TECHNICALRESCUE ARBCLIMBER WILDERNESSSAR ACCESS&RESCUE

BUYERSGUIDES

USAR/ Extrication

Comprehensive free MARKET GUIDE to all of the key and less well-known products with specifications. Updated with new data and products monthly.

Shoring reinvented.

First responders need shoring equipment that is as intuitive, versatile and smart as they are. That is why we have developed OmniShore, a shoring system reimagined from the ground up and designed in accordance with unparalleled standards of quality and safety.

Patented innovations such as the Trident Coupler and OmniLock system allow you to build unlimited applications with less parts, experience a seamless setup with less handling and take full control with less manpower.

Learn more at holmatro.com/omnishore

holmatro
mastering power

TECHNICALRESCUE ARBCLIMBER WILDERNESSSAR ACCESS&RESCUE

BUYERSGUIDES

USAR/Extrication Equipment

OTHER EQUIPMENT FOR USAR/Extrication.....

Pulleys, Large Haul systems and lifting frames are in **Rope Equipment**
Trauma care, med-packs, spine-care & stretchers, headtorches are in **PPE & Cas**
Underwater Search Cameras & Water rescue PPE are in **Water Rescue Equipment**
Chainsaws and chainsaw PPE are in **Arborist Equipment**

Click on the Page number/Product below to go direct to that page

CONTENTS

GREY=COMING Q3-4 2026

HYDRAULICS & BATTERY TOOLS

02 Extrication Manuals
06 Hand Hydraulic tools
12 Battery & Hose-fed Tools
16 Battery CombiTools
34 Hose-fed CombiTools
40 Battery Cutters
58 Hose-Fed Cutters
68 Battery Spreaders
82 Hose-Fed Spreaders
92 Battery Rams
104 Hose-Fed Rams
114 Battery Special/RIT Tools
126 Hose-Fed Special/RIT Tools
130 Reciprocating Saws
138 Disc Cutters/Cut-Off Saws

SHORING/STABILISATION

158 Vehicle Stabilisation Struts
168 Shoring Struts
204 HP Airbags
232 LP Airbags

ROPE EQUIPMENT

238 Tripods&High Directionals
254 Mini Haul Systems
256 Animal Rescue Lifting
264 >14mm Rope
276 Winch Rope

TECHNOLOGY

286 Search Cameras
320 USAR/Search Robotics
330 Aerial UAVs
344 Thermal Imaging
354 Acoustic Systems
360 MultiGas Monitors

PPE & SELF PRESERVATION

372 SCBA/EDBA
380 USAR/Extrication Helmets
400 USAR/Extrication Gloves
406 Decontamination Tents
412 Emergency Shelters

~~TOOLS &~~ ACCESSORIES

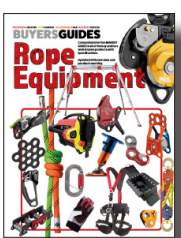
426 Access Frames/Ladders
436 Extrication Multitools
448 Handheld Lighting
464 Area Lighting
502 Pro Batteries
524 Wheeled Hard Cases
540 Fire & Bariatric Manikins
546 Animal Manikins
TBA Power Generators

Welcome to our **BUYERSGUIDES.** These are free to all as a page-turning pdf or you can download a regular PDF by clicking on the cloud icon. Many of these GUIDES originally appeared in our print magazines so have been updated and will continue to be updated every month. The same link that you used this time can be used anytime to see the latest version. New Guides and those appearing in forthcoming magazines will also be incorporated into the relevant **BUYERSGUIDES** building into an amazingly comprehensive guide to the best products on the market.

The tabulated data in our GUIDES is non-subjective although the comprehensive introductions do have subjective comment and pick out key and interesting products.

MANUFACTURERS can contact us at any time to update the information on a product(s).
admin@rescuemagazines.com.

Copyright TECHNICAL RESCUE Ltd -All rights reserved
BUYERSGUIDES are free to pass on in their published, unmodified form



RTC Rescue (Extrication) Manuals

We all have our department's own policies and procedures when it comes to working on roadways and undertaking casualty centred rescues at Road Traffic Collisions – RTC's (Motor Vehicles Collisions -MVC's), but where do we go to to get much needed supplemental information?

Oxford English Dictionary Definition: -
Extrication (noun) : Free (someone or something) from a constraint or difficulty

Your authors cut their teeth on Len Watson's seminal 'RTA Persons Trapped', way back in 1990. This beat Kidd and Czajkowski's 'VEHICLE EXTRICATION A Training Manual' to the punch by six months and together they were the first of the fifteen – soon to be sixteen – manuals that are now available on the subject of rescue at RTC/MVA's. Not only do I have all of these titles, I've also co-written two manuals, the first of which was never published having been pipped to the post by the Lukas manual. But, excellent as this manual is, the fact that we then felt that ours would only reinvent the wheel highlighted an obvious omission in virtually all the manuals and something that we as instructors had been majoring on for some time. So before we detail what's available in the way of manuals, lets first consider what's in a name.

Of the seventeen manuals currently available, nine have the word 'extrication' in their titles and yet ironically if you look at their full titles and related contents, you'll see that at no point are any vehicles extricated or rescued. Unfortunately, but specifically to the point, neither are any casualties/patients.
In the case of rescue at RTC's, extrication is freeing someone - a casualty (patient) - from the constraint of a crashed vehicle. This is important because people buying these books not unreasonably expect that they 'do what it says on the tin' – that there is an element of actual casualty extrication in these books, egress solutions for differing entrapments – just as these books all demonstrate to a greater or lesser extent differing space creation options for various situations. And although there are often excellent sections on casualty care, there are no detailed and illustrated casualty extrications from vehicles. In principle, its perhaps a bit like finding a book called 'Brick Laying'', then opening the book up and discovering that there's excellent in-depth coverage of all the major elements of building construction. Except for how to Lay Bricks.
So, in a shameless plug for the authors' own forthcoming book, it should be noted that this one deals exclusively with the extrication of casualties – there are twenty separate casualty circumstances catered for - and a truly multi-agency approach is detailed for achieving these.
But more of this later…

Of the manuals that are currently available, perhaps the first tranche – published between 1990 and 2004 – are showing their age. They contain a lot of dated information, have no colour diagrams or photos and can be very heavy with dense text, the latter not being something that aids comprehension, especially for uber-practical rescuers.

However it is still worth tracking down copies of these – even as 'previously-loved' purchases – for the still relevant and very valuable tips and alternative perspectives that can be gleaned from their pages.

The next selection comprises the four books published between 2005 and 2012. These do feature colour photos and diagrams and also benefit from a less 'wordy' approach and also start to make use of text boxes, etc. to break up the flow of words and make the concepts being explained more easily understood. Also more contemporary than their predecessors, these are again worthy of your attention and for the same reasons.

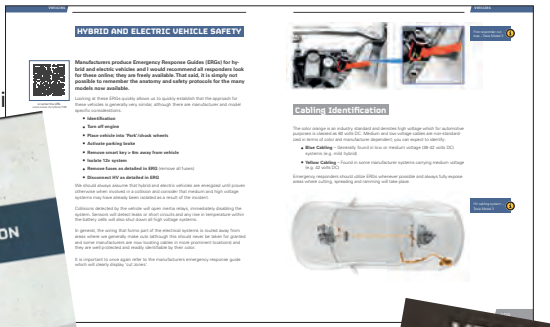
Finally there is the period from 2014 to the present day, perhaps initially most easily recognisable by one of their focuses being on electric (and other fuel) vehicles. These books also move on a step further in terms of their graphic presentations of concepts and techniques and are much easier to read and digest as exemplified by Holmatro's handy little A5 manual (pic right) - a true pocket guide.

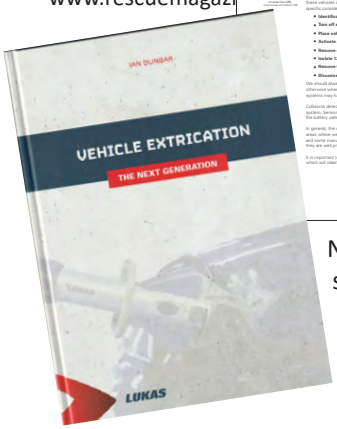
These later manuals also contain the author's personal favourites, and our criteria for giving five stars to an RTC Rescue Manual :

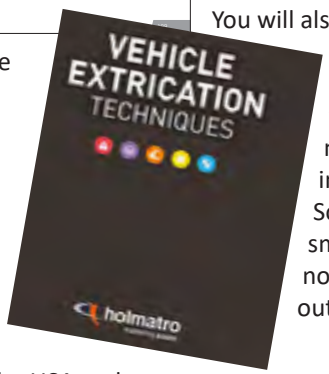
- Is it easy to read and understand?
- Is it based on contemporary information?
- Does it have a good practical section on all aspects of safety ?
- Does the book contain contemporary information ?
- Does it have a comprehensive space creation section ?
- Does it have an RTC related Casualty Care element, especially with regard to multi-agency integration ?

In direct relation to these points, we gave three 5 star ratings : Overall we preferred the international approach of Ian Dunbar's comprehensive 'VEHICLE EXTRICATION : The Next Generation'. The ongoing and well worked theme throughout was integrating both the fire and medical services in training and pre-planning for rescue at RTC's and this really is the future.
Of the 17 currently available manuals, 8 originate in the UK (shared with the Netherlands and South Africa) and 9 are

EXTRICATION MANUALS



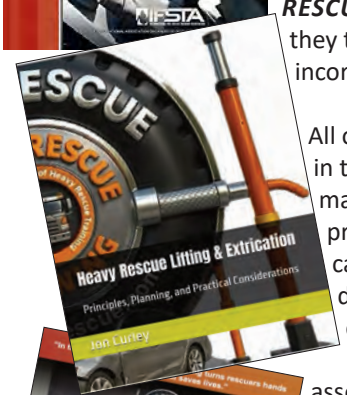




In conclusion RTC's are an ever evolving and demanding challenge and rescuers like you are the perfect proof of that, in as much as you are reading this magazine and specifically this article to better equip yourselves for those challenges.

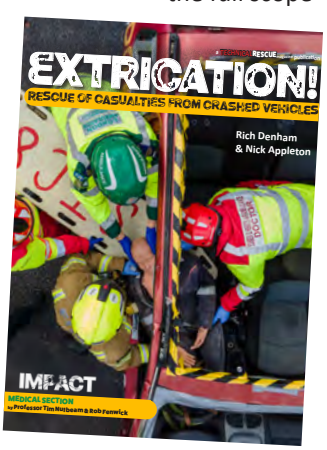
You will also realise that continuous personal development isn't something that is done just as a hoop-jumping exercise at work, but that it has a very real value for you, your knowledge and skills acquisition and maintenance and the people that you serve. And incidentally, no one wants to screw-up at a rescue… So pick one of these books, buy a copy and read it in small chunks and with a pencil in your hand to make notes in the margin. The result WILL improve the outcome for casualties that have yet to be……

North American and we suggest that a UK and European audience would be well served by the orientation of the second and third Ian Dunbar books,' ***VEHICLE EXTRICATION TECHNIQUES***' (pic right) & ***VEHICLE EXTRICATION*** (pics above) and that in the USA and Canada, the 'PRINCIPLES OF VEHICLE EXTRICATION' (pic left is very well suited to that environment. We have not yet, however, had a chance to include Jon Curley's ***HEAVY RESCUE BOOK*** and ***RTC RESCUE BOOK*** (pics below-left) but they too are UK -based (and will be incorporated soon).



All of the books listed here are - in their own context - excellent manuals dealing with safety, procedures, vehicle anatomy, casualty care, in some cases differing vehicle fuels and especially the vital art of space creation, and should be assessed and selected by you on their own merits and relevance to your own operational procedures. They are invaluable texts in terms of what they do and do well.

Incidentally, you may notice that we only gave our book four stars; our reasoning being that this buyers guide relates to manuals dealing with the full scope of casualty rescue from RTC's and ours focuses only – although admittedly in some depth – on casualty extrication. It will be however the only one of its kind, founded on evidence based medical research and decades of practical experience, so ultimately you can decide what rating it warrants.

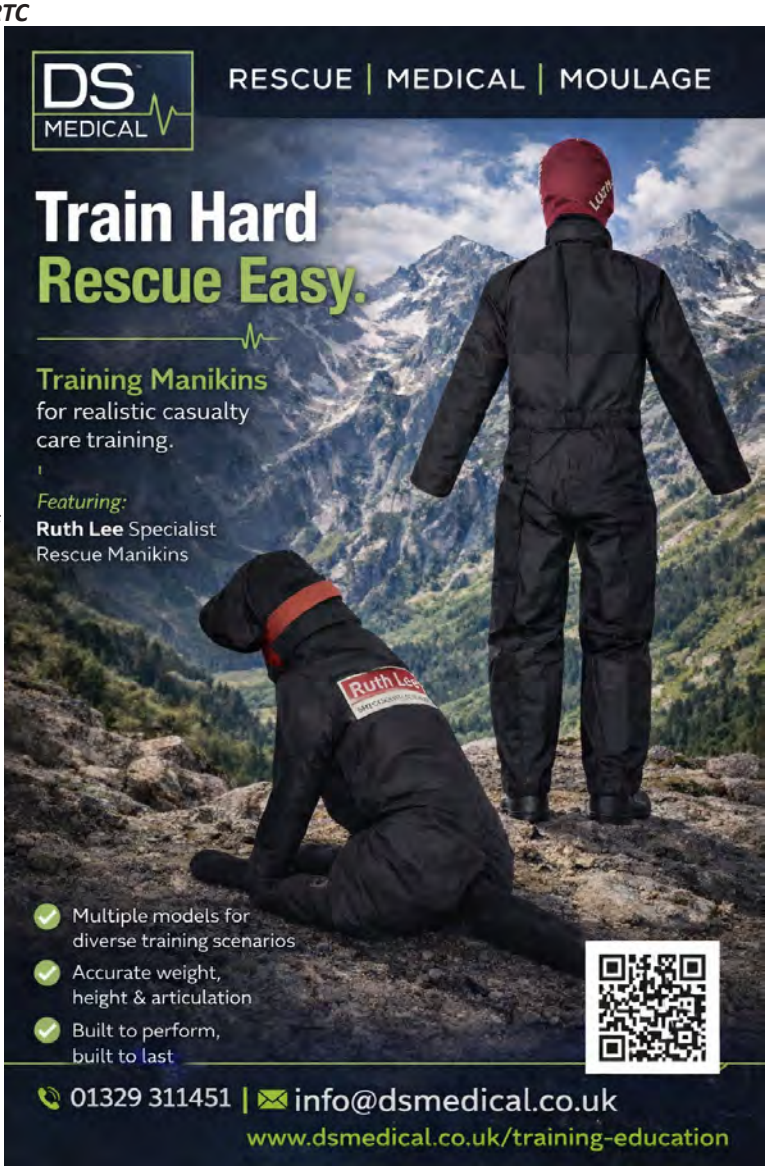


In the following tables…….

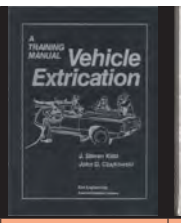
a black outlined white square ☐ indicates that the subject is covered but not in any great depth.

TBD= To be Determined

5 star recommendations are shown in gold■



□=the subject is covered but not in any great depth.
TBD= To be Determined
5 star recommendations are shown in gold■

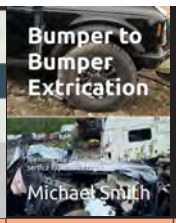


TITLE	RTA PERSONS TRAPPED	VEHICLE EXTRICATION A Training Manual/Study Guide	ADVANCED VEHICLE ENTRAPMENT RESCUE	VEHICLE RESCUE	VEHICLE RESCUE & EXTRICATION	VEHICLE EXTRICATION	HOLMATRO's VEHICLE EXTRICATION TECHNIQUES	F M i fr
COST	£21	n/a	n/a	£31	n/a	$83	Free	
EDITORIAL FOCUS	Casualty centred space creation	Casualty centred space creation	Casualty centred space creation	US procedural & access techniques	Accessing vehicle entrapments	US procedural & access techniques	Space creation	
VEHICLE CONSTRUCTION	■	■	■	□	■	■	■	
TRUCKS/HGVs/ELECTRIC	□	-	■	-	■	□	■■	
TOOLS & PPE	□	■	■	□	■	□	■	
STABILISATION	■	□	■	■	■	■	□	
GLASS MANAGEMENT	■	□	■	■	■	■	□	
SPACE CREATION	■	■	■	■	■	■	■	
CASUALTY CARE	□	■	■	■	□	□	-	
CASUALTY EXTRICATION	-	-	-	□	-	-	-	
AUTHOR(s)	Len Watson	Kidd & Czajkowski	Len Watson	Harvey Grant James Gargan	Ronald E Moore	Brian G Anderson	Brendan Morris	H
PUBLISHER	Greenwave	Fire Engineering /Penwell	Holmatro	Brady/ Prentice Hall	Mosby Jems	Fire Engineering /Penwell	Holmatro	
ISBN	0-95168600-3	9780878149155	0951686011	9780835983747	0-323-01833-5	1-59370-021-0	2-910725-34-0	97
PUBLISHED	1990	1991	1994	1997	2003	2004	2005	
FIRST PUBLISHED	1990	1991	1994	1996	1991	2004	2005	
SOFT/HARD BACK	■	■	■	■	■	■	■	
B&W / COLOUR	■	■	■	■■	■	■	■■	
PHOTOS/DIAGRAMS	■	■■	■	■	■	■	■■	
FORMAT & PAGES	EUA4 374	USA4 253	USA4 255	USA4 352	USA4 414	USA4 573	A5 98	
KEY CHAPTERS	•Space Creation •Training •Immediate Care and Medical •Appreciation (broad perspec-tives, some dated)	•Vehicle structure •Hand tools •Patient considerations & Packaging • Training	• Scene & vehicle stabilization •Space Creation, various postures •Casualty release theory	•Eqpt & Training •Managing the incident scene •Hazards •Gaining access •Disentangling •Patient packaging	•New Technology •Electric/Hybrids •Rescue Life-Cycle /Golden hour •Vehicle, Rescuer & Scene Safety •Incident Command •Casuaty Care •Tools & Eqpt •Rescue Evolutions •Glossary	•Tools & Rigs •Stabilization •Door/Side/Roof & Interior procedures •Entrapment beneath/between •Empalement •Trucks/Trailers •Buses •Sport vehicles	•Vehicle Design inc. Hybrids •Equipment •Scene Safety & crew organization •Techniques •Heavy Vehicles	
BREADTH of COVERAGE	■■	■■■■	■■■	■■■	■■■■	■■■	■■■	
IMAGE QUALITY/CLARITY	■	■■	■■■	■	■■	■■	■■■■	
QUALITY of TEXT	■■■	■■■	■■	■■	■■■	■■■	■■■■	
QUALTY of PAPER STOCK	■■	■■■	■■■	■■	■■■	■■■	■■■	
VALUE for MONEY	■	■■	■■	■	■■	■■	■■■■■	
COMMENT	The original car rescue manual led the way	Comprehensive but very dated	'Updated' and condensed version of RTA Persons Trapped	Detailed but very text heavy few photos and no diagrams	Detailed but dated in parts. Too much text, few photos and no diagrams	Also detailed but dated in parts. Too much text, few photos and no diagrams	Essentially a Holmatro catalogue but with excellent space creation sequences	U i
OVERALL MARK out of 5	■■	■	■■	■	■■	■■	■■■	

TO BE ADDED ***HEAVY RESCUE BOOK*** ISBN-13 979-8242540774 and ***RTC RESCUE BOOK*** ISBN-13 979-8248413331 both by Jon Curley

www.rescuemagazines.com

EXTRICATION MANUALS

								
IRE SERVICE MANUALvol2 Incidents nvolving rescue om road vehicles	**VEHICLE RESCUE 1-2-3**	**HOLMATRO's VEHICLE EXTRICATION TECHNIQUES**	**PRINCIPLES OF VEHICLE EXTRICATION** 4th ED	**VEHICLE RESCUE & EXTRICATION** 2nd ED	**ROAD TRAFFIC COLLISIONS** a Complete Guide	**VEHICLE EXTRICATION** the Next Generation	**BUMPER TO BUMPER EXTRICATION**	**EXTRICATION!** Rescue of Casualties from Crashed Vehicles
£28	$35	$20/€15	$75	$130	£28	€35	$35	TBA
UK procedural	Car safety & space creation	Accessing vehicle entrapments with holmatro kit	All aspects of entrapment rescue	All aspects of entrapment rescue	Mostly procedural	All aspects of entrapment rescue	Pre-rescue new vehicle technology	Casualty handling/ Casualty extrication
■	□	■	■	■	■	■	■	-
-	□	■■	■■	■■	■■	■■	■	■
■	□	■	■	■	■	■	-	-
■	■	■	■	■	■	■	-	-
■	■	■	■	■	■	■	-	-
■	■	■	■	■	■	■	-	-
■	□	□	□	■	■	■	-	■
-	-	□	□	□	-	-	-	■
IM Fire Service Inspectorate	Ronald E Moore	Ian Dunbar	Peters & Smith	David Sweet	Andrew Holden	Ian Dunbar	Michael Smith	R Denham, N Appleton
HMSO	University of Extrication	Holmatro	Ifsta/Fire Protection Publications	IAFC/NFPA Jones&Bartlett	Self-Published	Lukas Rescue	Boron Extrication Training	Technical Rescue Ltd
780113413058	9780983845003	9789081279604	9780879395971	9781284042177	-	9783000653063	9798830659352	TBA
2007	2011	2014	2017	2018	2019	2021	2022	2024
2007	2011	2014	'98,'00,'10	2012*	2019	2021	2022	2024
■	■	■	■	■	■	■	■	■
■■	■■	■■	■■	■■	■■	■■	■■	■■
■■	■	■■	■■	■■	■■	■■	■■	■■
EUA4 204	USA4 230	Custom 256	USA4 522	USA4 442	EUA4 205	EUA4 293	USA4 94	UKA4 220+
•Vehicle Design •Dealing with incidents •Safety and •Operational Procedures •Medical care	•Space Creation •Hybrid vehicles •Internal space creation •Underride extrication	•Safety •Vehicle Technology •Tools&Eqpt •Team Approach •At the scene	•Passenger vehicles •Commercial Vehicles •Heavy vehicles •Special circumstances	•Incident command •Kinetics/ construction •Electric/Hybrids • SRS/Airbags •Tools/Eqpt •Site Ops/Stabilization •Casualty handling •Trucks/Tractors •Alt Techniques •Wrapping up	•Vehicles in water •The collision •Traffic management •Debriefing	•Extrication planning •Medical considerations •Technical processes and evolutions	•Accident statistics •Vehicle structure •Electric •Glass •Airbags •Restraints Battery	•Multi-agency approach •Self & assisted extrication •20 detailed car & cab extrication sequences •Air ambulance & Trauma Care approved
■■■	■■■■	■■■	■■■■■	■■■■■	■■■■	■■■■■	■■■■	■■■
■■■■	■■■■	■■■■	■■■■■	■■■■■	■■■■	■■■■■	■■■■	■■■■■
■■■■	■■■■	■■■■	■■■■■	■■■■	■■■■	■■■■■	■■■■	■■■■■
■■■	■■■	■■■	■■■■	■■■	■■■	■■■■■	■■■	TBD
■■■	■■■■	■■■■■	■■■■	■■■■	■■■■	■■■■■	■■■■	TBD
Free download. Uses Holmatros's space creation information and diagrams	Techniques, six photos per page, good sequence detail	Comprehensive selection of sequential space creation evolutions.	Comprehensive MVA information resource, primarily for North America	*Originally just 'Vehicle Extrication'. Very comprehensive 2021 update is E-book only	Shows space creation sequences as a numbered sequence on a vehicle frame	Comprehensive hardback, especially good on integrating Fire and Medical rescue services	Full background to vehicle technology	The first and only manual to concentrate wholly on the casualty's needs & removal
■■■	■■■■	■■■■	■■■■■	■■■■■	■■■■	■■■■■	■■■■	■■■■

UPDATED Nov '25

'hydraulic' HAND-POWERED SELF-CONTAINED RESCUE TOOLS

Having a manual option available to get you out of trouble when the battery runs out and can't recharged or the fuel runs out or the generator won't start is a must. All powered hydraulic tools can be run from a hand pump or a foot pump and could therefore be deemed 'hand powered' but with a hose-attached hand pump they tend to be cumbersome. This Guide is concerned with ***self contained*** systems that operate ONLY via an ***integral*** handle and pump, not a hose-connected hand-pump. Consequently there are not very many at all. Surprising really because they are the ultimate get-out-of-jail tool - literally. We have two basic types of tool - **Combi-tools** with a cutting and spreading jaw and **Wedge spreaders** which provide a spreading/lifting capability over a much smaller distance. For **combi-tools** we only have *Holmatro, Hurst, Libervit* and *Weber-Rescue* with self-contained hand-hydraulics. Since there are less toes to tread on we have included the Chinese brand *Alolai* because they have an easily accessible website and answer emails, we've checked out and occasionally included their more unique looking rescue tools in our other guides. For **wedges** there is a much more industrial feel to things because these are used to separate pipe flanges etc. in the oil and gas industry and there are a number of manufacturers so we have only included the key brands that do, or did, have rescue products including *Enerpac* and *Petol*. *Eder Maschinebau* from the forestry sector has winches and battery powered ascenders so is crossing nicely into rescue but their two wedges are mechanical rather than hydraulic and none of these devices are purpose-designed for rescue as *Holmatro, Libervit* and *Weber*'s battery and hose models are but they will all perform a useful gap-expansion role. **See also BATTERY SPECIAL TOOLS for powered wedges inc *Eder*'s *Titans*.**

In all cases, instead of a battery or petrol generator doing the work to pressurise the hydraulic fluid, you have to do it by pumping a handle back and forth. In some hydraulic cases the handle is telescopic and allows 2-stage pumping - in other words you start out pumping with little or no resistance and the jaws move quite quickly but when the material you're cutting begins to resist your efforts, the handle suddenly becomes easier as the second stage kicks in but closure is a lot slower - it's exactly the same as any gearing mechanism - when the hill gets steeper your peddling gets easier but faster. Tools like the *Holmatro* and *Libervit* have a handle that rotates 360 degrees to allow pumping in any position. This is very important because in a wrecked vehicle you often don't have the luxury of choosing where the head is positioned. The *Weber/Genesis* tool is slightly different since it has a handle on each side - either one of which can be used to provide power depending on accessibility or use them both in a 'bellows' action.

The **ADVANTAGES** of a self-contained, hand-powered hydraulic rescue tool are fairly obvious:

- Lightweight (relative to powered hydraulics)
- Low Bulk - easy to stow on rescue vehicle/boat
- Never runs out of fuel/electricity
- Virtually no noise
- No exhaust fumes
- No trailing hoses or cables
- Simple to use - no hoses to connect or switches to throw!
- Intrinsically safe (aside from accidental metal to metal contact-in which case, *Enerpac* has an ATEX version of their wedge).
- Can operate under water, in/under grain/silo product etc.

The **DISADVANTAGES** are also reasonably obvious:

- Slow action compare to powered tools
- Smaller tools so less able to deal with large & hard metals
- Combi-tools can be bulky due to integral handle and pump.

Just to qualify that last statement it should be remembered that any discussion of self-contained hand-powered hydraulics being smaller and lighter only refers to the whole powered package including the hoses and petrol/gas generator. The rescuer actually using the tool wouldn't care if the gennie was a miniature whisper pump or a giant industrial model able to power a small city as long as the tool is manoeuvrable and copes well with its task. But taken as a whole, the full size hydraulic tool, hoses and generator represent considerably more weight, bulk and cost than the hand powered alternatives. There are exceptions of course. The diminutive electric-powered *Ogura* tools for instance are almost as light, faster and more powerful than hand tools and therefore represent an excellent alternative to full-size packages. However, they still have the problem of running out of battery power and not operating under water!
Hand-powered hydraulic tools have always been a distinctly

SELF-CONTAINED HAND HYDRAULIC TOOLS

under-used resource primarily because, under normal circumstances, battery is a much quicker option with greater capabilities and a huge range of tools. But when it all goes wrong, disasters are where they come into their own. They can be shipped easily to any part of the world because there is no fuel needed. When you unload them after months of (dry!) storage, they'll still work as well as the day they were packed and if you need to be working in a monsoon or in floods or a sandstorm they'll continue to do their job well. Combi-tools offer cutting, spreading and lifting in building collapses, floods, gaining entry, on-board ships & aircraft, in confined spaces and on rapid response vehicles arriving at a scene ahead of the better equipped trucks. The *Holmatro HCT5114* which we used operationally with great success, the veteran *Hurst Unitool,* the rarely seen *Libervit Multitool28* and the *Weber Vario* are extremely capable tools and highly recommended for disaster response teams and first responders. Since all of the hand-operated combi-tools are much smaller than their dedicated battery/hose brethren, the C and/or D pillars on a vehicle, with much larger cross-sections can tax the smaller rescue tools so we're really talking about fast-attack access rather than a full vehicle dismantling.

Wedge tools are superb for door-busting and getting into very tight gaps and initiating a lift or spread that can subsequently be taken over by a bigger combi, spreader, airbag or jack (see separate GUIDES). Some use a socket wrench handle which has to be rotated rather than pumped and this can feel even slower than a handle with less leverage to assist you but wedges are only opening a short distance compared to a combi-spreader. *Eder's* forestry sector wedges are used to initiate a directional felling and *Enerpac* are an automotive/industrial company more used to separating flanges and joints than spreading car door hinges but we did see them in rescue back in the 80's and 90's and these more 'industrial' tools remain remarkably small, simple and robust. With so many remote/wilderness rescue teams getting involved in road rescue (if not already the primary agency in some areas) there is much to be said for considering hand-powered hydraulics from both a cost and maintenance point of view.

CONCLUSIONS

The downside of course is speed of action. It takes frustratingly long to pump or wind that handle to open and to close. Never has the saying 'a watched pot/kettle never boils' been so apt. But that's the price you pay for absolute reliability in any weather under any conditions - no electrics to fry, no hoses to drag, no noise, no fumes in a confined space, no battery to decompose and catch fire and virtually no maintenance.

The Libervit Multitool 28 has a telescopic handle that makes stowage much easier

IMAGES NOT TO SCALE
£$€ = Currency Conversion Only- excludes duty, taxes, shipping etc.
●= Partial Feature/OK but not ideal
□□□= Option
N/A = info Not Available/not given
Str-Curve=Straight section ahead of curve

COMPANY	EDER	EDER	ENERPAC	ENERPAC
MODEL	Titan 50	Titan 80	SWi5TI-S	SWi2025TISTDEX
TYPE	WEDGE SPREADER	WEDGE SPREADER	WEDGE SPREADER	WEDGE SPREADER
ORIGIN				
COST inc tax /VAT	£540 $ €	£840 $ €	£ $2579 €	£ $45875887 €
WEIGHT Basic Tool	1.6kg / 3.5lb	5.6kg / 12.3lb	10.5kg / 23.1lb	9.2517.6kg / 20.4 39lb
HANDLE TYPE	Socket Handle*	Socket Handle*	Lever	Lever
LENGTH	240-340mm 9.4-13.4"	410-570mm 16.1-22.4"	404mm 15.9"	464mm 18.3"
WIDTH	118mm 4.6"	170mm 6.7"	163mm 6.4"	152mm 6"
DEPTH	72mm 2.8"	90mm 3.5"	n/a	n/a
LIFT CAPACITY t=US Ton	147Kn 16.5USt	245Kn 27.5USt	77Kn 8.7USt	240Kn 26.9USt
INSERTION HEIGHT	20mm 0.8"	20mm 0.8"	6mm 0.24"	6mm 0.24"
SPREAD HEIGHT	50mm 2"	80mm 3.15"	100mm 4"	104mm 4.1"
WORKING PRESSURE	Mechanical	Mechanical	700 Bar 10K psi	700 Bar 10K psi
ROTATE HEAD HANDLE	- 360°	- 360°	- 360°	-360°
IN-WATER USE	●*	●*	■	■
NOTES	Dims exclude handle. * 3/8 or 1/2" impact wrench - Can also be operated via battery driver.*Lubricate after being wet.	Dims exclude handle. * 3/8 or 1/2" impact wrench - *Lubricate after being wet. See Battery Special Tools for powered-remote control versions		
WEBSITE	eder-maschinenbau.de	eder-maschinenbau.de	enerpac.com	enerpac.com

KEY TO TABLES

As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Cutting and spreading strengths vary radically from the tips to nearer the fulcrum or union. The cutting codes for CE and NFPA certification given below are by far the BEST way to gauge the true abilities of a tool.

All force figures are given in KiloNewtons and US (short)tons

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■
If it's an option it is shown as an outline square □□□□
A circle ●● in the 'USE' columns indicates that the feature is only partially present and/or is OK but not ideal.
A model variant is shown in cyan and any features or specifications that differ from the standard are also in cyan.

ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries as is the case with *Holmatro and Weber.*

COST: As usual, for the overt rescue manufacturers, this is clearly an official secret within the industry. This is because the cost of one tool is vastly different to the cost of multiples that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICALRESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure. The prices that are shown are a rough guide only & include local taxes/VAT. They vary with exchange rates, extra taxes etc. We usually round up to the nearest Pound£/US Dollar$/Euro€. Cost is for basic model with included accessories indicated by a solid square in the appropriate column (optional extras being an outline square). In the case of *TNT* the cost includes two batteries and a charger but tools are normally costed without batteries and chargers.

DIMENSIONS: The Length of tool ready to work x by the width which is usually dictated by the union of the head but sometimes by the handle x the height which is the height off the ground if you lay the tool down and is usually dictated by either the handle or the battery if it is top-mounted.

CUT FORCE: Is the maximum *theoretical* force possible but not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers flat-out refuse to quote it because they feel it is a misleading figure. Our figures are in kN (KiloNewtons) and US (Short) Ton. There are

MECHANICAL' WEDGE TOOLS

ENERPAC	**PETOL (GEARENCH)**	**PETOL (GEARENCH)**	**RENQUIP**	**RENQUIP**
FSC14	**'POP-IT' P95-525**	**'POP-IT' PHD0535**	**FSW9**	**WJ19P**
WEDGE SPREADER	WEDGE JACK	WEDGE JACK	WEDGE SPREADER	WEDGE JACK
£ $ €	£ $1390 €	£ $3000 €	£ $ €	£ $ €
9kg / 19.8lb	5kg / 11lb	15kg / 33lb	5.5kg / 12.1lb	9.5kg / 20.9lb
Lever	Lever	Lever	Socket Handle	Lever
468-508mm 18.4-20"	289mm 11.39"	00mm 00"	290mm 11.4"	450mm 17.7"
00mm 00"	249mm 9.8"	00mm 00"	160mm 6.3"	135mm 5.3"
74mm 3"	94mm 3.7"	00mm 00"	80mm 3.1"	105mm 4.1"
118Kn 14USt	44Kn 5USt	*133Kn 15USt	*94Kn 10.5USt	183Kn 20.5USt
6mm 0.24"	1.5mm 0.06"	12.7mm 0.5"	6mm 0.24"	9.5mm 0.37"
80mm 3.16"	133mm 5.25"	*12.7-216mm 0.5-8.5"	81mm 3.19"	67.5mm 2.66"
700 Bar 10K psi	Mechanical	Mechanical	Mechanical	700 Bar 10K psi
- 360°	- 360°	- 360°	- 360°	- 360°
■	■	■	■	■
	strike plate on rear to 'force' a gap	*Greater lift weight decreases the available lift height	Also available as a hydraulic version as per the WJ19P	
enerpac.com	petol.com	petol.com	renquip.com	renquip.com

1.10 US short tons to a UK ton and to the metric ton (or tonne).
CUT OPENING: The maximum distance the cutter blades will open but don't forget that this does not equate to the material that can be cut as the max opening provides the least power. Check out the round bar cutting figure for more accurate interpretation of cutting prowess.
ROUND BAR: According to NFPA (and/or EN cut classifications) (see table on page 33) this is the max size of round bar that can be cut as a prescribed material with a specified Rockwell Hardness so that all tests are comparable.
INSERTION HEIGHT: The minimum clearance required to get the tool in and initiate a lift/push. The *Eder Titans* will fit a few mm gap but quote 20mm to initiate a full power lift.
MAX SPREAD FORCE: Is the maximum *theoretical* force possible but only near the fulcrum not the tops at the opposite end. The closer the tips you start the spread/lift the lower the available force. This is not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers like *Weber-Rescue* flat-out refuse to quote it because they feel it is a misleading figure which is a fair point. Some of the max figures quoted may therefore be the same as the upper range limit but ***in theory only*** they could lift/spread a much higher amount. Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).
MAX PULL FORCE & DISTANCE: Holes near the ends of the jaws can have a chain fitted - one to an anchor and one to the item to be pulled. As the jaws are closed a pull force is exerted and the object can be moved. This used to be common with a dash-roll or displacement but not so much these days. Due to leverage forces, the longer the jaw the lower the pull force.
SPREAD DISTANCE: The maximum distance the jaws will open but don't forget that the closest to the tips provides the least power.
FEATURES: TIPS: may describe the type of tip integral to the tool or the options for detachable tips
ROTATE HEAD/HANDLE: Either the blade or the handle can rotate for better access to the cut or the handle will extend around the tool by 180, 270 or 360° to allow it to be used in any position.
IN-WATER-CAPABLE= ■ The tool/battery can be used underwater - it is not just water resistant to heavy rain.
● The tool will work but will need post-use maintenance.

