# GENERAL CATALOGUE

2026



PENTA
ELECTRICAL SAFETY PRODUCTS

Your life,
Our work.

pentaesp.com

PENTA
ELECTRICAL SAFETY PRODUCTS

# A TEAM OF PASSIONATE EXPERTS

We build solutions for your safety and performance.

We design, manufacture and market safety and maintenance equipment for power grid and electrical network professionals.



**+750** employees

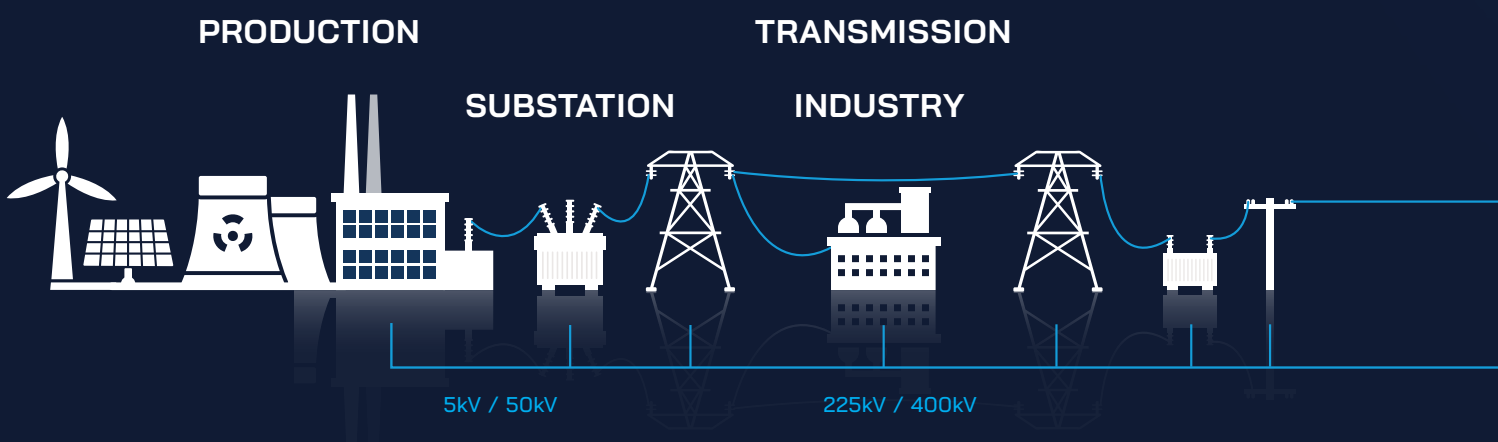
**+140** countries using our products

**170M€** in 2025 +20% growth vs. 2024

**16** manufacturing plants worldwide (incl. 12 in France)

**15,000** products references

## / Empowering & protection electricians throughout the electricity journey



# OUR HISTORY

Founded in 1993, PENTA Electrical Safety Products leverage 90 years of industrial heritage to create a unique, customer-focus brand.

- 2025 • PREISING & MADE
- 2024 • 4NRJ & WORK ITALIA
- 2023 • PENTA
- 2018 • OTTOTECNICA
- 2018 • P&B & SFEI TÜRKIYE
- 2017 • PENTA USA
- 2015 • SFE INTERNATIONAL & HYLEC NEW ZEALAND
- 2014 • SEGUMEXICO & HYLEC
- 2013 • REGELTEX
- 2010 • CSA
- 2009 • MOS INDUSTRIE & SORECA
- 2007 • ALROC
- 2005 • ELECTRO PJP
- 2001 • SIBILLE FAMECA ELECTRIC
- 2000 • SEGURINSA
- 1999 • JEGOU INDUSTRIE
- 1998 • FAMECA
- 1993 • SIBILLE OUTILLAGE



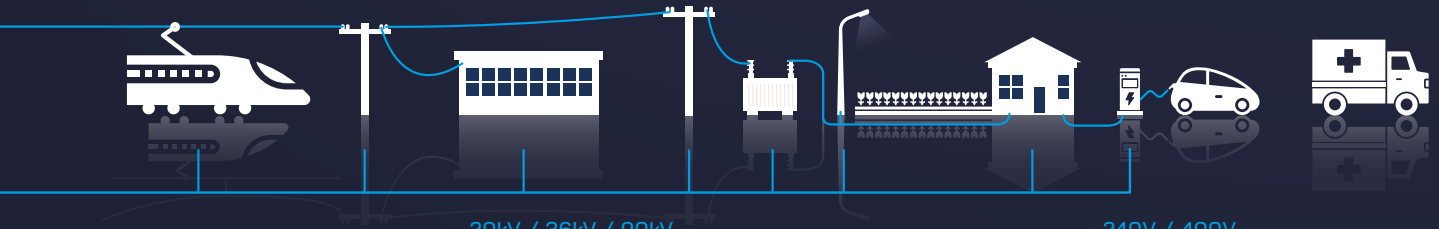
## DISTRIBUTION

ELECTRIC TRACTION

TERCIARY

ELECTRIC MOBILITY

CIVIL SECURITY

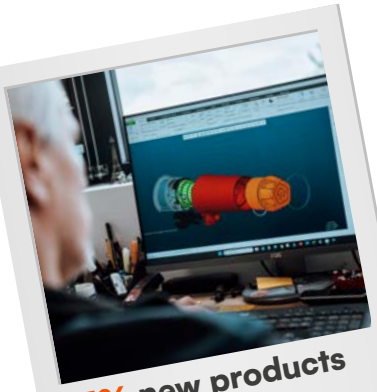


20kV / 36kV / 90kV

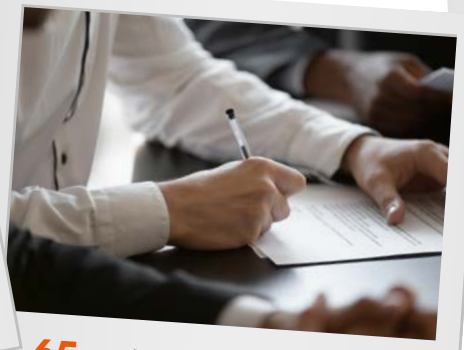
240V / 400V

CABLE & CONNECTIONS

From
## **prototype...**



**15%** new products each year



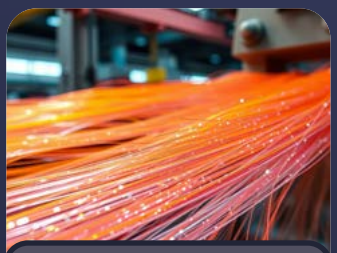
**65** patent applications



**5%** of turnover **injected in R&D**

## ... to
## **production**

/ Our manufacturing expertise



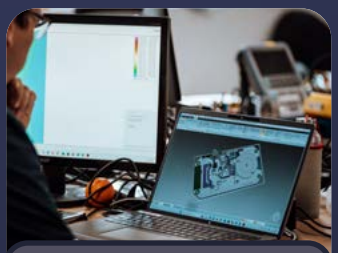
**PULTRUSION**



**INJECTION MOULDING**



**FOUNDRY**
(ALUMINIUM, BRASS, BRONZE)



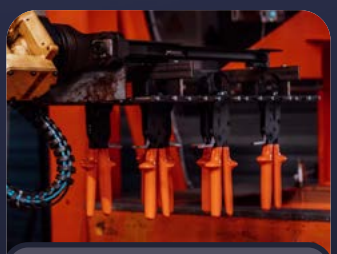
**HARDWARE/ SOFTWARE**



**POLYMER PROCESSING**
(LATEX)



**MACHINING**



**PVC DIPPING**



**LEATHER & FABRIC**

From
## our french factories...




... to
## our local expertise all over the world



GENERAL CATALOGUE

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**To PROTECT :**

For the Personal Protective Equipment (PPE) and Personal Protective Clothing (PPC) required for personal safety, to protect oneself and the environment.

**To SECURE your work environment :**

For all the equipment required for lockout/tagout procedures (low, medium and high voltage). To provide you with the necessary equipment for working on live systems in medium and hight voltage environments.

**To WORK on your operations with total security :**

For all precision and safety-oriented tools, as well as the necessary equipment for the construction and maintenance of networks.



PENTA ELECTRICAL SAFETY PRODUCTS

Your life, Our work.




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# PERSONAL PROTECTIVE EQUIPMENT & WORK AT HEIGHT


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PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# / SAFETY HELMETS

**Built for real risks. Trusted by professionals.**

Whether you're working at height, inside a substation, on live installations, or in high-arc environments, your head and face are constantly exposed to serious risks — falling objects, thermal effects from an electric arc, UV radiation, molten metal splashes or lateral impacts. At PENTA Electrical Safety Products, we design helmets that go beyond basic compliance to deliver reliable and durable protection adapted to your environment.



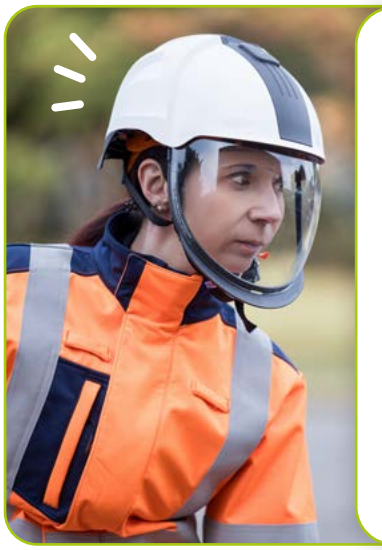
All our helmets meet **EN 397** for industrial safety and **EN 50365** (Class 0 or Class 2) for electrical insulation up to 17 000V AC (tested up to 30 000V). When Arc Flash exposure is a risk, selected models integrate **GS-ET-29** (or IEC 62819 new standard) certified face shields, rated APC1 or APC2 (and ATPV with IEC 62819), with optical clarity and protection against radiant heat and projection.

Our flagship model, the VISARC V1-BK, combines an **EN 50365** Class 2 safety helmet with an integrated APC1 arc-rated face shield, offering certified protection against Arc Flash effects up to 4 kA at 30 cm, in accordance with IEC 62819. For higher energy levels or longer interventions, the V2-12-LPP-BK and V2-25-LPP-BK kits offer APC2 protection and a grey Arc Flash face shield with ATPV ratings of 12 or 25 cal/cm².

All models are made of high-performance thermoplastic shells, compatible with a wide range of face shields, earmuffs, and accessories. Various configurations are available with 4-point chinstraps, adjustable harnesses, or dielectric features for specific uses (linemen, confined space, overhead work).
Custom colours and ID printing are available on request (please refer to the order instructions below the reference table of each product.)

## STANDARDS

| Standard | Description | Applies to |
|---|---|---|
| EN 397 | Industrial safety helmets: shock absorption, penetration resistance, and optional chinstrap release | All models listed |
| EN 50365 | Live Working - Electrically insulating helmets for use on low (and medium) voltage installations | VISARC Range, TC4812-25, TC45N, TC47N, TC48N, C45--CR |
| GS-ET-29 (APC1) | Face shields rated for Arc Protection Class 1 (4 kA at 30 cm, 0.5s) | VISARC V1-BK |
| GS-ET-29 (APC2) | Face shields rated for Arc Protection Class 2 (7 kA at 30 cm, 0.5s) | TC4812 - TC4825 V2-12-LPP-BK or V2-25-LPP-BK |
| IEC 62819 | Combined helmet and face shield systems designed for Arc Flash protection (APC1 or APC2 and ATPV) | VISARC RANGE |
| EN 166 / EN 170 | Optical clarity, UV protection, mechanical strength for face shields and eye protection | VISARC RANGE, All face shield and eye protection |



## CHOOSING THE RIGHT HELMET FOR THE JOB

— more than just meeting a standard

Not all helmets are created equal — and not all risks are visible at first glance. High temperatures, long-duration tasks, confined spaces, working at height or in arc-prone zones... the environments you face on a daily basis demand more than a one-size-fits-all approach. Here's how to choose smart:

- For mechanical risks or construction sites without electrical exposure, opt for a helmet certified EN 397. It protects against falling objects and basic shocks.
- If you're working near or on energized installations, go for a helmet certified EN 50365 (Class 0 or 2). These helmets are insulated and tested to withstand up to 30,000 V AC (for class 2) with no ventilation holes and strict dielectric performance.
- If Arc Flash is a potential hazard, choose a helmet designed to support a GS-ET-29 / (APC 1 / APC 2) certified face shield. This combination ensures protection against the intense thermal energy and pressure wave of an electric arc, especially in substations, LV and HV environments

→ A good helmet is one you don't think about once it's on — but only if you've chosen it for the right reasons. Don't rely on a checklist. Take into account your environment, your exposure level, your working time, and how your helmet will integrate with other PPE (glasses, lamp, earmuffs...). The closer your equipment is to your job's reality, the more likely it will protect you when it matters most.

## REFERENCES FOR HELMET ACCESSORIES

| Visual | Reference | Page | Description | TC45N | TC47N | TC4812 TC4825 | TC48N | C45-CR |
|---|---|---|---|---|---|---|---|---|
|  | C279 | p. 15 | Disposal hairnet for helmet (100 units pack) | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | CAB33 | p. 18 | Ear protection system for helmets SNR 33 dB | ✓ | ✓ | | | |
|  | CASADH | | Mounting plate for headlamp on protective helmet | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | CASADH-JB | | Lockout supervisor identification for electrician helmets | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | CASADH-RB | | Work supervisor identification for electrician helmets | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | E22E | p. 16 | Face shield with helmet holder | ✓ | | | | |
|  | HOUTC42R | p. 16 | Soft bag for helmet | ✓ | ✓ | | ✓ | ✓ |
|  | HOUTC25 | p. 16 | Anti-UVprotective cover for helmet with flip-up face shield | ✓ | ✓ | ✓ | | |
|  | PBADH | | Adhesive badge holder for helmet | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | S951SAFE | p. 478 | 1 LED headlamp 50 lm | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | S952SAFE | p. 478 | 2 LEDs headlamp 150 lm | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | S953SAFE | p. 478 | 2 LEDs rechargeable headlamp 212 lm | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | S954SAFE | p. 478 | 2 LEDs headlamp 250 lm | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | S955SAFE | p. 478 | 2 LEDs rechargeable headlamp 1000 lm | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | S956SAFE | | ATEX headlamp 90 lm | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | TC42AB | p. 18 | Ear protection system for helmets SNR 26 dB | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | TC42ESCI | | Multi-position flame retardant balaclava | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | TCID | | Adhesive helmet labels with wearer identification | ✓ | ✓ | ✓ | ✓ | ✓ |

For all other accessories, please contact us.

# VISARC

## HELMET FOR ELECTRICIANS WITH INTEGRATED ARC FLASH FACE SHIELD

VISARC PATENTED TECHNOLOGY

### V1-BK-...

**APC 1 protection** | 4kA/0,5s

Colorless face shield

### V2-12-LPP-BK-...

**APC 2 protection** | 7kA/0,5s
ATPV 12 cal/cm²
Light grey tint face shield

### V2-25-LPP-BK-...

**APC 2 protection** | 7kA/0,5s
ATPV 25 cal/cm²
Light grey tint face shield



**VIDEO**

Discover VISARC's **introduction video on our YouTube page** or by scanning the QR code opposite

**BROCHURE**

Find out more about VISARC through **its technical sheets and its brochure** or by scanning the QR code opposite

**USER MANUAL**

Don't forget to take a look at **VISARC's user manual** by scanning the QR code opposite

## / STANDARDS

**Helmet**
EN 397, EN 50365 (Class 2, use up to 17kV AC, tested up to 30kV AC)

**Face shield**
GS-ET-29, ASTM F 2178, EN ISO 16321 (EN 166, EN 170)

**Arc-flash protection (helmet and face shield)**
IEC 62819, tested by two methods:
- Box test
- Open arc

CE 0161

made in France

* Our helmets are systematically delivered with a black full crest, clipped onto the helmet. If you wish to add a full crest in a different colour, simply add one of the following codes to the helmet reference

W = White
R = Red
Y = Yellow
G = Green
O = Orange
B = Blue

The coloured crest will then be added to the box.

**Innovative helmet specially developed for electricians networks with optional electronic modules to be integrated: qualified by a notified laboratory to all Arc Flash standards.**

## / MULTI-BEAM HEADLAMP

**Dual beam**: long-range spotlight and wide beam, with 3 intensity levels
**Light output**: from 20 lumens up to 140 lumens
**Lighting range:** up to 20/30 m for the long-range beam
**Lamp runtime**: up to 50h (active detection mode)

## / TECHNICAL SPECIFICATIONS

**Helmet**
- Double shell for optimal electrical and Arc Flash protection, made of ABS
- 6-point textile harness, with wide sweatband and headband with push-and-pull adjustment (53 to 63 cm) with near - suspension comfort bands
- 4-point chinstrap, quick-release buckle for easy fastening/unfastening usable with insulating gloves.

**Face shield**
- Ergonomic polycarbonate material
- Resistant to molten metal splashes (symbol 9)
- Resistant to high-speed particles (190 m/s – symbol AT)
- UV resistant (index 1.2 for clear visor / 1.7 for tinted visor)
- Anti-fog treatment (symbol N)
- Scratch-resistant outer coating (symbol K)
- Protection against a short-circuit arc (symbol 8) according to EN 166
- Arc Flash protection according to 65-ET-29 and ISO62819
- Lifespan: 5 years from date of first use (after up to 2 years of recommended storage)

* **Optical quality (class1): face shield with perfect optical quality (patented technology) for prolonged use, to avoid eye strain or headaches.**



Headlamp
Dual beam
**Ref: VEA-1--**



Headlamp
Dual beam
with auxiliary battery
**Ref: VEA-2-BK--**



Headlamp
Dual beam
with auxiliary battery
with voltage detection alarm
**Ref: VEA-3-L*-BR--**

**Electronic modules are always supplied with a black central crest. To add a coloured central crest, add the codes above after the module reference (eg: VEA-1-BK-W) for a black and white central crest with module.**

# YOUR CUSTOMIZED PROTECTION WITH OUR CONFIGURATOR

## 01 I CHOOSE MY ARC-FLASH PROTECTION

Depending on the energy incident level from the risk analysis, I choose from the 3 models:

- **APC1** (4kA/0,5s) = V1-BK or V1-LPP-BK--
- **APC2** (7kA/0,5s and ATPV 12 cal/cm²) = V2-12-LPP-BK--
- **APC2** (25 Cal/cm²) = V2-25-LPP-BK--

## 02 I CHOOSE MY EMBEDDED ELECTRONICS

Based on my needs, I equip my helmet with:

- 1 front headlamp
- 1 front headlamp **+ 1 auxiliary battery**
- 1 front headlamp + 1 auxiliary battery **+ 1 voltage detection alarm**

## 03 I CHOOSE MY CREST COLOR

I customise the crest of the helmet with the chosen colour (optional):



**Black** (standard) **White** **Red** **Yellow**

**Green** **Orange** **Blue**

## 04 I CHOOSE MY ACCESSORIES

I complete my helmet with accessories adapted to my working environment:

- **Neck protector = VA-NECK**
- **Reflective tapes = VA-REFLECT**
- **Ear muffs = TC42AB**



Our teams have developed a configurator to let you simulate and select all the options and versions of your future VISARC helmet.

To access the configurator, go to the "Multimedia" section on our website: **www.pentaesp.com**

## / HELMET SUPPLIED WITH



Individual box



Protective bag



Microfibre wipe






# TC4812
# TC4825

## INDUSTRIAL SAFETY HELMET WITH GREY ARC FLASH FACE SHIELD

STANDARDS

- HELMET: EN 397 (-30°C / +50°C, LD) | EN 50365 (Class 0 — operating voltage: 1000V) | ANSI Z89.1 (Class E — tested up to 30 KV)
- FACE SHIELD: EN 166 | EN 170 | ANSI Z87.1 | ASTM F 2178 (ATPV = 12 or 25 Cal/cm²) | GS-ET-29 (APC 2/7kA, during 0,5 sec)

### / KEY FEATURES

Dielectric helmet and a light grey face shield with anti-fog, anti-scratch, chin and side protection.

**Protects against** intense heat, UV radiation, molten metal splashes and pressure waves.

Ideal for tasks near energized equipment, in substations or in confined HV spaces.

### / TECHNICAL SPECIFICATIONS

- **Ergonomic and durable construction:** ABS shell with universal side slots for accesories; 6-point textile harness and rack-and-pinion adjustment.
- **High-performance face shield:** Flip-up face shield with anti-fog interior / anti-scratch exterior, designed to pair with a dielectric helmet for consistent and reliable Arc Flash protection.

| Ref. | ATPV (ASTM F2178) | Helmet lifespan | Face shield lisespan |
|---|---|---|---|
| TC4812 | 12 cal/cm² | 84 months | 36 months |
| TC4825 | 25 cal/cm² | | |




# TC45

## INDUSTRIAL SAFETY HELMET WITH 4 POINT CHINSTRAP

STANDARDS

EN 397 (-30°C / +50°C / LD) | EN 50365 (class 0 - operating voltage: 1kV) | ANSI 1Z89.1 (Class E - test voltage: up to 30000V) AS/NZS 1801

### / KEY FEATURES

Industrial safety helmet designed for mechanical and electrical protection.

Protects against the accidental contact with electrical conductors and mechanical impacts.

Ideal for electricians, substations, industrial environments.

### / TECHNICAL SPECIFICATIONS

- **Ergonomic and durable construction:** ABS shell with universal side slots for accessories; 6-point textile harness and rack-and-pinion adjustment.
- **Electrical safety:** helmet without ventilation to ensure electrical insulation.

| Ref. | Weight | Lifespan from manufacturing |
|---|---|---|
| TC45-CN | 400 g | 84 months |




## *NEED VISIBILITY IN LOW-LIGHT ENVIRONMENTS?*

### COMPLETE YOUR SAFETY SETUP !

For optimal visibility in low-light or confined environments, equip your helmet with one of our LED headlamps (Refs. S951SAFE to S956SAFE). Designed for electrical work, these compact, hands-free lighting solutions ensure maximum safety and precision, without compromising comfort or mobility.

> Find all details in the "Signage, lighting and marking the work area" chapter – page 464.

# TC47N

## SAFETY HELMET FOR WORK AT HEIGHT

STANDARDS

EN 397 (-30°C / +50°C) | EN 50365 (Class 0 — operating voltage: 1000V) | ANSI Z89.1 (Class E — tested up to 30 kV) / AS/NZS 1801




### / KEY FEATURES

Industrial helmet offering mechanical impact and accidental electrical contact protection.

**Protects against** mechanical impacts and accidental contact with electrical conductors.

Ideal for linemen, work at height, gallery work, etc.

### / TECHNICAL SPECIFICATIONS

- **Ergonomic and robust design:** Non-vented ABS shell with universal slots for accessories, equipped with a 4-point chinstrap and rack-and-pinion adjustement.
- **Comfort:** absorbent antiperspirant headband made acrylic.

| Ref. | Head size | Weight | Lifespan from manufacturing |
|---|---|---|---|
| TC47-N | 52 to 63 cm | 420 g | 84 months |

# TC48N

## INDUSTRIAL SAFETY HELMET

STANDARDS

EN 397 (-30°C / +50°C / MM) | EN 50365 (Class 0 — operating voltage: 1 kV)




### / KEY FEATURES

Industrial helmet for mechanical impact and accidental electrical contact protection.

**Protects against** mechanical impacts and accidental contact with electrical conductors.

Ideal for linemen, industrial workers, substation and height operations.

### / TECHNICAL SPECIFICATIONS

- **Recommended for** network installers, suspended work, emergency situations and confined spaces. Ideal for industry, buildings...

| Ref. | Head size | Weight | Lifespan from manufacturing |
|---|---|---|---|
| TC48N | 54 to 61 cm | 330 g | 120 months |

# C45--CR

## PROTECTIVE HELMET FOR ELECTRICIANS WITH RACK-AND-PINION ADJUSTMENT SYSTEM

STANDARDS

EN 397 (-10°C / +50°C / LD) | EN 50365 (Class 0 — operating voltage: 1000V)




### / TECHNICAL SPECIFICATION

Optional chinstrap: please contact us

## › CAPS, FLEECE BEANIE, DISPOSABLE HAIRNET RESTRAINT

| Visual | Reference | Description | Key features |
|---|---|---|---|
|  | C43 | Safety cap | Protection of the head against accidental bumps and scratches. This is not a safety helmet. |
|  | C43-MINIVIS | Safety cap with short visor | Protection of the head against accidental bumps and scratches with a short visor. This is not a safety helmet. |
|  | B107N | Fleece hat | Protection of the head against cold. |
|  | C279 | Disposable hairnet restraint for helmet | The hairnet helps maintain the helmet hygiene by reducing perspiration and protecting and protecting it from dirt. |



For marking, please contact us.

## HOUTC42R

PROTECTIVE COVER FOR HELMET

### / KEY FEATURES

To protect and transport a helmet with or without face shield. Closure and with drawstrings.
Dimensions: 450x360 mm (standard size)



For marking, please contact us.

## HOUTC25

ANTI-UV PROTECTIVE COVER FOR HELMET WITH FLIP-UP FACE SHIELD

### / KEY FEATURES

Black PVC coated polyamide cover, closure and carrying by cords.
- Dimensions: 350x260 mm





## E30-APC1

ARC FLASH GREY FACE SHIELD ATPV 12 OR 25 CAL/CM²

STANDARDS

EN 166 | EN 170 | GS-ET-29 (APC1 — 4kA/0,5s) | ANSI Z87.1

### / KEY FEATURES

- Protection against thermal effect from electrical arc, for face.
- This PPE (Personal Protective Equipment) is part of the protection, suitable for arc-flash hazard, in addition with helmet, clothing and gloves.

FIELDS OF APPLICATION

- 3 Liquids (droplets or splashes)
- 8 Short-circuit electric arc
- 9 Liquid metal sprays and penetration of hot solids



## E24

FACE SHIELD WITH HEADBAND AND BROW-GUARD

STANDARDS

EN 166 | EN 170 | EN 175

### / KEY FEATURES

- Lens marking: 2C-1.2 U 1 AT
- Frame marking: U EN 166 3 8 9 AT
- EN175 9 -B CE
- Optical class 1: Clear, allowing users to wear the face shield all day while ensuring maximum optical comfort.
- Set including a polycarbonate face shield and a polyprolene front shell.

FIELDS OF APPLICATION

- 3 Liquids (droplets or splashes)
- 8 Short-circuit electric arc



## E22E

FLIP-UP FACE SHIELD FOR ELECTRICIANS, ADAPTABLE TO SAFETY HELMETS

STANDARDS

EN 166 | EN 170 | GS-ET-29 (APC 1 — 4 kA/0,5 s)

### / KEY FEATURES

- Lens marking: 2-1.2 ENH 1 B 8
- Frame marking: EN166 3 8 CE 0340
- Optical class 1: Clear, very good quality to avoid distortion.
- Compatible with most helmets on the market (helmet not included)
- No metal parts
- Set including a polycarbonate face shield and an universal face shield holder.

## CHOOSING THE RIGHT SAFETY GLASSES

PPE category II – it's about more than clear vision

Sight is essential for safety, yet the eyes are frequently exposed to risks like dust, UV rays, glare, fog and splashes – especially in hot or humid environments.

Our eyewear range adapts to your needs, offering models that resist scratches and fogging, while remaining lightweight and comfortable for long-term wear.

Made from impact-resistant polycarbonate, lenses ensure reliable protection without compromising visibility in standard or even low-light environments.



| Standard | Description | New standard |
|---|---|---|
| EN 166:2002 | Personal eye protection<br>Eye and face protection for professional use | EN ISO 16321-1:2022: Part 1: General requirements for eye and face protection |
| EN 170:2003 | Personal eye protection<br>Ultraviolet filters | |
| EN 172:1999 | Personal eye protection<br>Sun protection filters for industrial use | |
| EN 175:1997 | Personal eye protection<br>Equipment for eye and face protection during welding and allied processes | |

## TL19 & TL19S

CLEAR AND SUN-TINTED GLASSES WITH FLAT TEMPLES



STANDARDS

EN 166 | EN 170
TL19S (sun-tinted): EN 172

### / KEY FEATURES

- Lens marking: CLEAR: 2C-1.2 U 1 FT K CE
  SOLAR: 2C-3/5-3.1 U 1 FT K CE
- Frame marking: U EN166 FT CE
- Optical class 1 - Clear, for low light levels & Solar, for high light level
- Box of 10 pairs

## TL25 & TL25S

ADJUSTABLE, CLEAR AND SUN-TINTED GLASSES



STANDARDS

EN 166 | EN 170
TL25S (sun-tinted): EN 172

### / KEY FEATURES

- Lense marking: CLEAR: 2C-1.2 U 1 FT CE
  SOLAR: 2C-3/5-3.1 U 1 FT CE
- Frame marking: U 166 FT CE
- Optical class 1 - Clear, for low light levels & Solar, for high light level
- Box of 10 pairs

## TP05IR

PROTECTIVE GLASSES FOR MEDIUM VOLTAGE LIVE WORKING — INFRARED SCALE 3



STANDARDS

EN 166 / EN 169 / EN 175

### / KEY FEATURES

- Lens marking: 3 U 1 FT K N CE
- Frame marking: U 175 FT CE
- Optical class 1 - Welding optical filter (3)
- Box of 10 pairs

## TS52

ADJUSTABLE, CLEAR SAFETY GOGGLES



STANDARDS

EN 166 | EN 170

### / KEY FEATURES

- Lens marking: 2C-1.2 U 1 FT CE
- Frame marking: U EN166 FT CE
- Optical class 1 - Clear, for low light levels
- Box of 10 pairs

## L5600

CLEAR PROTECTIVE GOGGLES

FIELDS OF APPLICATION

- **3** Liquids (droplets or splashes)
- **4** Large dust particles
- **9** Liquid metal sprays and penetration of hot solids



STANDARDS

EN 166 / EN 170

### / KEY FEATURES

- Lens marking: 2C-1.2 U 1 BT 9 K N CE
- Frame marking: U EN166 3 4 9 BT CE
- Optical class 1 - Clear, for low light levels
- Box of 5 pairs

## › CASES FOR SAFETY EYEWEAR & ANTI-FOG WIPES

| Visual | Reference | Description | Key features |
|---|---|---|---|
|  | E62 | Case for safety glasses | 26 cm x 6 cm x 6 cm<br>Hook-and-loop fastener / Belt loop |
|  | TE4400U<br>TE4400UN | Case for safety glasses with/ without marking | 16 cm x 6 cm x 6 cm<br>Zip fastener / Belt loops |
|  | TE4500 | Case for safety goggles | 20 cm x 12 cm x 10 cm<br>Hook-and-loop fastener / Belt loop |
|  | LAB300X5 | Reusable anti-fog wipes | From 8 to 12 hours of efficiency for each use. Supplied in packs of 5. |

## HEARING MATTERS
— Even when noise comes and goes

Hearing is essential for situational awareness and long-term well-being, yet it is often overlooked — especially in environments where noise is variable or comes in short bursts. Intermittent exposure to loud or unpredictable sound sources, such as switching operations, maintenance zones or transport areas, may seem less harmful, but can cause just as much damage as continuous noise — especially without adequate protection.

PENTA Electrical Safety Products's hearing protection range is chosen to respond to real work conditions with irregular and mixed environments, with earmuffs, plugs and helmet-integrated solutions. All our solutions comply with EN 352 standards, ensuring verified performance and peace of mind in both European and international contexts. Hearing protections are category III PPEs in regard of the European Regulation 2016/425.



NOISE REDUCTION DB
- **SNR:** 27 dB



metal free

# C4200
METAL FREE EARMUFFS SNR 27 DB

STANDARDS
EN 352-1

### / KEY FEATURES
For continuous use against high noise levels. Made from durable, non-conductive materials compatible with use in the electrical industry.

| Ref. | Cup | Cushions | Support type | Weight |
|---|---|---|---|---|
| C4200 | ABS | PU foam | Over-the-head | 285 g |

NOISE REDUCTION DB
- **High:** 36 dB
- **Medium:** 30 dB
- **Low:** 23 dB
- **NNR:** 33 dB



# CAB33
EAR PROTECTION SYSTEM FOR HELMET 33 DB

STANDARDS
- EN 352-3

### / KEY FEATURES
Protection against noise in places where a safety helmet is required.
Adaptable to our helmets with universal notches.

| Ref. | Cup | Cushions | Support type | Weight |
|---|---|---|---|---|
| CAB33 | ABS | PU foam | Helmet mounted earmuffs | 342g |

NOISE REDUCTION DB
- **High:** 38 dB
- **Medium:** 34 dB
- **Low:** 27 dB
- **NNR:** 30 dB
- **SNR:** 36 dB



# C4500N
EARMUFFS SNR 36 DB

STANDARDS
- EN 352-1 / ANSI S3.19

### / KEY FEATURES
Protects against harmful noise and offers maximum comfort over long periods of use.

| Ref. | Cup | Cushions | Support type | Weight |
|---|---|---|---|---|
| C4500N | ABS | PU foam | Over-the-head | 325 g |

NOISE REDUCTION DB
- **High:** 33 dB
- **Medium:** 32 dB
- **Low:** 31 dB
- **NNR:** 26 dB
- **SNR:** 34 dB

metal free



# AB126N
REUSABLE EARPLUGS SNR 34 DB

STANDARDS
- EN 352-2 / ANSI S3.19

### / KEY FEATURES
Protects against harmful noise and offers maximum comfort over long periods of use.

| Ref. | Earplug material | Quantity per pack (pair) | Weight |
|---|---|---|---|
| AB126N | TPR | 50 | 11 g per unit |

NOISE REDUCTION DB
- **High:** 31 dB
- **Medium:** 23 dB
- **Low:** 18 dB
- **SNR:** 26 dB



metal free

# TC42AB
METAL FREE EARMUFFS FOR HELMET SNR 26 DB

STANDARDS
- EN 352-3

### / KEY FEATURES
Protection against noise in places where a safety helmet is required. Entirely non-metallic and adaptable to helmets with universal notches.

| Ref. | Cup | Cushions | Support type | Weight |
|---|---|---|---|---|
| TC42AB | ABS | PVC | Helmet mounted earmuffs | 260 g |

NOISE REDUCTION DB
- **High:** 34 dB
- **Medium:** 34 dB
- **Low:** 31 dB
- **SNR:** 36 dB

metal free



# AB127N
DISPOSABLE EARPLUGS SNR 36 DB

STANDARDS
- EN 352-2

### / KEY FEATURES
Protects against harmful noise and offers maximum comfort over long periods of use.

| Ref. | Earplug material | Quantity per pack (pair) | Weight |
|---|---|---|---|
| AB127N | PU foam | 200 | 2 g per unit |

- RESPIRATORY PROTECTION




# MRP355
# MRP352
# MRP353

SINGLE USE PROOF MASK
**FFP2 & FFP3**

STANDARDS

- **EN 149: 2001 + A1: 2009 / EN 14683: 2006**
- **MRP355**: FFP2 - Minimum filtration level 94%
- **MRP352**: FFP3 - Minimum filtration level 99%
- **MRP353**: FFP3 - Minimum filtration level 99%

## / KEY FEATURES

**Protects against** fine particles: dust from concrete, cement, plaster (demolition, structural works, sanding), fine paint and resin particles, plastics (sandblasting, sanding), etc.

Ideal for intensive use, for prolonged activities.

## / TECHNICAL SPECIFICATIONS

- **Comfortable and hygienic design**: Single-use polypropylene mask with two elastic holding straps, individually packaged to ensure cleanliness and easy use. Valve-less technology provides optimal breathing comfort for the wearer.
- **Safe and skin-friendly protection**: Hypoallergenic, latex-free and PVC-free composition, offering effective filtration against viruses and pollution without irritating the skin.




# DM171N

HALF MASK KIT AGAINST GASES, VAPOURS AND PARTICLES

STANDARDS

- EN 140:1998 / EN 14387:2004+A1:2008 (ABEK)

## / KEY FEATURES

Compact and reliable half-mask for demanding environments.

**Protects against** organic vapours (solvents with boiling point above 65°C), inorganic gases and vapours, sulfur dioxide, acid gases and vapours, ammonia and its organic derivatives.

## / TECHNICAL SPECIFICATIONS

- Robust and ergonomic construction: Half-mask made of soft natural rubber, fitted with an exhalation valve and two filter connectors for optimal sealing and breathing comfort.
- Designed for safety in sensitive environments: built to withstand the presence of gases, vapours, and particles.

› SPARE PARTS FOR DM171N MASK

| Visual | Reference | Description | Key features |
|---|---|---|---|
|  | DM171N-ABEK | Box of 10 filter cartridges for half mask | • Filter against gases and vapors from chemical compounds.<br>• Cylindrical body with a lid, made of ABS. |
|  | DM171N-FFP2 | Set of 10 P2 pre-filters for half mask | • Filter against both solid and liquid particles<br>• Several layers of non-woven fabric specially designed to provide maximum filtration efficiency |

# INSULATING GLOVES RANGE

Our range of insulating gloves for live working is manufactured in France at an ISO 9001:2008 certified site.

Full control over the entire industrial process ensures a very high level of quality.

made in France



100% French production



## GOOD TO KNOW

### / HOW TO CHOOSE THE RIGHT GLOVES?

You should be able to identify the required level of protection based on a thorough risk assessment. Our gloves provide:

Electrical insulation (insulating gloves — it is recommended to wear leather over-gloves for mechanical protection),

Electrical and mechanical protection (2-in-1 composite gloves with integrated mechanical protection),

Electrical, mechanical and Arc-Flash protection (3-in-1 gloves).
Special properties may be required for additional protection during electrical work:

A (acid),

H (oil),

Z (ozone),

R (combined A+H+Z),

C (very low temperatures).
Most of our gloves are classified as RC.

Choosing the correct size is essential for optimal dexterity. A wide range of sizes is available (from 6 to 12 depending on the class), suitable for both women and men with larger hands. Standard glove lengths are 28 cm, 36 cm, and 41 cm.

### / RECOMMENDATION BEFORE USE

Perform a thorough visual inspection of each glove.
Use a manual air pressure test device to inflate the glove and detect any potential defects.
If you believe one of the gloves in the pair is defective, neither glove should be used — the entire pair must be returned for electrical testing or discarded.



**Unlike other industrial processes, our gloves are manufactured using a water-based process, without the use of solvents.**

This environmentally conscious approach, combined with the use of natural materials (latex), ensures greater environmental respect.

Integrated directly into our production lines, our Quality Assurance laboratory enables us to perform all tests in accordance with current and upcoming EN 60903 and IEC 60903 standards.

A rigorous approach, including both visual and dielectric inspection of 100% of our production, guarantees full compliance and safety for users.

## / MEASURE YOUR GLOVE SIZE

Wrap a tailor's tape measure around your hand, excluding the thumb (see photo).

Close your hand gently without squeezing tightly, then take the measurement.

Refer to the conversion chart below to find your size.

| Recommended size | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|
| Hand circumference (cm) | 14 | 16 | 18 | 21 | 24 | 26 | 28 |



## / General information

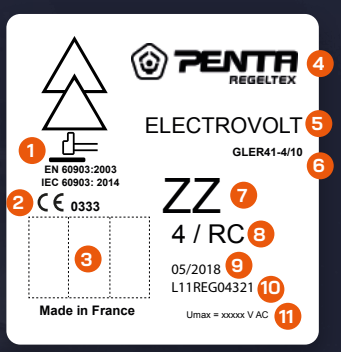
According to the applicable EN 60903 standard.

| Class | Maximum operating voltage | |
|---|---|---|
| | AC | DC |
| 00 | 500 V | 750 V |
| 0 | 1 000 V | 1 500V |
| 1 | 7 500 V | 11 250 V |
| 2 | 17 000 V | 25 500 V |
| 3 | 26 500 V | 39 750 V |
| 4 | 36 000 V | 54 000 V |

## / Meaning of the standard markings on each glove
Special properties

| Category | Resistant to |
|---|---|
| A | Acid |
| H | Oil |
| Z | Ozone |
| R | Acid, oil, ozone |
| | Mechanical protection |
| C | Very low temperature |

| | | Class of the latex gloves (GLE) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 00 | 0 | 1 | 2 | 3 | 4 |
| Size (rubber glove) | 6 | A | A | N/A | N/A | N/A | N/A |
| | 7 | A | A | B | B | N/A | N/A |
| | 8 | B | B | C | C | E | E |
| | 9 | B | B | C | C | E | E |
| | 10 | C | C | D | E | F | F |
| | 11 | D | D | E | F | G | G |
| | 12 | E | E | F | G | G | G |




| No | DESCRIPTION |
|---|---|
| 1 | mechanical resistance of the glove |
| 2 | inspection body no./CE marking |
| 3 | date of the periodic inspection |
| 4 | trademark logo |
| 5 | range |
| 6 | reference |

| No | DESCRIPTION |
|---|---|
| 7 | size |
| 8 | class/category |
| 9 | date of manufacture |
| 10 | validation batch |
| 11 | max. operating voltage |

# TOUCH-E

## NATURAL RUBBER INSULATING GLOVES




**3 IN 1** 3 LEVELS OF PROTECTION

| EN 60 903 CLASS 0 | EN388 1121X | IEC 61 482-1-2 |
|---|---|---|
| Electrical hazard | Mechanical hazard | Arc flash hazard<br>IEC 61 482-1-2<br>Classe 1 — 4kA |

### / KEY FEATURES

- Extremely thin insulating gloves offering greater dexterity than traditional models.
- The non-slip finish ensures excellent grip for handling even the smallest components.

### / TECHNICAL SPECIFICATIONS

Touch-E gloves are made of natural rubber with excellent dielectric properties. The chlorinated finish makes them easy to put on.

| Reference | Class | Max. operating voltage | Lenght | Size | CEI61482-1-1 | CEI61482-1-2 |
|---|---|---|---|---|---|---|
| JFO36-0/07 | 0 | 1 000 V AC / 1 500 V DC | 36 cm | 7 | 12 cal/cm² | APC1 |
| JFO36-0/08 | | | | 8 | | |
| JFO36-0/09 | | | | 9 | | |
| JFO36-0/10 | | | | 10 | | |
| JFO36-0/10 | | | | 11 | | |




Complete the reference with the desired size. RC available on request.

# GLE ELECTROVOLT

## NATURAL RUBBER INSULATING GLOVES

STANDARDS

- EN 60903 | CEI 60903

### / KEY FEATURES

Thin natural rubber insulating gloves for electrical protection up to 36 kV (class 00 to class 4).

**Protects against** electrical shock while ensuring excellent grip and dexterity.

Ideal for precise handling, even in damp environments.

| Reference | Class | Max. operating voltage | Length | Size | Category |
|---|---|---|---|---|---|
| GLE36 00 | 00 | 500 V AC | 36 cm | 6 to 12 | AZC* |
| GLE36 0 | 0 | 1 000 V AC | | 7 to 12 | |
| GLE36 1 | 1 | 7 500V AC | | | RC |
| GLE36 2 | 2 | 17 000 V AC | | 8 to 12 | |
| GLE36 3 | 3 | 26 500 V AC | | | |
| GLE36 4 | 4 | 36 000 V AC | 41 cm | | |




# AFG FLASH&GRIP

## COMPOSITE INSULATING GLOVES WITH ARC FLASH PROTECTION

STANDARDS

- EN 60903 | CEI 60903 Test report regarding IEC 61482-1-2 (Class 2 / 7KA — 0,5 sec) Test report regarding ASTM F2675 (ATPV = 71,6 cal/cm²)

### / KEY FEATURES

Composite gloves with integrated mechanical and arc-flash protection.

**Protects against** shocks, arcs, and abrasion without over-gloves.

Ideal for energized work in demanding environments.

| Reference | Class | Max. operating voltage | Size | CEI 61482-1-2 | ARC 4 > 40 (cal/cm2) ASTM F2675 |
|---|---|---|---|---|---|
| AFG36-00* | 00 | 500 V AC | 6 - 12 | Class 2 (0.5s - 7kA) | 26,3 cal/cm² |
| AFG36-0* | 0 | 1 000 V AC | | | 71,6 cal/cm² |
| AFG36-1* | 1 | 7 500 V AC | 7 - 12 | | 42,2 cal/cm² |
| AFG36-2* | 2 | 17 000 V AC | | | 74,5 cal/cm² |
| AFG36-3* | 3 | 26 500 V AC | 8 - 12 | | 73,2 cal/cm² |
| AFG41-4* | 4 | 36 000 V AC | | | 87,7 cal/cm² |




Complete the reference with the desired size.
* RC available on request.

# GICN FLEX&GRIP

## COMPOSITE INSULATING GLOVES

STANDARDS

- EN 60903 | CEI 60903

### / KEY FEATURES

Composite insulating gloves integrating mechanical protection—no need for leather over-gloves.

Protects against electric shock (up to 36 kV) and mechanical risks.

Ideal for energized tasks in humid, oily or high-friction environments.

| Reference | Class | Max. operating voltage | Length | Size | Category |
|---|---|---|---|---|---|
| GICN36 00 | 00 | 500 V AC | 36 cm | 7 to 12 | RC |
| GICN-BT/* | 0 | 1 000 V AC | 41 cm | | |
| GICN-1/* | 1 | 7 500V AC | | | |
| GICN-2/* | 2 | 17 000 V AC | | 8 to 12 | |
| GICN-3/* | 3 | 26 500 V AC | | | |
| GICN-4/* | 4 | 36 000 V AC | | | |

PERSONAL PROTECTIVE EQUIPMENT
**HAND PROTECTION**
INSPECTION FREQUENCY & CONTROL

# INSPECTION FREQUENCY & CONTROL



Inflation testing is mandatory before and after each use, along with a visual inspection, for all classes of gloves.

- Rubber insulating gloves have no expiration date and may be used as long as they pass periodic inspections.
- From the date of manufacture, no glove should be put into service unless it has passed an electrical test within the past 12 months, and must not be used unless it has undergone an electrical test within the last 6 months after being placed into service, for Classes 1 / 2 / 3 / 4.

See the illustration below.

(Testing can be performed either in-factory or on-site.)

## / WAREHOUSE STOCK MANAGEMENT

**FACTORY DISPATCH**

**WAREHOUSE STORAGE**

Less than 12 months
- No periodic inspection required

More than 12 months
- Perform a periodic inspection

**COMMISSIONING***

## / PERIODIC INSPECTION RULE
after first use

**COMMISSIONING***

Date

**PERIODIC INSPECTION****

+ 6 mois

Approved
The glove pair may be used for up to 6 months before the next inspection.

Rejected
The glove pair must not be used and must be discarded.

* Entry of the commissioning date or periodic inspection date using an ink stamp or ballpoint pen.
** According to Annex A of IEC 60903:2014. Periodic inspections and electrical testing must be performed only by duly trained and qualified personnel.

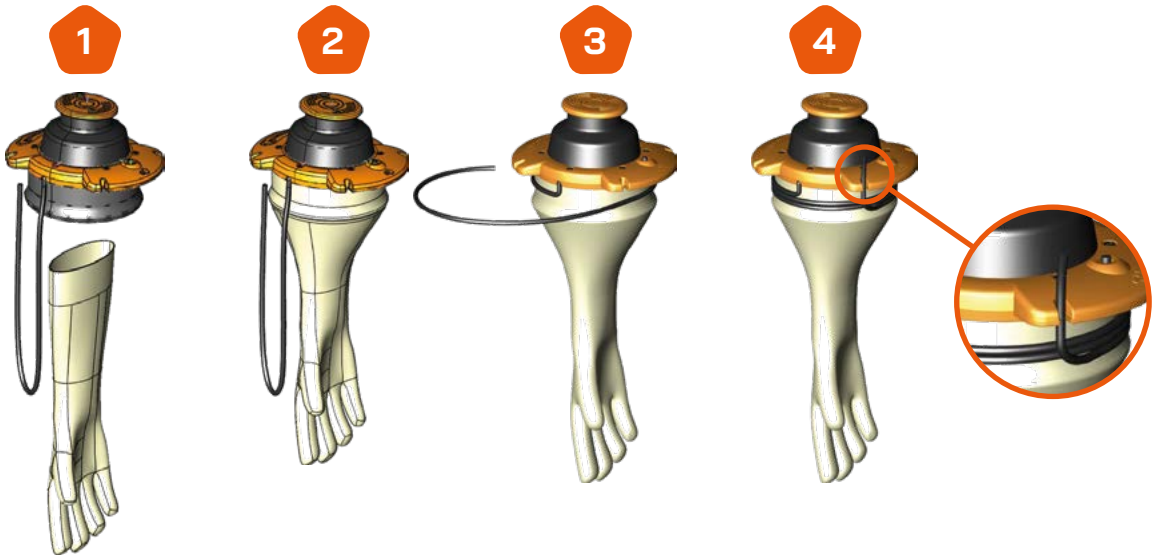
**National requirements regarding the inspection and periodic testing of Class 00 and Class 0 gloves may be considered sufficient.**
**▶ INFLATION TEST + VISUAL INSPECTION**

**Reminder: Insulating gloves must be stored in their original UV-protective packaging throughout their entire service life.**

# HOW TO USE THE EOS?

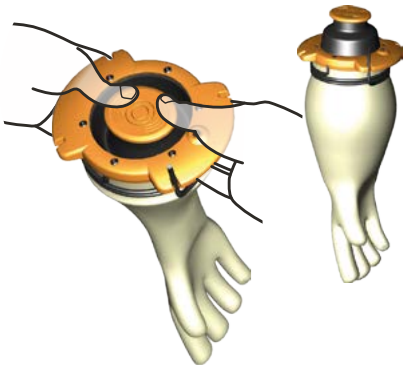
## QUICK AND EASY ATTACHMENT

Simply wrap the elastic cord and secure it using the cord lock.



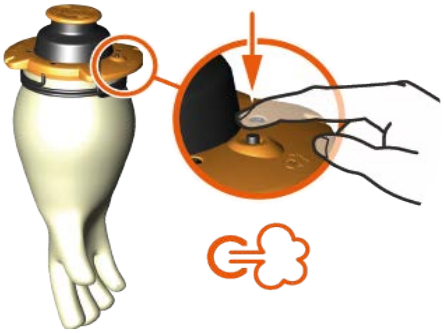

## PRESSURIZATION

- Apply successive presses on the top plunger.
- Inflation is made easier by two side grips ensuring proper hold.n



## DEPRESSURIZATION

Use the dedicated button
for controlled deflation.



## WHY TEST YOUR GLOVES?

**Before each use, every insulating glove must be visually inspected and checked with an air pressure test, in accordance with EN 60903 and IEC 60903 recommendations.*.**



A meticulous visual inspection of the entire glove surface helps detect possible defects such as:

- **Puncture**
- **Cut**
- **Major stain**
- **Burn**
- **Material degradation**

Particular attention should be paid to the palm, fingers, and between the fingers.
This check must be performed before each use:
- If a defect is detected, do not use the glove.
- If in doubt, do not use the glove and return it for electrical retesting.

*for Class 00 and Class 0 gloves, air leak testing combined with visual inspection may be considered sufficient for periodic inspection (EN 60903).



- Several diameters available.
- Ultra sample fixing : by simply winding the elastic cord and blocking it with a slot.
- Magnet option : for fixing on metal surface.
- Space-saving storage position.

# EOS

## PNEUMATIC TESTER FOR INSULATING GLOVES

### / USE

Recommended for field inspection before/after each use, but also for periodic visual inspection. It allows to check the entire surface of a glove, including the sleeve (according to the recommendations of EN 60903* and IEC 60903). The visual and meticulous inspection of the entire surface of the glove then makes it possible to detect any perforations or other defects (holes, cuts, important stains, burns, material alterations).

* for Class 00 and 0 gloves, air leakage verification and visual inspection may also be considered suitable for periodic inspection (EN 60903)

### / TECHNICAL SPECIFICATIONS

- Anti-UV treated ABS material body
- Bellows in NBR
- Depressurization button: For a controlled deflation
- Removable ring ® 150mm in EPDM
- Delivered with fabric bag in cardboard box 210 x 160 x 160 mm.

| Reference | Version | With magnet | Poids (g) |
|---|---|---|---|
| EOSE9030 | Diameter 100mm for Touch-E gloves | No | 290 |
| EOSEM9030 | Diameter 100 for Touch-E gloves | Yes | 290 |
| EOS9030 | Diameter 130mm (EN/CEI 60903 gloves) | No | 345 |
| EOSM9030 | Diameter 130mm (EN/CEI 60903 gloves) | Yes | 345 |

Legislation : Neodymium magnets are not intended for distribution/export to the USA, Canada or Japan. It is therefore strictly forbidden to export, directly or indirectly, the "with magnet" versions of this tester to the countries mentioned above. "with magnet" versions subject to IATA regulations.



# TV10

## PNEUMATIC TESTER FOR INSULATING GLOVES

### / USE

The purpose of the tester is to ensure that the glove is absolutely air-tight.

### / TECHNICAL SPECIFICATIONS

- Truncated end with two grooves for holding the glove under test
- A central piston at the bottom of the tester
- A flexible valve at the bottom of the bowl on the upper part
- Two rubber rings to hold the glove during inflation.



# SINGLE GLOVES STICK TESTER

### / USE

Durable PENTA Glove Stick Tester designed for fast, reliable daily air inspections of rubber insulating gloves, supporting compliance and improving electrical safety for field and industrial workers.

### / TECHNICAL SPECIFICATIONS

- Colour: Blue / Orange — coming soon
- Material: Plastic
- Hand Orientation: Ambidextrous
- Product Length: 30 cm
- Made in Australia

VIDEO |

Discover Gloves stick tester **introduction video on our YouTube page** or by scanning the QR code opposite



## GLFR

INSULATING NATURAL RUBBER GLOVES

STANDARDS

- IEC 60903:2014 / EN 60903:2003 / 13E001 as per EN61482-1-2 equivalent to IEC61482-1-2:2014 / ASTM F2675:2021

### / KEY FEATURES

- Insulating rubber gloves for live working up to 1 000 V AC.
- **Protects against** electric shock and arc flash (APC 2, ATPV 4.8 cal/cm²).
- Ideal for tasks requiring full protection without under- or overglove



## GICN80

LONG COMPOSITE INSULATING GLOVES

STANDARDS

- EN 60903 / IE C60903

### / KEY FEATURES

- Composite insulating gloves for live working up to 1 000 V AC (Class 0), ergonomic and chlorine-treated for easy donning.
- **Protects against** electric shock, arc flash, mechanical and chemical hazards (RC category, EN 60903 / IEC 60903 certified).
- Ideal for medium-voltage maintenance tasks, offering built-in mechanical protection without leather overgloves.



## RGX-SG

OVERGLOVES FOR INSULATING GLOVES TOUCH-E

STANDARDS

- EN 388: 2122X

### / KEY FEATURES

- Full leather protectors to wear over Electrovolt insulating gloves for enhanced durability and comfort.
- Protects against mechanical hazards with grain cowhide leather and reinforced cuff.
- Ideal for live work requiring dexterity and reliable overglove protection.



DETAILS

- **Abrasion:** 1
- **Tear:** 4
- **Cut ISO:** F
- **Dexterity:** 5
- **Arc Flash APC:**1
- **HRC:**1

## RGX-SGT

OVERGLOVES FOR INSULATING GLOVES TOUCH-E

STANDARDS

- EN388+A1:2018 /EN407:2004 / EN ISO21420 / IEC61482-1-2

### / KEY FEATURES

- Protective overglove designed to fit Touch-e insulating gloves, ensuring grip and dexterity.
- **Protects against** cuts (level F), heat, and arc flash (APC 1, ATPV 5.8 cal/cm²), with leather reinforcements.



## RGX-MC

COTTON FINGERLESS INNER GLOVES

STANDARDS

- EN 388: 2122X

### / KEY FEATURES

- Cotton undergloves to use beneath insulating rubber gloves.
- **Improves** comfort by absorbing sweat and reducing skin irritation.
- Ideal for daily wear under electrical gloves.

### DID YOU KNOW

Hand injuries often start with fatigue.

Prolonged grip, repetitive tasks, sweat accumulation or glove stiffness can lead to muscle fatigue and micro-stress in the hands and forearms. Over time, this reduces precision, increases reaction time and can contribute to serious accidents — especially during live electrical work or when handling tools in constrained environments.

At PENTA Electrical Safety Products, we design hand protection with ergonomics, breathability and tactility in mind.

From undergloves to insulating gloves, our solutions reduce effort and maintain dexterity over time, even in high-risk or precision applications.

Because protecting your hands also means preserving your control, grip and responsiveness.

## G86SP

FLAME RESISTANT INNER GLOVES



STANDARDS

- EN 420 / EN 407 / EN 388

### / KEY FEATURES

- Nomex® inner gloves, heat resistant up to 250 °C.
- Protects against heat and mechanical risks.
- Ideal for dry, hot work with sharp components.







## RGX-BG
## RGX-BGT

INSULATING STORAGE BOX FOR ELECTRICIAN GLOVES

### / KEY FEATURES

- Shock-resistant plastic box for storing electrician gloves and accessories.
- Holds one pair of gloves, overgloves and a powder flask.
- Wall-mountable or portable.

## RGX-SGL

CANVAS STORAGE BAG FOR ELECTRICIAN'S GLOVES

### / KEY FEATURES

- Durable canvas storage bag designed for long insulating gloves.
- Protects gloves from UV, dust and deformation during transport or storage, helping preserve their dielectric integrity.

## RGX-SAC

CANVAS STORAGE BAG FOR ELECTRICIAN'S GLOVES

### / KEY FEATURES

- Reinforced waterproof canvas bag for transporting electrician's gloves.
- Snap closure with internal gusset for talcum flask (flask not included).
- Fits in vehicles, toolboxes or bags.

### > MISCELLANEOUS (TALC, CLEANER, ETC.)

| Visual | Reference | Description | Key features |
|---|---|---|---|
|  | TS10T | Talcum bottle | • 100 ml Luzenac talc for use with insulating gloves.<br>• Improves comfort and ease donning/doffing. |
|  | RGX-1704/200 | Rubber cleaner | • 200 ml spray cleaner for rubber gloves and surfaces.<br>• Removes dirt and dust, dries quickly. |



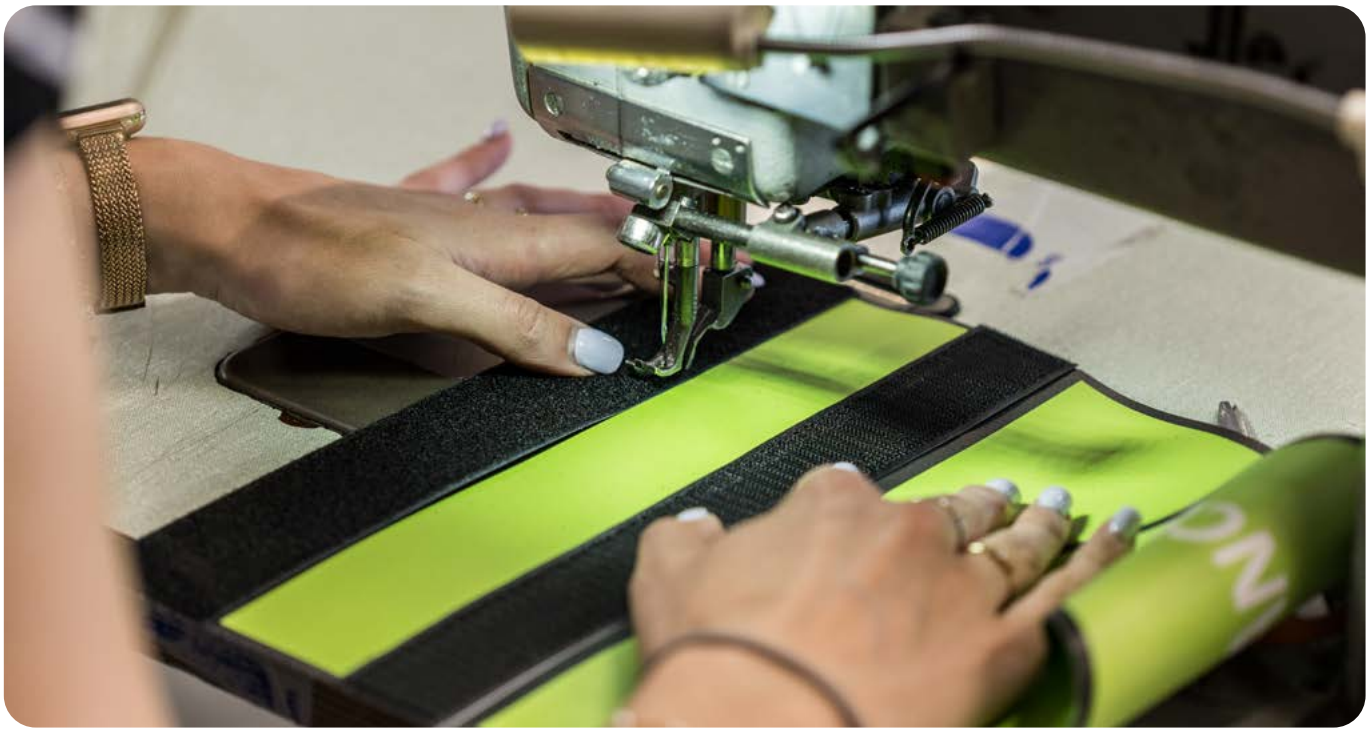


### *EXTEND THE LIFESPAN OF YOUR GLOVES*

STORAGE IS PROTECTION, TOO

Proper storage between uses preserves shape, surface condition and dielectric strength. Whether in a vehicle, substation or workshop, dedicated bags and cases help prevent wear, contamination and accidental damage.

> See all solutions in the "Transport & storage solutions" chapter – page 336.





MECHANICAL PROTECTION

- Abrasion: 4/4
- Cutting: X/5 (EN 388)
- Tearing: 4/4
- Perforation: 3/4
- Cutting (EN ISO 13997): F/F

HEAT PROTECTION

- Behavior in fire: X/4
- Contact heat: 1/4
- Convective heat: X/4
- Radiant heat: x/4
- Small liquid metal splashes: X/4
- Large liquid metal splashes: X/4

05 TO 13

# GLV-CUTF

## CUT-RESISTANT TOUCHSCREEN GLOVE

STANDARDS

- EN 21420 / EN 388 / EN 407

### / KEY FEATURES

Robust yet flexible glove designed for high-precision handling of dry or greasy sharp-edged parts.

Protects against cuts (level F), abrasion, tearing, and minor thermal contact (suitable for contact with objects up to 100°C).

Ideal for precise industrial and mechanical work requiring both cut protection and tactile sensitivity.

### / TECHNICAL SPECIFICATIONS

- High-density polythylene glove, stainless stell fiber, 13 gauge
- Engineered to deliver level F cut resistance without compromising dexterity (level 5), ideal for precision tasks in demanding environments.
- Its nitrile foam coating enhances grip reliability and reduces the risk of handling errors on dry or oily parts.
- Elasticated wrist with nitrile reinforcement in grip.

MECHANICAL PROTECTION

- **Abrasion:** 4/4
- Cutting: (EN397): **X/4**
- **Tear:** 4/4
- **Perforation:** 3/4
- Cutting: (EN ISO 13997): D/F



# G115N

## CUT RESISTANT GLOVES WITH PU COATED PALM

STANDARDS

- EN 21420 / EN 388

### / KEY FEATURES

- Excellent out resistance with the technical fibers of the support
- Increased flexibility and resistance with the polyurethane coating
- Back of the hand ventilated thanks to the only palm coating

07 TO 11

MECHANICAL PROTECTION

- **Abrasion:** 3/4
- Cutting: (EN397): **1/4**
- **Tear:** 2/4
- **Perforation:** 1/4
- Cutting: (EN ISO 13447): X/4



# G116N

## PU COATED HANDLING GLOVES

STANDARDS

- EN 21420 / EN 388

### / KEY FEATURES

- Non-irritating and easy to adjust with the seamless knitted support.
- Reinforced strengt with the polyester support.
- Good support of the gloves with the elastic knitted wrist.



MECHANICAL PROTECTION

- Abrasion: 4/4
- Cutting (EN 388): X/5
- Tearing: 4/4
- Perforation: 3/4
- Cutting (EN ISO 13997): F/F

HEAT PROTECTION

- **Behavior in fire:** X/4
- **Contact heat:** 1/4
- **Convective heat:** X/4
- **Radiant heat:** X/4
- **Small liquid metal splashes:** X/4
- **Large liquid metal splashes:** X/4

07 TO 12

# GLV-CUTF-HV

## HIGH-VISIBILITY CUT-RESISTANT TOUCHSCREEN GLOVES

STANDARDS

- EN 21420 / EN 388 / EN 407

### / KEY FEATURES

Highly visible cut-resistant glove combining optimal dexterity and grip for secure handling in industrial settings.

Protects against daily mechanical hazards and handling risks, even on sharp or greasy components

Ideal for industrial maintenance, mechanical work or logistics where both hand protection and visual signalisation are essential.

### / TECHNICAL SPECIFICATIONS

- Fibre high-performance polyethylene and stainless-steel wire and elasthane, this glove offers level F cut protection with superior flexibility (gauge 13) and touch sensitivity.
- Its bright yellow back and orange nitrile-foam coating palm ensure excellent visibility and control in demanding conditions.



06 TO 12

# G86

## COTTON WHITE GLOVES

### / TECHNICAL SPECIFICATIONS

- This glove made of 100% fine cotton is ideal for making all kinds of handling in dry conditions and requiring good dexterity.
- Protects the product handled from fingerprints, dirt...
- To be used as inner glove (heat/cold).



**MECHANICAL PROTECTION**
- Abrasion: 2/4
- Cutting: X/5 (EN 388)
- Tearing: 4/4
- Perforation: 4/4
- Cutting (EN ISO 13997): D/F

**COLD PROTECTION**
- Convective cold: 0/4
- Contact cold: 2/4
- Impermeability: X/4

06 TO 12

# GLV-COLD

## COLD-WEATHER CUT-RESISTANT GLOVE

**STANDARDS**
- EN 21420 / EN 388 / EN 511

### / KEY FEATURES

Handling sharp parts in cold weather combining cut protection and comfort.

**Protects against** cold exposure, handling risks and mechanical hazards

**Ideal for** outdoor or unheated industrial settings.

### / TECHNICAL SPECIFICATIONS

- High performance polyethylene knitted glove (gauge 13)
- 10-gauge brushed acrylic and lycra interior ensures thermal insulation and all-day comfort in cold conditions.
- Full latex foam coating provides high grip performance and cut resistance (level D), even in damp handling tasks.
- Dexterity: Level 5

Nitrile foam coating for excellent grip in wet and dry conditions



Breathable seamless liner

Wrist strap for secure fitting

Dexterity level 3, 13 gauge liner for durability and precise fitting,

**MECHANICAL PROTECTION**
- Abrasion: 4/4
- Cutting (EN 388): X/5
- Tearing: 4/4
- Perforation: 3/4
- Cutting (EN ISO 13997): C/F
- Impact resistance: P

**HEAT PROTECTION**
- Behavior in fire: X/4
- Contact heat: 1/4
- Convective heat: X/4
- Radiant heat: x/4
- Small liquid metal splashes: X/4
- Large liquid metal splashes: X/4

07 (S) TO 12 (3XL)

# GLV-IMP-NIT

## CUT AND IMPACT RESISTANT GLOVES

**STANDARDS**
- EN ISO 21420 / EN 388 / EN 407 / ANSI/ISEA 105 (Cut level A4 - Abrasion level 6) / ANSI/ISEA 138 (level 2)

### / KEY FEATURES

Protective work glove featuring cut and impact resistance for heavy-duty handling applications, ensuring enhanced grip and effective protection against impacts, cuts, and abrasion, while remaining comfortable and flexible.

Recommended for use in oil and gas, construction, logistics, transportation, and other demanding industrial environments.

### / TECHNICAL SPECIFICATIONS

- Reinforced thumb crotch for extra protection and durability,
- Double dipped coating for durability.

**MECHANICAL PROTECTION**
- Abrasion: 4/4
- Cutting (EN 388): 2/5
- Tearing: 4/4
- Perforation: 1/4
- Cutting (EN ISO 13997): X/F
- Impact resistance: P (test method with EN 13594)



# GLV-IMP-HV

## HIGH-VISIBILITY IMPACT-RESISTANT GLOVE

**STANDARDS**
- EN 21420 / EN 388 / ANSI / ISEA 105 (cutting A1 / Abrasion 6) / ANSI / ISEA 138 (Level 2)

### / KEY FEATURES

Durable glove combining back-of-hand impact protection, high visibility and excellent grip, even in oily environments.

**Protects against** repetitive handling impacts, mechanical risks, and grip loss in demanding industrial conditions.

Ideal for high-risk handling tasks in logistics, maintenance or heavy industry.

### / TECHNICAL SPECIFICATIONS

- Double-dipped nitrile coating delivers superior abrasion resistance and grip, even on greasy or wet surfaces.
- TPR reinforcements on the back of the hand absorb shocks while the breathable 13-gauge liner ensures comfort and dexterity.



**MECHANICAL PROTECTION**
- Abrasion: 4/4
- Cutting by slicing: X/5 (to EN 388)
- Tearing: 4/4
- Perforation: 3/4
- Cutting: D/F (to EN ISO 13997)

07(S) TO 12(7XL

# GLV-ETN

## DOUBLE-LAYER NITRILE WATERPROOF GLOVE

**STANDARDS**
- EN 21420 / EN 388 / ANSI/ISEA 105 (Cutting level A6)

### / KEY FEATURES

Gloves specially designed for high resistance to water.

Protects against non aggresave liquids, cuts and abrasion in tough environments.

Ideal for wet, oily or dirty environments (e.g., utilities, industry, waste management).



MECHANICAL PROTECTION

- Abrasion: 3/4
- Cutting (EN 388): 1/5
- Tearing: 2/4
- Perforation: 2/4
- Cutting (EN ISO 13997): X/F

| Ref. | Size |
|---|---|
| TG73 08 | 8 |
| TG74 09 | 9 |
| TG75 10 | 10 |
| TG76 11 | 11 |

# TG73 TO TG76

## WATER-REPELLENT GOAT LEATHER GLOVE

STANDARDS

- EN 21420 / EN 388

### / KEY FEATURES

Water - repellent goat leather gloves, providing good flexibility, dexterity and enhanced abrasion resistance.

Elastic cuff around the wrist, equipped, with anartery guard.

Handling work, dry parts requiring dexteerity, metallurgie, road construction

### / TECHNICAL SPECIFICATIONS

- To ensure proper tightening and wrist protection.
- Equipped with buttonhole and elastic cuff with artery protection.
- Lenght from 250 to 280 mm depending on size dexterity: level 5.



MECHANICAL PROTECTION

- Abrasion: 3/4
- Cutting (EN 388): 1/5
- Tearing: 3/4
- Perforation: 1/4
- Cutting: A/F (to EN ISO 13997)

| Ref. | Size |
|---|---|
| TG47 08 | 8 |
| TG40 09 | 9 |
| TG45 10 | 10 |
| TG4811 | 11 |

# TG40 TO TG48

## LEATHER OVERGLOVE WITH CUFF & SELF-GRIPPING BAND

STANDARDS

- EN 21420 / EN 388

### / KEY FEATURES

Full grain cowhide leather glove, and polyamide thread stitching.
- Dexterity: level 5.

Protection against mechanical hazards, for electrical works. To be worn over insulating gloves.

100mm split cowhide leather cuff limiting accidental exposure or areas near the wrist that can, be critical during electrical handling.



HEAT PROTECTION

- Behavior in fire: 4/4
- Contact heat: 1/4
- Convective heat: 3/4
- Radiant heat: 2/4
- Small liquid metal splashes: 4/4
- Large liquid metal splashes: X/4

MECHANICAL PROTECTION

- Abrasion: 3/4
- Cutting (EN 388): 1/5
- Tearing: 4/4
- Perforation: 3/4
- Cutting (EN ISO 13997): A/F

# TG05

## LEATHER WELDING GLOVES - SIZE 10

STANDARDS

- EN 21420 / EN 407 / EN 388 / EN 12477 (type B )

### / KEY FEATURES

High-resistance welding gloves combining thermal protection and dexterity.

Protects against sparks, radiant heat, molten metal splashes, and mechanical risks.

Ideal for welding operations, arc-related applications, and handling hot or rough materials.

### / TECHNICAL SPECIFICATIONS

- Glove with palm in natural grain cowhide leather
- Natural crust leather back
- 150 mm natural split leather cuff with protection
- Aramid thread stitching
- Other sizes available (08/09/11): please contact us.
- Another welding gloves available (ref GO2) compliant with EN 12477 (Type A) standard

# / SAFETY FOOTWEAR

**Built for tough conditions. Engineered for lasting protection.**

From substations to muddy worksites, climbing steel structures or moving through industrial floors, your feet face constant threats – crushing impact, sharp punctures, static electricity, chemical exposure, heat, and water ingress. At PENTA, we offer safety footwear that combines robust protection with functional comfort, tailored to the realities of electrical and industrial environments.

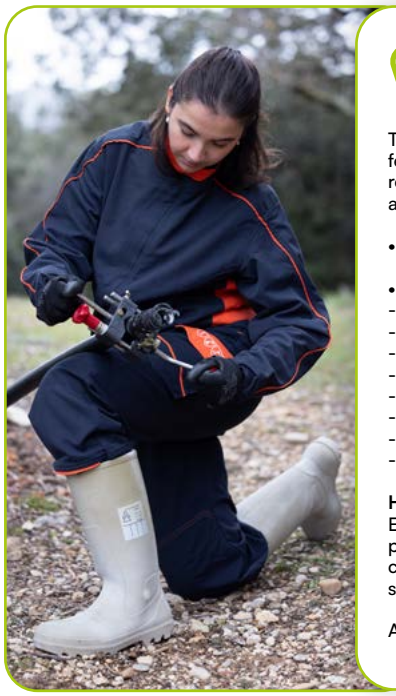
All our safety shoes are certified to EN ISO 20345:2022, with configurations ranging from SB to advanced S7L. Depending on your needs, models include key features such as: toe protection, heel energy absorption, anti-perforation midsoles (metallic or non-metallic), anti-static or ESD properties, hydrocarbon and slip resistance, and water-repellent uppers or full water resistance (WR).

Whether you need metal-free insulation, contact heat resistance (HRO), or winter-ready thermal outsoles (CI/HI), each pair is designed to meet real-world challenges. Our dielectric footwear options are tested up to 20 kV and offer full compatibility with live working PPE kits. Models are available in low or high cuts, with sizes and fits adapted to all profiles.



## STANDARD EN ISO 20345 2011 & 2022

| Marking | Description | EN ISO 20345: 2022 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | EN ISO 20345: 2011 | | | | | | | | | | | | |
| | | SB | S1 | S1P | S1PS | S1PL | S2 | S3 | S3S | S3L | S6 | S7 | S7S | S7L |
| | Toe protection (safety toecap) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Slip resistance (ceramic floors + detergent) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E | Heel energy absorption | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| A | Anti-static | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| P | Penetration resistance (metal insert, tested with 4.5 mm large pin) | | | ✓ | | | | ✓ | | | | ✓ | | |
| PS | Penetration resistance (non-metal insert) PS → Small pin (3 mm) | | | | ✓ | | | | ✓ | | | | ✓ | |
| PL | Penetration resistance (non-metal insert) PL → Large pin (4.5 mm) | | | | | ✓ | | | | ✓ | | | | ✓ |
| FO | Hydrocarbon Resistance | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | | |
| WRU / WPA | Water-repellent upper material | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| WR | Waterproof | | | | | | | | | | ✓ | ✓ | ✓ | ✓ |



## CHOOSING THE RIGHT FOOTWEAR FOR THE JOB

– more than just meeting a standard

The EN ISO 20345:2022 standard defines the minimum safety requirements for safety footwear used in professional environments. Each footwear model is assigned a protection level (e.g., SB, S1P, S3S, S7L), which corresponds to a base level of performance (toe cap, slip resistance, heel energy absorption, etc.) and may include additional features depending on the work context and risk exposure.

• **Base criteria according to a level of protection** (see tables above).

• **Additional criteria** (selected depending on environment and job role):
- ESD: ElectroStatic Dissipation
- FO: Hydrocarbon Resistance (option for version 2022)
- CI: Cold Insulation of the sole
- HI: Heat Insulation of the sole
- HRO: Heat Resistance of the Outsole (up to 300°C)
- LG: Heel for Ladder Grip
- SRC / SR: Slip Resistance
- SC: Abrasion Resistance of Scuff Cap

**How to read the table:**
Each tick ✓ shows which features are required by a given protection level. For example, S3 includes all S1 properties, plus puncture resistance and water penetration resistance. New 2022 levels (S6, S7, etc.) offer improved clarity on waterproofing and non-metallic insert types. For dielectric properties, our safety shoes with insulating soles are certified ASTM F2413 and our insulating boots are certified EN 50321-1.

Always choose your footwear based on actual worksite risks, task specificity, and user comfort.

# C20B-ISOL
# C20H-ISOL

SAFETY SHOES WITH INSULATING SOLES UP TO 20 KV

MARKING
- EN ISO 20345:2011:
- SB E PL WPA FO CI SR
- ASTM F2413-11: EH



metal free

Safety shoe built for durability and stability. Sole tested up to 20 kV, more than what is asked by the ASTM 2413-11.

**Protects against** toe impact (200J), puncture risks (non-metallic insert), anti-slips and contact heat. Protection against step voltage in dry conditions.

Ideal for tough industrial or indoor conditions.

## / TECHNICAL SPECIFICATIONS

Designed with a padded collar and metal-free build for all-day comfort and mobility.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C20B-ISOL | Low | Suede leather | PU3D | 36-47 |
| C20H-ISOL | High | | | |

# TC52

SAFETY RANGERS DESIGNED FOR LIVE WORKING

MARKING
- EN ISO 20345:2011
- SB E P FO WR
- HTA 70A index E (april 2012)



Individually tested regarding the Technical Specification HTA 70A from EDF, but up to 10kV instead of 6kV.

**Protects against** toe impact (200J), puncture. Protection against risks step voltage in dry conditions.

Ideal for live working. They are really sturdy and comfortable.

## / TECHNICAL SPECIFICATIONS

Leather inner mid sole and inner lining, as well as rustproof eyelets for a long product life.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| TC52 | High | Leather | Nitrile | 38-48 |

# TC55

LIVE WORKING BOOTS WITH INSULATING SOLES

MARKING
- EN ISO 20345:2011: SBEP
- SB E PL WPA FO SR LG
- ASTM F2413-18: EH



metal free

High-cut live working boot with electrically insulating soles tested up to 18 kV according to the ASTM 2413-18.

**Protects against** toe impact (200J), puncture risks (non metallic insert). Protection against step voltage in dry conditions.

They are resistant to abrasion in kneeling position and have an excellent grip on all types of ground thanks to the design and material of the sole.

## / TECHNICAL SPECIFICATIONS

Full-grain leather upper, metal-free construction and cold-insulating sole make the TC55 a robust and versatile partner in the field.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| TC55 | High | Full-grain leather | PU2D | 39-48 |



MARKING
- EN ISO 20345:2022
- S7L HRO CI HI SR SC

# C975N

SAFETY RANGERS
FOR LINEMEN



C974: low ankle available under certain conditions: please contact us.

metal free

Robust and antistatic safety boot designed for challenging outdoor conditions and extended wear.

**Protects against** toe impact (200J), puncture risks, and resists to oil and fuel, water, cold and heat.

Ideal for utility work, outdoor maintenance, or high-risk environments.



## / TECHNICAL SPECIFICATIONS

Reinforced design with all-day comfort features: ideal for demanding tasks on wet, cold or uneven terrain.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C975N | High | WR Leather | PU/ Rubber | 39-47 |

MARKING
- EN ISO 20345:2011
- S3 CI SRC

# C92LADY
# C92BLADY

SAFETY FOOTWEAR
FOR SMALL SIZES



metal free

Antistatic safety footwear designed specifically for women's feet, combining full S3 protection, durability, and flexibility in small sizes.

**Protects against** toe impact (200 J), puncture risks, and protects the malleoli.

Ideal for indoor or outdoor industrial use.

## / TECHNICAL SPECIFICATIONS

Flexible sole with multiple flex notches, indoor and outdoor.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C92BLADY | Low | Full-grain leather | PU2D | 35 - 42 |
| C92LADY | High | | | |

MARKING
- EN ISO 20345:2011
- S3 SR

# C90B
# C90H

SAFETY FOOTWEAR



metal free

Antistatic, non-metallic safety footwear.

**Protects against** toe impacts (200 J), puncture risks, and resists to oil and fuel exposure.

Ideal for indoor/ outdoor industrial and maintenance tasks.

## / TECHNICAL SPECIFICATIONS

Durable grain-leather upper, comfortable wide fit, deliver all-day protection indoors or outdoors.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C90B | Low | Leather | PU2D | 35 - 48 |
| C90H | High | | | |

## C800
## C801
SAFETY FOOTWEAR

MARKING
- EN ISO 20345:2022
- S3S FO CI HI SR LG SC




High quality, antistatic safety footwear built for harsh environments, with an excellent grip and durability.

**Protects against** toe impact (200 J), puncture risks, and resists to abrasion in kneeling position.

Ideal for outdoor or industrial work. Great to clim ladders thanks to its heel.

### / TECHNICAL SPECIFICATIONS

Metal-free construction, ideal for intensive outdoor work.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C800 | Low | Leather | PU2D | 36-51 |
| C801 | High | | | |

## C85B
## C85H
SAFETY FOOTWEAR

MARKING
- EN ISO 20345:2022
- S3 FO CI SR



Robust and antistatic safety shoe designed for cindoor and outdoor wear.

**Protects against** toe impact (200 J), puncture risks.

Ideal for utility work, outdoor maintenance.

### / TECHNICAL SPECIFICATIONS

Designed for daily wear.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C85B | Low | Leather | PU2D | 35 - 48 |
| C85H | High | | | |

## C91H
SAFETY BOOTS

MARKING
- EN ISO 20345:2011
- S3 HRO SR



Wide-fit antistatic safety boot designed for indoor and outdoor works.

**Protects against** toe impact (200 J), puncture risks, fuel and oil exposure, contact heat (HRO), and slip hazards on various surfaces.

Ideal for warm and humid work environments thanks to its HRO sole.

### / TECHNICAL SPECIFICATIONS

Wide fit and hydrolysis-resistant design offer long-term durability and comfort.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C91H | High | Full-grain leather | PU/Nitrile | 39-47 |

## C91HN
SAFETY BOOTS WITH QUICK RELEASE SYSTEM

MARKING
- EN ISO 20345:2022
- S3S HRO FO CI HI SR LG SC



Wide-fit antistatic safety boot designed for indoor and outdoor works.

**Protects against** toe impact (200 J), puncture risks, fuel and oil exposure, contact heat (HRO), and resists to abrasion in kneeling position.

Great to climb ladders thanks to its heel.

### / TECHNICAL SPECIFICATIONS

Wide fit and hydrolysis-resistant design offer long-term durability as well as an easy and fast system of release.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C91HN | High | Leather | PU/Nitrile | 36-48 |

MARKING
- EN ISO 20345:2011
- S3 HRO CI HI SRC

# C100H

SAFETY BOOTS



Wide-fit antistatic safety boot designed for indoor and outdoor works.

**Protects against** toe impact (200 J), puncture risks, fuel and oil exposure, contact heat (HRO), and slip hazards on various surfaces.

Ideal for warm and humid work environments thanks to its HRO sole.

## / TECHNICAL SPECIFICATIONS

Wide fit and hydrolysis-resistant design offer long-term durability and a better visibility of the wearer thanks to its retroreflective insert.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C100H | High | Leather | PU2D/Rubber | 39-47 |

MARKING
- EN ISO 20345:2011
- S1P FO SRC

# C80BSN
# C80HSN

SAFETY FOOTWEAR



Antistatic safety footwear designed for indoor and outdoor works.

**Protects against** toe impact (200 J), puncture risks.

Ideal for indoor use in logistics, and industrial works.

## / TECHNICAL SPECIFICATIONS

Wide fit and simple design for industrial or electrical maintenance tasks.

| Ref. | Ankle | Upper material | Outsole material | Size range |
|---|---|---|---|---|
| C80BSN | Low | Leather | PU | 37 - 47 |
| C80HSN | High | | | 36 - 48 |

MARKING
- **EN ISO 20347:2012**: OB
- **Heat resistance**: HRO
- **Slip resistance 2011**: SRC



# TBOB

DIELECTRIC RUBBER OVERBOOTS UP TO 20KV

## / KEY FEATURES

All-terrain safety boots with waterproof membrane, metal-free construction, and full S3 protection for demanding outdoor work.

**Protects against** toe impact (200 J), puncture risks, water ingress, cold (CI), fuel exposure, slips, and electrostatic discharge.

**Ideal for** utility and industrial fieldwork in wet, cold/ rugged conditions requiring comfort, weather resistance.

## / TECHNICAL SPECIFICATIONS

TBOB keeps your feet protected and dry in the harshest environments.

| Ref. | Upper material | Outsole material | Size range |
|---|---|---|---|
| TBOB | Synthetic leather + waterproof membrane | SRC, FO, WR, CI, ESD | 35 - 42 |

MARKING
- **EN ISO 20347:2012**: OB
- **Heat resistance**: HRO
- **Slip resistance 2011**: SRC



# TB20KV-AF

DIELECTRIC SAFETY RUBBER BOOTS 20 KV WITH ARC FLASH PROTECTION

## / KEY FEATURES

Protection against step voltage on electrical network, up to 20 KV AC (proof test for 3 minutes), withstand test to 30kV. Added Arc-Flash protection.

Knee length dielectric safety boots, flex and resistant natural rubber upper, ergonomically designed to secure the foot and enhance stability,.

Comfort system insole for day long comfort, improved foot health and better heel stability. Fully waterproof

## / TECHNICAL SPECIFICATIONS

Natural rubber upper, steel toe cap, and arc-rated performance make TB20K-AF ideal for high-risk network work in tough conditions.

| Ref. | Upper material | Outsole material | Size range |
|---|---|---|---|
| TB20KV-AF | Natural rubber | SRC, FO, WR, CI, ESD | 38 - 48 |

## SAFETY FOOTWEAR

— Why your choice of safety footwear matters more than you think

**Foot protection is more than toe caps.**
While most professionals focus on impact protection, true safety footwear for electrical and industrial environments must account for all the risks happening from the ground up — especially in unpredictable conditions like water, current leakage, or mixed surfaces.

**The outsole is your first line of defense.**
A slip or fall is one of the most common causes of workplace injury. Choosing a shoe with SRC-certified grip, cold insulation (CI), or fuel/oil resistance (FO) helps avoid preventable incidents in outdoor, industrial, or substation areas.

**Dielectric ≠ Standard Safety**
Only dielectric boots, certified to EN 50321-1, and safety shoes with insulating soles can protect against step voltage in live working conditions. Standard safety shoes (EN ISO 20345) do not provide electrical insulation. Safety shoes with insulated outsoles may only be used in dry conditions, otherwise insulated rubber boots must be worn.

**ESD vs insulation — don't confuse them.**
An ESD-compliant shoe prevents static buildup (to protect sensitive equipment), but does not insulate you from electric current. ESD shoes deal with dissipation of electrostatic charges.

**Comfort matters — for safety.**
Foot fatigue increases the risk of errors and slower reactions in critical environments. Features like heel energy absorption, ergonomic insoles, and metal-free flexibility contribute directly to long-term focus and reduced musculoskeletal stress.



MARKING
- **EN ISO 20345:2011**: SBEP
- **Heel energy absorption**: E
- **Slip resistance 2011**: SRC



MARKING
- **EN ISO 20345:2011**: SBEP
- **Heel energy absorption**: E
- **Slip resistance 2011**: SRC



**TB19BTE**: insulating safety boots, class 1 **with toe cap**

MARKING
- **EN ISO 20345:2011**: SBEP
- **Heel energy absorption**: E
- **Slip resistance 2011**: SRC



**TB30KV-LG**: insulating safety boots **with wider calf**

# TB19

## LIVE WORKING SAFETY BOOTS

### / KEY FEATURES

- For live working on alternating current (AC) electrical networks with a nominal voltage less than or equal to 33,000 V. The operator may be exposed to step voltage up to a maximum of 10,000 V AC.
- Protection against step voltage in the event of a phase-to-earth fault.
  Also used whenever there is a risk of moisture absorption for leather footwear.
- 100% of the boots are tested up to 15,000 V AC in accordance with ASTM F1116-14A for 1 minute. Non-metallic protective components with isothermal properties.

### / TECHNICAL SPECIFICATIONS

Natural rubber upper, steel toe cap, and arc-rated performance make TB20K-AF ideal for high-risk network work in tough conditions.

| Ref. | Upper material | Outsole material | Size range |
|---|---|---|---|
| TB19 | Natural rubber | SBPE, SRC | 36 - 49/50 |

# TB19BT

## INSULATING SAFETY BOOTS

### / KEY FEATURES

- For live working or working in the vicinity of live parts in installations up to 7,500 V AC and 11,250 V DC.
- Protection against step voltage in the event of a phase-to-earth fault.
  Also used whenever there is a risk of moisture absorption for leather footwear.
- 100% of the boots are tested up to 10,000 V AC in accordance with EN 50321-1, with a leakage current below 5 mA at 10,000 V AC (standard requirement: maximum 10 mA). Boot tested under alternating current up to 70 mm from the top of the shaft.

### / TECHNICAL SPECIFICATIONS

Natural rubber upper, steel toe cap, and arc-rated performance make TB20K-AF ideal for high-risk network work in tough conditions.

| Ref. | Toe cap | Upper material | Marking | Size range |
|---|---|---|---|---|
| TB19BT | No | Natural rubber | OBE, HRO, SRC | 36-49 /50 |
| TB19BTE | Yes | | SDE, HRO, SRC | |

# TB30KV

## INSULATING SAFETY BOOTS

### / KEY FEATURES

- Protection against step voltage on electrical network, up to 26,500 V AC (Tested individual boots at 30kV under wet condition.)
- Ideal for working environment with high voltage hazards. Power station operations. Substation operations. Electrical hazards with wet conditions / water exposure. High current leakage current. Electrical installations.

### / TECHNICAL SPECIFICATIONS

Seamless, leak-proof construction and bright green shaft ensure electrical protection up to 30 kV with standout visibility on site.

| Ref. | Upper material | Marking | Size range |
|---|---|---|---|
| TB30KV | Vulcanized rubber | SBC, HRO, FO, SBA | 36-50 |

*Under conditions, please contact us.



# ARC FLASH RISK
# BODY PROTECTION

WORK CLOTHING AND ACCESSORIES



# LEGISLATION & STANDARDS

Our range meets the requirements for PPE against the thermal hazards of an electric arc in accordance with the international standards currently in force

| | European Principles | American and International Principles |
|---|---|---|
| Legislation | EN 50110-1 standard (operation of electrical installations — Part 1: general requirements) | Rules issued by the United States federal government agency: OSHA |
| Regulations | **PPE Regulation 2016/425** | **NFPA 70E regulation** |
| Reference standards **Body** | EN 61482-2<br>EN 61482-1-2 | IEC 61482-2<br>IEC 61482-1-1, two methods:<br>Method A (fabric) or Method B (garment, if method A is already carried out)<br>ASTM F1959: Method A (fabric)<br>and ASTM F1506: Method B (garment) |
| Reference standards Head and face | GS-ET-29 → IEC 62819 | ASTM F2178 → IEC 62819 |
| **Test method** | **BOX TEST** | **OPEN ARC** |
| **Interpretation of results according to the original test method** | **Classifications:**<br>**APC 1 (Arc Protection Class 1)**<br>**APC 2 (Arc Protection Class 2)** | **Arc rating in cal/cm²:**<br>**- ATPV[1]**<br>**- Ebt[2]**<br>**- ELIM[3]** |

[1] ATPV: Arc Thermal Performance Value
[2] Ebt: Breakopen threshold energy value
[3] ELIM: Incident Energy Limit

The National Fire Protection Association in the United States (NFPA 70E) classifies the Arc Flash risk into 4 categories. Thanks to this regulation, and once the risk analysis has been carried out for each installation, users can determine the protection required to protect themselves against the risk of second-degree burns.

| Arc Flash Risk Category – ARC (Arc Rating Category) | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| ATPV (cal/cm²) | from 1.2 to 4 cal/cm² | from 4.1 to 8 cal/cm² | from 8.1 to 25 cal/cm² | from 25.1 to 40 cal/cm² |

NB: Experience shows that in certain situations, the incident thermal energy may exceed 40 cal/cm².

## > Protective garment test methods

The performance of a garment against electric arc hazards can be assessed using two test methods in accordance with the general requirements of IEC 61482-2:

### / IEC 61482-1-2: BOX TEST Method

European principle

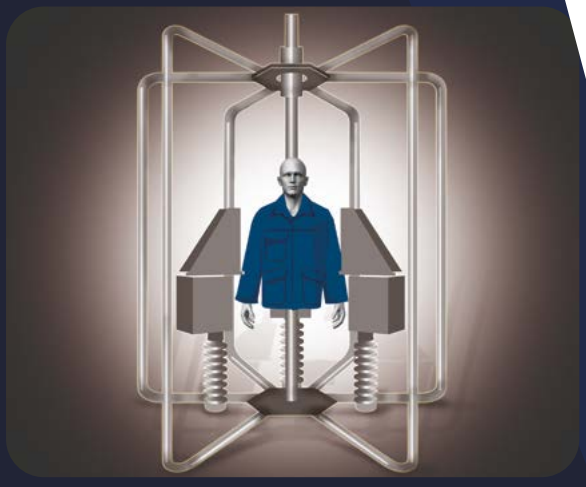


Determination of the class according to the electrical installation current intensity level:
APC 1: 4 kA for 0.5 s at 30 cm
APC 2: 7 kA for 0.5 s at 30 cm

Test relating to the density/intensity of the electric current, classifying garments into two classes and limited to a maximum of 7 kA only. Not suitable for electrical installations above 7 kA.

### / IEC 61482-1-1: OPEN ARC Method

American principle



Determination of the garment ATPV and ELIM values expressed in calories/cm².
The most representative test method and the closest to real conditions, corresponding to numerous levels of thermal energy (above 7 kA). This method simulates the thermal effects on the body, expressed in cal/cm².

# ARC FLASH AND MULTI-RISK PROTECTIVE CLOTHING

## > Protection against **industrial hazards**



**EN 1149-5:2018**

### PROTECTIVE CLOTHING ELECTROSTATIC PROPERTIES
PART 5: DESIGN AND MATERIAL PERFORMANCE REQUIREMENTS

Specifies the requirements relating to materials and the design of electrostatic dissipative protective clothing used in conjunction with an earthing system in order to prevent incendiary discharges.



**EN 13034+A1:2009**

### PROTECTIVE CLOTHING AGAINST LIQUID CHEMICALS
TYPE 6 AND TYPE PB (6) EQUIPMENT

Specifies the minimum requirements for chemical protective clothing for limited use or reusable clothing offering limited chemical protection.

Situations involving light spray, liquid aerosols or low pressure, light splashes, where a total barrier against liquid permeation is not necessary.



**EN ISO 11611:2015**

### PROTECTIVE CLOTHING USED DURING WELDING AND ALLIED PROCESSES

Specifies the essential minimum safety requirements and test methods for protective clothing.
It defines two performance classes according to fabric resistance to small molten metal splashes and to radiant heat transfer through the fabric.



**EN ISO 11612:2016**

### PROTECTIVE CLOTHING AGAINST HEAT AND FLAME
MINIMUM PERFORMANCE REQUIREMENTS

The performance requirements apply to garments that must provide properties of limited flame spread and to garments to which the wearer may be exposed to heat emitted by radiation, convection or contact, or to small splashes of molten metal.



**IEC 61482-2:2018**

### LIVE WORKING
PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF AN ELECTRIC ARC

**IEC 61482-1-1 OPEN ARC test method:** Determination of the assigned arc value (ELIM, ATPV and/or EBT) of materials for garments and protective clothing using an open arc.

**IEC 61482-1-2 BOX TEST method:** Determination of the arc protection class for materials and garments using a directed and constrained arc (test enclosure).

## > Protection against **environmental hazards**

EN 17353:2020



**PROTECTIVE CLOTHING**

Enhanced visibility equipment for moderate-risk situations - Test methods and requirements

EN ISO 20471:2013



**HIGH-VISIBILITY CLOTHING**

Test methods and requirements

EN 343:2019



**PROTECTIVE CLOTHING**

Protection against rain

EN 14058+A1:2023



**PROTECTIVE CLOTHING**

Protective garments for cool environments (temperatures down to –5°C)

EN 342:2017



**PROTECTIVE CLOTHING**

Clothing ensembles and garments for protection against cold (temperatures below –5°C)

EN 14404:2010



**PERSONAL PROTECTIVE EQUIPMENT**

Knee protection for work in the kneeling position



**GOOD TO KNOW**
Working in ATEX zones (EXplosive ATmospheres) requires garments with FR (Flame Retardant) and antistatic properties, and without metallic parts.

# **FABRIC** SELECTION

> Selection of a technical fabric with flame-retardant properties (FR: Flame Retardant)

## / Fabric with a predominance of **FR treated natural fibers**

**Examples of natural fibres:**
*Cotton, wool, lyocell, viscose*
**Product reference examples:**
*AFSIB-12 (see p. xx)*

Protection by **applied FR treatment**

Natural fibres are not inherently flame-retardant. A specific surface treatment is applied to give them FR performance.
Therefore, for each garment, it is essential to comply with the number of washes indicated in the care instructions in order to maintain the certified level of protection.




**Strengths**
*with the example of cotton*

- **Thermal comfort: breathability and good moisture regulation**
- **Wearing comfort, softness and flexibility**
- **Practical and accessible solution**

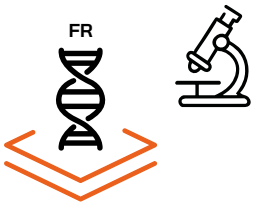
*Ideal when **everyday comfort** is the priority*

## / Fabric with a predominance of **inherent FR synthetic fibres**

**Product reference examples:**
*Aramid, FR viscose, modacrylic*
**Product reference examples:**
*AFPRO-41 (p. xx)*

Protection by **inherent FR fibres**

These synthetic fibres are inherently flame-retardant: their performance does not diminish, even after numerous washing cycles (cycle = washing + drying).




**Strengths**
*with the example of aramid*

- **Excellent resistance to abrasion and tearing**
- **Good resistance to chemicals**
- **Extended service life (FR properties inseparable from the fibre)**

*Suitable for demanding environments where **robustness is essential***

## / Fabric with a blend of **FR treated and inherent FR fibres**

**Product reference examples:**
*AFSIB-25 (p. xx)*

Protection by **FR treatment and inherent FR fibres**

These fabrics combine natural and synthetic FR fibres to combine comfort, resistance and technical performance. Inherent FR synthetic fibres provide flame resistance for the entire lifetime of the garment, while natural fibres contribute complementary benefits such as strength and colour fastness.




**Strengths**
*with the example of polyester*

- **Good colour fastness**
- **Enhanced resistance to abrasion and tearing**
- **Excellent resistance to garment wrinkling**

*A versatile choice to **combine the best properties** of each fibre*



## CUSTOMISATION
## GARMENTS DESIGNED TO REFLECT YOUR BRAND

To strengthen your company's brand image, we offer a range of customisation options:

- Addition of your company logo using non-flame-retardant transfer.
- Choice of fabric colours, number of pockets, addition or removal of RETROREFLECTIVE TAPES in accordance with what is provided in the certification of each garment.

**Contact us for any technical questions and to obtain detailed technical data sheets, size guides, user instructions, and quotations for customisation options.**

# GARMENT RANGES

/ Defining the use of protective clothing

## What type of activity?

Our Arc Flash garment range is organised according to its intended use.
The **Daily Wear** range includes technical garments designed for everyday or prolonged use, while the **Switching Wear** range is intended for occasional use, notably for switching and manoeuvring operations.

## What is the working environment?

Depending on the working environment, you may require high-visibility Arc Flash garments to ensure operators are visible both during the day and at night.
Work carried out in outdoor environments requires Arc Flash garments that also provide protection against weather conditions (cold, rain, sun, etc.).

## > DAILY WEAR RANGE



**AFPTA-POLO10**
- **ATPV** 10 cal/cm²
- **ELIM** 8.2 cal/cm²

* APC 1



**AFPTA-SWEAT15**
- **ATPV** 15 cal/cm²
- **ELIM** 15 cal/cm²

* APC 1



**AFPRO-JEANS15**
- **ATPV** N/A
- **ELIM** 8,3 cal/cm²

* APC 1



**ARCBLOUSE11-B-BR**
- **ATPV** 11 cal/cm²
- **ELIM** 9,1 cal/cm²

* APC 1



**AFPRO-9-BR**
- **ATPV** 9,6 cal/cm²
- **ELIM** 9 cal/cm²

* APC 1



G B

**AFPRO-COM9**
- **ATPV** 9,4 cal/cm²
- **ELIM** N/A

* APC 1



G B

**AFPRO-COM10**
- **ATPV** 10 cal/cm²
- **ELIM** 9 cal/cm²

* APC 1



**AFHVO-7**
- **ATPV** 8,8 cal/cm²
- **ELIM** 7,9 cal/cm²

* APC 1



**AFHVJ-10**
- **ATPV** 10 cal/cm²
- **ELIM** 9 cal/cm²

* APC 1



**AFSIB-12**
- **ATPV** 15 cal/cm²
- **ELIM** 13 cal/cm²

* APC 1



**AFSIB-12-BR**
- **ATPV** 15 cal/cm²
- **ELIM** 13 cal/cm²

* APC 1



**AFPTA-COAT12-BR**
- **ATPV** 15 cal/cm²
- **ELIM** 13 cal/cm²

* APC 1



**ENSEMBLE ROUGE**
- **ATPV** N/A cal/cm²
- **ELIM** N/A cal/cm²

* APC 1



**AFPRO-COM13OR-BR**
- **ATPV** 13 cal/cm²
- **ELIM** 11 cal/cm²

* APC 1



**AFSIB-25**
- **ATPV** 35 cal/cm²
- **ELIM** 32 cal/cm²

* APC 2



**AFPRO-41**
- **ATPV** 43 cal/cm²
- **ELIM** 36 cal/cm²

* APC 2

## > SWITCHING WEAR RANGE



**ARC-40**
- **ATPV** 40 cal/cm²
- **ELIM** 36 cal/cm²

* APC 2



**ARC-53**
- **ATPV** 53 cal/cm²
- **ELIM** 47 cal/cm²

* APC 2



**ARC-65**
- **ATPV** 75 cal/cm²
- **ELIM** N/A

* APC 2



**ARC-100**
- **ATPV** 100 cal/cm²
- **ELIM** N/A

* APC 2

## > ALL WEATHER CONDITIONS RANGE



O J

**AFPLUI-HV**
- **ATPV** N/A
- **ELIM** N/A

* APC 1



O J B

**AFPRO-SS-16**
- **ATPV** 16 cal/cm²
- **ELIM** 11 cal/cm²

* APC 1



**AF-LEO20**
- **ATPV** 23 cal/cm²
- **ELIM** 22 cal/cm²

* APC 2



O J

**AF-HV**

/ ORANGE
- **ATPV** 30 cal/cm²
- **ELIM** 25 cal/cm²

* APC 2

/ YELLOW
- **ATPV** 23 cal/cm²
- **ELIM** 22 cal/cm²

* APC 2

## > DAILY WEAR RANGE

This range covers workwear designed for everyday or prolonged use with ATPV levels from 8 cal/cm² to 41 cal/cm² (APC 1 and APC 2). Garments in our Daily Wear range contain no metallic parts. They are suitable for use in ATEX zones.




# AFPTA-POLO10

*ARC FLASH POLO SHIRT*

**> APC** 1 **> ATPV** 10 Cal/cm² **> ELIM** 8,2 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 A2 B1 C1 F1 / EN 1149-5:2018 / IEC 61482-2:2020 / IEC 61482-1-2 APC 1 / IEC 61482-1-1 ATPV 10 cal/cm², ELIM 8,2 cal/cm²

### / TECHNICAL SPECIFICATIONS

- Soft and flexible knit fabric, very comfortable to wear thanks to cotton fibres.
- Inherent fabric with FR (Flame Retardant) properties intrinsic to the modacrylic fibre.
- Breathable and comfortable knit, can be worn directly next to the skin without risk of allergy.
- **Lightweight garment perfectly suited for working in hot climates.**

Inherent FR knit fabric

48% modacrylic, 42% cotton, 5% para-aramid, 3% polyamide, 2% antistatic fibre, metal-free

S TO 5XL

Complete the reference with the required size, for example: AFPTA-POLO10-XL



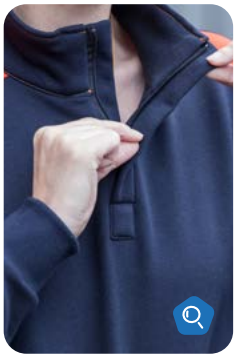

# AFPTA-SWEAT15

*ARC FLASH SWEATSHIRT*

**> APC** 1 **> ATPV** 15 Cal/cm² **> ELIM** 15 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1+A2 B1 C2 F2 / EN 1149-5:2018 / IEC 61482-2:2020 / IEC 61482-1-2 APC 1 / IEC 61482-1-1 ATPV 15 cal/cm², ELIM 15 cal/cm²



### / TECHNICAL SPECIFICATIONS

- Soft and flexible knit fabric, very comfortable to wear thanks to cotton fibres.
- Inherent fabric with FR (Flame Retardant) properties intrinsic to the modacrylic fibre.
- Breathable and comfortable knit, can be worn directly next to the skin without risk of allergy.
- Ideal for working in cool environments.

Inherent FR knit fabric

60% modacrylic, 38% cotton, 2% antistatic fibre, without metallic parts

S TO 5XL

Complete the reference with the required size, for example AFPTA-SWEAT15-S




Reference: **AFPTA-SWEAT15**



Complete your PPE with the **GENPOLY**
> see page 56

Weight: **345 g/m²**

# AFPRO-JEANS15

*ARC FLASH JEANS*

> **APC** 1 > **ELIM** 8,3 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 F1 / EN 1149-5:2018 / IEC 61482-2:2018 / IEC 61482-1-2 APC 1 / IEC 61482-1-1 (Method A) ELIM 8,3 cal/cm² / EN 14404:2004+A1:2010 Level 1, Type 2 with GENPOLY

**Inherent FR fabric**
58% modacrylique 36% cotton, 4% élasthanne 2% antistatique, metal free

36 TO 60

Complete the reference with the required size, for example: AFPRO-JEANS15-*36*



Weight: **350 g/m²**

# ARCBLOUSE11-B-BR

*ARC FLASH COAT*

> **APC** 1 > **ATPV** 11 Cal/cm² > **ELIM** 9,1 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 A2 B1 C1 E1 F1
EN ISO 11611:2015 A1+A2 Class 1 /
EN 13034:2005+A1:2009 Type PB [6] /
EN 1149-5:2018 /
IEC 61482-2:2020 / IEC 61482-1-1 APC 1 /
IEC 61482-1-1 (Method A) ATPV 11 cal/cm² ELIM 9,1 cal/cm²

**FR-treated fabric**
64% cotton, 35% polyester, 1% antistatic fibre, metal-free

S TO 3XL

Complete the reference with the required size, for example: ARCBLOUSE11-B-BR-*S*

Complete your PPE with the **GENPOLY**
> see page 56



AFPRO-VES9-BR



AFPRO-PAN9-BR

Weight: **260 g/m²**

# AFPRO-9-BR

*ARC FLASH SET WITH RETROREFLECTIVE TAPES*

> **APC** 1 > **ATPV** 9,6 Cal/cm² > **ELIM** 9 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E3 F1 /
EN ISO 11611:2015 A1 Class 1 /
EN 13034:2005+A1:2009 Type PB [6] /
EN 1149-5:2018 / IEC 61482-2:2020 /
IEC 61482-1-2 APC 1 / IEC 61482-1 (Method A)
ATPV 9,6 cal/cm² ELIM 9 cal/cm² / EN 17353:2020 Type B2
**AFPRO-PAN9-BR:** EN 14404:2004+A1:2010
Level 1, Type 2 with GENPOLY

| Ref. | Description |
|---|---|
| AFPRO-VES9-BR | Jacket |
| AFPRO-PAN9-BR | Trousers |

Inherent FR fabric
51% modacrylique, 41% cotton, 7% polyamide, 1% antistatic fibre, metal free

JACKET: XS TO 5XL
TROUSERS : 36 TO 62

Complete the reference with the required size, for example: AFPRO-VES9-BR-M and AFPRO-PAN9-BR-48



AFPRO-COM9G

Weight: **260 g/m²**

AFPRO-COM9B

# AFPRO-COM9B•G

*ARC FLASH COVERALL WITH RETROREFLECTIVE TAPES AND DOUBLE ZIP FASTENING*

> **APC** 1 > **ATPV** 9,4 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E2 F1 /
EN ISO 11611:2015 A1 Class 1 /
EN 13034:2005+A1: 2009 Type 6 /
EN 1149-5:2018 / IEC 61482-2:2020 /
IEC 61482-1-2 APC 1 / IEC 61482-1-1 (Method A)
ATPV 9,4 cal/cm² / EN 17353:2020 Type B3

| Ref. | Description |
|---|---|
| AFPRO-COM9B | Blue coverall |
| AFPRO-COM9G | Grey coverall |

**FR-treated fabric**
79% cotton, 20% polyester, 1% antistatic fibre, metal-free

XS TO 5XL

Complete the reference with the required size, for example: AFPRO-COM9G-*5XL*



Complete your PPE with the **GENPOLY** > see page 56

AFPRO-COM10B

AFPRO-COM10G

Weight: 320 g/m²

# AFPRO-COM10B•G

*ARC FLASH COVERALL*
*WITH RETROREFLECTIVE TAPES*

> **APC** 1 > **ATPV** 10 Cal/cm² > **ELIM** 9 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E3 F1 / EN ISO 11611:2015 A1 Class 1 / EN 13034:2005+A1:2009 Type 6 / EN 1149-5:2018 / IEC 61482-2:2020 / EN 61482-1-2 APC 1 / EN 61482-1-1 (Method A) ATPV 10 cal/cm² ELIM 9 cal / cm² / EN 17353:2020 Type B3 / EN 14404:2004 + A1:2010 Level 1, Type 2 with GENPOLY

| Ref. | Description |
|---|---|
| AFPRO-COM10B | Blue coverall |
| AFPRO-COM10G | Grey coverall |

**FR-treated fabric**
74% cotton, 25% polyester, 1% antistatic fibre, metal-free

XS TO 5XL

Complete the reference with the required size, for example: AFPRO-COM10B-XL



High stand-up collar closed with snap buttons

Adjustable cuffs

Standards pictograms

AFHVO-VES7

Double zip fastening

Standards pictograms





Complete your PPE with the **GENPOLY** > see page 56

Weight: 295 g/m²

AFHVO-PAN7

AFHVO-COM7

# AFHVO-7

*ARC FLASH SET*
*WITH RETROREFLECTIVE TAPES*

> **APC** 1 > **ATPV** 8,8 Cal/cm² > **ELIM** 7,9 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E2 F1 / EN ISO 11611:2015 A1 Class 1 / EN 13034:2005+A1:2009 Type PB[6] / EN 1149-5:2018 / IEC 61482-2:2018 IEC 61482-1-2 APC 1, IEC 61482-1-1 (Method A) ATPV 8,8 cal/cm² ELIM 7,9 cal/cm² / EN ISO 20471:2013+A1:2016 Class 3
AFHVO-PAN7: EN 14404:2004+A1:2010 Level 1, Type 2 with GENPOLY

| Ref. | Description |
|---|---|
| AFHVO-VES7 | Jacket |
| AFHVO-PAN7 | Trousers |
| AFHVO-COM7 | Coverall |

**FR-treated fabric**
50% polyester, 49% cotton, 1% antistatic fibre, metal-free

XS TO 4XL

Complete the reference with the required size, for example: AFHVO-COM7-*3XL*



High stand-up collar closed with snap buttons

Adjustable cuffs

Standards pictograms

AFHVJ-VES10

Double zip fastening

Standards pictograms





Complete your PPE with the **GENPOLY** > see page 56

Weight: 320 g/m²

AFHVJ-PAN10

AFHVJ-COM10

# AFHVJ-10

*ARC FLASH SET*
*WITH RETROREFLECTIVE TAPES*

> **APC** 1 > **ATPV** 10 Cal/cm² > **ELIM** 9 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E3 F1 / EN ISO 11611:2015 A1 Class 1 / EN 13034:2005+A1:2009 Type PB[6] / IEC 61482-2:2018 / IEC 61482-1-2 APC 1 / IEC 61482-1-1 (Method A) ATPV 10 cal/cm² ELIM 9 cal/cm² / EN ISO 20471: 2013+A1:2016 Class 3 /
AFHVJ-PAN10: EN14404:2004+A1:2010 Level 1, Type 2 with GENPOLY

| Ref. | Description |
|---|---|
| AFHVJ-VES10 | Jacket |
| AFHVJ-PAN10 | Trousers |
| AFHVJ-COM10 | Coverall |

**FR-treated fabric**
74% cotton, 25% polyester, 1% antistatic fibre, metal free

S TO 4XL

Complete the reference with the required size, for example: AFHVJ-VES10-3XL and AFHVJ-PAN10-4XL




# AFSIB-12-BR

*ARC FLASH SET WITH OR WITHOUT RETROREFLECTIVE TAPES*

> **APC** 1 > **ATPV** 15 Cal/cm² > **ELIM** 13 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E2 F1 / EN ISO 11611:2015 A1 Class 1 / EN 13034:2005+ A1:2009 Type PB[6] / IEC 61482-2:2020 IEC 61482-1-2 APC 1, IEC 61482-1-1 (Method A) ATPV 15 cal/cm² ELIM 13 cal/cm² (Method B) ATPV 13,5 cal/cm² / **AFSIB-PAN12POCK:** EN 14404:2004+A1: 2010 Level 1, Type 2 with GENPOLY / **AFSIB-12-BR** EN 17353:2020 Type B2

| Ref. | Description |
|---|---|
| AFSIB-VES12 | Jacket |
| AFSIB-PAN12 | Trousers |
| AFSIB-PAN12POCK<br>* Under conditions, please contact us. | Trousers with kneepad pockets |
| AFSIB-COM12 | Coverall |
| AFSIB-VES12-BR<br>* Under conditions, please contact us. | Jacket with RETROREFLECTIVE TAPES |
| AFSIB-PAN12-BR<br>* Under conditions, please contact us. | Trousers with RETROREFLECTIVE TAPES |

**FR-treated fabric**

79% cotton, 20% polyester, 1% antistatic fibre, metal free

XS TO 5XL

Complete the reference with the required size, for example: AFSIB-VES12-L and AFSIB-PAN12POCK-2XL








# COMBINATION RECOMMENDATIONS
## IN A HAZARDOUS ELECTRICAL ENVIRONMENT

/ We recommend combining certain items of equipment and optimising your protection in order to enable you to operate under the best possible conditions and ensure your safety in hazardous environments.
/ Following your risk analysis, we offer an Arc Flash protection kit APC 1 — ATPV 12 cal/cm².

**/ Example of a kit for Arc Flash protection**
**Arc Flash APC 1 - ATPV 12 cal/cm²**

| Réf. | Description | Available sizes |
|---|---|---|
| AFSIB-VES12-** | Arc Flash jacket APC 1, ATPV 15 cal/cm², ELIM 13 cal/cm² | XS to 4XL |
| AFSIB-PAN12-** | Arc Flash trousers APC 1, ATPV 15 cal/cm², ELIM 13 cal/cm² | |
| V1-BK(1) | Visarc helmet with Arc Flash face shield APC 1 — 4 kA / 0.5 s. Option to choose with or without lateral protection | One size |
| AFG-41-*/** | Insulating gloves with mechanical protection against the thermal effects of short-circuit | 7 - 12 |
| C20B-ISOL* | Low safety shoes with insulating soles tested up to 20 kV | 36 - 47 |
| RBCL* | Insulating mat | Please contact us |

** Complete with the required size..
(1) Complete the reference with the desired colour: BK (standard black) - W (white) - R (red) - Y (yellow) - G (green)






Weight: 300 g/m²

# AFPTA-COAT12-BR

*ARC FLASH LONG COAT WITH RETROREFLECTIVE TAPES*

> **APC** 1 > **ATPV** 15 Cal/cm² > **ELIM** 13 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E2 F1 / EN ISO 11611:2015 A1 Class 1 / EN 13034:2005+A1:2009 Type PB[6] / EN 1149-5:2018 / IEC 61482-2:2020 / IEC 61482-1-2 APC 1, IEC 61482-1-1 (Method A) ATPV 15 cal/cm² ELIM 13 cal/cm² (Method B) ATPV 13,5 cal/cm² / EN 17353:2020 Type B2

## / TECHNICAL SPECIFICATIONS

- Anti-panic zip fastening allowing the coat to be removed quickly when required.
- Durable and robust, with good resistance to wear and tearing.
- Flame Retardant (FR) fabric tested after 50 washing cycles in accordance with EN ISO 11612.
- Ease pleat at the back to ensure comfort and protection during everyday movements.

* Under conditions, please contact us.

**FR-treated fabric**
79% cotton 20% polyester 1% antistatic fibre, metal free

S/M, L/XL, 2XL/3XL, 4XL/5XL

Complete the reference with the required size, for example: AFPTA-COAT12-BR-S/M

Complete your PPE with **GENPOLY**
> see page 56



VESROUGE



PANTROUGE

Weight: 320 g/m²

# RED SET

*ARC FLASH SET WITH RETROREFLECTIVE TAPES*

> **APC** 1

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E3 F1 / EN ISO 11611:2015 A1 Class 1 / EN 13034:2005 +A1:2009 Type 6 / EN 1149-5:2018 / IEC 61482-2:2020 / IEC 61482-1-2 APC 1 / EN 17353:2020 Type B3 / PANTROUGE EN 14404:2004+A1:2010 Level 1, Type 2 with GENPOLY

| Ref. | Description |
|---|---|
| VESROUGE | Jacket |
| PANTROUGE | Trousers |

FR-treated fabric
74% cotton, 25% polyester, 1% antistatic fibre, metal free

XS TO 4XL

Complete the reference with the required size, for example: VESROUGE-*XS*



Weight: 340 g/m²

# AFPRO-COM13OR-BR

*ARC FLASH COVERALL WITH RETROREFLECTIVE TAPES*

> **APC** 1 > **ATPV** 13 Cal/cm² > **ELIM** 11 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1+A2 B1 C1 E2 F1 / EN ISO 11611:2015 A1+A2 Class 2 / EN 13034:2005+A1:2009 Type 6 / EN 1149-5:2018 / IEC 61482-2:2020 / IEC 61482-1-2 APC 1 / IEC 61482-1-1 ATPV 13 cal/cm² ELIM 11 cal/cm² / EN 17353:2020 Type B2 / ASTM F1959/ F1959M-12 ATPV=16 Cal/cm²

**FR-treated fabric**
80% cotton, 19% polyester, 1% antistatic fibre, metal free

S TO 3XL

Complete the reference with the required size, for example: AFPRO-COM13OR-BR-*XL*



Références: **AFPRO-SS-HVO16 + AFPRO-JEANS15**



# AFSIB-25

*ARC FLASH SET*

> **APC** 2 > **ATPV** 35 Cal/cm² > **ELIM** 32 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 E2 F1 / EN ISO 11611:2015 A1 Class 1 / EN 13034:2005+ A1:2009 Type 6 / IEC 61482-2:2020 / EN 61482-1-2 APC 2, EN 61482-1-1 (Method A) ATPV 35 cal cm² ELIM 32 cal/cm² (Method B) ATPV 35 cal/cm²

## / TECHNICAL SPECIFICATIONS

- Fabric with inherent FR properties from aramid fibres and treated cotton fibres, combining comfort (softness and flexibility).
- Kidney protection panel and extended back for optimal protection even in a bent position.
- Good mechanical resistance of the fabric (to wear and tearing) thanks to aramid fibres.

| Ref. | Description |
|---|---|
| AFSIB-VES25 | Jacket |
| AFSIB-PAN25 | Trousers |
| AFSIB-COM25* | Coverall |

**Inherent FR fabric**

35% modacrylique, 30% cotton, 14% para-aramid, 20% viscose FR, 1% antistatique, metal free

* Under conditions, please contact us.

XS TO 5XL

Complete the reference with the required size, for example: AFSIB-PAN25-*XL*

Weight: **440 g/m²**





# COMBINATION RECOMMANDATIONS
## IN A HAZARDOUS ELECTRICAL ENVIRONMENT

/ We recommend combining certain items of equipment and optimising your protection in order to enable you to operate under the best possible conditions and ensure your safety in hazardous environments.
/ Following your risk analysis, we offer an APC 2 kit — ATPV 25 cal/cm².

**/ Example of a kit for Arc Flash protection**
**Arc Flash APC 2 - ATPV 25 cal/cm²**

| Ref. | Description | Available sizes |
|---|---|---|
| AFSIB-VES25-** | Arc Flash jacket APC 2, ATPV 35 cal/cm², ELIM 32 cal/cm² | XS to 5XL |
| AFSIB-PAN25-** | Arc Flash trousers APC 2, ATPV 35 cal/cm², ELIM 32 cal/cm² | |
| V2-25-LPP-(1) | Visarc helmet with Arc Flash face shield APC 2 — ATPV 25 cal/cm² — integrated lateral protection | On size |
| AFG-41-*/** | Insulating gloves with mechanical protection and thermal effects of short-circuit | 7 - 12 |
| C20H-ISOL-** | High safety shoes with insulating soles tested up to 20 kV | 36 - 47 |
| RBCL* | Insulating mat | see page 34 |

(1) Complete the reference with the desired colour: BK (standard black) - W (white) - R (red) - Y (yellow) - G (green)
* Complete with the desired Class.. ** Complete with the required size.




**V2-25-LPP-BK***
Visarc Helmet
See page 12

**AFSIB-VES25-****
Arc Flash jacket
See page p. 52

**AFG-41-*/****
Insulating gloves
See page 23

**AFSIB-PAN25-****
Arc Flash trousers
See page p. 52

**C20H-ISOL-****
safety shoes with insulating soles




# AFPRO-41

*ARC FLASH SET*

> **APC** 2 > **ATPV** 43 cal/cm² > **ELIM** 36 cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B2 C2 / EN 1149-5:2018 /
EN ISO 11611:2015 A1 Class 1 / EN 61482-2:2020
EN 61482-1-2 APC 2, EN 61482-1-1 ATPV 43 cal/cm² ELIM 36 cal/cm²

| Ref. | Description |
|---|---|
| AFPRO-VES41 | Jacket |
| AFPRO-PAN41 | Trousers |

* Under conditions, please contact us.

**Inherent FR fabric**

75% aramid, 13% modacrylique, 10,5% cotton, 1,5% antistatique, metal free

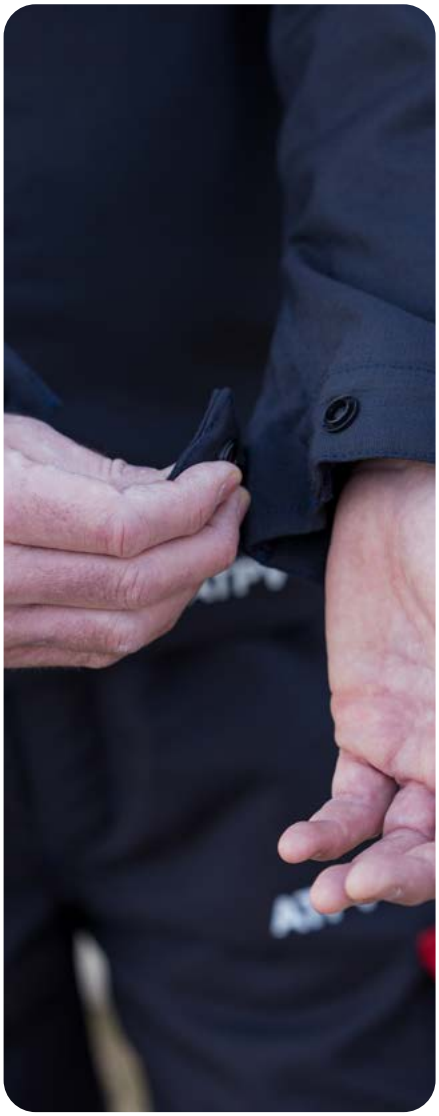
## / TECHNICAL SPECIFICATIONS

- Inherent fibre ensuring garment performance throughout its entire service life.
- Aramid fibre providing an excellent balance between fabric lightness and level of protection.
- Kidney protection panel and extended back for optimal protection even in a bent position.

XS TO 3XL

Complete the reference with the required size, for example: AFPRO-VES41-*S* and AFPRO-PAN41-*M*










References: AFPRO-VES41 + AFPRO-PAN41

## > ALL WEATHER CONDITIONS RANGE

In this range, you will find workwear designed for prolonged outdoor use in order to provide protection against difficult weather conditions, in addition to protection against electric arcs. Garments in our Weather Protection range contain no metallic parts. They are suitable for ATEX zones.

Complete your PPE with
**AFBRE**
> see page 56



AFPLUI-HVO
AFPLUI-HVJ

Weight: 390 g/m²

# AFPLUI-HVO•J

*HIGH-VISIBILITY ARC FLASH RAIN SET WITH RETROREFLECTIVE TAPES*

### > APC 1

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C1 / EN 1149-5:2018 / IEC 61482-2:2018 / EN 61482-1-2 APC 1 / EN ISO 20471:2013+A1:2016 Class 3 / EN 343:2009 [3;1]

| Ref. | Description |
|---|---|
| AFPLUI-VES-HVO | Orange jacket |
| AFPLUI-VES-HVJ | Yellow jacket |
| AFPLUI-PAN-HVO | Orange trousers |
| AFPLUI-PAN-HVJ | Yellow trousers |

**FR-treated fabric**
67% polyester, 33% cotton - 100% PVC-free coating

### / TECHNICAL SPECIFICATIONS

- Elasticated cuffs, stand-up collar, windproof and rainproof.
- High-frequency welded seams ensure perfect waterproofness and resistance to weather conditions.
- Adjustable hood with the possibility of storage in the collar.

XS TO 3XL

Complete the reference with the required size, for example: AFPLUI-PAN-HVOHVO*3XL*



AFPRO-SS-M16
AFPRO-SS-HVO16
AFPRO-SS-HVJ16

Weight: 360 g/m²

# AFPRO-SS-M•HVO•J16

*ARC FLASH SOFTSHELL WITH RETROREFLECTIVE TAPES*

### > APC 1 > ATPV 16 Cal/cm² > ELIM 11 Cal/cm²

MARKINGS & STANDARDS

EN ISO 11612:2015 A1 B1 C2 / EN ISO 11611:2015 A1 Class 2 / EN 13034:2005 + A1:2009 Type PB[6] / EN 1149-5:2018 / IEC 61482-2:2018 EN 61482-1-2 APC 1, EN 61482-1-1 ATPV 16 cal/cm² ELIM 11 cal/cm² / AFPRO-SS-HV: EN ISO 20471:2013+A1: 2016 Class 2

| Ref. | Description |
|---|---|
| AFPRO-SS-M16 | Blue softshell |
| AFPRO-SS-HVO16 | Orange softshell |
| AFPRO-SS-HVJ16 | Yellow softshell |

**Inherent FR fabric**
60% modacrylique, 39% cotton, 1% antistatique, metal free

S TO 3XL

Complete the reference with the required size, for example: AFPRO-SS-M16-L

## > ACCESSORIES

| Visual | Reference | Description | Key points |
|---|---|---|---|
|  | AFCAP23 | **Arc Flash hood for parka**<br>• IEC 61482-2<br>• EN 61482-1-1: ATPV 23 cal/cm², ELIM 22 cal/cm²<br>• EN 61482-1-2: APC 2 (7kA) | • Double-layer waterproof hood for protection against cold and rain.<br>• Fabric tested against electric arc hazards.<br>• Elastic closure, one-size-fits-all. |
|  | DOUBLEFR | **Flame-retardant fleece lining for parka**<br>• EN ISO 11612:2015 (Heat and flames): A1, B1, C1 | • Zip fastening with double sliders and round collar.<br>• Available sizes: S, M, L, XL, 2XL, 3XL. |
|  | AFBRE | **Adjustable and removable braces for over-trousers** | • All-plastic quick-release buckle.<br>• One size. |
|  | GENPOLY | **Pair of kneepads**<br>• EN 14404 + A1 Level 1 | • Knee protection for garments equipped with kneepad pockets.<br>• 15 mm thickness, material made of 100% polyethylene. |



AFPARKA-LEO20



AFOVERPAN-LEO

Weight: 420 g/m²

Complete your PPE with **AFCAP23**, **DOUBLEFR** for parka **AFBRE** for over-trousers

# AF-LEO•20

*ARC FLASH SET WITH RETROREFLECTIVE TAPES*

> **APC** 2 > **ATPV** 23 Cal/cm² > **ELIM** 22 Cal/cm²

MARKINGS & STANDARDS

EN ISO 14116:2015 Indice 3 / EN ISO 11612:2015 A1 B1 C1 E1 F1 / EN ISO 11611: 2015 A1 Class 2 / EN 13034:2005+A1:2009 Type PB[6] / EN 1149-5:2018 / IEC 61482-2: 2020 EN 61482-1-2 APC 2 / EN 61482-1-1 ATPV 23 cal/cm² ELIM 22 cal/cm² / EN 343:2003+A1:2007 [3;2]

| Ref. | Description |
|---|---|
| AFPARKA-LEO20 | Parka |
| AFOVERPAN-LEO | Over-trousers |

**Inherent FR fabric**

50% modacrylique, 41% cotton, 7% PU, 2% antistatique, metal free

S TO 3XL

Complete the reference with the required size
for example: AFPARKA-LEO20-*L* and AFOVERPAN-LEO-*XL*



Complete your PPE with **AFCAP23, DOUBLEFR** for parka
> see page 56

Complete your PPE with **AFBRE** for over-trousers
> see page 56

Yellow: 270 g/m²

Orange: 350 g/m²

# AF-HVJ•O

*HIGH-VISIBILITY ARC FLASH SETS WITH RETROREFLECTIVE TAPES*

> **APC** 2
*YELLOW* > **ATPV** 23 Cal/cm² > **ELIM** 22 Cal/cm²
*ORANGE* > **ATPV** 30 Cal/cm² > **ELIM** 25 Cal/cm²

MARKINGS & STANDARDS

EN ISO 14116:2015 Indice 3 / EN ISO 11612:2015 A1 B1 C1 E1 F1 / EN ISO 11611: 2015 A1 Class 2 / EN 13034:2005+A1:2009 Type PB[6] / EN 1149-5:2008 / EN 61482-2:2020 EN 61482-1-2 APC 2, (***Yellow***) EN 61482-1-1 ATPV 23 cal/cm² ELIM 22 cal/cm² (***Orange***) EN 61482-1-1 ATPV 30 cal/cm² ELIM 25 cal/cm² / EN 343:2003+A1:2007 [3;2] EN ISO 20471:2013+A1:2016 Class 2

| Ref. | Description |
|---|---|
| AFPARKA-HVJ | Yellow jacket |
| AFPARKA-HVO | Orange jacket |
| AFPRO-OVERPAN-HVJ | Yellow over-trousers |
| AFPRO-OVERPAN-HVO | Orange over-trousers |

Metal free

## / TECHNICAL SPECIFICATIONS

- Anti-panic zip fastening to allow rapid removal of the parka if required.
- Waterproof and breathable membrane to protect against wind and rain.
- Compatible with various accessories such as the FR lining, ideal for working in cold environments.

S TO 3XL

Complete the reference with the required size
for example: AFPARKA-HVJ-*M* and AFPRO-OVERPAN-HVJ-*M*







## > SWITCHING WEAR RANGE

In this range, you will find workwear designed for occasional use, for switching and manoeuvring operations.




# ARC40

*ARC FLASH SET AND ARC-LFH40 HOOD*

> **APC** 2
> **ATPV** 40 Cal/cm² > **ELIM** 36 Cal/cm²

MARKINGS & STANDARDS — LONG JACKET & BIB AND BRACE

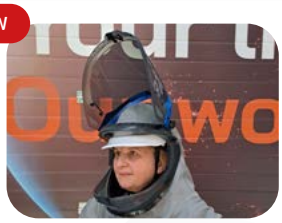
EN ISO 11612:2015 A1 A2 B1 C1 F1 / EN 1149-5:2008 /
IEC 61482-2:2020 EN 61482-1-2 APC 2, EN 61482-1-1 (Method A)
ATPV 40 cal/cm² ELIM 36 cal/cm²

MARKINGS & STANDARDS — FACE SHIELD

**ARCCOI40 face shield:** EN 166:2002 / EN 170:2002 /
GS-ET-29:2019 / ASTM F2178 / ARC-LFH40 face shield: same standards as the ARCCOI40 and the newest IEC 62819:2023 / EN ISO 16321-1:2022

ARC-LFH40 NEW





| Ref. | Description |
|---|---|
| ARCCOI40 | Hood |
| ARC-LFH40 | Hood with flip-up face shield |
| ARCVES40 | Long jacket |
| ARCSAL40 | Bib and brace |
| ARCGAN40 | Over-gloves |

**HOOD** ONE SIZE
**LONG JACKET** S TO 4XL
**BIB AND BRACE** S TO 4XL
**OVER-GLOVES** M TO 2XL

Complete the reference with the required size, for example: ARCSAL40-*2XL*

**FR-treated fabric** (two layers): 87% cotton, 12% nylon, 1% antistatic fibre




# ARC53

*ARC FLASH SET*

> **APC** 2 > **ATPV** 53 Cal/cm² > **ELIM** 47 Cal/cm²

MARKINGS & STANDARDS — LONG JACKET & BIB AND BRACE

EN ISO 11612:2015 A1 A2 C2 F2 / IEC 61482-2:2020 EN 61482-1-2
APC 2, EN 61482-1-1 (Method A) ATPV 53 cal/cm² ELIM 47 cal/cm²

MARKINGS & STANDARDS — FACE SHIELD

EN 166:2001 / EN 170:2002 / GS-ET-29:2019 / ASTM F2178

| Ref. | Description |
|---|---|
| ARCCOI53 | Hood |
| ARCVES53 | Long jacket |
| ARCSAL53 | Bib and brace |
| ARCGAN53 | Over-gloves |

**HOOD** ONE SIZE
**LONG JACKET** S TO 5XL
**BIB AND BRACE** S TO 5XL
**OVER-GLOVES** M TO 2XL

Complete the reference with the required size, for example: ARCGAN53-*2XL*

**FR-treated fabric** (three layers): 87% cotton, 12% nylon, 1% antistatic fibre




# ARC65

*ARC FLASH SET*

> **APC** 2 > **ATPV** 75 Cal/cm²

MARKINGS & STANDARDS **FABRIC**

IEC 61482-2:2020 IEC 61482-1-2 APC 2 / ASTM F1506
ATPV 75 cal/cm² / ASTM F1959 / NFPA 70E / EN 1149-2 A

MARKINGS & STANDARDS **FACE SHIELD**

ASTM F2178 / ANSI Z87.1 / EN 166:2002 / EN 170:2002 / GS-ET-29:2019 Class 2

| Ref. | Description |
|---|---|
| ARCCOI65 | Hood |
| ARCVES65 | Long jacket |
| ARCSAL65 | Bib and brace |
| ARCGAN65 | Over-gloves |

**HOOD** ONE SIZE
**LONG JACKET** S TO 3XL
**BIB AND BRACE** S TO 3XL
**OVER-GLOVES** M TO XL

Complete the reference with the required size, for example: ARCVES65-*XL*




# ARC100

*ARC FLASH SET*

> **APC** 2 > **ATPV** 100 Cal/cm²

MARKINGS & STANDARDS **FABRIC**

IEC 61482-2:2020, IEC 61482-1-2 APC 2 / ASTM F1506
ATPV 100 cal/cm² / ASTM F1959 / NFPA 70E / EN 1149-2 A

MARKINGS & STANDARDS **FACE SHIELD**

ASTM F2178 / ANSI Z87.1 / EN 166:2002 / EN 170:2002 / GS-ET-29:2019 Class 2

| Ref. | Description |
|---|---|
| ARCCOI100 | Hood |
| ARCVES100 | Long jacket |
| ARCSAL100 | Bib and brace |
| ARCGAN100 | Over-gloves |

**HOOD** ONE SIZE
**JACKET** S TO 3XL
**BIB AND BRACE** S TO 3XL
**OVERGLOVES** M TO 2XL

Complete the reference with the required size, for example: ARCSAL100-*M*





# CRYOVEST

## THERMOREGULATING VEST AGAINST HEAT STRESS

### / TECHNICAL SPECIFICATIONS

High-performance thermoregulating vest designed for operators performing physical exertion in thermal environments above 28°C.

**Physiological benefits**
- Reduction and stabilisation of heart rate
- Stabilisation of hydration status (reduced sweating)
- Improved thermal comfort
- Promotes recovery after exertion

**Psycho-cognitive benefits**
- Preserves memory, cognitive processing and fine motor skills
- Preserves coordination of movements and improves reaction times

**GOOD TO KNOW**
Never wear the CRYOVEST over Arc Flash garments, as this may compromise their level of protection. It must be worn under Arc Flash garments.

# PPE AGAINST **FALLS FROM A HEIGHT**



**/ Device or means intended to be carried or held by a person to protect them against one or several risks that may threaten their safety or health.**

It must comply with 2016/425 European Regulation which determines

- Essential health and safety requirements
- Commercialization of PPE
- The definition of PPE
- Conformity between member states and free intra-community circulation.
- Design according to the 3 categories of PPE
- PPE certification processes
- The scope of EU type examination
- Manufacturer's obligations

## LIST OF EUROPEAN STANDARDS

| Standards | Description |
|---|---|
| EN 341 | Descenders devices |
| EN 353-1 | Guided type fall arresters with a rigid anchor line |
| EN 353-2 | Guided type fall arresters with a flexible anchor line |
| EN 354 | Restraint lanyards with fixed length |
| EN 355 | Energy absorbers |
| EN 358 | Belts and lanyards for work positioning or restraint |
| EN 360 | Self-retracting lifelines |
| EN 361 | Safety harnesses |
| EN 362 | Connectors |
| EN 363 | Personal fall protection systems |
| EN 364 | Test methods for materials, components and systems |
| EN 365 | General requirements for instructions for use, maintenance, periodic examination, repair, marking and packaging |
| EN 795 | Anchorage devices and their components |
| EN 813 | Requirements, testing, marking and information |
| EN 1891 | Low stretch textile ropes of kernmantel construction |

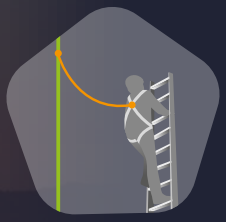


## LIST OF HARMONIZED EUROPEAN STANDARDS

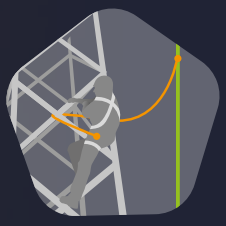
PPE should only be used as a last resort when collective protection cannot be provided. The fall arrest system allows a person to be connected to an anchorage point in such a way that the fall is safely arrested.



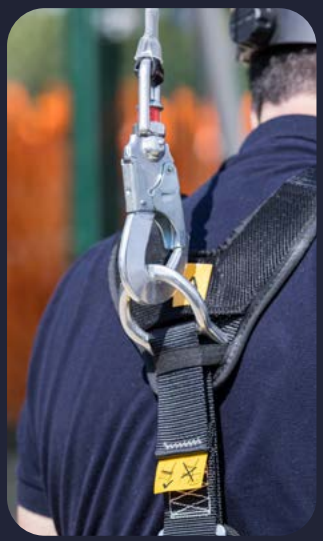
/ RETENTION SYSTEM



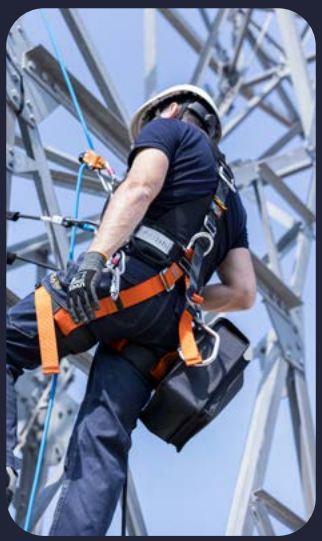
/ FALL ARREST SYSTEM



/ FASTENING SYSTEM
ON THE WORK ENVIRONMENT



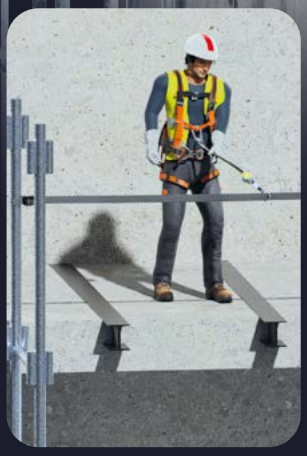


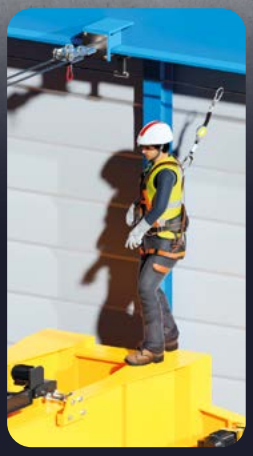


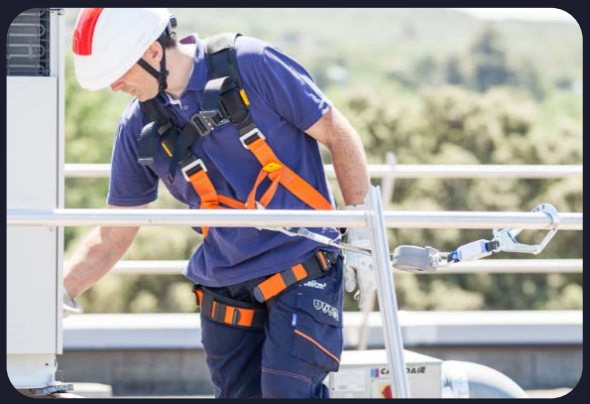
## POWER PLANTS

**EN 361:** Full body harnesses
**EN 795:** Single-user anchor devices
**EN 360:** Retractable type fall arresters
**EN 355:** Energy absorbers









## TRANSFORMERS

**EN 361:** Full body harnesses
**EN 795:** Single-user anchor devices
**EN 360:** Retractable type fall arresters
**EN 355:** Energy absorbers



## TRANSMISSION

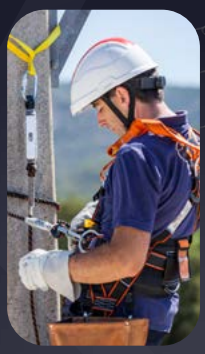
**EN 361:** Full body harnesses
**EN 358:** Belts and lanyards for work positioning or restraint
**EN 795:** Anchorage devices
**EN 353-2:** Guided type fall arresters with a flexible anchor line
**EN 355:** Energy absorbers



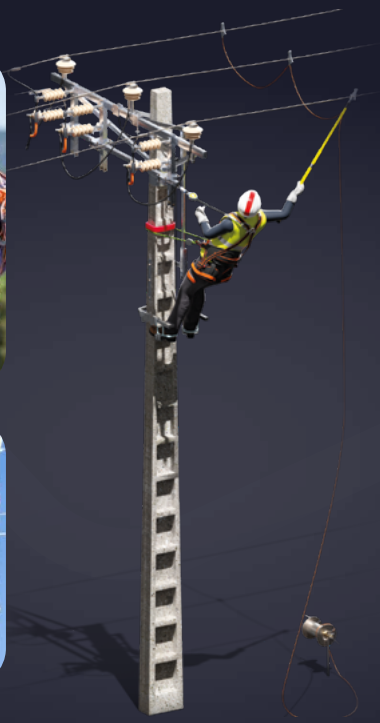


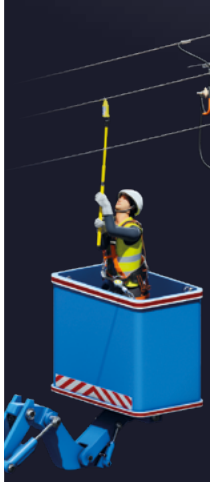
## MEDIA TENSION

**EN 361:** Full body harnesses
**EN 358:** Belts and lanyards for work positioning or restraint
**EN 795:** Anchorage devices
**EN 353-2:** Guided type fall arresters with a flexible anchor line
**EN 355:** Energy absorbers
**EN 360:** Self-retracting lifelines













| Ref. | Description |
|---|---|
| K310H1ACTM | Complete set - Size M/XL |
| K310H1ACGT | Complete set - Size XXL |

# K310H1ACTM
# K310H1ACGT

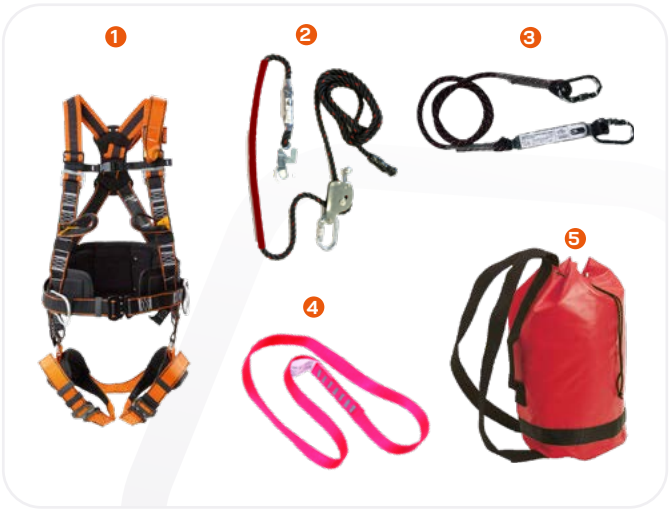
## COMPLETE LINEMEN SET (ELECTRICAL DISTRIBUTION)

STANDARDS

EN 361 | EN 355 | EN 358 | EN 795

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H1ACTM or H1ACGT | Comfort safety harness with automatic buckles. Size M/XL (H1ACTM) or XXL (H1ACGT) |
| 2 | FINCH+SHELTER-500 | Work positioning lanyard with progressive adjustment, 5 m |
| 3 | ABD118200 | Energy absorber with fixed safety lanyard and 2 manual connectors 18mm |
| 4 | ANS2120 | Anchorage ring 1,2m |
| 5 | TS75 | Carrying bag |



# K310H1A

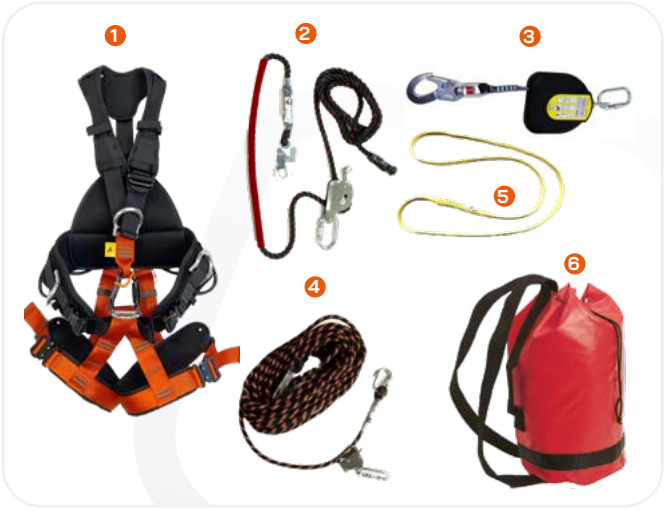
## COMPLETE LINEMEN SET (ELECTRICAL DISTRIBUTION)

STANDARDS

EN 361 | EN 355 | EN 358 | EN 795

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H1A | Harness for linemen with moving belt 180° and automatic buckles |
| 2 | LT1400 | Work positioning lanyard twisted rope 4 meters with snap hook and fall arrester |
| 3 | ABD118200 | Tear webbing energy absorber with fixed safety lanyard 2 meters |
| 4 | ANS2120 | Anchorage webbing sling 1,20 meters |
| 5 | TS75 | Equipment carrier bag, 42 L |



| Ref. | Description |
|---|---|
| K630H3NTM | Complete set - Size M/XL |
| K630H3NGT | Complete set - Size XXL |

# K630H3NTM
# K630H3NGT

## COMPLETE SUSPENSION LINEMEN SET (ELECTRICAL TRANSPORT)

STANDARDS

EN 361 | EN 813 | EN358 | EN360 | EN353/2 | EN795

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H3NTM or H3NGT | Comfort suspension harness with automatic buckles size M/XL (H3NTM) or XXL (H3NGT) |
| 2 | LT1200 | Work positioning lanyard in twisted rope, 2m |
| 3 | ARS3 | Retractable type fall arrester 6m |
| 4 | AMD130 | Guided type fall arrester on rope 30m |
| 5 | ANS2120 | Anchorage ring 1,2m |
| 6 | TS75 | Carrying bag |



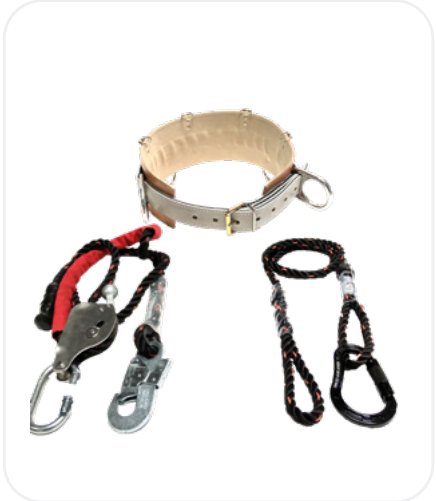
## C67N2

WORK POSITIONING KIT

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | C65TM | Work positionning belt, medium size 950/1250 mm |
| 2 | LT1400 | Work positioning lanyard twisted rope 4 meters with snap hook and fall arrester |

| Ref. | Description |
|---|---|
| C67N2 | Work positioning kit |



## C67N3

WORK POSITIONING KIT

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | C65TM | Work positionning belt, medium size 950/1250 mm |
| 2 | C62A | Lanyard securing rope Ø 12 mm length 1,5 m with connector |
| 3 | LT1400 | Work positioning lanyard twisted rope 4 meters with snap hook and fall arrester |

| Ref. | Description |
|---|---|
| C67N3 | Work positioning kit |



## KCT2D-1200

WORK POSITIONING KIT TEXTILE BELT

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | CT2D | Textile work positioning belt |
| 2 | LT1200 | Work positioning lanyard in twisted rope 2 meters |

| Reference | Size |
|---|---|
| KCT2DTM-1200 | M/XL |
| KCT2DGT-1200 | XXL |



## MP15

PLASTIC CASE
FOR CARRYING EQUIPMENT



## LSR1200

ADJUSTABLE WORK
POSITIONING LANYARD 2M

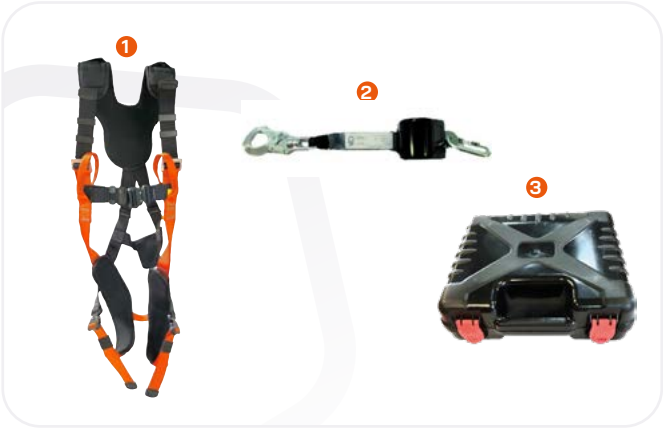
STANDARDS

EN 358: 1999

**/ TECHNICAL SPECIFICATIONS**

30 mm wide polyester webbing work positioning lanyard, length adjustable by steel buckle. At one end, a steel connector with manual locking by means of an 18 mm opening screw. At the other end of the lanyard, an integrated zinc-plated steel connector with automatic locking by double latch, opening 18 mm.






| Ref. | Description |
|---|---|
| K700H6PROTM | Complete set - Size M/XL |
| K700H6PROGT | Complete set - Size XXL |

# K700H6PROTM
# K700H6PROGT

## FALL ARREST KIT FOR AERIAL WORK PLATFORM

STANDARDS
EN 361 | EN 358

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H6PROTM or H6PROGT | Safety harness comfort / size M/XL (H6PROTM) or XXL (H6PROGT) |
| 2 | ARS4 | Retractable type fall arrester 2m |
| 3 | MP15 | Carrying plastic case |




| Ref. | Description |
|---|---|
| K100H6PROTM | Complete set - Size M/XL |
| K100H6PROGT | Complete set - Size XXL |

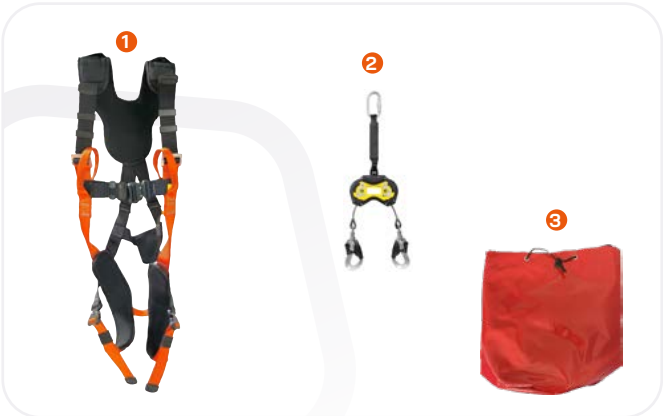
# K100H6PROTM
# K100H6PROGT

## FALL ARREST KIT WITH ADJUSTABLE LANYARD FOR AERIAL WORK PLATFORM

STANDARDS
EN 361 | EN 358

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H6PROTM or H6PROGT | Safety harness comfort / size M/XL (H6PROTM) or XXL (H6PROGT) |
| 2 | ABS160Y130 | Energy abosber with elastic webbing fork lanyard |
| 3 | STEPIR-16 | Carrying plastic case |




| Ref. | Description |
|---|---|
| K110RH6PROTM | Complete set - Size M/XL |
| K110RH6PROGT | Complete set - Size XXL |

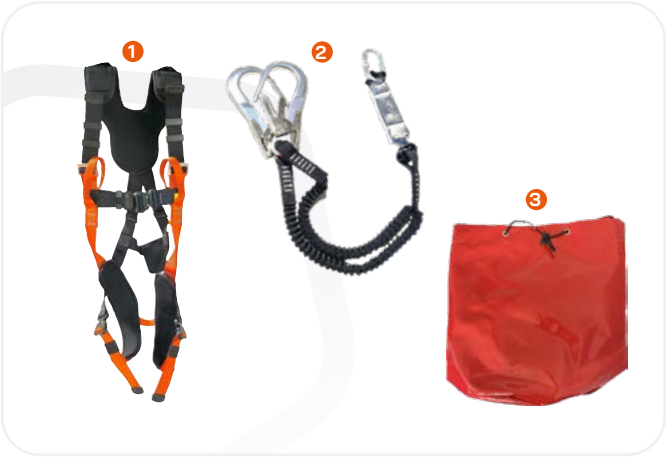
# K110RH6PROTM
# K110RH6PROGT

## SCAFOLDING COMFORT KIT WITH RETRACTABLE FALL ARRESTER

STANDARDS
EN 361 | EN 360

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H6PROTM or H6PROGT | Safety harness comfort / size M/XL (H6PROTM) or XXL (H6PROGT) |
| 2 | AR2S | Automatic fall arrester with double webbing max extended 2M |
| 3 | STEPIR-16 | Carrying plastic case |



## K130H6PROTM
## K130H6PROGT

FALL ARREST KIT FOR INDUSTRIAL MAINTENANCE

STANDARDS
EN 361 | EN 358

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H6PROTM or H6PROGT | Safety harness comfort / size M/XL (H6PROTM) or XXL (H6PROGT) |
| 2 | AR2S | Automatic fall arrester with double webbing max extended 2M |
| 3 | STEPIR-16 | Carrying plastic case |



## K340H1A

FALL ARREST KIT SPECIALLY DESIGNED FOR WORK ON CATENARY LINES AND OVERHEAD STRUCTURES

STANDARDS
EN 361 | EN 358

**/ This kit contains:**

| N° | Ref. | Description |
|---|---|---|
| 1 | H1ATM or H1AGT | Comfort safety harness with automatic buckles_size M/XL (H1ATM) or XXL (H1AGT) |
| 2 | LT1200 | Work positioning lanyard in twisted rope, 2m |
| 3 | AMD110 | Guided type fall arrester with 10m rope |
| 4 | TS75 | Carrying bag |



## H6

INDUSTRY 3-POINT FALL ARREST HARNESS

STANDARDS
EN 361

• Dorsal extension




### / USE

- Full body harness with three anchorage points (2 back and 1 front):
- Composition: polyamide/polyester straps.
- Metallic buckles in zinc plated steel.

| Ref. | Size |
|---|---|
| H6TM | M-XL |
| H6GT | XXL |

## H6PRO

FULL BODY HARNESS "PRO" MAINTENANCE

STANDARDS
EN 361




### / USE

- Full body harness with three anchorage points (2 back and 1 front):
- Composition: polyamide/polyester straps.
- Metallic buckles in zinc plated steel.

| Ref. | Size |
|---|---|
| H6PROTM | M-XL |
| H6PROGT | XXL |

## H6CPRO

FULL BODY HARNESS "PRO" MAINTENANCE

STANDARDS
EN 361




### / USE

- Fall arrest harness with work positioning belt.
- Harness with aluminium buckle and two fall arrest attachment points.

| Ref. | Size |
|---|---|
| H6CPRO-TM | M-XL |
| H6CPRO-GT | XXL |

## H1AL

FULL BODY HARNESS 180° FOR ELECTRICIAN WORKS

STANDARDS
EN 361 | EN 358




### / USE

- Full body harness for lineworker working on electrical supports, with work positioning belt.

| Reference | Size |
|---|---|
| H1AL-PT | S |
| H1AL-TM | M - XL |
| H1AL-GT | XXL |

## H1AC

FULL BODY HARNESS 180° FOR ELECTRICIAN WORKS

STANDARDS
EN 361 | EN 358




### / USE

- For lineworker working on electrical supports, with work positioning belt.

| Ref. | Size |
|---|---|
| H1ACPT | S |
| H1ACTM | M-XL |
| H1ACGT | XXL |
| H1ACTGT | XXXL |

## H1A-TST

FULL BODY HARNESS WITH 180° SEAT BELT FOR HVA LIVE WORKING

STANDARDS
EN 361 | EN 358




### / USE

- Full body harness with two fall arrest attachment points, one back metallic D-ring and two webbing sternal loops to link.

| Ref. | Size |
|---|---|
| H1ATST-PT | S |
| H1ATST-TM | M-XL |
| H1ATST-GT | XXL |

## H3N

FULL BODY HARNESS
FOR WORKS IN SUSPENSION

STANDARDS
EN 361 | EN 358 | EN 813




### / USE

- Personal Protective Equipment against fall from a height.
- Full body harness for works in suspension and work positioning

| Reference | Size |
|---|---|
| H3NPT | S |
| H3NTM | M - XL |
| H3NGT | XXL |

## H8

FULL BODY HARNESS
FOR WORKS IN SUSPENSION

STANDARDS
EN 361 | EN 358 | EN 813




### / USE

- Personal Protective Equipment against fall from a height.
- Full body harness for works in suspension and work positioning

| Ref. | Size |
|---|---|
| H8TM | M-XL |
| H8GT | XXL |





## ABD1

TEAR WEBBING ENERGY ABSORBER WITH FIXED SAFETY LANYARD

STANDARDS
EN 355

| Reference | Opening | Length |
|---|---|---|
| ABD118150 | 18 mm | 1,50 m |
| ABD118200 | 18 mm | 2 m |



## ABS1Y

TEAR WEBBING ENERGY ABSORBER WITH FIXED DOUBLE ELASTIC SAFETY LANYARD

STANDARDS
EN 355

### / TECHNICAL SPECS

- 32 mm polyamide energy absorber with 18 mm snap hook and double elastic lanyard.
- 40 mm elastic lanyard with double locking snap hooks (openings: 50, 60, 88 mm).

| Reference | Opening | Length |
|---|---|---|
| ABS150Y130 | 50 mm | 1,30 m |
| ABS188Y180 | 88 mm | 1,80 m |
| ABS160Y180 | 60 mm | |
| ABS188Y130 | 88 mm | 1,30 m |
| ABS160Y130 | 60 mm | |
| ABS150Y180 | 50 mm | 1,80 m |



## ABD1Y

TEAR WEBBING ENERGY ABSORBER, WITH FIXED DOUBLE ROPE SAFETY LANYARD

STANDARDS
EN 355

### / TECHNICAL SPECS

- 32 mm polyamide energy absorber with screw snap hook (C1) and fixed double lanyard.
- 10.5 mm polyamide rope lanyard with double locking snap hooks at both ends.

| Reference | Opening | Length |
|---|---|---|
| ABD150Y150 | 50 mm | 1,50 m |
| ABD160Y200 | 60 mm | 2 m |
| ABD188Y150 | 88 mm | 1,50 m |
| ABD188Y200 | | 2 m |
| ABD150Y200 | 50 mm | |
| ABD160Y150 | 60 mm | 1,50 m |



## AMD1

GUIDED TYPE FALL ARRESTER

STANDARDS
EN 352-2

### / USE

Device is designed for one person only and has to be used with Ø 12 mm work ropes.

### / TECHNICAL SPECS

Openable guided type fall arrester equipped with a screw snap hook (manual locking) opening 18 mm, ref. C1.





## BACKUP

FALL ARRESTER

STANDARDS

EN 353-2 | EN 358 | EN 567

**/ TECHNICAL SPECS**

Allows the user to follow the user in his ascent and descent and descent and to stop a fall.



## AMT1

GUIDED TYPE FALL ARRESTER WITH ENERGY ABSORBER

STANDARDS

EN 353-2

**/ TECHNICAL SPECS**

For use on 14/16 mm stranded rope, to be connected to the harness.



## ARC

STEEL CABLE RETRACTABLE TYPE FALL ARRESTER

STANDARDS

EN 360

**/ TECHNICAL SPECS**

Retractable 10/20/30 meters galvanised steel cable.



## ARS4

WEBBING RETRACTABLE FALL ARRESTER WITH ENERGY ABSORBER

STANDARDS

EN 360

**/ TECHNICAL SPECS**

Retractable 2,25 meters polyamide webbing



## ARS1

WEBBING RETRACTABLE FALL ARRESTER WITH ENERGY ABSORBER

STANDARDS

EN 360

**/ TECHNICAL SPECS**

Retractable 2,25 meters polyamide webbing



## ARS3

WEBBING RETRACTABLE FALL ARRESTER WITH ENERGY ABSORBER

STANDARDS

EN 360

**/ TECHNICAL SPECS**

- 6 m polyester/kevlar webbing (17 mm) with swivel eye, fall indicator, and auto-lock snap hook.
- Plastic casing with aluminium swivel eye and 18 mm manual screw snap hook.



## ANS2

ANCHORAGE WEBBING SLING

STANDARDS

EN 795 — class B

**/ TECHNICAL SPECS**

Polyamide anchorage webbing sling, width 20 mm.
Lenghts/colors combos availables: **ANS2050**:0,5m, orange / **ANS2080**:0,8m, blue / **ANS2100**:1m, green / **ANS2120**:1,2m, yellow / **ANS2150**:1,5m, red / **ANS2200**: 2m, purple



## CI85

INSULATED ANCHOR CONNECTOR OPENING 83 MM

STANDARDS

EN 795 — class B

**/ TECHNICAL SPECS**

Retractable 2,25 meters polyamide webbing



## CO110

ANCHORAGE CONNECTOR FOR TELESCOPIC POLE, OPENING 110MM

STANDARDS

EN 795 — class B

**/ TECHNICAL SPECS**

Anchorage connector for telescopic pole, to connect a fall arrest system, form the ground. For one person



## ACTP150

CABLE ANCHORAGE FOR TELESCOPIC POLE, LENGTH 1,5M.

STANDARDS

EN 795 — class B



## TR

TRIPOD ANCHORAGE SYSTEM FOR CONFINED SPACE

STANDARDS

EN 795 — class B

**/ TECHNICAL SPECS**

Transportable temporary anchorage device, used in confined space to descend/ascend operator in safety condition during work and to make a rescue operation.



## C7

ALUMINIUM CONNECTOR SIDE OPENING

STANDARDS
EN 795 — class B

### / TECHNICAL SPECS

Aluminium base connector, a symmetric shape, automatic locking with rotating ring.



## C1

GALVANIZED STEEL CONNECTOR

STANDARDS
EN 362 — class B

### / TECHNICAL SPECS

Basic connector, length 110 mm with manual locking by screw.



## C2

ALUMINIUM ALLOY CONNECTOR OPENING 24 MM

STANDARDS
EN 362 — class B

### / TECHNICAL SPECS

Basic connector, length 113 mm, opening 24 mm, with automatic locking gate device by swivel ring.



## C5

ALUMINIUM ALLOY CONNECTOR, OPENING 61 MM

STANDARDS
EN 362 — class A

### / TECHNICAL SPECS

Anchorage snap hook, length 245 mm, with pivoting gate, automatic locking by sliding ring (twist lock) and inside latch.



| Reference | Length | Weight |
|---|---|---|
| FINCH+SHELTER-200 | 2 m | 710 g |
| FINCH+SHELTER-300 | 3 m | 790 g |
| FINCH+SHELTER-400 | 4 m | 870 g |
| FINCH+SHELTER-500 | 5 m | 950 g |

## FINCH+SHELTER

GRADUALLY ADJUSTABLE WORK POSITIONING LANYARD

STANDARDS
EN 358 | EN 795

### / TECHNICAL SPECS

- Work positioning lanyard in polyamide rope 11 mm diameter with a sewn end connector light alloy with double locking 21 mm opening, and at the other end a stopper.
- With light alloy turnbuckle integrating a handle and with a 21 mm opening connector with manual screw lock.





## C62C1•A

LANYARD SECURING ROPE WITH CONNECTOR

STANDARDS
EN 354

| Ref. | Connector | Length |
|---|---|---|
| C62C1 | C1 | 1,50 m |
| C62A | C7 | |



## LD1

WORK POSITIONING LAN-YARD IN BRAIDED ROPE

STANDARDS
EN 358

| Ref. | Length | Weight |
|---|---|---|
| LD1200 | 2 m | 1 kg |
| LD1400 | 4 m | 1,2 kg |



## LT1

WORK POSITIONING LAN-YARD IN TWISTED ROPE

STANDARDS
EN 358

| Ref. | Length | Weight |
|---|---|---|
| LT1200 | 2 m | 1,080 kg |
| LT1400 | 4 m | 1,330 kg |



## KCT2D

WORK POSITIONING BELT KIT

STANDARDS

EN 795 — class B



## C4D

WORK POSITIONING BELT

STANDARDS

EN 358

### / TECHNICAL SPECS

- Full-grain leather belt with backpad, lateral D-rings, and roller pin buckle.
- Reinforced seams with copper rivets and 2 accessory holders.



## C65-TM

WORK POSITIONING BELT

STANDARDS

EN 358

### / TECHNICAL SPECS

Medium: 950/1250 mm




Complete set containing the EASYUP haul system to ease the victim elevation, and the INDYEVO anti-panic descender.




## SPARROW200R

SELF-BRAKING DESCENDER UP TO 200 KG

STANDARDS

EN 341 | EN 12841

### / USE

- Emergency set for the evacuation of a fallen worker suspended to its working space.
- Emergency kit for max. 20 m height.

### / TECHNICAL SPECIFICATIONS

- Control handle with auto-return for safe descent and workstation stop, plus retractable friction point.
- EBS braking reduces speed; safety lever allows easy rope installation over edges.

## RESCUEWHEEL-20

EVACUATION KIT WITH HAND WHEEL AND ROPE 20 M

STANDARDS

EN 341 CLASS A | EN 1496 CLASS B

### / TECHNICAL SPECS

- Complete kit for downspout by descent, facilitating the recovery of the victim.
- Maximum descent height 20 m.

### / This kit contains:

| N° | Ref. | Description |
|---|---|---|
| 1 | H1A | Harness for linemen with moving belt 180° and automatic buckles |
| 2 | LT1400 | Work positioning lanyard twisted rope 4 meters with snap hook and fall arrester |
| 3 | ABD118200 | Tear webbing energy absorber with fixed safety lanyard 2 meters |



# KSAFE01-20

## EMERGENCY KIT FOR 20 M HEIGHT

STANDARDS

EN 362 | EN 795 | EN 12278 | EN 567

### / TECHNICAL SPECS

- Emergency set for the evacuation of a fallen worker suspended to its working space.
- Emergency kit for max. 20 m height.

### / This kit contains:

| N° | Ref. | Description |
|---|---|---|
| 1 | TSAFE | Evacuation harness |
| 2 | ANS2200 | Anchorage webbing sling 2 m |
| 3 | EASYUP | Haul system with 2 double pulleys |
| 4 | C2 x2 | 2 connectors opening 24 mm |
| 5 | C1 x2 | 2 connectors opening 18 mm |
| 6 | CORSTA10520 | Static rope 20 m |
| 7 | INDYEVO | Anti-panic descender |
| 8 | SAFECUT | Knife |
| 9 | TS75 | Equipment carrier bag, 42L |







# TSAFE

## EVACUATION HARNESS

STANDARDS

EN 1498 class B

### / TECHNICAL SPECIFICATIONS

- Emergency situation, evacuation by a signe person of people working at height.
- Elastic straps. Maximum load: 130 kg.

# CORSTA105

## STATIC ROPE 10,5 MM

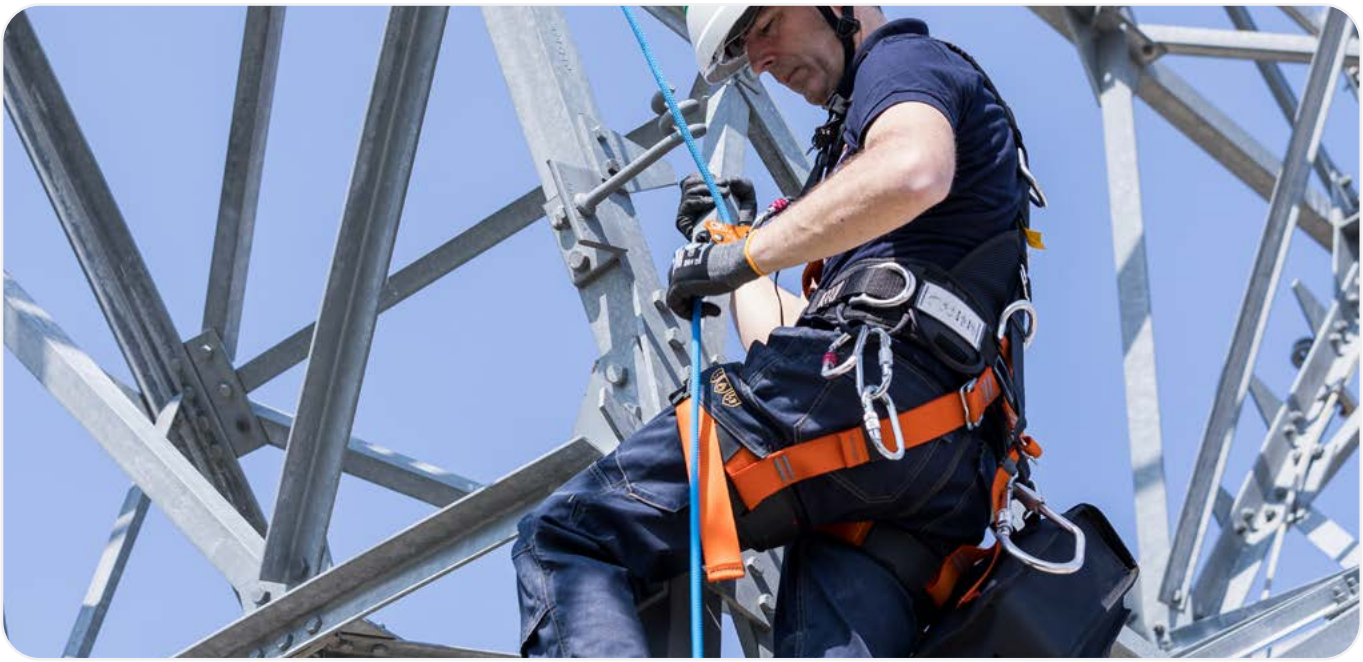
STANDARDS

EN 1891 TYPE A

### / TECHNICAL SPECS

- With plastic-sleeved ends and protected safety stitching.
- Breaking load 3000 daN; 2400 daN with sewn ends or figure-eight knot.

| Reference | Length |
|---|---|
| CORSTA10510 | 10 m |
| CORSTA10520 | 20 m |
| CORSTA10530 | 30 m |
| CORSTA10550 | 50 m |
| CORSTA105100 | 100 m |



# FIREFIGHTERS
## CIVIL SECURITY






**BELTS**

**CPA**
Belt for accessories

**CPAR**
Belt for accessories
with reflective elements

**CI326-2**
Intervention belt

**BAGS**

**SAT-72**
Bag for transporting pipes

**SET-55 / SIT-100**
Training bag for PPE transporting
55 L & 100 L

**SEDT-55 / SIDT-100**
Training bag for PPE transporting
55 L & 100 L

**SITT-100**
Carrying trolley bag for PPE 100 L

**SM-110**
Sailor's clothing bag 110 L

**SDP-40**
Backpack for PPE transporting 40 L



## SDTJ•B•R-LS

BAG FOR TRANSPORTING RESCUE EQUIPMENT

### / TECHNICAL SPECIFICATIONS

Backpack for carrying rescue kit equipment used in high-altitude victim evacuation operations: rope, harness, evacuation triangle, connectors, descender, anchoring rings, pulley, etc.



## SEPI

FIRST INTERVENTION BREAK-IN BAG FOR FIREFIGHTERS

### / TECHNICAL SPECIFICATIONS

- Roll-up leather bag, with interior storage fixed by copper rivets.
- On the top of the bag a webbing handle and a 45mm shoulder strap adjustable by automatic metal buckle and incorporating a comfort foam for shoulder pad.

Complete

Easy-to-use kit

Protected and transported in a case with identification label (year of manufacture)



## KAIRBAG

AIR BAG PROTECTION KIT (LV AND HV)

### / TECHNICAL SPECIFICATIONS

- Yellow = light vehicles
- Red = heavy vehicles
- High-strength PVC-coated canvas steering wheel cover with safety webbing reinforcements and safety seams.

## LSPCC

RESCUE AND FALL PROTECTION KIT WITH ANTI-PANIC DESCENDER CONTROL




### / USE

- To evacuate a victim in danger.
- The equipment is heavy and strong, enabling firefighters to carry out their duties quickly, even in extreme situations before the GRIMP arrives.
- This new generation of rescue kit includes a manual descender with rope lock function and a backpack for attaching a seal.

### / This kit contains:

| N° | Ref. | Description | **LSPCCJ:** basic package for pump, VID and VSR machines | **LSPCCB:** batch for MEA, EPAS, EPC, BEA, etc. | **LSPCCR:** batch for MEA, EPAS, EPC, BEA, etc. |
|---|---|---|---|---|---|
| 1 | SLPCC | Backpack | SJ-LSPCC Yellow | SB-LSPCC Blue | SR-LSPCC Red |
| 2 | CORSTA110 | Static rope 11 mm | CORSTA110-30 (30m) | CORSTA110-60 (60m) | CORSTA110-80 (80m) |
| 3 | ANS2080 | Anchorage ring blue 0,80 m | x 3 | x 6 | x 6 |
| 4 | ANS2150 | Anchorage ring 1,50m red | | x 3 | x 3 |
| 5 | ORBITER F | Single fixed pulley | x 1 | x 1 | x 1 |
| 6 | SPARROW 200R | Anti-panic descender | | | |
| 7 | T-SAFE | Rescue triangle | | | |
| 8 | AZ012 | Screw connector | x 6 | x 9 | x 9 |
| 9 | C2 | Automatic connector | x 1 | x 1 | x 1 |
| 10 | H6PRO | Automatic buckles harness | | x 2 | x 2 |


DANGER
LOCKED OUT
DO NOT REMOVE



# LOCKOUT
## TAGOUT - TRYOUT


/ LOCKOUT PADLOCKS 76

/ LOCKOUT - TAGOUT ACCESSORIES 84


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# CS-KA / CS-K NEW

## LOCKOUT PADLOCKS WITH INTERCHANGEABLE SHACKLE SYSTEM



### / TECHNICAL SPECIFICATIONS

- Non-metallic body padlock, with the possibility of 8 interchangeable shackles, to be chosen when ordering.
- Shackles available: metal, composite.
- 8 colours available.
- High security keys.

## THE KEY SYSTEMS

On the lockout padlock market, it is usual to see two different key systems.
The 2 key systems are available for all our PENTA padlocks.

- **KEYED DIFFERENT PADLOCKS**



Each padlock has its own unique key.
The key can only open one padlock and no others.

- **KEYED ALIKE PADLOCKS**
  Padlock WITH NUMBERED KEYS



The padlock and the key are numbered.
Only a key bearing the same number as the padlock can open it. A same key can thus open a set of padlocks bearing the same number, thereby simplifying the management of keys.

## THE FIRST LOCKOUT PADLOCK WITH INTER-CHANGEABLE SHACKLE

This feature allows the quick adaptation of the shackle to the installation to lock out without needing to change the padlock.

**We offer 8 different shackles that adapt to all our padlocks:**

- Height 38 or 76 mm.
- Metal or composite material.
- 4,5 mm or 6 mm diameter



Pressing the push button on the front face once releases the shackle when the padlock is open in order to replace the shackle.




## AN EXCLUSIVE DATING SYSTEM

We have developed a padlock that has a built-in dating wheel function that is exclusive on the market.

- Permanent information: the date is impossible to change when the padlock is closed.

We also offer a classic lockout padlock without a dater function.

## CUSTOMISE YOUR PADLOCKS

We offer to customise your lockout padlocks using laser engraving to add a lockout supervisor name, a company name or a training organisation name.
Under specific conditions,
Please contact us.



## LOCKOUT PADLOCKS WITH DATER

### ADAPT YOUR PADLOCK USING OUR INTERCHANGEABLE SHACKLES:

- Metal or composite material.
- **Diameter:** 4,5 or 6 mm.
- Height: 38 or 76 mm.

### SECURITY KEYS

- Over 1 million possible blade profile variations.
- Captive key system and automatic return cylinder.
- Punch colour identical to the padlock colour.




### ULTRA-STRONG COMPOSITE BODY

Non-conductive, UV, hydrocarbon and extreme environment resistant.

**Height:** 54 mm.
**Width:** 46 mm.
**Thickness:** 21 mm.
**Weight:** 80 g.

### EXCLUSIVE DATER SYSTEM

Set the date during the lockout to gain peace of mind about information protection.

### LOCKOUT TAG

- Lockout warning.
- Supervisor identification.
- Heavy duty tags: UV and abrasion resistant.
- Set of 6 languages.

## ALL THE COLOUR AND SHACKLE LINE AVAILABLE



# HOW TO ORDER YOUR PADLOCK

## 1. Select the body model




/ **CLASSIC PADLOCK**
Code: CS

/ **DATER PADLOCK**
Code: CD

## 2. Select the key system (and the padlock number)



/ **KEYED DIFFERENT PADLOCKS**
Code: KD

/ **KEYED ALIKE PADLOCKS**
Code: KA
add the required key n° 0301 to 0332
(please contact us for specific key numbers)

## 3. Select your colour

| Orange | Red | Blue | Green | Yellow | Brown | White | Black |
|---|---|---|---|---|---|---|---|
| Code: 1 | Code: 2 | Code: 3 | Code: 4 | Code: 5 | Code: 6 | Code: 7 | Code: 8 |
| (CS/CD) | (CS/CD) | (CS) | (CS) | (CS) | (CS) | (CS) | (CS) |

## 4. Select the shackle fitted to the padlock



## 5. Add extra shackles if you so require (optional)

| Shackle code | Shackle material | Shackle inside height | Shackle diameter |
|---|---|---|---|
| M438 | Metal | 38 mm | 4,5 mm |
| M638 | | | 6 mm |
| M476 | | 76 mm | 4,5 mm |
| M676 | | | 6 mm |
| P438 | Composite | 38 mm | 4,5 mm |
| P638 | | | 6 mm |
| P476 | | 76 mm | 4,5 mm |
| P676 | | | 6 mm |

- **Mounted shackle:** code of the shackle to be added to the padlock reference.
- **Additional shackles:** the shackles must be ordered individually.

## 6. Customise your padlock if required (optional)

### BREAKDOWN OF A COMPLETE REFERENCE

**KEY SYSTEM**
KD: keyed different
KA: keyed alike

**SHACKLE MATERIAL**
M: metal
P: composite

**CD-KD-2-M638**

**BODY MODEL**
CS: classic
CD: dater system

**COLOUR**
1: orange
2: red
3: blue
4: green
5: yellow
6: brown
7: white
8: black

**SHACKLE DIAMETER**
4: ø 4,5 mm
6: ø 6 mm

**SHACKLE INSIDE HEIGHT**
38: 38 mm
76: 76 mm

# LOCKOUT PADLOCK REFERENCES




## / CLASSIC - KEYED DIFFERENT

| Reference | Choice of colours (corresponding code) | Shackle material | Shackle inside height | Shackle diameter |
|---|---|---|---|---|
| CS-KD-x-M438 | Orange (1)<br>Red (2)<br>Blue (3)<br>Green (4)<br>Yellow (5)<br>Brown (6)<br>White (7)<br>Black (8) | Metal | 38 mm | 4,5 mm |
| CS-KD-x-M476 | | | 76 mm | |
| CS-KD-x-M638 | | | 38 mm | 6 mm |
| CS-KD-x-M676 | | | 76 mm | |
| CS-KD-x-P438 | | Composite | 38 mm | 4,5 mm |
| CS-KD-x-P476 | | | 76 mm | |
| CS-KD-x-P638 | | | 38 mm | 6 mm |
| CS-KD-x-P676 | | | 76 mm | |

Replace the reference x by the required colour code as shown in the table (1 to 8).
The padlock is supplied with 1 shackle, 1 key and 1 set of lockout tags in 6 languages




## / CLASSIC - KEYED ALIKE

| Reference | Available key numbers | Choice of colours (corresponding code) | Shackle material | Shackle inside height | Shackle diameter |
|---|---|---|---|---|---|
| CS-KA#-x-M438 | 0301 to 0332 | Orange (1)<br>Red (2)<br>Blue (3)<br>Green (4)<br>Yellow (5)<br>Brown (6)<br>White (7)<br>Black (8) | Metal | 38 mm | 4,5 mm |
| CS-KA#-x-M476 | | | | 76 mm | |
| CS-KA#-x-M638 | | | | 38 mm | 6 mm |
| CS-KA#-x-M676 | | | | 76 mm | |
| CS-KA#-x-P438 | | | Composite | 38 mm | 4,5 mm |
| CS-KA#-x-P476 | | | | 76 mm | |
| CS-KA#-x-P638 | | | | 38 mm | 6 mm |
| CS-KA#-x-P676 | | | | 76 mm | |

Replace the reference # by the required key number (4 digits). For specific key numbers, contact us. Replace the reference x by the required colour code as shown in the table (1 to 8). The padlock is supplied with 1 shackle, 1 key and 1 set of lockout tags in 6 languages




## / WITH DATER - KEYED DIFFERENT

| Reference | Choice of colours (corresponding code) | Shackle material | Shackle inside height | Shackle diameter |
|---|---|---|---|---|
| CD-KD-x-M438 | Orange (1)<br>Red (2) | Metal | 38 mm | 4,5 mm |
| CD-KD-x-M476 | | | 76 mm | |
| CD-KD-x-M638 | | | 38 mm | 6 mm |
| CD-KD-x-M676 | | | 76 mm | |
| CD-KD-x-P438 | | Composite | 38 mm | 4,5 mm |
| CD-KD-x-P476 | | | 76 mm | |
| CD-KD-x-P638 | | | 38 mm | 6 mm |
| CD-KD-x-P676 | | | 76 mm | |

Replace the reference x by the required colour code as shown in the table (1 to 8).
The padlock is supplied with 1 shackle, 1 key and 1 set of lockout tags in 6 languages.
For dater padlocks, other colors are available depending on the number of pieces.




## / WITH DATER - KEYED ALIKE

| Reference | Available key numbers | Choice of colours (corresponding code) | Shackle material | Shackle inside height | Shackle diameter |
|---|---|---|---|---|---|
| CD-KA#-x-M438 | 0301 to 0332 | Orange (1)<br>Red (2) | Metal | 38 mm | 4,5 mm |
| CD-KA#-x-M476 | | | | 76 mm | |
| CD-KA#-x-M638 | | | | 38 mm | 6 mm |
| CD-KA#-x-M676 | | | | 76 mm | |
| CD-KA#-x-P438 | | | Composite | 38 mm | 4,5 mm |
| CD-KA#-x-P476 | | | | 76 mm | |
| CD-KA#-x-P638 | | | | 38 mm | 6 mm |
| CD-KA#-x-P676 | | | | 76 mm | |

Replace the reference # by the required key number (4 digits). For specific key numbers, contact us. Replace the reference x by the required colour code as shown in the table (1 to 8). The padlock is supplied with 1 shackle, 1 key and 1 set of lockout tags in 6 languages.
For dater padlocks, other colors are available depending on the number of pieces.




# COMPOSITE BODY PADLOCKS

## VARIOUS OTHER PADLOCKS

### / KEY FEATURES

This padlock is resistant to chemicals, corrosion and UV exposure, and is built to withstand extreme temperatures.

Includes “Danger” and “Locked out” labels in English, French, Spanish and Arabic.

Supplied with a single key, the padlock is designed for reliable use in standard lockout procedures.

### / Accessories

| Reference | Shackle | Body width | Body height | Shackle height | Key retaining padlock | Weight |
|---|---|---|---|---|---|---|
| C406V | Composite Ø 6 mm | 38 mm | 44 mm | 38 mm | Yes | 72 g |
| C410V | Hardenned steel Ø 6 mm | | | | | 108 g |
| C410VLT | | | | 76 mm | | 128 g |
| C411V | | | 76 mm | 38 mm | | 105 g |
| C411VLT | | | | 76 mm | | 125 g |
| C412V | Composite Ø 4,76 mm | 35 mm | 48 mm | 38 mm | No | 70 g |
| C31V | Hardenned steel Ø 6 mm | | | | | 75 g |
| C31VLT | | | | 76 mm | | 90 g |




# COMPOSITE BODY PADLOCKS

## OTHER PADLOCKS WITH NUMBERED KEYS

### / KEY FEATURES

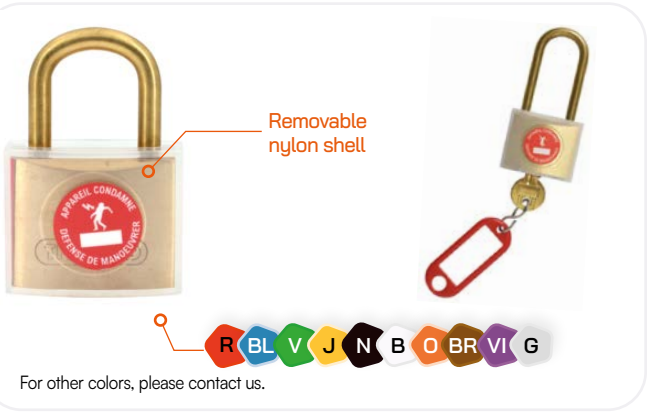
This padlock is resistant to chemicals, corrosion and UV exposure, and is built to withstand extreme temperatures.

Supplied with “Danger” and “Locked out” labels in English, French, Spanish, and Arabic for clear multilingual visibility.

Keys are sold separately or in sets, with padlocks available in packs of 4, 6 or 10 with a storage rack.

### / Accessories

| Reference | Key numbers available | Shackle | Shackle height | Dimensions | Weight |
|---|---|---|---|---|---|
| C410B--- | 252 to 263 | Hardenned steel Ø 6 mm | 38 mm | 90 x 38 x 20 mm | 96 g |
| C406B--- | 240 to 251 | Composite Ø 6 mm | | | |
| C410BLT--- | 264 to 275 | Hardenned steel Ø 6 mm | 76 mm | 132 x 38 x 20 mm | 116 g |




For other colors, please contact us.

# BRASS BODY PADLOCKS WITH REMOVABLE NYLON SHELL

## / KEY FEATURES

- 35 mm brass padlock with labeling space and "Locked out — Do not operate" marking.
- Identification : Colour-coded padlocks, each colour linked to a unique serial number for easy tracking and management.
- Delivered without key - keys must be ordered separately.

| Reference | Colour | Shackle diameter | Shackle height | Dimensions | Weight |
|---|---|---|---|---|---|
| MC1-- | R, BL, V, J, N, B, O, BR, VI, G, BN, BB, BRO | Brass Ø 5 mm | 45 mm | 80 x 35 x 17 mm | 125 g |
| MC1C-- | R, BL, V, J | | 20 mm | 49,5 x 35 x 17mm | 110g |

Complete the reference with the desired colour code.

## / Accessories

CC1-- Colour coded key (code to be precised)







# BRASS PADLOCKS

## / TECHNICAL SPECIFICATIONS

- Brass body, delivered with 2 keys. Model C16D is labelled with lockout stickers.

| Ref. | Label | Shackle | Shackle height | Dimensions | Weight |
|---|---|---|---|---|---|
| C10 | No | Hardenned steel Ø 5 mm | 20 mm | 55 x 35 x 20 mm | 105 g |
| C12 | | Hardenned steel Ø 7 mm | 26 mm | 70 x 45 x 10 mm | 180 g |
| C16D-GB | Yes | Brass Ø 7 mm | 60 mm | 105 x 45 x 10 mm | 230 g |

# BRASS PADLOCKS WITH ABS SHELL

## / TECHNICAL SPECIFICATIONS

- Brass body, ABS shell, **delivered with 2 keys.**
- Width of the body with shell: 50 mm.
- Models C14D and C22D are labelled with lockout stickers.

| Ref. | Label | Shackle | Shackle height | Dimensions | Weight |
|---|---|---|---|---|---|
| C14 | No | Hardenned steel Ø 7 mm | 26 mm | 75 x 50 x 18 mm | 200 g |
| C14D-GB | Yes | | | | |
| C22D-GB | | Brass Ø 6 mm | | 110 x 50 x 18 mm | 210 g |



# BRASS PADLOCKS

## / TECHNICAL SPECIFICATIONS

- Brass body and shackle.
- Delivered without key, the keys have to be ordered separately.

| Reference | Number | Shackle | Shackle height | Dimensions | Weight |
|---|---|---|---|---|---|
| C15 CAD 72423 | 72423 | Brass Ø 7 mm | 26 mm | 71 x 45 x 10 mm | 180 g |
| C15 CAD 72432 | 72432 | | | | |

## / Accessories

| Reference | Description |
|---|---|
| C15 CLE 72423 | Single key n° 72423 |
| C15 CLE 72432 | Single key n° 72432 |



# C20
# C20DL
# C21PT

| Ref. | Number | Shackle | Dimensions | Weight |
|---|---|---|---|---|
| C20T | Padlock with triangular shape opening | Brass Ø 7 mm height 32 mm | 60 x 50 x 15 mm | 80 g |
| C21PT | | Brass Ø 6 mm, height 50 mm | 65 x 60 x 14 mm | |
| C20DL | Padlock with half-moon opening | Brass Ø 7 mm height 32 mm | 60 x 50 x 15 mm | |

### / Accessories

| Reference | Description |
|---|---|
| C20TC | Triangular shaped key |
| C20DLC | Half-moon shaped key |

## PADLOCK RACKS



# IS47 OUR SELECTION

PADLOCKS RACK

### / TECHNICAL SPECIFICATIONS

- Rack made in composite material, fitted with handle.
- Delivered without padlock and without key.

| Reference | Number of holes | Dimensions | Weight |
|---|---|---|---|
| IS474TROUS | 4 | 150 x 115 x 9 mm | 85 g |
| IS476TROUS | 6 | | |
| IS4710TROUS | 10 | | |
| IS47-20TROUS | 20 | 340 x 80 mm | 90 g |



# SC2

PADLOCKS RACK - 30 PADLOCKS

### / KEY FEATURES

Fixation: Hook for easy storage or attachment to metallic structures during lockout.

Construction: Stainless steel body with integrated key storage in the handle.

| Reference | Dimensions | Weight |
|---|---|---|
| SC2 | 310 x 115 x 190 mm | 560 g |



# B7604

MULTIPLE LOCKING DEVICE

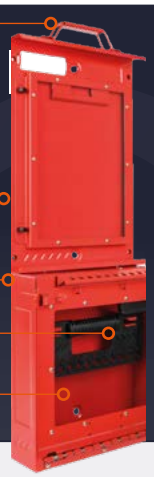
### / KEY FEATURES

Stainless steel device accommodates up to 4 padlocks and is delivered without padlock or key.

| Reference | Dimensions | Weight |
|---|---|---|
| B7604 | 165 x 40 x 22 mm | 150 g |

# ADC-CDG12 NEW

## GROUP LOCKOUT CENTRE




### / KEY FEATURES

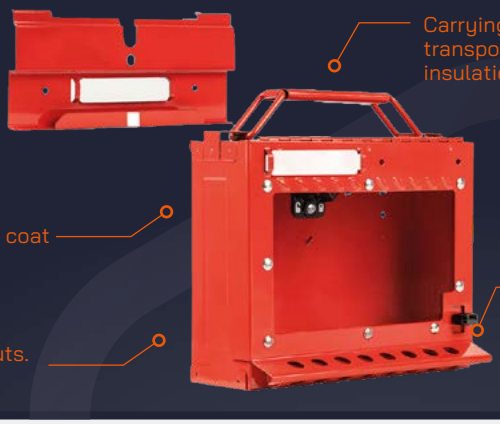
**Design & Durability:** Heavy-duty lockout centre made of powder-coated stainless steel, resistant to impact, corrosion and outdoor conditions.

**Security & Organisation:** 12 numbered holes for personal padlocks and one for the control padlock.
Removable key tray ensures visibility and simplifies key management during lockout.

**Usage & Communication:** Wall-mounted station ideal for multiple lockouts.
Includes a rewritable label for site-specific instructions and a removable caddy to transport padlocks to isolation points.

# ADC-CDG8 NEW

## GROUP LOCKOUT BOX




### / KEY FEATURES

**Construction:** Robust group lock box and wall bracket in stainless steel for outdoor use.

**Communication & Visibility:** Rewritable labels and impact-resistant window ensure clear operational tracking.
Includes 4 key hooks for quick identification of keys and numbers.

**Organisation & Use:** 8 slots for padlocks and hasps, with wall-mount system to manage and relocate boxes.
Ideal for small to medium-sized lockout programs.

# ADC-CGLB NEW

## COMPACT GROUP LOCK BOX



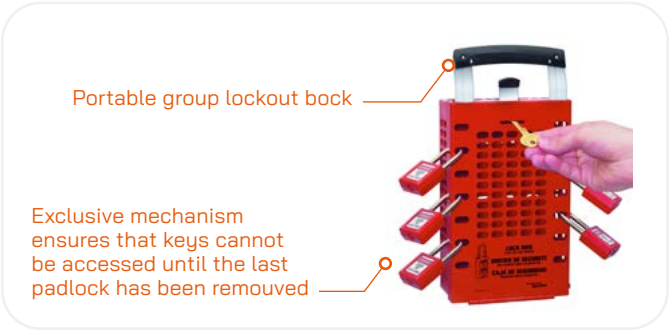
### / KEY FEATURES

**Visibility & Capacity:** Transparent top-hinged window for quick key checks.
6 internal hooks for visible key storage.
Holds up to **6 padlocks inside**, with **8 lockout points** on the sliding rail.

**Organisation & Extras:** 2 external hooks for permits, tags, or accessories.
Designed for group lockout convenience in varied environments from —40 °C to +65 °C.

**Portability & Mounting:** Lightweight, **compact red plastic box** for small team use.
**Can be wall-mounted** or carried on site.

| Reference | Overall height | Overall width | Largest depth | Window Height | Weight |
|---|---|---|---|---|---|
| ADC-CGLB | 18 cm / 7,1 inch | 10,1 cm / 4 inch | 14 cm / 5,5 inch | 15,2 cm / 6 inch | 250 g / 0,61 lb |







## SFES503RED

### GROUP LOCK BOX

**/ KEY FEATURES**

**Key Management:** Holds up to 12 keys or bulk keys.
Accommodates 14 workers with their own padlocks or hasps.

**Dual Use:** Can be wall-monted or used as a portable box. Secures multiple lockout points with a personal padlock.

## SFES1900

### LOCKOUT STATION

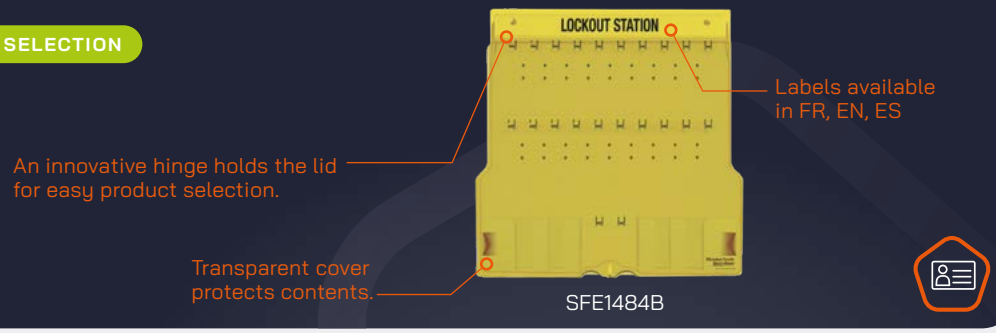
**/ KEY FEATURES**

Lockout station with adjustable dividers and peg hook options for organising bulky devices. Holds up to 16 suspension clips, each capable of holding up to 2 padlocks or hasps and stores up to 150 tags. Delivered empty.

| Reference | Dimensions |
|---|---|
| SFES1900 | 67,3 x 55,9 x 10,5 cm |

## SFE148 OUR SELECTION

### PADLOCK STATIONS



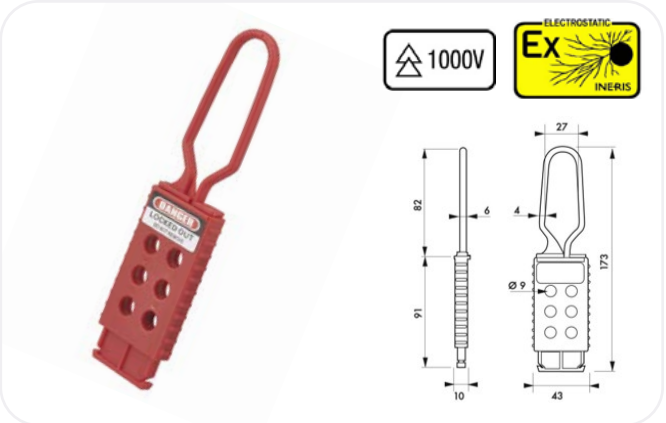

**/ KEY FEATURES**

One-piece moulded construction for enhanced ruggedness. Polycarbonate material offers 2× heat resistance and 4× impact resistance compared to standard stations.

**Security & Use:** Lockable with a combination padlock for controlled access.
Delivered empty, designed to safely store padlocks and lockout accessories.

| Reference | Description | Dimensions |
|---|---|---|
| SFE1482B | Unfilled padlock station for 4 padlocks, 2 hasps and 1 set of 12 labels | 311 x 406 x 44 mm |
| SFE1483B | Unfilled padlock station for 10 padlocks, 2 hasps and 2 sets of 12 labels | 394 x 559 x 44 mm |
| SFE1484B | Unfilled padlock station for 20 padlocks, 4 hasps and 4 sets of 12 labels | 559 x 559 x 44 mm |

## POLYMERE LOCKOUT HASP




## SFE428N

### POLYMERE LOCKOUT HASP

**/ KEY FEATURES**

**field-Ready desing:** Non-conductive nylon, impact and corrosion resistant. ATEX compatible, insulated up to 1000 V.

**Enhanced Group Safety:** Prevents re-energizing until all padlocks are removed. LOTO-compliant for individual or team maintenance.

**Functionality & capacity:** Holds 6 padlocks (Ø9 mm). Jaw stays locked until last padlock is removed. Ø6 mm shackle for quick setup.

| Reference | Weight |
|---|---|
| SFE428N | 30 g |

# ADC-MDC4 NEW
# ADC-MDC6

LOCKOUT HASP




ADC-MDC4 ADC-MDC6

### / KEY FEATURES

Non-conductive nylon jaw with 4 padlock holes (Ø 7.35 mm). Jaw remains locked until all padlocks are removed.

| Reference | Colour | Shackle |
|---|---|---|
| ADC-MDC4 | Red | Ø 3 mm |
| ADC-MDC6 | Yellow | Ø 6 mm |

## STEEL LOCKOUT HASPS



SFE420N SFE421N

# SFE420N
# SFE421N

STEEL LOCKOUT HASPS

### / KEY FEATURES

**Enhanced safety:** Holds up to 6 padlocks and keeps equipment de-energized until all locks are removed. Prevents accidental restart.

**Robust & ATEX-Compatible:** Stainless steel body with non-conductive ABS shell, suitable for ATEX zones and harsh environments.

| Reference | Inside jaw diameter |
|---|---|
| SFE420 | 26 mm |
| SFE421 | 39 mm |




# SFES430

LOCKOUT HASP 4MM

### / KEY FEATURES

**Applications:** The steel hook fits small locking points.

**Locking system:** Equipped to be locked with **up to 2 padlocks** for secure isolation.

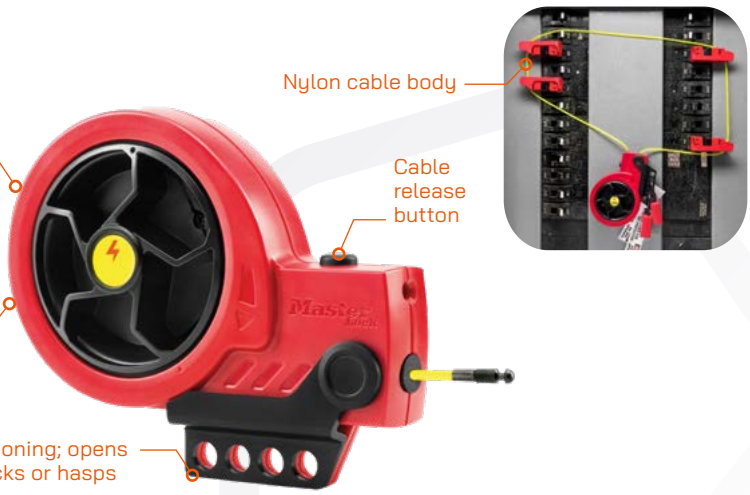
**Construction:** Steel hasp with composite body, **UV-stable,** resistant to chemicals and extreme temperatures.

| Reference | Lockout hook lenght | Shackle diameter | Dimensions |
|---|---|---|---|
| SFES430 | 76 mm | 4 mm | 76 x 57 x 25 mm |

# ADC-CA74

NEW

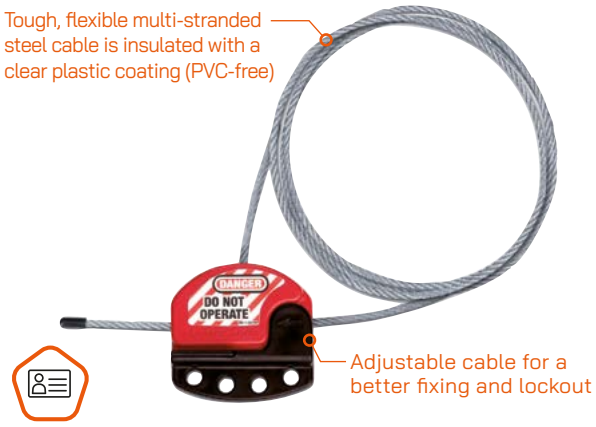
## RETRACTABLE LOCKOUT CABLE




### / KEY FEATURES

Adjustable nylon lockout cable (Ø 3.3 mm, 2.74 m) with yellow coating for high visibility. Rugged thermoplastic housing lightweight, chemical-resistant body with trilingual writable safety labels (EN, FR, ES).

| Reference | Cable diameter | Cable length |
|---|---|---|
| ADC-CA74 | 3,3 mm | 2,74 m |




# SFES806

## ADJUSTABLE LOCKOUT CABLE

### / KEY FEATURES

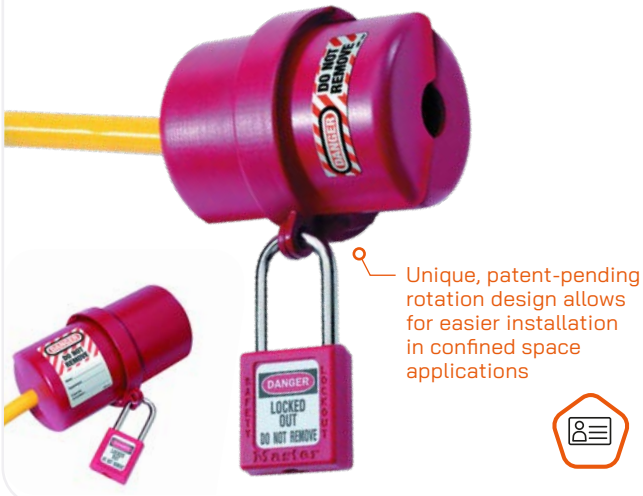
**Robust & Lightweight:** Lightweight thermoplastic body, chemical- and heat-resistant (—57 °C to +177 °C).

**Lockout system:** Integrated hasp and cable for multiple circuit breakers or valves. Cable remains adjustable when locked.

**Identification :** Writable safety labels (EN/FR/ES) included. Holds up to 4 padlocks for group lockout.

| Reference | Cable diameter | Length | Weight |
|---|---|---|---|
| SFES806A | 4 mm | 1 830 mm | 160 g |
| SFES806B | | 4 572 mm | 260 g |

## ELECTRICAL PLUG LOCKOUT




# SFE487
# SFE488

## ELECTRICAL PLUG LOCKOUTS

### / KEY FEATURES

**Durability:** Dielectric thermoplastic body, lightweight and chemical-resistant. Performs in temperatures from —46 °C to +177 °C.

**Lockout system:** Delivered without padlock, compatible with standard lockout systems. Protects against accidental reconnection.

**Identification:** Permanent high-visibility labels in English, French, and Spanish.

| Ref. | Lock for electrical outlet | Dimensions | Weight |
|---|---|---|---|
| SFE487 | 110V and 220V | 110 x 111 x 70 mm | 90 g |
| SFE488 | 220V to 550V | 190 x 130 x 90 mm | 140 g |

# SFE485

NEW

## ADJUSTABLE VALVE LOCKOUT




Adjustable lockout from 25 to 165 mm

### / KEY FEATURES

**Dielectric safety:** Non-conductive polypropylene body for safe electrical isolation. Provides effective dielectric protection.

**Resistant materials:** Withstands heat, cold, abrasion and chemicals. Equipped with a durable ABS casing.

**Locking capacity:** Padlockable with 3 holes (Ø10mm) for secure isolation.

| Reference | Valve diameter | Dimensions |
|---|---|---|
| SFE485 | 25 to 165 mm | 211 x 133 x 55 mm |



Outward/inward rotation for easier installation and storage





# SFE48

## ROTATING GATE VALVE LOCKOUT DEVICES

### / KEY FEATURES

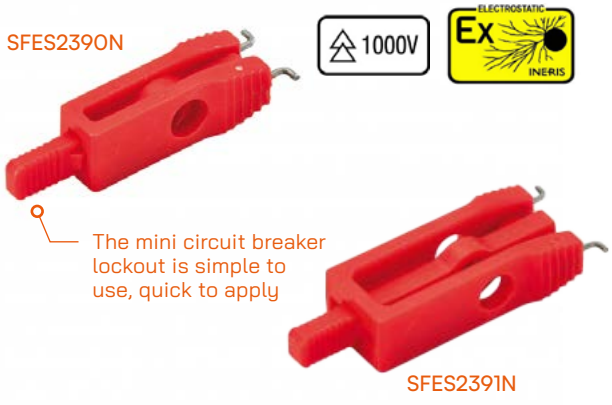
**Durable & Dielectric:** Lightweight thermoplastic body, chemical-resistant and dielectric, effective from —46 °C to +177 °C.

**Modular design:** rotating, nestable sizes for compact storage. Knockout centre removable for rising stem gate valves.

**Identification:** High-visibility permanent labels (EN, FR, ES), writable and erasable to track responsible users.

| Reference | Outer diameter | Valve diameter | Weight |
|---|---|---|---|
| SFE483 | 300 mm | 152 to 254 mm | 550 g |
| SFE484 | 400 mm | 203 to 330 mm | 1 060 g |

## CIRCUIT BREAKER LOCKOUT




# SFES2390N
# SFES2391N

## MINI CIRCUIT BREAKER LOCKOUT

### / KEY FEATURES

**Electrical safety:** Prevents accidental re-energization during maintenance, with a reinforced nylon body ensuring insulation and lasting durability. operations. ATEX compatible, insulated up to 1000 V.

**Durable Reinforced Nylon:** High-strength, insulating material providing excellent resistance to shocks and wear while remaining lightweight and reliable for professional use.

**High visibility :** Bright red finish for immediate identification of the lockout device on-site, improving safety and operational efficiency.




## SFES2392N

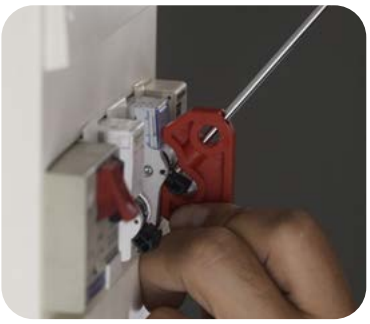
### LV CIRCUIT-BREAKER LOCK-OUT

**/ KEY FEATURES**

**Electrical safety:** Locks the toggle switch to prevent accidental re-energization during electrical work, ensuring operator protection at all times. ATEX compatible, insulated up to 1000 V.

**Reinforced Nylon:** Made from strong, insulating reinforced nylon offering excellent resistance to shocks and wear while remaining lightweight and reliable.

**High visibility :** Compact format (40x25x100mm) ideal for tight spaces, with a red finish for instant identification on panels and switchboards.





## SFES2393N

### UNIVERSAL MINIATURE CIRCUIT-BREAKER LOCK-OUT (LV)

**/ KEY FEATURES**

**Universal fit:** Fits most toggle-type circuit breakers for wide compatibility across devices.

**Safe Lockout:** Accepts a padlock (not included) to prevent accidental re-energizing and ensure operator safety.

**Quick & secure mounting :** Integrated screw system allows fast installation and reliable fixing during lockout procedures.







## SFES2394N

### MINIATURE CIRCUIT-BREAKER LOCKOUT DEVICE

**/ KEY FEATURES**

**Universal fit:** Fits most toggle-type circuit breakers, ensuring versatility across devices.

**Safe Lockout:** No tool required — easy tightening with built-in screw knob and padlock system (not included) to prevent accidental re-energizing.

**Quick & secure mounting:** Dual locking positions allow flexible installation and two padlocks if needed for shared work safety.



### PADLOCKS, HASPS, TAGS: WHAT DOES WHAT?

In a LOTO procedure, each item plays a defined role:

- The lockout padlock blocks access to the energy source (switch, valve, plug, etc.).
- The lockout hasp allows multiple workers to secure the same isolation point.
- The tags and labels indicate a prohibition to operate and identify the responsible person.

- These devices are complementary and must be used together, in a specific order.
- A tag without a lock = simple signage.
- A padlock without identification = no traceability.

**> Opening callout for "LOTO system" pages with logical chain pictogram diagram (NFC 18-510).**


ATPV 12 cal/cm²

## SFESCG INNOVATION

UNIVERSAL CIRCUIT BREAKER LOCKOUT





### / TECHNICAL SPECIFICATIONS

- Red nylon body. Extendable metal spring to fit all circuit breaker widths.
- Can be locked with Ø 4 or 6 mm shackle padlocks.

| Reference | Dimensions | Weight |
|---|---|---|
| SFES2393 | 147 x 31 x 14 mm | 25 g |








Adjusts to breaker with simple thumb turn and then close clamping handle for a tight grip on the toggle




## SFE491BN
## SFE493BN

LV CIRCUIT-BREAKER LOCKOUT

### / KEY FEATURES

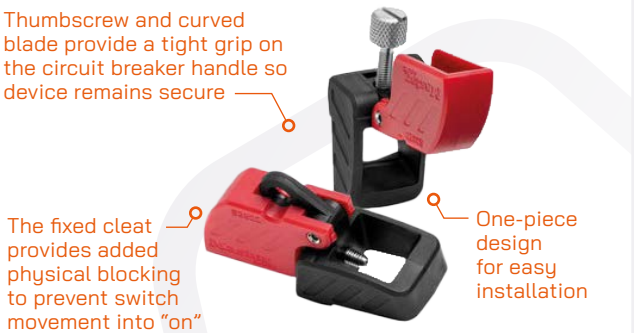
**Reliable lockout safety:** Secure padlock locking system (padlock not included) prevents accidental re-energizing during maintenance.

**Durable & compact design:** made of reinforced nylon for high mechanical strength; compact profile allows side-by-side installation and easy storage.

| Reference | Lever/handle width | Distance between modules |
|---|---|---|
| SFE491B | Around 8 to 12mm | 17,5 mm (standard) |
| SFE493B | Around 12 to 18mm | 18 to 27 mm |

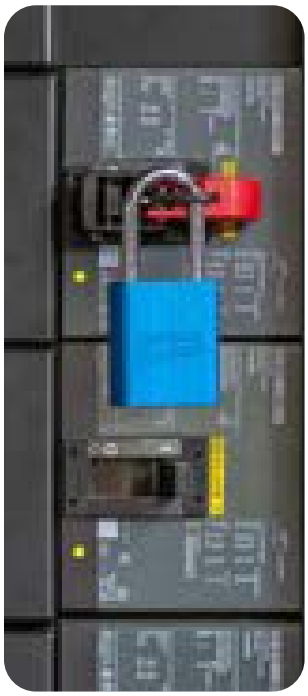
## ADC-BDBM NEW

CIRCUIT BREAKER LOCKOUT DEVICE
MOLDED CASE CIRCUIT BREAKERS (480/600V)




| Reference | Dimensions | Weight |
|---|---|---|
| ADC-BDBM | 75,44 x 26,16 x 43,69 mm | 47 g |





# SFES3823 NEW

## CIRCUIT BREAKER LOCKOUT FOR CIRCUIT BREAKER WITH LARGE HANDLE (480/600V)








### / KEY FEATURES

**Robust construction:** Lightweight one-piece design with black nylon body. Red PC/ABS thermoplastic cover and folding cleat

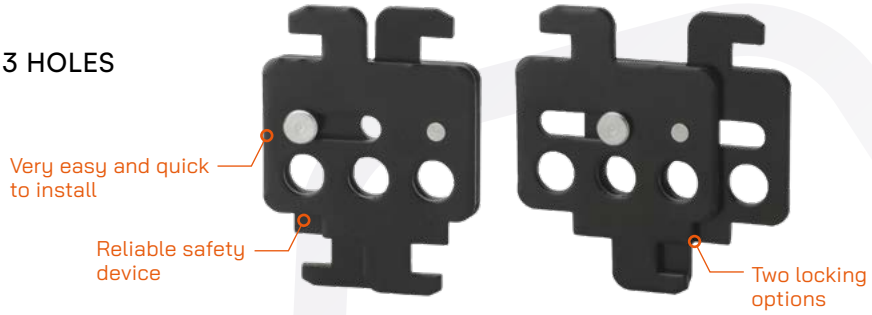
**Durability & grip:** Large stainless steel knurled screw and curved blade ensure secure attachment on large breakers (480/600 V).

**Wide compatibility:** Fits a variety of circuit breaker handles, regardless of shape or size.

| Reference | Dimensions | Weight |
|---|---|---|
| SFES3823 | 102,61 x 86,36 mm | 98 g |

# DV3 NEW

## LV CIRCUIT BREAKER LOCKOUT 3 HOLES




### / KEY FEATURES

**Locking options:** 3 locking holes (Ø 7 mm)
Accepts 1 to 3 padlocks with 2 possible spacings depending on breaker type.

**Durable design:** Steel body with anti-corrosion coating and black epoxy finish. Provides long-term resistance in industrial environments.

**Mechanical locking:** 2 sliding steel plates block the switch by spreading apart. Ideal for toggle circuit breakers (NS/NSE/NSF/NSJ/NSA — Schneider).

## GOOD TO KNOW: LOTO BECOMES LOTOTO

A restart test must **always** be performed before any intervention.
Stopping the machine doesn't guarantee zero energy. A wrong diagnosis, residual voltage, or faulty automation... and an accident can happen.

✓ The Try Out step confirms that the lockout is effective:

- Voluntary power-on test
- Mechanical check (actuator)
- Voltage absence verification

## USB14X200

INNOVATION

LOCKOUT DEVICE FOR ULTRA-FINE HOLES OF ELECTRICAL INSTALLATIONS








### / KEY FEATURES

**Cable design:** Multi-stranded steel cable with vinyl coating. Max cable Ø 1.3 mm, for precision use.

**Fine locking solution:** Ideal for situations where standard padlocks can't be used. Allows mechanical lockout of ultra-fine holes in electrical devices.

**Identification & compatibility:** Passage hole for padlock shackle Ø 5 mm (padlock not included).

| Reference | Dimensions | Weight |
|---|---|---|
| USB14X200 | 147 x 31 x 14 mm | 25 g |

## LOCKOUT DEVICE FOR 1/4 TURN VALVE






## SFES3068MLP

LOCKOUT DEVICE FOR HANDLES ON 1/4 TURN VALVE

### / KEY FEATURES

**Robust & heat-resistant:** Aluminium and steel body, corrosion-resistant and heat-resistant up to 538 °C.

**Efficient Lockout:** Locks valves in OFF position by clamping to handle stop. Fits valves from 6 to 100 mm. Works on insulated pipes and in tight spaces.

**Multilingual identification:** Includes labels in 12 languages (EN, FR, ES, DE, IT, CN, JP, etc.). Padlockable (padlock not included).



## SFES3080

ADJUSTABLE LOCKOUT DEVICE FOR 1/4 TURN VALVE

### / KEY FEATURES

**Durable & resistant:** Lightweight thermoplastic body, chemical-resistant and suitable for extreme environments.

**Secure lockout:** Four locking holes for padlocks. Locks ball valves in ON/OFF position to prevent accidental activation.

**Adjustable fit:** Fits valves from 13 to 51 mm. Compatible with SFES806 cable lockout for maximum security.

| Reference | Desciption |
|---|---|
| SFES3080 | For turn valves from 12,7 to 50,8 mm |
| SFES3079 | For XL turn valves from 51 mm to 20 cm |

## SFEKDCMGB OUR SELECTION

LV CIRCUIT BREAKER LOCKOUT KIT






P. 128



**/ This kit contains :**

| Reference | Description |
|---|---|
| S350 GBC11 | Plastic tag 80 mm « Do not operate - Disconnection » |
| SFET201 | Bras padlock 25 mm with 2 keys |
| SFES2393 | Universal miniature circuit-breaker lock-out (LV) |




S350C11




S349




S350 GBC11

## S349
## S350C11
## S350 GBC11

80 MM PLASTIC STICKER “EQUIPMENT OUT OF ORDER, DO NOT OPERATE”

| Référence | Diameter | Weight | Hole |
|---|---|---|---|
| S350C11 | 80 mm | 7 g | Ø10 mm on top |
| S349 | | | |
| S350 GBC11 | | | |







## C26GB
## C26RGB

STICKERS FOR LOCKOUT OR DISCONNECTION PADLOCKS

| Reference | Marking | Diameter |
|---|---|---|
| C26GB | “Locked by...” “On the...” | 40 mm |
| C26RGB | “Disconnection” “Do not operate” | |

* Label available in Arabic

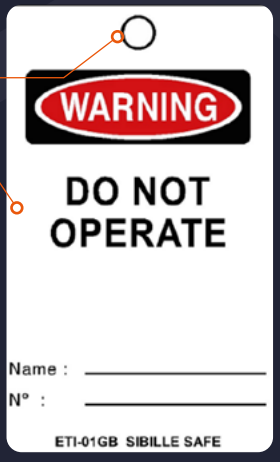
## ETI-01GB NEW

LOCKOUT TAGS

Centered hole at the top with a diameter of 7 mm

Rigid label and reusable with non-permanent marker

Key and holder identified; access only by user




| Reference | Material | Dimensions |
|---|---|---|
| ETI-01GB | PVC (0,3mm) | 56 x 90 mm |

* Sold in packs of 10 units

## SFES453L NEW

OVERSIZED PLUG CONTROL COVER



**/ KEY FEATURES**

**Versatile application:** Cinch sack for large or irregular connectors — adaptable to multiple lockout applications.

**Locking capacity:** Holds up to 6 padlocks or hasps.

**Identification:** Made of durable nylon with trilingual warning label (English, French, Spanish) printed on the bag.





# VOLTAGE **DETECTION**


/ AC VOLTAGE DETECTORS 98

Low voltage detectors 98
Medium voltage detectors and kits 106
High voltage detectors and kits 114
Direct current voltage detectors 120

/ SAFETY CABLE CUTTER FOR UNDERGROUND NETWORKS 124

/ PERSONAL VOLTAGE ALARMS 138


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

PRO-ELITE

# TAGLITE

INNOVATION

## LOW VOLTAGE DETECTOR

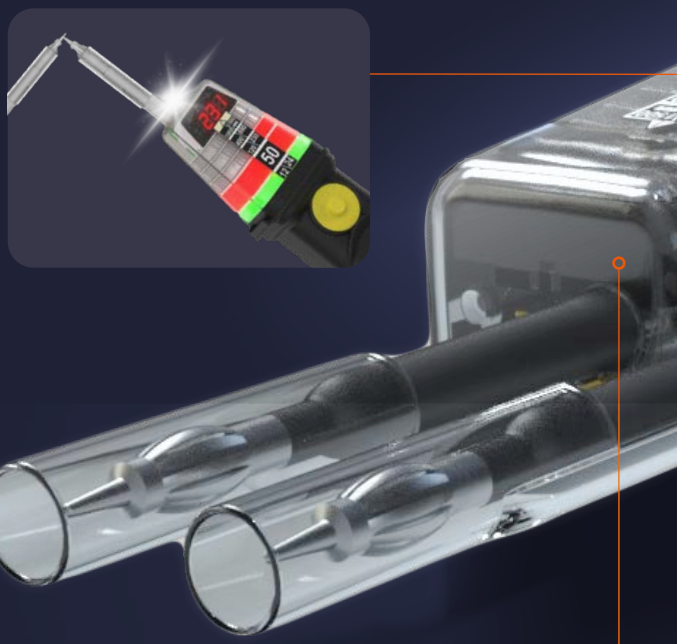
STANDARDS

IEC 61243-3 / CAT IV 1000 V / IP65

- Optimum visual indications in all working positions:
  - Front: 360° visual indications ;
  - Back: the main indications are shown on the back of the detector.
- Revolutionary IP2X system: Trigger system on the back of the device to release the pusher.
- Safe IP2X sheath: 2 position IP2X system to avoid short circuits on metal-encased meters:
  1. Retract the first 5 mm using the trigger on the back of the device ;
  2. Push for full removal.
- Ergonomic button: Prominent button for easy gripping with insulated gloves.
- Ultra-flexible, robust, double-insulated lead with no shape memory.
- 2x AA battery with quick access (lithium battery option) for extended battery life.

### ULTRA-BRIGHT 360° DISPLAY

Visibility of indications in all positions.



### / USE

This new Low Voltage Voltage Detector allows the following functions to be implemented on both indoor installations and overhead lines:

- Proof of no voltage operation
- Voltage level control from 12 to 1000V AC / 1500 V DC
- Polarity test on DC voltage
- Phase / Neutral discrimination
- Single pole phase indication
- Phase sequence test
- Continuity check
- Complete internal self test including measurement circuit control, lead continuity control and battery control.

### / TECHNICAL SPECIFICATIONS

- **Standard:** CEI 61243-3
- **Overvoltage category:** CAT IV 1000 V
- **Protection class:** IP 65 according to CEI 60529 (DIN 40050) : can be used in damp conditions: suitable for outdoor use.
- **Nominal voltage range:** 12—1000 V AC / 12—1500 V DC
- **Current consumption, measurement circuit:** AC/DC max. < 3.5 mA
- **Polarity display:** "+" and "—" symbols
- **Voltage level display:** 12, 24, 50, 120, 230, 400, 690, 1000 V AC/DC and 1500 V DC
- **Rated frequency range:** 50 and 60 Hz
- **Phase display:** Un ≥ 200 V, 50 & 60 Hz
- **Test current, continuity test:** max. 2 µA.
- **Test range, transverse resistance:** 0 - 100 Ω
- **Acoustic signal sound level:** 55 dB
- **Automatic activation at measuring voltage:** ≥ 50 V
- **Extra-low voltage (ELV) safety range:** < 50 V AC or < 120 V DC
- Integrated control device
- **Power supply:** 2 × LR06/AA batteries (lithium batteries optional)
- **Weight:** approx. 285 g
- **Double-insulated, silicone-jacketed test lead:** approx. 1200 mm
- **Operating temperature range:** —15 °C to +45 °C
- **Relative humidity:** 20% to 96% (climatic category N)

### MEASUREMENT POINT LIGHTING

Allows you to reach the correct test point in poorly lit areas.



### AA BATTERIES WITH QUICK ACCESS

Easy battery change 1.5V batteries for up to 2 times longer battery life than AAA batteries



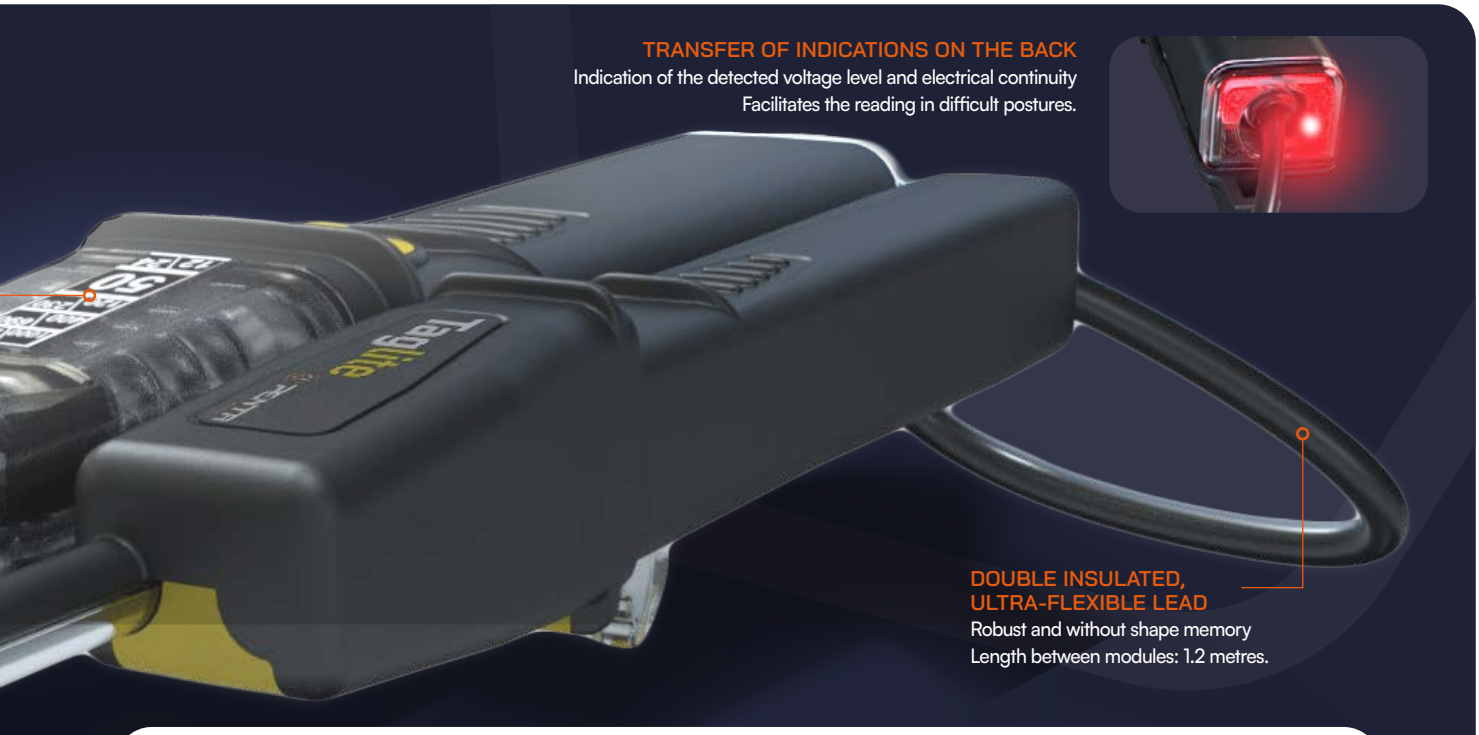
### AUTOTEST

Checking the integrity of the measuring circuit, the lead and the battery.

### CONTINUITY TEST WITHOUT PRESSING THE BUTTON

After the autotest, the operator has 90 seconds to perform the continuity tests.






## / ANTTAGLITERS

Lightweight and rigid contact electrode extensions for substations.
Contact tips with pointed test probes Ø 4 mm.
Supplied with storage pouch.



## / ANTTAGLITERA

Lightweight and rigid contact electrode extensions for overhead lines.
Contact parts: V-shaped electrode + contact hook also serving as a hanging hook.
Supplied with storage pouch



## / ANTTAGLITEX

The ANTTAGLITEI models are designed to allow the use of the TAGLITE LV voltage detector both in substations and on overhead networks.






| Refs | Application | Lenght | Weight |
|---|---|---|---|
| ANTTAGLITERS | Busbar and cabinet use | 0,78 m | 500 g |
| ANTTAGLITERA | Overhead network | 1,49 m | 700 g |
| ANTTAGLITEX | Combined cabinet and overhead use | 1.40 m | 800 g |

### OPTIONAL CONTACT ELECTRODE EXTENSIONS

Several models for overhead, underground or substation use.
Easy to read results thanks to the indications on the back.



### OTHER FUNCTIONS COMPLETE THIS VOLTAGE DETECTOR

Battery level indicator
Measurement point lighting

| TAGlite | TAGlite | TAGlite | TAGlite | TAGlite |
|---|---|---|---|---|
| Test probe | IP2X | IP2X | IP2X | IP2X |
| Standard functions* | ✔ | ✔ | ✔ | ✔ |
| Phase/neutral discrimination | ✔ | ✔ | ✔ | ✖ |
| Phase rotation | ✔ | ✔ | ✖ | ✖ |
| Digital display | ✔ | ✖ | ✖ | ✖ |
| Soft case | TAGliteDIFE | TAGliteRIFE | TAGliteVIFE | TAGliteSIFE |
| Without case | TAGliteDIFS | TAGliteRIFS | TAGliteVIFS | TAGliteSIFS |

* Up to 1000 V AC / 1500 V DC — Hazardous voltage indication (even when batteries are defective) — Self-test

SUPERIOR

# TAG780

## VOLTAGE DETECTOR

STANDARDS

IEC 61243-3 / NFC 18510

- Unique bright LED display can be read in sunlight.
- Ergonomically shaped to fit comfortably in the palm with gloves.
- A revolutionary IP2X system (retractable tip sleeve): “pull and hold” grip at back of device.
- Tip sleeve pulling is controlled, offering higher safety and visibility of contact area.
- Ultra flexible cord (no memory effect).
- Watertight and dustproof de vice (IP65).
- Built for notwork electricians with CAT IV 1000V. Provides the required protection against over voltage



A REVOLUTIONARY IPX SYSTEM RETRACTABLE TIP SLEEVE :
**“pull and hold” grip at back of device**



- unparalleled comfort: use of the index finger
- controlled sleeve retraction, safe visibility of contact
- the thumb is freed up for the test button.



### / USE

Heavy duty voltage detector for checking the absence of voltage and giving voltage level indication on low voltage up to 1000V.
This device provides additional features as :
- Integrated self-test
- Phase search in single-pole mode (any of the two contact tips may be used)
- Polarity display (-/+)
- Continuity test (< 80Ω )

### / TECHNICAL SPECIFICATIONS

- Voltage range: 12 to 1000V DC and AC (15 to 60 Hz).
- Audible alarm indicating the presence of voltage with a different tone according to voltage level (discontinuous tone up to 230V and continuous tone above 400V).
- Polarity indication (-/+).
- Built-in self-test.
- Continuity testing (threshold 80Ω).
- Phase identification in single-pole mode (either test probe may be used).
- Phase rotation indication
- Front light.
- Comes with 2 AAA batteries



Spot light



Self-test



Removable spring blade contact element



Retractable sleeve



# / ACCESSORIES

## SET OF CONTACT ELECTRODE EXTENSIONS FOR IP2X TAG780

(VERSION AVAILABLE FOR NON-IP2X TAG 780)



### / USE

Use the voltage detector TAG780 on overhead networks and connection boxes.

### / TECHNICAL SPECIFICATIONS

- Ø10 mm fiberglass sheath, Ø 4 mm connection probes, Ø 4 mm contact tips.
- Reliable impact-resistant internal connection even if device is dropped.
- Length adapted to the needs of the operator (short model for bus bars, long model for overhead lines).
- Contact parts adapted to the type of use.

| Reference | Lenght | Weight |
|---|---|---|
| ANT780RS | 0,78 m | 500 g |
| ANT780RA | 1,30 m | 700 g |
| ANT780I | 1.40 m | 800 g |

### / ANT780RS

Lightweight rigid contact electrode extensions for substations, installations and pavement boxes. Contact parts adapted for the type of use, Ø4 mm touch tips. Storage bag.



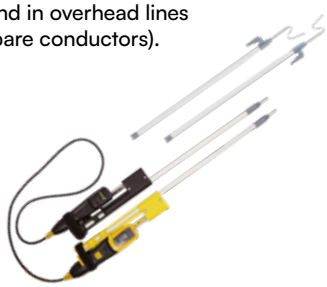
### / ANT780RA

Lightweight rigid contact electrode extensions for overhead lines. V-shaped contact parts and contact hook for hanging it. Storage bag.



### / ANT780I

ANT780I has been designed to allow the use of the TAG780 voltage detector both in substations and in overhead lines (bare conductors).



| TAG780 RANGE | TAG780 D | | TAG780 R | | TAG780 V | | TAG780 S | |
|---|---|---|---|---|---|---|---|---|
| Touch tips | IP2X | Fine touch tip | IP2X | Fine touch tip | IP2X | Fine touch tip | IP2X | Fine touch tip |
| Standard functions* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Phase/N discrimination | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × |
| Phase rotation | ✓ | ✓ | ✓ | ✓ | × | × | × | × |
| Digital display | ✓ | ✓ | × | × | × | × | × | × |
| Soft case | TAG780DIFE | TAG780DPFE | TAG780RIFE | TAG780RPFE | TAG780VIFE | TAG780VPFE | TAG780SIFE | TAG780SPFE |
| No case | TAG780DIFS | TAG780DPFS | TAG780RIFS | TAG780RPFS | TAG780VIFS | TAG780VPFS | TAG780SIFS | TAG780SPFS |

* 1000V - IP65 protection - Hazardous voltage indication (even when the cells are faulty)
- Integrated self-test - Continuity - Lighting of tested point - Polarity +/-

SUPERIOR

# DR706

## PHASE SEQUENCE TESTER

STANDARDS

IEC 67557 - 7




REPLACEABLE LEADS

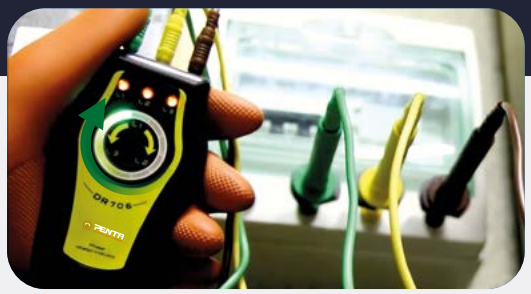
VOLTAGE TESTING ON L1 L2 L3

Additional element for diagnosing three-phase systems: all three leds must be lit to show current goes through!

INTELLIGENT DISPLAY

A slow led cahaser reproduces the rotation of a motor.

The GREEN clockwise direction and the RED anticlockwise direction make it easier to memorise the initial condition.

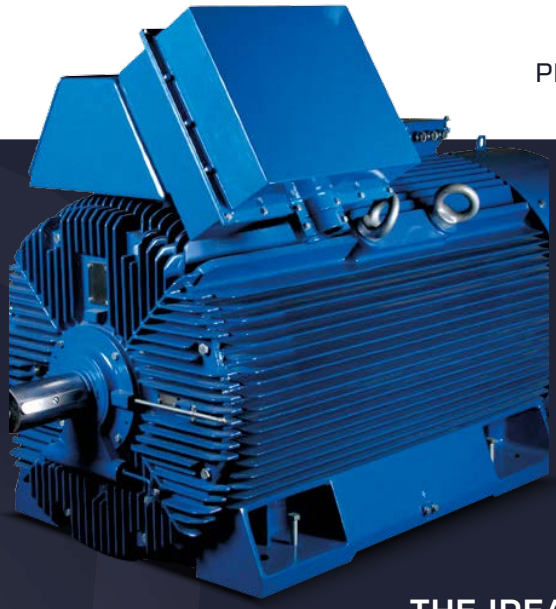




AN ULTRA-RESISTANT AND WATERPROOF CASE

Electronics embedded in insulating resin & IP65 for Cat IV version





## / ROTATION DIRECTION

When a three-phase system is commissioned, the phase order must be tested.
Many industrial processes using electric motors have a required rotation direction. That rotation direction is related to the order of connection of phase conductors. It is therefore imperative to make sure that the “rotation direction”, when it is put back into service, is the same as the initial rotation direction.

## / CAT IV

This device is specifically intended for working on low-voltage distribution networks.
It has been designed to achieve the requirements of measurement category IV, which is the most stringent for use on distribution systems.

Measurement category (formerly known as surge category):
All lowvoltage electrical installations can experience transient surges that can exceed several thousand volts. For example, such surges may be generated by the making and breaking of circuits or lightning impacts.

## THE IDEA OF OVERVOLTAGE CATEGORY EXPRESSES THE ABILITY OF DEVICES TO WITHSTAND SUCH SURGES:

CAT III — IF YOU WORK AFTER THE METER, CAT III IS SUFFICIENT.

CAT IV — IF YOU WORK BEFORE THE METER, YOU MUSTSELECT A HIGHER CATEGORY, I.E. CAT IV

## / TECHNICAL SPECIFICATIONS

- Voltage range: 80- 400 VAC
- For use on generating sets
- Frequency: 50 Hz & 60 Hz
- Maximum voltage: 440 V rms
- Class N = -70 °C to +55 °C
- Standard IEC 67557-7
- IP2X touch tips, 0 4 mm on elastic cages
- Supplied with bag, leads and crocodile clips
- Measurement category III or IV depending on model
- CE



| Reference | Overvoltage CATegory | Protection rating | Touch tips | Leads | Weight (Inc.cover) |
|---|---|---|---|---|---|
| DR706IIIXFR | CAT III 600 V | IP54 | IP2X | Green, yellow, brown | 390 g |
| DR706IIINEU | | | Standard | Brown, black, grey | 350 g |
| DR706IVXFR | CAT IV 600 V | IP65 | IP2X | Green, yellow, brown | 500 g |
| DR706IVNEU | | | Standard | Brown, black, grey | |

Fuse protected probe and other lead color available.




# PHASE DETECTOR 100-600V

PHASE SEQUENCE - CONTACT - PHASE DETECTOR 100-600 V

STANDARDS

EN 61010-1 CAT III 600 V/CAT IV 300 V

## / TECHNICAL SPECIFICATIONS

- Input Voltage: 100-600 V
- Frequency Range: 45-70 Hz
- Circuitry: All electronic
- Power consumption: Approx. 7 mA
- Dimensions: 102 (L) x 78 (W) x 32.5 (H) mm
- Weight: 212 g (including test leads)
- Accessories: Instruction Manual, Soft Case, Test Leads

# DISCOVER

## ALL OUR PRODUCTS IN OUR CATALOGUES AND BROCHURES

We invite you to explore our catalogues and brochures on our website.

**www.pentaesp.com**

Scan the QR code to access our website directly.







You can also request a printed copy from our Sales Department.

PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# MTAG

INNOVATION

## HIGH VOLTAGE DETECTOR
FOR DISTRIBUTION SYSTEM

STANDARDS
IEC 61243-1

**DESIGNED FOR "PROVING DEAD" ON HIGH VOLTAGE DISTRIBUTION SYSTEM BETWEEN 1 KV AND 69 KV**
(Voltage ranges calibrated according to IEC recommendations)




OPTIMUM SOUND INDICATION

OPERATING RELIABILITY

DIRECT ACCESS TO THE BATTERY, WATERTIGHT SEALED ELECTRONICS COMPARTMENT

ENHANCED VISUAL INDICATION

PREMIUM

# MTAG

INNOVATION

## MV VOLTAGE DETECTOR 1 - 69 KV

STANDARDS

IEC 61243-1 : NF EN 61243-1 : 2021



- **ENHANCED AUDIBLE INDICATION**

The 100 dB sound signal is designed to remains audible even in traffic or strong wind, thanks to its acoustic "horn".

- **ENHANCED VISUAL INDICATION**

The visual indication is visible in all usual working environments, in sunlight or fog, with a wide angle of visibility and from the side thanks to an optic ring.

- **DIRECT ACCESS TO THE BATTERY, WATERTIGHT SEALED ELECTRONICS COMPARTMENT**

When the battery is replaced, this design prevents the following:

- accidental interchange of housing or circuitry;
- damage to electronic circuits ;
- humidity ingress into the device when the battery is replaced outdoors.



- **OPERATING RELIABILITY**
  - Low battery level indicated by a dedicated ORANGE LED.
  - Latest generation of electronics.

### / ACCESSORIES

INTERCHANGEABLE POLE ADAPTERS



ADVECAPV* ADVECU* ADVECEAM* ADVECBV* ADVECUCR*

* Please contact us for other pole adaptaters

### / Soft case with conductive lining for EMC protection



SBHMTAG : soft case with conductive lining for EMC protection

### / USE

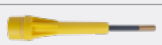
These voltage detectors are designed for "proving dead", making sure that nominal voltage is actually absent on a circuit in an HV distribution system between 1 kV and 69 kV (no-voltage verification):

- The device will detect any nominal voltage on overhead lines and stations.
- It will avoid detecting most induced voltages in order to allow grounding operations.

### / TECHNICAL SPECIFICATIONS

**AC voltage range possible choice from 1 - 4 kV to 69 kV**
**Network frequency: 50 and 60 Hzz.**

- Permanent standby status with automatic wake up function.
- The presence of voltage within the calibrated range or above is indicated by a RED light and a beeping sound.
- Self test OK the OK status (ready for use) of the device is indicated by a GREEN light.
- The self test checks all the circuits, the reference detection level and the battery voltage.
- The "ready for use" state is indicated by the green indication for 15 minutes.
- A low battery level is indicated by an ORANGE light.
- Designed for outdoor and indoor use.
- Operating temperature : -25° C to 55°C.
- Humidity 96 max.
- Power supply voltage 9 V alkaline cell IEC 6 LR 61.
- Accepts the use of rechargeable battery with identical supply voltage.
- Yellow polycarbonate housing.
- Dimensions Ø 59 mm, L 280 mm without the contact electrode.
- Net weight 0,390 kg with stick adaptor.
- Operating manual with a choice of languages, depending on the package.

| Description | Visual | Ref |
|---|---|---|
| 1200mm lenght electrode extension for 15kV and 25kV catenary network |  | ANTSMTAGRAIL1200R* |
| 226mm electrode extension with V shape fixed mount |  | ANTM226V** |
| Electrode extension for Magnefix system |  | ANTMTAGMAGNEFIX |
| Underground bushing probe |  | ANTMURD1MC |
| Underground elbow probe |  | ANTMURD1F |

*Pole end fitting to specify when ordering **Other lenght available on request

| Reference | Voltage range | Frequency | Housing colour | Stick adapter | Contact electrode | User manual** | Packaging*** |
|---|---|---|---|---|---|---|---|
| MTAG0104FHUA | 1 - 4 kV | 50 / 60 Hz | Yellow | Universal & EAM | V56 | Pack F<br>Also available in Pack G (change the ref to GHUA) | Soft case with conductive lining for EMC protection |
| MTAG0310FHUA | 3 - 10 kV | | | | | | |
| MTAG1036FHUA | 10 - 36 kV | | | | | | |
| MTAG2069FHUA | 20 - 69 kV | | | | | | |
| MTAG1036FHUA-FR | 10 - 36 kV | | | | Universal (for nevers pole) | | |

** Pack F : Notices in FR/GB/DE/ES/PT/PL. Pack G : Notices in GB/GR/BG/IT/NL/AR/TR. *** Metal case available on request.

PRO-ELITE

# MTAGX INNOVATION

## VOLTAGE DETECTOR MULTI RANGE

STANDARDS

IEC 61243-1




### / USE

These two or three operating voltage ranges are calibrated according to IEC recommendations between 1 kV and 69 kV.
This multi-range detector can simulate up to 3 voltage detectors with 3 separate ranges: lower range, middle range and upper range.

### / TECHNICAL SPECIFICATION

This contact voltage detector is designed for Verification of Absence of Rated Voltage (VATn) operations, verifying that a rated voltage is effectively absent from a circuit in a HV system.

| Reference | Voltage range | Frequency | Housing colour | Stick adapter | Contact electrode | User manual* | Packaging** |
|---|---|---|---|---|---|---|---|
| MTAGX0369FHUA-3 | 3 - 6,6 kV<br>10 - 36 kV<br>45 - 69 kV | 50 / 60 Hz | Yellow | Universal & APV | V56 | Pack F<br><br>Also available in **Pack G** (change the ref to GHUA) | Metal case |
| MTAGX1166FHUA-3 | 11 kV<br>33 kV<br>66 kV | | | | | | |
| MTAGX0669FHUA-2 | 6 - 20 kV<br>30 - 69 kV | | | | | | |

* Pack F : Notices in FR/GB/DE/ES/PT/PL. Pack G : Notices in GB/GR/BG/IT/NL/AR/TR. ** Metal case available on request.

/ Soft case with conductive lining for EMC protection



PRO-ELITE

# KIT MTAG INNOVATION

## VOLTAGE DETECTOR KIT & INSULATING POLE

STANDARDS

IEC 61243-1 / ASTM F 1826 / ASTM F 711 / IEC 62193 / IEC 60855-1





### / USE

Fameca offers a wide range of "detector + pole" assemblies, all 100% compliant with the requirements of IEC standards (IEC 61243-1 for the voltage detecor and IEC 62193 DEC60855 for the pole).

### / TECHNICAL SPECIFICATIONS

This will allow your agents to intervene in complete safety with a pole whose insulating length is adapted to the level of tension used, all protected and transportable in a suitable sheath.

/ Soft bag



| Type of pole | 1 - 4 kV | 3 - 10 kV | 10 - 36 kV | Weight |
|---|---|---|---|---|
| Fixed 0,8 m | VDP0104TM0808DMTAGFBL | VDP0310TM0808DMTAGFBL | VDP1036TM0808DMTAGFBL | 1,045 kg |
| Telescopic 1,5 m | VDP0104P0815DMTAGFBL | VDP0310P0815DMTAGFBL | VDP1036P0815DMTAGFBL | 1,245 kg |
| Telescopic 0,8M / 2 m | VDP0104P0820DMTAGFBL | VDP0310P0820DMTAGFBL | VDP1036P0820DMTAGFBL | 1,485 kg |

Other compositions based on different tension range, pole length or accessories are possible, please contact us.

PRO-ELITE

# MTAG DR

INNOVATION

## 1-69 KV VOLTAGE DETECTOR DUAL RANGE

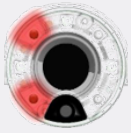
STANDARDS

IEC 61243-1 / CE / Compliance with European directives



- **2 in 1 : this dual range detector acts as 2 voltage detectors with 2 separated ranges : lower range and upper range.**
- **The presence of nominal voltage within the calibrated ranges is indicated as shown below :**

- **Two RED led lights and a beeping sound = nominal voltage detected within the lower range**



- **Four RED led lights and a beeping sound = nominal voltage detected within the upper range**



- **The 100db sound signal is designed to remains audible even in traffic or strong wing, thanks to natural amplification by an acoustic «horn»**

### / USE

This Go NoGo Contact voltage detector is designed for «proving dead», making sure that nominal voltage is actually absent on a circuit of an HV distribution system, It' s two operating ranges are calibrated according to IEC recommendations between 7 kV and 69 kV:

- The device will detect any nominal voltage when in contact with the part of the installation to be tested on overhead lines and substations.
- It will not indicate voltage presence when detecting induced voltages but will display green lights in order to allow grounding operations.

### / TECHNICAL SPECIFICATIONS

Two operating ranges can be chosen between 1 ans 69 kV
- Network frequency : 50 and 60 kV
- Complies to bridging test indoor and outdoor: no flashover when inserted between two live parts
- Designed for outdoor and indoor use
- Operating temperature: -25° Cto +55° C
- Humidity: 96% max.
- Power supply voltage: 9 V alkaline cell — IEC 6LR61
- Dimensions: © 59 mm. L = 280 mm without the contact electrode
- Net weight: 0.390 kg with stick adaptor

### / ACCESSORIES

INTERCHANGEABLE POLE ADAPTERS



ADVECAPV* ADVECU* ADVECEAM* ADVECBV* ADVECUCR*

* Please contact us for other pole adaptaters

| Reference | Voltage range | Frequency | Housing colour | End fitting* | Contact electrode | User manual** | Packaging*** |
|---|---|---|---|---|---|---|---|
| MTAGDR0669FCU | 6 - 25 kV 30 - 69 kV | 50 / 60 Hz | Yellow | Universal | V56 | Pack F | Metal case |
| MTAGDR0333FCU | 3.3 - 6.6 kV 11-33 kV | | | | | | |
| MTAGDR1166FHU | 11 - 33 kV 66 kV | | | | | | Soft case with conductive lining for EMC protection |
| MTAGDR0236FHUA | 2-7.2 kV 12-36 kV | | | Universal & APV | | | |

Other compositions based on different tension range, pole length or accessories are possible, please contact us.

*Other stick adaptator available on requied
** Pack F : FR/GB/DE/ES/PT/PL -- Pack G : GB/GR/NL/BG/IT/AR/TR
*** Metal case or soft case version available on required



- Visual indication: 2 red flashing LEDs (voltage present), 2 green LEDs (no voltage)
- Audible signal: intermittent beeping for voltage presence

# RT1030/U-AD

LIVE LINE DETECTOR HV NON CONTACT TYPE

STANDARDS

IEC 61243-6 / EA0499

## / TECHNICAL SPECIFICATIONS

- Voltage range: 50-765 kV
- Frequency: 50 / 60 Hz
- Suitable for use in wet condition, either indoors or outdoors.
- Double indications of operative voltage presence: intermittent acoustic and flashing of 2 red ledlights.
- The absence of operative voltage is indicated by 2 green led-lights permanent on.
- Built-in self control check for testing the accurate working of the voltage detector before use.
- Cylindrical box made of ABS diameter 58 mm.
- Universal splined end fitting for connection onto the head of the insulating rod.
- Supply: alkaline battery 9 V.
- Supplied into a plastic case with foam



# R-VISOR

ELECTRONIC CAPACITIVE DETECTOR OF MEDIUM VOLTAGE PRESENCE / ABSENCE THROUGH ACOUSTIC AND VISUAL SIGNALS CLEARLY VISIBLE FROM BOTTOM AND LATERAL SIDE OF THE DETECTOR

STANDARDS

IEC 61243-1

## / TECHNICAL SPECIFICATIONS

Range from 3kV to 66kV (range to be defined in case of order)
- Suitable for use in wet condition, either indoors or outdoors.
- Suitable for use in three-phase MV network.
- Double indication of operative voltage presence: intermittent acoustic and flashing of red LEDs in the lower and lateral side of the detector.
- The absence of operative voltage is indicated by green permanent LEDs on in the lower and lateral side of the detector.
- The presence of an adjacent active or earthed part does not affect the in phase and out phase conditions.
- It does not respond in case of DC voltage.
- It does not detect the presence of voltage for normal electromagnetic interference values.
- The lighting of the orange LED-light is the indication of low battery.
- Response time: less than 1 second.
- Fork shaped electrode.
- Built-in self-control check for testing the accurate working of the voltage detector before use. Self-control test every 3 seconds and positive confirming with a green led flashing and signal sound with buzzer.
- Operating time without faults when applied to operating voltage: more than 5 minutes.
- Cylindrical box made of ABS, diameter 58 mm.
- Power: alkaline battery 9 V included.
- No. 3 fittings into the package: Universal, hexagonal, threaded M10 interchangeable fittings to be used with rod with different heads.
- Plastic case with protective, shockproof foam.

SUPERIOR

# MTAG BC

OUR SELECTION

## VOLTAGE DETECTOR FOR CAPACITIVE TEST POINT OF ELBOW CONNECTOR

STANDARDS

CE: COMPLIANCE WITH EUROPEAN DIRECTIVES. COMPLIES WITH EDF-SPS TECHNICAL SPECIFICATION N° 42.




**Optimised indication** that can be understood clearly in all working conditions:

- The visual indication is visible in all usual working environments, in sunlight or fog, with a wide angle of visibility and from the side thanks to an optic ring.
- The **100 dB** sound signal is designed to remains audible even in traffic or strong wind, thanks to its acoustic "horn".

**Direct access to the battery and sealed electronics comparment. When the battery is replaced, this design guarantees the following:**

- NO accidental interchange of housing or circuitry;
- NO damage to electronic circuits;
- NO humidity ingress into the device when the battery is replaced outside.

### / USE

These voltage detectors are designed for "proving dead", making sure that nominal voltage is actually absent on capacitive test point of elbow connector (no-voltage verification):
- The device will detect any nominal voltage on capacitive test point.
- It will avoid detecting most induced voltages in order to allow grounding operations.



### / TECHNICAL SPECIFICATIONS

**AC voltage on Capacitive Test Point of elbow connector**
**Network frequency: 50 and 60 Hz**
- Permanent standby status with automatic wake-up function
- The presence of voltage within the calibrated range or above is indicated by a RED light and a beeping sound.
- Self-test OK: the OK status (ready for use) of the device is indicated by a GREEN light.
- The self-test checks all the circuits, the reference detection level and the battery voltage.
- The "ready for use" state is indicated by the green indication for 2 minutes.
- A low battery level is indicated by an ORANGE light.
- Designed for outdoor and indoor use
- Operating temperature: —25° to +55°C
- Humidity: 96% max.
- Power supply voltage: 9 V alkaline cell — IEC 6LR61
- Accepts the use of rechargeable battery with identical supply voltage
- Orange polycarbonate housing with integrated universal pole tip
- Dimensions: L = 260 mm — l = 100 mm
- Net weight: 0.450 kg
- Operating manual with a choice of languages, depending on the package.







| Reference | Voltage range | Frequency | User's Manual* | Packaging |
|---|---|---|---|---|
| MTAGBC0310FHU | 3—10 kV | 50 / 60 Hz | Pack F<br>Also available in **Pack G** (change the ref to GHUA) | Metallic bag with EMC protection |
| MTAGBC0336FHU | 3—36 kV | | | |
| MTAGBC0520FHU | 5—20 kV | | | |
| MTAGBC0536FHU | 5—36 kV | | | |
| MTAGBC1036FHU | 10—36 kV | | | |



* Pack F : FR/GB/DE/ES/PT/PL — Pack G : GB/GR/NL/BG/IT/AR/TR

ESSENTIAL

# TAG100

VOLTAGE DETECTOR

STANDARDS
NF —C18311



| Low Voltage | Ph-G distance |
|---|---|
| Un < 12 kV | 150 mm |
| 12 < Un < 17,5 | 180 mm |
| 17,5 < Un < 24 | 215 mm |
| 24 < Un < 36 | 325 mm |

## / USE

Voltage detector for MV networks.
- TAG100 is designed to check absence of nominal voltage by direct contact to the line.
- It is usually used prior to earthling operation of a three-phase voltage system.

## / TECHNICAL SPECIFICATIONS

**AC voltage range possible choice from 1 to 36 kV**
**Network frequency: 50 or 60 Hz**
- Category: L = without electrode extension.
- All weather use (under light rain after whipped with siliconed cloth !).
- Temperature: -25°C to +55°C.
- Power supply: 9 V alkaline battery 6LR61.
- Dimensions: Ø 49 mm, L = 195 mm excluding electrode
- **Limitation:** Distance between phase and ground must be above the following: no other electrode than Y40 and Y56 can be used.

| Reference | Voltage range | Frequency | End fitting | Contact electrode | User's manual* |
|---|---|---|---|---|---|
| T10F0310H | 03-10 kV | 50 / 60 Hz | Universal | Y56 | Pack F<br>Pack G also available |
| T10F1036H | 10-36 kV | | | | |

* Pack F : FR/GB/DE/ES/PT/PL * Pack G : GB/GR/NL/BG/IT/AR/TR

ESSENTIAL

Can be positioned by a simple screw or a directional clamp.



No maintenance required

Excellent perceptibility for the user



Useful compact and robust design

# PVI

PERMANENT VOLTAGE INDICATOR, FROM 5 TO 75KV AC

## / USE

The unipolar permanent voltage indicator installed on the conductor is intended to announce the presence of high voltage.

## / TECHNICAL SPECIFICATIONS

- The PVI consists of an external type box containing red led's with strong luminosities.
- A simple bracket allows the mounting of round conductor from 5 to 25 mm and the flat bars from 1 to 25 mm
- Its operating range is 5 to 75 kV.

| Reference | Dimension | Weight |
|---|---|---|
| PVI | 11x13x6 | 150 g |

SUPERIOR

# V CHECK

NEW

CAPACITIVE VOLTAGE DETECTORS PROVING UNIT

- High voltage signals generated by V CHECK allow to test most of IEC 61243-1 capacitive voltage detectors.
- Easy to use: touch the voltage detector contact electrode with the V CHECK proving unit, and press the button.
- Compact, lightweight, and easy to use.
- Battery powered (autonomy: up to 1000 tests).
- Red led warning during the test.
- Low battery indication by orange LED.
- Real conditions test






## / USE

- V CHECK proving unit is designed to check most of capacitive voltage detectors that comply with IEC61243-1.
- The proving unit allows you to make sure your MTAG, or other capacitive detector, is working properly when no "known real voltage" is available.
- The V CHECK proving unit could be used before and after using your capacitive voltage detector on-site or periodically to check its full integrity.
- The VCHECK don't allow to test capacitive voltage detector with resistive contact electrode extension.

**This product does not replace the built-in self-test which MUST be used before and after using your voltage detector.**

## / TECHNICAL SPECIFICATIONS

- Powered with 1 x 9V alkaline battery
- Use temperature: -25°C to +55°C
- Size: 123 x 72 x 49 mm
- Weight: 228 g (without battery).

| Reference | User's Manual * | Packaging |
|---|---|---|
| VCHECKHF | Pack F | Soft case |
| VCHECKHG | Pack G | |

* Pack F : FR/GB/DE/ES/PT/PL  Pack G : GB/GR/BG/IT/NL/AR/TR

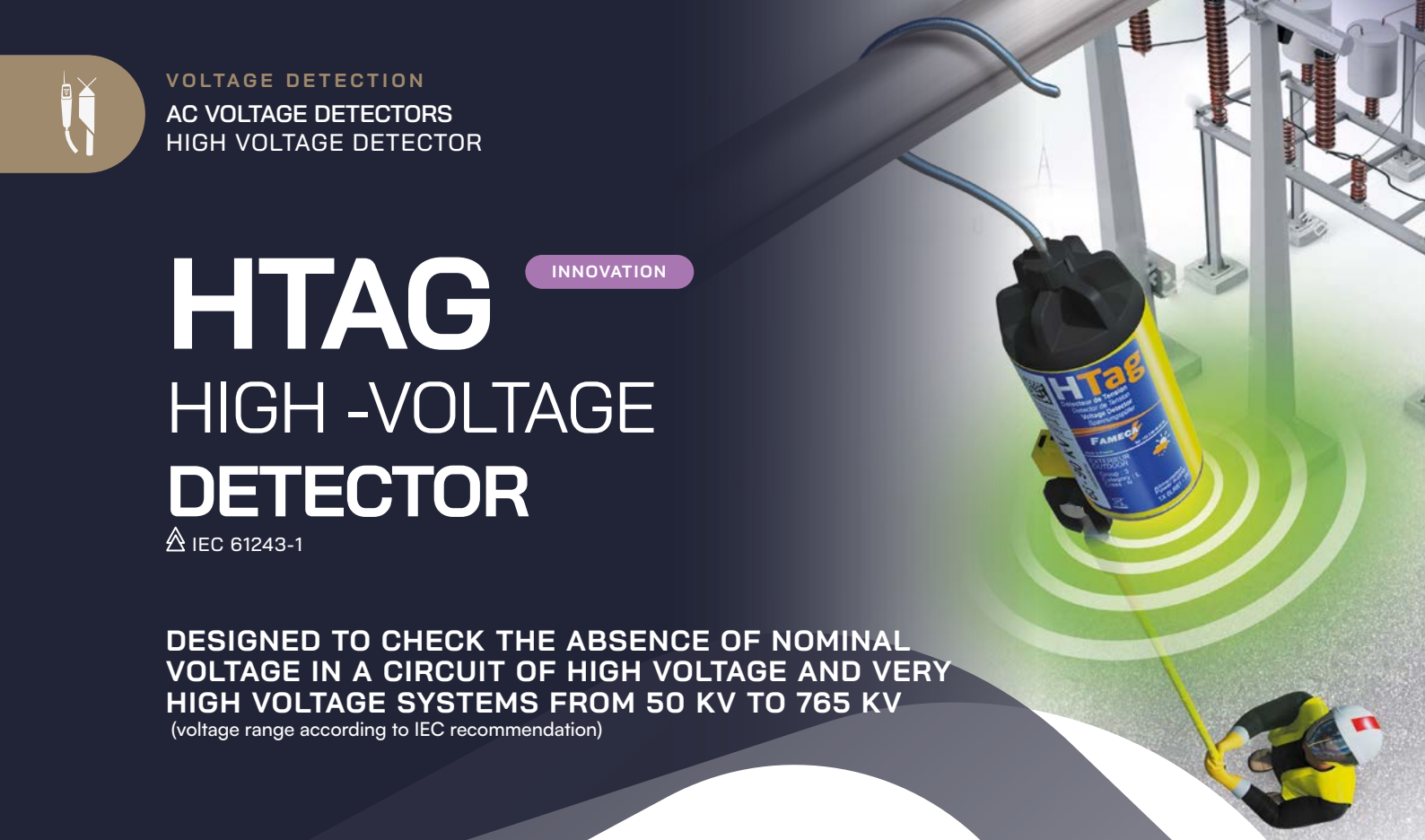


# HTAG

INNOVATION

# HIGH -VOLTAGE DETECTOR

IEC 61243-1




**DESIGNED TO CHECK THE ABSENCE OF NOMINAL VOLTAGE IN A CIRCUIT OF HIGH VOLTAGE AND VERY HIGH VOLTAGE SYSTEMS FROM 50 KV TO 765 KV**
(voltage range according to IEC recommendation)




FUNCTIONAL RELIABILITY

DIRECT ACCESS TO THE BATTERY AND SEALED ELECTRONICS COMPARTMENT

OPTIMUM SOUND INDICATION

OPTIMAL LIGHT INDICATION

PRO-ELITE

# HTAG

## 50 — 765 KV VOLTAGE DETECTOR

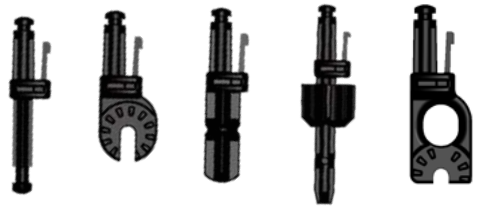
STANDARDS
IEC 61243-1



- **OPTIMISED INDICATION that can be understood clearly in all working conditions:**
  - The visual indication is visible in all usual working environments, in sunlight or fog, with a wide angle of visibility and from the side thanks to an optic ring.
  - The 100 dB sound signal is designed to remains audible even in traffic or strong wind, thanks to its acoustic "horn".
- **Direct access to the battery and sealed electronics compartment. When the battery is replaced, this design prevents the following:**
  - Accidental interchange of housing or circuitry;
  - Damage to electronic circuits;
  - Humidity ingress into the device when the battery is replaced outdoors.



### / ACCESSORIES
INTERCHANGEABLE POLE ADAPTERS



ADVECAPV* ADVECU* ADVECEAM* ADVECBV** ADVECUCR*

* Other adapters are available, please contact us.

### / USE

These voltage detectors are designed for "proving dead", making sure that nominal voltage is actually absent on a circuit in an HV transmission system between 50 kV and 765 kV (no-voltage verification)

- The device will detect any nominal voltage on over head lines and stations.
- It will avoid detecting most induced voltages in order to allow grounding operations.

### / TECHNICAL SPECIFICATION

AC voltage range possible choice from 50 to 765 kV.
Network frequency: 50 or 60 Hz (to be specified with the order)

- Permanent standby status with automatic wake-up function ;
- The presence of voltage within the calibrated range or above makes a RED indicator light up, and an audio signal is generated.
- Self-test OK: the OK status (ready for use) of the device is indicated by a GREEN indicator lamp.
- The self-test checks all the circuits, the reference detection level and the cell voltage.
- The self-test is repeated automatically throughout the ready for use state as indicated by the green indicator lamp (for 1.5 minutes).
- The battery low level is indicated by a dedicated ORANGE LED indicator going on.
- Designed for outdoor use
- Operating temperature: -25 °C to +55 °C
- Humidity: 96 % max.
- Power supply voltage: 9 V alkaline cell — IEC 6LR61
- Accepts the use of accumulators with identical supply voltage
- Yellow or red polycarbonate housing
- Dimensions: Ø 80 mm, L = 225 mm without the electrode
- Net weight: 0.618 kg with stick end fitting, without electrode
- Operating manual with a choice of languages, depending on the package.
- Package with three electrodes : 2 hooks: Ø 60 mm (AC 60) and Ø 120 mm (AC 120) and 1 straight electrode (D 100).

| Reference | Voltage range | End fitting** | Electrode type | User manual* | Packaging |
|---|---|---|---|---|---|
| HTAG060090FC | 60-90 kV | Universal & EAM | AC60/AC120/ D100 | Pack F<br>Also available in **Pack G** | Metal case |
| HTAG060132FC | 60-132 kV | | | | |
| HTAG220500FC | 220-500 kV | | | | |

** Pack F (user manual) FR/GB/DE/ES/PT/PL — Pack G (user manual) GB/GR/BG/IT/NL/AR/TR — For any other voltage range, available please contact us.

SUPERIOR





Devices features an electronic detection system with miniature gas discharge tubes.



This original configuration gives it very high performances, especially in the case of high induction and/or parasitic electric fields.

# TAG330

## ELECTRONIC HV NO-VOLTAGE TESTER, FROM 50 TO 765 KV

STANDARDS
IEC 61243-1

### / USE

Electronic HV no-voltage tester, from 50 to 765 kV.

### / TECHNICAL SPECIFICATIONS

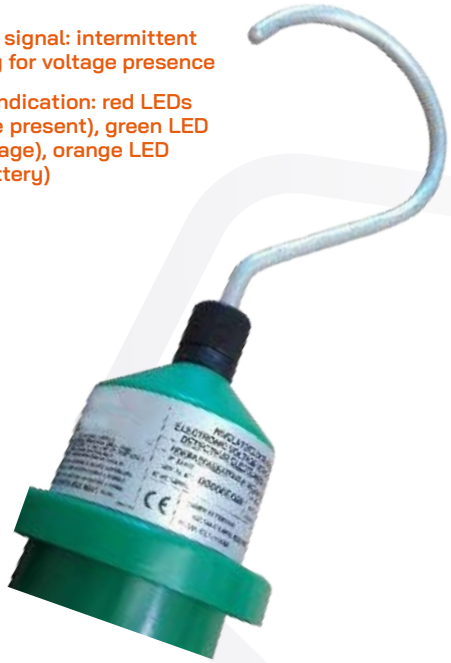
- Mains frequency range : 16.66 ; 50 or 60 Hz (specify when ordering).
- Indication of the absence of voltage and the correct operation of the device by a green LED.
- Very sturdy polycarbonate casing.
- Self-test device.
- Electronic cut-out if battery drops under threshold voltage of 8V.
- Can be used in all weathers.
- Temperature range: from -25°C to +55°C.
- Power supply: one 9V alkaline battery.

**Device comes in a metal case with hooks ø 60 and 120 mm and straight electrode 100 mm.**

| Reference | Description | Voltage range | Colour |
|---|---|---|---|
| 330F060090C5 | Electronic HV no-voltage tester, from 60 kV to 90 kV | 60 kV to 90 kV | Yellow |
| 330F150150C5 | Electronic HV no-voltage tester, 150 kV | 150 kV | Red |
| 330F225400C5 | Electronic HV no-voltage tester, from 225 kV to 400 kV | 225 kV to 400 kV | |
| 330F400765C5 | Electronic HV no-voltage tester, from 400 kV to 765 kV | 400 kV to 765 kV | |

** Other settings available with a ratio of 1/3 up to 735 kV. Available in 60 Hz.

- Audible signal: intermittent beeping for voltage presence
- Visual indication: red LEDs (voltage present), green LED (no voltage), orange LED (low battery)



# RMT3090/U

## ELECTRONIC CAPACITIVE DETECTOR OF VOLTAGE PRESENCE / ABSENCE ON HV LINES AND INSTALLATIONS BY VISUAL AND ACOUSTIC SIGNALS

STANDARDS
IEC 61243-1

### / USE

Electronic capacitive voltage detector for verifying presence or absence of voltage on high-voltage lines and installations (60—380 kV). Suitable for indoor or outdoor use in wet conditions. Ensures safe and reliable “proving dead” operations.

### / TECHNICAL SPECIFICATIONS

- Voltage range: 60-380 kV
- Integrated self-test function for operational verification before use
- Contact probe: metallic hook, 360° swivel type
- Connection: universal splined end fitting for insulating rod
- Power supply: 9 V alkaline battery

INNOVATION



**Advantages**

The Proxy Tester detects AC voltages with up to 12 selectable levels, clearly displayed on an integrated digital screen. Its indication remains easy to read in all conditions, and it features direct access to the battery and sealed electronic compartment.













# PROXY TESTER

## PROXIMITY VOLTAGE DETECTOR

STANDARDS

- Compliance with European directives.
- EN 61000-6-2, EN 61000-6-4

### / USE

- The Proxy Tester is an all-weather device for checking the presence of a selected AC voltage in a wide voltage range from low voltage, medium up to high voltage. It can be used in substations, switchyards as well as on overhead lines. It can integrate up to twelve positions of voltages to select between a wide range from 110 V AC to 750 kV AC (the possible selection depends on the version).

### / TECHNICAL SPECIFICATIONS

- Up to 12 selectable voltages (upon versions) within a wide range from 110 V to 750 kV
- Network frequency: 50/60 Hz
- Installation type: Indoor/Outdoor
- Climate class: N = from —25°C to +55°C
- Humidity: 96% max.

**Automatic features:**

- Automatic self-test when the device is switched on
- The self-test checks all the circuits and the battery level
- Selection of the voltage position by pressing the button successively
- "Ready for use" status indicated by the → GREEN light
- Switch off by a long press on the button
- Presence of voltage (as per selected position) → flashing RED light and beep
- Low battery level → ORANGE light

**Construction:**

- Power supply: 9 V alkaline cell — IEC 6LR61
- Red polycarbonate housing
- Dimensions: Ø 80 mm, L = 225 mm (Ø 3.14 in, L = 8.85 in)
- Net weight: 0.700 kg (1.54 pounds) with stick end fitting
- Interchangeable adapter for all types of insulated pole end fitting

| Reference | Voltage range | Number of level | Voltage levels* | End fitting** | User's Manual*** | Packaging |
|---|---|---|---|---|---|---|
| PT033L03FHU | 0.24—33 kV | 3 | 0.24-11-33 | Universal | Pack F*** Also available in Pack G | Soft bag with EMC protection |
| PT275L09FHU | 0.24—275 kV | 9 | 0.24-11-22-33-66-110-132-210-275 | | | |
| PT500L10FHU | 0.24—500 kV | 10 | 0.24-3.3-11-22-33-66-110-220-330-500 | | | |

*Other range available on request **Other stick adaptor available on request ***Pack F: FR/GB/DE/ES/PT/PL
Specific setting on demand for the voltage levels



# HBPVD

## PROXIMITY NOT CONTACT VOLTAGE DETECTOR LV-MV-HV

STANDARDS

IEC TR 61243-6

### / USE

Twelve voltage detection settings from 240Vac to 275kVac. Physical contact with electrical conductors is not necessary when testing for live lines. This tester works by proximity. Its sensor senses the radiated field which surrounds live conductors.

### / TECHNICAL SPECIFICATIONS

- Frequency 50/60 Hz
- 12 voltage settings: 240Vac, 2kV, 3.3kV, 6kV, 11kV, 22kV, 33kV, 66kV, 110kV, 132kV, 220kV and 275kV
- High bright LEDs visual indication
- Sound indication
- Automatic cyclic self-check
- Self turn-on and automatic timed shut-off plus manually switch on/off
- Self-test selection
- Non-contact work by proximity
- Suitable for indoor and outdoor use
- Detect low voltage on any system
- Low battery indication
- EMC Electromagnetic Compatibility

ESSENTIAL

• This adjustment is made using a sliding sleeve fitted around the antenna.



• The DCEDB382 features an original system that enables it to detect only the targeted fields by changing the device's acceptance angle.




Recommendations : It is very important to stand exactly below the conductor and take several comparative measurements (figures A and B).
In general, note that detection is always much better from the pole.

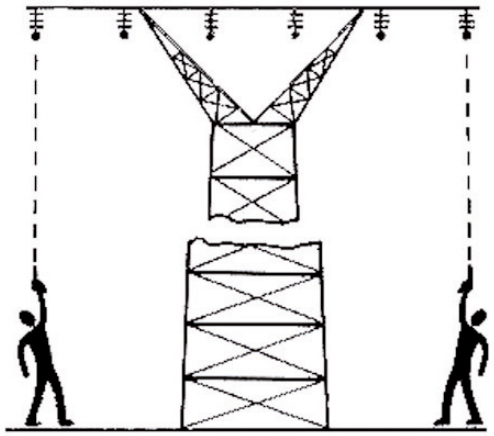


Figure A

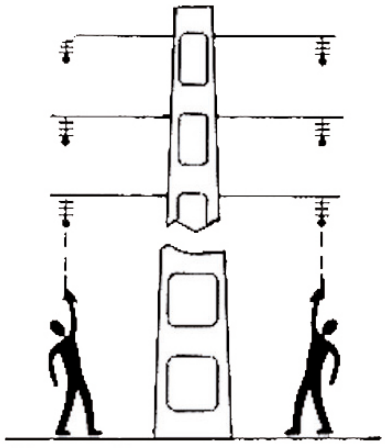


Figure B

# DCEDB382

## REMOTE ELECTRICAL FIELD DETECTOR

### / USE

The DCEDB382 remotely detects the presence of electrical fields from the pylon or even from the ground on all high voltage lines.
It has been specially designed to avoid linemen climbing the wrong pylon.
Established directives and procedures must be followed.

### / TECHNICAL SPECIFICATIONS

- Aluminium casing equipped with a zoom type adjustable field antenna.
- 10-position bargraph indicator, trigger start and green battery level LED.
- Self-checking.
- Power supply: 9V battery, IEC T LR61 ref. S413.
- Temperature range: from 25°C to 55°C.
- Comes in a leather holster.

**NB : This detector is not a voltage detector.**

| Reference | Description | Weight |
|---|---|---|
| DCEDB382 | Remote electrical field detector | 750 g |

### / Accessories

| Reference | Description | Weight |
|---|---|---|
| SCDCEDB | Leather case | 168 g |





PENTA
ELECTRICAL SAFETY PRODUCTS

TOGETHER

# #WEARE PENTASTIC



## FOLLOW US !

@PENTAESP

# DCC
# DIRECT CURRENT VOLTAGE DETECTOR

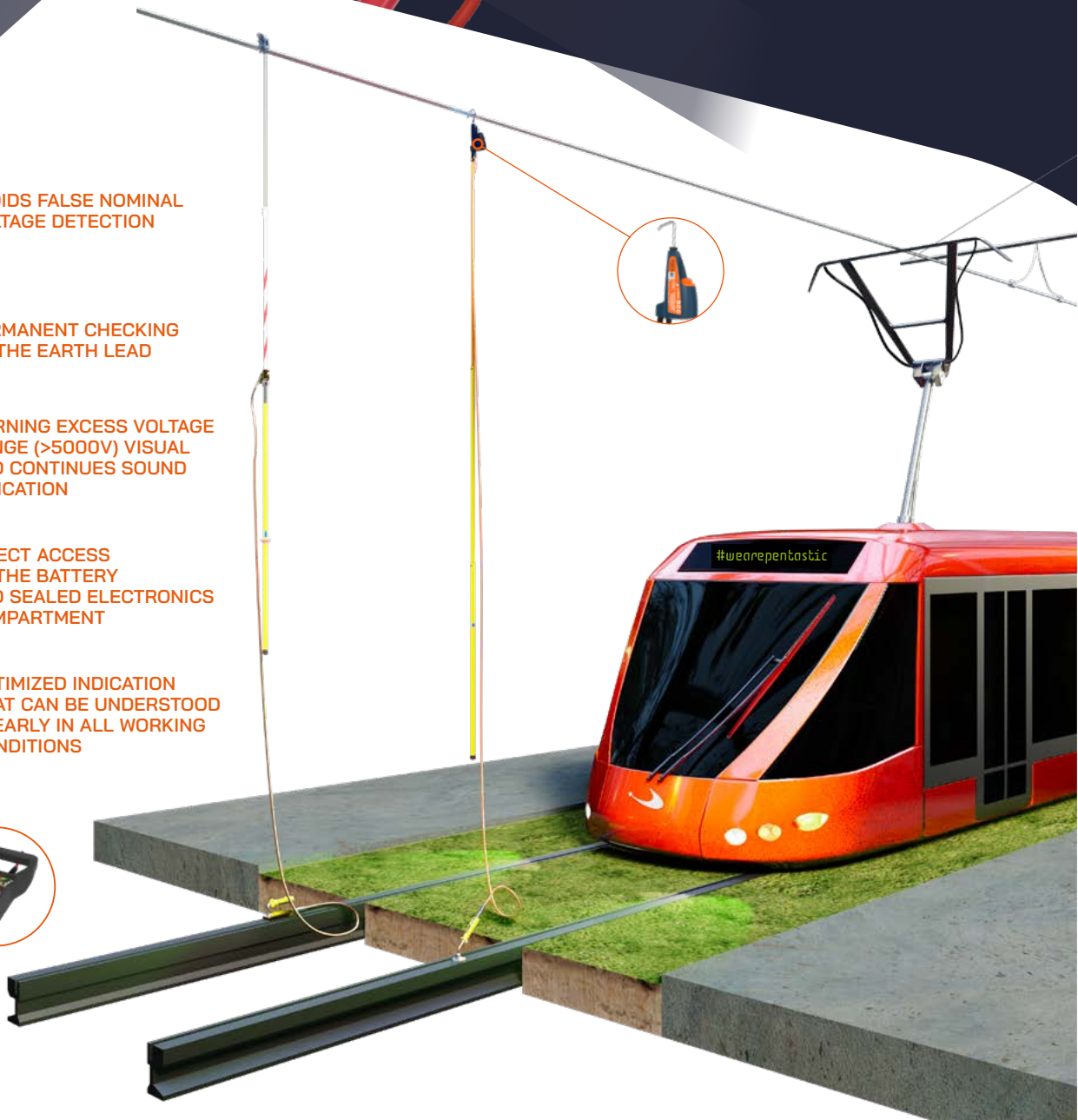
DESIGNED ACCORDING TO IEC 612343-2 CE

**DC BIPOLAR VOLTAGE DETECTOR**
**RANGE 120V – 3600 V DC**




- AVOIDS FALSE NOMINAL VOLTAGE DETECTION
- PERMANENT CHECKING OF THE EARTH LEAD
- WARNING EXCESS VOLTAGE RANGE (>5000V) VISUAL AND CONTINUES SOUND INDICATION
- DIRECT ACCESS TO THE BATTERY AND SEALED ELECTRONICS COMPARTMENT
- OPTIMIZED INDICATION THAT CAN BE UNDERSTOOD CLEARLY IN ALL WORKING CONDITIONS





PRO-ELITE

# DCC

INNOVATION

## DC VOLTAGE DETECTOR 120V — 3600 V DC

STANDARDS
IEC 61243-2




- **AVOIDS FALSE NOMINAL DC VOLTAGE DETECTION :** double measurement circuit distinguishing nominal and stray voltages.
- **PERMANENT CHECKING OF THE EARTH LEAD :** Permanent earth lead continuity monitoring.
- **DIRECT ACCESS TO THE BATTERY** and sealed electronics compartment.
  When the battery is replaced, this design prevents the following :
  - damage to electronic circuits ;
  - humidity into ingress the device when the battery is replaced outdoors.
- **OPTIMIZED INDICATIONS** that can be understood clearly in all working conditions :
  - **High-visibility indicator light, clearly readable in all working conditions.**
  - **100 dB audible signal, clearly perceptible in noisy environments, thanks to an acoustic "horn".**
- Integrated self-test button with lead continuity and battery status check.
- Each indicator light is dedicated to a single function.
- **A THOUGHTFUL DESIGN**
  - Robust shell with shock-absorbing adapter (adapters available on request – APV R).
  - Counter nut allowing electrode locking in any direction.
  - Ergonomic button suitable for use with insulating gloves.

### / USE

This device is used for proving dead operation of direct current overhead conductor especially railway catenary (metro, trains)
- Detection of DC voltage (presence or absence of voltage)
- Detection of residual DC voltage measure the unloading of the line
- Detection of nominal or induced AC voltage (presence or absence of voltage)

### / TECHNICAL SPECIFICATIONS

- Nominal voltage range : Un = 120 V to 3000V DC.
- Double voltage indication, powerful sound and a flashing light indication.
- Presence of real DC voltage indicated by audible and flashing high-brightness red light.
- Bright orange LED indication: presence of interference voltage (DC residual charge) or stray voltages coming from surrounding circuits (faulty insulators)
- Presence of induced alternative voltage indicated by high-brightness blue light.
- Auto-test OK and no voltage indicated by green high-brightness light.
- Self-check incorporated to ensure correct functioning of device in the field before and after use.
- Operating temperature: -25° to +55° C, humidity 20% to 96%.
- IP65: 1st index = 6 dustproof. 2nd index = 5 = Waterproof.
- Outdoor use
- Battery: 9 volt alkaline CEI / IEC 6LR61
- Delivered in metal case of soft case
- Complet device approx. height: 3,200 kg



### / A measurement module is available for this product!

**Voltage Detector – Measurement Version**

This advanced model provides accurate AC and DC voltage readings along with detailed diagnostics when leakage current is detected, offering enhanced support for rapid and reliable network analysis.




| Reference | Voltage range | End fitting | Packaging |
|---|---|---|---|
| DCC3600U | 120 — 3600V DC | Universal | Soft case |
| DCC3600R | | R | |
| DCC3600APV | | APV | |
| DCC3600MU | 120 — 3600 V DC (voltage indication on remote module) | Universal | Robust and waterproof case |
| DCC3600MR | | APV | |
| DCC3600MAPV | | R | |

SUPERIOR SUPERIOR ESSENTIAL

# DC3600BPM – DC3600 – DC36

OUR SELECTION

## DC BIPOLAR VOLTAGE DETECTORS, RANGE 500 / 3.600 V DC

STANDARDS
IEC 61243-2

- Instant detection of residual DC voltage (measure the unloading of the line).
- Detection of actual and induced AC voltage (presence or absence of voltage).
- Detection of DC voltage (presence or absence of voltage).
- Warning excess voltage range (> 4000V) visual and continues sound indication.
- Current limitation in the cable below <3.5 mA.
- Surge resistant up to 36 kV.
- Indication of the voltage level on the AC or DC receiver (± 3 %).
- Robust shell with flexible adapter coupling (AFLEX).
- Full auto control with self test button (cable is also tested).
- Dedicated display for each function => clear information.




### / USE

These devices are used for No-Voltage Testing of direct current overhead lines (mainly transport overhead lines : trams, metro, trains). Certain models in this range also indicate the presence of voltage due to residual electric charges (DC) and the presence of AC voltages (induced or actual).

### / TECHNICAL SPECIFICATIONS

Voltage range: 400-3600V DC.Audible and visual indication of the presence of voltage (red LEDs)
The current passing through the detector cable is always lower than the standardised danger threshold (3.5 mA). Designed to resist temporary over voltages up to 36kV. DC36 simplified model : simple DC voltage detection from 500V to 3600V. DC3600BP detector: complete detector able to indicate:
- detection of DC voltages (red LEDs) from 500V to 3600V
- presence of residual DC voltages while discharging(audible signal and orange LEDs)
- presence of actual or induced AC voltages (blueLED)
- overvoltage alarm

| Reference | Nominal voltage | End fitting | Packaging |
|---|---|---|---|
| DC36HR | 500 — 3600V DC | AFLEX R | Soft case |
| DC36HU | | AFLEX U | |
| DC36HAPV | | AFLEX APV | |
| DC36HB | | AFLEX B | |
| DC3600BPHR | | AFLEX R | |
| DC3600BPHU | | AFLEX U | |
| DC3600BPHAPV | | AFLEX APV | |
| DC3600BPHB | | AFLEX B | |
| DC3600BPM | - | - | |
| DC3600BPMAPV | 500—3600 V DC (voltage indication on remote module from 50 V AC and 120 V DC)) | AFLEX APV | Robust and water-proof case |
| DC3600BPMB | | AFLEX B | |
| DC3600BPMR | | AFLEX R | |
| DC3600BPMU | | AFLEX U | |

SUPERIOR

# HVDC OUR SELECTION

## HIGH VOLTAGE DC DETECTOR

- Exclusive patent for using peak effect.
- Aluminum electrodes, for peak effect and conductor contact
- Permanent stand-by mode
- Built-in self-test checking the circuit and the battery level
- Green LED for "ready to use" indication
- Acoustic and Red LED indication for "Nominal Voltage present"
- Housing made of impact resistant polycarbonate.




### / USE

Single-pole Voltage Detector for Direct Current, HVDC is designed to check absence or presence ofnominal voltage on high voltage Direct Current, DC, installations, both in switchgear and on lines.

### / TECHNICAL SPECIFICATIONS

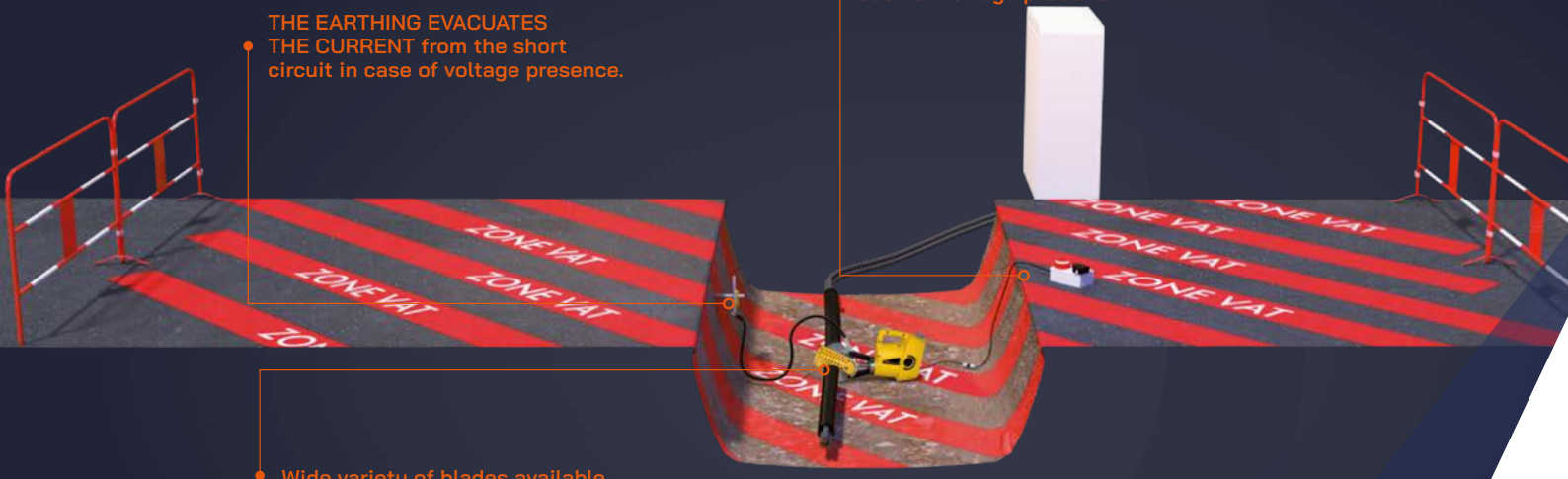
DC voltage range possible choice from 50 to 800 kV
- Detector operating exclusively with DC Voltages
- Rejection of AC Voltages
- Permanent stand-by mode, turning back to stand-by mode after 90s w/o detecting
- Use indoor outdoor category N: -25°à +55°
- Supply: 4 Batteries AA
- Carrying case with instruction manual
- Dimensions: Ø 80 mm — L = 350 mm
- Weight: 550 g.



| Reference | Voltage range | End fitting | Packaging |
|---|---|---|---|
| HVDC050150GB | 50 - 150 kV | Universal | Plastic case |
| HVDC150500GB | 150 - 500 kV | | |
| HVDC450800GB | 450 - 800 kV | | |

# D.E.T.
## DE-ENERGIZED TESTING FOR UNDERGROUND NETWORKS

**On tripolar cables and networks protected by a circuit breaker, it is strongly recommended to carry out a DET using a dual function spiking and cutting tool in order to limit the short circuit to a phase-to-earth fault.**




## SECURE IDENTIFICATION



De-energized and dual grounded.



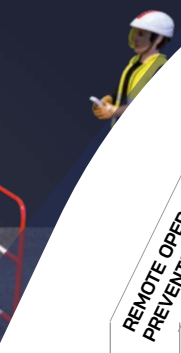
De-energized testing.

# SAFETY CABLE CUTTER FOR UNDERGROUND NETWORKS



## / OUR EXPERTISE FOR SAFER DE-ENERGIZED TESTINGS ON UNDERGROUND NETWORKS

- 25 years of expertise in de-energized testing (DET) spiking and cutting tools.
- Thousands of DET tools sold worldwide to electrical utilities.
- Short Circuit Intensity Rating (SCIR) of earth leads tested in third party laboratory up to 31.5kA.1s
- 0 accidents with the use of the Range PICOUP® since first delivery.
- Choose your safe DET solution in our wide range of products according your level of requirements.
- Compliance to existing standards NFC1850, EN 50340: Enedis specification.



✓ Function performed by device.

× Function not provided by the device.

ICC during a VAT on a live wire
DC phase-ground = 1kA = single phase fault
DC phase-phase = 3.5kA = two-phase fault
3-phase DC = 12.5kA = 3-phase fault

| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | IP67 CRETIFIED | SAFETY GUARANTED | Tools type | Tool reference | Wire diame-ter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| × | × | × | × | × | × | × | × | MANUAL cable cutter | SPCS120M | 120 mm | two-phase | 1 spiking | • | • | • |
| × | × | × | × | × | × | × | × | CARTRIDGE cable spiker | SPC80WC | 80 mm | two-phase | 1 spiking | • | • | • |
| × | × | × | × | × | × | × | × | | SPC114WJ | 114 mm | two-phase | 1 spiking | • | • | • |
| × | × | × | × | × | × | × | × | | SPC114WJC | 114 mm | two-phase | 1 spiking | • | • | • |
| × | × | × | × | × | × | × | × | | SPC152WC | 152 mm | two-phase | 1 spiking | • | • | • |
| ✓ | × | × | × | × | × | × | × | Cable cutter MANUAL | SPCC80NM | 80 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | × | × | | SPCC100SM | 100 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | × | × | | SPCC120WM | 120 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | × | × | | SPCC80NMC | 80 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | × | × | | SPCC100SMC | 100 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | × | × | | SPCC120WMC | 120 mm | two-phase | 1 cut | • | • | |
| ✓ | ✓ | ✓ | × | × | × | × | × | Cable cutter COMFORT | SPCC80NEP | 80 mm | two-phase | 1 cut | • | • | |
| ✓ | ✓ | ✓ | × | × | × | × | × | | SPCC100SEP | 100 mm | two-phase | 1 cut | • | • | |
| ✓ | ✓ | ✓ | × | × | × | × | × | | SPCC120WEP | 120 mm | two-phase | 1 cut | • | • | |
| ✓ | ✓ | ✓ | ✓ | × | × | × | × | | SPCCS100SEP | 100 mm | single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | Cable cutter INTE-GRATED | SPCC50 | 50 mm | two phase | 1 cut | • | | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | | SPCC65 | 65 mm | two phase | 1 cut | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | | SPCC80 | 80 mm | two phase | 1 cut | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | | SPCCS50SI | 50 mm | single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | | SPCCS65SI | 65 mm | single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | | SPCCS80SI | 80 mm | single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | Chop and cut ULTRA-SAFE | PICOUP 50 | 50 mm | single phase | 1 spiking & cutting | • | | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | | PICOUP 65 | 65 mm | single phase | 1 spiking & cutting | • | | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | | PICOUP 80 | 80 mm | single phase | 1 spiking & cutting | • | | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | PICOUP110EXP | 110 mm | single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | | SPCCS140WI | 140 mm | single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | | SPCC140WI | 140 mm | single phase | 1cut | | | • |

PRO-ELITE

# PICOUP 50, 65 & 80 MAK EXP

## ULTRA-SAFE WATERPROOF CABLE CUTTING AND PIERCING TOOLS – ULTRASAFE RANGE

- Safety cable cutter for voltage absence verification.
- Maximum short-circuit current (P–T) discharged: 10.5 kA/1s or 14.5 kA/0.5s.
- Remote-controlled up to 25 metres for user safety.
- Powered by a standard 18 V – 4 Ah battery.
- Waterproof for all-weather use and flooded trench operations.
- Robust and lightweight, with hardened steel blades.
- Compact electro-hydraulic pump with automatic double speed (fast approach / working mode).
- Eliminates the risk of injury from hose puncture and associated maintenance costs.
- Fast cutting speed enables melting of LV fuses.
- The PICOUP reduces risks during possible live cutting on MV cables.
- Supplied with a robust carrying bag with storage pockets.





PICOUP 50


PICOUP 65


PICOUP 80

### / USE

Fully integrated, waterproof electro-hydraulic cable cutter.
Ultra-safe, hose-free, and remote-controlled device for verifying voltage absence on underground networks.

| Ref. | Outer diameter | Max total conductor cross-section | Steel tape armour | Flat or round wire armour |
|---|---|---|---|---|
| PICOUP 50 MAK EXP | Up to 50 mm | 3 x 240 + 120 mm² / 1 x 630 mm² Alu<br>4 x 185 + 150 mm² / 1 x 300 mm² Copper | Thickness up to 2 mm | Thickness up to 2.4 mm |
| PICOUP 65 MAK EXP | Up to 65 mm | 3x240 + 120 mass / 1x630mm² Alu<br>3x150mm² + 95mm² / 1x300mm² Copper | | Thickness up to 2 mm |
| PICOUP 80 MAK EXP | Up to 80 mm | 3x240 + 120 mass / 1x1300mm² Alu<br>3x150mm² + 95mm² / 1x300mm² Copper | Thickness up to 1 mm | Thickness up to 1 mm (flat wire only) |

### / TECHNICAL SPECIFICATIONS

| Ref. | PICOUP 50 MAK EXP | PICOUP 65 MAK EXP | PICOUP 80 MAK EXP |
|---|---|---|---|
| **Cutting head** | | | |
| Cutting head weight with earth lead + battery + remote control | 7,2 kg | 7,4 kg | 10 kg |
| Cutting head dimensions | 555x115x180 mm | | |
| Cutting force | 8,8 t | 7,7 t | 5,8 t |
| Battery life (on 3 × 50 mm² aluminium cable) | 100 | 90 | 75 |
| Blade treatment | Oil-treated | | |
| **Integrated electro-hydraulic pump** | | | |
| Blade reopening | Decompression button + spring return | | |
| Interchangeable battery (CAS METABO or MAKITA 18) | 18v 4Ah | | |

# / PICOUP COMPONENTS & ACCESSORIES

| PICOUP | Aluminium earth braid with earth clamp | Remote control | METABO battery 18 V – 4 Ah | MET. charger 18 V |
|---|---|---|---|---|
| PICOUP80<br>(PICOUP65) (PICOU50) | MALT-AL-70-020 | PHE71-RADIO-TE | BATT-18V-4AH-MAK | CHARG-18V-MAK |
| <br>(PICOUP65) (PICOU50) |  |  |  |  |
| **Carrying case** | **Explosion-proof protective cover** | **Earth rod** | **Suspension strap** | **Retaining strap** |
| SPCCS80SI-01 | BACHE-PICOUP | PIQTER-500 | SANG-SUSP-P80 | SANG-MAINT-P80 |
|  |  |  |  |  |

PRO-ELITE

# PICOUP 110 EXP

## ULTRASAFE CABLE SPICKING AND CUTTING TOOLS SAFETY RANGE

- Network protection by creating a phase-to-earth fault using the spike integrated in the blade.
- Remotely operated cable cutter to check absence of voltage in an underground cable.
- Safety distance guaranteed between the remote control and the tool: 3m.
- Maximum transited short-circuit current (Ph-G): Al 70mm² = SCI 14,5 kA (0,5s) or SCI 10,5kA (1s).
- Remote-controller / tool distance up to 40 meters.
- Powered by standard MAKITA batteries 18 V - 4 Ah (up to 5 Ah).
- Waterproof for all-weather use.
- Robust & compact, hardened steel blades to cut armoured cables.
- Electro-hydraulic pump with automatic dual speeds (fast approach/cut).
- Eliminates the hydraulic insulating hose and associated maintenance costs.
- Spikes and cut the cable all in a row: when cutting 3 live phases simultaneously the spike creates a single phase-to-ground fault which operates circuit breakers thus avoiding short circuits between phases causing irreversible damages to the line.







### / USE

Ultra safe integrated electrohydraulic cable cutter without hydraulic hose to check absence of voltage on underground power cables. Use on the following cables :








| Overall diameter | Maximum total cross-section of conductors | Round steel wire armour | Steel sheath armour | Flat steel wire armour |
|---|---|---|---|---|
| Up to 110 mm | Up to 1300 mm² Aluminum<br>Up to 4x240 mm² Copper | Up to Ø 2 mm | Thickness up to 2 mm | Thickness up to 2 mm |

### / TECHNICAL SPECIFICATIONS

| Ref. | P110 |
|---|---|
| **Characteristics of the cables to be cut:** | |
| Total section copper conductors (mm²) | 3 x 240 mm² cupper |
| Total section aluminium conductors (mm²) | 1 x 1300 mm² Aluminium |
| Round steel wire armour (mm) | 2.5 |
| Flat steel wire armour (mm) | 2.5 |
| Steel sheath armour (mm) | 2 |
| **Fault following network protection:** | |
| Fuses | Three-phase fault |
| Circuit breaker | Single phase fault on one phase |
| **Earthing cable :** | |
| 70 Al 2m | SCI 14,5 kA (0,5s) ou SCI 10,5kA (1s) |

| Ref. | P110 |
|---|---|
| **Cutting head :** | |
| Maximum cutting diameter (mm) | 110 |
| Weight with battery (kg) | 17 |
| Dimensions (mm) (L x l x H) | 545 x 185 x 305 |
| Cutting blades hardness (Hrc) | 55 |
| Anti-corrosion treatment of the blades | Oil Quenching |
| Main Material | Steel |
| Hydraulic Power (tons) | 17 |
| Dust and water ingress protection grade | IP67 |
| **Integrated electro-hydraulic pump:** | |
| Hydraulic pressure (bar) | 560 |
| Battery | 18v 4Ah MAKITA (Up to 5Ah available in the market with same size) |
| Minimum number of cuts at 20°C | 10 |
| Hydraulic distributor | Double acting with selector |
| 2 speeds pump approach/cut (l/min – mm/s) | 4/1 - 1.3/0.4 |
| Blades reopening | With hydraulic pump |
| Oil capacity | 300 |
| **Remote control :** | |
| Maximum distance from the tool | 30m |
| Batteries | 3 x AAA |
| Radio frequency | Bluetooth 2,4 GHz |
| Safety distance between tool and user | 3m (Operator needs to be at least 3m from the tool to start the cut) |
| Radio frequency | |
| Total weight in case (kg) | 30 |
| Case dimensions (mm) | 687x528x286 |
| Operating temperature (°C) | -20/50 |

## / SPCCI COMPONENTS & ACCESSORIES

| PICOUP 110 EXP | Ground rod | Aluminum earthing braid with clamp | Remote control | Makita 5Ah Battery |
|---|---|---|---|---|
| PICOUP-110 | PIQTER-500 | MALT-AL-70-020 | PCCH110-01-RADIO-TEL | BATT-18V-4AH-MAK |
|  |  |  |  |  |
| **18V Charger** | **Case with wheels** | **Explosion-proof tarpaulin** | **Blade spike kit** | **Suspension strap** |
| CHARG-18V-MAK | EASYCASE-P110 | BACHE-PICOUP | PCCH110-56-LAME-PIC-INT | SANG-SUSP-P80 |
|  |  |  |  |  |
| **Maintain strap (x2)** | | | | |
| PCCH110-37-SANGLE-MAINT | | | | |
|  | | | | |

PRO-ELITE

# SPCCS140WI

## ULTRA-SAFE CABLE PIERCING AND CUTTING TOOLS – ULTRASAFE SAFETY RANGE

- Network protection by creating a phase-to-earth fault via the PIC system.
- Maximum short-circuit current (P–T) discharged: 31 kA/1 s or 43 kA/0.5 s.
- Direct earthing of the spike as close as possible to the conductor.
- Powered by a standard 24 V – 3 Ah battery.
- Safe positioning of the tool on the cable.
- Suspension straps allowing overhead operation.
- Compact integrated electro-hydraulic unit with automatic double speed (fast approach / working mode).
- Eliminates the risk of injury from hose puncture and associated maintenance costs.
- Robust and lightweight: reinforced polyamide structure, aluminum hydraulic body, and hardened steel blades.
- Removes the need to use a cartridge or manual cable piercer before cutting operations.
- Supplied with either a soft carrying case or a rigid wheeled transport box.




### / USE

Fully integrated, ultra-safe electro-hydraulic cable cutters, hose-free, designed for verifying absence of voltage on underground network cables.





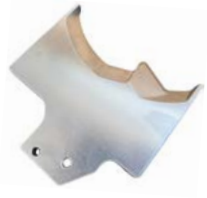



| Outer diameter | Maximum total cross-section of conductors | Round steel wire armour | Steel sheath armour | Flat steel wire armour |
|---|---|---|---|---|
| Up to 140 mm | Up to 2 500mm² Aluminium<br>Up to 2 500 mm² Cuivre | Up to Ø 4 mm | Thickness up to 4 mm | Thickness up to 4 mm |

### / TECHNICAL SPECIFICATIONS

| Ref. | SPCCS140WI |
|---|---|
| **Cable characteristics:** | |
| Total copper conductor cross-section | 2500 mm² |
| Total aluminium conductor cross-section | 2500 mm² |
| Round wire armour (diameter) | 4 mm |
| **Cutting head:** | |
| Weight without earthing | 20 kg |
| Maximum cutting diameter | 140 mm |
| Cutting force | 21 t |
| Blade hardness | 55 Hrc |
| Anti-corrosion blade treatment | Zingage |
| **Integrated electro-hydraulic unit:** | |
| Blade reopening | Selector with hydraulic return |
| Interchangeable battery (BOSCH) | 24v 3Ah |

# / PICOUP 400 SPCCI COMPONENTS & ACCESSORIES

| PICOUP400 | Cutting head 140-HTB | Piercing blade PCCH400 | Wire brush | Shoulder strap |
|---|---|---|---|---|
| PCCH400I | PCCH400I-RTE | PCCH400-42-K | BROSSEMETAL | EASYBAGBH |
|  |  |  |  |  |
| **Control unit** | **Rigid wheeled case** | **Soft wheeled carrying case** | **Battery** | **Battery charger** |
| PCCH250-BT-CSF | EASYCASE-L | EASYBAG-250 | BATTERIE24V3 | CHARGEUR220/24 |
|  |  |  |  |  |
| **Remote control** | **Straps for overhead work** | **Protective mat** | **Earth rod** | |
| PCCH250-38 | SANGLE2B | TAPISPICOUP | PIQTER-500 | |
|  |  |  |  | |



- No detonation cartridge.
- No battery.
- Standard drill.

# PCMT 95

## CABLE-SPIKING EQUIPMENT FOR SINGLE POLE AND THREE POLES INSULATED CABLES UP TO 100 MM OUTSIDE DIAMETER AND MAX 45 KV

STANDARDS

IN CONFORMITY WITH ENEL SPECIFICATIONS

### / TECHNICAL SPECIFICATIONS

- Application: single- or three-pole insulated cables up to Ø 100 mm / 45 kV
- Piercing body: light alloy with helicoidal piercing element
- Protection: insulating tiles and fiberglass-reinforced resin rods (pole & handle)
- Ground lead: 25 mm² copper cable, 5 m length, transparent PVC sheath
- Ground clamp: forged brass, clamping capacity up to 33 mm
- Connections: tinned copper lugs with heat-shrink reinforcement
- Complete with metallic carrying case
- Conformity: ENEL technical specifications

### / USE

Cable-piercing equipment for single-pole and three-pole insulated cables up to 100 mm diameter and 45 kV. Designed to safely pierce and short-circuit cable metallic parts (sheath, shielding, conductors) before grounding.

| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | Tools type | Tool reference | Wire diameter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| × | × | × | × | × | × | Manual cable cutter | PCMT95 | 100 mm | One phase | Spiking | • | • | • |

| Ref. | SCIR (kA-0,5s) | Cable max. | Dimensions | Weight |
|---|---|---|---|---|
| SPCS | 8 | 120mm | 170x21x27 cm | 25,8 kg |



# SPC

## CARTRIDGE CABLE SPIKER

### / USE

Cartridge cable spiker for checking the absence of nominal voltage on underground network cables.

**Advantages**

- No battery.

Remote trigger (rope).

| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | Tools type | Tool reference | Wire diameter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| × | × | × | × | × | × | MANUAL cable cutter | SPCS120M | 120 mm | two-phase | 3 prong cable | • | • | • |
| × | × | × | × | × | × | MANUAL CAR-TRIDGE cable snare | SPC80WC | 80 mm | two-phase | 3 prong cable | • | • | • |
| × | × | × | × | × | × | | SPC114WJ | 114 mm | two-phase | 3 prong cable | • | • | • |
| × | × | × | × | × | × | | SPC114WJC | 114 mm | two-phase | 3 prong cable | • | • | • |
| × | × | × | × | × | × | | SPC152WC | 152 mm | two-phase | 3 prong cable | • | • | • |

| Ref. | Cable max Ø | Cable max. | Dimensions | Weight |
|---|---|---|---|---|
| SPC80WC | 80mm | N/A | N/A | 7.5 kg |
| SPC110WC | 110mm | N/A | N/A | 20 kg |
| SPC152WC | 152mm | N/A | N/A | 21 kg |

# SPCCM
## MANUAL SAFETY CABLE CUTTER

STANDARDS
Certified Pump EN 50340




### / USE

Manual hydraulic cable cutters for de-energized testing of underground power cables.

### / TECHNICAL SPECIFICATIONS

- Robust & light, aluminum structure and hardened steel blades.
- Cable head earth lead: maximum rated short-circuit intensity: up to 14kA.1s (or 20kA.0.5s) phase to phase.
- Hydraulic pressure 700 bar
- 700 bar hydraulic hose, certified insulation up to 60kV, flexible, Kevlar reinforced with anti-pinch sleeves.
- Quick connection couplings with captive dust caps. Available with CEJN 115/117 or EDF coupler
- 3 cutting heads 80, 100 and 120 mm interchangeable with the pump. Integrated carry handles, balanced weight.
- Packaging: wheeled case or 2 Waterproof tarpaulin transport bags with wide shoulder straps and storage pockets.

- **Eliminates the need to use a cable spiker before the cutting operation.**
- **Without external energy.**



| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | Tools type | Tool reference | Wire diameter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| ✓ | × | × | × | × | × | Cable cutter MANUAL | SPCC80NM | 80 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | | SPCC100SM | 100 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | | SPCC120WM | 120 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | | SPCC80NMC | 80 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | | SPCC100SMC | 100 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | | SPCC120WMC | 120 mm | two-phase | 1 cut | • | • | |

| Ref. | Ø of cut | Cutting force | Ø Steel wire armour | SCIR | SCIR (kA.0.5s) | Type of short circuit | Certified EN50340 |
|---|---|---|---|---|---|---|---|
| SPCC80NMC | 80 mm | 8 t | 0 mm | 9 **kA.1s** | **13 kA.0.5** | three-phase fault | Yes |
| SPCC100SMC | 110 mm | 9,6 t | 1 mm | | | | |
| SPCC120WMC | 120 mm | 13 t | 2 mm | | | | |
| SPCC80WM | 80mm | 8 t | 0 mm | 14 **kA.1s** | **20 kA.0.5** | | No |
| SPCC100WM | 110 mm | 9,6 t | 1 mm | | | | |
| SPCC120WMB | 120 mm | 13 t | 2 mm | | | | |



# SPCC100SMC
## MANUAL SAFETY CABLE CUTTER

STANDARDS
Certified EN 50340

### / TECHNICAL SPECIFICATIONS

- Robust & light, aluminum structure and hardened steel blades.
- Cable head earth lead: maximum rated short-circuit intensity: up to 14kA.1s (or 20kA.0.5s) phase to phase.
- Hydraulic pressure 700 bars
- 700 bars hydraulic hose, certified insulation up to 60kV, flexible, Kevlar reinforced with anti-pinch sleeves.
- Quick connection couplings with captive dust caps. Available with CEJN 115
- Cutting heads 100mm
- Packaging With 2 bags, one for the cutting head and one for the footpump

### / USE

Manual hydraulic cable cutters for de-energized testing of underground power cables.

- Remote controlled 25m = safety for the user
- Comfort of use: electrical energy = effortless

| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | Tools type | Tool reference | Wire diameter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| ✓ | × | × | × | × | × | Cable safety cutter MANUAL | SPCC100SMC | 100 mm | two-phase | 1 cut | • | • | |




New 18 V 4 Ah batteries with high mechanical resistance and tropicalized design.

# SPCCEP
## COMFORT SAFETY CABLE CUTTERS

### / USE

Electrohydraulic cable cutters for de-energized testing of underground power cables.

### / TECHNICAL SPECIFICATIONS

- Bluetooth remote control range 25 m
- Earth lead of the cutting head: maximum SCIR (Ph-G) 25kA/0,5s (or 18kA/1s).
- Compact electrohydraulic pump with automatic double speed (fast approach / work).
- Hydraulic hose 700 bar insulation up to 60kV certified, flexible, Kevlar reinforced with anti-pinch sleeves.
- Quick connection couplings with captive dust caps. Available as CEJN 115/117 or EDF coupler.
- 3 cutting heads 80, 100 and 120 mm interchangeable with the pump.
- CAS metabo18V 4Ah battery
- Packaging: wheeled case or 2 Waterproof tarpaulin transport bags with wide shoulder straps and storage pockets

- Remote controlled 25m = safety for the user
- Comfort of use: electrical energy = effortless

| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | Tools type | Tool reference | Wire diameter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| ✓ | × | × | × | × | × | COMFORT SAFETY CABLE CUTTERS | SPCC80NEP | 80 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | | SPCC100SEP | 100 mm | two-phase | 1 cut | • | • | |
| ✓ | × | × | × | × | × | | SPCC120WEP | 120 mm | two-phase | 1 cut | • | • | |

SUPERIOR









# SPCCSEP

## POWER CABLES SPIKING AND CUTTING TOOL - COMFORT RANGE

- Remote controlled cable cutter for proving dead operations.
- Maximum short circuit current (P-T) elapsed: 25kA.0,5s or 18kA.1s.
- Earthing of the cutting head.
- Compact electro-hydraulic pump with automatic double speed (fast approach/working).
- Hydraulic hose 700 bar, insulating up to 60 kV certified, flexible, Kevlar-reinforced with anti-pinch cuffs.
- A 100 mm cutting head with spike for use on circuit breaker protected networks. The spike creates a phase-to-ground fault.
- Eliminates the need to use a cartridge or manual cable spiker prior to the cutting operation.
- No physical connection to the tool = optimum safety for the user.
- Quick connect couplings with captive dust caps.
- Robust carrying bags with wide shoulder straps and storage pockets.

### / USE

Electrohydraulic spiking and cutting tool for provingdead underground cables.

### / TECHNICAL SPECIFICATIONS

Double pump hydraulic unit 700 bar.
Available with CEJN 115/117 or EDF coupling.
Standard battery 24 V 3 Ah.
Bluetooth remote control with 25 m range.
Packaging: trolley acase or trolley bag.

| Reference | Cutting Ø | Cutting force | Ø reinforcement round wire | Icc (kA-1s) | Icc (kA-0,5 s) | Type of short-circuit |
|---|---|---|---|---|---|---|
| SPCCS100SEP | 100 mm | 9,6 t | 1 mm | 18 | 25 | single-phase fault |



- Adapted to street lighting, industry, low voltage, single core distribution cables and telecom cables
- Remote controlled up to 25m : safety for the user
- Integrated spike for single Phase-earth short circuit : safety for the line
- All integrated tool, no hydraulic hose:
  - no maintenance costs ;
  - safety for the user (700 bars) ;
  - quick set up and storage after the cut is complete.
- New cable retention strap for a successful remote-controlled cut.

# SPCC50, 65 AND 80
## INTEGRATED SAFETY CABLE CUTTERS

### / USE

Ultra safe integrated electrohydraulic cable cutters without hydraulic hose for de-energized testing of underground power cables.

### / TECHNICAL SPECIFICATIONS

- Bluetooth or radio remote controled
- Integrated spike
- Compact all integrated electro-hydraulic unit with automatic double speeds
- Extended range of blades opening: 50mm, 65mm, 80mm, for uses from street lighting to transmission cables
- Powerful enough to cut steel wire armoured cables, refer to product sheets.
- Systems to maintain the tool on the cable to cut
- Autocut system on request
- 700 bar double pump hydraulic unit.
- Protection tarpaulin
- Packaging: softbag

| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | Tools type | Tool reference | Wire diameter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | CUTTING HEAD INTEGRATED | SPCC50 | 50 mm | Two-phase | 1 cut | • | | |
| ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | | SPCC65 | 65 mm | Two-phase | 1 cut | • | • | |
| ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | | SPCC80 | 80 mm | Two-phase | 1 cut | • | • | |



- Adapted to street lighting, industry, low voltage, single core distribution cables and telecom cables
- Remote controlled up to 25m : safety for the user
- Integrated spike for single Phase-earth short circuit : safety for the line
- All integrated tool, no hydraulic hose:
  - no maintenance costs
  - safety for the user
  - quick set up and storage after the cut is complete.
- New cable retention strap for a successful remote-controlled cut.
- The spike protects your network.

# SPCCS 50, 65 AND 80 SI
## INTEGRATED SAFETY CABLE SPIKER&CUTTERS

### / USE

Ultra safe integrated electrohydraulic cable cutters without hydraulic hose for de-energized testing of underground power cables.

### / TECHNICAL SPECIFICATIONS

- Bluetooth remote controled
- Integrated spike
- Compact all integrated electro-hydraulic unit with automatic double speeds
- Extended range of blades opening: 50mm, 65mm, and 80mm for uses from street lighting to transmission cables
- Powerful enough to cut steel wire armoured cables, refer to product sheets.
- Systems to maintain the tool on the cable to cut
- Double pump hydraulic unit.
- Protection tarpaulin
- Packaging: softbag



SPCCS 50 SI



SPCCS 65 SI



SPCCS 80 SI

| REMOTE OPERATOR PREVENTS STEP VOLTAGE | STABILIZED PUMP | USER SECURIZED DURING SPICKING | PHASE TO EARTH SHORT CIRCUIT GUARANTEDD | NO HYDRAULIC HOSE | END OF DET INDICATOR | Tools type | Tool reference | Wire diameter | Type of fault | DET Certainty Underground Cable | Underground cables | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number of operations to be performed | LT | HV | VHV |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Spike and cut ULTRASAFE | SPCCS50SI | 50 mm | Single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | SPCCS65SI | 65 mm | Single phase | 1 spiking & cutting | • | • | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | SPCCS80SI | 80 mm | Single phase | 1 spiking & cutting | • | • | |

PRO-ELITE

# ALADIN

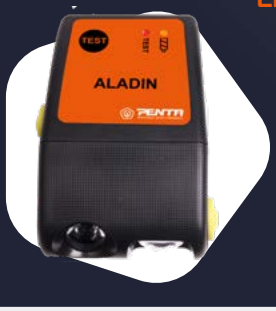
INNOVATION

## INDIVIDUAL VOLTAGE ALARM WITH HEADLAMP

STANDARDS

EN 61000-6-2 / EN 61000-6-4

THE ELECTRICIANS LIFEGUARD !







/ **Rail version**
**For 25 kV railway overhead networks**

## / USE

ALADIN is a personal electric field detector combined with a professional headlamp. It provides the wearer with an audible safety alarm if a high AC voltage level occurs. This makes it possible to manage unintentional proximity to live facilities by alerting the operator to the danger. The frequency of the audible alarm increases as the detected electric field increases.

The audible alarm alerts the operator as soon as they are close to a voltage source. On arrival at the work site, a personalized calibration of the voltage that triggers reactivation of the smart alarm may be obtained by pressing the Smart button. The alarm then remains on silent watch as long as its readings are below this level and as soon as the measured voltage is higher than the defined level, the user is warned. The closer is the voltage source, the shorter the reactivation distance will be.

The detector acts as a complementary warning by alerting the operators when they are in presence of live equipments : maintenance works, rescue, painting, pruning, etc.



### Advantages



- **ADJUSTABLE, 5-POSITION ANGLE:**

The lamp's angle is adjustable to 5 positions by moving the detector on its fixing plate.

- **UNIVERSAL FASTENING**

ALADIN is adjustable to all models of protective helmet or cap and its fastening interface includes:



- A clip for fixing to a protective helmet that has a slot for a headlamp.



- An adhesive pad system for fixing onto traditional helmets without this slot (several models available).



- An elastic strap with fixing hooks so that the detector may be worn with a protective cap.

## / A PROFESSIONAL QUALITY MULTI-BEAM LAMP

ALADIN is equipped with an integrated high-performance LED headlamp and professional lenses for excellent light quality and will adapt to any requirements.

ALADIN is fitted with two light beams, suitable for all uses.

LONG RANGE BEAM : a focused or long-range beam to provide lighting at a distance: path, overhead lines or electrical poles.

BROAD BEAM : a broad or close beam to light the immediate vicinity: work close at hand, movements, stairs.

| Type of beam | | Light intensity | Beam angle | Lighting distance | Autonomy |
|---|---|---|---|---|---|
| | | 140 lumens | 11° | 20-30 m | 4 h |
| | High strength | 100 lumens | 65° | 10-15 m | 4 h |
| | Medium strength | 50 lumens | | 5-10 m | 25 h |
| | Low strength | 20 lumens | | < 3 m | 50 h |
| Vigilance | | / | / | / | 80 h |

## / 360° DETECTION AROUND THE WEARER



The ideal position of the detector on top of the protective helmet makes detection of an electric field equally effective, whether the field is in front of or behind the wearer.

## / SMART MUTE FEATURE: SMART ALARM

The audible alarm alerts the operator as soon as they are close to a voltage source. On arrival at the work site, a personalized calibration of the voltage that triggers reactivation of the smart alarm may be obtained by pressing the Smart button. The alarm then remains on silent watch as long as its readings are below this level and as soon as the measured voltage is higher than the defined level, the user is warned.

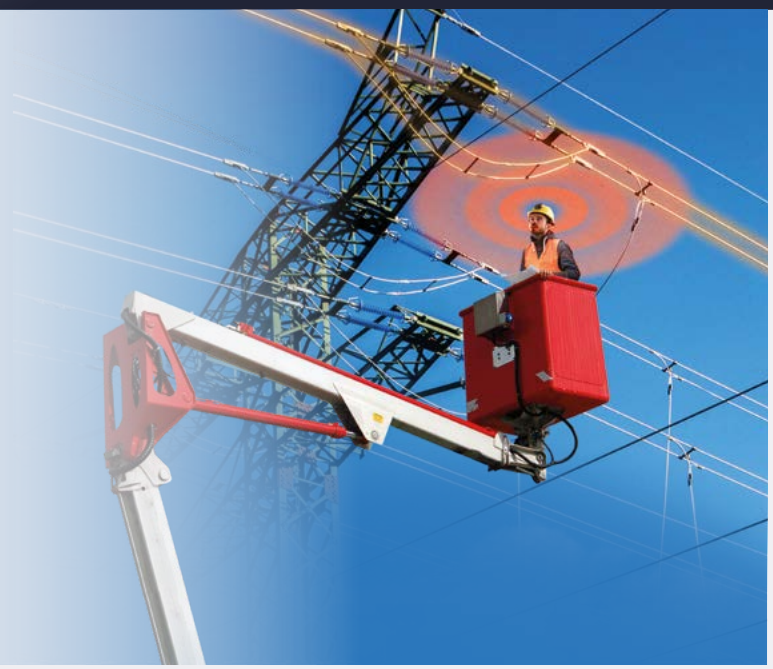
The closer is the voltage source, the shorter the reactivation distance will be.

## / COMPACT AND LIGHTWEIGHT

PENTA FAMECA has used all its know-how to reduce the volume and weight of its detector. ALADIN is lighter than most other headlamps with equivalent performance.

## / WIDE VOLTAGE DETECTION RANGE : FROM 2 KV TO 400 KV

ALADIN's wide voltage range from 2 kV to 400 kV makes it suitable for a great variety of electrical environments.



## / TECHNICAL SPECIFICATIONS

- Detector operating range : 2 kV to 400 kV.
- Reference detection distance: 2 metres from a conductor located at a height of 1.5m at a voltage of 1 kV (live-earth).
- Detects the electric field level but does not measure the distance. The higher the voltage, the greater the distance at which it may be detected.
- Detection of a 50 Hz and 60 Hz electric field at 360° around the wearer.
- Use for outside and indoor electrical equipment.
- Detects Low Voltage on residential and commercial eletrical sockets.
- IP65 protection : protection against dust and water splashes.
- Power supply : Lithium Polymer battery, rechargeable using a micro USB cable.



The standard version of detector ALADINCEFC is supplied in a cardboard box with a universal charger and micro USB cable, interface for fitting to a helmet, an elasticated band and four hooks, a reinforced protective case and Users' Instructions.

• FIRST ALARM DISTANCE BEFORE SMART MUTE

| KV | Distance* |
|---|---|
| 1 | 2 m |
| 15 | 4,5 m |
| 20 | 5 m |
| 25 | 5,5 m |

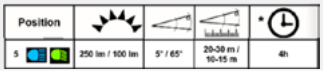
* Version ALADINCEFC

Distances given as an indication, obtained in laboratory conditions using single voltage on a 2-metre bar at 1.5 metres from the ground

| Reference | Voltage range | Sensitivity | Application | User's Manual* | Packaging |
|---|---|---|---|---|---|
| ALADINMVOSCEFC | 2 - 400 kV | +++++ | Compact 10kV metal walled cabinets in substations, overhead lines | Pack F<br>also available in Pack G | Cardboard box: includes metalized soft bag, pads interface (x 3), USB charger & elastic strap, cleaning tissue. |
| ALADINCEFC | 2 - 400 kV | ++++ | | | |
| ALADINMVOHCEFC | 10 - 69 kV | +++ | Only use on overhead line from Mobile Elevating Work Platform | | |
| ALADINRAIL25CEFC** | 25 kV single phase | ++ | 25kV railway tracks environment only | | |
| ALADINHVCEFC | 50 - 400 kV | + | Transmission overhead line and switchyard | | |

* Pack F: FR/GB/DE/ES/PT/PL - Pack G: GB/GR/BG/IT/NL/AR/TR

** Pack F: FR/GB/DE/ES/PT/PL - Pack G: GB/GR/BG/IT/NL/AR/TR



SUPERIOR

# ODIN

INNOVATION

## INDIVIDUAL VOLTAGE WARNING

STANDARDS

EN 61000-6-2 | EN 61000-6-4




- Sound alert of voltage proximity which rhythm increases up on the level of electric field detected.
- The "smart mute" is a Dynamic Voltage Detection :
  - it is used to silence the warning sound once at working place, the device is remaining in vigilance and still measuring the electric field.
  - The warning sound will automatically restart in case of increase of the level of detected electric field (closer or sudden presence of voltage).
  - Acts as an additional fencing which can be set at the working place.
- The device can be fixed on helmets or hard hats by various means. In this position, the device will detect 360° around the operator.
- No influence of the electromagnetic fields.
- Light and compact device.
- Rechargeable by standard micro USB 5 V plug.

- Robust shell with flexible adapter coupling (AFLEX), range of adapters available on request (U, APV & R)
- Counter nut allowing the electrode to be locked in position.
- Ergonomic button easy to operate even with insulating gloves.

### / USE

- ODIN is designed to provide extra safety level for workers operating near energized equipment (during maintenance, rescue operations, painting, pruning,...) in electrical environment.
- This device is a personal voltage alarm.

**Do not replace safety procedure.**

- Example of situation where ODIN provided an efficient warning.

- Misunderstanding : the operator approach the wrong spot
- Voltage unexpected return : mistake during an operation ondisconnected network.
- Involuntary approach : quick move in direction of energized areaduring operation
- Diversion: the operator is diverted by a bad news or urgency and moves toward a high potential energized conductor unconsciously.

**In all these situations and many others ODIN will provide the ultimate WARNING.**

### / TECHNICAL SPECIFICATIONS

- 360°detection of electric field 50 & 60 Hz around the worker.
- Convenient for outdoor and indoor electrical systems.
- Detects the level of electric field. It does not measure the distance of the source of the electric field.
- Higher is the voltage, bigger is the distance of detection.
- It may even detect low voltage near wall outlet.
- Range of use up to 400 kV environments.
- Battery capacity 2000mAh
- Temperature: -25°+55°C
- Humidity: up to 96 %.

| Reference | Voltage range | Options | User manual* | Packaging |
|---|---|---|---|---|
| ODINMVOSCEFC | 2 - 400 kV | Charger USB Elastic strap | Pack F also available in Pack G | Cardboard box: includes Soft bag, many pads interface (x 3) |
| ODINCEFC | | | | |
| ODINMVOHCEFC | 10 - 69 kV | | | |
| ODINHVCEFC | 50 - 400 kV | | | |

* Pack F : User manual FR/GB/DE/ES/PT/PL - Pack G : User manual GB/GR/BG/IT/NL/AR/TR

PREMIUM

# RODIN-RS

## OPERATING REPEATER FOR PERSONAL VOLTAGE ALARM

STANDARDS

EUROPEAN DIRECTIVE (2014/53/EU)

**Advantages**

- Provides the benefit of the functional and ergonomic features of ALADIN RS plus possible specific commands and alerts
- Enhance the ALADIN RS audible alarm to a level suitable for working environments (lift vehicle engine, surrounding traffic, etc




### / USE

RODIN-RS linked with ALADIN-RS by Bluetooth is designed to provide additional safety alert to a worker team operating in an electrical environment close to presumably live equipment (maintenance work, painting, pruning etc. It will warn the workers and operate on chosen auxiliary systems (warning beacons, siren, stopping equipment motion, ...) when voltage is detected by the ALADIN-RS to which it is paired.

**Does not replace safety procedures;**

- The detection of an electric field by ALADIN-RS activates audio and visual alarms and operate selected auxiliary functions to which RODIN-RS has been linked.
- The operator can adjust the alarm distance in relation to the live conductor using the Smart Mute function of ALADIN-RS audio indication stops but the light indication remains active
- RODIN-RS copies (emulates) all the sound and visual indications of ALADIN-RS (smart mute, low battery, etc.)

- RODIN-RS can be used paired with ALADIN-RS to enhance safety when closing to or operating near live installations in the voltage and configuration range of the ALADIN-RS used.
- ALADIN-RS refer to the related product data sheet.

**Caution** : RODIN-RS is designed to only operate with the ALADIN-RS electric field detector or any PENTA FAMECA device that will be designed in order to be compatible with this technology (RODIN-RS upgrade being probably necessary).

### / TECHNICAL SPECIFICATIONS

- Supply : 12 V or 24 V DC
- Dry contact control input (NO/NC)
- Protection : IP69 K
- Shocks resistance : IK03
- Operating temperature : -25 to +55° C
- Fitting by four M6 screws
- Dimension 141 x 227,5 x 90 mm
- Weight : 1,5 Kg

| Reference | Application | Voltage Range | Dimensions | User manual* |
|---|---|---|---|---|
| RODIN-RS | repeat ALADIN alarm and stop the bucket | 12 V or 24 V DC | 141 x 227,5 x 90 mm | Pack F |

* Pack F: FR/GB/DE/ES/PT/PL - Pack G: GB/GR/BG/IT/NL/AR/TR

PRO-ELITE

# GAZEL NEW

## VOLTAGE ALARM FOR GAS PIPE BYPASS

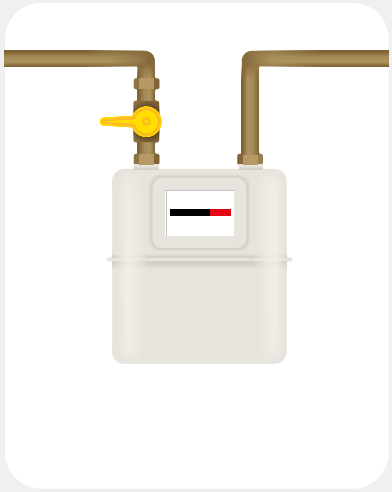



The GAZEL is a Pipe Bypass equipped with a Voltage alarm.

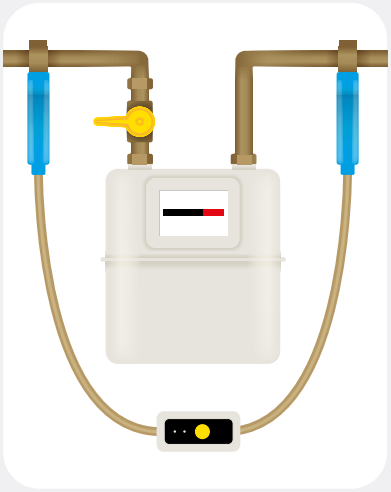
- It warns the operator of the risk of electric shock during gas meter change operations by showing presence of voltage with :
  - Sound
  - Light indication in all directions

### / SPECIFICATIONS

- Voltage detection
- Dimensions : 85 x 47 x x 31 mm
- Alert the user as soon the device is brought into contact with an AC voltage above 50V AC.
- Detection of the electric field 50Hz and 60Hz.
- IP 54, outdoor use.
- Sound level: 55 dB at 1m.
- No influence of electromagnetic fields beyond 150 KHz.
- Self Test: Performed by pressing the "Test" button.
- Power source: 2x AAA alkaline batteries, indication "low battery" level by red diode fixed after AUTOTEST.
- Weight : 95 g (excluding the Bypass).



1 OLD GAS METER BEFORE DISMANTLING



2 FIX THE 2 CLAMPS ON EACH SIDE OF THE GAS METER

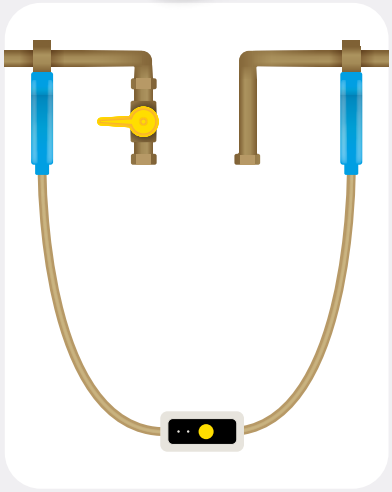
STOP **If the detector beeps and lights up : abnormal presence of voltage on the pipe !**



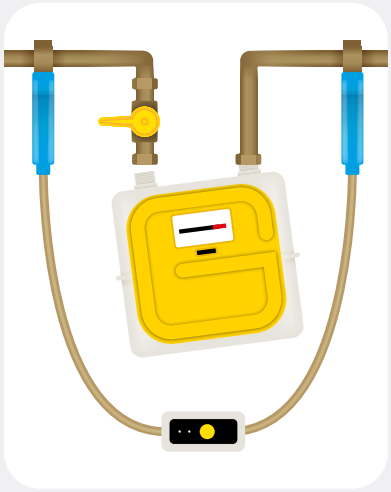
| Reference | Braid length | Weight | User's Manual* | Packaging |
|---|---|---|---|---|
| GAZELFTAH | 0,7 m | 1,4 kg | Pack F | Soft bag with EMC protection |
| GAZELFTBH | 2 m | 1,9 kg | also available in Pack G | |
| GAZELFTXH | Device alone for assembly on bypass with 35mm² section cable | | | |

* Pack F: FR/GB/DE/ES/PT/PL Pack G: GB/GR/BG/IT/NL/AR/TR

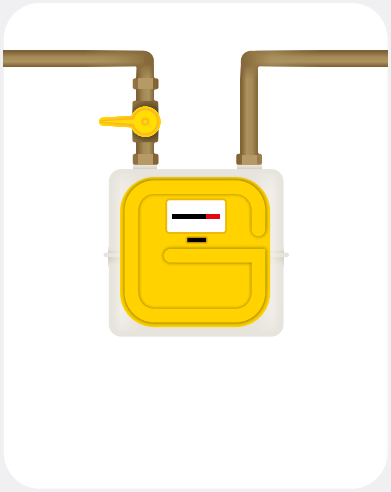


3 THE BYPASS MAINTAINS THE CONTINUITY WHEN THE OLD GAS METER IS REMOVING TO AVOID ANY SPARK



4 NEW GAS METER CAN BE INSTALLED



5 THE BYPASS CAN BE REMOVED





# UNITAG

## ELECTRO-ALERT DETECTOR FOR SAFE APPROACH OF DISTRIBUTION INSTALLATION (LV/HV)

STANDARDS
1000V CAT IV - IP65

- Sound and light alert on voltage presence.
- UNITAG 1000V for using on networks.
- Can be used by hands or on insulating stick.
- Indication of detection level.
- Tip length designed for access to LV panel and test point.
- Audible beeping speed proportional to the level of detection.
- Visual indication of level of detection on a bright LED bar graph.
- Automatic self-test when switched on with green LED indication.
- Multi purpose detector : street light, insulating twisted cables, rescue team, fire fighters...




### / USE

UNITAG is a unipolar detector designed to test the presence of phase on insulated or bare LV conductors.
The level of detection is indicated by a LED bargraph and a beeping sound which speed increases as device approaches a live source.
It is commonly used for detecting stray voltage on poles and cross arms, conductor disconnection on overhead insulated LV conductors.
UNITAG will not replace a standard “proving dead” device but is an ideal complement to bipolar LV detector.



### / TECHNICAL SPECIFICATIONS

- AC system
- AC mains frequency : 50-60 Hz
- Field of use : from 50V up to 1000V
- Detection by direct contact at 50V
- CAT IV 1000V
- IP65
- Temperature : - 15 ° C to +45 ° C
- 2 x LR03 1.5 volt alkaline (AAA)
- Delivered with soft bag suitable for belt fixing

| Reference | Type of use | Length | Insulating length | User manual* | Dimensions | Weight |
|---|---|---|---|---|---|---|
| UNITAGHFE | Hand-held | 2.40m | 520mm / 36Kv | Pack F<br>Also available in Pack G | 227 x 45 x 37 mm | 160 g |
| UNITAGUFE | Hand-held + stick interface | | | | 241 x 67 x 51 mm | 210 g |
| UNITAGUFX | Hand-held soft shell + telescopic stick + «Insulating» | | | | 51 x 67 x 1100 mm | 710 g |

### / Accessories

| Reference | Description | Weight |
|---|---|---|
| CPUNITAGUO | Protective shell UNITAG, Universal adapter | 100 g |

* Pack F : User manual FR/GB/DE/ES/PT/PL - Pack G : User manual GB/GR/BG/IT/NL/AR/TR







**Advantages**

**Optimised indication (clearly understood in all working conditions)**

- The visual indication is visible in all usual working environments, in sunlight or fog, with a wide angle of visibility and from the side thanks to an optic ring.
- The 100 dB sound signal is designed to remain audible even in traffic or strong wind, thanks to its acoustic "horn".

**Direct access to the battery and sealed electronics compartment**
**When the battery is replaced, this design prevents:**

- Accidental interchange of housing or circuitry
- Damage to electronic circuits
- Humidity ingress into the device when the battery is replaced outdoors

# LTAG

## 110—1000 V VOLTAGE DETECTOR

STANDARDS

CE: Compliance with European directives

### / USE

- These voltage detectors are designed for "proving dead", making sure that nominal voltage is actually absent on a circuit in an LV distribution system between 110 V and 1000 V (no-voltage verification):
  - The device will detect any nominal voltage on overhead lines and stations.
  - It will avoid detecting most induced voltages in order to allow grounding operations.

### / TECHNICAL SPECIFICATIONS

**AC voltage range: possible choice from 110 to 1000 V**
**Network frequency: 50 and 60 Hz**

- Permanent standby status with automatic wake-up function
- The presence of voltage within the calibrated range or above is indicated by a RED light and a beeping sound
- Self-test OK: the «ready for use» status is indicated by a GREEN light
- The self-test checks all circuits, the reference detection level and the battery voltage
- The "ready for use" state is indicated by the green indication for 1.5 minutes
- A low battery level is indicated by an ORANGE light
- Designed for outdoor and indoor use
- Operating temperature: —25°C to +55°C
- Humidity: 96% max
- Power supply: 9 V alkaline cell — IEC 6LR61
- Accepts the use of rechargeable battery with identical supply voltage
- Orange polycarbonate housing
- Dimensions: Ø 59 mm, L = 280 mm without the contact electrode
- Net weight: 0.390 kg with stick adaptor
- Operating manual with a choice of languages, depending on the package

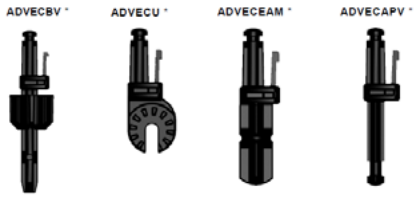
### / ACCESSORIES



/ Metal case



/ Soft case with conductive lining for an EMC protection equivalent to metal case one




/ Replaceable adaptor for different sticks end fitting

| Reference | Voltage range | Frequency | Housing color | End fitting* | Contact electrode | User's Manual** | Packaging*** |
|---|---|---|---|---|---|---|---|
| LTAGFHUA | 110—1000 V | 50 / 60 Hz | Orange | Universal & APV | V56 | Pack F/G | Soft case with conductive lining for EMC protection |

* Other stick adaptor available on required
***Metal case version available on required
**Pack F : User manual FR/GB/DE/ES/PT/PL
Pack G : User manual GB/GR/BG/IT/NL/AR/TR
**Also Available in Pack G**



# TDP

## VOLTAGE DETECTOR

STANDARDS

CE: Compliance with European directives

### / USE

- TDP is designed to check Voltage presence by direct contact. It is usually used prior to personal rescue operations in MV substations.
- TDP was specially adapted to be used in MV substations through 50 mm diameter spy holes.

### / TECHNICAL SPECIFICATIONS

- Normal voltage from 5 kV up to 72 kV
- Frequency: 50Hz-60Hz
- Delivered with 40mm - Ø10 mm straight probe
- Black polycarbonate shell
- Temperature : -20°C to +40°C
- Light indication only

| Reference | Voltage range | Frequency | Dimensions / Weight |
|---|---|---|---|
| TDP572 | 5—72 kV | 50 / 60 Hz | Ø50, L = 400 mm / 0.3 kg |
| TDP536 | 5-36 kV | | |



# R-FASER

## WIRELESS PHASING COMPARATOR SET MV

STANDARDS
IEC 61481-1 / 61243-1

### / USE

Device for voltage presence detection and phase comparison with radiofrequency connection and display receiver.
Kit composed of 2 voltage detection transmitters and one display receiver.
Display receiver is connected in radiofrequency with the transmitters for phase comparison or for a clear reading of the voltage detection working in cabins or in situations of poor visibility and audibility of the transmitter signals.
Device in compliance with both norms as voltage detector (single transmitter) and as phase comparator (complete kit).
Range 6-20 kV or 15-36 kV (to be indicated in case of order).

### / TECHNICAL SPECIFICATIONS

- Suitable indoor and outdoor use.
- Water-Proof (IP43)
- Double indication of operative voltage presence: intermittent acoustic and flashing of 2 LEDs on display receiver for both transmitters.
- The absence of operative voltage is indicated by green LEDs permanent on, on display receiver for both transmitters.
- Phase Concordance signaled by green LEDs in the center of display receiver
- Phase Discordance signaled by red LEDs in the center of display receiver
- Built-in self-control check for testing the accurate working of the voltage detector transmitters and display receiver before and after use.
- Carrying plastic case with internal foam housing.




- All indications are displayed on the user's smartphone via an Android Application.
- Optimized indication that can be understood clearly in all working conditions.
- Direct access to the battery and sealed electronics compartment. When the battery is replaced, this design prevents the following.

# MVI

## VOLTAGE INDICATOR WITH DISPLAY ON SMARTPHONE VIA AN ANDROID APPLICATION

STANDARDS
IEC 61243-1

### / USE

The MVI is designed to investigate medium-voltage networks from 0.5 to 100 kV (phase-to-ground). Within this range, it indicates the presence and level of voltage as well as network frequency. All measurements are sent to the user's smartphone via an Android app.

### / TECHNICAL SPECIFICATIONS

- Network frequency: 50 /60 Hz.
- Installation Type: Indoor/Outdoor.
- Category: L = without electrode extension.
- Climate class: N = from -25°C to +55°C
- Humidity: 96 % max.
- Power supply voltage: 9 V alkaline cell — IEC 6LR61
- White polycarbonate housing
- Dimensions: Ø = 59 mm, L = 280 mm without the contact electrode
- Net weight: 0.390 kg with stick adaptor
- Supplied with a standard system for attaching the user's smartphone to an insulating pole




| Reference | Voltage range | Frequency | End fitting** | Electrode | User's Manual *** | Packaging **** |
|---|---|---|---|---|---|---|
| MVI100FHUA | 0,5 - 100 kV | 50 / 60 Hz | Universal & APV | V56 | | 160 g |

** Other stick adaptor available on required
***Metal case version available on required
*** Pack F : FR/GB/DE/ES/PT/P -- Pack G : GB/GR/NL/BG/IT/AR/TR

# PRUNEL BUCKET

## VOLTAGE ALARM FOR MOBILE ELEVATING WORK PLATFORM (MEWP) FOR HIGH-VOLTAGE NETWORKS

STANDARDS

Complying with European Directives / EN 61000-6-2 / EN 61000-6-4

- **360° Detection:** Measurement module positioning on the platform allows complete detection of the electric field around the machine.
- **Smart Mute Function:** Allows to temporary disables the sound alarm when the work area is close to a powerline, while keeping detection active. If the platform moves closer to the line, the lockout feature automatically reactivates.
- **Simplified Integration:** Easy connection to the platform's control panel for intuitive control.
- **Powerful Sound Alert:** The sound signal is loud enough to be heard by all operators, including ground technicians, even in noisy environments.
- **Safety Lockout Function:** The device can alert and automatically stop the platform when approaching danger. An unlock feature allows for a safe move away from the hazardous area.
- **No additional power supply:** The system is powered directly by the machine's battery, avoiding the need for external energy sources.
- **Wired Communication System, designed to ensure:**
  - Continuous communication between measurement modules and the central module
  - Compatible with approach speed: negligible latency
  - Measurement modules powered by the central module
  - Shielded and mechanically protected communication wires
  - Quick and easy installation on platforms of various sizes

### / USE

PRUNEL Bucket is a safety collective protective equipment designed to enhance the protection of operators working in the vicinity of potentially live electrical equipment (maintenance work, painting, tree trimming, etc.). This system detects when the platform enters a hazardous area and automatically activate an audible and visual alert.Designed to stop the platform's movement in case of an alert, PRUNEL Bucket helps to prevent any accidental contact with a live line.

**Main Functions:**

- Danger Alert: Emits an audible and visual signal when the platform approaches a hazardous area (electrical risk).
- Accident Prevention: Significantly reduces the risk of unexpected contact with live installations.

**Covered Situations:**

- Misunderstanding of the work area: The operator heads toward an unplanned zone.
- Voltage unexpected return: An error occurs during a task assumed to be de-energized.
- Involuntary approach: Movement toward a live component during a maneuver.
- Emotional disturbance: Operator distraction leads to risky behavior.

In each of these cases, PRUNEL Bucket acts as an additional safety barrier, providing a final warning before a potential incident.





### / TECHNICAL SPECIFICATIONS

- Detection sensitivity adjustable during installation
- Detection available from 5 kV
- Power Supply : 12 to 36 V DC / 2 A, supplied from the vehicle
- Central module visual and sound Indications :
  - Power supply operational -> Green LED
  - All measurement moduledetected by the central module -> Blue LED
  - Voltage detected / movement lockout -> Red LED + audible beep
  - Smart Mute function activated -> Orange LED + audible beep (every 30 seconds)
- Acknowledgment and movement release button
- Automatic self-test of all functions, including measurement module presence, when switched on
- Protection : IP 66 rated for water and dust resistance
- Two Electrical Contacts NO/NC for opening or closing an external circuit (arm lock, remote alarm activation, ...)
- Size and Weight :
  - Measurement module: 150 x 75 x 35 mm / 220 g (per unit, without cable)
  - Central module : 200 x 90 x 120 mm / 780 g
- Wired connection between measurement modules
  - Spiral cables with adjustable length from 0.75 m to 3 m
- Measurement module fixing on the platform
  - Mounting plate with 4x M8 nut





# INSULATING POLES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/ TELESCOPIC POLES EXTENDER 160

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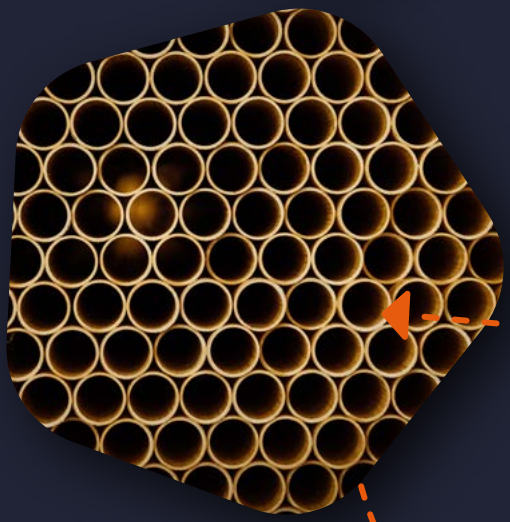
# **FROM PROTOTYPE** TO PRODUCTION















# / INSULATING POLES

Working safely near or directly on electrical installations requires maintaining a minimum approach distance.

In this context, the insulated pole is an indispensable tool: it becomes the vital barrier between humans and electricity, allowing technicians to work safely on high and very high voltage lines.

The result of decades of expertise and research, the Penta range of poles is designed to offer safety, ergonomics, and reliability in the most demanding environments.

Insulating poles are used in a wide range of applications: installation of grounding devices (MALT), disconnection of equipment, voltage testing, control operations, measurements, checks, or handling of accessories. They are subject to strict requirements in terms of compliance with standards, mechanical strength, and dielectric performance.

At PENTA Electrical Safty Products, we design and manufacture our insulated poles in accordance with the main international standards:

- IEC 60855-1 / ASTM F711: Foam-filled insulating tubes
- IEC 61235 /F1826: Hollow insulating tubes
- EN50508: Telescopic insulated poles
- IEC62193/ASTMF1825: Telescopic insulating poles
- IEC60832: Poles for live working



All our models are tested under real-world conditions: humidity, UV exposure, mechanical stress, etc.

This unique process combines mechanical strength with exceptional dielectric properties to create a tube that is lightweight, rigid, and perfectly insulated.

Depending on operational requirements, models can be telescopic, extendable, or hook-shaped, offering a wide range of working options.

This chapter will guide you in choosing the pole best suited to your working environment. You will find our ranges of telescopic poles (PPOLE, TR, PEC, PTUM), extendable models (PXV, PXL, RTTE), and high mechanical strength poles (PRE).

To complete your equipment, we also offer insulated extensions (RI-PPOLE), control heads, universal hooks, multi-format adapters, and various measuring and pruning accessories.

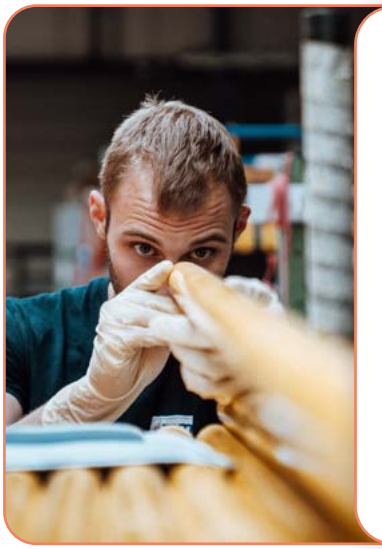
Each pole is designed as part of a coherent, safe, and high-performance system that can be configured according to your intervention protocol.