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= Partial Feature/OK but not ideal
□□□= Option
N/A = info Not Available/not given
Str-Curve=Straight section ahead of curve

	COMPANY	AOLAI	AOLAI	HOLMATRO	HOLMATRO
	MODEL	GYJK-31-33/20-10	GYJK-72-30/22-B	HCT 5114 ST	HCT 5111
	TYPE	COMBI-TOOL	COMBI-TOOL	COMBI-TOOL	COMBI-TOOL
	ORIGIN				
	COST inc tax / VAT exc Battery	N/A	N/A	N/A	N/A
	WEIGHT Basic Tool	10.2kg 22.5lb	11.8kg 26lb	9.2kg 20.3lb	8.8kg 19.4lb
	HANDLE TYPE	Lever	Lever	Telescopic Lever	Telescopic Lever
DIMS	LENGTH	735mm / 29"	810mm / 31.9"	583mm / 23"	529mm / 20.8"
DIMS	WIDTH	212mm / 8.3"	205mm / 8"	276mm / 10.9"	275mm / 10.8"
DIMS	DEPTH	146mm / 5.7"	176mm / 6.9"	193mm / 7.6"	192mm / 7.6"
CUT	EN 13204 CLASS	-	-	BK33/362-E-9.2	BK48/281-E-8.8
CUT	EN CUT CLASSIFICATIONS	-	-		1E 2E 3E 4E 5E
CUT	NFPA CUT CLASS	-	-	A5 B5 C5 D6 E4 F3	A5 B5 C5 D6 E4 F3
CUT	CUT FORCE	-	-	268kN 30.1USt	268kN 30.1USt
CUT	CUT OPENING	-	-	277mm 10.9"	196mm 7.7"
CUT	ROUND BAR	20mm 0.8"	24mm 0.9"		24mm 0.9"
SPREAD	EN SPREAD ■ CLASSIFICATION	-	-	-	-
SPREAD	NFPA SPREAD ■ CLASS	-	-	-	-
SPREAD	EN SPREAD FORCE RANGE t=US Ton	-	-	33-1350kN 3.7-152 USt	48-1350kN 5.4-152 USt
SPREAD	NFPA □ FORCE RANGE t=US Ton (at/near tips)	-	-	-	40-52kN ■ 4.5-5.8 USt
SPREAD	MAX SPREAD FORCE (Theoretical) t=US ton	-	-	1350kN / 152 USt	1350kN / 152 USt
SPREAD	SPREAD DISTANCE	160mm 6.3"	255mm 10"	362mm 14.25"	281mm 11"
PULL	PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	-	-	-	-
PULL	MAX PULL DISTANCE	-	-	-	-
	MAX SQUEEZE FORCE t=US ton	-	-	34kN 00 USt	44kN 00 USt
	WORKING PRESSURE	720 Bar / 10.4K psi	720 Bar / 10.4K psi	720 Bar / 10.4K psi	720 Bar/ 10.4K psi
FEATURES	TIPS	FIXED	FIXED	FIXED	FIXED
FEATURES	ROTATE HEAD/HANDLE	360° -	360° -	- 360°	- 360°
FEATURES	LED LIGHTS	-	-	■ x6	■ 6
FEATURES	IN-WATER USE	■	■	■	■
	NOTES	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation
	WEBSITE	aolai.com	aolai.com	holmatro.com	holmatro.com

HAND HYDRAULIC COMBI TOOLS

	HURST/LUKAS (IDEX)	HYDRAM	LIBERVIT	WEBER	WEBER/GENSIS
	Unitool SC 250M	CHECM 275	Multitool 28	HandVario RIT-Tool	HandVario SPS270H
	COMBI-TOOL	COMBI-TOOL	COMBI-TOOL	COMBI-TOOL	COMBI-TOOL
	N/A	N/A	N/A	N/A	N/A
	11.9kg 26.2lb	11.9kg 26.2lb	10kg 22lb	11.1kg* 24.4lb	9.8kg 52lb
	Lever	Articulating Lever	Telescopic Lever	'Bellows' handles	'Bellows' handles
	850mm / 33.47"	750mm / 29.5"	630mm / 25"	695mm / 27.3"	682mm / 26.8"
	190mm / 7.49"	210mm / 8.25"	230mm / 9"	192mm / 7.6"	192mm / 7.6"
	158mm / 6.23"	185mm / 7.3"	190mm / 8"	161mm / 6.3"	152mm / 6"
	-		-	G BK25/280G-11.1	G BK26/270G-9.8
	-		-	1H 2G 3G 4H 5G	1H 2G 3G 4H 5G
	A6 B6 C6 D7 E7		-	A6 B7 C6 D7 E7 F3	A6 B7 C6 D7 E7 F3
	261kN / 29.3USt	237.8kN / 26.7USt	280kN / 31.4USt	-	-
		-	-	215mm	221mm / 8.7"
	26mm 1"	25mm 1"	-	28mm / 1.1"	28mm / 1.1"
	-	-	-	-	-
	-	-	-	-	-
	34-405kN 3.8-45.5 USt	-	-	25-1175kN 2.8-132 USt	26-534kN 2.9-60 USt
	23.5-28kN ■ 2.6-3.15 USt	-	-	-	-
	34kN / 3.8 USt	51kN / 5.7 USt	41kN / 4.6 USt	1175kN / 132 USt	534kN / 60 USt
	308mm 12.1"	275mm 0"	200mm 8"	280-380*mm 11-15"	270mm 10.6"
	-	-	-	40kN 4.5 USt	32 kN 3.6 USt
	-	-	-	320mm 12.6"	380mm 15"
	-	-	-	-	-
	700 Bar / 10.1K psi	700 Bar / 10.1K psi	300 Bar / 4.5K psi	700 Bar / 10.1K psi	700 Bar / 10.1K psi
	FIXED	FIXED	DETACHABLE	DETACHABLE x4*	FIXED
	- 360°		360° 360°	360° -	360° -
	■		-	-	-
	■	■ 100m/328ft	■	■ 25m/82ft	
	Hurst E3 range is waterproof & can use EWXT IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option		Comes with transport bag & sling	*Wt inc spreader tips. *Door opening, spreader, long and pulling tips	
	lukas.com jawsoflife.com	hydram.com	libervit.com	weber-rescue.com	weber-rescue.com genesisrescue.com

DeWalt Dual voltage & Milwaukee M18 Batteries

'hydraulic' BATTERY-POWERED RESCUE TOOLS

Holmatro Battery

Lukas Saltwater battery

We continue to use the generic term 'hydraulic' for these types of vehicle extrication tools because the vast majority use electricity to power a hydraulic pump but some do not. However, since that direct electric drive function hasn't really caught on beyond the *P-16/P4* models we're safe to continue using the term.

We will discuss some of the history on the next pages, for now, we can accept that battery power has come of age and been accepted by most to be the way of the present and future as we see hose-fed hydraulics, but more specifically, liquid-fuel generators, start to take a back seat. Indeed *Amkus* in the US have ditched hose-fed hydraulics altogether and now sell ONLY battery tools. Initially, battery power was met with the same scepticism given to our ambulance service colleagues in the UK's Lake District who experimented in 2023 with a jet pack for rapid response - that's jet-packs as in flying humans and it really works but I bet it doesn't take 20 years for this to become the norm. It's more likely to be personnel-carrying drones but one-or two person flying at any rate. With battery technology having only now reached the stage that quite small units can offer significant amp-hours/watt-hours, most designs use an on-board detachable battery.

WATERPROOF

All are water resistant to a degree but some are water proof and can be used underwater - the *Holmatro, Lukas/ Hurst* models can be used under fresh and saltwater as can *Weber* with the addition of a small battery case (pic left) . *Weber/Genesis* even have an add-on dive bag with pressure-relief valve (pic right) that makes any battery tool waterproof and usable under water.

BESPOKE & TRADE BATTERIES

Something we haven't seen quite so much is integrated on-board rechargeable because it's quicker in the field to simply swap out batteries mid-job and carry on (though some, like *Holmatro*, offer on-tool charging while the tool is not being used). Some also offer backpack batteries which takes weight off the tool-in-hand and is usually a higher capacity than smaller on-board batteries. We've seen chainsaws and other such cutting equipment go further down this high-capacity backpack road to provide increased duration when you're in a tricky environment (like up a tree or part way down a cliff) so it certainly has merit for rescue. Only the original stalwart *Powerhawk* with it's 12v, *Libervit* with its hard and soft-pack options housing a 48v battery system and *ResQtec* with their similarly designed hardpack have

IMAGES NOT TO SCALE

.com

made the leap and in the case of the latter, did so in addition to a handy on-board battery option.

The trade tools that dominate the battery market also pioneered other features of use in rescue tools, not least LED lighting of the immediate work area. Screwdrivers and drills had been doing it for a while so it was an obvious next step when *Holmatro* introduced it first into their hose-fed hydraulic range and now have six sets of LEDs in their forward handle. The *Genesis/Weber* model below shows four sets of LEDs at the front of the rear handle while others like *ResQtec* and *Lukas* entry tools, opted to follow the firearms market and place a rail-style detachable LED on the rear handle.

SIZE MATTERS

Perhaps the most surprising thing about battery tool development is that our original concerns about the *Beaver* and *Gorilla* tools being too long to be easily manoeuvred within the confines of a crashed vehicle obviously weren't shared by the manufacturers (although dedicated peddle cutters later addressed at least part of this problem). The ability to swivel the head or the handle gives at least some options in manoeuvrability but on the whole, tools have got larger and bulkier rather than smaller. This is partly because that's what is required to produce a tool powerful enough to compete with hose-fed hydraulics and partly because the handle and the battery have simply got to go somewhere. *Holmatro* have addressed this by slim-lining their entire tool and producing a bespoke curved battery to match that slim profile though it too remains quite a long tool while the *TNT-Rescue* model increased duration (and bulk) by having batteries mounted on both side of the motor housing. That's quite a wide profile at the back end. We thought the *P16/P4* or the *Ogura* style hand-drill models might have caught on more but clearly the performance requirements have taken the standard battery tools down the more conventional size route although Malkita's powerful backpack battery could address endurance issues?

POWERHAWK, JUNKERS & OGURA LED THE WAY IN THE 90s In the days before on-board batteries were powerful enough to do the job, two companies pioneered battery rescue tools: - *Curtiss-Wright* in the US, better known for making flight control systems for fighter jets and Junkers in Germany, also better known for their aircraft. *Curtiss-Wright* introduced the *Powerhawk P-16* and *Junkers* introduced the *Beaver* cutter and the *Gorilla* spreader. They both used power leads from the tool to a battery - *Powerhawk* with it's quite bulky umbilical to a heavy 12v car battery in a back pack (or indeed, any car battery that's in the vicinity) and *Junkers* with a much smaller motorcycle battery to its *Beaver* and *Gorilla* dedicated cutter and spreader. *Junkers* used electricity to drive a hydraulic action so is perhaps more indicative of what was to come while the *Powerhawk* used what was effectively an aileron from an F16 fighter to provide an all-electric drive with no hydraulics. This was and still is, a short stocky tool with a unique replaceable jaws system so we had a parrot beak cutter, a spreader and a combi blade that could be switched in and within seconds, maybe a minute if the locking pins were stiff. It also came with a ram that had part of the cylinder exposed so that you could put spreaders under the lifting core and 'drive' it up as if it were a hydraulic ram with a locking collar to capture the progress. The *P-16* is still sold under the *Power Hawk Technologies, Inc*. name (now owned by *Snap-on, Inc*.), and have since introduced the *P-16X* - which still uses the same F16 fighter jet, replaceable jaw technology but has an on-board battery as well as the option of connecting to outside 12V DC vehicle batteries. *Power Hawk* previously collaborated with Dutch company *ResQtec* (who used to be *Zumro* under the brilliant helm of the original hydraulic tools innovator Axel Maarschalk) to produce the *P4*, with *Power Hawk's* actuator technology and *ResQtec*'s on-board battery (or optional backpack). *ResQtec* also introduced the equally non-hydraulic but more conventional looking *EDD-FX* series (right) which is the same electric-only, rather than hydraulic pump, concept but a little slicker. We used both the *P16* and *Junkers* kit operationally for many years at a time when their competition was the hose-fed hydraulic systems from generators creating a lot of noise, tool-travel restriction and fumes. Battery tools were largely dismissed as 'toys' despite their obvious advantages and capabilities so hose-fed tools were unopposed in the market for far longer than we expected. Some would argue (rightly) that if they want to maintain the 'grunt' of a hose fed tool they can simply switch to a battery generator and this is a fair compromise but hoses and sheer size of tool can still be a problem. Enter another battery tool we started using in '97 which really 'miniaturised' rescue tools - the excellent *Ogura* system from Japan. *Ogura* were the first to use readily available 'trade' batteries; in this case a 12v *Makita* hand-drill powering a hydraulic pump to feed a miniature 4 tonne cutter, spreader or re-bar cutter via a short hydraulic

hose. Only this morning, I used a long retired set from 25 years ago to lift a quarter tonne concrete slab. It is little changed today except using 18v *Makita* batteries and with heads directly attaching to the drill/pump. Their *HRS* still has the option of an extension hose which is very useful in getting the smallest spaces. The longevity of the *Ogura* and *Powerhawk* are testament to just how good these first battery tools were. *Junkers* suffered from being too long for easy manoeuvring inside vehicles and confined spaces because it had a fixed head and handle while the *P-16* could rotate it's head to get into tight spaces and this is something taken on board by the latest battery tools where either the handle or the head or both can rotate for easier access. Nevertheless, most tools retained the longer body of the *Junkers* which evolved into the *Lukas* (or *Weber*?) range of tools. Because *Junkers, Ogura* and *Powerhawk* were seen as quirks of the industry rather than a portent of things to come, it wasn't until the turn of the century when *Holmatro* introduced their short-bodied, doodle-bug style model powered by a readily available *DeWalt* 24v battery that we really began to see some progress in the rescue industry as the ability to use a common power source caught on. Even then it has taken another 20 years for fire departments to truly be considering them as 'instead of' conventional tools rather than 'in addition to'.

SMART/APP CONNECTIVITY

It is already the case with battery tools that you get far more visual indicators of performance and function change than the old days - this may just be the battery charge status with green or red LEDs, usually on the battery but can extend to a dashboard style array of indicators like the WiFi enabled *Lukas/Hurst E3* panel on the right and *Weber*'s above that, to help you better control your cut/spread/pull placement and remaining work time. Pretty soon you'll be confronted with a fighter pilot-style array of lights and pictograms. This one includes a water icon to show that you've actually got a saltwater-proof battery attached and a temperature gauge. On from this, *Lukas* and *Hurst* and latterly *Weber* and *Genesis* have adopted a mobile or app-driven feature that allows their tools to be individually monitored for status, performance and inventory. *Libervit*'s giant wrist watch style monitoring system on the right is another useful innovation. This won't be everyone's cup of tea, particularly on the front line where any technological advance is greeted with scepticism but from a maintenance and management point of view and hopefully continuity of charging and readiness to perform, these will be a real bonus. On the downside, if you've seen the *Terminator* films you'll know that this is how the machines ultimately take over the world so make sure your online security systems are up to date and able to resist hacking. Talking of battery management, remember that modern Lithium ion batteries DO NOT have an infinite life, they will all provide somewhere between 100 discharges/recharges to over 500 and perhaps much more for the highest quality but whatever it is, there is limit and if you fail to manage the storage and charging of batteries they will decline in performance sooner rather than later. . It is worth seeking maintenance and likely discharge and cycling information when choosing a tool range and if there is a management tool available, invest in that too.

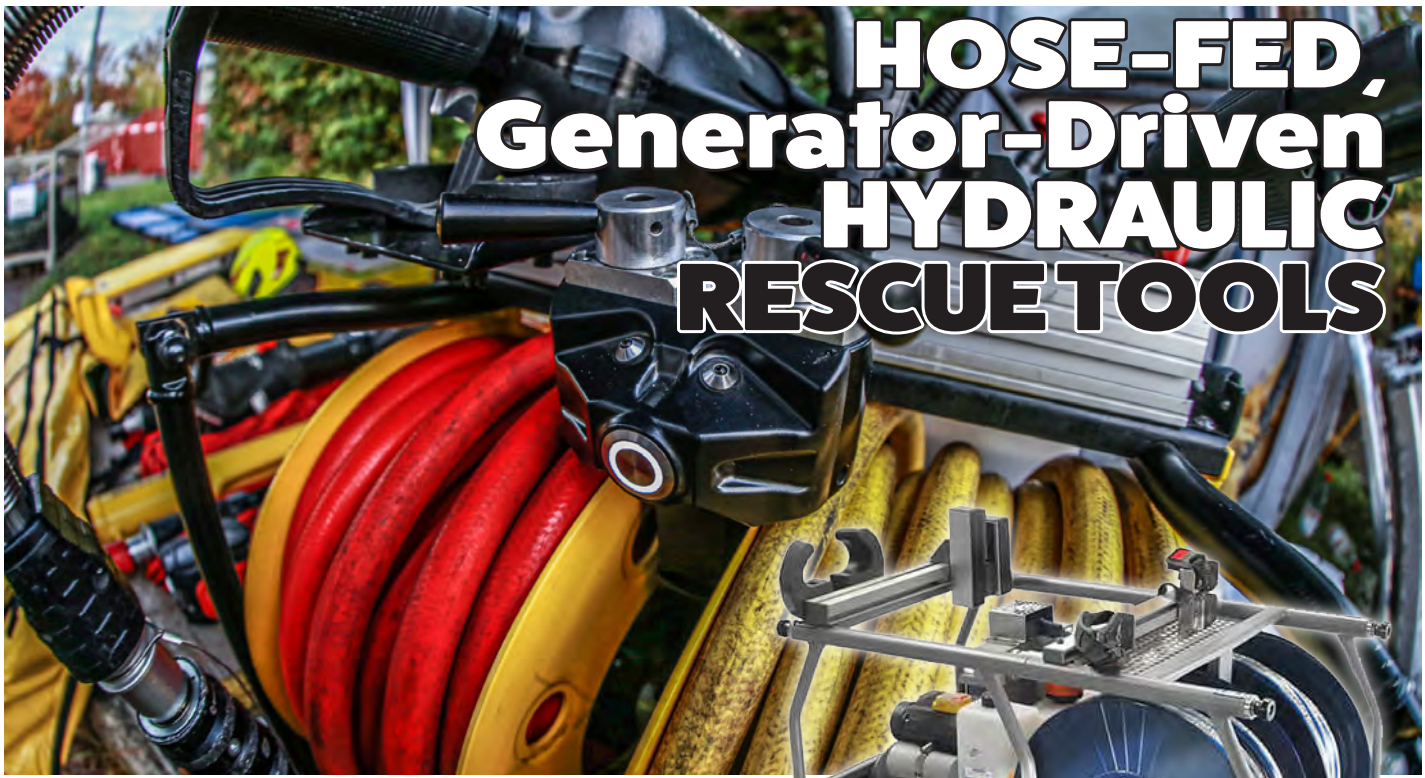
CROSSOVER FROM THE ARB INDUSTRY

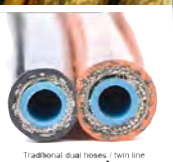
We've already mentioned the Makita multi-battery series pack and their 40v pack servicing two external batteries but two specialist companies known to rescuers are *Husqvarna* and *Stihl* which many rescue agencies use for reciprocating and quick-cut/circular saws as well as chainsaws. They not only have their own bespoke battery systems they also have excellent backpacks. Some of these battery platforms are crossing over into other relevant rescue products - *Husqvarna* for instance can now be used in *Skylotec/Actsafe*'s powered ascenders so watch this space in terms of crossover into 'hydraulic' rescue tools. Stihl too are the power source for powered ascenders from Eder Machinbau. The downside of all of these bespoke systems is the increased cost and availability compared to off-the-shelf batteries but there is no doubting their high quality and fitness for specific purposes. The rescue sector can be rightly proud to have led the way in underwater battery tools. We will see more long-duration back-pack options in the coming years like Libervit's BAS on the right and there will be a time when submersible, direct-connect batteries will be the norm.

COMMON TO ALL COMBIS, CUTTERS, SPREADERS, RAMS & SPECIALS.....

The tool length, width or height and weight are all WORKING spec so they **include the battery**. Many companies quote figures without the battery so at first glance seem lighter but when added, it has a significant affect on both the physical size and weight of a tool when in use. As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Cutting and spreading strengths vary radically from the tips to nearer the fulcrum or union.

HOSE-FED, Generator-Driven HYDRAULIC RESCUE TOOLS





Before battery there was hydraulic fluid being pumped into the tool's cylinder via a petrol/gas driven generator. There still is! Despite this magazine's 40 year crusade towards battery power, the fact remains that the majority of our own editors and contributors continue to use hose-fed hydraulics in some form or other - often alongside battery alternatives and increasingly, instead of. But for the most part - the hose - fed hydraulics remain a stalwart of many a fire 7 rescue service/dept. In some cases there's a fusion of battery powered generator pushing the hydraulic fluid through hoses so that the noise and fumes of a generator are negated while retaining the power and longevity of traditional hose-fed hydraulics. Take that element away though and there is little to no difference between the two types of tool. Indeed, next year sometime we intend to combine the two sets of tools into common tables containing both battery and hose-fed tools in the same tables for each class of tool. But for now, we'll keep them separate hoping that, by the time we get to it, other manufacturers may follow the lead of *Amkus* and put all their eggs into the battery basket. That's quite a bold move for a name synonymous in the US with hose-fed hydraulic rescue tools.

There will be a separate Guide to petrol and battery powered generators in which we can cover the generics of using hose-fed hydraulic tools. Here, we need only mention the logistics of handling tools that are connected to quite substantial hoses - there have always been two hoses - one to push hydraulic fluid into the tool and the return hose drawing it back but some like *Holmatro* run the second hose INSIDE the larger first hose - they call it *Core* and it reduces the sheer mass, the drag and the 'snaggability' of a double hose system but of course, there's a financial implication for these smarter, more convenient systems. Hose management is an important colleague skill - the tool operator should never have to manage his/her own hose lines and when they move to a new position they expect to do so unhindered. We have traditionally been able to say that hose fed systems offer much greater power and the longevity to see you through an entire, complex and convoluted vehicle rescue when batteries would have long ago given the ghost - either ran out of power or didn't have the grunt in the first place. That's no longer so much of an argument as battery power increases and durations see you through just about everything you will encounter in a normal working day. So what's driving the decision of so many to stick with hose-fed hydraulics? It's simple - 1) the sheer cost of swapping all those existing, perfectly functional tools for battery systems and 2) the simplicity of and existing training towards the generator and hose systems. You might think that battery is simple but there is a significant maintenance issue with battery charging and inventory that can be mitigated by a smart charging system and app-driven inventory but that is again an added cost. At a time when stations and even whole fire departments in the US are closing due to budget caps anything that costs you money or conversely, saves you money has to be considered. There will come a time in the not too distant future when battery become the cheaper option but that is not quite yet.

UPDATED Feb '26

Hydraulic & Mechanical Hose-fed & Battery COMBI-TOOLS

Left: Weber's hose-fed and battery systems are uniquely interchangeable - you can use the same head on either generator attached hoses or a battery. That's versatility!

COMBINATION CUTTING & SPREADING

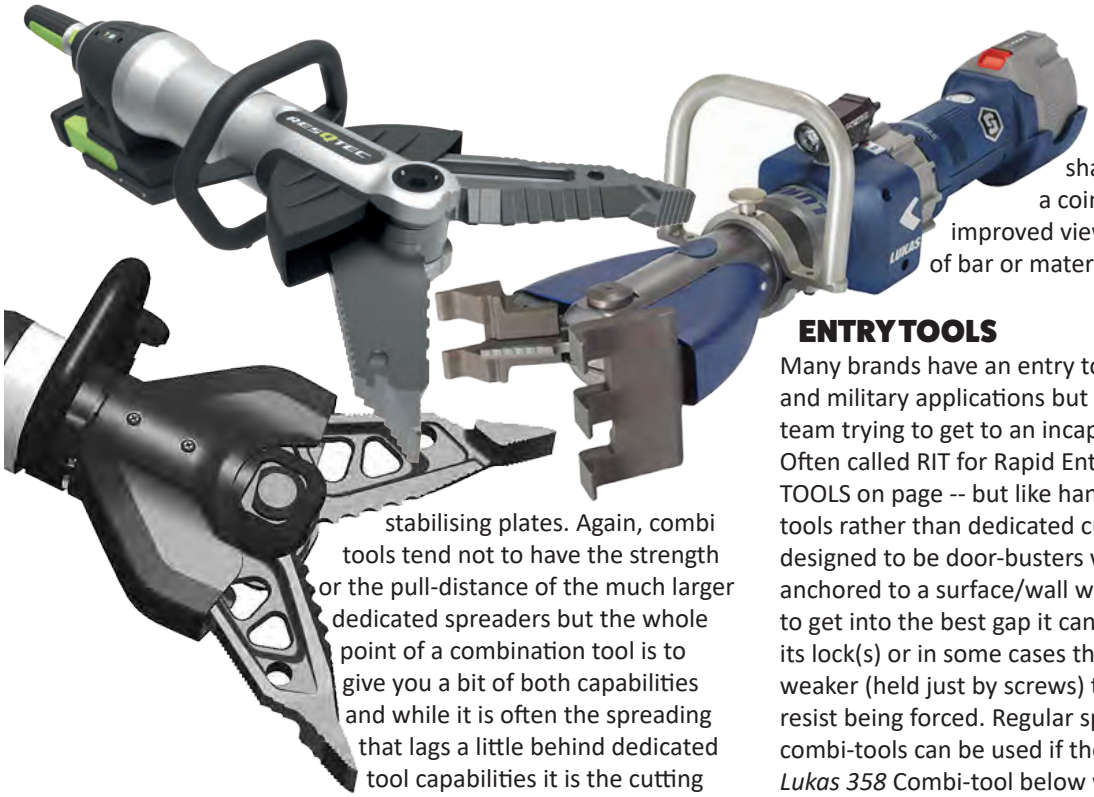
What sets a combi tool apart from dedicated cutters and spreaders? A combi is a combination cutter and spreader on the same set of blades - almost always this is a straight cutting blade with serrated edges operating in a scissor action with flattened ends that perform the spreading or squeezing function. Some major on the spreading with cutting as a secondary function - you'll know from the blade design. Some will have the means to add specialist or larger tips to the end via push-pins. Most dedicated cutters have a parrot-beak design that grasps the material being cut whereas straight blades like combis can squeeze harder materials along the blade before they're severed causing you to re-site for a second bite. There is no question that a combi-tool rarely, if ever, performs either cutting or spreading as well as the best dedicated tools but for that entire first ⅔ 's of performance bandwidth, combi-tools can hold their own and are most often the tool of choice simply because you only need the one. They fit easily into the smallest of response vehicles or even response drones..... you'll see.

BLADE/JAW DESIGNS

Combi tool blades are almost all straight blade, scissor action cutters with a spreader tip at the end of each blade.

But not all. A few variances are the entry tools like the blue *Lukas/Hurst* tool on the right which we'll come to later and the *Scorpe* tool below it in green/black which has a US-style curved cutting blade (parrot-beak) as does the Dutch *ResQtec G4*, These have two quite small spreader tips set towards the back edge of the blade. It has to be that far back to allow the parrot beak to close fully due to the curve. This parrot beak is generally preferred in the specialist cutter blades because it grabs and holds difficult to cut, harder bar material rather than spit it out as straight blades can. Straight blades overcome this to some extent by having a serrated or scalloped blade rather than perfectly straight shear blades and this helps to grip hard bar materials.

We don't see quite so much of the pivot-point notch design that we see in handheld pliers and multitools where the strongest part of the jaw, deep into the mouth of the tool, has a notch for cutting harder wires. Some appear to have an obvious rebate or curve near the blade union but some are more indicative of the blade's design requirement to rotate around a wide hub than a hard-bar cutting notch. Nevertheless, as with all blades, the highest strength is closest to this union with strengths for cutting and spreading dropping off significantly as you get towards the tips. You would therefore always try to cut hard materials within the first quarter of the blades length. Some tools have the spreader tips as a 'bolt-on' or detachable feature which gives the cutting blade better access to make a deeper cut and some are additional spreading length to an integral spreader tip like the *Holmatro Pentheon* in the title image above. Virtually all of the regular straight blade combi tools have attachment holes for pulling chains or



shapes are lighter and, possibly as a coincidence, can give you a slightly improved view of the area beneath the section of bar or material you are cutting/spreading.

stabilising plates. Again, combi tools tend not to have the strength or the pull-distance of the much larger dedicated spreaders but the whole point of a combination tool is to give you a bit of both capabilities and while it is often the spreading that lags a little behind dedicated tool capabilities it is the cutting blades that tend to be taxed more by modern car capabilities. Spreading and pulling requirements have remained reasonably constant while cutting requirements continue to increase with harder and harder materials and construction. The various indents and cut-aways that you see with some blades is simply a means to concentrate strength in certain areas of the blades and reduce weight in others. Those like the *Weber/Genesis* blades that have complete cut-away

ENTRY TOOLS

Many brands have an entry tool intended for law enforcement and military applications but are just as applicable to a medical team trying to get to an incapacitated casualty in their home. Often called RIT for Rapid Entry Tool we cover these in SPECIAL TOOLS on page -- but like hand-hydraulics, most are combi-tools rather than dedicated cutters or spreaders. The tips are designed to be door-busters where one half of the blades stays anchored to a surface/wall while the upturned blade edge tries to get into the best gap it can fit and force the door away from its lock(s) or in some cases the hinges which can be significantly weaker (held just by screws) than a lock designed specifically to resist being forced. Regular spreaders are too large but some combi-tools can be used if they can take specialist tips like the *Lukas 358* Combi-tool below which otherwise have tips that won't easily fit a door gap. Regular spreaders tend to push the door against its hinge/lock rather than forcing the door outwards away from the jam. Entry tools are not intended for vehicle extrication but with a cutting surface as well as modified spreading they can achieve far more than a hand tool or no tool at all. We have a separate Guide for Special Tools.

UPDATED Feb '26

IN THE FOLLOWING TABLES.....

COMMON TO ALL COMBIS, CUTTERS, SPREADERS, RAMS & SPECIALS.....

The tool length, width or height and weight are all WORKING spec so they **include the battery**. Many companies quote figures without the battery so at first glance seem lighter but when added, it has a significant affect on both the physical size and weight of a tool when in use. As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Cutting and spreading strengths vary radically from the tips to nearer the fulcrum or union. The cutting codes for CE and NFPA certification given below are by far the BEST way to gauge the true abilities of a tool.

All force figures are given in KiloNewtons and US (short)tons

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■
If it's an option it is shown as an outline square □□□□
A circle ● in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.
A model variant is shown in cyan and any features or specifications that differ from the standard are also in cyan.
TOOLS-IN-RANGE: refers to the other types of tool available jn this specific series of tools using this specific battery type.
■= Combi ■= Cutter ■= Spreader ■= Ram ■= Special Tools
ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries as is the case with *Holmatro's Pentheon.*
COST: As usual, this is clearly an official secret within the industry. This is because the cost of one tool is vastly different to the cost of multiples that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICALRESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure. So, only TNT in the US have the confidence to quote a price and those will give you a very rough idea of where battery powered rescue tools sit in the price hierarchy.....not cheap! And the batteries are an expensive consumable as well - eg. a *Milwaukee M18* 5Ah battery can cost you £/$/€200-300 though individuals could purchase through Amazon etc. and save a packet! The prices that are shown are a rough guide only & include local taxes/VAT. They vary with exchange rates, extra taxes etc. We usually round up to the nearest Pound£/US Dollar$/Euro€. Cost is for basic model with included accessories indicated by a solid square in the appropriate column (optional extras being an outline square). In the case of *TNT* the cost includes two batteries and a charger but tools are normally costed without batteries and chargers.

WEIGHT IN HAND: Refers to the operational weight that the rescuer experiences in using the tool so it includes any on-board batteries but not necessarily any extras like clip-on lighting or different tips.

WEIGHT of BATTERY: is for the default battery supplied or preferred by the manufacturer. Those that use 'off-the-shelf' brands like *Milwaukee* and *DeWalt* may well be able to use either higher Ah models for greater capacity/duration or lower Ah for decreased cost and perhaps weight but less duration.

BATTERY DURATION & RECHARGE TIME: Work-time or duration is much trickier as it depends on the resistance of the material being cut/spread/squeezed, the temperature, the age of the battery and even how meticulously you follow the recharge guidelines. Consequently some won't quote a figure at all and others are generous to say the least - consider most to be the absolute maximum with minimal workload. Tools last much longer carrying out hundreds of short duration cuts like the Genesis figure of <45mins compared to a few really long and hard cuts like *Homatro*'s minimum 11minute figure in like-for-like cutting/spreading their battery will match the highest time given by others cutting smaller and lighter materials. Recharge time can be more specific though it varies wildly between basic and high speed chargers. The time shown is for the charger supplied or preferred by the manufacturer.

DIMENSIONS: The Length of tool ready to work x by the width which is usually dictated by the union of the head but sometimes by the handle x the height which is the height off the ground if you lay the tool down and is usually dictated by either the handle or the battery if it is top-mounted.

IN-WATER-CAPABLE= ■ The tool/battery can be used underwater - it is not just water resistant to heavy rain.
● The tool/battery can be in heavy rain but not necessarily under water - refers mostly to hose-fed tools.

TOOL/BATTERY IP. Ingress protection for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like Milwaukee are not waterproof and tend not to quote an IP number because they are dependant on the tool to create an effective seal. Specialist batteries like Holmatro and Lukas are watertight (IP68) but you can safely assume that regular trade batteries are no more than IP54 so they are splashproof but certainly not submersible.