## INSULATING POLES GUIDE : TYPES, APPLICATIONS AND PERFORMANCE

| Range | Features | Applications | + Product advantages |
|---|---|---|---|
| PPOLE STANDARD / COMPACT / SPECIFIC / REINFORCED / LIGHT | Telescopic | • Voltage testing<br>• Switch disconnector operation<br>• Work near live lines<br>• Vertical earthing rod installation<br>• Pruning or conductor cleaning | Length from 1.5 m to 12 m<br>Easy vertical handling<br>Pentagonal tube for secure grip<br>Minimal folded length |
| PPOLE MEASURING | | • Measurement during operations | Direct graduation<br>Metric and imperial versions |
| TR / TRL / TRC | | • Voltage testing<br>• MV earthing & LV substation work | Length from 1 m to 6 m<br>Lockable in folded and extended positions |
| PTUM | | • Switch disconnector operation<br>• Work near live lines | Length from 5.9 m to 10.4 m<br>Adjustable extended length |
| PXV | Extendable | • Voltage testing<br>• MV earthing<br>• Work near live lines<br>• Medium mechanical stress | Length from 0.5 m to 8 m<br>From 1 to 4 sections |
| PRE | | • HV earthing<br>• High mechanical load applications | Length from 1 m to 8 m<br>Interchangeable end fittings available |
| PRL | | • High mechanical stress<br>• Dry conditions | Length from 1 m to 8 m<br>Interchangeable end fittings<br>Cost-effective solution |
| RTTE | | • VAT up to 400 kV | Length from 1.6 m to 5.1 m<br>Rain skirt for effective water drainage |
| PEC | | • Handling of catenary tools | Length from 4.5 m to 6.5 m<br>Quick clamp sleeve system for easy length adjustment |
| LW03 | Hook-type | • Handling of tools and accessories equipped with rings or gripping lugs | Length from 1.2 m to 3.8 m |
| PDD / MDI / MDD | Discharge pole and module | • Specific interventions with stored energy | 2 models available, depending on discharge energy required |
| RESCUE | **See rescue equipment range** | | |

**HV (Hig h voltage) :**
51kV to 400 kV (up to 1 M kV in some countries).
Used t o transport electricity over long distances.
Very high voltage lines

**MV (Medium voltage) :**
From 1 kV to 50 kV.
Used to distribute electricity in cities, rural areas, and industries.
Underg round or overhead network (medium-voltage **cables)**



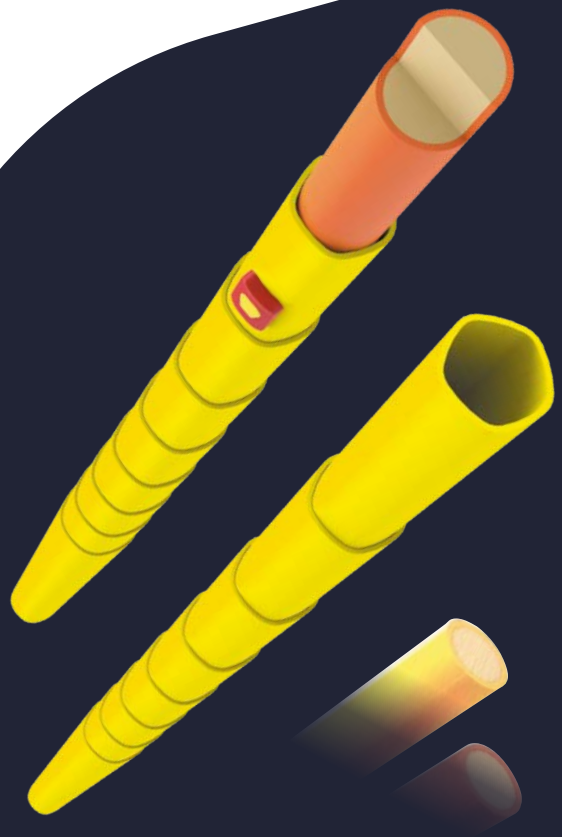
## WHEN SHOULD AN INSULATING POLE BE USED ?
— more than just meeting a standard

An insulating pole is used whenever it is necessary to operate at a safe distance from a live conductor or a component that may become energized, in order to prevent current from passing through the operator's body.

It is used in several situations :
- Voltage testing (VAT) before intervention,
- Remote disconnection or reactivation of devices,
- Installation of mobile earthing (MALT) or safety shunts,
- Height measurement or line inspection without direct contact,
- Removal of components (fuses, insulators, branches, etc.),
- Operation of insulated clamps, hooks, or tools.

The choice of pole depends on several factors: nominal system voltage, required safety distance, work environment (substation, overhead line, or industrial installation), and the type of operation (simple VAT or high-voltage earthing).

A well-chosen insulating pole makes the operator's work easier, optimizes intervention time, and ensures regulatory compliance.



**The main advantages of IEC 60855-1 foam-filled tube compared to hollow tubes are :**

- **ITS RESISTANCE TO THE PENETRATION OF HUMIDITY,** making it the ideal material for all-weather outdoor uses.
- **ITS UNIQUE INSULATION AND DIELECTRIC PROPERTIES** which prevents, no matter the weather conditions, to be a source of ignition when working in contact with or near live electrical lines.
- **ITS HIGH MECHANICAL STRENGTH AND RIGIDITY** which allows to improve its lifespan and the gesture's precision of the operators during handlings

Always concerned to improve the service life and reliability of our products in order to continually extend their essential safety function, PENTA Electrical Safety Products now has a range of tubes with better shock resistance properties. This range continues to comply with IEC 61235 for hollow tubes and IEC 60855-1 for foam-filled tubes.

**The constant search for innovation in the service of solutions for our customers has allowed us in recent years :**

- **TO PROPOSE A NEW RANGE OF PENTAGONAL TUBE.** These tubes were developed to create the Penta POLE telescopic pole. Reaching 12m in length, it offers lightness and excellent rigidity. As for its shape, it allows exceptional grip and can transmit a torque.
- **TO INCORPORATE A STRUCTURAL FINISH** that further enhances the mechanical properties of the tubes used for the sticks to increase their longevity,
- **TO CREATE NEW FINISH VARNISHES**
(almost non-existent in all of our competitors), which further increases the UV resistance properties and the hydrophobic and oleophobic properties of the tube surface, thereby reducing pollution and dirt on the poles and facilitating periodic maintenance.
- **TO BE CONSTANTLY ON THE LOOKOUT FOR NEW MATERIALS THAT BRING EVER MORE BENEFITS TO USERS.**

## CONTEXT

The PPOLE range covers the essential needs for operations on electrical networks. Thanks to its modular design, the versatility of available fittings, and its extension options, it stands out as a reference pole for LV, MV,and HV applications alike.

# PPOLE

## MULTI-PURPOSE TELESCOPIC INSULATING POLE PENTA-POLE

STANDARDS

IEC 62193, IEC 60855-1 / ASTM F1826, ASTM F711

- All-weather use up to 132 kV.
- Up to 900 kV in dry conditions.
- Quick deployment with bi-material push button.
- Wide range of terminal fittings available.
- Supplied with CMU2.

### / KEY FEATURES

**Specifications :** 7 models available

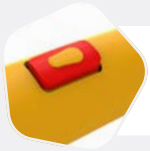
**Dimensions & structure :** From 3.7 m to 12 m
Terminal tube Ø28 mm on foam, followed by a pentagonal hollow tube for a secure grip.

**Performance & Use :** Bi-material push-button deployment system for quick and safe extension.

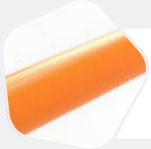
**Dielectric test after wet conditioning:** 100kV / 30cm from the top element on foam. 50kV / 30cm from the bottom elements. For the entire PPOLE range except PPOLE Light



**Universal end fitting to fix multiple accessories and adapters**

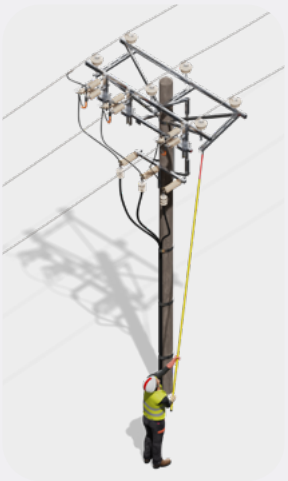


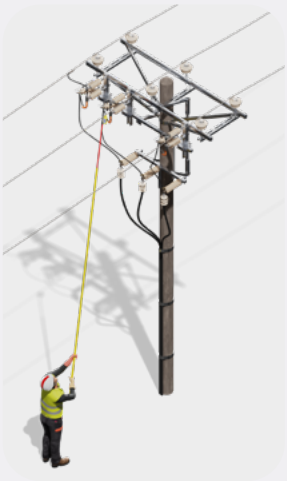
**Bi-material push button: simple operation**

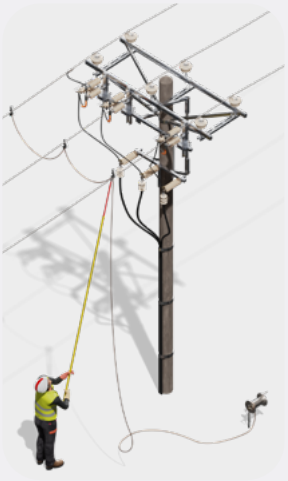


**Round top tube Ø 28 mm in accordance with IEC 60855-1 standard**

| Cover | Other packaging than HPPOLE |
|---|---|
| HPPOLE/150 | H2P140H |
| HPPOLE/170 | H2P160H |
| HPPOLE/190 | H2P180H |









# PPOLE STANDARD

STANDARDS

IEC 62193, IEC 60855-1 / ASTM F1826, ASTM F711

A solution for all voltages and heights until 12 meters



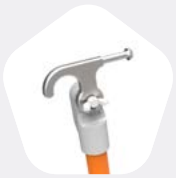
## / KEY FEATURES

**Construction :** Made of 2 to 8 pentagonal tubes with a top Ø28 mm on foam section, protective base, and universal end fitting for multiple accessories.

**Dimensions & structure :** Extends up to 12 m while maintaining a compact 1.78 m retracted length.
Available in 3 to 9 elements, adaptable to all configurations.

**Performance & Use:** Lightweight and rigid for precise movements.
Pentagonal shape ensures a secure, comfortable grip.
For voltage testing, cable handling, or grounding operations, indoors or outdoors.





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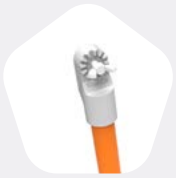


USC



B



APV

multipurpose end fitting, 12 mm 6 sided with automatic locking

| Reference | Number of sections | Extended lenght | Folded lenght | Max. operating voltage all weather | Max. operating voltage dry weather | Cover | Weight (Kg) |
|---|---|---|---|---|---|---|---|
| PPOL3/035* | 3 | 3700 mm | 1450 mm | 132 kV | 170 kV | HPPOLE/150 | 1.89 |
| PPOL4/050* | 4 | 5000 mm | 1510 mm | 132 kV | 245 kV | HPPOLE/170 | 2.48 |
| PPOL5/060* | 5 | 6300 mm | 1580 mm | 132 kV | 420 kV | HPPOLE/170 | 3.16 |
| PPOL6/075* | 6 | 7700 mm | 1650 mm | 132 kV | 525 kV | HPPOLE/170 | 3.96 |
| PPOL7/090* | 7 | 9100 mm | 1710 mm | 132 kV | 765 kV | HPPOLE/190 | 4.70 |
| PPOL8/105* | 8 | 10600 mm | 1780 mm | 132 kV | 900 kV | HPPOLE/190 | 5.52 |
| PPOL9/120* | 9 | 12000 mm | 1780 mm | 132 kV | 900 kV | HPPOLE/190 | 6.35 |

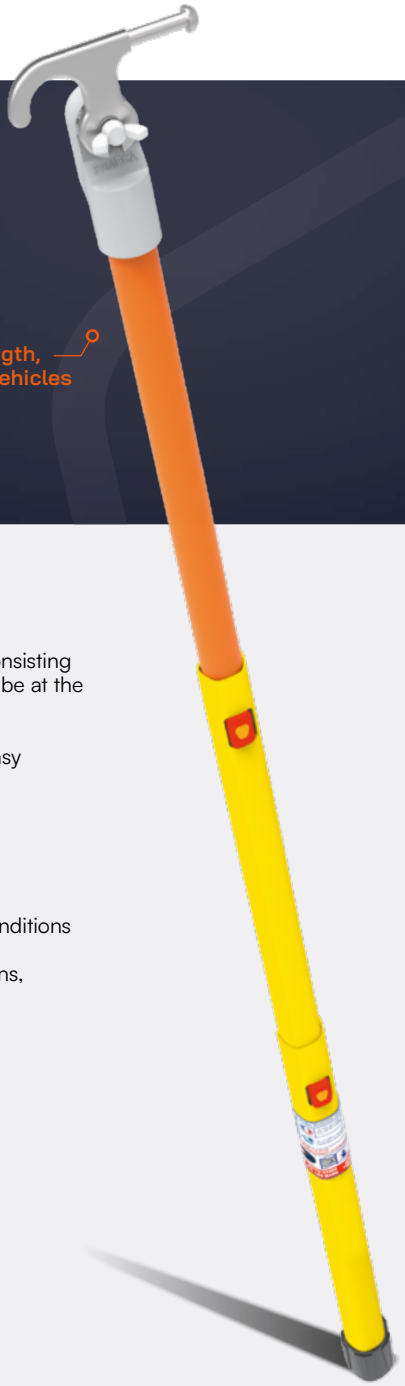
* Add the end fitting reference.

# PPOLE COMPACT

STANDARDS

IEC 62193, IEC 60855-1 / ASTM F1826, ASTM F711

Optimized retracted length, easy to store in small vehicles

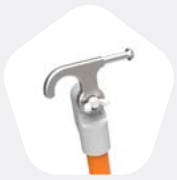


## / KEY FEATURES

**Construction :** Compact telescopic insulating pole consisting of 2 to 9 sections. With a Ø28mm on foam and coated tube at the end, followed by hollow pentagonal tubes.

**Dimensions & Options :** Compact folded length for easy transport and handling.
Option to add a hand guard and/or sheath.
Protective cap
Add *G or *GG to the end of the reference number.
Several end fitting available.

**Performance & Use :** Suitable for use in all weather conditions from 36 to 132 kV and up to 420 kV in dry conditions.
For voltage testing, cable handling, or grounding operations, indoors or outdoors.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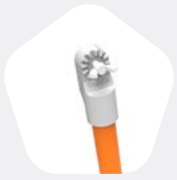
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APV

| Reference | Number of elements | Extended lenght | Folded lenght | Max. operating voltage all weather | Max. operating voltage dry weather | Cover | Weight |
|---|---|---|---|---|---|---|---|
| PPOL2/015* | 2 | 1520 | 880 | 45 kV | 72 kV | HPPOLE/100 | 0.92 Kg |
| PPOL2/020* | 2 | 2000 | 1090 | 72 kV | 110 kV | HPPOLE/130 | 1 Kg |
| PPOL2/025* | 2 | 2500 | 1355 | 132 kV | 150 kV | HPPOLE/150 | 1.25 Kg |
| PPOL3/013* | 3 | 1290 | 580 | 36 kV | 72 kV | HPPOLE/100 | 0.7 Kg |
| PPOL3/020* | 3 | 2020 | 880 | 45 kV | 132 kV | HPPOLE/100 | 1.08 Kg |
| PPOL3/025* | 3 | 2460 | 995 | 72 kV | 132 kV | HPPOLE/100 | 1.35 Kg |
| PPOL4/015* | 4 | 1500 | 560 | 20 kV | 132 kV | HPPOLE/100 | 0.73 Kg |
| PPOL5/024* | 5 | 2315 | 745 | 36 kV | 110 kV | HPPOLE/100 | 1.26 Kg |
| PPOL5/035* | 5 | 3455 | 1000 | 45 kV | 170 kV | HPPOLE/100 | 1.84 Kg |
| PPOL6/050* | 6 | 5000 | 1110 | 72 kV | 245 kV | HPPOLE/130 | 2.57 Kg |
| PPOL7/065* | 7 | 6560 | 1380 | 72 kV | 420 kV | HPPOLE/150 | 3.35 Kg |
| PPOL8/070* | 8 | 6930 | 1710 | 110 kV | 420 kV | HPPOLE/190 | 3.59 Kg |
| PPOL9/062* | 9 | 6220 | 1225 | 45 kV | 420 kV | HPPOLE/130 | 3.28 Kg |

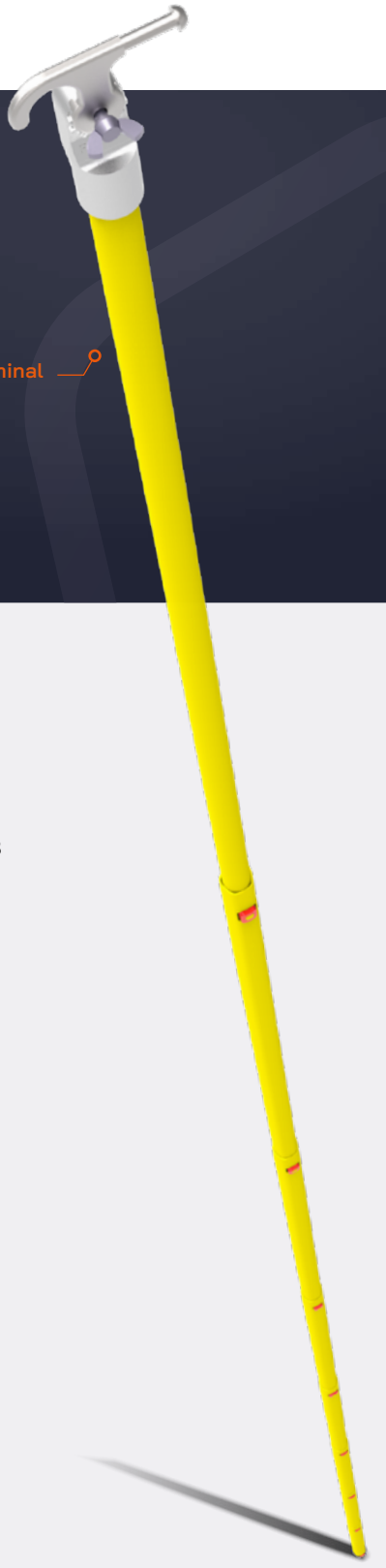
* Add the end fitting reference.

# PPOLE REINFORCED

STANDARDS

IEC 62193, IEC 60855-1 / ASTM F1826, ASTM F711

Improved rigidity, doubled elasticity of the terminal section for an even more precise gesture

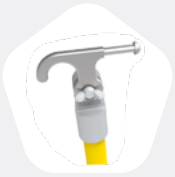


## / KEY FEATURES

**Construction :** Reinforced insulating telescopic pole consisting of 2 to 8 sections.
With a Ø32mm on foam and coated tube at the e nd, followed by hollow pentagonal tubes.

**Dimensions & Options :** Extended length from 2.6 m to 10.8 m, retracted length 1.76 m. Protective cap
Designed to withstand high mechanical stress and ensure precise and stable movements.

**Performance & Use :** Suitable for use in all weather conditions up to 132 kV and
in dry conditions up to 900 kV.
Several terminal fittings available for adaptable use in the field.
For voltage testing, cable handling, or grounding operations, indoors or outdoors.



U



USC



B



APV

| Reference | Number of sections | Extended lenght | Folded lenght | Max. operating voltage all weather | Max. operating voltage dry weather | Cover | Weight (Kg) |
|---|---|---|---|---|---|---|---|
| PPOLR2/025* | 2 | 2600 mm | 1400 mm | 132 kV | 132 kV | HPPOLE/150 | 0.92 |
| PPOLR3/040* | 3 | 3840 mm | 1440 mm | 132 kV | 170 kV | HPPOLE/150 | 1 |
| PPOLR4/050* | 4 | 5150 mm | 1560 mm | 132 kV | 245 kV | HPPOLE/170 | 1.25 |
| PPOLR5/065* | 5 | 6520 mm | 1630 mm | 132 kV | 420 kV | HPPOLE/170 | 0.7 |
| PPOLR6/080* | 6 | 7900 mm | 1690 mm | 132 kV | 525 kV | HPPOLE/170 | 1.08 |
| PPOLR7/095* | 7 | 9300 mm | 1760 mm | 132 kV | 765 kV | HPPOLE/190 | 1.35 |
| PPOLR8/110* | 8 | 10800 mm | 1760 mm | 132 kV | 900 kV | HPPOLE/190 | 0.73 |

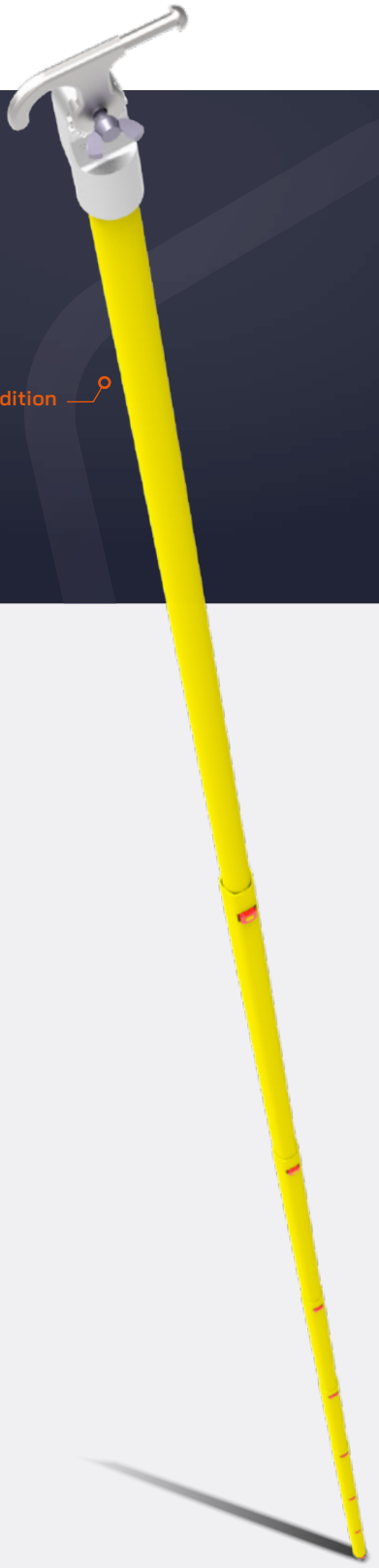
* Add the end fitting reference

# PPOLE LIGHT

STANDARDS

IEC 62193 / IEC 61235

Indoor and wet condition





U



USC



B



APV

## / KEY FEATURES

**Construction :** Telescopic insulating pole made of 2 to 5 hollow pentagonal tubes.
Designed as a cost-effective solution for standard operations.

**Dimensions & Configuration :** Extended length from 1.5 m to 2.4 m.
Compact, lightweight, and easy to handle.
Multiple terminal fittings available.

**Performance & Applications :** For dry conditions only, suitable up to 110 kV.
Ideal for Test voltage, rescue operations, cable handling, and earthing.

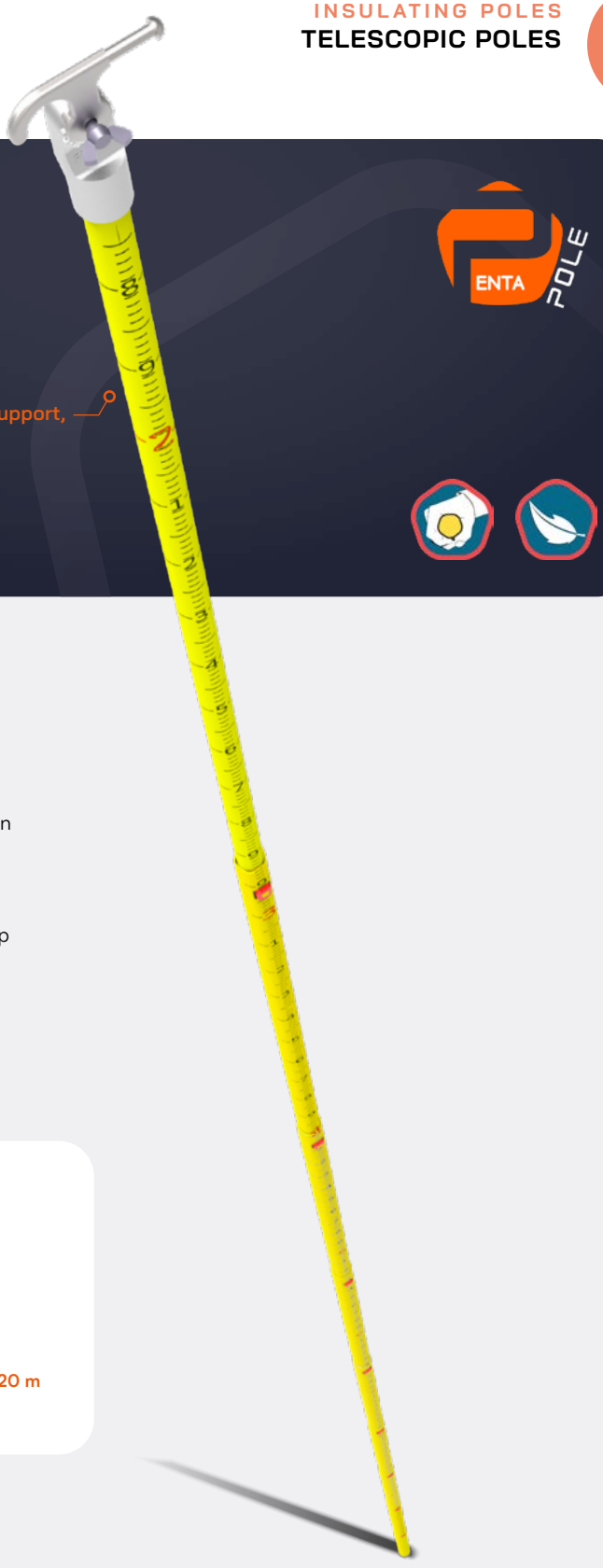
| Reference | Number of sections | Extended lenght | Folded lenght | Max. operating voltage dry weather | Soft cover | Weight (kg) |
|---|---|---|---|---|---|---|
| PPOL2L/015* | 2 | 1500 mm | 880 mm | 36 kV | HPPOLE/100 | 1 |
| PPOL2L/020* | 2 | 2000 mm | 1100 mm | 72 kV | HPPOLE/130 | 1.06 |
| PPOL3L/020* | 3 | 2000 mm | 800 mm | 110 kV | HPPOLE/100 | 1.06 |
| PPOL4L/026* | 4 | 2560 mm | 900 mm | 110 kV | HPPOLE/100 | 1.28 |
| PPOL5L/024* | 5 | 2400 mm | 830 mm | 110 kV | HPPOLE/100 | 1.28 |

* Add the end fitting reference

# PPOLE MEASURE

STANDARDS

IEC 62193, IEC 60855-1 / ASTM F1826, ASTM F711

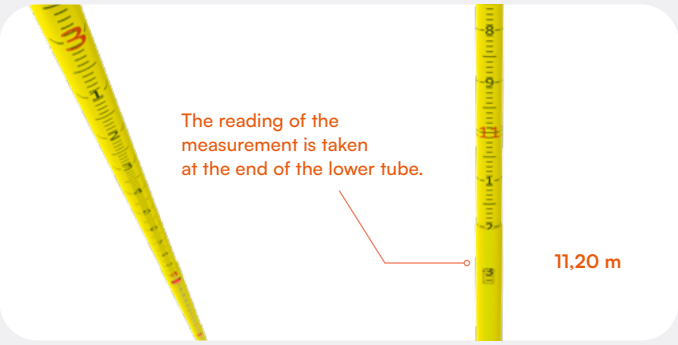



## / KEY FEATURES

**Construction :** Telescopic insulating stick made of 4 to 9 pentagonal tubes, with a fluorescent Ø28 mm on foam upper section, universal end fitting, and operating hook.

**Measurement & range :** Features millimetric graduations on each section for easy height measurement from 3 m to 12 m. Protective cap
Enables direct measurement through the pole.

**Performance & equipment :** Suitable for all-weather use up to 132 kV and dry conditions up to 900 kV. Delivered with CMU2 for complete operational setup.




| Reference | Number of sections | Extended lenght | Folded lenght | Max. operating voltage all weather | Max. operating voltage dry weather | Cover | Weight (Kg) |
|---|---|---|---|---|---|---|---|
| PPOL5/060MU | 5 | 6300 mm | 1580 mm | 132 kV | 420 kV | HPPOLE/170 | 3.16 |
| PPOL6/075MU | 6 | 7700 mm | 1650 mm | 132 kV | 525 kV | HPPOLE/170 | 3.96 |
| PPOL7/090MU | 7 | 9100 mm | 1710 mm | 132 kV | 765 kV | HPPOLE/190 | 4.70 |
| PPOL8/105MU | 8 | 10600 mm | 1780 mm | 132 kV | 900 kV | HPPOLE/190 | 5.52 |
| PPOL9/120MU | 9 | 12000 mm | 1780 mm | 132 kV | 900 kV | HPPOLE/190 | 6.35 |

## CONTEXT

The RI-PPOLE extension allows you to increase the length of a PPOLE rod and expand its maximum all-weather voltage range.

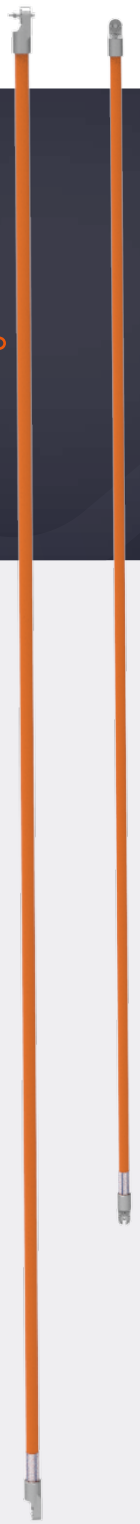
# RI-PPOLE

## INSULATING EXTENSIONS FOR PENTA-POLE

STANDARDS

IEC 60855-1

Allows the use of penta-pole poles in damp conditions over 132 kv

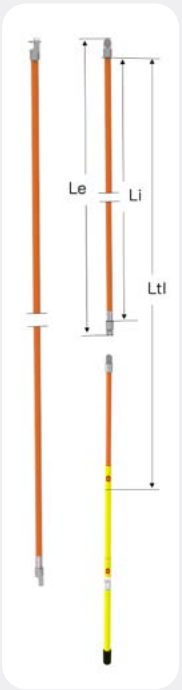


### / KEY FEATURES

**Construction :** Made of Ø28 mm foam-filled composite tube, compliant with IEC 60855-1.
Designed for high-voltage operations.

**Measurement & range :** Universal female fitting on pole side and Universal (U) fitting at the opposite end, compatible with a wide range of accessories.

**Performance & equipment :** Suitable for all-weather use up to 225 kV and up to 400 kV.
Ensures maximum operator safety in high-voltage environments.




| Reference | Max Operating Voltage* | Le | Li | Lti |
|---|---|---|---|---|
| RIPPOL225KV | 225 kV | 1370 mm | 1170 mm | 2300 mm |
| RIPPOL400KV | 400 kV | 2620 mm | 2420 mm | 3600 mm |

* PPole compatible for all-weather operating at maximum voltage
PPOL3/035U — PPOL4/050U — PPOL5/060U — PPOL6/075U — PPOL7/090U — PPOL8/105U — PPOL9/120U

## CONTEXT

The TR telescopic poles offer great versatility, suitable for voltage testing , MV earthing, or LV substation operations, while remaining easy to use. Their modular design and robustness make them ideal for intensive use, while ensuring a high level of dielectric safety.

# TR
# TRL

TELESCOPIC POLES

STANDARDS

IEC 62193 / IEC 60855-1 / IEC 61235






U



B



APV

## / KEY FEATURES

**Construction :** 2 to 4 elements, end tubes on foam, Ø32 mm or Ø26 mm (30% lighter design)
Followed by hollow tube Ø32, Ø39, Ø48 mm

**Measurement & range :** Push-button system with locking in retracted or extended position for easy handling.
Protective cap
Extension option on certain TR2 models, see reference table.

**Performance & equipment :** usable in all weather conditions from 36 to 275 kV, up to 525 kV in dry conditions.
Performance and equipment: can be used in all weather conditions from 36 to 275 kV, up to 525 kV
in dry conditions.
Ideal for checking the absence of voltage in earthing, MV/LV and medium load operations.
Ensures maximum safety for the operator in high-voltage environments.

| Type | Reference | Sections number | Retracted length | Extended length | Max. use voltage dry conditions | Max. use voltage any conditions | Weight | Upper tube from filed composite | Soft cover |
|---|---|---|---|---|---|---|---|---|---|
| TR2 | TR2105 | 2 sections | 0,70 m | 1,10 m | 36 kV | 36 kV | 1,00 kg | Ø 32 mm | H1P080V |
| TR2 | TR245 | 2 sections | 0,85 m | 1,50 m | 72 kV | 36 kV | 1,05 kg | Ø 32 mm | H1P100V |
| TR2 | TR275* | 2 sections | 1,10 m | 2,00 m | 90 kV | 72 kV | 1,20 kg | Ø 32 mm | H1P120V |
| TR2 | TR276 | 2 sections | 1,10 m | 2,00 m | 90 kV | 72 kV | 1,20 kg | Ø 32 mm | H1P120V |
| TR2 | TR2225* | 2 sections | 1,75 m | 3,20 m | 225 kV | 132 kV | 1,50 kg | Ø 32 mm | H1P180V |
| TR2 | TR2245 | 2 sections | 2,15 m | 4,00 m | 300 kV | 225 kV | 2,20 kg | Ø 32 mm | H1P220V |
| TR3 | TR3450 | 3 sections | 1.75 m | 4.50 m | 330 kV | 150 kV | 3,00 kg | Ø 32 mm | H1P180V |
| TR3 | TR3600 | 3 sections | 2,27 m | 6,00 m | 525 kV | 275 kV | 5,00 kg | Ø 32 mm | H1P220V |
| TRL2 | TRL2092 | 2 sections | 0,55 m | 0,92 m | 36 kV | 36 kV | 0,42 kg | Ø 26 mm | H1P060V |
| TRL3 | TRL3150 | 3 sections | 0,64 m | 1,50 m | 72 kV | 36 kV | 0,89 kg | Ø 26 mm | H1P080V |
| TRL3 | TRL3450 | 3 sections | 1,76 m | 4,50 m | 345 kV | 150 kV | 2,20 kg | Ø 26 mm | H1P180V |
| TRL3 | TRL3500 | 3 sections | 1,93 m | 5,00 m | 380 kV | 225 kV | 2,45 kg | Ø 26 mm | H1P200V |
| TRL3 | TRL3600 | 3 sections | 2,27 m | 6,00 m | 525 kV | 275 kV | 3,20 kg | Ø 26 mm | H1P220V |
| TRL4 | TRL4500 | 4 sections | 1,62 m | 5,00 m | 420 kV | 150 kV | 4,20 kg | Ø 26 mm | H1P180V |
| TRL4 | TRL4600 | 4 sections | 1,87 m | 6,00 m | 525 kV | 170 kV | 4,70 kg | Ø 26 mm | H1P200V |

*Extension (see table below). ** Unsheathed shaft.

## / EXTENSION

| Reference | Length |
|---|---|
| RTR100 | 1.00 m |
| RTR180 | 1,80 m |
| RTR215 | 2.15 m |

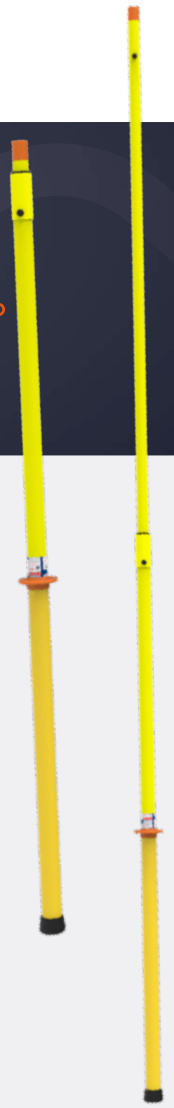
# TRC

NEW

## INSULATING TELESCOPIC POLE WITH TOP LOCK

STANDARDS

IEC 62193 / IEC 61235 / IEC 60855-1




### / KEY FEATURES

**Construction :** Two-piece insulating pole made of foam-filled composite material with a diameter of 32 mm for good strength and durability.

**Design & Handling :** Locking system in folded and extended positions (mounted on top) for easier and safer handling. Designed for intensive use.

**Performance & Use :** Suitable for use in all weather conditions from 132 kV to 380 kV and up to 525 kV in dry conditions.

| Reference | Extended lenght | Folded lenght | Dry condition rating | All-weather rating | Carrying bag | Height |
|---|---|---|---|---|---|---|
| TRC2300MT535URU | 3 m | 1.6 m | 225 kV | 132 kV | H1P120V | 1.5 kg |
| TRC2300B | | | | | | |
| TRC2400B | 4 m | 2.1 m | 300 kV | 225 kV | H1P220V | 2.2 kg |
| TRC2400CANU | | | | | | |
| TRC2400BCH | | | | | | |
| TRC2500B | 5 m | 2.6 m | 525 kV | 380 kV | H2P260H | 3.2 kg |
| TRC25001560 | | | | | | |



# PTUM

## COMPACT TELESCOPIC INSULATING STICK FOR WORK AT GREAT HEIGHTS

STANDARDS

IEC 60855-1 / IEC 62193

### / KEY FEATURES

**Construction :** 4 to 8-section insulating pole with foam-filled Ø26 mm upper tube and rigid hollow lower tubes. UV-protected glossy finish for durability.

**Design & Handling :** Length from 5.9 m to 10.4 m, adjustable by deployment.

**Performance & Use :** For 132 kV all-weather use and up to 900 kV dry. Lightweight yet highly rigid.

| Reference | Number of elements | Folded length | Extended length | 1st section diameter | Max. Operating Voltage - All weather | Max. Operating Voltage - Dry weather | Weight | Cover |
|---|---|---|---|---|---|---|---|---|
| PTUM18X600* | 4 | 1,8 m | 5,9 m | 38 mm | 132 kV | 420 kV | 2.3 kg | H1P180V |
| PTUM18X700* | 5 | | 7,1 m | 42 mm | | | 2.8 kg | |
| PTUM18X850* | 6 | | 8,3 m | 46 mm | | 525 kV | 3.4 kg | |
| PTUM18X950* | 7 | | 9,4 m | 50 mm | | 765 kV | 4.1 kg | |
| PTUM18X1050* | 8 | | 10,4 m | 54 mm | | 900 kV | 4.7 kg | |

* Adding the end fitting reference
** (Always extend the end section fully whatever the use)

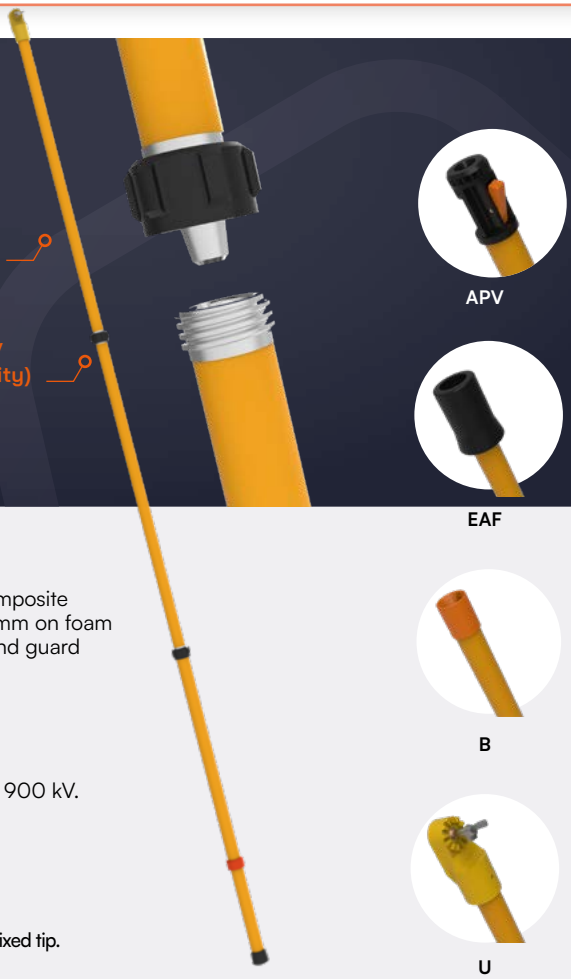
## CONTEXT

These poles are easy to use thanks to their interlocking sections, allowing them to cover most operations such as VAT (Voltage Absence Test), earthing and handling tasks.

# PXV

## CONNECTABLE INSULATING POLES MADE OF Ø 32 MM TUBE

STANDARDS
IEC 60855-1 / EN 50508





APV


EAF


B


U

### / KEY FEATURES

**Construction :** Modular insulating pole composed of 1 to 4 composite sections filled with foam, extendable insulating poles made of Ø32 mm on foam tube. S37 screw connectors made of aluminum alloy. Elastomer hand guard marking the limit of the grip zone. Ribbed sheath for a secure grip.

**Dimensions & configuration :** Length from 0.8 m to 8 m. adaptable to multiple configurations.

**Performance & Use :** or dry conditions only, suitable for 15 kV to 900 kV.

**Composition :**
The multi-part PXV range always consists of:

- A PXVH handle sections
- One or more PSL pole extensions, as required.
- A PSM* terminal element incorporating a permanently mounted fixed tip.

Designed for voltage test, MV/LV earthing and disconnection operations.

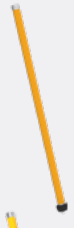
### / Full poles

| Reference | Overall length | Section numbers | Insulating length | Max operating voltage all weather | Weight | Soft cover |
|---|---|---|---|---|---|---|
| PXV1080* | 0,80 m | 1 section | 0,55 m | 15kV | 0,50 kg | HTR1950 |
| PXV1125* | 1,25 m | | 1,00 m | 72kV | 0,90 kg | H10 |
| PXV1150* | 1,50 m | | 1,10 m | 72kV | 1,00 kg | H10 |
| PXV1200* | 2,00 m | | 1,30 m | 110kV | 1,40 kg | H11 |
| PXV1250* | 2,50 m | | 1,80 m | 170kV | 1,60 kg | HTR12750 |
| PXV1300* | 3,00 m | | 2,00 m | 225kV | 2,00 kg | H12 |
| PXV2200* | 2,00 m | 2 sections | 1,30 m | 110kV | 1,50 kg | H2P120H |
| PXV2300* | 3,00 m | | 2,00 m | 225kV | 2,10 kg | H2P180H |
| PXV2400* | 4,00 m | | 2,80 m | 300kV | 3,30 kg | H2P220H |
| PXV2500* | 5,00 m | | 3,60 m | 400kV | 3,30 kg | H2P260H |
| PXV2600* | 6,00 m | | 4,60 m | 480kV | 4,10 kg | H2P320H |
| PXV3300* | 3,00 m | 3 sections | 2,30 m | 225kV | 2,15 kg | H2P120H |
| PXV3450* | 4,50 m | | 3,50 m | 400kV | 2,90 kg | H2P160H |
| PXV3600* | 6,00 m | | 4,80 m | 480kV | 4,30 kg | H2P220H |
| PXV4400* | 4,00 m | 4 sections | 3,30 m | 300kV | 3,20 kg | H2P120H |
| PXV4600* | 6,00 m | | 5,00 m | 480kV | 4,50 kg | H2P160H |
| PXV4750* | 7,50 m | | 6,30 m | 765kV | 5,20 kg | H2P220H |
| PXV4800* | 8,00 m | | 6,80 m | 900kV | 5,40 kg | H2P220H |

* Add the end fitting code at the the end of the reference (ex : PSM250U / PXV3450APV).

### / Terminal Sections

| Reference | Overall lenght | Insulating length | Weight |
|---|---|---|---|
| **Terminal sections** | | | |
| PSM100* | 1,00 m | 850 mm | 0,80 kg |
| PSM150* | 1,50 m | 1385 mm | 1,00 kg |
| PSM188* | 1,88 m | 1730 mm | 1,20 kg |
| PSM200* | 2,00 m | 1850 mm | 1,30 kg |
| PSM250* | 2,50 m | 2350 mm | 1,50 kg |
| PSM300* | 3,00 m | 2850 mm | 1,80 kg |
| **Intermediate sections** | | | |
| PSM100 | 1,00 m | 850 mm | 0,80 kg |
| PSM150 | 1,50 m | 1385 mm | 1,00 kg |
| PSM188 | 1,88 m | 1730 mm | 1,20 kg |
| PSM200 | 2,00 m | 1850 mm | 1,30 kg |
| PSM250 | 2,50 m | 2350 mm | 1,50 kg |
| PSM300 | 3,00 m | 2850 mm | 1,80 kg |
| **Handle sections** | | | |
| PVXH100 | 1,00 m | 300 mm | 0,70 kg |
| PXVH150 | 1,50 m | 500 mm | 0,95 kg |
| PXVH188 | 1,88 m | 680 mm | 1,10 kg |
| PXVH200 | 2,00 m | 800 mm | 1,20 kg |
| PXVH250 | 2,50 m | 1100 mm | 1,50 kg |
| PXVH300 | 3,00 m | 1600 mm | 1,75 kg |


# PXL

## EXTENDABLE INSULATING POLES MADE OF Ø32MM HOLLOW TUBE

STANDARDS

EN 50508 / IEC 61235

Lightweight and easy to handle





APV



EAF



B



U

### / KEY FEATURES

**Construction :** modular insulated pole consisting of 1 to 4 hollow composite sections, Ø32 mm.
S37 aluminum alloy screw connectors.
Elast omer hand protection marking the limit of the grip zone.
Ribbed sheath for a secure grip.

**Dimensions & configuration :** length from 0.8 m to 8 m.
Adaptable to multiple configurations.

**Performance & Use :** or dry conditions only, suitable for 15 kV to 900 kV.

**Composition :**
The multi-part PXL range always consists of:

- A PXLH handle sections
- One or more PSL mast extensions, as required.
- A PSL* terminal element incorporating a permanently mounted fixed tip.

Designed for indoor and dry condition use for voltage testing, MV/LV earthing, and disconnection operations.

### / Full poles

| Reference | Overall length | Section numbers | Insulating length | Max operating voltage in dry conditions | Weight | Soft cover |
|---|---|---|---|---|---|---|
| PXL1080* | 0,80 m | 1 section | 0,55 m | 15 kV | 0,44 kg | HTR1950 |
| PXL1125* | 1,25 m | | 1 m | 72 kV | 0,80 kg | H10 |
| PXL1200* | 2 m | | 1,30 m | 110 kV | 1,24 kg | H11 |
| PXL1300* | 3 m | | 2 m | 225 kV | 1,76 kg | H12 |
| PXL2200* | 2 m | 2 sections | 1,30 m | 110 kV | 1,34 kg | H2P120H |
| PXL2300* | 3 m | | 2 m | 225 kV | 1,86 kg | H2P180H |
| PXL2500* | 5 m | | 3,60 m | 400 kV | 2,90 kg | H2P260H |
| PXL2600* | 6 m | | 4,60 m | 480 kV | 3,62 kg | H2P320H |
| PXL3300* | 3 m | 3 sections | 2,30 m | 225 kV | 1,91 kg | H2P120H |
| PXL3600* | 6 m | | 4,80 m | 480 kV | 3,82 kg | H2P220H |
| PXL4400* | 4 m | 4 sections | 3,90 m | 300 kV | 2,88 kg | H2P120H |
| PXL4600* | 6 m | | 5 m | 480 kV | 4,02 kg | H2P160H |

### / Terminal sections

| Reference | Overall length | Insulating length | Weight |
|---|---|---|---|
| PSL100* | 1,00 m | 0,85 m | 0,72 kg |
| PSL150* | 1,50 m | 1,38 m | 0,88 kg |
| PSL188* | 1,88 m | 1,73 m | 1,05 kg |
| PSL200* | 2,00 m | 1,85 m | 1,14 kg |
| PSL250* | 2,50 m | 2,35 m | 1,30 kg |
| PSL300* | 3,00 m | 2,85 m | 1,56 kg |

### / Poles extension

| Reference | Overall length | Insulating length | Weight |
|---|---|---|---|
| PSL100 | 1,00 m | 0,85 m | 0,72 kg |
| PSL150 | 1,50 m | 1,38 m | 0,88 kg |
| PSL188 | 1,88 m | 1,73 m | 1,05 kg |
| PSL200 | 2,00 m | 1,85 m | 1,14 kg |
| PSL250 | 2,50 m | 2,35 m | 1,30 kg |
| PSL300 | 3,00 m | 2,85 m | 1,56 kg |

### / Handle sections

| Reference | Overall length | Insulating length | Weight |
|---|---|---|---|
| PXLH100 | 1,00 m | 0,30 m | 0,62 kg |
| PXLH150 | 1,50 m | 0,50 m | 0,83 kg |
| PXLH188 | 1,88 m | 0,68 m | 0,94 kg |
| PXLH200 | 2,00 m | 0,80 m | 1,04 kg |
| PXLH250 | 2,50 m | 1,10 m | 1,30 kg |
| PXLH300 | 3,00 m | 1,60 m | 1,51 kg |

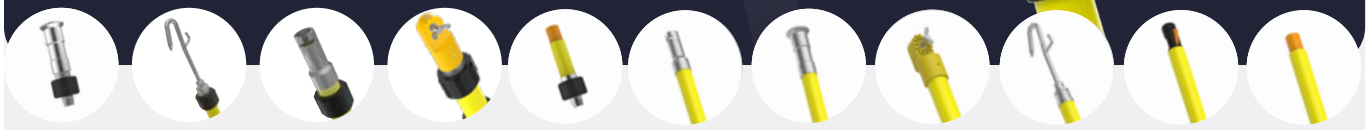
* Add the end fitting code at the end of the reference
ex: PSL250U / PXL3450APV).

# PRE

SPECIAL HEAVY DUTY EXTENDABLE INSULATING POLES MADE OF Ø 39 MM ON FOAM TUBE

STANDARDS
IEC 60855-1 / EN 50508



S46HE | S46AN | S46CL | S46U | S46B | CL | HE | U | AN | APV | B

## / KEY FEATURES

**Construction :** Special heavy duty extendable insulating poles made of ø39 mm on foam tube compliant with IEC 60855-1 (series test against moisture penetration).
- S46 light alloy screw connections with brake and protective sleeve.
- Elastomer hand guard marking the limit of the grip zone.
- Non-slip ribbed shaft.
- Length and part numbers to order: see table.

**Dimensions & configuration :** the PRE pole in sereval sections always consists of :
- a PFE base section.
- one or more PSE upper sections.
- an interchangeable S46 terminal adapter adapted to the tip of the maneuvering clamp

OR
- a terminal element incorporating a fixed tip (AN, HE, CL, B, etc.) permanently mounted

**Performance & Use :** Grounding on lines and in high and very high voltage substations.
All-weather use from 15 kV to 900 kV.
Any work involving significant mechanical stress.

## / Base section : PFE (handle)

| Reference | Length | Handle length | Insulating length | Weight |
|---|---|---|---|---|
| PFE100 | 1,05 m | 0,70 m | 0,30 m | 1,10 kg |
| PFE150 | 1,55 m | 1,00 m | 0,50 m | 1,50 kg |
| PFE175 | 1,80 m | 1,10 m | 0,65 m | 1,70 kg |
| PFE200 | 2,05 m | 1,10 m | 0,90 m | 1,90 kg |
| PFE225 | 2,30 m | 1,40 m | 0,85 m | 2,15 kg |
| PFE250 | 2,55 m | 1,50 m | 1,00 m | 2,40 kg |
| PFF300 | 3,05 m | 1,50 m | 1,50 m | 2,90 kg |

## / Upper sections

| Terminal element | Intermediate | Length | Insulating length | Weight |
|---|---|---|---|---|
| PSE100* | PSE100 | 1,10 m | 0,88 m | 1,10 kg |
| PSE150* | PSE150 | 1,60 m | 1,38 m | 1,50 kg |
| PSE175* | PSE175 | 1,75 m | 1,63 m | 1,75 kg |
| PSE200* | PSE200 | 2,00 m | 1,88 m | 1,90 kg |
| PSE225* | PSE225 | 2,25 m | 2,13 m | 2,15 kg |
| PSE250* | PSE250 | 2,50 m | 2,38 m | 2,40 kg |
| PSE300* | PSE300 | 3,00 m | 2,88 m | 2,90 kg |

## / PRE complete poles

| Reference | Length | Number of elements | Handle length | Insulating length | Max operating voltage all weather | Weight | Soft cover |
|---|---|---|---|---|---|---|---|
| PRE1100** | 1,05 m | 1 | 0,25 m | 0,75 m | 36 kV | 1,10 kg | H1P100V |
| PRE1150** | 1,55 m | 1 | 0,50 m | 1,00 m | 72 kV | 1,50 kg | H1P160V |
| PRE1200** | 2,05 m | 1 | 0,80 m | 1,10 m | 110 kV | 1,90 kg | H1P200V |
| PRE1250** | 2,55 m | 1 | 0,90 m | 1,60 m | 132 kV | 2,30 kg | H2P250H |
| PRE1300** | 3,05 m | 1 | 1,00 m | 2,00 m | 225 kV | 2,60 kg | H12 |
| PRE1400** | 4,05 m | 1 | 1,20 m | 2,60 m | 300 kV | 3,40 kg | H14H |
| PRE2200** | 2,10 m | 2 (2 x 1 m) | 0,80 m | 1,10 m | 110 kV | 2,30 kg | H2P120H |
| PRE2300** | 3,10 m | 2 (2 x 1.5 m) | 1,00 m | 2,08 m | 225 kV | 3,00 kg | H2P160H |
| PRE2400** | 4,10 m | 2 (2 x 2 m) | 1,50 m | 2,88 m | 300 kV | 3,80 kg | H2P220H |
| PRE2500** | 5,10 m | 2 (2 x 2.5 m) | 1,50 m | 3,88 m | 400 kV | 4,70 kg | H2P260H |
| PRE3300** | 3,15 m | 3 (3 x 1 m) | 0,70 m | 2,46 m | 300 kV | 3,40 kg | H2P120H |
| PRE3450** | 4,65 m | 3 (3 x 1.5 m) | 1,00 m | 3,76 m | 400kV | 4,50 kg | H2P160H |
| PRE3600** | 6,15 m | 3 (3 x 2 m) | 1,50 m | 5,26 m | 525kV | 5,70 kg | H2P220H |
| PRE3750** | 7,15 m | 3 (3 x 2.5 m) | 1,50 m | 6,26 m | 765kV | 6,60 kg | H2P260H |

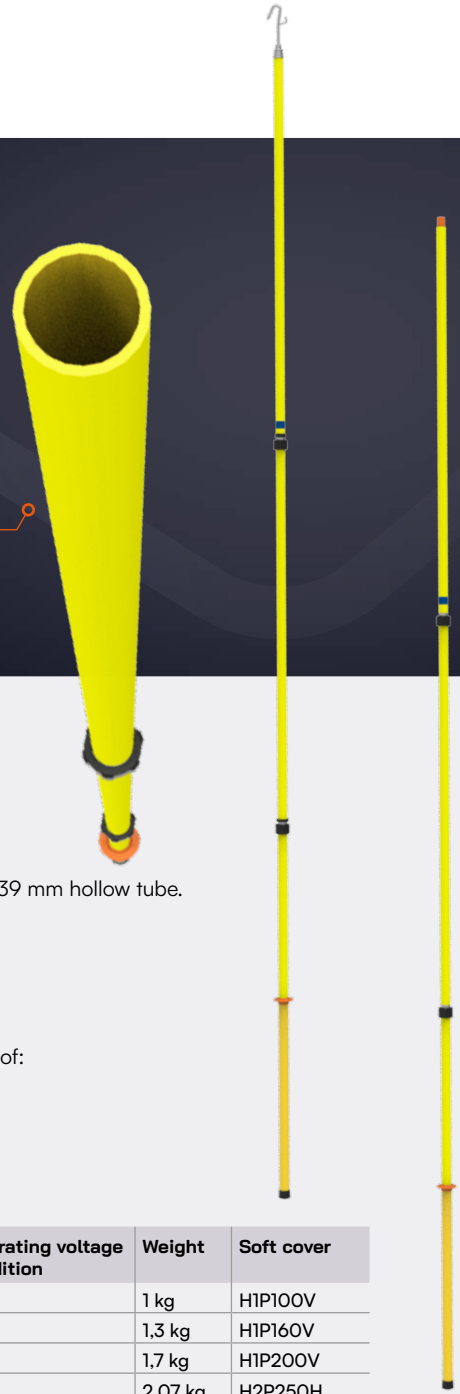
*Add the code of the permanently mounted end fitting
Example: PFExxxHE = with end fitting HE
PFExxxAN = with AN end fitting
**Add code for S46 adapter type or end fitting at the end of the part number

Without code = stick delivered without adapter or end fitting
Example: PREnxxxHE = with S46HE adapter
PREnxxxHEC = with end fitting HE permanently mounted on the terminal element
PREnxxxAN = with S46AN adapter

# PRL

## SPECIAL HEAVY DUTY EXTENDABLE INSULATING POLES MADE OF Ø39MM HOLLOW TUBE

STANDARDS
IEC 61235-S / EN 50508




### / USE

For use in dry conditions only, from 15 kV to 900 kV.
Any work involving significant mechanical stress.

### / KEY FEATURES

**Construction :** Special heavy duty extendable insulating poles made of ø39 mm hollow tube. Complies with IEC 61235-S standard.
- S46 light alloy screw connections with brake and protective sleeve.
- Elastomer hand guard marking the limit of the gripping area.
- Ribbed non-slip shaft.
- Lengths and part numbers to order: see table.

**Dimensions & configuration :** The multi-section PRL pole always consists of:
- a PFL base section.
- one or more PSL upper sections.
- a terminal element incorporating a fixed tip (AN, HE, CL, B, etc.) permanently mounted.

| Reference | Length | Number of elements | Handle length | Insulating length | Max operating voltage dry condition | Weight | Soft cover |
|---|---|---|---|---|---|---|---|
| PRL100** | 1,05 m | 1 | 0,25 m | 0,75 m | 36 kV | 1 kg | H1P100V |
| PRL1150** | 1,55 m | 1 | 0,50 m | 1,00 m | 72 kV | 1,3 kg | H1P160V |
| PRL1200** | 2,05 m | 1 | 0,80 m | 1,10 m | 110 kV | 1,7 kg | H1P200V |
| PRL1250** | 2,55 m | 1 | 0,90 m | 1,60 m | 132 kV | 2,07 kg | H2P250H |
| PRL2200** | 2,10 m | 2 (2 x 1 m) | 0,80 m | 1,10 m | 110 kV | 2,07 kg | H2P120H |
| PRL2300** | 3,10 m | 2 (2 x 1.5 m) | 1,00 m | 2,08 m | 225 kV | 2,7 kg | H2P160H |
| PRL2400** | 4,10 m | 2 (2 x 2 m) | 1,50 m | 2,88 m | 300 kV | 3,42 kg | H2P220H |
| PRL2500** | 5,10 m | 2 (2 x 2.5 m) | 1,50 m | 3,88 m | 400 kV | 4,23 kg | H2P260H |
| PRL3300** | 3,15 m | 3 (3 x 1 m) | 0,70 m | 2,46 m | 300 kV | 3,05 kg | H2P120H |
| PRL3450** | 4,65 m | 3 (3 x 1.5 m) | 1,00 m | 3,76 m | 400kV | 4,05 kg | H2P160H |
| PRL3600** | 6,15 m | 3 (3 x 2 m) | 1,50 m | 5,26 m | 525kV | 5,1 kg | H2P220H |
| PRL3750** | 7,15 m | 3 (3 x 2.5 m) | 1,50 m | 6,26 m | 765kV | 6 kg | H2P260H |

### / Base section : PFL (handle)

| Reference | Length | Handle length | Insulating length | Weight |
|---|---|---|---|---|
| PFL100 | 1,05 m | 0,70 m | 0,30 m | 1 kg |
| PFL150 | 1,55 m | 1,00 m | 0,50 m | 1,30 kg |
| PFL175 | 1,80 m | 1,10 m | 0,65 m | 1,50 kg |
| PFL200 | 2,05 m | 1,10 m | 0,90 m | 1,60 kg |
| PFL225 | 2,30 m | 1,40 m | 0,85 m | 1,90 kg |
| PFL250 | 2,55 m | 1,50 m | 1,00 m | 2,10 kg |
| PFL300 | 3,05 m | 1,50 m | 1,50 m | 2,60 kg |

### / Upper sections

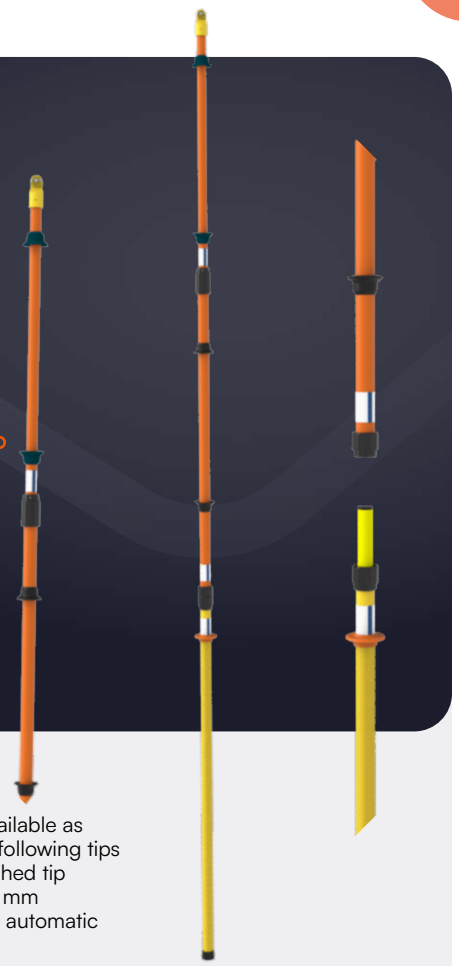
| Terminal element | Intermediate | Length | Insulating length | Weight |
|---|---|---|---|---|
| PSL100* | PSL100 | 1,10 m | 0,88 m | 1 kg |
| PSL150* | PSL150 | 1,60 m | 1,38 m | 1,30 kg |
| PSL175* | PSL175 | 1,75 m | 1,63 m | 1,50 kg |
| PSL200* | PSL200 | 2,00 m | 1,88 m | 1,60 kg |
| PSL225* | PSL225 | 2,25 m | 2,13 m | 1,90 kg |
| PSL250* | PSL250 | 2,50 m | 2,38 m | 2,10 kg |
| PSL300* | PSL300 | 3,00 m | 2,88 m | 2,60 kg |

# RTTE

## INSULATING POLES

STANDARDS

EN 50508 / IEC 60855-1



**Quick-connect insulated connectors :** the poles can only be used once all three components have been assembled, ensuring that the user maintains a safe distance when checking for voltage. The quick-connect system provides the poles with high rigidity and allows them to be used for earthing.

### / KEY FEATURES

💪**Performance & Use :** For checking the absence of voltage from 20 kV to 400 kV in all weather conditions, but also suitable for earthing and operating disconnectors.

⚙ **Construction :** Composite fibreglass tube on foam IEC 60855-1 ø39 and 32mm (terminal element). Dielectric strength 100 kV/30cm after wet conditioning. Neoprene protective sleeve. Rubber hand guard indicating the maximum distance to which hands should not be extended. Shaft covered with a non-slip sheath.

RTTE poles are available as standard with the following tips
- U: universal notched tip
- APV: versatile 12 mm hexagonal tip with automatic locking
- B: bayonet tip
- EAF: versatile 21 mm hexagonal tip

| Reference | Designation | Length | Insulating length | Composition (Lh + L1 + L2) | Cover | Weight |
|---|---|---|---|---|---|---|
| RTTE25 | Insulating pole 25 kV | 1,60 m | 0,95 m | Lh = 0,57 | H10 | 1,30 Kg |
| RTTE36 | Insulating pole 36 kV | 2,10 m | 1,45 m | Lh = 0,57 | H11 | 1,60 Kg |
| RTTE90 | Insulating pole 90 kV | 3,20 m | 2,10 m | PI302 = 1,36<br>PI477 = 1,10<br>PI478 = 1,10 | H3P140 | 3.20Kg |
| RTTE150 | Insulating pole 150 kV | 3,60 m | 2,60 m | PI302 = 1,36<br>PI307 = 1,10<br>PI308 = 1,60 | H3P160 | 3,50 Kg |
| RTTE63 | Insulating pole 63 kV | 2,70 m | 1,60 m | PI302 = 1,36<br>PI309 = 1,10<br>PI310 = 0,60 | H3P140 | 3 Kg |
| RTTE225 | Insulating pole 225 kV | 4,10 m | 3,10 m | PI302 = 1,36<br>PI305 = 1,10<br>PI306 = 2,10 | H3P220 | 3,80 Kg |
| RTTE400 | Insulating pole 400 kV | 5,10 m | 4,10 m | PI302 = 1,36<br>PI303 = 2,10<br>PI304 = 2,10 | HP3220 | 4,60 Kg |
| RE115 | Extension 1,15 m | 1,15 m | | | | 1,20 Kg |
| RE165 | Extension 1,65 m | 1,65 m | | | | 1,65 Kg |
| RE215 | Extension 2,15 m | 2,15 m | | | | 2 Kg |

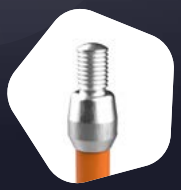
# PEC

## TELESCOPIC ADJUSTABLE TRAIN AND LGV

The telescopic insulated pole (PEC) is equipment intended for railway maintenance. This tool enables the user to perform Rail Line Connection and safely install tension detectors

This adjustable and reinforced telescopic insulated pole is particularly suitable for use in a wide range of remote works on both continuous and alternating railway networks ranging from 500 to 25,000V

It allows for carrying out the VAT (Voltage Absence Test) and then rail installation of the catenary and/or OCS (Overhead Contact Line) using an appropriate pole head (clamp), as well as various other tasks in the vicinity (video inspection, pruning, cleaning, etc.)





### / KEY FEATURES

**Construction :** telescopic pole with 2 to 4 sections, Ø28mm foam-covered end tube f ollowed by hollow tube. Designed to be strong and durable.

**Design & Adjustment :** Quick-release screw system when it completely unfolded. 1 to 2 m base extension available as an option. Anti-rotation system for precise torque control

**Performance & Use :** Designed for lifting heavy loads. Impact-resistant structure for demanding field applications.

| Reference | Folded lenght | Unfolded lenght | Number of elements | External tube diameter | Cover | Weight |
|---|---|---|---|---|---|---|
| PEC3560 | 2,15 m | 5,6 m | 3 elements | 28 / 37 / 45 mm | H2P220H | 3,8 kg |
| PEC4650 | 2 m | 6,5 m | 4 elements | 28 / 37 / 45 / 53 mm | H2P200H | 5 kg |
| PEC4450 | 1,6 m | 4,5 m | | | H1P160V | 4,5 kg |

* Adding the end fitting reference.
(Always extend the end section fully whatever the use).

### / Optional accessories

| Reference | Description |
|---|---|
| RAL1PEC | 1 meter extension |



PENTA Electrical Safety Products offers a wide range of end fitting depending on the area of use and the work to be done.

## / Distribution



X46 HE B AN

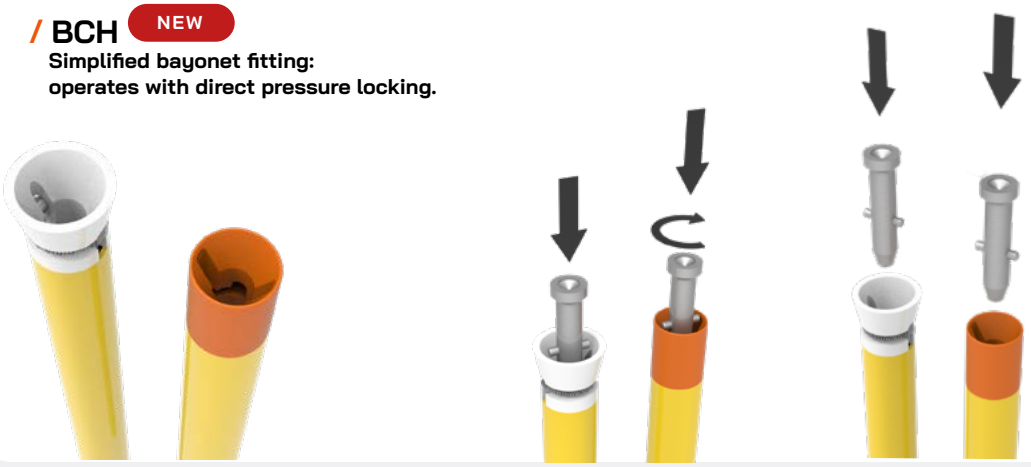
## / Transport



U B AP CR

## / BCH NEW

**Simplified bayonet fitting:**
**operates with direct pressure locking.**



### CONTEXT

When it is necessary to install, remove, or handle an earthing clamp, fuse, or accessory remotely, the clampstick is the ideal tool.
Equipped with an internal or external operating rod, it ensures a secure grip and precise control of the accessory, without direct contact with the live part.

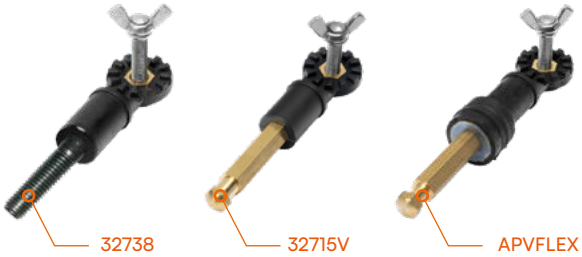
This section presents our straight, articulated, compact, and extendable models, designed to adapt to every field configuration — from MV substations to overhead networks.
All our clampsticks are ASTM and IEC compliant, and compatible with standard fittings across our range.

**Can be combined with our earthing clamps, hooks, adapters, and rigid extensions to suit your specific needs.**

# POLES END FITTINGS AND ADAPTER CONNECTIONS

## / APV - U adapters
12 mm 6-sided to U end fitting

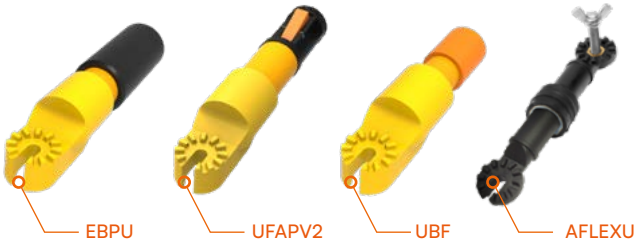





| Reference | Description |
|---|---|
| 32715V | Classic version |
| APVFLEX | Flexible version* |
| 32738 | M10 to U end fitting adapter compatible with an APV3 |

## / U adapters

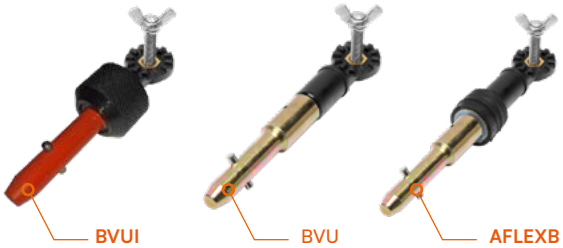





| Reference | Description |
|---|---|
| EBPU | U — Polish bayonet adapter |
| UBF | U — Bayonet adapter |
| UFAPV2 | U — APV adapter |
| AFLEXU | U — Flexible U version* |

## / B - U adapters
DIN bayonet to U end fitting






| Reference | Description |
|---|---|
| BVUI | Version with locking system on the bayonet end fitting |
| BVU | Classic version |
| AFLEXB | Flexible version* |

* The flexible adapters protect the detector from shocks during handling.
They also protect all the connection points.

# LW03-01

CLAMPSTICK - EXTERNAL ROD
WITH OR WITHOUT UNIVERSAL ADAPTER



## / KEY FEATURES

**Construction**
Fiberglass insulating tube with foam core and insulated control rod for full operator protection.

**Design & Components**
High-performance plastic head with integrated, replaceable hook. Designed for durability and precision.

**Performance & Applications**
Compliant with ASTM F711, IEC 60832-1, and ASTM F1825 standards.
Ideal for installing or removing grounding clamps, and plastic or rubber cover-up equipment.



## / Accessories

Coated suspension hook and spare parts.

| Catalog No. | Total length | Insulated length* | Tube Ø | Control rod | Approx. weight |
|---|---|---|---|---|---|
| LW03-01-32-200 | 2 m | 0,70 m | 32 mm | 10 mm | 2,6 kg |
| LW03-01-32-260 | 2,60 m | 1,15 m | | | 3,2 kg |
| LW03-01-32-320 | 3,20 m | 1,70 m | | | 3,8 kg |
| LW03-01-32-380 | 3,80 m | 2,35 m | | | 4,4 kg |

* part between the tool head and the hand positioning guard, ensuring operator insulation.

# LW03-02

PENTAGONAL CLAMPSTICK - EXTERNAL ROD WITH
OR WITHOUT UNIVERSAL ADAPTER



## / KEY FEATURES

⚙ **Construction :** Pentagonal fiberglass insulating tube with foam core, Ø32 mm (1¼").
Insulated control rod for full operator protection.

**Design & Components :** High-performance plastic head with integrated and replaceable hook.
Designed for strength and precision.
Better grip thanks to the pentagonal shape.

💪**Performance & Use :** Compliant with ASTM F711, ASTM F1825, and IEC 60832-1
Ideal for installing or removing grounding clamps and protective cover-up equipment.

| Catalog No. | Total length | Insulated length* | Tube Ø | Control rod | Approx. weight |
|---|---|---|---|---|---|
| ASTM F1825 | | | | | |
| LW03-02-32P-200 | 2 m | 0,70 m | 32 mm | 10 mm | 2,6 kg |
| LW03-02-32P-260 | 2,60 m | 1,15 m | | | 3,2 kg |
| LW03-01-32-320 | 3,20 m | 1,70 m | | | 3,8 kg |
| LW03-01-32-380 | 3,80 m | 2,35 m | | | 4,4 kg |

* part between the tool head and the hand positioning guard, ensuring operator insulation.

# LW03-03

## EXTENSION FOR CLAMPSTICK



### / USE

Attached to the head of a Clampstick 3,8m (12'5").
The Extension allows the length of a hook pole to be increased.

### / TECHNICAL SPECIFICATIONS

Hollow tube made of fiberglass and reinforced plastic.
Solid fiberglass control rod.
The operating rod is internal.

| Catalog No. | Total length | Tube Ø | Control rod | Approx. weight |
|---|---|---|---|---|
| LW03-03-32-120 | 1,2 m | 32 mm | 10 mm | 2 kg |

# LW03-04

## HINGED CLAMPSTICK



### / KEY FEATURES

**Construction :** Fiberglass insulating tube with foam core and 10 mm insulated control rod.
Ø32 mm (1 ¼") fiberglass insulating tube with foam core and 10mm insulated control rod.

**Design & Components :** High-performance plastic head with integrated, replaceable hook.
Compact design, ideal for vehicles with limited storage space.

**Performance & Use :** Compliant with ASTM F711.
Perfect for installing or removing grounding clamps and protective cover-up equipment.

| Catalog No. | Total length | Folded length | Insulated length | Tube Ø | Control rod | Approx. weight |
|---|---|---|---|---|---|---|
| ASTM F1825 | | | | | | |
| LW03-04-32-605 | 6,05 m | 3,02 | 4,29 m | 32 mm | 10 mm | 6,60 |
| LW03-04-32-508 | 5,08 m | 2,56 | 3,29 m | | | 5,85 |
| LW03-04-32-450 | 4,50 m | 2,27 | 2,71 m | | | 5,41 |
| LW03-04-32-381 | 3,81 m | 1,93 | 2,02 m | | | 4,88 |
| LW03-04-32-320 | 3,20 m | 1,62 | 1,41 m | | | 4,40 |
| LW03-04-32-260 | 2,60 m | 1,32 | 0,81 m | | | 3,93 |

# LW03-05

SECTIONAL CLAMPSTICK



## / KEY FEATURES

**Construction :** Fiberglass insulating tube with foam core and 10 mm insulated control rod.
Ø32 mm (1 ¼") fiberglass insulating tube with foam core and 10mm insulated control rod. Lightweight and robust interlocking design.

**Design & Components :** Corrosion-resistant metal hook and mechanism.
High-performance plastic head with integrated, replaceable hook.
Compact and easy to store, ideal for vehicles with limited space.

**Performance & Use :** Compliant with ASTM F711 and IEC 60855-1.
Designed for grounding clamp installation/ removal and cover-up equipment handling.
Ergonomic handle ensures a secure grip.

| Catalog No. | Total length | Insulated length | Tube Ø | Control rod | Approx. weight |
|---|---|---|---|---|---|
| ASTM F1825 | | | | | |
| PRIMARY ELEMENTS | | | | | |
| LW03-05-32-HA-11 | 2 m | 0,70 m | 32 mm | 10 mm | 1,7 kg |
| LW03-05-32-HA-35 | 3,5 m | 1,15 m | | | 3,3 kg |
| EXTENSIONS ELEMENTS | | | | | |
| LW03-05-32-RA-12 | 1,2 m | 1,1 m | 32 mm | 10 mm | 1,2 kg |
| LW03-05-32-RA-18 | 1,8 m | 1,7 m | | | 1,7 kg |
| LW03-05-32-RA-24 | 2,4 m | 2,3 m | | | 2,1 kg |
| LW03-05-32-RA-30 | 3 m | 2,9 m | | | 2,6 kg |
| EXTENSIONS ELEMENTS | | | | | |
| LW03-05-32-ET-06 | 0,6 m | 0,5 m | 32 mm | 10 mm | 0,9 kg |

# LW03-06

INSULATING UNIVERSAL STICK



## / KEY FEATURES

**Construction :** Fiberglass insulated tube with foam core.

**Design & Components :** Universal end fittings with thumbscrews (M8 threaded) made of corrosion-resistant metal.

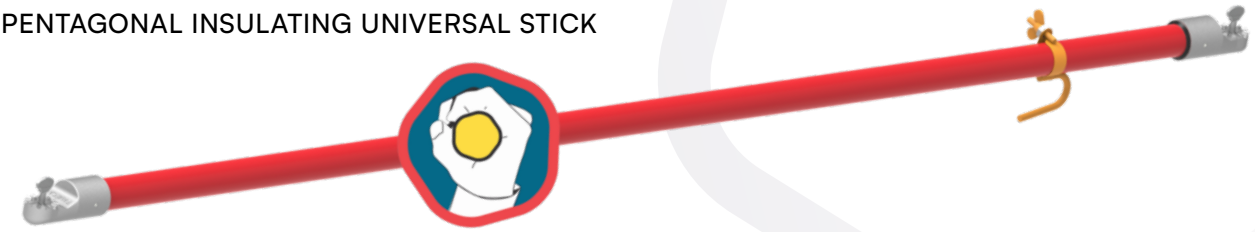
**Performance & Use :** Compliant with ASTM F711 and IEC 60832-1. Designed for using with universal tools. Universal end-fitting at each end of the stick.

| Catalog No. | Total length | Insulated length | Tube Ø | Approx. weight |
|---|---|---|---|---|
| LW03-06-32-180 | 1,80 m | 1,70 m | 32 mm | 1,2 kg |
| LW03-06-32-255 | 2,55 m | 2,35 m | 32 mm | 1,7 kg |
| LW03-06-32-315 | 3,15 m | 2,95 m | 32 mm | 2,0 kg |
| LW03-06-32-315 | | | 39 mm | 2,7 kg |
| LW03-06-32-375 | 3,75 m | 3,55 m | 32 mm | 2,4 kg |
| LW03-06-39-375 | | | 39 mm | 3,6 kg |

* Other lenght available on request

# LW03-07

## PENTAGONAL INSULATING UNIVERSAL STICK



### / KEY FEATURES

**Construction :** Pentagonal fiberglass insulated tube with foam core.

**Design & Components :** Universal end fittings with thumbscrews (M8 threead) made of corrosion-resistant metal. Better grip thanks to the pentagonal shape.

**Performance & Use :** Compliant with ASTM F711 and IEC 60832-1. Designed for using with universal tools. Universal end-fitting at each end of the stick.

| Reference | Total length | Insulated length | Tube Ø | Approx. weight |
|---|---|---|---|---|
| LW03-07-32P-180 | 1,80 m | 1,70 m | 32 mm | 1,2 kg |
| LW03-07-32P-255 | 2,55 m | 2,35 m | 32 mm | 1,7 kg |
| LW03-07-32P-315 | 3,15 m | 2,95 m | 32 mm | 2,0 kg |
| LW03-07-39P-315 | | | 39 mm | 2,7 kg |
| LW03-07-32P-375 | 3,75 m | 3,55 m | 32 mm | 2,4 kg |
| LW03-07-39P-375 | | | 39 mm | 3,6 kg |

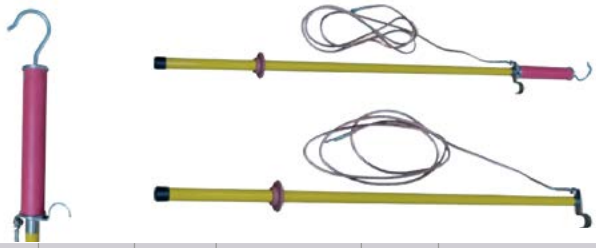
* Other lenght available on request

# PDD

## DISCHARGE POLES

STANDARDS

EN 50508 / IEC 62193



| Reference | Type | Resistance value (Ω) | Max voltage | Unfolded length | Folded length | Cable cross-section | Cable length | Type of earth connection clamp | Specificity |
|---|---|---|---|---|---|---|---|---|---|
| PDD001 | TR225 (telescopic) | 115 | 100 kV | 2,15 m | 3,6 m | 16 mm² | 10 m | PTS38 | / |
| PDD002 | TR225 (telescopic) | 6000 | 40 kV | | | | | PTS38 | / |
| PDD003 | PXV1130 (1 element) | 10000 | 33 kV | 1,3 m | 1,3 m | | | PTS38 | / |
| PDD004 | PXV2400 (2 elements) | 1500 | 150 kV | 2,45 m | 4,2 m | 35 mm² | | / | / |
| PDD005 | PXV2400 (2 elements) | 15000 | | | | | | / | / |
| PDD006 | PXV1150 (1 element) | 600 | 50 | 1,7 m | 1,7 m | 16 mm² | 3,5 m | / | with hook Ø 60 |
| PDD007 | PXV1200 | 2500 | 120 | 2,25 m | 2,25 m | 25 mm² | 5 m | / | / |
| PDDS001 | TR225 (telescopic) | N/A | 225 | 1,8 m | 3,3 m | 16 mm² | 10 m | PTS38 | / |
| PDDS002 | PXV1150 (1 element) | | 45 kV | 1,62 m | 1,62 m | | 3 m | / | / |
| PDDS003 | PXV1150 (1 element) | | | | | | 5 m | / | / |
| PDDS004 | PXV1200 (1 element) | | 66 kV | 2,12 m | 2,12 m | | | NB8 | / |
| PDDS005 | PXV1150 (1 element) | | 45 kV | 1,62 m | 1,62 m | | 10 m | / | / |
| PDDS006 | PXV1130 (1 element) | | 66 kV | 1,42 m | 1,42 m | | 3,5 m | / | / |
| PDDS007 | PXV1130 (1 element) | | 45 kV | 2,12 m | 2,12 m | | 5 m | PTS38 | Discharge tip in addition to the hook |
| PDDS008 | PXV1100 (1 element) | | 36 kV | 1,12 m | 1,12 m | 25 mm² | 3 m | NB8 | |
| PDDS009 | PXV1100 (1 element) | | | | | 35 mm² | 15 m | NBCRTTS | |
| PDDS010 | PXV1300 (1 element) | | 150 kV | 3,12 m | 3,12 m | 16 mm² | 5 m | NB8 | / |
| PDDS011 | PXV1130 (1 element) | | 45 kV | 1,42 m | 1,42 m | | 15 m | NB8 | / |
| PDDS012 | PPOL2L/020 (telescopic) | | 100 kV | 1,2 m | 2 m | | 6 m | NBD25M | Discharge tip in addition to the hook |
| PDDS013 | PXV1150 (1element) | | 45 kV | 1,62 m | 1,62 m | | 10 m | NB8 | / |
| PDDS014 | PXV1110 (1element) | | | 1,10 m | 1,10 m | | 2,5 m | MAGPFAM | With touch tip Without hook Magnetic vice Cover H2P120H included |







# MDD

## DIRECT DISCHARGE MODULE

### / KEY FEATURES

**Function :** Enables direct discharge of residual charges from capacitive circuits when powered off.

**Compatibility :** To be used with U-terminal poles (e.g. PPOL, PXV) and suitable earth clamps.

**Performance & Use :** Ensures safe, unbuffered discharge. Custom versions available on request.

### / MDD Direct Discharge Module, without resistance

| Reference | Number of resistor | Cable section | Cable length | Type of Ground Connection |
|---|---|---|---|---|
| MDD1605A | * | 16 mm² | 5 m | PTS38 |
| MDD1610A | * | | 10 m | |
| MDD1610B | * | | | NB8 |
| MDD2510B | * | 25 mm² | | |

## CUSTOMIZE

YOUR DISCHARGE MODULE

- **MDD** + Cable section + Cable length = none
- **MDI** + Number of resistor
  + A = PTS38
  + B = NB8



PTS38



NB8

# MDI

## INDIRECT DISCHARGE MODULE

### / KEY FEATURES

**Function :** Enables buffered discharge of residual charges from sensitive capacitive circuits through a built-in resistor.

**Compatibility :** To be used with U-terminal poles (e.g. PPOL, PXV) and suitable earthing clamps.

**Performance & Use :** Provides safe, controlled energy release. Custom configurations available on request.

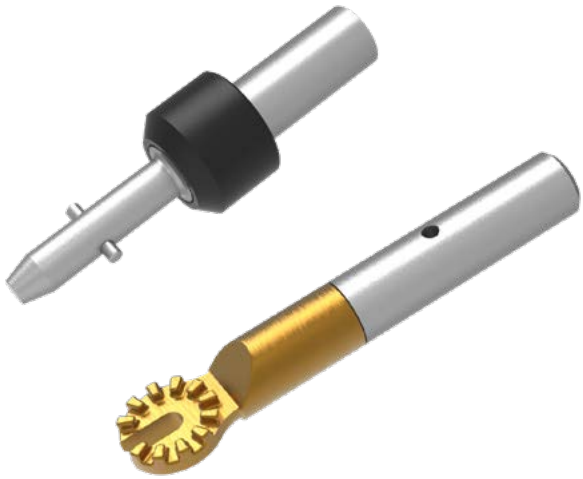
### / MDI Indirect Discharge Module, with resistance

| Reference | Number of resistor | Cable section | Cable length | Type of Ground Connection |
|---|---|---|---|---|
| MDI11605A | 1 | 16 mm² | 5 m | PTS38 |
| MDI21610A | 2 | | 10 m | |
| MDI21610B | | | 5 m | NB8 |
| MDI32510B | 3 | | 10 m | |

### / Technical specifications for MDI

| Number of resistor | Network Voltage Phase/Phase | Discharge Voltage Phase/Ground | Maximum Discharge Energy |
|---|---|---|---|
| 1 | 10 kV | 5 kV | 420 J |
| | 36 kV | 20 kV | 5 400 J |
| | 63 kV | 36 kV | 16 000 J |
| 2 | 90 kV | 52 kV | |
| | 150 kV | 86 kV | 40 600 J |
| 3 | 225 kV | 130 kV | 59 000 J |

* For the MDD, the maximum voltage depends on the associated pole.
The maximum energy is not defined; it corresponds to a short circuit to the ground.



# END FITTINGS FOR PRUNER

### / KEY FEATURES

**Construction :** BV end fitting made of stainless steel VDE bayonet pin with a knurled locking nut in synthetic material.

**Design & Components :** Available as U or BV adapter for connection to universal or bayonet sticks.
Also available as fixed adapter (ECH) mounted directly on the pole.

**Performance & Use :** Designed for mounting and securing pruners onto insulating sticks.
Ensures safe, stable, and quick attachment during operations.

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| UECH | U adapter for branch pruner | 166 x 33 x 23 mm | 270 g |
| BVECH | Lockable B adapter for branch pruner | 142 x 40 x 40 mm | 360 g |
| ECH | Fixed adapter on stick (add reference to the end of the reference of the stick required) | | |




# EFMT

## FUSE EXTRACTOR

### / TECHNICAL SPECIFICATIONS

Min. clamping diameter: 35 mm
Max. diameter: 70 mm.
Available with all types of end fitting.

| Reference | End fitting | Dimensions |
|---|---|---|
| EFMTB | B end fitting | 230 x 80 mm |
| EFMTU | U end fitting | 230 x 80 mm |
| EFMTBV | Lockable bayonet end fitting | 230 x 80 mm |
| EFMTAPV | APV end fitting | 230 x 80 mm |



# LP9054

## STICK LIFTER

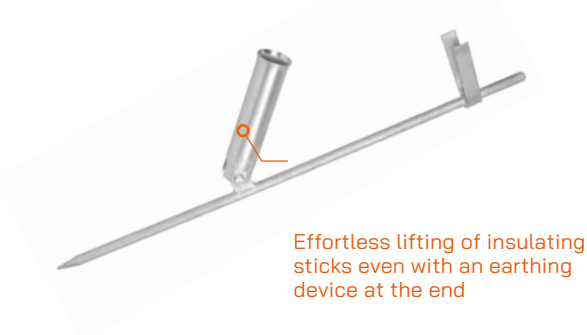
### / USE

Used to lift very long sticks resting on a metal structure.

### / TECHNICAL SPECIFICATIONS

Tightening clamp, capacity 33 mm.
For sticks with a bottom section with a diameter of up to 50 mm.

| Reference | Length | Weight |
|---|---|---|
| LP9054 | 200 mm | 1.3 kg |




# NE23

## STICK LIFTER

### / USE

Used to lift very long sticks resting on the rod driven into the ground beforehand.

### / TECHNICAL SPECIFICATIONS

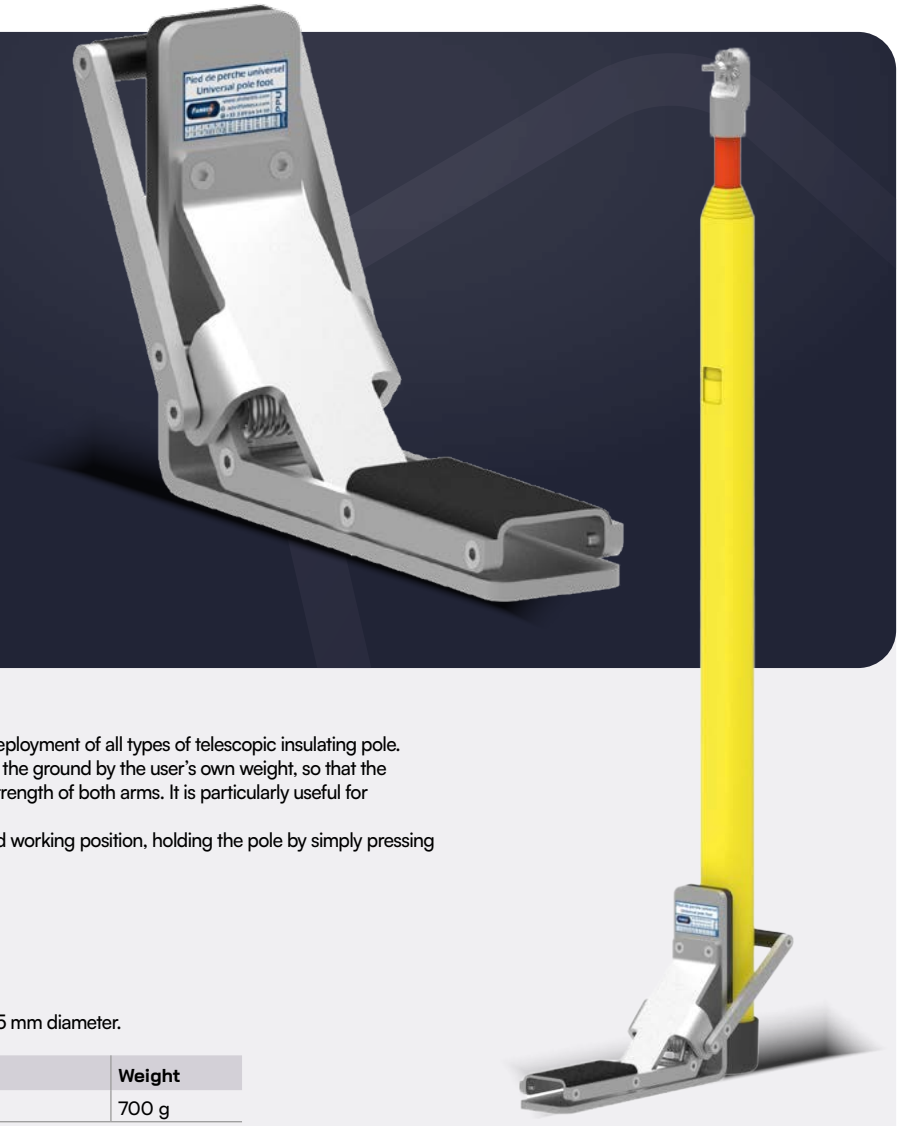
For sticks with a bottom section with a diameter of up to 50 mm.

| Reference | Description | Weight |
|---|---|---|
| NE23 | Stick lifter rod | 3,62 kg |

# PPU

INNOVATION

## UNIVERSAL POLE STAND




### / USE

The universal pole stand is an aid for the deployment of all types of telescopic insulating pole.
It allows the base of the stick to be held on the ground by the user's own weight, so that the insulating pole can be extended with the strength of both arms. It is particularly useful for unfolding pole with heavy tools.
Simple and comfortable to use: unchanged working position, holding the pole by simply pressing with the foot.
Easy release of the pole once extended.

### / TECHNICAL SPECIFICATIONS

Pole on EPDM rubber surface.
Non-slip pedal.
Compatible pole : all shapes, from 40 to 75 mm diameter.

| Reference | Dimensions | Weight |
|---|---|---|
| PPU | 310 x 200 x 105 mm | 700 g |



# TTR2 NEW
# TTR2LW

HOT STICK TESTER

- **Secured information:**
  - Full internal self-test which tests all active parts of the tester.
  - Self test with external test tube.
  - Light indication bar graph with crossing the green area to red in case of default.

- **Oriented for mobility:**
  - Rechargeable battery operated device.
  - Low battery indication and battery charge indication
  - Compact and robust.
  - 100% safe device → no danger for the user
  - Less than 5 minutes to test your tools on the field




## TTR2

HOT STICK TESTER

### / KEY FEATURES

**Construction :** Compact tester (190 × 120 × 135 mm) weighing 1.55 kg.
Rechargeable battery powered, with 100—240 V / 50—60 Hz adapter.

**Function & Performance :** Detects internal and external insulation faults (e.g. moisture ingress) using a capacitive measurement principle.
Green light = passed as per IEC 60855-1 (100 kV / 30 cm).

**Equipment & compatibility :** Calibrated for Ø28, Ø32 and Ø39 mm poles.
Supplied in a robust carrying case with adapter and test tube.
Compatible with foam tubes (custom calibers available for hollow poles).

## TTR2LW

INSULATING TOOLS TESTER

### / KEY FEATURES

**Construction :** Compact tester (190 × 120 × 135 mm) weighing 1.55 kg.
Rechargeable battery powered with 100—240 V / 50—60 Hz adapter.

**Function & Performance :** Detects internal and external insulation faults (including moisture ingress) via capacitive measurement.
Green light = passed as per IEC 60855-1 (100 kV / 30 cm).

**Equipment & compatibility :** Calibrated for rods Ø10—15 mm, poles Ø28—77 mm, and ropes Ø8—19 mm.
Supplied in a robust carrying case with adapter and test tube.
Suitable for hot sticks, poles, rods, and ropes.



| Reference | Description | User's manual* |
|---|---|---|
| TTR2F | Hot stick tester | Pack F |
| TTR2LWF | | Pack G |
| TTR2LWF | Insulating tools tester | Pack F |
| TTR2LWG | | Pack G |

* Pack F : FR/GB/DE/ES/PT/PL *Pack G : GB/GR/NL/BG/IT/AR/TR



# TC53

## SILICONE-COATED CLOTH

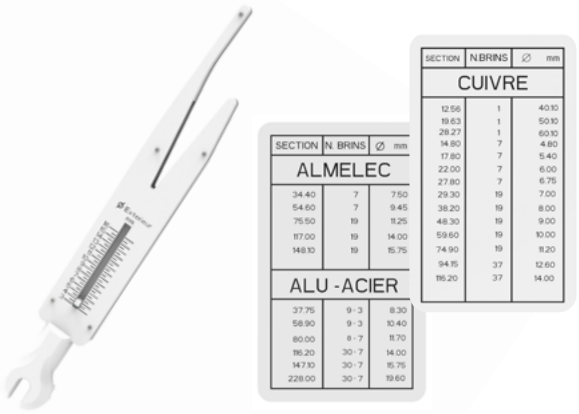
### / USE

Helps protect the surface of insulating sticks, detectors or other items with dielectric properties

### / TECHNICAL SPECIFICATIONS

Supplied in individual plastic pouches

| Reference | Dimensions | Weight |
|---|---|---|
| TC53 | 380 x 340 mm | 30 g |




# LW11-36

## GAUGE FOR DISTRIBUTION CONDUCTORS (GAUGE IN METRIC)

### / KEY FEATURES

**Conductor gauge :** Universal synthetic gauge with sliding cursor for direct reading of conductor diameters (3—16 mm), supplied with cross-section reference table.

| Reference | Dimensions | Approximative weight |
|---|---|---|
| TW11-36 | 270 x 35 x 17 mm | 300 g |



# LW11-37

## GAUGE FOR TRANSMISSION CONDUCTORS (GAUGE IN METRIC)

### / KEY FEATURES

**Conductor gauge :** Universal metal tip and slider with graduated synthetic body for direct reading of conductor diameters (6—60 mm), featuring an engraved table showing diameter—cross-section correspondence.

| Reference | Dimensions | Approximative weight |
|---|---|---|
| TW11-37 | 270 x 190 x 15 mm | 500 g |



# LW11-38

## BUSBAR GAUGE (GAUGE IN METRIC)

### / KEY FEATURES

**Conductor gauge :** Universal corrosion-protected metal tip with graduated synthetic body and slider for direct reading of tube and busbar diameters from 30 to 210 mm.

| Reference | Dimensions | Approximative weight |
|---|---|---|
| TW11-38 | 400 x 280 x 15 mm | 500 g |



# TB20
# TB25

## BRUSH FOR COPPER OR ALUMINIUM CONDUCTORS

### / KEY FEATURES

**Conductor cleaning brush :** C-shaped swivelling insulating body with internal metal “file card” brush for superficial cleaning of conductors, usable by hand or on a universal stick (TP30).

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| TB20 | Brush for copper conductors | 90 x 75 x 60 mm | 90 g |
| TB25 | Brush for aluminium conductors | | 100 g |



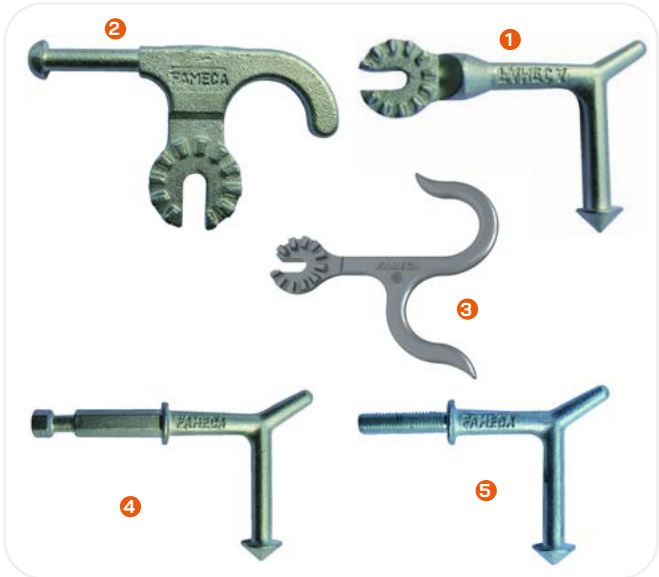
# BVSI

## INSULATING OPERATING HOOK

### / KEY FEATURES

**Compatibility :** Reinforced composite hook and finger with insulating locking nut for bayonet sticks (B fitting). Fully insulated and mechanically reinforced for operating disconnecting switches.

| Reference | Dimensions | Weight |
|---|---|---|
| BVSI | 130 x 69 x 40 mm | 160 g |




# CM

## OPERATING HOOK

### / KEY FEATURES

**Compatibility :** Zinc-plated steel hook for corrosion protection and extended service life. Shock- and stress-resistant with no deformation. Compatible with most end fittings for operating disconnecting switches in all environments.

| N° | Reference | Description | Dimensions | Weight |
|---|---|---|---|---|
| 1 | CMU1 | Operating hook for fitting onto a Universal connection | 120 x 60 x 25 mm | 160 g |
| 2 | CMU2 | Double operating hook for fitting onto a Universal connection | | 200 g |
| 3 | CMU3 | Removal bird’s nest crochet for fitting onto a Universal connection | | 170 g |
| 4 | CMAPV | Operating hook for fixing onto APV type end fitting (12 mm, hexagonal) | | 145 g |
| 5 | CM10 | Operating hook for fitting onto a M10 thread | | |




# ERS3437

## BRANCH PRUNER

### / KEY FEATURES

✂ **Bypass Pruner :** Hardened double-bevel blade with grooved counterblade and 10 m IEC 62192 insulating rope. Fits PENTA-POLE or PXV sticks for safe cutting of high branches from the ground.

| Reference | End fitting | Dimensions | Weight |
|---|---|---|---|
| ERS3437CI | Without end fitting | 260 x 220 x 60 mm | 1,26 kg |
| ERS3437U | U end fitting | 320 x 220 x 60 mm | 1,53 kg |
| ERS3437B | B end fitting | 330 x 220 x 60 mm | 1,62 kg |

### / Spare parts

| Ref. | Description |
|---|---|
| CI06CEI | IEC 62192 insulating rope (sold per metre) |
| R137E | Blade |
| R337E | Blade fasteners |
| R437E | Spring |

### / Option

| Ref. | Description |
|---|---|
| 4400 | Pruning saw blade |



# ERSO3908

## BRANCH SAW

### / KEY FEATURES

🔨**Branch saw :** Steel blade saw designed to fit onto PENTA-POLE or PXV insulating sticks for safe cutting of high branches from the ground.

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| ERSO3908 | Branch saw without end fitting | 470 x 110 x 2 mm | 180 g |
| BVSCER | Branch saw with B end fitting | 570 x 110 x 28 mm | 440 g |
| ERSO3908U | Branch saw with U end fitting | 550 x 110 x 25 mm | 510 g |



# JBG100BV

## LINE ICE BREAKER ROD

### / KEY FEATURES

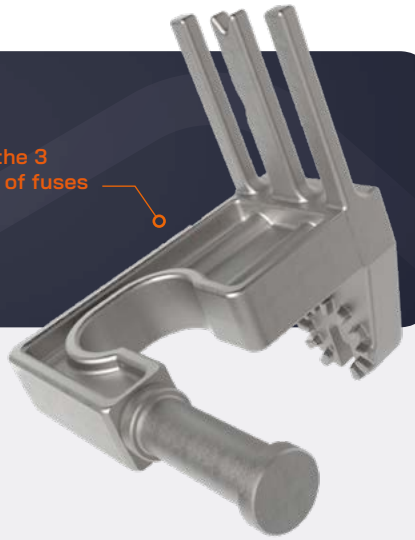
❄**De-Icing Rod :** Epoxy fibreglass insulating rod with stainless steel VDE bayonet pin and synthetic locking nut. Fits PENTA-POLE or PXV sticks for safely breaking ice on overhead lines.

| Reference | Dimensions | Weight |
|---|---|---|
| JBG100BV | 1100 x 40 x 40 mm | 690 g |

# UFH NEW

## UNIVERSAL FUSE HANDLE

Only 1 tool for the 3 different types of fuses



### / KEY FEATURES

**Fuse Barrel Tool:** aluminium tool designed to install, remove, and cut out fuse barrels. Features three gripping fingers, a shaped support hole, and a hook for secure handling. Universal fitting compatible with all sticks, ideal with PENTA-POLE hot sticks.

| Reference | Dimensions | Weight |
|---|---|---|
| UFH | 130 x 108 x 53 mm | 360 g |





# CRY02

## INSULATED V-SHAPED LIFTING ANTENNA

### / KEY FEATURES

**Conductor Lifting Hook :** Stainless steel hook with 4 mm PVC insulation, 90° V-angle, 200 mm opening, and 140 mm height. Screws on with M8 thread and fits insulating sticks to lift conductors for oversized vehicle clearance.

| Reference | Description |
|---|---|
| CRY02 | Lifting antenna with M8 thread |
| CRY02APV | Lifting antenna with APV end fitting |
| CRY02U | Lifting antenna with U end fitting |
| CRY02EB | Lifting antenna with B end fitting |



# PBU

## ADAPTER FOR REEL HOLDER WITH U END FITTING

### / USE

With an insulating stick equipped with a U end fitting, can be used to pass an insulating rope over a conductor using the reel ref. 68729846.

| Reference | Dimensions | Weight |
|---|---|---|
| PBU | 250 x 180 x 40 mm | 570 g |

# DROPOVER

NEW

DEVICE FOR PASSING A ROPE OVER A CONDUCTOR







## / KEY FEATURES

**Dropover System :** Device for passing a rope over a conductor by gravity using a weighted carabiner. Can be completed with an insulating rope, ballast, and cover. Optional cover: 39 × 18 × 9 cm, 0.6 kg.

| Reference | Description |
|---|---|
| DROPOVERVAT | Dropover with antenna for fitting a voltage detector |
| DROPOVER | Dropover alone |
| DROPOVERHO | Dropover with cover |
| HDROPOVER | Dropover cover |
| LEST500 | 500 g ballast |
| LEST1KG | 1 kg ballast |

## HOW TO MAINTAIN YOUR POLES :

**Maintenance :**

To ensure that the insulating pole plays its vital safety role, it is important to ensure that :

- EACH TIME IT IS USED: By the user

➢ Wipe the surface of the pole with a clean, lint-free white cloth.

➢ Examine the surface of the pole for traces of dust, creosote, grease or any other foreign material. If any of these contaminants are present, clean the tool with isopropanol and then with a silicon cloth (PENTA reference: TC53).

**Warning: Only isopropanol or isopropyl alcohol may be used for cleaning.**

ANNUALLY: By a trained and authorised user or at the manufacturer's premises:

➢ Clean each part of the boom with a clean, lint-free cloth soaked in soapy water or isopropyl alcohol (isopropanol), leave to dry for 5 minutes and then start the visual inspection.

➢ Examine the surface of the pole for deep nicks, scratches, chips, holes or dents. If any of these defects are present, remove the tool from service.

➢ Visually check the coupling, locking and securing components of the end fitting and any accessories:

| | |
|---|---|
| **Coupling and end fitting** | **Check that there are no breaks or cracks in any part of the component** |
| **Hand guard / rain skirt** | check the state of wear due to ageing of the material |
| **Lower end cap for pole** | Check presence and condition |

➢ As a minimum, the end section of telescopic poles and all sections of extendable poles (except the shaft section) must undergo an insulation test, i.e. :
• On a 100kV/30cm test bench at the manufacturer's premises or at a test laboratory with testing facilities.
• Using the TTR2 verifier (FAMECA reference) by the trained and authorised user

➢ Finally, wipe the entire pole with a silicon cloth (FAMECA reference: TC53) before storing in its protective cover.

**Note:** It is recommended that no pole, even those kept in storage, should be reused without a new trial within a maximum period of 2 years for telescopic poles and 6 years for single-element or extendable poles.

**Transport :** If possible, the insulating pole should be transported in a bag.
Avo id knocks and dragging the insulating pole along the ground when transporting it. Avoid stacking heavy equipment on the insulating pole.

**Storage :**

The insulating pole should preferably be stored in a protective cover :

• Away from light and moisture.
• In a dry, ventilated room
• Horizontally or vertically in such a way that it cannot be distorted.
• At temperatures between -55°C and +70°C




ATPV 12 cal/cm²



# EARTHING AND **SHORT-CIRCUITING**


/ LOW VOLTAGE 187

/ MEDIUM VOLTAGE 200

/ HIGH VOLTAGE 224

/ EQUIPOTENTIAL BONDING 242

/ ACCESSORIES 246


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# **FROM PROTOTYPE** TO PRODUCTION







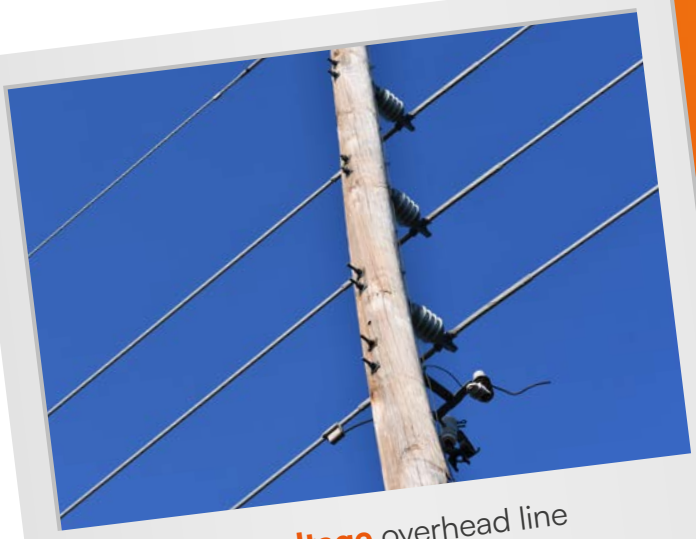








# LOW VOLTAGE RANGE



**Low voltage** overhead line



**Low voltage** switch



**Low voltage** overhead line

# 2B3

## EARTHING AND SHORT-CIRCUITING DEVICE FOR LV SWITCHBOARDS OR CABINETS

PATENTED

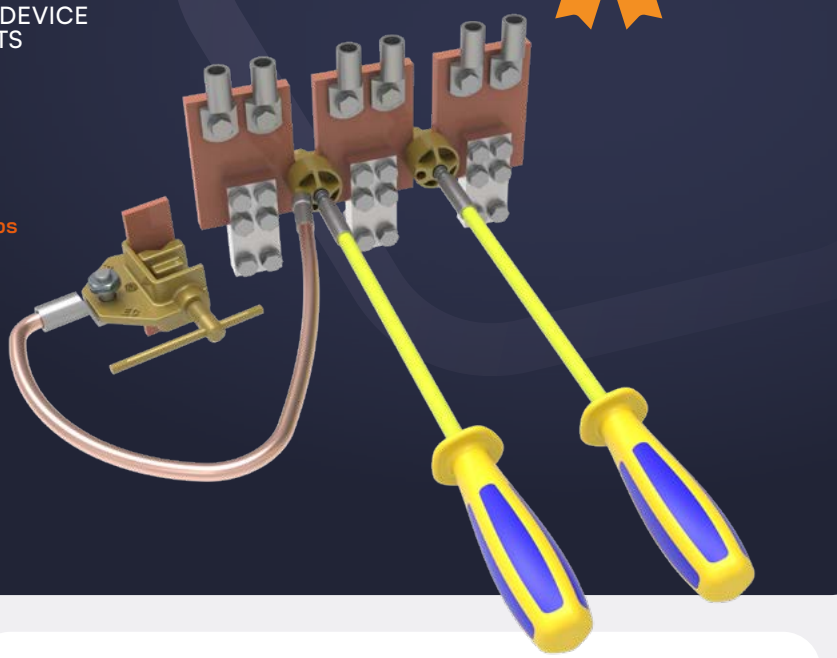
STANDARDS
IEC 61230 / IEC 61138

The short-circuit is performed using clamps and not cables.

This new technology makes it possible to achieve very high short circuit current

Its design allows it to be used in confined spaces.

The clamp has a large clamping capacity thanks to the various jaws supplied.



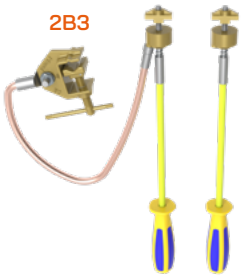
### / USE

Device for earthing and short-circuiting a switchboard or cabinet in an LV network.

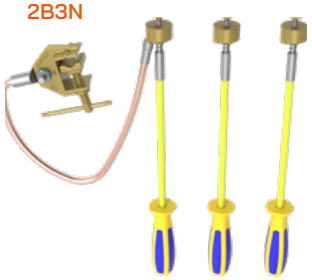
### / TECHNICAL SPECIFICATIONS

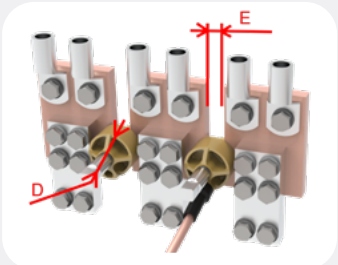
- 2 or 3 short-circuit bridging assemblies with 1000 V fixed insulated handle.
- 1 earthing cable, 35 or 50 mm² cross-section, 2 m length.
- 1 NB8 earth clamp.
- Maximum short-circuit current:
- With Ø35 mm disk clamp: 36 kA / 0.5 s
- With Ø50 mm disk clamp: 44.8 kA / 0.5 s — 36 kA / 1 s
- Storage and transport bag available on request.

2B3



2B3N






### / Example of clamp clamping capacity

| Disk diameter (D) | Space between bars (E) |
|---|---|
| Ø35 | 10 mm |
| | 15 mm |
| | 20-25 mm |
| Ø50 | 25-30 mm |
| | 30-35 mm |

For any specific request, please contact us.

**Other dimensions available on request.**

### / Earthing head clamping capacit

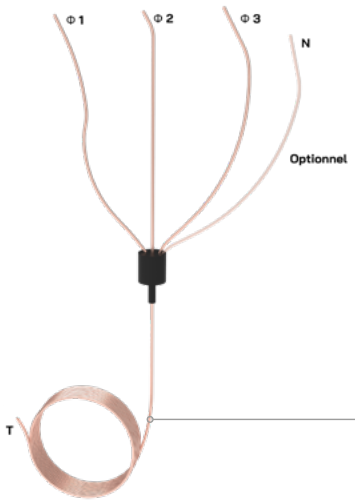
- Flat bar: 25 mm max

| Ref. | Number of short-circuit bridging assemblies | Disk clamp diameter | Earth cable cross-section | Handle | Packaging |
|---|---|---|---|---|---|
| 2B3D35E10PF | 2 | 35 mm | 35 mm² | Fixed | N/A |
| 2B3D50E10PA | | 50 mm | 50 mm² | Removable | N/A |
| 2B3ND35E10PA | 3 | 35 mm | 35 mm² | | N/A |
| 2B3ND50E10PF | | 50 mm | 50 mm² | Fixed | N/A |
| 2B3D35E10PFH | 2 | 35 mm | 35 mm | | HMALT |
| 2B3D35E10PFC | | | | | TD386PM |
| 2B3DxxMxxPxy | | At choice | At choice | At choice | At choice |
| 2B3NxxMxxPxy | 3 | | | | |

Other configurations available on request.

# **CONFIGURE** YOUR EARTHING & SHORT-CIRCUITING SYSTEMS FOR **LOW VOLTAGE**

## TRIFURCATION / QUADRIFURCATION CONFIGURATOR




**SECTION PHASES AND EARTHING:**
mm²

**L FOR EACH PHASES**

**Ø1, Ø2, Ø3 :**
m

**N (optional): YES/NO**
m

**L EARTH :**
m

## DEVICE CODING CONFIGURATOR

| EBT EBTS | UA CR OK MP | 16 | B T Q P | 005 XX XXX | - | 020 XX XXX | UA NB8 | P H C |
|---|---|---|---|---|---|---|---|---|

**Length of earth leads:**
Examples:
010 = 1 m
020 = 2 m
100 = 10 m

**Length of phase leads:**
Examples:
005 = 0.5 m
010 = 1 m
100 = 10 m

**Configuration:**
- B = bifurcation
- T = trifurcation
- Q = quadrifurcation
- P = pentafurcation

**Phase cable cross-section:**
mm²

**Phase clamp code:**
**UA** = PBTUA
**CR** = PBTCROCO
**OK** = POK
**MP** = MPBT

**Earth clamp code:**
UA = BTUA
NB8 = NB8

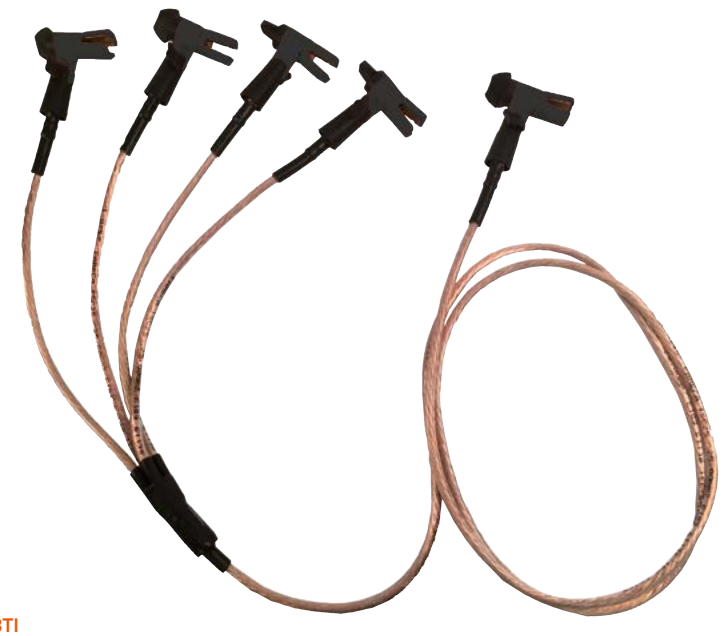
**Packaging:**
P = plastic case
H = soft case
C = metal case

**EBT =** Low voltage set with PVC cable
**EBTS =** Low voltage set with silicone cable

## LV CLAMP CONFIGURATOR

**Phase and earth clamp LV**

| **Reference** | 2P16F7 | 2P16F8 | 2P17F0-MCC | 2P17F0-L-MCC | PBTCROCO | POK | MPBT | PBTUA |
|---|---|---|---|---|---|---|---|---|
| **Code** | 2P7 | 2P8 | 2PA | 2PF | CR | OK | MP | UA |
| |  |  |  |  |  |  |  |  |
| Clamping capacity | Ø0 to 24 mm | Ø0 to 22 mm | Ø6 to 12 mm | Ø6 to 12 mm | Ø3 to 20 mm | Ø0 to 20 mm | Ø5 to 20 mm | |
| | 0 to 24 mm | Ø0 to 22 mm | 5 mm | 5 mm | 0 to 20 mm | up to 20 mm | up to 20 mm | 3 to 35 mm |
| | | | 10 mm | 10 mm | | | | |
| | | | Ø10 rod in this axis of the clamp | Ø10 rod in this axis of the clamp | | | | |
| Isc max | 6 kA/0,5s 4 kA/1s | 6 kA/0,5s 4 kA/1s | 6 kA/0,5s 4 kA/1s | 6 kA/0,5s 4 kA/1s | 6 kA/0,5s 4 kA/1s | 6 kA/0,5s 4 kA/1s | 11 kA/0,5s 8 kA/1s | 6 kA/0,5s 4 kA/1s |
| Material | Brass | Brass | Brass | Brass | Cupro-alu | Cupro-alu | Brass | Aluminium |
| Closed clamp dimensions | 165 x 60 x 30 mm | 165 x 60 x 30 mm | 90 x 85 x35mm | 60 x 85 x35mm | 100 x 78 x 25mm | 92 x 43 x 18mm | 95 x 60 x 20mm | 163 x 40 x 27mm |
| Weight | 0,28 kg | 0,28 kg | 0,25 kg | 0,17 kg | 0,3 kg | 0,18 kg | 0,5 kg | 0,13 kg |



DMCCTBTI

# DMCCTBTI

EARTHING AND SHORT-CIRCUITING DEVICE FOR LOW VOLTAGE SWITCHBOARDS IN INDUSTRY

STANDARDS

IEC 61230 / IEC 61138

## / TECHNICAL SPECIFICATIONS

The set consists of:
5 2P17F0-MCC micro-clamps (2P17F0-L-MCC for ref. DMCCTBTIX):
Insulated clamp for connection to:
- Ø10 mm round bar at the end
- 5 mm thick flat bar
- 10 mm hexagon at the end
- Ø 6 mm and Ø 8 mm vertical

1 quadruple splitter consisting of 4 copper short-circuit cables, 16 mm² cross-section and 0.5 m long, as well as a copper earth cable, 16 mm² cross-section and 2.5 m long

OPTIONAL: adapters — smooth terminals
Smooth brass terminals for positioning shunts (live work) or earthing and short-circuit equipment on LV panel terminal blocks.



DMCCTBTIX

| Ref. | Version | Isc | Dimensions | Weight | Packaging |
|---|---|---|---|---|---|
| DMCCTBTI | IP2X | 4,6 ka/1s | 500 x 200 x 100 mm | 4 kg | Soft case HTAGDC |
| DMCCTBTIX | NON IP2X | 4,6 ka/1s | 350 x 300 x 100 mm | 3,5 kg | Plastic case CTS38 |
| DMCCTBTI25 | IP2X | 6 kA/1s - 9 kA/0,5s | 500 x 200 x 100 mm | 4,5 kg | Soft case HTAGDC |
| DMCCTBTX25 | NON IP2X | 6 kA/1s - 9 kA/0,5s | 350 x 300 x 100 mm | | Plastic case CTS38 |
| DMCCTBTI35 | IP2X | 7 kA/1s - 13 kA/0,5s | 500 x 200 x 100 mm | 5 kg | Soft case HTAGDC |
| DMCCTBTX35 | NON IP2X | 7 kA/1s - 13 kA/0,5s | 350 x 300 x 100 mm | | Plastic case CTS38 |



## / TAPPED OR THREADED INTERFACE

| Ref. | Description |
|---|---|
| E4BLT6TW | Set of 4 M6 tapped interface |
| E4BLF6 | Set of 4 M6 threaded interface |
| E4BLT8TW | Set of 4 M8 tapped interface |
| E4BLF8 | Set of 4 M8 threaded interface |
| E4BLT10TW | Set of 4 M10 tapped interface |
| E4BLF10 | Set of 4 M10 threaded interface |
| E4BLT12TW | Set of 4 M12 tapped interface |
| E4BLF12 | Set of 4 M12 threaded interface |

# EBTPC NEW

EARTHING AND SHORT-CIRCUITING DEVICE FOR LOW VOLTAGE SWITCHBOARDS

STANDARDS
IEC 61230 / IEC 61138



PBTCROCO



POK

- The insulated clamp allows manual handling
- A compact footprint of only 100 × 78 × 25 mm, enabling access to restricted areas
- The clamp's spring mechanism provides immediate tightening
- The clamp offers a wide clamping capacity thanks to its design.

## / USE

Device designed for earthing and short-circuiting a switchboard or cabinet in a low-voltage (LV) network.

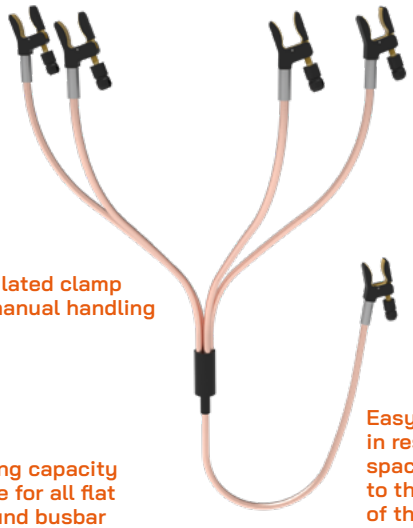


## / TECHNICAL SPECIFICATIONS

**Contents :**
- 4 insulated spring clamps for earthing and short-circuiting, rated 1000 V.
- One 16 mm² four-lead set: phase leads 50 cm / earth lead 2 m.
- One storage and transport pouch.
- Short-time withstand current (Ik): 6 kA / 0.5 s — 4 kA / 1 s.

**Clamping capacity of clamps and vice:**
- Flat bar: max. 20 mm
- Round bar: min. Ø 3 mm — max. Ø 20 mm

| Ref. | Nbr of phases clamps | Cross section | Phases cables length | Earth cable length | Weight |
|---|---|---|---|---|---|
| EBTPC16T005-020PC | 3 | 16 mm² | 0,5 m | 2 m | 1,7 Kg |
| EBTPC16Q005-020PC | 4 | | | | 2,0 Kg |



The insulated clamp allows manual handling

Easy to use in restricted spaces thanks to the small size of the clamps.

Clamping capacity suitable for all flat and round busbar configurations

# EBTOK NEW

EARTHING DEVICE FOR SWITCHBOARDS, ENCLOSURES AND CABINETS

STANDARDS
IEC 61230

## / USE

Device used to perform earthing operations on low-voltage switchboards, enclosures and cabinets.

## / TECHNICAL SPECIFICATIONS

- 4 POK clamps for short-circuiting and earthing during a quadruple configuration, and 3 POK clamps for short-circuiting + 1 clamp for earthing during a triple configuration.
- Triple or quadruple configuration (with neutral present): cross-section 16 mm²; phase leads 0.5 m / earth lead 2 m.
- Storage and transport soft case.
- Maximum short-circuit current (Isc): 6 kA / 0.5 s or 4 kA / 1 s.

**Clamping capacity of the clamps:**
- Flat bar: max. 20 mm
- Round bar: min. Ø 0 mm — max. Ø 20 mm

| Ref. | Nbr of phases clamps | Cross section | Phases cables length | Earth cable length | Weight |
|---|---|---|---|---|---|
| EBTOK16T005-020OK | 3 | 16 mm² | 0,5 m | 2 m | 1,2 Kg |
| EBTOK16Q005-020OK | 4 | | | | 1,4 Kg |



Easy to use in restricted environments thanks to the small size of the clamps.

Clamping capacity suitable for flat busbar systems.

# EBTMP

LOW-VOLTAGE EARTHING DEVICE FOR SWITCHBOARDS, ENCLOSURES AND CABINETS

STANDARDS
IEC 61230

## / USE

Device used to perform earthing operations on low-voltage busbar systems.

## / TECHNICAL SPECIFICATIONS

**Product:**
- 4 micro-clamps for short-circuiting and earthing in a quadruple configuration, and 3 micro-clamps for short-circuiting and earthing in a triple configuration.
- Triple or quadruple configuration (with neutral present): cross-section 16 mm²; phase leads 0.5 m / earth lead 2 m.
- Storage and transport soft case.
- Maximum short-circuit current (Isc): 11 kA / 0.5 s or 8 kA / 1 s.

**Clamping capacity of the clamps:**
- Flat bar: max. 20 mm
- Round bar: min. Ø 5 mm — max. Ø 20 mm

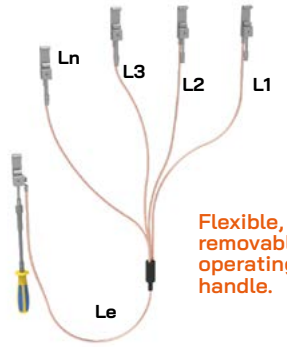
| Ref. | Cross section | Description |
|---|---|---|
| EBTMP16T005-020MP | 16 mm² | Complete LV earthing/short-circuiting device: 6 kA/0.5 s — 4 kA/1 s |
| EBTMP25Q005-020MP | 25 mm² | Complete LV earthing/short-circuiting device: 9.5 kA/0.5 s — 6.5 kA/1 s |
| EBTMP35Q005-020MP | 35 mm² | Complete LV earthing/short-circuiting device): 11 kA/0.5s — 8 kA/1 s |

Other configurations available: please contact us

Easy to use thanks to its small size

Full width and full thickness busbar clamping.

The earth is identified by a yellow and green sheath on the connection cable.




Flexible, removable operating handle.

Flat clamping capacity of up to 35mm, suitable for busbars





Clamp with 4 DC cable fixing positions to suit all configurations.

# EBTUA

EARTHING AND SHORT-CIRCUITING CLAMP

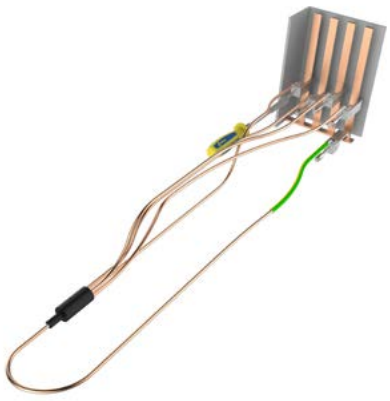
STANDARDS
IEC 61230

## / USE

Device used to carry out earthing and short-circuiting operations for SCU (self-contained unit) low-voltage column busbars.

| Ref. | Cable cross section | Max. Isc | Cable L1 | Cable L2 | Cable L3 | Cable Le | Cable sheath |
|---|---|---|---|---|---|---|---|
| EBTUA16T005-010UA | 16 mm² | 3,5 kA/1s - 3,5 kA/0,5s | 0,5 m | 0,5 m | 0,5 m | 1 m | Extra soft PVC |
| EBTUA25T005-010UA | 25 mm² | 4 kA/1s - 6 kA/0.5s | 0,5 m | 0,5 m | 0,5 m | 1 m | |





# DMTBTTR

LV SHORT-CIRCUITING AND EARTHING DEVICE FOR PANEL

PATENTED

STANDARDS

IEC 61230 | IEC 61138 | VDE 0105-100

- Easy to set up, in 2 operations: fixing the clamp and inserting the device.
- One-piece, robust and safe (visual coding).
- The fuses incorporate a keying system, which forces the device into the correct position, guaranteeing the user's safety.



## / USE

The insulated, portable and rigid device, equipped with false fuses, allows the earthing and short circuiting of an LV switchboard or cabinet in accordance with the IEC/EN 60947-3 standard.

### / DMTBTTR16

**Isc Max :** 16 kA/1s
**False fuses :** 3 x NH123

| Ref. | Earthing cable | Dimensions |
|---|---|---|
| DMTBTTR16N | No | 650 x 85 x 170 mm |
| DMTBTTR163512 | Yes : 35 mm² length 1,2 m | |

### / DMTBTTR4

**Isc Max :** 4,6 kA/1s
**False fuses :** 3 x NH00

| Ref. | Earthing cable | Dimensions |
|---|---|---|
| DMTBTTR4N | No | 650 x 85 x 170 mm |
| DMTBTTR41612 | Yes : 16 mm² length 1,2 m | |

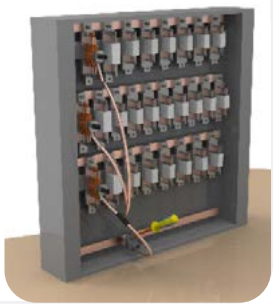
### / DMTBTTRTIPI

**Isc Max :** 16 kA/1s
**False fuses :** 4 x NH123

| Ref. | Earth connection | Dimensions |
|---|---|---|
| DMTBTTRTIPI | No | 800 x 85 x 170 mm |
| DMTBTTRTIPIxxyy | Yes, custom-made | |





# DMTBTT

LOW-VOLTAGE SHORT-CIRCUIT AND EARTHING DEVICE FOR SWITCHBOARDS AND CABINETS

PATENTED

STANDARDS

IEC 61230

Smart lock



## / USE

Portable device allowing short-circuiting and earthing of a low-voltage switchboard or cabinet equipped with a NH00, NH1, 2, 3 or NH4a type fuse base.

## / TECHNICAL SPECIFICATIONS

Three-branch assembly with central connector, sealed with a heat-shrink insulating sleeve.
3 phase cables L1, L2, L3 in 16 to 50 mm² cross-section and variable length (see product references or custom lengths) equipped at both ends with screw-type terminals.
1 earth cable in 16 to 50 mm² cross-section and variable length (see product references or custom lengths) equipped at each end with a 6 mm² eyelet lug.

Smart lock
Smart lock



**Note:** This three-branch assembly is made from extra-flexible translucent IEC 61138 PVC cable or silicone.
False fuses with M10 tapping: ref. SPH00.
False fuses with M10 tapping: ref. SPH123.
False fuse with M12 tapping : ref SPH00TW.
False fuse with M12 tapping : ref SPH123TW.
Insulated operating handle : ref. MIEBTMAY
Earth clamp : ref. ETEBTMAY
Storage case: ref. CETBTMAY (Optionnal)

| Smart lock ref. | Standard ref | Cable cross-section | Isc max | Cable L1 | Cable L2 | Cable L3 | Earth cable | Cable insulation |
|---|---|---|---|---|---|---|---|---|
| DMTBTTSL01 | DMTBTT01 | 25 mm² | 5.5 kA/1 s — 8 kA/0.5 s | 370 mm | 460 mm | 550 mm | 400 mm | Extra-flex PVC |
| DMTBTTSL1601 | DMTBTT1601 | 16 mm² | 3.5 kA/1 s — 5 kA/0.5 s | 300 mm | 500 mm | 700 mm | 300 mm | |
| DMTBTTSL2501 | DMTBTT2501 | 25 mm² | 5.5 kA/1 s — 8 kA/0.5 s | | | | | |
| DMTBTTSL3501 | DMTBTT3501 | 35 mm² | 7.2 kA/1 s — 10 kA/0.5 s | | | | | |
| DMTBTTSL5001 | DMTBTT5001 | 50 mm² | 10 kA/1 s — 14 kA/0.5 s | | | | | |
| DMTBTTSL16xx | DMTBTT16xx | 16 mm² | 3.5 kA/1 s — 5 kA/0.5 s | Custom | Custom | Custom | Custom | PVC or silicone |
| DMTBTTSL25xx | DMTBTT25xx | 25 mm² | 5.5 kA/1 s — 8 kA/0.5 s | | | | | |
| DMTBTTSL35xx | DMTBTT35xx | 35 mm² | 7.2 kA/1 s — 10 kA/0.5 s | | | | | |
| DMTBTTSL50xx | DMTBTT50xx | 50 mm² | 10 kA/1 s — 14 kA/0.5 s | | | | | |

# DMTBTMCTR

## LV EARTHING AND SHORT-CIRCUITING DEVICE FOR PANEL BOARDS AND CABINETS 4,3 KA/0,5S

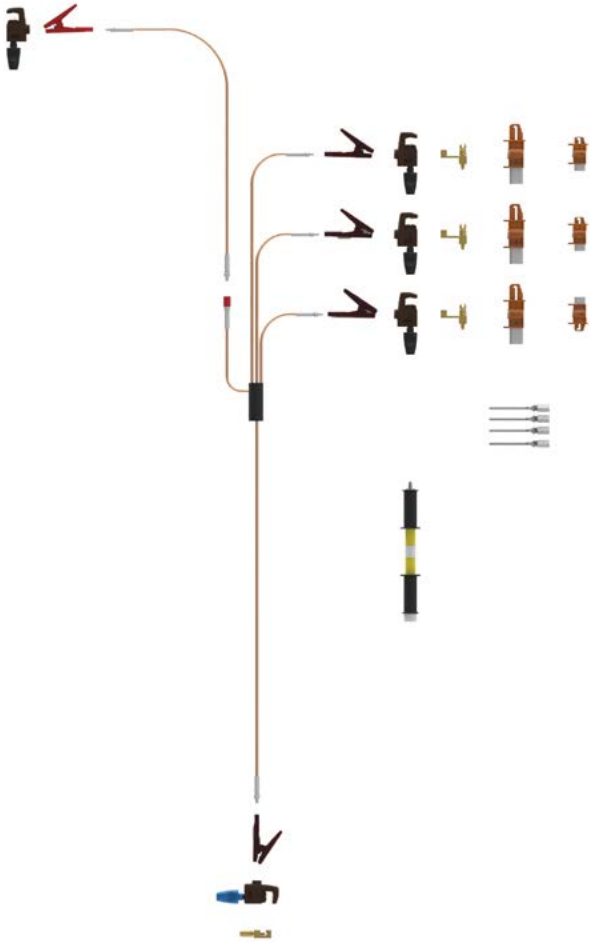
STANDARDS
IEC 61230

### / TECHNICAL SPECIFICATIONS

Composition :
- Set of 4 pliers with black handle
  - (2P16F7) and a blue handle clip (2P16F7B) :
  - 3 phases, 1 neutral and 1 public lighting
- Set of 3 fuse with coder (SPH123DET)
- A QUADRIFURCATION: set of copper cables in an extra-flexible sheath fitted with watertight lugs 3 false-fuse with coded pins and connected by a junction block consisting of :
- 3 short-circuit cables with M8 screw connectors :
  Length = 0,2m, Section = 16mm²
  Length = 0,4m, Section = 16mm²
  Length = 0,6m, Section = 16mm²
- 1 neutral cable (N) : Lenght = 0,8m, Section = 16mm².
- 1 earth cable : Length = 1m, Section = 16mm²
- 1000V insulated alligator clips with 2 cm opening
- An insulating handle : MIEBTMAY
- 4 cable collectors
- 3 fuse adaptors
- 1 earth vice : ETEBTMAY

Packaged in an IP67 plastic case.





| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| DMTBTMCTR | Low-voltage earthing and short-circuiting device for switchboards and cabinets | 475 x 415 x 150 mm | 9 kg |

Othetr compositions available: please contact us.

# PERF

NEW

FUSE PULLER STICK (FUSE EXTRACTION STICK)

STANDARDS
IEC 60832

- Two positions, suitable for small and large fuses



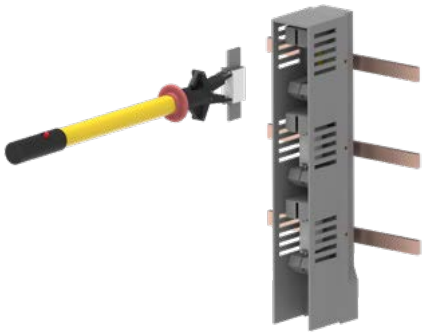
## / USE

The fuse extraction stick is used to remove fuses and false fuses from a low-voltage (LV) switchboard or cabinet, in accordance with IEC/EN 60947-3.

## / TECHNICAL SPECIFICATIONS

**Product:**
- Pentagonal fibreglass tube
- Plastic parts
- Steel fasteners and connecting pin, corrosion-protected

**Dimensions:**
- Overall length: 700 mm
- Height: 110 mm
- Weight: 0.7 kg





# TC151P

REMOVABLE HANDLE FOR FUSES

STANDARDS
IEC 61230

## / USE

Removable handle with knob for fuses sizes 00 to 4.

| Ref. | Field of use | Operating voltage | Station office | Measurement | Weight |
|---|---|---|---|---|---|
| TC151P | Station office | LV | Before electric meter | 125x75x23mm | 0,1 kg |



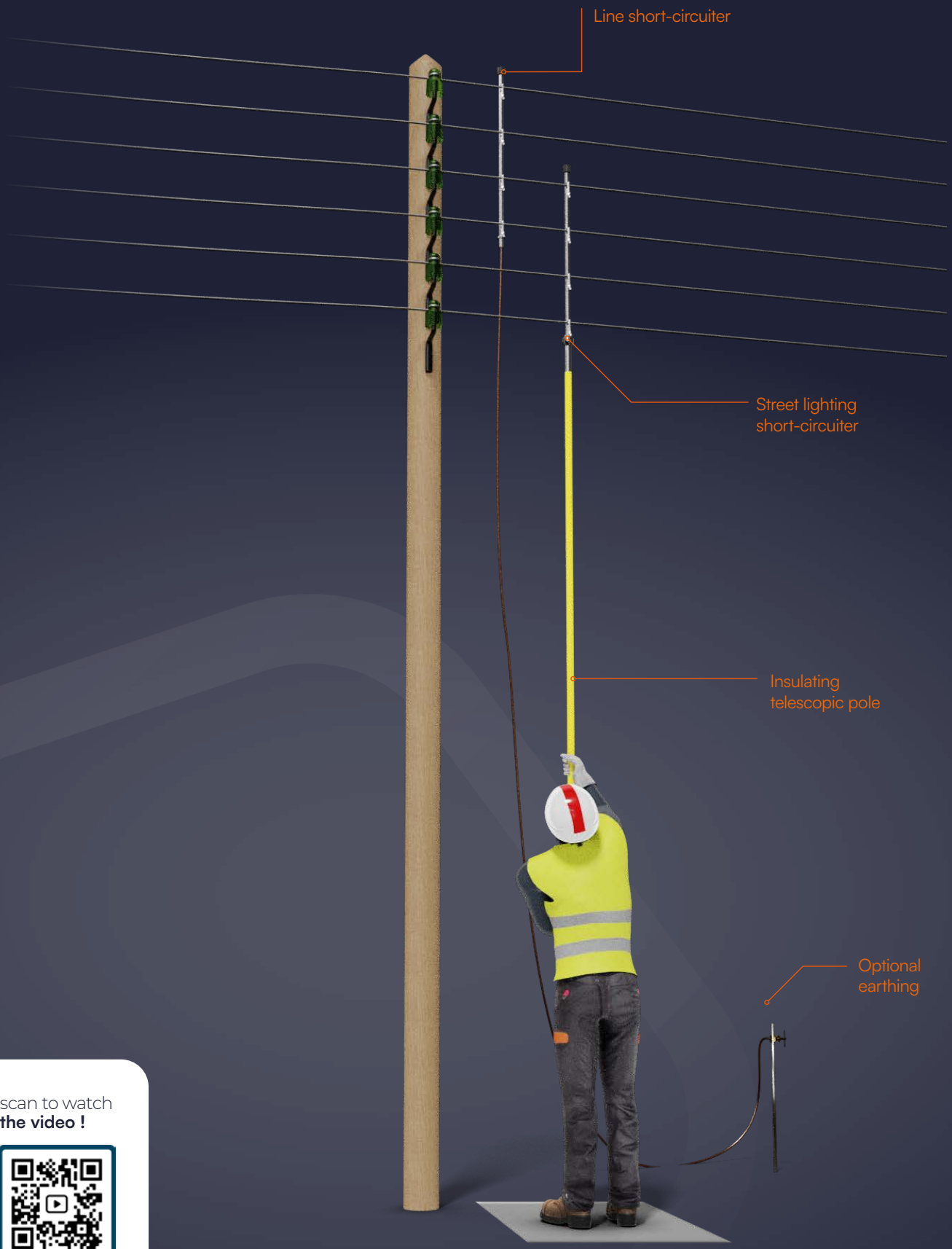
# TC151PM

FUSE PULLER HANDLE WITH SLEEVE

## / USE

Protection against flash arc risk

| Ref. | Field of use | Operating voltage | Station office | Measurement | Weight |
|---|---|---|---|---|---|
| TC151PM | Station office | LV | Before electric meter | 400x270x70mm | 0,36 kg |




scan to watch
**the video !**

SCAN ME

# GFLAG

## TEMPORARY SHORT-CIRCUITING AND EARTHING DEVICE FROM THE EARTH, FOR BARE LOW VOLTAGE OVERHEAD NETWORKS

STANDARDS
IEC 61230

- Quick installation from the ground by one person without climbing the support.
- Saves time in installation and removal of the device.
- Operator safety by working from the earth away from the network in an upright position.
- Safe no-voltage testing offset from the network with an insulated stick.
- Practical to use in all field configurations.
- Equipment to be used with the MTAGLV voltage detector (optional).




### / USE

- Designed to short-circuit bare LV overhead networks with 5 or 6 conductors (1 neutral, 3 phases, 1 or 2 public lighting).
- It is handled from the earth using a telescopic insulating stick.
- It is installed immediately after the no-voltage testing operation with the PICRABT device (see corresponding data sheet).
- The GFLAGFR device is composed of 2 conductive aluminium sticks, on which are mounted a U-shaped profile, equipped with 4 clamps.

### / TECHNICAL SPECIFICATIONS

The first stick short-circuits the neutral and the 3 phases, and the second stick short-circuits the public lighting, connecting to the phase conductors previously short-circuited to the neutral.
This equipment can be earthed, using the optional earth lead.
These two conductive sticks are mounted on the PentaPole type insulating stick (Fameca patent), specific to this kit, on a Tulip end cap.It allows the 6 conductors of the LV line to be short-circuited in two operations.

| Reference | Description |
|---|---|
| GFLAGFR | Temporary short-circuiting and earthing device from the earth, for bare low voltage overhead networks |

### / This product contains

| Reference | Description |
|---|---|
| 2 x PDMCCTBTARFR | 2 identical short-circuiting conductive sticks: 1 for short-circuiting the LV network and 1 for short-circuiting the public lighting if necessary |
| PICRABT | Iso-conductive stick for carrying out no-voltage testing on the LV flag network |
| PPOLMALTBT | Insulating telescopic stick for manoeuvring from the earth — extended length 7.5 m |
| HDMCCTBTARFR | Storage bag containing the whole kit |



# BTA800-5

## EARTHING AND SHORT-CIRCUITING DEVICE OF LV OVERHEAD LINES

STANDARDS
IEC 61230 / IEC 61138

### / USE

Earthing and shorting of overhead lines in bare conductors spring clamps Ø 3÷18 mm
- No. 5 light alloy clamps with spring clamping ø 3÷18 mm integral with fiberglass foils with handle
- No. 4 copper cables sect. 16 mm2 L=0.8 m covered with silicone sheathing
- No. 1 copper ground cable sect. 16 mm2 L=14 m covered with silicone sheathing
- No. 1 earth electrode
- No. 1 reach collector
- No. 1 sheet metal container for storing and transporting the device

| Reference | Clamp tightenning | Conductor type | Cable isola-tion type | Phase cable nber | Phases cable cross- section | Phases cable length | Cross -section | Floor cable lenght | Short-circuit intensity | Short-circuit intensity |
|---|---|---|---|---|---|---|---|---|---|---|
| BTA800-5 | 3/18 mm | Round | Silicone | 4 | 16 mm² | 0.8 m | 16 m² | 14 m | 5.7 kA/0.5s | 4.1 kA kA/1s |



# WBT537

## EARTHING AND SHORT-CIRCUIT DEVICE AT FIXED POINTS EQUIPPED WITH MOBILE PERFORATING TERMINALS FOR LV CABLES

STANDARDS
IEC 61230 / IEC 61138

| Reference | Clamp material | Conductor diameter | Cable material | Cable isolation type | Phase cable number | Cross -section | Floor cable lengh | In line (aerial) | Isc Max | Short-circuit intensity | Short -circuit intensity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WBT537 | Steel | 8mm | Copper | Silicone | 2 | 16 mm² | 15m | Isolated | 7.4 kA/0.3s | 5.7 kA/0.5s | 4.1 kA/1s |





- Ergonomic handle with hand guard.
- Quick connection/ disconnection.





# BT318_N

## EARTHING AND SHORT-CIRCUITING EQUIPMENT FOR BARE LV OVERHEAD LINES

STANDARDS
IEC 61230

### / USE

Device for short-circuiting and if necessary earthing with additional set CMTBT or ECBT.

| Reference | Composition | Weight |
|---|---|---|
| BT3184N | 4 clamps and 3 sticks | 3.32 kg |
| BT3185N | 5 clamps and 4 sticks | 3.74 kg |
| BT3186N | 6 clamps and 5 sticks | 4.16 kg |
| BT3187N | 7 clamps and 6 sticks | 4.58 kg |

Available version without bayonet earth wire joint, direct connection.

### / This product contains

| Reference | Description |
|---|---|
| BT318APV | Earthing and short-circuiting clamp for bare LV overhead lines |
| H318 | Storage cover |
| PT318 | BT318 clamp on 0,4 m stick with handle |
| TFK16007BB | 16 mm² short-circuiting cable 0,7 m |
| PPOL2/020APV | Insulating telescopic stick 2 m |

- Automatic spring clamp, no manual tightening required
- Low weight constraints
- Fast and easy to use
- Ensures effective contact with the cable



# BT324

## EARTHING AND SHORT-CIRCUITING CLAMP FOR LV OVERHEAD LINES

### / TECHNICAL SPECIFICATIONS

- Tightening capacity: Ø 3 to 24 mm

| Ref. | Handle type | Overall lenght | Insulating length | Weight |
|---|---|---|---|---|
| BT324 | PENTA handle (M) | 750 x 60 x 60 mm | 490 mm | 0,465 kg |
| BT324C | | 370 x 60 x 60 mm | 115 mm | 0,3 kg |
| BT324D | | 560 x 60 x 60 mm | 300 mm | 0,4 kg |
| BT324E | | 480 x 60 x 60 mm | 222 mm | |
| BT324AP | Hexagonal (AP) | 195 x 60 x 60 mm | N/A | 0,355 |



- Fast attachment/detachment
- High short-circuit current

# DMTBT324

## SHORT-CIRCUITING AND EARTHING DEVICE FOR BARE LV OVERHEAD LINES

STANDARDS
IEC 61230

### / USE

Device allowing the short-circuiting of LV network sand if necessary its earthing. Max. Isc: 8 kA/1s.
Including insulating sticks and storage cover set.

| Ref. | Nbr of clamps | Insulating length | Section cables | Short-circuiting cable lenght | Overall length | Weight |
|---|---|---|---|---|---|---|
| DMTBT3245 | 5 | 480 mm | 35 mm² | 0,5 m | 720 mm | 3,16 kg |

For other compositions, please contact us.



# DMTTP69

EARTHING AND SHORT-CIRCUITING EQUIPMENT FOR BARE LV OVERHEAD LINES

STANDARDS
IEC 61230

## / USE

Device allowing the short-circuiting of LV networks and if necessary its earthing.

## / TECHNICAL SPECIFICATIONS

- Isc: 8 kA/1s
- Tightening capacity: Ø3 to 22 mm
- Short-circuit cable: 35mm², lenght: 1m

| Ref. | Description |
|---|---|
| DMTTP69-4P | 4 clamps on sticks |
| DMTTP69-5P | 5 clamps on sticks |
| DMTTP69-6P | 6 clamps on sticks |
| DMTTP69-7P | 7 clamps on sticks |





# CMTBT

ADDITIONAL EARTHING EQUIPMENT

STANDARDS
IEC 61230

## / USE

Earthing cable to be connected to LV overhead line short-circuiting device.

## / TECHNICAL SPECIFICATIONS

- Isc: 4 kA/1s

| Ref. | Description |
|---|---|
| CMTBT1N | Cable 16 mm² - L 16 m |
| CMTBT2N | Cable 16 mm² - L 10 m |
| CMTBT3N | Cable 10 mm² - L 16 m |
| CMTBT4N | Cable 10 mm² - L 10 m |

# ECBT

ADDITIONAL EARTHING EQUIPMENT

STANDARDS
IEC 61230

## / TECHNICAL SPECIFICATIONS

- Isc: 4 kA/1s

Set content:
- 1 earthing cable in extra-flexible copper, 16 mm², Length : 16 m,
- 1 bronze earthing clamp, ref. NB8,
- 1 bayonet plug.

Supplied in CTS38S plastic carrying case, without earthing rod.

| Reference | Cable length |
|---|---|
| ECBT320 | 16 m |
| ECBT321 | 10 m |
| ECBT325 | 3 m |

Other compositions available on request.



# GDDTORS

SHORT-CIRCUITING EQUIPMENT

STANDARDS
IEC 61230

## / TECHNICAL SPECIFICATIONS

- Cable material : Copper
- Operating voltage : LV
- Phase(s) cable cross-section : 16 mm²
- Phase(s) cable length : 0,40 m
- Short-circuit intensity : 4 kA/1s
- Dimensions : 349x264x86mm

| Reference | Phase cable number | Weight |
|---|---|---|
| GDDTORS 5 | 4 | 1,8 kg |
| GDDTORS 6 | 5 | 2 kg |
| GDDTORS 7 | 6 | 2,3 kg |



# CPITORS

INSULATION PIERCING CONNECTORS FOR GDD-TORS DEVICE

## / USE

- Insulation piercing connectors for measurements, earthing and short-circuiting LV aerial bundled connectors.
- Insulation piercing short-circuit and earthing connectors for overhead networks with twisted insulated conductors, rated voltage 0.6/1 kV.

| Reference | Description |
|---|---|
| CPITORS | 16 to 150 mm² |

# MEDIUM VOLTAGE RANGE



**Medium voltage** overhead line



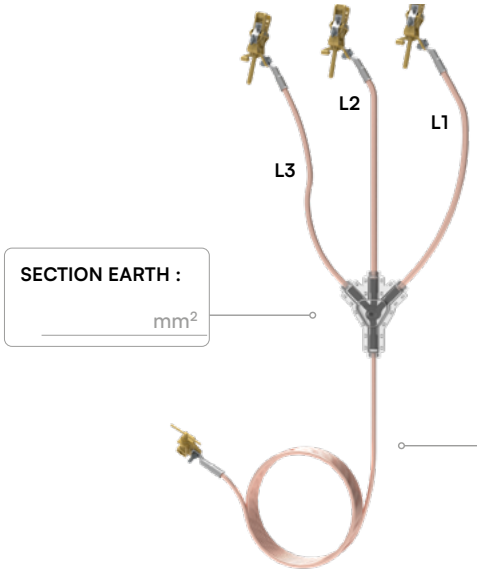
**Medium voltage** substation



**Medium voltage** substation

# **CONFIGURE** YOUR EARTHING & SHORT-CIRCUITING SYSTEMS FOR **MEDIUM VOLTAGE**

## TRIFURCATION/QUADRIFURCATION CONFIGURATOR




**SECTION EARTH :**
_____ mm²

**SECTION PHASES**
_____ mm²

**LENGTH PHASE L1, L2, L3**
L1 _____ m
L2 _____ m
L3 _____ m

**LENGTH EARTH :**
_____ m

## DEVICE CODING CONFIGURATOR

| EMT EMTS | 535 416 516 | B AP X | 16 | B T Q P | 005 XX XXX | - | 16 | 020 XX XXX | NB8 N3B | H C |
|---|---|---|---|---|---|---|---|---|---|---|

**EMT =** Medium-voltage set with PVC cable
**EMTS =** Medium-voltage set with silicone cable

**Phase clamp code**
535 = MT535 525LR = MT525BLAR
416 = MT416 NBD = NBD25
516 = MT516 NB = NB2025
525 = MT525 PFB = PFBD2025

**Terminations:**
B = bayonet
AP = AP (hexagonal)
X = without termination

**Phase cable cross-section:**
mm²

**Configuration:**
- B = bifurcation
- T = trifurcation
- Q = quadrifurcation
- P = pentafurcation

**Length of phase leads:**
Examples:
005 = 0.5 m
010 = 1 m
100 = 10 m

**Earth conductor cross-section: mm²:**
Earth cable cross-section: mm²

**Length of earth leads:**
Examples:
010 = 1 m
020 = 2 m
100 = 10 m

**Earth clamp code:**
NB8 = NB
N3B = N3B8

**Packaging**
H = soft case
C = metal case

# SELECTION GUIDE

## MV CLAMPS AND EARTH CLAMPS

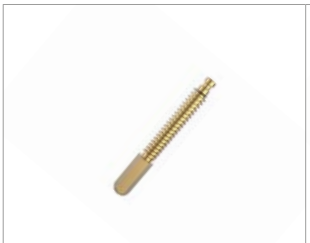
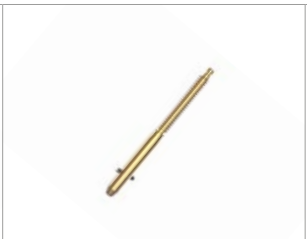
| | MV CLAMPS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Code** | **535** | **416** | **516** | **525** | **525L and 525LR** | **MTD** | **550** | **W535** |
| |  MT535 |  MT416 |  MT516 |  MT525 |   MT525BL MT525BLAR* |  MTD3290 |  MT550 |  PC535 |
| **Clamping capacity** | Ø 5-35 mm | | Ø 8-19 mm | Ø 5-35 mm | Ø 5-35 mm | Ø 32-90 mm | Ø 5-50 mm | Ø 5-35 mm |
| | 16-40 and 5-40 mm | 40-16 mm | 0-19 mm | | 5 - 15 mm | | Up to 50 mm | Flat bar: 5x40mm Horizontal busbar: 16x40mm |
| | | | | | | | | |
| **Isc max** | 31,5 kA/1s | 18 kA/1s | 20 kA/1s | 14,5 kA/1s | MT525BL: 20 kA/1s MT525BLAR*: 25kA/1s | 18 kA/1s | 18 kA/1s | 30 kA/1s |
| **Material** | Alu | Alu | Alu | Cupro-alu | Cupro-alu | Laiton | Cupro-alu | Alu |
| **Connection hole** | Ø 10 mm | Ø 10 mm | Ø 10 mm | Ø 10 mm | Ø 10 mm | Ø 10 mm | Ø 10 mm | Ø 10 mm |
| **Closed clamp dimensions** | 44 x 100 x 180 mm | 35 x 75 x 169 mm | 35 x 79 x 143 mm | 85 x 56 x 192 mm | 85 x 56 x 210 mm | 220 x 90 x 60 mm | 85 x 56 x 210 mm | 165x130x45 mm |
| **Weight** | 0,620 kg | 0,320 kg | 0,320 kg | 0,650 kg | 0,800 kg | 1,200 kg | 0,750 kg | 0,520 kg |

*anti arrachement

| | MV CLAMPS & EARTHING CLAMPS | | | | |
|---|---|---|---|---|---|
| PCE | NBD | NB | PFB | NB8 | N3B |
|  |  |  |  |  |  |
| PCE | NBD25 | NB2025 | PFBD25 | NB8 | N3B8 |
| Ø 0 - 22 mm |  Ø 7 - 37 mm |  Ø 5 - 32 mm | |  Ø 6 - 25 mm |  Ø 6 - 30 mm |
|  0-22mm |  37 mm |  32 mm | |  0 - 25 mm |  30 mm |
| |  Ø 20 - 25mm |  Ø 20 - 25mm |  Ø 20- 25mm |  Ø 6 - 25 mm |  Ø 6 - 33 mm |
| 20 kA/1s | 31,5 kA/1s<br>all conductor<br>40 kA/0,5s<br>on Ø 25 mm ball<br>20 kA/1s<br>on Ø 20 mm ball | 23,5 kA/1s<br>all conductors<br>20 kA/1s<br>on Ø 20 mm ball | 23 kA/1s<br>on Ø 20 mm ball<br>31,5 kA/0,5s<br>on Ø 25 mm ball | 20 kA/1s | 31,5 kA/1s |
| Alu | Cupro-alu | Cupro-alu | Cupro-alu | Cupro-alu | Cupro-alu |
| Ø 10 mm | M10 | M10 | M10 | Ø 10 mm | Ø 10 mm |
| 142x60x34mm | 35 x 75 x (160) mm | 35 x 75 x (125) mm | 35 x 75 x (125) | 100 x 100 x 40 mm | 40 x 72 x 130 mm |
| 0,300 kg | 0,850 kg | 0,750 kg | 0,750 kg | 0,5 kg | 0,75 kg |

## / CHOICE OF END FITTING FOR CLAMPS

(to be added at the end of the selected reference)

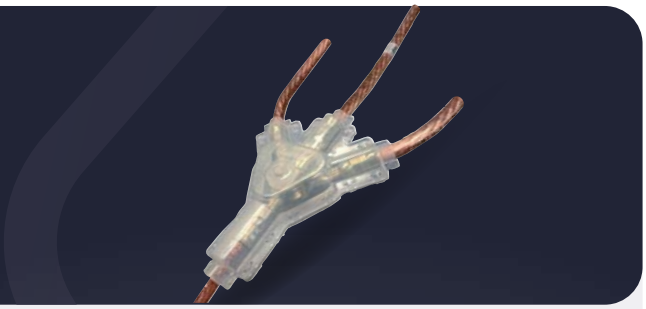
| | | |
|---|---|---|
|  |  |  |
| AP | B | M |

# TRIF

## SET OF CABLES FOR SHORT-CIRCUITING AND EARTHING DEVICES

STANDARDS
IEC 61230 / IEC 61138

• New central connection point and compression with sealing.



### / USE

Use to equip or replace substation short-circuitingand earthing cables.



### / TECHNICAL SPECIFICATIONS

A TRIFURCATION is a set of copper cables for a 3-phase earthing and short-circuiting device, consisting of:
- 3 short-circuiting cables,
- 1 earthing cable
- all connected to a junction block and fitted with TFK type sealed cable lugs.

### / Isc according to cable cross-section :



| Temperature rise of the copper cable at the end of the short-circuit : 700°C | | | | |
|---|---|---|---|---|
| **Isc Time** | **0,3 s** | **0,5 s** | **1 s** | |
| **Isc cable cross-section** | **Isc max. admissible** | | | **Min. earth cable cross-section** |
| 10 mm² | 4,8 ka | 3,7 ka | 2.5 ka | 16 mm² |
| 16 mm² | 7,7 ka | 6 ka | 4 ka | |
| 25 mm² | 12 ka | 9.5 ka | 6.5 ka | |
| 35 mm² | 17 ka | 13 ka | 9 ka | |
| 40 mm² | 19,3 ka | 15 ka | 10,5 ka | 25 mm² |
| 50 mm² | 24 ka | 18,5 ka | 13 ka | |
| 70 mm² | 34 ka | 26 ka | 18,5 ka | 35 mm² |
| 75 mm² | 36 ka | 28 ka | 20 ka | |
| 95 mm² | 46 ka | 35,5 ka | 25 ka | |
| 120 mm² | 58 ka | 45 ka | 31,5 ka | 50 mm² |
| 150 mm² | 72,5 ka | 56 ka | 40 ka | |

### / Codification

**T T T T** — **T =** Trifurcation

**... S PA SA**
... = Copper trifurcation with PVC sheath and swaged crimp lug connection (double crimping), —25°C to +55°C

S = Copper trifurcation with silicone sheath and swaged crimp lug connection (double crimping), —40°C to +70°C

PA = Aluminium trifurcation with PVC sheath and swaged crimp lug connection (double crimping), —25°C to +55°C

SA = Aluminium trifurcation with silicone sheath and swaged crimp lug connection (double crimping), —40°C to +70°C

**16 25 35 50 70 95 120 150**
**Phase cable cross-section:**
16 to 150 mm²

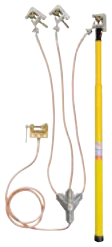
**008 010 100 XXX**
**Length of phase cables : XXX**
Ex : 008 = 0,8m (standard)
010 = 1m

**B C D**
**Ø phase-side terminal clamping:**
**B** = Ø8
**C** = Ø10
**D** = Ø12

**16 25 35 50 70 95 120 150**
**Earth wire section:**
16 à 150 mm²

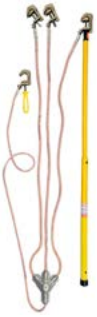
**008 010 100 XXX**
**Length of earth cable : XXX**
Ex : 010 = 1m
025 = 2,5m (standard)
100 =10m

**B C D**
**Ø of clamping of the earth side terminal :**
**B** = Ø 8
**C** = Ø 10
**D** = Ø 12



All other compositions available on request.





# PIMT

## EARTHING AND SHORT-CIRCUITING SYSTEM FOR MV SUBSTATIONS

STANDARDS
IEC 61230

### / TECHNICAL SPECIFICATIONS

Standard composition :
- A set of 3 identical clamps with AP end fitting (other end fittings on request): MT535, MT525, MT516 or MT416.
- A TRIFURCATION kit : set of extra flexible sheathed copper jumper cables with sealed cable lugs, connected by a junction block.
- Short-circuit cable length : 0,8 m.
- Earth cable length : 2 m.
- An earth clamp : NB8
- A telescopic insulating stick : TR245APV

# PIMT49S•SP

## EARTHING AND SHORT-CIRCUITING DEVICE FOR CELLS MC500, FLUAIR 24G AND 24F

### / TECHNICAL SPECIFICATIONS

Composition :
**PIMT49S**
- 3 clamps MT25AP1
- 1 earthing clamp NB8
- 1 trifurcation T70008C35020C
- 1 insulating stick TR245 APV
- 1 extracting hook CREXCO
- 1 case CM535

**PIMT49SP**
- 1 earthing clamp NB8
- 1 trifurcation T70008C35020C
- 1 insulating stick TR245 APV
- 1 case CM535

# CORATRIF

## COMPLETE EARTHING AND SHORT-CIRCUITING DEVICE

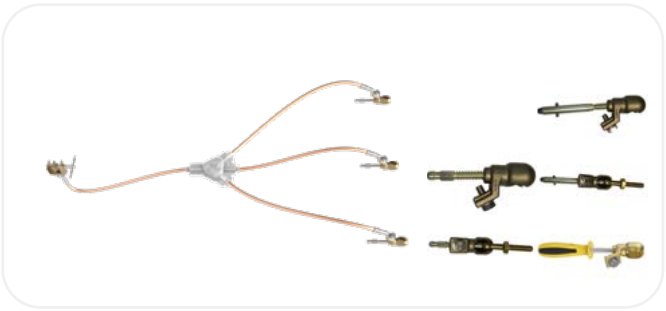
STANDARDS
IEC 61230

### / USE

For fixed ball points, diameters 20 and 25 mm, flat and cylindrical bars.
Suitable for fitting E240 lug barrels.

### / TECHNICAL SPECIFICATIONS

Composition :
- 1 TRIFURCATION as defined in the table
- 3 NBD25AP phase clamps (hexagonal end fittings, 12 mm)
- 1 NBD25M earthing clamp (with ergonomic handle)
- 1 insulating stick TR245APV
- 1 metal storage case CM535





# ONBAL

## EARTHING AND SHORT-CIRCUITING DEVICE FOR BALL FIXPOINT

STANDARDS
IEC 61230

### / USE

Vise clamp specially designed for earthing fixed ball points.

### / TECHNICAL SPECIFICATIONS

Standard composition:
- One set of 3 identical pliers with tip: PFBD25
  Clamping capacity :
  - Ball fixed point: Ø 20 and 25 mm
  - Max. short-circuit current :
    → 23 kA/1s on ball Ø 20 mm
    → 31.5 kA/0.5s on ball Ø 25 mm
- 1 TRIFURCATION: extra-flexible sheathed copper cable assembly fitted with watertight lugs and connected by a terminal block
- 1 earth clamp
- 1 telescopic insulating pole
- 1 cover or metal storage box

# PIMTRGB

## EARTHING DEVICE FOR RGB ABB STATION, 25 KA/1S

STANDARDS
IEC 61230

### / TECHNICAL SPECIFICATIONS

Max Isc : 25kA/1s
Composition :
- 1 insulated 36kV switching pole ref: PIRGB consisting of a 1.15m IEC 61235-S insulating tube fitted with a bayonet connector
- 1 trifurcation made up of :
  - 3 phases in copper cable, cross-section 95mm², each 1m long
  - 1 copper earth cable, cross-section 50mm², length 0.5m, fitted with a terminal with a 12 mm diameter at the end for connecting the clamp of your choice.
- 3 RGB connectors to screw onto the RGB box.
- 1 carrying case for the pole ref : H1P120PA.
- 1 carrying case for earthing ref: HMALT.

Other compositions and/or trifurcations on request.



# EMT550APT70005-020NB8C *(DMT55APT70SF)*

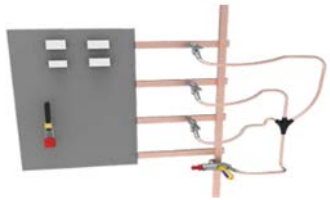
EARTHING AND SHORT-CIRCUITING DEVICE, 18 kA/1 S

## / USE

Device designed for short-circuiting and earthing distribution substations.

## / TECHNICAL SPECIFICATIONS

- Maximum short-circuit current (Isc max): 18 kA/1 s
- Composition:
  - 1 three-branch connection (T70008C35020C): copper cables with extra-flexible insulation, fitted with sealed lugs and connected through a junction block.
  - Short-circuit cable length: 0.8 m
  - Short-circuit cable cross-section: 70 mm²
  - Earth cable length: 2 m
  - Earth cable cross-section: 35 mm²
- 3 phase clamps MT550AP (AP terminal)
  - Clamping capacity: Round bar: Ø5 to 50 mm
  - Flat bar: 0 to 50 mm
- 1 earth clamp NBB:
  - Clamping capacity: Round bar: Ø6 to 30 mm
  - Flat bar: 0 to 25 mm
  - Hexagon: 19 mm
- 1 metal storage case: CM535PA
- Total weight: 12 kg
- Overall dimensions: 910×260×105 mm





# SMACE

EARTHING AND SHORT-CIRCUITING (E&S) SYSTEM
WITH PADLOCK INTERLOCK FOR EARTH CLAMP

## / USE

- Protection and securing of installations during the following operations:
- Lockout / isolation: prevents installation of the earthing and short-circuiting device (E&S / MALT/CC) by locking the earth clamp, ensuring compliance with the disconnector opening requirement.
- Lockout / isolation: imposes removal of the earthing and short-circuiting device (E&S / MALT/CC) before the disconnector can be re-closed.
- Impossible to issue a work permit / authorization before removal of the earth clamp and the earthing and short-circuiting device (E&S / MALT/CC).
- The SMACE solution by FAMECA is compatible with all low-voltage or medium-voltage earthing and short-circuiting devices (E&S / MALT/CC) already in service, by substituting the earth clamp.
- The earth clamp is then interlocked using a lockout padlock, with a single unique and proprietary key.

## / TECHNICAL SPECIFICATIONS

- Composition
  - Earth clamp SAHB202AM:
  - Max. short-circuit withstand current (Isc): 31.5 kA / 1 s
  - Suitable for low-voltage and high-voltage terminations
  - Maximum earth cable cross-section: 120 mm²
- Clamping capacity
  - On ball terminals: Ø 20 and 25 mm
  - On flat bar: up to 25 mm



# AMT50

EARTHING AND SHORT-CIRCUIT DEVICE FOR MV SUBSTATIONS
AND ELECTRICAL STATIONS WITH UNIVERSAL CONTACT CLAMPS

STANDARDS

IEC 61230 / IEC 61138

## / USE

- n°3 Aluminium universal contact clamp, tested for high currents. CH12 hexagonal shank, for insertion on EF-type shank, and steel clamping screw protected with antioxidant galvanic treatment.

**Clamping capacity:**

- cylindrical conductors diameter 5 - 40 mm;
- flat bars 40 x 60 mm;
- Board bars 12 x 60 mm;
- 45° inclined bars up to 28 mm.
- n°3 extra-flexible short-circuit cables made of electrolytic copper coated with a transparent sheath, for connection between the clamps and the central connector. Cross-section 70 mm², length 0.75 m, complete at the ends with tinned electrolytic copper cable lugs and additional transparent heat shrink tubing reinforcement.
- Three-pin connector. -Earth cable, length 2 m.
- Earth clamp, clamping capacity up to 22 mm.
- Insulation strap made of glass-fibre reinforced vinylester resin tubing for operating contact clamps, length 1.35 m in two elements with quick-connect fitting.
- Sturdy canvas bag for containing and transporting the device and foil.



# MT50-CAB

## EARTHING AND SHORT-CIRCUIT DEVICE MV

STANDARDS

IEC 61230 / IEC 61138

### / USE

- Isc Max (short-circuit current) : 13.6 kA/0.3s
- Short-circuit intensity : 11.6 kA/0.5s
- Short-circuit intensitys : 8.2 kA/1

| Reference | Conductor type | Cable material | Cable isolation type | Phase cable nber | Vise clamping capacity | Phase(s) cable cross-section | Phase(s) cable length | Cross -section | Earthing Clamp |
|---|---|---|---|---|---|---|---|---|---|
| MT50-CAB | Ball, Round, Flat | Copper | Silicone | 3 | 0÷35 mm | 35 mm² | 0.8m | 16 mm² | MT40F |



# MT100-CAB

## EARTHING AND SHORT-CIRCUIT DEVICE FOR MV SYSTEMS IN BARE CONDUCTORS OF SECONDARY SUBSTATIONS MV

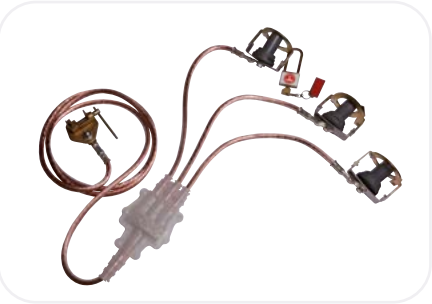
STANDARDS

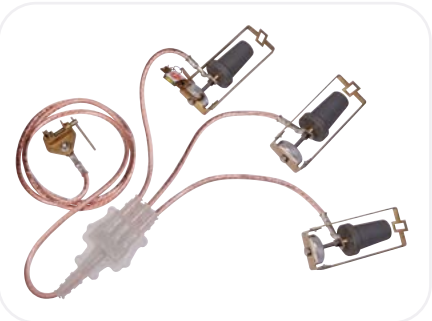
IEC 61230 / IEC 61138

### / USE

Earthing and short-circuit device for mt systems in bare conductors of secondary substations MV

| Reference | Clamp tightenning | Cable material | Cable isola-tion type | Phase cable nbr | Phase(s) cable cross-section | Phase(s) cable length | Cross -section | Floor cable lenght | In line (aerial) |
|---|---|---|---|---|---|---|---|---|---|
| MT100-CAB | 3÷18 mm | Copper | Silicone | 3 | 35 mm² | 4 m | 16 mm² | 2 m | Bare |







# DMTPC

## SHORT-CIRCUITING AND EARTHING DEVICE FOR SUBSTATIONS WITH PLUG-IN TYPE BUSHINGS

STANDARDS

IEC 61230

### / USE

Earthing and short-circuiting device for 250 amp sockets ref. DMTPC250 and 400 amp consisting of:
- 1 trifurcation with 3 x 70 mm² short-circuiting cables, length 0,8 m and 1 earthing cable, length 2 m, ref. T70008C35020C
- 3 x 250A or 400A earth studs with their locking system (metal stirrup)
- 3 lockout-tagout padlocks
- an earth clamp ref. NB8

The kit is delivered in a carrying bag.
Set of 3 insulating rest studs and its padlock lockout system. Allows the cable disconnected from the transformer to be re-energised:
- for 250A - 24kV sockets ref. PRPC250
- for 400A - 24kV sockets ref. PRPC400

400A - 24kV lockout-tagout system with 3 insulating caps, and its padlock lockout system : ref. DCPC400

### / TECHNICAL SPECIFICATIONS

Isc Max : 12,5 kA/1s

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| DMTPC250 | Short-circuiting and earthing for substations with plug-in type bushings 250A | 600 x 250 x 200 mm | 8 kg |
| PRPC250 | Set of 3 insulating rest studs for MV substation connectors 250A | 400 x 300 x 100 mm | 3 kg |
| DMTPC400 | Short-circuiting and earthing for substations with plug-in type bushings 400A | 600 x 250 x 200 mm | 10,5 kg |
| PRPC400 | Set of 3 insulating rest studs for MV substation connectors 400A | 400 x 300 x 100 mm | 5 kg |
| DCPC400 | Set of 3 lockout-tagout devices for MV transformer plug 400A | | 4,5 kg |



# WIG250

## DEVICE FOR EARTHING, SHORT-CIRCUITING AND EQUIPOTENTIALITY MV

STANDARDS

IEC 61230 / IEC 61138

### / USE

Mobile device for earthing, short-circuiting and equipotentiality of branch junctions for single-pole disconnectable external cone terminals, with 250 a contact plug (interface “a”) for overhead mt lines (8 ÷ 24 kv) in cable.