WiFi DIAGNOSTICS: ■ The tool and/or battery are linked to a mobile device to manage functions, servicing and inventory or ■=can be hardwired to a laptop etc. for diagnostic analysis

CUT/SPREAD/PULL/SQUEEZE FORCE: Is a range or the maximum force from lowest to highest with the much higher single, theoretical figure underlined. Actual force parameters are verified by a CE and/or NFPA cut and spread test figure. Pull force is only possible if the tips can accept a chain or adapter tip. Combi-tools that are primarily cutters may not be designed to squeeze.

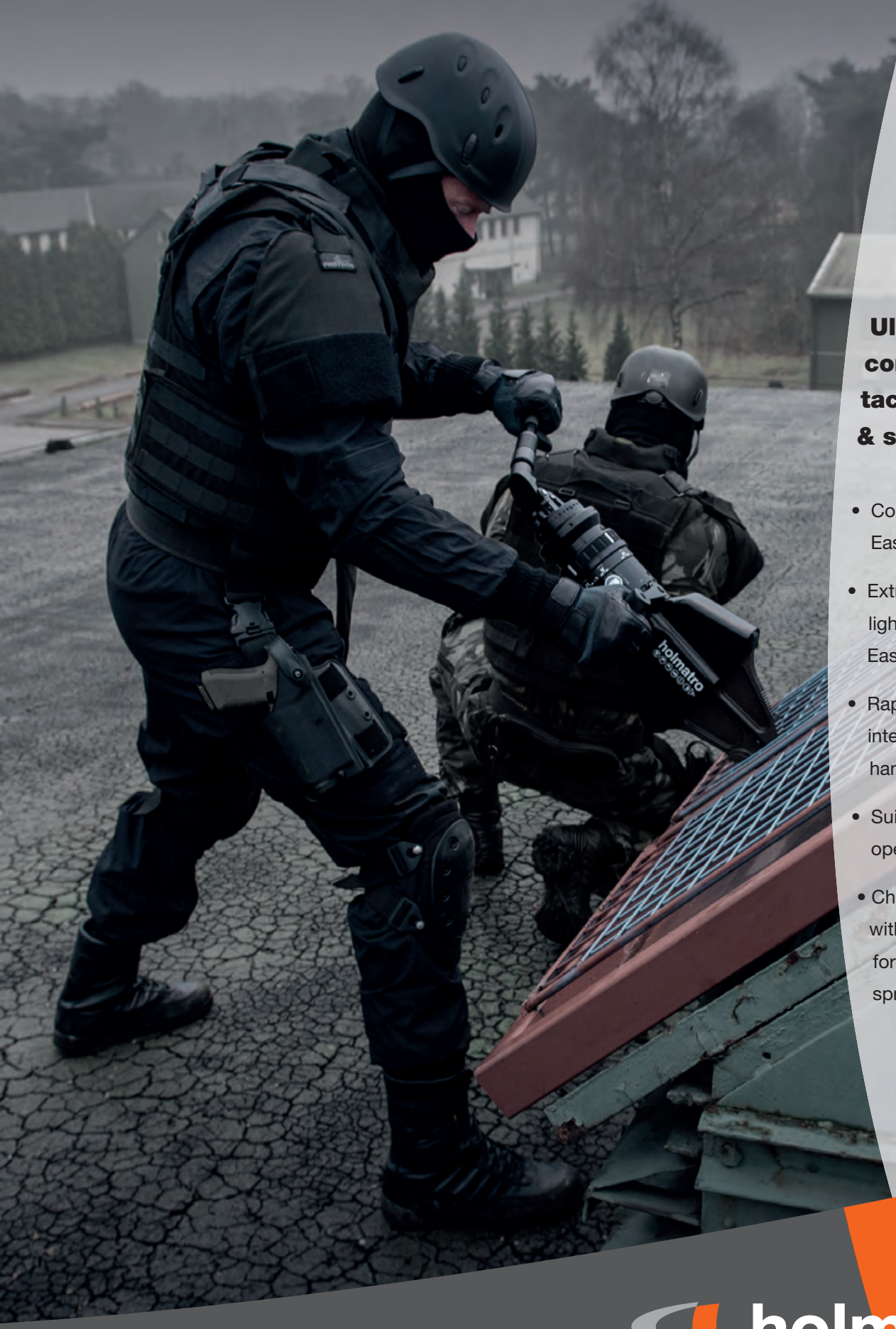
DISTANCE: Some give a range from minimum to maximum spread distance but don't forget that max distance provides only minimum force.

REMOVABLE TIPS: Increase the distance or the grip type

ROTATE HEAD/HANDLE: Can improve access if the tool has a large handle or bulky head and/or battery or simply too long.

LED LIGHTS: ■ Integral lighting from the handle or housing to illuminate the area being cut/spread.

WiFi/ Bluetooth-CAPABLE: The tool and/or battery are linked to a mobile device via Wifi &/or Bluetooth to manage functions, servicing and inventory. This category is listed twice.



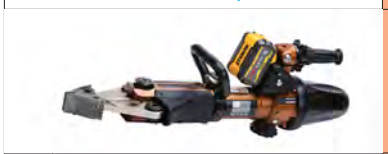
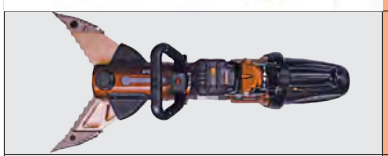
Ultra-lightweight combi tools for tactical cutting & spreading

- Compact design:
  Easy to add to your kit
- Extremely powerfull and lightweight:
  Easy to carry and handle
- Rapidly deployable with integrated or seperate hand pump
- Suited for tactical operations
- Choice between models with highest spreading force or highest spreading distance

holmatro
mastering **power**

Holmatro | Special Tactics equipment
tactical@holmatro.com | **www.holmatro.com**

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Cutter ■= Spreader ■=Ram
■= Special Tools ■= Hose-Fed Tools
●○= Partial feature or OK, but not ideal
□□□= Option.
MAX forces (underlined) = Theoretical
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	STO LENG w/TI
	Light Rescue LRCT Combi 54/60V	AMKUS			N/A	23.2kg 51 lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9,12Ah Li-ion	10-30mins 60mins	897m 35.3
	Heavy Rescue HRCT Combi 54/60V	AMKUS			N/A	27.2kg 60lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9,12Ah Li-ion	10-30mins 60mins	914m 36.9
	MDC 300 T30 BO 54/60V	EDILGRAPPA			N/A	15.7kg 34.5lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-30mins 60mins	731m 28.8
	MDC 390N-E 54/60V	EDILGRAPPA	■■■■■		N/A	23.6kg 52lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-30mins 60mins	861m 33.9
	MDC 300 T30 18/20V	EDILGRAPPA			N/A	13.1kg 28.8lb	0.6kg 1.3lb	DeWalt FlexVolt 5Ah Li-ion	12-20mins 30-75mins	748m 29.5
	E-Force 11C RIT3 28V	GENESIS RESCUE			N/A	14.9kg 32.8"	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Mil-waukee 5Ah* Li-ion	<45min 90mins	824m 32.4
	E-Force 11C SL3 28V	GENESIS RESCUE			N/A	13.6kg 30 lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Mil-waukee 5Ah* Li-ion	<45min 90mins	811m 31.9
	E-Force 14C SL3 28V	GENESIS RESCUE	■■■■■		N/A	18.8kg 41.4lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Mil-waukee 5Ah* Li-ion	<45min 90mins	927m 36.5
	E-Force 15C SL3 28V	GENESIS RESCUE			N/A	20kg 44.1lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Mil-waukee 5Ah* Li-ion	<45min 90mins	933m 36.7
	E-Force 17C SL3 28V	GENESIS RESCUE			N/A	21kg 46.3lb	1.4/ 1kg 3.2/ 2.3lb	Genesis/ Mil-waukee 5Ah* Li-ion	<45min 90mins	969m 38.1

RED DIMENSIONS TH PS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	CUT MAX FORCE OPENING ROUND BAR	SPREAD FORCE RANGE MAX FORCE DISTANCE	PULL FORCE DISTANCE SQUEEZE FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
m "	221mm 8.7"	287mm 11.3"	- - - A6 B6 C5 D6 E7 F4	454kN 51t 351mm 13.8" -	00-35.7kN 00-4t 1215kN 136.6t 356mm* 14"*	- - -	700 Bar 10.2K psi	-	■	□	-	- -	* with ERT tips=533mm/21"	amkus.com
m "	221mm 8.7"	295mm 11.6"	- - A7 B8 C7 D9 E8 F5	614kN 69t 351mm 13.8" -	29-35kN 3.2-3.9t 1579kN 177.5t 396mm* 15.6"*	- - -	700 Bar 10.2K psi	■	■	□	-	- -- -	* with ERT tips=599mm/23.6"	amkus.com
m "	245mm 9.7"	236mm 9.3"	- BK46/302-F-13 - -	375kN 42.2t - -	45-134kN 5-13.7t 302mm 11.9"	45kN 5t 64kN 7.2t	700 Bar 10.2K psi	-	■	□	-	- -		edilgrappa.com
m "	274mm 10.8"	241mm 9.5"	- BK30/390-H-22 A6 B7 C6 D7 E7	- 185mm 7.3" -	29-39.7kN 3.3-4.5t 394mm 15.5"	- - -	700 Bar 10.2K psi	-	-	□	-	- -		edilgrappa.com
m "	245mm 9.7"	339mm 13.3"	- BK46/302-F-13 - -	375kN 42.2t -	46-134kN 4.7-13.7t 302mm 11.9"	45kN 4.6t 64kN 6.5t	700 Bar 10.2K psi	-	■	□	-	- -		edilgrappa.com
m "	192mm 7.6"	241mm 9.5"	- - - A6 B7 C6 D7 E7	285mm 11.2" 28mm 1.1"	26-30kN 2.9-3.4t 215mm 8.5"	36-41kN 4-4.6t 276mm 10.9"	700 Bar 10.2K psi	■	■	-	-	- 54	*15Ah powerpack also available. Optional USAR carry-Backpack	genesisrescue.com
m "	192mm 7.6"	241mm 9.5"	- - - A7 B7 C6 D7 E7	221mm 8.7" 28mm 1.1"	24-32kN 2.7-3.6t 270mm 7.6"	34-45kN 3.8-4.6t 352mm 13.9"	700 Bar 10.2K psi	-	■	-	-	- 54	*15Ah powerpack also available	genesisrescue.com
m "	236mm 9.3"	241mm 9.5"	- - - A7 B8 C6 D8 E8 F5	285mm 11.2" 32mm 1.25"	28-40kN 3.1-4.5t 360mm 14.2"	39-56kN 4.4-6.3t 380mm 15"	700 Bar 10.2K psi	-	■	□ 4	-	- 54	*15Ah powerpack also available	genesisrescue.com
m "	236mm 9.3"	241mm 9.5"	- - - A7 B8 C6 D8 E8 F5	295mm 11.5" 32mm 1.25"	28-39kN 3.1-4.4t 370mm 14.6"	39-54kN 4.4-6t 360mm 14.2"	700 Bar 10.2K psi	■	■	□ 4	-	- 54	*15Ah powerpack also available	genesisrescue.com
m "	236mm 9.3"	241mm 9.5"	- - - A7 B9 C7 D9 E9 F6	342mm 13.5" 32mm 1.25"	29-40kN 3.3-4.5t 405mm 15.9"	36-57kN 4-6.4t 406mm 16"	700 Bar 10.2K psi	■	■	□ 4	-	- 54	*15Ah powerpack also available	genesisrescue.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Cutter ■= Spreader ■=Ram
■= Special Tools ■= Hose-Fed Tools
●○= Partial feature or OK, but not ideal
□□□= Option.
MAX forces (underlined) = Theoretical
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	STOR LENG w/TI
	PENTHEON PCT60 28V	HOLMATRO			N/A	23.4kg 51.6"	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	1011m 39.8
	PENTHEON PCT50 28V	HOLMATRO	■ ■ ■ ■ ■		N/A	20.3kg 44.8lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	898m 35.4
	PENTHEON PCT14 28V	HOLMATRO			N/A	14.2kg 31.3lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	731m 28.8
	PENTHEON PCT11 28V	HOLMATRO			N/A	13.8kg 30.4lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins	677m 26.7
	E2 SC758 25.2V	HURST JAWS of LIFE			N/A	25.5kg 56.1lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	1065m 41.9
	E2 SC358 25.2V	HURST JAWS of LIFE			N/A	19.7kg 43.3lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	956m 37.7
	E2 SC258 25.2V	HURST JAWS of LIFE			$12,415	15.8kg 34.7lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	874m 34.4
	E3connect SC758 25.2V	HURST JAWS of LIFE	■ ■ ■ ■ ■		$13,290	26kg 57.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	980m 38.6
	E3connect SC358 25.2V	HURST JAWS of LIFE			N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	876m 34.5
	E3connect SC258 25.2V	HURST JAWS of LIFE			N/A	16kg 35.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	792m 31.2

RED DIMENSIONS TH PS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	CUT MAX FORCE OPENING ROUND BAR	SPREAD FORCE RANGE MAX FORCE DISTANCE	PULL FORCE DISTANCE SQUEEZE FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi / CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
mm 5"	270mm 10.6"	275mm 10.7"	- CK45/468-J-23.4 1J 2J 3K 4K 5K A8 B9 C8 D9 E9 F4	370kN 41.6t 394mm 15.5" 40mm 1.6"	44.6-1860kN 5-209t 468mm 18.4"	105kN 11.8t 87.9kN 7.2t	720 Bar 00.4K psi	■	■	6		57 57		holmatro.com
m 4"	268mm 10.6"	273mm 10.7"	- CK43/380J-20.3 1J 2J 3K 4K 5K A7 B8 C8 D8 E8 F3	370kN 41.6t 320mm 12.6" 36mm 1.4"	43-1860kN 4.8-209t 380mm 15"	104kN 11.7t 87kN 9.8t	720 Bar 00.4K psi	■	-	6		57 57		holmatro.com
m 5"	270mm 10.6"	275mm 10.8"	- BK33/362-E-14.2 1E 2E 3E 4E 5E A5 B5 C5 D6 E4 F3	268kN 277mm 10.9" 24mm 0.9"	33-1350kN 3.7-151.7t 362mm 14.3"	- 34kN 3.8t	720 Bar 00.4K psi	-	-	6		57 57		holmatro.com
m "	270mm 10.6"	275mm 10.8"	- BK48/281-E-13.8 1E 2E 3E 4E 5E A5 B5 C5 D6 E4 F3	268kN 196mm 7.7" 24mm 0.9"	48-1350kN 5.4-151.7t 281mm 11.1"	- 44kN 4.9t	720 Bar 00.4K psi	-	-	6		57 57		holmatro.com
mm "	275mm 10.8"	284mm 11.2"	- - - A8 B9 C9 D9 E9 F5	885kN 99.5t 408mm 16.1" 40mm 1.57"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	jawsoflife.com
m "	237mm 9.3"	278mm 10.9"	- - - A7 B8 C7 D8 E7 F4	492kN 55.3t 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	jawsoflife.com
m 4"	215mm 8.5"	281mm 11.1"	- - - A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	-	-	- 54	DISCONTINUED	jawsoflife.com
m 5"	266mm 10.5"	253mm 10"	- - - A8 B9 C9 D9 E9 F5	885kN 99.5t 400mm 15.7" 40mm 1.57""	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	2	■	□ 54 58	Can use IP68 battery E2 & EWXT series discontinued	jawsoflife.com
m 4"	235mm 9.25"	253mm 10"	- - - A7 B8 C7 D8 E7 F4	492kN 55.3t 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	2	■	□ 54 58	Can use IP68 battery. E2 & EWXT series discontinued	jawsoflife.com
m 4"	210mm 8.3"	253mm 10"	- - - A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	24-700kN 2.7-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	2	■	□ 5458	Can use IP68 battery. E2 & EWXT series discontinued	jawsoflife.com
														expansion row

IMAGES NOT TO SCALE OTHER TOOLS IN RANGE: = Cutter = Spreader =Ram = Special Tools = Hose-Fed Tools = Partial feature or OK, but not ideal = Option. MAX forces (underlined) = Theoretical N/A = info Not Available/not given = (cyan border) WiFi is present on the model variant `shown in cyan	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	STO LENG w/TI
	StrongArm E100 25.2V	HURST JAWS of LIFE			N/A	11- 11.7kg 24.25- 25.8lb	1.2kg 2.7lb	Lukas 273100610 4Ah Li-ion		775 796m 30.5 31.3
	StrongArm LE100 25.2V	HURST JAWS of LIFE			N/A	11- 11.7kg 24.25- 25.8lb	1.2kg 2.7lb	Lukas 273100610 4Ah Li-ion		775 796m 30.5 31.3
	Underwater Combitool CHEBM120 28V	HYDRAM			N/A	28.75kg 63.25lb	00kg 00lb	5Ah Li-ion	00mins 66mins	900m 35.4

RED DIMENSIONS TH PS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	CUT MAX FORCE OPENING ROUND BAR	SPREAD FORCE RANGE MAX FORCE DISTANCE	PULL FORCE DISTANCE SQUEEZE FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
- mm - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Fire Rescue version with push-button release combi and door opening tips	jawsoflife.com
- mm - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Military version with push-button release combi and door opening tips Picatinny rail	jawsoflife.com
mm "	205mm 8"	325mm 12.8"	- - - -	210mm 8.27" 00mm 00"		- - -	700 Bar 10.1K psi	-	-	2*	-	■ 68 68	Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
= Cutter = Spreader =Ram
= Special Tools = Hose-Fed Tools
= Partial feature or OK, but not ideal
= Option.
MAX forces (underlined) = Theoretical
N/A = info Not Available/not given
= (cyan border) WiFi is present on the model variant `shown in cyan

SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	STOR LENGT w/TI
E2 SC758 25.2V	LUKAS			N/A	25.5kg 56.1lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	1065m 41.9
E2 SC358 25.2V	LUKAS			N/A	19.7kg 43.3lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	956m 37.7
E2 SC258 25.2V	LUKAS			N/A	15.8kg 34.7lb	0.9kg 2lb	Lukas 5Ah Li-ion	<30mins 75mins	874m 34.4
E2connect SC758 25.2V	LUKAS			N/A	25.6kg 56.3lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	987m 38.8
E2connect SC358 25.2V	LUKAS			N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	876m 34.5
E2connect SC258 25.2V	LUKAS			N/A	16kg 35.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	792m 31.2
eWCT SC758 25.2V	LUKAS			N/A	26kg 57.3lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	987m 38.8
eWCT SC358 25.2V	LUKAS			N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	876m 34.5
eWCT SC258 25.2V	LUKAS			N/A	16kg 35.2lb	1.6kg 3.5lb	Lukas 9 5Ah Li-ion	<60mins	792m 31.2
StrongArm E100 25.2V	LUKAS			N/A	11.1-11.8kg	1.3kg 2.9lb	Lukas 273100610 4Ah Li-ion	?	775 796m 30.5 31.3
StrongArm LE100 25.2V	LUKAS			N/A	11.1-11.8kg	1.3kg 2.9lb	Lukas 273100610 4Ah Li-ion	?	775 796m 30.5 31.3

RED DIMENSIONS TH PS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	CUT MAX FORCE OPENING ROUND BAR	SPREAD FORCE RANGE MAX FORCE DISTANCE	PULL FORCE DISTANCE SQUEEZE FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
mm "	275mm 10.8"	284mm 11.2"	J CK 43/475-J-25,5 1J-2K-3K-4K-5K A8 B9 C9 D9 E9	885kN 99.5t 408mm 16.1" 40mm 1.57"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	lukas.com
m "	237mm 9.3"	278mm 10.9"	I CK 38/368-I-19,7 1I-2J-3I-4J-5J A7 B8 C7 D8 E7	492kN 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	-	-	- 54	DISCONTINUED	lukas.com
m "	215mm 8.5"	281mm 11.1"	F BK 32/320-F-15.8 1G-2F-3F-4F-5G A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	-	-	- 54	DISCONTINUED	lukas.com
m "	266mm 10.5"	253mm 10"	J - 1J-2K-3K-4K-5K A8 B9 C9 D9 E9 F5	885kN 99.5t 408mm 16.1" 40mm 1.57"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	■ 2	■	□ 68 58	E2 & eWCT series discontinued. Tips options set to include Door Opening tips	lukas.com
m "	235mm 9.25"	253mm 10"	I - 1I-2J-3I-4J-5J A7 B8 C7 D8 E7 F4	492kN 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	■ 2	■	□ 68 58	E2 & eWCT series discontinued. Tips options set to include Door Opening tips	lukas.com
m "	210mm 8.3"	253mm 10"	F - 1G-2F-3F-4F-5G A6 B6 C6 D7 E7 F4	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	■ 2	■	□ 68 58	E2 & eWCT series discontinued.	lukas.com
m "	266mm 10.5"	253mm 10"	J - 1J-2K-3K-4K-5K A8 B9 C9 D9 E9 F5	885kN 31.5t 400mm 15.7" 26mm 1"	43-1500kN 4.8-168.6t 475mm 18.7"	<94kN <10.6t 340mm 13.4"	700 Bar 10.1K psi	■	-	■ 2	-	■ 68 68	DISCONTINUED	lukas.com
m "	235mm 9.25"	253mm 10"	I CK 38/368-I-19,6 1I-2J-3I-4J-5J A7 B8 C7 D8 E7 F4	492kN 309mm 12.2" 35mm 1.4"	38-1500kN 4.3-168.6t 368mm 14.5"	<61kN <6.9t 382mm 15"	700 Bar 10.1K psi	■	-	■ 2	-	■ 68 68	DISCONTINUED	lukas.com
m "	210mm 8.27"	253mm 10"	F BK 32/320-F-15.6 1G-2F-3F-4F-5G A6 B6 C6 D7 E7	280kN 31.5t 233mm 9.2" 26mm 1"	32-700kN 3.6-78.7t 321mm 12.6"	<34kN <3.8t 330mm 13.4"	700 Bar 10.1K psi	-	-	■ 2	-	■ 68 68	DISCONTINUED	lukas.com
- m - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Fire Rescue version with combi and door opening tips	lukas.com
- m - "	195mm 7.7"	210mm 8.3"	- - - A5 B3 C5 D6 E6	155kN 17.4t 207mm 8.1" 22.2mm 0.9"	28-700kN 3.2-78.7t 184-215mm 7.2-8.5"	- - -	700 Bar 10.1K psi	■	-	-	-	54 54	Military/Law Enforcement version in black	lukas.com

IMAGES NOT TO SCALE OTHER TOOLS IN RANGE: ■= Cutter ■= Spreader ■=Ram ■= Special Tools ■= Hose-Fed Tools ●○= Partial feature or OK, but not ideal □□□= Option. MAX forces (underlined) = Theoretical N/A = info Not Available/not given ■= (cyan border) WiFi is present on the model variant `shown in cyan	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	STOR LENG w/TI
	BC-300BL 18V	OGURA		●	N/A	14.5kg 32lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	703m 27.7
	BC-300X 18V	OGURA	■ ■ ■ ■	●	N/A	14kg 30.9lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	754m 29.7
	RP-V250 18v	OGURA		●	N/A	14kg 30.9 lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	558m 22"
	HRS931/ HRS-932 Shear Head 18v	OGURA	■ ■ ■ ■	●	N/A	3.9kg 8.6lb +6.2kg +13.7lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	303m 11.9 +382 +15
	HRS941/ HRS-934 Spreader 18v	OGURA		●	N/A	4.2kg 9.3lb 5.4kg 11.9lb	1/ 1.36kg 2,2/ 3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins	328m 12.9 +352 +13.
	P16 Legacy PowerBlade 12v or 16v LiGHT	POWERHAWK TECHNOLOGIES	■ ■ ■ ■	🇺🇸	N/A	*21.4kg 47lb	*4.5kg 9.9lb 15.9kg *35lb	Powerhawk 12.4Ah LiGHT 33Ah Li-ion 12v Lead Acid	<120mins <15hr	659m 27"
	P16 X Power Blade 12v	POWERHAWK TECHNOLOGIES		🇺🇸	N/A	21.6kg 47.5lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	<120mins	659m 27"
	EDD Frontliner P4FX 43.2V	POWERHAWK TECHNOLOGIES /RESQTEC		🇺🇸	N/A	21.8kg 48lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	765m 30.1
	EDD FX4-FJ 43.2V	RESQTEC	■ ■ ■ ■ ■	🇺🇸	N/A	17.1kg 37.6lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	856m 33.7
	EDD FX6-DJ 43.2V	RESQTEC		🇺🇸	N/A	21.3kg 46.8lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	950m 37.4
	EDD Frontliner G4-WX 43.2V	RESQTEC		🇺🇸	N/A	17.1kg 37.6lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 90mins	827m 32.6

RED DIMENSIONS TH PS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	CUT MAX FORCE OPENING ROUND BAR	SPREAD FORCE RANGE MAX FORCE DISTANCE	PULL FORCE DISTANCE SQUEEZE FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
m "	154mm 6.1"	288mm 11.3"	- - - -	36-549kN 4-61.7t 197mm 7.76" 25mm 1"	145-392kN 16.3-44t 300mm 11.8"	- - 74.5kN	n/a	-	■	□	-	- -	*EU uses 5Ah, US tends to use 6Ah	oguraescuetools.com
m "	154mm 6"	293mm 11.5"	- - - -	145-392.3kN 16.3-44t 197mm 7.76" -	36-567kN 4-63.7t 300mm 11.8"	- - 74.5kN	n/a	-	■	□	-	- -		oguraescuetools.com
m "	250mm 9.8"	180mm 7.1"	- - - -	600kN 67.4t 197mm 7.76" -	32-699kN 3.6-78.7t 250mm 9.8"	- - 119.6kN	n/a	-	■	□	-	- -		oguraescuetools.com
m " mm "	111mm 4.4" 186mm 7.3"	272mm 10.7" 104mm 4.1"	- - - -	98kN 11t 100mm 3.9" -	- -	- - -	n/a	-	■	-	-	- -	Heads swap out in seconds. Cutter, Spreader etc. attach via short hose or direct to the powerhead.	oguraescuetools.com
m " mm 9"	111mm 4.4" 121mm 4.8"	273mm 10.7" 78mm 3.1"	- - - -	- - -	39.3kN 4.4t 158mm 6.2"	- - -	n/a	-	■	-	-	- -	941 for US market. All heads interchangeable between power units	oguraescuetools.com
m "	254mm 10"	279mm 11"	- - - A3 B6 C3 D5 E6	93.4-200kN 10.5t 254mm 10" -	44.5-80.1kN 5-9t 254mm 10"	- - -	None	■	■	-	-	- -	interchangeable Cutter,spreader and combi heads. *Weight-in-Hand does NOT include Battery pack. Both P16&P16X can use a regular 12v car battery. *Wt = battery+controller	powerhawk.com
m "	254mm 10"	279mm 11"	- - - PENDING	93.4-200kN 10.5t 254mm 10" -	44.5-80.1kN 5-9t 254mm 10"	- - -	None	■	■	-	-	- -		powerhawk.com
m "	271mm 10.7""	274mm 10.8"	F - 1H 2F 3F 4H 5H A6 B6 C5 D6 E6	321kN 36t 236mm 9.3" -	43.7-107kN 4.9-12t 319mm 12.6"	- 96mm 3.8" -	None	■	■	□	-	- -	interchangeable Cutter,spreader and combi heads*10Ah powerpack also available	powerhawk.com rescue.resqtec.com
m "	236mm 9.3"	228mm 9"	H CK36.3-350H-17.0 1H 2H 3H 4J 5I A6 B7 C6 D7 E6	<720kN <80.9t 283mm 11.1" -	29-286kN 3.3-32.1t 350mm 13.8"	52.9-62.9kN 6--7.1t 271mm 10.7" 38.5-43.3kN 4.3-4.9t	n/a	■	■	□	-	- -	*10Ah powerpack also available	rescue.resqtec.com
m "	268mm 10.5""	235mm 9.25"	J CK44.8-432J-21.4 1J 2J 3J 4K 5K A7 B8 C7 D9 E7	1200kN 135t 358mm 14.1" -	44.8-1570kN 5-176.5t 432mm 17"	66.5-80.1kN 7.5-9t 327mm 12.9" 51.5-60.3kN 5.8-6.8t	n/a	-	-	□	-	- -	*10Ah powerpack also available	rescue.resqtec.com
m "	236mm 9.3"	228mm 9"	F BK33.8-369F-17 1H 2F 3G 4F 5G A6 B6 C6 D7 E6	<554kN <62.3t 156mm 6.1" -	33.8-485kN 3.8-54.5t 369mm 14.5"	- - 36.8-42.3kN 4.2-4.7t t	n/a	■	■	□	-	- -	*10Ah powerpack also available	rescue.resqtec.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Cutter ■= Spreader ■=Ram
■= Special Tools ■= Hose-Fed Tools
●○= Partial feature or OK, but not ideal
□□□= Option.
MAX forces (underlined) = Theoretical
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME	STOR LENGT w/TI
	Combi MK 28v	SCORPE	■■■		N/A	19.3kg 42.2lb	1kg 2.2lb	Milwaukee 5Ah Li-ion	<45mins 90mins	974m 38.3
	Combi SK 28v	SCORPE			N/A	15.1kg 33.2lb	1kg 2.2lb	Milwaukee 5Ah Li-ion	<45mins 90mins	858m 33.8
	EBFCC-28 18V	TNT RESCUE	■■■■■		N/A	25.1kg 55lb	1.1kg 2.4lb	8/9Ah MilwaukeeM18 DeWalt FlexVolt or Makita 18v Li-ion	87mins	920m 36.2
	E-Force3/ Smart SPS270 mk2 18/28V	WEBER RESCUE			N/A	13.6kg 30 lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	811m 31.9
	E-Force3/ Smart SPS360 mk2 18/28V	WEBER RESCUE			N/A	18.1kg 39.8lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	927m 36.5
	E-Force3/ Smart SPS370 mk2 18/28V	WEBER RESCUE	■■■■■		N/A	19.2kg 42.2lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	933m 36.7
	E-Force3/ Smart SPS400 mk2 18/28V	WEBER RESCUE			N/A	21kg 46.3lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	969m 38.1
	E-Force3/ Smart SPS480 mk2 18/28V	WEBER RESCUE			N/A	24.7kg 54.5lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	1062r 41.8
	E-Force3/ Smart Rit Tool 18/28V	WEBER RESCUE			N/A	13.3kg 29.3lb	1kg 2.2lb	Milwaukee 5Ah M28M18 Li-ion	<45mins 90mins	773m 30.4

RED DIMENSIONS TH PS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	CUT MAX FORCE OPENING ROUND BAR	SPREAD FORCE RANGE MAX FORCE DISTANCE	PULL FORCE DISTANCE SQUEEZE FORCE	OPERATING PRESSURE	REMOVABLE TIPS	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
m "	222mm 8.7"	248mm 9.8"	- CK37/360 H 19.3 - -	491kN 55.2t - 30mm 1.2"	45-783kN 5-88t 360mm 14.2"	- 60kN 6.7t -	700 Bar 10.2K psi	☐	■	☐ 4	-	- -		scorpe.net
m "	195mm 7.7""	248mm 9.8"	- BK30/265 E 15.1 - -	324kN 36.4t 120mm 4.7" 25mm 1"	35-691kN 3.9-77.7t 270mm 10.6"	- - -	700 Bar 10.2K psi	-		☐ 4	-	- -		scorpe.net
m "	267mm 10.5"	298mm 11.7"	- - - A8 B9 C8 D8 E9 F4	694kN 78t 343mm 13.5" 38mm 1.5"	106-1272kN 11.9-143t 422.7mm 16.6"	- - -	722 Bar 10.5K psi	■	-	☐ 4	-	- 54	Option of 3 battery ranges. TNT prices include 2 batteries & Dual Rapid charger. ESLCC twin battery DISCONTINUED	tntrescue.com
m "	236mm 9.3"	241mm 9.5"	- BK31/270G-13.6 1H-2G-3G-4H-5G A6 B7 C6 D7 E7 F3	- 221mm 8.7" 28mm 1.1"	31-591kN 3.5-66.4t 270mm 10.6"	<36kN 4t 395mm <52kN	700 Bar 10.2K psi	-	■	☐ 4	■	- 68		weber.com
m "	236mm 9.3"	241mm 9.5"	- CK36/360I-18.1 1I-2K-3J-4K-5J A7 B8 C7 D9 E8 F5	- 285mm 11.2" 32mm 1.25"	36-783kN 4-88t 360mm 14.1"	<53kN 6t 440mm <70kN	700 Bar 10.2K psi	-	■	☐ 4	■	- 68	All E-Force tools can covert to hose	weber.com
m "	236mm 9.3"	241mm 9.5"	- CK35/370H-19.2 1I-2J-3H-4J-5I A7 B8 C7 D8 E8 F5	- 295mm 11.6" 32mm 1.25"	35-783kN 3.9-88t 370mm 14.6"	<57kN 6.4t 405mm <72kN	700 Bar 10.2K psi	■	■	☐ 4	■	- 68		weber.com
m "	236mm 9.3"	241mm 9.5"	- CK35/405I-21.0 1I-2K-3J-4K-5J A7 B9 C7 D9 E9 F6	- 343mm 13.5" 32mm 1.25"	35-1071kN 3.9-120.4t 405mm 15.9"	<58kN 6.5t 450mm	700 Bar 10.2K psi	■	■	☐ 4	■	- 68		weber.com
m "	263mm 10.4"	241mm 9.5"	- CK45/480K-24.7 1K-2K-3K-4K-5K A8-B9-C9-D9-E9-F7	- 402mm 15.8" 32mm 1.25"	45-1600kN 5-180t 480mm 18.9"	<78kN 8.76t 525mm 107kN	700 Bar 10.2K psi	■	■	☐ 4	■	- 68		weber.com
m "	192mm 7.6"	241mm 9.5"	- AC140H-13,3 1H-2H-3H-4H-5H A6 B7 C6 D7 E7 F3	324kN 36.4t 241mm 9.5" 28mm 1.1"	30-1305kN 3.4-146.7t 380mm 15"	35-47kN 3.9-5.3t	700 Bar 10.2K psi	■	■	☐ 4	■	- 68		weber.com
														expansion row
														expansion row

SMART FORCE

MORE THAN A RESCUE TOOL.

BATTERY DRIVEN
RAPID INTERV

Cutting, spreading, pressin
Replaceable tips for breaking doors and w
lifting of loads, pulling obstacle

WEBER RESCUE SYSTEMS

N COMBI TOOL FOR
VENTION TEAMS

g and pulling with one device.
vindows, cutting steel and security sections,
es or opening vehicles (extrication).

Weber Rescue UK
Essex CO9 2EX
rescue@weberuk.com

Genesis RESCUE SYSTEMS
Kettering, OH 45429
https://genesisrescue.com

www.weber-rescue.com

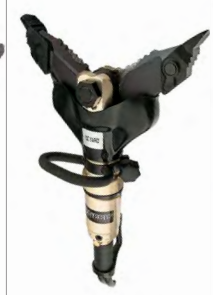
Discover more!

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Cutter
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
CUT/SPREAD/SQUEEZE forces= Theoretical

N/A = info Not Available/not given



MODEL SERIES VARIANT Product Code	MDC360	11C SL2	14C Vario	15C Vario	17C Brute Vario	CORE CT 5111
COMPANY	EDILGRAPPA	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	HOLMATI
TOOLS IN RANGE	■■■■■		■■■■■			
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT exc hose	00kg 00lb	23.8kg 10.8lb	14.9kg 32.8lb	16kg 35.3lb	18.3kg 40.3 lb	
LENGTH	00mm 00"	649mm 25.6"	765mm 30.1"	771mm 30.5"	807mm 31.8"	677mm 26.7"
WIDTH	00mm 00"	190mm 7.5"	236mm 9.3"	236mm 9.3"	236mm 9.3"	270mm 10.6"
DEPTH	00mm 00"	196mm 7.7"	241mm 9.5"	206mm 8.1"	206mm 8.1"	275mm 10.8"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	- - - A0 B0 C0 D0 E0	- - - A6 B5 C6 D6 E7	- - - A6 B8 C6 D8 E7	- - - A6 B6 C6 D8 E7	- - - A7 B9 C7 D9 E9	- BK48/281-E- 1E 2E 3E 4E A5 B5 C5 D6
CUTTER FORCE OPENING ROUND BAR	?? 0mm / 0" -	?? 342mm / 13.5" -	?? 257mm / 10.1" -	?? 295mm / 11.6" -	?? 340mm / 13.4" -	268kN / 30 196mm / 7. 24mm / 0.9
SPREAD FORCE DISTANCE	0-0kN 00USt 0mm / 0"	32-40.5kN 3.5-4.4USt 265mm / 10.4"	38.5-42.5kN 4.3-4.7USt 370mm / 14.6"	36-44kN 4-4.9USt 365mm / 14.4"	34.9-43.4kN 3.9-3.7USt 425mm / 16.7"	48-1350k 5.4-151.7u 281mm / 11
PULL FORCE DISTANCE SQUEEZE FORCE	0-0kN 00USt 0mm / 0" -	26-37kN 2.9-4.1USt 406mm / 16" -	39-48.5kN 4.3-5.4USt 396mm / 15.6" -	40.4-59kN 4.5-6.6USt 346mm / 13.6" -	36.6-57kN 4.1-6.4USt 402mm / 15.8" -	- - - 44kN / 4.9
OPERATING PRESSURE	700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi	
REMOVABLE TIPS	-	-	-	■	-	-
ROTATE HEAD/HANDLE	-	■360°	■360°	■360°	■360°	-
OPERATING TEMP	?	?	?	?	?	?
LED LIGHTS	-	-	-	-		6
IN-WATER-CAPABLE IP#	? ?	? ?	? ?	? ?	? ?	● 57
NOTES						
WEBSITE	edilgrappa.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	holmatro.co

	CORE CT 5114 ST	CORE CT 5150	CORE CT 5160	SC357	CHU 2010 CX	CHU 290 CX	CHU 2900 CX
RO	HOLMATRO	HOLMATRO	HOLMATRO	HURST JAWS of LIFE	HYDRAM	HYDRAM	HYDRAM
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
					12.6kg 27.7lb	13.38kg 44.7lb	14.88kg 32.8lb
	731mm 28.8"	898mm 35.4"	1011mm 39.8"	774mm 30.5"	685mm 26.9"	747mm 29.4"	758mm 29.8"
	270mm 10.6"	268mm 10.6"	270mm 10.6"	228mm 9"	240mm 9.4"	249mm 9.8"	249mm 9.8"
	275mm 10.8"	273mm 10.7"	275mm 10.7"	172mm 6.8"	175mm 6.8"	202mm 7.9"	202mm 7.9"
13.8 5E E4 F3	- BK33/362-E-14.2 1E 2E 3E 4E 5E A5 B5 C5 D6 E4 F3	- CK43/380J-20.3 1J 2J 3K 4K 5K A7 B8 C8 D8 E8 F3	- CK45/468-J-23.4 1J 2J 3K 4K 5K A8 B9 C8 D9 E9 F4	- - - A7 B8 C7 D8 E7 F4	F CC145-F-12.6 - A7 B8 C6 D7 E9	H CC103-H-13.38 1I 2J 3I 4J 5J A7 B8 C7 D7 E8	H CC103-H-14.88 - A7 B8 C6 D7 E9
USt 7" 9"	268kN / 30USt 277mm / 10.9" 24mm / 0.9"	370kN / 41.6USt 320mm / 12.6" 36mm / 1.4"	370kN / 41.6USt 394mm / 15.5" 40mm / 1.6"	492kN / 55.3USt 309mm / 12.2" 35mm / 1.4"	375kN / 42.1USt 210mm / 8.2" ?	6594kN / 741USt 290mm / 11.4" 33mm / 1.3"	375kN / 42.1USt 290mm / 11.4" ?
N USt .1"	33-1350kN 3.7-151.7USt 362mm / 14.3"	43-1860kN 4.8-209USt 380mm / 15"	44.6-1860kN 5-209USt 468mm / 8.4"	38-1500kN 4.3-168.6USt 368mm / 14.5"	122kN 13.7USt ?mm / ?"	122kN 13.7USt ?mm / ?"	163kN 13.7USt ?mm / ?"
t	- - - 34kN / 3.8t	104kN 11.7USt 87kN / 9.8t	105kN 11.8USt 87.9kN / 7.2t	<61kN <6.9USt382mm / 15" -	- - - -	- - - -	- - - -
					700Bar/10.1K psi	700Bar/10.1K psi	700Bar/10.1K psi
	-	■	■	■	- -	- -	- -
	-	-	■	-	-	-	-
	?	?	?	?	?	?	?
	6	6	6	-	-	-	-
	● 57	● 57	● 57	● 54	? ?	? ?	? ?
					Cut reach/depth = 150mm	Cut reach/depth = 149mm	Cut reach/depth = 149mm
om	holmatro.com	holmatro.com	holmatro.com	jawsoflife.com	hydram.com	hydram.com	hydram.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Cutter
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
CUT/SPREAD/SQUEEZE forces= Theoretical

N/A = info Not Available/not given

MODEL SERIES VARIANT Product Code	CHEC300 CX	CHEC360 CX	CHEC3600 CX	SC358	SC758
COMPANY	HYDRAM	HYDRAM	HYDRAM	LUKAS	LUKAS
TOOLS IN RANGE	■■■■	■■■■	■■■■	■■■■■	■■■■■
ORIGIN	France	France	France	Germany	Germany
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT exc hose	14.68kg 32lb	14.88kg 44.7lb	16.68kg 36.7lb	14.8kg 32.6lb	20.7kg 45.6lb
LENGTH	802mm 31.5"	802mm 31.5"	812mm 31.9"	774mm 30.5"	876mm 34.4"
WIDTH	249mm 9.8"	249mm 9.8"	249mm 9.8"	228mm 9"	301mm 11.8"
DEPTH	202mm 7.9"	202mm 7.9"	202mm 7.0"	172mm 6.8"	206mm 8.1"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	H BK25-365-H-14.68 - A? B? C? D? E?	H CC103-H-13.38 - A7 B8 C6 D7 E9	H CK40-365-H-16.68 - A7 B8 C6 D7 E9	I CK 38/368-I-14.8 1I-2J-3I-4J-5J A7 B8 C7 D8 E7	J CK 43/475-J-20.7 1J-2K-3K-4K-5K A8 B9 C9 D9 E9
CUTTER FORCE OPENING ROUND BAR	694kN / 78USt 300mm / 11.81" ?	694kN / 78USt 365mm / 14.3" 33mm / 1.3"	950kN / 106.8USt 365mm / 14.3" ?	492kN / 55.3USt 309mm / 12.2" 35mm / 1.4"1.4"	885kN / 99.5USt 408mm / 16.1" 40mm / 1.57"
SPREAD FORCE DISTANCE	54kN 6USt ?mm / ?"	70kN 7.8USt ?mm / ?"	80kN 9USt ?mm / ?"	38-1500kN 4.3-168.6USt 368mm / 14.5"	43-1500kN 4.8-168.6USt 475mm / 18.7"
PULL FORCE DISTANCE SQUEEZE FORCE	- - - -	- - - -	- - - -	<61kN <6.9USt 382mm / 15" -	<94kN <10.6USt 340mm / 13.4" -
OPERATING PRESSURE	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi
REMOVABLE TIPS	- -	- -	- -	■	■
ROTATE HEAD/HANDLE	-	-	-	-	-
OPERATING TEMP	?	?	?	?	?
LED LIGHTS	-	-	-	-	-
IN-WATER-CAPABLE IP#	? ?	? ?	? ?	● 54	● 54
NOTES	Cut reach/depth = 110mm	Cut reach/depth = 110mm	Cut reach/depth = 110mm	'Shark tooth' tips for enhanced grip	
WEBSITE	hydram.com	hydram.com	hydram.com	lukas.com/rescue	lukas.com/rescue

OPTIMUM PERFORMANCE. LONG ENGINE LIFE. ETHANOL FREE.

PREMIUM PREMIXED FUEL: STIHL MOTOMIX.

AVAILABLE AT YOUR LOCAL **STIHL APPROVED DEALER**

STIHL MotoMix is designed for 2-stroke, 2-MIX and 4-MIX STIHL engines and is patented to be the best formulation for petrol machines.

The fuel has been optimised so petrol machines accelerate up to working speed even faster. It uses STIHL's premium 2-stroke oil, HP Ultra, and has been formulated to provide better protection & lubrication for petrol engines. Plus, STIHL MotoMix has virtually no olefins or aromatic compounds, meaning it has cleaner emissions compared to regular fuels.

And best of all, STIHL MotoMix has a shelf life of up to 5 years in the original container in a cool, dry environment.

AVAILABLE IN 1 & 5 LITRE CANISTERS. DIRECT DELIVERY FOR 55 & 200 LITRE DRUMS.

FIND OUT MORE AT **STIHL.CO.UK**

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Cutter
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
CUT/SPREAD/SQUEEZE forces= Theoretical

N/A = info Not Available/not given

MODEL SERIES VARIANT Product Code	G4-WX Frontliner	FX4-DJ Frontliner	FX6-DJ Frontliner	SLCC-20 Legacy	BFCC-28 Legacy	SLCC-3 Legacy
COMPANY	RESQTEC	RESQTEC	RESQTEC	TNT RESCUE	TNT RESCUE	TNT RESC
TOOLS IN RANGE	■■■■■				■■■■■	
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT exc hose	11.3kg 24.9lb	11.8kg 26lb	15.8kg 34.8lb	00kg 00lb	00kg 00lb	00kg 00lb
LENGTH	827mm 32.6"	856mm 33.7"	950mm 37.4"	920mm 36.2"	920mm 36.2"	920mm 36.2"
WIDTH	236mm 9.3"	236mm 9.3"	268mm 10.5""	267mm 10.5"	267mm 10.5"	267mm 10.5"
DEPTH	228mm 9"	228mm 9"	235mm 9.25"	298mm 11.7"	298mm 11.7"	298mm 11.7"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	F BK33.8-369F-17 1H 2F 3G 4F 5G A6 B6 C6 D7 E6	H CK36.3-350H-17.0 1H 2H 3H 4J 5I A6 B7 C6 D7 E6	J CK44.8-434J-15.8 1J 2J 3J 4K 5K A7 B8 C7 D9 E7	- - - A8 B9 C8 D8 E9 F4	- - - A8 B9 C8 D8 E9 F4	- - - A8 B9 C8 D8
CUTTER FORCE OPENING ROUND BAR	<554kN / <62.3USt 156mm / 6.1" 00mm / 00"	<720kN / <80.9USt 283mm / 11.1" 00mm / 00"	1035kN / 135USt 358mm / 14.1" 40mm / 1.6"	694kN / 78USt 343mm / 13.5" 38mm / 1.5"	694kN / 78USt 343mm / 13.5" 38mm / 1.5"	694kN / 78 343mm / 13 38mm / 1.5
SPREAD FORCE DISTANCE	33.8-485kN 3.8-54.5USt 369mm / 14.5"	29-286kN 3.3-32.1USt 350mm / 13.8"	131-1570kN 14.7-176.5USt 434mm / 17"	106-1272kN 11.9-143USt 422.7mm / 16.6"	106-1272kN 11.9-143USt 422.7mm / 16.6"	106-1272 11.9-143U 422.7mm / 1
PULL FORCE DISTANCE SQUEEZE FORCE	- - - 37-42kN/4.2-4.7USt	52.9-62.9kN 6--7.1USt 271mm / 10.7" 38-43kN/4.3-4.9USt	66.5-80.1kN 7.5-9USt 327mm / 12.9" 51-60kN/5.8-6.8USt	- - - -	- - - -	- - - -
OPERATING PRESSURE				700Bar / 10.2K psi	700Bar / 10.2K psi	700Bar / 10.2
REMOVABLE TIPS	■	■	-	-	-	-
ROTATE HEAD/HANDLE	■	■	-	-	-	-
OPERATING TEMP	?	?	?	?	?	?
LED LIGHTS				-	-	-
IN-WATER-CAPABLE IP#	? ?	? ?	? ?	■ 64	■ 64	■ 64
NOTES						Chain pack avai for pulling
WEBSITE	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	tntrescue.com	tntrescue.com	tntrescue.c

0		SPS270 mk2	SPS360 mk2	SPS370 mk2	SPS400 mk2	SPS480 mk2	
CUE		WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	
		N/A	N/A	N/A	N/A	N/A	
		9.7kg 21lb	14.2kg 31lb	15.4kg 33.9lb	17kg 37.5lb	21kg 46lb	
		649mm 25.5"	765mm 30.1"	771mm 30.3"	807mm 31.7"	1062mm 41.8"	
		236mm 9.3"	236mm 9.3"	236mm 9.3"	236mm 9.3"	263mm 10.4"	
		152mm 5.9"	158mm 6.2"	158mm 6.2"	161mm 6.3"	241mm 9.5"	
E9 F4		- BK31/270G-9.7 1H-2G-3G-4H-5G A6 B7 C6 D7 E7 F3	- CK36/360I-14.2 1I-2K-3J-4K-5J A7 B8 C7 D9 E8 F5	- CK35/370I-15.4 1I-2K-3J-4K-5J A7 B8 C7 D8 E8 F5	- CK35/405I-17 1I-2K-3J-4K-5J A7 B9 C7 D9 E9 F6	- CK45/480K-21 1K-2K-3K-4K-5K A8 B9 C9 D9 E9 F7	
USt .5" 5"		- 221mm / 8.7" 28mm / 1.1"	- 285mm / 11.2" 32mm /1.25"	- 285mm / 11.2" 32mm /1.25"	- 343mm /13.5" 32mm / 1.25"	- 402mm / 15.8" 32mm / 1.25"	
kN USt 6.6"		31-591kN 3.5-66.4USt 270mm / 10.6"	36-783kN 4-88USt 360mm / 14.1"	35-783kN 4-88USt 370mm / 14.5"	35-1071kN 3.9-120.4USt 405mm / 15.9"	45-1600kN 5-180USt 480mm / 18.9"	
		<36kN 4USt 395mm/15.5" <52kN / 5.8USt	<53kN 6USt 440mm/17.3" <70kN / 00USt	<57kN 0USt 410mm/16.1" <70kN / 7.8USt	<58kN 6.5t 450mm/17.7" <00kN / 00USt	<78kN 8.76USt 525mm/20.6" 107kN / 12USt	
K psi		700Bar / 10.2K psi	700Bar / 10.2K psi	700Bar / 10.2K psi	700Bar / 10.2K psi	700Bar / 10.2K psi	
		-	-	■	■	■	
		■360°	■360°	■360°	■360°	■	
		?	?	?	?	?	
		4	4	4	4	4	
		? ?	? ?	? ?	? ?	? ?	
ilable		All Genesis battery tools can convert to hose and vice-versa	All Genesis battery tools can convert to hose and vice-versa	All Genesis battery tools can convert to hose and vice-versa	All Genesis battery tools can convert to hose and vice-versa	All Genesis battery tools can convert to hose and vice-versa	
om		weber.com	weber.com	weber.com	weber.com	weber.com	

'hydraulic' BATTERY DEDICATED CUTTERS

Above: the newest models in Holmatro's & Lukas' ranges are mini cutters using standard 18v batteries, excellent for small spaces, pedals, seat-backs, rebar, padlocks & chains etc.

Our title picture shows a great demonstration of how versatile some battery tools have become, in this case the *Holmatro Pentheon* series with full underwater cutting capability. It's not quite so good as a water safety promotion with a fine example of what NOT to wear when working in or near water, a non-buoyant firefighting tunic that probably weighs a ton and a half when wet. Even waist-deep water is a hazard if this firefighter suffers a medical event or is incapacitated in some way. For the purposes of this article we're going to pretend that this tunic is one of a new generation with integrated self-inflating life jacket that only inflates upon full immersion not when doused by a fire hose.

Dedicated cutters are perhaps the core tool of any rescue range - there tend to be more of them and it seems that more time and effort is spent on their design and performance than the others. The previous section was on combination tools and those are all cutters as well as spreaders so you should also refer to that selection of battery tools in considering what you need of your cutter and whether the versatility of the combi-tool is more advantageous than the generally greater cutting performance of a dedicated tool. If you include the previous 50 combi-tools in your shopping list of potential cutting tools you have over 120 models to choose from. These are all direct-connect battery systems. Although we have mentioned *Libervit*'s batteries and underwater prowess, their tools have not been included in the battery tools guides because they are regular hose-fed hydraulics that operate from a battery driven pump. Bear in mind that most hose-fed hydraulic tools can be run from hoses to a battery-powered hydraulic pump rather than a fossil-fuel generator and some, like the entire *Weber* range can convert between being hose-fed or integral battery-driven. For battery Tools, refer to the introduction to the battery tool guide on page 12. Some data/features headers differ between each type of tool.

BLADE DESIGN

A fully curved parrot beak blade is now a rare beast indeed but there was a time when it was the only game in town for cutter blades. Now, they may look like a full curve but they all have a straight section like the *Edilgrappa* model below. This parrot beak was generally preferred in the specialist cutter blades because it grabs and holds difficult to cut, harder bar material rather than spit it out as a scissor-straight blade might. However, straight blades quickly edged into the market alongside parrot-beak blades partly because combi-tools mostly need to be straight blades to accommodate spreading tips and partly because a serrated or scalloped blade was introduced to help grip hard bar materials rather than perfectly straight shearing blades. We don't see quite so much of the pivot-point notch design that we see in handheld pliers and multitools where the strongest part of the jaw, deep into the mouth of the tool, has a notch for cutting harder wires but they are an obvious presence on TNT's models which we have listed as a straight blade. Some appear to have an obvious rebate or curve near the blade union but this can be more indicative of the blade's design requirement to rotate around a wide hub than a hard-bar cutting notch. Nevertheless, as with all blades, the highest strength is closest to this union with strengths for

SMART FORCE

MORE THAN A RESCUE TOOL.

ADVANCED POWER

18V BATTERY

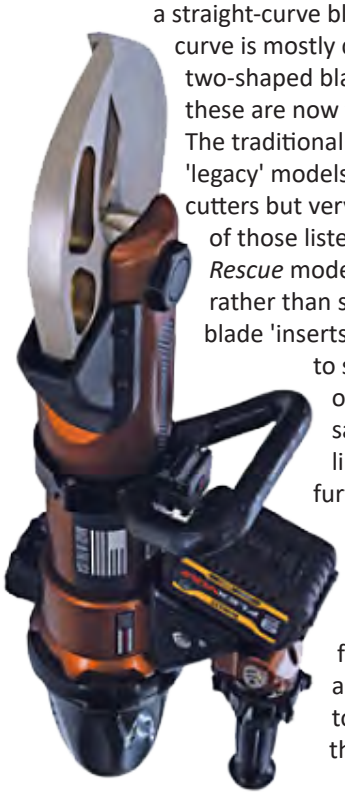
- M18™ FORGE™ battery that is guaranteed not to let the user down during any rescue operation
- One battery for all applications: 17 rescue tools and 200+ compatible MILWAUKEE tools

WEBER-RESCUE.COM/18V-BATTERY

cutting dropping off significantly as you get towards the tips. You would therefore always try to cut hard materials within the first quarter of the blades length. Again, don't forget that many combi tools have detachable spreader tips and can therefore be used as dedicated cutters so it is worth reviewing those models to determine if your operational needs can be met by a combi-tool. But we mentioned last time that modern car materials are taxing cutters more than spreaders and this will be a prime reason for choosing a dedicated cutter over a combi- the sheer grunt to be able to cut the toughest of materials.

Unlike combi tools with spread extensions, cutting blades tend to be a solid forged lump of hardened steel so, though smaller in size than a spreader, they're not necessarily lighter. *Weber/ Genesis* blades are unusual in having cut-away holes in their cast blades which does make them lighter and may, as we surmised last time, improve visibility of the materials around the cut.

Holmatro were the first to evolve the curve blade, first by extending the curve rather than being semi-circular and then by mimicking a spanner head and extending the front part of the curve into a straight, shearing section - this enables 'pre-cutting' of the section, especially sheet metal to ease the resistance once the material is pulled further into the high strength curve section. We now see blades that look more like a straight front section feeding into a straight rear section rather than curved. The angled junction of the two straighter blade sections still acts to capture the material being cut and force it deeper into the stronger section of blade. Because the difference between a straight-curve blade and a straight blade with less curve is mostly quite subtle we've described all such two-shaped blades as ***Str-Curve*** in our tables and these are now the norm across most product ranges. The traditional full curve parrot beak is still evident in 'legacy' models and in some smaller hand-drill style cutters but very much a minority design and most of those listed in our table as 'Curve' like the *TNT Rescue* models, are actually a much elongated curve rather than semi-circle. *Weber* have introduced blade 'inserts' with their '*Plus*' range allowing you to swap out the most abused sections of blade - this may provide significant savings and is something we will likley see more of. *Holmatro* further describe their own jaw design as 'inclined' because most of their tools have cutting jaws that are angled downwards by 30 degree. This is a useful feature even though it has yet to adopted by others, because it allows the tool to rotate further without 'trapping' the operator and gives increased access options where the body of the tool might otherwise inhibit placement of the cutting head. Which brings us to.....



ROTATE HEAD and/or HANDLE

This incline in the *Holmatro* tool is their permanently configured answer to improved access while their handle wraps around entirely allowing 360° use. Some have fixed handles that don't go all the way round but give about 270° of access like the *Power Hawk* above right which does have a 360° rear handle but the front handle uses two handle bars to add versatility rather than a full 360° wrap. Others have addressed access problems by allowing the handle to be rotated so that it doesn't get in the way of a specific cut as with *Scorpe, Weber* and *Amkus* models or by having the jaws rotate as with the *Power Hawk P16X* and *Resqtec PW4*. Another original proponent of the rotating head is the *Ogura* tool with its electric drill power-unit. The original variant, the *HRS* had a hose (now direct connection to the powerhead) that allows 360° rotation of the head but the later *RP* models (pic above) are fixed to the power unit and have a rotating front handle.

LED lighting

LED LIGHTS

Even though all helmets can have a headlamp attached and many have a light as an integral feature, they are often situation so that cutting in restricted spaces puts the cutting area into shade rather than illuminating it. The first to introduce LEDs into their rescue tools was *Holmatro*, with most manufacturers now following suit. Some have embedded LEDs into the handle while others like the *Weber* are embedded in the rear housing. If your tool doesn't have on board lighting you could simply retrofit a small LED torch/flashlight to the handle or barrel with a strap or zip-tie.

SIZE MATTERS

We mentioned in part one that contrary to our expectations and preferences when battery tools first arrived that the length and bulk would be reduced, they weren't. One or two models that started down the 'stubby' versus 'long' route like the *Power Hawk* and subsequent P4 *Resqtec* continued to evolve that line of tools to provide a modern option and the hand-drill design has continued as a separate branch but for the most part, all of the conventional cutting, spreading and combi-tools went on to be a very similar size and look as the hose-fed versions except with a battery stuck on somewhere. *Holmatro*'s new mini-cutter which has a similar cutting head to most peddle cutters shows how a battery can create a very

BATTERY CUTTERS

useful self-contained tool that can go anywhere although peddle cutters have long been run from short extensions without any problems because they were only ever operating in the footwell. This new model can be used in any area of a vehicle or for building entry or railing cutting etc. It's a high-cutting power option that can virtually be carried in a vehicle glove-box.....if you had a really, really big glove-box.

NOISE

Something we didn't elaborate on in part 1 was the noise generated by battery tools. We said and often say, that there is very little noise associated with battery tools as compared to a petrol engine or, in the case of hydraulics, a petrol/gas generator. When a battery tool is NOT being used there is virtually no noise, no background tick-over or the continuous quite loud noise of a fuel-driven generator, even the so called whisper-pumps. But when the tool is operating there is a noise, often a high-pitch whirr that increases with workload. As an example, *Libervit*'s large backpack battery with hydraulic pump generates 48 dB, the *Lukas/Hurst 799* = 69 to 74 Decibells and Holmatro's *MiniCutter* =74. Those aren't bad - compared to a 32cc chainsaw at around 80 to 103dB and of course, the petrol chainsaw continues to generate a relatively high noise even on tick-over.

IMAGES NOT TO SCALE

WiFi & BLUETOOTH DIAGNOSTICS

Most modern tool batteries already show charge status - usually with a line of green LEDs but many do much more. Some like *Holmatro* have a hard-wired diagnostics capability where the tool is linked to a laptop to assess work hours, maintenance and performance as well as Bluetooth. This can be done in the field but is generally a post-incident task undertaken back on-station. Others use a mobile app on WiFi or Bluetooth to connect remotely to a 'Smart' phone, device or wrist-monitor. *Weber*'s range of *E-Force* models has a *Smart-Force* variant which uses app-management. *Lukas/Hurst E-Connect* variants have mobile connectivity that allows their tools to be monitored for status, performance and inventory but they have also taken things a step further with an integrated dashboard on the handle to give real time information and *Libervit* have a wrist-mounted screen for tool monitoring.

LEFT: The Weber Smart-Force range uses a battery cover on the rear to keep its Milwaukee 18v battery waterproof

IN THE FOLLOWING TABLES.....

REFER TO COMMON DATA ON PAGE36/38 PLUS THIS UNIQUE CUTTERS KEY....

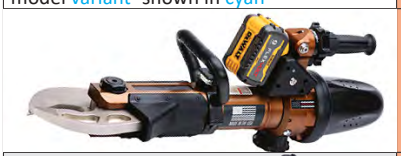
CUT FORCE: Is the maximum *theoretical* force possible but not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers flat-out refuse to quote it because they feel it is a misleading figure. Our figures are in kN (KiloNewtons) and US (Short) Ton. There are 1.10 US short tons to a a UK ton and to the metric ton (or tonne).

CUT OPENING: The maximum distance the cutter blades will open but don't forget that this does not equate to the material that can be cut as the max opening provides the least power. Check out the round bar cutting figure for more accurate interpretation of cutting prowess.

ROUND BAR: According to NFPA (and/or EN cut classifications) (see table on page 33) this is the max size of round bar that can be cut as a prescribed material with a specified Rockwell Hardness so that all tests are comparable.

ROTATE HEAD/HANDLE: Either the blade or the handle can rotate for better access to the cut or the handle will extend around the tool by 180, 270 or 360° to allow it to be used in any position.

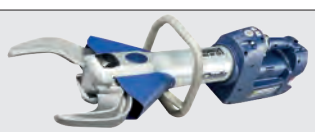
The Lukas & Hurst E3, E3-Connect and Holmatro Pentheon series of tools are all fully sealed against water immersion with batteries that can be changed under water. The Lukas/Hurst E3 & E3 Connect can even use a salt water battery that can be swapped under fresh and salt water. On the illuminated 'dashboard' present on E3 and E3 connect models (pics above) a wavy sea symbol indicates when the saltwater battery is on board. Note the EWXT model shown in the main picture has now been discontinued in favour of the E3/E3 Connect which have the full 'dashboard'. Weber's Smart range uses a waterproof cover on their 18v Milwaukee battery and top-right is their on-board dash. Libervit have used battery tools in sea water for years and even have full WiFi management including this handy Wrist-mounted monitor with 30m range, but their tools require a remote battery/hydraulic pump backpack attached via lead rather than a battery attached directly to the tool.

IMAGES NOT TO SCALE OTHER TOOLS IN RANGE: ■= Combi ■= Spreader ■=Ram ■= Special Tools ●= PARTIAL FEATURE □□□= Option **Theoretical Max Forces= underlined** **Str-Curve**=Straight section ahead of curve ■= (cyan border) WiFi is present on the model variant `shown in cyan	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	Light Rescue LRS Cutter 54/60V	AMKUS			N/A	22.2kg 48.8lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9, 12Ah Li-ion	10-15mins 60mins
	Heavy Rescue HRS Short Blade Cutter 54/60V	AMKUS	■ ■ ■		N/A	25.2kg 55.4lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9, 12Ah Li-ion	10-15mins- 60mins
	Heavy Rescue HRS Long Blade Cutter 54/60V	AMKUS			N/A	25.2kg 55.4lb	1.2kg 2.6 lb	DeWalt FlexVolt 6Ah 9, 12Ah Li-ion	10-15mins 60mins
	F180-2P BO 54/60V	EDILGRAPPA	■ ■ ■ ■		N/A	22.5kg 10.2lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-25mins 60mins
	F150N-E 54/60V	EDILGRAPPA			N/A	22.3kg 10.1lb	1.4kg 3lb	DeWalt FlexVolt 9Ah Li-ion	10-25mins 60mins
	F130-N-T30 18/20V	EDILGRAPPA	■ ■		N/A	13.1kg 28.8lb	0.6kg 1.3lb	DeWalt FlexVolt 5Ah Li-ion	10-15mins 60mins

NFPA Cutting Codes	A	B	C		D	E
MATERIAL CATEGORY	ROUND BAR	FLAT BAR	ROUND PIPE		SQUARE TUBE	ANGLE IRON
MATERIAL	A-36 Hot-rolled	A-36	Schedule 40 A-53 Grade B		A-500 Grade B	A-36
	Diameter	Thickness x Width	Nominal Size	OD x Wall Thickness	Dimension x Wall Thickness	Square Dimension x Thickness
PERFORMANCE LEVEL	(in.)	(in. x in.)	(in.)	(in. x in.)	(in. x in.)	(in. x in.)
1	3/8	1/4 x 1/2	3/8	0.68 x 0.09	1/2 x 0.06	1/2 x 1/8
2	1/2	1/4 x 1	3/4	1.05 x 0.11	1 3/4 x 0.06	1 x 1/8
3	5/8	1/4 x 2	1	1.32 x 0.13	1 x 0.08	1 1/4 x 3/16
4	3/4	1/4 x 3	1 1/4	1.66 x 0.14	1 1/4 x 0.12	1 1/2 x 3/16
5	7/8	1/4 x 4	1 1/2	1.90 x 0.15	1 1/2 x 0.12	1 1/2 x 1/4
6	1	3/8 x 3	2	2.38 x 0.15	1 3/4 x 0.12	1 3/4 x 1/4
7	1 1/4	3/8 x 4	2 1/2	2.88 x 0.20	2 x 0.15	1 1/2 x 3/8
8	1 1/2	3/8 x 5	3	3.50 x 0.22	2 1/2 x 0.19	2 x 3/8
9	1 3/4	3/8 x 6	3 1/2	4.00 x 0.23	3 x 0.19	2 1/2 x 3/8

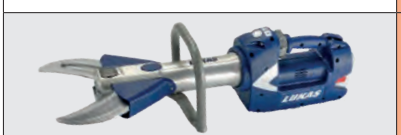
STORED DIMENSIONS LENGTH w/TIPS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
853mm 33.6"	221mm 8.7"	231mm 11.3"	- - - A6 B8 C6 D7 E7 F4	1154kN 129.7t	160mm 6.3" 25mm* 1"	700 Bar 10.2K psi	Str-Curve	- 360°	☐	-	- n/a	New in 2025 Replaced ION series *as per NFPA A6	amkus.com
826mm 32.5"	221mm 8.7"	295mm 11.6"	- - A7 B8 C7 D9 E8 F4	1560kN 175.4t	147mm 5.8" 31.75mm* 1.25"	700 Bar 10.2K psi	Str-Curve	- 360°	☐	-	- -- n/a	New in 2025 Replaced ION series *as per NFPA A7	amkus.com
856mm 33.4"	221mm 8.7"	285mm 11.2"	- - - A8 B9 C7 D9 E9 F4	1560kN 175.4t	178mm 7" 38.1mm* 1.5"	700 Bar 10.2K psi	Straight	- 360°	☐	-	- n/a	New in 2025 Replaced ION series *as per NFPA A8	amkus.com
832mm 32.75"	262mm 10.3"	300mm 11.8"	J BC180-J-22.5 - -	871kN 98t	185mm 7.3" 24mm 0.95"	700 Bar 10.2K psi	Str-Curve	- 360°	☐		- n/a		edilgrappa.com
777mm 30.6"	274mm 10.8"	244mm 9.6"	H BC150-H-20 A6 B5 C6 D7 E7	394kN 44.3t	147mm 5.8" 30mm 1.2"	700 Bar 10.2K psi	Str-Curve	- 270°	☐	-	- n/a		edilgrappa.com
679mm 33.9"	245mm 10.8"	388mm 15.3"	F AC130-F-13 -	330kN 37.1t	130mm 5.1" 24mm 0.95"	550 Bar 8K psi	Curve	- 180°	☐	-	- n/a		edilgrappa.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
Theoretical Max Forces= underlined
Str-Curve=Straight section ahead of curve
■= (cyan border) WiFi is present on the model variant `shown in cyan

	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	TP10 18/20V	EDILGRAPPA	■ ■		N/A	8.5kg 18.7lb	0.6kg 1.3lb	DeWalt FlexVolt 5Ah Li-ion	10-15mins 60mins
	E-Force ALL9 28V	GENESIS RESCUE			N/A	26.3kg 58lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	E-Force C195 SL3 NEXTGEN 28V	GENESIS RESCUE			N/A	20.6kg 45.4lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	E-Force C236 SL3 NEXTGEN 28V	GENESIS RESCUE	■ ■ ■ ■		N/A	23.5kg 51.8lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	E-Force Mass Transit Cutter 109.104.0 28V	GENESIS RESCUE			N/A	23.4kg 51.5lb	1.4kg 3.2lb 1kg 2.3lb	Genesis/ Milwaukee 5Ah* Li-ion	<45mins 90mins
	PENTHEON PCU60 28V	HOLMATRO			N/A	25kg 55.1lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	PENTHEON PCU50 28V	HOLMATRO			N/A	21.5kg 47.4lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	PENTHEON PCU40 28V	HOLMATRO	■ ■ ■		N/A	19kg 41.9lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	PENTHEON PCU30CL 28V	HOLMATRO			N/A	15.3kg 33.7lb	1.5kg 3.3lb	Holmatro PBPA287 8Ah Li-ion	>11mins 60mins
	MIni-Cutter CCU10 18V	HOLMATRO	-		N/A*	4.9kg 10.8lb	0.4kg 0.9lb	Holmatro CAS 2Ah Li-ion	<70 cuts 30mins
	E2 S 799 25.2V	HURST (IDEX	■ ■ ■		$13,900	26.2kg	1kg 2.1lb	Hurst 5Ah Li-ion	30-60mins 90mins