### / TECHNICAL SPECIFICATIONS

- Short-circuit intensity : 14.4kA/0.3s

| Reference | Clamp material | Cable isolation type | Phase cable nbr | Phase(s) cable cross-section | Phase(s) cable length | Cross -section | Floor cable lenght | In line (aerial) | Way of access | From the floor |
|---|---|---|---|---|---|---|---|---|---|---|
| WIG250 | Copper | Silicone | 3 | 35 mm² | 0,8 m | 35 mm² | 14 m | Isolated | From the floor | Columns |



# WIT400

## MOBILE DEVICE FOR EARTHING, SHORT-CIRCUITING AND EQUIPOTENTIALITY OF DISCONNECTABLE SINGLE-POLE “T” TERMINALS AND SHUNTS, WITH 400 / 630 A CONTACT PLUG OF OVERHEAD CABLE LINES MV

STANDARDS

IEC 61230 / IEC 61138

### / TECHNICAL SPECIFICATIONS

- Isc Max (short-circuit current) : 13.6 kA/0.3s
- Short-circuit intensity : 11.6 kA/0.5s
- Short-circuit intensity : 8.2 kA/1s

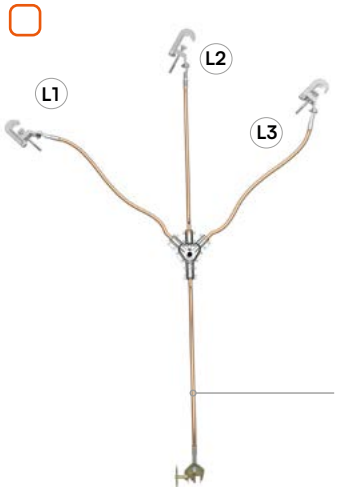
| Reference | Clamp material | Cable isolation type | Phase cable nbr | Phase(s) cable cross-section | Phase(s) cable length | Cross -section | Floor cable lenght | In line (aerial) | Way of access | From the floor |
|---|---|---|---|---|---|---|---|---|---|---|
| WIT400 | Copper | Silicone | 6 | 35 mm² | 2 m | 16 mm² | 14 m | Isolated | From the floor | Columns |

# **CONFIGURE** YOUR EARTHING & SHORT-CIRCUITING SYSTEMS FOR **MEDIUM VOLTAGE**

## CONFIGURATION AND DEFINITION OF EARTHING CABLES

### SUBSTATION

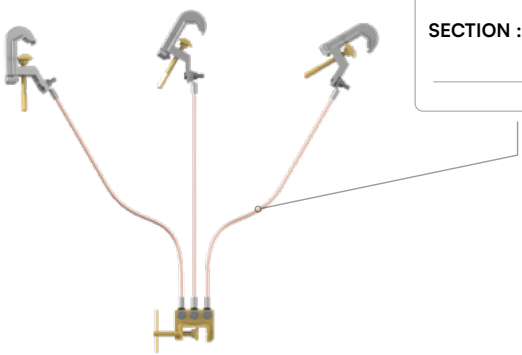
☐




SECTION PHASES : ____ mm²
L1 : ____ m
L2 : ____ m
L3 : ____ m

EARTH : ____ m
SECTION : ____ mm²

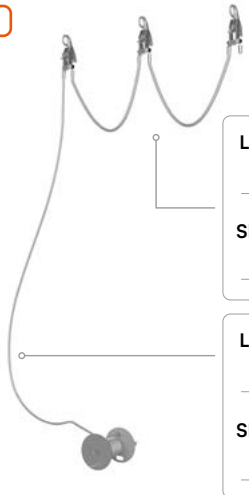
☐



L EARTH : ____ m
SECTION : ____ mm²

### OVERHEAD LINES

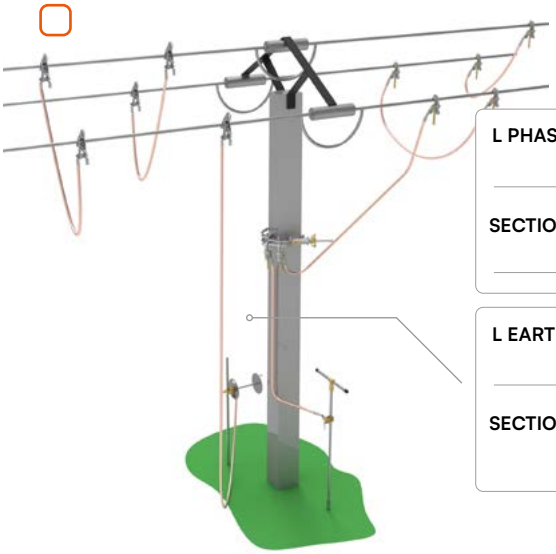
☐



L PHASES : ____ m
SECTION : ____ mm²

L EARTH ____ m
SECTION : ____ mm²

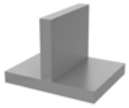
☐



L PHASES : ____ m
SECTION : ____ mm²

L EARTH ____ m
SECTION : ____ mm²

## TYPE OF CONDUCTOR

| Diameter, thickness, section... |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| Phase φ | | | | | | |
| Earth ⏚ | | | | | | |

## END FITTING TYPE CLAMP & POLE

### / TRANSPORT

X46 

HE 

AN 

CL 

B 

### / DISTRIBUTION

AP 

B 

U 

CR 

BCL 

## CABLE TYPE

### / MATERIAL

☐ COPPER



☐ ALUMINIUM



### / TYPE OF COVER

☐ PVC
(-25°C to + 55°C)

☐ SILICONE
(-40°C to + 70°C)

## MAX ISC

This information must be known by the customer who operates the network. If not, it is necessary to know the S-C power (MVA) of the source and the voltage of the network (kV).

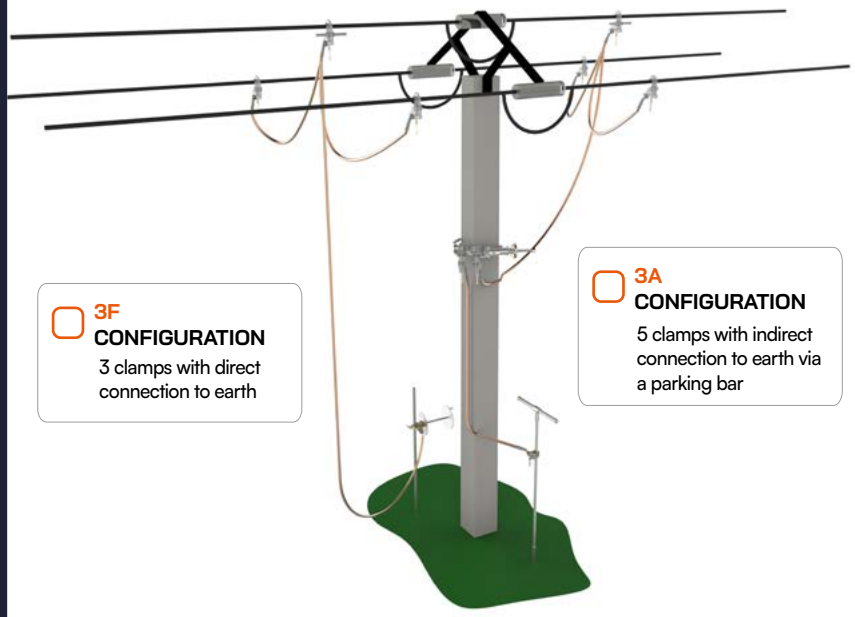
ISC :

## QUANTITY

## CUSTOMER'S NAME

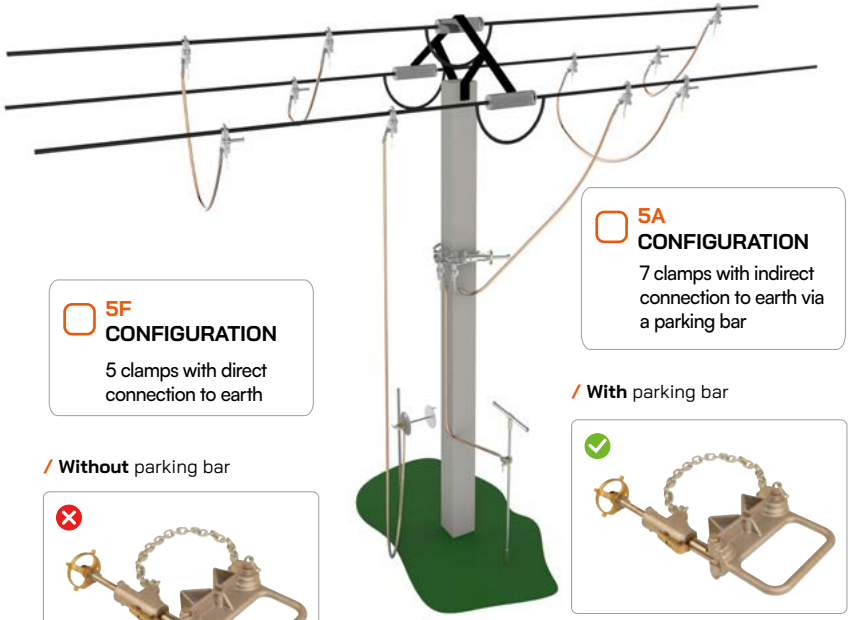
# **CONFIGURE** YOUR EARTHING & SHORT-CIRCUITING SYSTEMS FOR **MEDIUM VOLTAGE**

## CHOICE OF CONFIGURATION



☐ **3F CONFIGURATION**
3 clamps with direct connection to earth

☐ **3A CONFIGURATION**
5 clamps with indirect connection to earth via a parking bar



☐ **5F CONFIGURATION**
5 clamps with direct connection to earth

☐ **5A CONFIGURATION**
7 clamps with indirect connection to earth via a parking bar

/ **Without** parking bar



/ **With** parking bar



## CLAMP

☐ MT535URU



☐ DBC332



## CONNECTOR TYPE

☐ AP



☐ B

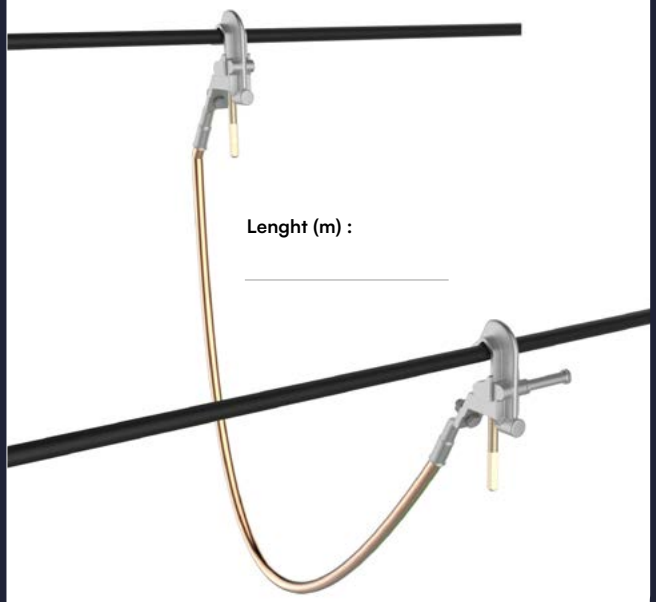


☐ CR



/ 3F OR 3A CONFIGURATION

## SHORT-CIRCUIT CABLE LENGHT



Lenght (m) :

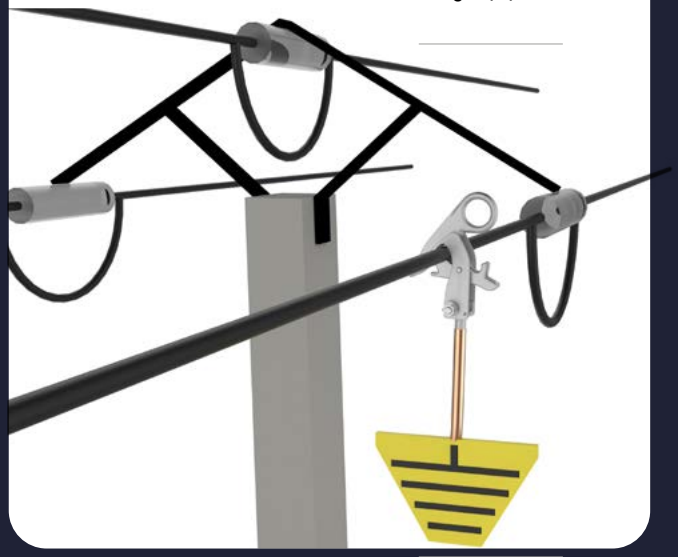
/ 5F OR 5A CONFIGURATION

## CABLE LENGTH BETWEEN PHASE AND PARKING BAR



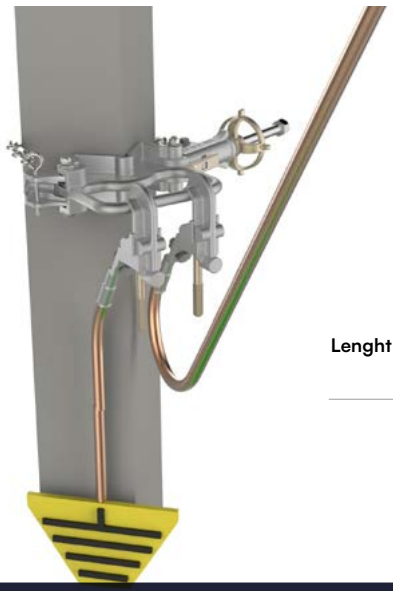
Lenght (m) :

## EARTH CABLE LENGHT



Lenght (m) :

## CABLE LENGTH BETWEEN PARKING BAR AND EARTH



Lenght (m) :

## CABLE TYPE

☐ COPPER



☐ ALUMINIUM



## TYPE OF COVER

☐ PVC extra flexible

☐ Silicone

## ISC ACCORDING TO SECTION

| Max. Isc | Copper cable | Aluminium cable |
|---|---|---|
| 6,5 kA/1s<br>9,5 kA/0,5s | 25 mm² ☐ | 50 mm² ☐ |
| 8 kA/1s<br>13 kA/0,5s | 35 mm² ☐ | 70 mm² ☐ |
| 13 kA/1s<br>18,5 kA/0,5s | 50 mm² ☐ | 95 mm² ☐ |
| 18,5 kA/1s<br>25 kA/0,5s | 70 mm² ☐ | 120 mm² ☐ |
| 25 kA/1s | 95 mm² ☐ | 165 mm² ☐ |

## EARTH CLAMP TYPE

☐ T702



☐ NB8



☐ N3B8



☐ NBD25M



## EARTHING ROD

☐ 701



☐ PTT130



## INSULATING POLE (SEE PREVIOUS POLES CHAPTER)



Pole :

## EXAMPLE OF COMPOSITION

### / 3F CONFIGURATION

| Ref. with clamp MT535URU | Max. Isc | Clamps | Connector | S/C cables lenght | Type of S/C cable | Lg of earth wire | Earth lathe | Case | Earthing rod | Pole | Pole storage bag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DMT535URUB601 | 6,5 kA/1s - 9,5 kA/0,5s | 1 x MT535URU2<br>2 x MT535URU | B | 2,5 m | Copper | 15 m | T702 | SEG-OX20 | 701 | PPOL2/020B | HTR11100 |
| DMT535URUAP6AL01 | 8 kA/1s - 13 kA/0,5s | | AP | | Aluminium | | | | | PPOL2/020AP | |
| DMT535URUB1301 | 13 kA/1s - 18,5 kA/0,5s | | B | | Copper | | | | | PPOL2/020B | |
| DMT535URUAP18AL01 | 18,5 kA/1s - 25 kA/0,5s | | AP | | Aluminium | | | | | PPOL2/020APV | |
| DMT535URUCR2501 | 25 kA/1s | | CR | | Copper | | T702GM | | | PCT200SJ | H2P200H |

For other compositions, please contact us.

### / 5A CONFIGURATION

| Ref. with clamp MT535URUDBC332 and parking bar | Max. Isc | Clamps | Connector | S/C cables lenght | Type of S/C cable | Lg of cables from par-king bar | Lg of earth cable | Earth clamp | Case | Earthing rod | Pole | Pole storage bag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DMT535URUB601 | 6,5 kA/1s - 9,5 kA/0,5s | 2 x MT535URU1<br>2 x MT535URU | CR | 2 m | Copper | 4 m | 12 m | 3 x NB8 | SEG-OX20 | PTT130 | PCT260SJ | H2P260H HPTT130 |
| DMT535URUAP6AL01 | 8 kA/1s - 13 kA/0,5s | 1 x MT535URU2<br>2 x MT535URU | | | | | | 3 x NB8 | SEG-OX20 | PTT130 | PCT260SJ | H2P260H HPTT130 |
| DMT535URUB1301 | 13 kA/1s - 18,5 kA/0,5s | | | | | | | 3 x NB8 | SEG-OX20 | PTT130 | PCT260SJ | H2P260H HPTT130 |
| DMT535URUAP18AL01 | 18,5 kA/1s - 25 kA/0,5s | | | | | | | 3 x NB8 | SEG-OX20 | PTT130 | PCT260SJ | H2P260H HPTT130 |
| DMT535URUCR2501 | 25 kA/1s | | | | | | | 3 x NB8 | SEG-OX20 | PTT130 | PCT260SJ | H2P260H HPTT130 |

For other compositions, please contact us.

# LWA455PB

EQUIPOTENTIALITY PARKING BAR ON POST

STANDARDS
IEC 61230



## / USE

Earthing and short-circuiting of overhead lines with equipotential bonding of the work area.

## / TECHNICAL SPECIFICATIONS

The LWA455PB parking bar consists of :
- an SPPB aluminium post bracket for the connection of earthing clamps,
- a CTPB tensioning device (aluminium body and shaft treated steel) enabling the parking bar to be pre-positioned on the post, then tightened using the bronze VPB wheel.
- a steel fastening chain treated against corrosion and fixed onto the post bracket,
- an aluminium fastener fixed onto the post bracket to hold the fastening chain.

| Spare parts | Description |
|---|---|
| SPPB | Post bracket with M8 screws |
| ECTPB | Tensioning device with screws for fastening the chain |
| CPB900 | Fastening chain with safety pin |
| NPB | Fastener for mounting on the post bracket (with M8 screws) |
| VPB | Bronze wheel for arming bar |
| LAPB | Arming latch with spring and fastening pin |

| Reference | Dimensions | Weight |
|---|---|---|
| LWA455PB | 460 x 170 x 80 mm | 3,5 kg |



# NEVERS

EARTHING AND SHORT-CIRCUITING DEVICE
FROM THE EARTH FOR BARE MV OVERHEAD LINES

STANDARDS
IEC 61230



• For work from the ground to heights up to 11.5 m.

## / USE

The Nevers device enables a single lineman to :
• do no-voltage testing operations,
• earth and short-circuit overhead lines at heightsof up to 11.50 m.
On bare MV overhead lines from the earth.

## / TECHNICAL SPECIFICATIONS

• Max. allowable Isc : 8 kA/1s
• Clamping range on cylindrical conductors from 3 to 22 mm in diameter (7 to 380 mm²)
• Telescopic metal sticks fitted with collars for quick, calibrated clamping, with integrated cleaning rings, 3-section foam-cored fibreglass insulating sticks, type IEC 60855, with reinforced slot-in joints,
• Optional insulating extension to reach 11.5 m,
• Fit the no-voltage tester to the bottom of the metalstick before earthing,
• Equipment for use with TAG200 or TAG2000 no-voltage detectors (detector not supplied),
• Removable clamp and stick bottom

## / Options

| Reference | Description |
|---|---|
| NE12 | Prehension piece NE10 |
| NE18ER | Complementary extension for insulating stick, to be placed between NE18 and NE19 |
| NE38 | Gripper fitting PA 4 |
| NE14 | Automatic clamp |
| NE22 | Empty cable reel |
| NE25 | 1 set of 3 earth braids, 35 mm² - length: 10 m |
| NE27 | Metal sticks maintenance kit (TK 1) |
| NE28 | Insulating sticks maintenance kit (TK 2) |



NE21ALU



NE21

## PA3GTI

### / 3 elements

| Reference | Description |
|---|---|
| PA3GTI | Complete set of equipment with 3-section metal sticks |

### / This product contains

| Reference | Description |
|---|---|
| NE10 | 3-section telescopic metal sticks<br>Lenght folded 2.20 m / Lenght unfolded 5.45 m |
| NE17E | Upper section of insulating stick |
| NE18E | Lower section of insulating stick |
| NE19E | Lower insulating stick extension, length 1,6 m |
| NE20 | Guide socket |
| NE21 | Cable reel with 3 x 10 m of copper braid,<br>35 mm² and an earthing clamp |
| NE24 | Soft plastic-coated canvas cover |
| 701 | Hexagonal earthing rod 1 m Ø 18 mm |

## PA4GTI

### / 4 elements

| Reference | Description |
|---|---|
| PA4GTI | Complete set of equipment with 4-section metal sticks |

### / This product contains

| Reference | Description |
|---|---|
| NE11 | 4-section telescopic metal sticks<br>Lenght folded 1.64 m / Lenght unfolded 4.85 m |
| NE17E | Upper section of insulating stick |
| NE18E | Lower section of insulating stick |
| NE19E | Lower insulating stick extension, length 1,6 m |
| NE20 | Guide socket |
| NE21 | Cable reel with 3 x 10 m of copper braid,<br>35 mm² and an earthing clamp |
| 701 | Hexagonal earthing rod 1 m Ø 18 mm |
| NE24 | Soft plastic-coated canvas cover |
| NE23 | Stick lifter rod |

# GWIRE

## SHORT-CIRCUITING AND EARTHING DEVICE FROM THE GROUND WITH INSULATING CORD

PATENTED

STANDARDS
IEC 61230 / IEC 62192

- Easy to use on all types of terrain without climbing.
- Automatic spring clamp, no need for manual tightening.
- Earthing up to 12m high from the ground without weight strain for the user.




### / USE

The clamp is placed and unhooked from the ground using an insulating rope passed over the conductor.
The clamp is positioned on the conductor by pulling on the 1st rope.
The clamp is unhooked by pulling on the 2nd rope.
The rope is passed over the conductor using atelescopic stick equipped with a smart hook.

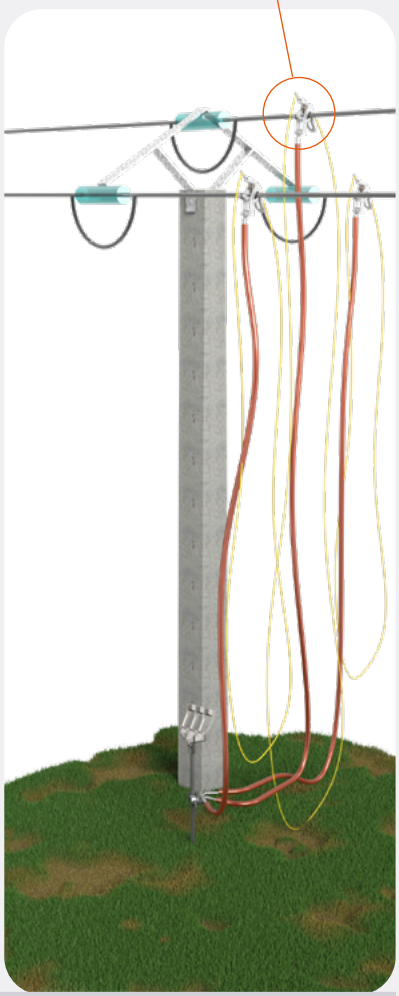
### / TECHNICAL SPECIFICATIONS

Spring clamps for Ø3 to Ø32mm conductors

The device contains :
- 3 PAC332SC clamps
- 1 earth clamp N3B8
- 3 x 15 m of 50 mm² copper cable
- 3 x 25 m of insulating rope (DI06CEI25M),
- 1 tray to support the clamps after arming and before installation (this accessory allows not to touch any metal part during the installation of the 3 clamps)
- 1 hexagonal earth spike (701)
- 1 telescopic insulating stick (PPOL8/105USC) for GWIR8HP and GWIR13HP only
- 1 dropover hook for passing the rope over the conductor.







| Reference | Max Isc | Version | Packaging |
|---|---|---|---|
| GWIR8HN | 8 kA/1s | With insulating stick | Bag containing cables, clamps and accessories |
| GWIR8HP | | Without insulating stick | Bag containing cables, clamps and accessories + 1 cover for the stick and the rod |
| GWIR13HN | 13 kA/1s | Without insulating stick | Bag containing cables, clamps and accessories |
| GWIR13HP | | With insulating stick | Bag containing cables, clamps and accessories + 1 cover for the stick and the rod |
| GWIRE18HN | 18 kA/1s | With insulating stick | Bag containing cables, clamps and accessories + 1 cover for the stick and the rod |
| GWIRE18HP | | Without insulating stick | Bag containing cables, clamps and accessories |

- The stackable or "piggy-back" design of the GDC325 removes the need for bulky standard clamp holders and can accommodate 2, 3, 4 or 5 clamps. Weight of one line clamp: 0,560 kg
- Ergonomics: all the clamps are in line, making it easier to adjust the position of the device on the cable.
- Patented clamp locking system
- The upper surface of the clamp nose is lined up with the jaw of the clamp above it. Each clamp facilitates the installation of the next clamp up on the cable.
- The clamps are retrieved using the removal hook fixed onto the clamp holder adapter.





# AUTOCLAM

## EARTHING AND SHORT-CIRCUITING DEVICE WITH SPRING CLAMPS FOR OVERHEAD LINES

STANDARDS
IEC 61230

### / USE

Three-phase (or more) device for short-circuiting and earthing bare overhead lines, with an allowable short-circuit current of 8 kA/1 s to 17.5kA/1s.Function : earthing for overhead lines with 2 to 5 conductors.

Clamp GDC325
Ø3- 32mm
Max Isc 18kA/1s
0,560 kg



GDC24
0.560kg



GDC21
0.600kg



### / TECHNICAL SPECIFICATIONS

The device is composed of :
- 3 clamps GDC24
- 3 short-circuiting cables
- 1 earthing cable
- 1 earthing clamp

According to models, the device can also be equipped with an insulating stick with soft cover, an earthing rod and a transport case.

- Standard models :
- Short-circuit cables : 35 mm², 2.75 m
- Earth cable : 16 mm² , 16 m
- Clamp holder GDC24 equipped with a universal endfitting.
- This allows the angle to be adjusted, facilitating installation from the pole.
- Isc : 8 kA/1s.
- The short-circuit cable can be aluminium instead of copper (please enquire).

| Reference | Short-circuit cable cross-section | Short-circuit cable lenght | Earthing cable length | Earth clamp | Storage case | Insulating pole | Pole cover | Earth rod |
|---|---|---|---|---|---|---|---|---|
| AUTOCLAM8T | 35 mm² | 2,75 | 16 m | T702* | no | | | |
| AUTOCLAM8TC | | | | | TD386 | PPOL2/020UE | HTR11100 | 701 |
| AUTOCLAM8N | | | | NB8 | no | | | |
| AUTOCLAM8NC | | | | | TD386 | PPOL2/020UE | HTR11100 | 701 |

* Reel with an earth clamp attached.
All compositions possible on request with Isc from 8 to 18 kA/1s with all components at choice.



# T702

## REEL EQUIPPED WITH AN EARTH CLAMP

STANDARDS
IEC 61230

### / USE

The reel is used to store the earthing cable. The earthing clamp permanently mounted on the reel makes the connection between the cable and theearthing rod (type 701 or PTT130).
This reel is mounted on complete earthing and short-circuiting devices EY322 and AUTOCLAM.

### / TECHNICAL SPECIFICATIONS

- Made of steel treated against corrosion.
- T702 : standard empty reel (without cable).
- Can store up to 16 m of 25 mm² cable.
- Weight :1,8 kg
- T702G : large reel (without cable).
- Can store up to 25 m of 16 mm² cable or 16 m of 35 mm² cable.
- Weight : 2,5 kg

| Reference | Description |
|---|---|
| T7021616 | Reel ref T702 with 16 m of 16 mm² cable |
| T7022516 | Reel ref T702 with 16 m of 25 mm² cable |
| T702G2516 | Large reel, ref T702G, with 16 m of 25 mm² cable |
| T702G3516 | Large reel, ref T702G, with 16 m of 35 mm² cable |

# EY322 RANGE

## EARTHING AND SHORT-CIRCUITING DEVICE WITH SPRING CLAMPS FOR OVERHEAD LINES

STANDARDS
IEC 61230




- Lightweight: also available with aluminium shorting cable.
- Robust.
- Fast and easy to use: smooth installation and large eyelet for easy removal.
- High clamping capacity: ø 3 to 32 mm.
- Max. Isc up to 18ka/1s.
- Adjustable to suit all field configurations.

### / USE

The EY322 short-circuiting and earthing device is intended for bare overhead distribution networks (MV).
It can be installed from the support, from a platform or from the ground (in the tray 2 version).
An aluminium clamp-holder plate supports the 3 clamps.
A version with tray 4 and 2 clamps is also available.
The tray is equipped with a hook for the removal of the clamps.
Generally, it is equipped with an AP (12 mm hexagon) for adaptation to sticks equipped with an APV end fitting.

Also available with a U end fitting (Universal).
Other end fittings available on request.

### / TECHNICAL SPECIFICATIONS

The standard equipment consists of :
- 3 clamps connected by 2 short-circuit cables
- 2 x 2.75 m copper or aluminium short-circuit cables
- 1 reel T7021616 with integrated earth clamp and 16m of copper cable
- 1 tray or clamp holder equipped with an APV endfitting and a hook for extracting the installed clamps,
- 1 earth rod 701, length 1 m,
- 1 x 2-section telescopic insulating stick , unfolded length of 2m.

The set is packaged in :
- 1 metal box TD386
- 1 waterproof canvas case HTR11100 containing the pole and earth rod.

**Model EY322NG**
Basic version with MT330N clamps. Pre-arming of the clamp then placing on the plate ofthe armed clamp. Spring on the plate allowing the locking of the clamp on it. Automatic release of the plate and closing of the clamp when placed on the conductor.

**Model EY322NFC**
Version with MT330NFC clamps equipped with a locking latch. Pre-arming of the clamp directly on the plate with locking of the clamp on it. Automatic closing and releasing of the clamp from the plate when placed on the conductor by unlocking the latch.





# EY322NG

STANDARDS
IEC 61230

## / USE

Basic version with MT330N clamps. Pre-arming of the clamp and then placing it on the plate of the armed clamp. Locking spring on the plate allowing the clamp to be locked on the plate. Release of the plate and automatic closing of the clamp when placed on the conductor.

| Reference | Max. Isc | Short-circuit cable cross-section | Short-circuit cable length | Type of short-circuit cables | Earthing cable length | Earth clamp | Earthing storage | Insulating pole | Insulating pole storage | Earth rod |
|---|---|---|---|---|---|---|---|---|---|---|
| EY3222NG6 | 6.5kA/1s - 9.5kA/0,5s | 25mm² | 2,75 m | Copper | 16m | T702 | TD386 | PPOL2 /020 APV | HTR11100 | 701 |
| EY3222NG | 8kA/1s - 13kA/0,5s | 35mm² | | | | | | | | |
| EY3222NG13 | 13kA/1s - 18,5kA/0,5s | 50mm² | | | | | | | | |
| EY3222NG18 | 18kA/1s | 70mm² | | | | | | | | |
| EY3222NG6xx | 6.5kA/1s - 9.5kA/0,5s | 25mm² | At choice | Copper or alu | At choice | T702 or NB8 | At choice | | | |
| EY3222NG8xx | 8kA/1s - 13kA/0,5s | 35mm² | | | | | | | | |
| EY3222NG13xx | 13kA/1s - 18,5kA/0,5s | 50mm² | | | | | | | | |
| EY3222NG18xx | 18kA/1s | 70mm² | | | | | | | | |






# EY322NFC

STANDARDS
IEC 61230

## / USE

Lock-in version with MT330NFC clamps equipped with a locking latch.
Pre-arming of the clamp directly on the plate with locking of the clamp on it.
Automatic closing and releasing of the clamp from the plate when placed on the conductor by unlocking the latch.

| Reference | Max. Isc | Short-circuit cable cross-section | Short-circuit cable length | Type of short-circuit cables | Earthing cable length | Earth clamp | Earthing storage | Insulating pole | Insulating pole storage | Earth rod |
|---|---|---|---|---|---|---|---|---|---|---|
| EY3222NFC6 | 6.5kA/1s - 9.5kA/0,5s | 25mm² | 2.75 m | Copper | 16 m | T702 | TD386 | PPOL2 /020 APV | HTR11100 | 701 |
| EY3222NFC | 8kA/1s - 13kA/0,5s | 35mm² | | | | | | | | |
| EY3222NFC13 | 13kA/1s - 18,5kA/0,5s | 50mm² | | | | | | | | |
| EY3222NFC18 | 18kA/1s | 70mm² | | | | | | | | |
| EY3222NFC6xx | 6.5kA/1s - 9.5kA/0,5s | 25mm² | At choice | Copper or alu | At choice | T702 or NB8 | At choice | | | |
| EY3222NFC8xx | 8kA/1s - 13kA/0,5s | 35mm² | | | | | | | | |
| EY3222NFC13xx | 13kA/1s - 18,5kA/0,5s | 50mm² | | | | | | | | |
| EY3222NFC18xx | 18kA/1s | 70mm² | | | | | | | | |



# WI332

## EARTHING AND SHORT-CIRCUITING DEVICES MV

STANDARDS

IEC 61230 / IEC 61138

### / TECHNICAL SPECIFICATIONS

- Isc Max (short-circuit current) : 13.6 kA/0.3s
- Short-circuit intensity : 11.6 kA/0.5s
- Short-circuit intensity : 8.2 kA/1s

| Reference | Clamp tightenning | Conductor type | Conductor diameter | Cable material | Cable isolation type | Phase cable nbr | Phase(s) cable cross-section | Phase(s) cable length | Cross -section | Floor cable lenght | Way of access |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WI332 | 3÷32 mm | Round | 3÷32 | Copper | Silicone | 2 | 35 mm² | 2.5 m | 16 mm² | 16 m | From the floor |



# BMT100-LINE

## EARTHING, SHORT-CIRCUIT AND EQUIPOTENTIALITY DEVICE MV

STANDARDS

IEC 61230 / IEC 61138

### / USE

Device for earthing and short-circuiting and equipotentiality of mt terminals in the transition from overhead MV lines in bare conductors to MV lines in cable
- No. 1 light alloy pliers with spring clamping ø 3÷20 mm
- No. 3 swivel light alloy pliers with DIN hexagonal shank screw clamping with socket:
- ø 3÷18 mm on cylindrical conductors
- Max thickness 60x12 mm on flat bars
- No. 1 DIN operating head
- No. 1 gripper holder plate
- No. 1 stainless steel recovery hook
- No. 2 copper cables sect. 16 mm2 L=4 m covered in silicone sheathing
- No. 2 copper cables sect. 25 mm2 L=2 m covered in silicone sheathing
- No. 1 insulating foil in 2 elements L= 1m + 0.6 m (total length 1.6 m) that can be assembled with simplex joint complete with nylon cloth bag
- no. 1 collet holder stafa

| Reference | Clamp tightenning | Conductor type | Cable isolation type | Phase cable number | Phases cable cross-section | Phases cable length | Cross -section | Floor cable lenght | Isc Max | Short-circuit intensity | Short-circuit intensity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BMT100-LINE | 3/20 mm | Round, Flat | Silicone | 2 | 25 mm² | 2 m | 16 m² | 4 m | 11.1 kA/0.3s | 8.8 kA/0.5s | 6.2 kA/1s |



# BMT18-CAB

## EARTHING AND SHORT-CIRCUITING DEVICE

STANDARDS

IEC 61230 / IEC 61138

### / USE

Earthing and shorting device for mt systems in bare conductors of mt/bt secondary substations - cylindrical conductors
- No. 3 light alloy pliers with spring clamping ø 3÷20 mm
- No. 1 pliers holder head with recovery hook
- No. 2 copper cables sect. 35 mm2 L=2 m covered in silicone sheathing
- No. 1 copper ground cable sect. 16 mm2 L=6 m covered with silicone sheath
- No. 1 light alloy self-milling ground clamp with screw clamping thickness 0÷40 mm
- No. 1 insulating foil L=2.2 m in two joinable parts with carrying bag and female quick couple

| Reference | Clamp tightenning | Conductor type | Cable isolation type | Phase cable number | Vise clamping capacity | Phases cable cross-section | Phases cable length | Cross -section | Floor cable lenght | Isc Max | Short-circuit intensity | Short-circuit intensity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMT18-CAB | 3/20 mm | Round | Silicone | 2 | 0/40 | 35 mm² | 2 m | 16 m² | 6 m | 13.6 | 11.6 kA/0.5s | 8.2 kA/1s |



# BMT18-LINE

## EARTHING AND SHORT-CIRCUITING DEVICE OVERHEAD LINES

STANDARDS

IEC 61230 / IEC 61138

### / USE

Earthing and shorting device for overhead lines in bare conductors spring clamps ø 3÷20 mm
- No. 4 light alloy pliers with spring clamping ø 3÷20 mm
- No. 1 pliers holder head with recovery hook
- No. 2 copper cables sect. 35 mm2 L=2 m covered in silicone sheathing
- No. 1 copper ground cable sect. 16 mm2 L=14 m covered in silicone sheathing
- No. 1 winder
- No. 2 earth electrodes connected with copper cable sect. 16 mm2 L=6 m covered in silicone sheathing
- No. 1 insulating foil L=3.4 m in 3 joinable parts with carrying bag
- No. 1 sheet metal container for storing and transporting the device

| Reference | Clamp tightenning | Conductor type | Cable isolation type | Phase cable number | Phases cable cross-section | Phases cable length | Cross -section | Floor cable lenght | Isc Max | Short-circuit intensity | Short-circuit intensity |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BMT18-LINE | 3/20 mm | Round | Silicone | 2 | 35 mm² | 2 m | 16 m² | 14 m | 13.6 kA/0.3s | 11.6 kA/0.5s | 8.2 kA/1s |



# MOBY22

## MOBILE UNINTERRUPTIBLE POWER SUPPLY DEVICE FOR MV OVERHEAD LINES IN BARE CONDUCTORS

### / USE

Mobile uninterruptible power supply device for MV overhead lines in bare conductors

| Reference | Clamp tigh-tenning | Conductor type | Conductor diameter | Cable material | Cable isolation type | Phase cable nbr | Phase(s) cable cross-section | Phase(s) cable lengt | In line (aerial) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| MOBY22 | 3÷20 mm | Round | 3÷20 | Copper | Silicone | 2 | 16 mm² | 6 m | Bare | 10 kg |



# ROLLER20

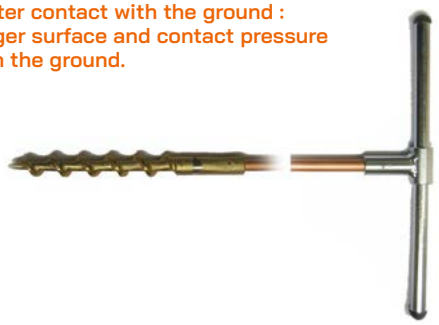
## MOBILE GROUND DEVICE

### / USE

Mobile ground device for stringing and repairing MV overhead lines

| Reference | Clamp material | Cable material | Cable isolation type | Cross -section | Floor cable lengh | In line (aerial) | Short -circuit intensity |
|---|---|---|---|---|---|---|---|
| ROLLER20 | Aluminium | Copper | Silicone | 16 mm² | 5m | Isolated | 6 |

Better contact with the ground : bigger surface and contact pressure with the ground.





- Ref. 701AIL : A fin at the tip prevents the rod rotating once in the ground.
- Ref. 701M : a weight on top of the rod allows to easily remove the rod from the ground.

# PTT130
## SCREWIN EARTH ROD

STANDARDS
IEC 61230

### / TECHNICAL SPECIFICATIONS

- Made of copper-plated steel, diameter 17 mm, with bronze screw and sliding operating lever.
- Designed to receive earthing device clamps (T702, T702G, NB8, N3B8, NBD25,...)

| Reference | Dimensions | Weight | Optional case |
|---|---|---|---|
| PTT100 | 1 002 x 405 x 30 mm | 3.00 kg | HPTT100 |
| PTT130 | 1 302 x 405 x 30 mm | 3.44 kg | HPTT130 |

For other dimensions, please contact us.

# 701
## HEXAGONAL EARTH ROD

STANDARDS
IEC 61230

### / USE

Designed to receive earthing device clamps (T702, T702G, NB8, N3B8, NBD25 ...).

### / TECHNICAL SPECIFICATIONS

Manufactured in rust-proof galvanised steel.

| Reference | Length | Weight | Diameter |
|---|---|---|---|
| 701 | 106 cm | 2,46 kg | 22 mm |
| 701AIL | | 2,50 kg | |
| 701M | | 4 kg | |





# ISPI
## 1000V INSULATING HANDLE FOR EARTH RODS

### / USE

Product allowing the installation of marker posts or earth rods in complete safety, compatible with rods type 701.

### / TECHNICAL SPECIFICATIONS

Made of insulating material resistant to a voltage of 17 kV.
Opening diameter for rods up to 24 mm diameter.
Steel anvil Ø 40mm (on request anvil made of non conductive material).
Distance between the 2 protective guards : 130 mm.
Profile of the guards limiting the «rolling effect».
Hole of 6 mm diameter allowing the passage of a strap.

| Reference | Dimensions | Weight |
|---|---|---|
| ISPI | Ø 130 x 160 mm | 540 g |




Lightweight

# HMALT
## CARRYING BAG FOR EARTHING DEVICE

### / TECHNICAL SPECIFICATIONS

Very sturdy, equipped with 4 handles, label holderon the outside and A4 document holder window onthe inside.

| Reference | Dimensions | Weight |
|---|---|---|
| HMALT | 600 x 250 x 200 mm | 980 g |
| PHMALT | 350 x 260 x 140 mm | 420 g |




# HMALTROUL
## CARRYING BAG FOR EARTHING DEVICE

### / TECHNICAL SPECIFICATIONS

Very robust, equipped with 4 handles, an external label holder and an internal window for A4 documents.

| Reference | Dimensions | Weight |
|---|---|---|
| HMALTROUL | 500 x 450 x 250 mm | 1 kg |




# CM535
## CARRYING CASE FOR EARTHING DEVICE

| Reference | Dimensions | Weight |
|---|---|---|
| CM535 | 910 x 240 x 105 mm | 6.34 kg |




# TD386
## CARRYING CASE FOR EARTHING DEVICE

| Reference | Dimensions | Weight |
|---|---|---|
| TD386PM | 590 x 300 x 145 mm | 3,9 kg |
| TD386 | 640 x 240 x 160 mm | 4,2 kg |
| TD386GM | 800 x 300 x 200 mm | 6,5 kg |

# HIGH VOLTAGE RANGE



**High voltage** substation

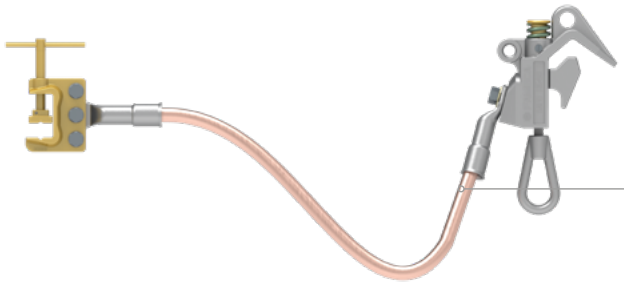


**High voltage** overhead lines



**High voltage** overhead lines

# CONFIGURE YOUR EARTHING SYSTEMS FOR HIGH VOLTAGE

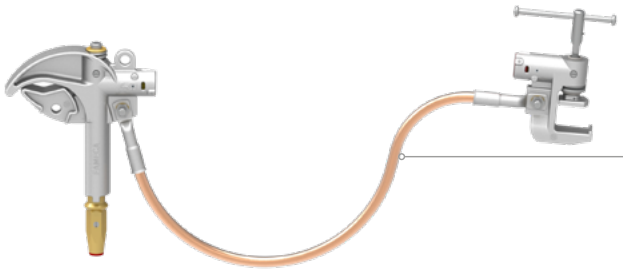


SECTION EARTH

mm²

LENGTH EARTH

m



SECTION EARTH

mm²

LENGTH EARTH

m

## DEVICE CODING CONFIGURATOR

| EHT<br>EHTS | SA3<br>540<br>S15 | B<br>HE<br>X | 95 | 020<br>XX<br>XXX | GTS<br>N3B | H<br>C |
|---|---|---|---|---|---|---|

**Packaging:**
H = soft case
C = metal case

**Earth clamp code:**
GTS = GTE25COS
N3B = N3B8

**Length of earth cables:**
Example:
010 = 1 m
020 = 2 m
100 = 10 m

**Earth cable cross-section: mm²**

**End fitting:**
**B =** bayonet
**HE =** hexagonal
**X =** without termination

**Phase clamp code**
SA3 = SA342
540 = S540
S15 = S1560

**EHT =** High-voltage set with PVC cable
**EHTS =** High-voltage set with silicone cable

# SELECTION GUIDE

## REGULAR DEVICES

| | CLAMPS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | LINE | | | SUBSTATION | | | | |
| **Code** | **540** | **S15** | **HT1** | **S20** | **SF2** | **E20** | **ATL** | |
| |  S540 |  S1560 |  HT1080 |  S20120 |  SF200 |  E200 |  ATL110 | |
| **Clamping capacity (mm)** |  Ø 5-40 mm |  Ø 15-60 mm |  Ø 10-80 mm |  Ø 20-120 mm |  Ø 120-220 mm |  Ø 10-70 mm |  Ø 14-70 mm | |
| | | | | | |  • **Flat bar:** up to 100 mm • Vertical busbar: 30x100 mm • **Horizontal busbar:** 60x100mm |  • **Flat bar:** up to 20-110 mm • **Inclined bar:** 50x120 mm | |
| | | | | | | |  Sphere: Ø 25 mm | |
| **Isc max** | 31,5 kA/1s | 40 kA/1s | 40 kA/1s | 40 kA/1s | 40 kA/1s | 31,5 kA/1s | 31,5 kA/0,5s | |
| **Material** | Alu | Alu | Alu | Alu | Alu | Alu | Alu | |
| **Connection hole** | Ø 12 mm | Ø 12 mm | M12 | Ø 12 mm | Ø 12 mm | Ø 12 mm | Ø 12 mm | |
| **Closed clamp dimensions** | 120 x 52 x 230 mm | 150 x 52 x 280 mm | 150 x 45 x 280 mm | 220 x 170 x 40 mm | 245 x 55 x 400 mm | 250 x 210 x100 mm | 260 x 290 x 90 mm | |
| **Weight** | 1,4 kg | 1,4 kg | 1,3 kg | 1,6 kg | 3,7 kg | 2,15 kg | 1,35 kg | |

## / CHOICE OF END FITTING FOR CLAMPS

(to be added at the end of the selected reference)

| | | | |
|---|---|---|---|
|  HE |  AN |  B |  X46 |

| | EARTH CLAMPS | | | |
|---|---|---|---|---|
| | LINE | SUBSTATION | | |
| | GTS | NBC | NB3 | N3B |
| |  |  |  |  |
| | GTE25COS | NBCRTTS | NB33S | N3B8 |
| | | | | |
| |  0-25 mm |  0-33mm |  0-33mm |  0-30mm |
| | | | |  Sphere: Ø 19 mm |
| | 40 kA/1s | 40 kA/1s | 31,5 kA/1s | 31,5 kA/1s |
| | Alu | Cupro - Alu | Cupro - Alu | Cupro - Alu |
| | M12 | Ø 12 mm | Ø 12 mm | Ø 10 mm |
| | 170 x 100 x 60 mm | 120 x 110 x 35 mm | 120 x 110 x 35 mm | 40 x 72 x 130 mm |
| | 1,6 kg | 1,1 kg | 1,1 kg | 0,75 kg |



# WI560SA-D-95

## EARTHING AND SHORT-CIRCUITING DEVICE

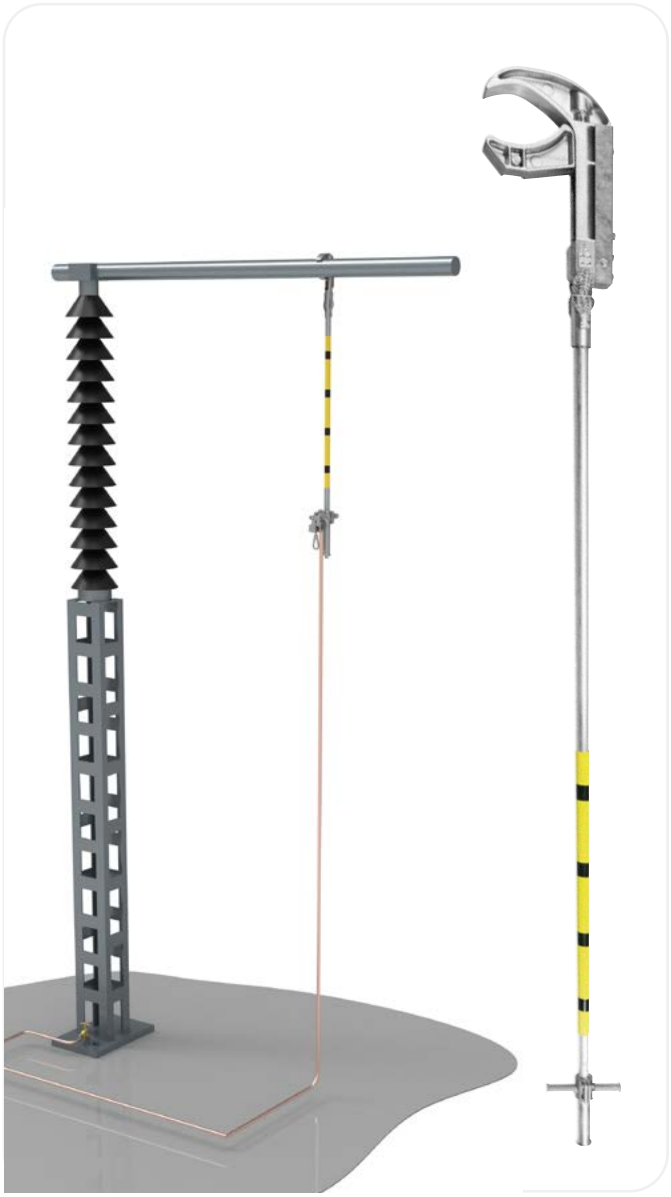
STANDARDS

IEC 61230 / IEC 61138

### / TECHNICAL SPECIFICATIONS

- Isc Max (short-circuit current) : 40.4kA/0.3s
- Short-circuit intensity : 35.6 kA/0.5s
- Short-circuit intensity : 25.2 kA/1s

| Reference | Clamp material | Clamp tigh-tenning | Conductor type | Cable material | Cable isola-tion type | Phase cable nbr | Vise clamping capacity | Phase(s) cable cross-section | Phase(s) cable length |
|---|---|---|---|---|---|---|---|---|---|
| WI560SA-D-95 | Brass | 5÷60 mm | Round | Copper | Silicone | 3 | Up to 40 mm | 95 mm² | 9 m |



# CHC31

## INTERMEDIATE EARTHING STICK FOR CONNECTIONS AT GREAT HEIGHT, MAX Isc 31,5 KA/1S

STANDARDS
IEC 61230

### / USE

Intermediate sticks for connections at heights are used to relieve the operator by bringing the earthing point 3 or 4 metres lower, which facilitates the various operations :
- checking for the absence of the nominal voltage,
- placing and clamping the aluminium stick on the conductor using the insulating stick,
- releasing the operating stick,
- placing the flexible earthing device between the earthing point and the earth bar,
- repeating the operation for each phase,
- carrying out the same operation in reverse order for removal.

The CHC31 conductor pole must be installed using :
- either specific CHI31 type dedicated insulating pole
- or an RTTE type insulating stick equipped with an ERTTECH end fitting

These sticks are made of IEC 60855 type foam-filled tubes, colour orange. It is strongly recommended that they be checked regularly.

### / TECHNICAL SPECIFICATIONS

Aluminium tube Ø 31/35, cross-section 207 mm², with a special light alloy contact clamp with an elastic conductor clamping system fitted at the top.
- Clamping ranges Ø 10 to 60 mm, Ø 20 to 120 mm,Ø 70 to 120 mm or 120 to 220 mm (depending onhead type).
- The electrical contact between the line clamp and the conductor stick is made directly between the clamp and the aluminium tube as well as by 2 tin-plated copper flexible braids.
  The clamp is tightened on the conductor using the lower insulated section, with the male end fitting engaged in the female end fitting.
- The bottom of the Ø 35 tube includes two Ø 30 aluminium earth studs designed to take earth clamps, type S540, S1560 for example.

| Reference | Tightening capacity | Length | Weight | Cover |
|---|---|---|---|---|
| CHC3120060 | Ø 10-60 mm | 2 m | 5 kg | H2P330RTE |
| CHC31200120 | Ø 70-120 mm | | 5,2 kg | |
| CHC3120020120 | Ø 20-120 mm | | 5,3 kg | |
| CHC3130060 | Ø 10-60 mm | 3 m | 5,6 kg | |
| CHC31300120 | Ø 70-120 mm | | 5,8 kg | |
| CHC3130020120 | Ø 20-120 mm | | 5,9 kg | |
| CHC31300220 | Ø 120-220 mm | | 10,8 kg | |
| CHC3140060 | Ø 10-60 mm | 4 m | 6,2 kg | H2P450RTE |
| CHC31400120 | Ø 70-120 mm | | 6,4 kg | |
| CHC3140020120 | Ø 20-120 mm | | 6,5 kg | |
| CHC31400220 | Ø 120-220 mm | | 11 kg | |
| CHC31500120 | Ø 70-120 mm | 5 m | 11,6 kg | / |



Clamp
CHC31_60



Clamp
CHC31_120



Clamp
CHC31_220



Clamp
CHC31_20120



To be used with an end fitted HE34 PRE pole.

# SMAPE (SMArt Portable Earth)

EARTHING SYSTEM WITH INTERLOCKING BETWEEN THE LINE CLAMP AND THE EARTH CLAMP

PATENTED

STANDARDS
IEC 61230

- 100% secure (PATENTED).
- Lightweight and compact device.
- Easy to handle, sturdy earth clamp.

## / USE

This unique concept is based on a mechanism that allows a choice between a conventional or magnetic key without power.
In the magnetic version without key insertion, the opening is achieved a key with a magnetic code that activates the moving parts of the cylinder without any mechanical contact.
The entire coded module located in the cylinder is coated and completely sealed.
This new version is adapted to extreme situations, corrosion, sand, humidity, frost, vandalism...



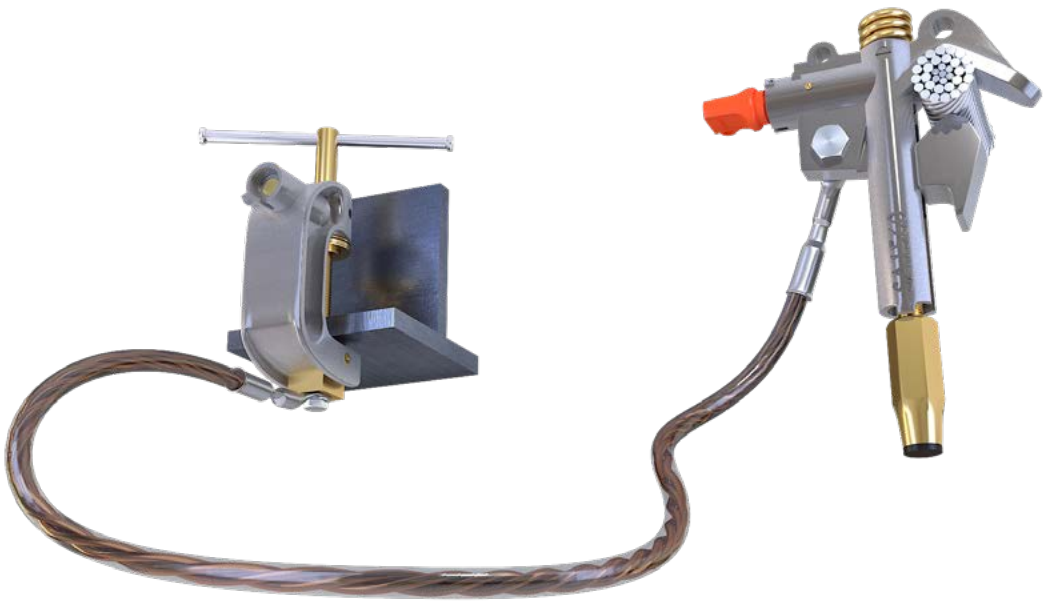
Classic key



Magnetic key

- Strong key that protects you.
- Automatic checking that the clamp is tight enough.
- Ergonomic design, easy to use.





# SELECTION GUIDE

## INTERLOCK DEVICE (SMAPE)

| | INTERLOCK PHASE CLAMPS | | | | | | |
|---|---|---|---|---|---|---|---|
| | LINE | | | | LINE + SUBSTATION | SUBSTATION | |
| **Code** | **P0** | **P7** | **P3** | **P6** | **P1** | **P2** | **P4** |
| |  SA342 |  SMA342 |  SAP1060 |  SAE200 |  SA1560 |  SAP20120 |  SAF220 |
| **Clamping capacity (mm)** | Ø 3-42 mm | Ø 3-42 mm | Ø 10-60 mm | Ø 10-70 mm | Ø 5-60 mm | Ø 20-120 mm | Ø 120-200 mm |
| | 5 mm | 5 mm | | Flat bar: up to 100 mm Vertical busbar: 30x100 mm Horizontal busbar: 60x100mm | | | |
| | | | | | | | |
| **Isc max** | 40 kA/1s | 31,5 kA/1s | 31,5 kA/1s | 31,5 kA/1s | 40 kA/1s | 40 kA/1s | 40 kA/1s |
| **Material** | Alu | Alu | Alu | Alu | Alu | Alu | Alu |
| **Connection hole** | Ø 12 mm | Ø 12 mm | Ø 12 mm | Ø 12 mm | Ø 12 mm | Ø 12 mm | Ø 12 mm |
| **Closed clamp dimensions** | 215 x 180 x 60 mm | 280 x 255 x 300 mm | 225 x 150 x 50 mm | 225 x 255 x 72 mm | 200 x 225 x 80 mm | 245 x 220 x 40 mm | 360 x 280 x 55 mm |
| **Weight** | 1,2 kg | 2,2 kg | 1,3 kg | 2,2 kg | 1,3 kg | 1,6 kg | 3,2 kg |



| | INTERLOCK EARTH CLAMPS | | | |
|---|---|---|---|---|
| | LINE + SUBSTATION | LINE + SUBSTATION | LINE + SUBSTATION | LINE + SUBSTATION |
| P5 | GT | N3 | NC | NB |
|  |  |  |  |  |
| SANB2025 | SAGTE25 | SANB33S | SANBCRTTS | SANBE2025 |
|  Ø 25mm | | | |  Ø 30 mm |
| |  40 mm |  35 mm |  30 mm | |
|  Sphere: Ø 25 mm | | | |  Sphere: Ø 20-25 mm |
| 31,5 kA/1s | 40 kA/1s | 40 kA/1s | 40 kA/1s and 63 kA/0,5s | 40 kA/1s |
| Alu | Alu | Alu | Alu | Alu |
| M12 | M12 | Ø 12 mm | Ø 12 mm | Ø 12 mm |
| 175 x 135 x 40 mm | 190 x 230 x 50 mm | 165 x 180 x 40 mm | 165 x 180 x 40 mm | 165 x 180 x 40 mm |
| 0,75kg | 1,8 kg | 1,2 kg | 1,2 kg | 1,2 kg |

## / CHOICE OF TERMINATIONS FOR CLAMPS

(to be added at the end of the selected reference)

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| HE | AN | B | X46 | AP |

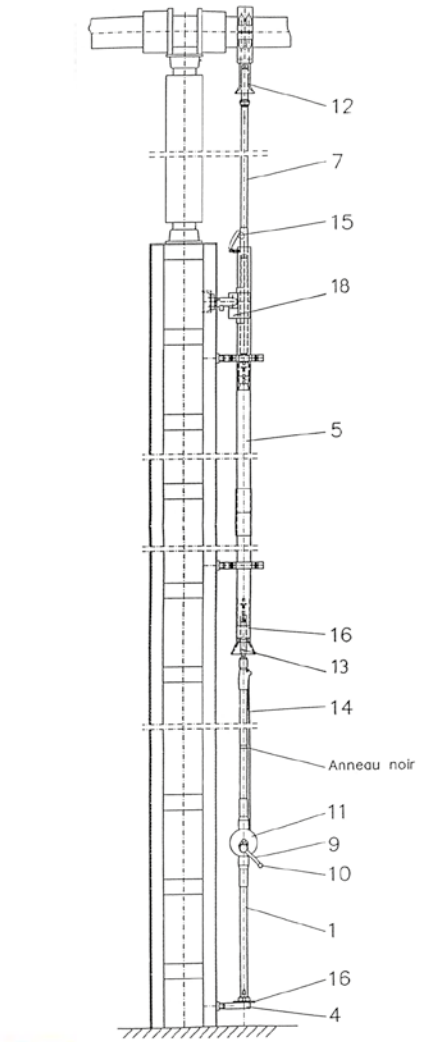
# SMAPE (SMArt Portable Earth)

REFERENCES: SETS – 1 CLAMP / EARTH CLAMP PAIR, WITHOUT CABLE, WITH ONE KEY PER PAIR

| | Ref. | | Clamp | Earth clamp | Clamp end fitting type |
|---|---|---|---|---|---|
| |  Classic |  Magnetic | | | |
| SUBSTATION | S1P1HNC | MA | SA1560  | SANBCRTTS  | HE |
| | S1P1BNC | MA | | | B |
| | S1P1XNC | MA | | | X46 |
| | S1P2HNC | MA | SAP20120  | | HE |
| | S1P2BNC | MA | | | B |
| | S1P2XNC | MA | | | X46 |
| | S1P4HNC | MA | SAF220  | | HE |
| | S1P4BNC | MA | | | B |
| | S1P4XNC | MA | | | X46 |
| | S1P1HN3 | MA | SA1560  | SANB33S  | HE |
| | S1P2HN3 | MA | SAP20120  | | |
| | S1P4HN3 | MA | SAF220  | | |
| SUBSTATION PIC/PIGME | S1P5VNC | MA | SANB2025  | SANBCRTTS  | AP |
| | S1P5HNC | MA | | | HE |
| | S1P5BNC | MA | | | B |
| | S1P5VNB | MA | | SANBE2025  | AP |
| | S1P5HNB | MA | | | HE |
| | S1P5BNB | MA | | | B |
| LINE | S1P0AGT | MA | SA342  | SAGTE25  | AN |
| | S1P0XGT | MA | | | X46 |
| | S1P0BGT | MA | | | B |
| | S1P0HGT | MA | | | HE |
| | S1P1AGT | MA | SA1560  | | AN |
| | S1P1XGT | MA | | | X46 |
| | S1P1BGT | MA | | | B |
| | S1P1HGT | MA | | | HE |
| | S1P3AGT | MA | SAP1060  | | AN |
| | S1P3BGT | MA | | | B |
| | S1P3HGT | MA | | | HE |
| | S1P7AGT | MA | SMA342  | | AN / HE / B |

REFERENCES: SETS – 3 CLAMP / EARTH CLAMP PAIRS, WITHOUT CABLE, WITH ONE KEY PER PAIR

| | Ref. | Earth clamp | Clamp | Clamp end fitting type |
|---|---|---|---|---|
| | single item | | | |
| LINE | S1P0AGTMA | SAGTE25  | SA342  | AN  |
| | S1P0XGTMA | | | X46  |
| | S1P0HGTMA | | | HE  |
| | S1P1AGTMA | | SA1560  | AN  |
| | S1P1XGTMA | | | X46  |
| | S1P1HGTMA | | | HE  |
| | S1P3AGTMA | | SAP1060  | AN  |
| | S1P3HGTMA | | | HE  |
| | S1P3XGTMA | | | X46  |
| SUBSTATION | S1P1HNCMA | SANBCRTTS  | SA1560  | HE  |
| | S1P2HNCMA | | SAP20120  | HE  |
| | S1P2XNCMA | | | CL  |
| | S1P4HNCMA | | SAF220  | HE  |
| | S1P4XNCMA | | | X46  |
| | S1P6HNCMA | | SAE220  | HE  |
| SUBSTATION PIC/PIGME | S1P5VNCMA | SANBCRTTS  | SANB2025  | AP  |
| | S1P5HNCMA | | | HE  |
| | S1P5BNCMA | | | B  |








# FIXED DEVICE

## FIXED EARTHING ROD FOR HIGH BUSBAR SETS

STANDARDS
IEC 61230

### / USE

A proven solution for earthing high-voltage installations, which is also highly short-circuit resistant. Our earthing devices are widely used at EDF test facilities such as the high-power laboratory “Les Renardières”. Offer subject to project study.

### / TECHNICAL SPECIFICATIONS

- Maximum admissible Isc: 80 kA / 0.5 s (complete set)
- Complete set comprises:

**1) Earthing pole (1), permanently installed**
- Aluminium earthing pole, housed in a protective tube (5).
- The pole is equipped with a copper cable (3) for connection to the earthing network, with the cable end pressed against the inside wall of the pole and connected to the line conductor by means of the contact clamp (6).
- Length: approx. 4.25 m.

**2) Contact clamp made of aluminium (18)**
- Bolted onto a wall-mounted console; this assembly is intended to be permanently installed on the earthing network of the installation.

**3) Protective tube (5)**
- Aluminium tube with locking lug, used for guiding and fixing to the structure.
- Length: approx. 4.60 m.
- The tube houses the earthing pole as long as the installation is not earthed and short-circuited.
- Designed to remain permanently installed on the structure; fastened by two U-shaped fixings made of hot-dip galvanised steel.
- The indicated dimensions correspond to a 300 kV substation, for a height of approx. 12 m.

**4) Base support in hot-dip galvanised steel (4)**
- For a permanently installed operating pole intended to be mounted on the structure.
- This support is removable; it can be dismantled.
- Intended to facilitate the guidance of the operating pole.

**5) Operating pole in fibreglass (1), in 3 telescopic sections with crank**
- Used to raise and release the earthing pole.
- Overall length: approx. 7.60 m
- Transport length: approx. 3.80 m

**6) Weight: 18 kg**

**7) Telescopic operating pole assembly includes:**
- A safety handle with locking lug and removable handle (9—10).
- A simple planetary gear to facilitate operation of the handle (11).
- Synthetic traction straps with rollers to remove or reinstall the telescopic sections of the operating pole (14).
- Shock absorbers to prevent impacts between the different pole sections.
- A bayonet head made of steel with a torque limiter (13), entering into operation at the end of tightening and release of the earthing pole.
- An aluminium base comprising a tubular section with a bearing, used for centring on the base support and a crown ring (16) serving as an optional support point for retracting the pole.
- Reference marking and operating instructions, direction of operation and rotation of the operating pole, and a mark indicating the maximum extension limit of the telescopic pole in the form of a black ring.

# SERPAT

## AERIAL EARTHING LIFTING DEVICE

### / USE

The device helps the operator to lift the pole effortlessly, and makes it easier to install the earthing clamp on the phase for the operator.
Its second function is to secure the operator, thanks to a carabiner that keeps the earthing clamp from falling if this one is not well installed.

### / TECHNICAL SPECIFICATIONS

It consist of:

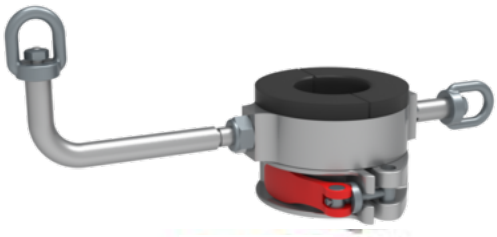
- 1 Rotative clamp with 3 adapters for poles diameter 38 x 39 x 40mm
- 1 hook
- 1 Snatch block
- 1 Big size carabiner
- 2 Small size carabiner
- 1 Insulating rope of Ø8mm
- 1 Carrying bag (HSERPAT)



Snatch block



Hook



Rotative clamp



Insulating rope



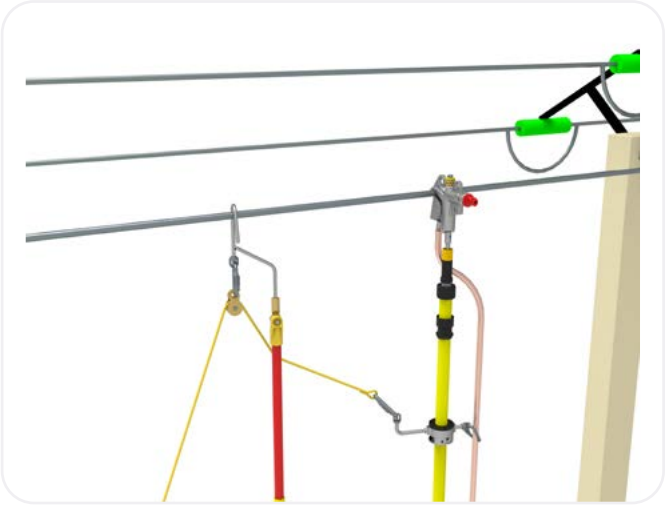
Carabiner big size
for earthing cable

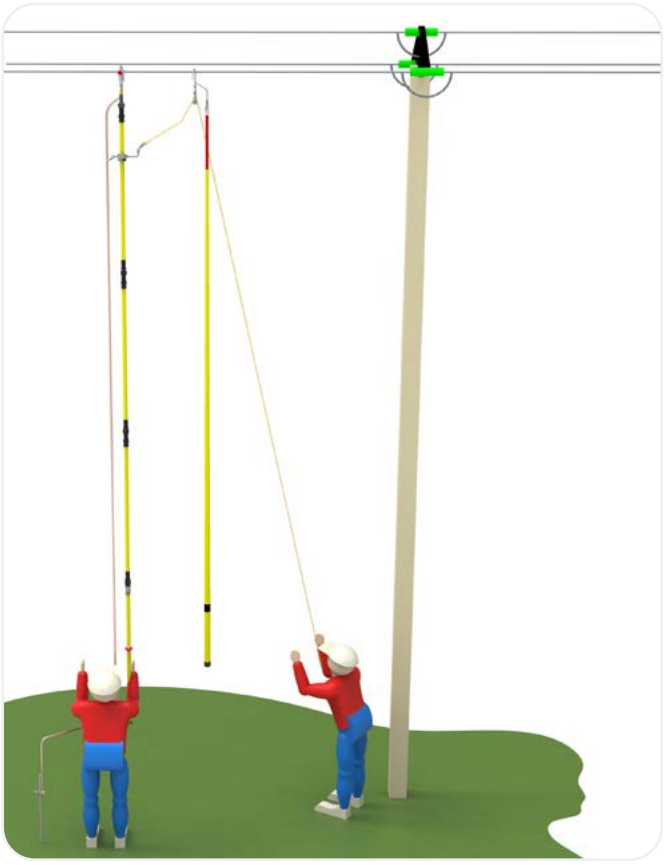


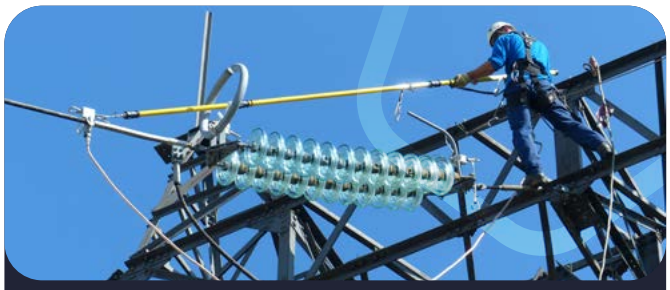
Carabiner small size
for lifting



Carrying bag







## S1P7AGTMA

EARTHING SYSTEM WITH CLAMP-TO-VICE SERVO CONTROL FOR 69/90KV AND 225KV TENSION TOWERS

STANDARDS
IEC 61230

- Allows the clamp to be positioned and clamped horizontally.

### / TECHNICAL SPECIFICATIONS

- Mechanical servo-control between clamp and vice.
- A locking system on the vice and the clamp, which ensures that the sequence of steps is respected.
- A mechanism that guarantees sufficient contact pressure for each clamping operation.

Set of 1 pair of pliers/vice delivered without cable and with a magnetic key:

**SMA342A PLIERS :**
- AN conductor,
- Isc max. : 31,5 kA/1s,
- roundly tightening capacity : Ø 3 to 42 mm,
- Weight : 2,2 kg



**SAGTE25 CLAMP :**
- Isc max. : 40 kA/1s,
- Weight : 1,8 kg
- Closing capacity flat : 40 mm





## S1P8RGTMA

EARTHING SYSTEM WITH LOCKING BETWEEN CLAMP AND JAW ISC : 39 KA/0,3S

STANDARDS
IEC 61230

- A lightweight, space-saving device.
- A sturdy vice that's easy to operate.
- A strong magnetic key to protect you.
- Automatic control of vise tightening.
- Ergonomic design makes it easy to use.

### / TECHNICAL SPECIFICATIONS

A mechanical link between the clamp and the winch
- A locking system between the lathe and the clamp that guarantees guarantees that the sequence of steps is followed.
- A mechanism to ensure sufficient contact pressure contact pressure for each tightening operation.

Set of 1 pair of pliers/tweezers delivered without cable and with magnetic key :



**SAPAC1060AG PLIERS :**
- Spring clamp
- Closing capacity Round Ø 10 a 60 mm
- Weight : 1,7 kg



**SAGTE25 CLAMP :**
- Weight : 1,8 kg
- Closing capacity flat : 40 mm



## S1P0ACAMA

APE SET WITH EARTHING CLAMP (CDTA) WITH MAGNETIC LOCK

STANDARDS
IEC 61230

### / USE

The CDTA earthing clamp allows you to maintain the clamp-to-earth (APE) servo-control for the following earthing operations:
- Shunt earthing,
- Multiple MALTs on a multi-beam transmission network, especially when towers are painted, to avoid potential differences. The CDTA clamp, connected to the SA342AN clamp, cannot be removed thanks to the horizontal axis, which prevents loosening as long as a SMAPE SAGTE25 clamp from an S1P0AGTMA assembly is still present on it. The operation of the clamp/vice interlock remains unchanged.

| Ref. | Short-circuit intensity | Dimensions | Key type | Weight |
|---|---|---|---|---|
| S1P0ACAMA | 31,5 kA/1s | 310x210x70mm | Magnetic | 3,8 kg |

• Earthing at great height from the ground.



# MALTAC1050

## EARTHING FROM THE GROUND WITH INSULATING ROPE

STANDARDS
IEC 61230

### / USE

Attachment/detachment of this clamp is done from the ground using an insulating rope previously passed over the conductor.
The clamp is raided on the conductor by pulling the 1st rope.
The clamp is detached by pulling the 2nd rope.
Passing the rope over the conductor can be done by :
- Using an insulating stick equipped with the adapter for reel holder PBU with the insulating reel
- Using the MAGICROU fastening device

### / TECHNICAL SPECIFICATIONS

• Connection to TFK earthing cable with cable lugs with stud hole diameter of 12 mm.
• Clamping capacity : Ø 10 to 50 mm
• Insulating rope (IEC 62192).

| Ref. | Description | Max. Isc | Dimensions | Weight |
|---|---|---|---|---|
| PAC1050SC | Clamp alone | 31,5 kA/1s | 220 x 220 x 80 mm | 1 kg |
| PAC1050AC | Single clamp with 30 m of insulating rope | | | |
| ENSPAC1050B01 | Set of 3 line clamps with earthing cables (95 mm² length 14 m) and earthing clamps, 3 x 30 m insulating rope and 3 earthing rods, delivered in soft cases | 25 kA/1s | 600 x 250 x 200 mm | 3 x 21 |



# MR50

## ROLLING EARTH DEVICE FOR CABLES UNREELING

STANDARDS
IEC 61230

### / USE

• This device is used for the unreeling of aerial electric line cables, for low, medium and high voltage.

### / TECHNICAL SPECIFICATIONS

• Tightening capacity on cylindrical conductor : from Ø 5 mm to Ø 50 mm
• Max Isc : 25 kA/1s

| Ref. | Description | Dimensions | Weight |
|---|---|---|---|
| MR50 | Rolling earth device for cables unreeling | 500 x 450 x 250 mm | 5 kg |
| MR50HE | Rolling earthing clamp for cable unwinding with HE end piece for installation with an insulating pole type PRE | | |



# DLT8

## VOLTAGE LIMITING DEVICE

### / USE

Under the new NFC 18-510 standard, working on disconnected network requires earthing on either side of the work area. The DLT8 is the only means authorised by the standard for creating the opening necessary in the earthing circuit to take certain measurements. The voltage limiting device is a single-phase device designed for use on HV lines. It is designed to be inserted in the earth circuit so as to be able to take measurements with a circuit breaker testing device for example.

### / TECHNICAL SPECIFICATIONS

The voltage limiting device has two positions:
• « OPEN » (position for taking measurements)
- it protects users against accidental voltage feedback by re-forming the earthing circuit.
- it limits the voltage at its terminals to under 50V.
• In the CLOSED position, it re-forms the earthing circuit.

| Ref. | Description |
|---|---|
| DLT8ENT | Voltage limiting device |
| DLT50APE | Voltage limiting device equipped with SMAPE system |

# ALUMINIUM AND COPPER EARTHING AND SHORT CIRCUIT CABLES

STANDARDS
IEC 61138

## / USE

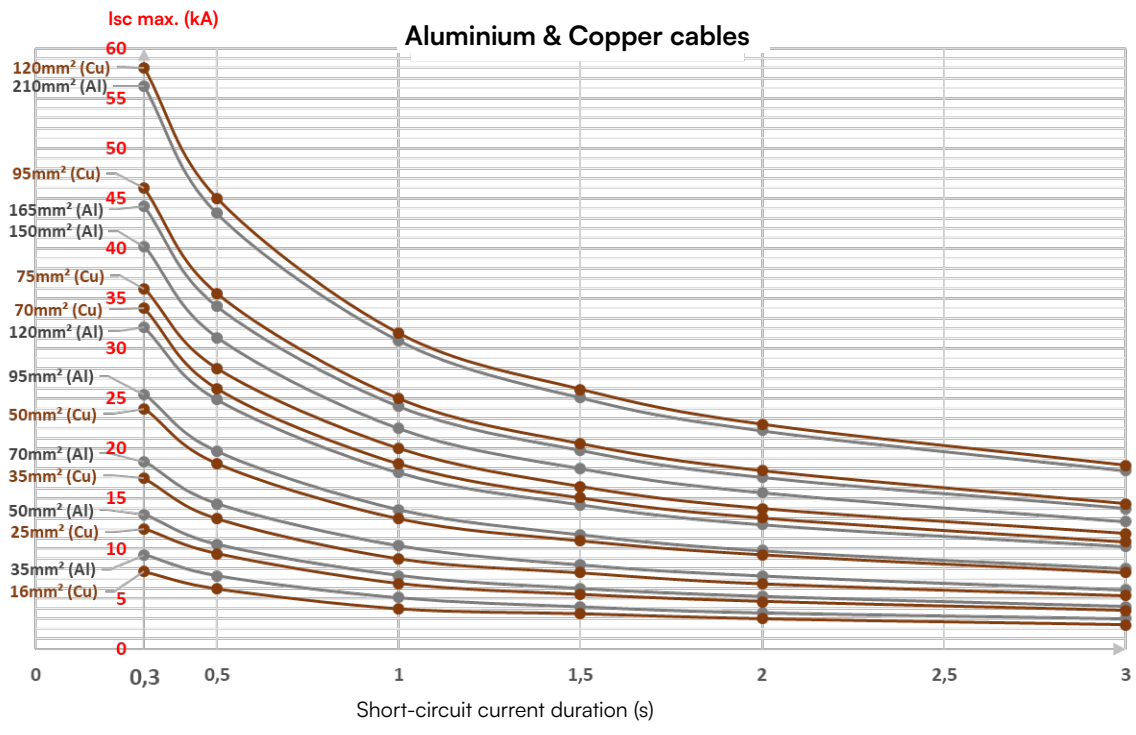
Cable for the construction of portable earthing and short-circuiting devices according to IEC 61230

## / TECHNICAL SPECIFICATIONS

Type TSC (Copper) - TAP (Aluminium) :
cable with extra flexible PVC sheath (ST11) for use from -25°C to +55°C.
Type SX (Copper) : cable with silicone sheath for use from -40°C to +70°C.

## / Isc max. of PAT cables

The following table defines the maximum short-circuit currents in kA admitted for aluminium and copper cables according to their cross-sections, the temperature at the end of the short-circuit (700°C for copper and 500°C for aluminium) and the short-circuit time.





## / Max. Isc. admissible (kA)

| | | | Increase in cable temperature at the end of a short circuit : | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Aluminium = 300°C<br>Copper = 450°C | | | Aluminium = 500°C<br>Copper = 700°C | | | |
| | Cable reference | Cable section | Duration of the Isc | | | | | | Weight/m |
| | | | 0,3 s | 0,5 s | 1 s | 0,3 s | 0,5 s | 1 s | |
| Equivalent | TAP35 | 35mm² (Al) | 8,5 | 6,5 | 4,5 | 9,5 | 7,5 | 5 | 0,1 kg |
| | TSC16<br>SX016 | 16mm² (Cu) | 6,5 | 5 | 3,5 | 7,5 | 6 | 4 | 0,15 kg |
| Equivalent | TAP50 | 50mm² (Al) | 12 | 9 | 6,5 | 13,5 | 10,5 | 7,5 | 0,17 kg |
| | TSC25<br>SX025 | 25mm² (Cu) | 10,5 | 8 | 5,5 | 12 | 9,5 | 6,5 | 0,3 kg |
| Equivalent | TAP70 | 70mm² (Al) | 16,5 | 13 | 9 | 18,5 | 14,5 | 10,5 | 0,25 kg |
| | TSC35<br>SX035 | 35mm² (Cu) | 14,5 | 11,5 | 8 | 17 | 13 | 9 | 0,35 kg |
| | TSC40<br>SX040 | 40mm² (Cu) | 16 | 13 | 9 | 19,5 | 15 | 10,5 | 0,45 kg |
| Equivalent | TAP95 | 95mm² (Al) | 22,5 | 17,5 | 12,5 | 25,5 | 19,5 | 14 | 0,35 kg |
| | TSC50<br>SX050 | 50mm² (Cu) | 21 | 16 | 11,5 | 24 | 18,5 | 13 | 0,5 kg |
| Equivalent | TAP120 | 120mm² (Al) | 28,5 | 22 | 15,5 | 32 | 25 | 17,5 | 0,45 kg |
| | TSC70<br>SX070 | 70mm² (Cu) | 29 | 22,5 | 16 | 34 | 26 | 18,5 | 0,7 kg |
| Equivalent | TAP150 | 150mm² (Al) | 35,5 | 27,5 | 19,5 | 40 | 31 | 22 | 0,5 kg |
| | TSC75 | 75mm² (Cu) | 31 | 24 | 17 | 36 | 28 | 20 | 0,75 kg |
| Equivalent | TAP165 | 165mm² (Al) | 39,5 | 30,5 | 21,5 | 44 | 34 | 24 | 0,6 kg |
| | TSC95<br>SX095 | 95mm² (Cu) | 39,5 | 30,5 | 21,5 | 46 | 35,5 | 25 | 1 kg |
| Equivalent | TAP210 | 210mm² (Al) | 50 | 38,5 | 27,5 | 56 | 43,5 | 31 | 0,75 kg |
| | TSC120<br>SX120 | 120mm² (Cu) | 50 | 38,5 | 27,5 | 58 | 45 | 31,5 | 1,3 kg |

# EARTHING LEADS WITH THEIR CONNECTIONS

## EXTRA FLEXIBLE COPPER AND ALUMINIUM

STANDARDS
IEC 61230



### / USE

Ensures the copper connection between the clamps and lathes of portable earthing and short-circuiting devices.

### / TECHNICAL SPECIFICATIONS

Connection by a watertight crimped DIN terminal, or by a 2nd crimping on the insulator, or by a heat-shrinkable sleeve with adhesive.

### / CODING

Copper cables



| TFK / TSF | 16 / 25 / 35 / 40 / 50 / 70 / 75 / 95 / 120 / 150 | 005 / 01 / 10 / XX / XXX | BB / DD / CD |
|---|---|---|---|

**Terminal hole diameter**
**B** = Ø8
**C** = Ø10
**D** = Ø12
**No letter =**
Ø10 at both ends

**Length : XX/XXX**
**Ex : 005** = 0,5m
**01** = 1m
**10** =10m

**Section :** mm²

**TFK** = extra flexible PVC sheath cable (ST11), -25°C to +55°C
**TSF** = silicone sheathed cable, - 40°C to +70°C

Aluminium cables



| CAP | 35 / 50 / 70 / 95 / 120 / 150 / 165 / 210 | 005 / 01 / 10 / XX / XXX | DD / CD |
|---|---|---|---|

**Terminal hole diameter**
**C** = Ø10
**D** = Ø12
**No letter =**
Ø10 at both ends

**Length : XX/XXX**
**Ex : 005** = 0,5m
**01** = 1m
**10** =10m

**Section :** mm²

**CAP** = extra flexible PVC sheath cable, -25°C to +55°C



# TFK/TSF CONNECTIONS

## COPPER CABLE CONNECTIONS

STANDARDS
IEC 61230

### / USE

Provide the copper connection between the lineclamps and the earth clamps in portable earthing and short-circuiting devices.

### / TECHNICAL SPECIFICATIONS

Connection by crimped DIN cable lugs sealed by a 2nd crimping of the insulation;
TFK type : connection made with extra flexible PVC sheathed cable (ST11) for use from -25°C to +55°C.
TSF type : connection made with silicone sheathed cable for use from -40°C to + 70°C.

| Reference | Cross-section | Cable length | Stud hole diameters | Type of sheathing |
|---|---|---|---|---|
| TFK1616 | 16 mm² | 16 m | Ø 10 mm | PVC |
| TFK3510 | 35 mm² | 10 m | | |
| TFK5005DD | 50 mm² | 5 m | Ø 12 mm | |
| TFK7010 | 70 mm² | 10 m | Ø 10 mm | |
| TFK7008DD | | 8 m | Ø 12 mm | |
| TFK9508 | 95 mm² | | Ø 10 mm | |
| TFK9508DD | | | Ø 12 mm | |
| TFK12010DD | 120 mm² | 10 m | | |
| TFK15010DD | 150 mm² | | | |



# CAP CONNECTIONS

## ALUMINIUM CABLE CONNECTIONS

STANDARDS
IEC 61230

### / USE

Provide the aluminium connection between the line clamps and the earth clamps in portable earthing and short-circuiting devices.

### / TECHNICAL SPECIFICATIONS

Connection by crimped DIN cable lugs sealed by a 2nd crimping of the insulation;
CAP type : connection made with extra flexible PVC sheathed cable (ST11) for use from -25°C to +55°C.

| References examples | Cross-section | Cable length | Stud hole diameters | Type of sheathing |
|---|---|---|---|---|
| CAP7012DD | 70 mm² | 12 m | Ø12 mm | PVC |
| CAP9502DD | 95 mm² | 2 m | | |
| CAP12015DD | 120 mm² | 15 m | | |
| CAP16506DD | 165 mm² | 6 m | | |
| CAP21010DD | 210 mm² | 10 m | | |

# EQUIPOTENTIAL BONDING RANGE



**LEQ** environment

# LEQ

EQUIPOTENTIAL BONDING

STANDARDS

IEC 61230 / IEC 61138



## / USE

To place all the metal parts in the work area at thesame potential by bonding with LEQ.

## / TECHNICAL SPECIFICATIONS

- Green transparent PVC insulated extra flexible copper cable.
- Cable ends crimped with 2 cable lugs with 12 mm stud holes for connecting HV line clamps and earthclamps.





## / Clamp-on whips

| Reference | Description |
|---|---|
| P0501560 | S1560 clamp and 50 cm pole |
| P05020120 | S20120 clamp and 50 cm pole |
| P050540 | S540 clamp and 50 cm pole |
| P050NBD25 | NBD25 clamp and 50 cm pole |
| P050MT525 | MT525 clamp and 50 cm pole |
| P050JAS19 | JAS19 winch and 50 cm pole |

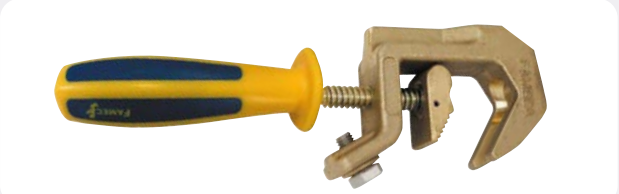
## / Winch

| Reference | Description |
|---|---|
| NBCRTTS | For earthing pads |
| NB33S | For flat bars |
| GTE25COS | For angle brackets |
| NB8 or N3B8 | For round |

## / Single hose

| Reference | Description |
|---|---|
| P050HE | Hose reel without clamp with funnel HE |

Other pole lengths available on request.



## / Cable for connecting equipment

| Reference | Description |
|---|---|
| TEQ3502DD | 2 m |
| TEQ3503DD | 3 m |
| TEQ3504DD | 4 m |
| TEQ3505DD | 5 m |
| TEQ3506DD | 6 m |
| TEQ3507DD | 7 m |
| TEQ3515DD | 15 m |

Other lengths available on request.



## / Lathe with handle

| Reference | Description |
|---|---|
| NBD25M | For flat bar, round, earth spike, spherical fixed point |
| PLE432M | For flat bar, cylindrical, earth spike |
| NB8M | |

## / Clamp

| Reference | Description |
|---|---|
| S1560HE | Use with end fitting HE |
| S20120HE | Clamp S20120 only |
| MT516M | For flat bar, cylindrical, earth spike, earth spike |



- Can be inserted in all equipotential bondings.
- Lightweight.
- Maintenance free.
- Secured after calibrated disconnection : the device can't be used again.

# LEQ35DB

## TEAR-OFF EQUIPOTENTIAL BONDING

STANDARDS

IEC 61230 / IEC 61138

### / USE

LEQ3DB allows an emergency disconnection of an equipotential bonding when used with mobile platform lifts. It allows to separate the platform from the driver without human intervention on the equipotential bonding.

### / TECHNICAL SPECIFICATIONS

- Minimal section : 35 mm².
- Permanent passage of 100 A.
- Compatible with line clamps and earth clamps.
- Breaking force : 50 daN.

| Reference | Dimensions | Weight |
|---|---|---|
| LEQ35DB | 710 x 30 x 30 mm | 700 g |



# KLEQTP

## EQUIPOTENTIAL BONDING SET FOR CONSTRUCTION COMPANIES

STANDARDS

IEC 61230 / IEC 61138

### / USE

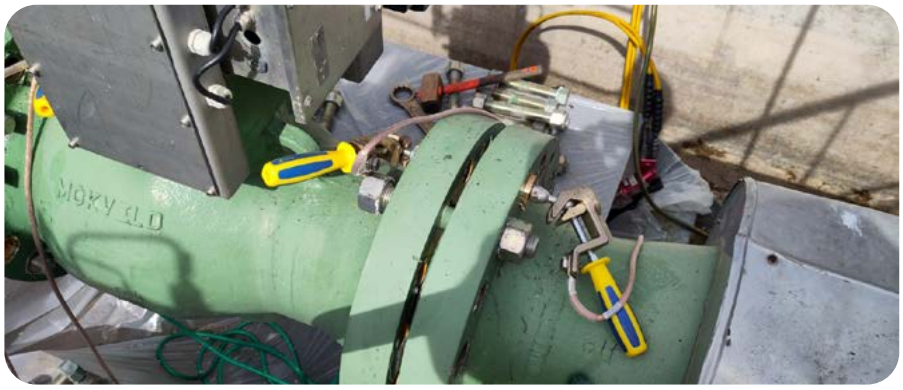
The equipotential bonding set KLEPT is designed for construction companies using platforms or scaffholding in the 50 meters vicinity zone of a live bare conductor.
The tear-off equipotential bonding LEQ35DB allows an emergency disconnection of this equipotential bonding without human intervention.

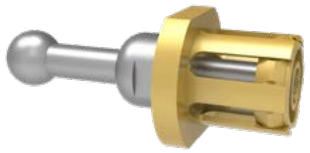
### / TECHNICAL SPECIFICATIONS

The device is composed of :
- 1 insulating stick with APV end fitting
- 1 clamp NBD25AP
- 1 earthing clamp NB33S
- 1 earthing copper cable 35 mm² length 15 m connecting the line clamp and the earthing clamp
- 1 earthing copper cable 35 mm² length 25 m
- 1 tear-off equipotential bonding LEQ35DB

The device is delivered in a transport bag HMALT.







- Ergonomic handle with hand guard.

# FPFB--

## BALL FIXING DEVICE FOR GAS SHUNT

### / USE

The device is an anchoring point for a gas conduit earthing system. It allows electrical discharge from a gas conduit. The device is fixed in a flange hole. When the ball anchor is tightened, the spacer expands to match the diameter of the flange hole. The system is therefore integral with the flange, and earthing is possible.

### / TECHNICAL SPECIFICATIONS

Composition :
- 1 extensible space
- 1 threaded ring
- 1 straight (or angled) ball fixpoint

The threaded ring cannot be removed from the extensible spacer for each device.
Only the ball fixture can be unscrewed from the assembly.

Ergonomic handle with hand guard.



# TL11

## CLAMPS ON INSULATING STICKS FOR EQUIPOTENTIAL BONDING

STANDARDS

IEC 61230 / IEC 61138

### / TECHNICAL SPECIFICATIONS

Epoxy resin insulating stick.
2 copper alloy clamps.
Clamps capacity: Ø 4 mm to Ø 32 mm.
40 mm wide flat bar.
Green transparent copper connection cable, length 1.2 m, cross-section 35 mm².
Isc: 8 kA/1 second.
Supplied in soft cover.
Other cross-sections and lengths available on request.

| Reference | Dimensions | Weight |
|---|---|---|
| TL11 | 910 x 60 x 40 mm | 1,25 kg |



# CESTEX

## MOBILE EQUIPOTENTIALITY DEVICE SUPPORT-CARRIER AND SUPPORT-BRIDGE

STANDARDS

IEC 61230 / IEC 61138

### / USE

To carry out equipotentiality during the use of auto-baskets and scaffolding
- No. 2 brass ground clamps with clamping capacity up to 35 mm
- No. 1 aluminum alloy ground clamp for connection to the basket with clamping capacity up to 80 mm
- No. 2 copper cables sect. 16 mm2 L=12 m covered with transparent silicone sheathing
- No. 2 steel reach winders for 12-meter ground conductors
- No. 1 hot-dip galvanized steel "T" earth electrode. Useful contact surface with the ground 0.075 m2
- No. 1 nylon cloth bag, for containing the device

| Reference | Clamp material | Clamp tightenning | Cable material | Cable isolation type | Vise clamping capacity | Cross -section | Floor cable lenght | In line (aerial) | Way of access | Short-circuit intensity | Ear-thing Clamp |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CESTEX | Brass | Up to 80 mm | Copper | Silicone | Up to 35 mm | 16 m² | 12 m | Isolated | From the floor | 3 kA/0.5s | MT4 |



# EQUI18

## EQUIPOTENTIALITY DEVICE OF OVERHEAD LINES MV

### / USE

Equipotentiality device of MV overhead lines in bare conductors
- No. 1 aluminum alloy contact clamp with quick spring clamping and gripping capacity on cylindrical conductors from ø 3÷ø 18 mm
- No. 1 fiberglass insulating foil L= 800 mm equipped with rubber grip and integral with the contact clamp
- No. 1 aluminum alloy self-milling vice with clamping capacity up to 40 mm No. 1 copper cable sect. 16 mm² L= 1.5 m covered with transparent silicone sheathing
- No. 1 nylon cloth bag for containing the device

| Reference | Clamp material | Conductor type | Conductor diameter | Cable material | Cable isola-tion type | Cross-section | Floor cable lenght | In line (aerial) | Roost number | Earthing Clamp |
|---|---|---|---|---|---|---|---|---|---|---|
| EQUI18 | Aluminium | Round | 3÷18 | Copper | Silicone | 16 mm² | 1.5 m | Bare | 1 | MT40F |



# HELIX

## MOBILE CONTINUITY AND EQUIPOTENTIALITY DEVICE

### / USE

Mobile continuity and equipotentiality device for visible helix cables and three-core MV belted cables.

### / TECHNICAL SPECIFICATIONS

- Isc Max (short-circuit current) : 13.6 kA/0.3s
- Short-circuit intensity : 11.6 kA/0.5s
- Short-circuit intensity : 8.2 kA/1s

| Reference | Clamp material | Conductor type | Conductor diameter | Cable material | Cable isolation type | Phase cable nber | Operating voltage | Phase(s) cable length | Cross -section | Floor cable lenght |
|---|---|---|---|---|---|---|---|---|---|---|
| HELIX | Bronze | Round | 5÷70 | Copper | Silicone | 2 | 35 mm² | 2 m | 35 mm² | 4 m |

# ACCESSORIES




Accessories



# STRAIGHT FIXED BALL CONTACT POINT

STRAIGHT FIXED BALL CONTACT POINT

| Male | Female | Ball diam. | Thread | Hexagon | Overall length (male type) | Overall length (female type) | Threaded stud length | Max. Isc |
|---|---|---|---|---|---|---|---|---|
| FD2010 | P20FM10 | 20 | M10 | 22 mm | 90 mm | 60 mm | 30 mm | 18,5 kA/1s |
| FD2012 | P20FM12 | | M12 | | | | 40 mm | |
| FD2512 | P25FM12 | 25 | | 27 mm | 122 mm | 82 mm | | 31,5 kA/1s and 40 kA/0,5s |
| FD2516 | P25FM16 | | M16 | | | | | |



# ANGLED BALL FIXED CONTACT POINT

ANGLED BALL FIXED CONTACT POINT

### / USE

Can be used as a contact pick-up point on a conductor bar.

| Male | Female | Ball diam. | Thread | Hexagon | Overall length (male type) | Overall length (female type) | Threaded stud length | Max. Isc |
|---|---|---|---|---|---|---|---|---|
| FC2012 | PC20FM12 | 20 | M12 | 22 mm | 105 mm | 75 mm | 30 mm | 18,5 kA/1s |
| FC2512 | PC25FM12 | 25 | | 27 mm | 135 mm | 95 mm | 40 mm | 31,5 kA/1s and 40 kA/0,5s |
| FC2516 | PC25FM16 | | M16 | | | | | |



# CAX-CBX

ADJUSTABLE FIXED POINTS FOR VERTICAL OR OBLIQUE CONDUCTORS

STANDARDS

IEC 61230 / IEC 61138

### / USE

These bars are designed to create earthing points in electrical installations so that standard S1560 or S540 earth clamps can be used.

| Reference | Min/Max diameter | Max. Isc | Material |
|---|---|---|---|
| CAX12120 | 12 - 120 mm | 31,5 kA/1s | Aluminium |
| CBX12120 | | | Bronze |



# SWING

FIXED POINT SYSTEM FOR EARTHING

STANDARDS

IEC 61230

### / USE

Device used to ensure contact between the conductor and the earthing device.

### / TECHNICAL SPECIFICATIONS

The fixed point system comprises :
- 1 Body consisting of a Ø30 mm x 130 mm cylinder to accommodate the earthing system.
- 1 cap to enclose the conductor.
- M10 H-head screws for tightening to the conductor.
- Isc: 60kA/0,5s.

| Ref. SWING | Conductor type diam. | Diameter | Optimum section | Min. section | Max. section |
|---|---|---|---|---|---|
| SWING22 | 22 mm | Ø22 ±2 | 280 mm² | 230 mm² | 330 mm² |
| SWING28 | 28 mm | Ø28,5 ±2 | 470 mm² | 400 mm² | 540 mm² |
| SWING30 | 30 mm | Ø30 ±2 | 520 mm² | 440 mm² | 600 mm² |
| SWING31 | 31 mm | Ø31 ±2 | 550 mm² | 470 mm² | 630 mm² |
| SWING35 | 35 mm | Ø35,5 ±2 | 730 mm² | 650 mm² | 800 mm² |

| Ref. DOUBLE SWING | Diameter | Optimum Section | Min. section | Max. section |
|---|---|---|---|---|
| DSWING35 | Ø35,5 ±2 | 730 mm² | 646 mm² | 806 mm² |
| DSWING59 | Ø59 ±2 | 2026 mm² | 1884 mm² | 2167 mm² |

- Easy-to-install earthing system thanks to offset attachment point.
- SWING : Conductor clamping capacity up to Ø36 mm.
- DOUBLE SWING : Conductor clamping capacity up to Ø60 mm.





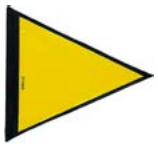

## CD-BINARD
CONSIGNMENT TROLLEY

### / USE

The consignment trolley, as it has been designed, is the tool that guarantees the chronological sequence of essential and regulated operations to ensure the safety of personnel and equipment before intervening in source substations as part of a consignment.

### / TECHNICAL SPECIFICATIONS

It can be fitted with (equipment not supplied) :
- Padlock
- Insulating gloves
- Insulating mat
- Voltage tester 20kV ; Voltage tester 63kV / 225kV
- Voltage tester poles
- Earthing poles
- Earthing devices
- Flags
- ...



## S120LV
YELLOW TRIANGULAR FLAG WITH NO MARKING AND NO SHAFT

### / TECHNICAL SPECIFICATIONS

PVC-coated fabric. Triangular flags with tunnel hem to pass 120 mm² max. copper braid through.

| Reference | Dimensions | Weight |
|---|---|---|
| S120LV | 350 x 300 mm | 30 g |



## S120L
TRIANGULAR EARTHING FLAG

### / TECHNICAL SPECIFICATIONS

- PVC-coated fabric, printed on both sides.
- Triangular earthing flag with black marking on a yellow background.
- With wooden shaft, Ø15 mm and length 750 mm.
- Dimensions : 350 x 300 mm

| Reference | Description | Weight |
|---|---|---|
| S120L | Flag with shaft | 100 g |
| S120LSH | Flag without shaft | 300 g |



## 7805
TURNING FLAG HOLDER

### / USE

Allows the flag to be fixed in any direction, on profiles of any cross-section and tubes.

### / TECHNICAL SPECIFICATIONS

Light alloy.
Ø 40 mm max.




## HTSMALT
HIGH RESISTANCE BAG FOR EARTHING CABLE

### / USE

Cover for carrying, protection, visibility and signalling of earthing cables.

| Reference | Dimensions (opened) |
|---|---|
| HTSMALT | 87 x 58 cm |
| HTSMALT-GM | 87 x 76 cm |

### / TECHNICAL SPECIFICATIONS

Main material: high-strength PVC.
Colour: yellow.
Inside: fastening straps with metallic buckles,storage pocket for cable.
Outside: fastening straps with metallic buckles, velcro and snap fastener, carrying handle.

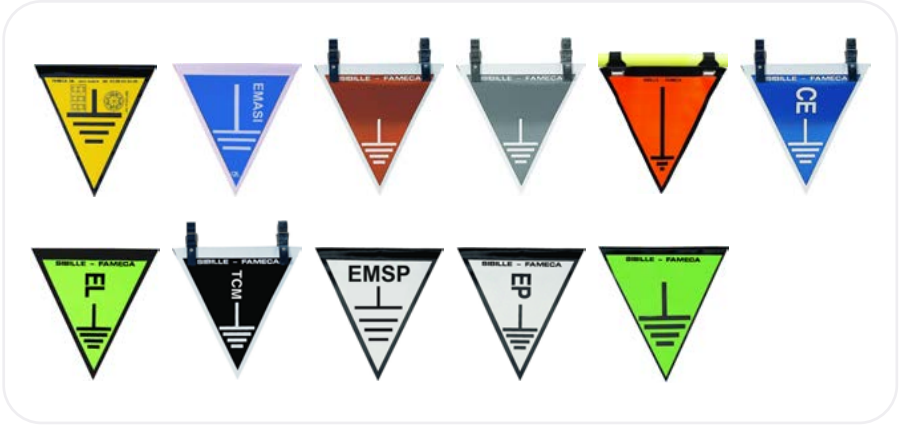


## XE9109
WALL BRACKET FOR STORAGE

### / TECHNICAL SPECIFICATIONS

Wall bracket for storing earthing devices:
- 2 wall fixing screws,
- 1 pin for clamps, in painted sheet metal.

| Reference | Weight |
|---|---|
| XE9109 | 1,5 kg |




# S120
## PVC-COATED FLAG

### / USE

Flag to identify worksite earthing common to more than one work area.

### / TECHNICAL SPECIFICATIONS

- Opaque PVC-coated fabric, printed on both sides.
- Number height : 50 mm
- Letter height : 60 mm
- Supplied with 2 black fibreglass clips, max. opening 23 mm for clipping onto braids or other items.
- Each flag can be numbered from 1 to 999, identifiedby 1 to 3 letters for the grey, brown and purple models only (price on request).

| Reference | Type | Colour | Marking | Dimensions | Weight | Identification |
|---|---|---|---|---|---|---|
| S120JV | With 2 Velcro fasteners | Yellow | Black | 350 x 300 mm | 50 g | |
| S120JP | With 2 black clips | | | | 170 g | |
| S120VV | With 2 Velcro fasteners | Violet | White | | 50 g | |
| S120VP | With 2 black clips | | | | 170 g | |
| S120MV | With 2 Velcro fasteners | Brown | | | 50 g | |
| S120MP | With 2 black clips | | | | 170 g | |
| S120GV | With 2 Velcro fasteners | Grey | | | 50 g | |
| S120GP | With 2 black clips | | | | 170 g | |
| S120ORFV | With 2 Velcro fasteners | Fluorescent orange | Black | | 50 g | |
| S120ORFP | With 2 black clips | | | | 170 g | |
| S120BCEV | With 2 Velcro fasteners | Blue | White | | 50 g | Electrical control team |
| S120BCEP | With 2 black clips | | | | 170 g | |
| S120VFV | With 2 Velcro fasteners | Fluorescent green | Black | | 50 g | Site manager |
| S120VFP | With 2 black clips | | | | 170 g | |
| S120NTCMV | With 2 Velcro fasteners | Black | White | | 50 g | TCM - Telecommunications work |
| S120NTCMP | With 2 black clips | | | | 170 g | |
| S120RGPV | With 2 Velcro fasteners | Red | | | 50 g | GP - Group of stations |
| S120RGPP | With 2 black clips | | | | 170 g | |
| S120BEPV | With 2 Velcro fasteners | White | Black | | 50 g | EP - Station team |
| S120BEPP | With 2 black clips | | | | 170 g | |
| S120VELV | With 2 Velcro fasteners | Green | | | 50 g | EL - Line Team |
| S120VELP | With 2 black clips | | | | 170 g | |



# S120J2
## SET OF 2 TRIANGULAR EARTHING FLAGS

### / TECHNICAL SPECIFICATIONS

PVC-coated fabric, printed on both sides.
Set of 2 flags with tunnel hem to pass the copper braid through.
Area with 3 pre-marked digits and 8 segments forthe earth braid sections.
Colours : yellow background with black marking.

### / This product contains

| Reference | Description |
|---|---|
| S120J | Flag for 120 mm² max. copper braid |
| S120J240 | Flag 240 x 200 |

| Reference | Description | Weight |
|---|---|---|
| S120J2 | Set of 2 triangular earthing flags | 35 g |

### / Option

| Reference | Description |
|---|---|
| S120LT | Flag with 2 eyelets Ø 11.5 mm for passing rings through |


PENTA
FAMECA
?
L1
L2 L3
I/O
PENTA
FAMECA
FC5300D



# CABLE IDENTIFICATION, PHASING AND LOAD TESTING


/ IDENTIFICATION OF CABLES AND PHASES 250

/ PHASES AND NETWORK MAPPING CONTROL 258

/ ON-LOAD CABLE CONTROLLER 269


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# FC ULTIMATE NEW

## DISCONNECTED CABLE AND PHASE IDENTIFIER



### / WORKING PRINCIPLE

FC ULTIMATE provides all necessary information at the job site for dead cable, phase and cable end identifications.

It combines :
- 2 transmitters with 3 induction clamps each
- A hand-held receiver displaying all information










### / SPECIFIC USES:

**Faulty Cables:** Cable identification can be available, provided that two phase conductors are still in good condition (continuity and insulation).

**Network mapping:** You can use the possibility of 8 different transmitter index for mapping up to 8 circuits during the same job.

### / TECHNICAL SPECIFICATIONS

**Type of cables:** PILC, XLPE, SWA, single core, three core cables / w/wo neutral conductor...

**Lengths:** LV up to 1 x miles, HV distribution up to 12 miles, HV transmission up to 25 km

**Cable configuration:** parallel, layers, bundles and overhead lines.

**Cable sections:** specific advance mode can provide identification from LV 4 x AWG 7 to HV 220 kV 4500 mm2.




### / MAGNETIC PROBE

Directional probe allows certain identification of the cable.

### / TWO CONTACT PROBE

Used on open circuit to confirm continuity and phasing

### / ROGOWSKI LOOP PROBE

Used for tracing and continuity testing on single-core cables only.

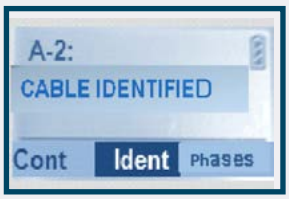
### / I-PROBE MAGNETIC PROBE

to indicate the presence of a 50/60 Hz current flow in all cable configurations: single-core, three-core with or without neutral, peripheral neutral.

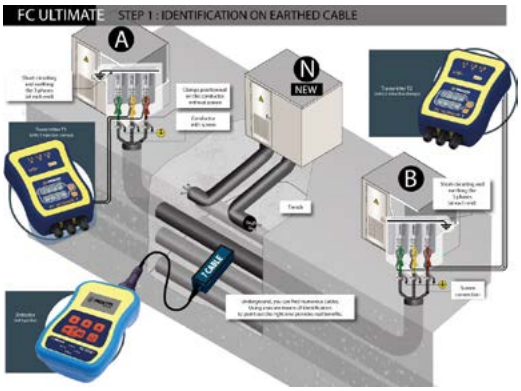
Preliminary test

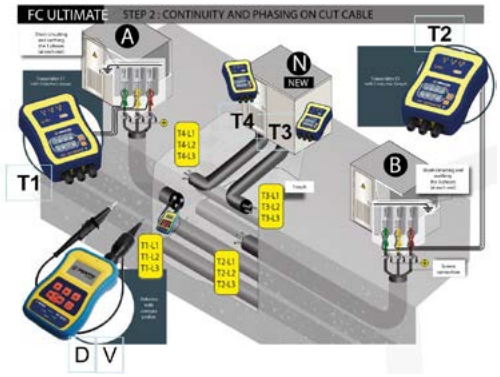



Unipolar and tripolar cables






## PRODUCT RANGE




### / PERFORMANCES LEVELS

**Essential:** Standard plug & play identification mode. Guaranteed identification accuracy on cables at less than 5 inches apart.
**Superior:** Standard + Advanced identification modes. Guaranteed identification accuracy on side-by-side cables.
**Pro-Elite:** Standard + Advanced + Expert identification modes. IPROBE function. Selection of loaded cables (Magnetic straight probe and Rogowski loop). Enhanced information for a better diagnostic in doubtful and risky cases (like faulty cables).

### / CABLE IDENTIFICATION SETTINGS

**LV settings:** straight probe can identify only LV cables, with LV thin insulation layer and conductors cross section up to 50 MCM.
**MV setting:** LV settings + MV settings: straight probe can identify HV cables with thicker insulation layers (<70kV) and conductors cross section up to 2000 MCM.
**HV setting:** LV + MV settings + HV settings: straight probe can identify HV cables with thicker insulation layers (<400kV) and conductors cross sections up to 3200 MCM.

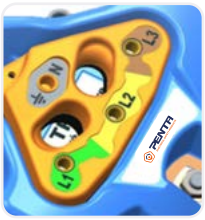



| | ESSENTIAL | SUPERIOR | PRO-ELITE |
|---|---|---|---|
| LV | LV cables<br>Standard mode | LV cables<br>Standard mode<br>Advanced Mode | LV cables<br>Standard Mode<br>Advanced Mode<br>Expert Mode<br>IPROBE |
| MV | LV + MV cables<br>Standard mode | LV + MV cables<br>Standard mode<br>Advanced mode | LV + MV cables<br>Standard Mode<br>Advanced Mode<br>Expert Mode<br>IPROBE |
| HV | LV+MV+HV cables<br>Standard mode | LV+MV+HV cables<br>Standard mode<br>Advanced Mode | LV+MV+HV cables<br>Standard Mode<br>Advanced Mode<br>Expert Mode<br>IPROBE |









# ENSTPBT

## LOW VOLTAGE EARTHING ARRESTER TPBT AND PHASE INDICATOR VISUTPBT

**Advantages**

- IP65 protection.
- IP2X on connection.
- L1, L2, L3 and Neutral indications by big LEDs sectors.
- No switch.
- Ideal for long term jobs.

### / USE

The Earthing Arrester is a three phase protective device for LV de-energized network.
Inserted in a earthing device set, it will allow measures on the network while being protected by this earthing devices.
The « visumeter » is a complementary device that will read phase L1, L2 L3 when the resistor box is connected on tothe earthing arrester.

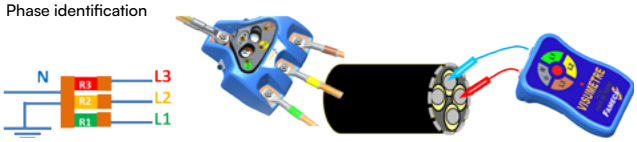
### / TECHNICAL SPECIFICATIONS

The LV earthing arrester TPBT feature three functions defined by the resistor box connection and position: PROTECTION, SHUNT and phase ID thanks to the resistor box different uses

### / This products contains :

| Reference | Description |
|---|---|
| TPBT | Low voltage earthing arrester |
| VISUTPBT | Phase indicator for low voltage earthing arrester |

Phase identification




For earthing arrester






# TP2300

## EARTHING ARRESTER FOR ENERGY CABLES

**Advantages**

- Can provide 3 different functions just by flipping or removing the « box ».
- isolated : 3 phases isolated from earth
- "short-circuit" : 3 phases short-circuited and isolated from earth
- Phase ID : connected to the earth through 3 different resistors.
- No switch.
- Ideal for long term job.
- Compatible with FC2310 for work requiring multiple earthing points.

### / USE

Provide same protection as an earthing while measuring a circuit insulated from earth.

| Reference | Designation | Dimensions | Weight |
|---|---|---|---|
| TP2300* | MV Earthing Arrester Block | 150 × 94 × 52 mm | 850 g |
| VISUHTA | Visumeter for MV Earthing Arrester Block | 150 × 94 × 52 mm | 350 g |

* Provided with a TP2300 box

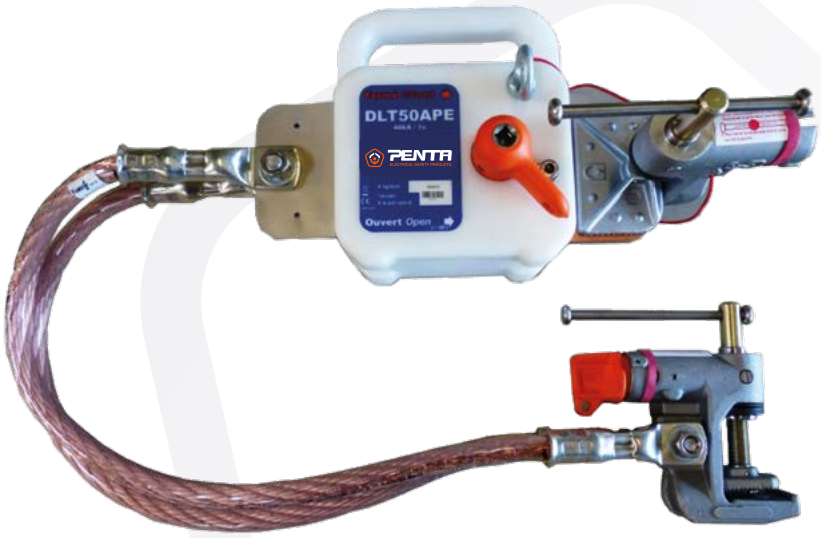
PREMIUM

# DLT8

OUR SELECTION

## VOLTAGE LIMITING DEVICE

- When the DLT8 is inserted in the earthing system, it limits to 50Vrms the "touch voltage" and the voltage at the measuring device terminals.
- In the event of accidental voltage feedback, the protective earth circuit is instantly re-formed.
- When the circuit breaker is CLOSED, the whole system is at earth potential




### / USE

The voltage limiting device is a single-phase device designed for use on HV lines.
It is designed to be inserted in the earth circuit so as to be able to take measurements with a circuit breaker testing device, for example.
The voltage limiting device has two positions:
«OPEN» (position for taking measurements)
- it protects users against accidental voltage feedback by re-forming the earthing circuit.
- It limits the voltage at its terminals to under 50V.
In the CLOSED position, it re-forms the earthing circuit



### / TECHNICAL SPECIFICATIONS

Allowable short-term current : 40 kA. NB: The max. allowable short-circuit current (I —t) by an earthing and short-circuiting device will be given by the element subject to the weakest current in the device's chain. This value is clearly identified on the device on a short-circuit cable and the user will always need to check before use whether the device's Isc is appropriate to the use and the relevant short circuit risk.
Duration 1 second. Peak current 100 kA.
Permanent current that can flow through the DLT8 in the CLOSED position : 400 A.
Allowable nominal current (§5.2 of specification HM-21/97/057A) that can pass through the voltage-clipping device in the OPEN position: 40 A.
Max. allowable current (§6.5.1.4 of specification HM-21/97/057A) that can pass through the voltage-clipping device in the ON position: 100 A.
Max. voltage at the DLT8 terminals: 50Vrms.
Max. tightening torque necessary: 20 Nm




# EASYLOC

## CABLE LOCATION SYSTEM

### / USE

The Easyloc system allows fast and reliable location of underground cables and pipes, reducing accident risks and optimizing excavation work. It is designed for civil engineering, road construction, municipal services, and landscaping companies to check and verify plans before starting excavation. By simplifying detection, it ensures safe projects from planning to completion.

### / TECHNICAL SPECIFICATIONS

- Quick and precise location of underground cables and conduits.
- Depth measurement at the push of a button, even without a transmitter.
- Powerful transmitters ensure stable and reliable signal transmission in difficult conditions.
- Compatible with other location systems for seamless integration into existing workflows.
- Large, easy-to-read display with intuitive menu navigation.
- Robust design adapted for construction sites and outdoor use.
- Designed for efficient verification of network maps before excavation.
- Ideal for civil engineering, road construction, public works, and landscaping applications.

VALUE

# FC5300 OUR SELECTION

## LIVE LV CABLE IDENTIFIER

- Simplicity : the device is connected like any other on customerpremises or to a connection terminal downstream of the point to beidentified.
- Effectiveness : the current drainage principle enables,
- the relevant indications to be confined to the cable sought,
- the device to be used without further intervention, however long thejob lasts and whatever the length of the cable.
- Elimination of risks due to :
- confusion with other similar low or high voltage cables,
- the detection of signals on adjacent cables.




### / USE

This device provides all the information necessary to identify a live LV cable among other cables without risk of error :
- Identification of cables in open trenches or tunnels.
- Identification of the three phase conductors (L1, L2 and L3) on single-pole three-phase cables.
- Identification or confirmation of the source.

Upstream and downstream cable discrimination at a given point of the network.

### / TECHNICAL SPECIFICATIONS

- The probe with display guides the user through the steps for each function.
- All the information is available in several languages : English, Spanish, German, Polish, Arabic, ...
- The ultra-sensitive directional probe improves resolution in cable harnesses.
- Reliable connectors: double-insulated, sheathed conductors, in accordance with new standards.
- Built-in self-test
- Works on all types of cables: oil-impregnated paper insulated cables, synthetic cables, cables with double metal reinforcement, even heavily loaded cables, insulated overhead cables; in any environment, in-ground in urban, peri-urban and rural areas for all types earthing systems.
- Comes in a sealed, unbreakable case specially designed for field work.
- The detector charges using a standard USB-type mains or vehicle charger.

**Magnetic probe:**
Directional probe allows certain identification of the cable.





**Rogowski loop:**
Can be used instead of the magnetic probe and in a similar way, but exclusively for phase conductor tracing, particularly at cable terminations and beneath LV switchboards.



# PHILINK NEW

## PHASE DETECTOR FOR PLC G1/G3 SMART GRID METER (LINKY)







G3-PLC

### / USE

The PHILINK device allows to detect and display the LINKY phase of a point (meter or connection box) when they are located on a low-voltage distribution network under PLC "LINKY" communication.

• This information is required:
- For a campaign of load balancing in order to improve:
- The quality of the electricity supply : Warranty of an expected voltage level
- the use of the electricity distribution installation( transformers and electrical circuits)
- To reduce the electricity losses
- For checking the phase when connecting of new LINKY smart meters




### / TECHNICAL SPECIFICATIONS

| Detector CPL Linky G1 G3 | PHILINK-G1 G3 |
|---|---|
| Protection level | IP54 — IK08 |
| Over voltage category | 600 V — Cat.IV |
| Operating ambient temperature | - 20°C to + 50°C |
| Voltage range | 206 V to 260 V rms |
| Voltage rating | 440 V (permanent) |
| Frequency range | 50 Hz and 60 Hz ±3% |
| Display | LCD 16M. Colors — 3,5" (320 x 240 pixels) |
| Internal protection | Fuse: HPC 1.6 A / 1000 V / 30 kA — FF — Ø6.3 x 32 mm |
| Battery charging status | On screen |
| Autonomy | 8 hours |
| Battery lifetime | about 500 cycles (Charge/discharge) |
| Connectivity | micro-USB |
| USB cable | Dedicated USB A male/ micro-USB B male V2.0 - L= 0.8 m |
| Battery charger | PSB05R input 100-240 V AC / 50-60 Hz — output USB 5 V DC — 1 A. Adapter « car power outlet» 12-24 V DC / USB 5 V DC — 1 A. PC/USB 5.0 V DC |
| Protective over moulded soft shell | |
| Ballistic nylon bag | |
| Measuring leads | Section 2.5 mm² — 1000 V — Cat.IV — length 1.05 m Contact probes IP2X Ø4 mm (fuse protected) Fuse 1.6 A / 1000 V / 30 kA — FF — Ø6.3 x 32 mm |
| Connection accessories | Alligator clips 600 V — Cat.IV opening Ø32 mm, connection IP2X Ø4 mm |

### / EXAMPLES OF CONFIRMED MEASURES






| Reference | Presentation | Dimensions | Weight |
|---|---|---|---|
| PHILINK G1-G3 | Detection unit | L = 165 x l = 96 x H = 56 mm | 0.50 kg |
| | In soft case | L = 270 x l = 200 x H = 100 mm | 1.15 kg |

# PHANTOM NEW

## TRUE PHASE IDENTIFICATION SYSTEM (GPS)

- True phasing for all applications at any voltage.
- Live true phasing.
- Phasing resolution of ± 1°.
- GPS satellite network synchronization.
- Fast setup, ready to operate in seconds.
- No network de-energisation required.
- All-day battery life.
- Encrypted and robust communication technology.
- 60 minutes underground time-delayed phase identification mode.
- Capability to phase without connection to server using the defered mode.
- Cloud based deployment.




Scan the QR code to discover PHANTOM video on YouTube !

### / USE

PHANTOM displays the phase angle of any network point on Low Voltage, High Voltage, overhead lines, substations and cabinet. The network stays live, in its normal operating diagram. Measurement accuracy is ensured by GPS synchronization.
The device consist of:
- A reference unit connected to the operating area 'zero point', providing an absolute reference and enabling cross-checks with surrounding or remote areas.
- One or many "Fields Units" consisting in a Display Unit and Measurement Module.

**Guarantee the definition of the true phase for following operations:**
- Transformer replacement
- Transition between overhead lines and underground cables
- Closing loops or connecting isolated operating areas
- Phase Marking for speeding up network commissioning after disaster
- Geo located phase mapping
- Smart power meter
- Tele measure sensors

**Benefits:**
- Planning of distribution networks and control of their development
- Reduction or delay of investment (balancing HVE/LV transformers instead of replacement)
- Reduction of operational costs : operation programmed and carried out with full knowledge of the phase configuration (correct connection guaranteed)
- A reduction of customer power and better service
- Greater safety of installation and persons
- Bringing up to standard and setting up of visual identification on electric installations

The Field Unit identifies phases anywhere on overhead or underground networks, regardless of distance from the Reference Unit.
- **HANDS FREE** thanks to the PHANTOM wireless Display Unit. Acquired data saving is done at a touch of a button.
- **HIGH PERFORMANCE**: phase measurements are quickly taken in real timenit!
- **Underground phasing is possible even without GPS or cellular signal; results are displayed once communication is restored.**

### / TECHNICAL SPECIFICATIONS

- **PHANTOM Reference Unit :**
  - Two reference inputs (CAT-III 600V, CAT-IV 300V)
  - Automatic switching of the reference inputs
  - Ethernet port
  - Power input (85VAC to 264VAC)
  - External GPS connection interface
  - 50/60Hz

- **PHANTOM Measurement Module :**
  - 4 AA Batteries
  - Autonomy: 30 hours of continuous phasing
  - CAT-III 1000V / CAT-IV 600V low voltage phasing direct contact
  - Up to 72 kV medium voltage direct contact using hotstick
  - Non-contact up to 800kV
  - Connectible to all universal hotstick
  - Capacitive test port input
  - Switchgear half rectified voltage indicator port measurements
  - IP-67 rating
  - 50/60Hz

- **PHANTOM Display Unit :**
  - Colour touch screen
  - Local phase compensation
  - Digital results (numbers & graphs)
  - Saving and export capabilities
  - IP-68 rugged device
  - Connectivity to the server using WIFI, 4G or HotSpot
  - Wireless connection (Bluetooth) to the Measurement Module up to 30 meters

| Reference | Description |
|---|---|
| PHANTOM-MM-GB | PHANTOM Measurement Module and Display Unit |
| PHANTOM-MR-GB | PHANTOM Reference Unit |

The **Phantom solution** provides unambiguous identification of electrical phases anywhere on your network.
By comparing a reference measurement taken on a known phase with a measurement in the field, the device makes it possible to display a phase shift, or, better, the hour index of the phases tested.

### / PRODUCT COMPOSITION

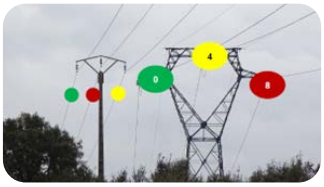



### / CALCULATION OF THE MEASURED PHASE AND DISPLAY OF THE RESULTS




## APPLICATIONS





### / NETWORK LOOPS

A power distribution network loop allows customers to be supplied via two different paths , which significantly improves service continuity in the event of a failure. It also facilitates operational maneuvers (isolating a fault, performing maintenance work) without interruption and optimizes stability and load distribution across the network.

### / MAPPING

A clear network map facilitates maintenance and troubleshooting.
It improves planning, enhances the safety of interventions, and optimizes operations.
It also allows for the identification of meter connection phases to ensure proper load balancing and connection of loads.

### / BALANCING

Properly balancing an electrical grid allows for the even distribution of loads across the different phases before it needs to be resized to deliver more power. This reduces the risk of overload, improves grid stability, extends equipment lifespan, limits energy losses, and enhances the quality of service for users.

### / PERFORMING MEASUREMENTS IN THE FIELD

The device offers several measurement modes, regardless of the network voltage type.
This versatility facilitates network monitoring, maintenance, and optimization.

### / LOW VOLTAGE

At the low-voltage switchboard :



In a network cabinet



Upstream of the meter



### / MEDIUM VOLTAGE (CONTACT OR REMOTE)

**Online** Contact



**Online** Remote



On a capacitive terminal



On VDS test point, VPIS



### / HIGH VOLTAGE (REMOTE)

Overhead line



Primary substation



# MPHASE NEW

## WIRELESS PHASE COMPARATOR

STANDARDS

IEC 61481-1



- Light and compact unit for safe indoor and outdoor use.
- Positive indication for “in phase” conditions
- Voltage presence indication
- Indication of active radio link between the 2 units

The wireless concept provides:

- Better safety by suppression of cable link hazard
- Better distance range between test points (more than 25m
- Allows phasing through walls, such as between substation bus bars and overhead cable terminals.

Enhanced indication that can be clearly noticed in most working conditions:

- Clear visual indication in all working conditions, with wide and side visibility thanks to the optic ring.
- 100 dB (1 m) acoustic signal remains audible even in heavy traffic or strong wind.

Direct access to the battery and sealed electronics prevents issues during battery replacement.

- Accidental interchange of housing or circuitry,
- Damage to electronic circuits,
- Prevents moisture ingress during outdoor battery replacement.




| Reference | Voltage range | Frequency | Stick adaptor** | Contact electrode*** | User manual* | Packaging |
|---|---|---|---|---|---|---|
| MPHASE0104FCUA | 1—4 kV | 50/60Hz | Universal & APV | V56 (x2)<br>AC60 (x2) | Pack F | Metal Case |
| MPHASE0336FCUA | 3—36 kV | | | | | |
| MPHASE0536FCUA | 5—36 kV | | | | | |
| MPHASE1133FCUA | 11—33 kV | | | | | |
| MPHASE2069FCUA | 20—69 kV | | | | | |

* Pack F: FR/GB/DE/ES/PT/PL - Pack G: GB/GR/BG/IT/NL/AR/TR

** Other stick adaptor available on request

*** Other electrode extension lenght available : 400, 600 and 900 mm.







## / USE

MPHASE is designed to carry out phase comparison between two MV circuits of a Three Phase system before connection.

Each units of the set can be used for checking Voltage Presence.

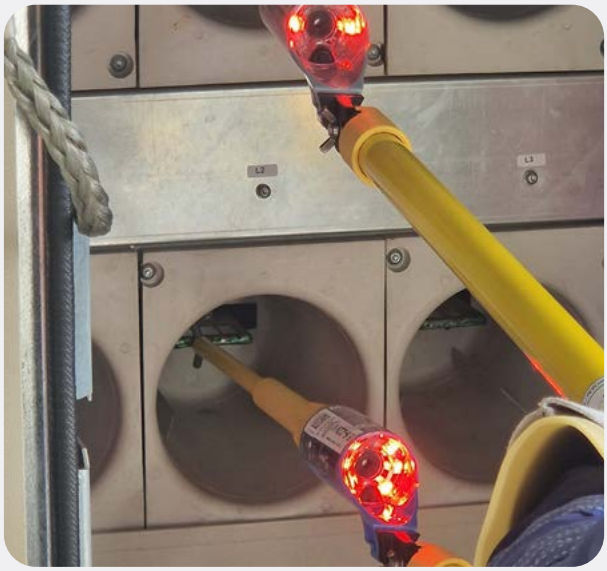
| Description | Visual | Ref |
|---|---|---|
| 226mm electrode extension with V shape fixed mount |  | ANTM226V** |
| Electrode extension for Magnefix system |  | ANTMTAGMAGNEFIX |
| Underground bushing probe |  | ANTMURD1MC |
| Underground elbow probe |  | ANTMURD1F |

** Other length available on request

## / TECHNICAL SPECIFICATIONS

- AC voltage range: 1 to 69 kV
- Network frequency: 50 and 60 Hz
- Permanent standby status with automatic wake-up function
- **Transmitter (T):** grey housing
- The presence of voltage is indicated by an intermittent **RED** light and a beeping sound then transmits phase information to the receiver.
- **Receiver (R): blue housing**
- The presence of voltage is indicated by intermittent **RED** lights (2LED) and a beeping sound, and the correct phase relationship is indicated by **solid RED** lights (4 LED) and a steady sound
- Indication of the radio link by a **BLUE** light indication
- HF radio transmission operating at 868 MHz
- Minimum distance range in open air: 25 m
- Self test checking all measuring circuits, phasing functions, radio link and battery level
- A low battery level is indicated by an **ORANGE** light
- Designed for outdoor and indoor use
- Operating temperature: -25 °C to +55 °C
- Humidity: 96 % max.
- Power supply voltage: 9 V alkaline IEC 6LR61 (1 by module)
- Accepts the use of rechargeable battery with identical supply voltage
- Polycarbonate housing
- Dimensions of each module: Ø 59 mm, L = 280 mm without the Y contact electrode
- Net weight of each module: 0.390 kg with stick adaptor
- Operating manual with a choice of languages, depending on the package.





# MEMPHASE

NEW

## MEDIUM VOLTAGE SINGLE POLE PHASER

STANDARDS

IEC 61481-1




- A single light and compact unit that can be used safely for outdoor (overhead lines) and indoor (substations) operations.
- Positive indication for ''in phase'' conditions
- Voltage presence indication
- Indication of ready memorization
- The wireless concept provides :
  - Better safety, better distance range between test points and possibility of phasing through walls.
- Enhanced indication that can be clearly noticed in most working conditions.
- The battery replacement will prevent from accidental interchange of housing or circuitry, damage to electronic circuits, Humidity ingress into the device when the battery is replaced outdoors.

### / USE

MEMPHASE is designed to carry out phase comparison between two MV circuits of a Three Phase system before connection. It can also be used for checking Voltage Presence on the line.



### / Version with electrode extension

- Electrode extension for testing through access holes. Indoor and outdoor use.
- Allows access to live phases without opening the cubicle substation.
- Minimum insertion diameter of 40 mm.

### / TECHNICAL SPECIFICATIONS

**AC voltage range: 1 to 36 kV**
**Network frequency: 50 and 60 Hz**

- Class A: ± 10° < ϕp ≤ ± 30°
- Permanent standby status with automatic wake-up function
- Single unit:
  - The presence of voltage is indicated by intermittent **RED** lights (2 LED) and beeping sound then memorization of the signal start.
  - Indication of the ready state of memorization made by an intermittent **BLUE** light, maintain of information in memory: 15s
  - Indicates phase concordance by solid **RED** lights (4 LED) and a steady sound
- Self test checking all measuring circuits and battery level.
- A low battery level is indicated by an **ORANGE** light.
- Designed for outdoor and indoor use
- Operating temperature: -25 °C to +55 °C
- Humidity: 96 % max.
- Power supply voltage: 9 V alkaline cell — IEC 6LR61 (Accepts the use of rechargeable battery with identical supply voltage)
- White colour polycarbonate housing
- Dimensions: Ø 59 mm, L = 280 mm without the Y contact electrode nor electrode extension
- Net weight: 0.390 kg with stick adaptor
- Operating manual with a choice of languages, depending on the package

| Reference | Voltage range | Frequency | Pole adaptator* | Contact electrode** | Manual user*** | Packaging |
|---|---|---|---|---|---|---|
| MEMPHASE0136FHUA | 1 - 36 kV | 50 / 60 Hz | Universal & APV | V56 | Pack F | Soft case with conductive lining for EMC protection |
| MEMPHASE0536ANT-226VFHUA | 5-36 kV | | | V56 - Electrode extension 226mm | | |

* Other pole adaptors available on required.
** Other electrode extension length available 400, 600 and 900 mm.
*** Pack F : FR/GB/DE/ES/PT/PL -- Pack G : GB/GR/NL/BG/IT/AR/TR

- Simple use
- Reduces the influence of stray electric field



# MV-PHASER-ELEC

## PHASE COMPARATOR FOR MV PANELS 4÷36 KV OPTIC/ACOUSTIC SIGNAL

### / TECHNICAL SPECIFICATIONS

- Made of n° 2 insulating sticks L=1,2 m connected by high insulation cable L=1,5 m (other lengths upon requests)
- Removable extensions and adjustable electronic heads 0÷90° through universal head
- Voltage range: 4÷36 kV
- Frequency: 50÷60 Hz
- Signallings: optic and acoustic
- Automatic self check: cyclic every 3 seconds
- Shut-down: automatic timed or by subsequent press of the power button
- Power supply: n° 1 battery 9 V
- 900 x 180 x 120 mm
- Metal case

| Reference | Dimensions |
|---|---|
| MV-PHASER-ELEC | 900 x 180 x 120 mm |



# TAG5000 – 4-500 KV
# TAG5000 – 4-230 KV

## WIRELESS PHASE COMPARATOR FOR OVERHEAD LINES

**Advantages**

- Light and compact units for overhead lines 4-230 kV.
- Specific High-Voltage probe extensions (white) for use on 110-500 kV over-head lines.
- Positive indication for "in phase" conditions.
- No hazard due to a cable link.
- Increase distance of operation (more than 25m).
- Possibility of phasing through walls (inside outside).

### / USE

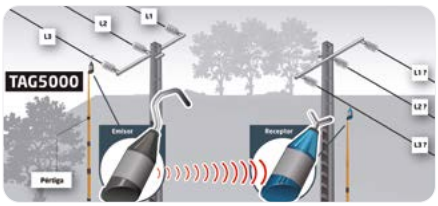
- **TAG5000 — 4-500 kV** : wireless phase comparator for three phase network with nominal voltages from 4 kV up to 500 kV - 50 Hz or 60 Hz (to be specified).
- **TAG5000 — 4-230 kV** : wireless phase comparator for three phase network with nominal voltages from 4 kV up to 230 kV - 50 Hz or 60 Hz (to be specified).
- Shall be used with two insulating sticks (not included) complying with the nominal voltage and having universal adaptors.

### / TECHNICAL SPECIFICATIONS

- **Transmitter (T)** : grey housing 210 mm — Ø 90 mm — 0.630 kg.
- Indicates the voltage presence with both visual and acoustic indications,then start to send the phase information to the receiver.
- **Receiver (R)** : blue housing 210 mm — Ø 90 mm — 0.630 kg. Indicates the voltage presence, and indicates "in phase" relationship with both visual and acoustic indications.
- Built-in testing element simulating all the functions including "out-of-phase".
- HF radio transmission operating at 433.9 MHz.
- Minimum distance range in free air 25 m minimum.
- Out-door and All weather use.
- Powered by two 9 V alkaline batteries (1 per module).

- **TAG5000 — 4-500 kV** : **Specific HV probe extensions (white) for 110-500 kV over-head lines** : Approx. weight of each electrode extensions : 0.400 kg. Extension length Lu = 325 mm. Soft case with a set of contact electrodes (hooks and V-shaped) and silicon cloth.
- **TAG5000 — 4-230 kV** Metal case with a set of contact electrodes (hooks and V-shaped) and silicon cloth.






| Reference | Voltage range | Frequency | Packaging | Dimensions | Weight |
|---|---|---|---|---|---|
| T5KGB004500H5 | 4 - 500 kV | 50 Hz | Soft case | 755 x 205 x 140 mm | 3,85 kg |
| T5KGB004500H6 | | 60 Hz | | | |
| T5KGB004230C5 | 4 - 230 kV | 50 Hz | Metal case | 337 x 105 x 235 mm | 3,75 kg |
| T5KGB004230C6 | | 60 Hz | | | |

ESSENTIAL




# PAAC CABLE CORE IDENTIFIER

## CABLE TEST AND IDENTIFICATION — CORE IDENTIFIERS — PAAC CABLE CORE IDENTIFIER

**Advantages**

- Indicates correctly matched cores & phase rotation sequences between ends
- Indicates individual faults such as –
- Two phases reversed
- Phases rotated forwards/backwards in sequence
- Earths in place on cable
- Equipment connected to cable (not properly isolated)
- Open-circuited or short-circuited cores
- Self-test
- For cables up to 33 kV, lengths up to 10 km

### / USE

Clearly identifies the cores and their sequence in a three-phase power cable. Indication of the action to be taken to correct the core sequence, or to remove a fault on any cable core(s). Uses a transmitter unit with LED indicators at the measuring end, and an array of colour-coded diodes with connecting clips to fix the diode leads to the remote end of the cable to be checked.

The CCI is for use on DE-ENERGISED CABLES ONLY. Therefore correct operating procedures must be employed to ensure the cable is de-energised and any voltage discharged before connection of the CCI or its diode array.

### / TECHNICAL SPECIFICATIONS

- Charging Circuit Voltage: 3.8-4.4 V DC
- Charging Resistance: 100 _
- Maximum cable core loop resistance: 28 _
- Maximum core voltage drop: 1.4 V DC
- Nominal charging current: 50 mA
- Charging time (to 2 V DC): 100 ms
- Battery: 9 V
- IP Rating: IP32
- Weight: 320 g



- Accurate Load Simulation
- Ensures consistent load conditions for accurate test results

# PA12057

## TMAC 5 A LOAD UNIT WITH LEADS AND BAG

### / USE

The TMAC Single Phase 5A Load Unit is a portable testing device designed to apply a controlled load to single-phase meters, ensuring accurate operation and performance verification under real load conditions.
Includes all leads and probes ready for immediate use

### / TECHNICAL SPECIFICATIONS

- Part Number: PA12057
- Type: Single Phase 5A Load Unit
- Input Voltage: 240 V, 50 Hz
- Power Consumption: 1200 W
- Category Rating: CAT III 600 V
- Pollution Class: IP20
- Load Capacity: 5 A single-phase operation
- Test Leads: Double-insulated silicone leads
- Accessories Included: Leads and probes included in carry bag
- Carry Case: PVC-reinforced bag with detachable Velcro pocket




- Accurate Load Simulation
- Designed to meet the demands of meter technicians and utility field engineers

# PA12055

## TMAC 9 A LOAD UNIT WITH LEADS, PROBES AND BAG

### / USE

The TMAC Single Phase 9A Load Unit is a portable testing device designed to apply a temporary load to single-phase energy meters, allowing accurate verification of meter performance and functionality under real load conditions.

### / TECHNICAL SPECIFICATIONS

- Type: Single Phase 9 A Load Unit
- Input Voltage: 240 V, 50 Hz
- Power Consumption: 2400 W
- Load Capacity: 9 A single-phase operation
- Category Rating: CAT IV 300 V
- Pollution Class: IP20
- Test Leads: Double-insulated silicone leads
- Accessories Included: Leads, probes, and clips (all in carry bag)
- Carry Case: PVC-reinforced bag with detachable Velcro pocket



# TL100

## LV TEST LAMPS - FIXED CHISEL TIP WITH ROUND FLOATING PROBE

### / USE

The TMAC TL100 LV Test Lamps feature a fixed chisel tip and a round floating probe, offering safe and reliable testing for 240/415 V AC/DC circuits with CAT IV 300 V protection and AS 61010-certified performance.

### / TECHNICAL SPECIFICATIONS

- Voltage Rating: 240/415 V AC and DC
- Safety Rating: CAT IV 300 V
- Certification: AS 61010:2003 compliant
- Fuse: 2 A 500 V, breaking capacity
  - 50 kA @ 500 V AC
  - 20 kA @ 500 V DC
- Bulb Options: 15 W or 25 W
- Leads: 2 m insulated lead
- Probe Types:
- Fixed 6.3 × 1.5 mm chisel-tip probe
- Detachable 2 mm round floating probe
- Design Feature: Locking fitting to prevent accidental disconnection



# TL102

## LV TEST LAMPS - ROUND TIP WITH FLOATING LONG PROBE

### / USE

The TMAC TL102 LV Test Lamps feature a round-tip design with a floating long probe, providing safe and reliable verification of 240/415 V AC/DC circuits, rated CAT IV 300 V and certified to AS 61010.

### / TECHNICAL SPECIFICATIONS

- Voltage Rating: 240/415 V AC and DC
- Safety Rating: CAT IV 300 V
- Certification: AS 61010:2003
- Fuse: 2 A 500 V
- Breaking Capacity: 50 kA @ 500 V AC, 20 kA @ 500 V DC
- Bulb Options: 15 W (PA12686) or 25 W (PA00063)
- Leads: 2 m insulated lead
- Probe Types: 2 mm fixed long probe and 2 mm detachable long probe
- Design Feature: Special locking system to prevent accidental probe disconnection



# TL200

## LV TEST LAMPS - 2 FLOATING CHISEL POINT PROBES

### / USE

The TMAC LV Test Lamps with 2 Floating Chisel Point Probes provide reliable low-voltage testing up to 240/415 V AC/DC, featuring CAT IV 300 V safety rating, fused protection, and rugged 1 m leads with detachable chisel-tip probes.

### / TECHNICAL SPECIFICATIONS

- Voltage Rating: 240/415 V AC and DC
- Safety Rating: CAT IV 300 V
- Certification: Tested and certified to AS 61010:2003
- Fuse: 2 A 500 V, breaking capacity
  - 50 kA @ 500 V AC
  - 20 kA @ 500 V DC
- Bulb Options: 15 W (PA12690) or 25 W (PA12691)
- Probes: 6.3 × 1.5 mm detachable chisel-tip probes
- Leads: 2 × 1 m insulated leads
- Design Features: Locking fitting to prevent accidental disconnection



# TL300

## LV TEST LAMPS - FIXED ROUNDED TIP WITH FLOATING PEG PROBE

### / USE

The TMAC TL300 LV Test Lamps feature a fixed rounded tip and a floating peg probe, providing safe and reliable verification of 240/415 V AC/DC circuits with CAT IV 300 V protection and AS 61010-certified performance.

### / TECHNICAL SPECIFICATIONS

- Voltage Rating: 240/415 V AC and DC
- Safety Rating: CAT IV 300 V
- Certification: AS 61010:2003 compliant
- Fuse: 2 A 500 V, breaking capacity
  - 50 kA @ 500 V AC
  - 20 kA @ 500 V DC
- Bulb Options: 15 W (PA12694) or 25 W (PA126951)
- Leads: 3 m insulated lead
- Probe Types:
  - 6.5 × 1.5 mm fixed rounded flat probe
  - Detachable peg clip/chisel probe
- Design Feature: Special locking fitting to prevent accidental disconnection



# TL500

## LV TEST LAMPS - 2 ROUNDED POINT FLOATING PROBES

### / USE

The TMAC TL500 LV Test Lamps with 2 Rounded Point Floating Probes provide safe and reliable low-voltage testing up to 240/415 V AC/DC, featuring CAT IV 300 V protection, fused safety design, and 1 m leads with detachable rounded probes.

### / TECHNICAL SPECIFICATIONS

- Voltage Rating: 240/415 V AC and DC
- Safety Rating: CAT IV 300 V
- Certification: AS 61010:2003 compliant
- Fuse: 2 A 500 V, breaking capacity
  - 50 kA @ 500 V AC
  - 20 kA @ 500 V DC
- Bulb Options: 15 W (PA12694) or 25 W (PA12695)
- Leads: 3 m insulated lead
- Probe Types:
  - 6.5 × 1.5 mm fixed rounded flat probe
  - Detachable peg clip/chisel probe
- Design Feature: Special locking fitting to prevent accidental disconnection



## PA12748 / PA12745

TEST LAMP SPARE PART - 15W / 25W BULB

**/ USE**

Genuine TMAC spare parts for 15W and 25W test lamps, including replacement globes, approved fuses, and probe caps to maintain safe and reliable voltage-testing performance.




## PA12746

TEST LAMP SPARE PART - APPROVED FUSE CERAMIC 2A

**/ USE**

Genuine TMAC spare parts for 15W and 25W test lamps, including replacement globes, approved fuses, and probe caps to maintain safe and reliable voltage-testing performance.



## PA12755

TEST LAMP SPARE PART - PROBE CAP BANANA PLUG

**/ USE**

Genuine TMAC spare parts for 15W and 25W test lamps, including replacement globes, approved fuses, and probe caps to maintain safe and reliable voltage-testing performance.

VALUE

# C-PROBE LV / C-PROBE MV

OUR SELECTION

## AMMETER FOR SINGLE CORE INSULATED CABLES
## LOW VOLTAGE VERSION AND MEDIUM VOLTAGE VERSION



**To improve the access to the cables:**

- The sensor is semi-flexible to be inserted between cables without stressing them.
- Adaptors for insulating telescopic sticks (sunrise/hook pole or hexagonal APV).

**To improve night use:**

- Bright yellow coating of the sensor to be visible among black cables.
- Light on the top of the housing to light the sensor and the area of measurement.
- Back light of the LCD display and function « HOLD » to record the measure.
- Easy and secure access to the battery.

### / USE

This device is designed to provide operators with a safe means to measure current on insulated LV overhead lines up to 2000A. During trouble shooting operation the operators need to pin point the reason of the failure like blown fuses or overloaded circuit.
With the right insulating pole, the operator can reach overhead transformer or cables. The hook shaped sensor help to de separate the conductor to be measured from close by ones.

### / TECHNICAL SPECIFICATIONS

- Range : 2000 A
- Frequency : 50 et 60 Hz
- Sensor : 140mm; opening 45 mm
- Functions “Track” and « HOLD »
- Field of use LV insulated single core cables
- Battery: 2 x 1,5 V - CEI / IEC AA
- Protective soft carrying case




| Reference | AC Voltage range | Frequency | Stick adaptors | User's manual* | Packaging |
|---|---|---|---|---|---|
| C-PROBE-LV-F | Up to 1000 V | 50 / 60 Hz | Universal + Shot-gun + APV | Pack F | Soft case |
| C-PROBE-LV-G | Up up 1000 V | | | Pack G | |
| C-PROBE-MV-F | Up to 36 kV | | | Pack F | |
| C-PROBE-MV-G | Up to 36 kV | | | Pack G | |

* Pack F : FR/GB/DE/ES/PT/PL - Pack G : GB/GR/NL/BG/IT/AR/TR



# BTC1000

## METER TESTER

### / USE

This device is used to check the correct operation of electromechanical, electronic, single and three-phases subscribers by performing an increase of energy consumption with 2 different positions of the switch,
It is also used to check under consumptions (in KWh) and the frauds said “not technical losses”.

### / TECHNICAL SPECIFICATIONS

- Power: No (self-powered by the network)
- Power consumption: 500 W or 1000 W
- Display: 1 red Led indication of operation
- Time of use: Unlimited usage time
- Thermal protection: Yes
- Test probes: IP2X — Ø 4 mm or European power plug (depend on version)
- PVC double insulated cable:1 mm², L = 1,5 m
- Connections: Connecting per IEC 60320
- Case: PP orange shockproof

| Reference | Version | Voltage range | User's manual | Frequency | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BTC1000 | Meter tester without test probes | 230 V | FR / GB / ES | 50 & 60 Hz | 235 x 150 x 95 mm | 1,5 Kg |
| BTC1000IP2X | Meter tester with IP2X test probes | | | | | |
| BTC1000PS | Meter tester with European power plug | | | | | |

# IPROBE "GRUNTER"

NEW

## CURRENT FLOW PROBE
## FOR ENERGY DISTRIBUTION CABLES

- **Enables to quickly scan a bundle of cables and select the loaded cables in a trench or conduit.**
- **Convenient to be used in LV distribution cabinets avoiding stress on cable heads.**
- **Provides an indication where Amp clamps and Rogowski probes do not give a reading (3 P, 3 P + N, 1 P + N cables).**




### / USE

i-PROBE is a >0,5A 50/60 Hz current sensor with a compact magnetic probe, safe and easy to use, that avoids the limitations of regular measuring instruments.
i-PROBE will operate in contact with any type of insulated energy cables:

- XLPE Isolation or Paper lead cables, shielded or not, including armored cables.
- Any cable configuration: unipolar, tripolar with or without neutral, peripheral neutral.

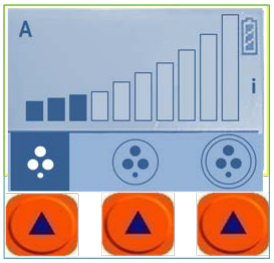
i-PROBE brings maximum benefits during the following situations:

- Check the presence of load in an unknown cable supposedly decommissioned, or unearthed during civil works, prior to cut it.
- Help to locate faulted cables by detecting and rejecting cables in charge.
- Allows a current measurement on unipolar cables with the use of the Rogowski probe.

This current flow probe must not be used in the circumstances hereunder:

- Instead of a live LV cable identifier (FC5300) during live line working,
- Instead of a cable identifier (FC2310) during a lockouttagout procedure,
- On bare (uninsulated) conductors.
- On GIS /OIS systems with sealed metal envelope,
- This device is a "load presence alert", by no means it can achieve a secured cable identification.
- This secured identification must be achieved by the use of a transmitter and receiver device and detection of a specific identification signal. Confirmation of the absence of voltage must be carried out by destructive means controlled with a remote device.
- Only these provisions guarantee the completion of the cable dead proof in accordance with relevant regulation.



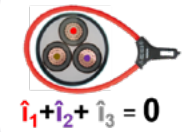



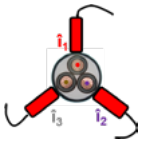

Indications from 0,5A to 800A by bar display.

### / TECHNICAL SPECIFICATIONS

- 3 sensitivity levels upon cable Types
- Minimum Indicated intensity : 0,5A
- Visual and audible indication of the current flow 50/60 Hz
- Available option: audio sound harmonics
- Can be used with a headset (not supplied)
- Network frequencies: 50/60 Hz
- Robust, waterproof storage and carry case (300 x 250 x 140 mm/2 kg).
- LC display for user interface
- Compatible with FC2310 probes
- Rechargeable Li-Pol battery (charger include)
- Expert mode displaying the following additional indications, from 0.3A. :
  - Harmonic currents
  - Distances of the current origins
- Display module compatible with FC2310 cable identifier probes.








- Two probes available :
  - **i-PROBE magnetic probe** : to indicate the presence of a 50 Hz current flow in all cable configurations: single-core, three-core with or without neutral, peripheral neutral.

- **ROGOWSKI-probe** : to measure the current flowing in single-core cables.

| Reference | Description |
|---|---|
| IPROBEF* | Detector + Magnetic probe + Carrying case |
| IPROBEBRF * | Detector + Magnetic probe + Rogowski probe + Carrying case |
| IPROBEF-FC-READY* | i-PROBE magnetic probe alone for FC2300CP/FC2310 detectors produced since 12/2020 |
| IPROBEF-FC-UPGRADE* | i-PROBE magnetic probe for FC2300CP/ FC2310 detectors produced before 12/2020, with upgrade of the detector to accept i-PROBE function and a complete checking of the FC2300CP/FC2310 the manufacturer site. |

* Pack F : FR/GB/DE/ES/PT/PL - Pack G : GB/GR/NL/BG/IT/AR/TR





# 1000 V INSULATED / INSULATING TOOLS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PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# 1000 V INSULATED, HYBRID AND INSULATING HAND TOOLS FOR ELECTRICIANS

For over 60 years, PENTA Electrical Safety Products has been supplying electricians across the world with tools of the highest quality that are best suited to the specific needs of the electricity industry.

SIBILLE OUTILLAGE has ISO 9001 and ISO 14001 certification.

## INSULATED-INSULATING TOOLS 1000 V COMPLYING WITH STANDARD NF EN 60900 REQUIREMENTS

### / IMPACT TEST AT AMBIENT AND LOW TEMPERATURE 23°C / -25°C

The energy created by the impact is equivalent to the energy of a tool falling from a height of 2 m and 0,60 m at low temperature onto a hard surface.

**The test is satisfactory if the insulating layer of the tool shows no sign of a break, tear or crack.**

### / FLAME RETANDARCY TEST

The tool is exposed to a flame for 10 seconds. Then, the propagation is observed for 20 seconds.

**The flame should not propagates for the 20 seconds observation time.**

### / SERIES INDIVIDUAL TEST

Each tool is checked individually at 10 KV for 10 seconds.

**A 100 % sight check is also carried out.**

### / DIELECTRIC TEST

After immersion in a tub of water at ambient temperature for 24 hours and then dried, a test at 10 KV is applied for 3 minutes between the conductive and insulated parts. The leakage current should be less than 1 mA per 200 mm of the coated tool.

**During test : no electrical puncture, sparkover or flashover should be observed.**

### / INDENTATION TEST

After conditioning for 2 hours at 70°C, a weight of 20 N being applied to the most vulnerable part of the tool, the assembly is submitted to a tension of 5 KV for 3 minutes.

**No perforation, energizing or flashover should be observed during this test.**

### / INSULATED COATING ADHERENCE TEST

After conditioning for 168 hours at 70° C, a weight of 500 N is applied for the plier for 3 minutes to test the steel insulated part adherence.

**During the test, no detachment or tearing of the insulating material should be observed.**

### / MECHANICAL TEST

Checking of the tools mechanical characteristics according to ISO standards or others standards specified by the manufacturer.

### / DURABILITY OF MARKING TEST

Tools should be wiped for 15 seconds with a water-soaked cloth and then for 15 seconds again with an ethyl alcohol-soaked cloth. After these procedures, the marking must remain legible.

### / VISUAL AND DIMENSIONAL CHECK

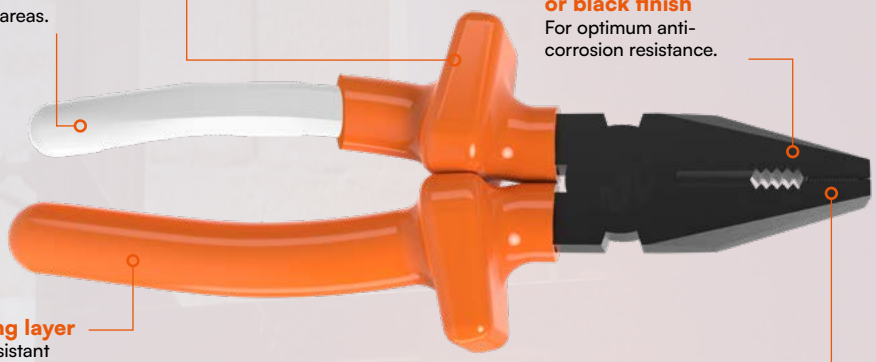
Make sure that the tool meets the dimensions specified by the standard or manufacturer.

## DESCRIPTION OF 1000 V INSULATED PLIER

**Reinforced handle ends**
Several layers of PVC protect the tool from impacts.
The drip effect at the end of handles is minimised, avoiding weak areas.

**Large hand guards**
Very strong, in insulating material to avoid slipping towards conductive parts.

**Tool head with chrome or black finish**
For optimum anti-corrosion resistance.



**Orange external insulating layer**
It is non-removable, impact-resistant and non-flammable, and offers a good grip, even while wearing insulating gloves.

**Selection and use of special steel alloys**
The selection of high-quality steels combined with chromium-vanadium treatment guarantees exceptional hardness and durability.
Tools designed for withstanding high mechanical stresses.

- The two insulating layers are differentiated by their colour, to allow a visual inspection of tool integrity, so as to confirm that it may be used for electrical work as required by standards UTE18-510 and IEC 60900.

**When the orange layer is damaged and the inner layer is visible, there is a hazard.**

- The thickness of insulating layers is determined according to the weight of the tool for optimum strength.
- The tools are designed to withstand extreme temperatures from -20 to +70°C.
- Each tool is tested at 10 000 V AC and approved for 1 000 V AC, for use in low voltage networks.
- Several inspections at each stage of production, in addition to those required by standard IEC 60900.
- PENTA products are recyclable.

## THE 3 TYPES OF HAND TOOLS FOR ELECTRICIANS

ACCORDING TO THE CURRENT IEC 60900 STANDARD



**INSULATED HAND TOOL**
Hand tool made of conductive material(s) fully or partially covered by insulating material(s).



**HYBRID HAND TOOL**
Hand tool made from insulating material(s) with exposed conductive parts at the working head (e-g : cutting edges).
Hybrid hand tool can be made of non exposed conductive parts used for reinforcement.



**INSULATING HAND TOOL**
Hand tool made essentially or totally from insulating material(s) except for inserts made from conductive materials used for reinforcement, but with no exposed conductive part.

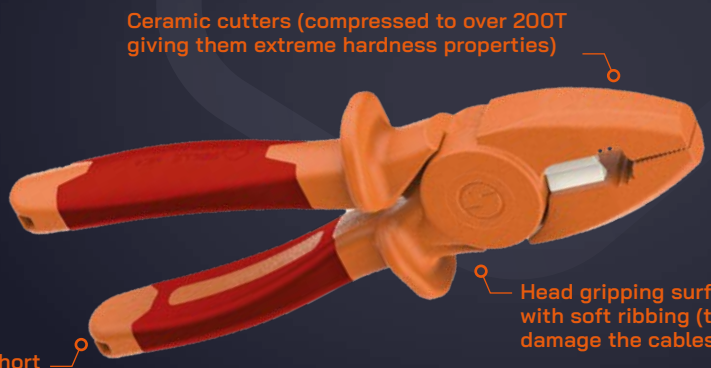
| | | | |
|---|---|---|---|
| Weight | ★★☆☆ | ★★★☆ | ★★★☆ |
| Mechanical performance | ★★★☆ | ★★☆☆ | ★☆☆☆ |
| Short-circuit protection | ★☆☆☆ | ★★★☆ | ★★★★ |
| Handle size | ★★☆☆ | ★★★☆ | ★★★☆ |

# MC4CE

INNOVATION

## INSULATING UNIVERSAL PLIER WITH CERAMIC CUTTERS

STANDARDS
EN 60900 / IEC 60900

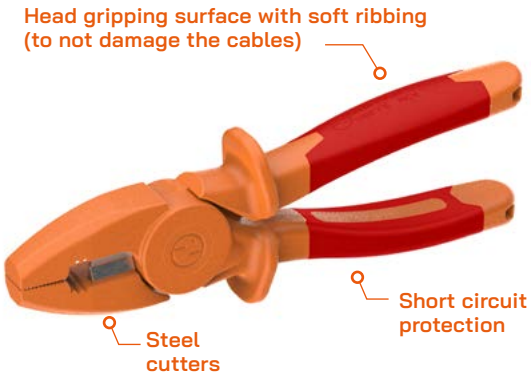



### / TECHNICAL SPECIFICATIONS

Pliers made of glass-fibre reinforced thermoplastic, providing full electrical insulation. The 200T-compressed ceramic cutting edges deliver high hardness and clean cuts without damaging cables. With no accessible conductive parts, short-circuit risks are minimized.

Soft, glove-friendly handles are available in two sizes:
L (compact) and XL (+20 mm), offering around 10% better performance and improved comfort for more sensitive users.
The lightweight engineered design and ergonomic handle ensure optimal force transfer.
A D-ring is integrated for safe use at height.

| Reference | Length (mm) | Weight (g) | Handle size |
|---|---|---|---|
| MC4CE-L | 190 | 160 | L |
| MC4CE-XL | 210 | 170 | XL |




# MC4H

## HYBRID UNIVERSAL PLIER WITH STEEL CUTTERS

STANDARDS
NF EN 60900 / IEC 60900

### / USE

These pliers are particularly suitable for low voltage live working in confined spaces where the risk of a short-circuit can have serious consequences for people and installations

### / TECHNICAL SPECIFICATIONS

Bi-material handle allowing a good grip and ease of handling, without risk of damage to the gloves. Arm profile allowing the transmission of important effort with ease = control of the gesture.
Hanging system, ideal for work at height.
Ergonomic use with insulating gloves.
Fiberglass reinforced composite material = light and robust.

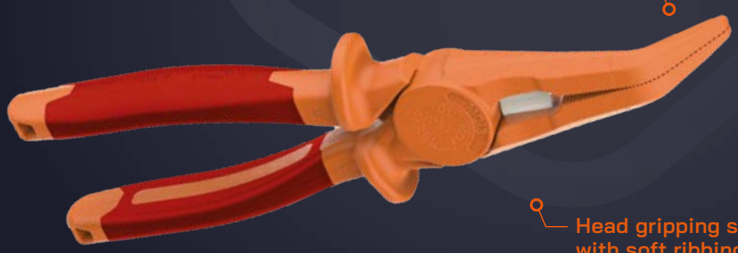
| Reference | Cutting capacity | Length | Weight | Handle size |
|---|---|---|---|---|
| MC4H-L | Cu: 16 mm² - Al: 25 mm² - No Steel — No Almelec | 190 mm | 160 g | L |
| MC4H-XL | Cu: 16 mm² - Al: 25 mm² - No Steel — No Almelec | 210 mm | 170 g | XL |

# MC13CE

INNOVATION

## 1000V INSULATING LONG BENT NOSE PLIER

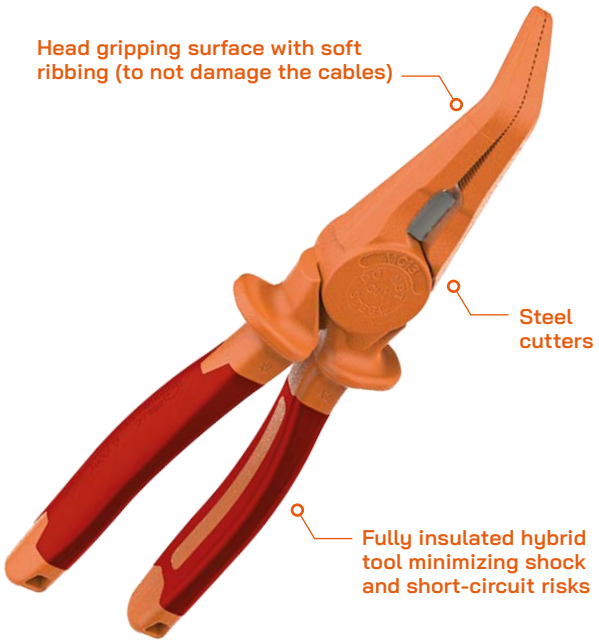
STANDARDS
EN 60900 / IEC 60900




### / TECHNICAL SPECIFICATIONS

Bi-material handle allowing a good grip and ease of handling, without risk of damage to the gloves.
Arm profile allowing the transmission of important effort with ease = control of the gesture. Hanging system, ideal for work at height.
Ergonomic use with insulating gloves.
Fiberglass reinforced composite material = light and robust.

| Reference | Cutting capacity | Cutting capacity : Steel - Almelec | Length (mm) | Weight (g) | Handle size |
|---|---|---|---|---|---|
| MC13CE-L | 16 mm² Cu multi -stranded copper | No | 215 | 170 | L |
| MC13CE-XL | | | 235 | 180 | XL |




# MC13H

## 1000V HYBRID LONG BENT NOSE PLIER

STANDARDS
NF EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Pliers made of glass fiber-reinforced thermoplastic insulating material
Steel cutting part - The shape of the pliers designed to avoid damage of the cable
Hybrid tool = reduce the risks of short-circuits. The only conductive part is the cutting part.
2 handle sizes :
L : compact — standa rd size
XL : + 20 mm = allow better performance ~ +10% - suitable for the most fragile personnel
Designed to be used with gloves - engineering materialy = light
The shape of the handle is designed to transfer the efforts. D-ring for works-at-height.

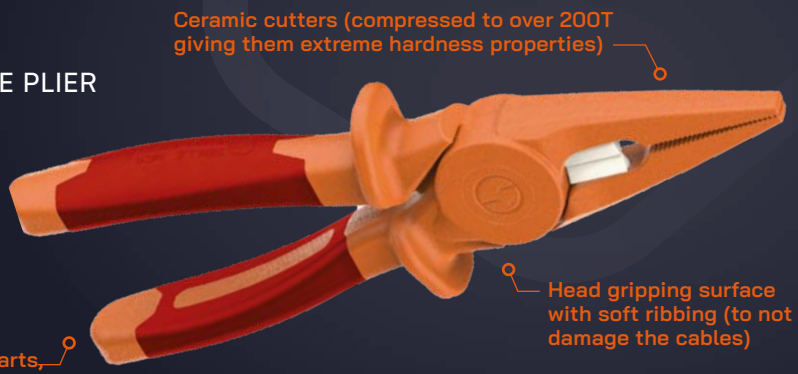
| Reference | Cutting capacity | Length | Weight | Handle size |
|---|---|---|---|---|
| MC13H-L | Cu: 16 mm² - Al: 25 mm² - No Steel — No Almelec | 215 mm | 170 g | L |
| MC13H-XL | Cu: 16 mm² - Al: 25 mm² - No Steel — No Almelec | 235 mm | 180 g | XL |

# MC11CE

INNOVATION

## 1000V INSULATING LONG FLAT NOSE PLIER

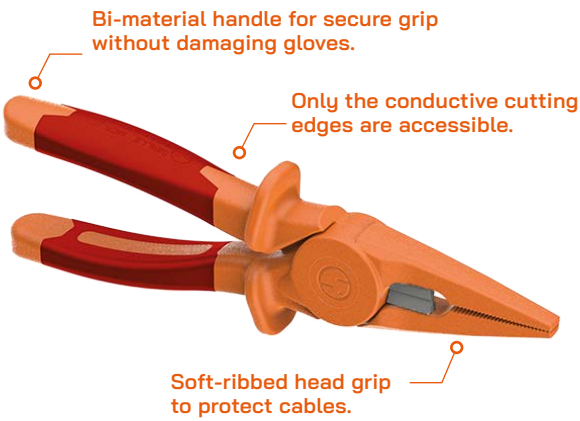
STANDARDS
EN 60900 / IEC 60900




### / TECHNICAL SPECIFICATIONS

Pliers made of glass fiber-reinforced thermoplastic insulating material
Ceramic cutting part are produced by pressure process (200T) to warranty hardness performances - The shape of the plier designed to avoid damage of the cable Insulating tool = reduce to the maximum the risks of short-circuits. Neither conductive part
accessible. Ergonomic use with insulating gloves.
2 handle sizes : L : compact — standard size and XL : + 20 mm = allow better performance ~ +10% - suitable for the most fragile personnel
Designed to be used with gloves - engineering materialy = light.
The shape of the handle is designed to transfer the efforts. D-ring for works-at-height.

| Reference | Cutting capacity | Cutting capacity : Steel - Almelec | Length (mm) | Weight (g) |
|---|---|---|---|---|
| MC11CE-L | 16 mm² Cu multi -stranded copper | No | 200 | 160 |
| MC11CE-XL | | | 220 | 170 |




# MC11H

## 1000V HYBRID LONG FLAT NOSE PLIER

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Steel cutting edges. Arm profile allowing the transmission of important effort with ease = control of the gesture.
Hanging system, ideal for work at height.
Ergonomic use with insulating gloves.
Composite material = lightness.

| Reference | Cutting capacity | Length | Weight | Handle size |
|---|---|---|---|---|
| MC11H-L | Cu: 16 mm² - Al: 25 mm² - No Steel — No Almelec | 200 mm | 160 g | L |
| MC11H-XL | Cu: 16 mm² - Al: 25 mm² - No Steel — No Almelec | 220 mm | 170 g | XL |



# MCPTI

## INSULATING PLIER FOR ELECTRICAL PANELS

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Insulating product (no accessible metal parts) for maximum safety.
Fiberglass-reinforced thermoplastic insulating material.
Reinforced arm profile adapted to the constraints of the field.

| Reference | Length (mm) | Weight (g) |
|---|---|---|
| MCPTI | 196 | 115 |



# MC70

## 1000V INSULATING NOTCHE PLIER

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Compact design and very rigid when gripping. Fiberglass-reinforced thermoplastic insulating material. Reinforced arm profile adapted to the constraints of the field.

| Reference | Length (mm) | Weight (g) | Handle size |
|---|---|---|---|
| MC70-L | 200 | 160 | L |
| MC70-XL | 220 | 170 | XL |

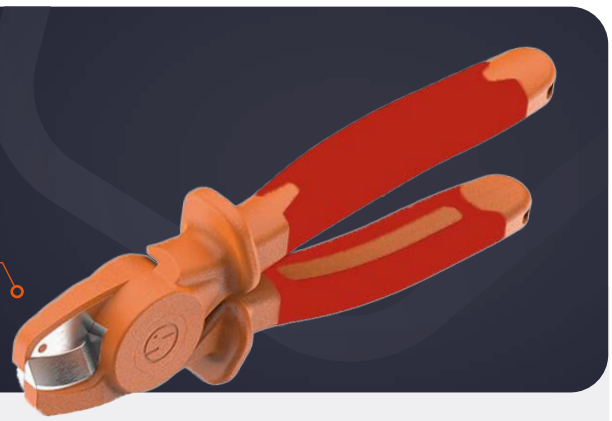
# MC45I

OUR SELECTION

## 1000V HYBRID CABLE CUTTING PLIER

STANDARDS
EN 60900 / IEC 60900

Lightweight, glove-friendly design for easy handling.



### / TECHNICAL SPECIFICATIONS

Bi-material handle for a good grip and ease of handling. XL arm length for more comfort and easier transmission of force (+ 20 mm compared to a standard pliers) - Force transmission gain ~ +10%. Arm profile allowing the transmission of important effort with ease = control of the gesture. Hanging system, ideal for work at height. Fiberglass reinforced composite material = light and robust. Reinforced blade profile.

| Reference | Length | Weight | Handle size | Cuttin capacity | Ø opening |
|---|---|---|---|---|---|
| MC45I-L | 172 mm | 230 g | L | Copper : 25 mm²<br>Aluminium : 70 mm²<br>Steel : no | 16 mm |
| M45I-XL | 187 mm | 250 g | XL | | |



# MC45IR

## 1000V REINFORCED HYBRID CABLE CUTTING PLIER

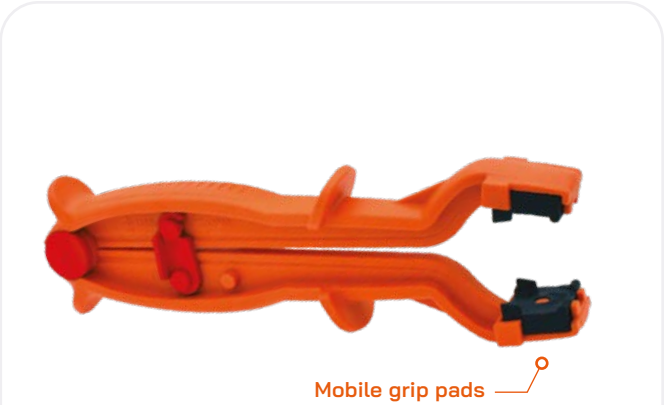
STANDARDS

EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Almelec cutting capacity. Tapered nose for optimal accessibility.

| Reference | Length (mm) | Cutting Capacity | Weight (g) |
|---|---|---|---|
| MC45IR | 190 | 54,6 mm² Almelec | 165 |




# IS53U

## 1000V INSULATED FUSE-PULLER PLIER WITH ADJUSTABLE JAWS

STANDARDS

EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Plier with a 25—100 mm opening capacity and spring-loaded jaws.
Removable, replaceable grip pads with a reversible 180° design suitable for various fuse types (porcelain, knife, etc.).
Latch locking system, fully ambidextrous.
Front and rear handle stops for secure handling.

| Reference | Length (mm) | Weight (g) |
|---|---|---|
| IS53U | 215 | 160 |



# MS27

## 1000V INSULATED DOUBLE SLIP-JOINT ADJUSTABLE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 8976 / ISO 5744

### / TECHNICAL SPECIFICATIONS

Double rack. Browned steel finish for high anticorrosion protection thanks to a series of 5 baths. Inner jaws hardness : 60 HRC for better wear resistance.
Model MS27R / reinforced model.
One-handed adjustment possible.

| Reference | Jaw opening | Position number | Lenght | Weight |
|---|---|---|---|---|
| MS27-250 | 28 mm | 7 | 10" | 440 g |
| MS27R-250 | | | | |



# MS27VM

## 1000V INSULATED DOUBLE RACK AND PINION PLIER WITH MECHANICAL LOCKING

STANDARDS

NF EN 60900 / IEC 60900 / NF ISO 8976

### / TECHNICAL SPECIFICATIONS

Quick, easy, one-hand adjustment. Push button to unlock/lock the setting = safety. 9 setting positions. Anti-finger-pinch device. Large capacity: 60 mm Thin jaws. Internal length of gripping handle: min. 70 mm.

| Reference | Jaw opening | Position number | Lenght | Weight |
|---|---|---|---|---|
| MS27VM | 60 mm | 9 | 250 mm +/-15t | 450 g |



# MS8

## 1000V INSULATED SLIP-JOINT ADJUSTABLE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 8976 / ISO 5744

### / TECHNICAL SPECIFICATIONS

Low thickness head working. Machined notch for better stability. Thin head for better accessibility.

| Reference | Length | Weight | Minimum opening jaws |
|---|---|---|---|
| MS8-205 | 205 mm | 230 g | 22 mm |
| MS8-250 | 250 mm | 400 g | 28 mm |
| MS8-310 | 310 mm | 670 g | 35 mm |




# MS43

## 1000V INSULATED STRIPPING ADJUSTABLE PLIER

STANDARDS

EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Suitable for stripping single-pole and multicore cables from 0.5 to 10 mm² (max Ø 5 mm), this tool features a 5-bath browned steel finish for strong anticorrosion protection. The adjustment screw with locking nut ensures precise diameter setting, while the return spring makes opening easier and more comfortable.

| Reference | Length | Weight |
|---|---|---|
| MS43 | 175 mm | 200 g |




# MS45

## 1000V INSULATED CABLE CUTTING PLIER

STANDARDS

EN 60900 / IEC 60900

### / USE

For cutting electrical cables.

### / TECHNICAL SPECIFICATIONS

Automatic opening, invisible spring.
Clamp with locking lever for extra safety.
Cutting capacities indicated on the tool

| Reference | Length | Weight | Aluminium | Copper | Opening |
|---|---|---|---|---|---|
| MS45-195 | 195 mm | 430 g | Ø 14 mm | Ø 14 mm | 20 mm |
| MS45-230 | 230 mm | 500 g | Ø 20 mm | Ø 20 mm | 24 mm |




# MS43E

## 1000V FULLY INSULATED STRIPPING PLIER

STANDARDS
EN 60900 / IEC 60900

### / USE

Stripping cables (single-pole and multiple conductor) from 0.5 to 10 mm² (max Ø: 5 mm).