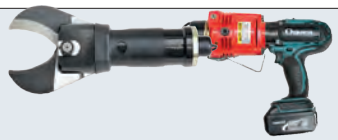
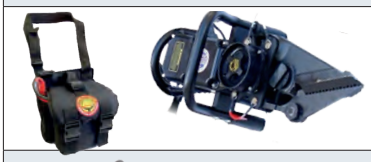
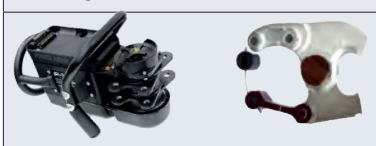
STORED DIMENSIONS LENGTH w/TIPS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW
1034mm 40.7"	264mm 10.4"	143mm 5.6"	- - - -	233kN 26.2t	52mm 2" n/a	550 Bar 8K psi	Straight	360° -	☐	-	- n/a		edilgrappa.com
1029mm 40.5"	298mm 11.7"	241mm 9.5"	- - - A9 B9 C9 D9 E9	0kN 0t	260mm 10.2" 45mm 1.75"	700 Bar 10.2K psi	Str-Curve	- 360°	-	-	- 54	*15Ah powerpack also available	genesisrescue.com
898mm 35.4"	236mm 9.3"	241mm 9.5"	- - - A8 B9 C7 D9 E9 F4	0kN 0t	185mm 7.3" 38mm 1.5"	700 Bar 10.2K psi	Str-Curve	- 360°	☐ 4	-	- 54	*15Ah powerpack also available	genesisrescue.com
994mm 39.1"	260mm 10.2"	241mm 9.5"	- - - A7 B8 C6 D8 E8 F5	0kN 0t	210mm 8.3" 32mm 1.25"	700 Bar 10.2K psi	Str-Curve	- 360°	☐ 4	-	- 54	*15Ah powerpack also available	genesisrescue.com
743mm 29.3"	205mm 8"	241mm 9.5"	- - - A4 B3 C5 D6 E6	0kN 0t	120mm 7.3" 19mm 0.75"	700 Bar 10.2K psi	Straight	- 360°	☐ 4	-	- 54	*15Ah powerpack also available	genesisrescue.com
969mm 38.1"	236mm 9.3"	241mm 9.5"	K CC205-K-25 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F4	1765kN 198.4t	205mm 8.1" 47mm 1.9"	720 Bar 10.4K psi	Str-Curve	- 360°	☐ 6	✓	■ 57 57	Inclined blade angle. Stepless speed increase	holmatro.com
892mm 35.1"	270mm 10.6"	274mm 10.8"	K BC165-K-21.5 1K 2K 3K 4K 5K A8 B8 C7 D9 E9 F4	1389kN 156.2t	182mm 7.2" 41mm 1.6"	720 Bar 10.4K psi	Str-Curve	- 360°	☐ 6	✓	■ 57 57	Inclined blade angle. Stepless speed increase	holmatro.com
832mm 32.8"	270mm 10.6"	300mm 11.7"	I BC165-I-19 1I 2I 3I 4J 5J A7 B7 C6 D7 E8 F3	764kN 85.9t	170mm 6.7" 36mm 1.4"	720 Bar 10.4K psi	Str-Curve	- 360°	☐ 6	✓	■ 57 57	Inclined blade angle. Step less speed increase	holmatro.com
811mm 31.9"	270mm 10.6"	288mm 10.8"	G BC150-F-15.3 1H 2G 3G 4F 5G A5 B5 C5 D6 E4 F3	0kN 0t	170mm 6.7" 36mm 1.4"	720 Bar 10.4K psi	Str-Curve	- 360°	☐ 6	✓	■ 57 57	Inclined blade angle. Step less speed increase	holmatro.com
554mm 21.8"	154mm 6.1"	92mm 3.6"	B AC59-B-4.9 1D 2D 3C A4 B3 C2 D4 E4	220kN 24.7t	59mm 2.3" 22mm 0.9"	720 Bar 10.4K psi	Straight	- 360°	☐	-	20 54	Inclined blade angle. *Battery included	holmatro.com
1025mm 40.4"	281mm 11.1"	269mm 10.6"	K CC 200 K-26,2 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	1310kN 147.25t	204mm 8" 45mm 1.8"	700 Bar 10.1K psi	Str-Curve	- 360°	☐ 2	-	- 54	E2 DISCONTINUED	jawsoflife.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
Theoretical Max Forces= underlined
Str-Curve=Straight section ahead of curve
■= (cyan border) WiFi is present on the model variant `shown in cyan

	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	S 799 E3/E3connect 25.2V	HURST (IDEX			N/A	26.5kg 58.3lb	1.6kg 3.5lb	Hurst 9Ah 5Ah Li-ion	<60mins 150-100mins
	S 789 E3/E3connect 25.2V	HURST (IDEX	■ ■ ■		N/A	24kg 52.8lb	1.6kg 3.5lb	Hurst 9Ah 5Ah Li-ion	<60mins 150-100mins
	S 378 E3/E3connect 25.2V	HURST (IDEX			$11,240	20kg 44lb	1.6kg 3.5lb	Hurst 9Ah 5Ah Li-ion	<60mins 150-100mins
	Underwater Cutter100 CHCBM100 28V	HYDRAM			N/A	27.8kg 61.2lb	00kg 00lb	5Ah Li-ion	00mins 66mins
	Underwater Cutter150 CHCBM150 28V	HYDRAM	■ ■ ■		N/A	28.3kg 62.3lb	00kg 00lb	5Ah Li-ion	00mins 66mins
	Underwater Cable Cutter CHCBM100 28V	HYDRAM			N/A	26.75kg 59lb	00kg 00lb	5Ah Li-ion	00mins 66mins
	E2 S 799-Beast 25.2V	LUKAS (IDEX)			N/A	26.5kg 58.3lb	1.2kg 2.7lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	E2 S 788 25.2V	LUKAS (IDEX)			N/A	23.8kg 52.4lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	E2 S 377 25.2V	LUKAS (IDEX)	■ ■ ■		N/A	20.5kg 45.1lb	1.2kg 2.7lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	E2 S 312 25.2V	LUKAS (IDEX)			N/A	20kg 44lb	1.2kg 2.7lb	Lukas 9Ah 5Ah Li-ion	30-60mins 75-150mins
	Powercut S 120e 90-20-10 18V	LUKAS (IDEX)	-		N/A	3.7kg 8.1lb	1/ 1.36kg 2.2-3lb	Makita 5/6Ah* Li-ion	<15mins 55-120mins

STORED DIMENSIONS LENGTH w/TIPS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
963mm 37.9"	265mm 10.4"	253mm 10"	K - 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	1310kN 147.25t	204mm 8" 45mm 1.8"	700 Bar 10.1K psi	Str-Curve	- 360°	2	■	68 58	5Ah battery reduces length by 20mm	jawsoflife.com
939mm 37"	266mm 10.5"	253mm 10"	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	1100kN 123.6t	205mm 8" 42mm 1.6"	700 Bar 10.1K psi	Str-Curve	- 360°	2	■	68 58	5Ah battery reduces length by 20mm	jawsoflife.com
880mm 34.6"	235mm 9.25"	253mm 10"	I - 1I-2J-3K-4J-5J A7 B8 C7 D8 E8 F4	760kN 85.4t	202mm 7.9" 33mm 1.3"	700 Bar 10.1K psi	Curve	- 360°	2	■	68 58	5Ah battery reduces length by 20mm	jawsoflife.com
820mm 00"	205mm 00"	325mm 00"	-	490kN 55t	00mm 00mm	700 Bar 10.1K psi	Curve	-	2*	-	68 68	Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com
850mm 00"	205mm 00"	325mm 00"	-	490kN 55t	00mm 00mm	700 Bar 10.1K psi	Curve	-	2*	-	68 68	Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com
815mm 00"	205mm 00"	325mm 00"	-	490kN 55t	20mm 15mm	700 Bar 10.1K psi	Curve	-	2*	-	68 68	MOVE to SPECIAL TOOLS GUIDE Waterproof to 120.9m/398ft *300-3000 lumen	hydram.com
1025mm 40.4"	281mm 11.1"	269mm 10.6"	K CC 200 K-26,2 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	1376kN 155.7t	204mm 8" 45mm 1.8"	700 Bar 10.1K psi	Str-Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
1000mm 39.4"	266mm 10.5"	281mm 10.1"	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F4	1100kN 123.6t	200mm 7.7" 42mm 1.6"	700 Bar 10.1K psi	Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
934mm 36.8"	237mm 9.3"	281mm 10.1"	I - 1I-2J-3I-4J-5J A7 B8 C7 D7 E8	650kN 73t	206mm 8.1" 33mm 1.3"	700 Bar 10.1K psi	Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
917mm 36.1"	237mm 9.3"	281mm 11.1"	I BC 160 I - 19,3 1I-2J-3I-4J-5J A7 B8 C7 D7 E7	680kN 76.4t	160mm 6.3" 35mm 1.4"	700 Bar 10.1K psi	Curve	- 360°	2	-	- 54	E2 range DISCONTINUED	lukas.com
425mm 16.7"	127.3mm 5"	81.6mm 3.2"	E - 1E - 2C - 3B A5-B3-C2-D3-E3	183kN 20.5t	52.3mm 2" 22mm 0.86"	-	Straight	-	-	-	- 44	NEW in 2025 *EU uses 5Ah, US tends to use 6Ah	lukas.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
Theoretical Max Forces= underlined
Str-Curve=Straight section ahead of curve
■= (cyan border) WiFi is present on the model variant `shown in cyan

	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	E3/E3connect S 799 25.2V	LUKAS (IDEX)	■ ■ ■		N/A	26.5kg 58.3lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	<60mins 150-100mins
	E3/E3connect S 789 25.2V	LUKAS (IDEX)			N/A	24kg 53lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	<60mins 150-100mins
	E3/E3connect S 378 25.2V	LUKAS (IDEX)	■ ■ ■		N/A	20kg 44lb	1.6kg 3.5lb	Lukas 9Ah 5Ah Li-ion	<60mins 150-100mins
	RP-C160 18v	OGURA	■ ■ ■	●	N/A	14.7kg 32.4 lb	1/ 1.36kg 2.2-3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins
	HRS931/ HRS-932 Shear Head 18v	OGURA	■ ■ ■ ■	●	N/A	3.9kg 8.6lb +6.2kg +13.7lb	1/ 1.36kg 2.2-3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins
	HRS941/ HRS-932S 'Stubby' Shear Head 18v	OGURA		●	N/A	4.2kg 9.3lb +5.7kg +12.5lb	1/ 1.36kg 2.2-3lb	Makita 5/6Ah* Li-ion	<12mins 55-120mins
	P16 Legacy PowerBlade 12v or 16v LiGHT	POWERHAWK TECHNOLOGIES	■ ■ ■ ■		N/A	*21.4kg 47lb	*4.5kg 9.9lb 15.9kg *35lb	Powerhawk 12.4Ah LiGHT 33Ah Li-ion 12v Lead Acid	? <120mins <15hr
	P-16X PowerBlade CS-1602LW 7.5/12v	POWERHAWK TECHNOLOGIES			N/A	22.1kg 48.7lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins
	P-16X Shredder Blade C1604 7.5/12v	POWERHAWK TECHNOLOGIES	■ ■ ■ ■		N/A	21.1kg 46.5lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins
	P-16X Curved Blade C-1601 7.5/12v	POWERHAWK TECHNOLOGIES			N/A	21.6kg 47.5lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins
	P-16X Hatchet Blade C1603 7.5/12v	POWERHAWK TECHNOLOGIES			N/A	20.5kg 45lb	1.36kg 3lb	Powerhawk 7.5Ah Li-ion or any 12v Lead Acid source	? <120mins

STORED DIMENSIONS LENGTH w/TIPS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW
963mm 37.4"	265mm 10.4"	253mm 10"	K - 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	1376kN 155.7t	204mm 8" 45mm 1.7"	700 Bar 10.1K psi	Curve	- 360°	2		68 58	All Can use IP68 battery. E2 & EWXT Tools Discontinued	lukas.com
939mm 37"	266mm 10.5"	253mm 10"	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	1100kN 123.6t	205mm 8.1" 42mm 1.6"	700 Bar 10.1K psi	Str-Curve	- 360°	2		68 58	All Can use IP68 battery. E2 & EWXT Tools Discontinued	lukas.com
880mm 34.6"	235mm 9.25"	266mm 10.5"	I - 1I-2J-3K-4J-5J A7 B8 C7 D8 E8 F4	760kN 85.4t	202mm 8" 33mm 1.3"	700 Bar 10.1K psi	Str-Curve	- 360°	2		68 58	All Can use IP68 battery. E2 & EWXT Tools Discontinued	lukas.com
591mm 23.3"	256mm 10.1"	182mm 7.2"	- - - 1I 2D 3F 4F 5G	738kN 83t	160mm 6.3" 32mm 1.26"	N/A	Str-Curve	360°360°		-	- -	*EU uses 5Ah, US tends to use 6Ah	ogurarescuetools.com
303mm 11.9" +382mm +15"	111mm 4.4" 186mm 7.3"	272mm 10.7" 104mm 4.1"	- - - -	98kN 11t	100mm 3.9" 32mm 1.26"	N/A	Curve	360° -	-	-	- -	Heads swap out in seconds. Cutter, Spreader etc. attach via short hose or direct to the powerhead. 941 for US market. All heads interchangeable between power units	ogurarescuetools.com
328mm 12.9" +328mm +12.9"	111mm 4.4" 130mm 5.1"	273mm 10.7" 104mm 4.1"	- - - -	78.4kN 8.8t	26mm 1" 32mm 1.26"	N/A	Curve	360° 270°	-	-	- -		ogurarescuetools.com
659mm 27"	254mm 10"	279mm 11"	- - - A3 B6 C3 D5 E6	93.4 to 200kN 10.5-22.5t	250mm 10" 25mm 1"	No Hydraulics	Straight	70° 270°	-	-	- -	Original version. Only in support of existing purchases. Accepts all blades as per P-16X below *Wt = battery+ controller	powerhawk.com
659mm 27"	254mm 10"	279mm 11"	- - - PENDING	93.4 to 200kN 10.5-22.5t	250mm 10" 25mm 1"	No Hydraulics	Straight	70° 270°	-	-	- -	interchangeable Cutter,spreader and combi heads. *Both P16&P16X can use a regular 12v car battery or any 12v power source with relevant adapter.	powerhawk.com
635mm 25"	254mm 10"	279mm 11"	- - - PENDING	>311TkN 35t	108mm 4.25" PENDING	No Hydraulics	Straight	70° 270°	-	-	- -		powerhawk.com
610mm 24"	254mm 10"	279mm 11"	- - - PENDING	133.4TkN 15t	125mm 5" PENDING	No Hydraulics	Straight	70° 270°	-	-	- -		powerhawk.com
559mm 22"	254mm 10"	279mm 11"	- - - PENDING	200.2kN 22.5t	76mm 3" PENDING	No Hydraulics	Straight	70° 270°	-	-	- -		powerhawk.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
Theoretical Max Forces= underlined
Str-Curve=Straight section ahead of curve
■= (cyan border) W[illegible] is present on the model variant `show[illegible]

	SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
	EDD P-4W 43.2V	RESQTEC			N/A	20.6kg 45.3lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins
	EDD G4W 43.2V	RESQTEC	■ ■ ■		N/A	15.9kg 6lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins*
	EDD G6C 43.2V	RESQTEC			N/A	20.3kg 44.8lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins*
	EDD G6W 43.2V	RESQTEC			N/A	20kg 44lb	1kg 2.2lb	Resqtec 2.6Ah Li-ion	<45mins 60mins*
	Cutter SC 28v	SCORPE			N/A	18.9kg 41.6lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45mins 90mins
	Cutter MC 28v	SCORPE	■ ■ ■		N/A	21.6kg 47.5lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45mins 90mins
	Storm Surge ESLC-29 18V/20v	TNT RESCUE			N/A	24.4kg 53.75lb 24.76kg 54.6lb	1.1kg 2.4lb 0.6kg 1.3lb	Milwaukee 8/9Ah M18 DeWalt 9Ah FlexVolt20 Li-ion	87mins 10-15mins 60mins
	Storm Surge EBFC-320 18V/20v	TNT RESCUE			N/A	28.8kg 63.6lb 29kg 63.9lb	1.1kg 2.4lb 0.6kg 1.3lb	Milwaukee 8/9Ah M18 DeWalt 9Ah FlexVolt20 Li-ion	87mins 10-15mins 60mins
	Storm2 ESLC-24D 28v	TNT RESCUE			N/A	21.5kg 47.5lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins
	Storm2 ESLC-27D 28v	TNT RESCUE			N/A	22.5kg 49.7lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins
	Storm2 ESLC-29D 28v	TNT RESCUE	■ ■ ■		N/A	24.4kg 53.8lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins
	Storm2 EBFC-320D 28v	TNT RESCUE			N/A	28.6kg 63.1lb	2x 1kg 2.2lb	Milwaukee 2x 5Ah M28 Li-ion	<90mins 60mins

STORED DIMENSIONS LENGTH w/TIPS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	WWW
705mm 27.75"	271mm 10.7""	274mm 10.8"	E BC153E-20.6 1G 2E 3F 4F 5H A6 B5 C5 D6 E6	506kN 56.9t	153mm 6" 26mm 1"	No Hydraulics	Straight	61° -	☐	-	- 54	3x interchangeable heads/blades. Rear handle option. *Also 28Ah power-pack. Jaw recess (reach)= 118mm	rescue.resqtec.com
767mm 30.2"	236mm 9.3"	228mm 9"	F BC156F-15.9 1H 2F 3G 4F 5G A6 B6 C6 D7 E6	554kN 62.3t	156mm 6.1" 30mm 1.2"	N/A	Curve	- 360°	☐	-	- 54	*Also 28Ah powerpack. Jaw recess (reach) = 128mm. *Charger has been enhanced from pt1	rescue.resqtec.com
868mm 34.2"	251mm 9.9"	235mm 9.25"	H CC200H-20.3 1I 2J 3H 4H 5J A6 B7 C6 D7 E7	1102kN 124t	203mm 8" 34mm 1.3"	N/A	Curve	- 360°	☐	-	- 54	*Also 28Ah powerpack. Jaw recess (Reach) =150mm. *Charger has been enhanced from pt1	rescue.resqtec.com
854mm 33.6"	268mm 10.5"	235mm 9.25"	H BC185H-19.9 1I 2J 3H 4J 5J A6 B7 C6 D7 E9	1052kN 118t	185mm 7.3" 34mm 1.3"	N/A	Curve	- 360°	☐	-	- 54	*Also 10Ah powerpack. Jaw recess (Reach) = 150mm *Charger has been enhanced from pt1	rescue.resqtec.com
925mm 36.4"	222mm 8.7"	248mm 9.8"	G BC/160-G-18.9 - -	493kN 55.4t	160mm 6.3" 32mm 1.26"	700 Bar 10.2K psi	Curve	- 360°	☐ 4	-	- 54		scorpe.net
944mm 37.2"	232mm 9.1""	248mm 9.8"	I BC-185-I-21.6 - -	781kN 87.8t	180mm 7.1" 35mm 1.4"	700bar 10.2K psi	Curve	- 360°	☐ 4	-	- 54		scorpe.net
838mm 33"	267mm 10.5"	297mm 11.7"	- - - A8 B9 C9 D9 E9 F5	1256.4kN 141.2t	178mm 7" 38mm 1.5"	722 Bar 10.5K psi	Curve	- -	☐ 4	-	- 54	TNT prices include 2 batteries and Dual Rapid charger. Cut Reach 129mm/ 5"	tntrescue.com
909.7mm 35.8"	267mm 10.5"	300mm 11.8"	- - - A9 B9 C9 D9 E9 F6	1424kN 160t	257mm 10.12" 45mm 1.75"	722 Bar 10.5K psi	Curve	- -	☐ 4	-	- 54	TNT prices include 2 batteries and Dual Rapid charger. 5.5" cut reach	tntrescue.com
798mm 31.4"	267mm 10.5"	241mm 9.5"	- - - A6 B5 C7 D7 E6	528.4kN 59.4t	127mm 5" 0mm 0"	722 Bar 10.5K psi	Curve	-	☐ 2	-	- 54	ALL Spec is for 2 batteries but Can operate on one. Cut Reach 82.4mm/ 3.24"	tntrescue.com
815mm 32.1"	267mm 10.5"	241mm 9.5"	- - - A6 B7 C7 D7 E7	528.4kN 59.4t	193mm 7.6" 0mm 0"	722 Bar 10.5K psi	Curve	-	☐ 2	-	- 54	ALL Spec is for 2 batteries but Can operate on one. Cut Reach 100.6mm/ 3.96"	tntrescue.com
826mm 32.5"	267mm 10.5"	241mm 9.5"	- - - A8 B9 C9 D9 E9 F4	1256.4kN 141.2t	177.8mm 8" 38mm 1.5"	722 Bar 10.5K psi	Curve	-	☐ 2	-	- 54	ALL Spec is for 2 batteries but Can operate on one. Cut Reach 129mm/ 5"	tntrescue.com
879mm 34.6"	273mm* 10.75"	178mm 7"	- - - A9 B9 C9 D9 E9 F6	1424kN 160t	228.6mm 8.6" 45mm 1.75"	722 Bar 10.5K psi	Curve	-	☐ 2	-	- 54	ALL Spec is for 2 batteries but Can operate on one. Cut Reach 140.4mm/ 5.53"	tntrescue.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
Theoretical Max Forces= underlined
Str-Curve=Straight section ahead of curve
■= (cyan border) WiFi is present on the model variant `shown in cyan

SERIES MODEL VARIANT Product Code VOLTAGE	COMPANY	TOOLS IN RANGE	ORIGIN	COST inc tax / VAT	WEIGHT IN HAND inc BATTERY(IES)	WEIGHT DEFAULT BATTERY	BATTERY Ah OPTIONS TYPE	BATTERY DURATION RECHARGE TIME
E-Force3 RSC 170 1102148 28V	WEBER RESCUE	■ ■ ■ ■		N/A	18.1kg 39.8lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80mins 60mins
E-Force3 RSC170+ 1102149 28V	WEBER RESCUE			N/A	19.2kg 42.2lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80min 60mins
E-Force3 RSC 190 1102150 28V	WEBER RESCUE			N/A	20.6kg 45.3lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80mins 60mins
E-Force3 RSC 190+ 1102150 28V	WEBER RESCUE			N/A	21kg 46.2lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80min 60mins
E-Force3 RSC200 1102152 28V	WEBER RESCUE			N/A	24.8kg 54.6lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80mins 60mins
E-Force3 RSC F7 1102153 28V	WEBER RESCUE			N/A	26.9kg 59.1lb	1kg 2.2lb	Milwaukee 5Ah M28 Li-ion	<45-80min 60mins
Smart-Force RSC 170 1101547 28V	WEBER RESCUE			N/A	19.1kg 42lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
Smart-Force RSC170+ 1101548 28V	WEBER RESCUE			N/A	20.1kg 44.2lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
Smart-Force RSC 190 1101549 28V	WEBER RESCUE			N/A	21.7kg 47.7lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
Smart-Force RSC 190+ 1101550 28V	WEBER RESCUE			N/A	22.8kg 50.1lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
Smart-Force RSC200 1101551 28V	WEBER RESCUE			N/A	25.7kg 56.5lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins
Smart-Force RSC F7 1101553 28V	WEBER RESCUE			N/A	27.7kg 60.9lb	1.1kg 2.33lb	Milwaukee 8Ah/12Ah M18 Li-ion	60/90mins 45-83mins

STORED DIMENSIONS LENGTH w/TIPS	WIDTH	HEIGHT /DEPTH	CUT CLASSES EN CLASSIFICATION EN CUT CAPACITY NFPA CLASS	THEORETICAL CUT FORCE t= US short ton	CUT OPENING ROUND BAR	WORKING (HYDRAULIC) PRESSURE	BLADE TYPE	ROTATE HEAD/HANDLE	LED LIGHTS	WiFi CAPABLE	IN-WATER-CAPABLE TOOL/BATTERY IP	NOTES	www
889mm 35"	236mm 9.3"	241mm 9.5"	I BC166I-18.1 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	N/A	175mm 6.9" 32mm 1.25"	700 Bar 10.2K psi	Str-Curve	- 360°	4	-	- 54	All E-Force tools can convert to hose	weber.com
889mm 35"	236mm 9.3"	241mm 9.5"	I BC166I-19,2 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	N/A	175mm 6.9" 32mm 1.25"	700 Bar 10.2K psi	Str-Curve	- 360°	4	-	- 54	All E-Force tools can convert to hose. Plus version has enhanced blade inserts	weber.com
920mm 00"	236mm 9.3"	241mm 9.5"	K BC187K-20,6 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	N/A	185mm 7.3" 38.1mm* 1.5"	700 Bar 10.2K psi	Str-Curve	- 360°	4	-	- 54	All E-Force tools can convert to hose	weber.com
969mm 36.2"	236mm 9.3"	241mm 9.5"	K BC187K-20,6 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	N/A	187mm 7.4" 38.1mm* 1.5"	700 Bar 10.2K psi	Str-Curve	- 360°	4	-	- 54	All E-Force tools can convert to hose. Plus version has enhanced blade inserts	weber.com
987mm 38.9"	300mm 11.8"	241mm 9.5"	K CC201K-24.8 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F5	N/A	200mm 7.8" 45mm 1.75"	700 Bar 10.2K psi	Str-Curve	- 360°	4	-	- 54	All E-Force tools can covert to hose	weber.com
1049mm 41.3"	295mm 11.6"	241mm 9.5"	K CC268K-26.9 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F7	N/A	300mm 11.8" 45mm 1.75"	700 Bar 10.2K psi	Str-Curve	- 360°	4	-	- 54	All E-Force tools can convert to hose	weber.com
889mm 35"	236mm 9.3"	228mm 9"	I BC166I-18.1 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	N/A	175mm 6.9" 32mm 1.25"	700 Bar 10.2K psi	Str-Curve	- 360°	4	■	■ 68 68	All E-Force tools can convert to hose	weber.com
889mm 35"	236mm 9.3"	228mm 9"	I BC166I-19,2 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	N/A	175mm 6.9" 32mm 1.25"	700 Bar 10.2K psi	Str-Curve	- 360°	4	■	■ 68 68	All E-Force tools can convert to hose. Plus version has enhanced blade inserts	weber.com
936mm 36.8"	236mm 9.3"	228mm 9"	K BC187K-21,7 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	N/A	185mm 7.3" 38.1mm* 1.5"	700 Bar 10.2K psi	Str-Curve	- 360°	4	■	■ 68 68	All E-Force tools can convert to hose	weber.com
936mm 36.8"	236mm 9.3"	228mm 9"	K BC187K-22.8 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	N/A	187mm 7.4" 38.1mm* 1.5"	700 Bar 10.2K psi	Str-Curve	- 360°	4	■	■ 68 68	All E-Force tools can convert to hose, Plus version has enhanced blade inserts	weber.com
1003mm 39.5"	297mm 11.7"	228mm 9"	K CC201K-25.7 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F5 F3	N/A	200mm 7.8" 45mm 1.75"	700 Bar 10.2K psi	Str-Curve	- 360°	4	■	■ 68 68	All E-Force tools can convert to hose	weber.com
1064mm 41.9"	297mm 11.7"	241mm 9.5"	K CC268K-27.7 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F7	N/A	300mm 11.8" 45mm 1.75"	700 Bar 10.2K psi	Str-Curve	- 360°	4	■	■ 68 68	All E-Force tools can convert to hose	weber.com

FL360 LR
10871
SAMSUNG

FIRSTLOOK

USAR

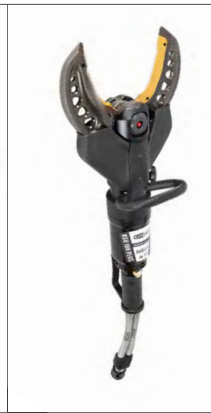
SEE
MORE.
ACHIEVE
MORE.

www.firstlook.net

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given



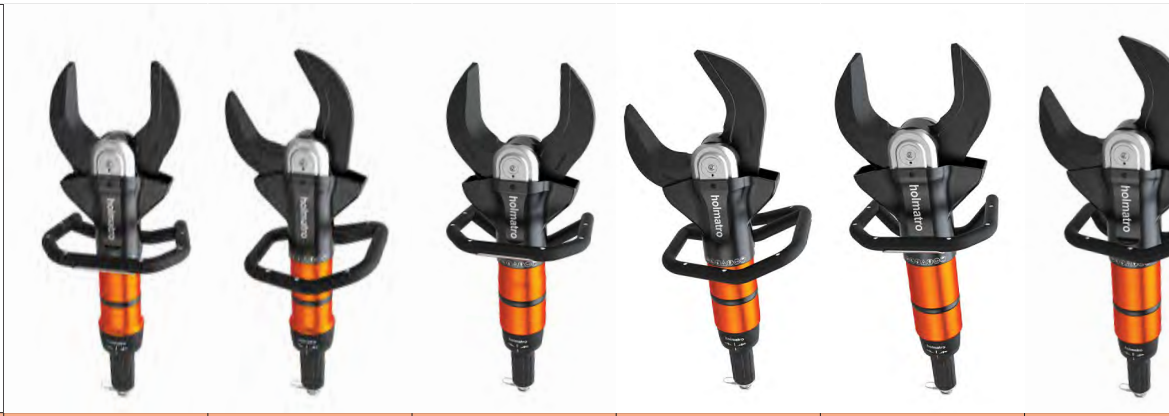
SERIES MODEL VARIANT Product Code	F180	C165	SC198-SL3	SC198-SL3 Next Gen	C195 Next Gen	SC240-S
COMPANY	EDILGRAPPA	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESI RESCU
TOOLS IN RANGE	■■■■■					
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT (exc hose)	19.5kg 43lb	16.3kg 36lb	14.3kg 31.5lb	15.4kg 33.9lb	16.9kg 37.25lb	16.9kg 37.25lb
LENGTH	774mm 30.5"	711mm 28"	727mm 28.6"	732mm 28.8"	736mm 28.9"	758mm 29.8"
WIDTH	264mm 10.4"	225mm 8.9"	236mm 9.3"	236mm 9.3"	212mm 8.3"	236mm 9.3"
DEPTH	186mm 7.3"	202mm 8"	164mm 6.5"	164mm 6.5"	212mm 8.3"	164mm 6.5"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	K BC181-K-19.5 - -	- - - A8 B6 C6 D7 E9	- - - A7 B8 C6 D8 E9 F4	- - - A7 B8 C6 D8 E9 F4	- - - A8 B9 C7 D9 E9	- - - A8 B9 C7 D9
THEORETICAL CUT FORCE t= US short ton	941kN 105.8USton	N/A	N/A	N/A	N/A	N/A
CUTTER OPENING ROUND BAR	181mm 7.1" 32mm 1.25"	150mm 5.9" 25mm 1"	175mm 6.9" 32mm 1.25"	175mm 6.9" 32mm 1.25"	180mm 7.1" 35mm 1.5"	187mm 7.4" 38.1mm* 1.5"
WORKING PRESSURE	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2
ROTATE HEAD/HANDLE	- -	- -	- 360°	- 360°	- -	- 360°
LED LIGHTS	-	-	-	-	-	-
OPERATING TEMP	?	?	?	?	?	?
IN-WATER-CAPABLE/ IP#	? ?	■ 68	■ 68	■ 68	■ 68	■ 68
NOTES			All Genesis battery tools can convert to hose and vice-versa	NextGen version has detachable blade inserts for boron/UHSS. All Genesis battery tools can convert to hose and vice-versa.	NextGen version has detachable blade inserts for boron/ UHSS.	All Genesis ba tools can conv hose and vice-
WEBSITE	edilgrappa.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue

L3	SC240-SL3 Next Gen	C236-SL2 Next Gen	SC385-SL3	C365	All-9	F7-SL3	
S E	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	
	N/A	N/A	N/A	N/A	N/A	N/A	
	18kg 39.7b	19.6kg 43.2lb	21kg 46.3lb	22kg 48.5lb	22.5kg 49.6lb	23.3kg 51.7lb	
	758mm 29.8"	833mm 33"	827mm 32.6"	811mm 31.9"	855mm 33.7"	886mm 34.9"	
	236mm 9.3"	260mm 10.2"	300mm 11.8"	298mm 11.7"	298mm 11.7"	295mm 11.6"	
	164mm 6.5"	221mm 8.7"	177mm 7"	221mm 8.7"	223mm 8.8"	179mm 7.1"	
E9 F4	- - - A8 B9 C7 D9 E9 F4	- - - A8 B9 C8 D9 E9	- - - A9 B9 C9 D9 E9 F5	- - - A8 B9 C8 D9 E9	- - - A9 B9 C9 D9 E9	- - - A9 B9 C9 D9 E9 F7	
	N/A	N/A	N/A	N/A	N/A	N/A	
*	187mm 7.4" 38.1mm* 1.5"	210mm 8.2" 45mm 1.75"	202mm 7.8" 45mm 1.75"	170mm 6.7" 30mm 1.25"	180mm 7.1" 35mm 1.5"	300mm 11.8" 45mm 1.75"	
2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	
	- 360°	- -	- 360°	- -	- -	- 360°	
	-	-	-	☐	☐	-	
	?	?	?	?	?	?	
	■ 68	■ 68	■ 68	■ 68	■ 68	■ 68	
ttery ert to -versa	NextGen version has detachable blade inserts for boron/UHSS. All Genesis battery tools can convert to hose and vice-versa.	NextGen version has detachable blade inserts for boron/ UHSS.	All Genesis battery tools can convert to hose and vice-versa.			All Genesis battery tools can convert to hose and vice-versa	
.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
- =BATTERY TOOLS
- = Combi
- = Spreader
- =Ram
- = Special Tools

●● = PARTIAL or OK but not ideal
□□□ = Option
N/A = info Not Available/not given



SERIES MODEL VARIANT Product Code	CORE CU5030	CORE CU5030i CL	CORE CU5040	CORE CU5040i CL	CORE CU5050	CORE CU5050i
COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATI
TOOLS IN RANGE						
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT (exc hose)	9.5kg 20.9lb	9.5kg 20.9lb	13.1kg 28.9lb	13.2kg 29.1b	15.7kg 34.6lb	15.9kg 35.1lb
LENGTH	674mm 26.5"	685mm 27"	692mm 27.2"	706mm 27.8"	752mm 29.6"	762mm 30"
WIDTH	270mm 10.6"	275mm 10.8"	271mm 10.7"	300mm 11.8"	278mm 10.9"	306mm 12"
DEPTH	188mm 7.4"	253mm 10"	190mm 7.5"	268mm 10.6"	200mm 7.9"	268mm 10.6"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	F BC 150f-9.5 1H 2G 3G 4F 5G A6 B5 C6 D6 E6 F2	F BC150F-9.5 1H 2G 3G 4F 5G A6 B5 C6 D6 E6 F2	I BC165I-13.1 1I 2I 3I 4J 5J A7 B7 C6 D7 E8 F3	I BC165I-13.2 1I 2I 3I 4J 5J A7 B7 C6 D7 E8 F3	K BC165K-15.9 1K 2K 3K 4K 5K A8 B8 C7 D9 E9 F4	K BC165K-15 1K 2K 3K 4K A8 B8 C7 D9
THEORETICAL CUT FORCE t= US short ton	579kN 65USton	549kN 61.7USton	794kN 89.2USton	764kN 85.8USton	1412kN 158.7USton	1389kN 156.3USto
CUTTER OPENING ROUND BAR	170mm 6.7" 31mm 1.2"	170mm 6.7" 31mm 1.2"	170mm 6.7" 36mm 1.4"	170mm 6.7" 36mm 1.4"	182mm 7.2" 41mm 1.6"	182mm 7.2" 41mm 1.6"
WORKING PRESSURE	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- -
LED LIGHTS	?	?	?	?	?	?
OPERATING TEMP	?	?	?	?	?	?
IN-WATER-CAPABLE/ IP#	■ 68	■ 68	■ 68	■ 68	■ 68	■ 68
NOTES	Stepless speed increase	Inclined blade angle. Stepless speed increase	Stepless speed increase	Inclined blade angle. Stepless speed increase	Stepless speed increase	Inclined blade Stepless spe increase
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.co

CL	CORE CU5060	CORE CU5060i CL	S799E2	MCH E100	MCH E140	MCH C60	MCH C70
RO	HOLMATRO	HOLMATRO	HURST (IDEX	HYDRAM	HYDRAM	HYDRAM	HYDRAM
	N/A	N/A	$10,265	N/A	N/A	N/A	N/A
	19.6kg 43.2lb	19.8kg 43.7lb	23.6kg 57.6lb	14.4kg 31.7lb	16.7kg 36.8lb	14.4kg 31.7lb	16.7kg 36.8lb
	807mm 31.8"	820mm 32.3"	1000mm 39.4"	744mm 29.3"	756mm 29.7"	744mm 29.3"	756mm 29.7"
	321mm 12.6"	342mm 13.5"	266mm 10.5"	224mm 8.8"	224mm 8.8"	224mm 8.8"	224mm 8.8"
	200mm 7.9"	285mm 11.2"	281mm 11.1"	177mm 7"	177mm 7"	177mm 7"	177mm 7"
.7 K 5K E9 F4	K CC205K-19.6 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F4	K CC205K-19.8 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F4	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F4	I CC130-H-14.4 ?? A7 B8 C6 D7 E9	I CC130-H-16.7 ?? A7 B8 C6 D7 E9	I CC130-H-14.4 ?? A7 B8 C6 D7 E9	I CC130-H-16.7 ?? A7 B8 C6 D7 E9
on	1793kN 201.5USton	1765kN 198.4USton	1100kN 123.6USton	694kN 73USton	950kN 73USton	694kN 73USton	950kN 73USton
	205mm 8.1" 47mm 1.9"	205mm 8.1" 47mm 1.9"	200mm 7.8" 42mm 1.6"	154mm 6" ??mm ??"	154mm 6" ??mm ??"	154mm 6" ??mm ??"	154mm 6" ??mm ??"
4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi
	- -	- -	- 360°	- -	- -	- -	- -
	?	?	2	-	-	-	-
	?	?	-	?	?	?	?
	■ 68	■ 68	■ 68	■ 68	■ 68	■ 68	■ 68
angle. eed	Stepless speed increase	Inclined blade angle. Stepless speed increase		Cut reach/depth = 154mm See also 3x CHU models in combitools - these are closer to cutters than combis	Cut reach/depth = 154mm	Cut reach/depth = 154mm See also 3x CHU models in combitools - these are closer to cutters than combis	Cut reach/depth = 154mm
om	holmatro.com	holmatro.com	jawsoflife.com	hydram.com	hydram.com	hydram.com	hydram.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	CHM275 CX	CHM2750 CX	CHU1500	CHU1800	CHU2020	LD2
COMPANY	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRAM	LIBERVI
TOOLS IN RANGE	■ ■ ■ ■			■ ■ ■ ■		
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT (exc hose)	14.4kg 31.7lb	16.7kg 36.8lb	15.88kg 35lb	16.08kg 35.45lb	17.6kg 38.8lb	20.3kg 44.7lb
LENGTH	744mm 29.3"	756mm 29.6"	711mm 00"	744mm 29.3"	00mm 00"	934mm 36.8"
WIDTH	224mm 8.8"	224mm 8.8"	224mm 8.8"	224mm 8.8"	00mm 00"	237mm 9.3"
DEPTH	177mm 7"	177mm 7"	177mm 7"	177mm 7"	00mm 00"	281mm 11.1"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	I CC130-H-14.4 ?? A7 B8 C6 D7 E9	I CC130-H-16.7 ?? A7 B8 C6 D7 E9	G BC150-G-15.88 ?? A? B? C? D? E?	H BC180-H-17.2 ?? A7 B8 C6 D7 E9	H BC180-H-17.2 ?? A? B? C? D? E?	I - 1I-2J-3I-4J- A7 B8 C7 D7
THEORETICAL CUT FORCE t= US short ton	694kN 78UStON	950kN 106UStON	950kN 106UStON	950kN 106UStON	1040kN 116.9UStON	650kN 73UStON
CUTTER OPENING ROUND BAR	154mm 6" ??mm ??	154mm 6" ??mm ??	150mm 5.9" ??mm ??	180mm 7.1" ??mm ??	202mm 7.9" ??mm ??	206mm 8.1" 33mm 1.3"
WORKING PRESSURE	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- 360°
LED LIGHTS	-	-	-	-	-	2
OPERATING TEMP	?	?	?	?	?	?
IN-WATER-CAPABLE/ IP#	■ 68	■ 68	● 54	● 54	● 54	■ 68
NOTES	Cut reach/depth = 154mm See also 3x CHU models in combitools - these are closer to cutters than combis	Cut reach/depth = 154mm				
WEBSITE	hydram.com	hydram.com	hydram.com	hydram.com	hydram.com	libervit.com

	LD2C	BP2	BP2C	U400
T	LIBERVIT	LIBERVIT	LIBERVIT	LIBERVIT
	N/A	N/A	N/A	N/A
	26.5kg 58.3lb	24kg 52.8lb	20kg 44lb	26.5kg 58.4lb
	963mm 37.9"	939mm 37"	880mm 34.6"	1025mm 40.4"
	265mm 10.4"	266mm 10.5"	235mm 9.25"	281mm 11.1"
	253mm 10"	253mm 10"	253mm 10"	269mm 10.6"
-5J 7 E8	K - 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5	K - 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	I - 1I-2J-3K-4J-5J A7 B8 C7 D8 E8 F4	K CC 200 K-26,2 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5
	1310kN 147.25USton	1100kN 123.6USton	760kN 85.4USton	1376kN 155.7USton
	204mm 8" 45mm 1.8"	205mm 8" 42mm 1.6"	202mm 7.9" 33mm 1.3"	204mm 8" 45mm 1.8"
1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi
	- 360°	- 360°	- 360°	- 360°
	2	2	2	2
	?	?	?	?
	68	68	68	68
m	libervit.com	libervit.com	libervit.com	libervit.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	S312	S378	S789	S799		G4A
COMPANY	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)		RESQTE
TOOLS IN RANGE	■■■■■					
ORIGIN	🇩🇪	🇩🇪	🇩🇪	🇩🇪		🇳🇱
COST inc tax / VAT	N/A	N/A	N/A	N/A		N/A
WEIGHT (exc hose)	14.5kg 32lb	14.8kg 32.6lb	18.8kg 41.4lb	21.3kg 47lb		20.6kg 45.3lb
LENGTH	1000mm 39.4"	742mm 29.2"	801mm 31.5"	828mm 32.6"		705mm 27.75"
WIDTH	266mm 10.5"	228mm 9"	279mm 11"	291mm 11.5"		271mm 10.7""
DEPTH	281mm 10.1"	172mm 6.8"	187mm 7.4"	188mm 7.4"		274mm 10.8"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	K BC 1601-14.5 1I-2J-3I-4J-5J A7 B8 C7 D7 E7	I BC 1801-14.8 1I-2J-3I-4J-5J A7 B8 C7 D7 E8	I CC 205 K - 18.8 1K-2K-3K-4K-5K A8 B9 C8 D9 E9 F5	K CC 200 K-21.3 1K-2K-3K-4K-5K A9 B9 C9 D9 E9 F5		E BC153E-20 1G 2E 3F 4F A6 B5 C5 D6
THEORETICAL CUT FORCE t= US short ton	680kN 76.4t	760kN 85.4t	1100kN 1234.6t	1376kN 155t		506kN 56.9t
CUTTER OPENING ROUND BAR	160mm 00" 35mm 00"	202mm 00" 35mm 00"	205mm 8" 42mm 00"	204mm 8" 45mm 1.7"		153mm 6" 26mm 1"
WORKING PRESSURE	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi	700Bar/10.1Kpsi		N/A
ROTATE HEAD/HANDLE	- 360°	- 360°	- 360°	- 360°		61° -
LED LIGHTS	2	2	2	2		□
OPERATING TEMP	-20to 55	-20to 55	-20to 55	-20to 55		?
IN-WATER-CAPABLE/ IP#	■ 68	■ 68	■ 68	■ 68		? ?
NOTES						3x interchange heads/blade Rear handle op Jaw recess (re 118mm
WEBSITE	lukas.com	lukas.com	lukas.com	lukas.com		rescue.resqtec

	G4W	G6A	G6C	G6W	G6W-FR	G8C	G8W
C	RESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	20.3kg 44.8lb	15.9kg 6lb	20.3kg 44.8lb	20kg 44lb	20kg 44lb	20kg 44lb	20.3kg 44.8lb
	868mm 34.2"	767mm 30.2"	868mm 34.2"	854mm 33.6"	854mm 33.6"	854mm 33.6"	868mm 34.2"
	251mm 9.9"	236mm 9.3"	251mm 9.9"	268mm 10.5"	268mm 10.5"	268mm 10.5"	251mm 9.9"
	235mm 9.25"	228mm 9"	235mm 9.25"	235mm 9.25"	235mm 9.25"	235mm 9.25"	235mm 9.25"
0.6 F 5H 6 E6	H CC200H-20.3 1I 2J 3H 4H 5J A6 B7 C6 D7 E7	F BC156F-15.9 1H 2F 3G 4F 5G A6 B6 C6 D7 E6	H CC200H-20.3 1I 2J 3H 4H 5J A6 B7 C6 D7 E7	H BC185H-19.9 1I 2J 3H 4J 5J A6 B7 C6 D7 E9	H BC185H-19.9 1I 2J 3H 4J 5J A6 B7 C6 D7 E9	H BC185H-19.9 1I 2J 3H 4J 5J A6 B7 C6 D7 E9	H CC200H-20.3 1I 2J 3H 4H 5J A6 B7 C6 D7 E7
	1102kN 124t	554kN 62.3t	1102kN 124t	1052kN 118t	1052kN 118t	1052kN 118t	1102kN 124t
	203mm 8" 34mm 1.3"	156mm 6.1" 30mm 1.2"	203mm 8" 34mm 1.3"	185mm 7.3" 34mm 1.3"	185mm 7.3" 34mm 1.3"	185mm 7.3" 34mm 1.3"	203mm 8" 34mm 1.3"
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	- 360°	- 360°	- 360°	- 360°	- 360°	- 360°	- 360°
	☐	☐	☐	☐	☐	☐	☐
	?	?	?	?	?	?	?
	? ?	? ?	? ?	? ?	? ?	? ?	? ?
eable es. tion. ach)=	Jaw recess (Reach) =150mm.	Jaw recess (Reach) =150mm.	Jaw recess (Reach) =150mm.	Jaw recess (Reach) =150mm.	Jaw recess (Reach) =150mm.	Jaw recess (Reach) =150mm.	Jaw recess (Reach) =150mm.
c.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Spreader
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

SERIES MODEL VARIANT Product Code	SLC-24	SLC-27	SLC-28	SLC-29	BFC-320
COMPANY	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE
TOOLS IN RANGE	■■■■■				
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT (exc hose)	15.3kg 33.7lb	16.1kg 35.5lb	18kg 39.6lb	18.2kg 40lb	28.8kg 63.6lb
LENGTH	723mm 28.5"	723mm 28.5"	736.6mm 29"	726.4mm 28.6"	762mm 30"
WIDTH	228.6mm 9"	285mm 11.25"	285mm 11.25"	285mm 11.25"	273.1mm 10.75"
DEPTH	177.8mm 7"	177.8mm 7"	177.8mm 7"	177.8mm 7"	177.8mm 7"
CUT EN CLASS EN CUT CLASSIFICATION NFPA CLASS	- - - A6 B5 C7 D7 E6	- 1F-2F-3F-4F-5F - A6 B7 C7 D7 E7	- - - A7 B7 C7 D7 E7	- 1J-2J-3J-4K-5K - A8 B9 C9 D9 E9 F4	- 1K-2K-3K-4K-5K - A9 B9 C9 D9 E9 F5
THEORETICAL CUT FORCE t= US short ton	528kN 59.3t	528kN 59.3t	694kN 78t	1256kN 141t	1424kN 160t
CUTTER OPENING ROUND BAR	127mm 5" 00mm 00"	193mm 7.6" 00mm 00"	193mm 7.6" 00mm 00"	203mm 8" 00mm 00"	218.4mm 8.6" 00mm 00"
WORKING PRESSURE	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi	722Bar / 10.5Kpsi
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -
LED LIGHTS	-	-	-	-	-
OPERATING TEMP	?	?	?	?	?
IN-WATER-CAPABLE/ IP#	■ 64	■ 64	■ 64	■ 64	■ 64
NOTES	Cut Reach 82.4mm/ 3.24"	Cut Reach 100.6mm/ 4"	Cut Reach 101.6mm/ 4"	Cut Reach 113.6mm/ 4.47"	Cut Reach 140.5mm/ 5.5"
WEBSITE	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com

RSC 170	RSC 170+	RSC 190	RSC 190+	RSC 200	RSC F7
WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE
N/A	N/A	N/A	N/A	N/A	N/A
14.3kg 31.5lb	15.4kg 33.9lb	16.9kg 37.2lb	18kg 39.7b	21kg 46.3lb	23.3kg 51.7lb
727mm 28.6"	732mm 28.8"	758mm 29.8"	758mm 29.8"	827mm 32.6"	886mm 34.9"
236mm 9.3"	236mm 9.3"	236mm 9.3"	236mm 9.3"	300mm 11.8"	295mm 11.6"
164mm 6.5"	164mm 6.5"	164mm 6.5"	164mm 6.5"	177mm 7"	179mm 7.1"
I BC166I-14.3 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	I BC166I-15.4 1J 2K 3I 4J 5J A7 B8 C6 D8 E9 F4	K BC187K-16.9 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	K BC187K-20,6 1K 2K 3K 4K 5K A8 B9 C7 D9 E9 F4	K CC202K-21 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F5	K CC268K-23.3 1K 2K 3K 4K 5K A9 B9 C9 D9 E9 F7
N/A	N/A	N/A	N/A	N/A	N/A
175mm 6.9" 32mm 1.25"	175mm 6.9" 32mm 1.25"	187mm 7.4" 38.1mm* 1.5"	187mm 7.4" 38.1mm* 1.5"	202mm 7.8" 45mm 1.75"	300mm 11.8" 45mm 1.75"
700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi
- 360°	- 360°	- 360°	- 360°	- 360°	- 360°
-	-	-	-	-	-
?	?	?	?	?	?
68	68	68	68	68	68
All E-Force battery tools can convert to hose and vice-versa.	Plus version has detachable blade inserts for boron/ UHSS. All E-Force battery tools can convert to hose and vice-versa.	All E-Force battery tools can convert to hose and vice-versa.	Plus version has detachable blade inserts for boron/ UHSS. All E-Force battery tools can convert to hose and vice-versa.	All E-Force battery tools can convert to hose and vice-versa.	All E-Force battery tools can convert to hose and vice-versa.
weber.com	weber.com	weber.com	weber.com	weber.com	weber.com

'hydraulic' BATTERY DEDICATED SPREADERS

Weber Smart Force series can operate in and under water with the addition of a bespoke IP68 battery cover.

These next two intro paragraphs are mostly straight out of the previous section on cutters with the word 'spreader' instead of 'cutter'.

It is again the case that combination tools are all spreaders as well as cutters so you should also refer to that selection of battery tools in considering what you need of your spreader and whether the versatility of the combi-tool is more advantageous than the always greater spreading performance of a dedicated tool. If you include the 50 combi-tools in your shopping list of potential spreading tools you have around 98 models to choose from. These are all direct-connect battery systems. Although we have previously mentioned *Libervit*'s batteries and underwater prowess, their tools have not been included because they are regular hose-fed hydraulics that operate from a battery driven pump and there are a number of others similar systems. Bear in mind that most hose-fed hydraulic tools can be run from hoses to a battery-powered hydraulic pump but that's a whole different GUIDE!

'JAW' DESIGN

Hurst coined the term 'Jaws-of-Life' with their original extrication tools and made it into a generic term for all such tools in the US and Canada but most electro-hydraulic rescue tools are manufactured in Europe where the term 'Jaws-of-Life' is not used. Nevertheless, 'Jaws' is as appropriate a name as any to describe the gaping chasm created by an open set of spreaders. Some of the larger models in this Guide are almost a metre/3+feet wide at full width but the trade-off is that this will be the weakest point at which you could load a spreader either pulling or spreading apart. As with cutters, the strongest a spreader ever gets is with a lift or pull-point closer to the fulcrum or jaws-union pivot pin. In terms of pulling this is rarely possible as most have a dedicated pin hole for attaching pulling chains up near the tip as can be seen in the *Lukas* model opposite but some, like the Weber model above, have additional holes that can be press-ganged into use for pulling at the stronger mid-points. However, you will need to check the individual tool's capability because such holes are often a weight-saving cut-out rather than an element designed for loading.

The holes engineered into most spreader jaws may be a weight saving measure but are usually for attachment of pulling chains but where the tips are detachable like the *Holmatro Pentheon* opposite and the *Amkus* above, the pin-attachment point for the tips may also be the chain-set attachment point and this would be preferable because A) the hole is usually a larger (stronger) bore than higher up because it has more material to work with like the *Amkus* left and B) more often than not, it is lower down the jaw and therefore provides greater pulling force.

Whether the tips are detachable or fixed they will first and foremost be adorned with a gripping surface on the inside and the outside so that the jaws can get a solid purchase on the material being spread or squeezed/crushed. There was a time when the only game in town was simple ridges like a set of pliers but this has evolved into more complex forward and rear-facing ridges and 'dog-tooth' grips like the *Holmatro* tip top-right. In engineering terms, having removable tips can create a weak point compared to a single-piece construction but removable tips enable you to replace damaged components and to use either an alternate design or future enhanced

One of the three market leaders to fully embrace underwater and smart/diagnostics capabilities is *Holmatro*'s *Pentheon* series

Lukas E3 & *E3* Connect tools can operate in and under water even in salt water with their special saltwater battery.

designs. Most of the tips in this GUIDE are regular spreading/squeezing tips, albeit in a range of different grip configurations but there are door-opening tips angled to force the available gap.

ROTATE HEAD and/or HANDLE

There are broadly two types of forward positioning handles on these tools - Fixed or rotating. Fixed handles may provide a full 360° wrap like the *Holmatro* and *Lukas* models or it may give about 270° of access (top and sides) like the *TNT Surge2 model* opposite. Rotating handles like *Weber*'s decrease the bulk of the tool with a much smaller handle profile but the price you pay is that this needs to be unlocked in order to reposition and use the tool in a different orientation. As it happens, the vast majority of most spreading actions take place within the top and side orientation (270°). In our tables, we have not differentiated between fixed and rotating

handles, only that they allow either 360 or 270° positioning - you only have to look at most images to figure out it is a fixed frame

LED LIGHTS, WiFi & DIAGNOSTICS - SEE PAGE 34

SIZE STILL MATTERS

Unlike dedicated cutters, combi-tools and to some extent rams, spreaders cannot physically get much smaller, at least not in the head/jaws unless they invent some form of telescopic jaw. If you want to spread the maximum distance you will need the longest jaws. Consequently, the largest tools are around a metre/3.28ft long and set to stay that way for a while yet.

NOISE

Covered in the previous parts of this series but worth reiterating that electric tools are silent when not in use so there is no tick-over noise as you get with a petrol engine tool or a generator driven, hose-fed hydraulic system. But there is still noise when the tool is doing its work and this can vary from a hum to a high pitched whirr that gets louder as the tool works harder. So they are not 'silent' but certainly far less noise pollution than a traditional petrol engine/gennie based system.

IN THE FOLLOWING TABLES..... REFER TO COMMON DATA ON PAGE14/15 PLUS THIS UNIQUE SPREADERS KEY....

MAX SPREAD FORCE: Is the maximum *theoretical* force possible but only near the fulcrum not the tops at the opposite end. The closer the tips you start the spread/lift the lower the available force. This is not quoted by all because the EN and/or NFPA classifications cover this more accurately. Indeed, one or two manufacturers like Weber-Rescue flat-out refuse to quote it because they feel it is a misleading figure which is a fair point. Some of the max figures quoted may therefore be the same as the upper range limit but ***in theory only*** they could lift/spread a much higher amount. Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).

MAX PULL FORCE & DISTANCE: Holes near the ends of the jaws can have a chain fitted - one to an anchor and one to the item to be pulled. As the jaws are closed a pull force is exerted and the object can be moved. This used to be common with a dash-roll or displacement but not so much these days. Due to leverage forces, the longer the jaw the lower the pull force.

SPREAD DISTANCE: The maximum distance the jaws will open but don't forget that the closest to the tips provides the least power.

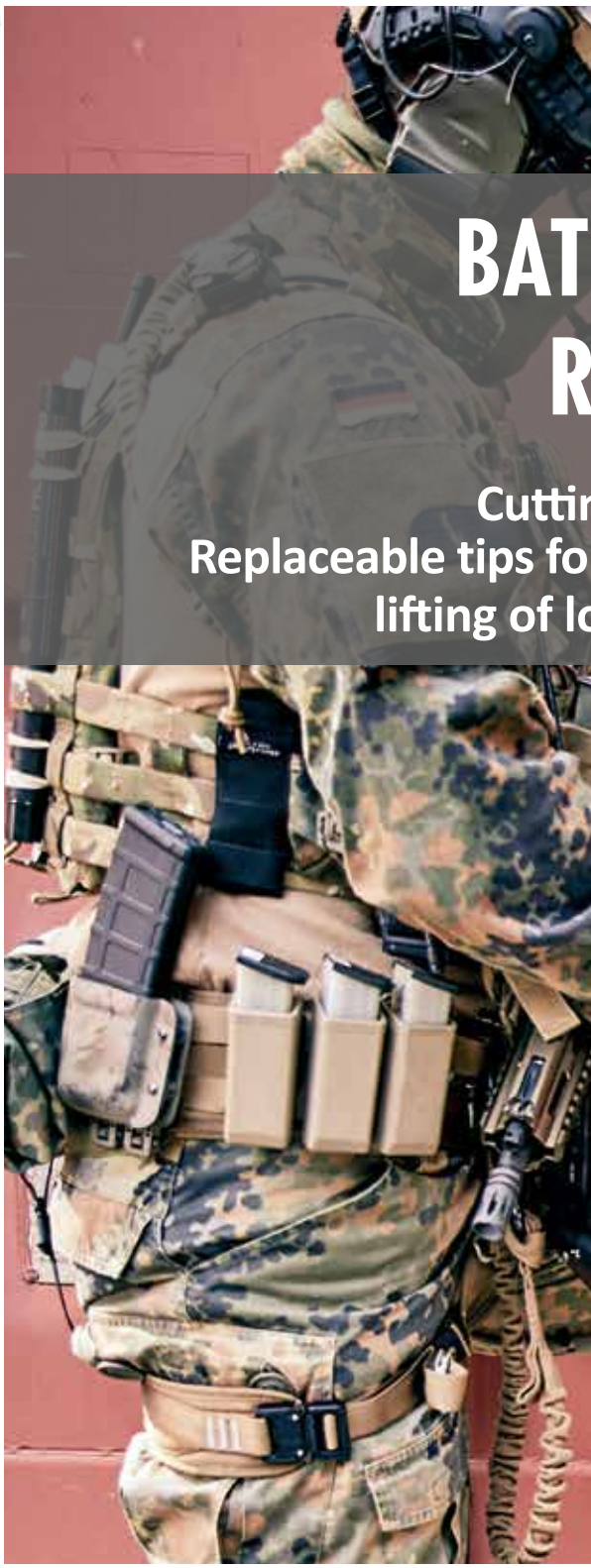
ROTATE HEAD/HANDLE: Either the Jaws or the handle can rotate for better access to the cut or the handle will extend around the tool by 180, 270 or 360° to allow it to be used in any position.

LED LIGHTS: Integral lighting from the handle or housing to illuminate the area being cut/spread.

WiFi/Bluetooth-CAPABLE: The tool and/or battery are linked to a mobile device via Wifi &/or Bluetooth to manage functions, servicing and inventory. This category is listed twice.

IN-WATER-CAPABLE: The tool/battery can be used underwater

TOOL/BATTERY IP. Ingress protection for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like *Milwaukee* are **not** waterproof and tend not to quote an IP number because they are dependant on the tool to create an effective seal. Specialist batteries like *Holmatro* and *Lukas* are watertight (IP68) but you can safely assume that regular trade batteries are no more than IP54 so they are splashproof but certainly not submersible.



Below: The Weber Smart-Force range uses a battery cover on the rear to keep its Milwaukee 18v battery waterproof

www.arbclimber.com

CHINESE & RUSSIAN TOOLS: As at 2023/24 Russia has become a North Korea style pariah state so we don't have to consider Russian tools yet even if they were good enough. China, however, continues to vex. They produce quality products for big name companies around the world but there are two problems. The first is their propensity for copyright infringement via blatant copying of design and imagery, as an example, we have included *Aolai Rescue* because their battery tools are their own badged products but they have *Paratech* looking struts that even have dark green and yellow livery. If they could only shy away from this continual plagiarism of well known products and concentrate on their own considerable design skills the world would be a fairer and happier place!

WEBERRESCUE

TERY DRIVEN COMBI TOOL FOR
APID INTERVENTION TEAMS

ng, spreading, pressing and pulling with one device.
r breaking doors and windows, cutting round steel and chains,
oads, pulling obstacles or opening vehicles (extrication).

Weber Rescue UK
Essex CO9 2EX
rescue@weberuk.com

Genesis RESCUE SYSTEMS
Kettering, OH 45429
https://genesisrescue.com

www.weber-rescue.com

Discover more!

IMAGES NOT TO SCALE OTHER TOOLS IN RANGE: ■= Combi ■= Cutter ■=Ram ■= Special Tools ●= PARTIAL FEATURE □□□= Option N/A = info Not Available/not given ■= (cyan border) WiFi is present on the model variant `shown in cyan					
COMPANY	**AMKUS**	**AMKUS**	**AOLAI RESCUE**	**AOLAI RESCUE**	**EDILGRAPPA**
SERIES	Light Rescue	Heavy Rescue	GYKZD-A	-	-
MODEL	LRS Spreader	HRS Spreader	ESP-650	GYKZD-46~97/740	DE625N
VOLTAGE	54/60v	54/60v	28v	28v	54/60v
TOOLS IN RANGE	■ ■ ■		■ ■ ■		■ ■ ■
ORIGIN					
COST inc tax / VAT	N/A	N/A	$4500 per 2 tools FOB	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	20.7kg 45.5lb	24.2kg 53.2lb	24.5kg 54lb	26kg 57.2lb	22.7kg 50lb
WEIGHT DEFAULT BATTERY	1.2kg 2.6 lb	1.2kg 2.6 lb	0.9kg 2 lb	0.9kg 2 lb	1.2kg 2.6 lb
BATTERY Ah OPTIONS	DeWalt FlexVolt 6Ah 9, 12Ah	DeWalt FlexVolt 6Ah 9, 12Ah	5Ah	5Ah	DeWalt FlexVolt 9Ah
BATTERY DURATION RECHARGE TIME	10-15mins 60mins	10-15mins 60mins	45-60mins 90mins	45-60mins 90mins	10-25mins 85mins
LENGTH	894mm 35.2"	963mm 37.9"	905mm 35.6"	1194mm 47"	787mm 30.9"
WIDTH	282mm 11.1"	246mm 9.7"	350mm 13.77"	320mm 12.6"	282mm 11.1"
DEPTH	294mm 11.6"	287mm 11.3"	279mm 10.9"	265mm 10.4"	244mm 9.6"
EN ■ CLASSIFICATION	-	-	■	■	■ AS45/625-
EN SPREAD FORCE RANGE t=US Ton	-	-	47-124kN 5.7-13.9 USt	52-562kN 5.8-63 USt	<131kN 14.7 USt
NFPA ■ FORCE RANGE t=US Ton (at/near tips)	27.4-43.7kN ■ 3.1-4.9 USt	47-67kN ■ 5.3-7.5 USt	-	-	32.9-60.6kN ■ 3.6-6.8 US
MAX SPREAD FORCE (Theoretical) t=US ton	895.7kN 100.7 USt	800kN 89.9 USt	-	-	174kN 19.5 USt
SPREAD DISTANCE	940mm 37"*	933mm 37.9"*	650mm 25.6"	820mm 32.2"	625mm 24.6"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	17.6-26.2kN 2-2.9 USt	34-51kN 3.8-5.73 USt	(68)kN (7.6) USt	(73)kN (8.2) USt	(≤46)kN (<5.2) USt
MAX PULL DISTANCE	?mm ?"	?mm ?"	520mm 20.5"	716mm 28"	482.5mm 19"
MAX SQUEEZE FORCE t=US ton	N/A	N/A	69kN 7.7 USt	140kN 15.8 USt	69kN 7.7 USt
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.2K psi	700 Bar 10.2K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	700 Bar 10.2K psi
WiFi/Bluetooth capable	- -	- -	- -	- -	- -
REMOVABLE DOOR OPENING TIPS	■	-	-	-	-
ROTATE HEAD/HANDLE	- 360°	- 360°	- -	- -	- 270°
LED LIGHTS	□	□	2	2	-
IN-WATER USE BATTERY/TOOL IP	54 54	54 54	54 54	54 54	54 54
NOTES	NEW in 2025 with carbon-fibre construction Replaces ION series *with ERT Extended Reach Tips	NEW in 2025 with carbon-fibre construction Replaces ION series *40" with ERT Extended Reach Tips.	Cutting tips option and pulling chains	Cutting tips option and pulling chains	
WEBSITE	amkus.com	amkus.com	aolairescue.com	aolairescue.com	edilgrappa.com

	GENESIS RESCUE	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**
	E-Force	E-Force	E-Force	E-Force	E-Force	E-Force
	S44 SL3	S49 SL3	S54 SL3	S44 SLi	S49 SLi	S54 SLi
	28v	28v	28v	18v	18v	18v
	N/A	N/A	N/A	N/A	N/A	N/A
	17.3kg 38lb	20.7kg 45.5lb	20.9kg 45.5lb	18.2kg 40lb	21.6kg 47.5lb	21.8kg 48lb
	1.4kg/1kg 3.2lb/2.3lb	1.4kg/1kg 3.2lb/2.3lb	1.4kg/1kg 3.2lb/2.3lb	1.1kg 2.33lb	1.1kg 2.33lb	1.1kg 2.33lb
	Genesis/ Milwaukee 5Ah*	Genesis/ Milwaukee 5Ah*	Genesis/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah	Milwaukee M18 8Ah/12Ah	Milwaukee M18 8Ah/12Ah
	<45mins 90mins	<45mins 90mins	<45mins 90mins	60/90mins 45-83mins	60/90mins 45-83mins	60/90mins 45-83mins
	877mm 34.5"	982mm 38.7"	1015mm 40"	893mm 35.2"	999mm 39.30"	1032mm 40.6"
	239mm 9.4"	282mm 11.1"	282mm 11.1"	239mm 9.4"	282mm 11.1"	282mm 11.1"
	241mm 9.5"	241mm 9.5"	241mm 9.5"	228mm 9.5"	228mm 9.5"	228mm 9.5"
19	-	-	-	AS44/610-18.2	AS55/735-20.7	BS50/805-21.8
	-	-	-	44-857kN 5-96.3 USt	50-501kN 5.6-56.3 USt	50-501kN 5.6-56.3 USt
St	41-52kN 4.6-5.8 USt	51-76kN 5.7-8.5 USt	46-68kN 5.2-7.6 USt	-	-	-
	-	-	-	-	-	-
	610mm 24"	735mm 28.9"	805mm 31.7"	610mm 24"	735mm 28.9"	805mm 31.7"
	21-42kN 2.36-4.7 USt	30-54kN 3.4-6 USt	26-52kN 2.9-5.8 USt	68kN 7.6 USt	70kN 7.9 USt	67kN 7.5 USt
	388mm 15.3"	558mm 22"	618mm 24.3"	465mm 18.3"	620mm 24.4"	680mm 26.80"
	149kN 16.9 USt	144kN 16.2 USt	144kN 16.2 USt	149kN 16.9 USt	144kN 16.2 USt	144kN 16.2 USt
	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi
	- -	- -	- -			
	- 360°	- 360°	- 360°	- 360°	- 360°	- 360°
	4	4	4	4	4	4
	54 54	54 54	54 54	54/68* 68	54/68* 68	54/68* 68
	*15Ah powerpack also available	*15Ah powerpack also available	*15Ah powerpack also available	All E-Force tools can convert to hose. * IP68 with waterproof cover	All E-Force tools can convert to hose. *IP68 with waterproof cover	All E-Force tools can convert to hose. * IP68 with waterproof cover
n	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HURST (IDEX
SERIES	PENTHEON	PENTHEON	PENTHEON	PENTHEON	E3/E3connect
MODEL	PSP60	PSP50	PSP40	PSP40CL	SP 333
VOLTAGE	28v	28v	28v	28v	25.2v
TOOLS IN RANGE		■ ■ ■ ■			
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	25kg 55.1lb	21kg 46.3lb	19.4kg 42.8lb	15.2kg 33.5lb	17.1kg 37.7lb
WEIGHT DEFAULT BATTERY	1.5kg 3.3lb	1.5kg 3.3lb	1.5kg 3.3lb	1.5kg 3.3lb	1.4kg/1kg 3.2lb/2.3lb
BATTERY Ah OPTIONS	Holmatro PBPA287 7Ah	Holmatro PBPA287 7Ah	Holmatro PBPA287 7Ah	Holmatro PBPA287 7Ah	Lukas 9Ah 5Ah
BATTERY DURATION RECHARGE TIME	>11mins 60mins	>11mins 60mins	>11mins 60mins	>11mins 60mins	<60mins 150-100mins
LENGTH	1052mm 41.4"	964mm 38"	956mm 37.6"	811mm 31.9"	823mm 32.4"
WIDTH	319mm 12.6"	272mm 10.7"	270mm 10.6"	270mm 10.6"	256mm 10.1"
DEPTH	274mm 10.8"	272mm 10.7"	276mm 10.9"	276mm 10.9"	253mm 9.96"
EN ■ CLASSIFICATION	■ BS62/820-25	■ AS54/725-21	■ AS43/725-19.4	-	-
EN SPREAD FORCE RANGE t=US Ton	62-522kN 6.9-58.6 USt	54-366kN 6.06-41.1 USt	43-280kN 4.8-31.5 USt	43-131kN 4.83-14.7 USt	-
NFPA ■ FORCE RANGE t=US Ton (at/near tips)	60-112kN ■ 6.7-12.6 USt	50-93kN ■ 5.6-10.5 USt	39.1-69.2kN ■ 4.4-7.8 USt	39-53kN ■ 4.4-6 USt	39-63kN ■ 4.4-7.1 US
MAX SPREAD FORCE (Theoretical) t=US ton	875kN 98 USt	875kN 98.3 USt	875kN 98.4 USt	875kN 98.32 USt	836kN 94 USt
SPREAD DISTANCE	820mm 32.3"	725mm 28.5"	725mm 28.5"	510mm 20.1"	600mm 23.6"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	79kN 8.8 USt	67kN 7.53 USt	51.7kN 5.8 USt	48kN 5.4 USt	23-43 (56) kN 2.6-4.8 (6.3) US
MAX PULL DISTANCE	700mm 27.6"	610mm 24"	613mm 24.1"	393mm 15.5"	440mm 17.3"
MAX SQUEEZE FORCE t=US ton	127kN 14.2 USt	135kN 15.17 USt	59kN 6.6 USt	47kN 5.28 USt	144kN 16.2 USt
WORKING PRESSURE (HYDRAULIC)	720 Bar 10.4K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	700 Bar 10.1K psi
WiFi/Bluetooth capable	■	■	■	■	■
REMOVABLE DOOR OPENING TIPS	■	■	■	■	■
ROTATE HEAD/HANDLE	- 360°	- 360°	- 360°	- 360°	- 360°
LED LIGHTS	■ 6	■ 6	■ 6	■ 6	■ 4
IN-WATER USE BATTERY/TOOL IP	■ 67 57	■ 67 57	■ 67 57	■ 67 57	■ 68 58
NOTES	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Hurst E3 range is waterproof & can us IP68 battery. 5Ah battery reduces l by 20mm. 'Hero' graphics opti
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	jawsoflife.com