### / TECHNICAL SPECIFICATIONS

Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.
With adjustment screw and nut for locking on the required diameter.
Return spring that makes opening easier.

| Reference | Length | Weight |
|---|---|---|
| MS43E | 180 mm | 220 g |




# MS30S

## 1000V INSULATED CABLE CUTTING AND STRIPPING PLIER FOR REMOTE ENERGY METER

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Protective pin to avoid pinching.
Stripping function using a small notch made at the end of the jaw.
Riveted jaws.

| Reference | Length (mm) | Weight (g) | Opening (mm) |
|---|---|---|---|
| MS30S-165 | 165 | 200 | 12 |
| MS30S-200 | 205 | 340 | 16 |
| MS30S-250 | 250 | 430 | 18 |

# PCC20-1000V

OUR SELECTION

## 1000V INSULATED CABLE SHEARS WITH TWIN CUTTING EDGE

STANDARDS
EN 60900 / IEC 60900




### / TECHNICAL SPECIFICATIONS

Protective pin to avoid pinching. Stripping function using a small notch made at the end of the jaw.
Riveted jaws.

| Reference | Length | Weight | Opening | Capacity |
|---|---|---|---|---|
| PCC20-1000V | 210 mm | 350 g | Ø 20 mm | Copper & alu : 70 mm² / No steel |







# C28-250

## 1000V INSULATED CABLE CUTTING PLIER

STANDARDS

EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Arm profile allowing the transmission of important cutting effort with ease.
Hardened steel cutting edges : 45 HRC.

| Reference | Length | Weight | Cutting capacity |
|---|---|---|---|
| C28-250 | 250 mm | 470 g | Ø12 mm |




# PCCR1000V

## CUTTING PLIER FOR PLASTIC CABLE TIES

STANDARDS

IEC 60900 (ONLY FOR THE INSULATED VERSION

### / USE

The plier's specially shaped nose cuts plastic clamp rings (Rilsan, Colson, etc.) without risking cable damage. Ideal for electrical networks, power stations, telecom, public lighting, firefighting, automotive, and infrastructure work.

| Reference | Length | Weight | Cutting capacity |
|---|---|---|---|
| PCCR-1000V | 150 mm | 140 g | Ø10 mm |






# MS5S

## 1000V INSULATED FLUSH CUTTING PLIER

STANDARDS

EN 60900 / IEC 60900

### / USE

Cutting the strip on the armoured teleport cable.

| Reference | Length | Weight |
|---|---|---|
| MS5S | 130 mm | 100 g |




# MS80

## 1000V INSULATED CONNECTOR PLIER

STANDARDS

EN 60900 / IEC 60900

### / USE

Pliers used in the telephony field for multipair cable. For crimping telecommunication and signal cables.

| Reference | Length | Weight |
|---|---|---|
| MS80 | 150 mm | 150 g |

# MS4

OUR SELECTION

## 1000V INSULATED UNIVERSAL PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5746




### / USE

Multi-purpose pliers (clamping, bending, cutting).

| Reference | Length | Weight |
|---|---|---|
| MS4-145 | 145 mm | 190 g |
| MS4-165 | 165 mm | 255 g |
| MS4-185 | 185 mm | 320 g |
| MS4-210 | 210 mm | 390 g |
| MS4-220 | 220 mm | 450 g |

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life.
Edge hardness: 60 HRC.
Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.
No play in the axis for a perfect alignment of the cutting edges guaranteeing an optimal cutting quality. This also prevents unintentional opening of the tool during transport, which could damage other tools.



# MS4E

## 1000V FULLY INSULATED UNIVERSAL PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5746

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life.
Edge hardness: 40 HRC min.
Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.
The working head insulation is chamfered to avoid damaging it while grasping.

| Reference | Lenght | Weight |
|---|---|---|
| MS4E-185 | 185 mm | 330 g |
| MS4E-210 | 210 mm | 400 g |

Overall length tolerance : ± 15 mm of the nominal value



# MS4-250

## 1000V INSULATED LINEMAN PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5746

### / TECHNICAL SPECIFICATIONS

For LINEMAN
Induction forge treatment of the cutting edges, giving jaws a long life. Edge hardness: 60 HRC.
Chrome finish for high anticorrosion protection thanks to a series of 5 baths.
Lug crimping point under the axis of the tool.

| Reference | Lenght | Weight |
|---|---|---|
| MS4-250 | 250 mm | 450 g |



# MS13

## 1000V INSULATED HALF-ROUND 45° BENT NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5745

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a longlife. Edge hardness: 44 HRC min. Browned steel finish for high anticorrosion protection thanks to a seriesof 5 baths.
Axial cut edges. Jaws with ribbing on the inside for a good hold.

| Reference | Length | Weight |
|---|---|---|
| MS13-165 | 165 mm | 180 g |
| MS13-185 | 185 mm | 190 g |
| MS13-205 | 205 mm | 200 g |



# MS13E

## 1000V FULLY INSULATED HALF-ROUND 45° BENT NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5745

### / USE

This plier make it easy to bend electrical wire. Suitable for work requiring a good grip and precision cutting.

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a longlife. Edge hardness: 44 HRC min. Browned steel finish for high anticorrosion protection thanks to a seriesof 5 baths.
Axial cut edges. Jaws with ribbing on the inside for a good hold.

| Reference | Length | Weight |
|---|---|---|
| MS13E 185 | 185 mm | 210 g |
| MS13E 205 | 205 mm | 250 g |



# MS10

## 1000V INSULATED HALF-ROUND LONG NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5745

### / USE

This plier make it easy to bend electrical wire. Suitable for work requiring a good grip and precision cutting.

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a longlife. Edge hardness: 44 HRC min. Browned steel finish for high anticorrosion protection thanks to a seriesof 5 baths.
Axial cut edges. Jaws with ribbing on the inside for a good hold.

| Reference | Length | Weight |
|---|---|---|
| MS10-170 | 170 mm | 175 g |
| MS10-205 | 205 mm | 240 g |



# MS10E

## 1000V FULLY INSULATED HALF-ROUND LONG NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5745

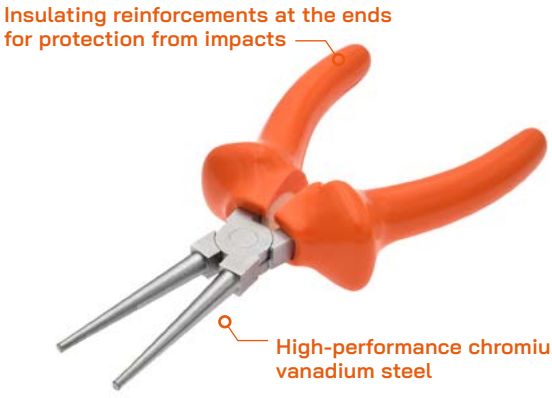
### / USE

This plier make it easy to bend electrical wire. Suitable for work requiring a good grip and precision cutting. Complete insulation of the working head reduces the risk of short-circuits.

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life. Edge hardness: 44 HRC. Browned steel finish for high anticorrosion protection thanks to a series of 5 baths. Axial cutting edges. Nose length designed to reach hard-to-reach parts.

| Reference | Length | Weight |
|---|---|---|
| MS10E-170 | 170 mm | 185 g |
| MS10E-205 | 205 mm | 250 g |




# MS15

## 1000V INSULATED ROUND NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5745

### / TECHNICAL SPECIFICATIONS

Chrome finish for high anticorrosion protection thanks to a series of 5 baths.
Jaws with ribbing on the inside for a good hold.
Nose length designed to reach hard-to-reach parts.

| Reference | Lenght | Weight |
|---|---|---|
| MS15-170 | 170 mm | 170 g |



# MS11

## 1000V INSULATED FLAT NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5745

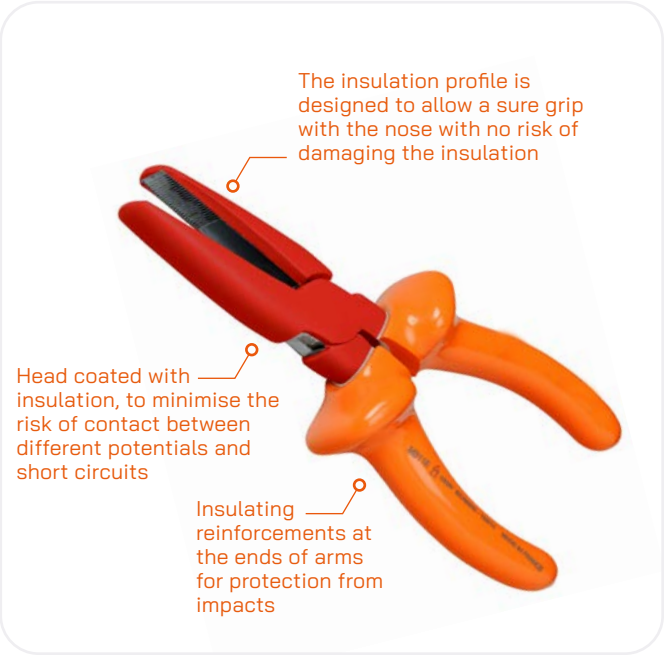
### / USE

They make it easy to bend electrical wire.

### / TECHNICAL SPECIFICATIONS

Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.
Jaws with ribbing on the inside for a good hold.

| Reference | Type | Length | Weight |
|---|---|---|---|
| MS11-150BC | Short flat nose | 150 mm | 175 g |
| MS11-170BC | | 170 mm | 180 g |
| MS11-170BL | Long flat nose | | 185 g |




# MS11E

## 1000V FULLY INSULATED LONG FLAT NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5745

### / USE

They make it easy to bend electrical wire. Complete insulation of the work head reduces the risk of short-circuits.

### / TECHNICAL SPECIFICATIONS

Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.
Jaws with ribbing on the inside for a good hold.

| Reference | Length | Weight |
|---|---|---|
| MS11E-170 | 170 mm | 210 g |



# MS60

## 1000V INSULATED DIAGONAL CUTTING PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5749

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life. Edge hardness: 44 HRC min.
Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.

| Reference | Length | Weight |
|---|---|---|
| MS60-145 | 145 mm | 200 g |
| MS60-165 | 165 mm | 260 g |
| MS60-185 | 185 mm | 350 g |



# MS60E

## 1000V FULLY INSULATED HALF-ROUND LONG NOSE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5749

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life. Edge hardness: 44 HRC. Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.

| Reference | Length | Weight |
|---|---|---|
| MS60E-170 | 170 mm | 260 g |
| MS60E-185 | 185 mm | 350 g |



# MS5

## 1000V INSULATED SIDE PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5749

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life. Cutting edges hardness: 62 HRC. Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.

| Reference | Length | Weight |
|---|---|---|
| MS5-150 | 150 mm | 220 g |
| MS5-175 | 175 mm | 280 g |
| MS5-190 | 195 mm | 370 g |
| MS5-200 | 210 mm | 400 g |



# MS5E

## 1000V FULLY INSULATED SIDE CUTTING PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5749

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life.
Cutting edges hardness: 62 HRC.
Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.

| Reference | Length | Weight |
|---|---|---|
| MS5E-190 | 195 mm | 370 g |



# MS6

## 1000V INSULATED END CUTTING PLIER

STANDARDS

EN 60900 / IEC 60900 / ISO 5743 / ISO 5744 / ISO 5748

### / TECHNICAL SPECIFICATIONS

Induction forge treatment of the cutting edges, giving jaws a long life.
Cutting edges hardness: 62 HRC. Browned steel finish for high anticorrosion protection thanks to a series of 5 baths.
Riveted joint that can withstand high loads.

| Reference | Length | Weight | Cutting capacity |
|---|---|---|---|
| MS6-135 | 135 mm | 210 g | Medium-hard steel wire 160 kg/mm² : Ø 1,4 mm |
| MS6-170 | 170 mm | 290 g | Medium-hard steel wire 160 kg/mm² : Ø 1,6 mm |
| MS6-210 | 210 mm | 410 g | Hard steel wire 200 kg/mm² : Ø 2 mm |

# HTLC4
# HTLC5

## 1000V INSULATED TORQUE

STANDARDS

EN 60900 / IEC 60900 / EN ISO 6789




### / USE

In order to guarantee the optimum tightening torque and to facilitate the work of technicians, we offers a torque limiting screwdriver preset at 4.5 Nm or 5 Nm. When the torque is reached, the dynamometric device is triggered, thus ensuring optimal screwing. Automatic reset.

### / TECHNICAL SPECIFICATIONS

- Fixed torque factory preset to 4.5Nm or 5Nm depending on model.
- Delivered with a calibration certificate.
- Each tool is marked with a serial number for traceability

The screwdriver is supplied with a set of 3 removable blades:
- Short insulated hexagonal blade for 4 mm hexagonal socket screws.
- Long insulated hexagonal blade for 4 mm hexagon socket screws.
- Long insulated blade for 6.5 mm slotted head screws.

Complete set delivered in a canvas bag.

| Reference | Description |
|---|---|
| HTLC4 | 1000V insulated torque limiting screwdriver 4,5 Nm (with 3 blades) |
| HTLC5 | 1000V insulated torque limiting screwdriver 5 Nm (with 3 blades) |

| Spare parts | Description |
|---|---|
| IS18AI-6.5 | Long, insulated bit for 6,5 mm slotted head screws |
| IS64AI-4 | Short, insulated bit for 4 mm hex key screws |
| IS64ALI-4 | Long, insulated bit for 4 mm hex key screws |
| TLC4 | 4 Nm - 2,95 lbf.ft - 35,4 lbf.in torque limiting screwdriver without bit |
| TLC5 | 5 Nm - 3,7 lbf.ft in torque limiting screwdriver without bit |

| Options | Description |
|---|---|
| IS64ALI-3 | Insulated long blade 6-sided 3 mm |
| IT18AI-25 | Insulated Torx blade T25 |

# ROTOLINE PATENTED

## 1000V INSULATED SCREWDRIVERS

STANDARDS

EN 60900 / IEC 60900 / ISO 2380-1 / ISO 8764 / ISO 10664

**/ After an in-depth study to find the best compromise between comfort and efficiency, we has developed its newest innovation, the Rotoline range.**

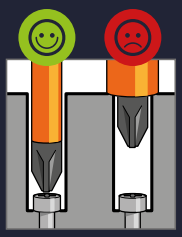
The screwdrivers of the Rotoline range have a perfectly rounded handle end, making them perfect in terms of grasp and user comfort.

That round end allows the user to turn the screwdriver in the palm of his hand very easily during heavy-duty work, particularly with electrician's gloves.

The ROTOLINE range is available with three handle ends :

- **ROTOLINE CLASSIC :** this is the classic version of the screwdriver, with a perfectly round handle end that makes it very comfortable in use.
- **ROTOLINE TURN :** the round handle end rotates, making initial tightening and loosening much easier. The handle ball sits snugly in the palm, and the user can rotate the body of the screwdriver with their fingers.
- **ROTOLINE TURN & BLOCK :** the end of the handle rotates, and can also be locked by just applying pressure to it. The rotating function helps in initial tightening, while the lock is used for final tightening.

**"SMART DIAMETER" BLADE**
The blades are turned to offer no excess thickness of the insulating material at the top of the blade in order to reach screws set in narrow recesses.



**BLADE**
High strength tempered and burnished steel for more precision.

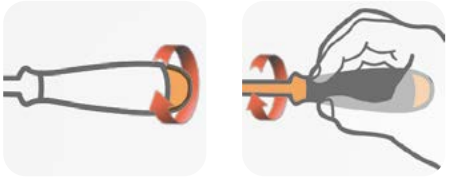
**INSULATED BLADE**
The insulating sleeve is integral with the handle, injected directly around the blade. 1000 V insulation in accordance with electrical standard IEC 60900:2012 and mechanical standards ISO2380-1 and ISO8764-1. VDE certified.



**HANDLE**
Ergonomic handle with high-quality soft coating for comfort and grip.
The handle is designed for powerful and comfortable tightening.
Four different handle dimensions are available, depending on the blade diameter.
Markings are applied showing standard information and product number.

**INITIAL TIGHTENING POSITION**
The rotating ball of the handle is held in the palm and the fingers control the rotation of the screwdriver.

**NB : According to regulations, wearing insulating gloves is mandatory.**



**IDENTIFICATION RING**
Each screwdriver has a coloured ring on the handle. The ring colour corresponds to the type of screwdriver blade, allowing a quick identification.

**Slot-head blade**
**Pozidriv blade**
**Phillips blade**
**Torx® blade**

**ROUND END**
The round end is absolutely smooth and shaped to suit the hollow of the palm for quick and precise rotation.
The round end of the handle is marked with the symbol of the blade type, and the pictogram associated with the type of Rotoline model : Classic, Turn or Turn & Block.



## RL1-PL-8•150

**Rotoline model**
RL1 for Rotoline Classic
RL2 for Rotoline Turn
RL3 for Rotoline Turn & Block

**Blade Type**
PL : slot-head
PH : Phillips
PZ : Pozidriv
TX : Torx®

**Shank dimensions**
Diameter x length

**Advantage**

- The most complete range of screwdrivers : 70 models.

| | | OUR SELECTION | | |
|---|---|---|---|---|
| **Type of blade** | **Dimensions (shank Ø x shank lenght )** | **ROTOLINE CLASSIC item number** | **ROTOLINE TURN item number** | **ROTOLINE TURN & BLOCK item number** |
| SLOT-HEAD | 2 x 70 | RL1-PL-2•70* | RL2-PL-2x70* | - |
| | 3 x 100 | RL1-PL-3•100* | RL2-PL-3x100* | - |
| | 3,5 x 120 | RL1-PL-35•120 | RL2-PL-35x120 | - |
| | 4 x 120 | RL1-PL-4x120 | RL2-PL-4x120 | - |
| | 5,5 x 100 | RL1-PL-55x100 | RL2-PL-55x100 | - |
| | 5,5 x 150 | RL1-PL-55x150 | RL2-PL-55x150 | - |
| | 6,5 x 150 | RL1-PL-65x150 | RL2-PL-65x150 | - |
| | 8 x 150 | RL1-PL-8x150 | RL2-PL-8x150 | RL3-PL-8x150 |
| | 8 x 200 | RL1-PL-8x200 | RL2-PL-8x200 | RL3-PL-8x200 |
| | 10 x 150 | RL1-PL-10x150 | RL2-PL-10x150 | RL3-PL-10x150 |
| | 10 x 250 | RL1-PL-10x250 | RL2-PL-10x250 | RL3-PL-10x250 |
| | 12 x 200 | RL1-PL-12x200 | RL2-PL-12x200 | RL3-PL-12x200 |
| PHILLIPS | N°0 - 4 x 75 | RL1-PH-4x75 | RL2-PH-4x75 | - |
| | N°0 - 4 x 150 | RL1-PH-4x150 | RL2-PH-4x150 | - |
| | N°1 - 5 x 100 | RL1-PH-5x100 | RL2-PH-5x100 | - |
| | N°2 - 6 x 125 | RL1-PH-6x125 | RL2-PH-6x125 | - |
| | N°3 - 8 x 150 | RL1-PH-8x150 | RL2-PH-8x150 | RL3-PH-8x150 |
| | N°4 - 10 x 200 | RL1-PH-10x200 | RL2-PH-10x200 | RL3-PH-10x200 |
| POZIDRIV | N°0 - 4 x 75 | RL1-PZ-4x75 | RL2-PZ-4x75 | - |
| | N°0 - 4 x 150 | RL1-PZ-4x150 | RL2-PZ-4x150 | - |
| | N°1 - 5 x 100 | RL1-PZ-5x100 | RL2-PZ-5x100 | - |
| | N°2 - 6 x 125 | RL1-PZ-6x125 | RL2-PZ-6x125 | - |
| | N°3 - 8 x 150 | RL1-PZ-8x150 | RL2-PZ-8x150 | RL3-PZ-8x150 |
| | N°4 - 10 x 200 | RL1-PZ-10x200 | RL2-PZ-10x200 | RL3-PZ-10x200 |
| TORX® | T10 | RL1-TX-T10* | RL2-TX-T10* | - |
| | T20 | RL1-TX-T20 | RL2-TX-T20 | - |
| | T27 | RL1-TX-T27 | RL2-TX-T27 | - |
| | T30 | RL1-TX-T30 | RL2-TX-T30 | - |
| | T45 | RL1-TX-T45 | RL2-TX-T45 | RL3-TX-T45 |

* These models do not use « smart diameter ».




# IS18DB

## 1000V INSULATED SLOTTED SCREWDRIVER WITH SMART DIAMETER BLADE

STANDARDS

EN 60900 / IEC 60900 / ISO 2380-1

### / USE

For tightening slotted screws.

### / TECHNICAL SPECIFICATIONS

Ergonomically designed bi-material handle for good support (especially with insulating gloves) and comfortable torque transmission.
Hanging hole (anti-fall).
Screwdriver tip : slotted.
Additional (non-standard) blade bending test.

| Reference | Blade Ø | Blade length | Handle Ø | Handle length | Weight |
|---|---|---|---|---|---|
| IS18DB4X120 | 4 mm | 120 mm | 27 mm | 91 mm | 45 g |
| IS18DB55X150 | 5,5 mm | 150 mm | 32 mm | 109 mm | 65 g |
| IS18DB65X150 | 6,5 mm | | | | 95 g |
| IS18DB65x40 | | 40 mm | 31 mm | 55 mm | 35 g |
| IS18DB8X150 | 8 mm | 150 mm | 35 mm | 123 mm | 140 g |
| IS18DB10X150 | 10 mm | 150 mm | 35 mm | 123 mm | 180 g |




# IC18DB

## 1000V INSULATED PHILLIPS SCREWDRIVER WITH SMART DIAMETER BLADE

STANDARDS

EN 60900 / IEC 60900 / ISO 8764-1

### / USE

For tightening Phillips screws.

### / TECHNICAL SPECIFICATIONS

Ergonomically designed bi-material handle for good support (especially with insulating gloves) and comfortable torque transmission.
Hanging hole (anti-fall).
Screwdriver tip : Phillips.
Additional (non-standard) blade bending test.

| Reference | N° | Blade Ø | Blade length | Handle Ø | Handle length | Weight |
|---|---|---|---|---|---|---|
| IC-18DB4X75 | 0 | 4 mm | 75 mm | 27 mm | 91 mm | 40 g |
| IC18DB5X100 | 1 | 5 mm | 100 mm | | | 50 g |
| IC18DB6X125 | 2 | 6 mm | 125 mm | 32 mm | 109 mm | 80 g |
| IC18DB8X150 | 3 | 8 mm | 150 mm | 35 mm | 123 mm | 140 g |




# IP18DB

## 1000V INSULATED POZIDRIV SCREWDRIVER WITH SMART DIAMETER BLADE

STANDARDS

EN 60900 / IEC 60900 / ISO 8764-1

### / USE

For tightening Pozidriv screws.

### / TECHNICAL SPECIFICATIONS

Ergonomically designed bi-material handle for good support (especially with insulating gloves) and comfortable torque transmission.
Hanging hole (anti-fall).
Screwdriver tip : Pozidriv.
Additional (non-standard) blade bending test.

| Reference | N° | Blade Ø | Blade length | Handle Ø | Handle length | Weight |
|---|---|---|---|---|---|---|
| IP18DB4x75 | 0 | 4 mm | 75 mm | 27 mm | 91 mm | 40 g |
| IP18DB5X100 | 1 | 5 mm | 100 mm | | | 50 g |
| IP18DB6X125 | 2 | 6 mm | 125 mm | 32 mm | 109 mm | 80 g |
| IP18DB8X150 | 3 | 8 mm | 150 mm | 32 mm | 123 mm | 140 g |




# IT18DB

## 1000V INSULATED TORX® SCREWDRIVER WITH SMART DIAMETER BLADE

STANDARDS

EN 60900 / IEC 60900 / ISO 10664

### / USE

For tightening Torx® screws.

### / TECHNICAL SPECIFICATIONS

Ergonomically designed bi-material handle for good support (especially with insulating gloves) and comfortable torque transmission.
Hanging hole (anti-fall).
Screwdriver tip : Torx®
Additional (non-standard) blade bending test.

| Reference | N° | Blade Ø | Blade length | Handle Ø | Handle length | Weight |
|---|---|---|---|---|---|---|
| IT18ND-T10 | T10 | 3 mm | 100 mm | 22 mm | 74 mm | 25 g |
| IT18ND-T15 | T15 | 3,5 mm | 100 mm | 22 mm | 74 mm | 30 g |
| IT18DB-T20 | T20 | 4 mm | 120 mm | 27 mm | 91 mm | 45 g |
| IT18DB-T25 | T25 | 5 mm | 100 mm | 27 mm | 91 mm | 50 g |
| IT18DB-T27 | T27 | 5 mm | 100 mm | 27 mm | 91 mm | 50 g |
| IT18DB-T30 | T30 | 5,5 mm | 150 mm | 32 mm | 109 mm | 65 g |
| IT18DB-T40 | T40 | 6,5 mm | 150 mm | 32 mm | 109 mm | 95 g |
| IT18DB-T45 | T45 | 8 mm | 150 mm | 35 mm | 123 mm | 140 g |



# TC4

## 1000V INSULATED SCREWDRIVER FOR ROUND HEADED OR CONICAL SQUARE COUNTERSUNK SCREWS

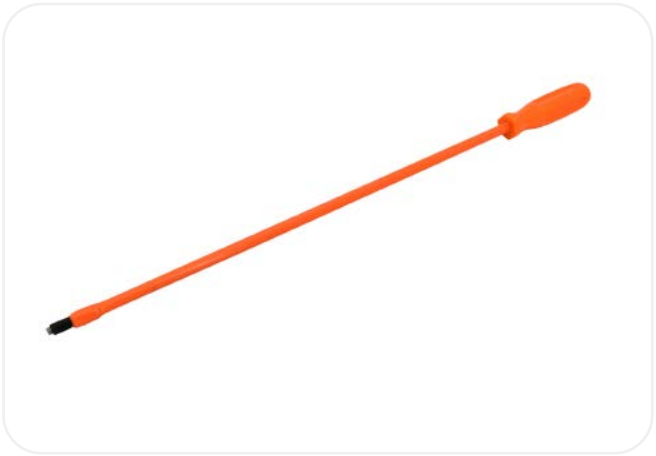
STANDARDS

EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

The ergonomic shape of the handle ensures a good grip, especially when using gloves, and a high torque with limited effort.

| Reference | Length | Square | Screw diamter |
|---|---|---|---|
| TC4N1 | 215 mm | 2,35 mm | 3-3,5 mm |
| TC4N2 | 225 mm | 2,9 mm | 4-5 mm |
| TC4N3 | | 3.4 mm | 6 mm |



# TFA

## 1000V INSULATED HANDLE WITH FLEXIBLE SHAFT AND MAGNETIC TIP

STANDARDS

EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

This tool consistis of a handle and a flexible rod with a magnet at its tip, Maximum load/lift force: 120 g

| Reference | Length overall | Lenght wand | Magnec diameter | Weight |
|---|---|---|---|---|
| TFA | 560 mm | 440 mm | 5mm | 130 g |



# TLF8

## LEVER SCREWDRIVER WITH FLAT BLADE Ø 8 MM

### / USE

This tool facilitates the leverage operations required in different configurations (e.g. removing wood panels and meters).

### / TECHNICAL SPECIFICATIONS

Large cross-section blade limits the effect of elasticity when levering.
Flat blade with a 15° angle.
**This tool is not an insulated tool.**

| Reference | Length | Weight |
|---|---|---|
| TLF8 | 305 mm | 150 g |



# MS220

## INSULATED ANGLED BOX-END WRENCH

STANDARDS

IEC 60900 / ISO 691 / ISO 1711-1

### / TECHNICAL SPECIFICATIONS

Hardness : 39 HRC mini.

| Reference | Size | Length | Weight |
|---|---|---|---|
| MS220-13 | 13 mm | 150 mm | 440 g |
| MSHU220-14 | 14 mm | | 450 g |
| MSHU220-17 | 17 mm | | 670 g |
| MSHU220-19 | 19 mm | | 675 g |



# MS51

## 1000V INSULATED SINGLE HEAD BENT SOCKET SPANNER 6-SIDED

STANDARDS

EN 60900 / IEC 60900 / ISO 691 / ISO 1711-1

### / USE

Socket wrench specially designed for TRS (Reduced size Urban Low Voltage Switchboard).

### / TECHNICAL SPECIFICATIONS

End stop on the handle for a good grip.

| Reference | Lenght | Diameter | Weight |
|---|---|---|---|
| MS51 16 | 325 mm | 16 mm | 680 g |
| MS51 17 | | 17 mm | |



# MS51T

## 1000V INSULATED BENT TORX® KEY T50

STANDARDS

EN 60900 / IEC 60900

### / USE

Designed to be used on IP2X Low Voltage switchboards - TIPI (Power and Information Interface Switchboard).

### / TECHNICAL SPECIFICATIONS

Large handle for easy torque transmission.

| Reference | Lenght | Diameter | Weight |
|---|---|---|---|
| MS51T | 375 mm | TORX® T50 | 300 g |




# IS67 - IS87

## 1000 V INSULATED SOCKET TO BE USED WITH EXTERNAL HEXAGON SCREWS

STANDARDS

CEI EN IEC 60900 / CATEGORIE C / ISO 1774-1/ ISO 1711-1 / ISO 2936 / ISO 691

### / USE

Manual sockets to be used with standard ratchet wrenches or with locking devices.

### / TECHNICAL SPECIFICATIONS

Sockets made of burnished steel alloy.

| Codice | Square connection | Measurement | Lenght | Weight |
|---|---|---|---|---|
| IS87S-5 | 3/8'' | 5 mm | 55 mm | 30 g |
| IS87S-6 | | 6 mm | | |
| IS87S-8 | | 8 mm | | 35 g |
| IS87S-10 | | 10 mm | | 45 g |
| IS87XL-4 | | 4 mm | 128 mm | |
| IS87XL-5 | | 5 mm | | 50 g |
| IS87XL-6 | | 6 mm | | 55 g |
| IS87XL-8 | | 8 mm | | 60 g |

| Codice | Square connection | Measurement | Lenght | Weight |
|---|---|---|---|---|
| IS67M-5 | 1/2'' | 5 mm | 78 mm | 60 g |
| IS67M-6 | | 6 mm | | 65 g |
| IS67M-8 | | 8 mm | | |
| IS67M-10 | | 10 mm | | 70 g |
| IS67XL-4 | | 4 mm | 133 mm | |
| IS67XL-5 | | 5 mm | | 75 g |
| IS67XL-6 | | 6 mm | | 80 g |
| IS67XL-8 | | 8 mm | | 95 g |



# MS45SP

## 1000 V INSULATED CABLE CUTTER

STANDARDS

CEI EN IEC 60900

### / USE

Cutting electrical cables.

| Ref | Opening capacity | Cutting capacity | Length | Weight |
|---|---|---|---|---|
| MS45SP | Ø 15 mm | Cu: 35 mm²<br>Al: 50 mm² | 170 mm | 300 g |




# MS2P

## 1000 V INSULATED SCISSORS

STANDARDS

CEI EN IEC 60900

### / TECHNICAL SPECIFICATIONS

High-performance steel with burnishing treatment.
Adjustable hinge with nickel-plated screw and lock nut.
Flexible joint without friction.

| Ref | Lenght | Length of exposed head | Width | Weight |
|---|---|---|---|---|
| MS2P | 185 mm | 70 mm | 50 mm | 180 g |



# MS241

## 1000V INSULATED DOUBLE HEAD 12-SIDED RATCHET SPANNER

STANDARDS

CEI EN IEC 60900

### / USE

For right and left hand pitch tightening.

### / TECHNICAL SPECIFICATIONS

Spanner with 2 working heads of different sizes.
12-sided
Reversible tightening direction by means of a latch.

| Ref | Length | Weight |
|---|---|---|
| MS241-13x17 | 23,5 mm | 300 g |
| MS241-17x19 | 27 mm | 530 g |
| MS241-24x30 | 36 mm | 1,350 kg |

# /WRENCHES, T-WRENCHES, ADJUSTABLE SPANNERS, RING SPANNERS

| | OPEN END WRENCHES | | T-WRENCHES | |
|---|---|---|---|---|
| |  MS16 |  MS16Q |  MS19 |  MS34 |
| **Description** | 15° inclined head | « quick » clamping | long version (305 mm) | small size (135 mm) |
| **Opening** | 5 to 36 mm<br>3/16" to 1,5/8" | 8 - 10 - 13 - 14 - 16 -17 -19 mm | 6 sides<br>Ø 10 to 22 mm<br>12 sides<br>Ø 18 to 22 mm | 6 sides<br>Ø 6 to 21 mm |

***Other size on request**

# / SOCKET WRENCH, CROSS SPANNER, NUT DRIVER, BENT MALE HEX KEY, T-HANDLE HEX KEYS, HEX KEY DRIVER WITH HANDLE, SINGLE HEAD CRANKED RING SPANNER

| | SOCKET WRENCHES | CROSS SPANNER | NUT DRIVER | |
|---|---|---|---|---|
| |  MS20 |  IS39 |  RL-36 | |
| **Description** | | | | |
| **Opening** | 12 sides<br>Ø 10 to 36 mm | 6 sides<br>6 x 8 x 10 x 12 mm<br>7 x 9x 11 x 13 mm<br>8 x 10x 12 x 14 mm<br>8x 10 x 13 x17 mm<br>14 x 17 x 19 x 21 mm | 6 sides<br>Ø 6 to 20 mm | |

***Other size on request**

| | ADJUSTABLE SPANNERS | | RING SPANNERS | | |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| | MS7 | MS7S | MS41 | MS38 | MS41-12P |
| | | | ratchet | 15° inclined head | ratchet |
| | until 43 mm | until 34 mm | 6 sides<br>10-13-16-17-18-19-22 mm | 12 sides<br>Ø 5 to 26 mm<br>1/4" to 15/16" | 12 sides<br>8-10-12-13-14-16-17-18-19 mm |

| | BENT MALE HEX KEY | T-HANDLE HEX KEYS | HEX KEY DRIVER WITH HANDLE | RING SPANNER |
|---|---|---|---|---|
| |  |  |  |  |
| | MS23 | IS23TPC-IS23TPL | IS64 | MS21 |
| | 90° angled head | T-handle — short and long version | | Counter-angled head |
| | 6 sides<br>Ø 3 to 12 mm | 6 sides<br>Ø 3 to 8 mm | 6 sides<br>Ø 2,5 to 8 mm | 12 sides<br>Ø 6 to 32 mm<br>1/4" to 15/16" |

## / RATCHETS, T-WRENCHES, EXTENSIONS

| | Radio 1/4" (6,35 mm) | | | Junior 3/8" (9,53 mm) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| |  MS55 |  MS54 |  MS54L |  MS85 |  MS85P |  MS85PC |  MS84 |  MS84P |  MS84L |  MS84LP |
| **Type** | Reversible ratchet spanner | Short extension bar | Long extension bar | Reversible ratchet spanner | | Reversible compact ratchet spanners | Short extension bar | | Long extension bar | |
| **Locking system** | | | | | • | • | | • | | • |
| **Interchangeability** | | | | | • | • | | • | | • |

## / SOCKETS

| | Radio 1/4" (6,35 mm) | | Junior 3/8" (9,53 mm) | | | | | |
|---|---|---|---|---|---|---|---|---|
| |  MS56 |  MS57 |  MS77 |  MS77L |  MS77MAG |  MS86 |  MS86L |  MS87 |
| **Type** | Female | Male | Female | Female long serie | Magnetic female | Female | Female long serie | Male |
| **Opening** | 6 sides | 6 sides | 6 sides | 6 sides | 6 sides | 12 sides | 12 sides | 6 sides |
| **Diameter** | 4 to 14 mm 3/16" to 9/16" | 3 to 7 mm 1/8" to 5/16" | 6 to 26 mm 3/8" to 13/16" | 8 to 24 mm | 13 - 14 -17 -19 - 21 | 8 to 24 mm 5/16" to 7/8" | 8 to 24 mm 1/4" to 7/8" | 3 to 10 mm 1/8" to 3/8" |

***Other size on request**

## / TORQUE WRENCHES

| | Junior 3/8" (9,53 mm) | | | Standard 1/2" (12,7 mm) | | |
|---|---|---|---|---|---|---|
| |  MS100N0 |  MS100N0P |  MS100N1-3/8 |  MS100N1-1/2 |  MS100N15-1/2 |  MS100N2-1/2 |
| **Specificity** | | Locking system | | | | |
| **Torque range** | 4 - 20 Nm 40 - 418 Lbf.in | | 10-50 Nm 8 - 35 Lbf.ft | 10-50 Nm 8 - 35 Lbf.ft | 20-100 Nm 15-75 Lbf.ft | 40-200 Nm 30 - 150 Lbf.ft |
| **Resolution / increment** | 1 Nm | | 2 Nm | 2 Nm | 1 Nm | 2 NM |

| | Standard 1/2" (12,7 mm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| |  MS72J |  MS72JP |  MS72JLC4 |  MS65 |  MS65P |  MS71 |  MS71P |  MS71L |  MS71LP |  MS72S |  MS72SP |
| | T-wrench | | Torque T-wrench 4Nm | Reversible ratchet spanner | | Short extension bar | | Long extension bar | | T-wrench | |
| | | • | | | • | | • | | • | | • |
| | | • | | | • | | • | | • | | • |

| | Standard 1/2" (12,7 mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| |  MS87MAG |  MS77E |  MS87T |  MS84LC |  MS66 6P |  MS66L 6P |  MS66 12P |  MS66L 12P |  MS67 |
| | Magnetic male | Female | Male | Socket with torque limiter | Female | Female long serie | Female | Female long serie | Male |
| | 6 sides | Torx® | Torx® | | 6 sides | 6 sides | 6 sides | 6 sides | 6 sides |
| | 8 - 10 mm | E08 to E20 | T15 to T50 | 4 - 8 -18 Nm | 8 to 31 mm | 10 to 24 mm | 8 to 32 mm 3/8" to 1.1/4" | 12 to 32 mm 5/16" to 1.1/4" | 4 to 19 mm 1/4" to 5/8" |

## / ADAPTERS

| |  MS95 |  MS96 |  MS91 |  MS70 |  MS90 |
|---|---|---|---|---|---|
| **Type** | Augmenter | Reducer | Augmenter | Reducer | Reducer |
| **Diameter** | 1/4'' > 3/8'' | 3/8'' > 1/4'' | 3/8'' > 1/2'' | 1/2'' > 1/4'' | 1/2'' > 3/8'' |

# KIT 3/8''

## / COMPOSITION 3/8''

| Reference | Descripción |  MS89 |  MS89V01 |  MS89V02 |
|---|---|---|---|---|
| MS84 | Short extension 3/8" 140 mm | • | | |
| MS85 | Insulated reversible ratchet spanner 3/8" 185 mm | • | | |
| MS85P | Reversible insulated ratchet wrench 3/8" with mechanical locking | | • | • |
| MS85PC | Compact reversible insulated ratchet spanner 3/8" with mechanical locking | | • | |
| MS84P | Short extension 3/8" with mechanical locking | | • | • |
| MS77 08 | 6 sides insulated female hexagonal socket 3/8" 8 mm | • | • | • |
| MS77 10 | 6 sides insulated female hexagonal socket 3/8" 10 mm | • | • | • |
| MS77 12 | 6 sides insulated female hexagonal socket 3/8" 12 mm | | | |
| MS77 13 | 6 sides insulated female hexagonal socket 3/8" 13 mm | • | • | • |
| MS77 14 | 6 sides insulated female hexagonal socket 3/8" 14 mm | | • | • |
| MS77 16 | 6 sides insulated female hexagonal socket 3/8" 16 mm | | • | • |
| MS77 17 | 6 sides insulated female hexagonal socket 3/8" 17 mm | | • | • |
| MS77 18 | 6 sides insulated female hexagonal socket 3/8" 18 mm | | • | • |
| MS77 19 | 6 sides insulated female hexagonal socket 3/8" 19 mm | | • | • |
| MS77 21 | 6 sides insulated female hexagonal socket 3/8" 21 mm | | • | • |
| MS77 22 | 6 sides insulated female hexagonal socket 3/8" 22 mm | | • | • |
| MS77 23 | 6 sides insulated female hexagonal socket 3/8" 23 mm | | • | • |
| MS77L 16 | 6 sides insulated female hexagonal socket 3/8" long series - 16 mm | | | |
| MS77L 17 | 6 sides insulated female hexagonal socket 3/8" long series - 17 mm | | | |
| MS77L 18 | 6 sides insulated female hexagonal socket 3/8" long series - 18 mm | | | |
| MS77L 19 | 6 sides insulated female hexagonal socket 3/8" long series - 19 mm | | | |
| MS77L 21 | 6 sides insulated female hexagonal socket 3/8" long series - 21 mm | | | |
| MS77L 22 | 6 sides insulated female hexagonal socket 3/8" long series - 22 mm | | | |
| MS87 04 | 6 sides insulated male hexagonal socket 3/8" - 4 mm | | • | • |
| MS87 05 | 6 sides insulated male hexagonal socket 3/8" - 5 mm | • | • | • |
| MS87 06 | 6 sides insulated male hexagonal socket 3/8" - 6 mm | | • | • |
| MS87 08 | 6 sides insulated male hexagonal socket 3/8"- 8 mm | | • | • |

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| | MS89V04 | MS89V05 | MS89V06 | MS89V07 | MS89V08 |
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# / COMPOSITION 1/4''

| Reference | Descripción | | |
|---|---|---|---|
| | |  MS59S |  MS59 |
| MS55 | Reversible insulated ratchet spanner 1/4” | • | • |
| MS54L 166 | Long extension bar 1/4” | | |
| MS54 116 | Long extension bar 1/4” | | |
| MS56 04 | 6 sides insulated female hexagonal socket 1/4” 4 mm | | |
| MS56 05 | 6 sides insulated female hexagonal socket 1/4” 5 mm | | |
| MS56 06 | 6 sides insulated female hexagonal socket 1/4” 6 mm | | |
| MS56 07 | 6 sides insulated female hexagonal socket 1/4” 7 mm | | |
| MS56 08 | 6 sides insulated female hexagonal socket 1/4” 8 mm | • | • |
| MS56 09 | 6 sides insulated female hexagonal socket 1/4” 9 mm | | |
| MS56 10 | 6 sides insulated female hexagonal socket 1/4” 10 mm | • | • |
| MS56 11 | 6 sides insulated female hexagonal socket 1/4” 11 mm | | |
| MS56 12 | 6 sides insulated female hexagonal socket 1/4” 12 mm | • | |
| MS56 13 | 6 sides insulated female hexagonal socket 1/4” 13 mm | | • |
| MS56 14 | 6 sides insulated female hexagonal socket 1/4” 14 mm | | |
| MS57 03 | 6 sides insulated male hexagonal socket 1/4” 3 mm | | |
| MS57 04 | 6 sides insulated male hexagonal socket 1/4” 4 mm | | |
| MS57 05 | 6 sides insulated male hexagonal socket 1/4” 5 mm | • | • |
| MS57 06 | 6 sides insulated male hexagonal socket 1/4” 6 mm | | |
| MS57 07 | 6 sides insulated male hexagonal socket 1/4” 7 mm | | |
| MS58 | 1/4" square screwdriver | | |

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| | MS59A | MS59V01 | MS59M | MS59T |
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# IS82R NEW

## 1000V INSULATED KNIFE WITH RETRACTABLE BLADE FOR TPC CABLE PROTECTION TUBES

STANDARDS
IEC 60900

Protective guard at the front and back of the handle to prevent slipping of the hand out of use the blade may be fully retracted in the handle to avoid any risk



Retractable blade with push button at the end of the handle

### / USE

Knife designed for cutting and opening :
- TPC sheaths (protective tubes for pipes or energy cables)
- Sheaths (telecom - gas - water - optical fibre) up to 200 mm diameter

### / TECHNICAL SPECIFICATIONS

- Triangular double-edged blade with non-cutting tip. With this shape, there is no more risk of damaging cables (electric arc) or cable sheaths inside the protection tubes.
- Blade locking in working position by pressure and turning 1/4 of the button.
- 2 output positions for the blade : 10 mm and 18 mm.
- The front plate of the knife can be removed to allow the blade block to be changed.

| Reference | Dimensions | Weight |
|---|---|---|
| IS82R | 185 x 58 x 38 mm | 160 g |

| Spare parts | Description |
|---|---|
| BLOC-LAME-IS82R | Spare blade block |



Transversal section



Longitudinal section



Spare blade block

# OMF

INNOVATION

## 1000V HYDRID MULTIFUNCTION TOOL

STANDARDS
IEC 60900 / IEC 60900




### / USE

Hybrid tool for cutting, stripping of small cables and opening/closing of various electrical boxes and cabinets.
The different functions:
1 - A straight knife blade (with scraper on the back of the blade).
2 - A 11 mm female triangle wrench (for opening electrical boxes and cabinets).
3 - A 4,5 x 9 mm rectangular key (for duct doors, S 300, gas valves)
4 - A trapezoidal key with a conical end of 7 to 5 mm on 2 cm (for old closing).
Each of the functions folds into the handle of the tool.

### / TECHNICAL SPECIFICATIONS

Insulated tool made up of different working heads without electrical continuity between them (because of the insulating material loaded with fibreglass for an optimal mechanical resistance).
Hanging system at the handle = anti-drop.
Knife blade with electrolytic polishing = increased life span.

NOTE: Possibility to customize the working heads (e.g.: 14 mm female square wrench for gas valves, 14 mm female triangle wrench,...)

| Reference | Dimensions | Weight |
|---|---|---|
| OMF | 145 x 40 x 23 mm | 160 g |

| Spare parts | Description |
|---|---|
| LAME-OMF | Overmoulded knife blade + pin |
| CLE-TR11-OMF | Triangular key 11 mm + pin |
| CLE-TR14-OMF | Triangular key 14 mm + pin |
| CLE-RECT-OMF | Rectangular key + pin |
| CLE-TRAP-OMF | Trapezoidal key + pin |
| CLE-CA14-OMF | Square key 14 mm + pin |



# MS36T

## 1000V INSULATED SCREWDRIVER WITH TRIANGULAR SOCKET SPANNER 11 MM

STANDARDS
NF EN 60900 / IEC 60900

### / USE

To be used on triangular socket screws of electrical boxes and cabinets.

### / TECHNICAL SPECIFICATIONS

Blades in treated steel. Insulated body, except for the tip to ease the penetration into screw holes. Burnished tip

| Reference | Blade length | Length | Weight |
|---|---|---|---|
| MS36T | 180 mm | 300 mm | 180 g |



# IS77

## 1000V INSULATED KNIFE WITH LONG BLADE

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Hardened stainless steel blade. Stainless steel blade, injection-moulded insulation. Electrolytic polish finish for durability of the cutting edge. Insulation is attached to the blade at 6 points to ensure it stays in place when stripping. Weighted handle for good balance and to prevent the tool from falling onto the blade. The guide carved into the blade guard allows guidance during longitudinal stripping of a conductor. Supplied in a soft case.

| Reference | Blade type | Blade length | Length | Weight |
|---|---|---|---|---|
| IS77 | Thick | 62 mm | 180 mm | 100 g |



# IS79

## 1000V INSULATED KNIFE WITH SHORT BLADE

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Hardened stainless steel blade. Electrolytic polish finish ensures durability of the cutting edge. Insulation is attached to the blade at 6 points to ensure it stays in place when stripping. Weighted handle for good balance and to prevent the tool from falling onto the blade. The guide carved into the blade guard allows guidance during longitudinal stripping of a conductor. Supplied in a soft case.

| Reference | Blade length | Length | Weight |
|---|---|---|---|
| IS79 | 40 mm | 160 mm | 100 g |

# IS80C

OUR SELECTION

## 1000V INSULATING KNIFE WITH CERAMIC BLADE

STANDARDS
NF EN 60900 / IEC 60900



Reduced weight compared to a conventional knife

Remains efficient over time: ceramic blade therefore stainless, no wear, no sharpening

• Removable protective cap in the handle by rotation:
- Allows the blade to be protected when stored in a toolbox.
- Protects the user from accidental cuts.

### / USE

This tool doesn't cut metal strip.

| Reference | Blade length | Length | Weight |
|---|---|---|---|
| IS80C | 65 mm | 200 mm | 60 g |

### / TECHNICAL SPECIFICATIONS

High cutting performance: precise cutting, control of the gesture.
Notched handle to optimise the grip.
Hand guard to prevent the hand from sliding towards the blade.
Large handle for a better grip and more comfort.



# IS22

## 1000V INSULATED HACKSAW

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Forged steel frame, injection insulated, guaranteeing high rigidity and mechanical resistance. One-piece, adjustable. Blade tension adjustment by 2 knobs. Frame delivered with 1 blade 24 TPI (10 teeth/cm).

| Reference | Blade | Length | Weight |
|---|---|---|---|
| IS22 | 297 to 304 mm | 450 mm | 740 g |

### / Accessories

| Reference | Description |
|---|---|
| L10 08D | Steel hacksaw spare blade 300 mm 8 teeth/cm |
| L10 10D | Steel hacksaw spare blade 300 mm 10 teeth/cm |
| L10 12D | Steel hacksaw spare blade 300 mm 12 teeth/cm |
| L15 8D | Steel hacksaw spare blade 300 mm 8 teeth/cm |
| L15 12D | Steel hacksaw spare blade 300 mm 12 teeth/cm |



# MS22J

## INSULATED JUNIOR HACKSAW

STANDARDS
EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Fully insulated steel frame with a 130 mm blade.

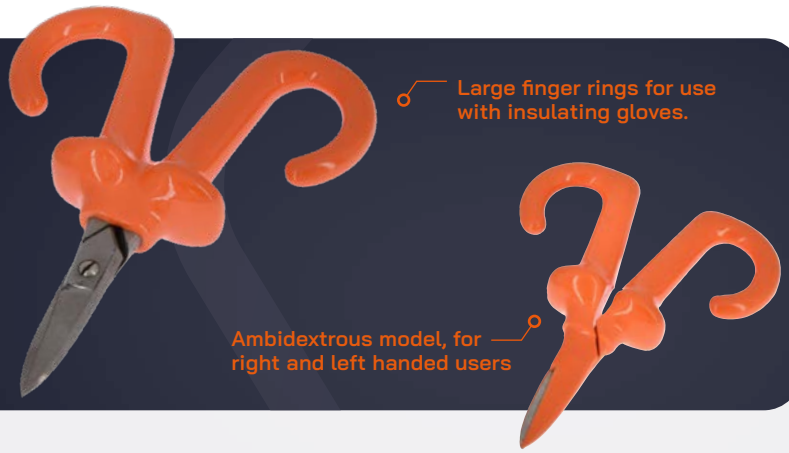
| Reference | Blade | Length | Weight |
|---|---|---|---|
| MS22J | 130 mm | 265 mm | 160 g |

# MS2-XL
# MS2E-XL

OUR SELECTION

## 1000V INSULATED ELECTRICIAN SCISSORS

STANDARDS
NF EN 60900 / IEC 60900




### / USE

For cutting cable strands, cable straps, E4R heat shrink sleeves.
2 versions available: insulated and fully insulated.

| Reference | Version | Blade length | Length | Weight |
|---|---|---|---|---|
| MS2-XL | Insulated | 35 mm | 155 mm | 160 g |
| MS2E-XL | Fully insulated | | | 175 g |

### / Accessories

| Reference | Description |
|---|---|
| ETC170 | Protective case 145 x 77 mm |

### / TECHNICAL SPECIFICATIONS

XC40 steel blades. Straight cutting shear type. Screw hinge. Pointed tip.







# ISPI

## 1000V INSULATING HANDLE FOR EARTH RODS

### / USE

Product allowing the installation of marker posts or
earth rods in complete safety, compatible with rods type 701.

### / TECHNICAL SPECIFICATIONS

CMade of insulating material resistant to a voltage of 17 kV
Opening diameter for rods up to 24 mm diameter.
Steel anvil Ø 40mm (on request anvil made of nonconductive material)
Distance between the 2 protective guards: 130 mm
Profile of the guards limiting the "rolling effect".
Hole of 6 mm diameter allowing the passage of a strap

| Reference | Dimension | Weight |
|---|---|---|
| ISPI | Ø 130 x 160 mm | 540 g |

# MSPC NEW

## 1000V INSULATING BENT BRUSH

STANDARDS
NF EN 60900 / IEC 60900



### / TECHNICAL SPECIFICATIONS

Tool with no visible conductive parts.
For cleaning and dusting connectors,...
Interchangeable tool head, fixed to the handle with an insulating screw (slotted head) (with M3 thread).
Angled head for good visibility during use.
Cleaning: with a soft, dry cloth.

| Reference | Lenght | Brush head width | Weight |
|---|---|---|---|
| MSPC | 410 $^{+/-10}$ mm | 35 mm | 180 g |



# TFM

## INSULATED FUSE EXTRACTOR SCREWDRIVER

STANDARDS

NF EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Tool for extracting specific fuses with M8 or M10 threads.
Handle profile for good torque transmission.

| Reference | Thread | Blade length | Handle | Handle length | Weight |
|---|---|---|---|---|---|
| TFM8 | M8 | 150 mm | 25 mm | 105 mm | 205 g |
| TFM10 | M10 | | | | |




# TWISTER90

## INSULATING BENDING TOOL FOR 50 TO 300 MM² SOLID ALUMINIUM CONDUCTOR UNDERGROUND CABLES

STANDARDS

EN 60900 / IEC 60900

### / TECHNICAL SPECIFICATIONS

Insulating tool : fully non-metallic
Cross sections : 50 mm² - 70 mm² - 95 mm² - 120 mm² - 150 mm² - 185 mm² - 240 mm² - 300 mm²

| Reference | Lenght | Weight |
|---|---|---|
| TWISTER90 | 250 mm | 200 g |



# 5544E

## INSULATING SEPARATOR WITH GROOVE

### / USE

Designed for moving apart and protecting the cable during the use of a cable cutter.

| Reference | Length | Weight |
|---|---|---|
| 5544E | 225 mm | 240 g |



# TC120

## INSULATING WEDGE

### / USE

Both wedge sides have 4 half-rounded grooves to separate the conductors of aerial bundled cables.

### / TECHNICAL SPECIFICATIONS

Made of polyamide 6.

| Reference | Dimensions | Weight |
|---|---|---|
| TC120 | 160 x 55 x 35 mm | 110 g |



# TE04

## INSULATING WEDGE SEPARATOR

### / USE

This insulating wedge separator is used for separating a conductor in ABC overhead cable or an underground cable in order to enable a localized operation on this conductor.

### / TECHNICAL SPECIFICATIONS

The insulating wedge separator is composed of 2 wedges linked with a 1 meter long cord. Each orange wedge is made of strong synthetic material, resisting to UV rays, bumps and freeze.
4 spaces are possible:
A hole at the extremity enables insertion of a tool to make the rotation through 90° easier, permitting the separation from 2 to 4 cm. Very smooth ribs and a slight penetration angle make wedge insertion in the cable easier.

| Reference | Dimensions | Weight |
|---|---|---|
| TE04 | 230 x 45 x 25 mm | 260 g |



# OUR NEW RANGE OF PREMIUM TOOLS WITH A LIFETIME WARRANTY

A LIFETIME WARRANTY AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP.

MORE THAN 120 REFERENCES AVAILABLE

# TRANSITIONING TOWARDS A CIRCULAR ECONOMY

## A NEW LIFE FOR YOUR TOOLS

/ Aware of our environmental impact, we have developed a recycling and reprocessing industry for its insulated tools.

1



DETECTED NON-CONFORMING TOOL

2



**CRYOGENIC TREATMENT**

We have choosen the cryogenic treatment to treat the non-conforming tools. This technique makes the PVC easily brittle to separate the PVC from the forging of the tools without the use of solvents or other chemical products.

3



**RECOVERED PVC**

The recovered PVC material is "clean" and can thus be redirected to an external reprocessing subsidiary which will ensure its transformation into new products (shoe soles, children's games, etc.).

**REUSED FORGES**

The forges, isolated from their PVC, are cleaned and checked. When the forges are in good condition and reusable, Sibille Outillage offers a quotation for the repair (new insulation) thus reducing the cost of acquiring new tools for its customers.



4



# KITSO-01

## SET OF 5 INSULATED TOOLS IN TRANSPORT CASE

### / TECHNICAL SPECIFICATIONS

Case holds up to 10 tools (5 pliers + 5 screwdrivers)
Wide elastic band to hold products in place
Internal pocket for documents and protection between tools
Sturdy carrying handle
Zipped closure
Dimensions: 340x300x80mm Empty weight: 600 g.

| Reference | Dimensions | Weight |
|---|---|---|
| KITSO-01 | Set of 5 insulated tools in transport case | 340 x 300 x 80 mm |

### / This product contains

| Reference | Description |
|---|---|
| V100I-SO | Carrying case |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS13 165 | 1000V Insulated half-round 45° bent nose plier 185 mm |
| MS30S 165 | 1000V Insulated cable cutting and stripping plier 165 mm |

Other compositions available on request.



# KITSO-02

## SET OF TOOLS IN TRANSPORT CASE

### / USE

Kit for electrical work.

### / TECHNICAL SPECIFICATIONS

Case holds up to 10 tools (5 pliers + 5 screwdrivers)
Wide elastic band to hold products in place
Internal pocket for documents and protection between tools
Sturdy carrying handle
Zipped closure
Dimensions: 340x300x80mm Empty weight: 600 g.

| Reference | Dimensions | Weight |
|---|---|---|
| KITSO-02 | Set of 8 insulated tools in transport case | 340 x 300 x 80 mm |

### / This product contains

| Reference | Description |
|---|---|
| V100I-SO | Carrying case |
| RL1-PZ-5X100 | 1000V Insulated Pozidriv screwdriver - 5 x 100 mm |
| RL1-PZ-6X125 | 1000V Insulated Pozidriv screwdriver 6 x 125 mm |
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm |
| RL1-PL-8X200 | 1000V Insulated slotted screwdriver 8 x 200 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS13 165 | 1000V Insulated half-round 45° bent nose plier |
| MS30S 165 | 1000V Insulated cable cutting and stripping plier |

Other compositions available on request.



# KITSO-03

## SET OF 10 INSULATED TOOLS IN TRANSPORT CASE

### / TECHNICAL SPECIFICATIONS

Case holds up to 10 tools (5 pliers + 5 screwdrivers)
Wide elastic band to hold products in place
Internal pocket for documents and protection between tools
Sturdy carrying handle
Zipped closure
Dimensions: 340x300x80mm Empty weight: 600 g.

| Reference | Dimensions | Weight |
|---|---|---|
| KITSO-03 | Set of 10 insulated tools in transport case | 340 x 300 x 80 mm |

### / This product contains

| Reference | Description |
|---|---|
| V100I-SO | Carrying case |
| RL1-PZ-5X100 | 1000V Insulated Pozidriv screwdriver 5 x 100 mm |
| RL1-PZ-6X125 | 1000V Insulated Pozidriv screwdriver 6 x 125 mm |
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm |
| RL1-PL-8X200 | 1000V Insulated slotted screwdriver 8 x 200 mm |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier |
| MS43 175 | 1000V Insulated stripping plier |
| MS13 165 | 1000V Insulated half-round 45° bent nose plier |
| MS30S 165 | 1000V Insulated cable cutting and stripping plier |

Other compositions available on request.



# KITSO-04

## SET OF 8 INSULATED TOOLS IN TRANSPORT CASE WITH INSULATING GLOVES AND OVERGLOVES

### / TECHNICAL SPECIFICATIONS

Case holds up to 8 tools
Wide elastic band to hold products in place
Internal pocket for documents and protection between tools
Sturdy carrying handle
Zipped closure
Dimensions: 340x300x80mm Empty weight: 600 g.

| Reference | Dimensions | Weight |
|---|---|---|
| KITSO-04 | Set of 8 insulated tools in transport case with insulating gloves and overgloves | 340 x 300 x 80 mm |

### / This product contains

| Reference | Description |
|---|---|
| V100I-SO | Carrying case |
| MS15 | 1000V Insulated round nose plier 170 mm |
| MS43 | 1000V Insulated stripping plier |
| MS60 165 | Insulated diagonal cutting plier 165 mm |
| IS78 | 1000V Insulated knife with long slim blade |
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm |
| RL1-PH-5X100 | 1000V Insulated Phillips screwdriver 5 x 100 mm |
| MS4 185 | 1000V Insulated universal plier 185 mm |

Other compositions available on request.

# KITSO-05

ELECTRICAL METER REPLACEMENT TOOL SET - ESSENTIAL KIT 17 TOOLS



## / USE

Kit for electrical work.

## / TECHNICAL SPECIFICATIONS

Backpack with trolley system and telescopic handle
Dedicated compartments for each tool
(up to 60 products)
Equipment arranged to follow work procedures
Robust carrying handle
Dimensions: 56 x 44 x 27 cm Empty weight: 3.5 Kg




| Reference | Description |
|---|---|
| KITSO-05 | Set of 18 insulated tools with toolbag |

## / This product contains

| Reference | Description |
|---|---|
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X100 | 1000V Insulated slotted screwdriver 5,5 x 100 mm Rotoline Classic |
| RL1-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Classic |
| RL1-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Classic |
| RL1-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| RL1-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS23 SET1 | Set of 3 insulated male hex keys 90° bent - 4 / 5 / 6 mm |
| MS45 230 | 1000V Insulated cable cutting plier Ø 24 mm |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| MS7 260 | 1000V Insulated adjustable spanner 260 mm |
| IS78 | 1000V Insulated knife with long slim blade |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| SADT-25 | Trolley backpack for PPE and tools |

Other compositions available on request.

# KITSO-06

ELECTRICAL METER REPLACEMENT TOOL SET - PRO KIT



## / USE

Kit for electrical work.

## / TECHNICAL SPECIFICATIONS

Backpack with trolley system and telescopic handle
Dedicated compartments for each tool (up to 60 products)
Equipment arranged to follow work procedures
Robust carrying handle
Dimensions: 56 x 44 x 27 cm Empty weight: 3.5 Kg




| Reference | Description | Dimensions |
|---|---|---|
| KITSO-06 | Electrical meter replacement tool set - Pro kit | 400 x 550 x 350 mm |

## / This product contains

| Reference | Description |
|---|---|
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Classic |
| RL1-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Classic |
| RL1-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Classic |
| RL1-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| RL1-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS45 230 | 1000V Insulated cable cutting plier Ø 24 mm |
| MS7 260 | 1000V Insulated adjustable spanner 260 mm |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| IS78 | 1000V Insulated knife with long slim blade |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| MS23 SET1 | Set of 3 insulated male hex keys 90° bent - 4 / 5 / 6 mm |
| MS85P | 1000V Insulated reversible ratchet spanner 3/8" with mechanical locking, standard version |
| MS84P | 1000V Insulated short socket extension 3/8" with mechanical locking |
| MS77 SET5 | Set of 10 insulated female hexagonal sockets - 3/8" (9,53 mm) square drive - 8 / 10 / 12 / 13 / 14 / 16 / 17 / 18 / 19 / 21 mm |
| SADT-25 | Trolley backpack for PPE and tools |

Other compositions available on request.

# KITSO-07

ELECTRICAL METER REPLACEMENT TOOL SET - EXCELLIUM KIT 42 TOOLS



## / USE

Kit for electrical work.

## / TECHNICAL SPECIFICATIONS

Backpack with trolley system and telescopic handle
Dedicated compartments for each tool (up to 60 products)
Equipment arranged to follow work procedures
Robust carrying handle
Dimensions: 56 x 44 x 27 cm Empty weight: 3.5 Kg




| Reference | Description |
|---|---|
| KITSO-07 | Electrical meter replacement tool set Excellium kit, 42 tools |

## / This product contains

| Reference | Description |
|---|---|
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Classic |
| RL1-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Classic |
| RL1-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| RL1-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Classic |
| RL1-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS45 230 | 1000V Insulated cable cutting plier Ø 24 mm |
| MS34 SET1 | Set of 3 insulated T-handled hexagonal box spanners - 8 / 10 / 13 mm |
| MC45I | 1000V Insulating composite cutting plier |
| MS23 SET1 | Set of 3 insulated male hex keys 90° bent - 4 / 5 / 6 mm |
| MS7 260 | 1000V Insulated adjustable spanner 260 mm |
| IS78 | 1000V Insulated knife with long slim blade |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MC11CE | 1000Electrical meter replacement tool set - Excellium kit, 42 tools Insulating composite flat nose plier with ceramic blades |
| MS79ALG | 1000V Insulated ratchet cable cutter Ø 45 mm |
| MS85P | 1000V Insulated reversible ratchet spanner 3/8" with mechanical locking, standard version |
| MS84P | 1000V Insulated short socket extension 3/8" with mechanical locking |
| MS77 SET5 | Set of 10 insulated female hexagonal sockets - 3/8" (9,53 mm) square drive - 8 / 10 / 12 / 13 / 14 / 16 / 17 / 18 / 19 / 21 mm |
| IS22 | 1000V Insulated flush and straight cut saw mount |
| MS35 | Set of 8 single open ended spanners for calibration |
| SADT-25 | Trolley backpack for PPE and tools |

Other compositions available on request.

# KITSO-180I

SET OF 18 INSULATED TOOLS



## / USE

Kit for electrical work.

| Reference | Description | Dimension |
|---|---|---|
| KITSO-180I | Set of 18 insulated tools | voir TS33N |

## / This product contains

| Reference | Description |
|---|---|
| RL2-PL-035X120 | 1000V Insulated slotted screwdriver 3.5 x 120 mm Rotoline Turn |
| RL2-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Turn |
| RL2-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Turn |
| RL2-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Turn |
| RL2-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Turn |
| RL2-PH-4X75 | 1000V Insulated Phillips screwdriver n°0 - 4 x 75 mm Rotoline Turn |
| RL2-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Turn |
| RL2-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Turn |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| MS13 205 | 1000V Insulated half-round 45° bent nose plier 205 mm |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS45 195 | 1000V Insulated cable cutting plier Ø 20 mm |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS6 210 | 1000V Insulated end cable cutter 210 mm |
| MS76GM | 1000V Insulated ratchet cable cutter Ø 52 mm |
| TS33N | Black leather tool bag |

Other compositions available on request.

# KITSO-2201

SET OF 22 BASIC TOOLS WITH TOOL BAG FOR CONNECTIONS OR PUBLIC LIGHTING



## / USE

Kit for electrical work.

| Reference | Description |
|---|---|
| KITSO-2201 | Set of 22 basic tools with tool bag for connections or public lighting |

## / This product contains

| Reference | Description |
|---|---|
| RL2-PL-035X120 | 1000V Insulated slotted screwdriver 3.5 x 120 mm Rotoline Turn |
| RL2-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Turn |
| RL2-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Turn |
| RL2-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Turn |
| RL2-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Turn |
| RL2-PH-4X75 | 1000V Insulated Phillips screwdriver n°0 - 4 x 75 mm Rotoline Turn |
| RL2-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Turn |
| RL2-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Turn |
| MS13 205 | 1000V Insulated half-round 45° bent nose plier 205 mm |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| MS43 175 | 1000V Insulated stripping plier |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS23 04 | 1000V Insulated 90° bent male hex key 4 mm |
| MS45 195 | 1000V Insulated cable cutting plier Ø 20 mm |
| MS23 05 | 1000V Insulated 90° bent male hex key 5 mm |
| MS7 260 | 1000V Insulated adjustable spanner 260 mm |
| MS76GM | 1000V Insulated ratchet cable cutter Ø 52 mm |
| MS23 06 | 1000V Insulated 90° bent male hex key 6 mm |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS6 210 | 1000V Insulated end cable cutter 210 mm |
| TS33N | Black leather tool bag |

Other compositions available on request.

# KITSO-350I

SET OF 35 TOOLS WITH TOOL BAG FOR CONNECTIONS



## / USE

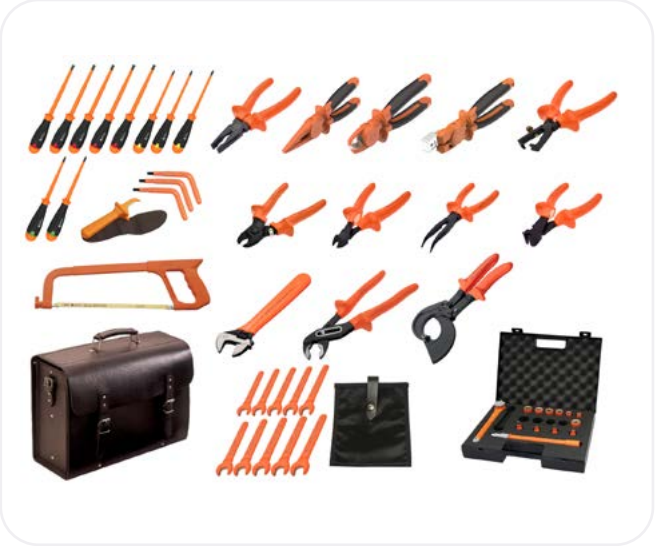
Kit for electrical work.

| Reference | Description |
|---|---|
| KITSO-350I | Set of 35 tools with tool bag for connections |

## / This product contains

| Reference | Description |
|---|---|
| RL2-PL-035X120 | 1000V Insulated slotted screwdriver 3.5 x 120 mm Rotoline Turn |
| RL2-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Turn |
| RL2-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Turn |
| RL2-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Turn |
| RL2-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Turn |
| RL2-PH-4X75 | 1000V Insulated Phillips screwdriver n°0 - 4 x 75 mm Rotoline Turn |
| RL2-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Turn |
| RL2-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Turn |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS13 205 | 1000V Insulated half-round 45° bent nose plier 205 mm |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS6 210 | 1000V Insulated end cable cutter 210 mm |
| MS7 260 | 1000V Insulated adjustable spanner 260 mm |
| IS79 | 1000V Insulated knife with short blade |
| MS76GM | 1000V Insulated ratchet cable cutter Ø 52 mm |
| MS45 195 | 1000V Insulated cable cutting plier Ø 20 mm |
| MS23 SET1 | Set of 3 insulated male hex keys 90° bent - 4 / 5 / 6 mm |
| MS84P | 1000V Insulated short socket extension 3/8" with mechanical locking |
| MS85P | 1000V Insulated reversible ratchet spanner 3/8" with mechanical locking, standard version |
| MS77 SET5 | Set of 10 insulated female hexagonal sockets - 3/8" (9,53 mm) square drive - 8 / 10 / 12 / 13 / 14 / 16 / 17 / 18 / 19 / 21 mm |
| MS89VCV1 | Black plastic case 350 x 250 x 80 mm with foam |
| TS33N | Black leather tool bag |

Other compositions available on request.



# KITSO-490I

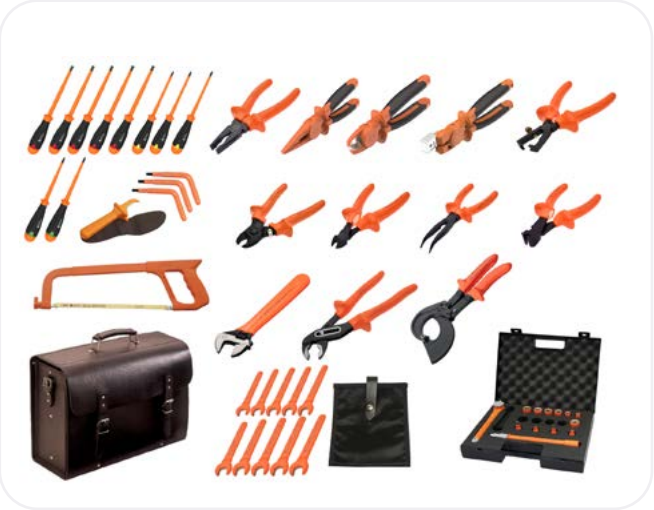
## SET OF 49 BASIC TOOLS WITH TOOL BAG FOR UNDERGROUND CONNECTIONS

| Reference | Description |
|---|---|
| KITSO-490I | Set of 49 basic tools with tool bag for underground connections |

**/ This product contains**

| Reference | Description |
|---|---|
| RL2-PL-035X120 | 1000V Insulated slotted screwdriver 3.5 x 120 mm Rotoline Turn |
| RL2-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Turn |
| RL2-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Turn |
| RL2-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Turn |
| L2-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Turn |
| RL2-PH-4X75 | 1000V Insulated Phillips screwdriver n°0 - 4 x 75 mm Rotoline Turn |
| RL2-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Turn |
| RL2-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Turn |
| RL2-PZ-4X75 | 1000V Insulated Pozidriv screwdriver n°0 - 4 x 75 mm Rotoline Turn |
| RL2-PZ-6X125 | 1000V Insulated Pozidriv screwdriver n°2 - 6 x 125 mm Rotoline Turn |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS13 205 | 1000V Insulated half-round 45° bent nose plier 205 mm |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| MS43 175 | 1000V Insulated stripping plier |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS6 210 | 1000V Insulated end cable cutter 210 mm |
| MS45 195 | 1000V Insulated cable cutting plier Ø 20 mm |
| MS76GM | 1000V Insulated ratchet cable cutter Ø 52 mm |
| MCF | 1000V Hybrid cutting plier for steel strip |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS7 260 | 1000V Insulated adjustable spanner 260 mm |
| IS79 | 1000V Insulated knife with short blade |
| IS22 | 1000V Insulated flush and straight cut saw mount |
| MS23 SET1 | Set of 3 insulated male hex keys 90° bent - 4 / 5 / 6 mm |
| MS16 SET2 | Set of 10 insulated single head spanners - 8 / 10 / 12 / 13 / 14 / 16 / 17 / 18 / 19 / 21 mm |
| MS35V2 | Textile case for 7 spanners |
| MS85P | 1000V Insulated reversible ratchet spanner 3/8'' with mechanical locking, standard version |
| MS77 SET5 | Set of 10 insulated female hexagonal sockets - 3/8" (9,53 mm) square drive - 8 / 10 / 12 / 13 / 14 / 16 / 17 / 18 / 19 / 21 mm |
| MS84P | 1000V Insulated short socket extension 3/8'' with mechanical locking |
| MS89VCV1 | Black plastic case 350 x 250 x 80 mm with foam |
| TS33N | Black leather tool bag |

Other compositions available on request.



# KITSO-520I

## COMPLETE TOOL SET FOR UNDERGROUND CONNECTIONS (52 TOOLS) WITH TOOL BAG

| Reference | Description |
|---|---|
| KITSO-520I | Complete tool set for underground connections (52 tools) with tool bag |

**/ This product contains**

| Reference | Description |
|---|---|
| RL2-PL-035X120 | 1000V Insulated slotted screwdriver 3.5 x 120 mm Rotoline Turn |
| RL2-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Turn |
| RL2-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Turn |
| RL2-PL-65X150 | 1000V Insulated slotted screwdriver 6,5 x 150 mm Rotoline Turn |
| RL2-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Turn |
| RL2-PH-4X75 | 1000V Insulated Phillips screwdriver n°0 - 4 x 75 mm Rotoline Turn |
| RL2-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Turn |
| RL2-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Turn |
| RL2-PZ-4X75 | 1000V Insulated Pozidriv screwdriver n°0 - 4 x 75 mm Rotoline Turn |
| RL2-PZ-6X125 | 1000V Insulated Pozidriv screwdriver n°2 - 6 x 125 mm Rotoline Turn |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS13 205 | 1000V Insulated half-round 45° bent nose plier 205 mm |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| PEF-1000V | 1000V Hybrid cutting plier for steel strip |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS6 210 | 1000V Insulated end cable cutter 210 mm |
| MS45 195 | 1000V Insulated cable cutting plier Ø 20 mm |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| MS76GM | 1000V Insulated ratchet cable cutter Ø 52 mm |
| IS22 | 1000V Insulated flush and straight cut saw mount |
| IS79 | 1000V Insulated knife with short blade |
| MS43 175 | 1000V Insulated stripping plier |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS7 260 | 1000V Insulated adjustable spanner 260 mm |
| MS23 SET1 | Set of 3 insulated male hex keys 90° bent - 4 / 5 / 6 mm |
| MS16 SET2 | Set of 10 insulated single head spanners - 8 / 10 / 12 / 13 / 14 / 16 / 17 / 18 / 19 / 21 mm |
| MS85P | 1000V Insulated reversible ratchet spanner 3/8" with mechanical locking, standard version |
| MS84P | 1000V Insulated short socket extension 3/8" with mechanical locking |
| MS35V2 | Textile case for 7 spanners |
| MS77 SET5 | Set of 10 insulated female hexagonal sockets - 3/8" (9,53 mm) square drive - 8 / 10 / 12 / 13 / 14 / 16 / 17 / 18 / 19 / 21 mm |
| MS89VCV1 | Black plastic case 350 x 250 x 80 mm with foam |
| MS100N1VM-3/8 | 1000V Insulated torque wrench 10-50 Nm with mechanical locking |
| PG3EC/2020 | 1000V Insulating composite plier for network cables CC 2.0 LC 2.0 |
| TS33N | Black leather tool bag |



# TS270

## LOW VOLTAGE TOOL SET

| Reference | Description |
|---|---|
| TS270 | Low Voltage tool set |

### / This product contains

| Reference | Description |
|---|---|
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Classic |
| RL1-PL-10X150 | 1000V Insulated slotted screwdriver 10 x 150 mm Rotoline Classic |
| RL1-PH-4X150 | 1000V Insulated Phillips screwdriver n°0 - 4 x 150 mm Rotoline Classic |
| RL1-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| RL1-PH-8X150 | 1000V Insulated Phillips screwdriver n°3 - 8 x 150 mm Rotoline Classic |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MC45I XL | 1000V Hybrid cable cutting plier Ø 16 mm |
| MS76S | 1000V Insulated ratchet cable cutter Ø 32 mm |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS27 250 | 1000V Insulated double slip-joint adjustable plier 250 mm |
| MS53 J46 | 1000V Insulated fuse extractor plier 210 mm |
| IS79 | 1000V Insulated knife with short blade |
| IS36 SET1 | Set of 3 insulated hexagonal nut drivers - 8 / 9 / 10 mm |
| M115 160G | Electrician's hammer with Hickory shaft 160 g |
| C214 | Cabinet key |
| TC25 X5 | Set of 5 LV insulating caps for conductor ends from 3 to 10 $mm^2$ |
| TC30 X5 | Set of 5 LV insulating caps for conductor ends from 6 to 35 $mm^2$ |
| TP71 | Support rods for current meter panels |
| D60 | Insulating plastic folding rules |
| TP60P x6 | Set of 6 plastic clips for insulating sheets and bands |
| TC151P | Removable handle for fuses |
| GLB0-36-09 | Insulating latex gloves class 0 size 09 |
| TS10T | Powder flask |
| TS10 | Canvas storage bag for insulating gloves |
| SGB | Leather overgloves size B |
| TS27V | Split leather bag |



# TS338RV

LOW VOLTAGE TOOL SET

| Reference | Description |
|---|---|
| TS338RV | Low Voltage tool set |

## / This product contains

| Reference | Description |
|---|---|
| RL1-PL-3X100 | 1000V Insulated slotted screwdriver 3 x 100 mm Rotoline Classic |
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Classic |
| RL1-PL-8X150 | Insulated slotted screwdriver 8 x 150 mm Rotoline Classic |
| RL1-PZ-5X100 | 1000V Insulated Pozidriv screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| RL1-PZ-6X125 | 1000V Insulated Pozidriv screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| IS79 | 1000V Insulated knife with short blade |
| MC4CE | 1000V Insulating composite universal plier with ceramic blades |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS43 175 | 1000V Insulated stripping plier |
| MS89V02 | 1000V Insulated socket set 3/8'' - 17 tools with ratchet spanner and extension |
| TAG780RIFE | LV voltage detector IP2X with phase rotation indication |
| E24 | Electrician face shield with headband and brow-guard |
| GLB00-36-09 | Insulating latex gloves 36 cm class 00 size 09 |
| TS33N | Black leather tool bag |
| SGB | Leather overgloves size B |
| TS10 | Canvas storage bag for insulating gloves |
| TC25 X5 | Set of 5 LV insulating caps for conductor ends from 3 to 10 mm² |
| TN17 0,66M | Insulating sheet with velcro strips 0,66 x 0,36 m |
| TP60P x5 | Set of 6 plastic clips for insulating sheets and bands |
| TTCL3 0,6X1 | TTCL3 0,6X1 |

# S318RV

SET OF 12 TOOLS



## / USE

Kit for electrical work.

| Reference | Description |
|---|---|
| S318RV | Set of 12 tools |

## / This product contains

| Reference | Description |
|---|---|
| RL1-PL-3X100 | 1000V Insulated slotted screwdriver 3 x 100 mm Rotoline Classic |
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Classic |
| RL1-PL-8X150 | 1000V Insulated slotted screwdriver 8 x 150 mm Rotoline Classic |
| RL1-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| RL1-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| RL1-PH-8X150 | 1000V Insulated Phillips screwdriver n°3 - 8 x 150 mm Rotoline Classic |
| IS79 | 1000V Insulated knife with short blade |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MC11CE-XL | 1000V Insulating long flat nose plier - handle size XL |
| MS43 175 | 1000V Insulated stripping plier |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS26 250 | 1000V Insulated slip-joint plier 250 mm |
| S31N | Canvas fanny pack |



# V148

## ELECTRONICS TOOL SET

| Reference | Description |
|---|---|
| V148 | Electronics tool set |

**/ This product contains**

| Reference | Description |
|---|---|
| RL1-PL-3X100 | 1000V Insulated slotted screwdriver 3 x 100 mm Rotoline Classic |
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Classic |
| RL1-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| RL1-PH-6X125 | 1000V Insulated Phillips screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| RL1-PZ-5X100 | 1000V Insulated Pozidriv screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| RL1-PZ-6X125 | 1000V Insulated Pozidriv screwdriver n°2 - 6 x 125 mm Rotoline Classic |
| IS18B 06,5X40 | 1000V Insulated slotted stubby screwdrivers |
| MS23 SET2 | Set of 5 insulated male hex keys 90° bent - 3 / 4 / 6 / 7 / 8 mm |
| IS79 | 1000V Insulated knife with short blade |
| ML112 | 40° Bent needle nosed plier |
| ML16 SET1 | Set of 10 insulated single open ended spanners - 3 / 3,5 / 4 / 4,5 / 5 / 5,5 / 6 / 7 / 8 / 9 mm |
| ML281 140 | 1000V Insulated long flat nose plier |
| ML283 BIS | Insulated half-round bent long nose plier 135 mm |
| ML288 110 | 1000V Insulated diagonal beveled cutting plier |
| ML292 135 | 1000V Insulating stripping plier |
| ML289 110 | 1000V Insulated diagonal flush cutting plier |
| MS2 132 | Electrician scissors |
| MS7 160 | Insulated adjustable spanner 160 mm |
| MS22J | 1000V Insulated junior hacksaw |
| ML64 SET1 | Set of 3 insulated male hex keys - 1,5 / 2 / 2,5 mm |
| MU18L 248 | Insulated screw starters with magnetic head (for slotted screws) 10 x 248 mm |
| P135 P23 | Round paintbrush Ø 23 mm |
| F30 45 W | Soldering iron 45 W |
| M189 | Inspection mirror |
| P192 | Desoldering pump |
| 6005-IEC-N | 4 mm Wire grip, black |
| 6005-IEC-R | 4 mm Wire grip, red |
| S142 | Penlight |
| D60 | Insulating plastic folding rules |
| ART17048H | Maintenance case 482 x 375 x 184 mm |
| ML108 | Straight needle nosed plier |
| S509NM | PPE transport soft bag, 80L |

# V658

SET OF 7 TOOLS



## / USE

Kit for electrical work.

| Reference | Description |
|---|---|
| S318RV | Set of 12 tools |

## / This product contains

| Reference | Description |
|---|---|
| RL1-PL-3X100 | 1000V Insulated slotted screwdriver 3 x 100 mm Rotoline Classic |
| RL1-PL-4X120 | 1000V Insulated slotted screwdriver 4 x 120 mm Rotoline Classic |
| RL1-PL-55X150 | 1000V Insulated slotted screwdriver 5,5 x 150 mm Rotoline Classic |
| RL1-PH-5X100 | 1000V Insulated Phillips screwdriver n°1 - 5 x 100 mm Rotoline Classic |
| MS4 185 | 1000V Insulated universal plier 185 mm |
| MS5 175 | 1000V Insulated diagonal cutting plier 175 mm |
| MS10 170 | 1000V Insulated half-round long nose plier 170 mm |
| S31N | Canvas fanny pack |



# RATCHET CABLE CUTTERS

| Reference | Opening (mm) | Copper | Aluminium | Almelec | Steel | Cable types |
|---|---|---|---|---|---|---|
| MS76S | Ø 32 | 240 mm² | 300 mm² | No | No | LV cables : 3 x 50 mm² + 50 mm²<br>MV cables : 1 x 50 mm² |
| MS76SR2 | Ø 40 | 320 mm² | 370 mm² | 70 mm² | No | LV cables : 3 x 70 mm² + 70 mm²<br>LV cables : 3 x 150 mm² + 70 mm²<br>U-1000(A) R2V: 1 x 630 mm² |
| MS792 | Ø 45 | 300 mm² | 400 mm² | No | No | LV cables : 3 x 150 mm² + 70 mm²<br>LV cables : 3 x 150 mm² + 150 mm²<br>MV cables : 1 x 240 mm² |
| MS79A2 | Ø 45 | 300 mm² | 400 mm² | 70 mm² | No | |
| MS79ALG | Ø 45 | 300 mm² | 400 mm² | 70 mm² | No | LV cables : 3 x 150 mm² + 70 mm²<br>LV cables : 3 x 150 mm² + 150 mm²<br>MV cables : 1 x 240 mm² |
| MS76GM | Ø 52 | 400 mm² | 400 mm² | No | No | LV cables : 3 x 150 mm² + 70 mm²<br>LV cables : 3 x 240 mm² + 95 mm²<br>MV cables : 1 x 240 mm² |
| MS76GMR | Ø 52 | 400 mm² | 400 mm² | 70 mm² | No | LV cables : 3 x 150 mm² + 70 mm²<br>LV cables : 3 x 240 mm² + 95 mm²<br>MV cables : 1 x 240 mm² |
| MS790 | Ø 50 | 300 mm² | 300 mm²<br>(ACSR Ø 17 mm) | Yes | Ø 11 mm | Overhead twisted cable (distribution) : 3 x 150 mm² + 70 mm²<br>H1 XDV-A underground network cable (distribution) 3 x 150 mm² + 150 mm² |
| MS99SR | Ø 52 | Yes | Yes | Yes | Yes | Stranded cable (7 strands Ø3 mm with hardness 35-39 HRC)<br>Ø 12 mm guy rope<br>Aster" support cable Ø 10 mm<br>LV cable: 3 x 240 mm² + 95 mm²<br>LV cable: 3 x 150 mm² + 70 mm²<br>MV cable: 1 x 240 mm² |
| MS755 | Ø 55 | 400 mm² | 450 mm² | 70 mm² | No | LV overhead cables : 3 x 150 mm² + 70 mm² Almelec<br>Underground cables: 3 x 240 mm² + 95 mm²<br>MV cables : 1 x 240 mm² |
| MS755R | Ø 55 | 470 mm² | 520 mm² | 70 mm² | No | Overhead LV cables : 3 x 150 mm² + 70 mm² Almelec<br>Underground LV cables : 3 x 240 mm² + 95 mm²<br>MV cables : 1 x 240 mm² |
| MS79GM | Ø 60 | 750 mm² | 750 mm² | 70 mm² | No | LV cables : 3 x 240 mm² + 95 mm²<br>MV cables : 1 x 630 mm² |
| MS79GM2 | Ø 60 | 750 mm² | 750 mm² | 70 mm² | No | |
| MS780 | Ø 80 | 840 mm² | 1000 mm² | 70 mm² | No | Flexible copper cables: 630 mm²<br>Copper / aluminium multi-strand cables: 840 mm²<br>Multi-strand copper power cables: 3 x 240 mm²<br>Aluminium sector cables multi-strand: 4 x 240 mm² |



## RATCHET CABLE CUTTERS END CUTTING

| Reference | Opening (mm) | Copper | Aluminium | Almelec | Steel | Cable types |
|---|---|---|---|---|---|---|
| MS46C | Ø 34 | 240 mm² | 320 mm² | No | No | HN33S33BR : 4 x 35²<br>HN33S32 : 3 x 50² + 502 HN33S23 : 1 x 50²<br>HN33S22 : 1 x 95²<br>HN33S33BR : 4 x 50² |
| MS46S2 | Ø 35 | 240 mm² | 320 mm² | 70 mm² | No | BT NF C 33-210 : 3 x 95² + 50²<br>HTA NF C 33-223, C 33-226 : 1 x 240² |



## SHEAR TYPE CABLE CUTTERS

| Reference | Opening (mm) | Copper | Aluminium | Almelec | Steel | Cable types |
|---|---|---|---|---|---|---|
| MS61 | Ø 16 | Ø 14 mm | Ø 14 mm | Ø 14 mm | Ø 14 mm | Copper/mild steel : Ø 16 mm<br>Hard steel : Ø 10 mm |
| MS78 | Ø 20 | No | Ø 12 mm | Ø 12 mm | Ø 8 mm | - |
| MS25NM | Ø 30 | 185 mm² | 185 mm² | No | No | 185 mm² max. |
| MSE2 | Ø 31 | 250 mm² | 250 mm² | No | No | Telecom 56x2 9/10e U-1000(A)R2V : 1x 300mm² |



## BOLT CUTTERS

| Reference | Opening (mm) | Copper | Aluminium | Almelec | Steel | Type de cables |
|---|---|---|---|---|---|---|
| MS29D | Ø 10 | Ø 10 mm | Ø 10 mm | Ø 10 mm | Ø 9 mm | Steel 60 kg/mm² = Ø 9 mm<br>Steel 80 kg/mm² = Ø 8 mm |



## GS1080

ADJUSTABLE HOOK SPANNER

STANDARDS

ISO 5744 / ISO 8976

### / TECHNICAL SPECIFICATIONS

"Bronze" tool for explosive area.
Aluminum bronze.

| Reference | Lenght | For nuts of | Weight |
|---|---|---|---|
| GS1080 115 | 310 mm | 115/170 mm | 500 g |
| GS1080 32 | 200 mm | 32/75 mm | 230 g |
| GS1080 50 | 290 mm | 50/120 mm | 450 g |

Simply designed, the torque spanner is particularly reliable and strong, even in difficult conditions of use



## C182

RATCHET TORQUE WRENCH KIT WITH GRADUATED SECTOR FOR GAS WORKER - 5 TOOLS

STANDARDS

EN ISO 6789

| Reference | Description |
|---|---|
| C182 | Ratchet torque wrench kit with graduated sector for gas worker - 5 tools |



## GS1110

SINGLE OPEN ENDED SPANNER

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
Other dimensions available on request.
These products are also available in beryllium copper.

| Reference | Opening | Length | Weight |
|---|---|---|---|
| GS1110 10 to 36 | 10 to 26 mm | 115 to 310 mm | 40 to 710 g |



## GS1120

OPEN ENDED SPANNER

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
Other dimensions available on request.
These products are also available in beryllium copper.

| Reference | Opening | Length | Weight |
|---|---|---|---|
| GS1120 06x07 to 46x50 | 06x07 to 46x50 mm | 100 to 420 mm | 25 to 1900 g |



# GS1150

COMBINATION SPANNER

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
Other dimensions available on request.
These products are also available in beryllium copper .

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| GS1150 08 to 32 | 8 to 32 mm | 135 to 430 mm | 40 to 1000 g |



# GS1180

HEX KEY

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze. Other dimensions available on request.
These products are also available in beryllium copper.

| Reference | Diameter on flats | Weight |
|---|---|---|
| GS1180-03 | 3 mm | 5 g |
| GS1180-04 | 4 mm | 11 g |
| GS1180-05 | 5 mm | 20 g |
| GS1180-06 | 6 mm | 30 g |
| GS1180-08 | 8 mm | 70 g |
| GS1180-10 | 10 mm | 105 g |



# GS1160

OFFSET RING SPANNER

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze. Other dimensions available on request.
These products are also available in beryllium copper.

| Reference | Diameter | Weight |
|---|---|---|
| GS1160 06x7 to 46x50 | 06x07 to 46x50 mm | 60 to 2 160 g |



# GS1170

HEX SOCKET WRENCH

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze. These products are available in beryllium copper. Dimensions 8 to 50 mm on request.

| Reference | 6 pan | Length | Weight |
|---|---|---|---|
| GS1170-14 | 14 mm | 250 mm | 280 g |
| GS1170-17 | 17 mm | 270 mm | 320 g |
| GS1170-19 | 19 mm | 300 mm | 530 g |
| GS1170-23 | 23 mm | 340 mm | 830 g |
| GS1170-24 | 24 mm | | |



# GS1100

PIPE WRENCH

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
"Bronze" tools for explosive atmosphere.

| Reference | Capacity | Length | Weight |
|---|---|---|---|
| GS1100-0200 | 3 to 19 mm | 215 mm | 0,60 kg |
| GS1100-0250 | 3 to 25 mm | 280 mm | 1 kg |
| GS1100-0360 | 6 to 38 mm | 350 mm | 1,50 kg |
| GS1100-0460 | 6 to 50 mm | 420 mm | 2,20 kg |
| GS1100-0610 | 6 to 63 mm | 565 mm | 3,80 kg |
| GS1100-0915 | 12 to 90 mm | 770 mm | 7,20 kg |
| GS1100-1220 | 25 to 130 mm | 1 100 mm | 10,50 kg |



# GS1070

COUPLING WRENCH

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
These products are also available in beryllium copper.

| Reference | Capacity | Length | Weight |
|---|---|---|---|
| GS1070 | | | |



# GS1075

HOOK WRENCH

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.

| Reference | Capacity | Length | Weight |
|---|---|---|---|
| GS1075 012 to 155 | 12/14 to 155/165 mm | 110 to 390 mm | 30 to 1200 g |



# GS95

MULTI-HEAD BUNG WRENCH

## / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
These products also exist in beryllium copper .

| Reference | Diameter | Weight |
|---|---|---|
| CS95 | | |



## GS1250

SLOTTED SCREWDRIVER

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
These products are also available in beryllium copper.

| Reference | Blade width | Blade lenght | Length | Weight |
|---|---|---|---|---|
| GS1250 03x60 | 03 mm | 60 mm | 150 mm | 45 g |
| GS1250 04x70 | 04 mm | 70 mm | 160 mm | 55 g |
| GS1250 05x80 | 05 mm | 80 mm | 170 mm | 60 g |
| GS1250 08x80 | 08 mm | | 180 mm | 70 g |
| GS1250 10x200 | 10 mm | 200 mm | 320 mm | 230 g |
| GS1250 10x300 | | 300 mm | 420 mm | 300 g |
| GS1250 11x150 | 11 mm | 150 mm | 260 mm | 140 g |



## GS1260

PHILLIPS SCREWDRIVER

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
These products are also available in beryllium copper.

| Reference | Blade lenght | Length | Weight |
|---|---|---|---|
| GS1260-N1 | 80 mm | 170 mm | 55 g |
| GS1260-N2 | 100 mm | 200 mm | 75 g |
| GS1260-N3 | 150 mm | 260 mm | 140 g |
| GS1260-N4 | 200 mm | 320 mm | 230 g |




## GS160

METAL SAW FRAME FOR 300 MM BLADES

### / TECHNICAL SPECIFICATIONS

Excellent grip, even with handling gloves.
Delivered with steel blade.



## GS1050

KNIFE

### / TECHNICAL SPECIFICATIONS

Beryllium copper hand tool.
Blade length : 150 mm. Wooden handle.



## GS172

SAW BLADE

### / TECHNICAL SPECIFICATIONS

Hand tool in beryllium bronze. Blade designed to fit blue gas saw ref. GS160. This product is also available in beryllium copper.



## GS153

PAINT SCRAPER

### / TECHNICAL SPECIFICATIONS

Silicon nickel cupro bronze hand tool.
This product is also available in beryllium copper.

| Reference | Description | Weight |
|---|---|---|
| GS153F | Flexible blade scraper | 115 g |
| GS153R | Rigid blade scraper | 165 g |



## GS155

SCRAPER WITHOUT HANDLE

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze (delivered without handle).
These products are also available in beryllium copper.

| Reference | Opening diameter | Blade | Weight |
|---|---|---|---|
| GS155 125 | 25 mm | 125 x 65 mm | 540 g |
| GS155 150 | 27 mm | 150 x 65 mm | 900 g |



## GS166

PINCHING BAR

### / TECHNICAL SPECIFICATIONS

Hand tool in bronze aluminium Ø 22 mm.
Bronze tools for explosive atmosphere.
This product is also available in beryllium copper.

| Reference | Diameter | Weight |
|---|---|---|
| GS166 | | |



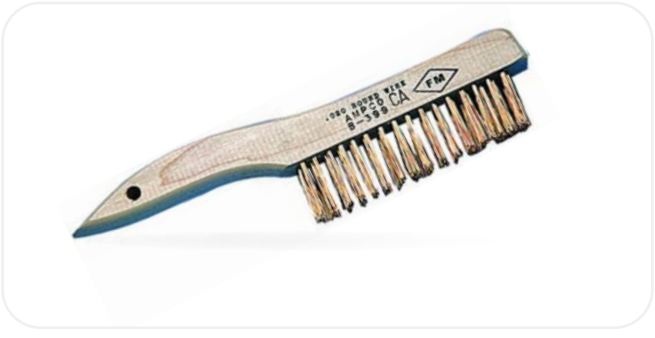
## GS1060

WRECKING BAR

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze, hexagonal shape, Ø 16 mm.
Other dimensions available on request.

| Reference | Diameter | Weight |
|---|---|---|
| GS1060 | | |



## GS86B

BRUSH WITH HANDLE

### / TECHNICAL SPECIFICATIONS

Hand tool in phosphor bronze. Bristle size: 30 mm.
This product is also available in beryllium copper.

| Reference | Diameter | Weight |
|---|---|---|
| GS86B | | |



## GS1190

SLUGGING AND FORK WRENCH

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
This product is also available in beryllium copper.



## GS1200

SLUGGING BOX WRENCH

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
This product is also available in beryllium copper.



## GS88

CHISEL

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
These products are also available in beryllium copper.

| Reference | Diameter | Weight |
|---|---|---|
| GS88 17 | 17 x 230 mm | 380 g |
| GS88 19 | 22 x 200 mm | 400 g |
| GS88 20 | 20 x 225 mm | 475 g |
| GS88 21 | 22 x 305 mm | 655 g |



## GS80

CAPE CHISEL

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
These products are also available in beryllium copper.

| Reference | Diameter | Weight |
|---|---|---|
| GS80 205 | 205 x 13 mm | 400 g |
| GS80 235 | 235 x 17 mm | 610 g |



## GS164

PEAK SCRAPPER

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
This product is also available in beryllium copper.



## GS152

SCRAPPER WITH ANGLED BLADE

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
This product is also available in beryllium copper.



## GS157 4

SQUARE MALLET

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
This product is also available in beryllium copper.



## GS158

SQUARE MALLET

### / TECHNICAL SPECIFICATIONS

Hand tool in aluminium bronze.
This product is also available in beryllium copper.

| Reference | Total lenght | Helved weight | Not helved weight | Head section |
|---|---|---|---|---|
| GS158 1 | 355 mm | 1,04 kg | 0,8 kg | 36 mm |
| GS158 3 | | 1,18 kg | 1,02 kg | 40 mm |
| GS158 4 | 380 mm | 1,53 kg | 1,25 kg | 42 mm |
| GS158 5 | | 1,68 kg | 1,36 kg | 44 mm |



## GS3100240

SHOVEL WITH HANDLE

### / TECHNICAL SPECIFICATIONS

Made in beryllium copper.



## GS3100470

PICKAXE

### / TECHNICAL SPECIFICATIONS

Made in beryllium copper.



## GS100-2-20

### / USE

Working protective tent

### / TECHNICAL SPECIFICATIONS

Fiberglass frame.
Canvas : translucent white polyester 350 g/m², yellow PVC base 670 g/m².
Fire classification: M2.
Delivered with carrying bag, tent poles, retaining ropes.

| Reference | Dimensions |
|---|---|
| T31GM | 2,50 x 2,00 x 1,90 m |
| T31PM | 1,80 x 1,70 x 1,65 m |



## T270

WELDING TENT

### / TECHNICAL SPECIFICATIONS

Canvas in white polyester.
Option : Customisation available on request (color and/or logo).

| Reference | Folded dimensions | Set up dimensions | Weight |
|---|---|---|---|
| T270GM | 1,80 x 0,35 x 0,35 m | 2,50 x 2,50 x 2 m | 20 kg |
| T270PM | 1,80 x 0,25 x 0,25 m | 1,80 x 1,80 x 1,95 m | 13 kg |


PAULSON



# TRANSPORT AND STORAGE SOLUTIONS


/ FOR PERSONAL PROTECTIVE EQUIPMENT 342

/ FOR TOOLS 346

/ TOOLS BOXES AND CASES 350


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# SELECTION GUIDE

## / FOR PERSONNAL PROTECTIVE EQUIPMENT

| | ST-80 | ST-100 | STT-80 | |
|---|---|---|---|---|
| |  |  |  | |
| **VOLUME** | 80 L | 100 L | 80 L | |
| **DIMENSIONS** | 75 x 35 x 33 cm | 80 x 42 x 33 cm | 75 x 36 x 33 cm | |
| **WEIGHT** | 2 kg | 2,6 kg | 3,7 kg | |
| **BACK CARRYING** | | | | |
| **TROLLEY** | | | ✓ | |
| **STRAP** | ✓ | ✓ | ✓ | |
| **HANDLE** | ✓ | ✓ | ✓ | |
| **LABEL-HOLDER** | ✓ | ✓ | ✓ | |
| **COMPARTIMENTS** | | | | |
| **POCKETS** | ✓ | ✓ | ✓ | |
| **HOLDALL** | | | | |
| **EQUIPMENTS** | Helmet, shoes, glasses, mask, vest, gloves, insulating mat, clothing, harness | | Helmet, shoes, glasses, mask, vest, gloves, insulating mat, clothing, harness | |

| | STT-100N | S509NM | SDP-40 | TS75 | S520SF |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| | 100 L | 80 L | 40 L | 42 L | 42 L |
| | 85 x 32 x 40 cm | 75 x 42 x 33 cm | xxx cm | 30 x 60 cm | 55 x 32 x 24 cm |
| | 4,7 kg | 1,5 kg | 1,2 kg | 780 g | 540 g |
| | | | ✓ | ✓ | |
| | ✓ | | | | |
| | | ✓ | | | |
| | ✓ | ✓ | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ | ✓ | |
| | ✓ | | | | |
| | ✓ | ✓ | ✓ | | |
| | | | | ✓ | ✓ |
| | Helmet, shoes, glasses, mask, vest, gloves, insulating mat, clothing, harness | Helmet, shoes, glasses, mask, vest, gloves, insulating mat, clothing, harness | Helmet, shoes, glasses, mask, vest, gloves, insulating mat, clothing, harness | Fall arrester equipment (harness, rope, energy absorber) | Helmet, shoes, glasses, mask, vest, gloves, clothing, harness |

# SELECTION GUIDE

## / TOOLS TRANSPORT BAGS

| | SAD-20 | COT-PM | SADT-25 |
|---|---|---|---|
| |  |   |  |
| MATERIAL | Textil | | |
| VOLUME | 20 L | 30 L | 25 L |
| DIMENSIONS | 37x44x21 cm | 45x33x25 cm | 40x55x35 cm |
| WEIGHT | 3,1 kg | 2,7 kg | 5,3 kg |
| BACK CARRYING | ✓ | | ✓ |
| TROLLEY | | | ✓ |
| STRAP | | ✓ | |
| HANDLE | ✓ | ✓ | ✓ |
| LABEL-HOLDER | ✓ | ✓ | ✓ |
| INTERNAL TOOLS-HOLDER | ✓ | removable | removable |
| COMPARTIMENTS | ✓ | ✓ | ✓ |
| POCKETS | ✓ | ✓ | ✓ |
| HOLDALL | | | |
| EQUIPMENTS | PC or tablet computer, small tools (screw-drivers, pliers, wrenches, ...), measuring devices, some clothes and small PPE | LV live working insulated tools (screw-drivers, pliers, wrenches, ...), metal saw, measuring devices, protection mats | |

| STHCF-15 | STHO-25 | STH-29 | S20TGMR | TS33N |
|---|---|---|---|---|
| Temporary transport | | | | |
|  |  |  |  |  |
| Textil | | | Leather | |
| 17 L | 25 L | 29 L | 8 L | 20 L |
| 32x28 cm | 28x42 cm | 30x42 cm | 24x16x31 cm | 42x30x16 cm |
| 1,2 kg | 0,68 kg | 1,1 kg | 0,53 kg | 2,4 kg |
| | | | | |
| | | | | |
| | | | | ✓ |
| | rope | rope + metal hook | karabiners | ✓ |
| | | | | |
| | | | | ✓ |
| | | | | ✓ |
| | | | | ✓ |
| | ✓ | ✓ | ✓ | |
| Small tools | | | | |

ESSENTIAL




# SAD409 OUR SELECTION

## PPE BACKPACK - 40 L

### / TECHNICAL SPECIFICATIONS

- 600D polyester bag with drawstring and flap closure, adjustable waist strap, inner pocket and document window.

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| SAD409 | 35 L | 35 x 23 x 50cm | 1,5 kg |

SUPERIOR



# TS75

## EQUIPMENT CARRIER BAG - 42 L

### / TECHNICAL SPECIFICATIONS

- PVC-coated canvas bag with drawstring closure, inner hanging ring, label holder, reinforced base, handle and shoulder straps.

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| TS75 | 42 L | 30 x 60 cm | 800 g |

ESSENTIAL




# S520SF

## EQUIPMENT CARRIER BAG - 42 L

### / KEY FEATURES & APPLICATIONS

Coated canvas bag suitable for transporting equipment, compliant with cabin luggage dimensions.

**Protects against** UV rays and humidity.

| Reference | Capacity | Dimensions |
|---|---|---|
| S520SF | 42 L | 55 x 24 x 32 cm |

ESSENTIAL




# S509NM

## PPE TRANSPORT SOFT BAG - 80 L

### / KEY FEATURES & APPLICATIONS

Main compartment with U-zip and double sliders, three zipped front pockets with label holder, and two side pockets including a kangaroo-style pocket.

Flexible PVC-coated canvas bag
**Protects against :** humidity and UV.

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| S509NM | 80 L | 70 x 38 x 30 cm | 1,5 kg |

ESSENTIAL




# ST-80

PPE TRANSPORT BAG - 80 L

## / KEY FEATURES & APPLICATIONS

Includes multiple external pockets, a mesh top opening with double sliders, a reinforced bottom with studs, and a full-length inner pocket.

**Protects** equipment and documents from moisture and UV thanks to high-strength canvas.

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| ST-80 | 80 L | 75 x 35 x 33 cm | 2 kg |

ESSENTIAL




ESSENTIAL




# ST-100

PPE TRANSPORT BAG - 100 L

## / KEY FEATURES & APPLICATIONS

Features multiple zipped and mesh pockets, a wide top opening with tightening straps, and a removable self-grip inner divider for organised storage

High-resistance semi-rigid fabric bag designed to store and transport items while protecting them from dirt, moisture and UV light.

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| ST-100 | 100 L | 80 x 42 x 33 cm | 2,6 kg |

# STT-80

PPE TROLLEY BAG - 80 L

## / KEY FEATURES & APPLICATIONS

Includes two zipped back pockets, a right-side sock pocket with name tag, a wide mesh top opening with double sliders, and a full-length inner pocket.

This semi-rigid, high-strength canvas bag is designed to carry contents **protected** from moisture and UV light.

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| STT-80 | 80 L | 75 x 36 x 33 cm | 3,7 kg |

SUPERIOR




# H125D

LARGE TRANSPORT BAG FOR INSULATING MATS

| Reference | Dimensions |
|---|---|
| H125D | 125 x 30 x 20 cm |

SUPERIOR




# H195

## TEXTILE BAG FOR TRANSPORT OF EQUIPMENT

### / TECHNICAL SPECIFICATIONS

- Zipper closure and two sliders.
- Cylindrical sides.
- Carried by two straps with handles.
- Label holder on one side.

| Reference | Dimensions |
|---|---|
| H125D | 125 x 30 x 20 cm |

SUPERIOR



# TS28H

## HOLDALL BAG

### / TECHNICAL SPECIFICATIONS

- Holdall bag, made of polyamide/polyester canvas and PVC coating.
- Drawstring closure.
- Inner bottom reinforced with plastic.

| Reference | Capacity | Base diameter | Height | Weight |
|---|---|---|---|---|
| TS28H | 40 L | 31 cm | 70 cm | 670 g |

SUPERIOR




# TS10GL

## LONG INSULATING GLOVE CASE

### / KEY FEATURES & APPLICATIONS

Ventilated glove bag with dual carry handles and compartments for care kit and instructions.

Protects against mechanical and light UV exposure.

| Reference | Dimensions | Weight |
|---|---|---|
| TS10GL | 30 x 90 x 20 cm | 700 g |

ESSENTIAL




# COT-PM NEW

## SMALL CAPACITY TOOLBOX

### / TECHNICAL SPECIFICATION

- 8 internal compartments + 2 removable partitions with hook.
- Side pockets with tape holder, label slot and flap closure.
- Removable semi-rigid hacksaw pocket with strap support.
- Elastic straps and cartridge belt for tool storage.

| Reference | Dimensions | Weight |
|---|---|---|
| COT-PM | 45 x 33 x 25 cm | 2,7 kg |

PRO-ELITE

# SADT-25

TROLLEY BACKPACK FOR PPE AND TOOLS




### / TECHNICAL SPECIFICATIONS

- Main compartment with clip sleeves and removable tray
- Side and front pockets for tools, gloves, saw and detector
- Reflective elements and secure buckle closure

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| SADT-25 | 25 L | 40 x 55 x 35 cm | 5,3 kg |

SUPERIOR




# MS35V2

TEXTILE CASE FOR 7 SINGLE OPEN ENDED SPANNERS

### / TECHNICAL SPECIFICATIONS

- 7-pocket mesh case for insulated spanners until the number 19.
- PVC mesh case with snap fastener and tool storage.

| Reference | Dimensions | Weight |
|---|---|---|
| MS35V2 | 18 x 14 x 1 cm (closed) | 62 g |

SUPERIOR



# T104

ROLL-UP SOFT CASE

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| T104 | 15 tool slots | 66 x 33 x 0,8 cm | 270 g |

SUPERIOR



# TR20

ROLL-UP KIT FOR STORING AND TRANSPORTING TOOLS

### / TECHNICAL SPECIFICATIONS

- Compartmented pouch for insulated tools.
- Roll-up design with quick-release buckles and handle.andle.

| Reference | Dimensions | Weight |
|---|---|---|
| TR20 | 45 x 45 x 22 cm | 4,44 Kg |

Delivered empty.

SUPERIOR




# SAD-20

## BACKPACK 20L

### / TECHNICAL SPECIFICATIONS

- Main zippered compartment fits 13" laptop, tools and accessories (clip pockets, holders, carabiner, name tag, pen slots)
- Two side pockets, including one with hook-and-loop fastener
- Front zippered compartment with mesh + exterior patch pocket
- Two open front pockets with webbing and metal loops

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| SAD-20 | 20 L | 38 x 22 x 50 cm | 3,085 kg |

SUPERIOR



# S32

## CANVAS BAG

### / KEY FEATURES & APPLICATIONS

- Canvas bag with central compartment, front tool holder, back pocket and reinforced bottom.

| Reference | Dimensions | Weight |
|---|---|---|
| S32 | 44 x 33 x 16 cm | 630 g |

SUPERIOR



# S31N

## CANVAS FUNNY PACK

### / KEY FEATURES & APPLICATIONS

- Canvas cover with central and side pockets, tool cord, and adjustable belt system.

| Reference | Dimensions | Weight |
|---|---|---|
| S31N | 30 x 16 x 10 cm | 280 g |

SUPERIOR




# S33PM
# S33GM

## CANVAS SOFT CASE

| Reference | Dimensions | Weight |
|---|---|---|
| S33PM | 20 x 6 x 4 cm | 150 g |
| S33GM | 26 x 6 x 6 cm | 170 g |

SUPERIOR



# S20T

## HARD CANVAS TOOL BAG FOR WORKING AT HEIGHT

| Reference | Dimensions | Weight |
|---|---|---|
| S20TPM | 25 x 23 x 10 cm | 300 g |
| S20TGM | 30 x 24,5 x 15 cm | 350 g |

SUPERIOR




# S20TGMR NEW

## REINFORCED PVC-COATED CANVAS TOOL BAG FOR WORKING AT HEIGHT

### / TECHNICAL SPECIFICATION

**INTERNAL:** Main compartment with side reinforcements, drainage holes, and flap closure with strap and self-gripping fastener.
**EXTERNAL:** Two metallic hooks on the back part to fix to the harness.

| Reference | Dimensions | Weight |
|---|---|---|
| S20TGMR | 24 x 16 x 31 cm | 0,53 kg |

SUPERIOR




# STHCF-15 NEW

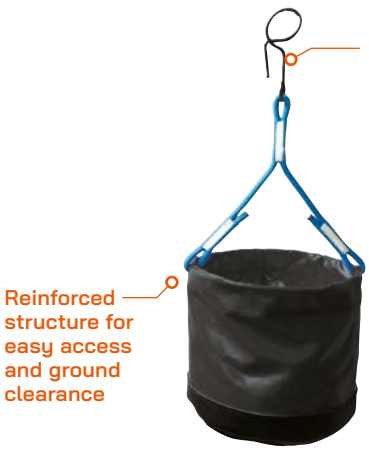
## TEXTILE BUCKET WITH INTERNAL TOOL HOLDERS FOR WORK AT HEIGHT

### / TECHNICAL SPECIFICATION

**INTERNAL:** Main compartment with lateral reinforcement, individual tool sheaths, and a reinforced bottom with drainage.
**EXTERNAL:** Metallic reinforcement ring, high-strength rope with sewn end, and fabric-and-cord top closure with removable hook-and-loop tab.

| Reference | Dimensions | Weight |
|---|---|---|
| STHCF-15 | 32 x 28 cm (~17L) | 1,3 kg |

SUPERIOR




# STH-13
# STH-29

## BUCKET BAG FOR TEMPORARY CARRYING

### / TECHNICAL SPECIFICATION

Cylindrical PVC canvas bucket with reinforced stitching, steel hook and rope, metal hoop, and leather base with drainage eyelet.

| Reference | Capacity | Dimensions | Weight |
|---|---|---|---|
| STH-13 | 13 L | 26 x 24 cm | 0.8 kg |
| STH-29 | 29 L | 30 x 42 cm | 1.1 kg |

## OUR EXPERTISE, YOUR STANDARDS

Built to last, designed for you !

**At PENTA,** bags are more than accessories — they are essential work tools, engineered to withstand the toughest environments.

**We design and manufacture** a wide range of durable, functional bags tailored to the realities of the field.

Most of our bags **are proudly made in France,** in our CSA workshop located in Villeneuve-de-Berg, in the heart of Ardèche.

It's here that **we cultivate local craftsmanship**, blending industrial precision, refined finishing and responsible production.

**Our expertise** also extends to elegant leather goods, where performance meets style.

SUPERIOR



# S10

## ELECTRICIAN LEATHER TOOL BAG

### / KEY FEATURES & APPLICATIONS

Canvas bag with central compartment, front tool holder, back pocket and reinforced bottom.

| Reference | Dimensions | Weight |
|---|---|---|
| S10 | 37 x 26 x 10,5 cm | 1,35 kg |

SUPERIOR



# S15PM

## PLUMBER LEATHER BAG WITH CARRYING HANDLE

| Reference | Dimensions | Weight |
|---|---|---|
| S15PM | 35 x 12 x 12 cm | 550 g |

SUPERIOR



# S15MM

## SPLIT LEATHER TOOL BAG WITH SHOULDER STRAP

| Reference | Dimensions | Weight |
|---|---|---|
| S15MM | 45 x 18 x 16 cm | 1,25 kg |

SUPERIOR



# TS33N

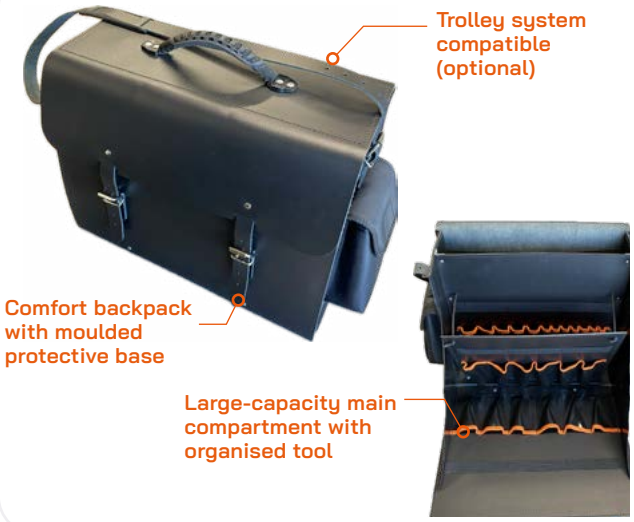
## BLACK LEATHER TOOL BAG

### / KEY FEATURES & APPLICATIONS

Bag with handle, tool divider and flap tray with bungee cord.

| Reference | Dimensions | Weight |
|---|---|---|
| TS33N | 42 x 30 x 16 cm | 2,40 kg |

PRO-ELITE




# TS33GM

NEW

## LEATHER/TEXTILE FABRIC BAG FOR ELECTRICIAN TOOLS LARGE MODEL

### / TECHNICAL SPECIFICATION

**INTERNAL:** Main compartment with fixed and pivoting dividers, multiple tool holders, mesh pockets, and polypropylene reinforcements for added structure and durability.
**EXTERNAL:** Features an ergonomic handle on the flap, leather strap closure, a removable shoulder strap, and plastic base feet for upright stability.

| Reference | Dimensions | Weight |
|---|---|---|
| TS33GM | 45 x 45 x 22 cm | 4,44 kg |

PRO-ELITE



# TS28V

## ELECTRICIAN LEATHER BAG

### / KEY FEATURES & APPLICATIONS

Shoulder strap with felt reinforcement for comfort, front opening with removable tray.

| Reference | Dimensions | Weight |
|---|---|---|
| TS28V | 45 x 16 x 37 cm | 4,30 kg |

PRO-ELITE




# STH-VRP

## SOFT LEATHER TOOL BAG FOR WORKING AT HEIGHT

### / TECHNICAL SPECIFICATIONS

**Interior :**
• Rigid open compartment with drainage eyelet and metal snap hooks
**Exterior :**
• An open pocket on the front.

| Reference | Dimensions | Weight |
|---|---|---|
| STH-VRP | 24 x 33 x 10 cm | 630 g |

PRO-ELITE




# S20

## SOFT LEATHER TOOL BAG FOR WORKING AT HEIGHT

| Reference | Dimensions | Weight |
|---|---|---|
| S20PM | 27 x 26 x 13 cm | 900 g |
| S20GM | 30 x 24,5 x 15 cm | 1060 g |




# ART161V

TOOLBOX

| Reference | Dimensions | Weight |
|---|---|---|
| ART161V | 406 x 252 x 244 mm | 0,92 kg |



# S505

POLYPROPYLENE TOOLBOX

### / TECHNICAL SPECIFICATIONS

Polypropylene case with 5 to 26 compartments, large handle, and transparent stackable lid.

| Reference | Dimensions | Weight |
|---|---|---|
| S505 | 460 x 330 x 80 mm | 1 kg |






# B102P-V64V

POLYPROPYLENE TOOLBOX

### / KEY FEATURES & APPLICATIONS

Polypropylene case with continuous handle, lockable lid, removable tray and shelf for tools and small parts.
Model V64V includes rear straps for carrying insulating mats or sheets (not included).

| Reference | Dimensions | Weight |
|---|---|---|
| B102P | 475 x 257 x 255 mm | 2,20 kg |
| V64V | 475 x 257 x 255 mm | 2,20 kg |

# ART162N

FULLY INSULATED TOOLBOX

| Reference | Dimensions | Weight |
|---|---|---|
| ART162N | 515 x 287 x 388 mm | 2,21 kg |




# C259NM

## POLYPROPYLENE TOOL CHEST

### / TECHNICAL SPECIFICATIONS

Equipped with two removable trays, two small-parts shelves, two fasteners, side handles and a padlock locking device.

| Reference | Dimensions | Weight |
|---|---|---|
| C259NM | 635 x 450 x 420 mm | 7,55 kg |



# ART17048H

## MAINTENANCE CASE

### / TECHNICAL SPECIFICATIONS

Dust-tight, waterproof and particle-sealed case equipped with a document holder, internal fittings, two tool holders with straps, and a padlock locking device.



# B96M

## CANTILEVER TOLL BOX 5-TRAY

### / TECHNICAL SPECIFICATIONS

Sheet metal case with 5 compartments, double handle, and padlock locking device.

# C274

## TEXTILE BUCKET WITH INDIVIDUAL INSIDE TOOL POSITIONING FOR WORKING AT HEIGHT



| Reference | Bag's type | Weight | Dimensions |
|---|---|---|---|
| C274 | Toolbox | 0,7 kg | 375 x 308 x 75 mm |
| C274B | Suitcase | 1 kg | 435 x 308 x 90 mm |
| C274GM | | 1,5 kg | 510 x 360 x 120 mm |


L2
L3
MERLIN GERIN
NS 250 N



# SMART INSULATING SOLUTIONS


/ INSULATING MATS 354

/ INSULATING SHEETS & BLANKETS 356

/ LINE PROTECTORS (FORMELY SLEEVES) 359

/ INSULATING CAPS & END COVERS 361

/ INSULATING TAPES & STRIPS 362

/ INSULATING SCREENS & BARRIERS 363


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# RBCL

EXCLUSIVE

## INSULATING MATS

STANDARDS

IEC 61111:2009

The insulating mat isolates the operator from the ground to prevent electric current flow in case of contact or step voltage.



Permanent safety zone boundaries marking




### DID YOU KNOW?

Each insulating mat can be equipped with an built-in NFC tag, allowing complete product traceability throughout its service life.

This tag enables you to store and access key information such as the user's name, date of the next periodic inspection, and other product-related data — ensuring easier monitoring and maintenance.

| Color | Class | Max. operating voltage A.C. (alternatif current) | Max. operating voltage D.C. (direct current) |
|---|---|---|---|
| | 0 | 1000V | 1500V |
| | 2 | 17000V | 25500V |
| | 3 | 26500V | 39750V |
| | 4 | 36000V | 54000V |

## / RBCL0

INSULATING MAT — CLASS 0

- **Maximum operating voltage:** 1 000V AC.
- Grey elastomer.

**Advantages**

- Ultra-light carpet that facilitates daily interventions.

| Reference | Dimensions | Shape | Weight | Marking |
|---|---|---|---|---|
| RBCL0 0,6 X 0,6 | 0,6 x 0,6 m | Mat | 1,8 kg | |
| RBCL0 0,6 X 1 | 0,6 x 1 m | | 1,84 kg | |
| RBCL0 1 X 1 | 1 x 1 m | | 3 kg | |
| RBCL0 1X10 | 1 x 10 m | Roll | 30 kg | |

## / RBCL2

INSULATING MAT — CLASS 2

**Maximum operating voltage:** 17 000V AC.
Grey elastomer.

| Reference | Dimensions | Shape | Weight | Marking |
|---|---|---|---|---|
| RBCL2 0,6 X 1 | 0,6 x 1 m | Mat | 2,4 kg | |
| RBCL2 1 X 1 | 1 x 1 m | | 3,9 kg | |
| RBCL2 1 X 10 | 1 x 10 m | Roll | 39,8 kg | |

## / RBCL3

INSULATING MAT — CLASS 3

**Maximum operating voltage:** 26 500V AC.
Grey elastomer.

| Reference | Dimensions | Shape | Weight | Marking |
|---|---|---|---|---|
| RBCL3 0,6 X 1 | 0,6 x 1 m | Mat | 2,9 kg | |
| RBCL3 1 X 1 | 1 x 1 m | | 4,8 kg | |
| RBCL3 1X10 | 1 x 10 m | Roll | 48 kg | |

## / RBCL4

INSULATING MAT — CLASS 4

**Maximum operating voltage:** 36 000 V AC
Grey elastomer

| Reference | Dimensions | Shape | Weight | Marking |
|---|---|---|---|---|
| RBCL4 1 X 1 | 1 x 1 m | Mat | 7,5 kg | |
| RBCL4 1X10 | 1 x 10 m | Roll | 75 kg | |

# I-MAT RANGE

INSULATING MATS

STANDARDS
IEC 61111:2009

The thinnest and lightest on the market

Continuous dielectric testing during production



## / TECHNICAL SPECIFICATIONS

Non-slip on both sides.
Material: Elastomer.

### DID YOU KNOW?

I-MAT range also available with optionnal NFC tag upon request and minimum quantities.

NFC

# I-MAT0

## CLASS 0 INSULATING MAT

| Reference | Dimensions | Max. operating voltage | Test voltage | Resistance voltage | Thickness | Weight |
|---|---|---|---|---|---|---|
| I-MAT006X1 | 1 × 0,6 m | 1 000 V | 5 000 V | 10 000 V | 3 mm | 3,3 kg/m² |
| I-MAT001X10 | 1 × 10 m | | | | | |
| I-MAT001X1 | 1 × 1 m | | | | | |



# I-MAT2

## CLASS 2 INSULATING MAT

| Reference | Dimensions | Max. operating voltage | Test voltage | Resistance voltage | Thickness | Weight |
|---|---|---|---|---|---|---|
| I-MAT206X1 | 1 × 0,6 m | 17 000 V | 20 000 V | 30 000 V | 3 mm | 3,4 kg/m² |
| I-MAT201X10 | 1 × 10 m | | | | | |
| I-MAT201X1 | 1 × 1 m | | | | | |



# I-MAT3

## CLASS 3 INSULATING MAT

| Reference | Dimensions | Max. operating voltage | Test voltage | Resistance voltage | Thickness | Weight |
|---|---|---|---|---|---|---|
| I-MAT306X1 | 1 × 0,6 m | 26 500 V | 30 000 V | 40 000 V | 3 mm | 4,6 kg/m² |
| I-MAT301X10 | 1 × 10 m | | | | | |
| I-MAT301X1 | 1 × 1 m | | | | | |

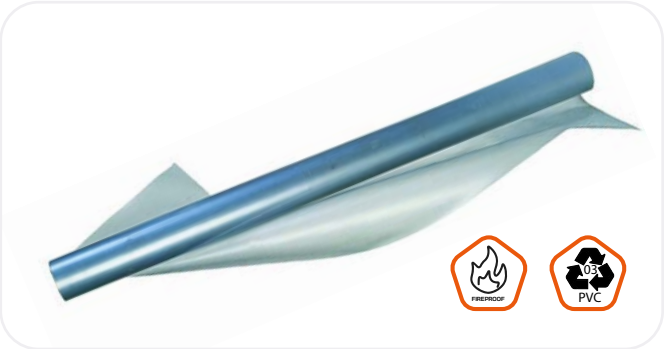


# I-MAT4

## CLASS 4 INSULATING MAT

| Reference | Dimensions | Max. operating voltage | Test voltage | Resistance voltage | Thickness | Weight |
|---|---|---|---|---|---|---|
| I-MAT406X1 | 1 × 0,6 m | 36 000 V | 40 000 V | 50 000 V | 4 mm | 6,1 kg/m² |
| I-MAT401X10 | 1 × 10 m | | | | | |
| I-MAT401X1 | 1 × 1 m | | | | | |





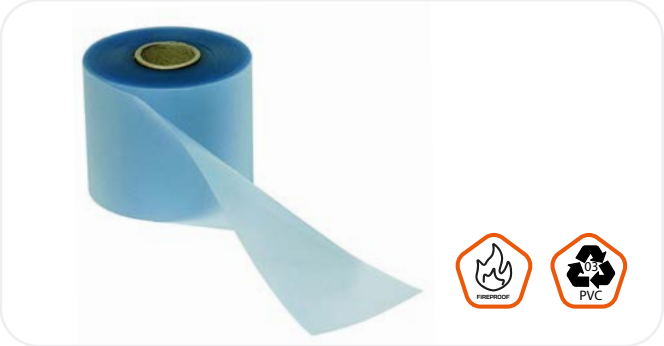
# TN08

INSULATING SHEET 8/10MM

STANDARDS

CEI 61112 CLASSE 0 (1000V)

| Reference | Max operating voltage | Thickness | Length | Width | Weight |
|---|---|---|---|---|---|
| TN08 | 1000V AC | 8/10e mm | 25 m | 1,3 m | 30 kg |



# TN15R

INSULATING TAPE

STANDARDS

CEI 61112 CLASSE 0 (1000V)

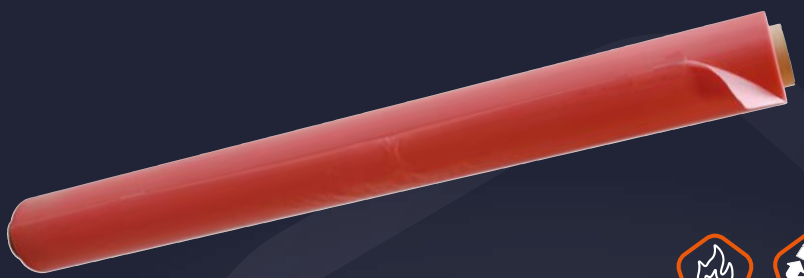
| Reference | Max operating voltage | Thickness | Length | Width | Weight |
|---|---|---|---|---|---|
| TN08 | 1000V AC | 3/10e mm | 25 m | 90 m | 900 g |

# TN05R NEW
# TN10R

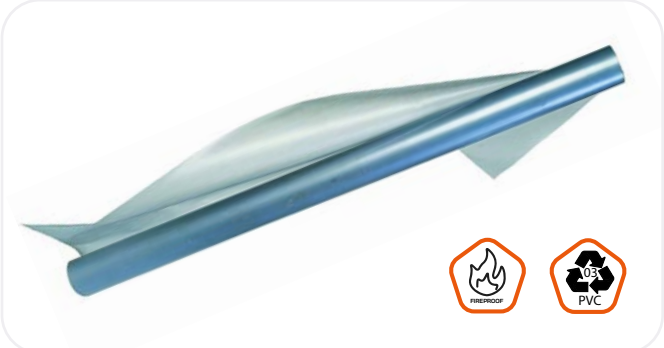
INSULATING SHEET 3/10 MM

STANDARDS

CEI 61112 CLASSE 0 (1000V)



| Reference | Max operating volatage | Thickness | Length | Width | Weight |
|---|---|---|---|---|---|
| TN05R | 1000V AC | 3/10e | 12,5 m | 1,3 m | 0,70 kg |
| TN10R | | | 25 m | | 1,39 kg |



# TN02R

INSULATING SHEET 3/10MM

STANDARDS

CEI 61112 CLASSE 0 (1000V)

| Reference | Max operating voltage | Thickness | Length | Width | Weight |
|---|---|---|---|---|---|
| TN02R | 1000V AC | 3/10 mm | 25 m | 0,65 m | 0,70 kg |

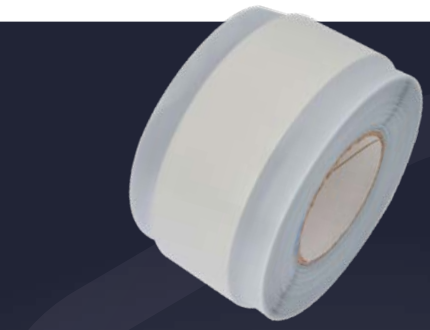
# TN15AD

NEW

INSULATING ADHESIVE TAPE

STANDARDS

ST BT 410 / IEC 61112 CLASSE 0 (1000V)



### / TECHNICAL SPECIFICATIONS

Material: One adhesive side.

| Reference | Max operating voltage | Thickness | Length | Width |
|---|---|---|---|---|
| TN08 | 1000V AC | 3/10e mm | 25 m | 90 m m |



Max 8 Kg

# ISMAG

INSULATING MAGNET

### / KEY FEATURES & APPLICATIONS

Secures insulating blankets (TN10R, TN10, TN05) to metal surfaces in panels, cabinets, or battery packs.

Fully coated with insulating synthetic material to avoid short circuits.

Easy to handle with overgloves or insulating gloves, and stackable for efficient storage.

| Reference | Max operating voltage | Diameter | Height | Weight |
|---|---|---|---|---|
| ISMAG | 500 V | 48 mm | 30 mm | 110 g |



# TN17

INSULATING SHEET WITH VELCRO STRIPS

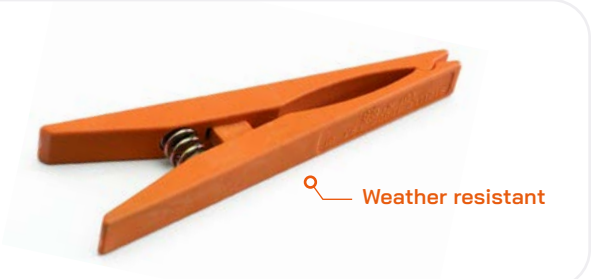
STANDARDS

ST TST BT 410

### / KEY FEATURES & APPLICATIONS

Designed to insulate bare conductors or those with faulty or insufficient insulation by simple covering. Several sheets can be combined for extended coverage. Suitable for LV networks and reusable.

| Reference | Length | Width | Weight |
|---|---|---|---|
| TN17 0,66M | 0,66 m | 0,36 m | 60 g |
| TN17 0,90M | 0,9 m | 0,5 m | 120 g |
| TN17 1,20M | 1,2 m | 0,8 m | 250 g |



Weather resistant

# TP60P

PLASTIC CLIP FOR INSULATING SHEETS AND BANDS

| Reference | Length | Width | Weight |
|---|---|---|---|
| TP60P | 165 mm | 18 mm | 82 g |



Weather resistant

# TP60PS

SMALL PLASTIC CLIP FOR INSULATING SHEETS AND BANDS (3MM)

| Reference | Dimensions | Weight |
|---|---|---|
| TP60PS | 67 x 27 x 22 mm | 10 g |



# I-COVER-010
# I-COVER-012

ELECTRICAL INSULATING BLANCKETS CLASS 0

STANDARDS

IEC 61112:2009 CLASSE 0 (1000V)

## / KEY FEATURES & APPLICATIONS

The I-COVER is a high-quality EPDM insulation blanket designed to protect against live or dead electrical parts.
It is suitable for indoor and outdoor use and certified to IEC 61112:2009, Class 0 (up to 1000V).
The material offers excellent resistance to ozone and acids (AZ category).
Both sides are smooth, with edge markings ensuring clear and safe use.

| Reference | Environment | Thickness | Class | Width | Length | Weight | Hardness | Tensile strenght |
|---|---|---|---|---|---|---|---|---|
| I-COVER-010 | Exterior | 1 mm | 0 | 1 m | 10 m | 1.4 kg/m² | 60+/-5 Sha | 16 MPa |
| I-COVER-012 | | | | 1.2 m | | | | |

## DID YOU KNOW?

An **insulating blanket** is not just an accessory — it's a true piece of the worker protection. **Used during de-energized work in low-voltage environments, it protects operators from direct or indirect contact with potentially live parts. To be effective, the blanket must be properly positioned, tensioned and secured**, without folds or loose areas.

- *Use dedicated clips or fasteners to ensure stability throughout the operation.*
- Compliance: Insulating blankets should follow the national requirements or International standards like IEC 61112
- Any alteration to the blanket (such as cutting, piercing, or marking) will immediately void its insulating properties.
- For cleaning: recommendation to refer to the manufacturer recommendation

# TMAC LV TEMPORARY CROSSARM ADJUSTABLE 4 OR 5 WIRE

## / USE

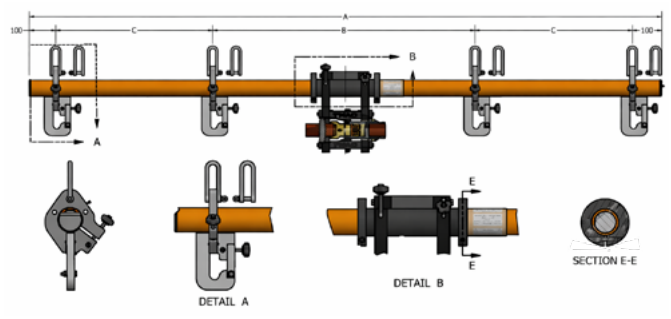
Designed to temporarily support energised low voltage conductors at their points of attachment while a damaged permanent crossarm is replaced.
The working load limit of the TMAC LV Temporary Crossarm depends on the length of the arm and the number of conductor attachment points.

## / KEY FEATURES

- All insulator positions are adjustable — 4 or 5 wire (Improved design)
- Used on Live LV and De-energised HV Lines
- Damaged parts can be replaced
- Easy to maintain
- Can be used on wood and round poles
- Versatile insulated crossarm pole bracket to suit intermediate or strain structures

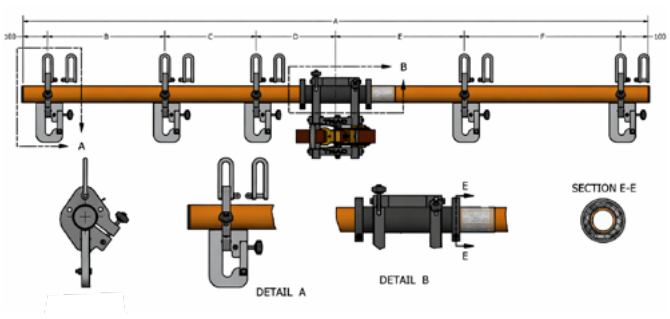
**CROSSARM - 4 POSITION (dimensions)**

| Part No. | A | B | C |
|---|---|---|---|
| TM01345 | 2100mm | 1000mm | 450mm |
| TM01347 | 2400mm | | 600mm |
| TM01349 | 2700mm | | 750mm |




**CROSSARM - 5 POSITION (dimensions)**

| Part No. | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| TM01346 | 2100mm | 350mm | 350mm | 250mm | 475mm | 475mm |
| TM01348 | 2400mm | 450mm | 400mm | 250mm | 550mm | 550mm |
| TM01350 | 2700mm | 455mm | 455mm | 340mm | 625mm | 625mm |





# TP105

## INSULATING LINEHOSE FOR LV CONDUCTOR WIRE

### / KEY FEATURES & APPLICATIONS

Insulates live conductors up to Ø15 mm on overhead networks; compatible with TP60 plastic clips.

| Reference | Max operating voltage | Lenght | Weight |
|---|---|---|---|
| TP105S1M | 1000 V AC | 1 m | 380 g |
| TP10515M | | 1,5 m | 520 g |
| TP1053M | | 3 m | 1400 g |

# TP115R

NEW

## LONG LENGHT LV NOTCHED INSULATING LINEHOSE



### / KEY FEATURES & APPLICATIONS

Protects against accidental contact near live LV overhead lines; easy-to-fit sleeves with notched assembly.

| Reference | Length |
|---|---|
| TP115R 2,5M | 2,5 m |
| TP115R-5M | 5 m |

# MGPI

NEW

## LONG LENGHT LV NOTCHED INSULATING LINEHOSE





### / KEY FEATURES & APPLICATIONS

Polycarbonate guide for aligning insulation on bare aerial cables up to 75 mm², ensuring quick and easy installation.

| Reference | Dimensions | Insulation | Weight |
|---|---|---|---|
| MGPI | 100 x 90 x 55 mm | Ø40 max | 52 g |



# G80

## SHEATHING GUIDE

### / KEY FEATURES & APPLICATIONS

11 mm groove guides TP115 sleeves. Composite material.

| Reference | Dimensions | Weight |
|---|---|---|
| G80 | 195 x 100 x 30 mm | 160 g |



# P85

## NOTCHING PLIERS

### / KEY FEATURES & APPLICATIONS

Pliers specially designed to make a T notch in TP115 insulating sleeves.

| Reference | Length | Weight |
|---|---|---|
| P85 | 180 mm | 280 g |



# TC135

## CONTAINER FOR INSULATING SLEEVES

| Reference | Diameter | Weight | Length |
|---|---|---|---|
| TC135 | 125 mm | 5 kg | 1,60 m |
| TC135 3,10M | | 10 kg | 3,10 m |
| TC135 5,10M | | 17,4 kg | 5,10 m |
| TC135 A | | | 5,10 m with female cap |
| TC135 D | 200 mm | 18 kg | 3,50 m |
| TC135 L | 125 mm | 11 kg | 4 m |



# TS30

## CONTAINER FOR INSULATING SLEEVES

### / KEY FEATURES & APPLICATIONS

Reinforced polyamide bag with rope handles and suspension hook, holds up to 45 profiles with drainage eyelets.

| Reference | Length | Diameter | Dimensions | Weight |
|---|---|---|---|---|
| TS30 | 1,20 m | 18 cm | 1 270 x 210 mm | 720 g |

### DID YOU KNOW?

At PENTA Electrical Safety Products, we don't just supply insulating line protector – we also design the full range of i**nstallation, storage and transport accessories** to ensure fast, safe and reliable use in the field. All our tools are engineered to support the correct use of temporary protections **in accordance with most national and international standards,** especially during operations near or on exposed low-voltage conductors. From sheathing guides to rigid or soft containers, every detail is designed to **optimize your work in complete safety.**



# TC15 - TC20

## INSULATING CAP FOR LV INSULATOR

| Reference | Use | Diameter | Height | Weight |
|---|---|---|---|---|
| TC15 | For alignment insulator | 110 mm | 150 mm | 0,5 kg |
| TC20 | For backstay insulator (yoke) | 162 mm | 200 mm | 1,3 kg |



# TS05

## BAG FOR INSULATING CAPS

### / TECHNICAL SPECIFICATIONS

Polyamide bag with drainage eyelets, holds 20 TC15 or 10 TC20 sleeves.

| Reference | Diameter | Height | Weight |
|---|---|---|---|
| TS05 | 30 cm | 40 cm | 700 g |



# TS26

## BUCKET FOR WORKING AT HEIGHT

| Reference | Diameter | Height | Weight |
|---|---|---|---|
| TS26 | 26 cm | 37 cm | 600 g |



# TS20 - TS21

## LV INSULATING BAG FOR CONNECTORS

### / KEY FEATURES & APPLICATIONS

Transparent insulating bag with elastic/Velcro closure, for safe use on overhead lines.

| Reference | Width | Length |
|---|---|---|
| TS20 | 130 mm | 210 mm |



# TC43

## LV INSULATING CAP FOR CONDUCTOR ENDS

STANDARDS

NFC 18425

| Reference | N° | Outer diameter | Capacity section | Ø on conductor sheath | Length | Sold by |
|---|---|---|---|---|---|---|
| TC43P | - | 9 mm | - | Min 3 - Max 4 mm | 50 mm | 1 |
| TC43 N1 | 1 | 12 mm | 6 to 16 mm² | Min 5 - Max 9 mm | 45 mm | 10 |
| TC43 N2 | 2 | 14 mm | 25 to 35 mm² | Min 8 - Max 11 mm | 48 mm | |
| TC43 N3 | 3 | 20 mm | 35 to 70 mm² | Min 10 - Max 16 mm | 68 mm | |
| TC43 N4 | 4 | 24 mm | 95 to 120 mm² | Min 15 - Max 20 mm | 90 mm | |



# TC25 - TC30 - TC35 - TC40 - TC41

## LV INSULATING CAP FOR CONDUCTOR ENDS

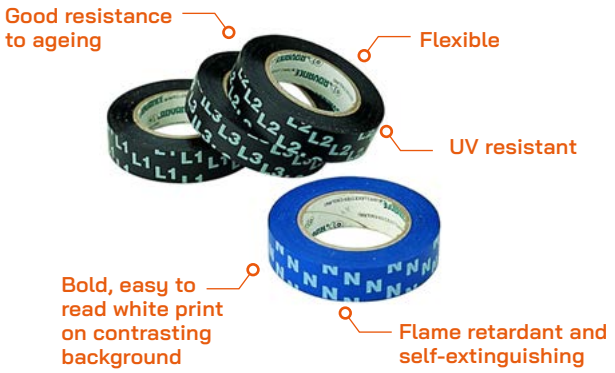
STANDARDS

NFC 18425

### / KEY FEATURES & APPLICATIONS

Soft insulating cap with cross opening for stripped LV conductors.

| Reference | Capacity section | Capacity on insulation | Outer diameter | Length |
|---|---|---|---|---|
| TC25 | 4 to 10 mm² | Ø 4 to 6,5 mm | 14 mm | 60 mm |
| TC30 | 10 to 35 mm² | Ø 5 to 11 mm | 19 mm | 100 mm |
| TC35 | 16 to 70 mm² | Ø 7,5 to 15 mm | 24 mm | 120 mm |
| TC40 | 25 to 100 mm² | Ø 10 to 20 mm | 30 mm | |
| TC41 | 120 to 240 mm² | Ø 18 to 30 mm | 35 mm | |




# S182

## PVC PHASE MARKING TAPES

STANDARDS

EN 60454 / TYPE 6

### / TECHNICAL SPECIFICATIONS

Thickness: 0,18 mm. Breaking load: 40 N/cm. Elongation: 250%. Service temperature: -5°C to +70°C. Breakdown voltag e: 10 kV.

| Reference | Color | Width | Length | Weight |
|---|---|---|---|---|
| S182L1 | Black L1 | 15 mm | 10 m | 37 g |
| S182L2 | Black L2 | | | |
| S182L3 | Black L3 | | | |
| S182N | Blue N | | | |









# TR055

## INSULATED ADHESIVE TAPES

STANDARDS

EN 60454 TYPE 2

### / TECHNICAL SPECIFICATIONS

Thickness: 0.13 mm — Breaking load: 26 N/cm — Elongation: 180% — Adhesion (steel/self): 2.4 / 2.1 N/cm — Service temp.: —5 °C to +70 °C — Breakdown voltage: 8 kV — Sold per unit (min. 4 per LV conductor).

| Reference | Application | Colour | Width | Length | Weight |
|---|---|---|---|---|---|
| TR055B | - | White | 15 mm | 10 m | 30 g |
| TR055BE | neutral | Blue | | | |
| TR055J | phase 2 | Yellow | | | |
| TR055M | phase 3 | Brown | | | |
| TR055N | - | Black | | | |
| TR055V | phase 1 | Green | | | |
| TR055VJ | Earth | Green/Yellow | | | |

# TN200

## LV PROTECTION COVER FOR ELECTRICAL CABINETS S22

### / TECHNICAL SPECIFICATIONS

60 mm red elastic headband with “Danger” marking.

| Reference | Diameter | Version | Dimensions | Weight |
|---|---|---|---|---|
| TN200PM | 90 cm | Small version | 340 x 390 x 710 mm | 580 g |
| TN200GM | 90 cm | Big version | 660 x 290 x 710 mm | 900 g |

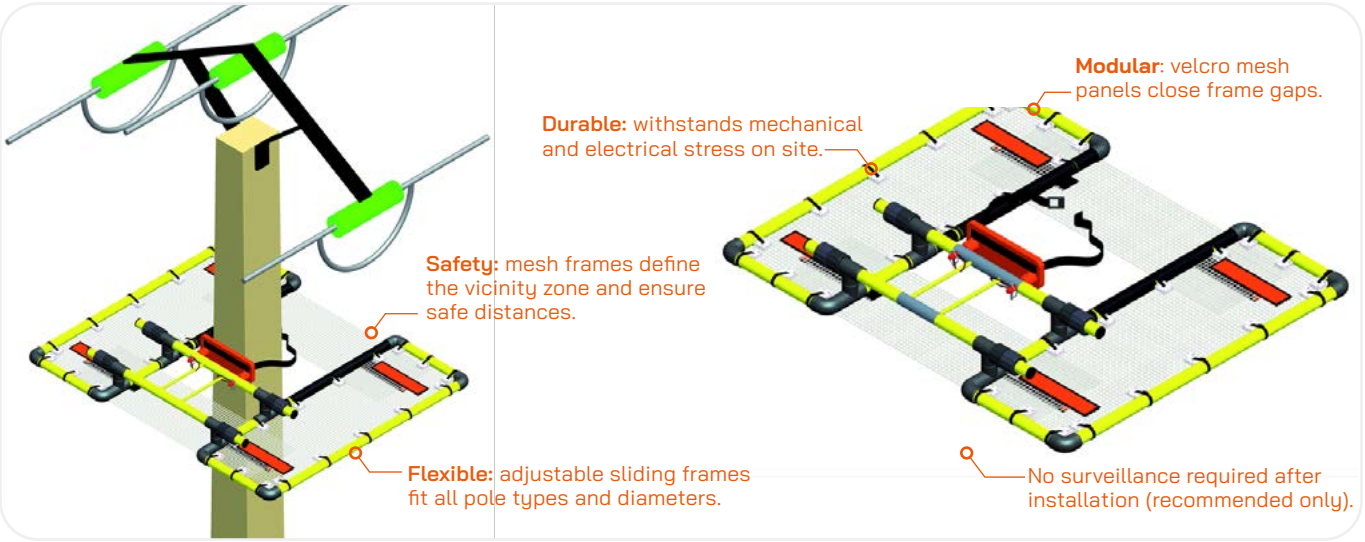
# TE08

## INSULATING SCREEN 20 KV FOR SUBSTATION

### / KEY FEATURES & APPLICATIONS

Self-extinguishing (M3 / UL94 V-0), dielectric tested (IEC 60243-1), mechanically compliant (ISO 178/527/604/179/180), with insulating corners (TC144C) and bolts (TC144B).

| Reference | Version | Width | Weight |
|---|---|---|---|
| TE08PM | Small version | 1000 x 1000 x 3 mm | 5,9 kg |
| TE08GM | Big version | 2000 x 1000 x 3 mm | 11,8 kg |




# ELISOL

MARKING OF THE MINIMUM APPROACH DISTANCE

| Reference | Mininum Approach Distance |
|---|---|
| ELISOL | 0,50 U (kV) +0,50m |




# EPROLLDOWN

LV INSULATING PROTECTIVE SCREEN FOR OUT-OF-REACH PROTECTION

STANDARDS

FT BT 410 FOR ADHESIVE STRIP INSULATING BLANKET
IEC 61235 FOR INSULATING TUBES

## / KEY FEATURES

Dielectric helmet and a light grey face shield with anti-fog, anti-scratch, chin and side protection.

Provides safe working conditions near live LV components by isolating exposed parts.

Fixed side handles make the screen easy to move and position on site.

| Reference | Screen width | Base width | Screen height | Screen weight |
|---|---|---|---|---|
| EPROLLDOWN | 800 mm | 500 mm | 1900 mm | 5 kg |



# TB05 - TB10

INSULATING SCREEN 20 KV FOR SUBSTATION

## / KEY FEATURES & APPLICATIONS

Fireproof M2-rated linen cloth cover designed for protecting linemen's tools during daily operations.

| Reference | Width | Weight |
|---|---|---|
| TB05 | 2 x 1 m | 1,6 kg |
| TB10 | 3 x 1 m | 2,6 kg |





# SHORT CIRCUITING & GROUNDING DEVICES
## BRITISH STANDARDS


/ **BRITISH STANDARDS** 368

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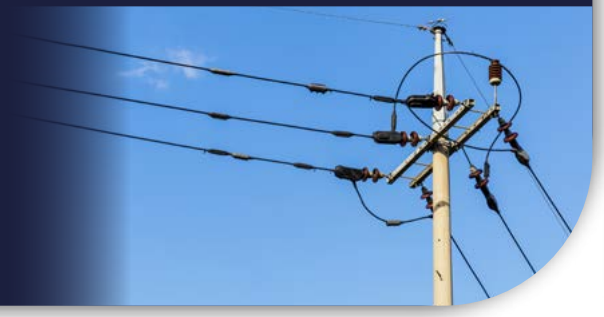


# CONFIGURATOR FOR PORTABLE EARTHING SYSTEM

## 1) NETWORK & INSTALLATION CHARACTERISTICS

Equipment conforming to Standards: _____ UK ☐ / Export ☐

Network nom. voltage: ___ kV  Max. short-circuit current: _____ kA / _____ s (time)

Nature of the conductive materials: Aluminium _____ Copper _____ Other _____

Conductor line configuration: _____ DLE: ☐ Rail: ☐ Underground: ☐ Substation: ☐ TLE: ☐

- Line End Conductor Dia. mm : min. _____ max. _____

Single ☐ Twin ☐ Triple ☐ Quad ☐

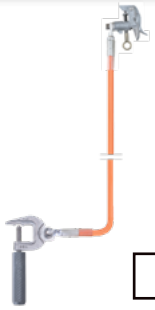
- Earth End Clamp Dia. mm : min. _____ max._____

Length. _____

- Flat bars: width. _____ Breadth. _____ Fitting: Side ☐ / Edgewise ☐

## 2) PENTA P&B PORTABLE EARTHING TYPES

**CONFIGURATION TYPE A**



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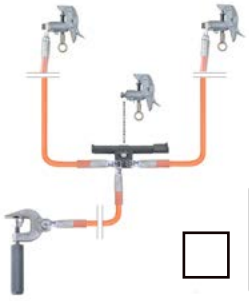
**CONFIGURATION TYPE B**



☐

**CONFIGURATION TYPE C**



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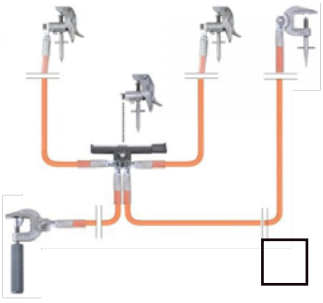
**CONFIGURATION TYPE D**



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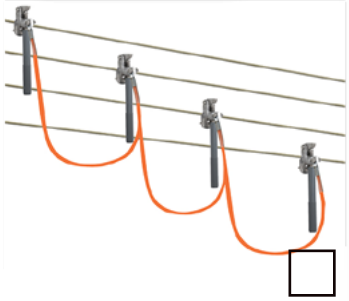
**CONFIGURATION TYPE E**



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**CONFIGURATION TYPE F**



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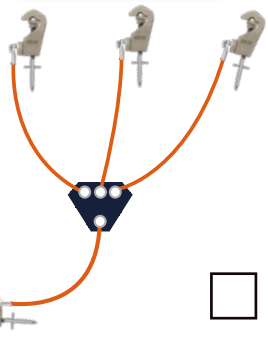
**CONFIGURATION TYPE G**



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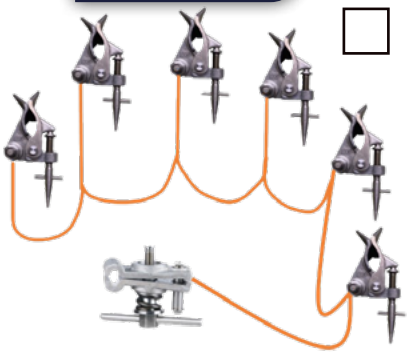
**CONFIGURATION TYPE H**



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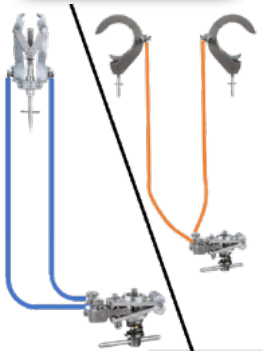
**CONFIGURATION TYPE J**



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# CONFIGURATOR FOR PORTABLE EARTHING SYSTEM

## 3) CHARACTERISTICS OF THE EARTHING SYSTEM

- How many kits/ leads required : _____
- Distance between Line conductors (m): _____ , distance between Line conductors and Earthing point (m) _____
- To place the clamps in position, the operator will stand

i. above the conductors ☐ ii. below the conductors ☐

iii. at the conductors level ☐ iv. Upon a pole ☐

v. Upon a platform ☐ vi. In a MEWP ☐

## 4) EARTHING CONNECTION POINT

- Sparrow Plate : ☐ - Steelwork : ☐ - Earth Rod: ☐ - Earth Nest: ☐ - Number of Rods: _____

_____

## 5) INSULATED OPERATING POLE

Overall length: _____ Sectional: ☐ Telescopic: ☐ Hand Grip: ☐ End Fitting: _____

Pole Quantity: Top _____ Intermediate _____ Bottom _____ End Plug : ☐ Socket/ Head: ☐

Telescopic _____

## 6) ACCESSORIES

- Carrying bag for Pole : ☐ - Carrying bag for equipment : ☐ - Do you require a bag ? Yes ☐ No ☐

## 7) EARTHING SOLUTION

- Line End Clamp: _____
- Phase Leads: Length (m) _____

Cross sectional area ($mm^2$) _____

Insulation Colour: _____

- Busbar/ parking bar type: _____

- Earth End Clamp _____
- Earth Lead: Length (m) _____

Cross sectional area ($mm^2$) _____

Insulation Colour: _____

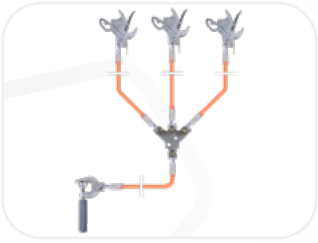
- Insulating pole, type: _____

- Earth rods/ nest: _____

Below are range of Earthing Kits suitable for Distribution Earthing.

/ This range offers solutions that are :

- Fully customisable depending upon requirements
- Approved for use on Distribution Lines
- Equipment used worldwide
- Lightweight and Solid construction



## MISC-00006

11kA SNAP-ON
EARTHING KIT

STANDARDS
ENA TS 41-21

### / KIT COMPRISING

3 x CE62 Line End Clamps
3 x 3m 120sqmm Orange Aluflex Leads
1 x Type-A Terminal Plate
1 x 15m 50sqmm Orange Aluflex Lead
1 x S9A Short Handle Earth End Clamp

| Reference | Short Circuit Rating |
|---|---|
| MISC-00006 | 12.5kA/ 1s (Phase to Phase) |



## MISC-00066

DLE2/A EARTHING KIT

STANDARDS
ENA TS 41-21

### / KIT COMPRISING

3 x S9B Short Taper Line End Clamps
3 x 3m 50sqmm Clear Aluflex Leads
1 x Type C Terminal Plate
1 x 11m 50sqmm Clear Aluflex Lead
1 x Split Connector
1 x 4ft P&B Top Pole
1 x 4ft P&B Bottom Pole
1 x S9D Socket
1 x Rain Shield
1 x Heavy Duty PVC Carrying Bag

| Reference | Short Circuit Rating |
|---|---|
| MISC-00066 | 20kA/ 1s (Phase to Phase) |



## MISC-00060

DLE KIT WITH CROSS
ARM CLAMP

STANDARDS
ENA TS 41-21

### / KIT COMPRISING

3 x S9B Short Taper Line End Clamps
3 x 3m 120sqmm Orange Aluflex Leads
1 x Cluster Bar Type DLE/ CAC
1 x 15m 50sqmm Orange Aluflex Lead
1 x S9A Short Handle Earth End Clamp
1 x S9A Pointed Tip Cross Arm Clamp
1 x 3m 50sqmm Orange Aluflex Lead

| Reference | Short Circuit Rating |
|---|---|
| MISC-00060 | 20kA/1s (phase to phase) |



## MISC-00103

33kV KIT WITH S9A
RING TYPE
LINE END CLAMPS

STANDARDS
ENA TS 41-21

### / KIT COMPRISING

3 x S9B Ring Type Line End Clamps
2 x 3m 120sqmm Actic Orange Aluflex Leads
1 x Cluster Bar
1 x 15m 50sqmm Arctic Orange Aluflex Leads
2 x S9A Short Handle Earth End Clamps with Rocker Block
1 x S9A Short Handle Clamp with Pointed Tip

| Reference | Short Circuit Rating |
|---|---|
| MISC-00103 | 20kA/ 1s (Phase to Phase) |





## MISC-00022

DLE KIT S9B/RT & NEW CLUSTER

STANDARDS
ENA TS 41-21

### / KIT COMPRISING

3 x S9B Ring Type Line End Clamps
3 x 3m 120sqmm Arctic Orange Aluflex Leads
1 x Cluster Bar
1 x 15m 50sqmm Arctic Orange Aluflex Lead
1 x S9A Short Handle Earth End Clamp
1 x pvc Carrying Bag

| Reference | Short Circuit Rating |
|---|---|
| MISC-00022 | 20kA/1s (phase to phase) |



## MISC-00018

33kV DLE KIT

STANDARDS
ENA TS 41-21

### / KIT COMPRISING

3 x S9B Short taper Line End Clamps
3 x 3m 120sqmm Arctic Orange Aluflex Leads
1 x Type C Terminal Plate
1 x 15m 50sqmm Arctic Orange Aluflex Lead
1 x S9A Short Handle Earth End Clamp
1 x CE10 Cross Arm Clamp
1 x 3m 50sqmm Arctic Orange Aluflex Lead

| Reference | Short Circuit Rating |
|---|---|
| MISC-00018 | 20kA/1s (phase to phase) |



## MISC-00169

DLE2/B EARTHING KIT

STANDARDS
ENA TS 41-21

### / KIT COMPRISING

3 x S9B Short Taper Line End Clamps
3 x 3m 120sqmm Arctic Orange Aluflex Leads
1 x Type-A Terminal Plate
1 x 7m 50sqmm Arctic Orange Aluflex Lead
1 x S9A Short Handle Earth End Clamp
1 x PVC Carrying Bag
1 x 4ft Top Section Pole
1 x 4ft Bottom Section Pole
1 x P331 Socket
1 x Earth Rod

| Reference | Short Circuit Rating |
|---|---|
| MISC-00169 | 20kA/1s (phase to phase) |



## MISC-00029

LV EARTHING KITS

STANDARDS
ENA TS 41-21

### / USE

LV Earthing Kits can be applied by hand using the S9B Long Handle clamps. Kits can be provided for up to 5 cables (three Phase, Neutral and Earth Line End clamps), and are supplied including a heavy duty pvc carry bag for protection of the equipment. The length of the 50sqmm leads is usually 1.5m, although these can be made to any length/colour depending upon requirements.

### / KIT COMPRISING

1 x PVC Bag for Shorting Kit
4 x 50sqmm 1.5m Arctic Orange Leads
5 x S9BS/A/LH/105 Clamp Assembly

| Reference | Short Circuit Rating |
|---|---|
| MISC-00029 | 20kA/1s (phase to phase) |



# BRITISH STANDARDS
## EARTH TAPE KITS

Below are range of Earth Tape Kits suitable for Substation Earthing.

These portable earthing kits have been developed to provide safe and secure high voltage connections to dirty or heavy oxidized copper/aluminium earth tapes. The CE57 Earth Tape clamp provides a drain earth before fitting a bridging earth suitable for fault protection, conductor sizes ranging from 25x3mm to 100x6mm are accommodated.

Earth tape defects range from deterioration of welded underground jointed interfaces on an earthing grid, high resistance connections between a tape and the primary plant or unauthorised removal leaving breaks in the system. PENTA P&B supply kits to aid safe repairs of Earth Tapes.

/ This range offers solutions that are :

- Suitable for conductor range 66kV to 400kV
- In accordance with National Grid NSI 24



### MISC-00021

NSI24 TEMPORARY EARTH BOND KIT

STANDARDS
ENA TS 41-21

**/ KIT COMPRISING**

1 x CE57 Earth Tape Clamp
2 x 8m 50sqmm Blue Aluflex Leads
1 x CE20/2 Clamp
1 x 2ft Bottom Pole
1 x 2ft Upper Pole c/w Socket
1 x PVC Carry Bag

This kit can be used as an NSI26 Earth.

| Reference | Short Circuit Rating | Continuous Current Rating |
|---|---|---|
| MISC-00021 | 16kA/1s | 300A |



### MISC-00100

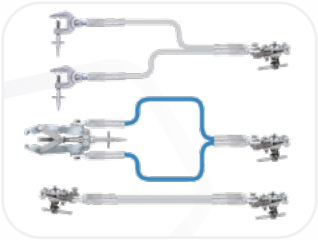
NSI24 EARTH TAPE REPAIR KIT WITH CLEAR LEADS

STANDARDS
ENA TS 41-21

**/ KIT COMPRISING**

1 x CE57 Earth Tape Clamp
1 x CE20/2 Clamp
2 x 8m Clear 50sq mm Leads
1 x 2ft Upper Pole Assembly c/w Socket
1 x 2ft Lower Pole Assembly
1 x PVC Carrying Bag

| Reference | Short Circuit Rating | Continuous Current Rating |
|---|---|---|
| MISC-00100 | 16kA/1s | 300A |



### MISC-00137

EARTH TAPE REPAIR KITS FOR NIE

STANDARDS
ENA TS 41-21

**/ KIT COMPRISING**

2 x S9A/A/LT/PT/135H Clamp
1 x CE57 Drain Earth Clamp
4 x CE20/2 Clamp
4 x 150sqmm Clear Lead 8.00m
2 x 50sqmm Artic Blue Lead

| Reference | MISC-00137 |
|---|---|



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# PORTABLE EARTHING EQUIPMENT












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# BRITISH STANDARDS
# EARTHING CLAMPS

/ This range of earthing and overhead line clamps complies with the ENA 41-21 standard and is also suitable for export markets. Designed for durability, these clamps feature a robust construction, lightweight design, and exceptional resistance to corrosion.

Below are range of Earthing Clamps suitable for Distribution Earthing.




## SK081008-0/1

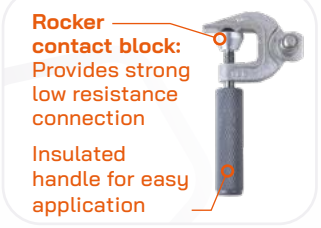
S9A SHORT HANDLE CLAMP WITH HARDENED TIP

STANDARDS
ENA TS 41-21

### / USE

Used as part of a earthing kit and connects to a designated earthing point either to aluminium or copper flat bar, round conductor or earth rods or steelwork, with knurled insulated handle for ease of application and a **hardened steel tip** for penetrating non-conductive surfaces.

| Reference | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| SK081008-0/1 | 6.4 - 20mm diameter<br>Up to 20mm thick bar | 17.5kA/ 2s | Insulated handle | 0.46kg |




## FA1076-F

S9A SHORT HANDLE CLAMP WITH ROCKER BLOCK

STANDARDS
ENA TS 41-21

### / USE

Used as part of a earthing kit and connects to a designated earthing point either to aluminium or copper flat bar, round conductor or earth rods or steelwork, with knurled insulated handle for ease of application and a **rocker block** for strong low-resistance connection.

| Reference | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| FA1076-F | 6.4 — 17mm dia. | 24.75kA/ 1s | Insulated handle | 0.46kg |




## FA3726-A

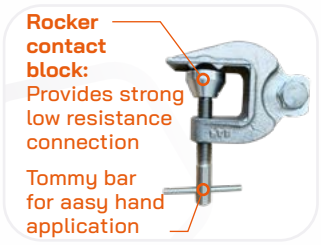
S9A LONG TAPER STEELWORK EARTH END CLAMP

STANDARDS
ENA TS 41-21

### / USE

Hardened Steel Tip penetrates non-conductive surfaces for a strong, low resistance connection.
Used as part of a earthing kit and connects to a designated earthing point or steelworks.

| Reférence | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| FA3726-A | Up to 20mm thick bar<br>6.4 to 20mm diameter round conductors | 17.5kA/ 2s | Long Taper | 0.40kg |




## FA1076-A

S9A CLAMP WITH ROCKER BLOCK AND TOMMY BAR

STANDARDS
ENA TS 41-21

### / USE

Fitted with rocker block and tommy bar op-screw for hand operation.
Used as part of a earthing kit and connects to a designated earthing point.

| Reference | Clamping diameter | Short circuit rating | Weight |
|---|---|---|---|
| FA1076-A | 12.7mm thick bars<br>6.4 to 20mm diameter round conductors | 17.5kA/ 2s | 0.38kg |




## EFD-11764/2

CE10 CROSS ARM/ STEELWORK CLAMP

STANDARDS
ENA TS 41-21

### / USE

With hardened Steel Tip penetrates non-conductive surfaces for a strong, low resistance connection.

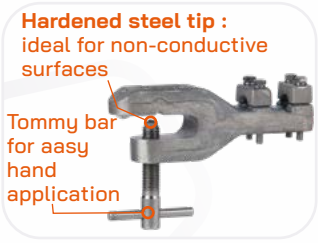
| Reference | Clamping diameter | Weight |
|---|---|---|
| EFD-11764/2 | 0 - 13mm | 0.45kg |



Below are range of Earthing Clamps suitable for Transmission Earthing.

/ This range offers solutions that are :

- Solid construction to give extended service
- Proven service record used by the electricity supply industry for more than 40 years
- Lightweight and excellent resistance to corrosion




## EFP-11173/1

### CE10/A2 EARTH END CLAMP

STANDARDS
ENA TS 41-21



## FA2043-C

### CE18/A BRIDGING CLAMP

STANDARDS
ENA TS 41-21

**/ USE**

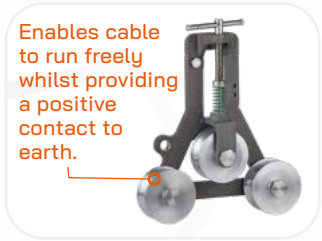
The CE10/A2 clamp is for direct application by hand to steelwork. The large thumbscrew of the device has a captive hardened steel tip which penetrates through painted, weathered or non-conductive surfaces and indents into the steelwork, ensuring a strong connection to earth potential.

| Reference | Short Circuit Rating | Cont. Circuit Rating | Weight |
|---|---|---|---|
| EFP-11173/1 | 8.9kA/ 1s | 150A | 0.40kg |

**/ USE**

The CE18/A clamp is for earthing the conductor over the tension set insulators to the tower arm coupling during maintenance. It bolts to the coupling through the clearance hole for the arcing horn bolt, which is removed before earthing.

| Reference | Short Circuit Rating | Cont. Circuit Rating | Weight |
|---|---|---|---|
| FA2043-C | 8.9kA/ 1s | 150A | 0.33kg |




## FA2127

### CE23/A RUNNING EARTH CLAMP

STANDARDS
ENA TS 41-21

**/ USE**

The CE23/A Running Earth clamp is designed specifically for earthing line conductors during “stringing” operations. The CE23/A Running Earth enables the cable to run freely between contact roller faces whilst providing a positive contact to earth.
The earth is anchored to a convenient position using the lanyard locating hole. The maximum size of a conductor that can be accommodated is 42mm. The CE23/A has a short circuit rating of 18kA/1s and a continuous current rating of 300A.
Improved cable fixing location offers improved strength, suitable for PB50 and PB120 palm terminations.

| Reference | Clamping Diameter | Short Circuit Rating | Cont. Circuit Rating | Weight |
|---|---|---|---|---|
| FA2127 | Up to 42mm | 20kA/ 1s | 300A | 4.76kg |



Below are range of Earthing Clamps suitable for Substation Earthing.

/ This range offers solutions that are :
- Solid construction to give extended service
- Proven service record used by the electricity supply industry for more than 40 years
- Lightweight and excellent resistance to corrosion



## FA2120-B

CE20 ESI-E1 EARTH END CLAMP

STANDARDS
ENA TS 41-21

### / USE

The CE20 is an Earth End clamp suitable to provide a connection to Substation Earth Tape. This is ideally suited for connection to tapes fitted with panhandles. Compatible with PB150T terminated leads and can be applied to clean or dirty copper and aluminium earth tape.

- Earth Tape Thickness : 3.2-6.5mm
- Earth Tape Width : 38-50mm

| Reference | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|
| FA2120-B | 25kA/ 1s & 17.5kA/2s | 1 | 0.62kg |




## FA2173-B

CE20/2 38-50 EARTH END CLAMP

STANDARDS
ENA TS 41-21

### / USE

CE20 Earth End clamp with adapter to permit fitting of twin cables and increase short circuit capacity.

- Earth Tape Thickness : 3.2-6.5mm
- Earth Tape Width : 38-50mm

| Reference | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|
| FA2173-B | 53.7kA/ 1s & 38kA/2s | 2 | 0.94kg |




## EFP-13727

CE20/2 50-60 EARTH END CLAMP

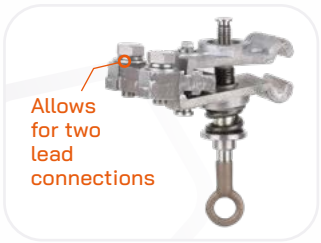
STANDARDS
ENA TS 41-21

### / USE

Special CE20/2 50-60 Earth End Clamp suitable for fitting to wide aluminium earth tapes 50mm to 60mm wide.
Rating same as CE20/2 38/50.

- Earth Tape Thickness : 3.2-6.5mm
- Earth Tape Width : 38-50mm

| Reference | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|
| EFP-13727 | 53.7kA/ 1s & 38kA/2s | 2 | 1.16kg |




## EFP-16705

CE20/2/A/S/RT EARTH CLAMP

STANDARDS
ENA TS 41-21

### / USE

Earth clamp to allow temporary earthing of earth tapes.

| Reference | Short Circuit Rating | Weight |
|---|---|---|
| EFP-16705 | 25kA/ 1s & 17.5kA/2s | 0.94kg |



## FA2121-B

CE21 EARTH END CLAMP

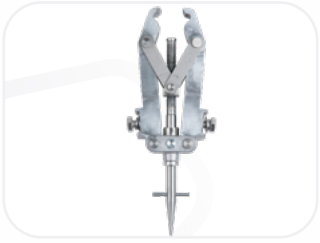
STANDARDS
ENA TS 41-21

### / USE

Can be applied to clean or dirty Copper or Aluminium tape.

- Earth Tape Thickness : 3.2-13mm
- Earth Tape Width : 25-50mm

| Reference | Short Circuit Rating | Weight |
|---|---|---|
| FA2121-B | 25kA/ 1s & 17.5kA/2s | 0.64kg |



## EFP-16708

CE57 DRAIN EARTH CLAMP

STANDARDS
ENA TS 41-21

### / USE

Aluminium Drain Earth clamp for use in Earth Tape Bridging Kit.

| Reference | Conductor Range | Short Circuit Rating | Continuous Current Rating |
|---|---|---|---|
| EFP-16708 | 25mm — 3mm (Min) / 100mm — 6mm (Max) | 16kA/ 1s | 300A |



## FA3129-A
### CE35 EARTH CLAMP

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for application to T bar stubs, ball stubs, flat bar and round bar. For use with ball stubs and T bar stub.

- For Flat Bars : Max Thickness: 12mm / Min Width: 31mm
- For Round Bars : Max Diameter: 25mm / Min Diameter: 12mm

| Reference | Short Circuit Rating | Weight |
|---|---|---|
| FA3129-A | 25kA/1s & 17.5kA/2s | 1.16kg |



## 4814-01
### BOLTED TYPE BALL STUB

STANDARDS
ENA TS 41-21

**/ USE**

Bronze bolted ball stud to provide a designated Earth point upon an Earth tape or within an electrical cabinet.
Connects to CE35 Earth Clamp.

| Reference | 4814-01 |
|---|---|



## 4814-02
### STUD TYPE BALL STUB

STANDARDS
ENA TS 41-21

**/ USE**

Bronze bolted ball stud to provide a designated Earth point upon an Earth tape or within an electrical cabinet.
Connects to CE35 Earth Clamp.

| Reference | 4814-02 |
|---|---|



## 4815-03
### STUD TYPE T BAR STUB

STANDARDS
ENA TS 41-21

**/ USE**

Bronze bolted ball stud to provide a designated Earth point upon an Earth tape or within an electrical cabinet.
Connects to CE35 Earth Clamp.

| Reference | 4815-03 |
|---|---|



## EMP-20066/1
### LARGE PANHANDLE

STANDARDS
ENA TS 41-21

**/ USE**

Large Aluminium Pan Handle suitable for fitting to access platforms.

| Reference | Length | Material |
|---|---|---|
| EMP-20066/1 | 422.4mm | Aluminium |



## EMP-20066
### MEDIUM PANHANDLE

STANDARDS
ENA TS 41-21

**/ USE**

Medium Aluminium Pan Handle suitable for fitting to access platforms.

| Reference | Length | Material |
|---|---|---|
| EMP-20066 | 310mm | Aluminium |



## EMP-20066/2
### SMALL PANHANDLE

STANDARDS
ENA TS 41-21

**/ USE**

Small Aluminium Pan Handle suitable for fitting to access platforms.

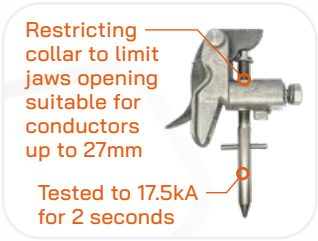
| Reference | Length | Material |
|---|---|---|
| EMP-20066/2 | 220mm | Aluminium |



Below are range Overhead Line Clamps suitable for Distribution Earthing.