)	HURST (IDEX)	HURST (IDEX)	HURST (IDEX)	HYDRAM		
t	E3/E3connect	E3/E3connect	E3/E3connect	Underwater		
	SP 555	SP 777	M40 -Mammoth	Spreader		
	25.2v	25.2v	25.2v	28V		
	■ ■ ■ ■			■ ■ ■ ■		
	N/A	N/A	N/A	N/A		
	19.9kg 43.9lb	23.4kg 51.6lb	24.9kg 54.9lb	00kg 00lb		
	1.4kg/1kg 3.2lb/2.3lb	1.6kg 3.5lb	1.6kg 3.5lb	00kg 00lb		
	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	-0Ah 0Ah		
	<60mins 150-100mins	<60mins 150-100mins	<60mins 150-100mins	0mins 0-0mins		
	923mm 36.3"	997mm 39.3"	1106mm 43.6"	0mm 0"		
	265mm 10.4"	309mm 12.2"	309mm 12.1"	0mm 0"		
	253mm 9.96"	253mm 9.96"	253mm 9.96"	0mm 0"		
	-	-	-	-		
	-	-	-	-		
St	49-72kN ■ 5.5-8 USt	59-85kN ■ 6.6-9.6 USt	45-72kN ■ 5-8.1 USt	0kN ■ 0 USt		
	658kN 74 USt	600kN 67.4 USt	500kN 56.2 USt	0kN 0 USt		
	730mm 28.7"	813mm 32"	1018mm 40.1"	0mm 0"		
St	28-46 (58) kN 3.2-5.2 (6.5) USt	30-49 (60) kN 3.4-5.5 (6.7) USt	23-42 (50) kN 2.6-4.7 (5.6) USt	0 (0) kN 0-0(0) USt		
	569mm 22.4"	655mm 25.8"	~ 848mm 33"	~ 0mm 0"		
	115kN 12.9 USt	122kN 13.7 USt	N/A	N/A		
	700 Bar 10.1K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	0 Bar 0K psi		
	■	■	■			
	■	-	-	-		
	- 360°	- 270°	- 360°	-		
	■ 4	■	■			
	■ 68 58	■ 68 58	■ 68 58			
s se T ength ion	Hurst E3 range is waterproof & can use IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option	Hurst E3 range is waterproof & can use IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option	Hurst E3 range is waterproof & can use IP68 battery. 5Ah battery reduces length by 20mm. 'Hero' graphics option			
	jawsoflife.com	jawsoflife.com	jawsoflife.com	hydram.com		

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	OGURA	OGURA
SERIES	E3/E3connect	E3/E3connect	E3/E3connect	RP	HRSpreaderHe
MODEL	SP 333	SP 555	SP 777	RPS-505	HRS941/HRS-9
VOLTAGE	25.2v	25.2v	25.2v	18v	18v
TOOLS IN RANGE		■ ■ ■ ■			■ ■ ■ ■
ORIGIN				●	●
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	17.1kg 37.7lb	15.2kg 33.5lb	23.4kg 51.5lb	14.2kg 31.3lb	4.2kg +5.4kg 9.3lb +11.9lb
WEIGHT DEFAULT BATTERY	1.4kg/1kg 3.2lb/2.3lb	1.6kg 3.5lb	1.6kg 3.5lb	1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb
BATTERY Ah OPTIONS	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	Lukas 9Ah 5Ah	Makita 5-6Ah*	Makita 5-6Ah*
BATTERY DURATION RECHARGE TIME	<60mins 150-100mins	<60mins 150-100mins	<60mins 150-100mins	<12mins 55-120mins	<12mins 55-120mins
LENGTH	823mm 32.4"	1002mm 39.4"	997mm 39.3"	600mm 23.6"	328mm +352m 12.9"+13.9"
WIDTH	256mm 10.1"	265mm 10.4"	309mm 12.2"	206mm 8.1"	111mm +121m 4.4"+4.8"
DEPTH	253mm 9.96"	253mm 9.96"	253mm 9.96"	101mm 7.1"	272mm+78mm 10.7"+3.1"
EN ■ CLASSIFICATION	■ AS 42/600-18.3	■ AC 52/730-21.1	■ AS43/725-19.4	-	-
EN SPREAD FORCE RANGE t=US Ton	42-836kN 4.7-94 USt	52-658kN 5.8-74 USt	63-600kN 7.1-67.4 USt	-	<39.3kN 4.4 USt
NFPA ■ FORCE RANGE t=US Ton (at/near tips)	-	-	-	-	-
MAX SPREAD FORCE (Theoretical) t=US ton	836kN 94 USt	658kN 74 USt	600kN 67.4 USt	745kN 83 USt	39.3kN 4.4 USt
SPREAD DISTANCE	600mm 23.6"	730mm 28.7"	813mm 32"	505mm 19.9"	158mm 6.2"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	23-43 (56) kN 2.6-4.8 (6.3) USt	28-46 (58) kN 3.2-5.2 (6.5) USt	30-49 (60) kN 3.4-5.5 (6.7) USt	N/A	-
MAX PULL DISTANCE	440mm 17.3"	569mm 22.4"	655mm 25.8"	N/A	-
MAX SQUEEZE FORCE t=US ton	144kN 16.2 USt	115kN 12.9 USt	122kN 13.7 USt	692.5kN 77.8 USt	69kN 7.7 USt
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.1K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	N/A	N/A
WiFi/Bluetooth capable	■	■	■	- -	- -
REMOVABLE DOOR OPENING TIPS	■	■	■	■	-
ROTATE HEAD/HANDLE	- 360°	- 360°	- 360°	360° 360°	360° 270°
LED LIGHTS	■ 2	■ 6	■ 6	-	-
IN-WATER USE BATTERY/TOOL IP	54 54	■ 57 57	■ 68 58	54 54	54 54
NOTES	All Can use IP68 battery. E2 & EWXT have been DISCONTINUED	All Can use IP68 battery. E2 & EWXT have been DISCONTINUED	All Can use IP68 battery. E2 & EWXT have been DISCONTINUED	*EU uses 5Ah, US tends to use 6Ah	Heads swap out in se via short hose 94 All heads interch
WEBSITE	lukas.com	lukas.com	lukas.com	ogurarescuetools.com	ogurarescuetools.c

	OGURA	POWERHAWK TECHNOLOGIES	POWERHAWK TECHNOLOGIES	RESQTEC	RESQTEC	
ad	HR SpreaderHead	Legacy	X	EDD	EDD	
934	HRS931/HRS-934	P16 / S-1601	P-16X /S-1601X	P-4X	X2	
	18v	12v or 16v LiGHT	7.5/12v	43.2v	43.2v	28V
	N/A	N/A	N/A	N/A	N/A	N/A
	3.9kg +5.4kg 8.6lb+11.9lb	22.3kg 49.3lb	19.5kg 43lb	20kg 44lb	20.5kg 45.2lb	00kg 00lb
	1-1.36kg 2.2-3lb	*4.5kg / 9.9lb 15.9kg / *35lb	1..36kg 3lb	1kg 2.2lb	1kg 2.2lb	00kg 00lb
	Makita 5-6Ah*	Powerhawk 12.4Ah LiGHT 33Ah 12v	Powerhawk 7.5Ah or any 12v source	Resqtec 2.6Ah	Resqtec 2.6Ah	-0Ah 0Ah
	<12mins 55-120mins	>30 mins <120mins/<15hr	>30mins <120mins	<45mins 60mins	<45mins 60mins	0mins 0-0mins
m	303mm+352mm 11.9"+13.9"	635mm 25"	635mm 25"	711mm 28"	823mm 32.4"	0mm 0"
m	111mm +121mm 4.4"+4.8"	254mm 10"	254mm 10"	271mm 10.7"	273mm 10.7"	0mm 0"
n	272mm+78mm 10.7"+3.1"	305mm 12"	279mm 11"	274mm 10.8"	235mm 9.25"	0mm 0"
	-	-	-	-	AS38.4/607-20.5	-
	<39.3kN 4.4 USt	-	-	-	38.4-83.2kN 4.3-9.3 USt	-
	-	35.6-48.9kN 4-5.4 USt	31.6-52.5kN 3.5-5.9 USt	32.8-51kN 3.7-5.7 USt	34.7-76.7kN 3.9-8.6 USt	0kN 0 USt
	39.3kN 4.4 USt	201.2kN 22.6 USt	711.7kN 80 USt	374kN 42 USt	342kN 38.4 USt	0kN 0 USt
	158mm 6.2"	356mm 14"	406.4mm 16"	401mm 15.8"	607mm 23.9"	0mm 0"
	-	N/A	N/A	-	27.4-59.6kN 3.1-6.7 USt	0 (0) kN 0-0(0) USt
	-	approx 270mm 11"	approx 312mm 12.5"	-	426mm 16.8"	~ 0mm 0"
	69kN 7.7 USt	N/A	N/A	36.3-57.7kN 4-6.48 USt	66.3-120.9kN 7.4-13.4 USt	N/A
	N/A	N/A	N/A	700 Bar 10.2K psi	720 Bar 10.4K psi	0 Bar 0K psi
	- -	- -	- -	- -		
	-					-
	360° -	70° 270°	70° 270°	61° 270°	- 360°	-
	-	-	-		6	
	54 54	54 54	54 54	54 54	57 57	
	conds. Cutter, Spreader etc. attach or direct to the powerhead. 41 = US market. angeable between power units	Legacy only in support of existing purchases. Accepts all P-16X blades & can be retrofitted to become P-16X*Wt=battery+controller	interchangeable Cutter,spreader &combi heads. Both P16&P16X can use a 12v car battery or any 12v power source	3x interchangeable heads/ blades. Rear handle option. *Also 28Ah powerpack. Jaw recess (reach)= 118mm	Cutting tips option. Auto high-temp shut-off. Step less speed increase	
om	ogurarescuetools.com	powerhawk.com	powerhawk.com	rescue.resqtec.com	rescue.resqtec.com	.com

IMAGES NOT TO SCALE
OTHER TOOLS IN RANGE:
■= Combi ■= Cutter ■=Ram
■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	SCORPE	TNT RESCUE	TNT RESCUE	TNT RESCUE	WEBER RESCUE	
SERIES	GreenSpirit II	Storm Surge	Storm Surge	Storm Surge	E-Force3	
MODEL	Spreader MS	ES100-32	ES100-28	ES100-24	SP 44 AS 1093703	SP
VOLTAGE	18v/28v	18v/20v	18v/20v	18v/20v	28v	
TOOLS IN RANGE	■ ■ ■		■ ■ ■			
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	
WEIGHT IN HAND inc BATTERY(IES) & TIPS	18.1kg 39.8lb	23.9-23.5kg 51.8-52.6lb	23.31-22.9kg 51.4-50.55lb	22.31-22.7kg 49.2-50lb	17.3kg 38lb	
WEIGHT DEFAULT BATTERY	1kg 2.2lb	1.1kg /2.4lb 0.6kg / 1.3lb	1.1kg /2.4lb 0.6kg / 1.3lb	1.1kg /2.4lb 0.6kg / 1.3lb	1kg 2.2lb	
BATTERY Ah OPTIONS	Milwaukee 8Ah M18 5Ah M28	Milwaukee M18 8/9Ah. Makita6Ah DeWalt FlexVolt20 9Ah	Milwaukee M18 8/9Ah. Makita 6Ah DeWalt FlexVolt20 9Ah	Milwaukee M18 8/9Ah. Makita 6Ah DeWalt FlexVolt20 9Ah	Milwaukee M28 5Ah	Mi
BATTERY DURATION RECHARGE TIME	60/80mins 45-90mins	10-15mins 87 / 60mins	10-15mins 87 / 60mins	10-15mins 87 / 60mins	<45-80mins 60mins	
LENGTH	912mm 36"	944.2mm 37.2"	884mm 34.8"	823.77mm 32.43"	877mm 34.5"	
WIDTH	250mm 9.8"	283mm 11.15	283mm 11.15	283mm 11.15"	239mm 9.4"	
DEPTH	222mm 8.7"	345.4mm 13.6"	345.4mm 13.6"	344.9mm 13.58"	241mm 9.5"	
EN ■ CLASSIFICATION	■ AS44/610-18.1	-	-	-	■ AS44/610-17.3	■
EN SPREAD FORCE RANGE t=US Ton	44-857kN 5-96.3 USt	-	-	-	44-857kN 5-96.3 USt	6
NFPA ■ FORCE RANGE t=US Ton (at/near tips)	-	■ 225-895kN 25.3-100.56 USt	■ 249-1014kN 27.98-113.93USt	■ 286-1078kN 32-121 USt	-	
MAX SPREAD FORCE (Theoretical) t=US ton	171kN 19.2 USt	895kN 100.56 USt	1014kN 113.93 USt	-	-	
SPREAD DISTANCE	610mm 24"	700.1mm 31.5"	698.5mm 27.5"	596.9mm 23.5"	610mm 24"	
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	68kN 7.6 USt	41.54kN 4.67 USt	49.7kN 5.58 USt	63.9kN 7.2 USt	68kN 7.6 USt	
MAX PULL DISTANCE	465mm 18.3""	565.2mm 22.25"	463.5mm 18.25"	463.5mm 18.2"	465mm 18.3"	
MAX SQUEEZE FORCE t=US ton	149kN 16.9 USt	N/A	N/A	N/A	149kN 16.9 USt	
WORKING PRESSURE (HYDRAULIC)	700 Bar 10.2K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	700 Bar 10.2K psi	
WiFi/Bluetooth capable	- -	- -	- -	- -	- -	
REMOVABLE DOOR OPENING TIPS	-	■	■	■	■ ■	
ROTATE HEAD/HANDLE	- 110°	- -	- -	- -	- 360°	
LED LIGHTS	■ 4	■ 4	■ 4	■ 4	■ 4	
IN-WATER USE BATTERY/TOOL IP	■ 54/68* 68	54 54	54 54	54 54	54 54	
NOTES	Converter available for M28 & other batteries. * IP68 with M18 & waterproof cover (not shown)	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter.option	All E-Force tools can convert to hose	All
WEBSITE	scorpe.net	tntrescue.com	tntrescue.com	tntrescue.com	weber.com	

WEBER RESCUE	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**
E-Force3	E-Force3	Smart Force	Smart Force	Smart Force	E-Force3	Smart Force
54 AS 1091736	SP 50 BS 1091735	SP 44 1101468	SP 54 AS 1101469	SP 50 BS 1101548	SP 60 BS 00000000	SP 60 BS 0000000
28v	28v	18v	18v	18v	28v	18v
N/A	N/A	N/A	N/A	N/A	N/A	N/A
20.7kg 45.5lb	20.9kg 46lb	18.2kg 40lb	21.6kg 47.5lb	21.8kg 48lb	23.7kg 52.1lb	24.7kg 54.3lb
1kg 2.2lb	1kg 2.2lb	1.1kg 2.33lb	1.1kg 2.33lb	1.1kg 2.33lb	1kg 2.2lb	1.1kg 2.33lb
lwaukee M28 5Ah	Milwaukee M28 5Ah	Milwaukee M18 8Ah/12Ah	Milwaukee M18 8Ah/12Ah	Milwaukee M18 8Ah/12Ah	Milwaukee M28 5Ah	Milwaukee M18 8Ah/12Ah
<45-80mins 60mins	<45-80mins 60mins	60/90mins 45-83mins	60/90mins 45-83mins	60/90mins 45-83mins	<45-80mins 60mins	60/90mins 45-83mins
982mm 38.7"	1015mm 40"	893mm 35.2"	999mm 39.30"	1032mm 40.6"	1040mm 41"	1080mm 42"
282mm 11.1"	282mm 11.1"	239mm 9.4"	282mm 11.1"	282mm 11.1"	307mm 12.1"	307mm 12.1"
241mm 9.5"	241mm 9.5"	228mm 9.5"	228mm 9.5"	228mm 9.5"	241mm 9.5"	228mm 9"
AS55/735-20.7	BS50/805-20.9	AS44/610-18.2	AS55/735-20.7	BS50/805-21.8	BS60/820-23.7	BS60/820-24.7
55-501kN 5.2-56.3 USt	50-501kN 5.6-56.3 USt	44-857kN 5-96.3 USt	50-501kN 5.6-56.3 USt	50-501kN 5.6-56.3 USt	60-638kN 6.7-71.7 USt	60-638kN 6.7-71.7 USt
-	-	-	-	-	-	-
-	-	-	-	-	-	-
735mm 28.9"	805mm 31.7"	610mm 24"	735mm 28.9"	805mm 31.7"	820mm 32.2"	820mm 32.2"
70kN 7.9 USt	67kN 7.5 USt	68kN 7.6 USt	70kN 7.9 USt	67kN 7.5 USt	74kN 8.3 USt	74kN 8.3 USt
620mm 24.4"	680mm 26.8"	465mm 18.3"	620mm 24.4"	680mm 26.80"	702mm 27.6"	702mm 27.6"
144kN 16.2 USt	144kN 16.2 USt	149kN 16.9 USt	144kN 16.2 USt	144kN 16.2 USt	114kN 12.8 USt	114kN 12.8 USt
700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi	700 Bar 10.2K psi
- -	- -				- -	
- 360°	- 360°	- 360°	- 360°	- 360°	- 360°	- 360°
4	4	4	4	4	4	4
54 54	54 54	54/68* 68	54/68* 68	54/68* 68	54 54	54/68* 68
E-Force tools can convert to hose	All E-Force tools can convert to hose	All E-Force tools can convert to hose. * IP68 with waterproof cover	All E-Force tools can convert to hose. *IP68 with waterproof cover	All E-Force tools can convert to hose. * IP68 with waterproof cover	All E-Force tools can convert to hose	All E-Force tools can convert to hose. * IP68 with waterproof cover
weber.com	weber.com	weber.com	weber.com	weber.com	weber.com	weber.com

POWER ASCENDERS – FOR PROFESSIONALS.

ActSafe Power Ascenders are an ingenious combination of a high-capacity rope winch in a compact, lightweight and user-friendly design. They simply redefine the possibilities for working in vertical environments.
skylotec.com

More Information

ActSafe PMX

- working load limit (WLL) of 250 kg
- 17 m / min at 100 kg
- suitable for 11 mm ropes

ActSafe ACX

- simplifies and accelerates work on complex or difficult to access structures
- power-saving use
- remote control up to 150m

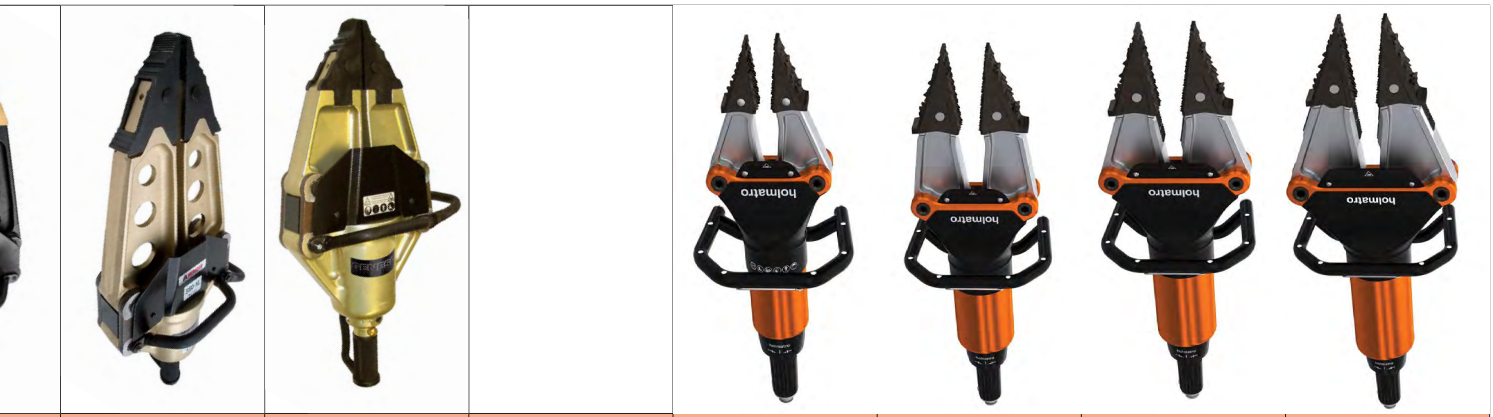
SKYLOTEC

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Cutter
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

COMPANY	AOLAI RESCUE	AOLAI RESCUE	EDILGRAPPA	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE
SERIES MODEL VARIANT			DE700	S44 SL	S49 XL	S53 XL
Product Code						
TOOLS IN RANGE	■■■■■		■■■■■	■■■■■		
ORIGIN	China	China	Italy	USA / Canada	USA	USA
COST inc tax / VAT	$4500 per 2 tools FOB	N/A	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	24.5kg 54lb	26kg 57.2lb	15.5kg 00lb	17.3kg 38lb	19.9kg 43.9lb	20.3kg 44.7lb
LENGTH	905mm 35.6"	1194mm 47"	775mm 00"	768mm 30.2"	766mm 30.2"	836mm 32.9"
WIDTH	350mm 13.77"	320mm 12.6"	280mm 11"	250mm 9.8"	243mm 9.6"	299mm 11.8"
DEPTH	279mm 10.9"	265mm 10.4"	190mm 7.5"	190mm 7.5"	199mm 7.8"	216mm 8.5"
EN CLASSIFICATION EN SPREAD FORCE RANGE t=US Ton	- 47-124kN 5.7-13.9 USt	- 52-562kN 5.8-63 USt	AS105/710-15.5 - -	- - -	- - -	- - -
NFPA FORCE RANGE t=US Ton (at/near tips)	-	-	38-105kN 4.2-11.8 USt	75-151kN 0-0 USt	49-61kN 0-0 USt	52.8-81.3 0-0 USt
MAX SPREAD FORCE (Theoretical) t=US ton	-	-	367kN 41.25 USt	-	-	-
SPREAD DISTANCE	650mm 25.6"	820mm 32.2"	710mm 28"	610mm 24"	710mm 28"	800mm 31.5"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	(68)kN (7.6) USt	(73)kN (8.2) USt	63.7kN 7.1 USt	30-44kN 0-0 USt	38-48kN 0-0 USt	38.6-66k 0-0 USt
MAX PULL DISTANCE	520mm 20.5"	716mm 28"	595.5mm 00"	? ?	561mm 22"	645mm 25.4"
MAX SQUEEZE FORCE t=US ton	69kN 7.7 USt	140kN 15.8 USt	49kN 5.5 USt	- -	- -	- -
WORKING PRESSURE	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2
REMOVABLE DOOR OPENING TIPS	-	-	■	■	■	■
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- -
OPERATING TEMP	?	?	?	?	?	?
LED LIGHTS	2	2	-	-	-	-
IN-WATER USE TOOL IP	54	54	54	54	54	54
NOTES	Cutting tips option and pulling chains	Cutting tips option and pulling chains		All Genesis battery tools can convert to hose and vice-versa		
WEBSITE	aolairescue.com	aolairescue.com	edilgrappa.com	genesisrescue.com	genesisrescue.com	genesisrescue



S E	GENESIS RESCUE	GENESIS RESCUE		HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO
	S60 XL	S80 XL		CORE SP5240CL	CORE SP5240	CORE SP5250	CORE SP5260
	N/A	N/A		N/A	N/A	N/A	N/A
	24.7kg 40lb	25.1kg 55.3lb		15.2kg 33.5lb	19.4kg 42.8lb	21kg 46.3lb	25kg 55.1lb
	856mm 54.5"	749mm 29.5"		811mm 31.9"	956mm 37.6"	964mm 38"	1052mm 41.4"
	329mm 13"	329mm 13"		270mm 10.6"	270mm 10.6"	272mm 10.7"	319mm 12.6"
	213mm 8.4"	213mm 8.4"		276mm 10.9"	276mm 10.9"	272mm 10.7"	274mm 10.8"
	- -	- -		- 43-131kN 4.83-14.7 USt	AS43/725-19.4 43-280kN 4.8-31.5 USt	AS54/725-21 54-366kN 6.06-41.1 USt	BS62/820-25 62-522kN 6.9-58.6 USt
kN	63-84.7kN 0-0 USt	87.7-115.5kN 0-0 USt		39-53kN 4.4-6 USt	39.1-69.2kN 4.4-7.8 USt	50-93kN 5.6-10.5 USt	60-112kN 6.7-12.6 USt
	-	-		875kN 98.32 USt	875kN 98.4 USt	875kN 98.3 USt	875kN 98 USt
	810mm 31.9"	735mm 28.9"		510mm 20.1"	725mm 28.5"	725mm 28.5"	820mm 32.3"
N	45.2-63.5kN 0-0 USt	60-95.8kN 0-0 USt		48kN 5.4 USt	51.7kN 5.8 USt	67kN 7.53 USt	79kN 8.8 USt
	643mm 25"	444mm 17.5"		393mm 15.5"	613mm 24.1"	610mm 24"	700mm 27.6"
	- -	144kN 16.2 USt		47kN 5.28 USt	59kN 6.6 USt	135kN 15.17 USt	127kN 14.2 USt
2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi		720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi
	■	■		■	■	■	■
	- -	- -		- 360°	- 360°	- 360°	- 360°
	?	?	?	?	?	?	?
	-	-		6	6	6	6
	54	54		● 57	● 57	● 57	● 57
				Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation	Extreme grip spreader tips. On-tool charging. Stepless speed maximisation
.com	genesisrescue.com	genesisrescue.com		holmatro.com	holmatro.com	holmatro.com	holmatro.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
- =BATTERY TOOLS
- = Combi
- = Cutter
- =Ram
- = Special Tools

●● = PARTIAL or OK but not ideal
□□□ = Option
N/A = info Not Available/not given

COMPANY	HURST (IDEX)	HYDRAM	HYDRAM	HYDRAM	HYDRAM	LIBERVI
SERIES MODEL VARIANT	SP 555	EHM750	EHL800	EHL620	EHS570	E300 ME
Product Code	0000000	0000000	0000000	0000000	0000000	0000000
TOOLS IN RANGE	■■■■■		■■■■			
ORIGIN						
COST inc tax / VAT	$12,110.	N/A	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	20kg 44.1lb	18.48kg 00lb	26.18kg 00lb	23.88kg 00lb	31.48kg 00lb	14.5kg 28lb
LENGTH	1002mm 39.4"	834mm 00"	885mm 00"	786mm 00"	936mm 00"	480mm 19"
WIDTH	265mm 10.4"	335mm 00"	385mm 00"	385mm 00"	395mm 00"	280mm 11"
DEPTH	280mm 11"	230mm 00"	225mm 00"	220mm 00"	269mm 00"	170mm 6.5"
EN CLASSIFICATION EN SPREAD FORCE RANGE t=US Ton	- -	AS41-750/18.48 41-132kN 00-00USt	BS 63-800/26.18 66-202kN 00-00USt	CS 88620/23.88 97-373kN 00-00USt	CS 91-565/31.48 92-260kN 00-00USt	- 00-00kN 00-00US
NFPA FORCE RANGE t=US Ton (at/near tips)	49-72kN 5.5-8 USt	-	-	-	-	
MAX SPREAD FORCE (Theoretical) t=US ton	658kN 74 USt	132kN 00 USt	202kN 00 USt	373kN 00 USt	260kN 00 USt	84kN 00USt
SPREAD DISTANCE	730mm 28.7"	750mm 00"	800mm 00"	620mm 00"	565mm 00"	288mm 11"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	28-46 (58) kN 3.2-5.2 (6.5) USt	41-49kN 00USt	51.2-128kN 00USt	82-138kN 00-00USt	62-114.2kN 00-00USt	-
MAX PULL DISTANCE	569mm 22.4"	502mm 00"	565mm 00"	378mm 00"	431mm 00"	00mm 00"
MAX SQUEEZE FORCE t=US ton	115kN 12.9 USt	-	-	-	-	00kN 00USt
WORKING PRESSURE	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	
REMOVABLE DOOR OPENING TIPS	■					
ROTATE HEAD/HANDLE	- 360°					
OPERATING TEMP	?	?	?	?	?	?
LED LIGHTS	2					
IN-WATER USE TOOL IP	● 54					■80m/262
NOTES		Previous version 19.6kg				ME4 is an under capable version E100
WEBSITE	jawsoflife.com	hydram.com	hydram.com	hydram.com	hydram.com	

T	LIBERVIT	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	RESQTEC	RESQTEC	RESQTEC
E4	E500 ME5	SP 333	SP 555	SP 777	X2	X4	X6
	0000000	0000000	0000000	0000000	0000000	0000000	0000000
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	16.7kg 36.7lb	17.3kg 38.1lb	20kg 44.1lb	23.6kg 52lb	13.2kg 00lb	16.5kg 00lb	24.9kg 00lb
	589mm 23"	905mm 35.6"	1002mm 39.4"	1080mm 42.5"	711mm 28"	823mm 32.4"	823mm 32.4"
	226mm 9"	256mm 10.1"	265mm 10.4"	309mm 12.2"	271mm 10.7"	273mm 10.7"	273mm 10.7"
	228mm 9"	253mm 9.96"	280mm 11"	285mm 11.2"	274mm 10.8"	235mm 9.25"	235mm 9.25"
t	- 00-00kN 00-00USt	AS 42/600-18.3 42-836kN 4.7-94 USt	AS 52/730-20.9 52-658kN 5.8-74 USt	BS 63/813-24.5 63-600kN 7.1-67.4 USt	AS40.3-616-13.2 40.3-347kN 4.5-39USt	AS52-700-16.5 52-3643kN 5.8-409USt	BS60.4-802-20.5 60.4-2273.8kN 6.8-255.6USt
					■	■	■
	50kN 00USt	836kN 94 USt	658kN 74 USt	600kN 67.4 USt	347kN 39USt	3643kN 409USt	2273.8kN 255.6USt
	500mm 19.5"	600mm 23.6"	730mm 28.7"	813mm 32"	616mm 00"	670mm 00"	802mm 00"
	-	23-43 (56) kN 0 (0) USt	28-46 (58) kN 3.2-5.2 (6.5) USt	30-49 (60) kN 3.4-5.5 (6.7) USt	45.4-100kN 5.1-11.2USt	57.8-131.8kN 6.5-14.8USt	27.4-59.6kN 00-00USt
	00mm 00"	440mm 17.3"	569mm 22.4"	655mm 25.8"	-	-	-
	00kN 00USt	144kN 5.7 USt	115kN 12.9 USt	122kN 13.7 USt	62.4-103kN 7-11.5USt	80.1-197.3kN 9-22USt	173-245kN 19.5-27.5 USt
		700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi	700Bar / 10.1Kpsi
		■	■	■	■*	■*	■*
		- 360°	- 360°	- 360°	61° 270°	- 360°	- 360°
	?	?	?	?	?	?	?
		6	6	4	□	□	□
2ft	■80m/262ft	■ 58	■ 58	54	54	■ 57	■ 57
water- of the	ME5 is an underwater-capable version of the E500				138° jaw opening. *Aircraft Jaws option.	149° jaw opening *Aircraft Jaws option.	130° jaw opening. *Aircraft Jaws option.
		lukas.com	lukas.com	lukas.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Cutter
■=Ram
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = info Not Available/not given

COMPANY	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESC
SERIES MODEL VARIANT	SL-24	SL-28	S-100-24	S-100-28	S-100-32	S-200-2
Product Code	0000000	0000000	0000000	0000000	0000000	0000000
TOOLS IN RANGE				■■■■■		
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT IN HAND inc BATTERY(IES) & TIPS	16.3kg 35.9lb	16.6kg 36.6lb	18.7kg 41.2lb	20.6kg 45.4lb	23.5kg 52.6lb	21.2kg 47lb
LENGTH	723.9mm 28.5"	772.2mm 30.4"	774.7mm 30.5"	894.1mm 35.2"	944.2mm 37.2"	774.7mm 30.5"
WIDTH	335.3mm 177.8"	335.3mm 177.8"	342.9mm 13.5"	342.9mm 13.5"	335.3mm 177.8"	342.9mm 13.5"
DEPTH	177.8mm 7"	177.8mm 7"	165.1mm 6.5"	165.1mm 6.5"	345.4mm 13.6"	165.1mm 6.5"
EN CLASSIFICATION EN SPREAD FORCE RANGE t=US Ton	AS39/609-17 - -	AS28/711-17 - -	AS47/609-19 - -	AS39/711-20 - -	AS35/812-21 - -	BS64/609- - -
NFPA FORCE RANGE t=US Ton (at/near tips)	155-857kN 00-00 USt	143-793kN 00-00USt	286-1078kN 32-121 USt	225-895kN 0-0USt	225-895kN 25.3-100.56 USt	453-1343k 00-00USt
MAX SPREAD FORCE (Theoretical) t=US ton	857kN 00USt	793kN 00 USt	1078kN 121 USt	1014kN 00 USt	895kN 00 USt	-
SPREAD DISTANCE	609.6mm 24"	711.2mm 28"	609.6mm 24"	711.2mm 28"	812.8mm 32"	609.6mm 24"
PULL FORCE RANGE/MAX (THEORETICAL MAX) t=US ton	131.2kN 00USt	119kN 00 USt	130kN 00 USt	102kN 00 USt	41.54kN 4.67 USt	205kN USt
MAX PULL DISTANCE	?mm ?"	?mm ?"	?mm ?"	?mm ?"	?mm ?"	?mm ?"
MAX SQUEEZE FORCE t=US ton	N/A	N/A	N/A	N/A	N/A	N/A
WORKING PRESSURE	724Bar / 10.5K psi	724Bar / 10.5K psi	724Bar / 10.5K psi	724Bar / 10.5K psi	724Bar / 10.5K psi	724Bar / 10.5
REMOVABLE DOOR OPENING TIPS	■	■	■	■	■	■
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- -
OPERATING TEMP	?	?	?	?	?	?
LED LIGHTS	-	-	-	-	4	4
IN-WATER USE TOOL IP	54	54	54	54	54	54
NOTES						
WEBSITE	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.c

HOSE-FED SPREADERS

UE	TNT RESCUE	TNT RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE
4	S-200-28	S-200-32	SP 44 AS	SP 50 BS	SP 54 AS	SP 64 BS	SP 84 CS
	0000000	0000000	0000000	0000000	0000000	0000000	1093904
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	22.4kg 49.6lb	23.1kg 51.2lb	17.3kg 38lb	20.9kg 46lb	20.7kg 45.5lb	18.2kg 40lb	19.8kg 00lb
	830.6mm 32.7"	894.1mm 35.2"	877mm 34.5"	1015mm 40"	982mm 38.7"	893mm 35.2"	790mm 00"
	342.9mm 13.5"	335.3mm 177.8"	239mm 9.4"	282mm 11.1"	282mm 11.1"	239mm 9.4"	307mm 00"
	165.1mm 6.5"	345.4mm 13.6"	241mm 9.5"	241mm 9.5"	241mm 9.5"	228mm 9.5"	210mm 00"
22	BS54/711-23 - -	BS45/812-24 - -	AS44/610-17.3 44-857kN 5-96.3 USt	BS50/805-20.9 50-501kN 5.6-56.3 USt	AS55/735-20.7 55-501kN 6.2-56.3 USt	AS44/610-18.2 44-857kN 5-96.3 USt	CS82/660-19,8 82-680kN 00-00USt
kN	394-1199kN 00-00USt	356-1099kN 00-00 USt	-	-	-	-	-
	1099kN 00 USt	1099kN 00 USt	-	-	-	-	680kN
	711.2mm 28"	812.8mm 32"	610mm 24"	805mm 31.7"	735mm 28.9"	610mm 24"	660mm 00"
	49.7kN 5.58 USt	161kN 00USt	68kN 7.6 USt	67kN 7.5 USt	70kN 7.9 USt	68kN 7.6 USt	70kN 7.9 USt
	?mm ?"	?mm ?"	465mm 18.3"	680mm 26.8"	620mm 24.4"	465mm 18.3"	540mm 00"
	N/A	N/A	149kN 16.9 USt	144kN 16.2 USt	144kN 16.2 USt	149kN 16.9 USt	129kN 00 USt
K psi	724Bar / 10.5K psi	724Bar / 10.5K psi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi
	■	■	■■	■■	■■	■	■■
	- -	- -	- 360°	- 360°	- 360°	- 360°	- 360°
	?	?	?	?	?	?	?
	4	4	4	4	4	4	4
	54	54	54 54	54 54	54 54	■ 54/68* 68	■ 54/68* 68
			All Weber battery tools can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa	All Weber battery tools can convert to hose and vice-versa
om	tntrescue.com	tntrescue.com	weber.com	weber.com	weber.com	weber.com	weber.com

'hydraulic' BATTERY RAMS

The image above is not an environment you would normally think of for a hydraulic ram but I can think of many an incident in the dim and distant past where such a tool would have been a literal life saver. We had manually operated hydraulics of course and these are indeed a fantastically reliable option even now but these dedicated battery tools are infinitely faster and with far greater reach or more accurately for rams, stroke which is the distance that you can physically move your target. The specifics of battery tools together with their advantages and disadvantages are covered in the previous three parts to this series so before we look at some ram-specific features, our co-extrication editor Nick Appleton gives some useful training and operational usage pointers for battery rams , some of which is just as relevant to any ram no matter the power source.