/ This range offers solutions that are :

- Short Circuit tested to 17.5kA for 2 seconds (25kA/1s)
- Proven service record used by ESI for over 50 years
- Robust construction for extended service life
- Lightweight and excellent corrosion resistance




## FA3218-A

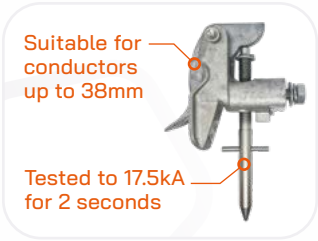
S9BS SHORT TAPER LINE END CLAMP (WITH COLLAR)

STANDARDS
ENA TS 41-21

### / USE

Hooks over conductor, with spring-loaded jaw for ease of installation.

| Reference | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| FA3218-A | 3 - 27mm | 17.5kA/2s | Short Taper | 0.58kg |




## FA3218-B

S9BS SHORT TAPER LINE END CLAMP (NO COLLAR)

STANDARDS
ENA TS 41-21

### / USE

Hooks over conductor, with spring-loaded jaw for ease of installation.

| Reference | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| FA3218-B | 3 - 38mm | 17.5kA/2s | Short Taper | 0.55kg |




## FA3213-A

S9B RING TYPE LINE END CLAMP

STANDARDS
ENA TS 41-21

### / USE

Ring Type operating screw allows application to conductor whilst holding the Operating Pole at an angle to the Line End clamp.

| Reference | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| FA3213-A | 3 - 27mm | 17.5kA/2s | Ring Type | 0.52kg |




## FA3344-A

S9B LONG HANDLE LINE END CLAMP

STANDARDS
ENA TS 41-21

### / USE

Insulated Handle to allow hand application upon LV Distribution Lines.

| Reference | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| FA3344-A | 3 - 27mm | 17.5kA/2s | Insulated handle | 0.58kg |




## EFD-13218/3

S9B DLE CEB ASSEMBLY

STANDARDS
ENA TS 41-21

### / USE

Serrated jaw profile to provide better contact upon weathered conductor

| Reference | Clamping diameter | Short circuit rating | Operating screw | Weight |
|---|---|---|---|---|
| EFD-13218/3 | 3 - 27mm | 17.5kA/2s | Short taper | 0.56kg |






## CE62 SNAP-ON LINE END CLAMP

STANDARDS
ENA TS 41-21

> Lightweight
> Rapid fitting and removal
> Tested to 12.5kA for 1 seconds

### / USE

Sprung loaded jaw snaps onto conductor for easy connection.
The CE62 Snap-on clamp is made from lightweight robust aluminium casting with stainless steel fittings.

| Reference | Clamping diameter | Short circuit rating | Applied with | Weight |
|---|---|---|---|---|
| EFD-16733 | 4 - 20mm | 12.5kA/ 1s | DH1A or Applicator Head | 0.44kg |
| EFD-16733/1 | | | | 0.52kg |
| EFD-16733/2 | | | | 0.62kg |

Below are Overhead Line Clamps suitable for Transmission Earthing.

/ This range offers solutions that are :

- Solid construction to give extended service
- Proven service record used by the electricity supply industry for more than 40 years
- Lightweight and excellent resistance to corrosion




## EFP-16743

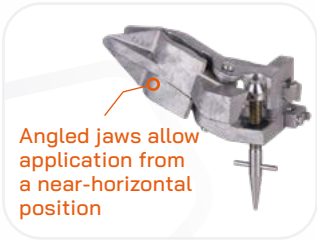
CE69 LINE END CLAMP

STANDARDS
ENA TS 41-21

### / USE

The CE69 clamp is to be applied in either an upward or downward direction utilising an OL1 operating socket attached to an insulated operating pole. The spring-loaded jaws enable the clamp to be slipped easily over the line conductor and retain the clamp in position whilst the operating screw is being tightened or loosened. The clamp is suitable for application to conductors ranging from 13mm to 46mm.

| Reference | Clamping Diameter | Short Circuit Rating | Cont. Current Rating | Weight |
|---|---|---|---|---|
| EFP-16743 | 13 - 46mm | 20kA/ 1s | 300A | 0.63kg |




## EFP-11868

CE13 LINE END CLAMP

STANDARDS
ENA TS 41-21

### / USE

The CE13/A Line End clamp attaches to an OL1 operating socket and is designed to be applied in a nearly horizontal position, from the tower cross arm over tension set insulators to the conductor. The CE13/A clamp accommodates a range of conductors from 19mm to 42mm.

| Reference | Clamping Diameter | Short Circuit Rating | Cont. Current Rating | Weight |
|---|---|---|---|---|
| EFP-11868 | 19 — 42mm | 20kA/ 1s | 300A | 0.99kg |




## EFP-16790

CE81 LINE END CLAMP

STANDARDS
ENA TS 41-21

### / USE

Designed for large special conductors such as used for river crossings and CCC conductor with double 'Armour Rods'.

The CE81 Line End clamp is to be applied in either an upward or downward direction using an OL1 operating socket attached to an insulated operating pole. The spring- loaded jaws enable the clamp to be slipped easily over the line conductor and retain the clamp in position whilst the operating screw is being tightened or loosened.

| Reference | Short Circuit Rating | Cont. Current Rating | Weight |
|---|---|---|---|
| EFP-16790 | 20kA/ 1s | 300A | 0.99kg |



# BRITISH STANDARDS
## OVERHEAD LINES CLAMPS

Below are Overhead Line Clamps suitable for Substation Earthing.

/ This range offers solutions that are :
- Lightweight
- Precision machined for improved performance



### FA2738-A
CE22/A ESI-S1
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE1

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2738-A | 10-38mm | 25kA/1s & 17.5kA/2s | 1 | 1.05kg |



### FA2143-B
CE22/B ESI-L2
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE3

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2143-B | 38-76mm | 25kA/1s & 17.5kA/2s | 1 | 1.09kg |



### FA2143-A
CE22/A&B ST
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE4

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2143-A | 19-76mm | 25kA/1s & 17.5kA/2s | 1 | 1.09kg |



### FA2739-A
CE22/C ESI-L3
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE5

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2739-A | 60-90mm | 25kA/1s & 17.5kA/2s | 1 | 1.27kg |

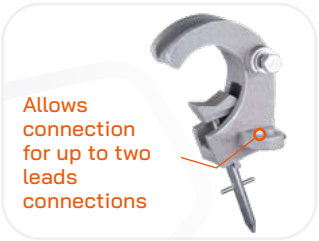



### FA2169-B
CE25
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE2

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2169-B | 35-75mm | 53.7kA/1s | 2 | 1.73kg |




### FA2191-A
CE15
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE6

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2191-A | 90mm | 51.6kA/ 2s | 2 | 1.73kg |




### FA2367-A
CE28
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE7

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2367-A | 100mm | 45kA/ 1s & 31.8kA/ 2s | 2 | 1.66kg |



### FA2180
CE27
LINE END CLAMP

STANDARDS
ENA TS 41-21

- ENA 41-21 Reference : 41-21-LE8

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2180 | 101.6mm | 25kA/1s & 17.5kA/2s | 1 | 1.55kg |




## FA2973-A

CE16/120
LINE END CLAMP

STANDARDS
ENA TS 41-21

• ENA 41-21 Reference : 41-21-LE9

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2973-A | 120mm | 61.2kA/ 2s | 3 | 2.23kg |




## FA2004-A

CE16/140
LINE END CLAMP

STANDARDS
ENA TS 41-21

• ENA 41-21 Reference : 41-21-LE11

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| FA2004-A | 140mm | 61.2kA/ 2s | 3 | 2.41kg |




## EFP-16703

CE51
LINE END CLAMP

STANDARDS
ENA TS 41-21

• ENA 41-21 Reference : 41-21-LE12

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| EFP-16703 | 140-160mm | 53.7kA/ 1s & 38kA/ 2s | 2 | 2.85kg |




## EFP-16702

CE50
LINE END CLAMP

STANDARDS
ENA TS 41-21

• ENA 41-21 Reference : 41-21-LE13

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| EFP-16702 | 190-200mm | 53.7kA/ 1s & 38kA/2s | 2 | 3.03kg |



## EFP-16749

CE71
LINE END CLAMP

STANDARDS
ENA TS 41-21

• ENA 41-21 Reference : 41-21-LE14

| Reference | Clamping Diameter | Short Circuit Rating | Max Cable Connection | Weight |
|---|---|---|---|---|
| EFP-16749 | 220-250mm | 25kA/ 1s 17.5kA/2s | 1 | 3.5kg |





Below are Operating Poles suitable for Distribution Earthing.

/ This range offers solutions that are :
- Lightweight
- High torsional and bending strength
- Easy interconnection in 4ft lengths
- Engineered precision joints to minimise flexing
- High electrical resistance value




## EBR-18101/4

P&B STYLE 4FT (1.22M) TOP POLE SECTION

STANDARDS
ENA TS 41-21

- Available with or without grip

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| EBR-18101/4 (No Grip) | Glass cloth reinforced epoxy resin tubing | 4ft (1.22m) | P&B Style Inter. and Bottom Poles | 0.70kg |




## EAR-18103/1

P&B STYLE 4FT (1.22M) INTERMEDIATE POLE SECTION

STANDARDS
ENA TS 41-21

- Available with or without grip

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| EAR-18103/1 (No Grip) | Glass cloth reinforced epoxy resin tubing | 4ft (1.22m) | P&B Style Top, Inter. and Bottom Poles | 0.70kg |




## EAR-18103/2

P&B STYLE 4FT (1.22M) BOTTOM POLE SECTION

STANDARDS
ENA TS 41-21

- Available with or without grip

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| EAR-18103/2 (With Grip) | Glass cloth reinforced epoxy resin tubing | 4ft (1.22m) | P&B Style Top and Inter. Poles | 0.70kg |




## EBR-18163

BOWTHORPE STYLE 4FT (1.22M) TOP POLE SECTION

STANDARDS
ENA TS 41-21

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| EBR-18163 | Glass cloth reinforced epoxy resin tubing | 4ft (1.22m) | Bowthorpe Style Inter. and Bottom Pole | 0.70kg |




## EBR-18161

BOWTHORPE STYLE 4FT (1.22M) INTERMEDIATE POLE SECTION

STANDARDS
ENA TS 41-21

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| EBR-18161 | Glass cloth reinforced epoxy resin tubing | 4ft (1.22m) | Bowthorpe Style Top & Bottom Pole Sections | 0.70kg |




## EBR-18162/1

BOWTHORPE STYLE 4FT (1.22M) BOTTOM POLE SECTION

STANDARDS
ENA TS 41-21

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| EBR-18162/1 | Glass cloth reinforced epoxy resin tubing | 4ft (1.22m) | Bowthorpe Style Inter. and Top Pole | 0.70kg |




## EBB-14510

GOLF TYPE EARTHING BAG

STANDARDS
ENA TS 41-21

- Used for carrying 4ft Operating Poles to site and keeps poles dry and safe.

| Reference | Material | Dimension |
|---|---|---|
| EBB-14510 | Re-inforced green PVC | 1390 Long x 150 High x 240 Wide |

Below are Operating Poles suitable for Substation Earthing.

/ This range offers solutions that are :

- Lightweight
- Precision machined for rigidity
- High electrical resistance




## FA1346-E

8FT (2.44M) TOP POLE SECTION

STANDARDS
ENA TS 41-21

- 8ft pole with foam filled also available

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| FA1346-E (Pole Only) | Glass cloth reinforced epoxy resin tubing | 8ft (2.44m) | S9D and CEA/S2 Sockets | 1.40kg |




## FA1322-H

8FT (2.44M) BOTTOM POLE SECTION

STANDARDS
ENA TS 41-21

- Bottom sections supplied with End Plug

| Reference | Material | Total Length | Use with | Weight |
|---|---|---|---|---|
| FA1322-H | Glass cloth reinforced epoxy resin tubing | 8ft (2.44m) | S9D and CEA/S2 Sockets | 1.40kg |



## EFR-18104/3

8FT (2.44M) POLE (2X4FT SECTIONS JOINED BY CHAIN)

STANDARDS
ENA TS 41-21

- Sections Available : Used as single-pole only

| Reference | Material | Total Length | Compatible with | Weight |
|---|---|---|---|---|
| EFR-18104/3 | Glass cloth reinforced epoxy resin tubing | 8ft (2.44m) | S9D and CEA/S2 Sockets | 1.38kg |



## EFR-18114

2FT SPECIAL POLE ASSEMBLIES FOR EARTH TAPE BRIDGING KITS

STANDARDS
ENA TS 41-21

- Special 2ft (0.6m) long upper and lower operating pole sections identified by blue pigmented open weave hand grip

| | Top Section | Bottom Section |
|---|---|---|
| Reference | EFR-18114 | EFR-18115 |




## EAR-18106

REMOVABLE POLE END PLUG

STANDARDS
ENA TS 41-21

- Attaches to the bottom pole section

| Reference | Material | Colour | Compatible with | Weight |
|---|---|---|---|---|
| EAR-18106 | Thermo-Plastic | Grey | Bottom Poles | 0.16kg |

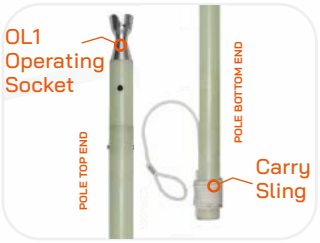




Below are Operating Poles suitable for Transmission Earthing.

/ This range offers solutions that are :

- Open weave hand grips
- Lightweight rigid sections
- Available with or without OL1 Socket & Carry Sling
- 'Snap action' button joints




## FA1816-B

8FT /16FT TELESCOPIC POLE WITH OL1 SOCKET & SLING

STANDARDS
ENA TS 41-21

**/ USE**

The two-part telescopic pole for use on Transmission line has an extended length of 4.83m (15' 10") and a closed length of 2.54m (8' 4"). Intermediate spring-loaded locking pegs provide partially extended lengths of 4m (13' 1") and 4.4m (14' 5"). The pole is supplied with an OL1 operating socket for the application of our Line End clamps with long taper style operating screws.

| Reference | Extended Length | Retracted Length | OL1 Operating Socket | Sling | Weight |
|---|---|---|---|---|---|
| FA1816-B | 16 ft/ 4.83m | 8 ft/ 2.54m | Yes | Yes | 3.40kg |




## FA1816-A-01

8FT /16FT TELESCOPIC POLE

STANDARDS
ENA TS 41-21

**/ USE**

The two-part telescopic pole for use on Transmission line has an extended length of 4.83m (15' 10") and a closed length of 2.54m (8' 4"). Intermediate spring-loaded locking pegs provide partially extended lengths of 4m (13' 1") and 4.4m (14' 5").

| Reference | Extended Length | Retracted Length | OL1 Operating Socket | Sling | Weight |
|---|---|---|---|---|---|
| FA1816-A-01 | 16 ft/ 4.83m | 8 ft/ 2.54m | No | No | 3.17kg |




## FA1817-A

6FT POLE WITH SLING

STANDARDS
ENA TS 41-21

**/ USE**

Transmission operating pole used to attach to the 8/16ft Telescopic Pole to extend overall length to 22ft / 6.7m.

Supplied with a carry sling.

| Reference | Total Length | OL1 Operating Socket | Sling | Weight |
|---|---|---|---|---|
| FA1817-A | 6ft / 1.8m | No | Yes | 1.68kg |




## FA1817-B

6FT OPERATING POLE WITHOUT SLING

STANDARDS
ENA TS 41-21

**/ USE**

Transmission operating pole used to attach to the 8/16ft Telescopic Pole to extend overall length to 22ft / 6.7m.

**Does not** include carry sling.

| Reference | Total Length | OL1 Operating Socket | Sling | Weight |
|---|---|---|---|---|
| FA1817-B | 6ft / 1.8m | No | No | 1.6kg |




## EFR-18109

2FT BRIDGING POLE

STANDARDS
ENA TS 41-21

- Supplied with Operating socket, Rain Shield and Swivel Eye Fitting.
- Also available with GS1 Socket (Ref. EFR-18109/1)

| Reference | Total Length | Weight |
|---|---|---|
| EFR-18109 | 2ft/ 0.6m | 0.98kg |



## EBR-14502

RAINSHIELD FOR OPERATING POLES

STANDARDS
ENA TS 41-21

**/ USE**

Fits on to any standard 4ft Pole section.
Protects Engineers against conductive paths caused by rainwater.

| Reference | EBR-14502 |
|---|---|

Distribution kits can be supplied with a wide range of operating sockets and heads. Operating sockets should be matched with both the Operating Pole style and operating screw type of the Line End clamp.

Below are Operating Heads & Sockets suitable for P&B Style & Bowthorpe Style Operating Poles listed above.

/ This range offers solutions that are :
- Lightweight
- Engineered precision to ensure smooth operation
- Anti corrosion partst
- Designed to fit to P&B Style & Bowthorpe style operating poles




## EFS-18314

P331 OPERATING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Torsional type spring loaded socket

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| EFS-18314 | Bowthorpe Style | Long or Short Taper | 0.31kg |




## EFS-16637

PB331 OPERATING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Torsional type spring loaded socket.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| EFS-16637 | P&B Style | Long or Short Taper | 0.31kg |




## FA3714-A

HOOK TYPE SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Spring tension hook type socket.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| FA3714-A | Bowthorpe Style | Ring type | 0.42kg |




## EFS-18319

P3313 OPERATING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for removal and fitting of LEL and S&E fuse isolators.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| EFS-18319 | Bowthorpe Style | LEL or S&E Fuse Isolators | 0.29kg |




## EFS-18304

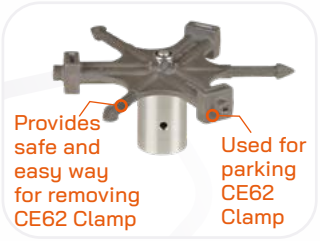
RT/TL OPERATING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Orange/white indicator to show retention and release of clamp.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| EFS-18304 | Bowthorpe Style | Ring type | 0.37kg |




## EFD-16731/2

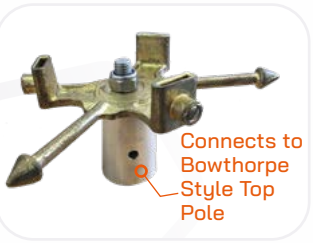
DH1A APPLICATOR HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Aluminium dispenser head for CE62 Line End clamps.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| EFD-16731/2 | Bowthorpe Style | CE62 Only | 0.51kg |




## EFT-20126

CATU DISPENSER HEAD WITH P&B ADAPTOR

STANDARDS
ENA TS 41-21

**/ USE**

Aluminium dispenser head for CE62 Line End clamps.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| EFT-20126 | Bowthorpe Style | CE62 Only | 0.51kg |




## FA1097-B

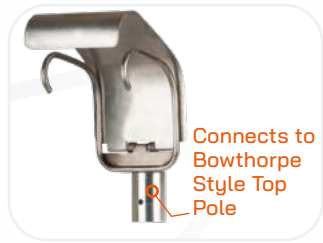
S9D : ESI-S1 OPERATING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Quick action sliding Socket supports clamps being applied in an upward direction. Ideally suited to use with the S9B clamp with a short taper op-screw.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| FA1097-B | P&B Style | Short taper | 0.30kg |




## EFS-18339

SPLASH PLATE HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for protection from arc splash when applying live (hot) line clamps.

| Reference | Pole Type | Weight |
|---|---|---|
| EFS-18339 | Bowthorpe Style | 0.63kg |




## EFS-12541

GS1 OPERATING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

To suit square end op-screws.

| Reference | Pole Type | Op-screw Type |
|---|---|---|
| EFS-12541 | P&B Style | Square End |




## FA1200-B

OL1 OPERATING SOCKET WITH CONCEALED JOINT

STANDARDS
ENA TS 41-21

**/ USE**

Spring loaded bayonet socket for clamp application in any direction.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| FA1200-B | P&B Style | Long taper | 0.23kg |




## EFS-11203

CEA : ESI-S2 OPERATING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Spring loaded bayonet socket for clamp application in any direction.

| Reference | Pole Type | Op-screw type | Weight |
|---|---|---|---|
| EFS-11203 | P&B Style | Short taper | 0.33kg |




## EFS-18326

LIVE LINE TAPPING SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for the fitting and removal of live (hot) line taps.

| Reference | Pole Type | Op-screw type |
|---|---|---|
| EFS-18326 | Bowthorpe Style | Live Line Taps |




## EFS-18362

DIN BAYONET SOCKET

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for fitting and removal of clamps with short taper style DIN op-screws.

| Reference | Type | Pole Type | Op-screw Type |
|---|---|---|---|
| EFS-18362 | Spring Loaded | Bowthorpe Style | DIN Bayonet |
| EFS-18369 | Non-sprung | | |




## EMS-18368

P3437 UNIVERSAL POLE HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for fuse cut-outs die-cast for strength, durability and accuracy.

| Reference | Pole Type | Fuse type | Weight |
|---|---|---|---|
| EMS-18368 | Bowthorpe Style | Universal Cut-Outs | 0.77kg |




## EFS-18330

SIDE SPINDLE ADAPTOR

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for Brush or J&P fuses.

| Reference | Pole Type | Fuse type | Weight |
|---|---|---|---|
| EFS-18330 | Bowthorpe Style | Brush or J&P Fuses | 0.15kg |




## EMS-18372

P3380 J&P FUSE CUT-OUT HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for fitting and removal of J&P fuse cut-outs, die-cast for strength, durability and accuracy.

| Reference | Pole Type | Fuse type | Weight |
|---|---|---|---|
| EMS-18372 | Bowthorpe Style | J&P Fuses | 0.34kg |




## EMS-18317

P3458 FUSE CUT-OUT HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for Brush fuse cut-out and isolating links, die-cast for strength, durability and accuracy.

| Reference | Pole Type | Fuse type | Weight |
|---|---|---|---|
| EMS-18317 | Bowthorpe Style | Brush | 0.30kg |




## EFS-18323

JBONDEN PMR RE-CLOSER HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Fully insulated Re-Closer Head.

| Reference | Pole Type | Re-closer |
|---|---|---|
| EFS-18323 | Bowthorpe Style | Re-closer |




## EFS-18334

JB1030 FUSE HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for fitting and removal of JB1030 LV Yorkshire fuses.

| Reference | Pole Type | Fuse Type | Weight |
|---|---|---|---|
| EFS-18334 | Bowthorpe Style | JB1030 LV Yorkshire Fuses | 0.34kg |




## EMS-18301

AEI HENLEY FUSE HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for the fitting and removal of Henley type fuses.

| Reference | Pole Type | Fuse Type |
|---|---|---|
| EMS-18301 | Bowthorpe Style | Henley |




## 4927

MACH OP-SOCKET ADAPTER

STANDARDS
ENA TS 41-21

**/ USE**

Allows the fitting of P&B Sockets or Heads to a Bowthorpe style top pole.

- PADS Number : 0054/003008

| Reference | Pole Type | Fits to | Weight |
|---|---|---|---|
| 4927 | Bowthorpe Style | P&B Sockets & Heads | 0.26kg |




## EFS-18315

UNIVERSAL HEAD ADAPTER

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for use with universal (rising sun) line fitting tools. Aluminium or glass filled nylon (insulated) versions available.

| Reference | Type | Pole Type | Fits to | Weight |
|---|---|---|---|---|
| EFS-18315 | Aluminium | Bowthorpe Style | Universal tools | 0.44kg |
| EFS-18315/1 | Nylon | | | |




## EFR-18360

UNIVERSAL ADAPTER CASTELLATED HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for use with universal (rising sun) line fitting tools.

| Reference | Type | Pole Type | Fits to |
|---|---|---|---|
| EFR-18360 | Aluminium | Bowthorpe Intermediate Only | Universal tools |
| EFS-18360/1 | Nylon | | |



## EFS-18321

TELE ROD UNI-ADAPTOR

STANDARDS
ENA TS 41-21

**/ USE**

Adaptor for use with a Tele Rod or Universal Head adaptor (EFS-18315) to allow fitting of Bowthorpe style sockets.

| Reference | Pole Type | Fits to |
|---|---|---|
| EFS-18321 | Bowthorpe Style | Universal tools |




## EFS-13376

SOCKET ADAPTOR ASSEMBLY

STANDARDS
ENA TS 41-21

**/ USE**

Allows the fitting of Bowthorpe style sockets & heads to P&B style top pole.

| Reference | Pole Type | Fits to |
|---|---|---|
| EFS-13376 | P&B Style | Bowthorpe Sockets & Heads |




## EMS-18380

VOLTAGE DETECTOR REPLACEMENT HEAD

STANDARDS
ENA TS 41-21

**/ USE**

Insulated adaptor to fit a Metrohm Tester to a Bowthorpe style top pole.

| Reference | Pole Type | Fits to |
|---|---|---|
| EMS-18380 | Bowthorpe Style | Voltage Tester |




## EFS-18352

HEX TYPE SOCKET/HEAD ASSY

STANDARDS
ENA TS 41-21

**/ USE**

For application of clamps with hexagonal (12mm A/F) operating screws employing spring-loaded locking device operated by push button upon the light polymer socket.

| Reference | Pole Type | Fits to | Weight |
|---|---|---|---|
| EFS-18352 | Bowthorpe Style | Hexagonal 12mm A/F | 0.20kg |

/ AREA OF ACTIVITY

/ This range offers solutions that are :
- Less vulnerable to theft than copper
- Half the weight of copper for equivalent Short Circuit Rating
- Available in any length on request
- Fully tested and approved to ENA 41-21 standard



## 50SQMM ARCTIC BLUE ALUFLEX LEAD

STANDARDS
ENA TS 41-21



## 50SQMM ARCTIC ORANGE ALUFLEX LEAD

STANDARDS
ENA TS 41-21

/ USE

Produced from multi-stranded, commercially pure aluminium available in either blue, green, clear, orange, or reflect coloured PVC sheath "arctic" grade to protect the lead from damage. Other insulation colours are available upon request.
Leads are carefully manufactured at our factory and tested rigorously throughout the manufacturing process to ensure quality and performance.

| Ref | Lead material | Insulation type | Short circuit rating | Continuous Current Rating | Weight per m |
|---|---|---|---|---|---|
| VARIOUS | Alu | Blue PVC | 8.9kA/ 1s | 150A | 0.19kg |

| Ref | Lead material | Insulation type | Short circuit rating | Continuous Current Rating | Weight per m |
|---|---|---|---|---|---|
| VARIOUS | Alu | Orange PVC | 8.9kA/ 1s | 150A | 0.19kg |




## 50SQMM REFLECT ALUFLEX LEAD

STANDARDS
ENA TS 41-21




## 120SQMM CLEAR ALUFLEX LEAD

STANDARDS
ENA TS 41-21

/ USE

Market-leading Aluflex cable with orange marking helix for identification with additional reflective silver helical strip to aid identification at night or when used in tunnels.
Strands remain visible between helical strips to aid inspection.

| Ref | Lead material | Insulation type | Short circuit rating | Continuous Current Rating | Weight per m |
|---|---|---|---|---|---|
| VARIOUS | Alu | Reflect Orange PVC | 8.9kA/ 1s | 150A | 0.19kg |

/ USE

Produced from multi-stranded, commercially pure aluminium with Clear coloured PVC sheath "arctic" grade to protect the lead from damage. Other insulation colours are available upon request.

| Ref | Lead material | Insulation type | Short circuit rating | Continuous Current Rating | Weight per m |
|---|---|---|---|---|---|
| VARIOUS | Alu | Clear PVC | 20kA/ 1s | 300A | 0.19kg |



## 120SQMM ARCTIC ORANGE ALUFLEX LEAD

STANDARDS
ENA TS 41-21



## 150SQMM ARCTIC ORANGE ALUFLEX LEAD

STANDARDS
ENA TS 41-21

/ USE

Produced from multi-stranded, commercially pure aluminium with Orange coloured PVC sheath "arctic" grade to protect the lead from damage. Other insulation colours are available upon request.

| Ref | Lead material | Insulation type | Short circuit rating | Continuous Current Rating | Weight per m |
|---|---|---|---|---|---|
| VARIOUS | Alu | Orange PVC | 20kA/ 1s | 300A | 0.19kg |

| Ref | Lead material | Insulation type | Short circuit rating | Continuous Current Rating | Weight per m |
|---|---|---|---|---|---|
| VARIOUS | Alu | Orange PVC | 25kA/ 1s & 17.5kA/ 2s | 350A | 0.60kg |

/ This range of Terminations are manufactured from specially milled and certified material and precision machined in our works, tested rigorously throughout the manufacturing process to ensure quality and performance. For use upon Field Equipment Earth. All of those alu terminations have a Ø11 diameter hole.

## PB50/ 70/ 120 TYPE ALU. TERMINATION

STANDARDS
ENA TS 41-21

/ AREA OF ACTIVITY




| Reference | Description | Material | Compatible cable | Strain relief type | Weight |
|---|---|---|---|---|---|
| EMP-07880/1 | PB50 Alu. Termination Ø11 Hole | Alu | 50sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.06kg |
| EMP-07880/2 | PB50 Alu. Termination Ø12 Hole | Alu | 50sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.06kg |
| EMP-07880/3 | PB50 Alu. Termination Ø13 Hole | Alu | 50sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.06kg |
| EMC-07887 | PB50S Termination Lug | Alu | 50sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.06kg |
| EMP-07883/1 | PB70 Alu. Termination Ø11 Hole | Alu | 70sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.06kg |
| EMP-07883/2 | PB70 Alu. Termination Ø12 Hole | Alu | 70sqmm Aluflex Leads | 70sqmm Strain Relief (EBT-16112) | 0.06kg |
| EMP-07883/3 | PB70 Alu. Termination Ø13.25 Hole | Alu | 70sqmm Aluflex Leads | 70sqmm Strain Relief (EBT-16112) | 0.06kg |
| EMP-07881/1 | PB120 Alu. Termination Ø11 Hole | Alu | 120sqmm Aluflex Leads | 120sqmm Strain Relief (6112-02) | 0.06kg |
| EMP-07881/2 | PB120 Alu. Termination Ø12 Hole | Alu | 120sqmm Aluflex Leads | 120sqmm Strain Relief (6112-02) | 0.06kg |
| EMP-07881/3 | PB120 Alu. Termination Ø13 Hole | Alu | 120sqmm Aluflex Leads | 120sqmm Strain Relief (6112-02) | 0.06kg |

## PB50/95/120/150T TYPE TERMINATIONS

STANDARDS
ENA TS 41-21

/ AREA OF ACTIVITY




| Reference | Description | Compatible cable | Strain relief type | Weight |
|---|---|---|---|---|
| EMP-07884/1 | PB50T Alu. Termination With Ø11-Dia Hole | 50sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.03kg |
| EMP-07892/1 | PB70T Alu. Termination Ø11 Hole | 70sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.03kg |
| EMP-07892 | PB70T Alu. Termination Ø13 Hole | 70sqmm Aluflex Leads | 150sqmm Tension Spring (EBP-14714) | 0.13kg |
| EMP-07889/1 | PB95T Alu. Termination With Ø11 Hole | 95sqmm Aluflex Leads | 150sqmm Tension Spring (EBP-14714) | 0.13kg |
| EMP-07889 | PB95T Alu. Termination With Ø13 Hole | 95sqmm Aluflex Leads | 150sqmm Tension Spring (EBP-14714) | 0.13kg |
| EMP-07889/2 | PB95T Alu. Termination With Ø13 Hole -Long Palm | 95sqmm Aluflex Leads | 150sqmm Tension Spring (EBP-14714) | 0.13kg |
| EMP-07885/1 | PB120T Alu. Termination with Ø11 Hole | 120sqmm Aluflex Leads | 120sqmm Support Springs (4906) | 0.13kg |
| EMP-07885 | PB120T Alu. Termination with Ø13 Hole | 120sqmm Aluflex Leads | 120sqmm Support Springs (4906) | 0.13kg |
| EMP-07882 | PB150T Alu. Termination : ESI-T1 | 150sqmm Aluflex Leads | 150sqmm Tension Spring (EBP-14714) | 0.13kg |
| EMP-07882/2 | SP150 Termination - Extra Long Palm | 150sqmm Aluflex Leads | 150sqmm Tension Spring (EBP-14714) | 0.13kg |

# FERRULE TYPE TERMINATIONS

STANDARDS
ENA TS 41-21

/ AREA OF ACTIVITY




| Reference | Description | Material | Compatible cable | Strain relief type | Weight |
|---|---|---|---|---|---|
| EMP-07886 | PB50F Ferrule Terminal | Alu | 50sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.03kg |
| EMP-07893 | PB70F Alu. Ferrule Termination | Alu | 70sqmm Aluflex Leads | 50sqmm Strain Relief (6112-01) | 0.03kg |
| EMP-07897 | PB95F Ferrule Termination | Alu | 95sqmm Aluflex Leads | 150sqmm Tension Spring (EBP-14714) | 0.13kg |
| EMP-07891 | PB120F Ferrule Termination | Alu | 120sqmm Aluflex Leads | 120sqmm Strain Relief (6112-02) | 0.06kg |



## 6112-01

50SQMM STRAIN RELIEF

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for 50sqmm Aluflex Cables.

| Reference | 4927 |
|---|---|



## EBT-16112

70SQMM STRAIN RELIEF

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for 70sqmm Aluflex Cables.

| Reference | EBT-16112 |
|---|---|



## 6112-02

120SQMM STRAIN RELIEF

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for 120sqmm Aluflex Cables.

| Reference | 6112-02 |
|---|---|



## EBL-16548

50SQMM TENSION SPRING

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for 50sqmm Aluflex Cables.

| Reference | EBL-16548 |
|---|---|



## 4906

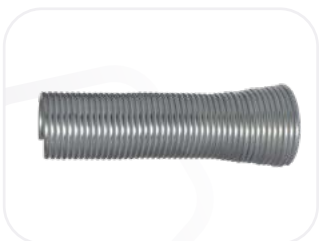
120SQMM TENSION SPRING

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for 120sqmm Aluflex Cables.

| Reference | 4906 |
|---|---|



## EBP-14714

150SQMM TENSION SPRING

STANDARDS
ENA TS 41-21

**/ USE**

Suitable for 150sqmm Aluflex Cables.

| Reference | EBP-14714 |
|---|---|

Below are range of Earth Rods & Nests suitable for Distribution Earthing.

/ This range offers solutions that are :
- Lasting resistance to corrosion
- High tensile strength
- Available in lengths 850mm, 1,000mm and 1,200mm
- Copper clad for low resistance



## MISC-00020

EARTH NEST KIT NO BAG

STANDARDS
ENA TS 41-21

### / USE

Earths Rods can be used individually or interconnected by 50sqmm Arctic Orange Leads to create a nest. Leads can be attached using S9A Earth End clamps or Split Connectors. Configurations can be fully customised depending on customer requirements.

| Ref | Lead material | Lead Length | Earth Rod Material | Earth Rod Dimension |
|---|---|---|---|---|
| MISC-00020 | Aluminium with PVC insulation | 1.5m | Low carbon steel core with 99.95% pure copper and thickness 0.25mm | 850mm long x 14.3mm O/D |




## EBD-20070

850MM STEEL COPPER CLAD SPIKED EARTH ROD

STANDARDS
ENA TS 41-21

> Available in standard lengths 850mm. Other Lengths available (1,000mm and 1,200mm)

### / USE

Used as part of Earth Nest Kit and driving into the soil for electrical grounding/ earthing operation providing a low-resistance path for electricity to safely dissipate into the ground, protecting against faults.

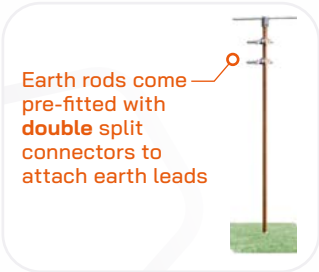
| Ref | Earth Rod Material | Earth Rod Dimension |
|---|---|---|
| EBD-20070 | Low carbon steel core with 99.95% pure copper and thickness 0.25mm | 850mm long x 14.3mm O/D |




## EFD-20137/1

1.5M SCREW TYPE EARTH ROD WITH SINGLE SPLIT CONNECTOR

STANDARDS
ENA TS 41-21




## EFD-20137/2

1.5M SCREW TYPE EARTH ROD WITH DOUBLE SPLIT CONNECTORS

STANDARDS
ENA TS 41-21

### / USE

A special Screw Type Earth Rod with strong cast bronze spiral end fitting for easy driving into the soil and provide low resistance Earth connection. The 1.5m Screw Type Earth Rod can be used as part of an Earth Nest Kit for electrical grounding/earthing operation providing a low-resistance path for electricity to safely dissipate into the ground, protecting against faults.

| Ref | Earth Rod Material | Earth Rod Dimension | Bottom Fitting |
|---|---|---|---|
| EFD-20137/1 | Low carbon steel core with 99.95% pure copper and thickness 0.25mm | 1.5m long x 17.2mm O/D | Bronze screw profile casting |

| Ref | Earth Rod Material | Earth Rod Dimension | Bottom Fitting |
|---|---|---|---|
| EFD-20137/2 | Low carbon steel core with 99.95% pure copper and thickness 0.25mm | 1.5m long x 17.2mm O/D | Bronze screw profile casting |




## EAD-20074

SPLIT CONNECTOR FOR EARTH ROD M12 X 90MM

STANDARDS
ENA TS 41-21

### / USE

Split type brass connector assembly for use with 14.3mm diameter copper clad earth rods.
Provides excellent low-resistance connection to Earth Leads connected to Earth Kits or to Multi-point Aluminium Connecting Plate.

| Ref | Material | Length | Rod Diameter |
|---|---|---|---|
| EAD-20074 | Brass | 42.7mm | 14.3mm |



Below are range of Cluster Bar & Terminal Plates suitable for Distribution Earthing.

/ This range offers solutions that are :

- Solid construction for many years' service
- Proven service record used by the ESI for over 40 years
- Used worldwide
- No plated components high-quality stainless-steel fasteners

Cluster bar assembly for use upon S9B clamp



## EFD-16748

DLE/CAC CLUSTER BAR ASSEMBLY

STANDARDS
ENA TS 41-21

> Suitable for an additional cross-arm clamp with centre cable fixing for up to 4 leads

### / USE

The cluster bar mounts on the S9B Line End clamp and allows parking of two additional S9B clamps (and a Cross Arm Clamp if needed), reducing individual clamp applications and limiting Operating Pole use.

| Ref | Material | Max Cable Connection | Weight |
|---|---|---|---|
| EFD-16748 | Aluminium | 4 | 1.43kg |

Cluster bar assembly for use upon S9B clamp



## A3214-A

THREE-WAY CLUSTER BAR

STANDARDS
ENA TS 41-21

> Suitable for supporting two additional S9B clamps two phase leads and the earth lead

### / USE

The cluster bar is an attachment bolted to the centre of three-conductor clamps and facilitates the parking of the other two-conductor clamps with interconnecting leads, whilst the assembly is fitted or removed from the distribution line. The Cluster Bar is designed to be attached to the S9B Line End clamp, which then can accommodate two further S9B Clamps. This reduces the need to apply clamps individually by lowering the Operating Pole several times.

| Ref | Material | Max Cable Connection | Weight |
|---|---|---|---|
| A3214-A | Aluminium | 4 | 1.38kg |

Multi-point aluminium plate allows for interconnecting three phase leads and one down lead



## A3478-B

TYPE A TERMINAL PLATE

STANDARDS
ENA TS 41-21

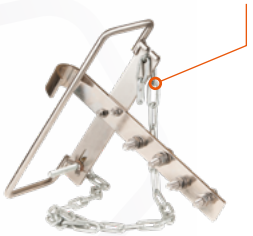
> The Type A Terminal Plate Assembly is available with or without a support hook

### / USE

As an alternative to the cluster bar, a terminal plate can be specified. These are smaller multi-point aluminium plate used for interconnecting phase and down leads.

| Ref | Type | Material | Max Cable Connection | Weight |
|---|---|---|---|---|
| A3478-B | Without (Pictured) | Aluminium | 4 | 0.99kg |
| A3478-A | With Hook | | | |

Available in two variations with chain or strap & carabine to aid with lifting



## EFD-16730

TYPE B CRUCIFIX TERMINAL PLATE WITH CHAIN

STANDARDS
ENA TS 41-21

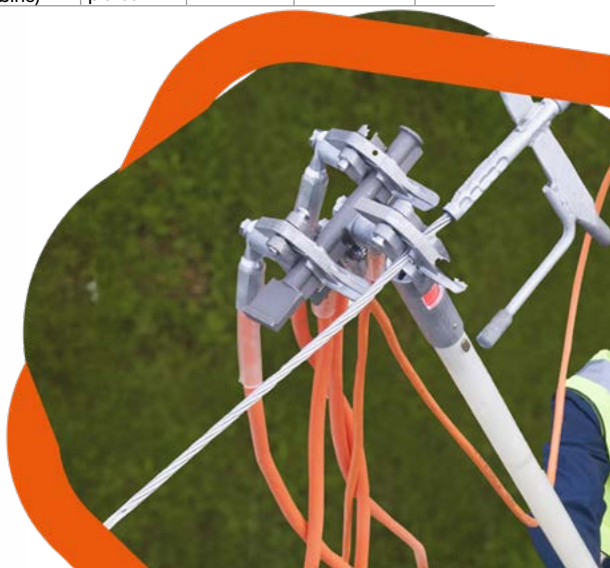
> Suitable for four lead attachment via M12 stainless steel fasteners

### / USE

The Type B Crucifix assembly is suitable for mounting to poles using chain or alternatively a ratchet strap. A parking bar is used for supporting, resting and raising the line end clamps before application.

| Ref | Type | Material | Chain material | Max Cable Connection | Weight |
|---|---|---|---|---|---|
| EFD-16730 | Crucifix with Chain | Mild steel plated copper bar plated | Galvanised Steel | 4 | 6.66kg |
| EFD 16730/1 | Crucifix with strap and Carabine) | | | | |





With Carabine hook and webbing strap to secure to structure



## EFD-20030

TYPE C TERMINAL PLATE

STANDARDS
ENA TS 41-21

### / USE

As an alternative to the cluster bar, a terminal plate can be specified. These are smaller multi-point aluminium plate used for interconnecting phase and down leads.

| Ref | Material | Max Cable Connection | Weight |
|---|---|---|---|
| EFD-20030 | Aluminium | 4 | 1.64kg |

Equiped with an Heavy-duty ratchet strap



## EFD-16737

TYPE D TERMINAL PLATE

STANDARDS
ENA TS 41-21

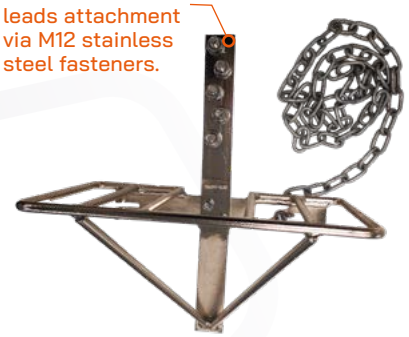
> Suitable for four lead attachment via M12 stainless steel fasteners

### / USE

Aluminium busbar with stainless steel M12 fasteners. Heavy-duty ratchet strap for securing to pole or structure. Similar to the Type A terminal plate except with a ratchet strap for secure pole mounting.

| Ref | Material | Chain material | Max Cable Connection | Weight |
|---|---|---|---|---|
| EFD-16737 | Aluminium | Galvanised Steel | 4 | 1.74kg |

Suitable for five leads attachment via M12 stainless steel fasteners.



## EFD-16795

CRUCIFIX PLATFORM (21 PATT)

STANDARDS
ENA TS 41-21



### / USE

Improved version to Type B Crucifix Terminal Plate suitable for mounting to poles using chain. A parking bar is used for supporting, resting and raising the line end clamp before application.

| Ref | Material | Chain Material | Max Cable Connection | Weight |
|---|---|---|---|---|
| EFD-16795 | Mild steel plated Copper bar plated | Galvanised Steel | 5 | 6.66kg |




## 6132

PVC BAG FOR SHORTING KIT

STANDARDS
ENA TS 41-21

### / USE

Carrying bag for shorting cluster with 210 flap with velcro fixing with black nylon webbing shoulder strap.

| Reference | Material | Dimension |
|---|---|---|
| 6132 | Green PVC Nylon Reinforced | 640 Long x 560 High x 147 Wide |




## EBB-18507

CARRY BAG FOR SHORTING CLUSTER KIT

STANDARDS
ENA TS 41-21

### / USE

Large heavy duty bag suitable for carrying large earthing kits.

| Reference | Material | Dimension |
|---|---|---|
| EBB-18507 | Green PVC Nylon Reinforced | 850 Long x 300 High x 147 Wide |

Below are Earthing Spigots suitable for Substation Earthing.

/ This range offers solutions that are :
- 1kN Mechanical Load
- 900 Amps Continuous Current Rating
- 40kA/3s Short Circuit Rating including apeak at 100kA
- RIV and Corona Discharge Test @ 400kV Rating
- 80kA/1s Short Circuit Rating including a peakat 200kA Rating



## A2617-A

BOLT ON CORONA SHIELDS FOR SPIGOTS

STANDARDS
ENA TS 41-21

> Available versions for 275kV and 400kV

### / USE

Aluminium Corona Shields Bolt for Spigots fully tested available models for 275kV and 400kV.

| Ref | Description | Voltage Rating |
|---|---|---|
| A2617-A | Stress Cone Bolted | 275kV |
| EFF-16701 | Spigot & Corona Assy | 400kV |



## TYPE A & B ALUMINIUM SPIGOT

STANDARDS
ENA TS 41-21

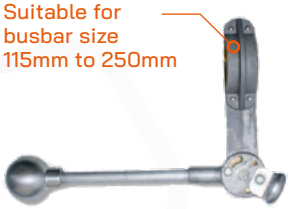
### / USE

Suitable for 275kV & 400kV insulator post assemblies. Available with varying lengths of Spigots to suit the required rating.
Optional Corona Shields available (bolt-on type) for non-shielded applications 275kV or 400kV.

| Reference | Description | Features |
|---|---|---|
| FA2277-A | Spigot Type A/178/290/A | 4-slots 18 wide on a 127mm PCD |
| FA2277-B | Spigot Type A/127/230/AL | |
| FA2369-A | Spigot Type B/178/290/AL | 4-slots 22 wide on a 178 PCD |
| FA2369-B | Spigot Type B/178/410/AL | |



Suitable for busbar size 115mm to 250mm



## EMF-20083

SUSPENDED BUSBAR SPIGOT

STANDARDS
ENA TS 41-21

> Lightweight
> Can be set up by one person
> Suitable for existing and new busbars

### / USE

This Spigot range is designed to be permanently fitted to new or existing busbars. It accommodates up to five PENTA P&B Clamps suitable for 38mm (CE22/A or CE22/A+B), reducing the need for heavier large-diameter clamps.
Suitable for busbar at any angle up to 60°.

* Note: A Suspended Busbar requires both a body and spigot assembly as shown on table below.

| Ref | Body Part Number | Spigot Part Number | Busbar Size (mm) |
|---|---|---|---|
| CE75/250 | EFF-16771 | EFF-16780 | 250 |
| CE75/220 | EFF-16772 | EFF-16780 | 220 |
| CE76/200 | EFF-16773 | EFF-16780 | 200 |
| CE76/190 | EFF-16774 | EFF-16780 | 190 |
| CE76/160 | EFF-16775 | EFF-16780 | 160 |
| CE77/140 | EFF-16776 | EFF-16780 | 140 |
| CE77/127 | EFF-16777 | EFF-16780 | 127 |
| CE77/120 | EFF-16778 | EFF-16780 | 120 |
| CE77/115 | EFF-16779 | EFF-16780 | 115 |

Suitable for busbar size 90mm



## TYPE C SPIGOT

STANDARDS
ENA TS 41-21

### / USE

Simple clamp on spigots in aluminium and bronze to provide a suitable Earthing Point on-site from a busbar or stranded conductor. Optional bolt-on Corona Shields available.
Different length 40mm diameter spigots are available to suit required rating.

| Reference | Description | Spigot Length | Spigot Diameter | Busbar size |
|---|---|---|---|---|
| FA2438-A | Spigot Type C/90/230/AL | To suit rating/ Number of Line End clamps | Ø 40mm | 90mm |
| FA2438-B | Spigot Type C/90/165/AL | | | |




## TYPE D SPIGOT

STANDARDS
ENA TS 41-21

### / USE

Type D aluminium Spigot to suit isolator or circuit breaker head.

| Reference | Description | Spigot Diameter | Busbar size | Spigot Length |
|---|---|---|---|---|
| FA2448-A | SPIGOT D/63.5/230/AL | Ø 40mm | 63.5mm | To suit rating/ number of Line End clamps |




## TYPE E SPIGOT

STANDARDS
ENA TS 41-21

### / USE

Simple clamp on spigot in bronze. Stainless steel fittings optional bolt-on Corona Shields available.

| Reference | Description | Spigot Diameter | Spigot Length | Busbar Size |
|---|---|---|---|---|
| FA2447-A | Spigot Type E/75/410/BZ | Ø 40mm | 410mm | 75mm |
| FA2447-B | Spigot Type E/75/230/BZ | Ø 40mm | 230mm | 75mm |




## TYPE M SPIGOT

STANDARDS
ENA TS 41-21

### / USE

Type M Spigot Simple clamp on spigot in bronze. Stainless steel fittings optional bolt-on Corona Shields available.

| Reference | Description | Spigot Diameter | Busbar size |
|---|---|---|---|
| FA3650 | Spigot Type M 38mm Busbar | Ø 40mm | 38mm |




## TYPE H SUSPENDED BUSBAR ALU. SPIGOT

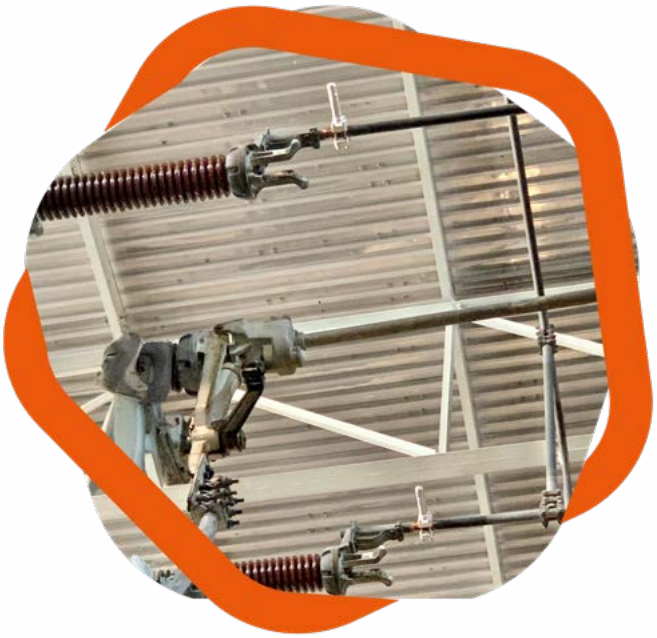
STANDARDS
ENA TS 41-21

### / USE

Underslung design Busbar to provide a standard busbar size to suit a smaller clamp such as the CE22/B or CE22/A+B Line End. Aluminium with stainless steel fittings.

| Reference | Description | Spigot Diameter | Busbar size |
|---|---|---|---|
| FA2528-A | Spigot Type H/140/381/AL | Ø 40mm | 140mm |





Below are DrESS Earth and Sparrow PLates suitable for Transmission Earthing.



## EFP-16711

CE61 DEAS BAR

STANDARDS
ENA TS 41-21

### / USE

Insulated Earthing bar for use in the dead-end arcing horn bolt hole when lowering off tension set insulators. Suitable for use with CE69 Line End, CE18/A Bridging Earth, CE13/A Line End, PB50 terminated leads and CE52 legacy Line End clamps.

| Ref | Short Circuit Rating | Continuous Current Rating |
|---|---|---|
| EFP-16711 | 9.1kA/ 1s | 450A |




## EFP-16783

DRESS TEE CONNECTOR ASSEMBLY

STANDARDS
ENA TS 41-21

### / USE

To join Sparrow Plate connecting bonds.

| Ref | Short Circuit Rating | Continuous Current Rating |
|---|---|---|
| EFP-16783 | 36kA/ 1s | 600A |




## EFP-17528

CE84 DrESS TEE CONNECTOR FOR BONDS WITH PB120F FERRULES

STANDARDS
ENA TS 41-21

### / USE

To join sparrow plate connecting bonds.

European Design Registration Number: 001404578-0003 and 001404578-0004

| Ref | Short Circuit Rating | Continuous Current Rating |
|---|---|---|
| EFP-17528 | 36kA/ 1s | 600A |




## EFP-16785

CE60 SPARROW PLATE MK1 (PRE-2014)

STANDARDS
ENA TS 41-21

### / USE

Fits up to six portable Line Earth with PB50F Ferrule terminations and up to six further equipment earth. Provision for up to four interconnecting leads (120sqmm) with PB120 terminations.

| Ref | Short Circuit Rating | Continuous Current Rating |
|---|---|---|
| EFP-16785 | 36kA/ 1s | 600A |




## EFP-16710

CE60 SPARROW PLATE MK2 (POST-2014)

STANDARDS
ENA TS 41-21

> Spares: CE60 Sparrow Plate 'back-to-back' fittings kit (Ref: EAP-20117)

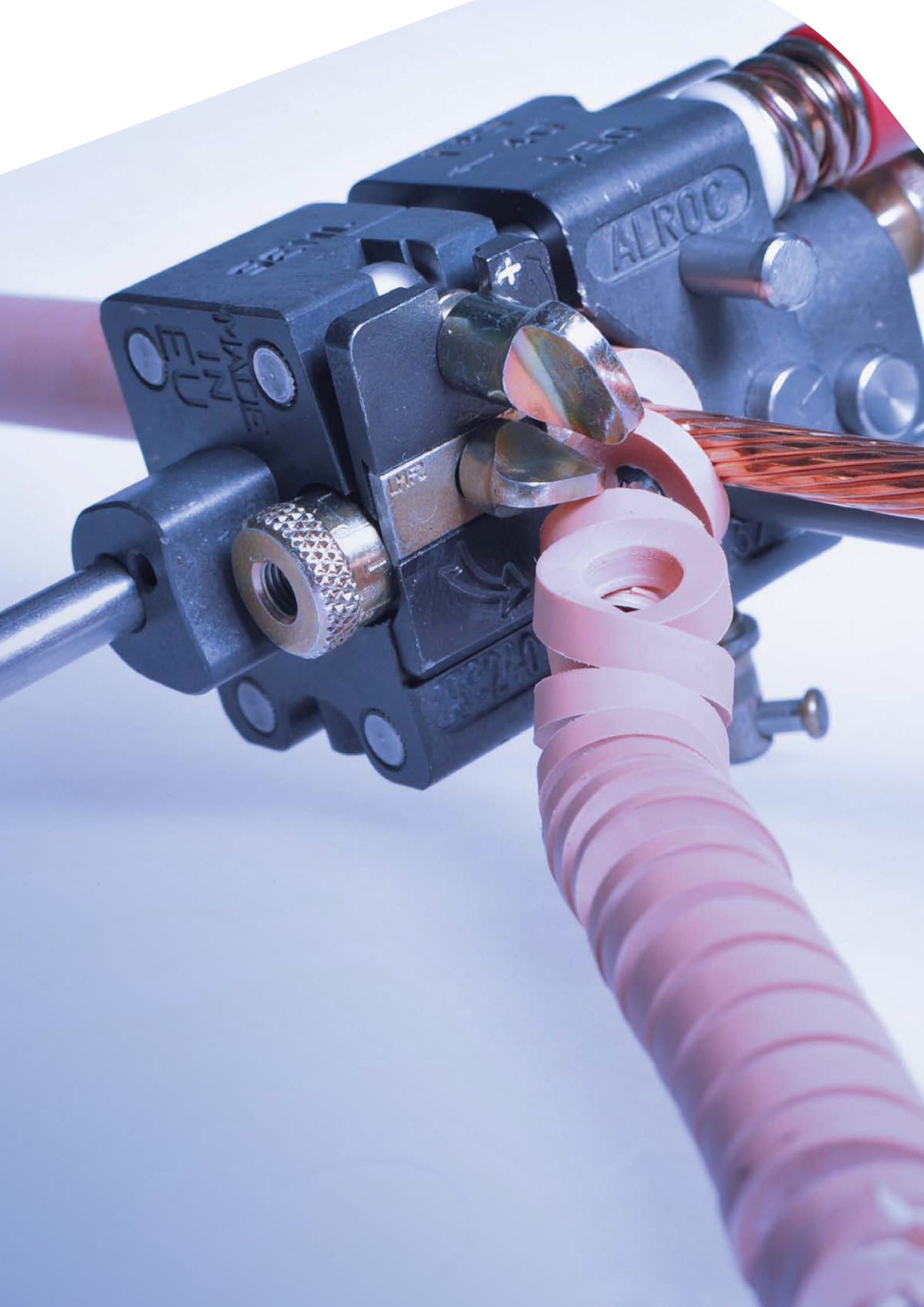
### / USE

Fits up to six portable Line Earths and up to six further equipment earth with PB50F terminations. Provision for up to four interconnecting leads (120 sq.mm)
with PB120F terminations.

European Registered Design Number: 001404578-0001 & 001404578-0002

| Ref | Short Circuit Rating | Continuous Current Rating |
|---|---|---|
| EFP-16710 | 36kA/ 1s | 600A |




ALROC



# CABLE PREPARATION TOOLS


/ LV outer sheath 398

/ LV outer sheath and lead sheath 399

/ LV and MV: PILC cable/insulated overhead lines cables 406

/ MV outer sheath 407

/ MV bonded semiconductor and screen 421

/ Peelable semiconductor 423

/ Primary insulation 426

/ Multifonction tools 429

/ Kits 431

/ Insulated overhead lines 435

/ Miscellanous 436

PREMIUM




# K7/GBT NEW

SHEATH ABRADING CASSETTE TO BE MOUNTED ON ROTO-TMG

STANDARDS

COMPATIBLE WITH BT NFC 33-210

| Reference | Max diameter | Min diameter | Length | Weight | Width | Height |
|---|---|---|---|---|---|---|
| K7/GBT | 55 mm | 20 mm | 82 mm | 200 g | 50 mm | 45 mm |

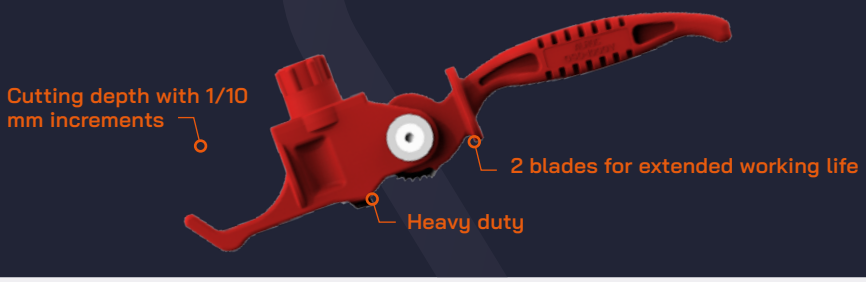
ESSENTIAL

# OSO-1000V NEW

UNIVERSAL OUTER SHEATH STRIPPING TOOL/HYBRID 1000V ENABLES LONGITUDINAL AND RING CUTS ON THREE-CORE AND UNICORE CABLES

STANDARDS

NF EN 60900




| Reference | Max diameter | Min diameter | Cut deepness | Weight | Packaging |
|---|---|---|---|---|---|
| OSO-1000V | 200 mm | 25 mm | 5 mm | 250 g | Carton box |

PREMIUM




# PG3EC/2020

1000V HYBRID PLIERS FOR NETWORK CABLES CC 2.0LC 2.0

STANDARDS

IEC 60900/EN 60900/COMPATIBLE WITH BT NFC 33-210 TYPE HN33S33

## / TECHNICAL SPECIFICATIONS

PG3EC/2020 for cables from Ø 26 to 52 mm
(3 x 50² + 1 x 50² to 3 x 240 + 1 x 95²).
Circular and longitudinal cutting depth: 2 mm.

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| PG3EC/2020 | 265 mm | 90 mm | 73 mm | 440 g |

Other cutting depths available on request.

## / SPARE PARTS

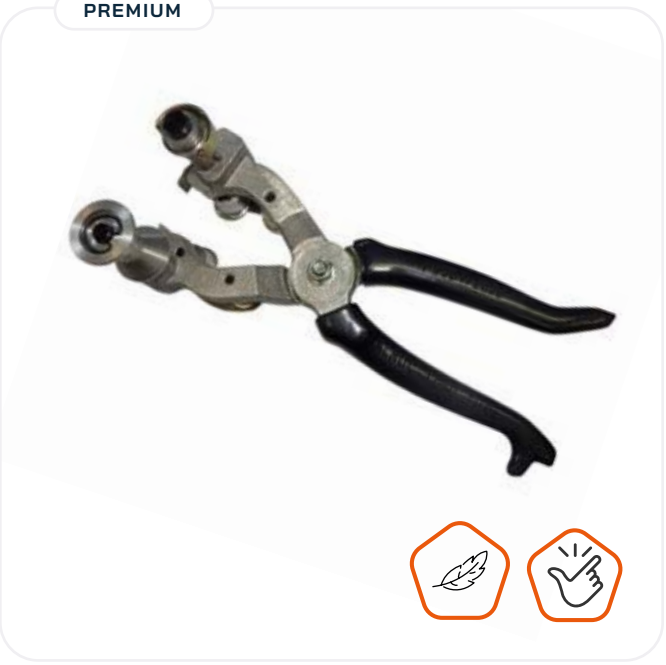


**/ MTC3E/20**
**Circular cutting blade**



**/ MTL3E/20**
**Longitudinal cutting blade**

PREMIUM



# PG3BT/2020

## ALUMINIUM PLIER FOR LV CABLE

### / TECHNICAL SPECIFICATIONS

PG3EC/2020 for cables from Ø 26 to 52 mm
(3 x 50² + 1 x 50² a 3 x 240 + 1 x 95²).
Circular and longitudinal penetration: 2 mm.

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| PG3BT/2020 | 265 mm | 95 mm | 80 mm | 600 g |

Other cutting depths available on request.

### / SPARE PARTS

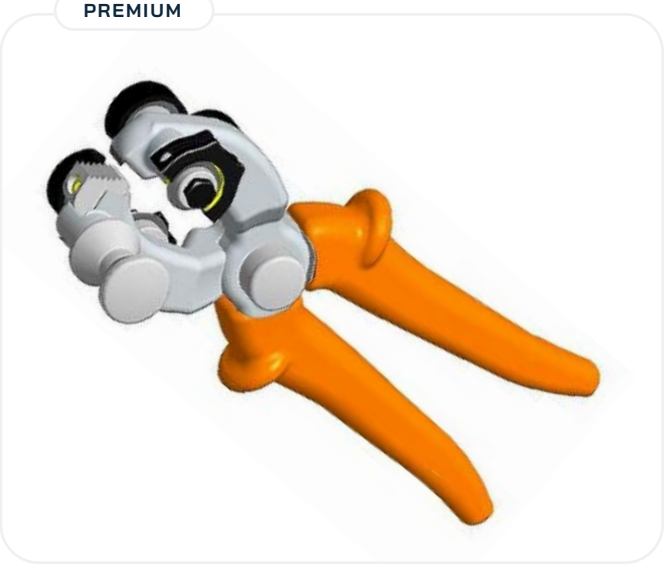


**/ MTC3/20**
**Circular cutting blade**



**/ MTL3/20**
**Longitudinal cutting blade**

PREMIUM



# PG3EW/2828

## INSULATED PLIERS FOR LV CABLE

STANDARDS
IEC 60900/EN 60900

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| PG3EW/2828 | 265 mm | 97 mm | 73 mm | 700 mm |

Other cutting depths available on request.

### / SPARE PARTS



**/ MTC3E/28**
**Circular cutting blade**



**/ MTL3E/28**
**Longitudinal cutting blade**

PREMIUM



# PEF

## CABLE'S SCREEN CUTTING PLIERS

**/ USE**

Ensures a clean-cut flush with the sheath when necessary.

| Reference | Cutting capacity | Lenght | Width | Height | Weight |
|---|---|---|---|---|---|
| PEF | Steal < 5 mm | 225 mm | 95 mm | 35 mm | 290 g |

VALUE



# SBI

## 1000V INSULATING STRIP SAW

STANDARDS
EN 60900

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| SBI | 350 mm | 53 mm | 53 mm | 330 g |

## DID YOU KNOW?

All Insulated, Insulating, Hybrid tools for low voltageapplications must comply with EN 60900.

This European standard ensures that every tool provides electrical insulation up to 1000 V AC (1500 V DC), with individual dielectric testing performed on each piece during manufacturing.

- **Always check that your tools display the 1000 V symbol and the CE marking — clear proof that they meet the required safety and performance standards.**

PREMIUM



Special blade design to creep the lead



AGPB4-1000 Insulated pliers

# AGPB3-1000V AGPB4-1000V

## 1000V HYBRID PLIERS FOR LEAD SHEATH

STANDARDS

IEC 60900/EN 60900

### / KEY FEATURES

**Precision Cutting:** AGPB3-1000V and AGPB4-1000V are design to remove the lead sheath by creeping the lead circularly and longitudinally

**Ensures clean** lead sheath removal without damaging the underlying insulation.

| Reference | Diameter of the cables | Lenght | Width | Height | Weight |
|---|---|---|---|---|---|
| AGPB3-1000V | Ø26 to 52mm | 265 mm | 100 mm | 75 mm | 470 g |
| AGPB4-1000V | Ø47 to 75mm | 310 mm | | 110 mm | 1000 g |

PREMIUM

# PINTEL4EC/2020 NEW

## 1000V HYBRID PLIERS FOR SHEATH REMOVAL

STANDARDS

NF EN 60900



| Reference | Lenght | Width | Height | Weight | Min diameter | Max diameter |
|---|---|---|---|---|---|---|
| PINTEL4 EC/2020 | 265 mm | 97 mm | 73 mm | 490 g | 10 mm | 30 mm |

### / SPARE PARTS



**/ MTP4E/20**
Circular cutting blade



**/ MTLP4E/20**
Longitudinal cutting blade

ESSENTIAL




# PINTEL4BT/1216-1000V

## 1000V INSULATED PLIERS FOR LV AUXILIARY CABLE CC 1.2 LC 1.6

### / TECHNICAL SPECIFICATIONS

Penetration in circular cut: 1,2 mm.
Penetration in longitudinal cut: 1.2 - 1,6 - 1.8 mm.
**Cable compatibility:**
25 to 35 mm² — EDF HM-27/03/139
16 to 50 mm² — NFC 33-210
25 to 150 mm² — NFC 33-209
25 to 35 mm² — NFC 32-321 (U1000)

| Reference | Cable diameter | Lenght | Width | Height | Weight |
|---|---|---|---|---|---|
| PINTEL4BT/1216-1000V | Ø10 - 30mm | 260 mm | 90 mm | 80 mm | 620 g |

### / SPARE PARTS



**/ MTCP4/12**
Circular cutting blade



**/ MTLP4/16**
Longitudinal cutting blade

ESSENTIAL




# PINTEL4BT/1216R-1000V

## 1000V INSULATED PLIERS FOR LV AUXILIARY CABLE WITH ADJUSTABLE LONGITUDINAL CUTTING DEPTH CC 1.2 CL 1.2, 1.6, 1.8

### / TECHNICAL SPECIFICATIONS

**Cutting depth:**
Circular cut: 1.2 mm
Longitudinal cut: 1.2 - 1.6 - 1.8

| Reference | Cable diameter | Lenght | Width | Height | Weight |
|---|---|---|---|---|---|
| PINTEL4BT/1216-R-1000V | Ø10 - 30mm | 260 mm | 90 mm | 80 mm | 660 g |

### / SPARE PARTS



**/ MVCP4/12**
Circular cutting blade

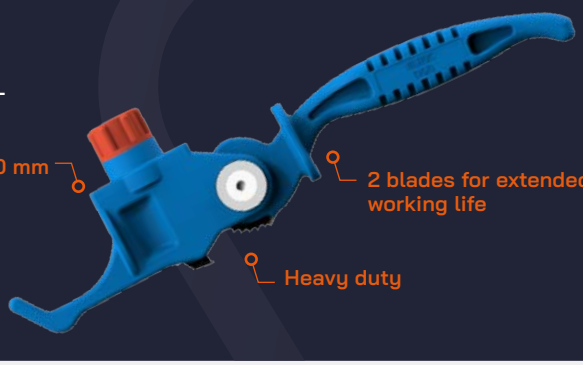


**/ TRL/12-16-18**
Longitudinal cutting head

ESSENTIAL

# OSO NEW

## UNIVERSAL OUTER SHEATH STRIPING TOOL




| Reference | Min diameter | Max diameter | Max cutting depth | Weight | Packaging |
|---|---|---|---|---|---|
| OSO | 25 mm | 200 mm | 5 mm | 250 g | Carboard box |



# CPV-TST-BT

## LOW VOLTAGE LIVE WORKING CASE

STANDARDS
EN 60900

### / TECHNICAL SPECIFICATIONS

CPV-TST-BT case contains the following tools:
- PINTEL4BT/1216-R-1000V: 1000V insulated pliers for LV auxiliary cable with adjustable longitudinal cutting depth
- PG3EC/2020: 1000V Hybrid pliers for network cables
- MS45 195: 1000V insulated cable cutter
- MS46 S: 1000V insulated ratchet cable cutter (end cutting)
- 5544E: 1000V insulating groove spreader
- MS2E: 1000V insulated scissors
- TL05: insulating lever
- D60: folding meter stick 10 parts
- SFB: White pencil

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| CPV-TST-BT | 505 mm | 360 mm | 120 mm | 6,7 kg |

VALUE

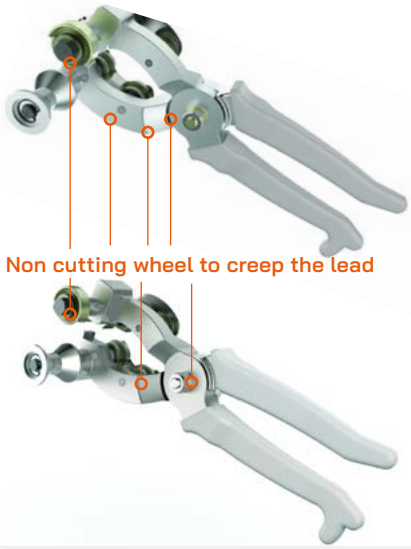


# SBA

## ALUMINIUM STRIP SAW

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| SBA | 340 mm | 50 mm | 50 mm | 240 g |

PREMIUM




# AGPB3
# AGPB4

## LV-MV PLIERS FOR LEAD SHEATH CABLES

### / THECHNICAL SPECIFICATIONS

AGPB3 for cables with Ø26 to 52 mm.
AGPB4 for cables with Ø47 to 75 mm.

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| AGPB3 | 270 mm | 92 mm | 77 mm | 610 g |
| AGPB4 | 300 mm | 105 mm | 105 mm | 860 g |

### / SPARE PARTS



**/ MTC-AGPB3**
**Circular creeping blade**



**/ MTL-AGPB3**
**Longitudinal creeping blade**

ESSENTIAL



# EVP

LEAD SHEATH SPREADER

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| EVP | 190 mm | 16 mm | 40 mm | 200 g |

PREMIUM




# PINTEL4BT/1216

PLIERS FOR LV AUXILIARY CABLE CC 1.2 LC 1.6

STANDARDS

COMPATIBLE WITH EDF-HM-27/03/139, NFC 33-210, NFC 33-209, NFC33-221 (U1000), NFC33-400

## / TECHNICAL SPECIFICATIONS

**Cutting depth:**
PINTEL4BT/1216 for cables with Ø 9 mm to 30 mm
Penetration in circular cut: 1,2 mm.
Penetration in longitudinal: 1,6 mm.

**Cable compatibility:**
25 to 35 mm² for cables EDF HM-27/03/139.
16 to 50 mm² for cables NFC 33-210.
25 to 150 mm² for cables NFC33-209.
25 to 35 mm² for cables NFC32-321 (U1000).

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| PINTEL4BT/1216 | 260 mm | 90 mm | 68 mm | 550 g |

## / SPARE PARTS



**/ MTCP4/12**
**Circular cutting blade**



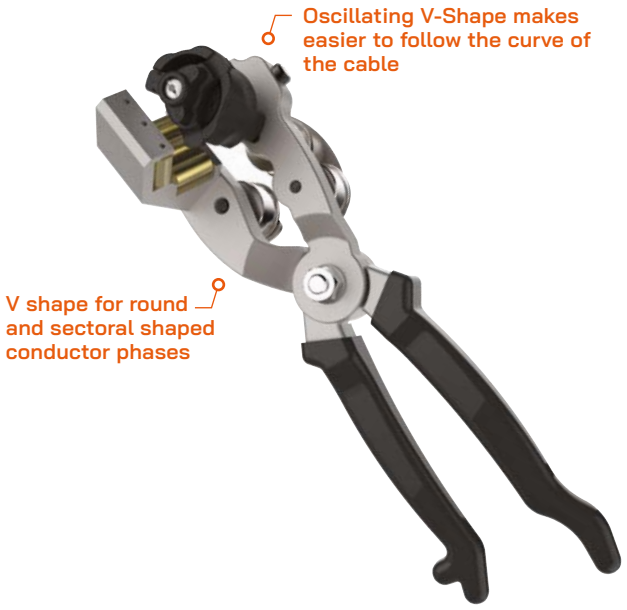
**/ MTLP4/16**
**Longitudinal cutting blade**

## DID YOU KNOW?

An incorrect cutting depth setting can compromise the safety of the installation. If the cut is too shallow, the sheath won't be properly removed. Too deep, and the conductor may be nicked — creating a potential hot spot.

**That's why PINTEL pliers with multi-depth adjustment are recommended for LV network cables.**

PREMIUM




# PINTEL4BT/1216-R

PLIERS FOR LV AUXILIARY CABLE WITH ADJUSTABLE LONGITUDINAL CUTTING DEPTH CC 1.2 CL 1.2, 1.6, 1.8

STANDARDS

COMPATIBLE WITH EDF-HM-27/03/139, NFC 33-210, NFC 33-209, NFC33-221 (U1000), NFC33-400

## / TECHNICAL SPECIFICATIONS

**Cutting penetration:**
Penetration in circular cut: 1,2 mm.
Penetration in longitudinal cut: 1,2, 1,6 -1,8 mm.

**Cable compatibility:**
PINTEL4BT/1216-R for cable with Ø 10 mm to 30 mm
25 to 35 mm² for cables EDF HM-27/03/139.
16 to 50 mm² for cables NFC 33-210.
25 to 150 mm² for cables NFC33-209.
25 to 35 mm² for cables NFC32-321 (U1000).

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| PINTEL4BT/1216-R | 260 mm | 90 mm | 80 mm | 580 g |

## / SPARE PARTS



**/ MTCP4/12**
Circular cutting blade



**/ TRL/12-16-18**
Longitudinal cutting head



# CPI-BT/HTA3

## FULL CASE FOR LV/MV IMPREGNATED PAPER INSULATION CABLE

### / TECHNICAL SPECIFICATIONS

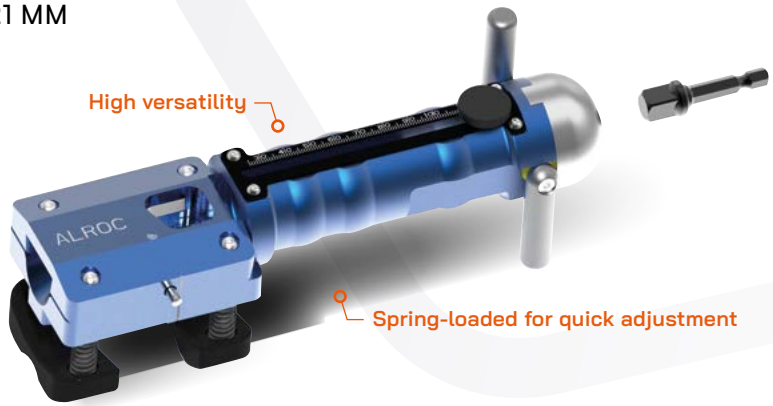
CPI-BT/HTA3 case contains the following tools :
- AGPB4: pliers for lead sheath cable Ø47 to 75 mm
- SBA: aluminium strip saw
- LSBA: spare blade for SBA
- PINTE4PI/465: pliers to remove the primary insulation of LV/MV PILC cable
- AGPB3: pliers for lead sheath cable Ø26 to 52 mm
- EVP: lead sheath spreader
- P115: banding cutting tool for steel strap
- C170: scissors
- EVG: plastic sheath spreader
- TP75: insulating gouge
- PILC accessories kit: wooden mallet, steel wire brush, wooden folding ruler, string, pencil

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| CPI-BT/HTA3 | 575 mm | 470 mm | 145 mm | 6,6 kg |

PREMIUM

# J1R1 NEW

## ABC CABLE STRIPPING TOOL Ø6-21 MM

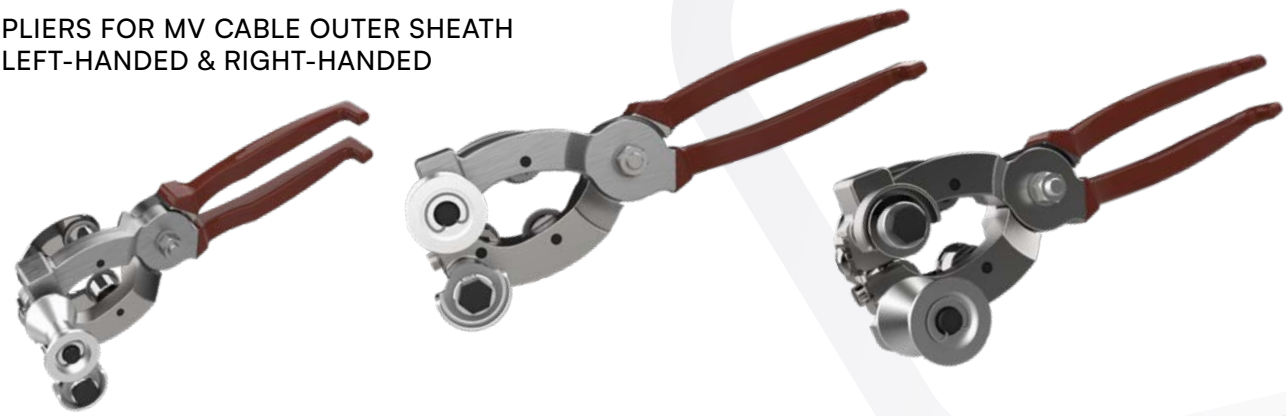



| Reference | Diameter | Depth of cut | Stripping Lenght | Lenght | Width | Height | Weight |
|---|---|---|---|---|---|---|---|
| J1R1 | 6-21 mm | 0.8 to 2.5 mm | 25 to 100 mm | 224 mm | 65 mm | 82 mm | 800 g |

ESSENTIAL

# PG3NHTA/2020 NEW

PLIERS FOR MV CABLE OUTER SHEATH
LEFT-HANDED & RIGHT-HANDED



## / KEY FEATURES

**Configurable Design:** Adjustable setup for right- or left-handed use, ensuring optimal ergonomics during sheath removal.

**Custom Cutting Depth:** Custom-built configuration (PG3NHTA/yyzz)
Cutting depth from 0.5 mm to 5 mm, tailored on request for circular (yy) and longitudinal (zz) cuts.

| Reference | Max diameter | Min diameter | Cutting depth | Packging | Weight |
|---|---|---|---|---|---|
| PG3NHTA/2020 | 52 mm | 26 mm | 2 mm | Cardboard box | 600 g |

PREMIUM



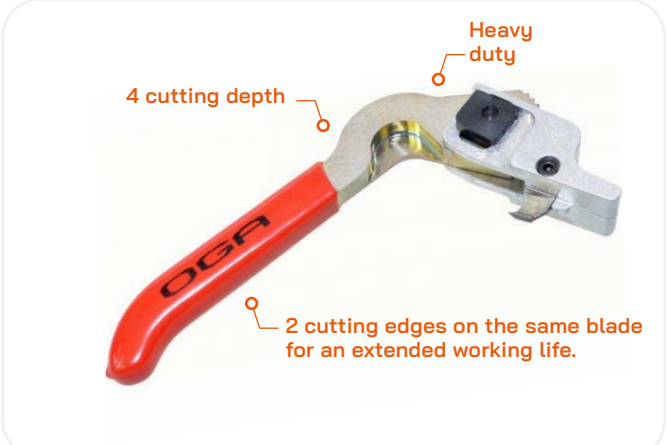

# PG3NHTA/2833

PLIERS FOR MV CABLE OUTER SHEATH LEFT-HANDED & RIGHT-HANDED

## / KEY FEATURES

The PG3HTA/2020 performs precise circular and longitudinal cuts on medium voltage cables, with adjustable left- or right-handed configuration.

| Reference | Min Diameter | Max Diameter | Circular cutting depth | Longitudinal cutting depth | Packing | Weight |
|---|---|---|---|---|---|---|
| PG3NHTA/2020 | 26 mm | 52 mm | 2 mm | 2 mm | Cardboard box | 600 g |
| PG3NHTA/2828 | | | 2,8 mm | 2,8 mm | | |
| PG3NHTA/2833 | | | 2,8 mm | 3,3 mm | | |
| PG3NHTA/3033 | | | 3 mm | 3,3 mm | | |




# OGA

OUTER SHEATH STRIPPING TOOL

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| OGA | 180 mm | 26 mm | 62 mm | 0,27 kg |

## / SPARE PARTS



**/ LKMS**
**Spare blade**

# UNDERGROUND MEDIUM VOLTAGE UNIPOLAR CABLE

COPPER WIRE SCREEN/BONDED
SEMICONDUCTOR/XLPE INSULATION



## 1. Outer Sheath removal tool

### / PG4 SERIE



Ø Min 47 mm/Ø Max 75 mm

### / PG3 SERIE



Ø Min 26 mm/Ø Max 52 mm

### / PRG4 SERIE



Ø Min 47 mm/Ø Max 75 mm

### / PRG3 SERIE



Ø Min 26 mm/Ø Max 52 mm

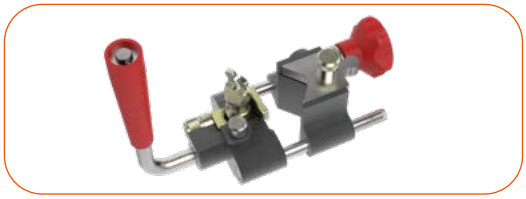
### / MF2 SERIE 45 or 60



**45.** Ø Min 16 mm/Ø Max 45 mm
**60.** Ø Min 16 mm/Ø Max 58 mm

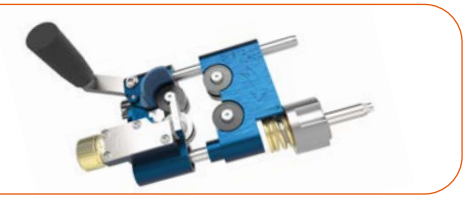
# 2. Bonded Semiconductor removal tool

### / BSC/25-40



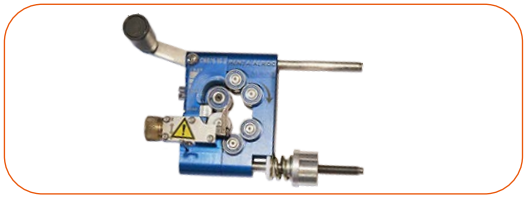
Ø Min 14 mm/Ø Max 44 mm

### / CWB/12-44



Ø Min 12 mm/Ø Max 44 mm

### / CWB/18-60-S

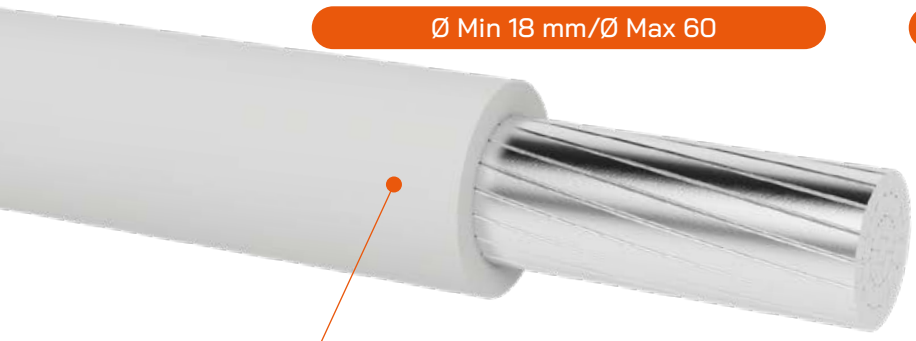


Ø Min 18 mm/Ø Max 60

### / GRI

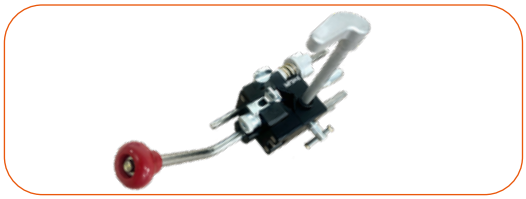


Ø Min 15 mm/Ø Max 240 mm



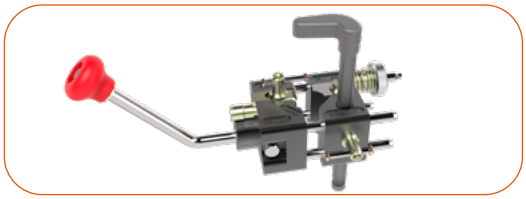
# 3. Insulation removal tool

### / MF2 SERIE 45 or 60



**45.** Ø Min 16 mm/Ø Max 45 mm
**60.** Ø Min 16 mm/Ø Max 58 mm

### / BRMRD1E



Ø Min 14 mm/Ø Max 40 mm

### / CWI SERIE NEW



Ø Min 13 mm/Ø Max 38 mm

# MEDIUM VOLTAGE UNDERGROUND MULTICORE CABLE/WITH STEEL TAPE ARMORING

COPPER FOIL SCREEN/PEELABLE SEMICONDUCTOR/XLPE INSULATION



## 1. Outer Sheath removal tool

### / PG5 SERIE



Ø Min 69 mm/Ø Max 95 mm

### / PRG4 SERIE



Ø Min 47 mm/Ø Max 75 mm

### / PG4 SERIE



Ø Min 47 mm/Ø Max 75 mm

### / OGA



Ø Min 20 mm/Ø Max 200 mm

## 2. Peelable Semiconductor removal too

### / ORACL

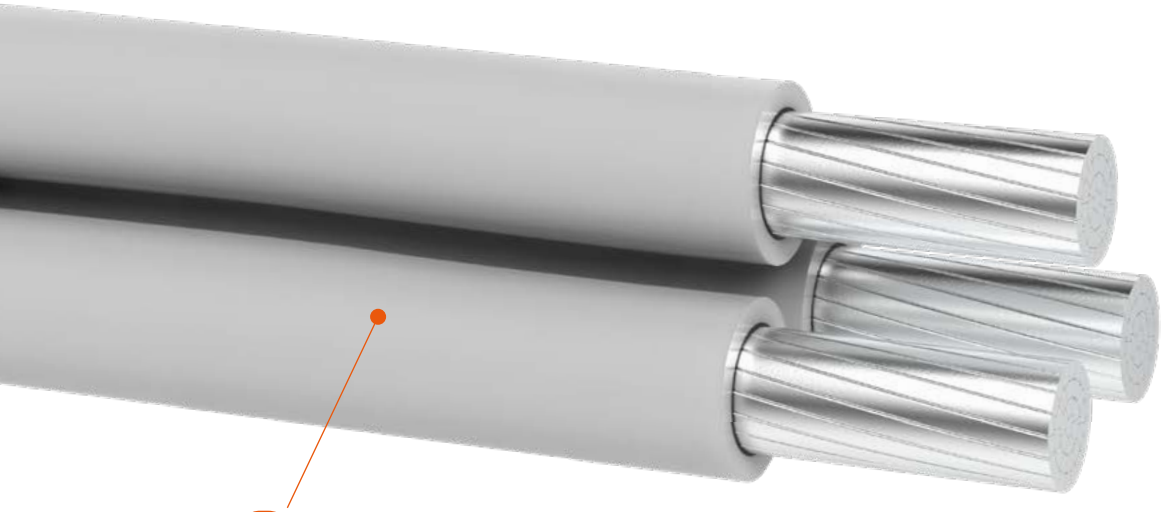


Ø Min 10 mm/Ø Max 100 mm

### / CWE/14-50 MVS

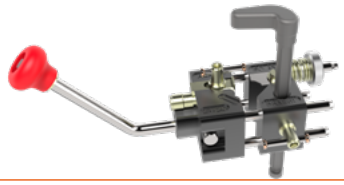


Ø Min 14 mm/Ø Max 50 mm



## 3. Insulation removal tool

### / BRMRD1E



Ø Min 14 mm/Ø Max 40 mm

### / MF2 SERIE 45 and 60



**45.** Ø Min 16 mm/Ø Max 45 mm
**60.** Ø Min 16 mm/Ø Max 58 mm

### / CWI SERIE NEW



Ø Min 13 mm/Ø Max 38 mm

# UNDERGROUND MEDIUM VOLTAGE UNIPOLAR CABLE

COPER WIRE SCREEN/PEELABLE SEMICONDUCTOR/EPR INSULATION



## 1. Outer Sheath removal tool

### / PG4 SERIE



Ø Min 47 mm/Ø Max 75 mm

### / PG3 SERIE



Ø Min 26 mm/Ø Max 52 mm

### / PRG4 SERIE



Ø Min 47 mm/Ø Max 75 mm

### / PRG3 SERIE



Ø Min 26 mm/Ø Max 52 mm

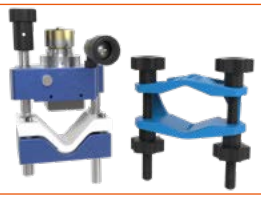
### / MF2 SERIE 45 or 60



**45.** Ø Min 16 mm/Ø Max 45 mm
**60.** Ø Min 16 mm/Ø Max 58 mm

# 2. Peelable Semiconductor removal tool

### / CWE/14-50 MVS



Ø Min 14 mm/Ø Max 50 mm

### / ORACL

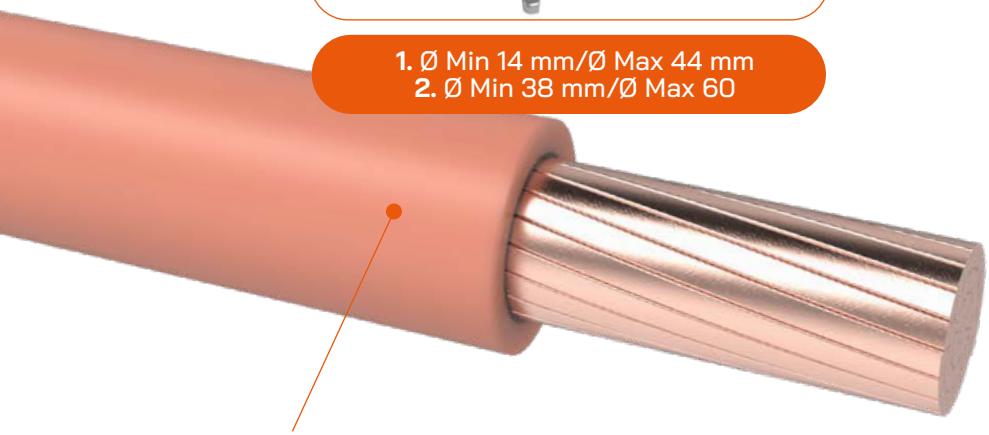


Ø Min 10 mm/Ø Max 100 mm

### / LHMR SERIE 1 and 2

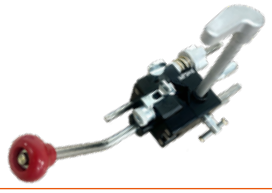


**1.** Ø Min 14 mm/Ø Max 44 mm
**2.** Ø Min 38 mm/Ø Max 60



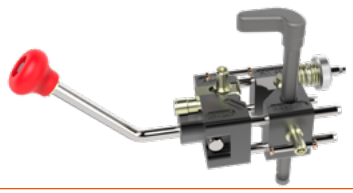
# 3. Insulation removal tool

### / MF2 SERIE 45 or 60



**45.** Ø Min 16 mm/Ø Max 45 mm
**60.** Ø Min 16 mm/Ø Max 58 mm

### / BRMRD1E



Ø Min 14 mm/Ø Max 40 mm

### / CWI SERIE NEW



Ø Min 13 mm/Ø Max 38 mm

# UNDERGROUND MEDIUM VOLTAGE UNIPOLAR CABLE

ALUMINIUM SCREEN/PEELABLE SEMICONDUCTOR/XLPE INSULATION



## 1. Outer Sheath removal tool

### / PG4 SERIE



Ø Min 47 mm/Ø Max 75 mm

### / PG3 SERIE



Ø Min 26 mm/Ø Max 52 mm

### / PRG4 SERIE



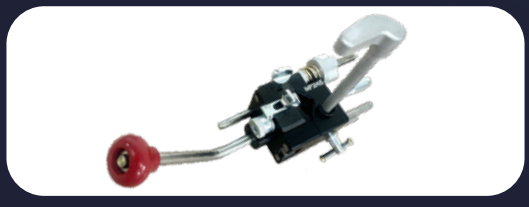
Ø Min 47 mm/Ø Max 75 mm

### / PRG3 SERIE



Ø Min 26 mm/Ø Max 52 mm

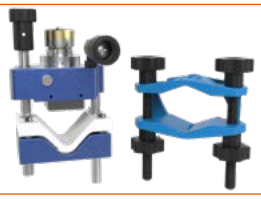
### / MF2 SERIE 45 or 60



**45.** Ø Min 16 mm/Ø Max 45 mm
**60.** Ø Min 16 mm/Ø Max 58 mm

# 2. Peelable Semiconductor removal tool

### / CWE/14-50 RANGE



Ø Min 14 mm/Ø Max 50 mm

### / ORACL



Ø Min 10 mm/Ø Max 100 mm

### / LHMR RANGE 1 and 2

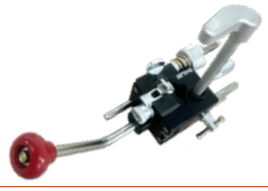


**1.** Ø Min 14 mm/Ø Max 44 mm
**2.** Ø Min 38 mm/Ø Max 60



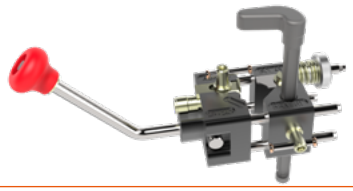
# 3. Insulation removal tool

### / MF2 SERIE 45 or 60



**45.** Ø Min 16 mm/Ø Max 45 mm
**60.** Ø Min 16 mm/Ø Max 58 mm

### / BRMRD1E



Ø Min 14 mm/Ø Max 40 mm

### / CWI SERIE NEW



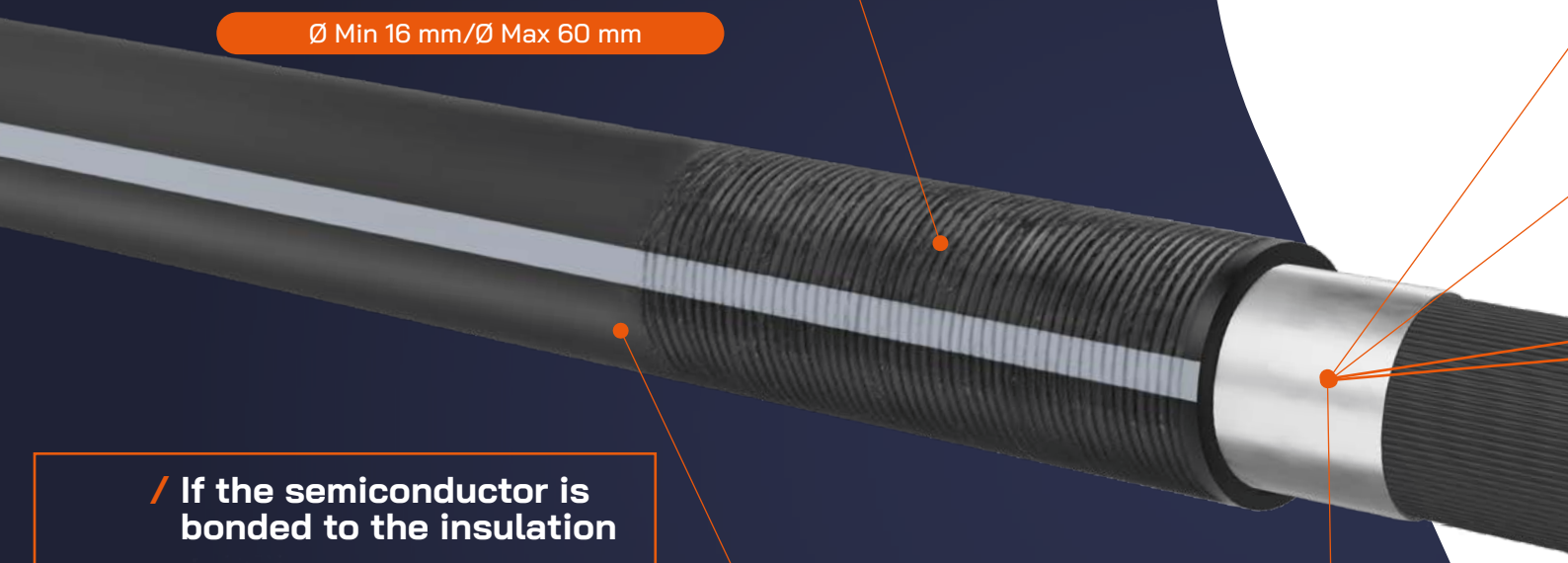
Ø Min 13 mm/Ø Max 38 mm

# UNDERGROUND MEDIUM VOLTAGE UNIPOLAR CABLE/ ALUMINIUM SCREEN/PEELABLE SEMICONDUCTOR/XLPE INSULATION

## / ROTO-TMG + K7/GRATT (sheath abrasion)



Ø Min 16 mm/Ø Max 60 mm



## / If the semiconductor is bonded to the insulation



## / CWB/12-44



Ø Min 12 mm/Ø Max 44 mm

## / GRI



Ø Min 15 mm/Ø Max 240 mm

## / EV/NPT-4F (spacing of the tabs)



Ø Min 35 mm/Ø Max 60 mm

## / MF3/45-C



Ø Min 16 mm/Ø Max 45 mm

## / ALROC-FENTE to make slits in the sheath and screen



Ø Min 16 mm/Ø Max 60 mm

## / ROTO-TMG + GFE-TMG to tighten the screen on the "cheese grater"



Ø Min 16 mm/Ø Max 60 mm

## / EV/NPT (spacing of the tabs)

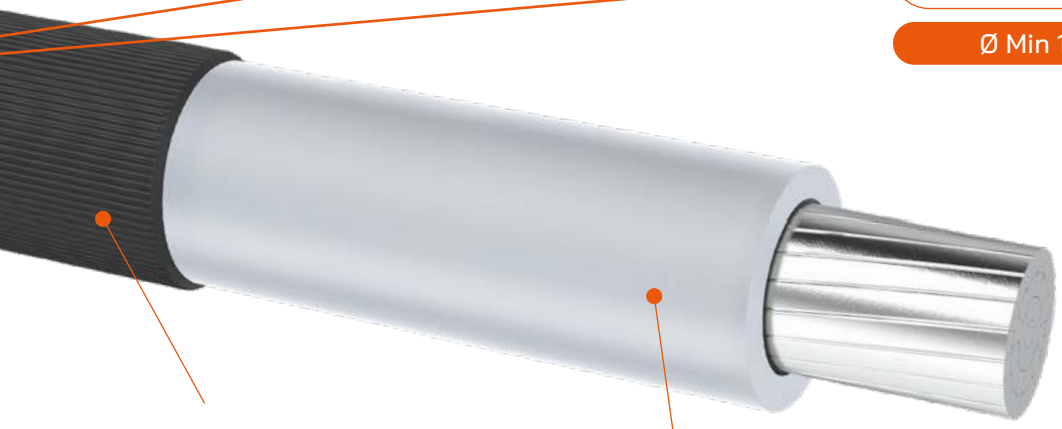



Ø Min 15 mm/Ø Max 240 mm

## / P115 to tighten and cut ligarex band



Ø Min 16 mm/Ø Max 240 mm



## / Peelable/easy peel semiconductor





## / SCH to chamfer insulation (To be mounted on MF3 Serie)



Ø Min 14 mm/Ø Max 60 mm

PREMIUM



# PG4HTA/3033

PLIERS FOR MV CABLE OUTER SHEATH

## / KEY FEATURES

**Tool Capacity:**
For cables Ø 47–75 mm.
Cutting thickness: 3.0 mm (circular), 3.3 mm (longitudinal).

**Custom Depth configuration:**
Available in custom cutting depths from 0.5 to 5 mm.
Model code: PG4HTB/yyzz (yy = circular, zz = longitudinal).

| Reference | Length | Width | Height | Weight | Packaging |
|---|---|---|---|---|---|
| PG4HTA/3033 | 300 mm | 110 mm | 105 mm | 0,87 kg | Box |

## / SPARE PARTS



**/ MTC4/30**
**Circular cutting blade**



**/ MTL4/33**
**Longitudinal cutting blade**



# PG5HTB/3535

PLIERS FOR MV CABLE OUTER SHEATH

## / KEY FEATURES

Circular and longitudinal cutting for safe sheath removal.

For cables Ø 69 — 95 mm — tailor-made tool (PG5HTB/yyzz).

Customizable cutting depth from 0.5 mm to 5 mm.

| Reference | Length | Width | Height | Weight | Packaging |
|---|---|---|---|---|---|
| PG5HTB/3535 | 360 mm | 140 mm | 160 mm | 2 Kg | None |

## / SPARE PARTS

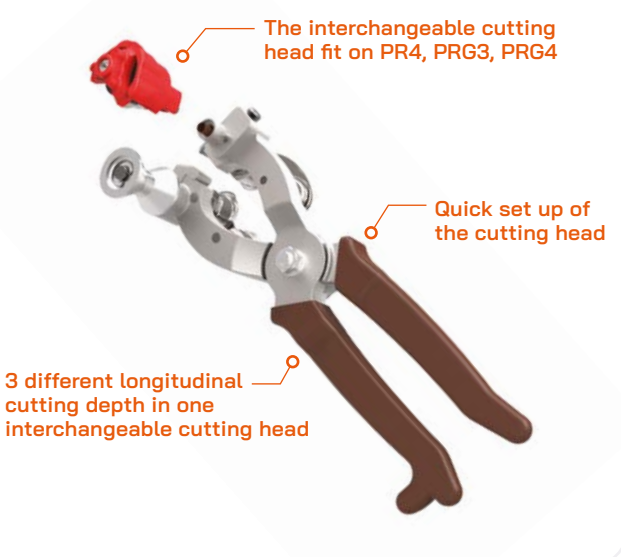


**/ MTC5/35**
**Circular cutting blade**



**/ MTL5/35**
**Longitudinal cutting blade**
3.5

PREMIUM




# PRG3/C22-L222833
# PRG4/C25-L252830

PLIERS FOR MV CABLE OUTER SHEATH WITH ADJUSTABLE LONGITUDINAL CUTTING DEPTHS

## / KEY FEATURES

Performs circular and longitudinal cuts for fast and safe sheath removal.

Customizable cutting depth from 0.5 mm to 5 mm.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| PRG3/C22-L222833 | 270 mm | 100 mm | 80 mm | 630 g |
| PRG4/C25-L252830 | 300 mm | 120 mm | 105 mm | 890 g |

ESSENTIAL



Fast assembling/disassembling of the optional k7 blocks: GFE-TMG & K7/GRATT

# ROTO-TMG

## MAINTAINING TOOL FOR SHEARBOLT CONNECTOR

STANDARDS

COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23

### / TECHNICAL SPECIFICATIONS

For cable with Ø 16 mm to 60 mm (50 to 630 mm²).
Available options for more functions (GFE-TMG, K7/GRATT).

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| ROTO-TMG | 255 mm | 85 mm | 90 mm | 840 g |

ESSENTIAL



Circular abrasion of the sheath to provide better sealing of the cable/accessory interface

# K7/GRATT

## SHEATH ABRASING BLOCK FOR ROTO-TMG TOOL

STANDARDS

COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23

### / TECHNICAL SPECIFICATIONS

Use with ROTO-TMG.
For cable with Ø16 to 60 (50 to 630 mm²).

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| K7/GRATT | 85 mm | 40 mm | 85 mm | 230 g |

ESSENTIAL



Good penetration of the pins (cheese grater) into the aluminium screen of the cable

# GFE-TMG

## BLOCK WITH ROLLS FOR ROTO-TMG

STANDARDS

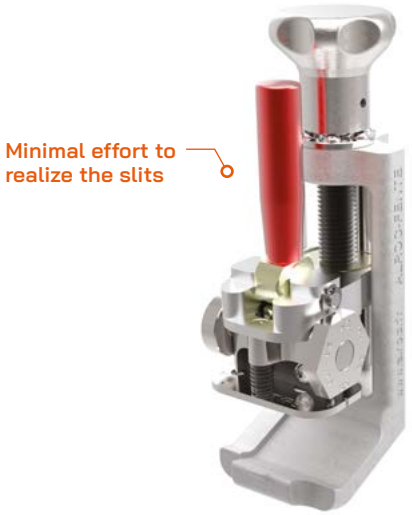
COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23

### / TECHNICAL SPECIFICATIONS

Use with ROTO-TMG tool.
For cables from Ø16 to 60 (50 to 630 mm²).

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| GFE-TMG | 75 mm | 45 mm | 50 mm | 200 g |

PREMIUM




# ALROC-FENTE

SLITTER FOR SHEATH/ALUMINIUM SCREEN 50-630 MM²

STANDARDS

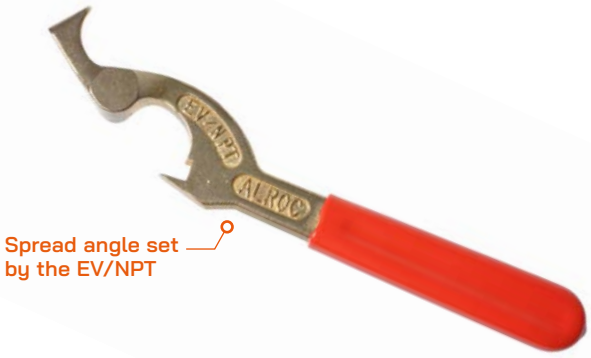
COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23

## / TECHNICAL SPECIFICATIONS

Slits on outer sheath: 40 mm long.
For cable from Ø 16 to 60 (25 to 630 mm²)
Sheath thickness: 2 to 3,5 mm (6 positions setting).

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| ALROC-FENTE | 270 mm | 75 mm | 145 mm | 1 kg |

ESSENTIAL




# EV/NPT

SHEATH/ALUMINIUM SCREEN SPREADER FOR CABLE WITH CROSS SECTION < 400 MM²

STANDARDS

COMPATIBLE WITH POPY NIKOL C33-226

## / KEY FEATURES

Designed to spread the outer sheath with aluminium screen tabs of C33-226 cables without damaging the metallic screen — ideal for grounding screen positioning.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| EV/NPT | 230 mm | 15 mm | 40 mm | 240 g |

ESSENTIAL




# EV/NPT-4F

SHEATH/ALUMINIUM SCREEN SPREADER FOR CABLE WITH CROSS SECTION > 400 MM²

## / KEY FEATURES

Spreads the outer sheath with the aluminium screen attached, without damaging it — ensuring a clean, safe and reliable earthing connection.

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| EV/NPT-4F | 230 mm | 20 mm | 55 mm | 290 g |

PREMIUM



# P115

## BANDING & CUTTING TOOL FOR STEEL STRAP

STANDARDS

COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23

### / USE

Pliers specially designed for ligarex steel strap when tightening the earthing connection beetween aluminium screen and the "cheese grater" earthing connection. Equiped with a cutting part to adjust the strap length once tighten.

### / TECHNICAL SPECIFICATIONS

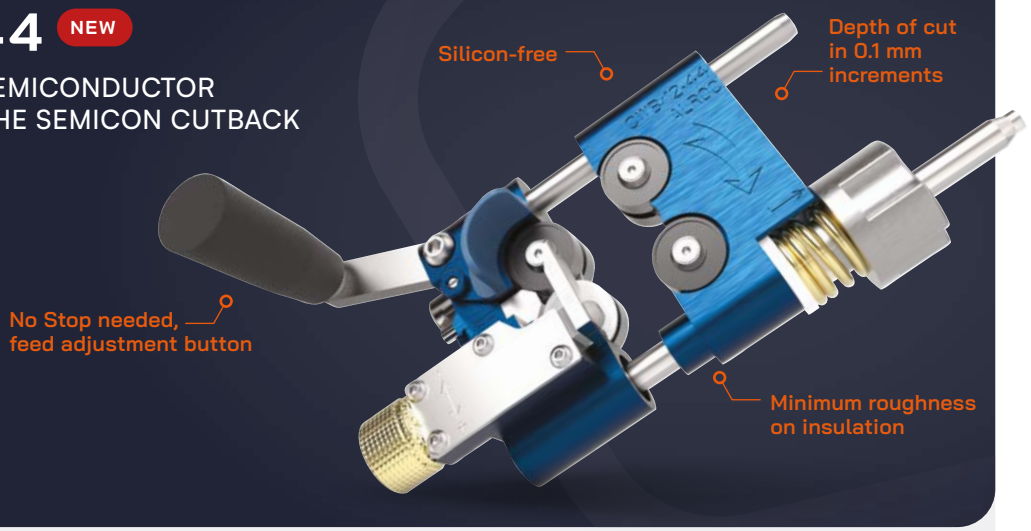
Material: Steel
For all diameters and cross-sections.
For steel strap up to 10 mm wide

| Reference | Dimensiones | Weight |
|---|---|---|
| P115 | 160 x 25 x 56 mm | 240 g |

PREMIUM

# CWB/12-44 NEW

## TOOL FOR BONDED SEMICONDUCTOR WITH CHAMFER ON THE SEMICON CUTBACK




| Reference | Diameter | Maximum cutting depth | Lenght | Width | Height | Weight |
|---|---|---|---|---|---|---|
| CWB/12-44 | 12-44 mm | 1.8 mm | 185 mm | 103 mm | 74 mm | 525 g |

## DID YOU KNOW?

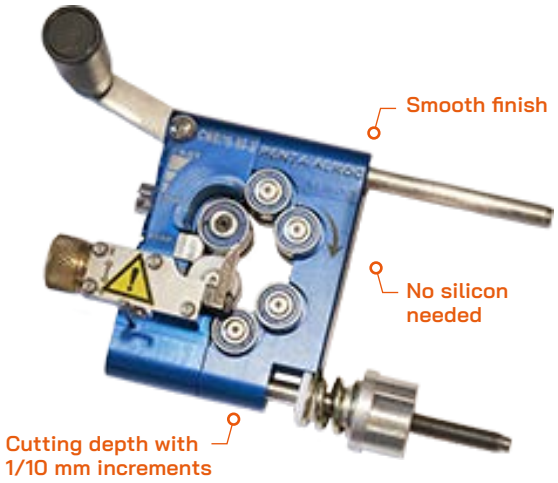
In synthetic underground distribution cables (HTA/Medium voltage), there is a layer called "external semiconductor," which is found on the cable's insulation.

Depending on the process used during the manufacture of these cables, it is possible to operate in two ways :

- **Double extrusion:** internal semiconductor + insulation
- **Triple extrusion:** internal semiconductor + insulation + external semiconductor

The external semiconductor will be **strippable** in the first case and **non-strippable** in the second. **In the first case**, when the cable is referred to as "strippable," the external semiconductor can be presented like a banana peel. To remove it during the preparation of a cable for a joint or termination, the external semiconductor can be incised and, only afterward, peeled off from the insulation, just like peeling a banana. **In the second case,** when the cable is referred to as "non-strippable," the external semiconductor can be presented like an apple peel. To remove it, the external semiconductor can thus be "peeled" like the skin of an apple.

PREMIUM



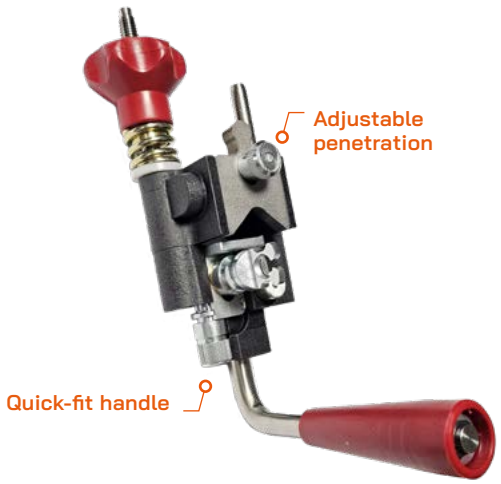

# CWB/18-60-S

## BONDED SEMICONDUCTOR REMOVAL TOOL WITH CHAMFER CUT AND AUTO-STOP FUNCTION

### / KEY FEATURES

CWB/18-60-S enables easy removal of the bonded semi-conductor without the use of silicon leaving a 13° chamfer on the semicon cutback.

| Reference | Length | Width | Height | Weight | Min diam. | Max diam. | Max cutting depth |
|---|---|---|---|---|---|---|---|
| CWB/18-60-S | 198 mm | 126 mm | 73 mm | 730 g | 18 mm | 60 mm | 1,8 mm |




# BSC/25-40

## TOOL FOR BONDED SEMICONDUCTOR REMOVAL WITH CHAMFER CUT

### / TECHNICAL SPECIFICATIONS

Diameter: 14-44 mm
Cutting depth: 0,4 to 1,5 mm
Chamfer angle: 14,5°
Remaining quotation: 0,984 or 1,574 inb

| Reference | Length | Width | Height | Weight | Packaging |
|---|---|---|---|---|---|
| BSC/25-40 | 155 mm | 82 mm | 65 mm | 620 g | Box |

VALUE



# GRI

## SCRAPER FOR BONDED SEMICONDUCTOR RESIDUES OR SHEATH SEMICONDUCTIVE LAYER

STANDARDS

COMPATIBLE WITH NIKOL C33-226

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| GRI | 250 mm | 40 mm | 25 mm | 190 g |

PREMIUM

# CWB/14-50-MVS NEW

MONO-FUNCTION TOOL FOR SEMI-CONDUCTOR PEELING MACHINE AND STOPPER FOR CABLE MV




| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| CWE/14-50-MVS | 150 mm | 80 mm | 48 mm | 695 g |

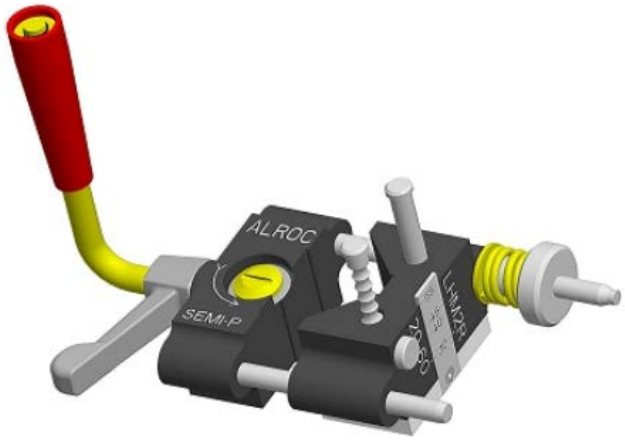


# LHM1R 30/45E

**/ KEY FEATURES**

LHM2R 30/60 allowsto make an incision on the peelable semi-conductor of the cable in order to remove it more easily with the hand.

| Reference | Lenght | Width | Height | Weight | Packaging |
|---|---|---|---|---|---|
| LHM1R 30/45E | 200 mm | 75 mm | 140 mm | 630 g | Carton box |




# LHM2R 30/60

**/ KEY FEATURES**

LHM1R 30/45E tools allowsto make an incision on the peelable semi-conductor of the cable in order to remove it more easily with the hand.

| Reference | Lenght | Width | Height | Weight | Min - max diameter |
|---|---|---|---|---|---|
| LHM2R 30/60 | 216 mm | 112 mm | 137 mm | 900 g | 38 - 60 mm |

ESSENTIAL

# ORACL

NEW

TOOL TO PERFORM CONTROLLED LONGITUDINAL SCORING ON PEELABLE SEMICONDUCTOR

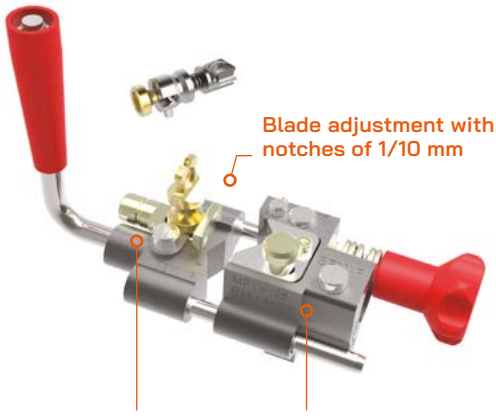



### / TECHNICAL SPECIFICATIONS

Diameter: 10 - 100 mm
Scoring depth: : 0.4/0.6/0.9/1.1 mm

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| ORACL | 135 mm | 55 mm | 35 mm | 120 g |

ESSENTIAL




# MF1PLUS/25-SRC

MULTI-FUNCTION TOOL FOR BONDED AND PEELABLE SEMICONDUCTOR

STANDARDS

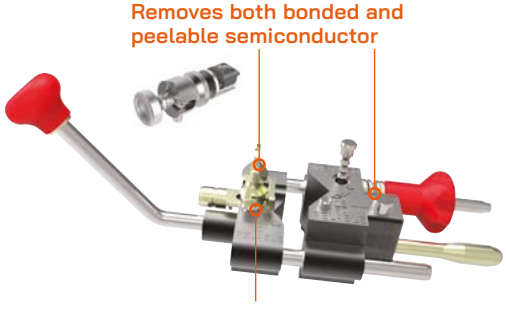
COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23

### / TECHNICAL SPECIFICATIONS

For cable with Ø14 to 44 mm (25 to 240 mm²).
Remaining Lenght of semiconductor: 25, 30, 40, 45 mm.
Delivered with SRC stylus providing chamfer on the peelable semiconductor cutback.

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| MF1+/25 | 190 mm | 85 mm | 125 mm | 750 g |

ESSENTIAL




# MF1PLUS/60-SRCD

MULTI-FUNCTION TOOL FOR BONDED AND PEELABLE SEMICONDUCTOR

STANDARDS

COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23

### / TECHNICAL SPECIFICATIONS

For cables with Ø18 to 60 (50 to 630 mm²).
Remaining Lenght of semiconductor: 30, 40, 45, 50, 55mm.
Delivered with SRC-D stylus providing chamfer on the peelable semiconductor cutback

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| MF1+/60 | 305 mm | 105 mm | 100 mm | 1.100 kg |

ESSENTIAL




# SRC

ADJUSTABLE SCORING STYLUS FOR PEELABLE SEMICONDUCTOR WITH CHAMFERED TRANSITION

STANDARDS

COMPATIBLE WITH POPY VINYL C33-226, UTE C33-223, NFC33-223, HN33S23

## / USE

SRC stylus enables the user to score the peelable semiconductor with a chamfered semiconductor cutback.
4 scoring depths: 0.4 mm/0.7 mm/0.9 mm/1.1 mm

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| SRC | 70 mm | 20 mm | 30 mm | 80 g |

ESSENTIAL




# SRC-D

ADJUSTABLE SCORING STYLUS FOR PEELABLE SEMICONDUCTOR WITH CHAMFERED TRANSITION

STANDARDS

COMPATIBLE WITH POPY VINYL C33-226, UTE C33-223, NFC33-223, HN33S23

## / USE

SRC-D stylus for MF1+/60 enables the user to score the peelable semiconductor with a chamfered semiconductor cutback.
4 scoring depths: 0.4 mm/0.7 mm/0.9 mm/1.1 mm

| Reference | Lenght | Width | Height | Weight) |
|---|---|---|---|---|
| SRC-D | 70 mm | 20 mm | 30 mm | 80 g |

ESSENTIAL




# DSP

PEELABLE SEMICONDUCTOR LIFTER

| Reference | Lenght | Width | Height | Weight | Diameter |
|---|---|---|---|---|---|
| DSP | 108 mm | 35 mm | 35 mm | 130 g | 10-80 mm |

VALUE

# MVS NEW

TOOL STOPPER




| Reference | Length | Width | Height | Weight | Diameter | Material |
|---|---|---|---|---|---|---|
| MVS | 100 mm | 40 mm | 100 mm | 175 g | 18-60 mm | Plastic |

ESSENTIAL




# CWI-R

## LV/ MV CABLE SHEATH (LV)/INSULATION (MV) REMOVAL TOOL

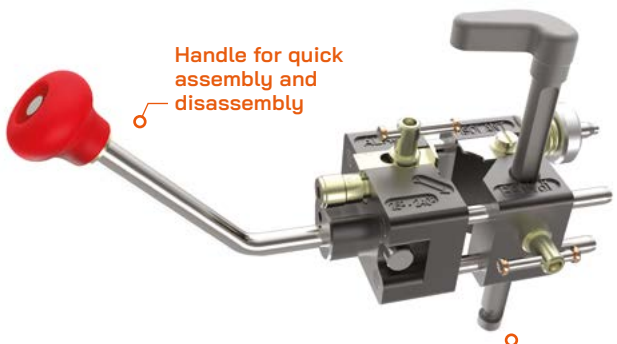
### / USE

The tool is Manually operated or can be motorised if using a powered Screwdriver and enables easy cable clamping alongside cutting-depth adjustment. Up to 400 mm² cross section.

| Reference | Length | Width | Height | Weight | Diameter |
|---|---|---|---|---|---|
| CWI-R | 248 mm | 87 mm | 79 mm | 1.2 kg | 13-38 mm |




ESSENTIAL




# BRMRD1E

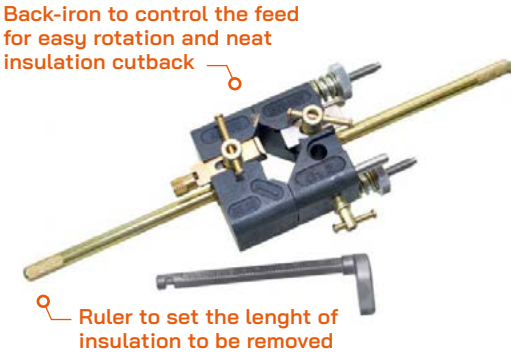
## PRIMARY INSULATION REMOVAL TOOL Ø14 - 40 MM

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| BRMRD1E | 151 mm | 92 mm | 67 mm | 1100 g |

ESSENTIAL

# LH2

## PRIMARY INSULATION REMOVAL TOOL Ø38 - 60 MM




### / USE

The LH2 enables the user to remove the primary insulation of MV undergroud cable

### / TECHNICAL SPECIFICATIONS

Diameter: 38 - 60
Max cutting depth: 17 mm

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| LH2 | 425 mm | 105 mm | 85 mm | 2 kg |

VALUE

# SCH

## STYLUS FOR CHAMFERING THE PRIMARY INSULATION OF MEDIUM-VOLTAGE UNDERGROUND CABLES

STANDARDS

COMPATIBLE WITH C33-226, UTE C33-223, NFC33-223, HN33S23




### / TECHNICAL SPECIFICATIONS

Use with tools MF1+ SERIE & MF3 SERIE.

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| SCH | 65 mm | 20 mm | 30 mm | 60 g |

ESSENTIAL

# LHA

## TOOL TO CHAMFER MV CABLE PRIMARY INSULATION




### / USE

The LHA enables the user to make a chamfer of 30° at the extremity of the insulation of MV cables

### / TECHNICAL SPECIFICATIONS

Diameter: 14 - 44 mm
Angle of the chamfer: 30°

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| LHA | 275 mm | 75 mm | 45 mm | 0,56 kg |

VALUE



# TCD2000

## PENCILING TOOL FOR 150 MM² AND 240 MM² 20KV CABLE

STANDARDS

COMPATIBLE WITH C33-226, UTE C33-223

### / TECHNICAL SPECIFICATIONS

For cables 150 mm² and 240 mm² C33-226, UTEC33-223.
Pre-adjusted tool.
Cone Length : 30 to 40 mm.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| TCD2000 | 200 mm | 88 mm | 70 mm | 610 g |

ESSENTIAL



Custom fitted penciling tools available on request (cable sample mandatory for perfect fitting)

# TC50 - TC95 - TC150 - TC240 - TC630

## PENCILING TOOLS

STANDARDS

COMPATIBLE WITH NFC33-223, HN33S23

### / TECHNICAL SPECIFICATIONS

For cables sections from 50 mm² to 630 mm² NFC33-223, HN33S23.
Pre-adjusted tool.
Cone length: 30 to 40 mm.

| Reference | Cable section | Length | Width | Height | Weight |
|---|---|---|---|---|---|
| TC50 | 50 mm² | 190 mm | 60 mm | 70 mm | 500 g |
| TC95 | 95 mm² | | | | |
| TC150 | 150 mm² | | | | |
| TC240 | 240 mm² | | | | |
| TC400 | 400 mm² | | | | |
| TC630 | 630 mm² | 205 mm | | | |



A must for MV taped joint

# CPM-TC223-NG

## PENCILING TOOL CASE 50 MM² TO 240 MM²

STANDARDS

COMPATIBLE WITH C33-223, UTE C33-223, NFC33-223, HN33S23

### / KEY FEATURES

Set of penciling tools for 20kC cable with:
- 50, 95, 150, 240 Mm² cross section nfc 33-223
- 150 and 240 mm² cross section UTE C33-223

ESSENTIAL



# MF2/45
# MF2/60

## MULTIFONCTION TOOL FOR OUTER SHEATH AND REMOVAL

### / KEY FEATURES

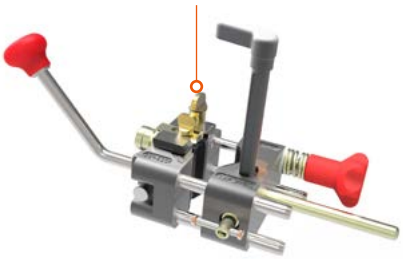
The MF2 SERIE tools enables the user to :
Remove the outer sheath (PE-PVC-PR) with a straight and neat cut
Set the length to be removed and remove the insulation with a straight and neat cut

| Reference | Length | Width | Height | Weight | Diameter |
|---|---|---|---|---|---|
| MF2/45 | 273 mm | 95 mm | 165 mm | 1,25 kg | 16-45 mm |
| MF2/60 | 170 mm | 90 mm | 120 mm | 1,4 kg | 16-58 mm |

PREMIUM



Tool feed rate adjustment (chip thickness)



# MF2/40

## MULTIFUNCTION TOOL FOR OUTER SHEATH AND INSULATION REMOVAL

STANDARDS

COMPATIBLE WITH C33-223, UTE C33-223, NFC33-223, HN33S23

### / TECHNICAL SPECIFICATIONS

Quick release handle.
MF2/40 for cable from Ø16 to 40mm (25 to 240mm²) 12/20 kV max.
MF2/60 for cable from Ø16 to 58mm (25 to 630mm²).

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| MF2/40 | 150 mm | 80 mm | 100 mm | 1.240 kg |
| MF2/60 | 170 mm | 90 mm | 120 mm | 1.400 kg |

ESSENTIAL



# MF3/45-C

## MULTIFONCTION TOOL FOR OUTER SHEATH, PEELABLE SEMICONDUCTOR AND PRIMARY INSULATION

### / KEY FEATURES

Multifunction tool for cables with Ø16—45 mm — removes the outer sheath, scores the peelable semicon with SRC stylus leaving a nice chamfered transition, remove the primary insulation.

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| MF3/45-C | 303 mm | 95 mm | 165 mm | 1,5 kg |

ESSENTIAL



# MF3/60-C
# MF3/60-SRC

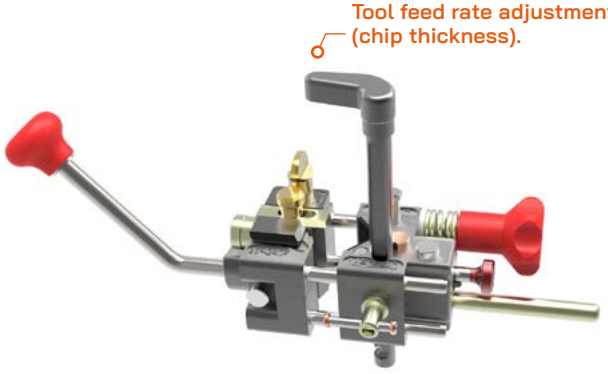
## MULTIFONCTION TOOL FOR OUTER SHEATH, PEELABLE SEMICONDUCTO WITH CHAMFER AND INSULATION

### / KEY FEATURES

Multifunction tool for cables Ø16—58 mm — removes sheath and insulation with clean cuts and scores the peelable semiconductor with chamfer using the included SRC stylus.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| MF3/60-C | 303 mm | 95 mm | 165 mm | 1,5 kg |

PREMIUM




# MF3/40-SR
# MF3/60-SR

## MULTIFUNCTION TOOL FOR COVERING, SEMI-CONDUCTOR PEELABLE AND THICK INSULATING

### / TECHNICAL SPECIFICATIONS

Quick release handle.
MF3/40-SR for cable Ø16 to 40 mm (25 to 240 mm²).
MF3/60 for cable from Ø16 to 58 mm (25 to 630 mm²).

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| MF3/40-SR | 165 mm | 80 mm | 100 mm | 1.520 kg |
| MF3/60-SR | 185 mm | 90 mm | 120 mm | 1.650 kg |



IMAGE FOR ILLUSTRATION ONLY

| | OUTER SHEATH REMOVAL | | | BONDED SEMICON REMOVAL | | | PEELABLE SEMICON REMOVAL | | | INSULATION REMOVAL | | | INSULATION CHAMFERING | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ø Min | ø Max | Max thickness | ø Min | ø Max | Max thickness | ø Min | ø Max | Max thickness | ø Min | ø Max | Max thickness | ø Min | ø Max |
| CMV-3CH2 | 26 mm | 52 mm | 2 mm | 14 mm | 60 mm | 1,4 mm | | | | 16 mm | 45 mm | 7 mm | 14 mm | 44 mm |
| CMV-3F-NP | 18 mm | 58 mm | 7 mm | 18 mm | 60 mm | 1,8 mm | | | | 18 mm | 58 mm | 7 mm | | |
| CMV-3F-PGNP | 47 mm | 75 mm | 3,5 mm | 18 mm | 60 mm | 1,8 mm | | | | 38 mm | 60 mm | 17 mm | | |
| CMV-4-CH | 16 mm | 45 mm | 7 mm | 12 mm | 44 mm | 12 mm | | | | 16 mm | 45 mm | 7 mm | | |
| CMV-4F-PNP | 16 mm | 58 mm | 7 mm | 18 mm | 60 mm | 1,8 mm | 16 mm | 58 mm | 1,1 mm | 16 mm | 58 mm | 7 mm | | |

ESSENTIAL



# KIT-400-2020

FULL KIT FOR MEDIUM VOLTAGE UNDERGROUND CABLE 50 MM² UP TO 400 MM²

## / COMPOSITION

- MF3/45-C
- SCH
- CWB/12-44
- MVS
- ALROC-FENTE
- ROTO-TMG
- GFE-TMG
- K7/GRATT
- EV/NPT
- EV/NPT-4F
- GRI
- P115

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| KIT-400-2020 | 575 mm | 470 mm | 145 mm | 10,7 kg |

ESSENTIAL



# KIT-630-2020

FULL KIT FOR MEDIUM VOLTAGE UNDERGROUND CABLE 50 MM² UP TO 630 MM²

## / COMPOSITION

- MF3/60-C
- SCH
- CWB/18-60-S
- ALROC-FENTE
- ROTO-TMG
- GFE-TMG
- EV/NPT
- EV/NPT-4F
- P115
- K7/GRATT
- GRI

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| KIT-630-2020 | 575 mm | 470 mm | 145 mm | 10,9 kg |

ESSENTIAL



# CNPT/240-1-MV-NG

FULL CASE 50 MM² TO 240 MM²

STANDARDS

COMPATIBLE WITH C33-223, UTE C33-223, NFC33-223, HN33S23

## / COMPOSITION

- ALROC-FENTE
- EV/NPT
- EV150/240
- EV2000 150/240
- GFE-TMG
- GRI
- K7/GRATT
- MF1+/25
- MF2/40
- P115
- ROTO-TMG
- SCH
- SRC

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| CNPT/240-1-MV-NG | 390 mm | 310 mm | 145 mm | 6,9 kg |

ESSENTIAL



# CNPT/240-2-MV-NG

## FULL CASE FOR MEDIUM VOLTAGE CABLE 50 MM² TO 240 MM² INCLUDING PENCILING TOOLS

STANDARDS

COMPATIBLE WITH C33-223, UTE C33-223, NFC33-223, HN33S23

### / COMPOSITION

- ALROC-FENTE
- EV/NPT
- EV150/240
- EV2000 150/240
- GFE-TMG
- K7/GRATT
- MF1+/25
- P115
- ROTO-TMG
- SCH
- SRC
- GRI
- TC150
- TC240
- TC50
- TC95
- TCD2000
- MF2/40

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| CNPT/240-2-MV-NG | 575 mm | 470 mm | 145 mm | 11,5 kg |

ESSENTIAL



New generation

# CNPT/630-1-MV-NG

## FULL KIT FOR MEDIUM VOLTAGE CABLE 50 MM² TO 630 MM² INCLUDING PENCILING TOOL FOR 630 MM² CABLE

STANDARDS

COMPATIBLE WITH C33-223, UTE C33-223, NFC33-223, HN33S23

### / COMPOSITION

- ALROC-FENTE
- EV/NPT
- EV630
- MF2/60
- GFE-TMG
- K7/GRATT
- MF1+/60
- P115
- ROTO-TMG
- SCH
- TC630
- SRC-D

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| CNPT/630-1-MV-NG | 575 mm | 470 mm | 145 mm | 10 kg |

ESSENTIAL



CNPT/HTA-630-RSM comes with full self maintenance kit

# CNPT/HTA-400-RSM

## FULL KIT FOR MEDIUM VOLTAGE UNDERGROUND CABLE 50 MM² UP TO 400 MM²

### / COMPOSITION

- MF3/45-C
- CWB/12-44
- MVS
- SCH
- ALROC-FENTE
- ROTO-TMG
- GFE-TMG
- K7/GRATT
- EV/NPT
- GRI
- P115
- EV/NPT-4F

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| INCLUDES SELF MAINTENANCE KIT | 575 mm | 470 mm | 145 mm | 11 g |
| KIT/400-2020 | | | | 10,7 g |

ESSENTIAL



CNPT/HTA-630-RSM comes with full self maintenance kit

# CNPT/HTA-630-RSM

FULL KIT FOR MEDIUM VOLTAGE UNDERGROUND CABLE 50 MM² UP TO 630 MM²

### / COMPOSITION

- MF3/60-C
- CWB/18-60-MVS
- SCH
- ALROC FENTE
- ROTO-TMG
- GFE-TMG
- K7/GRATT
- EV/NPT
- EV/NPT-4F
- GRI
- P115

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| INCLUDES SELF MAINTENANCE KIT | 575 mm | 470 mm | 145 mm | 11,2 kg |
| KIT/630-2020 | | | | 10,9 kg |

ESSENTIAL



# CNPT/1200

FULL KIT FOR 20KV 1200 MM² CABLE (PEELABLE SEMICONDUCTOR)

### / KEY FEATURES

The CNPT/1200 case contains storage spaces for the following products: EV630, P115, DSP, LHA/60, and TC1200.

### / COMPOSITION

- EV/NPT
-LMF2
- MF3/60
- PRG4/C35-L40

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| CNPT/1200 | 575 mm | 470 mm | 145 mm | 6.5 kg |



Operates over a wide cable range

# KIT-AMSUD

FULL KIT FOR MEDIUM VOLTAGE UNDERGROUND POWER CABLES

### / THE CASE INCLUDES :

- MF3/60-SRC
- SCH
- CWB/18-60-S
- ALROC-FENTE
- ROTO-TMG
- GFE-TMG
- P115
- DSP
- EV/NPT
- MVS

ESSENTIAL



CKM-HTA-240-NG maintenance kit enables to change on site all the spare parts of the tools.

# CKM-HTA-240-NG

## SELF MAINTENANCE KIT FOR CNPT/240-1-MV-NG & CNPT/240-2-MV-NG CASE

### / TECHNICAL SPECIFICATIONS

CKM-HTA-240-NG kit contains the following products:
- LRTT x2: blade for sheath abrasion (K7/GRATT)
- LMF2: Blade for sheath and insulation (MF2/40)
- LFE: blade for slits on outer sheath (ALROC-FENTE)
- LS-C: blade for incision of semiconductor with chamfer (SRC)
- kit MF3/40 X5: wear pads (MF2/40, MF3/40)
- C-RTT: Tools for disassembly/reassembly of K7/GRATT blades
- 065/3187: 3 mm Allen wrench for LFE blade change
- C-SR: wrench for stylus SR, SRC and SRC-D

| Reference | Lenght | Width | Height | Weight |
|---|---|---|---|---|
| CKM-HTA-240-NG | 170 mm | 150 mm | 32 mm | 300 g |

ESSENTIAL



CKM-HTA-630-NG maintenance kit enables to change on site all the spare parts of the tools.

# CKM-HTA-630-NG

## SELF MAINTENANCE KIT FOR CNPT/630-1-MV-NG CASE

### / TECHNICAL SPECIFICATIONS

CKM-HTA-630-NG kit contains the following products:
- LRTT x2: blade for sheath abrasion (K7/GRATT)
- LMF2: Blade for sheath and insulation (MF2/40)
- LFE: blade for slits on outer sheath (ALROC-FENTE)
- LS-CD: blade for incision of semiconductor with chamfer (SRC-D)
- kit MF3/40 X5: wear pads (MF2/40, MF3/40)
- C-RTT: Tools for disassembly/reassembly of K7/GRATT blades
- 065/3187: 3 mm Allen wrench for LFE blade change
- C-SR: wrench for stylus SR, SRC and SRC-D

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| CKM-HTA-630-NG | 170 mm | 150 mm | 32 mm | 300 g |

ESSENTIAL



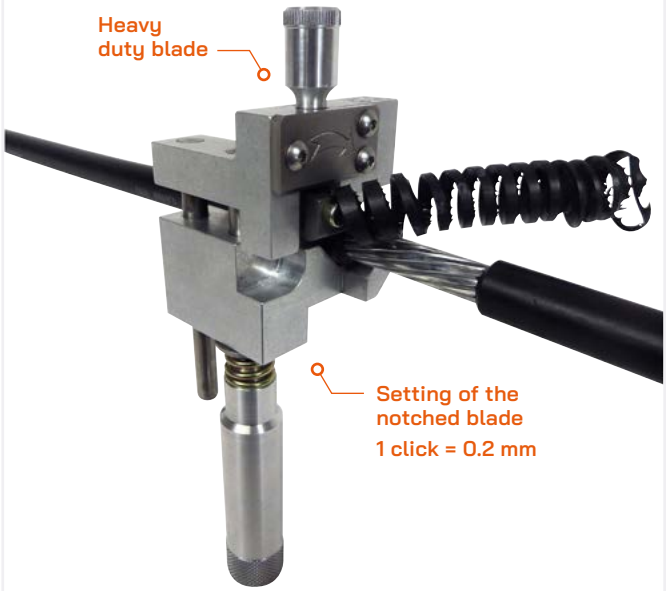
# CIR001

## TOOL CASE FOR INDUSTRIAL CABLE

### / THE CASE CONTAINS :

- -PRG3/CIR20: pliers for cable sheath removal ø26 to 52 mm with ring cutting depth 2.0 mm.
- PINTEL4/CIR10: pliers for cable sheath removal ø10 to 30 mm with ring cutting depth 1.0 mm.
- TRL/10-15-20: longitudinal cutting head: 1.0/1.5/2.0 mm.
- TRL/24-28-32: longitudinal cutting head: 2.4/2.8/3.2 mm.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| CIR001 | 390 mm | 310 mm | 145 mm | 2.9 g |




# DPC/10-45

OUR SELECTION

## MV OVERHEAD INSULATED CABLE MIDSPAN STRIPPER Ø10-45 MM

### / TECHNICAL SPECIFICATIONS

Capacity: Ø 10-45 mm
Max cutting depth: 11 mm
Delivered in a soft case.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| DCP/10-45 | 230 mm | 70 mm | 75 mm | 890 g |

ESSENTIAL




# DCG54-148
# DCG54-70

## CABLE STRIPPER (SHEATHED BRIDGE) 54.6 MM²/148 MM² OR 54,6 MM²/70 MM²

STANDARDS

COMPATIBLE WITH LV AERIAL BUNDLED CONNECTORS AND MV SHEATHED BRIDGES WITH 54.6 MM² AND 148 MM² CROSS SECTION.

### / THECHNICAL SPECIFICATIONS

Preset stripping length 45 mm or 160 mm for DCG54-148
Preset stripping length 34 mm, 60 mm or 160 mm for DCG54-70

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| DCG54-70 | 255 mm | 35 mm | 45 mm | 450 g |
| DCG54-148 | 280 mm | | | 480 g |

ESSENTIAL



# DCAP54-148

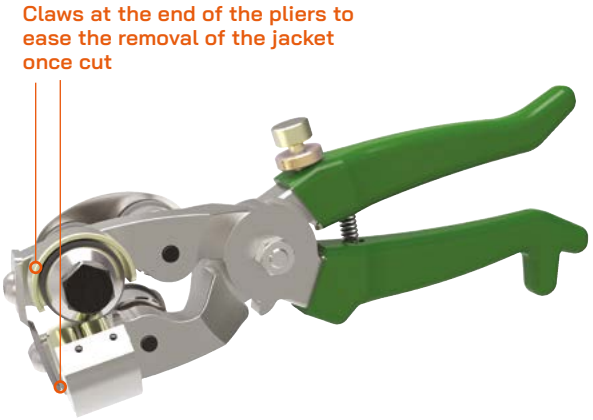
## STRIPPING BODY FOR INSULATED OVERHEAD AERIAL CABLES

### / KEY FEATURES

The DCAP allows for easy and quick stripping of overhead insulated cable ends (insulated bridge) with cross-section of 54.6 mm² and 148 mm² Preset stripping length 55 mm or 160 mm.
Stripping bushings (54,6 mm² or 148 mm²) to be ordered separately.

| Reference | Length | Width | Height | Weight | Diameter |
|---|---|---|---|---|---|
| DACP54-148 | 200 mm | 45 mm | 60 mm | 400 g | 12-20 mm |

ESSENTIAL




# PG0/CIR0911

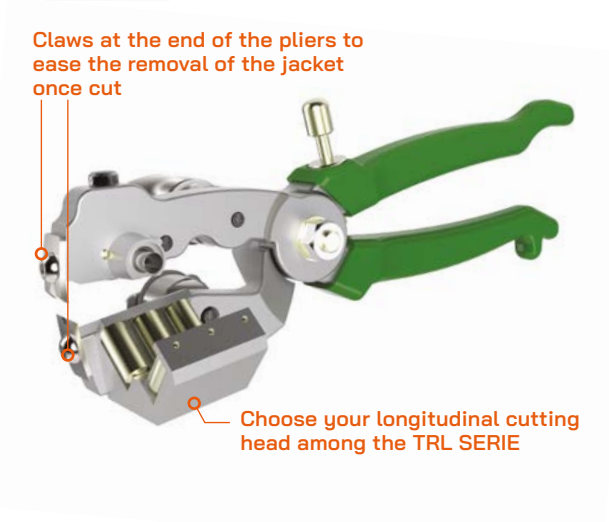
## PLIERS FOR INDUSTRIAL CABLE SHEATH 10-28 MM CC 0.9 MM CL 1.1 MM

### / KEY FEATURES

Compact pliers for cables Ø5—17 mm — performs of circular cut 0.9 mm deep and a longitudinal cut 1.1 mm deep for precise sheath removal on industrial cable for precise sheath removal on industrial cables.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| PG0/CIR0911 | 195 mm | 72 mm | 70 mm | 360 g |

ESSENTIAL




# PINTEL4/CIR10

## PLIERS FOR INDUSTRIAL CABLE SHEATH 10-28 MM CC 1.0 LONGITUDINAL CUTTING HEAD TRL SERIE, TO BE ORDERED SEPARATELY

### / KEY FEATURES

Pliers for cables Ø10—30 mm — performs circular cut with 1.0 mm penetration for clean sheath removal; longitudinal cutting head to be ordered separately.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| PINTEL4/CIR10 | 260 mm | 90 mm | 68 mm | 540 g |

ESSENTIAL



Choose your longitudinal cutting head among the TRL SERIE

# PRG3/CIR20

## PLIERS FOR INDUSTRIAL CABLE SHEATH 28-52 MM CC 2;0 LONGITUDINAL CUTTING HEAD TRL SERIE, TO BE ORDERED SEPARATELY

### / KEY FEATURES

Pliers for cables Ø26—52 mm — performs circular cut with 2.0 mm penetration for precise sheath removal on industrial cables.

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| PRG3/CIR20 | 270 mm | 100 mm | 80 mm | 630 g |

PREMIUM



# PINTEL4PI/465

## PLIERS TO REMOVE THE PRIMARY INSULATION OF LV/MV PILC CABLE

### / USE

PINTEL4 PI/465 tool enables the user to perform a controled circular cut into the paper impregnated insulation in order to remove it without damaging the conductor.

### / TECHNICAL SPECIFICATIONS

PINTEL4PI/465 for cable with phases diameter ranging from 10 to 26 mm
Circular cutting depth: 4.65 mm

| Reference | Length | Width | Height | Weight |
|---|---|---|---|---|
| PINTEL4PI/465 | 260 mm | 60 mm | 55 mm | 380 g |

ESSENTIAL



Interchangeable longitudinal cutting head for PRG3, PRG4, PRG4, PRG3/CIR, PINTEL4/CIR



# TRL SERIE

## INTERCHANGEABLE LONGITUDINAL CUTTING HEAD WITH 1 OR 3 CUTTING DEPTH POSITIONS

### / TECHNICAL SPECIFICATIONS

1 or 3 cutting depths per cutting head. Available on request.

| Reference | Compatible with | Length | Width | Height | Weight |
|---|---|---|---|---|---|
| TRL/XX | PRG3, PRG4, PRG3/CIR, PINTEL4/CIR | 50 mm | 40 mm | 40 mm | 40 g |
| TRL/XXXXXX | PRG3, PRG4, PRG3/CIR, PINTEL4/CIR | 60 mm | | | 70 g |

## DID YOU KNOW?

The PINTEL4 SERIE is the result of decades of expertise in live and de-energized cable preparation. Designed and manufactured with the precision required for electrical safety work, PINTEL tools combine robust construction, ergonomic handling, and absolute cutting accuracy.

Each model is engineered to adapt to real field conditions — from urban LV networks to industrial installations — ensuring efficient sheath removal, repeatable performance, and compliance with the EN 60900 safety standard for live working serie PINTEL4 1000V.

Their interchangeable longitudinal cutting head, with multi-cutting depth settings, make them indispensable for training centers, maintenance teams, and network operators in more than 20 countries worldwide.

**With PINTEL, precision isn't optional — it's built in.**





# SUBSTATION AND RESCUE EQUIPMENT


/ SAFETY KIT 440

/ STORAGE BOX 443

/ ACCESSORIES FOR STICKS 444

/ VOLTAGE DETECTOR 445

/ VOLTAGE DETECTOR STICKS 446

/ VOLTAGE DETECTOR FOR MV SUBSTATION 447

/ INSULATING STOOLS 448

/ WALL-MOUNTED RESCUE KIT 450

/ MOBILE ELECTRICAL SAFETY KIT 452

/ FIRST AID KIT 453

/ RESCUE KIT 454

/ INSULATING STICK 455

/ FIRE EXTINGUISHING BALL 456

/ FIRE SET 457


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

SUPERIOR

# TK3S

OUR SELECTION

## SAFETY SET FOR SUBSTATIONS WITH BARE CONDUCTORS



STANDARDS

IEC 60855-1 / STEDFN°71 / UNE 204001 / IEC 60903 / NFC 71810 / C18311 / EDF SPSC221 / IEC 61235 / IEC 60855-1

• Set available with voltage detector TAGDP and its insulating stick TP13G1MU.

| Reference | Description |
|---|---|
| TK3S | Safety set for substations with bare conductors |
| TK3S-TAG | Safety set for substations with bare conductors with TAGDP |

### / This kit contains :

| Reference | Description |
|---|---|
| BGT-E | Insulating storage box for electrician gloves |
| GLE36-3/10 | Latex insulating gloves class 3 size 10 |
| TB11D | Stand for MV fuses |
| TT015M 24KV | Insulating stool 24 kV |
| TP13PM | Insulating stick range 5-45 kV |
| S4310 | Work light for intervention |
| TP12ECSC | Rescue stick 45 kV with hook and without handguard |
| CROTP12 | Hook with PVC sheathe for stick TP12 |
| TDP536 | Voltage detector for indoor use, 5-36kV |

The pair of insulating gloves is also available in size 9 and 11, please specify in your order.

SUPERIOR




# TK3C

## SAFETY SET FOR SUBSTATIONS WITH SIGNAGE

STANDARDS

IEC 60855-1 / STEDFN°71 / UNE 204001 / IEC 60903 / NFC 71810 / C18311 / EDF SPSC221 / IEC 61235 / IEC 60855-1

### / TECHNICAL SPECIFICATIONS

• Set available with voltage detector TAGDP and its insulating stick TP13G1MU.

| Reference | Description |
|---|---|
| TK3C | Safety set for substations with signage |
| TK3C-TAG | Safety set for substations with signage, with TAGDP |

### / This kit contains :

| Reference | Description |
|---|---|
| BGT-E | Insulating storage box for electrician gloves |
| GLE36-3/10 | Latex insulating gloves class 3 size 10 |
| TB11D | Stand for MV fuses |
| TT015M 24KV | Insulating stool 24 kV |
| TP13PM | Insulating stick range 5-45 kV |
| S4310 | Work light for intervention |
| TP12ECSC | Rescue stick 45 kV with hook and without handguard |
| CROTP12 | Hook with PVC sheathe for stick TP12 |
| TDP536 | Voltage detector for indoor use, 5-36kV |
| | + 10 aluminium signs and posters |

The pair of insulating gloves is also available in size 9 and 11, please specify in your order.

SUPERIOR




# TK3GT

## SEFETY KIT WITH SIGNAGE, HELMET AND FIRE EXTINGUISHER

STANDARDS

IEC 60855-1 / STEDFN°71 / UNE 204001 / IEC 60903 / NFC 71810 / C18311 / EDF SPSC221 / IEC 61235 / IEC 60855-1 / EN 397 / EN 50365 / ANSI Z891 / EN 166 / EN 170 / EN ISO 16321-1 / GS-ET-29 / ANSI Z87-1 / IEC 62819

### / This kit contains :

| Reference | Description |
|---|---|
| BGT-E | Insulating storage box for electrician gloves |
| GLE36-3/10 | Latex insulating gloves class 3 size 10 |
| TB11D | Stand for MV fuses |
| TT015M 24KV | Insulating stool 24 kV |
| TP13PM | Insulating stick range 5-45 kV |
| S4310 | Work light for intervention |
| TP12ECSC | Rescue stick 45 kV with hook and without handguard |
| CROTP12 | Hook with PVC sheathe for stick TP12 |
| TDP536 | Voltage detector for indoor use, 5-36kV |
| | 6 Aluminium signs |
| V1-BK | Electrician safety helmet with integrated ArcFlash face shield |
| E072KGS | Carbon dioxide fire extinguisher |
| | Fire burd and shovel |

For other rope lentghs, please contact us.

The pair of insulating gloves is also available in size 9 and 11, please specify in your order.

### / TECHNICAL SPECIFICATIONS

• Set available with voltage detector TAGDP and its insulating stick TP13G1MU.



# TK3C-EXP-LIGHT

## SAFETY KIT

### / This kit contains :

| Reference | Description |
|---|---|
| TT015M36KV | Insulating stool 36 kV for inside use |
| GLE36-3/10 | Pair of insulating gloves class 03 size 10 |
| TP12ECSC | Insulating rescue stick |
| TP13PM | Voltage detector stick 5-45kV |
| RGX-CP | Plastic storage box for insulating gloves |
| CROTP12 | Hook with PVC sheathe for stick TP12 |
| TDP536 | Voltage detector for indoor use, 5-36kV |

| Reference | Description |
|---|---|
| TK3C-EXP-LIGHT | Safety kit |

The pair of insulating gloves is also available in size 9 and 11, please specify in your order.



# SUBKIT-EXP

## SAFETY KIT

**/ This kit contains :**

| Reference | Description |
|---|---|
| GLE41-4/10 | Insulating latex gloves, class 4 size 10 |
| BGT-EXST | Insulating storage box for electrician gloves |
| TT015M45KV-EX | Insulating single piece plastic stool for inside use |
| TP12ECSC-EX | Insulating rescue stick 45 kV |
| CROTP12 | Hook with PVC sheath for stick TP12 |
| TP13PM-EX | Insulating stick 5-45 kV |
| TDP536 | Voltage detector for indoor use, 5-36 kV |

| Reference | Description |
|---|---|
| SUBKIT-EXP | Safety kit |

The pair of insulating gloves is also available in size 9 and 11, please specify in your order.

SUPERIOR



# S4310

## PORTABLE LAMP FOR INTERVENTION

STANDARDS
NFC 71-810

**Advantages**

- Flexible usage : can serve both as an intervention lamp and as an emergency / escape light (BAPI or BAES)
- Back up autonomy : internal rechargeable batteries supplies light even when mains power is lost, ensuring safety or intervention capability.
- Ergonomic and compact design.

**/ USE**

Light designed for safety operations and checking operations in technical facilities such as:
- electrical station and substation,
- boiler room,
- lift machinery.

It can be configured either as BAPI (portagle enterention lamps) or as a BAES (emergency escape lighting unit) depending of the application.

**/ TECHNICAL SPECIFICATIONS**

Articulated handle. Switch with 2 positions : 45 lm and 100 lm.
On request: configuration in « Automatic switch on in case of power break ».
Delivered with a bracket (without screw) for wall mounting and a carrying handle.
Voltage : 230 VAC / 50Hz
Lamp output : 1 white LED 2,1W
Charge monitor : 1 Green LED
Battery : 2,4V 1,5Ah
Autonomy : 1 hour (100 lumens) or 3 hours (45 lumens)
Temperature of use : 0° to +40° C
IP42. (protection offers reasonable resistanse to small solid object and water splobes, suitable for technical or maintenance environement)
IK10.

| Reference | Dimensions | Weight |
|---|---|---|
| S4310 | 240 x 138 x 60 mm | 800 g |

PRO-ELITE

# RGX-BGT

OUR SELECTION

STORAGE BOX FOR INSULATING GLOVES




**Advantages**

- Transparent window (with UV filtration) to check the presence of gloves in the box
- Large interior volume suitable for storing gloves, overgloves and a bottle of talcum powder
- Integrated and retractable handle

## / USE

This storage and protection box for insulating gloves can be used either :
- as a wall-mounted box (electrical substations, technical rooms),
- as a portable box (thanks to its retractable handle).

## / TECHNICAL SPECIFICATIONS

Made entirely from plastic.
Can hold 1 pair insulating gloves from class 00 to 4, 1 pair leather overgloves and a bottle of talcum powde.r
Equipped with 4+4 pre-drilled holes for wall mounting (drilling dimensions indicated).

| Reference | Talcum powder bottle | Dimensions | Weight |
|---|---|---|---|
| RGX-BG | No | 500 x 250 x 100 mm | 1 100 g |
| RGX-BGT | Yes | | |

ESSENTIAL



# RGX-CP

POLYPROPYLENE CASE WITH HANDLE

## / TECHNICAL SPECIFICATIONS

Dimensions : 432 x 170 x H 52 mm / 17.01 x 6.69 x H 2.05 inch
Available colours : Black or Blue

| Reference | Description |
|---|---|
| RGX-CP | Polypropylene |



# TB11D

## STAND FOR MV FUSES

### / USE

For the provision of spare fuses in transformer stations or MV cells.

### / TECHNICAL SPECIFICATIONS

- Bracket consisting of 2 parts (1 upper part with 3 slots for fuses max. ø65mm, 1 lower part with flat bottom).
- Material: white injection-moulded thermoplastic.
- Pre-drilled back for wall mounting (supplied with plugs and fixing screws, without fuse).

| Reference | Dimensions | Weight |
|---|---|---|
| TB11D | 2 elements of 280 x 90 x 225 mm | 540 g |



# TL06

## STICK ACCESS HOLE

### / USE

Access hole for passing voltage detection stick through the protective wall of an "open" installation, guaranteeing personal protection.

### / TECHNICAL SPECIFICATIONS

Materials: moulded plastic.
External installation by 3 screws tightened onto a steel fixing flange.

| Reference | Opening | Weight |
|---|---|---|
| TL06 | Ø 60 mm | 110 g |



# TS48

## WALL BRACKETS FOR STICKS

### / TECHNICAL SPECIFICATIONS

Semi-rigid plastic, supplied with wood fixing screws.



# TP13P
# TP13T

## VOLTAGE DETECTOR STICK WITH AIR GAP ARRESTER FOR INDOOR USE

STANDARDS
EN 166 / EN 170

### / USE

Stick for detecting the absence of voltage before earthing a line or a transformer to carry out work in MV substations or cells.
The detector's battery-free operation and built-in self-test make it possible, in indoor substations, to have a testing device that is always ready for use.

### / TECHNICAL SPECIFICATIONS

**TP13PM :**
1 section insulating stick with a universal end fitting
Fibreglass composite tube, diameter 32 mm.
Operating voltage: 5 to 45 kV.
Test voltage on 300 mm: 50 kV.
Overall length: 1,50 m.
Weight: 600 g.

**TR245U :**
Telescopic insulating stick with a universal end fitting
Polyurethane foam-filled fibreglass composite upper tube, Ø 32 mm.
Fibreglass composite lower tube, Ø 39 mm.
Operating voltage: 25 to 63 kV kV.
Test voltage on 300 mm: 100 kV (upper section) / 50 KV (lower section).
Folded length: 0,85 m.
Extended length: 1,50 m.
Weight: 1,050 kg.

TDP536 : see next product description.

| Reference | Opening | Detector | Insulating Stick | Length | Weight |
|---|---|---|---|---|---|
| TP13P | 1 element insulating stick range 5 to 36 kV 5-36 kV | TDP536 | TP13 PM | 1,50 m | 800 g |
| TP13T | Insulating telescopic stick 5-36 kV | | TR245U | 0,85/1,50 m | 1 350 g |




# TDP536
# TDP572

## VOLTAGE ABSENCE DETECTOR WITH AIR GAP ARRESTER FOR INDOOR USE

### / TECHNICAL SPECIFICATIONS

- 2 standard voltage ranges: 5-36 kV (ref. TDP536) or 5-72.5 kV (ref. TDP572)
- Operates without battery
- Flashing warning light.
- Integrated piezoelectric self-test system for checking all moving parts.
- Dimensions compatible with use of stick holder rings.
- Black polycarbonate container, fixed using universal end-fittings.
- Fixing on all types of stick using available intermediary joints.
- Supplied with straight antenna of dimensions - L 40 mm - Ø 10 mm

| Reference | Voltage | Detector | Weight |
|---|---|---|---|
| TDP536 | 5 to 36 kV | Body Ø 49 mm x L 195 mm | 300 g |
| TDP572 | 5 to 72,5 kV | | |

SUPERIOR



# TP13C

## COMPACT VOLTAGE DETECTOR STICKS

**Advantages**

- Compact voltage detector.
- Working without battery.
- Black polycarbonate shell.
- All weather use.
- Temperature : -20°C to +40°C.
- Red telescopic stick with 6 elements included.
- Soft handle with hand guard.
- Visual indication by 1 red light.
- Integrated auto-test without battery (with piezoelectric).
- Supplied with carrying bag suitable for belt fixing.

### / USE

TP13C is designed to check absence or presence of nominal voltage by direct contact. It is usually used prior to earthing operation of a three-phase voltage system. TP13C was specially adapted to be used in MV substations through 50 mm diameter spy holes.

### / TECHNICAL SPECIFICATIONS

- 3-phase AC indoor system.
- Nominal voltage from 5 kV up to 36 kV
- Frequency : 50Hz - 60hz
- Telescopic stick size : extended length: 900mm - folded length: 320mm
- Delivered with 40 mm straight probe

| Reference | Voltage | Frequency | Dimensions | Weight |
|---|---|---|---|---|
| TP13C | 5 to 36 kV | 50 to 60 Hz | 350 x 70 x 60 mm | 400 g |

SUPERIOR



# TP13CS

## COMPACT VOLTAGE DETECTOR STICKS

### / USE

Voltage detection on MV Substation. TP13CS is designed to check absence or presence of nominal voltage by direct contact. It is usually used prior to earthing operation of a three-phase voltage system. TP13CS was specially adapted to be used in MV substations through 50 mm diameter spy holes.

### / TECHNICAL SPECIFICATIONS

- **Detector characteristics:**
  - 3-phase AC indoor system.
  - Nominal voltage from 5 kV up to 36kV.
  - Frequency: 50Hz 60 Hz to be specified.
  - All weather use.
  - Temperature: -20°C to +40°C.
  - Acoustic indication by buzzer.
  - Visual indication by 1 red lights.
  - Built-in «All check» test provides checking of all electronic and battery level. Green led indicates the unit is ready.
  - Supply: 9 V alkaline battery 6LR61.
  - White polycarbonate shell.
  - Body: Ø 49mm, L=140mm.
  - 40mm 'Y' shape universal contact probe (straight probe, 'V' shape probe and hook probe available on request).

- **Stick characteristics:**
  - Red telescopic stick with 6 elements
  - Soft handle with handguard

| Reference | Extended length | Folded length | Dimensions (protective bag size) | Weight |
|---|---|---|---|---|
| TP13CS | 900mm | 320mm | 350x70x60 mm | 650 g |

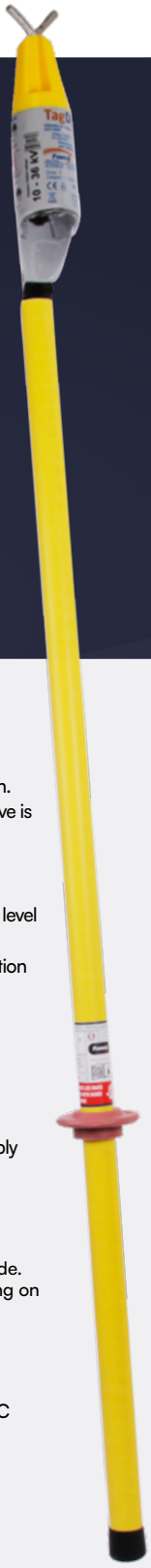
PRO-ELITE

# TAGDP NEW

## VOLTAGE DETECTOR FOR MV SUBSTATION

STANDARDS

EN 353-2 / INSULATING STICKS : EN 50508 & IEC 61235



### Advantages

- Optimised indication that can be clearly perceptible in all working conditions
- The design prevents accidental interchange of housing or circuitry and damage to electronic autonomy of more than 6 years.
- Increased autonomy thanks to its lithium battery, easy maintenance of the device and guaranteed autonomy of more than 6 years.
- Insulating stick : optimal ratio weight/stiffness and good grip of the stick.

## / USE

Voltage detector needed in safety equipment required in Medium Voltage Substations according to the NFC 13 200 standard (High voltage electrical installations for electrical energy production area, industrial, tertiary and agricultural area, etc.
These voltage detectors, with integrated insulating pole, are designed for "proving dead", making sure that nominal voltage is actually absent on a circuit in an MV substation between 1 kV and 36 kV (no voltage verification)

- The device will detect any nominal voltage present in MV substation.
- It will avoid detecting most induced voltages in order to allow grounding operations.





## / TECHNICAL SPECIFICATIONS

**AC voltage range possible choice from 1 to 36 kV**
**Network frequency : 50 and 60 Hz**

- Permanent standby status with automatic wake-up fonction.
- The presence of voltage within the calibrated range or above is indicated by a RED light and a beeping sound.
- Self-test OK : the OK status (ready for use) of the device is indicated by a GREEN light.
- The self-test checks all the circuits, the reference detection level and the battery voltage.
- The "ready for use" state is indicated by the GREEN indication for 1,5 minute.
- A low battery level is indicated by an ORANGE light.
- Designed for indoor use.
- Operating temperature : - 25°C to +55° C.
- Humidity : 96 % maximum.
- Power supply voltage : 9 V lithium cell - IEC 6LR61.
- Accepts the use of rechargeable battery with identical supply voltage.
- Grey polycarbonate housing.
- Dimensions : Ø 59 mm, L = 260 mm with the contact electrode.
- Net weight detector : 0,450 kg with the contact electrode.
- Operating manual with a choice of languages, depending on the package.
- Delivered in a vinyl sheath with KSMP32 wall bracket.

**Insulating stick : stick in 1 element**

- Round hollow tube 32 mm diameter in accordance with IEC 61235.
- Rubber hand guard 20 mm height.

| Reference | Voltage range | Frequency | Contact electrode | Total lenght** | User manual* | Packaging |
|---|---|---|---|---|---|---|
| TAGDP0104FXTP125 | 1 - 4 kV | 50 / 60 Hz | V. 56 | 1,25 m | Pack F | Vinyl sheath |
| TAGDP0310FXTP125 | 3-10 kV | | | | | |
| TAGDP0520FXTP125 | 5-20 kV | | | | | |
| TAGDP1036FXTP125 | 10-36 kV | | | | | |

* Other Insulating stick available on required. ** Pack F : FR/GB/DE/ES/PT/PL — Pack G : GB/GR/NL/BG/IT/AR/TR

SUPERIOR



# TT015M

## INSULATING PLASTIC STOOL FOR INSIDE USE

STANDARDS
ST EDF N°71

### / USE

Used to provide insulation for a technician during 1st category work or operating on manually operated 2nd or 3rd category separating instruments (switchgear...). Provides insulation from the ground when working near electrical installations. For inside use only.

### / TECHNICAL SPECIFICATIONS

One-piece moulded plastic stool with anti-slip tray.
Fixed insulating legs in PVC, inclined in order tokeep the platform away from contact with verticalwall.
All stools are supplied with anti-slip pads.

| Reference | Voltage | Height under platform | Dimensions | Weight |
|---|---|---|---|---|
| TT015M 24KV | 24 kV | 150 mm | 50 x 50 cm | 3,6 kg |
| TT015M 36KV | 36 kV | | | |
| TT015M 45KV | 45 kV | 237 mm | | 3,9 kg |

PRO-ELITE



# TT016

## INSULATING PLASTIC STOOL FOR INSIDE USE

STANDARDS
ST EDF N°72

### / USE

Used to provide insulation for a technician during 1st category work or operating on manually operated 2nd or 3rd category separating instruments (switchgear...). Provides insulation from the ground when working near electrical installations.

### / TECHNICAL SPECIFICATIONS

Plastic stool with anti-slip tray.
Insulating PVC legs, inclined in order to keep theplatform away from contact with vertical wall.
All stools are supplied with anti-slip pads. Screw legs.

| Reference | Voltage | Height under platform | Dimensions | Weight |
|---|---|---|---|---|
| TT016 24KV | 24 kV | 150 mm | 50 x 50 cm | 3,6 kg |
| TT016 45KV | 45 kV | 237 mm | | 3,9 kg |
| TT016 63KV | 63 kV | 317 mm | | 4,1 kg |

PRO-ELITE



# TT018

## INSULATING PLASTIC STOOL FOR OUTSIDE USE

STANDARDS
ST EDF N°72

### / USE

Used to provide insulation for a technician during 1st category work or operating on manually operated 2nd or 3rd category separating instruments (switchgear...). Provides insulation from the ground when working near electrical installations. For inside use only.

### / TECHNICAL SPECIFICATIONS

Plastic stool with anti-slip tray.
Insulating PVC legs with insulating skirts, inclined in order to keep the platform away from contact with vertical wall. All stools are supplied with anti-slip pads. Screw legs.

| Reference | Voltage | Number of skirts | Height under platform | Dimensions | Weight |
|---|---|---|---|---|---|
| TT018 24KV | 24 kV | 2 | 245 mm | 50 x 50 cm | 4,15 kg |
| TT018 45KV | 45 kV | 3 | 362 mm | | 4,6 kg |
| TT018 63KV | 63 kV | | 413 mm | | 4,8 kg |

PENTA
ELECTRICAL SAFETY PRODUCTS

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PRO-ELITE

# PS2 NEW

## WALL-MOUNTED RESCUE KIT

STANDARDS

LV / 25 KV / 36 KV




### Advantages

- Complete proximity rescue kit for assisting a victim of an electrical accident.
- Transparent, UV-resistant door makes it easy to see all components from the outside.
- Storage and protection of components from dust, spray and splashes for outdoor use, outdoor use and resistance to severe weather weatherproof (IP54).
- Lockable case to prevent the borrowing of material.
- Great modularity, and possibility of adaptation according to needs (optional additional unit and possibility to organize the storage space with removable trays).

### / USE

Quick access wall-mounted rescue kit for rescue intervention in the event of an incident on or near a low voltage or medium voltage electrical istallation.

### / TECHNICAL SPECIFICATIONS

- Weatherproof plastic box, resistant to weather, dust, splashes and marine spray (IP54). Non-mettalic
- UV-resistant transparent door with locking handle that can accommodate a seal or padlock (max. Ø 4.8 mm shackle).
- Equipment mounting insert optimized for efficient storage and quick response.
- Possible to add a shelves for storing protects.
- Wall mounting kit included.



Do not attempt to move the casualty without appropriate equipment.



Free the victim (or cable) using the rescue kit.

| Reference | Description | Dimensions |
|---|---|---|
| PS2-BT-EN | Large wall-mounted kit with equipment for low-voltage use with insulating mat and posters in English | 790 x 790 x 280 mm |
| PS2-25KV-EN | Large wall-mounted kit with equipment for use up to 25 KV use with insulating stool and posters in English | |
| PS2-36KV-EN | Large wall-mounted kit with equipment for use up to 36 KV use with insulating stool and posters in English | |
| PS2-GM | Small empty module, supplied with no components, no posters and no shelf (2 shelves possible) | |
| PS2-PM | Large empty module, supplied with no components, no posters and no shelf (3 shelves possible) | 790 x 400 x 280 mm |
| PS2-CLAY | Single shelf only | 650 x 230 x 40 mm |

* For a customised configuration : please contact us.


Rescue stick


Votage detector


Insulating gloves


Insulating boots


Insulating stool



Talc bottle


Adhesive barrier tape



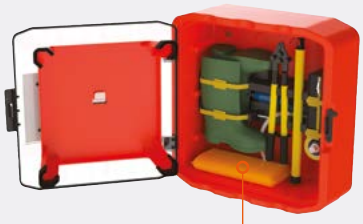
## TYPE KIT

**/ LV VERSION**
- Class 0 insulating gloves
- Class 0 insulating mat

**/ 25 KV VERSION**
- Class 3 insulating gloves
- 24 KV stool

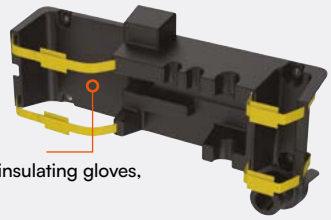
**/ 36 KV VERSION**
- Class 4 insulating gloves
- 36 KV stool

## MODULAR DESIGN ENABLES CUSTOMISATION TO YOUR OPERATION


Large module


Large module with small module optional


**Shelf**
3 positions possible in the large module [ref. : PS2-GM]
2 positions in the small module [ref. : PS2-PM]


**Dedicated shelf**
for the products (insulating gloves, boots, pole ...)

## COMPONENTS INCLUDED IN THE DIFFERENT KITS

| Reference | Description | Quantity | PS2-BT-EN (LV version) | PS2-25KV-EN (25 KV version) | PS2-36KV-EN (36 KV version) |
|---|---|---|---|---|---|
| TB19-45 | Live working safety boots - Size 45 | 1 pair | | • | • |
| GLE36-0/10 | Insulating gloves Class 0 - Size 10 | 1 pair | • | | |
| GLE36-3/10 | Insulating gloves Class 3 - Size 10 | 1 pair | | • | |
| GLE41-4/10 | Insulating gloves Class 4 - Size 10 | 1 pair | | | • |
| RGX-SAC | Canvas storage bag for insulating gloves | 1 unit | • | • | • |
| TS10T | Powder flask | 1 unit | • | • | • |
| UNITAGUFE | Voltage detector | 1 unit | • | • | • |
| PPOLF2/011APV | insulating telescopic pole | 1 unit | • | • | • |
| CSVES | Rescue hook for insulating pole | 1 unit | • | • | • |
| RBCL0600X1000 | Insulating mat Class 0 - Size 0,6 x 1 m | 1 unit | • | | |
| TT015M36KV | Insulating stool 36 KV | 1 unit | | • | • |
| S174JN | Boundary tape | 1 unit | • | • | • |
| AF2-PS2--EN | Set of two adhesive door posters for version identification, and instructions for use | 1 unit | • | • | • |

PRO-ELITE

# VES

## ELECTRICAL SAFETY KIT

STANDARDS

IEC 61243-3 / NFC 18510

CE

- COMPACT : For easier storage in vehicles, the case has been dimensioned according to the european standardbox
- MOBILITY : Exclusive wheel system and handle to facilitate access to the intervention area.
- HIGHT RESISTANCE : The materials and the manufacturing process were selected to ensure a maximum durability of the case.
- HIGH VISIBILITY : Retro reflective strips providing excellent visibility for rescue personnel.
- OPTIMAL STORAGE : The case packs a lot of equipment into a small space.
- Insulating stool use as a lid.




### / USE

The electrical safety kit allows to assist people in presence of electrical hazards, up to 25 kV network with model VES25 or up to 36 kV network with model VES36.
This kit is particularly suitable for the following situations :

- Road accidents
- Electric and hybrid cars
- Cable removal
- Work on photovoltaic panels
- Work on electrified railways
- Industry




### / TECHNICAL SPECIFICATIONS

Contents:

- Insulating stool : 25 000V or 36 000V models available.
- Insulating gloves : class 3 for model VES25 or class 4 for model VES36.
- Insulating boots : protection against step voltage (voltage gradient in the ground).
- Insulating polr, equipped with a hook telescopic pole with pentagonal shape for a perfect grip.
- Voltage detector : detects all voltages of 127 V AC and above (does not detect DC voltages).
- Cable cutter : Insulated 36 000 V cable cutter.
- Talc shaker : for easier donning of gloves.
- Fabric case for gloves : Mechanical and UV protection.
- Adhesive marker tape : for marking off an area, preventing a disconnect switch from being reset, etc.
- Instruction for use : in diagram form for quick reading and guidance.

| Reference | Max operating voltage | Distinctive feature | Dimensions | Weight |
|---|---|---|---|---|
| VES25 | 25 000 V | 25 kV stool and gloves class 3 | 600 x 400 x 310 mm | 15 kg |
| VES36 | 36 000 V | 36 kV stool and gloves class 4 | | |

A flat bottom version is also available, allowing all types of equipment to be stored inside the mobile case. Custom configurations available upon request (please contact us)

SUPERIOR






# B88
# B89

## FIRST AID KIT

### / TECHNICAL SPECIFICATIONS

Contents :
- 5 sterile compresses 5 x 5 cm (10 for B89)
- 2 extensible strips 3 m x 7 cm (4 for B89)
- 1 sterile compression dressing small size
- 1 large sterile compression bandage
- 10 assorted adhesive dressings (20 for B89)
- 1 roll of plaster 5 m x 2 cm
- 1 spray 50 ml of chlorhexidine (for B89 only)
- 2 alcohol compresses
- 2 anti-shock calendula compresses (3 for B89)
- 2 Chlorhexidine compresses (3 for B89)
- 2 packets of anti-burn gel (3 for B89)
- 2 packets of bactericidal gel (3 for B89)
- 1 pair of scissors
- 1 splinter pliers
- 1 box of 12 safety pins
- 1 pair of vinyl gloves (2 for B89)
- 1 first aid guide in 6 languages

Supplied with wall bracket.

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| B88 | First aid set - 4 people | 18 x 13 x 6 cm | 400 g |
| B89 | First aid set - 8 people | 26 x 20 x 9 cm | 700 g |

SUPERIOR



# C347

## SURVIVAL BLANKET

**Advantages**

- SUPERIOR first aid item.

### / USE

Single-use survival blanket. High protection against cold, heat, rain, snow, wind and damp. May also be used as a means of signalling. Do not use it during storms.

### / TECHNICAL SPECIFICATIONS

This survival blanket is made from metallic polyester film, which reflects 90% of heat radiation.
Delivered in individual bag. (14x11 cm)

| Reference | Dimensions | Weight |
|---|---|---|
| C347 | 210 x 160 cm | 60 g |

SUPERIOR



# B134ENS

## FOLDING RESCUE STRETCHET SET

### / USE

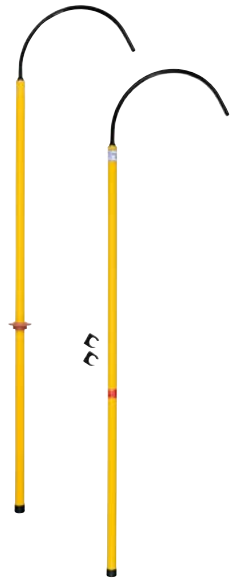
Ideal to quickly evacuate a person.

### / TECHNICAL SPECIFICATIONS

The set contains :
- a reinforced coated canvas stretcher, foldable along its length and width. Aluminium handles and feet.
Dimensions : 229 x 58,5 x 14 cm
Dimensions folded : 115 x 12 x 18 cm
Weight : 8 kg
Max load : 150 kg

- a soft cover with protective frame, handles and carrying straps
- a first aid kit for 4 people
- a survival blanket, 210 x 160 cm
- a pillow with washable cover, 35 x 35 cm
- a blanket 150 x 200 cm

| Reference | Dimensions | Weight |
|---|---|---|
| B134ENS | Folding rescue stretcher set | 13 kg |



# TP12

## INSULATING RESCUE STICK

### / USE

Stick for rescuing an injured technician (electrocution, dizziness...), working on category 1, 2 and 3 substations. It is used to grasp the injured person by the waist and bring them back to a protected area.

### / TECHNICAL SPECIFICATIONS

Test voltage on 300 mm : 100 kV.
Hook : steel tube 18 x 1,5 cm.
Length : 600 mm, delivered dismantled.
Ref. TP12X includes stick (ref. TP12) with adaptor for voltage detector 5-36 kV (TDP536).
Length of the protected area : shaft : 600 mm

| Reference | Description | Operating voltage | Overall length without hook | Weight |
|---|---|---|---|---|
| TP12 45KV | Rescue stick 45 kV with handguard and hook | 45 kV | 1,47 m | 1,4 kg |
| TP12 90KV | Rescue stick 90kV with handguard and hook | 90 kV | 1,97 m | 1,7 kg |
| TP12EC | Rescue stick 45 kV with hook without hand-guard | 45 kV | 1,47 m | 1,35 kg |
| TP12225KV | Rescue stick 225 kV | 225 kV | 2,25 m | 1,95 kg |



# TP31ST2

## 3 ELEMENTS RESCUE STICK 50 KV

### / USE

Stick for rescuing an injured technician (electrocution, dizziness...).
It is used to grasp the injured person by the waist and bring them back to a protected area, it can aslo be used to push a cable away from a victim.
Indoor and outdoor use.

### / TECHNICAL SPECIFICATIONS

The 3 sections are assembled by aluminium screw connectors.
Dielectric strength : 100 kV/30 cm
Hook : steel tube 180 x 15 mm, length 500 mm
The hook can be equipped with the voltage detector TDPESEC (detector not included).

| Reference | Lenght | Weight |
|---|---|---|
| TP31ST2 | 2 m | 1,7 kg |

# BEXT-DA

INNOVATION

## FIRE EXTINGUISHING BALL WITH AUTOMATIC RELASE

STANDARDS

NB 1395 / P1-0218/2010

### Advantages

- Easy to use
- Lightweight and compact
- Self-activating
- No false alarms
- Alarm function
- Enhanced user safety
- Flexible
- Maintenance-free
- Environmentally-friendly



### / USE

On contact with the flame, the detonator inside the ball activates the wick on its outer surface.
In 3 to 10 seconds, an explosion is triggered : the extinguishing powder disperses over an area of 8 to 10 m2 in an open field.
The fire is extinguished instantly by the action of the blast.
To trigger the explosion, the ball can be thrown into the fire, or if the room is unoccupied, the ball is activated by contact with the fire.
Recommended areas are those at high risk of fire, such as electrical cabinets, kitchens, chimneys, engine compartments, etc.

| Reference | Description | Weight |
|---|---|---|
| BEXT-DA | Fire extinguishing ball automatic release | 1,5 kg |

### / TECHNICAL SPECIFICATIONS

- 1.5 kg
- Diameter: 152 mm
- Non-toxic, environmentally friendly
- Self-acting fire extinguishing device
- Triggers in 3 to 10 seconds on contact with flames
- 120 dB alarm on activation
- The extinguishing ball has a 5-year performance life
- Ideal for all prevention scenarios. Extinguishes 5 classes of fire:
  - Class A (wood, paper, textiles, rubber)
  - Class B (flammable liquids, fuels, paints)
  - Class C (gas fuels or gas fires)
  - Electrical fires (<5KW)
  - Class F (Edible oil fires)
- Equivalent to a standard 2.5 kg extinguisher.
- 5-year life and warranty.
- Must be protected from rain and not be direct exposed to sunlight.

SUPERIOR



# BI01

## FIRE SET

### / USE

To be used in boiler room, substations, fuel storage facilities.
Allows to store sand necessary to stop an incipient fire.

### / TECHNICAL SPECIFICATIONS

Reinforced box made with polypropylene with high resistance to flammability, water and dust, fuel, UV rays and changes of temperature.
Box with an ergonomic shovel with clip for lid fitment.
Nylon handles suitable for padlocks.
Side handles for easy carrying.
Fast and easy to assemble, and stock thanks to its stackability when disassembled.

### / This kit contains :

| Reference | Weight |
|---|---|
| BI01 | Polypropylene sand bax |

### / Options :

| Reference | Desciption | Capacity |
|---|---|---|
| S56 | Red steel bucket 1 with handle | 11 L |

| Reference | External dimensions | Internal dimensions | Weight | Capacity |
|---|---|---|---|---|
| BI01 | 65.5 x 52 x 57 cm | 53.6 x 42 x 53.7 cm | 6,3 Kg | 108,5 L |

SUPERIOR




# C348

## FIRE BLANKETS

STANDARDS
BS EN 1869

### / USE

The fire blanket is useful for the protection of the men and the material.
It must always be accessible in offices, workshops and substations.

### / TECHNICAL SPECIFICATIONS

Blanket supplied in an ABS plastic box, which is both chemical and corrosion-resistant.
Instructions provided as symbols that can be readily understood by all.
Box is visible in the dark due to its glow-in-the-dark label.
Ideal where space is limited.
Reusable blankets that must be disposed of when damaged or contaminated.
Temperature range : -20° C to +100° C.
Weight of the blanket : 520 g/m²

| Reference | Cover dimensions | Box dimensions | Weight |
|---|---|---|---|
| C348A | 120 x 120 cm | 26 x 16 x 4 cm | 800 g |
| C348B | 120 x 180 cm | 37 x 18 x 4 cm | 1 400 g |





# PERMANENT EARTHING


/ EARTH CLAMP 460

/ PLATES, WASHERS, EXOTHERMIC WELDING AND KIT 461

/ BUCHHOLZ RELAYS 462


PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

## CPAR
EARTH CLAMP



STANDARDS
According to RTE standard SF404

### / USE
The earth clamp is a set of copper alloy blocks holding the rise of the earth circuit loop.

### / TECHNICAL SPECIFICATIONS
Copper alloy clamp and screws for metal structures up to 20mm thick.
Rated Isc (A) from 30 to 40 kA/1 s and 63kA/0.5 s

| Reference | Description | Weight |
|---|---|---|
| CPAR50-120L | STN-75/116 : Earth clamp for 50 to 120 mm² cables | 255 g |
| CPAR150L | STN-146 : Earth clamp for 150 mm² cables | 310 g |
| CPAR185L | STN-182 : Earth clamp for 185 mm² cables | 465 g |

The use of a bi-metallic plate and washer for mounting on galvanised steel structures reduces the galvanic torque and corrosion.

## 2CPAR
DOUBLE EARTH CLAMP



STANDARDS
According to RTE standard SF404

### / USE
These clamps are similar to the winged earth clamp but include an additional copper alloy block allowing the mounting of an extra conductor.

### / TECHNICAL SPECIFICATIONS
Copper alloy clamp and screws for metal structures up to 20mm thick.
Rated Isc (A) from 30 to 40 kA/1 s and 63kA/0.5 s

| Reference | Description | Weight |
|---|---|---|
| 2CPAR50-120L | STND-75/116 : Double earth clamp for 50 to 120 mm² cables | 340 g |
| 2CPAR150L | STND-146 : Double earth clamp for 150 mm² cables | 370 g |
| 2CPAR185L | STND-182 : Double earth clamp for 185 mm² cables | 649 g |

The use of a bi-metallic plate and washer for mounting on galvanised steel structures reduces the galvanic torque and corrosion.

## CLPAR
WINGED EARTH CLAMP



STANDARDS
According to RTE standard SF404

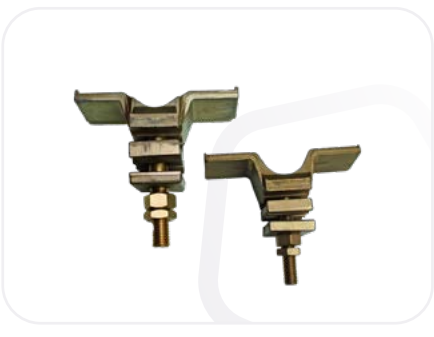
### / USE
These clamps are similar to single earth clamps but provides a pair of wings used for temporary grouding connection during maintenance work on the earthing circuit.

### / TECHNICAL SPECIFICATIONS
Copper alloy clamp and screws for metal structures up to 20mm thick.
Rated Isc (A) from 30 to 40 kA/1s and 63kA/0.5s.

| Reference | Description | Weight |
|---|---|---|
| CLPAR50-120L | STA-2/75-116 : Winged earth clamp for 50 to 120 mm² cables | 614 g |
| CLPAR150L | STA-2/146 : Winged earth clamp for 150 mm² cables | 640 g |
| CLPAR185L | STA-2/182 : Winged earth clamp for 185 mm² cables | 911 g |

The use of a bi-metallic plate and washer for mounting on galvanised steel structures reduces the galvanic torque and corrosion.

## 2CLPAR
DOUBLE WINGED EARTH CLAMP



STANDARDS
According to RTE standard SF404

### / USE
These clamps are similar to the winged earth clamp but include an additional copper alloy block allowing the mounting of an extra conductor.

### / TECHNICAL SPECIFICATIONS
Copper alloy clamp and screws for metal structures up to 20mm thick.
Rated Isc (A) from 30 to 40 kA/1s and 63kA/0.5s.

| Reference | Description | Weight |
|---|---|---|
| 2CLPAR50-120L | STDA-2/75-116 : Double winged earth clamp for 50 to 120 mm² cables | 692 g |
| 2CLPAR150L | STDA-2/146 : Double winged earth clamp for 150 mm² cables | 640 g |
| 2CLPAR185L | STDA-2/182 : Double winged earth clamp for 185 mm² cables | 1 061 g |

The use of a bi-metallic plate and washer for mounting on galvanised steel structures reduces the galvanic torque and corrosion.



# BP13026KITCDT

CRIMPING TOOL KIT FOR SUBSTATIONS

## / USE

This crimping kit is specially designed for your work on grounding circuits on HTA / HTB electrical substations, it includes :

- A robust, reliable 13-ton crimping tool with two batteries

## / TECHNICAL SPECIFICATIONS

Bimetallic plates and washers composed of 15% copper and 85% aluminium (clad aluminium).

- **Plates:** Dimensions 55 × 40 × 1 mm
- **Washers:** Outer diameter 30 mm, thickness 2 mm

| Reference | Strength | Crimping | Crimping time | Autonomy | Battery | Operating temperature | Dimensions | Weight | Hexagonal crimping |
|---|---|---|---|---|---|---|---|---|---|
| BP13026KITCDT | 130 kN | 26 mm | 8-9 sec. depending on section | approx. 150 cycles | 18 V Li-Ion 5 A | -10 / + 50°C | 400 x 75 x 310 mm | 6,5 Kg (with battery) | 6 > 300 mm² |

- A set of 8 dies for tubular lugs of type CDCT tand C crimp of type RDCT

| Reference | Application | | RDCT (C crimps) | CDCT (Tubular lugs) |
|---|---|---|---|---|
| BP13026KITCDT | Substations | Earthing circuits | From 75 to 150 mm² | From 75 to 240 mm² |

# BUCHHOLZ RELAYS



/ Our range of Buchholz Relays has a proven track record of many years' service. As well as supplying a standard range of approved equipment, we also have the capability to design new solutions for any transformer protection requirement.

**Our range includes a range of Buchholz Relays of many sizes and configurations, Dry Air Pumps and gas collectors.**



/ Buchholz Relays from Penta P&B can provide a service for many decades if maintained properly. Our Relays have been providing transformer protection globally for many years.

Most faults in an oil filled Transformer are accompanied by the generation of gas. By using a suitable Relay, the formation of gas can be used as a warning of a developing fault.
Once a specified volume of gas has collected within the Buchholz Relay, the alarm element will cause an alarm indication.

If there is a more serious fault within the Transformer, the trip element will function, the oil/gas mixture will be forced into the relay. The trip element will cut off the supply of the transformer to protect it from further damage, and protect those working around it.

> **Possible causes for Alarm indication**
- Breakdown of insulation.
- Overheating.
- Operation under short-circuit conditions.
- Overload.
- Overheating on windings.

> **Possible causes for Trip**
- Short circuits.
- Punctured bushings.
- Winding/earth faults.



/ **Mounting Position**
The relay should be mounted in the connecting pipe between the transformer and conservator tank. This pipe should be as long and as straight as possible, and must be arranged to slope upwards towards the conservator at an angle within the limits of 3 to 7 degrees to the horizontal. There should be a straight run on the transformer side of the relay of at least five times the inside diameter of the pipe, and at least three times diameter on the conservator side. A machined surface is provided on the relay body to help ensure matching of the mounting flanges, both in the inclined position and horizontal element. When fitting the relay to the pipework, do not attempt to use the mounting holes for alignment.

/ **Connections**
The terminal boxes on double element relays are normally supplied with tapped M20, 25 mm gland entries and bushing. The 750/760 style relays have M25 gland entries and a further two M20 entries.

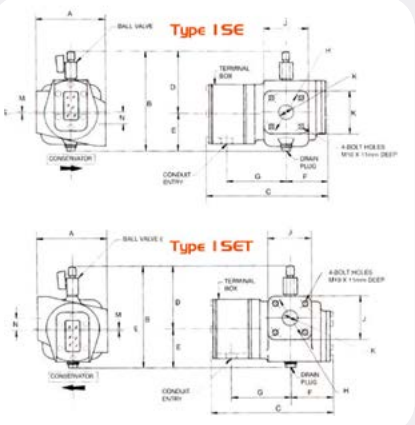
/ **Testing on Site**
Double element relays are provided with a separatable valve to enable the injection of compressed air when testing on-site. To test the operation of the alarm element, air from an air bottle should be admitted slowly so that the alarm operates fully but so as to prevent the element from fluttering.To test the trip element, the valve controlling the air bottle must be quickly shut so that the trip operates satisfactorily. The pressure required is dependent upon the equipment used. To facilitate site testing the portable Dry Air Pump is available.

/ **Routine Testing**
Relays are individually calibrated in accordance with BEBS T2 (1966). Values are taken after the relay has stabilised to room temperature. The oil level is checked to detect any small amounts of gas collected in the top of the relay. Drain points are also tested. The alarm element is set at approximately 75% of the steady oil flow and the trip at 125% (±10%). If fitted, all valves and their connections must be checked. Finally the optical window should be inspected. The alarm flag should operate to function at a steady oil flow of approximately 60 mm/sec. The test element has been concluded with Silicon oil.

## MK10 MODEL

/ **TRIP OPERATION**
When a serious fault occurs, the generation of gas is so rapid that an oil surge is sent through the relay. This flow will impinge upon the flap fitted to the trip element causing it to rotate about its axis and bring the Mercury switch to the closed position, which in turn operates the tripping device. In the event of serious oil loss from the transformer, both alarm and trip elements operate, in line of normal approved industry requirements.

The oil level in the double element relay can be monitored against a graduated scale on the windows both sides.



# SINGLE ELEMENT AND TAP-CHANGER TYPES

Single element type relays are available for 1" bore size, designated 1SE, which operate indiscriminately for gas or oil collection and are suitable for small oil filled transformer, capacitor and potential transformer protection. A special range of single element relays are also available for Tap-changer type transformers which operate for a surge condition or loss of oil only and allow gas, normally produced during tap changing operations to pass freely. The SE relay has only one operating element and operates in the same manner as the DE relays. A special open frame unit designated R575/1 suitable for fitting inside the header tank tap-changers which operate due to gas collection, oil loss and surge conditions is available. A protective diode unit type D1 can also be provided to protect Reed switches employed in single element units.

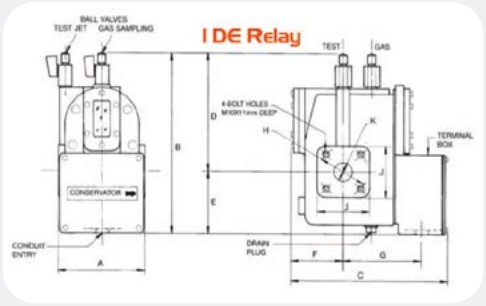
| | Steady Oil Flow (mm/sec) to Operate Trip Element Switch | | Oil level (cc) to operate Alarm Element Switch @ 500 Inclination | | For equipment containing |
|---|---|---|---|---|---|
| **Model** | Pipe angle 10° Not less than | Pipe angle 90° Not more than | Min. | Max. | |
| 1SE | 650 | 900 | 140 | 200 | N/A |
| 1SE/VO | | | 120 | 160 | |
| 1SE/VK/ML | 900 | 1050 | 150 | 230 | |
| 1SET<br>1SET/VO | 450 | 600 | N/A | N/A | |
| 1SET/HF | 650 | 750 | | | |
| 1DE<br>1DE/VO<br>1DE/Vc/o | 1000 | 1300 | 200 | 300 | Up to 1000 litres — 1000 kVA |
| 2DE<br>2DE/VO<br>2DE/Vc/o | 1100 | 1400 | | | 1001/10,000 litres — 1001/10,000 kVA |
| 3DE<br>3DE/VO<br>3DE/Vc/o | 1200 | 1600 | | | 10,000/50,000 litres — 10,001 kVA / 99 MVA |
| 3DE/HF2<br>3DE/HF2/VO | 1900 | 2500 | 250 | 350 | 50,000 litres + — 100 MVA + |

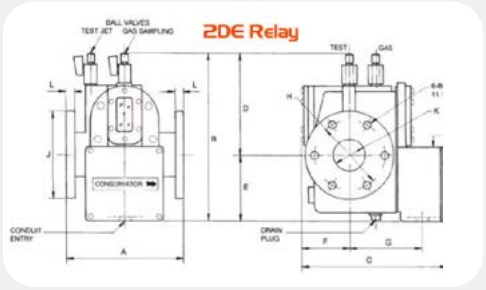
| Type | Dims | A | B | C | D | E | F | G | H | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1DE | mm | 127 | 269 | 232 | 171 | 98 | 76 | 114 | 72 | 76 | 25 | N/A | N/A | N/A |
| | in | 5.0 | 10.6 | 9.13 | 6.75 | 3.9 | 3.0 | 4.5 | 2.84 | 3.0 | 1.0 | | | |
| 2DE | mm | 184 | 269 | 232 | 158 | 111 | 76 | 114 | 110 | 139 | 51 | 13 | N/A | N/A |
| | in | 7.25 | 10.6 | 9.13 | 6.2 | 4.37 | 3.0 | 4.5 | 4.33 | 5.5 | 2.0 | 0.5 | | |
| 3DE | mm | 184 | 269 | 234 | 158 | 111 | 80 | 114 | 130 | 160 | 76 | 13 | N/A | N/A |
| | in | 7.25 | 10.6 | 9.21 | 6.2 | 4.37 | 3.15 | 4.5 | 5.12 | 6.31 | 3.0 | 0.5 | | |
| 1SE | mm | 120 | 174 | 212 | 110 | 64 | 76 | 103 | 72 | 76 | 25 | N/A | 3.0 | 22 |
| | in | 4.75 | 6.85 | 8.35 | 4.33 | 2.52 | 3.0 | 4.0 | 2.84 | 3.0 | 1.0 | | 0.13 | 0.85 |
| 1SET | mm | 120 | 174 | 212 | 104 | 70 | 76 | 103 | 72 | 76 | 25 | N/A | 3.0 | 22 |
| | in | 4.75 | 6.85 | 8.35 | 4.1 | 2.75 | 3.0 | 4.0 | 2.84 | 3.0 | 1.0 | | 0.13 | 0.85 |

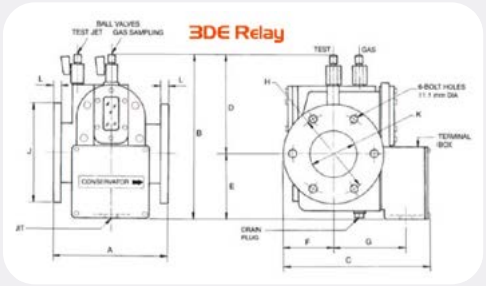
As well as conventional MK10 model Relays, we also provide DIN style relays depending upon your requirements. We can also supply bespoke flange sizes, paint types and numbers of fitting holes. Please contact us for more information on this service.

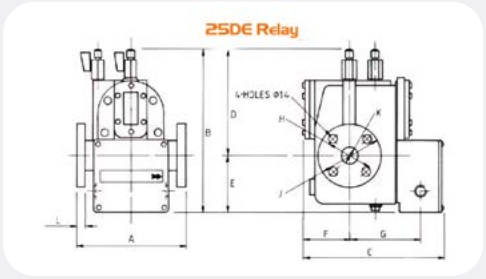
| | Steady Oil Flow (mm/sec) to Operate Trip Element Switch | | Oil level (cc) to operate Alarm Element Switch @ 500 Inclination | | For equipment containing |
|---|---|---|---|---|---|
| **Model** | Pipe angle 10° Not less than | Pipe angle 90° Not more than | Min. | Max. | |
| 25DE<br>25DE/VO<br>25DE/Vc/o | 1000 | 1300 | 200 | 300 | Up to 1000 litres — 1000 kVA |
| 50DE<br>50DE/VO<br>50DE/Vc/o | 1100 | 1400 | | | 1001/10,000 litres — 1001/10,000 kVA |
| 75DE<br>75DE/VO<br>75DE/Vc/o | 1200 | 1600 | | | 10,000/50,000 litres — 10,001 kVA / 99 MVA |
| 75DE/HF2<br>50DE/HF2/VO<br>50DE/HF2/Vc/o | 1900 | 2500 | 250 | 350 | 50,000 litres + — 100 MVA + |

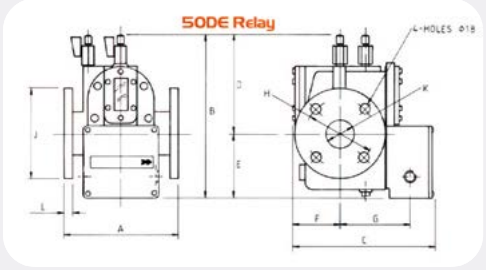
| Type | Dims | A | B | C | D | E | F | G | H | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25DE | mm | 200 | 269 | 232 | 171 | 98 | 76 | 114 | 85 | 115 | 25 | 16 | | |
| | in | 7.87 | 10.6 | 9.13 | 6.75 | 3.9 | 3.0 | 4.5 | 3.35 | 4.53 | 1.0 | 0.63 | | |
| 50DE | mm | 184 | 269 | 232 | 158 | 111 | 76 | 114 | 125 | 165 | 51 | 13 | | |
| | in | 7.25 | 10.6 | 9.13 | 6.2 | 4.37 | 3.0 | 4.5 | 4.92 | 6.5 | 2.0 | 0.5 | | |
| 75DE | mm | 184 | 269 | 254 | 158 | 111 | 100 | 114 | 160 | 200 | 76 | 13 | | |
| | in | 7.25 | 10.6 | 10 | 6.2 | 4.37 | 3.94 | 4.5 | 6.3 | 7.87 | 3.0 | 0.5 | | |

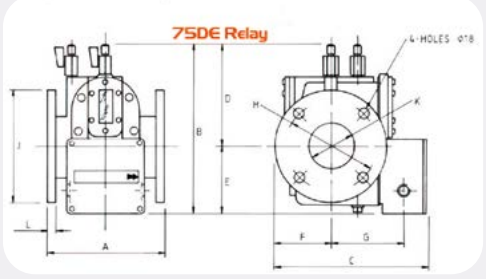


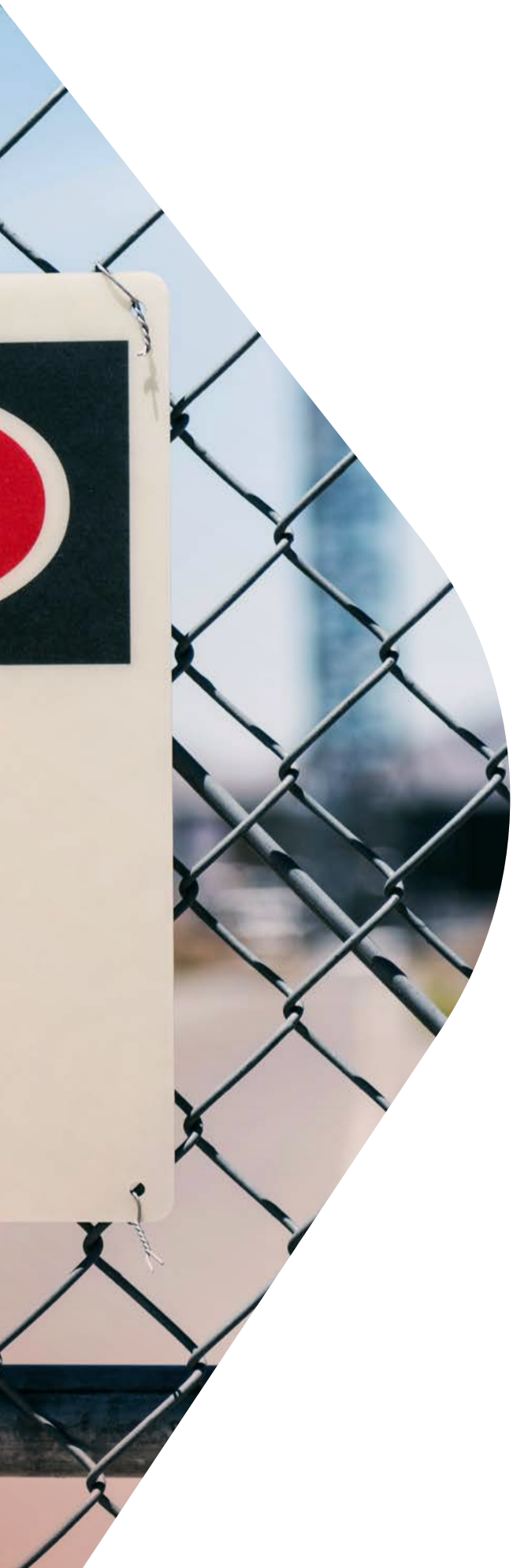




DANGER
HIGH
VOLTAGE



# SIGNAGE, LIGHTING AND MARKING
## THE WORK AREA


/ SIGNAGE 466

/ SUBSTATION AND WORK SITE MARKINGS 474

/ HEADLAMPS 478

/ FLASHLIGHTS 479

/ WORK LIGHT/SPOTLIGHT 480

/ REMOTE AREA LIGHTING SYSTEM 482




## S80ALPAS

OUR SELECTION

ELECTRICAL ACCIDENT RESPONSE - SAFETY SIGN FOR ELECTRICAL AREAS

**Advantages**

- Protective film to protect the sign before installation.

STANDARDS

According to NFC 18-510 emergency response principles (Protect - Alert - Assist)

### / USE

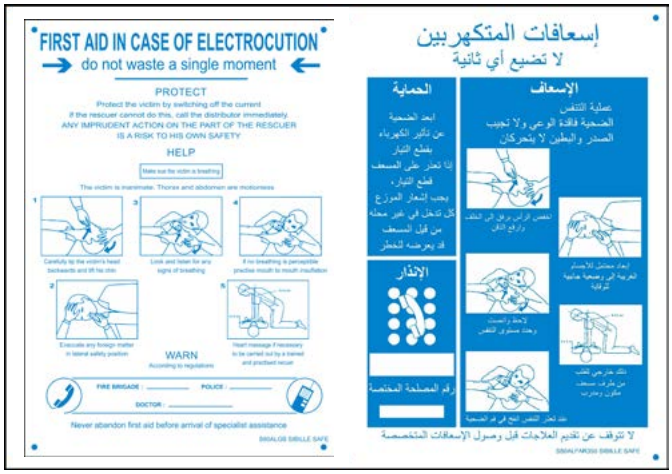
This sign provides guidance on the initial actions to take when an electrical accident occurs.
It helps personnel:
- Protect the area and prevent additional risks,
- Alert emergency services,
- Provide basic first-aid measures when necessary.

It ensures a structured and safe immediate response to electrical incidents.

### / TECHNICAL SPECIFICATIONS

- 4 holes for small models.
- 6 holes for large models.

| Reference | Language | Dimensions | Weight |
|---|---|---|---|
| S80ALPAS-NEU-GB | English | 350 x 500 mm | 500 g |
| S80ALPAS-NEU-GB-PM | | 210 x 297 mm | 250 g |
| S80ALPAS-AR-PM | Arabic with Emergency number | | |




## S80A--

OUR SELECTION

ELECTRICAL INJURY FIRST AID
SAFETY SIGN FOR ELECTRICAL AREAS

**Advantages**

- Protective film to protect the sign before installation.

STANDARDS

February 14, 1992 Decree (Protect - Assist - Alert)

### / TECHNICAL SPECIFICATIONS

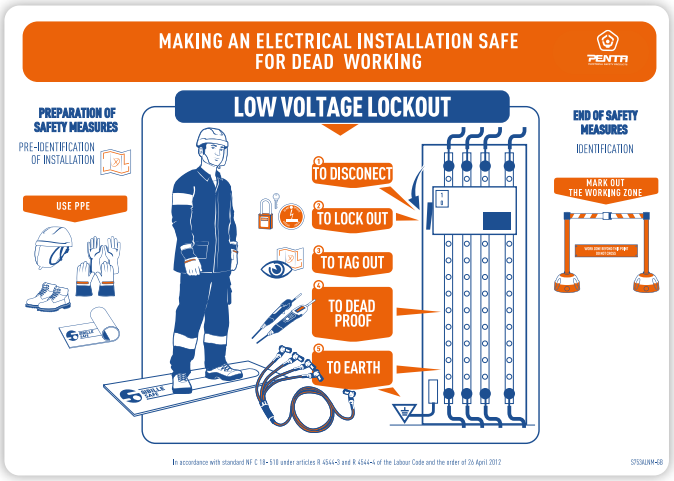
4 holes for small models. 6 holes for large model

### / USE

This sign provides the first-aid procedures for victims of electric shock or electrocution:
Protect the victim from the electrical source,
Save the victim (provide immediate resuscitation if needed),
Alert emergency services.
It ensures first-aid practices in workplaces dealing with electrical risks.

| Reference | Description | Emergency number marking | Language | Dimensions | Weight |
|---|---|---|---|---|---|
| S80ALAF20BGM | Aluminium | Yes | French | 350 x 500 mm | 500 g |
| S80ALAF20BGM-NEU | | No | | | |
| S80ALGB350 | | No | English | | |
| S80ALFGB350 | | French: Yes/English: No | French + English | | |
| S80ALFAR350 | | French: Yes/Arabic: No | French + Arabic | | |
| S80ALGBAR350 | | No | English + Arabic | | |
| S80ALAF20BPM | | Yes | French | 210 x 297 mm | 250 g |
| S80ALAF20BPM-NEU | | No | | | |
| S80ALGB210 | | No | English | | |
| S80AAF20BPM | Adhesive | Yes | French | | 20 g |
| S80AGBAF20BPM | | Yes | English | | |

For a customised sign (material, color, text, etc.): Please contact us.




## S753ALNM-GB OUR SELECTION

"DE-ENERGIZED ELECTRICAL WORK"
LOW VOLTAGE LOCKOUT

**Advantages**

- Protective film to protect the sign before installation.

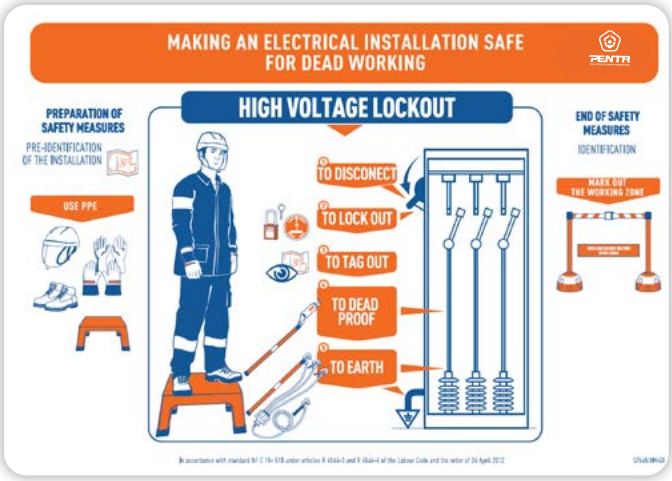
### / USE

Low Voltage Electrical Safety Rules Reminder sign for De-energized Work = GOLDEN RULES

### / TECHNICAL SPECIFICATIONS

- Aluminium sign.
- White background.
- 6 holes Ø 4,5 mm
- Dimensions: 500 x 350 mm
- Weight: 500 g

| Reference | Description |
|---|---|
| S753ALNM-GB | English |
| S753ALNM | French |




## S754ALNM-GB OUR SELECTION

"DE-ENERGIZED ELECTRICAL WORK"
HIGH VOLTAGE LOCKOUT

**Advantages**

- Protective film to protect the sign before installation.

### / USE

High Voltage Electrical Safety Rules Reminder sign for De-energized Work = GOLDEN RULES

### / TECHNICAL SPECIFICATIONS

- Aluminium sign.
- White background.
- 6 holes Ø 4,5 mm
- Dimensions: 500 x 350 mm
- Weight: 500 g

| Reference | Description |
|---|---|
| S754ALNM-GB | English |
| S754ALNM-AR | Arabic |
| S754ALNM | French |




## S755ALNM-GB

"SAFETY REQUIREMENTS" SIGN

**Advantages**

- Protective film to protect the sign before installation.
- Enhanced rigidity.
- Optimal coating adhesion and uniform color aging.
- Excellent adhesion and outstanding resistance to weather, UV exposure, and chemicals.

### / USE

Sign must be systematically displayed in all rooms and areas where electrical hazards exist, such as electrical substations, industrial facilities..

| Reference | Lang. |
|---|---|
| S755ALNM-GB | English |
| S755ALAR | Arabic |
| S755ALNM | French |

### / TECHNICAL SPECIFICATIONS

- White background and blue text
- 6 holes.
- Dimensions: 500 x 350 mm
- Weight: 500 g

For a customised sign (material, color, text, etc.): Please contact us.




## S756ALNM-GB

"GENERAL REQUIREMENTS" SIGN

**Advantages**

- Protective film to protect the sign before installation.
- Screen-printed raw aluminum backing for enhanced rigidity.
- White pre-coated surface for optimal coating adhesion and uniform color aging.
- Two-component polyurethane ink providing excellent adhesion and outstanding resistance to weather, UV exposure, and chemicals.

### / USE

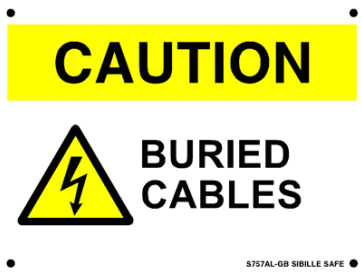
Sign must be systematically displayed in all rooms and areas where electrical hazards exist, such as electrical substations, industrial facilities...

| Reference | Lang. |
|---|---|
| S756ALNM-GB | English |
| S756ALAR | Arabic |
| S756ALNM | French |

### / TECHNICAL SPECIFICATIONS

- White background and blue text
- 6 holes.
- Dimensions: 500 x 350 mm
- Weight: 500 g

For a customised sign (material, color, text, etc.): Please contact us.




## S757AL-GB

''CAUTION BURIED CABLES'' SIGN

### / TECHNICAL SPECIFICATIONS

- Aluminium
- 4 holes Ø 4.5 mm
- Language: english
- Dimensions: 200 x 150 mm

| Reference | Language |
|---|---|
| S757AL-GB | English |
| S757AL | French |



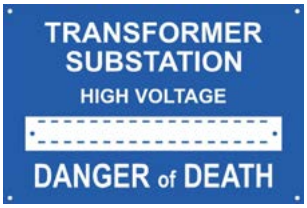

## S750ALGB

''DANGER - KEEP OUT - ELECTRICAL STATION'' ALUMINIUM SIGN

### / TECHNICAL SPECIFICATIONS

- Aluminium
- 4 holes Ø 4.5 mm
- Interaxial distance: 185 x 135 mm
- Dimensions: 200 x 150 mm

| Reference | Language |
|---|---|
| S750ALGB | English |
| S750AL-AR | Arabic |
| S750AL | French |




## S80ALPR10NEU-GB

SIGN FOR POST OFFICE DOOR

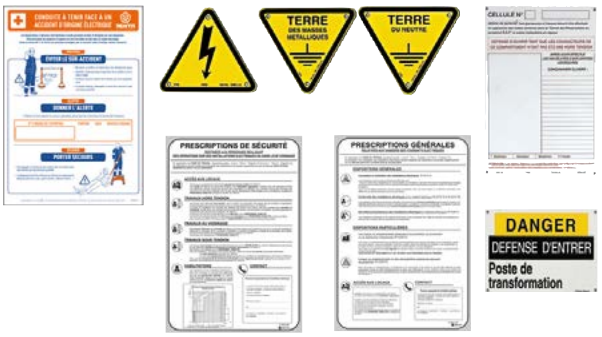
### / TECHNICAL SPECIFICATIONS

- Screen-printed aluminium sign
- Notched model
- 4 holes Ø 4.5 mm
- Centre-to-centre distance: 300 x 200 mm

| Reference | Language |
|---|---|
| S80ALPR10NEU-GB | English |
| S80ALPR10NEU | Arabic |

## S759AL-NEU

STATION SIGNALLING KIT IN FRENCH LANGUAGE




For a customised sign (material, color, text, etc.): Please contact us.

### / This kit contains

| Reference | Description |
|---|---|
| S335ALPR40 | PR40 aluminium sign with changeable layout |
| S750AL | ''Danger - no entry - transformer station''poster |
| S755ALNM | ''Safety regulations'' poster |
| S756ALNM | ''General requirements'' poster |
| S80AL-PASNEU-FR-GM | Poster for post office care for the electrified |
| S81ALTM | Earth triangle for metallic grounds |
| S81ALTN | Neutral earth triangle |
| S81ALT10100 | T10 Flash Triangle |

# S773AL-NEU

## STATION SIGNALING KIT - IN FRENCH LANGUAGE




### / TECHNICAL SPECIFICATIONS

Safety kit containing a set of aluminium posters.

### / This kit contains

| Reference | Description |
|---|---|
| S80AL-PASNEU-FR-GM | Poster for post office care for the electrified, |
| S80ALPP30 | "No posting" poster |
| S81ALT10100 | T10 Flash Triangle |
| S81ALTM | Earth triangle for metallic grounds |
| S81ALTN | Neutral earth triangle |
| S335ALPR40 | PR40 aluminium sign with changeable layout |
| S750AL | "Danger - no entry - transformer station" poster |
| S754ALNM | "Electrical work off voltage" sign medium-voltage |
| S755ALNM | "Safety regulations" poster |
| S756ALNM | "General requirements" poster |

# S774AL-NEU-GB

## STATION SIGNALLING KIT - IN FRENCH LANGUAGE




### / TECHNICAL SPECIFICATIONS

- Aluminium kit:
- Warning triangle (S81ALT10100) and earthing triangle (S81ALTMGB/ S81ALTNGBGED)
- 3 holes diam. 4.5 mm,
- S750ALGB sign: 4 holes diam. 4,5mm,
- S754ALNM-GB sign: 6 holes diam. 4,5mm.

### / This kit contains

| Reference | Description |
|---|---|
| S81ALT10100 | Triangle with lightning symbol |
| S750ALGB | Warning sign "danger keep out" |
| S754ALNM-GB | Warning sign work on disconnected line — HV |
| S80ALPAS-NEU-GB | "Responding to an electrical accident" sign |
| S81ALTNGBGED | Triangle "ground for neutral" |
| S81ALTMGB | Triangle "Ground frame" |

# S784AL-NEU

## STATION SIGNALLING KIT - IN FRENCH LANGUAGE




### / TECHNICAL SPECIFICATIONS

Safety kit containing a set of aluminium posters.

### / This kit contains

| Reference | Description |
|---|---|
| S80AL-PASNEU-FR-GM | Poster for post office care for the electrified |
| S81ALT10100 | T10 Flash Triangle |
| S80ALPP30 | "No posting" sign |
| S81ALTM | Earth triangle for metallic grounds |
| S81ALTN | Neutral earth triangle |
| S335ALPR40 | PR40 aluminium sign with changeable layout |
| S750AL | Danger - no entry - transformer station alu poster |
| S754ALNM | Sign "electrical work off voltage" medium-voltage |

# S786AL-NEU

## STATION SIGNALING KIT - IN FRENCH LANGUAGE




### / TECHNICAL SPECIFICATIONS

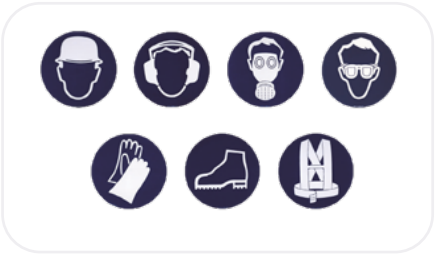
Safety kit containing a set of aluminium posters.

### / This kit contains

| Reference | Description |
|---|---|
| S80ALPASNEU-FR-PM | Poster for post office care for the electrified |
| S80AL-PASNEU-FR-GM | Poster for post office care for the electrified |
| S80ALPP30 | No-posting sign |
| S81ALT10100 | T10 Flash Triangle |
| S81ALTM | Earth triangle for metallic grounds |
| S81ALTN | Neutral earth triangle |
| S335ALPR40 | PR40 aluminium sign with changeable layout |
| S750AL | Danger - no entry - transformer station alu poster |
| S754ALNM | Sign "electrical work off voltage" medium-voltage |
| S755ALNM | "Safety regulations" poster |
| S756ALNM | "General requirements" poster |

# S87

MANDATORY SAFETY SIGNS



| Reference | Symbol | Material | Diameter |
|---|---|---|---|
| S8701 | Wear safety helmet | Plastic | 30 cm |
| S637A50 | | Adhesive | 6 cm |
| S637A75 | | | 8 cm |
| S8702 | Wear ear protection | Plastic | 30 cm |
| S506A50 | | Adhesive | 6 cm |
| S506A75 | | | 8 cm |
| S8703 | Wear respiratory protection | Plastic | 30 cm |
| S638A50 | | Adhesive | 6 cm |
| S638A75 | | | 8 cm |
| S8704 | Wear eye protection | Plastic | 30 cm |
| S639A50 | | Adhesive | 6 cm |
| S639A75 | | | 8 cm |
| S8705 | Wear hand protection | Plastic | 30 cm |
| S640A50 | | Adhesive | 6 cm |
| S640A75 | | | 8 cm |
| S8706 | Wear safety footwear | Plastic | 30 cm |
| S641A50 | | Adhesive | 6 cm |
| S641A75 | | | 8 cm |
| S8707 | Wear safety harness | Plastic | 30 cm |
| S642A50 | | Adhesive | 6 cm |
| S642A75 | | | 8 cm |




# S81 - S72 - S73 - S74

ELECTRICAL HAZARD WARNING SIGNS AND EARTH SIGNS

### / TECHNICAL SPECIFICATIONS

- Triangular sign with 3 holes Ø 4.5 mm
- Interaxial distance:
  80 mm for the 100 mm model
- Interaxial distance:
  180 mm for the 200 mm model

| Reference | Symbol | Material | Diameter |
|---|---|---|---|
| S81AL T10 100 | Lightning T10 | Aluminium | 100 mm |
| S81 T10 100 | | Plastic | |
| S81 AL T10 200 | | Aluminium | 200 mm |
| S81 T10 200 | | Plastic | |
| S81A T10 50 | | Adhesive | 50 mm |
| S81A T10 100 | | | 100 mmm |
| S81A T10 200 | | | 200 mm |
| S728AL 100 | Electrocuted man | Aluminium | 100 mm |
| S728AL 200 | | | 200 mm |
| S728 | | Plastic | 100 mm |
| S728A 050 | | Adhesive | 50 mm |
| S728A 100 | | | 100 mm |
| S81TGB EARTH | Earth | Plastic | |
| S81ALTGB EARTH | | Aluminium | |
| S734AGB EARTH | | Adhesive | |
| S81ALTGB GING | Grounding | Aluminium | |
| S81TGB GRDING | | Plastic | |
| S734AGB GDING | | Adhesive | |
| S81ALTGB GROUND | Ground | Aluminium | |
| S81TGB GROUND | | Plastic | |
| S734AGB GROUND | | Adhesive | |
| S81ALTNGB GED | Grounded for neutral | Aluminium | |
| S81TNGB GRED | | Plastic | |
| S736AGB GRDED | | Adhesive | |
| S81ALTNGB GND | Ground for neutral | Aluminium | |
| S81TNGB GROUN | | Plastic | |
| S736AGB GROUN | | Adhesive | |
| S81ALTMGB | Ground frame | Aluminium | |
| S81TMGB | | Plastic | |
| S735AGB | | Adhesive | |



# S621 - S632

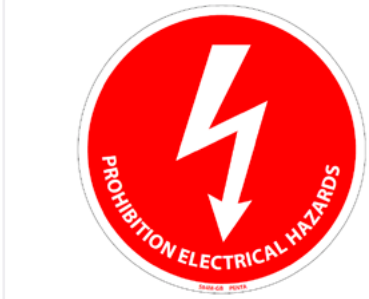
EXPLOSION SIGN

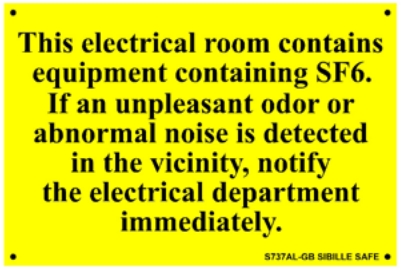
### / TECHNICAL SPECIFICATIONS

Adhesive or plastic triangular sign.
Yellow background, black symbol and border.

| Reference | Description | Diameter | Weight |
|---|---|---|---|
| S621 | Adhesive triangular sign | 10 cm | 30 g |
| S632 | Plastic triangular sign | | 40 g |




## S83M

‘WORKING AREA LIMIT’’
IN FRENCH LANGUAGE
MAGNETIC DISC Ø 300 MM

### / TECHNICAL SPECIFICATIONS

- Green background, white print.

| Reference | Marking | Diameter |
|---|---|---|
| S83M | ‘‘Limite zone de travail’’ | 30 cm |

For a customised sign (material, color, text, etc.): Please contact us.

## S84M-GB

PROHIBITION ELECTRICAL HAZARDS + SYMBOL MAGNETIC DISC Ø 300 MM

### / TECHNICAL SPECIFICATIONS

- Red background, white print.

| Reference | Marking | Diameter |
|---|---|---|
| S84M-GB | ‘‘Prohibition electrical hazards’’ | 30 cm |

## S737AL-GB

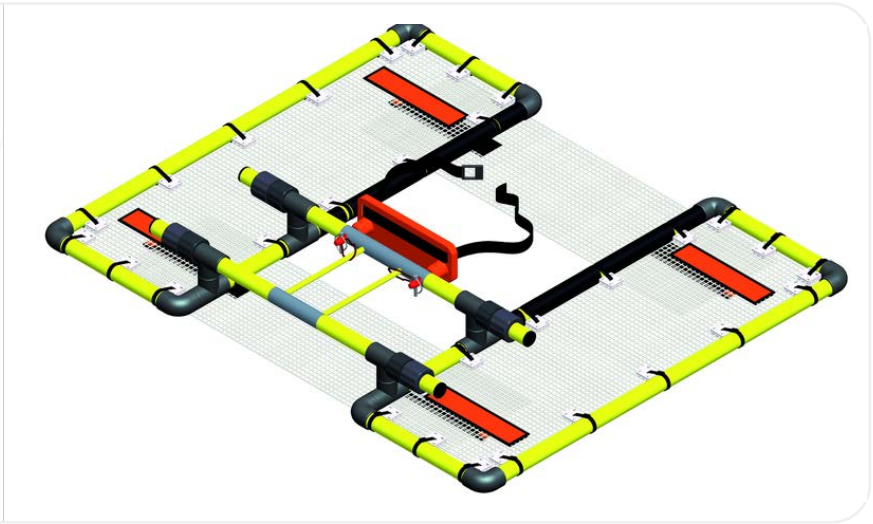
‘‘EQUIPMENT CONTAINING SF6’’ SIGN

### / TECHNICAL SPECIFICATIONS

- Aluminium
- 4 holes Ø 4.5 mm, centres 286 x 186 mm
- Dimensions: 300 x 200 mm

| Reference | Language |
|---|---|
| S737AL-GB | English |
| S737AL | French |





## ELISOL

MARKING OF THE MINIMUM APPROACH DISTANCE

**Advantages**

Operator safety is guaranteed:

- The vicinity zone is marked with insulated frames covered with wire mesh which eases the respect of the distances.
- After the installation has been completed, the permanent surveillance from the ground is not compulsory (even if strongly advised).
- Flexibility: adapt itself to all poles
- The 2 frames covered with wire mesh slide to adapt themselves to all types and diameters of poles.
- Two additional insulated wire meshes can be set up with Velcro closures to close gaps betweens the frames.
- Reliability: long-lasting on construction site.
- Based on a well proven technology for high Voltage, the components of this boundary marker are designed to deal with mechanical and electrical stress.

### / USE

Material demarcation of the working area during operations on power poles.

### / TECHNICAL SPECIFICATIONS

Minimum Approach Distance (from live parts) = 0,50 U (kV) +0,50m




# XE90

## NET WITH RIGID MESH

### / USE

Perfect to quickly and clearly delimit a working and/or dangerous zone. For indoor and outdoor use.

### / TECHNICAL SPECIFICATIONS

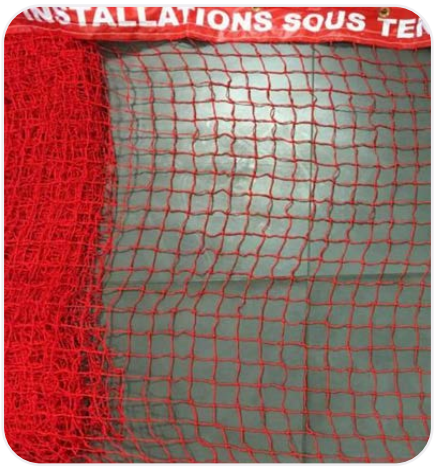
- H.D.P.E. mesh
- Dimensions: 1,2 x 20 m
- Possibility to mark the mesh (in any languages), please contact us.
- To be used with marker posts, ref. XE9107N

**Advantages**

- Easy to wind and unwind thanks to its rigid mesh

| Reference | Colour | Marking |
|---|---|---|
| XE9072V-80X80 | Green | Yes* |
| XE9092 | Yellow | Yes* |
| XE9061J | Yellow | No |
| XE9093V | Green | No |
| XE9093R | Red | No |

* One side, white on green, "LIMITE DE LA ZONE DE TRAVAIL - NE PAS FRANCHIR" and one side, white on red "VOUS ÊTES EN DEHORS DE LA ZONE DE TRAVAIL"



# XE91

## NET WITH TENNIS LIKE MESH

### / USE

Great to delimit working zones for substations, industrial sites - indoor and outdoor.

| Reference | Colour | Marking |
|---|---|---|
| XE9133-100X100 | Green | Yes |
| XE9120 | Red | |
| XE9105 | Yellow | |
| XE9105V | Green | |

### / TECHNICAL SPECIFICATIONS

- Polyamide mesh
- Dimensions: 1,2 x 20 m
- Possibility to mark the mesh (in any languages), please contact us.
- To be used with marker posts, ref. XE9107

**Advantages**

- Easy to set up with the pull-out handle.
- Light weight compare to the XE90 nets, thanks to its supple and flexible mesh.



# XE9072C

## ROPE FOR WARNING MESH

### / TECHNICAL SPECIFICATIONS

- Rope: Ø 6 mm
- Supplied with 21 steel pins

| Reference | Length | Weight |
|---|---|---|
| XE9072C | 25 m | 540 g |



# EPFIPE

## EXTRA LARGE SAFETY PIN FOR WARNING MESH

### / TECHNICAL SPECIFICATIONS

- Transport/storage pin for warning mesh.
- Made in stainless steel Ø 4 mm



# XE9070

## BASE FOR ROD

### / USE

To maintain the rods on concrete ground.

### / TECHNICAL SPECIFICATIONS

- Equipped with a carrying handle.
- Welded and painted.
- Can be fitted with posts reference XE9107N, XE9062, S168,F05, FTPICLO.
- Dimensions: 400 x 300 x 105 mm

| Reference | Description | Weight |
|---|---|---|
| XE9070 | Base for rod | 6,72 kg |
| XE907015 | Base with 15 kg weight for fixing rod | 15 kg |

ESSENTIAL

# XE9070X

INNOVATION

## STACKABLE BASE FOR FIXING ROD XE9107 AND XE9107N

**Advantages**

- Very resistant to all weather.
- Compact and stackable in order to optimize storage.
- Easy to use and move thanks to two ergonomic handles.
- Sustainable solution: base made from recycled material.



### / USE

To maintain fixing rods and demarcation nets, in order to mark out work areas of a de-energized workstation. For electrical maintenance operations, especially for substations.

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| XE9070X | Stackable base for fixing rod | 50 x 44 x 9,5 cm | 8 kg |
| XE9107 | Aluminium rod with hooks | 1,40 m x 25 mm | 820 g |
| XE9107N | Aluminium rod with clamping buckles | | |

### / TECHNICAL SPECIFICATIONS

- Base made from recycled material.
- Base with carrying handle.
- Stackable base.
- 4 mm metal plate, screwed under the base to secure the part holding the rod.



# XE9068

## HANDLE FOR MESH CLAMPS

### / TECHNICAL SPECIFICATIONS

- Painted steel
- Dimensions: 430 x 120 x 10 mm
- Weight: 640 g



# XE9060

## UNWINDING TROLLEY

### / TECHNICAL SPECIFICATIONS

- Tubular steel frame.
- Large diameter wheels.
- Capacity max: 60 m.
- Dimensions: 155 x 100 x 70 cm
- Weight: 36 kg



# EDFM

## INSULATED FRAME TO DELIMIT THE WORKING ZONE

### / TECHNICAL SPECIFICATIONS

- Made in cylindrical polyethylene tubes
- "Electrocuted man" banner.
- Rotating clamp with steel collar
- Dimensions: 560 x 560 mm
- Weight: 1,5 kg



# XE9066

## HOLDING CLAMP

### / USE

Allows the hanging of warning nets by using the existing supports.

### / TECHNICAL SPECIFICATIONS

- Dimensions: 115 x 90 x 25 mm
- Weight: 420 g



# XE9067

## CLAMP

### / TECHNICAL SPECIFICATIONS

- To suspend the mesh
- Dimensions: 260 x 105 x 70 mm
- Weight: 500g

One-piece unit, high mechanical resistance



Stainless steel wire detectable with on surface locating equipment

# S126AR

## WARNING MESH FOR BURIED CABLES

STANDARDS

EN 12613

### / TECHNICAL SPECIFICATIONS

- Meshing: 85 x 85 mm
- Dimensions: 0,30 x 100 m
- Weight: 2,45 kg

ESSENTIAL

# BINARD NEW

NET AND CHAIN WINDER/UNWINDER



### / USE

The reel/unwinder is a removable structure equipped with a net reel and a chain reel that allows the marking of cells (transformers). The interchangeable elements make it easy to install only the net or chain part or both. The net and the chain are each protected by a UV protective cover.

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| CDC-BINARD | Lockout trolley | 190 x 80 x 150 cm | 45 kg |
| CDB-BINARD | Marking trolley | 140 x 82 x 210 cm | 36 kg |
| ED-BINARD | Unwinder | 130 x 40 x 130 cm | |



## XE9107N

FIXING ROD WITH ADJUSTABLE STRAPS

### / USE

To fix and maintain in place the marking net on electrical sites, outdoors, especially in substations. Great for XE90 nets (rigid mesh).

### / TECHNICAL SPECIFICATIONS

- Made in aluminium with 3 adjustable riveted straps.
- To be put on base XE9070X or in a buried beacon.

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| XE9107N | Ø 25 mm | 1,40 m | 820 g |



## XE9107

FIXING ROD WITH HOOKS

### / USE

Ideal to secure XE91 nets (tennis like mesh) and delimit a working zone.

### / TECHNICAL SPECIFICATIONS

- Made of aluminium with 4 hooks to maintain the mesh.
- It is recommended to place a rod every 3 metres.

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| XE9107 | Ø 25 mm | 1,40 m | 840 g |



## S168

FIXING ROD WITH PENETRATION TIP

### / USE

Fixing rod to maintain nets outdoor.

### / TECHNICAL SPECIFICATIONS

- Made of steel and painted, with 3 hooks to maintain the mesh.
- It is recommended to place a rod every 3 metres.

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| S168 | Steel Ø 16 mm | 1,3 m | 2,06 kg |



## F05

FIXING ROD WITH PENETRATION TIP, FOR WARNING LANTERN

### / USE

Rod with hook on top to suspend chains, ropes, road marking ribbons, lanterns or to maintain demarcation nets.

### / TECHNICAL SPECIFICATIONS

- Made of steel with 1 hook on top. Outdoor use.

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| F05 | Ø 14 mm | 1,3 m | 1,7 kg |



## FTPICLO

FIXING ROD WITH PENETRATION TIP, FOR FENCES

### / USE

Rod with hook on top to suspend chains, ropes, roadmarking ribbons, lanterns or to maintain demarcation nets. Outdoor use.

### / TECHNICAL SPECIFICATIONS

- Made of steel and painted, with 2 hooks.
- U hook on top: Ø 14 mm.

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| FTPICLO | Steel Ø 18 mm | 1,5 m | 3,30 kg |



## F06

FIXING ROD WITH PENETRATION TIP

### / USE

Rod with hook on top to suspend chains, ropes, road marking ribbons, lanterns or to maintain demarcation nets or fences. Outdoor use.

### / TECHNICAL SPECIFICATIONS

- Made of steel, with 1 hook.
- U hook on top: Ø 16 mm.

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| F06 | Ø 16 mm | 1,2 m | 2,1 kg |





# F10

FIXING ROD WITH METAL BASE

### / USE

Rod with hook on top to suspend chains, ropes, road marking ribbons, lanterns or to maintain demarcation nets or fences. Indoor and outdoor use.

### / TECHNICAL SPECIFICATIONS

- Made of steel and painted, rod with a hook on top.
- Square base (side of 350 mm), to be placed on the ground.

| Reference | Diameter | Length | Weight |
|---|---|---|---|
| F10 | Ø 16 mm | 1 m | 4,2 kg |




# S82R10

PLASTIC SIGN FOR ''WORK ZONE'' IN FRENCH

| Reference | Weight | Dimensions | Version |
|---|---|---|---|
| S82AIR10 | 160 g | 300 x 200 mm | Magnetic |
| S82R10 | 80 g | 300 x 200 mm | Plastic |
| S82ALR10 | 220g | 300 x 200 mm | Aluminium |

Customization with a minimum of order: please contact us.



# S120D - S120E

RED WARNING FLAG - ELECTRICAL HAZARD

### / TECHNICAL SPECIFICATIONS

Made in vinyl coated fabric.
Colours: red background, white symbol or/and lettering.
Other languages, colours and dimensions are available (with a minimum of order), please contact us.

| Reference | Description | Dimensions | Weight |
|---|---|---|---|
| S120D | Horizontal flag, with wooden stick (75 cm length), with white symbol electrocuted man and ''DANGER DE MORT'' | 600 x 350 mm (flag only) | 130 g |
| S120E | Vertical flag with a cotton string | 500 x 350 mm | 100 g |




# S85

RED WARNING BANNER - ELECTRICAL HAZARD

### / TECHNICAL SPECIFICATIONS

Coated fabric banner with a cotton string drawstrings and 4 metallic eyelets.
Colours: red background and white symbol and lettering.
Other languages, colours and dimensions are available (with a minimum of order), please contact us.

| Reference | Marking | Dimensions | Weight |
|---|---|---|---|
| S85GBB | Installation under voltage Danger of death | 1 x 0,2 m | 95 g |
| S85GBC | Protected area boundary No entry | | |
| S85GBA | Danger of death | | |
| S85GBC1 | Working area boundary No entry | | |



## S175JRNGP

REFLECTIVE SAFETY TAPE

### / TECHNICAL SPECIFICATIONS

- 1 side: yellow fluorescent with a 10 mm retro reflective band: "grey class B"
- 1 side: red fluorescent
- Reel dimensions: Ø 17 cm
- Tape dimensions: 50 mm x 50 m
- Weight: 600 g



## S67

ADHESIVE TAPE

### / TECHNICAL SPECIFICATIONS

- Red background, white writing
- Dimensions: 50 mm x 100 m
- Weight: 300 g

Other languages, colours and dimensions are available (with a minimum of order), please contact us.



## DDS

RED AND WHITE STRAP DISPENSER FOR TRAFFIC CONES

### / USE

- To be used with traffic cones for quick delimitation
- Indoor and outdoor use

| Ref. | Lenght | Strap width |
|---|---|---|
| DDS3 | 3 m | 50 mm |
| DDS4 | 4 m | |



## S170
## S170S

DEMARCATION TAPE IN COATED FABRIC

### / TECHNICAL SPECIFICATIONS

- Red tape for marking the working area.

| Ref. | Description | Tape lenght | Weight |
|---|---|---|---|
| S17010 | Tape with a D-shape ring at the end | 10 m | 170 g |
| S17020 | Tape with a D-shape ring at the end | 20 m | 360 g |
| S170S20 | Tape with with a carabiner at the end, and, 25 cm above on the tape a D-shape ring | | 170 g |
| S170T2 | Tape with a D-shape ring at the end, mounted on a metallic reel T04 | | 1 090 g |



## T04

METALLIC REEL

### / TECHNICAL SPECIFICATIONS

- Reel fitted with a pin for blocking the tape and a spring with snap fastener for the D-shaped ring.
- Delivered without tape.
- Usable with S17010 and S17020 tapes.
- Dimensions: 24 x 18 x 14,5 cm
- Weight: 860 g

# S951SAFE/S952SAFE/S953SAFE/S954SAFE/S955SAFE

## LED HEADLAMPS | SHARED FEATURES

All models share the following characteristics:

- Universal mounting on all helmets on the market thanks to the CASADH mounting plate (optional).
- Practical: it can be rotated vertically by 180° (for the S953SAFE: 150°) thanks to precise adjustment by notching.
- Polyamide housing, resistant to hydrocarbon splashes, oils and corrosive liquids.
- High-quality polycarbonate lens.
- Lamp cleaning by rinsing with clean water and drying.
- Adjustable, hypoallergenic elastic headband, washable at 30°C.
- Supplied with 4 hook for attaching the headband to safety helmets.
- Made in France.



### S951SAFE
LED HEADLAMP
**UP TO 50 LUMENS**

**/ KEY FEATURES**

- IP54 waterproof rating: resistant to weather conditions (rain, snow, etc.) and dust.
- Wide uniform beam with 3 intensity levels for comfortable illumination of the work area and hands.
- High impact and crush resistance (Fall height 2 m).
- Electronic LED protection (in case of reverse polarity). Self-cleaning contact.
- Supplied with 3 round Alkaline batteries LR03AAA 1.5 V
- Waterproof battery cap.

STANDARDS
ANSI FL1 | IEC 62471 | EN 60598-1

| Brightness levels | Light output | Light beam distance | Runtime |
|---|---|---|---|
| Max | 50 lumens | 25 m | 18 h |
| Mid | 25 lumens | 18 m | 30 h |
| Eco | 10 lumens | 12 m | 89 h |



### S952SAFE
LED HEADLAMP
**UP TO 150 LUMENS**

**/ KEY FEATURES**

- IP54 waterproof rating: resistant to weather conditions (rain, snow, etc.) and dust.
- Dual beam: wide beam for close-up work, narrow beam for distance.
- Shock-resistant with anti-accidental ON/OFF lock.
- Electronic LED protection (in case of reverse polarity).
- Self-cleaning contact.
- Supplied with 3 round Alkaline batteries LR03AAA 1.5 V
- VARIO mode for precise adjustment of light intensity.
- Battery test mode to check the remaining charge.

STANDARDS
ANSI FL1 | IEC 62471 | EN 60598-1

| Beam | Light output | Light beam distance | Runtime |
|---|---|---|---|
| Narrow | 150 lumens | 81 m | 7h30 (300h in VARIO mini mode) |
| Wide & uniform | 140 lumens | 33 m | |



### S953SAFE
RECHARGEABLE
LED HEADLAMP
**UP TO 330 LUMENS**

**/ KEY FEATURES**

- IP54 waterproof: weather- and dust-resistant.
- High impact and crush resistance (Fall height 2 m)
- Side switch for selecting lighting modes.
- Charge completion indicator light.
- USB-C charging: 7 h charge time, 400+ cycles.
- 3.7 V 3500 mAh lithium-ion battery: over 9 hours of runtime.
- Brightness adjustable on all three beams with memory of the last setting.

STANDARDS
ANSI FL1 | IEC 62133 | UN 38.3 | EN 60598-1 | EN 62471 | EN 60598-1

| Mode | Beam | Light output | Light beam distance | Runtime |
|---|---|---|---|---|
| Fast movement | Dual beam (narrow and wide) | 6 to 330 lumens | 9m to 86m | 97h to 9h |
| Inspection | Focused | 6 to 270 lumens | 15m to 110m | 90h to 10h |
| Close-up work | Wide, uniform | 6 to 280 lumens | 7m to 46m | 90h to 10h |
| Signaling (red light) | Medium | / | / | 52h (Steady red) 102h (Flashing red) |



### S954SAFE
LED HEADLAMP
**251 LUMENS**

**/ KEY FEATURES**

- IP54 waterproof: weather- and dust-resistant.
- Triple beam: wide for close-up work, focused for distance, and combined for optimal illumination on the move.
- Shock-resistant with anti-accidental ON/OFF lock.
- Electronic LED protection (in case of reverse polarity). Self-cleaning contact.
- Supplied with 3 round Alkaline batteries LR03AAA 1.5 V
- Equipped with a progressive brightness dimmer on all three beams, with memory of the last setting.
- Battery test mode to check the remaining charge.

STANDARDS
ANSI FL1 | IEC 62471 |EN 60598-1

| Beam | Light output | Light beam distance | Runtime |
|---|---|---|---|
| Focused | 228 lumens | 100 m | 7h30 (300h in VARIO mini mode) |
| Wide | 215 lumens | 44 m | |
| Combined | 251 lumens | 75 m | |



### S955SAFE
RECHARGEABLE
LED HEADLAMP
**UP TO 1,000 LUMENS**

**/ KEY FEATURES**

- IP67 waterproof: dustproof and submersible (1 m/30 min).
- Triple beam: wide for close-up work, focused for distance, and combined for optimal illumination on the move.
- Shock-resistant with anti-accidental ON/OFF lock.
- 7,000 mAh lithium-ion battery: USB-C rechargeable, 400+ cycles.
- Charging time: 3 h, with charge status indicator light.
- Battery discharge indicator (6 levels) with 10-hour backup reserve
- Progressive dimmer with memory on all beams.
- Multi-color signal beam (blue, red, green, white, orange, turquoise, fuchsia) with continuous, flashing, or pulse modes.

STANDARDS
ANSI FL1 | IEC 62133 | NF EN 62471 | EN 60598-1

| Beam | Light output | Light beam distance | Runtime |
|---|---|---|---|
| Focused | 5 to 410 lumens | 15m to 151m | 200h to 11h45 |
| Wide & uniform | 5 to 400 lumens | 6m to 61m | 200h to 11h45 |
| Combined | 10 to 1000 lumens | 17m to 170m | 150h to 5h30 |
| Steady color | / | / | 162h |
| Flashing color | / | / | 300h |



# LGT-TRL300

## LED FLASHLIGHT KIT WITH HOSTER

### / USE

Ideal for all types of work sites and/or interventions in professional environments.

### / TECHNICAL SPECIFICATIONS

- Rechargeable LED flashlight (10 W).
- With tactical switch and zoom function for distance or close-up lighting.
- IP44: protected against splashing water and solid objects.
- Zoom function: ×1, ×250, ×500, ×1000, ×2000, with two lighting levels (100%/50%).
- Delivered with: 1 rechargeable battery (Li-ion 3,7 V 2200 mAh), 1 charger with USB cable, 1 adapter for 1860 Li-on battery, 1 adapter for 3 AAA batteries (AAA batteries not included), 1 holster, 1 wrist strap, 1 handlebar adapter, all in a plastic case.

| Reference | Light output | Beam distance | Runtime | Dimensions |
|---|---|---|---|---|
| LGT-TRL300 | 350 lumens | 300 m | 2 h | 137 x 40 mm |



# RL-LAMP

## RECHARGEABLE FLASHLIGHT

### / TECHNICAL SPECIFICATIONS

- LED High Power CREE XP-L - 800 lumens
- Compact, lightweight, and durable design (aluminum alloy).
- Zoom function (12°—75°)
- IP44 — protected against solid objects larger than 1 mm and splashing water.
- 18650 Li-Ion battery, 3.7 V/2200 mAh
- Supplied with 50 cm micro-USB cable and protective case

| Ref. | Light output | Beam distance | Runtime | Weight |
|---|---|---|---|---|
| RL-LAMP | 800 lumens | 300 m | 10h (50%) | 220 g |




# S600N

## LED PHOTOLUMINESCENT FLASHLIGHT PELI™

### / USE

Designed for easy one-handed use in emergency situations. Ideal for use in difficult environments - public works.

### / TECHNICAL SPECIFICATIONS

- Wide beam for even proximity lighting.
- 3 lighting modes: high, low, flashing.
- Virtually indestructible polymer material.
- IPX8 waterproofing: continuous immersion.
- Operation indicator light.
- Supplied with 3 x LR06AA 4.5V alkaline batteries.
- Runtime: 202h (low mode)
- Photoluminescent technology emitting a bright beam

### / Accessories

| Reference | Description |
|---|---|
| KFS600N | Lateral fixing for helemt |

| Reference | Light output | Lighting distance |
|---|---|---|
| S600N | 39 - 378 lm | 62 - 196 m |

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# LGT-BAR-SFN NEW

RECHARGEABLE INSPECTION LAMP
12 LEDS, 520 LUMENS



## / USE

- To be used to illuminate a space that does not have permanent lighting.
- Designed for indoor and outdoor use. Ideal for all types of work.

| Reference | Light output | Runtime | Dimensions | Weight |
|---|---|---|---|---|
| LGT-BAR-SFN | 520 lm | 24h | 3,50 x 4,40 x 30 cm | 240 g |

## / TECHNICAL SPECIFICATIONS

- Rechargeable inspection lamp
- Built-in Li-Ion battery (3.7 V/2.2 Ah) with charge indicator
- IP54: protected against dust ingress and splashing water
- IK07: impact-resistant (protection against 2 J impacts)
- Charging time: 5h,
- With on/off switch,
- 3 lighting modes (10%, 40%, 100%)
- With a sturdy, retractable, and rotatable hook, and integrated magnet in the mounting base
- Supplied with USB charging cable.



# LGT-BAP5M

PROFESSIONAL WORK LIGHT

## / USE

Designed for outdoor use and for all types of activities.
Use to illuminate an area that does not have permanent lighting.

## / TECHNICAL SPECIFICATIONS

- Hand lamp with switch and 5 meter cable (h05vv-f 2 x 0,75mm2, PVC).
- E27 base for 1 bulb max 60W (not included).
- LED compatible.
- French 6A plug.
- Power supply: 220V
- Equipped with a 360° adjustable hook
- Metal cage, highly impact-resistant.

| Reference | Dimensions | Weight |
|---|---|---|
| LGT-BAP5M | 325 x 90 x 90 mm | 500 g |

Lightweight, compact and easy to install, it offers safety and lighting quality toits wearer



# LGT-LPL142

LED CHEST LIGHT

## / KEY FEATURES

Worn at sternum level and held in place by a harness with a reflective strip, the chest lamp increases the user's visibility and helps to improve safety.

Complementary to a headlamp or torch, it offers a light that is always directed towards the front.

Ideal for public works, intervention on power lines and railways...

## / TECHNICAL SPECIFICATIONS

- 2 LED chest lamp.
- 2 types of beam: fine and wide and uniform.
- 180° adjustable light beam.
- Battery test mode: indication of the remaining battery capacity (4 levels)
- Supplied with 3x1,5 V LR03/AAA alkaline batteries
- Polyamide housing, resistant to hydro-carbonsplashes, oils and corrosive liquids.
- Protection: IP54 weatherproof (rain, snow...) and dustproof.
- Elastic strap harness
- Hight resistance to impacts and crushing drop height: 2m

| Ref. | Light output | Beam distance | Runtime | Dimensions | Weight |
|---|---|---|---|---|---|
| LGT-LPL142 | 140 - 150 lm | 33 - 81 m | 7h30 | 60 x 45 x 35 mm | 153 g |

High performance reflector.

Adjustable bracket



Long range: 800 metres

Very bright LED light: 800 lumens.

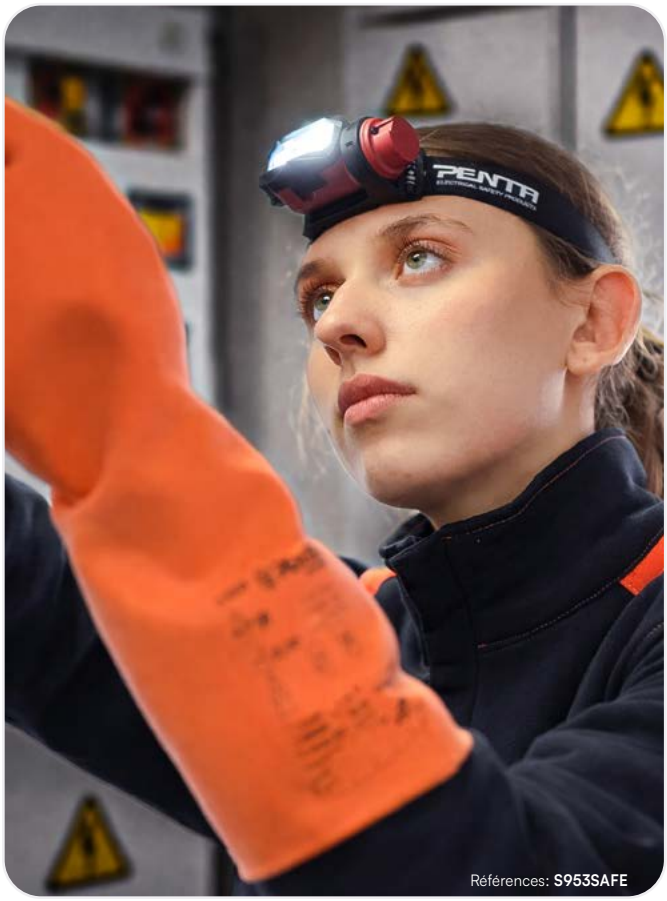
# LGT-SPOT800N

## RECHARGEABLE LED SPOTLIGHT

### / TECHNICAL SPECIFICATIONS

- 10W high power LED
- Hyper-resistant nylon structure (IK08)
- Beam angle: 30° - 270° diffused light
- USB 2A power bank function for charging smartphones and tablets
- Tripod mountable (please contact us)
- Automatically switches on in the event of a power outage
- Large, ergonomic handle, comfortable even when wearing gloves.
- IP44: protected against solid objects and splashing water.
- Supplied with 2 chargers (mains and car charger) with strap
- Li-Ion 18650 battery, 3.7 V/2.4 Ah.

| Reference | Light output | Beam distance | Runtime | Weight |
|---|---|---|---|---|
| LGT-SPOT800N | 735 lm | 735m | 5h (50%)/2,5h (100%) | 900 g |




Références: **S953SAFE**

# SFE9410N NEW

## RECHARGEABLE PORTABLE 4 LED LANTERN PELI™

STANDARDS

ANSI FL1/Approved to NFPA (National Fire Protection Association) 1901




### Advantages

- Ultra powerful 3 369 lumens rechargeable projector.
- The flexible battery system allows you to select between Li-ion, AA alkaline or AA NiMH to operate the light.
- 4 battery slots to extend runtime or reduce weight.
- Spot, Flood, Spot/Flood and Flashing modes.
- Glove-friendly switch activation.
- Battery status indicator switch.

| Beam | Light output | Light beam distance | Runtime |
|---|---|---|---|
| Combined | 3 369 lumens | 417 m | 2h45 |
| Wide | 1 119 lumens | 47 m | 5h30 |
| Focused | 2 623 lumens | 489 m | 4h15 |

### / TECHNICAL SPECIFICATIONS

- Body material in ABS with polycarbonate lens,
- Rear taillights with dedicated switch and adjustable colors (Green, Blue, Red)
- Delivered with removable shoulder strap.
- IP67 Protection: Dust-proof, and temporary immersion (-1 meter for 30 minutes).
- Wide base for stability.
- Charging time: 5h30.
- Length: 20,4 cm.

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# SFE9430

## REMOTE AREA LIGHTING SYSTEM PELI™

### / USE

- Lighting for construction sites.
- Ideal for first responders as well as industrial applications.

### / TECHNICAL SPECIFICATIONS

- Body and head made in polycarbonate/ABS.
- Mast made in fibreglass (glass-reinforced plastic).
- Fully extendable mast with 360° rotating head
- Waterproof rubber activation switch
- Mast extension lock
- Low battery warning system

Mast length: 82 cm

- Cable length: 35 cm

Beam: 125°
IP54: dust protected and splash-resistant
Includes 110 — 240 Volt (50/60hz) charger and universal adaptors

| Ref. | Light output | Runtime | Dimensions (closed) | Weight |
|---|---|---|---|---|
| SFE9430 | Full power: 3000 lm<br>Low power: 1500 lm | Full power:8 h<br>Low power:15 h | 400 x 200 x 230 mm | 10,3 kg |

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Dual telescopic LED lighting heads.



Smart battery level indicator.

Can be plugged into the mains for continuous operation.

Light, quiet and heat-free operation.

Remote activation via Bluetooth with power dimming.

# SFE9460

## REMOTE AREA LIGHTING SYSTEM PELI™

STANDARDS

ROHS (RESTRICTION OF HAZARDOUS SUBSTANCES) COMPLIANT

### / USE

Lighting system for difficult access areas. Ideal for emergency interventions. Area lighting to illuminate a construction site at night or an accident area.

### / TECHNICAL SPECIFICATIONS

- Two swivelling telescopic masts (each extends to nearly 1,80m/6 feet) and two 360 degree articulated light arrays.
- 2 polycarbonate/ABS heads with 10 LEDs each.
- Battery type: 12V rechargeable, sealed.
- Battery level indicator: LED display
- Battery charging time: 6 hours.
- Body made in polypropylene, mats made in aluminium.
- Supports for vertical and horizontal masts.
- The system is integrated into a heavy-duty wheeled protective case for easy transportation.
- 2 intensity modes.

| Reference | Light output | Runtime | Max. height | Dimensions | Weight |
|---|---|---|---|---|---|
| SFE9460 | 12000 lm (6000 per lighting head) | 3 to 24 h | 1,80 m | 591 x 356 x 235 mm | 27,7 kg |

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Remote activation via Bluetooth with variable light control

Battery level indicator

Easily transportable with shoulder strap



Can be plugged into the mains for constant operation

# SFE9440N

## STAND-ALONE LED LIGHTING SYSTEM PELI™

STANDARDS

ROHS (RESTRICTION OF HAZARDOUS SUBSTANCES) COMPLIANT

### / USE

Quickly illuminates ravines, confined spaces,riverbanks, etc., all places that conventionaltorches cannot reach.

### / TECHNICAL SPECIFICATIONS

- Polycarbonate/ABS body and head and aluminium mast.
- Mast extends to 2.13 metres, allowing illumination in difficult to access areas.
- 125° beam angle with a maximum output of 5,300 lumens.
- 340° Rotating light head
- 3 intensity modes: low, medium, high.
- Rechargeable Lithium-Ion battery.
- Battery charge time: 3h45.
- IP65: dust-tight and protected against water jets.

| Reference | Light output | Runtime | Max. height | Dimensions | Weight |
|---|---|---|---|---|---|
| SFE9440N | 5300/2800/1400 lm | Up to 8h | 2,13 m | 950 x 200 x 200 mm | 7,30 kg |

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# LGT-HL200

ATEX HEADLAMP - ZONE 0



## / USE

Intrinsically safe LED headlamp for use in hazardous areas (ATEX).
Ideal for people working in chemical, pharmaceutical, electrical, oil and gas plants and in fire rescue situations.

## / TECHNICAL SPECIFICATIONS

- ABS material: High impact resistance, and excellent heat resistance.
- IP67: Fully protected against dust and the effects of water immersion (up to 1 metre).
- Power source: 3 AAA Alkaline batteries (not included).

| Reference | Light output | Beam distance | Runtime | Weight |
|---|---|---|---|---|
| LGT-HL200 | 100 lm (50%)<br>200 lm (100%) | 100 m | 17,5 h (100 lm)<br>9 h (200 lm) | 135 g |

# SLTA01 NEW

ATEX FLASHLIGHT - ZONE 0



## / USE

Flashlight for use in ATEX Zone 0 hazardous environments.

## / TECHNICAL SPECIFICATIONS

- Shock-resistant technical polymer construction,
- IPX7: waterproof up to 1 m for 30 minutes
- 1 meter impact resistance tested,
- Length: 16,2 cm
- LED lifetime: 50 000 hours
- Temperature class T4: <135°
- Powered by 2 × AA alkaline batteries (included).

| Reference | Light output | Beam distance | Runtime | Weight |
|---|---|---|---|---|
| SLTA01 | 65 lumens | 96 m | 24 h | 100 g |






# LGT-LAX117

ATEX ZONE 1 PENLIGHT PELI™

STANDARDS

IEC 60079-0/EN 60079-11/EN 60079-28/Directive 2014/34/EU.
Certified ATEX Zone 1 (Category 2): II 2G Ex ib op is IIB T4 Gb

## / USE

Intrinsically safe penlight for use in hazardous areas (ATEX Zone 1).
Ideal for people working in chemical, electrical, oil and gas environments, and in fire rescue situations

## / TECHNICAL SPECIFICATIONS

- Aluminium core,
- ABS overmoulded polymer material,
- Activated with a click on the rear switch,
- Battery: 2 AAA batteries,
- IP68: Fully sealed against dust and water from more than 1 metre for 1 hour.
- Autonomy: 8h15

| Reference | Light output | Lighting distance | Distance | Weight |
|---|---|---|---|---|
| LGT-LAX117 | ATEX penlight | 94 lumen | 22 m | 54 g |
| LGT-LAX117SUP | ATEX penlight with helmet holder | N/A | N/A | N/A |
| SUPLAX117 | Helmet holder | N/A | N/A | N/A |



• 30° focused light: Seeing far ahead accurately



• 3 lighting intensities: full power (300 lumens), middle power (150 lumens), low power (60 lumens)

# LGT-PEX350 NEW

RECHARGEABLE ATEX SPOTLIGHT - ZONE 0

## / USE

Spotlight for use in ATEX Zone 0 hazardous environments.
**Included:** 220V adapter + Wall-mounted charging base

## / TECHNICAL SPECIFICATIONS

- Polycarbonate and ABS materials: High level impact resistance, chemical attack, and UV
- Aluminium heatsink for better heat dissipation
- Battery type: 3,7V 2AH 18650 type li-ion battery
- Battery charging time: 6h
- IP64: dust-tight and protected against water splashes from any direction

| Reference | Light output | Beam distance | Runtime | Dimensions (mm) | Weight |
|---|---|---|---|---|---|
| LGT-PEX350 | 60 - 300 lm | 300 m | 50 h - 4h | 260 x 150 x 175 | 1 kg |

Compact and easy to manage portable lighting system.





Battery level indicator.

Can be plugged into mains for constant operation.

# SFE9435N

REMOTE AREA LIGHTING SYSTEM PELI™ ATEX - ZONE 0

STANDARDS

ATEX ZONE 0 (CAT.1) (EUROPE)/IECEX IA/C1/D1 (NORTH AMERICA)

## / TECHNICAL SPECIFICATIONS

- 10 LED light head.
- 2 lighting modes: low, high.
- Polycarbonate/ABS body and aluminium head.
- Power supply: NimH rechargeable battery.
- Charging time: 8h.
- IP54 protection.
- Beam: 125°

| Reference | Light output | Runtime | Max. height | Dimensions | Weight |
|---|---|---|---|---|---|
| SFE9435N | 800 - 1600 lumens | Up to 10h | 0,80 m | 390 x 200 x 230 mm | 7,30 kg |

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# NETWORK
# CONSTRUCTION

PENTA ELECTRICAL SAFETY PRODUCTS | Your life, Our work.

# T43F2 • T44F3 • T45F4

LV MV

"TIRVIT" TENSIONER




## / USE

The "Tirvit" tensioner is a compact and robust tool designed to stretch and tension electrical and telephone cables, guy wires, and fences of varying lengths.

## / TECHNICAL SPECIFICATION

The self-tightening cams, activated by reciprocating movements, grip directly onto the passing wire or cable.
T43F2 and T44F3 equipped with an anchor chain.
T45F4 equipped with a steel anchor sling.

| Ref. | Capacity | Cable Ø | Cable cross section | Dimensions | Weight |
|---|---|---|---|---|---|
| T43F2 | 400 kg | 6-8 mm | 22 - 40 mm² | 535x88x653mm | 4 kg |
| T44F3 | 600 kg | 7-15 mm | 30 - 120 mm² | 625x110x730mm | 5,2 kg |
| T45F4 | 800 kg | 14-18 mm | 110 - 190 mm² | 625x115x720mm | 6,2 kg |




# TP10

INSULATED ROPE-OPERATED HOIST 240 DAN

STANDARDS

IN CONFORMITY WITH FT BT 320B

## / USE

The rope hoist is used to apply tensile forces to a conductor or bundle cables in order to replace insulators and their fittings or to adjust conductors or to transfer them from supports.

## / TECHNICAL SPECIFICATION

5 m working height.
2 swivelling aluminium-copper hooks.
Hooks with gripping ring.
Hoist with insulating rope blocks.

| Ref. | Max load | Rope length | Weight |
|---|---|---|---|
| TP10 | 240 daN | 25 m | 2,89 kg |

| Spare part | Description |
|---|---|
| C325D10L025 | Polyamide braided rope 8 strands Ø10 mm L. 25 m |
| TP10L | Replacement safety clip for TP10 hoist |

# TP550 - TP1300

NEW

ROPE PULLEY BLOCK TACKLE HOIST 550 DAN AND 1300 DAN WITH SYNTHETIC BLOCKS

STANDARDS

MACHINERY DIRECTIVE 2006/42/EC

The block frame and sheaves are made of synthetic material

Wide opening swivel hook equipped with safety latch



## / USE

This hoist is used to apply tensile forces (e.g. for adjusting conductors), lift loads (e.g. a transformer) or move a triangulation.

## / TECHNICAL SPECIFICATION

- 2 blocks of 3 sheaves mounted on ball bearings
- 100m polyamide braided rope Ø12mm
- Carrying rope bag

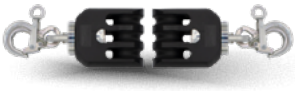
| Reference | WLL | Comment | Weight/pair |
|---|---|---|---|
| TP550-100 | 550 daN | 100m rope + bag | |
| TP1300-100 | 1300 daN | | |
| TP550 | 550 daN | 196 x 110 x 62 mm | 2,5 kg |
| TP1300 | 1300 daN | 210 x 110 x 62 mm | 2,8 kg |

# T88F

## ROPE-OPERATED HOIST 550 DAN

STANDARDS

IN CONFORMITY WITH FT BT 320B AND FT HTA545



T88FSEUL



LWA525-LWB71A-D12

### / USE

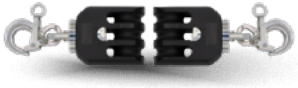
Hoist 550 DaN, for lifting H61 transformers.
This hoist is designed to take up mechanical stresses.
It is used to transfer overhead line anchors between two supports.

### / TECHNICAL SPECIFICATIONS

Working height of 20m.
The blocks are equipped with swivel hooks with ring.
Hoist delivered with 100 metres of Ø12mm polyamide braided rope.
Hoist with insulating rope blocks.

| Ref. | WLL | Dimensions | Weight |
|---|---|---|---|
| T88F | 550 daN | 520 x 110 x 62 mm | 2x 1,75 kg no rope |

| Spare part | Description |
|---|---|
| T88FSEUL | Pair of hoist blocks T88F (without rope) |
| LWA525-LWB71A-D12 | Braided polyamide rope 100 m Ø 12 mm |



PALIS1300



LWA525-LWB71A-D12

# TP11

## ROPE-OPERATED HOIST 1300 DAN

STANDARDS

IN CONFORMITY WITH FT HTA545

### / USE

This hoist is used, in addition to conventional handling and lifting operations, to adjust the conductors or to move a triangulation made by insulating poles on a support.

### / TECHNICAL SPECIFICATIONS

Hoist with insulating rope blocks.
Includes 2 blocks with 3 sheaves mounted on ball bearings.
Hoist delivered with 100 metres of Ø12mm polyamide braided rope.
Hoist with insulating rope blocks.

| Ref. | Dimensions | WLL | Weight |
|---|---|---|---|
| TP11 | 520 x 110 x 62 mm | 1 300 daN | 2x 1,75kg no rope |

| Spare part | Description |
|---|---|
| PALIS1300 -> | Pair of blocks TP11 (without rope) |
| LWA525-LWB71A-D12 | Braided polyamide rope 100 m Ø 12 mm |

# PLH

NEW

## MANUAL RATCHET CABLE HOIST

STANDARDS

MACHINERY DIRECTIVE 2006/42/ EC. CE LIFTING TOOL APPROVED



PLH1000-4



PLH1000-9



PLH1600-6

### / USE

"Winch" hoits dedicated to lifting, handling, pulling (hauling) or mechanically tensioning cables operations.

### / TECHNICAL SPECIFICATIONS

- Anti-corrosion treated flexible steel wire rope
- Hoist body in light aluminium alloy and anticorrosion
- Forged steel hooks with safety latch and free 360° rotation.
- Interlocking pawl mechanism for secure holding in position.
- The load is lowered tooth by tooth.

| Reference | Single line | | | Double line | | | Ø cable | Dimensions | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | WLL | Lifting height | Hook to hook min | WLL | Lifting height | Hook to hook min | | | |
| PLH1000-4 | 500 kg | 4,3 m | 0,51 m | 1000 kg | 2,1 m | 0,58 m | 5,6 mm | 645 x 115 x 105 mm | 4,4 kg |
| PLH1000-9 | | 9,1 m | 0,56 m | | 4,5 m | 0,74 m | | 845 x 180 x 125 mm | 6,4 kg |
| PLH1600-6 | 800 kg | 6,1 m | | 1600 kg | 3,0 m | | 6,4 mm | 975 x 180 x 125 mm | 7,2 kg |

Part of the quality management system to ISO9000, lifting equipment
Compliance to standards and recommendations must be verified periodically

# P11

NEW

## CHAIN LEVER HOIST

Durable high quality hoist manufacturing

Freewheel system under no load for quickly approaching the hook to the load.



Compact and lightweight hoist.

Automatic double brake security

### / USE

This hoist is particularly suitable for lifting, handling, pulling (hauling) and mechanical tensioning operations.
It is a high-powered manual hoist suitable for all applications.
Machinery directive 2006/42/EC.

### / TECHNICAL SPECIFICATIONS

Rubber handle.
Hook free rotation 360° on both extremities.
COROLIM lifting chain anticorrosion.
The hoist disengage the chain when iddle (without load).

| Ref. | WLL | Lifting height | Number of strands | Chain dimensions | Force on lever | Dimensions | Weight |
|---|---|---|---|---|---|---|---|
| P11C08L15 | 800 kg | 1,5 m | 1 | 5,6 x 17 mm | 26 daN | 350 x 158 x 132 mm | 6,7 kg |
| P11C16L15 | 1 600 kg | | | 7,1 x 21 mm | 29 daN | 410 x 185 x 145 mm | 11,2 kg |
| P11C32L15 | 3 200 kg | | 1 | 10 x 28 mm | 33 daN | 530 x 212 x 198 mm | 20,4 kg |
| P11C63L15 | 6 300 kg | | 2 | | 37 daN | 650 x 212 x 230 mm | 24,9 kg |
| P11C08L30 | 800 kg | 3,0 m | 1 | 5,6 x 17 mm | 26 daN | 350 x 158 x132 mm | 7,6 kg |
| P11C16L30 | 1 600 kg | | | 7,1 x 21 mm | 29 daN | 410 x 185 x 145 mm | 12,6 kg |
| P11C32L30 | 3 200 kg | | | 10 x 28 mm | 33 daN | 530 x 212 x 198 mm | 23,2 kg |

For other dimensions, please contact us.

# T420

NEW

## ALUMINIUM CABLE WINCH

STANDARDS

MACHINERY DIRECTIVE 2006/42/EC
COMPLIES WITH EN 1315




- Cable winch with no length constraints.
- The rope always stays in the grip during operation, which provides an anti-disconnect safety feature.
- Lever equipped with a safety pin to prevent overloading.

### / USE

Wire rope hoist works in all positions (horizontal, vertical) and can be used for lifting, pulling and lashing. The hoist is supplied with 20m cable and a hook.

### / TECHNICAL SPECIFICATIONS

Hoist made of compact and lightweight cast aluminium body.
100% of the hoists pass a dynamic proof load test 1,25 x WLL.
Hoist equipped with a carrying handle.
Rubber mud flaps to limit debris entry.

Hoist supplied with 20m of 6x19 IWRC 1770 N/mm² cable.
Safety factor of 5 on cables.
Hook with safety latch.
Hoist equipped with RFID chip.
Only accessible spare parts are available (shaft, lever, pins, ...)

| Ref. | WLL lifting | Hand force max on lever | Ø cable | Lever L1/L2 | Dimensions | Weight (hoist) |
|---|---|---|---|---|---|---|
| T42016 | 1,6 T | 41 daN | Ø 11 mm | 0,7 / 1,2 m | 545 x 284 x 97 mm | 12 kg |
| T42032 | 3,2 T | 45 daN | Ø 16 mm | 0,7 / 1,2 m | 660 x 325 x 116 mm | 23 kg |
| T42054 | 5,4T | 85 daN | Ø 20 mm | 0,7 / 1,2 m | 940 x 440 x 170 mm | 61 kg |



- Capstan winch with rope for pulling without length limit.
- Approved for lifting up to 250 kg. 775 daN pulling winch.
- Rope guide with lock to ensure load retention.

# PCH1000

## CAPSTAN WINCH FOR PULLING AND LIFTING

### / USE

This hoist can be used for both lifting and pulling operations.
This hoist is suitable for all trades: Lifting, pulling, unwinding, moving, etc.

### / TECHNICAL SPECIFICATIONS

- 50cc 4-stroke petrol engine for lead-free petrol.
- Starter by launcher.
- Centrifugal clutch by engine speed acceleration.

| Ref. | Power | WLL Lifting | WLL Pulling | Rope | Dimensions | Weight |
|---|---|---|---|---|---|---|
| HL-PCH1000 | 1,6 kW | 250 kg | 775 kg | Ø 12 mm | 505 x 371 x 361 mm | 19 kg |



- Capstan winch with rope for pulling without length limit.
- Pulling winch with a capacity of 1000 daN.

# KITPCW5000

## CAPSTAN WINCH KIT - PULLING

### / USE

This hoist is mainly used for pulling operations and is suitable for all kinds of jobs.

### / TECHNICAL SPECIFICATIONS

50cc 4-stroke petrol engine for unleaded petrol.
Starter by launcher.

**Composition :**

- 1 PCW5000 winch for pulling
- 1 anchor plate on towing ball
- 1 polyester rope Ø12mm with threaded loops
- 1 rope bag
- 2 polyester slings
- 2 stainless steel pulleys
- 2 carabiners
- 1 transport box (59 x 56 x 54 cm IP67)

| Ref. | Power | WLL Lifting | WLL Pulling | Rope | Dimensions | Weight |
|---|---|---|---|---|---|---|
| KITPCW5000 | 1,6 kW | Not allowed | 1000 kg | Ø 12 mm | 507 x 371 x 361 mm | 196 kg |

PREMIUM

# KITPCH1000TOP

NEW

CAPSTAN WINCH KIT

- Capstan winch with rope for pulling without length limit, approved for lifting up to 250 kg.
- Pulling winch with a capacity of 775 daN.
- Rope guide with lock to ensure load retention.
- Wide selection of accessories for working in all situations.



## / USE

This hoist can be used for both lifting and pulling operations
This hoist is suitable for all trades.
Applications : lifting, pulling, unwinding, moving, etc.

## / TECHNICAL SPECIFICATIONS

50cc 4-stroke petrol engine for lead-free petrol.
Starter by launcher.
Centrifugal clutch by engine speed acceleration.

Composition :
- 1 PCH1000 winch for pulling and lifting
- 1 anchor on posts (wood or concrete)
- 1 anchor on towing ball Ø50mm
- 1 horizontal pulling support
- 1 vertical pulling support
- 1 polyester rope Ø12mm L100m looped
- 1 rope bag
- 2 polyester slings
- 2 stainless steel pulleys
- 2 carabiners

| Ref. | Power | WLL Lifting | WLL Pulling | Rope | Dimensions | Weight |
|---|---|---|---|---|---|---|
| KITPCH1000TOP | 1,6 kW | 250 kg | 1000 kg | Ø 12 mm | 507 x 371 x 361 mm | 19 kg |

# / ACCESSORIES

## FOR PCH1000, KITPCW5000 AND KITPCH1000TOP

| Ref. | Description |
|---|---|
| HL-1263 | 493 |
| HL-1266 | Towing balls anchoring system Ø50mm |
| HL-1806 | Pylon mount anchoring system for steel angle 10 to 30 cm |



HL-1263



HL-1266



HL-1806

| Ref. | Description |
|---|---|
| HL-1268 | Horizontal pull winch plate |
| HL-1264 | Vertical pull winch support |



HL-1216/2ESC



HL-1257XL

| Ref. | Description |
|---|---|
| HL-1216/2ESC | Double braided polyester rope, spliced Ø12mm L:200m BL:3300kg |
| HL-1257XL | Rope bag XL with 2 handles Ø37cm x H60cm capacity 200 m |



HL-1216/2ESC



HL-1257XL

| Ref. | Description |
|---|---|
| HL-1274 | Swing side snatch block with sheave Ø100mm BL:9185kg |
| HL-1276 | Steel locking carabiners BL:2550kg |
| HL-1281 | Hook with safety latch BL:3000kg |



HL-1274



HL-1276



HL-1281

Simple and robust mechanical jack

Very resistant



Pole extractor which allows to apply the turning force in both directions without dismantling





Integrally cast for greater mechanical strength

## C390

POLE EXTRACTOR JACK

### / USE

Used at the foot of the pole to apply an upward pull-out force.

### / TECHNICAL SPECIFICATIONS

- Crank-operated jack with rising shaft.
- It is equipped with a chain for attachment.
- The safety crank is foldable.

| Ref. | Force | Stroke | Height | Weight |
|---|---|---|---|---|
| C390 | 5 t | 600 mm | 900 mm | 22 kg |

| Spare part | Description |
|---|---|
| C390M | Folding safety crank |
| C390C | Chain, length 1.05 m |

## V16

POLE EXTRACTOR

### / USE

Used on the base of the post to apply rotational force.

### / TECHNICAL SPECIFICATIONS

- Steel post turners with a specially shaped foot that allows right or left hand turning without dismantling the system.
- It is secured by a 1.20 m long strap.
- Ø 40 mm socket.
- Delivered without handle (use a Ø40 mm handle).

| Ref. | Dimensions | Weight |
|---|---|---|
| V16 | 250 x 250 x 200 mm | 5 kg |

## F60

LIFTING FORK FOR WOODEN POLES

### / USE

Used along the pole to apply a pushing force.

### / TECHNICAL SPECIFICATIONS

- Fork made of special forged steel.
  - 3 solid steel tips,
  - conical socket Ø 45 mm,
  - opening 285 mm.
- Product delivered without handle.

| Ref. | Dimensions | Weight |
|---|---|---|
| F60 | 320 x 380 x 50 mm | 1,35 kg |

## F60MH NEW

LIFTING FORK FOR METAL POSTS

Fork equipped with anti-slip EPDM sleeves

Can be used with standard wooden handles



Delivered with a protective cover

### / USE

Fork to be mounted at the end of the wooden handle M25250 or M25300.
A set of 4 forks allows the lifting of supports with a team of 5 people including 1 guide.

### / TECHNICAL SPECIFICATIONS

- Steel fork protected against corrosion.
- EPDM rubber with longitudinal grooves to limit slipping.
- Delivered without wooden handle.
- Cylinder for fixing the handle Ø 38 mm

| Ref. | WILL | Opening | Dimensions | Weight |
|---|---|---|---|---|
| F60MH | 100 kg | 35 cm | 382x267x50mm | 1,7 kg |

Long wooden handle that can be used on all types of tools.



## M25

HARDWOOD CYLINDRICAL HANDLE

### / USE

Can be used on pole jacks, pole extractors, forks,etc.

### / TECHNICAL SPECIFICATIONS

Cylindrical hardwood handle.

| Ref. | Length | Ø | Weight |
|---|---|---|---|
| M25250 | 2,5 m | 40 mm | 1 kg |
| M25300 | 3 m | | 1,4 kg |

Steel head, screw, column and base

Screw head equipped with shaft support



Heavy duty jack with bronze nut and bolt

# V042

## MECHANICAL REEL LIFTER WITH CENTRAL AXIS

### / USE

Reel lifter sold individually.
A pair of V042 reel lifters and an AV042 axle makeup a reel lifting set.

### / TECHNICAL SPECIFICATIONS

- Robust jack with central screw and bronze nut.
- Steel head, screw, column and base.
- Screw head equipped with pin support.
- Supplied without spindle bar (to be ordered separately).

| Ref. | Max load | Min-Max drum diameter | Min. height | Stroke | Base diam. | Weight |
|---|---|---|---|---|---|---|
| V04201T | 1 t | 1,20 - 1,76 m | 55 cm | 380 mm | 40 cm | 24 kg |
| V04202T | 2 t | 1,50 - 2,30 m | 70 cm | 500 mm | 57 cm | 35 kg |
| V04204T | 4 t | 1,90 - 3,10 m | 90 cm | 700 mm | 57 cm | 57 kg |
| V04206T | 6 t | 1,90 - 2,70 m | 90 cm | 500 mm | 70 cm | 64 kg |
| V04210T | 10 t | 2,50 - 3,50 m | 120 cm | 600 mm | 77 cm | 113 kg |

# AV042

## SPINDLE FOR REEL LIFTER

| Ref. | WLL | Length | Ø spindle | Weight |
|---|---|---|---|---|
| AV042-1T | 1.000 kg | 2 m | Ø 60 mm | 18 kg |
| AV042-2T | 2.000 kg | | Ø 76 mm | 27 kg |
| AV042-4/6T | 4 and 6.000 kg | | Ø 80 mm | 80 kg |
| AV042-10T | 10.000 kg | | Ø 90 mm | 100 kg |

Designed to unwind reels



Rollers mounted on sealed ball bearings

# D25

## ONE-PIECE REEL UNWINDER

### / USE

Allows the rotation of the reel on the 2 rollers that support it.
A locking system facilitates the tilting of the reel out of the unwinder.

### / TECHNICAL SPECIFICATIONS

- Very robust painted steel frame with 2 carrying handles.
- Rollers with guide flanges.
- Locking system for reel change.

| Ref. | WLL | Drum Ø min/ max | Width | Dimensions | Weight |
|---|---|---|---|---|---|
| D25 | 800 t | 600 / 1050 mm | max. 560 mm | 800 x 715 x 115 mm | 23 kg |

For other dimensions, please contact us.

Great stability and easy loading of the reel (anti-slip ramps).



Very robust device ideal for unwinding reel

The 2-shoe system gives it optimised storage and weight

# D260

## PAIR OF CABLE DRUM UNWINDERS ON BASE

### / USE

Allows the rotation of the reel on the rollers of the 2 shoes that support it.

### / TECHNICAL SPECIFICATIONS

- Steel frame with Ø70mm aluminium rollers mounted on sealed bearings.
- Great stability and easy change of the reel.
- Sold in pairs.

| Ref. | WLL | Drum Ø min/max | Dimensions | Weight |
|---|---|---|---|---|
| D260 | 1 000 t | 300 /1 600 mm | 800 x 200 x 115 mm | 10 kg x2 |

VALUE

# D85C NEW

## MECHANICAL TRACTION DYNAMOMETER

Direct and instant needle reading (no battery)

Very robust mechanical design with aluminium body




Two ring ends for easy hanging

LV MV

### / USE

Dynamometer to be applied within a pulling chain in order to be able to read directly the mechanical tension in kN. The device is specially designed for construction or maintenance work on power lines.

### / TECHNICAL SPECIFICATIONS

- Dynamometer to be installed in series in the pulling chain.
- The extremities eyes allow to attach through hooks, shackles, ...
- Accuracy of reading ±3%.
- Needle dial embedded in the body of the dynamometer for optimum protection.
- Safety factor 3 (breaking > 3 x capacity).



| Ref. | Capacity | Graduation | A | B | C | Weight |
|---|---|---|---|---|---|---|
| D85C1T | 10 kN (1000daN) | 20 daN | 215 mm | 65 mm | 28 mm | 1,2 kg |
| D85C2T | 20 kN (2000daN) | 50 daN | | | | |
| D85C3T | 30 kN (3000daN) | | 250 mm | 80 mm | | 2 kg |

Robust design for site use.

Built-in, protected LCD display with high readability.

Electronic measurement accuracy



Compact and lightweight due to strain gauge design.

LV MV

# D86

## ELECTRONIC TRACTION DYNAMOMETER

### / USE

Used for any mechanical tension measurement
- Vertical: mass of a suspended load.
- Horizontal: tension of ropes or cables in traction.

Industrial and electrical networks applications.
Machinery directive 2006/42/EC.

### / TECHNICAL SPECIFICATIONS

- Versatile: suspended or traction work.
- Intended to measure traction forces (N) or suspended weight (kg).
- Accuracy of ± 0.3%.
- Operates with 2 x 1.5V (AAA batteries).
- Indication of battery power load.
- IP65 / NEMA 4 sealing: Allows outdoor use.
- Operating temperature: -20°C to +50°C.
- Safety factor: 4.
- Delivered in plastic carrying case with foam inside.



| Shackles for attachment | Description |
|---|---|
| D86M03T2 | Anchor shackle for D86 1T and 3,2T dynamometers |
| D86M06T3 | Anchor shackle for D86 6,3T dynamometers |



| Ref. | WLL | Precision | Reading unit | Dimensions | Weight |
|---|---|---|---|---|---|
| D86C01T | 1 000 kg | +/- 3 kg | 1 kg | 191 x 84 x 36 mm | 0.75 kg |
| D86C03T2 | 3 200 kg | +/- 9,6 kg | 5 kg | 191 x 100 x 36 mm | 0.95 kg |
| D86C06T3 | 6 300 kg | +/- 18,9 kg | 10 kg | 236 x 122 x 35 mm | 1.45 kg |

ESSENTIAL

# P225

OUR SELECTION

PLASTIC-COATED UNWINDING PULLEY

Anchored by a hook with a safety catch



Ratchet strap support SP12M or SP20M



## / USE

Pulley designed for unwinding LV Aerial Bundled Cables up to 3x150 mm².

## / TECHNICAL SPECIFICATIONS

- Plastic coated aluminium sheave for insulated cables.
- Aluminium alloy pulley which is strong and light.

| Ref. | Deep groove Ø | Groove width | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| P225 | 130 mm | 60 mm | 800 daN | 460 x 250 x 140 mm | 2,6 kg |

| Accessories | Description | Lenght | WLL | Weight |
|---|---|---|---|---|
| SP12M | Ratchet strap pulley support | 1,2 m | 1000 daN | 2,9 kg |
| SP20M | | 2 m | | 3 kg |

Anchored by a hook with a safety catch



# P226

PLASTIC-COATED UNWINDING PULLEY WITH HOOK

## / USE

Pulley designed for unwinding LV aerial bundled cables up to 3x150mm².

## / TECHNICAL SPECIFICATIONS

- Plastic coated aluminium sheave for insulated cables.
- Aluminium alloy pulley which is strong and light.
- Opening pulley with lockable clevis that allows working with greater lateral effort.

| Ref. | Deep groove Ø | Groove width | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| P226 | 130 mm | 60 mm | 800 daN | 485 x 250 x 150 mmm | 2,9 kg |

| Accessories | Description | Lenght | WLL | Weight |
|---|---|---|---|---|
| SP12M | Ratchet strap pulley support | 1,2 m | 1000 daN | 2,9 kg |
| SP20M | | 2 m | | 3 kg |





# P227

LOW-VOLTAGE BUNDLE CABLE HOOK-TYPE PULLING PULLEY

## / TECHNICAL SPECIFICATIONS

- Designed for guiding low-voltage twisted cables
- Maximum working load: 800 daN
- Sheave made of insulating plastic material
- Structure made of treated aluminium alloy for enhanced strength
- Equipped with a tilting safety locking system
- Pulley Ø (bottom of groove): 140 mm; groove width: 80 mm
- Swivel hook mounted on a ball joint, fitted with a safety latch and a ring for pole handling (passage Ø: 16 mm)
- Latch opening: 22 mm
- Distance between the pulley's central axis and the hook attachment point: 300 mm

| Ref. | Total height | Weight |
|---|---|---|
| P227 | 450 mm | 2.3 kg |

# SP20

STRINGING BLOCK WITH HOOK FOR LV AERIAL BUNDLE CABLE

## / USE

Stringing blocks designed for unwinding of LV aerial bundled cables.
Hook attachment for use on any existing structure
Recommended cables : LV ABC up to 3 x 150mm²
Accessory : pulley support with ratchet strap around the post

## / TECHNICAL SPECIFICATIONS

- Hook equipped with safety latch rotating 360°
- Sheave groove width : 60mm
- Sheave groove Ø : Ø130mm.
- Dimensions : 460 x 250 x 140 mm

| Ref. | WLL | Dimensions | Weight |
|---|---|---|---|
| SP20 | 800 daN | 460 x 250 x 140 mm | 2.5 kg |

## P229 NEW

PLASTIC-COATED UNWINDING PULLEY WITH HOOK AND OPENING CLEVIS

Plastic coated aluminium sheave for insulated cables



### / USE

Pulley designed for unwinding LV aerial bundled cables.

### / TECHNICAL SPECIFICATIONS

- Anchoring by hook with safety latch.
- Opening clevis.

| Ref. | Deep groove Ø | Groove width | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| P229 | 250 mm | 80 mm | 1 500 daN | 800 x 480 x 250 mm | 10,7 kg |

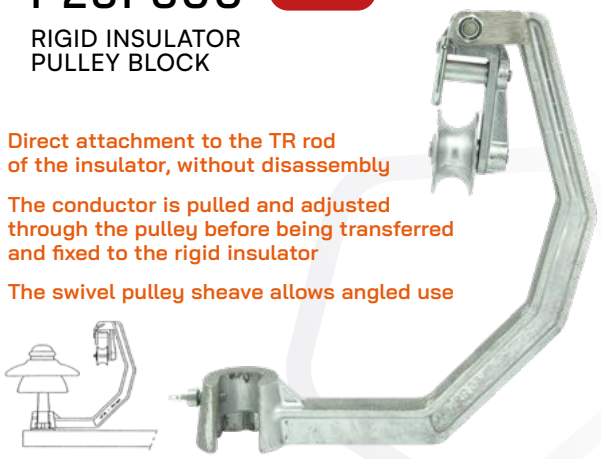
## P25F300 NEW

RIGID INSULATOR PULLEY BLOCK

Direct attachment to the TR rod of the insulator, without disassembly

The conductor is pulled and adjusted through the pulley before being transferred and fixed to the rigid insulator

The swivel pulley sheave allows angled use



### / USE

Pulley designed for overhead stringing of bare cables on networks equipped with rigid insulators. It is to be attached on the reinforced TR rod (EDF standard) of the rigid insulator. This pulley can also be used to release a one-sided force on a support where one of the spans will be removed for maintenance.

### / TECHNICAL SPECIFICATIONS

- Aluminium alloy assembly.
- Slotted fixing ring with butterfly tightening screw.
- Swivel sheave equipped with a safety catch.

| Ref. | Groove width | Groove depth Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| P25F300 | 24 mm | 35 mm | 300 daN 150 daN | 320 x 310 x 65 mm | 1,2 kg |

## P220 OUR SELECTION

STRINGING PULLEYS FOR BARE CABLES



### / USE

Pulleys designed for stringing overhead line LV or MV bare cables. It is recommended to use a pulley with a sheave Ø at least 20 times larger than the external diameter of the cable (15 times in case of a small winding).

### / TECHNICAL SPECIFICATIONS

- Strong and light pulley made of light aluminium alloy.
- Rotating hook with safety latch.
- Side opening clevis with latch that prevents the cable from escaping.

| Ref. | Groove width | Deep groove Ø | WLL | For cables | Weight |
|---|---|---|---|---|---|
| P220 0500 | 22 mm | 150 mm | 500 daN | Up to 43 mm² | 1,15 kg |
| P220 0800 | 38 mm | 250 mm | 800 daN | Up to 117 mm² | 2,1 kg |
| P220 1300 | 40 mm | 300 mm | 1 300 daN | Up to 148 mm² | 4 kg |





# TP95

## INSULATING UNWINDING PULLEY

### / USE

Used for unwinding operations near live conductors.
Pulley used to unwind or adjust a bare or insulated conductor or an ABC cable up to 4x25mm².
In conformity with EDF SERECT 315

### / TECHNICAL SPECIFICATIONS

- Safety latch to secure the conductor on the sheave.

| Ref. | Groove width | Groove depth Ø | WLL | Hook opening | Dimensions | Weight |
|---|---|---|---|---|---|---|
| TP95 | 25 mm | 140 mm | 100 daN | 23 mm | 392 x 200 x 83 mm | 1,7 kg |

Steel pulley with anti-corrosion treatment

Pulley with cable guide flanges to prevent derailment



# P230

## PULLEY WITH HOOK

### / USE

Pulley designed to transmit forces using steel cables.

### / TECHNICAL SPECIFICATIONS

Pulley with opening shell and bronze ring. Hook fitted with safety clip.

| Ref. | Deep groove Ø | Cable Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| P230160 | 140 mm | 10-11,5 mm | 1,25 t | 342 x 197 mm | 5,2 kg |
| P230200 | 172 mm | 13-15 mm | 2 t | 430 x 255 mm | 9,3 kg |

Offshore pulley made of high-strength HR steel with anti-corrosion treatment



# P222

## PULLEY WITH HOOK FOR WIRE ROPE

### / USE

Pulley designed to transmit forces using steel cables.
Intensive use possible.

### / TECHNICAL SPECIFICATIONS

- Hook pulley with safety latch.
- Openable clevis pulley, waterproof components.
- Anchoring: hook

| Ref. | Deep groove Ø | Cable Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| P2221 | 60 mm | 9-10 mm | 2 t | 262 x 82 mm | 2,6 kg |
| P2222 | 90 mm | 12-14 mm | 5 t | 367 x 120 mm | 7 kg |

Stainless steel frame and nylon sheave



# PDRE

## UNWINDING PULLEY FOR TELECOM CABLES

### / USE

Pulley designed for unwinding telecommunication cables up to 112 pairs.

### / TECHNICAL SPECIFICATIONS

- Anchored by a single hook.
- Stainless steel hook and stem.
- Polyamide sheave.

| Ref. | Deep groove Ø | Groove width | WLL | Weight |
|---|---|---|---|---|
| PDRE | 20 mm | 45 mm | 150 daN | 350 g |

Steel pulley protected against corrosion



Simple, light and economical pulley

# P223

## SCISSOR TYPE PULLEY WITH HOOK FOR STEEL WIRE ROPE

### / USE

Pulley designed to transmit forces using steel cables.

### / TECHNICAL SPECIFICATIONS

- Pulley with swivel flanges for cable routing.
- Multiple anchoring: shackle, hook, sling, chain

| Ref. | Deep groove Ø | Cable Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| P2232 | 132 mm | 10-12 mm | 3,2 t | 260 x 164 mm | 4,8 kg |

Compact and robust pulley constructed from HR steel



Very ergonomic thanks to the swivel hook and opening flange

# P224

## SNATCH BLOCK FOR WIRE ROPE, PULLEYS FOR LIFTING, PULLING AND RETURNING FORCE

### / USE

Pulleys for lifting, pulling and returning wire rope.
Swivel hook suspension.

### / TECHNICAL SPECIFICATIONS

- 360° rotating hook equipped with safety latch.
- Opening by unscrewing the retained bolt and rotating the movable flange around sheave axis.
- Sheave mounted on bronze bushing.
- Lifting approved — safety factor 4.

| Ref. | WLL | Wire rope Ø | Ø groove | Height H (mm) | Lenght L (mm) | Width E(mm) | Hook P(mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| P224 C20T | 2.5 t | 9-11 mm | 80/60 mm | 279 | 86 | 81 | 23 | 3,6kg |
| P224 C32T | 3.2 t | 12/16 mm | 110/76 mm | 330 | 120 | 97 | 27 | 6,7 kg |
| PC224 C52T | 5,4 t | | | 369 | | | 35 | 8,1 kg |
| PC224 C54T | | 16/20 mm | 150/116 mm | 419 | 160 | | | 11 kg |
| PC224 C80T | 8 t | 20/22 mm | 200/160 mm | 533 | 210 | 125 | 43 | 24 kg |

# TP90C-25

NEW

25M ROPE WITH PULLEY AND HOOK WLL:50DAN



**/ This kit contains**

- TP90 insulating pulley
- TC160H insulating hook
- 25 meters braided rope

| Ref. | Deep groove Ø | Cable Ø | WLL one rope strand | WLL total at hook | Weight |
|---|---|---|---|---|---|
| TP90 | 45 mm | 10 mm max. | 60 daN | 120 daN | 390 |

| Ref. | WLL | Weight |
|---|---|---|
| TC160H | 50 daN | 45 g |

# TC160H

OUR SELECTION

INSULATING HOOK 50 DAN FOR SERVICE ROPES

STANDARDS

IEC 60900: 2012



**/ USE**

Live working up to 1000V AC and 1500V DC.

Used with a TP90 pulley and a service rope, this hook can be used to lift tools or equipment when working under tension.

**/ TECHNICAL SPECIFICATIONS**

Insulating hook made of red polyamide with 30% glass fibre.

The hook has 2 holes of Ø 16 mm for the rope to pass through.

| Ref. | WLL | Weight |
|---|---|---|
| TC160H | 50 daN | 45 g |

Opening fork pulley in polyamide reinforced with glass-fiber



Hook with safety catch, rotates 360°

# TP90

OUR SELECTION

INSULATING PULLEY WITH HOOK FOR SERVICE ROPE



Very light pulley for simple manual work

Insulating pulley due to flanges and sheave made of insulating materials

**/ USE**

Pulley used for :

- angle transmission of the service rope
- lifting tools and materials,
- removing connections using a TM05 clamp.

It can be attached to a bracket, to the ring of a TE40, TE45, TE50 anchor bracket, to a TC155 rope tie, to a TC125 ring clamp

**/ TECHNICAL SPECIFICATIONS**

- Hook pulley with safety latch equipped with a manoeuvring ring (for hook pole).
- Hook opening: 20 mm.

| Ref. | Deep groove Ø | Cable Ø | WLL one rope strand | WLL total at hook | Weight |
|---|---|---|---|---|---|
| TP90 | 45 mm | 10 mm max. | 60 daN | 120 daN | 390 |



# LW08-05-ALU

SERVICE HOOK

**/ USE**

The service rope hook is used to hoist the material and tools required by the lineman.

| Ref. | WLL | Lenght | Width | Height | Weight |
|---|---|---|---|---|---|
| LW08-05-ALU | 100 daN | 140 mm | 80 mm | 10 mm | 0,09 kg |

# TP92

NEW

RETURN PULLEY BLOC WITH OPENING FORK 500 DAN

STANDARDS

MACHINERY DIRECTIVE 2006/42/EC

**/ USE**

Pulley used as a return or sheave block.

Used, for example, on rope hoists.

Applications include electrical networks and the lifting industry.

**/ TECHNICAL SPECIFICATIONS**

**Product :**

- Opening fork locked by a screwed pin.
- Steel swivelling hook having an opening of Ø20mm.

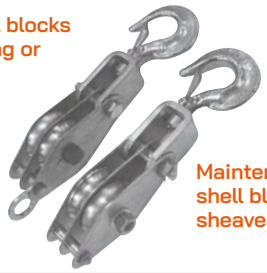
| Ref. | WLL | Ø rope max | Ø sheave | Weight | Dimensions |
|---|---|---|---|---|---|
| TP92 | 500 daN at hook<br>250 daN on 1 strand | 16 mm | 56 mm | 0,7 kg | 320 x 80 x 80 mm |

Very light aluminium alloy pulley with opening flange



Sheave mounted on armoured ball bearing and greased for life

Very versatile shell blocks for use in tensioning or lifting loads



Maintenance-free shell blocks with nylon sheaves.

# 802-842

## RETURN PULLEY FOR SERVICE ROPES

### / USE

Mainly used as a return pulley for ropes up to maximum Ø16 mm (hoist, service or operating ropes).

### / TECHNICAL SPECIFICATIONS

Light alloy pulley with rustproofed tempered steel hook fitted with a safety clip; light alloy sheave mounted on reinforced permanently greased ball bearings for rapid jam-free unwinding

| Ref. | Deep groove diam | Rope diam. | WLL total at hook | WLL one rope strand | Dimensions | Weight |
|---|---|---|---|---|---|---|
| 802 | 130 mm | Ø16mm max. | 500 daN | 250 daN | 155 x 80 x 365 mm | 3,06 kg |
| 842 | 60 mm | | 250 daN | 125 daN | 90 x 80 x 265 mm | 1,37 kg |

# PDL

## PAIR OF SHELL BLOCKS WITH HOOK

### / USE

Shell blocks that are assembled with a service cord.

### / TECHNICAL SPECIFICATIONS

- Shell blocks with hook and safety latch.
- Shell blocks made of corrosion-resistant steel.
- Anchoring: hook.

| Ref. | Number of sheaves | Deep groove diameter | Rope diameter | WLL | Weight |
|---|---|---|---|---|---|
| PDL250 | 3 | 32 mm | 8-10 mm | 250 kg | 1,3 x 2 kg |
| PDL320 | 2 | 40 mm | 10-12 mm | 320 kg | 1,8 x 2 kg |
| PDL500 | 3 | 40 mm | 10-12 mm | 500 kg | 2,4 x 2 kg |

# LW08-16

NEW

LV MV

## SELF-CENTERING LIFTING SPREADER BEAM



### / USE

The lifting spreader beam is used for lifting equipment such as pole-mounted electrical transformers, pole-mounted circuit breakers, etc. To adjust the distance between clevises, both clevises must be moved simultaneously by hands.

### / TECHNICAL SPECIFICATIONS

- Body, lifting ring, clevises, locking pins are made of corrosion protected metal.
- Swivelling and sliding clevises are symmetrically moved and balanced by a wire rope system. For guiding the load : 2 holes ø 27 mm are located at both ends of the spreader body.
- Minimum distance between clevise : 0,28 m
- Maximum distance between clevise : 0,85 m

| Ref. | Lifting eye Øs | Dimensions | WLL | Weight |
|---|---|---|---|---|
| LW08-16 | 35 mm (int) 63 mm (ext) | 0,95 x 0,25 x 0,06 m | 650 daN | 5,5 kg |

ESSENTIAL

# TM05N

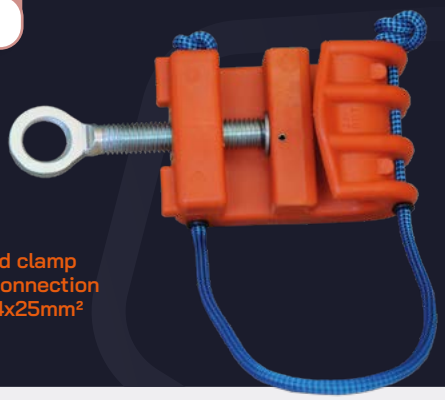
OUR SELECTION

LV

## CLAMPING HAND WITH INSULATING BODY

STANDARDS

FT BT 330



Insulated hand clamp for handling connection cables up to 4x25mm²

### / USE

Used with an operating rope, the tightening hand allows to grab, fix or remove insulated aerial bundled cables, or to apply a mechanical tension force.

### / TECHNICAL SPECIFICATIONS

Clamping hand consisting of :
- a C-shaped insulating body
- a screw with a metal ring protected against corrosion
- Ø 5mm synthetic fibre rope handle in blue/black

| Ref. | Capacity | Cable | WLL | Dimensions | Weight |
|---|---|---|---|---|---|
| TM05N | 11 to 23 mm | Up to 4 x 25 mm² | 80 daN (pull on the loop) | 160 x 100 x 60 mm | 300 g |

# G32DR - G32AN - G32AR - G32ST

NEW

UNWINDING ROLLERS



G32DR



• Protects cables when passing through corners.

G32AN



• Protects cables from friction on sharp edges.

G32AR



• Protects cables from friction on sharp edges.

G32ST

## / G32DR

### STRAIGHT UNWINDING ROLLERS

#### / USE

Roller for straight unwinding of cables on the ground or in trenches.

#### / TECHNICAL SPECIFICATIONS

Very robust frame.
Roller mounted on ball bearings.
Roller Ø76mm.

| Ref. | Cable Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|
| G32DR135 | 135 mm max | 200 daN | 300 x 240 x 250 mm | 3,6 kg |

For other dimensions, please contact us.

## / G32AN

### CORNER UNWINDING ROLLERS

#### / USE

Roller for turns unwinding of cables on the ground or in trenches.

#### / TECHNICAL SPECIFICATIONS

Very robust frame.
Roller mounted on ball bearings.
Roller Ø76mm.

| Ref. | Cable Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|
| G32AN135 | 135 mm max | Horizontal : 400 - Vertical : 200 daN | 510 x 370 x 375 mm | 10,5 kg |

## / G32AR

### EDGE UNWINDING ROLLERS

#### / USE

Roller for unwinding cables at the “stair nosing”.

#### / TECHNICAL SPECIFICATIONS

Very robust frame. 3 rollers mounted on ball bearings. Rollers Ø76mm.
Radius of curvature downwards 700mm.

| Ref. | Cable Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|
| G32AR160 | 160 mm max | 300 daN | 490 x 240 x 400 mm | 9 kg |

For other dimensions, please contact us.

## / G32ST

### REEL RUN OFF ROLLERS

#### / USE

Rollers for centering cables when running off the reel.

#### / TECHNICAL SPECIFICATIONS

Very robust frame.

| Ref. | Cable Ø | WLL | Dimensions | Weight |
|---|---|---|---|---|
| G32ST160 | 200 mm max | 200 daN | 1000 x 510 x 480 mm | 13,5 kg |

Simple wire clamp with self-tightening cam for effortless installation.

Lightweight and equipped with a shackle.



Tensioner very robust made of forged steel.



Galvanised steel for protection against corrosion.

## T47

WIRE ROPE GRIPPER

### / USE

For use on overhead power line networks, to take up load or maintain tensional force while awaiting adjustment.

### / TECHNICAL SPECIFICATIONS

- Aluminium alloy body.
- Grooved cam, spring loaded.

| Ref. | Cable diameter | WLL | Weight |
|---|---|---|---|
| T47PT43 | 6 - 8 mm | 400 kg | 290 g |
| T47PT44 | 7 - 15 mm | 600 kg | 550 g |
| T47PT45 | 14 - 18 mm | 800 kg | 610 g |

## T51

PARALLEL JAWS TENSIONER

### / USE

Mechanical tensioner used to apply traction forces to copper, aluminium and steel wires.

| Ref. | WLL | Ø Min - Max | Cables | Weight |
|---|---|---|---|---|
| T51D1-5 | 500 daN | 1 - 5 mm | 1 - 16 mm² | 0,25 kg |
| T51D3-9 | 1000 daN | 3 - 9 mm | 9 - 45 mm² | 0,85 kg |
| T51D4-12 | 1700 daN | 4 - 12 mm | 16 - 75 mm² | 1,20 kg |
| T51D6-18 | 3000 daN | 6 - 18 mm | 25 - 180 mm² | 1,85 kg |
| T51D10-28 | 3500 daN | 10 - 28 mm | 50 - 240 mm² | 3,80 kg |

## / G18A - G18C - G18AC

OUR SELECTION

CABLE GRIP WITH STEEL JAWS

### / USE

Application of overhead power line networks Aluminium, Aluminium Alloy or Alu-Steel (Al, AAC, AAAC, ACSR, ...).

- Steel cable grip with parallel jaws.
- Movable jaw with fine grooves for aluminium cables.
- Wide range of cable diameters.
- Safety catch to prevent the cable from coming out of the jaws.

### / TECHNICAL SPECIFICATIONS

Wire grip made of steel protected against corrosion
Equipped with a spring to tighten the cable.
Large hanging ring.



WLL
1000 DAN

### G18A

| Ref. | Cable Ø | Clamping Length | Capacity Aluminium | WLL | Weight |
|---|---|---|---|---|---|
| G18A1T5-22 | 5-22 mm | 60 mm | 16 - 288 mm² | 1000 daN | 1,4 kg |
| G18A2T5-25 | 5-25 mm | 110 mm | 16 - 366 mm² | 2000 daN | 2,1 kg |
| G18A2T16-32 | 16-32 mm | | 147 - 612 mm² | | 2,3 kg |



WLL
2000 DAN

### G18C

| Ref. | Cable Ø | Tightening Length | Capacity Copper | WLL | Weight |
|---|---|---|---|---|---|
| G18C1T5-22 | 5-22 mm | 60 mm | 16-300 mm² | 1000 daN | 1,4 kg |
| G18C2T5-25 | 5-25 mm | 110 mm | 16-370 mm² | 2000 daN | 2,1 kg |
| G18C2T16-32 | 16-32 mm | | 150-600 mm² | | 2,3 kg |



### G18AC

| Ref. | SWL | Min-Max | Cable | Jaw lenght | Hanging eye | Weight |
|---|---|---|---|---|---|---|
| G18AC2T5-16AD | 2000 daN | Ø 5-16 mm | 16-148 mm² | 100 mm | 32 mm | 1,7 kg |
| G18AC2T5-25AD | | Ø 5-25 mm | 16-366 mm² | 110 mm | | 2,1 kg |



Aluminium alloy cable clamp for optimum weight

# G10 - G12 - G08 - G09

## CABLE CLAMPS WITH ALUMINIUM ALLOY JAWS

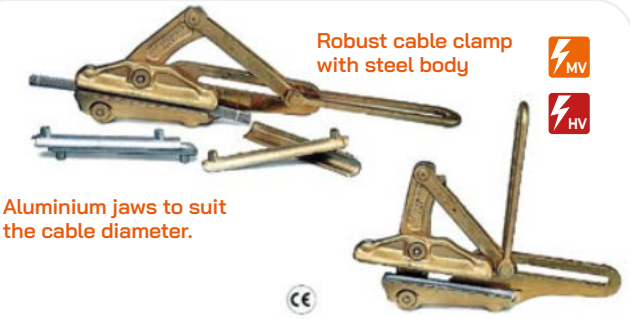
### / USE

Application for overhead power line networks. Allows traction to be applied by distributing the clamping force over the entire length of the jaws.

### / TECHNICAL SPECIFICATIONS

- 2 versions:
  - Aluminium cable clamp for non-insulated cables.
  - Plastic-coated cable clamp for insulated cables (e.g. ABC cables).

| Ref. | Cable Ø | Length | Specificity | Capacity al | LV capacity | MV capacity | WLL | Weight |
|---|---|---|---|---|---|---|---|---|
| G10 | 6-14 mm | 160 mm | Aluminium jaws | 22-117 mm² | - | - | 800 daN | 1,6 kg |
| G12 | 6-13,5 mm | | Epoxy coated jaws | - | ABC with messenger 54.6 or 70mm² | - | | |
| G08 | 10-20 mm | 175 mm | Aluminium jaws | 59,7-228 mm² | - | - | 1 400 daN | 4,1 kg |
| G09 | | | Epoxy coated jaws | - | ABC with messenger 54.6 or 70mm² | ABC with messenger 50 mm² | | |



Robust cable clamp with steel body

Aluminium jaws to suit the cable diameter.

# G15

## STEEL CABLE GRIPS WITH INTERCHANGEABLE JAWS

### / USE

Application for overhead power line networks. Allows traction to be applied by distributing the clamping force over the entire length of the jaws.

### / TECHNICAL SPECIFICATIONS

- Aluminium cable clamp for non-insulated cables.
- Anchor shackle to apply the tensile force.
- Supplied without jaws.

| Ref. | WLL | Weight |
|---|---|---|
| G15 | 2 500 daN | 7 kg |

| Jaws reference | Min-max | Cables | Jaw lenght |
|---|---|---|---|
| G15F170-185 | 17-18,5 mm | 170-200 mm² | 280 mm |
| G15F185-200 | 18,5-20mm | 200-240 mm² | |
| G15F200-215 | 20-21,5 mm | 240-280 mm² | |
| G15F215-230 | 21,5-23 mm | 280-320 mm² | |

For other dimensions, please contact us.



An accessory that keeps the insulator chain under stress while adjusting the conductor tension.

# EA4BS11

## ANCHORING STIRRUP

STANDARDS

COMPLIES WITH FT HTA 530

### / USE

Used to anchor behind the ball socket of an insulator and apply tension to the conductor. Used with a hoist to take up the tension.

### / TECHNICAL SPECIFICATIONS

- Designed to fit between the N11 rod insulator and the ball socket.

| Ref. | WLL | Length | Weight |
|---|---|---|---|
| EA4BS11 | 1 300 daN | 350 mm | 2,5 kg |



Single loop
with crimped sleeve

# C86

## PULLING SLEEVE OR CABLE PULLER IN GALVANIZED STEEL

### / USE

Cable pulling socks for pulling insulated or bare cables.
Used for unwinding cables on pulleys or ground rollers.

### / TECHNICAL SPECIFICATIONS

- Single loop closed pulling socks.
- Sock made of galvanised steel cables.

| Ref. | Min-max | Breaking load | Lenght engaged | Ø loop | Weight |
|---|---|---|---|---|---|
| C86D8-15 | Ø 8-15 mm | 1.100 daN | 365 mm | Ø4 mm | 0.07 kg |
| C86D15-25 | Ø 15-25 mm | 2.500 daN | 560 mm | Ø6 mm | 0.19 kg |
| C86D25-45 | Ø 25-45 mm | 3.800 daN | 660 mm | Ø8 mm | 0.32 kg |
| C86D45-60 | Ø 45-60 mm | 7.800 daN | 665 mm | Ø9 mm | 0.66 kg |
| C86D60-80 | Ø 60-80 mm | 8.900 daN | 760 mm | | 0.81 kg |
| C86D80-100 | Ø 80-100 mm | | 900 mm | | 1.2 kg |

Note: the breaking load is not the working load limit. It is necessary to apply a safety factor.

Model C85D12-17 specifically designed for bundled cables messenger wire.



Cable puller with ligated
single thimble loop.

# C85

## PULLING SLEEVE OR CABLE PULLER IN GALVANIZED STEEL

### / USE

Cable pulling socks for pulling insulated or bare cables.
Model C85D12-17 specific for pulling messenger wires of aerial bundled cables LV and MV.
Ideal for unwinding cables on pulleys or ground rollers.

### / TECHNICAL SPECIFICATIONS

- Closed single loop cable pulling socks.
- Ligated thimble loop for improved flexibility.
- Brazed sock end for better strength.
- Sock made of galvanised steel cables.

| Ref. | Min-max | Breaking load | Lenght engaged | Ø loop | Weight |
|---|---|---|---|---|---|
| C85D10-15 | Ø 10-15 mm | 790 daN | 300 mm | Ø6 mm | 0.07 kg |
| C85D12-17 | Ø 12-17 mm | 2.100 daN | 400 mm | | 0.14 kg |
| C85D15-20 | Ø 15-20 mm | 1.500 daN | 360 mm | Ø8 mm | 0.13 kg |
| C85D18-25 | Ø 18-25 mm | | 465 mm | | 0.14 kg |
| C85D23-30 | Ø 23-30 mm | 2.300 daN | 550 mm | | 0.23 kg |

Note: the breaking load is not the working load limit. It is necessary to apply a safety factor.



Cable puller with ligated
double thimble loops.

# C90

## DOUBLE LOOP PULLING SLEEVES OR CABLE PULLER IN GALVANISED STEEL

### / USE

Cable puller designed for pulling electrical cables from overhead networks.

### / TECHNICAL SPECIFICATIONS

- Cable puller in galvanised steel.
- Open end with double loop.

| Ref. | Min-max | Breaking load | Length engaged | Weight |
|---|---|---|---|---|
| C90D18-25 | Ø 18-25 mm | 1500 daN | 465 mm | 0.28 kg |
| C90D23-30 | Ø 23-30 mm | 2300 daN | 475 mm | |
| C90D30-38 | Ø 30-38 mm | 2300 daN | 500 mm | |
| C90D35-43 | Ø 35-43 mm | 4900 daN | 525 mm | 0.52 kg |

Note: the breaking load is not the working load limit. It is necessary to apply a safety factor.

# C91 NEW

## PULLING SLEEVE OR CABLE PULLER IN POLYAMIDE

Open ended cable puller with large flexible loop for use on the bundled in combination with C85D12-17.



### / USE

Cable puller designed for the aerial pulling of bundled cables with messenger wire.

### / TECHNICAL SPECIFICATIONS

- Cable pulling sock built with polyamide wires.
- Single flexible loop.
- Open end to make it pass through.

| Ref. | Min. - max. | Breaking load | Length | Weight |
|---|---|---|---|---|
| C91D25-32 | Ø 25 to 32 mm | 850 daN | 550 mm | 60 g |
| C91D32-43 | Ø 32 to 43 mm | 1300 daN | 650 mm | 130 g |
| C91D40-50 | Ø 40 to 50 mm | | 725 mm | 140 g |
| C91D42-55 | Ø 42 to 55 mm | | 750 mm | 220 g |
| C91D65-75 | Ø 65 to 75 mm | 2140 daN | 1000 mm | 340 g |
| C91D75-85 | Ø 75 to 85 mm | 2850 daN | 1300 mm | 500 g |
| C91D85-100 | Ø 85 to 100 mm | | 1400 mm | 600 g |

### / AERIAL BUNDLE CABLE STRINGING SET

| Cable pulling sock recommended for use on cable bundle | | |
|---|---|---|
| **Network** | **Cable bundle** | **Recommended ref.** |
| LV | 3 × 25 mm² + (N) 54,6 mm² à 3 × 35 mm² + (N) 54,6 mm² | C91D25-32 |
| | 3 × 50 mm² + (N) 54,6 mm² à 3 × 70 mm² + (N) 70 mm² | C91D32-43 |
| | | C91D40-50 |
| | 3 × 150 mm² + (N) 70 mm² | C91D42-55 |
| MV | 3 × 50 mm² + (P) 50 mm² à 3 × 95 mm² + (P) 50 mm² | C91D65-75 |
| | 3 × 150 mm² + (P) 50 mm² | C91D75-85 |
| | 3 × 240 mm² + (P) 50 mm² | C91D85-100 |

Double mount



Above :
- Pulling swivel E41D34R6000
- 2 steel pullling socks C85D12-17
- Polyamide pulling sock C91D...

| Composition of a pulling set | | |
|---|---|---|
| **Ref.** | **Description** | **Destination** |
| C85D12-17 | Galvanised steel pulling sock Ø12-17mm | Pulling of neutral or messenger |
| C91D... | Polyamide pulling sock adapted to Ø | Holding of cables bundle extremity |
| E41D34R6000 | Swivel Ø34mm BL:6000daN | Rotation freedom during pulling |
| C85D12-17 | Galvanised steel pulling sock Ø12-17mm for fixing on pulling rope/cable extremity | |



Clevis swivel

# E41

## STRINGING SWIVELS

### / USE

Swivel to allow rotation of the ropes when pulling.

### / TECHNICAL SPECIFICATIONS

- Steel swivel on bronze ring or ball bearing system.

| Ref. | Outside Ø | Length | Clevis opening | BR (breakage) | Weight |
|---|---|---|---|---|---|
| E41D16R1700 | 16 mm | 70 mm | 8 mm | 1.700 daN | 0.10 kg |
| E41D22R4000 | 22 mm | 88 mm | 10 mm | 4.000 daN | 0.23 kg |
| E41D34R6000 | 34 mm | 122 mm | 16 mm | 6.000 daN | 0.52 kg |
| E41D38R9000 | 38 mm | | | 9.000 daN | 0.69 kg |

# TC155

INSULATING POLYAMIDE ROPE TIE



## / USE

Tie designed to hang a TP10 rope hoist or a TP90 pulley block in order to apply tensionning force to conductors of a LV or MV network.

## / TECHNICAL SPECIFICATIONS

- Made of Ø 16 mm synthetic rope.
- Thickened 14 cm loops at each end with heatshrinkable chains.
- 14 cm spliced loops at both ends covered with heatshrink.

| Ref. | WLL | Length | Weight |
|---|---|---|---|
| TC155 | 300 daN | 1 m | 250 g |

# E27

CHAIN SLING



## / USE

Used for lifting transformers.

## / TECHNICAL SPECIFICATIONS

- 2 hooks with safety latch.
- WLL: 2.8 t (0 to 45°)
- WLL: 2.0 t (45° to 60°)

| Ref. | WLL | Length | Weight |
|---|---|---|---|
| E27 | 2000 (<60°) daN | 1 m | 6,4 kg |

# E35

STEEL SLING WITH SLEEVED THIMBLED LOOPS



## / USE

Approved sling for lifting with a safety factor of 5:1.

## / TECHNICAL SPECIFICATIONS

- Galvanised steel cable sling.

| Ref. | WLL | Length | Cable (mm) | Weight |
|---|---|---|---|---|
| E35N14T08M | 1,4 t | 0,8 m | Ø 12 | 0,9 kg |
| E35N14T12M | | 1,2 m | | 1,1 kg |
| E35N14T2M | | 2 m | | 1,5 kg |
| E35N14T3M | | 3 m | | 2 kg |
| E35N27T08M | 2,7 t | 0,8 m | Ø 16 | 1,9 kg |
| E35N34T12M | 3,4 t | 1,2 m | Ø 18 | 2,9 kg |
| E35N34T2M | | 2 m | | 3,8 kg |
| E35N34T3M | | 3 m | | 4,9 kg |
| E35N52T3M | 5,2 t | | Ø 22 | 5,2 kg |



# E25

POLYESTER ROUND SLING

STANDARDS

EN 1492-2

## / USE

Round sling with safety factor 7:1.
Dedicated to lifting loads. For concrete applications, a protective sheath is required.

## / TECHNICAL SPECIFICATIONS

- 100% high tenacity polyester.
- Label: identification, information, certificate, traceability.
- Reinforced sheath.

| Estrope polyester | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| WLL and color code | 1.000 kg | 2.000 kg | 3.000 kg | 4.000 kg | 5.000 kg | 6.000 kg | 8.000 kg | 10.000 kg |
| 0,5 m | E25N1T05M | E25N2T05M | E25N3T05M | | | | | |
| 1,0 m | E25N1T1M | E25N2T1M | E25N3T1M | E25N4T1M | E25N5T1M | | | |
| 1,5 m | E25N1T15M | E25N2T15M | E25N3T15M | E25N4T15M | E25N5T15M | | | |
| 2,0 m | E25N1T2M | E25N2T2M | E25N3T2M | E25N4T2M | E25N5T2M | E25N6T2M | | |
| 2,5 m | E25N1T25M | E25N2T25M | E25N3T25M | E25N4T25M | E25N5T25M | E25N6T25M | E25N8T25M | |
| 3,0 m | E25N1T3M | E25N2T3M | E25N3T3M | E25N4T3M | E25N5T3M | E25N6T3M | E25N8T3M | E25N10T3M |
| 4,0 m | E25N1T4M | E25N2T4M | E25N3T4M | E25N4T4M | E25N5T4M | E25N6T4M | E25N8T4M | E25N10T4M |



# E26

POLYESTER FLAT WEBBING SLING

STANDARDS

EN 1492-1

## / USE

Lifting sling with safety factor 7:1.
Dedicated to lifting loads. For concrete applications, a protective sheath is required.

## / TECHNICAL SPECIFICATIONS

- 100% high tenacity polyester.
- Label: identification, information, certificate, traceability.

| Polyester flat webbing sling | | | | | | |
|---|---|---|---|---|---|---|
| WLL and color code | 1.000 kg | 2.000 kg | 3.000 kg | 4.000 kg | 5.000 kg | 6.000 kg |
| Length / Webbing width | 30 mm | 60 mm | 90 mm | 120 mm | 140 mm | 170 mm |
| 1,0 m | E26N1T1M | E26N2T1M | | | | |
| 1,5 m | E26N1T15M | E26N2T15M | E26N3T15M | | | |
| 2,0 m | E26N1T2M | E26N2T2M | E26N3T2M | E26N4T2M | E26N5T2M | |
| 2,5 m | E26N1T25M | E26N2T25M | E26N3T25M | E26N4T25M | | |
| 3,0 m | E26N1T3M | E26N2T3M | E26N3T3M | E26N4T3M | E26N5T3M | E26N6T3M |
| 4,0 m | E26N1T4M | E26N2T4M | E26N3T4M | E26N4T4M | E26N5T4M | E26N6T4M |
| 5,0 m | E26N1T5M | E26N2T5M | E26N3T5M | E26N4T5M | E26N5T5M | E26N6T5M |
| 6,0 m | E26N1T6M | E26N2T6M | E26N3T6M | E26N4T6M | E26N5T6M | E26N6T6M |



## C319

SEMI-STATIC POLYAMIDE BRAIDED ROPE

### / USE

Suitable for work at height, climbing, hoisting.

### / TECHNICAL SPECIFICATIONS

- Ø 10.5 mm.
- Very robust polyamide.

| Ref. | Rope diam. | Length | Packaging | Weight |
|---|---|---|---|---|
| C319D10L050 | 10.5 mm | 50 m | Roll of rope | 3,2 kg |
| C319D10L060 | | 60 m | | 3,9 kg |
| C319D10L100 | | 100 m | On reel | 6,5 kg |
| C319D10L200 | | 200 m | | 13 kg |

Manufactured according to EN ISO 1346



## C320

4-STRAND POLYPROPYLENE ROPE

### / USE

Service rope.

### / TECHNICAL SPECIFICATIONS

- Made of UV treated yarns.
- 4 strands

| Ref. | Rope Ø | Length | Breaking load | Weight |
|---|---|---|---|---|
| C320D10L100 | 10 mm | 100 m | 1 390 kg | 4,5 kg |
| C320D12L025 | 12 mm | 25 m | 1 940 kg | 1,6 kg |
| C320D12L100 | | 100 m | | 6,5 kg |
| C320D14L025 | 14 mm | 25 m | 2 600 kg | 2,2 kg |
| C320D14L100 | | 100 m | | 9 kg |
| C320D16L100 | 16 mm | | 3 330 kg | 11,5 kg |
| C320D18L100 | 18 mm | | 4 510 kg | 15 kg |
| C320D20L100 | 20 mm | | 5 050 kg | 18 kg |

Flexible and resistant polyamide rope.



## C325

POLYAMIDE BRAIDED ROPE 8 STRANDS

### / USE

Rope suitable for pulling work and for fitting to hoists.
C325D10L025 suitable for TP10 hoist.
C325D12L100 suitable for TP550 hoist.

### / TECHNICAL SPECIFICATIONS

- High density polyamide rope with UV protection.

| Ref. | Rope Ø | Length | Breaking resistance | Weight |
|---|---|---|---|---|
| C318D03L100 | 3 mm | 100 m | 180 kg | 0,5 kg |
| C325D06L100 | 6 mm | | 600 kg | 1,7 kg |
| C325D08L100 | 8 mm | | 1 100 kg | 4 kg |
| C325D10L100 | 10 mm | | 1 600 kg | 5,5 kg |
| C325D12L100 | 12 mm | | 2 400 kg | 8,5 kg |
| C325D14L100 | 14 mm | | 2 800 kg | 10 kg |
| C325D10L025 | 10 mm | 25 m | 1 600 kg | 1,4 kg |
| C325D12L050 | 12 mm | 50 m | 2 400 kg | 4,3 kg |
| C325D14L250 | 14 mm | 250 m | 2 800 kg | 25 kg |
| C325D16L300 | 16 mm | 300 m | 3 500 kg | 42 kg |

## M120

NEW

HIGH STRENGHT CHAIN SHACKLE



### / USE

Compact shackle used for lifting loads.

### / TECHNICAL SPECIFICATIONS

Chain shackle with screwed pin.
Shackle in galvanised forged steel.




| Ref. | WLL | Ø | A | B | Weight |
|---|---|---|---|---|---|
| M120D08 | 500 kg | 8 mm | 13 mm | 22 mm | 40 g |
| M120D11 | 1000 kg | 11,2 mm | 17 mm | 31 mm | 130 g |
| M120D12 | 1500 kg | 12,7 mm | 18 mm | 36 mm | 190 g |
| M120D16 | 2000 kg | 15,8 mm | 20 mm | 41 mm | 290 g |
| M120D19 | 3250 kg | 19 mm | 27 mm | 51 mm | 580 g |
| M120D22 | 4750 kg | 22 mm | 32 mm | 63 mm | 930 g |

For other dimensions, please contact us.

## M220

NEW

HIGH STRENGHT ANCHOR SHACKLE



### / USE

Compact shackle used for lifting loads.

### / TECHNICAL SPECIFICATIONS

Anchor shackle with screwed pin.
Shackle in galvanised forged steel.




| Ref. | WLL | Ø | A | B | Weight |
|---|---|---|---|---|---|
| M220D08 | 500 kg | 8 mm | 13 mm | 29 mm | 50 g |
| M220D11 | 1000 kg | 11,2 mm | 17 mm | 36 mm | 150 g |
| M220D12 | 1500 kg | 12,7 mm | 18 mm | 43 mm | 200 g |
| M220D16 | 2000 kg | 15,8 mm | 20 mm | 47 mm | 300 g |
| M220D19 | 3 250 kg | 18,6 mm | 27 mm | 60 mm | 650 g |
| M220D22 | 4 750 kg | 22 mm | 32 mm | 71 mm | 1 kg |
| M220D25 | 6 500 kg | 25 mm | 37 mm | 84 mm | 1,5 kg |

For other dimensions, please contact us.

ESSENTIAL

# POT150

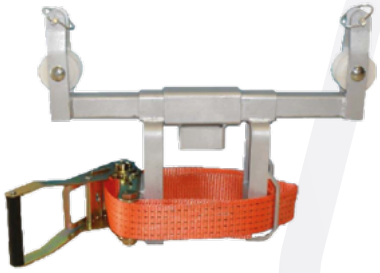
NEW

LIFTING BRACKET TO BE POSITIONNED AT TOP OF ELECTRICAL POST

STANDARDS

MACHINERY DIRECTIVE 2006/42/EC

Delivered without rope and without hook.



- Allows the technician to work in a better position.
- Saves time and therefore reduces operation and shutdown time.



- Relieves forces during aerial work.
- Allows lifting forces to be applied from the ground.

## / USE

Lifting bracket that can be positioned on top of posts.
Can be fixed to the top of wooden or concrete posts up to 370mm width.
Used for the following operations :
- Lifting of LV aerial bundle line/cable for clamping.
- Applying a lifting force from the top of the post.
- Applying a lifting force on a crossbar.
- Lifting equipment to a technician positioned at height.

## / TECHNICAL SPECIFICATIONS

**Product :**
- Zinc plated welded steel frame.
- Clamping on the support by means of a ratchet strap.
- Centering on the head of the support can be adjusted and therefore transfer of the forces in the axis of the post.
- Transfer of the mechanical force by 2 Teflon guide pulleys.



Positionning on top of wooden post



Readjusting the height of a post fitting



Setting height of a crossbar

| Ref. | Post width | WLL | Dimensions | Weight |
|---|---|---|---|---|
| POT150 | 370 mm max | 150 kg | 550 x 230 x 325 mm | 6,8 kg |

PREMIUM

# BEHRALIFT

INNOVATION

TEMPORARY SUPPORT FOR THE INSTALLATION/ REMOVAL OF MV BUNDLED CONDUCTORS

- The installation or removal of the bundled conductor can be easily carried out on uneven ground.
- The use of complex and expensive equipment is no longer necessary.
- This device is the only solution to hoist the line from the top of the pole.
- The jib has been designed so that it can be used on all three types of existing supports (Dervaux, Malico, FAV).



## / USE

The BEHRALIFT device is designed to hook or unhook MV aerial bundled cables at the top of wooden poles during maintenance work or when the conductor falls due to bad weather.

## / TECHNICAL SPECIFICATIONS

WLL : 400 daN

| Ref. | WLL | Dimensions | Weight |
|---|---|---|---|
| BEHRALIFT | 400 daN | 730 x 310 x 310 mm | 8 kg |





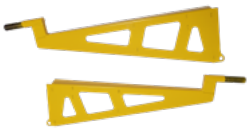
PREMIUM

# LP-LIFTPLAQ

INNOVATION

MANHOLE MAGNETIC LIFTER WITH WHEELS





LP-ER110

- Ergonomics: straight back, bent legs and reduced effort.
- Safety: no contact between hands and plates.
- Use on different types of plates and pads.

## / USE

Tool specially designed for the handling of plates and manhole covers. Very versatile, it can be used on: round, rectangular, triangular, BV Enedis, K2C, hinged, partially covered with concrete or bitumen, ...

## / TECHNICAL SPECIFICATIONS

- Frame : painted steel with 2 solid wheels Ø160mm
- Accessories: Handle with chisel tip and bronze weight.
- Very powerful permanent magnet.
- Magnet ejector.
- Magnet cover provided.

| Ref. | WLL | Dimensions | Weight |
|---|---|---|---|
| LP-LIFTPLAQ | 110 kg | 1000 x 200 x 350 mm | 18 kg |

## / ACCESSORIES

| Ref. | Description |
|---|---|
| LP-ER110 | Pair of wheels width expanders 110cm (2x55cm) |
| LP-KIT4 | 4-leg chain sling with hooks |
| LP-TLIFT | T-wrench for manhole with rectangular central hole |
| LP-R160X2 | Set of 2 wheels Ø160mm |
| LP-R260ACX2 | Set of 2 puncture-proof wheels Ø260mm |

ESSENTIAL

# LP-MINI-PLUS

INNOVATION

MANHOLE MAGNETIC MANUAL LIFTER



- Powerful, light and compact.
- Safety: no hand to manhole contact (risk of pinching or cutting).
- Use on different types of manholes and pads.
- Adjustable telescopic handle adapts to the size of the operator, which helps to respect the correct gestures and postures.

## / USE

Tools for handling manholes covers and pads without touching them. Professional dry and wet underground network applications. They allow a powerful grip while reducing the risk of musculoskeletal disorders.

| Ref. | Magnet | Height | Dimensions | Weight |
|---|---|---|---|---|
| LP-MINI-PLUS | Permanent and powerful 250 x 155 mm magnet 590 kg of grip in optimal condition | Adjustable : 72 / 79 / 85 cm | 39 x 15,5 x 50 cm retracted handle | 4 kg |



# MARTAP

PLATE REMOVING HAMMER

## / USE

Hammer used to loosen, lift and remove almost all chamber covers (metal or concrete). Used separately or in pairs, as required.

## / TECHNICAL SPECIFICATIONS

- Curved end with bar for blind holes.
- Straight end for through holes.
- Bronze striking plate.

| Ref. | Dimensions | Weight |
|---|---|---|
| MARTAP | 1 050 x 270 x 40 mm | 5,5 kg |



# P101

PLATE REMOVING HAMMER

## / USE

Pliers designed to lift, open and move cast iron manholes and plates.

## / TECHNICAL SPECIFICATIONS

Clamp made of special steel.

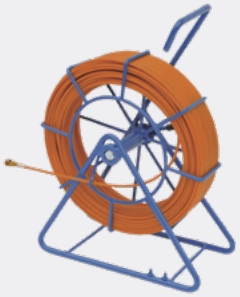
| Ref. | WLL | Dimensions | Weight |
|---|---|---|---|
| P101 | 30 kg | 630 x 245 x 50 mm | 2,9 kg |

# / A045 – A060 – A090

NEW

FIBER GLASS DUCT ROD

- High strength fibreglass rod with polypropylene outer sheath.
- Robust reel.



## / A045

Ø 4.5MM FIBER GLASS DUCT ROD

### / USE

Fiber glass duct rod for Ø 40-60 mm sheaths.
Recommended bending radius >310 mm.

### / TECHNICAL SPECIFICATIONS

- Fiber glass duct mounted on rotating reel.
- Painted steel reel equipped with a brake.
- Ø reel: 320 mm.
- Threaded end with eyelet head.

| Ref. | Ø | Length | End Fitting | Breaking | Dimensions | Weight |
|---|---|---|---|---|---|---|
| A045L060TDN | 4,5mm | 60 m | M5 | 170 daN traction | 360 x 190 x 450 mm | 4,1 kg |

For other dimensions, please contact us.



## / A060

Ø 6MM FIBER GLASS DUCT ROD

### / USE

Fiber glass duct for Ø 50-80 mm sheaths.
Recommended bending radius >400 mm.

### / TECHNICAL SPECIFICATIONS

- Fiber glass duct mounted on rotating reel.
- Painted steel reel equipped with a brake and 2 wheels. Ø reel: 520 mm.
- Threaded end with eyelet head.

| Ref. | Ø | Length | End Fitting | Breaking | Dimensions | Weight |
|---|---|---|---|---|---|---|
| A060L060TDN | 6 mm | 60 m | M6 | 230 daN traction | 540 x 250 x 640 mm | 7,7 kg |
| A060L100TDN | | 100 m | | | | 9,5 kg |

For other dimensions, please contact us.



## / A090

Ø 9MM FIBER GLASS DUCT ROD

### / USE

Fiber glass duct for Ø 65-125 mm sheaths.
Recommended bending radius >Ø 620mm.

### / TECHNICAL SPECIFICATIONS

- Fiber glass duct mounted on rotating reel.
- Painted steel reel equipped with a brake.
- Ø reel: Ø750mm.
- Threaded end with eyelet head.

| Ref. | Ø | Length | End Fitting | Breaking | Dimensions | Weight |
|---|---|---|---|---|---|---|
| A090L100TD2RN | 9 mm | 100 m | M12 | 340 daN traction | 780 x 400 x 820 mm | 19,3 kg |
| A090L150TD2RN | | 150 m | | | | 24 kg |
| A090L200TD2RN | | 200 m | | | | 28,5 kg |

For other dimensions, please contact us.



## TE40 - TE45 - TE50

ANCHOR CLAMP

STANDARDS
FT BT 320B

### / USE

Clamp to be tightened on the structure to create an anchoring point.
Ring screw tightening to be used with hooked poles.

| Ref. | Version | Tightening capacity | Dimensions | Weight |
|---|---|---|---|---|
| TE40EAC | Round bar mounting | Ø 26 mm | 140x100x65 mm | 450 g |
| TE45EAD | Large plate mounting | 40 to 60 mm - thickness 8 to 10 mm | 100x95x70 mm | 590 g |
| TE50EAS | Small plate mounting | 35 to 40 mm - thickness 7 to 8 mm | 100x90x50 mm | 360 g |



## T89

LASHING STRAP WITH RATCHET TENSIONER

STANDARDS
EN 12195-2

### / TECHNICAL SPECIFICATIONS

Device equipped with :
- 50mm wide blue webbing 100% polyester - anchor fitting n° 1
- double safety ratchet tensioner

| Ref. | Lashing capacity | Bare strap failure | Length | Strap width | Weight |
|---|---|---|---|---|---|
| T89 | 2000 daN | 6000 daN | 8 m | 50 mm | 0,3 kg |

# TE13AUD

SINGLE SECTION INSULATING LADDER



STANDARDS

EN 50528 / EN 131-1 / EN 131-2

- Rugged and reliable construction: the ladders have a unique screw assembly system, allowing the replacement of rungs.
- Improved ergonomics through the use of rectangular composite profiles with rounded edges.
- Tri-oval shape rungs, flat top, for a safer foot support.

## / TECHNICAL SPECIFICATIONS

- Anti-slip rubber feet.
- Ribbed anti-slip aluminium rungs, tri-oval shape, inclined to have an horizontal foot position.
- Anatomic 250 mm distance between rungs making it possible to support the knee and make work safer and more comfortable.
- The uprights are made of fibreglass/polyestercomposite material.
- The material offers high mechanical performance.
- A fibreglass surface finish makes them more efficient and improves UV resistance.
- In addition to its insulation qualities, the material is non-rotting and lightweight for user convenience.
- The optional V-shaped pole support has an anti-slip rubber profile.

| Factory assembled accessories (integrated wall wheels) | | | Option reference | OPE802130 | OPE802152 | OPE802065 | OPE802073 |
|---|---|---|---|---|---|---|---|
| | | | Option description | Pair of inner clam cleats | Rope 6m | Pole support E320V | Compensating stabiliser 70x30 |
| **Reference** | **Length** | **Weight** | **Nbr rungs** | | | | |
| TE13AUD 2M | 2 m | 6 kg | 7 | ✓ | ✓ | ✓ | ✓ |
| TE13AUD 3M | 3 m | 8,5 kg | 11 | ✓ | ✓ | ✓ | ✓ |
| TE13AUD 4 M | 4 m | 11,5 kg | 15 | ✓ | ✓ | ✓ | ✓ |

# TE17AUD - TE12AUD

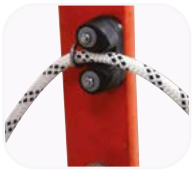
## ROPE-OPERATED INSULATING EXTENSION LADDER WITH 2 OR 3 SECTIONS

STANDARDS

EN 50528 / EN 131-1 / EN 131-2



Option: V-shaped pole support, factory installed



Option : factory-fitted cleats, supplied with a halyard rope



Standard wall wheels, factory assembled



Option: compensating stabiliser, factory assembled



### / TECHNICAL SPECIFICATIONS

- Automatically engaging aluminium double-safety rung lock.
- Ø 10 mm extension rope, strength 1800 daN.
- Anti-slip rubber feet.
- Guided by nylon-coated low-friction guides.
- Ribbed anti-slip aluminium rungs, tri-oval shape, inclined to have an horizontal foot position.
- Anatomic 250 mm distance between rungs making it possible to support the knee and make work safer and more comfortable.
- Standard wall wheels make it easier to extend the ladder and protect the fibreglass surface.
- The uprights are made of fibreglass/polyestercomposite material.
- The material offers high mechanical performance.
- A fibreglass surface finish makes them more efficient and improves UV resistance.
- In addition to its insulation qualities, the material is non-rotting and lightweight for user convenience.
- The optional V-shaped pole support has an anti-slip rubber profile.

## TE17AUD

Factory assembled accessories (integrated wall wheels)

| Option reference | | | | OPE802130 | OPE802152 | OPE802153 | OPE802154 | OPE802065 | OPE802073 | OPE802074 | OPE802143 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Option description | | | | Pair of inner clam cleats | Rope 6m | Rope 8m | Rope 10m | Pole support E320V | Compensating stabiliser 70x30 | Compensating stabiliser 85x30 | Compensating stabiliser 110x30 |
| **Reference** | **Folded length** | **Open length** | **Weight** | **Nbr rope** | | | | | | | |
| TE17AUD250M | 2,5m | 4m | 16 kg | 1 | ✓ | ✓ | | | ✓ | ✓ | | |
| TE17AUD3M | 3m | 5m | 18 kg | | ✓ | ✓ | | | ✓ | ✓ | | |
| TE17AUD 3.50M | 3,5m | 6m | 19 kg | | ✓ | ✓ | | | ✓ | ✓ | | |
| TE17AUD4M | 4m | 7m | 25 kg | | ✓ | | ✓ | | ✓ | | ✓ | |
| TE17AUD450M | 4,5m | 8m | 29 kg | | ✓ | | ✓ | | ✓ | | ✓ | |
| TE17AUD5M | 5m | 9m | 35 kg | | ✓ | | ✓ | | ✓ | | ✓ | |
| TE17AUD550M | 5,5m | 10m | 39 kg | | ✓ | | | ✓ | ✓ | | ✓ | |
| TE17AUD6M | 6m | 10,5m | 43 kg | | ✓ | | | ✓ | ✓ | | | ✓ |
| TE17AUD7M | 7m | 12m | 48 kg | | ✓ | | | ✓ | ✓ | | | ✓ |

## TE12AUD

Factory assembled accessories (OPTIONAL wall wheels)

| Option reference | | | | | | OPE802130 | OPE802153 | OPE802154 | OPE802155 | OPE802071 | OPE802065 | OPE802074 | OPE802143 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Option description | | | | | | Pair of inner clam cleats | Rope 8m | Rope 10 m | Rope 12 m | Pole support E300V | Pole support E320V | Compensating stabiliser 85x30 | Compensating stabiliser 110x30 |
| **Reference** | **Folded length** | **Open length** | **Interm. weight** | **Weight** | **Nbr rungs** | **Nbr rope** | | | | | | | |
| TE12AUD250M | 2,5m | 5,5m | 4m | 25 kg | 3 x 9 | 1 | ✓ | ✓ | | | ✓ | | ✓ | |
| TE12AUD3M | 3m | 7m | 5m | 28 kg | 3 x 11 | | ✓ | ✓ | | | ✓ | | ✓ | |
| TE12AUD350M | 3,5m | 8,5m | 6m | 31 kg | 3 x 13 | | ✓ | ✓ | | | ✓ | | ✓ | |
| TE12AUD425M | 4,25m | 10,25 | 7,25m | 45 kg | 3 x 16 | 2 | ✓ | | ✓ | | | ✓ | ✓ | |
| TE12AUD6M | 6m | 14m | 10m | 75 kg | 3 x 23 | | ✓ | | | ✓ | | ✓ | | ✓ |

# TE22AUD

## MANUALLY-OPERATED INSULATING EXTENSION LADDER WITH 2 SECTIONS

STANDARDS

EN 50528 / EN 131-1 / EN 131-2



- Rugged and reliable construction.
- The rungs and uprights are repairable.
- New tri-oval shape rungs.

### / USE

Ladders for live working below 1000V AC / 1500V DC

### / TECHNICAL SPECIFICATIONS

- Anti-slip rubber feet.
- Guided by nylon-coated low-friction guides.
- Ribbed anti-slip aluminium rungs, tri-oval shape, inclined to have an horizontal foot position.
- Anatomic 250 mm distance between rungs making it possible to support the knee and make work safer and more comfortable.
- Standard wall wheels make it easier to extend the ladder and protect the fibreglass surface.
- The uprights are made of fibreglass/polyestercomposite material.
- The material offers high mechanical performance.
- A fibreglass surface finish makes them more efficient and improves UV resistance.
- In addition to its insulation qualities, the material is non-rotting and lightweight for user convenience.
- The optional V-shaped pole support has an anti-slip rubber profile.

### › OPTIONAL ACCESSORIES

| Description |
|---|
| Cleats and rope |
| Compensating stabilizer |
| V-shaped pole support |

| Factory assembled accessories (OPTIONAL wall wheels) | | | | Option reference | OPE802130 | OPE802152 | OPE802065 | OPE802073 |
|---|---|---|---|---|---|---|---|---|
| | | | | Option description | Pair of inner clam cleats | Rope 6m | Pole support E320V | Compensating stabiliser 70x30 |
| Reference | Folded length | Open length | Weight | Nbr rungs | | | | |
| TE22AUD2M | 2m | 3,25m | 12 kg | 2 x 7 | ✓ | ✓ | ✓ | ✓ |
| TE22AUD25M | 2,5m | 4m | 15 kg | 2 x 9 | ✓ | ✓ | ✓ | ✓ |
| TE22AUD3M | 3m | 5m | 17 kg | 2 x 11 | ✓ | ✓ | ✓ | ✓ |

# TE13VAL / TE17VAL / TE12VAL / TE22VAL

INSULATING LADDERS



STANDARDS

EN 50528 / EN 131-1 / EN 131-2

## / TECHNICAL SPECIFICATIONS

- Anti-slip rubber feet.
- Ribbed anti-slip aluminium rungs, tri-oval shape, inclined to have an horizontal foot position.
- Anatomic 250 mm distance between rungs making it possible to support the knee and make work safer and more comfortable.
- The uprights are made of fibreglass/polyestercomposite material.
- The material offers high mechanical performance.
- A fibreglass surface finish makes them more efficient and improves UV resistance.
- In addition to its insulation qualities, the material is non-rotting and lightweight for user convenience.
- The optional V-shaped pole support has an anti-slip rubber profile.

## TE13VAL

Factory assembled accessories (OPTIONAL wall wheels)

| Option reference | | | | OPE802130 | OPE802152 | OPE802065 | OPE802073 |
|---|---|---|---|---|---|---|---|
| Option description | | | | Pair of inner clam cleats | Rope 6m | Pole support E320V | Compensating stabiliser 70x30 |
| Reference | Length | Weight | Nbr rungs | | | | |
| TE13VAL2M | 2 m | 5,5 kg | 7 | ✓ | ✓ | ✓ | ✓ |
| TE13VAL25M | 2,5 m | 6,9 kg | 9 | ✓ | ✓ | ✓ | ✓ |
| TE13VAL3M | 3 m | 8,3 kg | 11 | ✓ | ✓ | ✓ | ✓ |
| TE13VAL35M | 3,5 m | 9,7 kg | 13 | ✓ | ✓ | ✓ | ✓ |
| TE13VAL4M | 4 m | 11 kg | 15 | ✓ | ✓ | ✓ | ✓ |
| TE13VAL5M | 5 m | 14 kg | 19 | ✓ | ✓ | ✓ | ✓ |

## TE17VAL

Factory assembled accessories (integrated wall wheels)

| Option reference | | | | | | OPE802130 | OPE802152 | OPE802153 | OPE802154 | OPE802065 | OPE802073 | OPE802074 | OPE802143 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Option description | | | | | | Pair of inner clam cleats | Rope 6m | Rope 8m | Rope 10m | Pole support E320V | Compensating stabiliser 70x30 | Compensating stabiliser 85x30 | Compensating stabiliser 110x30 |
| Reference | Folded length | Open length | Weight | Nbr rope | Nbr rungs | | | | | | | | |
| | 2,5m | 4m | 16 kg | 2 x 9 | | ✓ | ✓ | | | ✓ | ✓ | | |
| TE17VAL3M | 3m | 5m | 18 kg | 2 x 11 | | ✓ | ✓ | | | ✓ | ✓ | | |
| TE17VAL35M | 3,5m | 6m | 19 kg | 2 x 13 | | ✓ | ✓ | | | ✓ | ✓ | | |
| TE17VAL4M | 4m | 7m | 25 kg | 2 x 15 | | ✓ | | ✓ | | ✓ | | ✓ | |
| TE17VAL45M | 4,5m | 8m | 29 kg | 2 x 17 | 1 | ✓ | | ✓ | | ✓ | | ✓ | |
| TE17VAL5M | 5m | 9m | 35 kg | 2 x 19 | | ✓ | | ✓ | | ✓ | | ✓ | |
| TE17VAL55M | 5,5m | 10m | 39 kg | 2 x 21 | | ✓ | | | ✓ | ✓ | | ✓ | |
| TE17VAL575M | 6m | 10,5m | 43 kg | 2 x 23 | | ✓ | | | ✓ | ✓ | | | ✓ |
| TE17VAL7M | 7m | 12m | 48 kg | 2 x 27 | | ✓ | | | ✓ | ✓ | | | ✓ |

## TE12VAL

Factory assembled accessories (OPTIONAL wall wheels)

| Option reference | | | | | | | OPE802130 | OPE802153 | OPE802154 | OPE802155 | OPE802071 | OPE802065 | OPE802074 | OPE802143 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Option description | | | | | | | Pair of inner clam cleats | Rope 8m | Rope 10 m | Rope 12 m | Pole support E300V | Pole support E320V | Compensating stabiliser 85x30 | Compensating stabiliser 110x30 |
| Reference | Folded length | Open length | Interm. lenght | Weight | Nbr rungs | Nbr rope | | | | | | | | |
| | 2,5m | 5,5m | 4m | 25 kg | 3 x 9 | | ✓ | ✓ | | | ✓ | | ✓ | |
| TE12VAL3M | 3m | 7m | 5m | 28 kg | 3 x 11 | 1 | ✓ | ✓ | | | ✓ | | ✓ | |
| TE12VAL35M | 3,5m | 8,5m | 6m | 31 kg | 3 x 13 | | ✓ | ✓ | | | ✓ | | ✓ | |
| TE12VAL425M | 4,25m | 10,25 | 7,25m | 45 kg | 3 x 16 | | ✓ | | ✓ | | | ✓ | ✓ | |
| TE12VAL6M | 6m | 14m | 10m | 75 kg | 3 x 23 | 2 | ✓ | | | ✓ | | ✓ | | ✓ |

# TE18AUD – TE20AUD

## CONVERTIBLE INSULATING LADDER 2 AND 3 SECTIONS

STANDARDS

EN 50528 / EN 131-1 / EN 131-2

Can be used on stairs



### / USE

Ladders for live working below 1000V AC / 1500V DC

### / TECHNICAL SPECIFICATIONS

- Anti-slip rubber feet.
- Guided by nylon-coated low-friction guides.
- Ribbed anti-slip aluminium rungs, tri-oval shape, inclined to have an horizontal foot position.
- Anatomic 250 mm distance between rungs making it possible to support the knee and make work safer and more comfortable.
- Standard wall wheels make it easier to extend the ladder and protect the fibreglass surface.
- The uprights are made of fibreglass/polyestercomposite material.
- The material offers high mechanical performance.
- A fibreglass surface finish makes them more efficient and improves UV resistance.
- In addition to its insulation qualities, the material is non-rotting and lightweight for user convenience.
- The optional V-shaped pole support has an anti-slip rubber profile.

## TE20AUD

Factory assembled accessories (integrated wall wheels)

| | | | | Option reference | OPE802120 | OPE802081 | OPE802152 |
|---|---|---|---|---|---|---|---|
| | | | | Option description | Pole support TRF367V | Pair of exterior clam cleats | Rope 6M |
| Reference | Folded length | Open length | Weight | Nbr rungs | | | |
| TE18AUD2M | 2m | 3m | 13 kg | 2 x 7 | ✓ | ✓ | ✓ |
| TE18AUD250M | 2,5m | 4m | 16 kg | 2 x 9 | ✓ | ✓ | ✓ |
| TE18AUD3M | 3m | 5m | 19 kg | 2 x 11 | ✓ | ✓ | ✓ |

## TE20AUD

Factory assembled accessories (integrated wall wheels)

| | | | | | Option reference | OPE802119 | OPE802081 | OPE802152 |
|---|---|---|---|---|---|---|---|---|
| | | | | | Option description | Pole support TRF284V | Pair of exterior clam cleats | Rope 6M |
| Reference | Folded length | Open length | Interm. lenght | Weight | Nbr of rungs | | | |
| TE20AUD2M | 2m | 4m | | 19 kg | 3 x 7 | ✓ | ✓ | ✓ |
| TE20AUD250M | 2,5m | 5,5m | 4m | 23 kg | 3 x 9 | ✓ | ✓ | ✓ |
| TE20AUD3M | 3m | 6,25m | 4,75m | 27 kg | 3 x 11 | ✓ | ✓ | ✓ |

# TE10AUD

## INSULATING DOUBLE SECTION ARTICULATED LADDER

STANDARDS

EN 50.528-2010 / MARKING TST-BT/ EN 131

- Work position as a stepladder or an extension ladder
- Transport handle and wheels.
- Robust and light construction thanks to ergonomic uprights with rounded edges.
- Ladder levellers for uneven surfaces - stable position to work on stairs.
- Ultra-compact for transport in small vehicles.





### / TECHNICAL SPECIFICATIONS

- Double aluminium rung. Anti-slip and tri-oval shaped rung.
- 250 mm anatomic distance between rungs.
- Repairable rungs thanks to the screw assembly system.
- 3 position hinge with automatic locking 35/180°.
- Non-slip rubber shoes with wide grooves.
- Optional V-shaped pole support with rubber profile.nvenience.

| Option reference | | OPE802095 | OPE802096 | OPE802152 |
|---|---|---|---|---|
| Option description | | Pole support DF300V | Pair of inner clam cleats | Rope 6M |
| Reference | Folded length | Open length | Max. working height | Height of the last rung | Transport dimension | Weight | | | |
| TE10AUD108M | 1,08m | 1,88m | 2,75m | 0,75m | 114 x 58 x 15 cm | 9,8 kg | ✓ | ✓ | ✓ |
| TE10AUD135M | 1,35m | 2,42m | 3m | 1m | 140 x 58 x 15 cm | 11 kg | ✓ | ✓ | ✓ |
| TE10AUD162M | 1,62m | 2,95m | 3,25m | 1,25m | 164 x 58 x 15 cm | 12,8 kg | ✓ | ✓ | ✓ |

PREMIUM

Ergonomic work platform with all regulatory guards



Easy set-up

Rugged and lightweight

Stability

# TE30AUD

## LIGHTWEIGHT ROLLING INDIVIDUAL PLATFORM

STANDARDS

EN 131-7

### / USE

Automatically opening ultra-light model designed to replace stepladders and combination ladders, but with a safe work platform and adjustable legs to adapt to level differences (pavements, steps). Particularly suited to work at low heights in urban environments.
Three versions are available:
- Folding version for saving storage space
- Ultra-light version for working on flat ground
- Multi-purpose version for adapting to the terrain (two telescopic front extensions and sliding rear surface)

### / TECHNICAL SPECIFICATIONS

- Patented platform opening/closing system : the two front legs that offer stability can be opened and positioned in a single movement.
- 400 x 480 mm floor with openings for better adherence.
- Uprights, extensions and work platform made of aluminium.
- Adjustable front extensions with a 30-mm pitch.
- Integrated transport wheels Ø 125 mm.
- Load capacity : 150 kg.



| Ref. | Version | Nber of rungs | Platform height | Max working height | Adjustment range | Weight |
|---|---|---|---|---|---|---|
| TE30AUD19M | Ultralight | 3 | 0,75 m | 2,75 m | No | 13 kg |
| TE30AUD22M | | 4 | 1 m | 3 m | | 14 kg |
| TE30AUD25M | | 5 | 1,25 m | 3,25 m | | 15 kg |
| TE30AUDP19M | Polyvalent | 3 - 4 | 0,75 - 1 m | 2,75 - 3 m | 0 to 250 mm | 18 kg |
| TE30AUDP22M | | 4 - 6 | 1 - 1,5 m | 3 - 3,50 m | 0 to 500 mm | 21 kg |

# TE41AUD

## LIGHTWEIGHT ROLLING INDIVIDUAL PLATFORM IN FIBREGLASS AND ALUMINIUM

Intuitive and easy set-up



Lightweight patented leg cinematic

Extended guardrail for a comfortable workstation even for plus-sized people

STANDARDS

EN 131-7

### / USE

An ultra-lightweight, self-opening model designed to replace stepladders and convertible ladders but incorporating a safe workstation and adjustable legs to accommodate different levels (pavements, stairs).
Particularly suitable for low-level work in urban environments.

### / TECHNICAL SPECIFICATIONS

- Patented platform opening/closing system : the two front legs that offer stability can be opened and positioned in a single movement.
- 420 x 480 mm floor with openings for better adherence.
- Pivoting swing gate for a safe and easy access.
- Uprights and adjustable legs made of composite fibreglass polyester : non-conductive.
- Floor and swing gates made of aluminium.
- Non-slip d-shaped rungs.
- Tool holder injected in the handrail.
- Integrated transport wheels Ø 125 mm.

| Ref. | Number of rungs | Platform height | Max. working height | Dimensions | Weight |
|---|---|---|---|---|---|
| TE41AUD1-86M | 2 | 0,50 m | 1,50 / 2,50 m | 1,86 x 0,75 x 0,22 m | 12 kg |
| TE41AUD2-14M | 3 | 0,75 m | 1,75 / 2,75 m | 2,14 x 0,75 x 0,22 m | 13 kg |
| TE41AUD2-42M | 4 | 1 m | 3 m | 2,42 x 0,75 x 0,22 m | 14 kg |

ESSENTIAL



# TE32

## INSULATED STEPLADDER

STANDARDS

EN 131 / EN 50528

### / USE

"Full-safety" stepladder with ultra-strong fibreglass stiles, insulated from low and medium voltages.

### / TECHNICAL SPECIFICATIONS

Fiberglas stiles : electrical protection against lowand medium voltages up to 10 000V.
Ribbed 80-mm anti-slip steps with 250 mm spacing.
Stand larger than the climbing section.
Anti finger-pinching articulation.

Retractable large-capacity tool holder. Aluminium platform : 250 x 250 mm.
Anti-slip pads.
Max. working load : 150 kg.
Please contact us if need of spare parts or repair.

| Ref. | Nbr of rungs | Platform height | Folded height | Work amplitude | Spacing | Spacing | Dimensions | Weigh |
|---|---|---|---|---|---|---|---|---|
| TE32 3M | 3 | 0,69 m | 1,45 m | 2,58 m | 0,52 m | 0,71 m | 1 390 x 500 x 80 mm | 5,9 kg |
| TE32 4M | 4 | 0,92 m | 1,70 m | 2,81 m | 0,55 m | 0,87 m | 1 640 x 530 x 80 mm | 6,9 kg |
| TE32 5M | 5 | 1,15 m | 1,95 m | 3,04 m | 0,57 m | 1,03 m | 1 890 x 550 x 80 mm | 8 kg |
| TE32 6M | 6 | 1,38 m | 2,20 m | 3,27 m | 0,60 m | 1,20 m | 2 140 x 580 x 80 mm | 9,4 kg |
| TE32 7M | 7 | 1,61 m | 2,45 m | 3,50 m | 0,63 m | 1,37 m | 2 390 x 600 x 80 mm | 11 kg |

ESSENTIAL



# LV LADDER KIT

## LOW VOLTAGE SPLICED LADDER KIT

### / USE

For Low Voltage Live Working.
For climbing on poles, regardless of the height.
Positions line workers safely.

### / TECHNICAL SPECIFICATIONS

FibKit made up of:
- Aluminium base with adjustable feet for adaptingto ground irregularities (Ref. EB)
- Aluminium intermediate elements (Ref. EM)
- Insulating intermediate elements to keep the lineworker safe in the work area (Ref. EI)

| Ref. | Description | Weight | Nbr of rungs |
|---|---|---|---|
| EB210 | Metal Base element 2,10 m with adjustable feet + 2 cradles with straps | 7 kg | 7 |
| EB300 | Metal base element 3.00 m with adjustable feet + 2 cradles with straps | 9 kg | 10 |
| EM300 | Metal intermediate element 3.00 m with adjustable feet + 2 cradles with straps | 8 kg | 10 |
| EM210 | Metal intermediate element 2.10 m with adjustable feet + 2 cradles with straps | 6 kg | 7 |
| EI120 | Insulating intermediate element 1.20 m + 1 cradle with strap | 7,4 kg | 4 |
| EI210 | Insulating intermediate element 1.20 m + 1 cradle with strap | 4,7 kg | 7 |
| EI300 | Insulating intermediate element 1.20 m + 1 cradle with strap | 9,5 kg | 10 |

ESSENTIAL



# MV LADDER KIT

## MIDDLE VOLTAGE SPLICED LADDER KIT

### / USE

For Middle Voltage Live Working.
For climbing on poles, regardless of their height.
Positions line workers safely

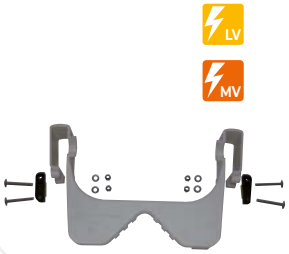
### / TECHNICAL SPECIFICATIONS

FiKit made up of:
- Aluminium base with adjustable feet for adaptingto ground irregularities (Ref. EB)
- Aluminium intermediate elements (Ref. EM)
- Insulating intermediate elements to keep the lineworker safe in the work area (Ref. EI)

| Ref. | Description | Weight | Nbr of rungs |
|---|---|---|---|
| EB210 | Metal Base element 2,10 m with adjustable feet + 2 cradles with straps | 7 kg | 7 |
| EB300 | Metal base element 3.00 m with adjustable feet + 2 cradles with straps | 9 kg | 10 |
| EM300 | Metal intermediate element 3.00 m with adjustable feet + 2 cradles with straps | 8 kg | 10 |
| EM210 | Metal intermediate element 2.10 m with adjustable feet + 2 cradles with straps | 6 kg | 7 |
| EI120 | Insulating intermediate element 1.20 m + 1 cradle with strap | 7,4 kg | 4 |
| EI210 | Insulating intermediate element 1.20 m + 1 cradle with strap | 4,7 kg | 7 |
| EI300 | Insulating intermediate element 1.20 m + 1 cradle with strap | 9,5 kg | 10 |

NETWORK CONSTRUCTION

VALUE



## K37218188

CRADLE KIT FOR LV AND MV SPLICED LADDERS

### / USE

The cradle kit is designed to be fitted on splicedladders, type ESE120, ESE210, ESE300, EI120, EI210 and EI300. Supplied in a transparent nylon bag.

### / TECHNICAL SPECIFICATIONS

The kit includes the following :
- a cradle made of synthetic material,
- 4 struts,
- 4 fastening bolts with nuts and washers.

| Ref. | Dimensions | Weight |
|---|---|---|
| K37218188 | 320 x 200 x 60 mm | 367 |

VALUE



## K37238373

STRAP KIT FOR LV AND MV SPLICED LADDERS

### / USE

The strap kit is designed to be fitted on ESE120, ESE210, ESE300, EI120, EI210 and EI300 type spliced ladders. Supplied in a transparent nylon bag.

### / TECHNICAL SPECIFICATIONS

The kit includes the following :
- a short strap with a hook, 300 mm long
- a long strap with a ratchet load binder, 1200 mmlong

The straps are always placed above the rung locatedat the level of the cradle.

| Ref. | Weight |
|---|---|
| K37238373 | 380 |

ESSENTIAL



## E17NM

ALUMINIUM HOOK LADDER

### / USE

Straight ladder for linesmen, with a pair of hooks and safety chains.
The hooks fixed to the ladder uprights are also held by a steel cable going through the entire length of the uprights.
This new system offers full safety.
Vertical or horizontal use.

### / TECHNICAL SPECIFICATIONS

- High-strength rectangular aluminium uprights.
- Ø 26 mm rungs, serrated, anti-slip.
- Rung distance: 25 cm.
- Ø 25 mm hooks
- Hanging Ø : 250 mm.
- Nominal load : vertical position 225 DaN / bridge position 265 DaN (for ladders 3 to 5 meters high).
- Safe working load : 150 kg max.
- On request, we can supply ladders in 5 and 6 meters.
  Please contact us for replacement chains.

| Ref. | Height | Width | Uprights section | Dimensions | Weight |
|---|---|---|---|---|---|
| E17NM 2 | 2 m | 38 cm | 80 x 27 mm | 2000 x 380 x 330 mm | 14,5 kg |
| E17NM 3 | 3 m | | | 3000 x 380 x 330 mm | 16 kg |
| E17NM 4 | 4 m | | 94 x 27 mm | 4000 x 380 x 330 mm | 18,5 kg |

PREMIUM

## D2001

OUR SELECTION

PAIR OF CLIMBERS FOR CONCRETE POSTS

STANDARDS

TECHNICAL SPECIFICATION EDF N° ST52
FICHE EDF SPS N° B312





### / USE

Climbers are designed for climbing and working on overhead power line posts made of reinforced concrete, with a rectangular or I-shaped cross section.

### / TECHNICAL SPECIFICATIONS

The climber main body is made of light aluminium alloy.

| Ref. | Load per foot without deformation | Breaking load per foot | Capacity of use | Dimensions | Weight per leg |
|---|---|---|---|---|---|
| D2001 | 500 daN | > to 800 daN | 120 to 450 mm | 0,570 x 0,200 x 0,180 m | 3.7kg or 7.4kg the pair of climbers |

ESSENTIAL

# G20

## CLIMBING IRONS

STANDARDS

IN COMPLIANCE WITH EDF TECHNICAL SPECIFICATION SPS B3




Conforms to S71-012 standard

### / USE

Climbers for wooden round poles.
Application for power line networks.

### / TECHNICAL SPECIFICATIONS

- Forged and treated special steel.
- Stability without deformation 400kg/climbers.
- Drawn and hollowed out soles (2 oblong holes).
- Chrome-plated leather straps, hand-sewn and riveted.
  The replacement of the straps can only be done in an authorized workshop (hand sewing).



| Ref. | Opening | Nbr of spikes | Dimensions | Weight |
|---|---|---|---|---|
| G20 24 | 24 cm | 7 | 385 x 195 x 95 mm | 2,6 g |
| G20 26 | 26 cm | 8 | 420 x 220 x 100 mm | 2,9 g |
| G20 32 | 32 cm | | 490 x 250 x 100 mm | 3,6 g |
| G20 35 | 35 cm | | 515 x 230 x 240 mm | |

VALUE

# G21

## CLIMBING IRONS

LV MV



### / USE

Climbing irons designed especially for electricity companies and contractors.

### / TECHNICAL SPECIFICATIONS

- Forged special steel.
- Chrome-plated leather straps passing directly around the shaft.

| Ref. | Nbr of spikes | Dimensions | Weight |
|---|---|---|---|
| G21 25 | 6 | 370 x 200 x 170 mm | 2,7 kg |
| G21 30 | | | 3 kg |
| G21 35 | | | 3,2 kg |

| Spare parts | Description |
|---|---|
| G21 25 | Set of leather straps + rivets for G21 |



# G24

## CLIMBING IRONS

STANDARDS

APPROVED BY FRANCE TELECOM
CONFORMS TO S71-012 STANDARD



Spikes set in the mass, forged and hardened.

Removable straps.

### / USE

Climbing irons for wooden round pole telecom applications.

### / TECHNICAL SPECIFICATIONS

- Forged and treated special steel.
- Stability without deformation 400kg/climbing iron.
- Drawn and hollowed out soles (diamond).
- Riveted 1st choice chrome leather straps.

| Ref. | Opening | Number of spikes | Dimensions | Weight |
|---|---|---|---|---|
| G24 24 | 24 cm | 7 | 390 x 190 x 175 mm | 2,7 kg |
| G24 30 | 30 cm | | 425 x 230 x 175 mm | 3 kg |
| G24 35 | 35 cm | | 495 x 260 x 180 mm | 3,2 kg |

| Spare parts | Description |
|---|---|
| G24J | Set of 4 leather straps for G24 climbers |

Please contact us for irons with riveted belts.







G22F



G22L

- Jaw opening adjustable from 5 to 20 mm.
- Jaws equipped with rubber pads to prevent damage to coatings.

# G22

## CLIMBING IRONS FOR PYLONS, STEEL PROFILES AND CATENARY POSTS

### / USE

Climbing irons for metal poles and metal profiles.

### / TECHNICAL SPECIFICATIONS

Forged special steel. Interchangeable rubber pads.
Chrome-plated 1st choice leather straps.

| Ref. | Version | Dimensions | Weight |
|---|---|---|---|
| G22F | Positioning at the front of the profile | 235 x 110 x 80 mm | 3,7 kg |
| G22L | Positioning on the side of the profile | 300 x 120 x 80 mm | 4,8 kg |

| Spare parts | Description |
|---|---|
| G22B | Set of 4 replacement rubber pads gor G22F and G22L |
| G22SF | Set of leather straps for G22F |
| G22SL | Set of leather straps for G22L |



Rubber protection to prevent damage to the coverings.

# G23

## CLIMBING IRONS FOR ROUND OR HEXAGONAL POLES

### / USE

Climbing irons specially designed for climbing metal, cement or wooden poles. Can be used on hexagonal, truncated cone and cylindrical poles.

### / TECHNICAL SPECIFICATIONS

- Painted steel climbing irons.
- Interchangeable pads and rubber tubes.
- Chrome-plated leather belts.

| Ref. | Opening | Dimensions | Weight |
|---|---|---|---|
| G23 | 18 cm | 360 x 220 x 180 mm | 4 kg |

| Spare parts | Description |
|---|---|
| G23A | Set of 2 replacement rubber pads for G23 |
| G23B | Set of 2 replacement rubber tubes for G23 |





- Adjustable opening during ascent.
- Rubber protection to prevent damage to the coverings.

# G25

## ADJUSTABLE CLIMBERS FOR ROUND POLES

### / USE

Iron climbers specially designed for climbing truncated cone or cylindrical poles, metal or concrete poles.

### / TECHNICAL SPECIFICATIONS

- Body in aluminium and shaft in special treated steel.
- Rubber glides and grooved tubes. Leather straps.

| Ref. | Opening | Weight |
|---|---|---|
| G25D14-30 | 14 to 30 cm | 7,1 kg |
| G25D16-33 | 16 to 33 cm | |
| G25D26-40 | 26 to 40 cm | 7,4 kg |
| G25D28-46 | 28 to 46 cm | 7,7 kg |

| Spare parts | Description |
|---|---|
| G25A | Set of 2 rubber pads for G25 |
| G25B | Set of 2 rubber tubes for G25 |







# G26

## CLIMBING IRONS FOR PRUNERS

### / USE

Designed to climb on trees and poles of different diameters.

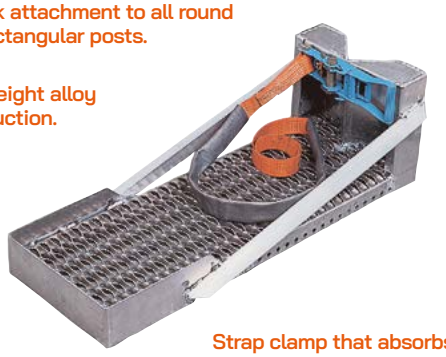
### / TECHNICAL SPECIFICATIONS

- Zinc-plated forged steel.
- Length of spikes: 5 cm.
- Stem height 42 cm.
- Chrome-plated leather straps.

| Ref. | Dimensions | Weight |
|---|---|---|
| G26 | 440 x 150 x 100 mm | 2,7 kg |

Quick attachment to all round or rectangular posts.

Lightweight alloy construction.



Strap clamp that absorbs jolts and allows fixing in different positions

# TP73

## PLATFORM FOR WORKING AT HEIGHT

### / USE

Quick attachment to all poles for work at height:
- Round 150 to 300 mm
- Rectangular 200 to 400 mm

### / TECHNICAL SPECIFICATIONS

- Platform secured by ratchet strap.
- Strap protected by a sleeve.
- Working area: 1000 x 356 mm
- Weight: 10kg allows for mounting with service rope.
- Sturdy welded aluminium construction with rivets.
- Retaining plinths to secure equipment and position technician's feet.

| Ref. | Working load | Dimensions | Weight |
|---|---|---|---|
| TP73 | 100 kg max | 1 000 x 356 x 310 mm | 10 kg |

- Steel protected against corrosion.
- Designed for use on poles with holes.



# TC12

## POSITIONING FOOT-REST FOR CONCRETE POLES

STANDARDS

IN COMPLIANCE WITH EDF TECHNICAL SPECIFICATION SPS B223

### / USE

Foot-rest for positioning a climber on a concrete pole. Max pole width : 340 mm. The technician must be secured to the concrete pole.

### / TECHNICAL SPECIFICATIONS

- Ø14mm steel rod with fixed bracket at 1 end.
- Mobile bracket with spring loaded pin for longitudinal positioning according to the width of the post.
- Captive chain to connect the 2 components.
- Anti-slip stirrups in ribbed sheet metal.

| Ref. | Working load | Weight |
|---|---|---|
| TC12 14 | 150 kg max. | 2,4 kg |



# UNIVERSAL INSULATED POLE PLATFORM

STANDARDS

ISO 9001:2015 | ISO 45001:2018 | ISO 14001:2015

### / KEY FEATURES

- Insulated platform
- Innovative polyurethane pads for grip to wood, steel, composite and concrete poles
- Replaceable poly pad kit available separately
- Engineered Ertalon frame and deck
- Low maintenance
- High tensile rated steel chain, electroplated for corrosion resistance
- Easy to use chain gate locking mechanism
- Non-slip rough-top rubber matting
- WLL 200kg
- Two sizes available



# PLATFORM FOR WOODEN POLES

### / USE

Designed especially for overhead line work, the PAAC pole platform is approved and used by many electricity authorities.

### / TECHNICAL SPECIFICATIONS

- Non-slip rubber tread surface
- Rated securing chain
- Locking assembly
- Non-slip spikes for hardwood poles

| Ref. | WLL | Width | Lenght | Weight |
|---|---|---|---|---|
| PA12198 | 150 kg | 360 mm | 560 mm | 10 kg |

PREMIUM

## LWA146 OUR SELECTION

POSITIONING GIRDER

- Specially designed to work with 1 or 2 technicians (1 on each side of the pole).
- Allows to work directly on the armament or at a distance during live work.
- Very light aluminium alloy beam.



### / USE

The girder allows 2 operators to position themselves at height on a concrete pole.
The technician must be secured to the pole.

### / TECHNICAL SPECIFICATIONS

- Beam secured by 2 ratchet straps.
- Sturdy welded aluminium alloy beam.

| Ref. | Beam | Working load | Dimensions | Weight |
|---|---|---|---|---|
| LWA146C | 1.6 m | 265 daN max | 1,6 x 0,5 x 0,1 m | 9,8 kg |
| LWA146 | 2.0 m | | 2,0 x 0,5 x 0,1 m | 10,8 kg |

ESSENTIAL

# POTAMAR

OUR SELECTION

## GUYING SYSTEM FOR WOODEN POLES

STANDARDS

COMPLIANCE WITH EDF/GDF SPS A54 SPECIFICATION

- Quick opening and closing system of the jaws.
- Universal joint for attaching the control rod to a rope.
- System for keeping the operating pole in line with the axis.
- High performance aluminium alloy.



### / USE

A device used to ensure the stability of a wooden pole prior to operate on the pole either for repair, connection or temporary anchoring after damage.

| Ref. | Description | Weight |
|---|---|---|
| POTAMAR | Guying system for wooden poles | 20,50 kg |

### / TECHNICAL SPECIFICATIONS

The guy-wire device consists of :
- 1 clamp with 2 jaws: Articulated parallelogram type with quick tightening and loosening and including a universal joint.
- 6 interlocking aluminium alloy tubes, each about 1m long, which form the control pole.
- 3 guying ropes, each consisting of a Ø12mm rope, 10m long, with carabiner.
- 3 anchor poles of 0.9m in galvanised steel.

Device delivered with 2 bags: one for the clamp and the ropes and another for the tubes and the stakes.

PREMIUM

# KOALA

INNOVATION

## GUYING EQUIPMENT FOR ELECTRICAL POST NETWORK

STANDARDS

EN 131-1 / EN 131-2 / EN 50528

The guy ropes are made of flat textile webbing.

Tensioners equipped with torque limiters to ensure a balance of the 3 tensions of the guy wires



Lightweight

LV MV



### / USE

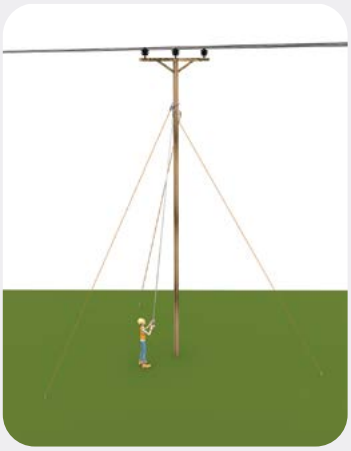
Application for overhead power line networks on poles up to 12m high. Device ensuring the stability of the poles during operations: repair, connection or temporary anchoring. Can be used on poles: wood, steel, concrete. To be installed before climbing the pole.

| Ref. | Tightening capacity | Height | Length of guy wires | Weight |
|---|---|---|---|---|
| KOALA | 10 to 20 cm | Stick 8,40 m | Straps 20 m | 25 kg |

### / TECHNICAL SPECIFICATIONS

- Grip capacity 200mm, weight of clamp + pole set < 10kg.
- Ratchet and disengageable tensioners.
- 1000V insulated interlocking poles.
- 120° positioning jig.
- Suitable for poles with horizontal traction up to 200kg.
- Tested and resistant to extreme loads : 817 kg horizontal tension + 578 kg vertical tension, applied simultaneously.

| Options | Description |
|---|---|
| KL-PK20 | Koala Clamp with DIN clamp + 2 shackles |
| KL-PL084D | Lifting stick: 1 upper element with insulated DIN end cap + 6 plug-in elements |
| KL-SH20 | 20m orange single loop guy strap on reel + 1 carabiner |
| KL-SH07 | 7m red double loop guy strap on reel + 1 carabiner |
| KL-SH13 | 13m red single loop guy strap on reel + 1 carabiner |
| KL-PA | Galvanised anchor stake |
| KL-TC | Ratchet strap tensioner |
| KL-CS | Torque limiting spanner |
| KL-EP | Anchor stake puller |
| KL-GP | 3x120° positioning template |
| KL-SL | Reinforced bag for sticks, stakes and accessories |
| KL-SD | Backpack for Koala clamp and accessories |



## MC25

OUR SELECTION

MANUAL HYDRAULIC
CABLE CUTTER Ø 25 MM

The ergonomically designed movable handle makes it possible to start cutting one-handed.

High usage convenience in comparison with a mechanical tool.



### / USE

Guillotine type hydraulic cable cutter for copper, aluminium or steel cables with maximum diameter of 25 mm.
Improvement of the pumping force.
Do not use this tool on live cables.

### / TECHNICAL SPECIFICATIONS

- Cutting head strengthened at the fork and at the lock.
- Quick opening and closing head, rotatable 180°.
- Automatic release with audible "click" in the event of overload.
- Piston return by release trigger.
- Periodic inspection frequency: 1 year or 10,000 cycles.
- Supplied in plastic case (490 × 302 × 90 mm).

| Ref. | Force | Max. passage | Cables | Dimensions | Weight |
|---|---|---|---|---|---|
| MC25 | 55 kN | Ø 25 mm | Steel / Copper / Alu | 380 × 60 × 140 mm | 2,94 kg |

| | TYPE OF CABLES | MAX. HARDNESS | MAX. CUTTING Ø * |
|---|---|---|---|
| MULTI-STRAND CABLES | 7 × 19 strands – steel | 100 > 120 daN/mm² | Ø 15 > 16 mm |
| | 7 × 37 strands – steel | 130 > 145 daN/mm² | Ø 12 > 13 mm |
| ELECTRICAL CABLES | Bare – copper/aluminium | | 300 mm² |
| | Rigid multi-strand – copper/aluminium | | Ø 20 > 22 mm |
| | Semi-rigid multi-strand – copper/aluminium | | |
| ROUND BARS | Copper | < 20 daN/mm² | Ø 20 > 22 mm |
| | Hard copper | 20 > 28 daN/mm² | Ø 15 > 18 mm |
| | Aluminium | < 20 daN/mm² | Ø 20 > 25 mm |
| | Mild steel | 42 > 45 daN/mm² | Ø 12 > 14 mm |
| | Medium hard steel | 50 > 70 daN/mm² | Ø 10 mm |
| INSULATED CABLES | Depends on the thickness of insulation | | 150 > 240 mm² |
| | Stainless steel | < 150 daN/mm² | Ø 8 > 10 mm |

** Other dimensions and cables to be approved with tests.*

VALUE

## MC40

OUR SELECTION

MANUAL HYDRAULIC
CABLE CUTTER Ø 40 MM

- Reinforced blades for longer life.
- Identical and replaceable blades and counter-blades.



- 2-speed tool: Fast advance / High pressure.

### / USE

Guillotine type hydraulic cable cutter for copper, aluminium or steel cables with a maximum diameter of 40 mm.

### / TECHNICAL SPECIFICATIONS

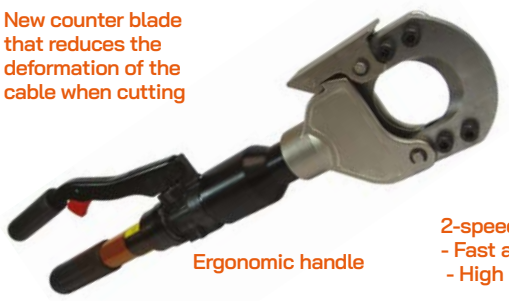
- Very powerful tool with 8.8 t shearing force.
- Safe opening and closing cutting head, rotatable to 340°.
- Automatic release with audible "click" in case of overpressure.
- Piston return by turning the handle and closing.
- Delivered in a canvas bag.

| Ref. | Force | Max. passage | Cables | Dimensions | Weight |
|---|---|---|---|---|---|
| MC40 | 88 kN | Ø 40 mm | Steel / Copper / Alu | 645 x 85 x 165 mm | 5,9 kg |

| | TYPE OF CABLES | MAX. HARDNESS | MAX. Ø OF CUT (mm) * |
|---|---|---|---|
| CABLES | Copper | < 40 daN/mm² | Ø 32 (630 mm²) |
| | Aluminum | < 20 daN/mm² | Ø 40 |
| | Hard copper | < 34 daN/mm² | Ø 40 |
| | Steel | < 180 daN/mm² | 7 × Ø 3.0 (= Ø 9.0) |
| | | | 19 × Ø 2.1 (= Ø 10.5) |
| | | | 19 × Ø 2.3 (= Ø 11.5) |
| | Multistrands steel | < 180 daN/mm² | Ø 18 (strands quantities: 200) |
| | ACSR | < 180 daN/mm² | 26 × Ø 2.50 + 7 × Ø 1.95 (= Ø 15.85) |
| | (medium hard steel) | | 26 × Ø 3.06 + 7 × Ø 2.38 (= Ø 19.38) |
| | | | 26 × Ø 3.60 + 7 × Ø 2.80 (= Ø 22.80) |
| | | | 54 × Ø 3.50 + 19 × Ø 2.10 (= Ø 31.50) |
| BARS | Steel | < 60 daN/mm² | Ø 18 |
| | | < 42 daN/mm² | Ø 20 |
| | Copper | < 30 daN/mm² | Ø 30 |
| | | < 25 daN/mm² | Ø 32 |
| | Aluminum | < 16 daN/mm² | Ø 40 |

** Other dimensions and cables to be approved with tests.*

New counter blade that reduces the deformation of the cable when cutting



Ergonomic handle

2-speed tool:
- Fast advance
- High pressure.

## MC55

MANUAL HYDRAULIC CABLE CUTTER Ø 55 MM

### / USE

Guillotine type hydraulic cable cutter for copper or aluminium cables up to Ø55 mm.

### / TECHNICAL SPECIFICATIONS

- Quick opening and closing head, rotatable 180°.
- Automatic release with audible "click" in the event of overload.
- Piston return by release trigger placed on the moveable handle.
- Tool delivered in canvas bag.

| Ref. | Force | Max. passage | Cables | Dimensions | Weight |
|---|---|---|---|---|---|
| MC55 | 43 kN | Ø 55 mm | Copper/Alu | 560 x 55 x 140 mm | 3,7 kg |

MAX. CUTTING CAPACITIES — ** Other dimensions and cables to be approved with tests.*

| | TYPE OF CABLES | MAX. HARDNESS | SECTIONS | MAX. Ø OF CUT * |
|---|---|---|---|---|
| CABLES | Copper leads cables | | 4 x 185 mm² or 630 mm² max. | |
| | Underground aluminum | | 3 x 240 + 1 x 95 mm² | Ø 51 mm |
| | Telephone cables | | | Ø 55 mm |
| BARS | Round annealed copper | < 20 daN/mm² | | Ø 16 – 18 mm |
| | Round annealed aluminum (A5) | < 16 daN/mm² | | Ø 20 – 25 mm |

2-speed tool:
- Fast advance
- High pressure.



New counter blade that reduces the deformation of the cable when cutting.

# MC85

## MANUAL HYDRAULIC CABLE CUTTER Ø 85 MM

### / USE

Hydraulic guillotine type cable cutter for copper or aluminium cables up to 85 mm diameter. Particularly suitable for cutting insulated underground cables.

### / TECHNICAL SPECIFICATIONS

- Two speed hydraulic system, reducing the number of pump strokes.
- Safe opening and closing of the cutting head, rotatable by 180°.
- Automatic release with audible «click» in case of overpressure.
- Return of the piston by means of a discharge lever by turning the mobile handle and closing. Tool delivered in canvas bag.

MAX. CUTTING CAPACITIES

| TYPE OF CABLES | MAX. Ø OF CUT * |
|---|---|
| UNDERGROUND INSULATED ALUMINUM CABLES | 3 x 240 mm² + 1 x 95 mm²<br>1 x 630 mm² > 800 mm² |
| COPPER CABLES | 630 mm² |
| TELEPHONE CABLES | Ø 85 mm |

** Other dimensions and cables to be approved with tests.*

| Ref. | Force | Max. passage | Cables | Dimensions | Weight |
|---|---|---|---|---|---|
| MC85 | 55 kN | Ø 85 mm | Copper / Alu | 745 x 72 x 190 mm | 7,6 kg |

- New reinforced blades for longer life.
- Identical and replaceable blades and counter-blades.



# XC25W

## HYDRAULIC CUTTING HEAD Ø 25 MM

### / USE

Guillotine type hydraulic cable cutter for copper, aluminium or steel cables with a maximum diameter of 25 mm.

### / TECHNICAL SPECIFICATIONS

Reinforced cutting head in the clevis and closing lock. Quick opening and closing. The tool is supplied with its own hydraulic nipple, which can be connected to the 700 bar hydraulic hoses and pumps available in the catalogue.

| | TYPE OF CABLES | MAX. HARDNESS | MAX. CUTTING Ø * |
|---|---|---|---|
| MULTI-STRAND CABLES | 7 x 19 strands – steel | 100 > 120 daN/mm² | Ø 15 > 16 mm |
| | 7 x 37 strands – steel | 130 > 145 daN/mm² | Ø 12 > 13 mm |
| ELECTRICAL CABLES | Bare – copper/aluminum | | 300 mm² |
| | Rigid multi-strand – copper/aluminum | | Ø 20 > 22 mm |
| | Semi-rigid multi-strand – copper/aluminum | | |
| ROUND BARS | Copper | < 20 daN/mm² | Ø 20 > 22 mm |
| | Hard copper | 20 > 28 daN/mm² | Ø 15 > 18 mm |
| | Aluminum | < 20 daN/mm² | Ø 20 > 25 mm |
| | Mild steel | 42 > 45 daN/mm² | Ø 12 > 14 mm |
| | Medium hard steel | 50 > 70 daN/mm² | Ø 10 mm |
| INSULATED CABLES | Depends on the thickness of insulation | | 150 > 240 mm² |
| | Stainless steel | < 150 daN/mm² | Ø 8 > 10 mm |

** Other dimensions and cables to be approved with tests.*

| Ref. | Force | Max. passage | Cables | Dimensions | Weight | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|---|---|---|---|
| XC25W | 55 kN | Ø 25 mm | Steel / Copper / Alu | 215 x 52 x 90 mm | 2,4 kg | XC25W-5 | XC25W-7 | XC25W-E |

- Identical and replaceable blades and counter-blades.



- Reinforced blades for longer life.

# XC40W

## HYDRAULIC CUTTING HEAD Ø 40 MM

### / USE

Guillotine type hydraulic cable cutter for copper, aluminium or steel cables with a maximum diameter of 40mm.

### / TECHNICAL SPECIFICATIONS

Very powerful tool with 8.8 t shearing force. Cutting head with safe opening and closing. The tool is supplied with its own hydraulic nipple, which can be connected to the 700 bar hydraulic hoses and pumps available in the catalogue.

| | TYPE OF CABLES | MAX. HARDNESS | MAX. HARDNESS |
|---|---|---|---|
| CABLES | Copper | < 40 daN/mm² | < 40 daN/mm² |
| | Aluminum | < 20 daN/mm² | < 20 daN/mm² |
| | Hard copper | < 34 daN/mm² | < 34 daN/mm² |
| | Steel | < 180 daN/mm² | < 180 daN/mm² |
| | Multistrands steel | < 180 daN/mm² | < 180 daN/mm² |
| | ACSR (medium hard steel) | < 180 daN/mm² | < 180 daN/mm² |
| BARS | Steel | < 60 daN/mm² | < 60 daN/mm² |
| | | < 42 daN/mm² | < 42 daN/mm² |
| | Copper | < 30 daN/mm² | < 30 daN/mm² |
| | | < 25 daN/mm² | < 25 daN/mm² |
| | Aluminum | < 16 daN/mm² | < 16 daN/mm² |

** Other dimensions and cables to be approved with tests.*

| Ref. | Force | Max. passage | Cables | Dimensions | Weight | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|---|---|---|---|
| XC40W | 88 kN | Ø 40 mm | Steel / Copper / Alu | 285 x 85 x 105 mm | 4,3 kg | XC40W-5 | XC40W-7 | XC40W-E |

• New counter blade that reduces the deformation of the cable when cutting.



# XC55N

## HYDRAULIC CUTTING HEAD Ø 55 MM

### / USE

Guillotine type hydraulic cable cutter for copper or aluminium cables up to 55 mm Ø.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing.
The tool is supplied with its own hydraulic nipple, which can be connected to the 700 bar hydraulic hoses and pumps available in the catalogue.

*MAX. CUTTING CAPACITIES*

** Other dimensions and cables to be approved with tests.*

| | TYPE OF CABLES | MAX. HARDNESS | SECTIONS | MAX. Ø OF CUT * |
|---|---|---|---|---|
| CABLES | Copper leads cables | | 4 x 185 mm² or 630 mm² max. | |
| | Underground aluminum | | 3 x 240 + 1 x 95 mm² | Ø 51 mm |
| | Telephone cables | | | Ø 55 mm |
| BARS | Round annealed copper | < 20 daN/mm² | | Ø 16 – 18 mm |
| | Round annealed aluminum (A5) | < 16 daN/mm² | | Ø 20 – 25 mm |

| Ref. | Force | Max. passage | Cables | Dimensions | Weight | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|---|---|---|---|
| XC55N | 43 kN | Ø 55 mm | Copper / Alu | 300 x 55 x 110 mm | 3 kg | XC55N-5 | XC55N-7 | XC55N-E |

New counter blade that reduces the deformation of the cable when cutting.



# XC85N

## HYDRAULIC CUTTING HEAD Ø 85 MM

### / USE

Compact hydraulic cable cutter, guillotine type, for copper or aluminium cables with a maximum diameter of 85 mm.

### / TECHNICAL SPECIFICATIONS

Cutting head with secure opening and closing.
Blade and counter-blade with tapered profiles.
The tool is supplied with its own hydraulic nipple, which can be connected to the 700 bar hydraulic hoses and pumps available in the catalogue.

*MAX. CUTTING CAPACITIES*

| TYPE OF CABLES | MAX. Ø OF CUT * |
|---|---|
| UNDERGROUND INSULATED ALUMINUM CABLES | 3 x 240 mm² + 1 x 95 mm²<br>1 x 630 mm² > 800 mm² |
| COPPER CABLES | 630 mm² |
| TELEPHONE CABLES | Ø 85 mm |

** Other dimensions and cables to be approved with tests.*

| Ref. | Force | Max. passage | Cables | Dimensions | Weight | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|---|---|---|---|
| XC85N | 55 kN | Ø 85 mm | Copper / Alu | 395 x 80 x 170 mm | 6,2 kg | XC85N-5 | XC85N-7 | XC85N-E |



# XC100S-5

## HYDRAULIC CUTTING HEAD Ø 100 MM

### / USE

The XC100S-5 cable cutter head connects to a 700 bar hydraulic pump or unit, via hose and high pressure couplings.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing.
Control and maintenance service: 1 year or 10,000 cycles.

| Ref. | Force | Max. passage | Cables | Dimensions | Weight |
|---|---|---|---|---|---|
| XC100S-5 | 130 kN | Ø 120 mm | Copper - Alu - flat wire - round wire | 215 x 52 x 90 mm | 2,4 kg |



# XC120W-5

## HYDRAULIC CUTTING HEAD Ø 120 MM

### / USE

The XC120W-5 cable cutter head connects to a 700 bar hydraulic pump or unit, via hose and high pressure couplings.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing.
Control and maintenance service: 1 year or 10,000 cycles.

| Ref. | Force | Max. passage | Cables | Dimensions | Weight |
|---|---|---|---|---|---|
| XC100S-5 | N/A | N/A | N/A | N/A | N/A |



LV MV

Dual trigger control: advance, hold, retract.

Sturdy shell with non-slip coating.

# BLC25

## 18V BATTERY OPERATED HYDRAULIC CABLE CUTTER Ø 25 MM

### / USE

Compact electro-hydraulic guillotine type cable cutter for copper, aluminium or steel cables up to Ø25 mm.

### / TECHNICAL SPECIFICATIONS

- Reinforced cutting head in the clevis and closing lock.
- Quick opening and closing, 180° rotation.
- LED lighting on the front of the tool.
- Lightweight 18V Li-Ion 2Ah battery with charge indicator.
- Delivered in plastic case with 1 battery and 1 charger.

| | TYPE OF CABLES | MAX. HARDNESS | MAX. CUTTING Ø * |
|---|---|---|---|
| MULTI-STRAND CABLES | 7 x 19 strands – steel | 100 > 120 daN/mm² | Ø 15 > 16 mm |
| | 7 x 37 strands – steel | 130 > 145 daN/mm² | Ø 12 > 13 mm |
| ELECTRICAL CABLES | Bare – copper/aluminum | | 300 mm² |
| | Rigid multi-strand – copper/aluminum | | Ø 20 > 22 mm |
| | Semi-rigid multi-strand – copper/aluminum | | |
| ROUND BARS | Copper | < 20 daN/mm² | Ø 20 > 22 mm |
| | Hard copper | 20 > 28 daN/mm² | Ø 15 > 18 mm |
| | Aluminum | < 20 daN/mm² | Ø 20 > 25 mm |
| | Mild steel | 42 > 45 daN/mm² | Ø 12 > 14 mm |
| | Medium hard steel | 50 > 70 daN/mm² | Ø 10 mm |
| INSULATED CABLES | Depends on the thickness of insulation | | 150 > 240 mm² |
| | Stainless steel | < 150 daN/mm² | Ø 8 > 10 mm |

** Other dimensions and cables to be approved with tests.*

| Ref. | Force | Max. passage | Cables | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BLC25 | 55 kN | Ø 25 mm | Steel / Copper/ Alu | 18V-2Ah | 128 x 75 x 400 mm | 3,3 kg |

| Accessories | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |



# BLC35C

## Ø35MM SCISSOR CABLE CUTTER

### / USE

Electro-hydraulic cable cutter for cutting copper or aluminum cables up to Ø35mm maximum.
Do not use to cut live cables.
Machinery directive 2006/42/EC, EMC 2014/30/CE.

### / TECHNICAL SPECIFICATIONS

- Blades guided by rail.
- Double switch control : advance, hold, retract.
- ON/OFF control switch.
- Hanging shackle.
- Battery lightweight 18V 2A with power load indicator.



| MAX. CUTTING CAPACITIES | Possible cutting tests |
|---|---|
| SEMI RIGID MULTI STRAND COPPER CABLE | 240 mm² |
| COPPER FLEXIBLE MULTI STRAND CABLE | Ø 35 mm – 300 mm |
| ALUMINUM MULTI STRAND CABLE | Ø 35 mm |
| TELEPHONE CABLE | Ø 35 mm |

*No round bars, no steel sheet reinforced cable either.*

| Ref. | Force | Max. Ø | Dimensions | Weight |
|---|---|---|---|---|
| BLC35C | 45 kN | Ø 35 mm | 107 x 78 x 445 mm | 3,3 kg |

| Accessories | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |
| 77501-SFE | Plastic carrying case |




# BC40

## 18V BATTERY OPERATED HYDRAULIC CABLE CUTTER Ø 40 MM

### / USE

Compact electro-hydraulic guillotine type cable cutter for copper, aluminium or steel cables up to Ø 40 mm.

### / TECHNICAL SPECIFICATIONS

- Cutting head with safe opening and closing, 180° rotation.
- Identical and replaceable blades and counterblades.
- Hanging ring for shoulder strap.
- 18V Li-Ion 5Ah battery with charge indicator.
- Delivered in a plastic case with 2 batteries and 1 charger.

| Ref. | Force | Max. passage | Cables | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BC40 | 88 kN | Ø 40 mm | Steel / Copper/ Alu | 18 V - 5,0 Ah | 480 x 85 x 325 mm | 7,4 kg |

| Accessories | Description |
|---|---|
| AB18LI500 | 18V Li-Ion battery 5Ah with power load indicator |
| AC18220 | Charger 220V AC European plug |

| | TYPE OF CABLES | MAX. HARDNESS | MAX. Ø OF CUT (mm) * |
|---|---|---|---|
| CABLES | Copper | < 40 daN/mm² | Ø 32 (630 mm²) |
| | Aluminum | < 20 daN/mm² | Ø 40 |
| | Hard copper | < 34 daN/mm² | Ø 40 |
| | Steel | < 180 daN/mm² | 7 x Ø 3.0 (= Ø 9.0) |
| | | | 19 x Ø 2.1 (= Ø 10.5) |
| | | | 19 x Ø 2.3 (= Ø 11.5) |
| | Multistrands steel | < 180 daN/mm² | Ø 18 (strands quantities: 200) |
| | ACSR (medium hard steel) | < 180 daN/mm² | 26 x Ø 2.50 + 7 x Ø 1.95 (= Ø 15.85) |
| | | | 26 x Ø 3.06 + 7 x Ø 2.38 (= Ø 19.38) |
| | | | 26 x Ø 3.60 + 7 x Ø 2.80 (= Ø 22.80) |
| | | | 54 x Ø 3.50 + 19 x Ø 2.10 (= Ø 31.50) |
| BARS | Steel | < 60 daN/mm² | Ø 18 |
| | | < 42 daN/mm² | Ø 20 |
| | Copper | < 30 daN/mm² | Ø 30 |
| | | < 25 daN/mm² | Ø 32 |
| | Aluminum | < 16 daN/mm² | Ø 40 |

* Other dimensions and cables to be approved with tests.




# BC45

## Ø45MM GUILLOTINE CABLE CUTTER

### / USE

Electro-hydraulic cable cutter for cutting copper, aluminum or steel cables up to Ø45mm maximum.

### / TECHNICAL SPECIFICATIONS

- Double switch control : advance, hold, retract.
- Safety lock on switch button.
- Tool life management and maintenance cycle.
- Guillotine type cutting head, rotation >180°.
- Locking the head by pin.
- Hydraulic double speed for optimised operation.
- Batteries large capacity 18V 5A with power load indicator
- Safety lock on switch button.
- Delivered in a plastic case with 2 batteries and 1 charger.

| Ref. | Force | Max. Ø | Dimensions | Weight |
|---|---|---|---|---|
| BC45 | 130 kN | Ø 45 mm | 510 x 75 x 330 mm | 8,5 kg |

| Accessories | Description |
|---|---|
| AB18LI500 | 18V Li-Ion 5 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |

MAX. CUTTING CAPACITIES

* Other dimensions and cables to be approved with tests.

| | TYPE OF CABLES | MAX. HARDNESS | MAX. Ø OF CUT (mm) * |
|---|---|---|---|
| CABLES | Copper | < 40 daN/mm² | Ø 45 |
| | Aluminum | < 20 daN/mm² | Ø 45 |
| | Almelec | < 34 daN/mm² | Ø 45 |
| | Steel | < 180 daN/mm² | 7 x Ø 3.0 (= Ø 9.0) |
| | | | 19 x Ø 2.1 (= Ø 10.5) |
| | | | 19 x Ø 2.3 (= Ø 11.5) |
| | Multi-steel strands | < 180 daN/mm² | Ø 18 (strands quantities : 200) |
| | ACSR (medium hard steel) | < 180 daN/mm² | 26 x Ø 2.50 + 7 x Ø 1.95 (= Ø 15.85) |
| | | | 26 x Ø 3.06 + 7 x Ø 2.38 (= Ø 19.38) |
| | | | 26 x Ø 3.60 + 7 x Ø 2.80 (= Ø 22.80) |
| | | | 54 x Ø 3.50 + 19 x Ø 2.10 (= Ø 31.50) |
| | | | 54 x Ø 4.36 + 19 x Ø 2.62 (= Ø 39.20) |
| | Inox | > Please contact us. | |
| BARS | Steel | < 60 daN/mm² | Ø 20 |
| | | < 42 daN/mm² | Ø 22 |
| | Copper | < 30 daN/mm² | Ø 33 |
| | | < 25 daN/mm² | Ø 35 |
| | Aluminum | < 16 daN/mm² | Ø 45 |




MAX. CUTTING CAPACITIES

* Other dimensions and cables to be approved with tests.

| | TYPE OF CABLES | MAX. HARDNESS | SECTIONS | MAX. Ø OF CUT * |
|---|---|---|---|---|
| CABLES | Copper leads cables | | 4 x 185 mm² or 630 mm² max. | |
| | Underground aluminum | | 3 x 240 + 1 x 95 mm² | Ø 51 mm |
| | Telephone cables | | | Ø 55 mm |
| BARS | Round annealed copper | < 20 daN/mm² | | Ø 16 – 18 mm |
| | Round annealed aluminum (A5) | < 16 daN/mm² | | Ø 20 – 25 mm |

# BC55

## 18V BATTERY OPERATED HYDRAULIC CABLE CUTTER Ø 55 MM

### / USE

Hydraulic cable cutter on 18V battery for cables with maximum Ø55 mm. Do not use this tool on live cables.
Delivered in a plastic case with 2 batteries and 1 charger.

### / TECHNICAL SPECIFICATIONS

- Quick opening and closing cutting head, 270° rotation.
- Blade and counterblade with tapered profiles.
- Hanging ring for shoulder strap.
- 18V Li-Ion 5Ah battery with charge indicator.

| Ref. | Force | Max. passage | Cables | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BC55 | 43 kN | Ø 55 mm | Copper / Alu | 18V-5,0Ah | 500 x 75 x 335 mm | 6,4 kg |

| Accessories | Description |
|---|---|
| AB18LI500 | 18V Li-Ion battery 5Ah with power load indicator |
| AC18220 | Charger 220V AC European plug |




| Ref. | Force | Max. Ø | Dimensions | Weight |
|---|---|---|---|---|
| BC65C | 60 kN | Ø 65 mm | 395 x 80 x 330 mm | 7,6 kg |

| Accessories | Description |
|---|---|
| AB18LI500 | 18V Li-Ion 5 Ah battery with power load indicator |
| AC18220 | Battery charger Li-Ion 10,8-18V |

# BC65C

## Ø65MM SCISSOR CABLE CUTTER

### / USE

Do not use to cut live cables. Electro-hydraulic cable cutter for cutting copper or aluminum cables up to Ø65mm maximum

### / TECHNICAL SPECIFICATIONS

- Double switch control : advance, hold, retract.
- Safety lock on switch button.
- Tool life management and maintenance cycle.
- Scissor type cutting head, rotation >180°.
- End access and direct to the cutting area.
- Hydraulic double speed for optimised operation.
- Batteries large capacity 18V 5A with power load indicator
- Delivered in a plastic case with 2 batteries and 1 charger.

| MAX. CUTTING CAPACITIES | |
|---|---|
| COPPER CABLES | Ø 65 mm |
| ALUMINUM CABLES | Ø 65 mm |

*Cut of aluminum or copper, steel reinforced cables is possible.*




| Ref. | Force | Max. Ø | Dimensions | Weight |
|---|---|---|---|---|
| BC85 | 55 kN | Ø 85 mm | 580 x 85 x 340 mm | 8,9 kg |

# BC85

## Ø85MM GUILLOTINE CABLE CUTTER

### / USE

Electro-hydraulic cable cutter for cutting copper, aluminum or steel cables up to Ø85mm maximum.
Do not use to cut live cables.
Machinery directive 2006/42/EC, EMC 2014/30/CE.

### / TECHNICAL SPECIFICATIONS

- Guillotine type cutting head, rotation >180°.
- Locking the head by pin.
- Hydraulic double speed for optimised operation.
- Batteries large capacity 18V 5A with power load indicator

| MAX. CUTTING CAPACITIES | |
|---|---|
| TYPE OF CABLES | MAX. Ø OF CUT * |
| UNDERGROUND INSULATED ALUMINUM CABLES | 3 x 240 mm² + 1 x 95 mm² |
| | 1 x 630 mm² > 800 mm² |
| COPPER CABLES | 630 mm² |
| TELEPHONE CABLES | Ø 85 mm |

** Other dimensions and cables to be approved with tests.*

# / CRIMPING TOOLS BY CAPACITY

| | | | Crimping tools | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Mechanical press | P126 | P125 | PFCU6-50 | PFCU6-120 | PBGD3 | | P128 | |
| | | Battery-powered press | | | | | | BLP36 | | |
| | | Manual hydraulic press | | | | | | MP36 | | |
| | | 700-bar hydraulic press | | | | | | | | |
| | | Crimping tools |  |  |  |  |  |  |  | |
| | | Force | 26KN | | | | 50kN | 35kN | 50kN | |
| **Applications** | **Connectors type** | **Type of dies** | Integrated E140 | Punch + Barrel | 2 Barrels | 2 Barrels | W50  | D36  | D50  | |
| **Industrial** | NF C20-130 Hexagonal : CT,XCT,CU,MJ |  | | 6 - 70 mm² | 6 - 50 mm² | 6 - 120 mm² | | 4 - 150 mm² | 4 - 120 mm² | |
| | NF C63-061 Cu/A Bimetal I : ACX,ICAU |  | 35-50 mm² E140 | | | | | 35 - 120 mm² E140 - E173 | 35 - 120 mm² E140 - E173 | |
| | Forged lug : HU |  | | | | | | | | |
| | High intensity lugs : HUR,DPD7 |  | | | | | | 16 - 150 mm² | | |
| **LV insulated networks** | Preinsulated : MJPB, CPTA, ERP |  | 6-35 mm² E140 | | | | | 6 - 150 mm² E140 - E215 | 6 - 95 mm² E140 - E173 | |
| | Junctions : MJPAS, JAS4R |  | | | | | | | | |
| | Junctions : MJTAS, XN8S |  | | | | | | 50 - 150 mm² E215 | | |
| **LV-MV uninsulated bare networks** | Aluminium alloy : JL, ABT, CBO |  | | | | | | 34,4 - 93,3 mm² E120 - E173 | | |
| | ACSR conductors : JAR, ABAR |  | | | | | | | | |
| | Copper conductors : JU |  | | | | | | 7,07 - 146 mm² E54 - E215 | | |
| **Underground Networks** | NF C33-090 Deep indent crimp: CA, XCX, RJ, X8 |  | | | | | | | | |
| | Prerounding : Cu & Al |  | | | | | | 10 - 120 mm² | | |
| **Earthing lines** | C-Connectors : CC, RCC |  | | | | | C16 - C35 mm² | C6 - C16 mm² | C6 - C35 mm² | |
| | Earthing lug : CDCT |  | | | | | | | | |
| **DIN standard** | DIN 48083 Lugs: Cu |  | | | | | | 4 - 150 mm² K4 - K22 | | |
| | DIN 48083 Lugs: Al |  | | | | | | 25 - 120 mm² K4 - K22 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | BLP55, BPE55 | BLP62, BPE62 | BLP80, BP80 | BP13026, BP13038 | BPU130 | | | | |
| | MP55 | MP62 | MP80 | MP13026, MP13038 | MPU130 | | | | |
| | | | | XP13026, XP13038 | XPU130 | XPRU200 | XPH250 | XPH450 | XPRH450 |
| |  |  |  |  |  |  |  |  |  |
| | 55kN | 62kN | 80kN | 130kN | 130kN | 200kN | 250kN | 450kN | |
| | D55  | C60  | C60 & C80  | C130  | C130 & U130  | U210  | H250  | H450  | RH450  |
| | 4 - 240 mm² | 6 - 300 mm² | 6 - 300 mm² | 6 - 400 mm² | 6 - 400 mm² | 25 - 630 mm² | 50 - 630 mm² | 95 - 1000 mm² | |
| | 35 - 120 mm² E140 - E173 | 35 - 300 mm² E140 - E260 | 35 - 300 mm² E140 - E260 | 35 - 300 mm² E140 - E260 | 35 - 300 mm² E140 - E260 | | | | |
| | | | | 16 - 150 mm² E180 | 16 - 150 mm² E180 | 185 - 500 mm² E270 - E330 | | | |
| | 16 - 150 mm² | 16 - 240 mm² | 16 - 240 mm² | 16 - 400 mm² | 16 - 400 mm² | 16 - 400 mm² | | | |
| | 6 - 150 mm² E140 - E215 | | 6 - 240 mm² E140 - E280 | 6 - 240 mm² E140 - E280 | 6 - 240 mm² E140 - E280 | 6 - 240 mm² E140 - E280 | | | |
| | | | 50 - 150 mm² E260 | 50 - 150 mm² E260 | 50 - 150 mm² E260 | 50 - 150 mm² E260 | | | |
| | 50 - 150 mm² E215 | | 50 - 240 mm² E215 - E280 | 50 - 240 mm² E215 - E280 | 50 - 240 mm² E215 - E280 | 50 - 240 mm² E215 - E280 | | | |
| | 22 - 117 mm² E100 - E210 | | 22 - 148 mm² E100 - E230 | 22 - 228 mm² E100 - E280 | 22 - 228 mm² E100 - E280 | 22 - 228 mm² E100 - E280 | | | |
| | 17,8 - 116,2 mm² E54 - E210 | | 17,8 - 147,1 mm² E54 - E230 | 17,8 - 181,6 mm² E54 - E250 | 17,8 - 181,6 mm² E54 - E250 | 17,8 - 228 mm² E54 - E285 | | | |
| | 7,07 - 146 mm² E54 - E215 | | 7,07 - 182 mm² E54 - E230 | 7,07 - 182 mm² E54 - E230 | 7,07 - 182 mm² E54 - E230 | 7,07 - 182 mm² E54 - E230 | | | |
| | | | | | 16 - 240 mm² 0E - 4E | 16 - 630 mm² 0E - 6E | | | 300 - 1600 mm² 5E - 9E |
| | 6 - 240 mm² | 25 - 240 mm² | 25 - 240 mm² | 25 - 300 mm² | 25 - 300 mm² | | | | |
| | C6 - C35 mm² | C6 - C50 mm² | C6 - C50 mm² | C6 - C150 mm² | C6 - C150 mm² | C25 - C240 mm² | | | |
| | | | | 75 - 240 mm² | 75 - 240 mm² | 75 - 185 mm² | | | |
| | 10 - 240 mm² K6 - K28 | 10 - 300 mm² K6 - K32 | | 10 - 400 mm² K6 - K38 | | 10 - 400 mm² K6 - K38 | 16 - 630 mm² K8 - K44 | 50 - 1000 mm² K14 - K60 | |
| | 25 - 240mm² K6 - K32 | 25 - 300 mm² K6 - K34 | | 25 - 400 mm² K6 - K38 | | 25 - 400 mm² K6 - K38 | 25 - 500 mm² K8 - K44 | 35 - 1000 mm² K14 - K60 | |

# P126

OUR SELECTION

HEXAGONAL E140
CRIMPING PLIERS 25 KN

Ratchet mechanism with fast forward handwheel

D-head with fixed E140 cavity, width 9 mm.



Anti-return system to guarantee a complete cycle.

## / USE

Clamp used mainly on LV networks such as preinsulated sleeves and bi-metal connectors:
- MJPB, CPTA, EBPAU: up to 35 mm²,
- Al/Cu ACX, ICAU: up to 50 mm².

## / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head.
SIMPI tool equivalent.
Option : Belt holster with canvas protection ref.P126E

| Ref. | Hexagonal crimping | Dimensions | Weight |
|---|---|---|---|
| P126 | E140 | 260 x 75 x 30 mm | 1,3 kg |

| Accessories | Description |
|---|---|
| P126M | Die E140/9 |
| P126E | Canvas belt holster |



• UNILEC tool equivalent.

• Cylinder locked by push-button system.

# P125

INDENT CRIMPING PLIERS WITH CYLINDER 6 TO 70 MM²

## / USE

Manual indent crimping tool with cylinder for Cu connectors according to NFC20-130 : XCT, XG7T, CT, CU, MJ : up to 70 mm².

## / TECHNICAL SPECIFICATIONS

Tool equipped with a barrel with 7 cavities: 6, 10, 16, 25, 35, 50,70 mm².

| Ref. | Crimping | Dimensions | Weight |
|---|---|---|---|
| P125 | Indent + barrel 7 positions | 420 x 85 x 35 mm | 2,5 kg |

Tool equipped with a cylinder with 7 cavities: 6, 10, 16, 25, 35, 50, 70mm².



Box containing a selection of 85 Cu connectors (lugs + sleeves).

# P125CO

INDENT CRIMPING PLIERS P125 IN CASE WITH 85 TERMINALS AND LUGS

## / USE

Manual indent crimping tool with cylinder for Cu connectors according to NFC20-130.
- XCT,XG7T,CT,CU,MJ : up to 70 mm².

## / TECHNICAL SPECIFICATIONS

Contents :
- 1 plastic case with dividers
- 1 indent crimping pliers (ref. P125),
- 5 LV copper sleeves XG7T series 15 mm²,
- 5 LV copper sleeves XG7T series 25 mm²,
- 5 LV copper sleeves XG7T series 50 mm²,
- 5 LV copper sleeves XG7T series 70 mm²,
- 10 copper tubular lugs XCT series 10-8,
- 10 copper tubular lugs XCT series 10-6,
- 10 copper tubular lugs XCT series 6-6,
- 5 copper tubular lugs XCT series 16-6,
- 5 copper tubular lugs XCT series 16-8,
- 5 copper tubular lugs XCT series 25-8,
- 5 copper tubular lugs XCT series 25-10,
- 5 copper tubular lugs XCT series 35-8,
- 5 copper tubular lugs XCT series 50-10,
- 5 copper tubular lugs XCT series 70-10.

| Ref. | Dimensions | Weight |
|---|---|---|
| P125CO | 445 x 345 x 95 mm | 5,1 kg |



• Tool equipped with 2 cylinders 6 cavities: 6, 10, 16, 25, 35, 50 mm².

# PFCU6-50

HEXAGONAL CRIMPING PLIERS
WITH CYLINDERS 6 TO 50 MM²

## / USE

Manual crimping tool for Cu connectors according to NFC20-130.
- XCT,XG7T,CT,CU,MJ: up to 50 mm².

## / TECHNICAL SPECIFICATIONS

Crimping pliers with arm.
Cylinders locked by push-button system.

| Ref. | Crimping | Dimensions | Weight |
|---|---|---|---|
| PFCU6-50 | 2 barrels 6 cavities | 400 x 135 x 45 mm | 1,3 kg |

Box containing a selection of 280 Cu lugs.



Tool equipped with 2 cylinders with 6 cavities: 6, 10, 16, 25, 35, 50mm²

# PFCU6-50CO

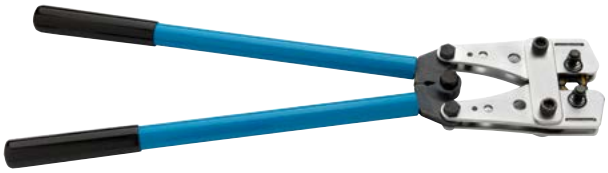
## HEXAGONAL CRIMPING PLIERS PFCU6-50 IN CASE WITH 280 LUGS

### / TECHNICAL SPECIFICATIONS

Contents :
- 1 PFCU6-50 crimping tool
- 25 lugs 6 mm² copper cable Ø6mm hole
- 25 lugs 6 mm² copper cable Ø8mm hole
- 25 lugs 10 mm² copper cable Ø6mm hole
- 25 lugs 10 mm² copper cable t Ø8mm hole
- 25 lugs 16 mm² copper cable Ø8mm hole
- 25 lugs 16 mm² copper cable Ø10mm hole
- 25 lugs 25 mm² copper cable Ø8mm hole
- 25 lugs 25 mm² copper cable Ø10mm hole
- 20 lugs 35 mm² copper cable Ø8mm hole
- 20 lugs 35 mm² copper cable Ø10mm hole
- 20 lugs 50 mm² copper cable Ø10mm hole
- 20 lugs 50 mm² copper cable Ø12mm hole.

| Ref. | Dimensions | Weight |
|---|---|---|
| PFCU6-50CO | 445 x 345 x 95 mm | 5,1 kg |

• Tool equipped with 2 cylinders with 9 cavities: 6, 10, 16, 25, 35, 50, 70, 95, 120mm².



# PFCU6-120

## HEXAGONAL CRIMPING PLIERS WITH CYLINDERS 6 TO 120 MM²

### / USE

Manual crimping tool for Cu connectors according to NFC20-130. XCT,XG7T,CT,CU,MJ: up to 120 mm².

### / TECHNICAL SPECIFICATIONS

- Crimping pliers with arm.
- Cylinders locked by push-button system.

| Ref. | Crimping | Dimensions | Weight |
|---|---|---|---|
| PFCU6-120 | 2 barrels 9 cavities | 680 x 230 x 75 mm | 2,9 kg |

Tool equipped with 2 fixed cavities BG and D3



CP-PBGD3

The D3 cavity is equipped with a locking pin for W50 dies.

# PBGD3

## CRIMPRING PLIERS BG AND D3 WITH COMPOSITE ARMS

### / USE

Manual mechanical press for crimping C connectors.
Uses W50 dies. For crimping C connectors:
- BG die: C16, C25-10, C25PM connectors
- Die W50E173L5: C25, C25EGM, C35 connectors.

### / TECHNICAL SPECIFICATIONS

- Simple tool that crimps in one operation.
- 2 composite fibreglass arms.
- Easy calibration with a hand tool.
- Option: Plastic case ref. CP-PBGD3

| Ref. | Crimping | Dimensions | Weight |
|---|---|---|---|
| PBGD3 | BG & D3 | 635 mm | 3,2 kg |



# P128

## RATCHET CRIMPING PLIERS 50 KN

### / USE

For hexagonal crimping of C-shaped connectors, copper sleeves and lugs, copper/alu sleeves and lugs and connectors for insulated networks.
Uses D50 die sets.

### / TECHNICAL SPECIFICATIONS

- D-head with stock and lock.
- Quick-feed, non-return ratchet.
- ISOLEC 2 tool equivalent.
- Option : Metal case ref.CM-P128

| Ref. | Crimping | Dimensions | Weight |
|---|---|---|---|
| P128 | 4-120 mm² | 440 x 80 x 45 mm | 2,5 kg |

VALUE

## MP36 OUR SELECTION

SINGLE HAND MANUAL HYDRAULIC CRIMPING TOOL 35 KN

The most compact hydraulic tool on the market



Very ergonomic, operated with one hand

Highly resistant aluminium clevis

### / USE

Lightweight and compact manual hydraulic press for crimping connectors up to 150 mm².
Industrial applications and also suitable for preinsulated LV connectors.
Uses D36 type dies.

### / TECHNICAL SPECIFICATIONS

- Quick opening and closing D-head, 180° rotation.
- Two-tone handle with anti-slip pads.
- Automatic release with audible "click".
- Piston return by release lever. Supplied in plastic case.

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight |
|---|---|---|---|---|---|
| MP36 | 35 kN | 8 mm | 4 - 150 mm² | 215 x 50 x 175 mm | 1,4 kg |

Comfortable to use compared to a mechanical tool.

Accepts all brands of dies



Ergonomic handle allows for one-handed approach

Reversible dies with double indentations (except for large dimensions).

## MP55

MANUAL HYDRAULIC CRIMPING TOOL 55 KN

### / USE

Lightweight and ergonomic manual hydraulic press for crimping connectors up to 240 mm². Industrial applications and electrical networks.
Uses D55 type dies.

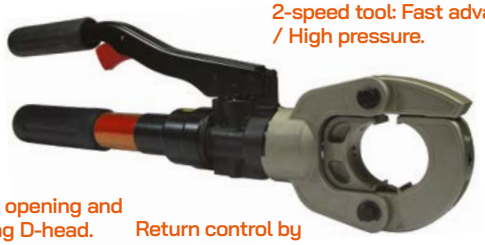
### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation. Adjustable ball plunger for 30 or 38 mm dies.

Automatic release with audible « click ». Piston return by discharge lever. Supplied in plastic case.

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight |
|---|---|---|---|---|---|
| MP55 | 55 kN | 13 mm | 4 - 240 mm² | 380 x 65 x 140 mm | 2,3 kg |

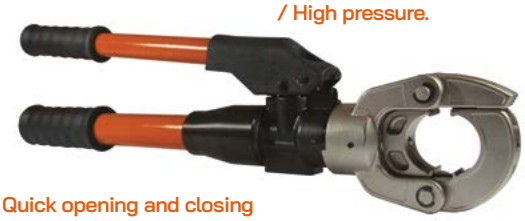
2-speed tool: Fast advance / High pressure.



Quick opening and closing D-head.

Return control by simple trigger.

2-speed tool: Fast advance / High pressure.



Quick opening and closing D-head, 180° rotation.

## MP62

MANUAL HYDRAULIC CRIMPING TOOL 62 KN

### / USE

Lightweight and ergonomic manual hydraulic press for crimping connectors up to 300 mm². Mainly industrial applications. Uses C60 type dies.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation. Automatic release with audible « click ». Return of the piston by trigger located in the mobile handle. Delivered in a plastic case.

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight |
|---|---|---|---|---|---|
| MP62 | 62 kN | 13 mm | 6 - 300 mm² | 420 x 53 x 150 mm | 2,8 kg |

## MP80

MANUAL HYDRAULIC CRIMPING TOOL 80 KN

### / USE

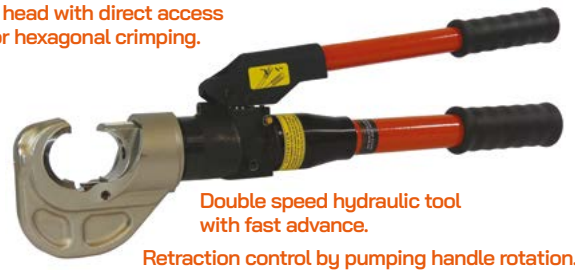
Manual hydraulic press for crimping connectors up to 300 mm².
Industrial applications and ENEDIS electrical networks.
Uses C80 or C60 type dies.

### / TECHNICAL SPECIFICATIONS

Powerful and comfortable tool that develops 8 tons in crimping. Double composite handles. Automatic release with audible «click». Piston return by rotating and closing the mobile handle. Delivered in a plastic case.

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight |
|---|---|---|---|---|---|
| MP80 | 80 kN | 13 mm | 6 - 300 mm² | 535 x 57 x 175 mm | 3,9 kg |

C head with direct access for hexagonal crimping.



Double speed hydraulic tool with fast advance.

Retraction control by pumping handle rotation.

# MP13026

## 130KN CRIMPING TOOL C HEAD

### / USE

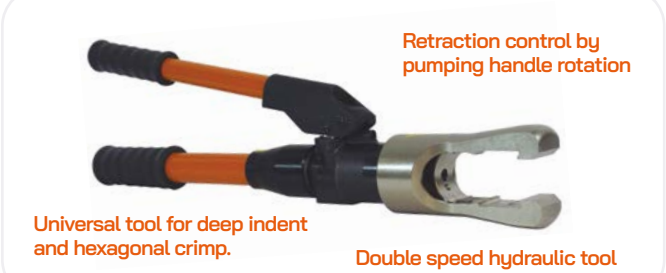
Hydraulic crimping tool for cables up to 300mm².
Industrial and electrical networks applications.



### / TECHNICAL SPECIFICATIONS

- Open C head, rotation >180°.
- 2 hands pumping handles.
- Tool delivered in case: carrying case can contain 24 dies sets type C130

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight |
|---|---|---|---|---|---|
| MP13026 | 130 kN | 26 mm | up to 400mm² | 565 x 70 x 160 mm | 5,2 kg |



Retraction control by pumping handle rotation

Universal tool for deep indent and hexagonal crimp.

Double speed hydraulic tool with fast advance.

# MPU130

## 130KN CRIMPING TOOL U HEAD

### / USE

Tool particularly suitable for deep indent crimping up 240mm² underground lines.
Industrial and electrical networks applications.
No adapters supplied.
In conformity with NF C33-090-4.

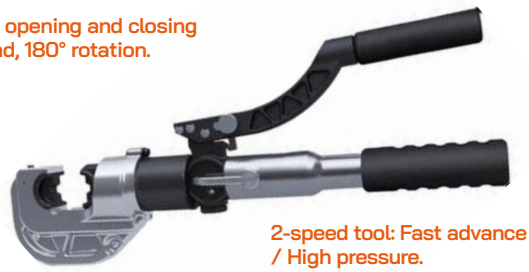


### / TECHNICAL SPECIFICATIONS

- Robust U head, rotation >180°.
- U shape head according to spécifications HN 68S.
- 2 hands pumping handles.
- Deep indent aluminium : up to 240mm².
- Tool delivered without adapter.

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight |
|---|---|---|---|---|---|
| MPU130 | 130 kN | 26 mm | up to 400mm² | 560 x 80 x 165 mm | 5,2 kg |

Quick opening and closing D-head, 180° rotation.



2-speed tool: Fast advance / High pressure.



# MP130-42KIT

## 120KN HYDRAULIC CRIMPING PRESS WITH 42MM STROKE SUPPLIED WITH DIE SETS FROM 16 TO 400 MM²

### / USE

Hydraulic crimping tool for cables up to 400mm².
Industrial and electrical networks applications.

### / TECHNICAL SPECIFICATIONS

- Hexagonal hydraulic crimping for copper and aluminium tubular terminals
- Interchangeable dies
- For ease of operation and operator comfort, the head swivels at 350°
- Dual-speed hydraulics: one fast speed to approach dies towards the connector and another slower speed for crimping
- Automatic return at the end of crimping
- Safety valve with bypass for automatic pressure release when maximum pressure is reached
- Dies supplied: 16, 25, 35, 50, 70, 95, 120, 150, 185, 240, 300, 400 mm²
- Carrying case: metal, 3.3 kg

| Ref. | Force | Stroke | Hexagonal crimping | Weight |
|---|---|---|---|---|
| MP130-42KIT | 120 kN | 42 mm | up to 400mm² | 6,3 kg |

# XP13026/XP13038

## HYDRAULIC CRIMPING HEAD

### / TECHNICAL SPECIFICATIONS

**XP13026:**
- Copper lugs and sleeves — NFC 20-130: 6 to 300 mm²
- Bare or insulated sleeves in copper or aluminum — EDF: E54 to E235
- Copper or aluminum lugs and sleeves — DIN 48083: KZ6 to KZ28
- C-shaped connectors: C10 to C70
- Pre-rounding die sets: 50 to 60 mm²
- Copper lugs and sleeves — NFC 20-130: 10 to 240 mm²

**XP13038:**
- Copper lugs and sleeves — NFC 20-130: 6 to 400 mm²
- Bare or insulated sleeves in copper or aluminum — EDF: E54 to E280
- Copper or aluminum lugs and sleeves — DIN 48083: KZ6 to KZ38
- C-shaped connectors: C10 to C70
- Pre-rounding die sets: 50 to 60 mm²
- Copper lugs and sleeves — NFC 20-130: 10 to 240 mm²

| Ref. | Force | Stroke | Dimensions | Weight |
|---|---|---|---|---|
| XP13026 | 130 kN | 26 mm | 215×70×125 mm | 3,750 kg |
| XP13038 | | 38 mm | 240×70×112 mm | 4,250 kg |

Tool supplied with U200PR extender



Large crimping capacity

Crimping head interchangeable with other hydraulic tools.

# XPRU200-5

## 700 BARS HYDRAULIC CRIMPING TOOL 200KN EXTENDED U HEAD

STANDARDS

STANDARD NF C33-090 (FORMERLY HN 68-S-90)

### / USE

Crimping head mainly developed for deep indent crimping up to 630mm².
Single-acting 700 bars operating pressure.
Applications mainly underground electrical networks.

### / TECHNICAL SPECIFICATIONS

Product :
- U-shaped head with parallel arms for robustness.
- Single-acting press with spring piston return.
- Piston with lock to hold the indent.
- Tool equipped with a hydraulic quick coupling series 115.
- Delivered with extender U200PR.

| Ref. | Force | Nominal pressure | Stroke | Weight | Dimensions |
|---|---|---|---|---|---|
| XPRU200-5 | 200 kN | 700 bars | 38 mm | 6,7 kg | 320 x 70 x 95 mm |

Robust H-head with locking pin



Crimping head interchangeable with other hydraulic tools

# XPH250

## H-SHAPE HYDRAULIC CRIMPING HEAD 700 BAR 250 KN

### / USE

Portable and powerful hydraulic press for crimping connectors up to 630 mm².
Mainly industrial applications. Uses H250 type dies.

### / TECHNICAL SPECIFICATIONS

- H-head to withstand high loads. Leather strap to secure the locking pin.
- The tool is supplied with a hydraulic nipple, which can be connected to the 700 bar hydraulic hoses and pumps available in the catalogue.

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|---|---|---|---|
| XPH250 | 250 kN | 28 mm | 25 - 630 mm² | 287 x 130 x 100 mm | 6,8 kg | XPH250-5 | XPH250-7 | XPH250-E |

Interchangeable crimping head with other hydraulic tools.

Robust H-head with locking pin.



Hydraulic connection on the side to allow the head to be placed vertically on the workbench.

# XPH450

## H-SHAPE HYDRAULIC CRIMPING HEAD 700 BAR 450 KN

### / USE

Portable and powerful hydraulic press for crimping connectors up to 1000mm². Mainly industrial applications. Uses H450 type dies.

### / TECHNICAL SPECIFICATIONS

H-head to withstand high loads. Leather strap to secure the locking pin.
H-head with anti-corrosion coating. The tool is supplied with a hydraulic nipple, which can be connected to the 700 bar hydraulic hoses and pumps available in the catalogue.

| Ref. | Force | Stroke | Hexagonal crimping | Dimensions | Weight | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|---|---|---|---|
| XPH450 | 450 kN | 35 mm | 95 - 1000 mm² | 285 x 115 x 120 mm | 11 kg | XPH450-5 | XPH450-7 | XPH450-E |



Extended head that allows deep indenting up to 9E (1600 mm²).

Double handle for improved ergonomy.

H type head with locking pin for the upper die.

# XPRH450-5

## 700 BARS HYDRAULIC CRIMPING TOOL 450KN H HEAD

### / USE

Crimping head mainly developed for deep indent crimping up to 1600mm².
Single-acting 700 bars operating pressure.
Applications mainly underground electrical networks.

### / TECHNICAL SPECIFICATIONS

- H type head with parallel arms for robustness.
- Single-acting press with spring piston return.
- Piston with lock to hold the indent.
- Tool equipped with a hydraulic quick coupling series 115.

| Ref. | Force | Nominal pressure | Stroke | Dimensions | Weight |
|---|---|---|---|---|---|
| XPRH450-5 | 450 kN | 700 bars | 42 mm | 300 x 120 x 386 mm | 18,5 kg |



Ergonomic and lightweight "Line" tool for one-handed crimping.

Double trigger control.

LED communication system and work area lighting.

# BLP36

## BATTERY OPERATED CRIMPING TOOL 35 KN

### / USE

Compact electro-hydraulic crimping machine for crimping connectors up to 150 mm². For industrial applications and LV network connections. Uses D36 type dies.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation.
Dual triggers: advance, hold, retract.
Sturdy, non-slip coated body with LED lighting on the front of the tool.
Lightweight 18V Li-Ion 2Ah battery with charge indicator.
Supplied in a plastic case with 1 battery and 1 charger.

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BLP36 | 35 kN | 8 mm | 4 - 150 mm² | 18 V - 2 Ah | 128 x 75 x 355 mm | 2,2 kg |

| Accessoires | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |



Ergonomic and light "Line" tool for one-handed crimping

Double trigger control, LED communication system and work area lighting.

Reversible dies with double cavities (except for large dimensions).

# BLP55

## BATTERY OPERATED CRIMPING TOOL 55 KN

### / USE

Compact electrohydraulic crimping machine for connectors up to 240 mm². Industrial applications and LV electrical networks. Uses D55 type dies.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation.
Dual triggers: advance, hold, retract.
Robust, non-slip coated shell. LED lighting on the front of the tool.
Lightweight 18V Li-Ion 2Ah battery with charge indicator.
Supplied in plastic case with 1 battery and 1 charger.

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BLP55 | 55 kN | 13 mm | 4 - 240 mm² | 18 V - 2 Ah | 128 x 75 x 390 mm | 2,9 kg |

| Accessoires | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |

# BPE55 NEW

## BATTERY OPERATED CRIMPING TOOL 55 KN PISTOL SHAPE

- Ergonomic and light allow crimping with one hand.
- Automatic return when crimping is complete.
- Led lighting of the work area.




### / USE

Compact electrohydraulic crimping machine for connectors up to 240 mm². Industrial applications and LV electrical networks. Uses D55 type dies.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation Dual triggers: advance, hold, retract. Robust, non-slip coated shell. LED lighting on the front of the tool. Lightweight 18V Li-Ion 2Ah battery with charge indicator. Supplied in plastic case with 1 battery and 1 charger.

| Accessoires | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Battery charger Li-Ion 10,8-18V |

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BLP55 | 55 kN | 13 mm | 4 - 240 mm² | 18 V - 2 Ah | 285 x 60 x 270 mm | 3,2 kg |

## BLP62 NEW

BATTERY OPERATED CRIMPING TOOL 62 KN PISTOL SHAPE



- Ergonomic and light allow crimping with one hand.
- Led lighting of the work area.

### / USE

Compact electro-hydraulic press for crimping connectors up to 300 mm². Mainly for industrial applications. Uses C60 type dies.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation. Single trigger with automatic return. LED lighting of work area. Lightweight 18V Li-Ion 2Ah battery with charge indicator. Supplied in plastic case with 1 battery and 1 charger.

| Accessoires | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BLP62 | 62 kN | 13 mm | 6 - 300 mm² | 18V-2Ah | 128 x 75 x 390 mm | 3,2 kg |

## BPE62 NEW

BATTERY OPERATED CRIMPING TOOL 62 KN PISTOL SHAPE



- Ergonomic and light allow crimping with one hand.
- Automatic return when crimping is complete.
- Led lighting of the work area.

### / USE

Compact electrohydraulic crimping machine for connectors up to 300 mm². Mainly for industrial applications. Uses C60 type dies.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation.
Single trigger with automatic return. LED lighting of work area.
Lightweight 18V Li-Ion 2Ah battery with charge indicator.
Supplied in plastic case with 1 battery and 1 charger.

| Accessoires | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BPE62 | 62 kN | 13 mm | 6 - 300 mm² | 18V-2Ah | 290 x 60 x 285 mm | 3,5 kg |



- Ergonomics and lightness allow crimping with one hand
- Communicating led and work area lighting
- Hanging ring for shoulder strap or carabiner

# BLP80

## 80KN BATTERY OPERATED HYDRAULIC CRIMPING TOOL

### / USE

Electrohydraulic crimping tool for cables up to 300 mm²
ENEDIS power lines network. Uses C80 or C60 type dies.

### / TECHNICAL SPECIFICATIONS

Quick opening and closing D-head, 180° rotation. Single trigger with automatic return. LED lighting of work area. Lightweight 18V Li-Ion 2Ah battery with charge indicator. Supplied in plastic case with 1 battery and 1 charger.

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BLP80 | 80 kN | 13 mm | 6 - 300 mm² | 18V-2Ah | 128 x 75 x 420 mm | 3,7 kg |

| Accessoires | Description |
|---|---|
| AB18LI200 | 18V Li-Ion 2 Ah battery with power load indicator |
| AC18220 | Charger 220V AC European plug |



- Quick opening and closing D-head, 270° rotation.
- 2-speed tool: fast advance/high pressure.
- Tilting and locking double trigger control.
- InteLED communication system and work area lighting.
- Very robust shell with anti-slip coating.

# BP80

## BATTERY OPERATED CRIMPING TOOL 80 KN

### / USE

Electro-hydraulic press for crimping connectors up to 300 mm².
Industrial applications and electrical networks. Uses C80 or C60 type dies.

### / TECHNICAL SPECIFICATIONS

Double trigger: advance, hold, retract. Electronic crimping end control. INTELED LED ring. Hanging ring for shoulder strap. 18V Li-Ion 5Ah battery with charge indicator. Delivered in a plastic case with 2 batteries and 1 charger.

| Accessoires | Description |
|---|---|
| AB18LI500 | 18V Li-Ion battery 5Ah with power load indicator |
| AC18220 | Charger 220V AC European plug |

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BP80 | 80 kN | 13 mm | 6 - 300 mm² | 18V-5Ah | 355 x 75 x 325 mm | 5 kg |



- Open C-head with direct access, 180° rotation.
- 2-speed tool: fast advance/ high pressure.
- Tilting and locking double trigger control



- InteLED communication system and work area lighting.
- Very robust shell with anti-slip coating.

# BP13026 - BP13038

## C-SHAPE BATTERY OPERATED CRIMPING TOOL 130 KN

### / USE

Electro-hydraulic press for crimping connectors up to 400 mm². Industrial applications and power networks. Particularly suitable for crimping overhead lines. Uses C130 type dies but also C80 and C60.

### / TECHNICAL SPECIFICATIONS

Double trigger: advance, hold, retract. Electronic crimping end control. INTELED LED ring. Hanging ring for shoulder strap. 18V Li-Ion 5Ah battery with charge indicator. Delivered in a plastic case with 2 batteries and 1 charger.

| Accessoires | Description |
|---|---|
| AB18LI500 | 18V Li-Ion battery 5Ah with power load indicator |
| AC18220 | Charger 220V AC European plug |

| Ref. | Force | Stroke | Hexagonal crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|
| BP13026 | 130 kN | 26 mm | 6 - 300 mm² | 18 V - 5 Ah | 400 x 75 x 310 mm | 6,5 kg |
| BP13038 | | 38 mm | 6 - 400 mm² | | | 7 kg |




- InteLED communication system and work area lighting.
- Very robust shell with anti-slip coating.
- Robust U-shaped head, 270° rotation according to NF C33-090.
- 2-speed tool: fast advance/high pressure.
- Tiltable and lockable double trigger control.

# BPU130

## U-SHAPE BATTERY OPERATED CRIMPING TOOL 130 KN

### / USE

Electro-hydraulic press particularly suitable for deep indenting of Al underground lines from 16 to 240 mm². Press for hexagonal crimping of connectors up to 400 mm². Industrial applications and electrical networks. Uses U130 and C130 type dies. Optional adapters U130C130 and C130PP (not supplied).

### / TECHNICAL SPECIFICATIONS

Double trigger: advance, hold, retract. Electronic crimping end control. INTELED LED ring. Hanging ring for shoulder strap. 18V Li-Ion 5Ah battery with charge indicator. Delivered in a plastic case with 2 batteries and 1 charger.

| Accessoires | Description |
|---|---|
| AB18LI500 | 18V Li-Ion battery 5Ah with power load indicator |
| AC18220 | Charger 220V AC European plug |
| U130C130 | Adapter for C130 dies |
| C130PP | Adapter for indenting dies |

| Ref. | Force | Stroke | Deep indenting | Crimping | Battery | Dimensions | Weight |
|---|---|---|---|---|---|---|---|
| BPU130 | 130 kN | 26 mm | 16 - 240 mm² | 6 - 400 mm² | 18 V - 5,0 Ah | 415 x 75 x 310 mm | 6,3 kg |




# BPU210

## 200KN ELECTROHYDRAULIC CRIMPING TOOL U HEAD 18V BATTERY

### / USE

Electrohydraulic crimping tool for deep indent crimping up to 400mm² underground lines. Hexagonal crimping aerial conductors up to 228 mm². Applications mainly electrical networks or grounding in substation.

### / TECHNICAL SPECIFICATIONS

- U-shaped head with parallel arms for robustness.
- Double switch control : advance, hold, retract.
- Cycle control and crimp validation.
- Tool life management and maintenance cycle.
- Hydraulic double speed for optimised operation.
- Battery large capacity 18V 5A with power load indicator.
- Delivered in a plastic case with 2 batteries and 1 charger.

| Ref. | Force | Stroke | Dimensions | Weight |
|---|---|---|---|---|
| BPU210 | 200 kN | 30 mm | 460 x 98 x 345 mm | 9,6kg |

# B62RM

INNOVATION

MULTIFUNCTION HYDRAULIC TOOL



B62RM_RMC50C

B62RM_RMP62

B62RM_RMEP6




B62RM headless

- Tool with RAPID head change.
- MUTLI tool for cutting, crimping and punching.
- Communicating InteLED system and work area lighting.
- Robust housing covered with a non-slip layer.

## / USE

Electrohydraulic MULTIFUNCTION tool for crimping up to 300mm², cable cutting Ø50mm and hole punching. Industrial multifunction applications. Uses C60 crimping dies.

| MULTIFUNCTION tool combinations | | | |
|---|---|---|---|
| **FUNCTION** | **Capacity** | **Weight** | **Dimensions** |
| CRIMP 62 kN | Stroke 13 mm | 5,7 kg | 435 x 85 x 335 mm |
| CABLE CUT Ø50mm | Force 62 kN | 7,3 kg | 540 x 85 x 335 mm |
| PUNCH-OUT | Force 6 T | 4,9 kg | 385 x 85 x 335 mm |

## / TECHNICAL SPECIFICATIONS

Quick access head with locker, rotation rotative 360°. Double switch control : advance, hold, retract. Cycle control and crimp validation. Hydraulic double speed for optimised operation. Batteries large capacity 18V 5A with power load indicator. Delivered in a plastic case with 2 batteries and 1 charger.

| MULTI tool B62RM delivered with : | |
|---|---|
| **Reference** | **Description** |
| AB18LI500 x2 | Battery 18V Li-Ion 5A with power load indicator |
| AC18220 | Battery charger Li-Ion 10,8-18V |

Set of:
- 4 hexagonal impact sockets : 10, 13, 16, 19 mm
- 2 hexagonal male sockets
  5 mm (l8mm)
  6 mm (l19mm)



Tool with progressive trigger control.

Tri-LED integrated lighting.

| Ref. | Battery M18 | Drive | Dimensions | Weight |
|---|---|---|---|---|
| Impact wrench M18FIW | 18V Li-Ion 5A power load indicator | Square 1/2'' (12,7 mm) | 124 x 79 x 234 mm | 1,8 kg with battery |

# VC-M18

CORDLESS IMPACT WRENCH 18V

## / USE

18V battery operated impact wrench, for underground shear bolt connectors.

## / TECHNICAL SPECIFICATIONS

- Impact wrench with 4 modes Drive Control to maximise versatility :
  - 3 impact modes 102 / 203 / 339 Nm
  - 1 control mode 34 Nm with auto shut-off
- Reversible belt hook
- Fast charger 1 hour for 18V Li-Ion 5A battery
- Tool delivered in carrynig case with 2 batteries 18V Li-Ion and a fast charger.

| Setting mode | Torque MAX | No-load speed | Impact range |
|---|---|---|---|
| Impact 1 | 102 Nm | 0-900 rpm | 0-1000/min |
| Impact 2 | 203 Nm | 0-1650 rpm | 0-2400/min |
| Impact 3 | 339 Nm | 0-2400 rpm | 0-3500/min |
| Torque control | 34 Nm | 0-1200 rpm | - |

Phosphorescent bumper - high visibility

Built-in LED light with afterglow illuminates the work area

Ergonomic rubberised grip with non-slip dimples

Belt clip



## BC.B18V

IMPACT DIVER

### / TECHNICAL SPECIFICATIONS

- Square drive : 1/2"
- No Load Speed (variable speed) : 0 - 2,100 rpm
- Impacts Per Minute (variable speed) : 0 - 3,200 ipm
- Maximum Torque : 170 ft.lbs./230 Nm
- Battery : 18V Lithium-Ion
- Battery charge time : 30 min
- Delivered in case with a battery charger, 2 batteries, a socket set (size 10/13/16/19) and 6 sided end fitting 6 mm.



## CP-C130X15

CASE

### / TECHNICAL SPECIFICATIONS

- Case designed to hold a deep punching set 0E, 1E, 2E and 4E for lugs and connectors.
- Supplied empty.



## CP-PPEU130

CASE

### / TECHNICAL SPECIFICATIONS

- Case suitable for storing deep punching sets 0E, 1E, 2E and 4E for lugs and connectors.

# / INDUSTRIAL DIN APPLICATION

| | | | MP36, BLP36 | | MP55, BLP55, BPE55 | | MP62, BLP62, BPE62 | | MP130, XP130, BP130 | | XPH250 | | XPH450 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | |  | |  | |  | |  | |  | |  | |
| **Hexagonal crimp Lugs and junctions** | **Sections (mm²)** | | **lg** | D36 | **lg** | D55 | **lg** | C60 | **lg** | C130 | **lg** | XPH250 | **lg** | H450 |
| **DIN 48083** | Cu 4 | | 5 | D36K4L5 | | | | | | | | | | |
| | Cu 6 | | 5 | D36K5L5 | | | | | | | | | | |
| | Cu 10 | | 5 | D36K6L5 | 5 | D55K6/20L5/5 | 5 | C60K6L5 | 12 | C130K6L12 | | | | |
| | Cu 16 | | 5 | D36K8L5 | 5 | D55K8/16L5/5 | 5 | C60K8L5 | 14 | C130K8L14 | 12 | H250K8L12 | | |
|  | Cu 25 | Al 10 | 5 | D36K10L5 | 5 | D55K10/18L5/5 | 5 | C60K10L5 | 12 | C130K10L12 | 12 | H250K10L12 | | |
| | Cu 35 | Al 25 | 5 | D36K12L5 | 5 | D55K12/14L5/5 | 5 | C60K12L5 | 12 | C130K12L12 | 12 | H250K12L12 | | |
| | Cu 50 | Al 35 | 5 | D36K14L5 | 5 | D55K12/14L5/5 | 5 | C60K14L5 | 12 | C130K14L12 | 12 | H250K14L12 | 14 | H450K14L14 |
| | Cu 70 | Al 50 | 5 | D36K16L5 | 5 | D55K8/16L5/5 | 5 | C60K16L5 | 12 | C130K16L12 | 12 | H250K16L12 | 14 | H450K16L14 |
|  | Cu 95 | Al 70 | 5 | D36K18L5 | 5 | D55K10/18L5/5 | 5 | C60K18L5 | 12 | C130K18L12 | 12 | H250K18L12 | 14 | H450K18L14 |
| | Cu 120 | | 4 | D36K20L4 | 5 | D55K6/20L5/5 | 5 | C60K20L5 | 12 | C130K20L12 | 12 | H250K20L12 | 14 | H450K20L14 |
| | Cu 150 | Al 95-120 | 4 | D36K22L4 | 5 | D55K22L5 | 5 | C60K22L5 | 14 | C130K22L14 | 14 | H250K22L14 | 14 | H450K22L14 |
| | Cu 185 | Al 150 | | | 5 | D55K25L5 | 5 | C60K25L5 | 14 | C130K25L14 | 14 | H250K25L14 | 14 | H450K25L14 |
| | Cu 240 | Al 185 | | | 5 | D55K28L5 | 5 | C60K28L5 | 14 | C130K28L14 | 14 | H250K28L14 | 14 | H450K28L14 |
| | Cu 300 | Al 240 | | | 5 | D55K32L5 (except Cu) | 5 | C60K32L5 | 5 | C130K32L5 | 16 | H250K32L16 | 18 | H450K32L18 |
| | | Al 300 | | | | | 5 | C60K34L5 | 5 | C130K34L5 | 16 | H250K34L16 | 18 | H450K34L18 |
| | Cu 400 | Al 400 | | | | | | | 9 | C130K38L9 | 16 | H250K38L16 | 18 | H450K38L18 |
| | Cu 500 | | | | | | | | | | 16 | H250K42L16 | 18 | H450K42L18 |
| | Cu 630 | Al 500 | | | | | | | | | 16 | H250K44L16 | 18 | H450K44L18 |
| | Cu 800 | Al 630 | | | | | | | | | | | 25 | H450K52L25 |
| | Cu 1000 | Al 800 | | | | | | | | | | | 25 | H450K58L25 |
| | | Al 1000 | | | | | | | | | | | 25 | H450K60L25 |



**CP-C130X15**
Coffret plastique qui peut recevoir 15 jeux de matrices type C130
*Plastic carrying case for 15 sets of C130 type of dies*



**CP-PPEU130**
Coffret plastique qui peut recevoir poincons 0E,1E,2E,4E et matrices MC & MJ
*Plastic carrying case for 0E,1E,2E,4E indents and MC & MJ opening dies*

# / INDUSTRIAL (CU)

| | | Hexagonal crimping and Cu indent crimp | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P125 | PFCU6-50 | PFCU6-120 | MP36, BLP36 | | P128 | | MP55, BLP55, BPE55 | | MP62, BLP62, BPE62 | | |
| | |  |  |  |  | |  | |  | |  | | |
| **Cable Cu Lungs and junctions** | **Sections (mm²)** | | **2 barrels** | **2 barrels** | **lg** | D36 | **lg** | D50 | **lg** | D55 | **lg** | C60 | |
| **NF C20-130 : XCT, XG7T, COT, CT, CU, MJ**  | 4 | | | | 5 | D36HFCU4L5 | 9 | D50HFCU4/120L9/5 | 9 | D55HFCU4/125L5/5 | | | |
| | 6 | Barrel | Barrels 6 positions | Barrels 9 positions | 9 | D36HFCU6L9 | 9 | D50HFCU6/35L9/5 | 9 | D55HFCU6/35L9/9 | 9 | C60HFCU6L9 | |
| | 10 | | | | 9 | D36HFCU10L9 | 9 | D50HFCU10/50L9/5 | 9 | D55HFCU10/50L9/5 | 9 | C60HFCU10L9 | |
| | 16 | | | | 9 | D36HFCU16L9 | 9 | D50HFCU16/70L9/5 | 9 | D55HFCU16/70L9/5 | 9 | C60HFCU16L9 | |
| | 25 | | | | 9 | D36HFCU25L9 | 9 | D50HFCU25/95L9/5 | 9 | D55HFCU25/95L9/5 | 9 | C60HFCU25L9 | |
| | 35 | | | | 9 | D36HFCU35L9 | 5 | D50HFCU6/35L9/5 | 9 | D55HFCU6/35L9/9 | 12 | C60HFCU35L12 | |
| | 50 | | | | 5 | D36HFCU50L5 | 5 | D50HFCU10/50L9/5 | 5 | D55HFCU10/50L9/5 | 12 | C60HFCU50L12 | |
| | 70 | | | | 5 | D36HFCU70L5 | 5 | D50HFCU16/70L9/5 | 5 | D55HFCU16/70L9/5 | 5 | C60HFCU70L5 | |
| | 95 | | | | 5 | D36HFCU95L5 | 5 | D50HFCU25/95L9/5 | 5 | D55HFCU25/95L9/5 | 5 | C60HFCU95L5 | |
| | 120 | | | | 3,5 | D36HFCU120L3 | 5 | D50HFCU4/120L9/5 | 5 | D55HFCU4/120L5/5 | 5 | C60HFCU120L5 | |
| | 150 | | | | 3,5 | D36HFCU150L3 | | | 5 | D55HFCU150L5 | 5 | C60HFCU150L5 | |
| | 185 | | | | | | | | 5 | D55HFCU185L5 | 5 | C60HFCU185L5 | |
| | 240 | | | | | | | | 5 | D55HFCU240L5 | 5 | C60HFCU240L5 | |
| | 300 | | | | | | | | | | 6 | C60HFCU300L6 | |
| | 400 | | | | | | | | | | | | |
| | 500 | | | | | | | | | | | | |
| | 630 | | | | | | | | | | | | |
| | 800 | | | | | | | | | | | | |
| | 1000 | | | | | | | | | | | | |

| | MP80, BP80 | | MP130, XP130, BP130 | | MPU130, XPU130, BPU130 | | XPRU200 | | XPH250 | | XPH450 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| |  | |  | |  | |  | |  | |  | |
| | lg | C80  | lg | C130  | lg | U130  | lg | U200  | lg | H250  | lg | H450  |
| | | | | | | | | | | | | |
| | 9 | C60HFCU6L9 | 9 | C130HFCU6L9 | 9 | C130HFCU6L9 | | | | | | |
| | 9 | C60HFCU10L9 | 9 | C130HFCU10L9 | 9 | C130HFCU10L9 | | | | | | |
| | 9 | C60HFCU16L9 | 9 | C130HFCU16L9 | 9 | C130HFCU16L9 | | | | | | |
| | 9 | C60HFCU25L9 | 9 | C130HFCU25L9 | 9 | C130HFCU25L9 | 9 | C130HFCU25L9 | | | | |
| | 12 | C60HFCU35L12 | 12 | C130HFCU35L12 | 12 | C130HFCU35L12 | 12 | C130HFCU35L12 | | | | |
| | 12 | C60HFCU50L12 | 12 | C130HFCU50L12 | 12 | C130HFCU50L12 | 12 | C130HFCU50L12 | 12 | H250HFCU50L12 | | |
| | 5 | C60HFCU70L5 | 12 | C130HFCU70L12 | 12 | C130HFCU70L12 | 12 | C130HFCU70L12 | 12 | H250HFCU70L12 | | |
| | 5 | C60HFCU95L5 | 12 | C130HFCU95L12 | 12 | C130HFCU95L12 | 12 | C130HFCU95L12 | 12 | H250HFCU95L12 | 16 | H450HFCU95L16 |
| | 5 | C60HFCU120L5 | 12 | C130HFCU120L12 | 12 | C130HFCU120L12 | 12 | C130HFCU120L12 | 12 | H250HFCU120L12 | 16 | H450HFCU120L16 |
| | 5 | C60HFCU150L5 | 12 | C130HFCU150L12 | 12 | C130HFCU150L12 | 12 | C130HFCU150L12 | 16 | H250HFCU150L16 | 16 | H450HFCU150L16 |
| | 5 | C60HFCU185L5 | 12 | C130HFCU185L12 | 12 | C130HFCU185L12 | 5x3 | U200HFCU185L5x3 | 16 | H250HFCU185L16 | 22 | H450HFCU185L22 |
| | 5 | C60HFCU240L5 | 12 | C130HFCU240L12 | 12 | C130HFCU240L12 | 5x3 | U200HFCU240L5x3 | 16 | H250HFCU240L16 | 22 | H450HFCU240L22 |
| | 6 | C60HFCU300L6 | 12 | C130HFCU300L12 | 12 | C130HFCU300L12 | 5x3 | U200HFCU300L5x3 | 16 | H250HFCU300L16 | 25 | H450HFCU300L25 |
| | | | 9 | C130HFCU400L9* | 9 | C130HFCU400L9 | 5x3 | U200HFCU400L5x3 | 16 | H250HFCU400L16 | 25 | H450HFCU400L25 |
| | | | | * 13038 only | | | 5x2 | U200HFCU500L5x2 | 16 | H250HFCU500L16 | 25 | H450HFCU500L25 |
| | | | | | | | 5x2 | U200HFCU630L5x2 | 16 | H250HFCU630L16 | 18 | H450HFCU630L18 |
| | | | | | | | | | | | 6x3 | H450HFCU800L6x3 |
| | | | | | | | | | | | 18 | H450HFCU1000L18 |


U200C130U
U200C130P


U130C130

# / INDUSTRIAL APPLICATION



| | | Hexagonal crimp | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | P126 | | MP36, BLP36 | | P128 | | MP55, BLP55, BPE55 | |
| | |  | |  | |  | |  | |
| **Aluminium cable Hexagonal crimp Al /Cu lugs** | **Sections (mm²)** | **lg** | P126 | **lg** | D36 | **lg** | D50 | **lg** | D55 |
| **NF C63-061 : ACX, ICAU, CBTAU**  | 35 | 9 | E140 | 9 | D36E140L9 | 9 | D50E140/173L9/9 | 9 | D55E140/173L9/9 |
| | 50 | | | | | | | | |
| | 70 | | | 9 | D36E173L9 | 9 | D50E140/173L9/9 | 9 | D55E140/173L9/9 |
| | 95 | | | | | | | | |
| | 120 | | | | | | | | |
| | 150 | | | | | | | | |
| | 185 | | | | | | | | |
| | 240 | | | | | | | | |
| | 300 | | | | | | | | |
| **Cable Cu Hexagonal crimp Forged lugs** | **Sections (mm²)** | | | | | | | | |
| **HU**  | 16 | | | | | | | | |
| | 25 | | | | | | | | |
| | 35 | | | | | | | | |
| | 50 | | | | | | | | |
| | 70 | | | | | | | | |
| | 95 | | | | | | | | |
| | 120 | | | | | | | | |
| | 150 | | | | | | | | |
| | 185 | | | | | | | | |
| | 240 | | | | | | | | |
| | 300 | | | | | | | | |
| | 400 | | | | | | | | |
| | 500 | | | | | | | | |
| **Cable Cu Hexagonal crimp High intensity lugs** | **Sections (mm²)** | | | **lg** | D36 | **lg** | D50 | **lg** | D55 |
| **HUR, DPD7**  | 16 | | | 5 | D36HFCU50L5 | 5 | D50HFCU10/50L9/5 | 5 | D55HFCU10/50L9/5 |
| | 25 | | | | | | | | |
| | 35 | | | | | | | | |
| | 50 | | | | | | | | |
| | 70 | | | 3,5 | D36HFCU150L3 | | | 5 | D55HFCU150L5 |
| | 95 | | | | | | | | |
| | 120 | | | | | | | | |
| | 150 | | | | | | | | |
| | 185 | | | | | | | | |
| | 240 | | | | | | | | |
| | 300 | | | | | | | | |
| | 400 | | | | | | | | |

| MP62, BLP62, BPE62 | | MP80, BLP80, BP80 | | MP130, XP130, BP130 | | MPU130, XPU130, BPU130 | | XPRU200 | |
|---|---|---|---|---|---|---|---|---|---|
|  | |  | |  | |  | |  | |
| lg | C60 | lg | C80 | lg | C130 | lg | U130 | lg | U200 |
| 9 | C80E140L9 | 9 | C80E140L9 | 9<br>18 | C130E140L9<br>C130E140L18 | 9<br>18 | C130E140L9<br>C130E140L18 | 9<br>18 | C130E140L9<br>C130E140L18 |
| 9 | C80E173L9 | 9 | C80E173L9 | 9<br>18 | C130E173L9<br>C130E173L18 | 9<br>18 | C130E173L9<br>C130E173L18 | 9<br>18 | C130E173L9<br>C130E173L18 |
| 9 | C80E235L9 | 9 | C80E235L9 | 9<br>18 | C130E235L9<br>C130E235L18 | 9<br>18 | C130E235L9<br>C130E235L18 | 9<br>18 | C130E235L9<br>C130E235L18 |
| 9 | C80E260BIL9 | 9 | C80E260BIL9 | 9 | C130E260L9 | 9 | C130E260L9 | 9 | C130E260L9 |
| | | | | lg | C130 | lg | U130 | lg | |
| | | | | 10 | C130E180L10 | 10 | C130E180L10 | 10 | C130E180L10 |
| | | | | | | | | 10 | U200E270L10 |
| | | | | | | | | 10 | U200E330L10 |
| lg | C60 | lg | C80 | lg | C130 | lg | U130 | | |
| 12 | C60HFCU50L12 | 12 | C60HFCU50L12 | 12 | C130HFCU50L12 | 12 | C130HFCU50L12 | 12 | C130HFCU50L12 |
| 5 | C60HFCU150L5 | 5 | C60HFCU150L5 | 12 | C130HFCU150L12 | 12 | C130HFCU150L12 | 12 | C130HFCU150L12 |
| 5 | C60HFCU240L5 | 5 | C60HFCU240L5 | 12 | C130HFCU240L12 | 12 | C130HFCU240L12 | 5x3 | U2HFCU240L5X3 |
| | | | | 9 | C130HFCU400L9 | 9 | C130HFCU400L9 | 5x3 | U200HFCU400L5X3 |

# / LV INSULATED NETWORKS ALUMINIUM



| | | Hexagonal crimp | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | P126 | | MP36, BLP36 | | P128 | | MP55, BLP55, BPE55 | |
| | | |  | |  | |  | |  | |
| **Cable Al Hexagonal crimp Preinsulated connectors** | **Sections (mm²)** | **lg** | P126 | **lg** | D36 | **lg** | D50 | **lg** | D55 | |
| **NF C33-021 MJPB, MJPT, MJT, EJPT, MJPBAS, CPTA, CPTAU, EJAS, DPCNA, DPCNU, EDASCNA, EDASCNU, ERP**  | 6 | 9 | E140 | 9 | D36E140L9 | 9 | D50E140/173L9/9 | 9 | D55E140/173L9/9 | |
| | 10 | | | | | | | | | |
| | 16 | | | 9 | D16 D36E140L9 D20 D36E173L9 | 9 | D50E140/173L9/9 | 9 | D55E140/173L9/9 | |
| | 25 | | | | | | | | | |
| | 35 | | | | | | | | | |
| | 50 | | | 9 | D36E173L9 | 9 | D50E140/173L9/9 | 9 | D55E140/173L9/9 | |
| | 54,6 | | | | | | | | | |
| | 70 | | | | | | | | | |
| | 70N | | | | | | | | | |
| | 95 | | | | | | | | | |
| | 120 | | | 9 | D36E215L9 | | | 9 | D55E215L9 | |
| | 150 | | | | | | | | | |
| | 185 | | | | | | | | | |
| | 240 | | | | | | | | | |
| **Cable Al Hexagonal crimp Preinsulated Junctions** | Sections (mm²) | | | | | | | | | |
| **MJPAS, MJPASE, JAS4R**  | 50 | | | | | | | | | |
| | 70 | | | | | | | | | |
| | 95 | | | | | | | | | |
| | 50 | | | | | | | | | |
| **Cable Al Hexagonal crimp Junctions** | Sections (mm²) | | | lg | D36 | lg | | lg | D55 | |
| **MJTAS, MJTASE, EJASE, XN8S**  | 50 | | | 9 | D36E215L9 | | | 9 | D55E215L9 | |
| | 70 | | | | | | | | | |
| | 95 | | | | | | | | | |
| | 150 | | | | | | | | | |
| | 240/95N | | | | | | | | | |

| | MP80, BLP80, BP80  | | MP130, XP130, BP130  | | MPU130, XPU130, BPU130  | | XPRU200  | | |
|---|---|---|---|---|---|---|---|---|---|
| | lg | C80 | lg | C130 | lg | U130 | lg | U200 | |
| | 9 | C80E140L9 | 9 | C130E140L9 | 9 | C130E140L9 | 9 | | C130E140L9 |
| | 9 | D16 C80E140L9<br>D20 C80E173L9 | 9 | D16 C130E140L9<br>D20 C130E173L9 | 9 | D16 C130E140L9<br>D20 C130E173L9 | 9 | | D16 C130E140L9<br>D20 C130E173L9 |
| | 9 | C80E173L9 | 9<br>18 | C130E173L9<br>C130E173L18 | 9<br>18 | C130E173L9<br>C130E173L18 | 9<br>18 | U200C130U<br>U200C130P | C130E173L9<br>C130E173L18 |
| | 9 | C80E215L9 | 9<br>18 | C130E215L9<br>C130E215L18 | 9<br>18 | C130E215L9<br>C130E215L18 | 9<br>18 | | C130E215L9<br>C130E215L18 |
| | 9 | C80E280L9 | 9 | C130E280L9 | 9 | C130E280L9 | 20 | U200E280L9 | |
| | lg | C80 | lg | C130 | lg | U130 | lg | U200 | |
| | 9 | C80E260L9 | 9 | C130E260L9 | 9 | C130E260L9 | 18 | U200E260L18 | |
| | lg | C80 | lg | C130 | lg | U130 | lg | U200 | |
| | 9 | C80E215L9 | 9 | C130E215L9 | 9 | C130E215L9 | 9 | U200C130U<br>U200C130P | C130E215L9 |
| | 9 | C80E280L9 | 9 | C130E280L9 | 9 | C130E280L9 | 20 | U200E280L20 | |

# / LV-MV UNINSULATED NETWORKS (ALU OR COPPER)



| | | MP36, BLP36 | | MP55, BLP55, BPE55 | | MP80, BLP80, BP80 | |
|---|---|---|---|---|---|---|---|
| **Cable Al<br>Hexagonal crimp<br>Alu. alloy conductor** | **Sections (mm²)** | **lg** | **D36** | **lg** | **D55** | **lg** | **C80** |
| **JL, CN2A, QN2A, ABT, CD, CB, CBO, AT, RDB** | 22 | | | 9 | D55E54/100L9/9 | 9 | C80E100L9 |
| | 34,4 | 5 | D36E120L5 | 9 | D55E72/120L9/9 | 9 | C80E120L9 |
| | 43,1 | 9 | D36E140L9 | 9 | D55E140/173L9/9 | 9 | C80E140L9 |
| | 54,6 | | | | | | |
| | 75,5 | 9 | D36E173L9 | 9 | D55E140/173L9/9 | 9 | C80E173L9 |
| | 93,3 | | | | | | |
| | 117 | | | 5 | D55E210L5 | 5 | C80E210L5 |
| | 148 | | | | | 5 | C80E230L5 |
| | 181,6 | | | | | | |
| | 228 | | | | | | |
| **Cable Cu<br>Hexagonal crimp<br>Cu junctions** | **Sections (mm²)** | **lg** | **D36** | **lg** | **D55** | **lg** | **C80** |
| **JU** | 7,07 (30/10 mm) | 5 | D36E54L5 | 5 | D55E54/100L5/5 | 9 | C80E54L9 |
| | 9,6 (35/10 mm) | 5 | D36E68L5 | 9 | D55E68/140L9/9 | 9 | C80E68L9 |
| | 10,8 | | | | | | |
| | 12,56 (40/10 mm) | | | | | | |
| | 12,4 | 5 | D36E72L5 | 9 | D55E72/120L9/9 | 9 | C80E72L9 |
| | 14,1 | | | | | | |
| | 15,9 (45/10 mm) | | | | | | |
| | 19,63 (50/10 mm) | | | | | | |
| | 17,8 | 5 | D36E83L5 | 9 | D55E83/173L9/9 | 9 | C80E83L9 |
| | 22 | | | | | | |
| | 27,6 | | | | | | |
| | 28,26 (60/10 mm) | 5 | D36E100L5 | 9 | D55E54/100L9/9 | 9 | C80E100L9 |
| | 29,3 | | | | | | |
| | 38,2 | | | | | | |
| | 38,46 (70/10 mm) | | | | | | |
| | 48,3 | 5 | D36E120L5 | 9 | D55E72/120L9/9 | 9 | C80E120L9 |
| | 59,7 | 9 | D36E173L9 | 9 | D55E83/173L9/9 | 9 | C80E173L9 |
| | 74,9 | | | | | | |
| | 93,3 | | | | | | |
| | 116 | 9 | D36E215L9 | 9 | D55E215L9 | 9 | C80E215L9 |
| | 146 | | | | | | |
| | 182 | | | | | 5 | C80E230L5 |

| MP130, XP130, BP130 | | MPU130, XPU130, BPU130 | | | XPRU200 | |
|---|---|---|---|---|---|---|
|  | |  | | |  | |
| lg | C130  | lg | U130  | | lg | U200  |
| 18 | C130E100L18 | 18 |  U130C130 | C130E100L18 | 18 |  U200C130U U200C130P C130E100L18 |
| 18 | C130E120L18 | 18 | | C130E120L18 | 18 | C130E120L18 |
| 14 | C130E140L14 | 14 | | C130E140L14 | 14 | C130E140L14 |
| 14 | C130E173L14 | 14 | | C130E173L14 | 14 | C130E173L14 |
| 10 | C130E210L10 | 10 | | C130E210L10 | 10 | C130E210L10 |
| 10 | C130E230L10 | 10 | | C130E230L10 | 10 | C130E230L10 |
| 9 | C130E250L9 | 9 | | C130E250L9 | 20 | U200E250L20 |
| 5 | C130E280L5 | 5 | | C130E280L5 | 20 | U200E280L20 |
| lg | C130  | lg | U130  | | lg | C130  |
| 18 | C130E54L18 | 18 |  U130C130 | C130E54L18 | 18 |  U200C130U U200C130P C130E54L18 |
| 18 | C130E68L18 | 18 | | C130E68L18 | 18 | C130E68L18 |
| 18 | C130E72L18 | 18 | | C130E72L18 | 18 | C130E72L18 |
| 18 | C130E83L18 | 18 | | C130E83L18 | 18 | C130E83L18 |
| 18 | C130E100L18 | 18 | | C130E100L18 | 18 | C130E100L18 |
| 18 | C130E120L18 | 18 | | C130E120L18 | 18 | C130E120L18 |
| 14 | C130E173L14 | 14 | | C130E173L14 | 14 | C130E173L14 |
| 18 | C130E215L18 | 18 | | C130E215L18 | 18 | C130E215L18 |
| 10 | C130E230L10 | 10 | | C130E230L10 | 10 | C130E230L10 |

# / LV-MV UNINSULATED NETWORKS (ALU-STEEL)



| | | MP55, BLP55, BPE55 | | MP80, BLP80, BP80 | |
|---|---|---|---|---|---|
| **Cable Al Hexagonal crimp ACSR conductor** | **Sections (mm²)** | **lg** | **D55** | **lg** | **C80** |
| **JAR, JALR, JLR, ABAR, ABLR** | **Crimping on steel** | | | | |
| | 17,8 | 5 | D55E54/100L5/5 | 5 | C80E54L5 |
| | 22 | | | | |
| | 27,8 | | | | |
| | 34,4 | | | | |
| | 43,1 | | | | |
| | 37,7 | 5 | D55E72/120L5/5 | 5 | C80E72L5 |
| | 54,6 | | | | |
| | 58,9 | 5 | D55E54/100L5/5 | 5 | C80E100L5 |
| | 80 | | | | |
| | 69,3 | 5 | D55E72/120L5/5 | 5 | C80E72L5 |
| | 88 | | | | |
| | 59,7 | 5 | D55E72/120L5/5 | 5 | C80E120L5 |
| | 116,2 | | | | |
| | 75,5 | | | | |
| | 147,1 | | | | |
| | 181,6 | | | | |
| | 228 | | | | |
| | **Crimping on aluminium** | | | | |
| | 17,8 | 5 | D55E72/120L5/5 | 5 | C80E120L9 |
| | 22 | | | | |
| | 27,8 | | | | |
| | 34,4 | | | | |
| | 43,1 | 9 | D55E140/173L9/9 | 9 | C80E140L9 |
| | 37,7 | | | | |
| | 54,6 | | | | |
| | 58,9 | 9 | D55E140/173L9/9 | 9 | C80E173L9 |
| | 80 | | | | |
| | 69,3 | | | | |
| | 88 | | | | |
| | 59,7 | 5 | D55E210L5 | 5 | C80E210L5 |
| | 116,2 | | | | |
| | 75,5 | | | 5 | C80E230L5 |
| | 147,1 | | | | |
| | 181,6 | | | | |
| | 228 | | | | |

| | MP130, XP130, BP130 | | MPU130, XPU130, BPU130 | | | XPRU200 | | |
|---|---|---|---|---|---|---|---|---|
| |  | |  | | |  | | |
| | lg | C130  | lg | U130  | | lg | U200  | |
| | 10 | C130E54L10 | 10 |  U130C130 | C130E54L10 | 10 |  U200C130U U200C130P | C130E54L10 |
| | 10 | C130E72L10 | 10 | | C130E72L10 | 10 | | C130E72L10 |
| | 10 | C130E100L10 | 10 | | C130E100L10 | 10 | | C130E100L10 |
| | 10 | C130E72L10 | 10 | | C130E72L10 | 10 | | C130E72L10 |
| | 9 | C130E120L9 | 9 | | C130E120L9 | 9 | | C130E120L9 |
| | 5 | C130E135L5 | 5 | | C130E135L5 | 10 | U200E135L10 | |
| | | | | | | 10 | U200E160L10 | |
| | 9<br>18 | C130E120L9<br>C130E120L18 | 9<br>18 |  U130C130 | C130E120L9<br>C130E120L18 | 9<br>18 |  U200C130U U200C130P | C130E120L9<br>C130E120L18 |
| | 14 | C130E140L14 | 14 | | C130E140L14 | 14 | | C130E140L14 |
| | 14 | C130E173L14 | 14 | | C130E173L14 | 14 | | C130E173L14 |
| | 10 | C130E210L10 | 10 | | C130E210L10 | 10 | | C130E210L10 |
| | 10 | C130E230L10 | 10 | | C130E230L10 | 10 | | C130E230L10 |
| | 5 | C130E250L5 | 5 | | C130E250L5 | 18 | U200E260L18 | |
| | | | | | | 18 | U200E285L18 | |

# / UNDERGROUND NETWORK APPLICATIONS (LV OR MV), ALUMINIUM OR COPPER

## PRE-ROUNDING

| | | MP36, BLP36 | | MP55, BLP55, BPE55 | | MP62, BLP62, BPE62 | |
|---|---|---|---|---|---|---|---|
| | |  | |  | |  | |
| **Cable Al & Cu** | **Sections (mm²)** | **lg** | D36  | **lg** | D55  | **lg** | C60  |
| Pre-rounding | 6 | | | 12 | D55MR6L12 | | |
| | 10 | 9 | D36MR10L9 | 12 | D55MR10L12 | | |
| | 16 | 9 | D36MR16L9 | 12 | D55MR16L12 | | |
| | 25 | 9 | D36MR25L9 | 12 | D55MR25L12 | 35 | C80MR25L35 |
| | 35 | 9 | D36MR35L9 | 12 | D55MR35L12 | 35 | C80MR35L35 |
|  | 50 | 9 | D36MR50L9 | 12 | D55MR50L12 | 35 | C80MR50L35 |
| | 70 | 9 | D36MR70L9 | 12 | D55MR70L12 | 35 | C80MR70L35 |
| | 95 | 9 | D36MR95L9 | 12 | D55MR95L12 | 35 | C80MR95L35 |
|  | 120 | 9 | D36MR120L9 | 12 | D55MR120L12 | 35 | C80MR120L35 |
| | 150 | | | 12 | D55MR150L12 | 35 | C80MR150L35 |
| | 185 | | | 12 | D55MR185L12 | 35 | C80MR185L35 |
| | 240 | | | 12 | D55MR240L12 | 35 | C80MR240L35 |
| | 300 | | | | | | |

| | MP80, BLP80, BP80 | | MP130, XP130, BP130 | | MPU130, XPU130, BPU130 | | | XPRU200 | |
|---|---|---|---|---|---|---|---|---|---|
| |  | |  | |  | | |  | |
| | lg | C80  | lg | C130  | lg | U130  | | lg | U200  |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | 35 | C80MR25L35 | 35 | C80MR25L35 | 35 | | C80MR25L35 | 35 | C80MR25L35 |
| | 35 | C80MR35L35 | 35 | C80MR35L35 | 35 | | C80MR35L35 | 35 | C80MR35L35 |
| | 35 | C80MR50L35 | 60<br>35 | C130MR50L60<br>C80MR50L35 | 60<br>35 | | C130MR50L60<br>C80MR50L35 | 60<br>35 | C130MR50L60<br>C80MR50L35 |
| | 35 | C80MR70L35 | 60<br>35 | C130MR70L60<br>C80MR70L35 | 60<br>35 | | C130MR70L60<br>C80MR70L35 | 60<br>35 | C130MR70L60<br>C80MR70L35 |
| | 35 | C80MR95L35 | 60<br>35 | C130MR95L60<br>C80MR95L35 | 60<br>35 | | C130MR95L60<br>C80MR95L35 | 60<br>35 | C130MR95L60<br>C80MR95L35 |
| | 35 | C80MR120L35 | 70<br>35 | C130MR120L70<br>C80MR120L35 | 70<br>35 |  U130C130 | C130MR120L70<br>C80MR120L35 | 70<br>35 | C130MR120L70<br>C80MR120L35 |
| | 35 | C80MR150L35 | 70<br>35 | C130MR150L70<br>C80MR150L35 | 70<br>35 | | C130MR150L70<br>C80MR150L35 | 70<br>35 | C130MR150L70<br>C80MR150L35 |
| | 35 | C80MR185L35 | 75<br>35 | C130MR185L75<br>C80MR185L35 | 75<br>35 | | C130MR185L75<br>C80MR185L35 | 75<br>35 | C130MR185L75<br>C80MR185L35 |
| | 35 | C80MR240L35 | 75<br>35 | C130MR240L75<br>C80MR240L35 | 75<br>35 | | C130MR240L75<br>C80MR240L35 | 75<br>35 | C130MR240L75<br>C80MR240L35 |
| | | | 60 | C130MR300L60 | 60 | | C130MR300L60 | 60 | C130MR300L60 |

# / LV-MV UNDERGROUND NETWORKS ALU-COPPER



MPU130, XPU130, BPU130



| Cable Al (Cu) Deep indent crmip (hexagon on Cu) Lungs and junctions | Sec-tions (mm²) | Indents | | Lugs dies | Junctions dies | lg | Cu hexagonal crimp | |
|---|---|---|---|---|---|---|---|---|
| NF C33-090 : C.A, Q.A, C.AU, Q.AU, RJ.A, CXA., CXU., RJ.AU, E.AU, XCX, XDX, XEX, XLX, XGX, XG8, XN8, XD8 | 16 | C130PP | P0E | U130MC0E | U130MJ0E | 9 | U130C130 | C130E140L9 |
| | 25 | | | | | | | |
| | 35 | | | | | | | |
| | 50 | | P1E | U130MC1E | U130MJ1E | 9 | | C130E173L9 |
| | 70 | | | | | | | |
| | 95 | | | | | | | |
| | 120 | | P2E | U130MC2E | U130MJ2E | 9 | | C130E215L9 |
| | 150 | | | | | | | |
| | 185 | | P4E | U130MC4E | U130MJ4E | | | |
| | 240 | | | | | | | |
| | 300 | | | | | | | |
| | 400 | | | | | | | |
| | 500 | | | | | | | |
| | 630 | | | | | | | |
| | 800 | | | | | | | |
| | 1000 | | | | | | | |
| | 1200 | | | | | | | |
| | 1600 | | | | | | | |

| | XPRU200 | | | | | | | XPRH450 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| |  | | | | | | | | | | | | | |
| | Indents | Lugs dies | | Junctions dies | | Cu hexagonal crimp | | Indents | Lugs dies | | Junctions dies | | Cu hexagonal crimp | |
| | | | | | | lg | | | | | | | lg | |
| | P0E | U200U130 | U130MC0E | U200U130 | U130M-J0E | 9 | C130E140L9 | | | | | | | |
| | P1E | | U130MC1E | | U130M-J1E | 9 | C130E173L9 | | | | | | | |
| | P2E | | U130MC2E | | U130M-J2E | 9 | C130E215L9 | | | | | | | |
| | P4E | | U130MC4E | | U130M-J4E | 5 x2 | U200E280L5X2 | | | | | | | |
| | PM5E | RU200MC5E | | RU200MJ5E | | 10 | U200E330L10 | PM5E | RH450U200 | RU200MC5E | RU200MJ5E | | 25 | RH450E330L25 |
| | PM6E | RU200MC6E | | RU200MJ6E | | | | PM6E | | RU200MC6E | RU200MJ6E | | 20 | RH450E400L20 |
| | | | | | | | | PM7E | RH450MC7E | | RH450MJ7E | | 10 | RH450E440L10 |
| | | | | | | | | PM8E | RH450MC8E | | RH450MJ8E | | 15 | RH450E530L15 |
| | | | | | | | | PM9E | RH450M9 | RH450M-C9E | | | 10 | RH450E600L10 |

# / EARTHING LINES



| | | Hexagonal crimoing and C-connectors | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MP36, BLP36 | | PBGD3 | | P128 | | MP55, BLP55, BPE55 | |
| | |  | |  | |  | |  | |
| **C-connectors C crimping** | **Sections** | **lg** | D36  | **lg** | W50  | **lg** | D50  | **lg** | D55  |
| **CC, RCC** | C6 | 9 | D36HFCU10L9 | | | 9 | D50HFCU10/50L9/5 | 9 | D55HFCU10/50L9/5 |
| | C10 | 9 | D36HFCU25L9 | | | 9 | D50HFCU25/95L9/5 | 9 | D55HFCU25/95L9/5 |
| | C16 | 5 | D36HFCU70L5 | 5 | BG | 5 | D50HFCU16/70L9/5 | 5x2 | D55CC16L5x2 |
| | C25-10 | | | | | 5 | D50HFCU25/95L9/5 | 5 | D55HFCU25/95L9/5 |
| | C25PM | | | | | | | | |
| | C25 | | | 5 | W50ET173L5 | 5 | D50ET173L5 | 5 | D55CC35L5 |
| | C25EGM | | | | | | | | |
| | C35 | | | | | | | | |
| | C50 | | | | | | | | |
| | C70-35 | | | | | | | | |
|  | C70 | | | | | | | | |
| | C75 | | | | | | | | |
| | C95-35 | | | | | | | | |
| | C95 | | | | | | | | |
|  | C120 | | | | | | | | |
| | C150 | | | | | | | | |
| | C185-95 | | | | | | | | |
| | C185 | | | | | | | | |
| | C240 | | | | | | | | |
| **Cable Cu Hexagonal crimp Earth lugs** | **Sections (mm²)** | | | | | | | | |
| **CDCT** | 75 | | | | | | | | |
|  | 95 | | | | | | | | |
| | 116 | | | | | | | | |
| | 147 | | | | | | | | |
| | 181 | | | | | | | | |
| | 240 | | | | | | | | |
| **Cable Cu Hexagonal crimp Earth lugs** | **Sections (mm²)** | **lg** | D36  | | | **lg** | D50  | **lg** | D55  |
| **DPD7 29/25**  | 25/29 | 5 | D36HFCU50L5 | | | 5 | D50HFCU10/50L9/5 | 5 | D55E54/100L5/5 |

| | MP62, BLP62, BPE62 | | MP80, BLP80, BP80 | | MP130, XP130, BP130 | | MPU130, XPU130, BPU130 | | XPRU200 | |
|---|---|---|---|---|---|---|---|---|---|---|
| |  | |  | |  | |  | |  | |
| | lg | C60  | lg | C80  | lg | C130  | lg | U130  | lg | U200  |
| | 9 | C60HFCU10L9 | 9 | C60HFCU10L9 | 9 | C130HFCU10L9 | 9 | C130HFCU10L9 | 9 | C130HFCU10L9 |
| | 9 | C60HFCU25L9 | 9 | C60HFCU25L9 | 9 | C130HFCU25L9 | 9 | C130HFCU25L9 | 9 | C130HFCU25L9 |
| | 5x2 | C60CC16L5x2 | 5x2 | C60CC16L5x2 | 12 | C130HFCU70L12 | 12 | C130HFCU70L12 | 12 | C130HFCU70L12 |
| | 5 | C60HFCU95L5 | 5 | C60HFCU95L5 | 12 | C130HFCU95L12 | 12 | C130HFCU95L12 | 12 | C130HFCU95L12 |
| | 5x2 | C60CC50L5x2 | 5x2 | C60CC50L5x2 | 12 | C130HFCU150L12 | 12 | C130HFCU150L12 | 12 | C130HFCU150L12 |
| | | | | | 18 | C130CC70L18 | 18 | C130CC70L18 | 18 | C130CC70L18 |
| | | | | | 9 | C130CC95L9 | 9 | C130CC95L9 | 4x2 | U200CC95L4X2 |
| | | | | | 5 | C130CC150L5 | 5 | C130CC150L5 | 4x2 | U200CC150L4X2 |
| | | | | | | | | | 4 | U200CC185L4 |

| | C130  | | U130  | | U200  |
|---|---|---|---|---|---|
| lg | | lg | | lg | |
| 14 | C130HCT75L14 | 14 | C130HCT75L14 | 15 | U200HCT75L15 |
| 14 | C130HCT95L14 | 14 | C130HCT95L14 | 15 | U200HCT95L15 |
| 14 | C130HCT116L14 | 14 | C130HCT116L14 | 15 | U200HCT116L15 |
| 12 | C130HCT147L12 | 12 | C130HCT147L12 | 11 | U200HCT147L11 |
| 12 | C130HCT181L12 | 12 | C130HCT181L12 | 17 | U200HCT181L17 |
| 12 | C130HCT240L12 | 12 | C130HCT240L12 | | |

| | C60  | | C80  | | C130  | | U130  | | U200  |
|---|---|---|---|---|---|---|---|---|---|
| lg | | lg | | lg | | lg | | lg | |
| 5 | C80E100L5 | 5 | C80E100L5 | 18 | C130E100L18 | 18 | C130E100L18 | 18 | C130E100L18 |

ESSENTIAL

# PH700 OUR SELECTION

700 BAR HYDRAULIC
FOOT PUMP




- Compact foot pump for better ergonomics.
- Robust design.
  - 2 speed tool: fast forward / work forward.
  - 1000 bar graduated pressure gauge

## / USE

Hydraulic foot pump with two speeds, developing a maximum pressure of 700 bar. Connection of all types of hydraulic heads 700 bar.

## / TECHNICAL SPECIFICATIONS

- Automatic release at 700 bar.
- Discharge lever for return to the tank. Hook to hold the pedal in the off position.
- Metal base for better stability.
- Supplied with a hydraulic quick coupling.
- Pressure : 700 bar

| Accessories | Description |
|---|---|
| EASYCASE-NUE | Black pastic case for PH700 |

| Ref. | Dimensions | Weight | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|---|
| PH700 | 730 x 200 x 180 mm | 8 kg | PH700-5 | PH700-7 | PH700-E |

ESSENTIAL

# BH702N OUR SELECTION

HYDRAULIC PUMP 700 BAR
WITH BATTERY






- On-board control system : cutting or crimping selector and steering.
- Excellent weight/power and weight/autonomy ratios < 6 kg.
- 2-button wired remote control (3m): advance, hold, retract.

## / USE

18V Li-Ion 5A battery hydraulic unit with a pressure of 700 bar.
Can be connected to the hydraulic heads available in the catalogue.
Designed for intermittent operation.

## / TECHNICAL SPECIFICATIONS

- ON/OFF button for power on. LED indicator: battery charge level, cycle indication, maintenance.
- 400W motor controlled with automatic stop at 700 bars.
- Auto OFF after 10 minutes of inactivity.
- Electronic and mechanical protection in case of overpressure or overheating.
- Robust plastic shell with protection level: IP 42 according to NF EN 60529. Manual emergency pressure relief.
- Pump delivered in plastic case with: 2 batteries 18V Li-Ion 5Ah, 1 charger 220V, 1 wired remote control 3m and 0,5L of oil XV32. This pump is supplied with a hydraulic quick coupling.

| Accessories | Description |
|---|---|
| AB18LI500 | 18V Li-Ion battery 5Ah with power load indicator |
| AC18220 | Charger 220V AC European plug |
| 82801 | 2 function remote control |
| 82809 | Insulating hydraulic oil XV32 0,5L |
| 82814 | Foot control pedal |
| CP-BH702 | Black plastic case 768 x 490 x 476 mm for BH702 |

| Ref. | Dimensions | Weight | Ref. series 115 | Ref. series 117 |
|---|---|---|---|---|
| BH702N | 330 x 160 x 250 mm | 5,7 kg | BH702N-5 | BH702N-7 |



- Industrial engine for heavy duty use
- Large oil volume to contain oil heating.
- Drain plug or oil filling and level control.
- 2-button wired remote control (3m): advance, hold, retract.

# EH706

## 220V ELECTRICAL HYDRAULIC PUMP 700 BARS

### / USE

Electric hydraulic unit 220 V with a pressure of 700 bar. Connection with hydraulic heads available in the catalogue.

| Accessories | Description |
|---|---|
| 82801 | 2 function remote control |
| 82809 | Insulating hydraulic oil XV32 0,5L |
| 82814 | Foot control pedal |
| CP-BH702 | Black plastic case 768 x 490 x 476 mm for BH702 |

### / TECHNICAL SPECIFICATIONS

- Designed for intensive use: S3/S6 service of 40%. 550 W single-phase 220 V 50 Hz motor with starting capacitor.
- Automatic motor stop at 700 bar.
- Thermal circuit breaker for protection against overload of the electric motor. Robust one-piece plastic housing: IP 55 according to NF EN 60529.
- Manual emergency decompression and manual return of the piston.
- Pump delivered with 1 wired remote control 3m, 0,5L of XV32 oil and 2 fuses.
- Supplied with a hydraulic quick coupling.

| Ref. | Power supply | Dimensions | Weight | Ref. series 115 | Ref. series 117 |
|---|---|---|---|---|---|
| EH706 | 220 V | 380 x 200 x 420 mm | 17 kg | EH706-5 | EH706-7 |



- Flexible hose mechanically reinforced with coil spring and anti-pinch sleeves.

# FHM

## 700 BAR HIGH PRESSURE HOSE

### / USE

For use with all pumps and hydraulic heads in this catalogue.

### / TECHNICAL SPECIFICATIONS

Supplied with nipples and couplings.

| Ref. | Length | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|
| FHM030 | 3 m | FHM030-5 | FHM030-7 | FHM030-E |
| FHM050 | 5 m | FHM050-5 | FHM050-7 | FHM050-E |
| FHM100 | 10 m | FHM100-5 | FHM100-7 | FHM100-E |

For other lengths, please contact us.

- Kevlar reinforced flexible hose with anti-pinch cuffs.
- Quick-connect coupling with captive dust caps.
- 60 kV insulation



# FHI

## INSULATING 700 BAR HIGH PRESSURE HOSE

### / USE

For use with all pumps and hydraulic heads in this catalogue. FHI100-5 is a 10 meter flexible hose certified by DGUV:
It can be used with cable cutting tools according to DIN EN 50340 and GS-ET-23 on cables with nominal voltages up to 60 kV at 60 Hz.

### / TECHNICAL SPECIFICATIONS

Supplied with nipples and couplings.



Series 115



Series 117



Series EDF

| Ref. | Hose length | Ref. series 115 | Ref. series 117 | Ref. series EDF |
|---|---|---|---|---|
| FHI030-.. | 3 m | FHI020-5 | FHI020-7 | FHI020-E |
| FHI050-.. | 5 m | FHI040-5 | FHI040-7 | FHI040-E |
| FHI100-.. | 10 m | FHI076-5 | FHI076-7 | FHI076-E |

| Ref. | Hydraulic couplings |
|---|---|
| FHI...-5 | Hydraulic hose with 115 series couplings |
| FHI...-7 | Hydraulic hose with 117 series couplings |
| FHI...-E | Hydraulic hose with EDF series couplings |

For other lengths, please contact us.



- Excellent battery life and no memory effect.
- LED charge indicator on the battery.
- Very good weight to energy ratio.

# AB18LI

## 18V RECHARGEABLE BATTERY

### / USE

These batteries are suitable for all electro-hydraulic tools such as cable cutters, crimping tools and 700 bar pumps in the catalogue.

### / TECHNICAL SPECIFICATIONS

Increased autonomy for maximum productivity.

| Ref. | Voltage | Capacity | Dimensions | Weight |
|---|---|---|---|---|
| AB18LI200 | 18 V | 2 Ah | 115 x 75 x 45 mm | 0,36 kg |
| AB18LI500 | | 5 Ah | 115 x 75 x 65 mm | 0,62 |



- 2-stage charging to provide performance and durability to the battery.
- Battery state of charge diagnostic system with LED indicator.

# AC18220

## BATTERY CHARGER 18 V

### / USE

Recharges 10.8 V - 14.4 V and 18 V Li-Ion batteries.

### / TECHNICAL SPECIFICATIONS

- Variable and self-adjusting charging power depending on the battery.
- Diagnostic system: battery charged, battery charging, voltage drops and problems with battery too cold or too hot.
- Reduced charging time:
  - 40 min for full charge: 2.0 Ah battery
  - 90 min for full charge: 5.0 Ah battery

| Ref. | Voltage | Dimensions | Weight |
|---|---|---|---|
| AC18220 | 220 V AC European plug | 200 x 140 x 75 mm | 0,54 kg |
| AC18012 | 12 V car charger | 180 x 120 x 80 mm | 0,66 kg |




# EASYLOC

## UTILITY LINE LOCATION SYSTEM

### / USE

Utility location system to detect and trace cable runs and pipe networks.

### / TECHNICAL SPECIFICATIONS

Contents : receiver, transmitter, earthing kit, earthing spike, carrying bag, operating instructions

| Receiver | | | |
|---|---|---|---|
| **Location depth** | **Power supply** | **Dimensions** | **Weight** |
| 0,3 to 7 m | 10 x IEC R6 1.5 V | 100 x 670 x 260 mm | 2,5 kg |
| **Transmitter** | | | |
| **Transmitted power** | **Power supply** | **Dimensions** | **Weight** |
| 0,1 W / 0,5 W (switchable) | 6 x IEC R20 1.5 V | 140 x 260 x 255 mm | 2,6 kg |



- Lightweight and easy to use.
- Requires only one operator, with no special skills.
- Saves time

# SUP600 SUP600E

## OVERHEAD CABLE HEIGHT AND CLEARANCE METER / ULTRASONIC RANGE FINDER

### / TECHNICAL SPECIFICATIONS

- Very accurate : 99%.
- Measures heights up to 23 m.
- Measures the distances between up to 6 cables.
- Min. clearance 150 mm.
- Measures distances from other objects (e.g.: posts,walls... up to 23 m).
- Operating temperature : -10 °C to +40 °C.
- Automatic temperature compensation between-10°C and +40°C.

| Ref. | Height measurement | Dimensions | Weight |
|---|---|---|---|
| SUP600 | Up to 15 m | 205 x 100 x 70 mm | 0,5 kg |
| SUP600E | Up to 25 m | | |




# PMT63

## MEASURING STICK

### / USE

The PMT63 telescopic insulating stick is designed to carry out measurement operations on overhead networks:
- The height by means of a hook (PMT634: optional accessory),
- The diameter of conductors from 3 to 13 mm by means of a gauge (PMT632 : optional accessory)

| Ref. | Description |
|---|---|
| SBH1001 | Pouch |
| PMT632 | Gauge for use with M8 adaptor |
| PMT631 | 1m epoxy resin insulating end rod with M8 male/female end fittings |
| PMT634 | Hook |

PENTA
ELECTRICAL SAFETY PRODUCTS

TOGETHER

# #WEARE PENTASTIC



## FOLLOW US !

@PENTAESP



## ADA-TETRA

MALE PLUG ADAPTER

**/ USE**

For semi-permanent and permanent tests and measurements on three-phase industrial power outlets.

**/ TECHNICAL SPECIFICATIONS**

CEE 3P+N+E 6h 415 volts: monitor network voltages with a network analyser, measure insulation resistances, measure loop impedances, measure earthing resistances, etc.

| Reference | Safety sockets | Weight |
|---|---|---|
| ADAFM-TETRA16 | 16A-4mm | 0.35 kg |
| ADAFM-TETRA32 | 32A-4mm | 0.45 kg |
| ADAFM-TETRA6 | Pilot 63A-4 | 0.70 kg |



## 380-IEC

4 MM IP2X TEST PROBE

**/ USE**

For temporary measurements up to 1000 V CAT III / 600 V CAT IV while benefiting from IP2X safety.

**/ TECHNICAL SPECIFICATIONS**

4 mm safety connector
Lockable/retractable sheath



## 2352-IEC

IP2X 4 MM SAFETY LEAD WITH RIGHT-ANGLED PLUG

**/ TECHNICAL SPECIFICATIONS**

- Ø 4 mm safety lead fitted with a straight plug and a 90°angled plug
- Extra flexible double-insulated PVC cable, section 1 mm².
- Dedicated Intensity : Max. 19 A
- Dedicated voltage: 1000V CAT III - 600V CAT IV
- Length: 1.50mh



## 606MG6.6-IEC3IV

6.6MM ANGLED MAGNETIC ADAPTER

**/ USE**

For semi-permanent tests and measurements on circuit breakers, RCDs, etc. without having to loosen their screws: measuring voltages, measuring insulation resistances, checking the operation of RCDs, etc. 1500V CAT III electrical safety protection



## 217/600V

4 MM LEAD WITH RETRACTABLE SLEEVE

**/ USE**

Lead particularly recommended for use with safety fuse holders ref TP83 for all appliances with 4 mm Ø sockets and clamp ref TP51.

**/ TECHNICAL SPECIFICATIONS**

- Stackable lead fitted at each end with a 4 mm plug with retractable sleeve, compatible with 4 mm safety and non safety sockets.
- Extra flexible double-insulated PVC cable, section 2.5 mm².
- Dedicated Intensity : Max. 32 A.
- Limit stipulated by IEC 61010-031 . 600V CAT II



## 2CEE7/7/ 2310B150

MALE PLUG CABLE 2P+E SCHUKO TYPE

**/ USE**

- Used for semi-permanent and permanent testing and measurement on French (CEE7/5) and German Schuko (CEE7/3) sockets.
- Enables monitoring of voltages with a network analyzer, insulation resistance measurement, loop impedance measurement, and earth resistance testing



## 402-IEC-CATIV

TEST PROBE FOR TEMPORARY MEASUREMENTS UP TO 1000 V CAT IV

**/ USE**

Designed for contacts that are hard to reach, small, remote, or covered with oxidation, paint, dirt, or varnish.



## 2617-IEC

IP2X 4 MM STACKABLE SAFETY LEAD

**/ USE**

Recommended for use with safety fuse holders ref. TP 83, all appliances with Ø 4 mm socket and clamp ref. TP51.

**/ TECHNICAL SPECIFICATIONS**

- Safety lead fitted at each end with a 4 mm safety plug (with rigid sleeve)
- Extra-flexible double-insulated PVC cable, section 2.5 mm².
- Dedicated Intensity : Max. 32 A.
- Dedicated voltage: 600V CAT III - 1000V CAT II



## 2312/PV4MAUNI

1500V DC CAT III PV TEST LEADS

**/ USE**

For semi-permanent and permanent testing and measurement on photovoltaic panels with MC4 connectors, such as voltage and power measurement.

**/ TECHNICAL SPECIFICATIONS**

- Connector type: MC4, 4 mm
- Length: 100 cm



## 5066-IEC

ALLIGATOR CLIP WITH 4 MM FEMALE BANANA SOCKET

**/ USE**

Safety crocodile clip with wide jaw opening, equipped with a 4 mm rear banana socket for secure connection to safety leads.

**/ TECHNICAL SPECIFICATIONS**

- Length : 92 mm.
- Jaw opening : up to 41 mm on end and on round, Ø 25 mm max
- Current : 36 A maxi.
- Voltage : 1000V CAT III / 600V CAT IV.



## 5004/LM-IEC

ALLIGATOR CLIP

**/ USE**

Designed for semi-permanent testing and measurement applications up to 1000 V CAT III / 600 V CAT IV.

**/ TECHNICAL SPECIFICATIONS**

- Connection: 4 mm safety socket
- Rated voltage: 1000 V CAT III / 600 V CAT IV
- Category: safety test accessory
- Compact and robust for versatile use



## 1067

ALLIGATOR CLIP

**/ USE**

Designed for quick field repair of 4 mm male banana connectors without the need for soldering.

**/ TECHNICAL SPECIFICATIONS**

- Connector type: 4 mm banana plug
- Orientation: angled
- Fixation: screw connection
- Robust and reusable construction



## 1087

TOOL TO REPAIR 4 MM MALE BANANA CONNECTORS

**/ USE**

Designed for field repair of 4 mm male banana connectors without the need for soldering.

**/ TECHNICAL SPECIFICATIONS**

- Connector type: 4 mm male banana plug
- Connection: quick-connect with rear entry
- Robust, reusable construction
- Compact dimensions for easy integration



## 6005-IEC

4 MM CLAMP-TYPE SAFETY WIRE GRIP

**/ USE**

Self-locking wire grips designed for secure test connections during semi-permanent and temporary measurements. Compatible with 4mm safety test leads.

**/ TECHNICAL SPECIFICATIONS**

- Rated current: 6 A
- Length: 159 mm
- Protection rating: 1000 V CAT II
- Equipped with 4 mm safety socket for test leads
- Flexible sheath guiding the clamps



## 6009-IEC

4 MM SAFETY WIRE-GRIP WITH INSULATED CROC CLIPS TO IP2X

**/ USE**

Safety wire grip with insulated crocodile clips for secure semi-permanent or temporary test connections. Compatible with 4 mm safety leads.

**/ TECHNICAL SPECIFICATIONS**

- Length: 155 mm
- Clamp opening: up to 20 mm
- Rated current: 20 A max
- Rated voltage: 1000 V CAT III
- Equipped with 4 mm safety socket
- IP2X insulated design



## 6007-IEC

FLEXIBLE TEST GRIP, IP2X

**/ USE**

Flexible IP2X test grip designed for temporary or semi-permanent measurements up to 1000 V CAT III. Connects directly to 4 mm safety leads.

**/ TECHNICAL SPECIFICATIONS**

- Rated current: 6 A
- Rated voltage: 1000 V CAT III
- Compatible with Ø 4 mm safety leads (IEC)
- IP2X protection for safe contact



## TP51

TESTER CLAMP FOR FLAT CONTACTS

**/ USE**

The TP51 clamp is designed for safe and fast connections on flat contacts such as busbars in LV installations.

**/ TECHNICAL SPECIFICATIONS**

- Fully insulated tester clamp
- 4 mm output for safety leads
- Rated voltage: 600 V CAT III
- Max current (TP51N1): 32 A
- Max current (TP51N2 with fuse): 20 A
- Jaw opening: 0—10 mm (TP51N1), 4—12 mm



## 6001-IECIV

TEST GRIP

**/ USE**

The 6001-IECIV is a rigid test grip designed for semi-permanent testing and measurement up to 1000 V CAT IV. It firmly holds rod-shaped contacts, bare wires, pins, and similar conductors to ensure safe and stable measurements.

**/ TECHNICAL SPECIFICATIONS**

- Rated voltage: 1000 V CAT IV
- Rigid insulated hook design
- 4 mm safety connection socket
- Available in red or black

PREMIUM

## ADABV140

NEW

TEST TIP



### / USE

For testing and measuring on screw terminals. The stripped side passes as a cable and connects to a screw terminal block, ultimately converting it to a standard 4mm female banana fitting.

### / TECHNICAL SPECIFICATIONS

- 1.8mm flexible rod,
- 4 mm female coupling.

VALUE

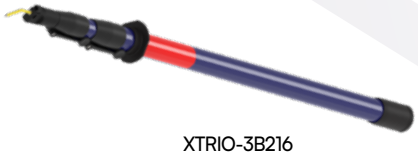
## / XTRIO-2B085 • XTRIO-3B216 • PERCHTELE

PREMIUM TELESCOPIC STICK AND TELESCOPIC PROBE

- Adjust very quickly the length of the probe thanks to its twist locking system.



XTRIO-2B085



XTRIO-3B216



PERCHTELE

### / XTRIO-2B085

PREMIUM 2-SECTION TELESCOPIC STICK

#### / USE

For testing continuity and measuring the resistance of protective conductors and equipotential bonding on sockets, luminaires, metal frames, etc.

#### / TECHNICAL SPECIFICATIONS

4 mm socket.
Extended length : 85 cm.

### / XTRIO-3B216

PREMIUM 3-SECTION TELESCOPIC STICK

#### / USE

For testing continuity and measuring the resistance of protective conductors and equipotential bonding on sockets, metal frames, etc.

#### / TECHNICAL SPECIFICATIONS

4 mm socket.
Extended length : 216 cm.

### / PERCHTELE

TELESCOPIC PROBE FOR CONTINUITY TEST AND NO VOLTAGE DETECTION

#### / USE

This stick allows to make a continuity test on hard-to-reach points such as ceiling lights.

#### / TECHNICAL SPECIFICATIONS

1 000V CAT III, 600V CAT IV.
4 mm female connector socket.

| Reference | Description | Folded dimensions | Extended dimensions | Weight |
|---|---|---|---|---|
| PERCHTELE | Economic Telescopic probe 85cm | 47 cm | 85 cm | 300 g |
| XTRIO-2B085 | Premium telescopic probe 85cm | 51 cm | | 350 g |
| XTRIO-3B216 | Premium telescopic probe 216cm | 85 cm | 216 cm | 750 g |



# REEL IEC3 2715 100

REEL FOR CONTINUITY TEST, 100 M

### / USE

In combination with a tellurometer as an extension reel

### / TECHNICAL SPECIFICATIONS

- 100 meters of PVC insulated cable.
- Cross-section : 1,5 mm².
- 1000V CAT III - 600V CAT IV.
- Connector socket: 4 mm.
- Plastic handle.

| Reference | Dimensions | Weight |
|---|---|---|
| REELIEC3-2715-100J | 19 x 28 x 37cm | 4,5 kg |

Keep your hands free thanks the belt !



# STB-REEL

BELT REEL FOR CONTINUITY TEST

### / USE

This reel is commonly used during electrical and inspection testing.

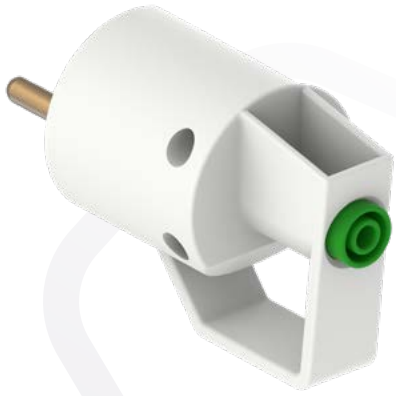
| Reference | Colour | Length |
|---|---|---|
| STB-REEL2310-30V | Green | 30 m |
| STB-REEL2310-30JV | Yellow/green | |
| STB-REEL2310-50N | Black | 50 m |

### / TECHNICAL SPECIFICATIONS

- 30m ou 50m 0.75mm² wire. 1000V CAT III.
- ABS plastics material.

# ADAFMSECT

GROUNDED WALL SOCKET ADAPTOR



- Dedicated to ease electrical continuity measuring for electrical diagnostic inhouses.

### / USE

By connecting this adapter to the Schuko socket typeof a house, the technician can use the earth pole of the socket as reference to test the other sockets with their earth tester.

### / TECHNICAL SPECIFICATIONS

- Current : 16 A.
- 150V AC CAT II

| Ref. | Dimensions |
|---|---|
| AdaFMSectDE-T-F4-JV | 80 x 36mm |

- The ULD-40 enables making remote acoustic inspections with great accuracy.
- User friendly
- Works just as well in noisy environments.



# ULD-40

ULTRASONIC CORONA/ARCING DETECTOR

### / USE

The ULD-40 accurately pinpoints and identifies corona effects and arcs that may be encountered on any type of high voltage installation simply by scanning around the suspected area. An optional external parabolic sensor, enables the user to pinpoint electrical defects from a longer distance. It easily connects on the side of the ULD and it is equipped with a laser pointing device which enables pinpointing the ultrasound emission source. The dismountable parabolic antenna and the small dimensions of the ULD facilitate its use in the field and allow access to any type of installations.

### / TECHNICAL SPECIFICATIONS

- Display : 7-segment display in relative dB-mode
- Display Range : 90 dB
- Sensor : Built-in with 5 degrees conical directivity
- Audio : Integrated Speaker & Audio output for headset or PC recording
- Centre Frequency : 40 KHz
- Bandwidth : 38 kHz-48 kHz
- Detection : Detects 0.127 mm dia. leak at 5 psi at a distance of 8m
- Battery : Rechargeable Lithium-ion battery
- Delivered with case, battery charger and product manual.

| Reference | Description |
|---|---|
| ULD401 | Parabolic sensor |
| ULD403 | Noise simulator |
| ULD404 | Audio cable for PC |
| ULD405 | Headset |

VALUE

# T2-FR100 OUR SELECTION

SOCKET TESTER FOR FAULTY WIRING, CONTROL OF THE EARTH ELECTRODE (TT) AND 30MA RCDS TEST











IMMEDIATE : No setting up, immediate display. No batteries, no risk of failure.

CORRECT: No possible mistakes thanks to the colour screen switch.

FLEXIBLE: The rotating plug allows easy readings.




Correct connection
(Earth < 100Ω)



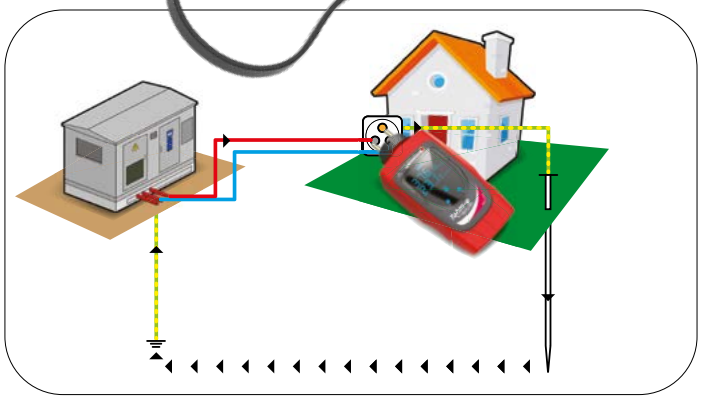

Incorrect connection
(> 100Ω)




Earth
not connected




Abnormal voltage









## / USE

LV electrical systems must comply with the installation rules of standard NFC 15-100. Compliance must be guaranteed upon initial commissioning, and also after periodic inspections.

In particular, the value of the EARTH CONNECTION must be inspected. Tohm-e can measure that value from a simple power socket.
The device can also check if the socket is wired correctly (position of phase, neutral and earth).

## / TECHNICAL SPECIFICATIONS

- Measurement using the earth loop principle
- Device designed for TT earth systems
- Earth connection measurement: 0.0 D to 2kD
- Voltage measurement: 50V to 440V (actual RMS value)
- Indication of the position of phase, neutral and earth
- Usage temperature: -20°C to +55°C
- 30mA RCDs test

| Ref. | Description | Specificity | Dimensions (mm) | Weight (kg) |
|---|---|---|---|---|
| TE-FR100 | Power socket tester, earth connection impedance meter | IP2X, CAT III, 300V | 170 x 75 x 63 mm | 250 |

# WHEEL-E

**NEW : CALIBRATION SERVICE AVAILABLE**

CONTINUITY TESTER AND REEL

STANDARDS

CEI 61010-031 / NF C15-100 ET XPC 16-600

- Worn at the belt to free the operator's hands
- Integrated reel for unhindered movement in the inspected premises
- Original display system (red or blue depending on the quality of continuity) doubled by an audio signal
- Single button for all functions
- Available in two versions:
  - 30m (domestic environments)
  - 50m (industrial environments)




## / USE

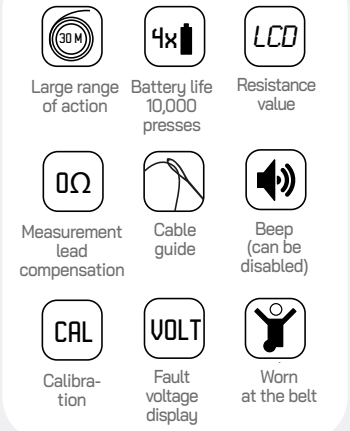
Testing and measuring the continuity of protective conductors and equipotential bonding.
In accordance with standard NF C 15-100, Wheel-e makes it possible to make sure that the resistance measured between all frames and equipotential bonding is below 2Ω.
Because it is worn at the belt, Wheel-e is particularly suited to inspecting large buildings, industrial facilities and offices.







Wheel-e by electro-PJP




## / TECHNICAL SPECIFICATIONS

**PROTECTION**
- 600V~ CAT III
- 300V~ CAT III
- Compliant with EN 61010-1
- IP2X
- Class 2
- Voltage alert
- Replaceable 0.5A fuse
- Double-sleeved 1mm² PVC cable
- Protection inspected by an accredited outside laboratory in France (LCIE)

**MEASUREMENTS**
- Automatic polarity inversion (complies with EN 61557-4)
- Measurement range 0.00Ω to 20.0Ω (resolution 0.01Ω)
- Intensity 200mA direct current (complies with EN 61557-4)
- Voltage from 4V to 6V (complies with EN 61557-4)
- Supplied with verification certificate
- Precision ±10% ±0.02 from 0.50 to 2.00.

Supplied complete with belt.
Starting up kit supplied (coiled lead, crocodile clamp, tip and adapter). Cells supplied.
Accessory not supplied : Telescopic probe such as PERCHTELE or X-TRIO lines

| Reference | Weights | Specifications |
|---|---|---|
| W2-2OH301235 | 1.8 Kg | 30m version, PVC cable 1mm² green |
| W2-2OH501235 | 2.2 Kg | 50m version, PVC cable 1mm² green |
| EtaElec-X07-011-W2OH30V | - | Calibration, adjustment, verification Wheel-e 2 Ohm 30m green |
| EtaElec-X07-011-W2OH50V | - | Calibration, adjustment, verification Wheel-e 2 Ohm 50m green |



# CPM D H M T

## FOLDING KEY CPM

### / USE

Folding key CPM are specially made to adapt to your composition. 21 different codes which can be combined by 2, 3, 4 or 5 on the same key. The disposition of elements is determined by our cares according to number and components selected. All combinations are possible such as : CPM-B-J-T-M, CPM-E-H-N-T and CPM-B-G-H-M-T.

### / TECHNICAL SPECIFICATIONS

Made in bronze.

| Elements | | Section | Description | Code | Use |
|---|---|---|---|---|---|
| FEMALE KEY |  | Square | 6 x 6 | A | For square lock 6 mm male |
| | | | 8 x 8 | B | For square lock 8 mm male |
| | | | 14 x 14 | C | Opening and closing of polyvalent cases |
| | | | 15 x 15 | D | |
| | | | 16 x 16 | E | |
| |  | Triangular | 11 | H | Access to the technical area of phone box |
| | | | 13 | J | For electrical boxes and cabinets |
| | | | 15 | L | Old openings |
| | | | 18 | P | |
| | | | 8 | K | For triangular lock 8 mm |
| | | | 5 | G | Opening padlock |
| | | | 7 | I | For fixing screw to triangular head (TTR) |
| |  | 1/2 moon | 1/2 moon Ø 5 | X | Opening padlock |
| MALE KEY |  | Square | 7 x 7 | T | Opening technical sheaths and old openings for female lock from 6 to 8 mm |
| |  | Right-angled | 4.5 x 9 Long | M | Opening door of sheaths S 300 |
| | | | 4.5 x 9 Short | N | |
| |  | Teat | Boob Ø 1.8 setting over with guide Ø 10 | R | Opening building electrical cabinets |
| |  | Cross | Cross 1.2 | S | Opening Belgian electrical boxes and cabinets |
| |  | | Double teat Ø 2.3 | Y | Gas riser apparatus |
| |  | Double bar | Bit 2.2 | V | For female double bit safety lock 3 mm |
| | | | Bit 2.9 | W | |



# TP71

## SUPPORT RODS FOR CURRENT METER PANELS

### / USE

This set is used to put up or put down electricmeters or to maintain it in a sloped position.

### / TECHNICAL SPECIFICATIONS

Kit content:
- Two rods for right position, Ø 5 mm Length : 340mm
- Two rods for left position , Ø 5 mm Length : 170mm
- One screwdriver handle Ref. TP 71MV

Max. weight of 50 daN on the 4 rods.

| Reference | Dimensions | Weight |
|---|---|---|
| TP71 | 380 x 40 x 40 mm | 350 g |

| Spare parts | Description |
|---|---|
| TP71T | Case |
| TP71VD | Rod for right position |
| TP71M | Screwdriver handle |
| TP71VC | Rod for left position (bent rod) |



# P109

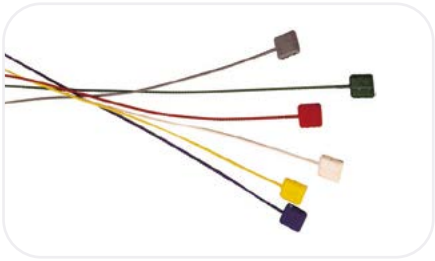
## LEAD PLIERS WITHOUT TEXT BLOC

### / TECHNICAL SPECIFICATIONS

- Pliers made from black steel for 10 mm leads.
- Engraving block possible on one or two sides, until 10 text blocks : please contact us.
- The lead pliers (ref. P109) are delivered without accessories.

| Reference | Lenght | Weight |
|---|---|---|
| P109 | 15 cm | 190 g |

| Spare parts | Description |
|---|---|
| P109BG | Single block engraved with text |
| P109BV | Single block without engraving |
| P109V | Bag of 10 spare screws |
| P109P | Lead Ø 10 mm (in bag of 1000 pieces) |
| P109PF | Lead Ø 8 mm on 200 mm rod (in bag of 1000 pieces) |
| P109F 1000 | Wire seals n° 1 Ø 1,11 mm (on reel) |



# P109A

## PLASTIC CABLE TIES

### / USE

The seal is done with the same pliers used for lead (ref. P109).

### / TECHNICAL SPECIFICATIONS

- Head: 10 mm.
- Length 160 mm ( 240 mm on demand, by 100 pieces).
- Wire Ø 1,2 mm.

Bag of 300 pieces.

| Reference | Color |
|---|---|
| P109ABE | Blue |
| P109AR | Red |
| P109AB | White |
| P109AJ | Yellow |
| P109AN | Black |
| P109AG | Gray |



• Lightness, ergonomic, stainless steel blade to maintain durability and sharpness.

# C365-C370-C375-C371

## ELECTRICIAN POCKET KNIFES

| Ref. | Handle | Version | Blade length | Overall length | Weight |
|---|---|---|---|---|---|
| C365 | Bubinga handle | 1 straight blade | 80 mm | 180 mm | 65 g |
| C370 | Varnished wooden handle | 1 curved blade | 75 mm | 175 mm | 70 g |
| C371 | Black ABS handle | 1 straight blade | 80 mm | 180 mm | 60 g |
| C375 | Bubinga handle | 1 straight blade + 1 curved blade | straight blade : 80, curved blade : 75 | 180 mm | 100 g |



# A02

## SHARPENING STEEL

### / USE

Its shape makes it easy to sharpen electrician knives, pruning blades, axes, etc.

### / TECHNICAL SPECIFICATIONS

This sharpening stone comes complete with a protective plastic handle.

| Reference | Lenght | Weight |
|---|---|---|
| A02 | 250 mm | 220 g |



# P97

## SELF ADJUSTING CUT AND STRIP TOOL

### / USE

The tool can be operated with one hand and ensuresquality stripping and cutting of the cable.

### / TECHNICAL SPECIFICATIONS

- Wire cutting notch.
- Stripping length : 4 to 18 mm
- Stripping capacity : 0,02 mm² to 10 mm².

| Reference | Lenght | Dimensions in blister | Weight |
|---|---|---|---|
| P97 | 200 mm | 250 x 115 x 30 mm | 150 g |



# 003

## ROUND WIRE STRIPPER

### / USE

For stripping of outer insulation from cables.
Spring loaded gripping arm, blade has adjustable cutting depth.
Blade can be turned by pushing the side knob, to cut along the length of cable.

### / TECHNICAL SPECIFICATIONS

- Spring loaded gripping arm, blade has adjustable cutting depth.
- Blade can be turned by pushing the side knob, to cut along the length of cable.

| Reference | Lenght | Weight |
|---|---|---|
| 003 | 135 mm | 140g |



- Each tool is delivered with a spare blade in the handle.
- The blade is adjustable to the insulation thickness.

# C366 - C366 A

## SELF ADJUSTING CUT AND STRIP TOOL

### / USE

Stripping tool for regular cables. Capacity Ø 8 to 28 mm. Circular and longitudinal cut.

### / TECHNICAL SPECIFICATIONS

- Rotating blade for circular and longitudinal cut.
- Adjustable cutting depth with a red knurled nut.
- The cable to be stripped is positioned by a guiding « V » slot with return spring.
- Handle made of PA (Polyamide).
- Special hardened steel blade.

| Ref. | Number | Overall length | Weight |
|---|---|---|---|
| C366 | 28 | 170 mm | 75 g |
| C366 A | 27 | 130 mm | 70g |



# C368

## JACKET REMOVER WITH RETRACTABLE BLADE

### / USE

Longitudinal cut.

### / TECHNICAL SPECIFICATIONS

- Lightweight, retractable blade with guiding security tip.
- For a longitudinal cut of maximum 3,5 mm thick insulation cable.
- Insulated PA handle (PA - Polyamide)

| Reference | Lenght | Weight |
|---|---|---|
| C368 | 170 mm | 90 g |



# A13AV

## STRAP BANDING TOOL

### / USE

Tool used for banding steel or stainless-steel straps.

### / TECHNICAL SPECIFICATIONS

- Delivered in cardboard box.
- No repair of the A13AV banding tool is done.
- Forged steel body protected by paint.
- Maximum tensioning force : 1100 daN

| Ref. | Dimensions | Weight |
|---|---|---|
| A13AV | 270 x 93 x 90 mm | 1,95 kg |



# T-PASS

STEEL STRAP PASSING TOOL















### / USE

The T-PASS is a non-conductive tool designed to make the installation of steel strapping on poles safer and easier, even when an existing cable run is present. Its shape has been engineered to slide under cable ducts, even when tightly secured to the pole, without any risk of damaging the existing cables.
The T-PASS therefore acts as a safe guide for passing the strapping, and also keeps it in place throughout the entire banding operation. This allows the technician to keep both hands free while working.

### / TECHNICAL SPECIFICATIONS

- Sold in pairs with an attachment cord
- 100% insulating material: reinforced polyamide
- Patented product.

| Ref. | Dimensions of one “T | Weight |
|---|---|---|
| T-PASS | 190 × 100 × 21 mm | 120 g |



# C119

STEEL STRIP SHEARS

### / TECHNICAL SPECIFICATIONS

Equipped with a return spring, designed to cut steel strip at the desired length.
Its specific shape facilitates collar fixation.

| Reference | Lenght | Weight |
|---|---|---|
| C119 | 230 mm | 490 g |







# A13

MANUAL TENSIONER

### / USE

For fixing and cutting steel strip from 10 mm to 20mm wild, and 4/10e to 7/10e thick.

| Reference | Dimensions | Weight |
|---|---|---|
| A13 | 305 x 85 x 65 mm | 1.370 kg |

# P115

CLAMPING TOOL FOR STEEL STRIP

STANDARDS

C33-226, UTE C33-223
NF C 33-223, HN33S23

### / USE

Specific pliers used to bind all types of pipes, cables, ropes, boxes, etc...
It allows to cut metallic strip thanks to a cutting part.

### / TECHNICAL SPECIFICATIONS

- For steel strips up to 10 mm wide.
- Suitable for all Øs and sections.

| Reference | Dimensions | Weight |
|---|---|---|
| P115 | 160 x 25 x 56 mm | 240 g |

# F06 C

CLASP FOR METAL STRIP

### / TECHNICAL SPECIFICATIONS

Clasp for 20 mm stainless steel strip.
Bag of 100 pieces.

| Reference | Weight (kg) |
|---|---|
| F06 C | 1 kg |



# PE9Y

PLASTIC-COATED PLIERS FOR INSULATED CONNECTORS

### / USE

Used in telephone field for multi pair wires.

| Reference | Lenght | Weight |
|---|---|---|
| PE9Y | 150 mm | 150 g |



# P110

PLIERS FOR PLASTIC COLLARS

### / USE

For fixing and cutting Rilsan platic collars.

### / TECHNICAL SPECIFICATIONS

Steel pliers, lacquer finish.

| Reference | Lenght | Weight |
|---|---|---|
| P110 | 200 mm | 320 g |



# F06-4 / F06-7

STAINLESS STEEL STRIP

### / TECHNICAL SPECIFICATIONS

Reel of stainless steel strip 20 mm wide.

| Reference | Thickness | Dimensions | Weight |
|---|---|---|---|
| F06 4 | 4/10e | 230 x 230 x 25 mm | 3 kg |
| F06 7 | 7/10e | | 5 kg |



• No vibration : belt driven wheel.

# 002

TOPOMETER

### / USE

For road and field measurements.

### / TECHNICAL SPECIFICATIONS

- Counter capacity : 9 999.99 m
- Centimetres display : precision 0.05%
- Wheel Ø : 318,5 mm
- Belt width : 20 mm Locking device and cleaning device.
- Support stand and removable handle.
- Accessory : case Ref. 002M (not supplied)



• 100% safe : no conductive metallic parts.

# NCT

NON-CONDUCTIVE TAPE MEASURER

### / TECHNICAL SPECIFICATIONS

- Tape is constructed of highest quality FRP — Fibre Reinforced Plastic material.
- The material will not stretch and when usedcorrectly will allow years of use.
- Standard length : 3 m.

| Ref. | Length | Dimensions | Weight |
|---|---|---|---|
| NCT | 3 m | 83 x 73 x 29 mm | 150 g |



# D60

INSULATED PLASTIC FOLDING RULES

STANDARDS

CERTIFIED EC - CLASS 3

### / TECHNICAL SPECIFICATIONS

- 10 section insulated folding rulers, made of ABS plastic.
- Extended length : 2 m.
- Double-sided graduation.
- Delivered in blister.



# P135P

ROUND PAINTBRUSH

### / TECHNICAL SPECIFICATIONS

Dielectric round paintbrush with plastic ring.

| Ref. | Ø | Length | Weight |
|---|---|---|---|
| P135 P23 | 23 mm | 200 mm | 15 g |
| P135 P30 | 30 mm | | 20 g |




# L10

HACKSAW SPARE BLADE "ULTRA MAJOR"

### / USE

Especially designed for engineering, workshops, etc.

### / TECHNICAL SPECIFICATIONS

Super High Speed Steel with molybdenum - rustproof treated.
High cutting performances, maximum precision.

| Reference | Number of teeth | Length |
|---|---|---|
| L10 08D | 8 teeth/cm | 300 mm |
| L10 10D | 10 teeth/cm | |
| L10 12D | 12 teeth/cm | |

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