Top Tips from TR Extrication Co-Editor Nick Appleton:

Training with rams should be carried out on previously prepared vehicles that have been deformed to simulate various accident damage scenarios e.g. roof pushed down, B pillars pushed inwards etc. Rescuers will only understand the importance of moving the metal all the way back or past the position that the metal was originally formed if the vehicle has been deformed in this way. They will realise that only partially ramming the structure will cause it to spring back once the rams are retracted.

- *Adding and extending a second ram with a longer extension piece placed adjacent to the first ram once the first ram is fully extended can help prevent the structure springing back to its original shape*
- *When extending the ram both ends of the ram should be continuously monitored to ensure that neither slips out of position*
- *Rescuers need to be 100% sure of the direction of travel before operating the ram as the consequences of housing the ram instead of extending it could bring the structure back onto the casualty*
- *A ram will always go towards the direction of the weaker end of the structure it's in contact with and so assess the push point and ensure it is stronger than the structure to be moved.*
- *If adding an extension piece to the ram then this end must always be positioned against the push point*
- *If the structure is in contact with the entrapped casualty then always move the structure away first with the ram before cutting it. Cutting the structure first can cause further structural movement towards the casualty [ED: and alter the way it reacts to being pushed including the possibility of a cut-end 'springing' off the end of the ram. When the structure is intact there are fewer jagged, loose ends to be concerned about].*
- *Casualty entrapment should be freed first before further space creation techniques are considered due to the requirement to have a viable emergency release plan in place should the casualties condition suddenly deteriorate*
- *When extricating from Electric Vehicles rescuers must ensure they do not ram from or into any high voltage battery components or any high voltage areas – refer to the Emergency Response Guide for the vehicle*
- *When carrying out a dash roll manoeuvre cut the dash tie down from centre console if more space is required to carry out the extrication*
- *Ensure the structure has been peeled and revealed so that the ram does not inadvertently push through any hidden hazards*

Advantages of battery operated rams:

- *No set up time so immediately deployable*
- *Quicker to get to work*
- *Quieter when operating*
- *No hoses so no trip hazard*
- *Less stowage space required on fire appliance*
- *No emissions or fumes so can be used in confined and enclosed spaces*

Disadvantages of battery operated rams:

- *Dependent on good battery management*
- *Heavier because have own internal pump, oil reservoir and power source*
- *Bulky to get into restricted spaces*
- *Some cannot be used submerged under water – though they can all be used in wet weather .*

RAM DESIGN

A simple ram consists of a tube being hydraulically (or in some shoring cases, pneumatically), pushed out of a bombproof tubular casing that can take high internal pressure. With

traditional hose-fed rams, those tubes constitute a relatively small footprint with just the length of tube to contend with but battery power usually involves having the battery and motor on-board and this increases bulk considerably. Unlike cutters and spreaders where the battery doesn't add a huge amount to the bulk of the tool, rams do and therefore require more thought before purchasing. This is mitigated in most models by being able to rotate the motor assembly into free space or by having the ram tubes mounted at 90 degrees to the motor housing. So you'll still use them especially if you have other battery tools in the same series; not only for continuity of batteries but also because of the self-contained nature that we've discussed throughout this series of guides and Nick again mentions in the intro - minimal noise and no liquid fuel and exhaust fumes to contend with. In our tables we have two unpowered, stand-alone rams that don't quite fit the 'self-contained, battery-powered tool' description unless you introduce a spreader. We have included the *Powerhawk X* (& *P/X16*) compatible rams simply because they were the first to come up with an ingeniously simple alternative - a ram housing with a cutaway section that allows you to insert any spreader head that fits and do the pushing of tubes that way as a proxy power source. These things are not only a lot cheaper than a self-contained battery ram, you can set and leave them in situ. in complex extrication or USAR situations instead of tying up multiple battery units. The image on the left shows the legacy P16 that we used for many years and in fact the ram, although, long retired, is still going strong after more than 20 years.

SIZE MAY NOT MATTER

Rams are infinitely more extendible than their cutter and spreader counterparts. Not all manufacturers bother of course because 1) a 2-stage telescoping ram offers a wide size range albeit that the strength at longer lengths is very much reduced and 2) there are useful regular lengths for rams that cover most eventualities. But some can take screw-on or clip-on extensions that might be over a metre long when the ram itself is only pushing 4 or 5 inches! *Resqtec's V4* has an adapter that enables it use extensions plus all 5 shoring struts as extensions! It's often about the bridging distance between the sill or support point and the target to be moved than it is the distance it needs to be moved. Two of the original *Ogura* tools continue to provide perhaps the most accessible rams because their power source is a diminutive *Makita* drill connected by a short hose so you can get that into smaller spaces than virtually any other ram in our selection. That's snot bad after over 30 years of development - you might have thought that by 2024 we would be taking a matchbox off the truck and deploying some microscopic nano-bots to do the heavy lifting.

(LACK OF) NOISE: Covered in the previous parts of this series and already reiterated in Nick's introduction - electric tools are silent when not in use so there is no tick-over noise as you get with a petrol engine tool or a generator driven, hose-fed hydraulic system. But there is still noise when the tool is doing its work and this can vary from a hum to a high pitched whirr that gets louder as the tool works harder. So they are not 'silent' but certainly far less noise pollution than a traditional petrol engine/generator-based system.

LED LIGHTS: Not so obvious as the cutters and spreaders but most of the battery rams have on- board LEDs for illuminating your immediate tool placement area. These are extremely useful because area lighting and even head and angled lighting can illuminate everything BUT the work area as a congested jumble of vehicle or building parts casts a dark shadow where you least want it. Having an LED that shines down the line of the tool negates this problem.

WiFi & BLUETOOTH DIAGNOSTICS & BATTERY MANAGEMENT

Holmatro, Lukas/Hurst and *Weber/Genesis* have continued with on-board control panels discussed in the other tool guides but we haven't mentioned much about the importance of battery management. So important, we've listed it twice in our tables! For tools that use off-the shelf batteries from the likes of *Milwaukee, Makita* and *DeWalt* this is not so important but the more expensive bespoke systems from *Holmatro* and *Lukas* need to be looked after. Luckily their own charging and storage systems together with WiFi and/or Bluetooth diagnostics allows much easier and efficient management - *Holmatro*'s on-vehicle multi-charger for instance will charge 6 to 18 batteries separately from a single power source or while on the tool and will prioritise on-tool charging over 'loose' batteries. That and the watertight batteries is why you pay the big bucks for the bespoke systems. Incidentally, *Lukas* and *Hurst E3* and Wifi capable *E3-Connect* series are the same tool aside from the extra cost of the Wifi version but the *Lukas* range was ratified with removal of the R421 E2, R520 E3/E3C and R522 E3/E3C models in mid 2024.

CHINESE & RUSSIAN TOOLS

As at 2024 Russia has become a North Korea style pariah state so we still don't have to consider Russian tools even if they were good enough to include. China, however,

continues to produce quality products for big name companies around the world but there are two problems associated with including their products in our GUIDES. The first is their propensity for copyright infringement via blatant copying of design and imagery, as an example, we have included *Aolai Rescue* because their battery tools are their own badged products and they are the only one to quote a price but they have other rescue products that may be very good but are clearly copied from market leading models, their *Paratech* looking struts even have dark green and yellow livery while their *Arachnipod* looking Tripod/gantry frame has the same red and silver livery. If they could only shy away from this continual plagiarism of well known products and concentrate on their own considerable design skills the world would be a fairer and happier place!

IN THE FOLLOWING TABLES.....

The tool length, width or height and weight are all WORKING spec so they **include the battery**. Many companies quote figures without the battery so at first glance seem lighter but when added has a significant affect on both the physical size and weight of a tool when in use. As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Stroke power is highest at the shortest extension. **All force figures are given in KiloNewtons and US (short)tons**

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■
If it's an option it is shown as an outline square □□□□
A circle ● in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■.
WiFi/Bluetooth-CAPABLE: The tool and/or battery are linked to a mobile device via Wifi &/or Bluetooth to manage functions, servicing and inventory. This category is listed twice.
TOOLS-IN-RANGE: refers to the other types of tool available jn this specific series of tools using this specific battery type.
■= Cutter ■= Spreader ■= Combi ■= Special Tools
ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.

COST: This is clearly an official secret within the industry. This is because the cost of one tool is huge and vastly different to the cost of multiples that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICALRESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure. Chinese Manufacturer *Aolai* have been confident enough to quote a range of $3500 to $4700 exc shipping and import duty to give some idea of the minimum you are likely to pay for a battery ram. The batteries are an expensive consumable as well - eg. a *Milwaukee* M18 8Ah battery costs £/$/€150-200 though individuals could purchase through *Amazon* etc. and save a packet!
WEIGHT IN HAND: Refers to the operational weight that the rescuer experiences in using the tool so it includes any on-board batteries but not backpack batteries and not necessarily any extras like clip-on lighting or different heads/feet.

WEIGHT of BATTERY: is for the default battery supplied or preferred by the manufacturer. Those that use 'off-the-shelf' brands like *Milwaukee* and *DeWalt* may well be able to use either higher Ah models for greater capacity/duration or lower Ah for decreased cost and perhaps weight but less duration.
BATTERY DURATION & RECHARGE TIME: Work-time or duration is much trickier as it depends on the resistance of the material being pushed/supported, the temperature, the age of the battery and even how meticulously you follow the recharge guidelines. Consequently some won't quote a figure at all and others are generous to say the least - consider most to be the absolute maximum with minimal workload. Tools last much longer carrying out hundreds of short duration cuts like the Genesis figure of <45mins compared to a *Homatro*'s minimum 11minute figure in like-for-like ramming their battery will match the highest time given by others.
Recharge time can be more specific though it varies wildly between basic and high speed chargers. The time shown is for the charger supplied or preferred by the manufacturer and may give a time-range if referring to different types of charger.
DIMENSIONS: The Length by width by depth/height of tool ready to store on the truck and/or ready to work. Rams are stored with the cylinders retracted so they are the least bulky of the 'hydraulic ' rescue tools. Height is the 'thickness' of the tool off the ground if you lay the tool down and is usually dictated by either the handle or the battery if it is top-mounted.
PUSH FORCE: Is the maximum *theoretical* force that can be exerted and, like spreaders and cutters, is highest closest to the power unit. The strongest rams are the shortest, single-stage rams. Telescoping gives you much needed reach but the second stage is very much weaker than the first stage and this is extremely important to remember - you may have easily pushed your target material with the first stage but beware that you don't overwhelm it's capabilities when you extend into the second, telescoping stage. **It is also vital that you push in direct line with the power unit - if your target load starts to stray off-centre as it moves you could damage the ram's extending cylinders.** Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).
STROKE RANGE: If the ram has a telescoping section there will be two figures - the first, higher figure is for the first stage and the second, lower figure is for the telescoped section. If the ram is single-stage only this figure will be the same as the total stroke distance. Some rams can also pull using chains etc. in the same way as a spreader but this is not the norm and is written in the NOTES.
TOTAL STROKE DISTANCE: The maximum distance the target load can be pushed including any telescoping sections.
ROTATE HEAD/HANDLE: The handle can rotate around the cylinder for better access to in-line ramming of the target but most rams are relatively compact anyway.
LED LIGHTS ■: Integral lighting from the handle or housing to illuminate the area being cut/spread.
IN-WATER-CAPABLE: The tool/battery can be used underwater
TOOL/BATTERY IP. Ingress protection for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like *Milwaukee* are **not** waterproof without a bespoke cover and tend not to quote an IP number because they are dependant on the tool to create an effective seal. Specialist batteries like *Holmatro* and *Lukas* are watertight (IP68) but regular trade batteries are no more than IP54 so they are splashproof but not submersible without a bespoke cover.

NEW Search Equipment

INNOVATIVE TOOLS FOR USAR RESPONSES

LEADER Sar

All-risk helmet

INNOVATION: The world's only DUAL Search system!

LEADER Hasty

Combined Search Camera
& Wireless Life Detector
Patent pending

LEADER Search

Wireless Life Detector
330 ft / 100m - Wired version available

LEADER Cam

Search Camera with Communication
Probe up to 13 ft / 4m

www.LeaderNorthAmerica.com
www.leader-group.eu

LEADER®

Images not exactly to Scale but comparative within their own series of tools.

OTHER TOOLS IN RANGE:
■= Combi ■= Spreader
■=Cutter ■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	AMKUS	AMKUS	AOLAI RESCUE	AOLAI RESCUE	EDILGRAPPA
SERIES	ION	Heavy Rescue	-	-	-
MODEL VARIANT	ITR230	HRTR Ram	GYCDD-A	GYDD-171-388/576C	MT730N-E
VOLTAGE	54/60v	54/60v	28v	28v	54/60v
TOOLS IN RANGE	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■ ■
ORIGIN	■ ■	■	■	■	■ ■
COST inc tax / VAT	N/A	N/A	$3500-4500*	$3750--4700*	N/A
RAM TYPE	2-Stage Telescoping	2-Stage Telescoping	1-Stage	2-Stage Telescoping	2-Stage Telescopi
WEIGHT IN HAND inc BATTERY exc EXTENSION	17.9kg 39.4lb	25.2kg 55.4lb	19.8kg 43.6lb	20.4kg 45lb	17.9kg 39.4lb
WEIGHT - DEFAULT BATTERY	1.2kg / 2.6 lb	1.2kg / 2.6 lb	0.9kg /2 lb	0.9kg /2 lb	1.2kg / 2.6 lb
BATTERY Ah OPTIONS	DeWalt FlexVolt 9Ah	DeWalt FlexVolt 6Ah 9, 12Ah	5Ah	5Ah	DeWalt FlexVolt 9Ah
BATTERY DURATION RECHARGE TIME	10-25mins 85mins	10-15mins 60mins	45-60mins 90mins	45-60mins 90mins	10-25mins 85mins
LENGTH retracted/extended*	290mm/ 11.4" 574mm/22.6"	561mm/ 22.1" 1282mm/50.5"	560mm/ 22.3" 930mm/0"	565mm/ 22.2" 1355mm/53.3"	290mm/ 11.4" 574mm/22.6"
HEIGHT/WIDTH	452mm / 17.8"	290mm / 11.4"	300mm / 11.8"	400mm / 15.8"	452mm / 17.8"
DEPTH (max diam)	185mm / 7.3"	262mm / 10.3"	175mm / 6.9"	120mm / 4.7"	185mm / 7.3"
EXTENSION(S) & OPTIONS	254mm/10" 457mm/18" 680mm/27" -	NO -	NO -	NO --	254mm/10" 457mm/18" 680mm/27" -
EN ■ NFPA ■	■ ■	■	■*	■* ■	■ ■
EN CLASSIFICATION	TR215/160-76.4/124-16.7	-	-	-	TR215/160-76.4/124-1
PUSH FORCE(S for telescoping) t=US Ton	215-76.4kN 24.2-8.6 USt	216-100kN 00-00 USt	120kN 13.5 USt	145.7-75.5kN 16.4-8.5 USt	215-76.4kN 24.2-8.6 USt
STROKE RANGE	160/124mm 6.3/4.9"	000/00mm 00/00"	370mm 14.6"	415/380mm 16.3/15"	160/124mm 6.3/4.9"
TOTAL STROKE DISTANCE	284mm 11.2"	00mm 00"	370mm 14.6"	975mm 38.4"	284mm 11.2"
WORKING PRESSURE (HYDRAULIC	700 Bar 10.2K psi	700 Bar 10.2K psi	720 Bar 10.4K psi	720 Bar 10.4K psi	700 Bar 10.2K psi
WiFi/Bluetooth capable	- -	- -	- -	- -	- -
SPEED CONTROL ON-BOARD LED	Rotating Star Grip -	Rotating Star Grip -	Rotating Star Grip □	Rotating Star Grip □	Rotating Star Gri
IN-WATER USE BATTERY/TOOL IP	54 54	54 54	54 54	54 54	54 54
NOTES	DISCONTUNED	New in 2025	*CE is listed but you will need to verify this refers to the correct standard. *FOB China	*CE & NFPA is listed but you will need to verify this refers to the correct standard. *FOB China	-
WEBSITE	amkus.com	amkus.com	aolairescue.com	aolairescue.com	edilgrappa.com

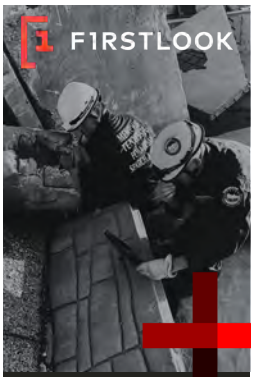
	GENESIS RESCUE	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**
	E-Force SL3	E-Force SLi	E-Force SL3	E-Force SL3	E-Force SL3	E-Force SLi
	21-36	21-36	31" Push-Pull	41" Push-Pull	22-54	22-54
	28v	18v	28v	28v	28v	18v
	N/A	N/A	N/A	N/A	N/A	N/A
ng	1-Stage	1-Stage	1-Stage	1-Stage	2-Stage Telescoping	2-Stage Telescoping
	17.3kg 38.1lb	18.4kg 40.6lb	18.2kg 40.1lb	21.6kg 47.6lb	20.1kg 44.3lb	21.6kg 47.6lb
	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb	1.4kg/1kg 3.2lb/2.3lb	1.4kg/1kg 3.2lb/2.3lb	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb
	Genesis/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*	Genesis/ Milwaukee 5Ah*	Genesis/ Milwaukee 5Ah*	Genesis/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*
	<45mins 90mins	60/90mins 45-83mins	<45mins 90mins	<45mins 90mins	<45mins 90mins	60/90mins 45-83mins
	540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	553mm /21.8" 840mm /33.1"	653mm /25.7" 1061mm /41.8"	587mm /23.1" 1387mm /53"	587mm /23.1" 1387mm /54.6"
	340mm / 13.4"	340mm / 13.4"	347mm / 13.7"	347mm / 13.7"	365mm / 14.4"	365mm / 14.4"
	134mm/ 5.3"	134mm/ 5.3"	142mm / 5.6"	142mm / 5.6"	134mm /5.3"	134mm / 5.3"
	76mm/3" 127mm/5" 254mm/10" Angled V-head Pull shackles, pins & adapters	50mm/2" 150mm/6" 270mm/10.6"	76mm/3" 127mm/5" 254mm/10" Angled V-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V-head Pull shackles, pins & adapters	NO -	NO -
	■	■	■	■	■	■
16.7	-	-	-	-	-	-
	111kN 12.5 USt	111kN 12.5 USt	142 (47*) kN 16 (1.8*) USt	142 (47*) kN 16 (1.8*) USt	138(47kN*) 15.5 (1.8*) USt	108/62kN 12.1/7 USt
	368mm 14.5"	368mm 14.5"	287mm 11.3"	408mm 16.1"	428/372mm 16.8- 14.7"	428/372mm 16.8- 14.7"
	368mm 14.5"	368mm 14.5"	287mm 11.3"	408mm 16.1"	800mm 31.5"	800mm 31.5"
	700 Bar 10.1K psi	550 Bar 7.9K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	700 Bar 10.1K psi	550 Bar 7.9K psi
	- -	■	- -	- -	- -	■
p -	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐	Rocker switch ☐
	54 54	■ 68* 58	54 54	54 54	54 54	■ 68* 58
	All E-Force tools can convert to hose. Length remaining markers on ram tube.	All E-Force tools can convert to hose. Length remaining markers on ram tube. *IP68 only with battery cover. IP54 splash cover for 12Ah	All E-Force tools can convert to hose. *=PULL-FORCE	All E-Force tools can convert to hose. *=PULL-FORCE	All E-Force tools can convert to hose. Length remaining markers on ram tube.	All E-Force tools can convert to hose. Length remaining markers on ram tube. *IP68 only with battery cover. IP54 splash cover for 12Ah
	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com

Images not exactly to Scale but comparative within their own series of tools.

OTHER TOOLS IN RANGE:
■= Combi ■= Spreader
■=Cutter ■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	GENESIS RESCUE	GENESIS RESCUE	HOLMATRO	HOLMATRO	HOLMATRO
SERIES VARIANT	E-Force SL3	E-Force SLi	PENTHEON	PENTHEON	PENTHEON
MODEL VARIANT	28-59	28-59	PRA40	PTR40	PRA50
VOLTAGE	28v	28v	28v	28v	28v
TOOLS IN RANGE	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
RAM TYPE	2-Stage Telescoping	2-Stage Telescoping	1-Stage	2- Stage Telescoping	1-Stage
WEIGHT IN HAND inc BATTERY exc EXTENSION	21.7kg 47.8lb	22.7kg 50lb	14.1kg 31.1lb	15.5kg 34.2lb	18.2kg 40.1lb
WEIGHT - DEFAULT BATTERY	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb	1.5kg / 3.3lb	1.5kg / 3.3lb	1.5kg / 3.3lb
BATTERY Ah OPTIONS	Genesis/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*	Holmatro PBPA287 8Ah	Holmatro PBPA287 8Ah	Holmatro PBPA287 8Ah
BATTERY DURATION RECHARGE TIME	<45mins 90mins	60/90mins 45-83mins	30-90mins* 60mins	30-90mins* 60mins	30-90mins* 60mins
LENGTH retracted/extended*	700mm /27.6" 1500mm /59"	700mm /27.6" 1500mm /59"	385mm / 15.2" 600mm/23.6"	385mm/ 15.2" 792mm/31.2"	578mm/ 22.8" 985mm/38.8"
HEIGHT/WIDTH	365mm / 14.4"	365mm / 14.4"	443mm / 17.4"	443mm / 17.4"	443mm / 17.4"
DEPTH (max diam)	134mm / 5.3"	134mm / 5.3"	256mm / 10.1"	256mm / 10.1"	256mm / 10.1"
EXTENSION(S) & OPTIONS	NO	NO	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)
EN ■ NFPA ■	■	■	■ ■	■ ■	■ ■
EN CLASSIFICATION	-	-	R136/215-14.1	TR136/215-65/192-15.5	R136/407-18.2
PUSH FORCE(S for telescoping) t=US Ton	108/62kN 0USt	108/62kN 0USt	136kN 15.3 USt	65-136kN 7.3-15.3 USt	136kN 15.3 USt
STROKE RANGE	428/372mm 16.8- 14.7"	428/372mm 16.8- 14.7"	-	215/192mm 8.5/7.6"	-
TOTAL STROKE DISTANCE	800mm 31.5"	800mm 31.5"	215mm 8.5"	407mm 16"	407mm 16"
WORKING PRESSURE (HYDRAULIC	700 Bar 10.1K psi	700 Bar 10.1K psi	540 Bar 7.8K psi	540 Bar 7.8K psi	540 Bar 7.8K psi
WiFi/Bluetooth capable	- -	■	■	■	■
SPEED CONTROL ON-BOARD LED	Rocker switch ■	Rocker switch ■	2speed throttle ■	2speed throttle ■	2speed throttle
IN-WATER USE BATTERY/TOOL IP	54 54	■ 68* 58	■ 67 57	■ 67 57	■ 67 57
NOTES	All E-Force tools can convert to hose. Length remaining markers on ram tube.	All E-Force tools can convert to hose. Length remaining markers on ram tube. *IP68 only with battery cover. IP54 splash cover for 12Ah	Push-button ram ext. do not need original ram head to be removed.On-tool charging. tepless speed maximisation. *11mins at constant max force.	Push-button ram ext. do not need original ram head to be removed.On-tool charging. tepless speed maximisation. *11mins at constant max force.	Push-button ram ext. do need original ram head t removed.On-tool charg tepless speed maximisat *11mins at constant m force.
WEBSITE	genesisrescue.com	genesisrescue.com	holmatro.com	holmatro.com	holmatro.com

	HOLMATRO	HOLMATRO	HURST (IDEX)	HURST (IDEX)	HURST (IDEX)
	PENTHEON	PENTHEON	E3/E3connect	E3/E3connect	E3/E3connect
	PTR50	PTR51	R320	R521	CR 522
	28v	28v	25.2v	25.2v	25.2v
	N/A	N/A	N/A	N/A	N/A
	2-Stage Telescoping	2-Stage Telescoping	2-Stage Telescoping	2-Stage Telescoping	2-Stage Telescoping
	20.5kg 45.2lb	21.4kg 47.2lb	13.7kg 30.2lb	19.4kg 42.8lb	21.6kg 47.6lb
	1.5kg / 3.3lb	1.5kg / 3.3lb	1.6 1.2kg /3.5 2.7lb	1.6 1.2kg /3.5 2.7lb	1.6 1.2kg /3.5 2.7lb
	Holmatro PBPA287 8Ah	Holmatro PBPA287 8Ah	Lukas 9Ah 9AhsaltWater, 5Ah	Lukas 9Ah 9AhsaltWater, 5Ah	Lukas 9Ah 9AhsaltWater, 5Ah
	30-90mins* 60mins	30-90mins* 60mins	30-60mins 75-150mins	30-60mins 75-150mins	30-60mins 75-150mins
	578mm/ 22.8" 1365mm/53.7"	713mm/ 28.1" 1500mm/59.1"	340mm /13.4" 640mm /25.2"	579mm /22.8" 1359mm /53.5"	657mm /25.9" 1533mm /60.3"
	443mm / 17.4"	443mm / 17.4"	326mm / 12.8"	327mm / 12.9"	327mm / 12.9"
	256mm / 10.1"	256mm / 10.1"	200mm / 7.9"	140mm / 5.5"	140mm / 5.5"
	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb)	NO	50mm/2" 150mm/6" 270mm/10.6"	NO	50mm/2" 150mm/6" 270mm/10.6"
	TR-136/405-65/382-20.5	TR136/405-65/382-21.4	-	-	-
	65-136kN 7.3-15.3 USt	65-136kN 7.3-15.3 USt	60-127kN 6.74-14.27 USt	60-127kN 6.74-14.27 USt	60-127kN 6.74-14.27 USt
	405/382mm 15.9/15"	405/382mm 15.9/15"	164/136mm 6.5-5.4"	403/377mm 15.9-14.8"	451/425mm 17.75-16.7"
	787mm 31"	787mm 31"	300mm 11.8"	780mm 30.7"	876mm 34.5"
	540 Bar 7.8K psi	540 Bar 7.8K psi	500 Bar 7.2K psi	500 Bar 7.2K psi	500 Bar 7.2K psi
	2speed throttle	2speed throttle	Rotating Star Grip	Rotating Star Grip	Rotating Star Grip
	67 57	67 57	68 58	68 58	68 58
not to be ing. tion. ax	Push-button ram ext. do not need original ram head to be removed.On-tool charging. tepless speed maximisation. *11mins at constant max force.	Push-button ram ext. do not need original ram head to be removed.On-tool charging. tepless speed maximisation. *11mins at constant max force.	Can operate for 60min under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity. Side-mounted battery R421 E2 discontinued	Can operate for 60min under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity for tool management and remote status etc.	Can operate for 60min under water inc salt water with Saltwater battery. R421 E2 discontinued
	holmatro.com	holmatro.com	jawsoflife.com	jawsoflife.com	jawsoflife.com



360° SEARCH & RESCUE CAMERA

www.firstlook.net

UPDATED Feb '26

Images not exactly to Scale but comparative within their own series of tools.

OTHER TOOLS IN RANGE:
■= Combi ■= Spreader
■=Cutter ■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	OGURA	OGURA
SERIES	E3/ E3connect	E3connect	E3/ E3connect	RP	HR938 Ram
MODEL VARIANT	R320	R521	CR 522 CrossRam	RPR-370	HRS941
VOLTAGE	25.2v	25.2v	25.2v	18v	18v
TOOLS IN RANGE	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
ORIGIN				●	●
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
RAM TYPE	2-Stage Telescoping	2-Stage Telescoping	2-Stage Telescoping	1-Stage	1-Stage
WEIGHT IN HAND inc BATTERY exc EXTENSION	13.7kg 30.2lb	19.4kg 42.8lb	21.6kg 47.6lb	14.1kg 31.1lb	4.2kg +3.1kg 9.3lb +6.8lb
WEIGHT - DEFAULT BATTERY	1.6 1.2kg /3.5 2.7lb	1.6 1.2kg /3.5 2.7lb	1.6 1.2kg /3.5 2.7lb	1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb
BATTERY Ah OPTIONS	Lukas 9Ah 9AhSaltWater, 5Ah	Lukas 9Ah 9AhSaltWater, 5Ah	Lukas 9Ah 9AhSaltWater, 5Ah	Makita 5-6Ah*	Makita 5-6Ah*
BATTERY DURATION RECHARGE TIME	30-60mins 75-150mins	30-60mins 75-150mins	30-60mins 75-150mins	<12mins 55-120mins	<12mins 55-120mins
LENGTH retracted/extended*	340mm /13.4" 640mm /25.2"	579mm /22.8" 1359mm /53.5"	657mm /25.9" 1533mm /60.3"	529mm /16" 899mm /27"	*219mm /8.6" 319mm /12.6"
HEIGHT/WIDTH	326mm / 12.8"	327mm / 12.9"	327mm / 12.9"	290mm / 11.4"	*290mm / 11.4
DEPTH (max diam)	200mm / 7.9"	140mm / 5.5"	140mm / 5.5"	179mm / 7"	*179mm / 7"
EXTENSION(S) & OPTIONS	50mm/2" 150mm/6" 270mm/10.6"	NO	50mm/2" 150mm/6" 270mm/10.6"	200mm/7.9" 450mm/17.7" Flat surface and claw heads	*
EN ■ NFPA ■	■ ■	■ ■	■ ■	-	-
EN CLASSIFICATION	-	-	-	-	-
PUSH FORCE(S for telescoping) t=US Ton	127/60kN 14.27/ 6.74 USt	127/60kN 14.27/ 6.74 USt	127/60kN 14.27/ 6.74 USt	66.6kN 0 USt	36.6kN 4.1 USt
STROKE RANGE	164/136mm 6.5-5.4"	403/377mm 15.9-14.8"	451/425mm 17.75-16.7"	370mm 14.6"	100mm 4"
TOTAL STROKE DISTANCE	300mm 11.8"	780mm 30.7"	876mm 34.5"	370mm 14.6"	100mm 4"
WORKING PRESSURE (HYDRAULIC	500 Bar 7.2K psi	500 Bar 7.2K psi	500 Bar 7.2K psi	N/A	N/A
WiFi/Bluetooth capable	■	■	■	- -	- -
SPEED CONTROL ON-BOARD LED	Rotating Star Grip ■	Rotating Star Grip ■	Rotating Star Grip ■	Trigger	Trigger
IN-WATER USE BATTERY/TOOL IP	■ 68 58	■ 68 58	■ 68 58	54 54	54 54
NOTES	Can operate for 60min under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity. Side-mounted battery	Can operate for 60min under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity for tool management and remote status etc.	Can operate for 60min under water inc salt water with Saltwater battery. E3 Connect has WiFi connectivity for tool management and remote status etc.	Head can be switched between cutter, combi, spreader ram etc.*EU uses 5Ah, US tends to use 6Ah	*Ram dims only *HRS941 Head can switched between cu combi, spreader ram
WEBSITE	lukas.com	lukas.com	lukas.com	ogurarescuetools.com	ogurarescuetools.c

	OGURA	POWERHAWK TECHNOLOGIES	POWERHAWK TECHNOLOGIES	RESQTEC	SCORPE	SCORPE
	HR938 Ram	X	X	EDD	GreenSpirit II	GreenSpirit II
	HRS931	P25 (S-1601X)	P40 (S-1601X)	V4 V4x	Ram SR	Ram TR
	18v	12v or 16v LiGHT	7.5/12v	43.2v	28v	18v/28v
	N/A	N/A	N/A	N/A	N/A	N/A
	1-Stage	1-Stage+ hand-wind top section	1-Stage+ hand-wind top section	1-Stage	1-Stage	2-Stage Telescoping
	3.9kg +3.1kg 8.6lb+6.8lb	27kg 0lb	36kg 0lb	16.4kg 36.1lb	17.9kg	21.1kg 46.5lb
	1-1.36kg 2.2-3lb	1..36kg 3lb	1..36kg 3lb	1kg 2.2lb	1/1.1kg 2.2/2.33lb	1.1/1kg 2.33/2.2lb
	Makita 5-6Ah*	Powerhawk 7.5Ah or any 12v source	Powerhawk 7.5Ah or any 12v source	*Resqtec 2.6Ah	Milwaukee 5Ah M28 8Ah M18	Milwaukee 8Ah M18 5Ah M28
	<12mins 55-120mins	>30 mins <120mins/<15hr	>30 mins <120mins/<15hr	<45mins 60mins	60/80mins 45-90mins	60/80mins 45-90mins
"	303mm /16" 899mm /27"	303mm /16" 899mm /27"	564mm /23" 1041mm /41"	636mm /25" 936mm /37"	540mm /21.3" 908mm /35.7"	587mm /23.1" 1387mm /53"
"	290mm / 11.4"	178mm / 7"	327mm / 12.9"	355mm / 14"	291mm / 11.5"	365mm / 14.4"
	179mm / 7"	100mm / 4"	100mm / 4"	133mm/ 5.2"	167mm/ 6.6"	167mm/ 6.6"
	*	610mm/24" 1220mm/48" Coupling Swivel bases	610mm/24" 1220mm/48" Coupling Swivel bases	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	250mm/10" 350mm/14" 450mm/18" 100 &180mm Heads Sill Support	250mm/10" 350mm/14" 450mm/18" 100 &180mm Heads Sill Support
	-	■	■	■ ■	■	■
	-	-	-	-	R111/368-17.9	TR108/428-62/372-21.1
	36.6kN 4.1 USt	31.6-52.5kN 3.5-5.9 USt	31.6-52.5kN 3.5-5.9 USt	89 /58.8kN 10 /6.6 USt	111kN 12.47 USt	108/62kN* 12.1/7 USt
	100mm 4"	127/152*mm 5/6"	305/152*mm 12/6"	300mm 11.8"	368mm 14.5"	428/372mm 16.8- 14.7"
	100mm 4"	127mm (+152mm manual) 5"(+6"manual)	305mm(+152mm manual) 12" (+6"manual)	300mm 11.8"	368mm 14.5"	800mm 31.5"
	N/A	N/A mechanical	N/A mechanical	N/A mechanical	700 Bar 10.2K psi	550 Bar 7.9K psi
	- -	- -	- -	- -	- -	- -
	Trigger	Rotating Star Grip	Rotating Star Grip	■	Rocker switch ■	Rocker switch ■
	54 54	54 54	54 54	54 54	54/68 54	■ 54/68* 68
be utter, etc.	*Ram dims only *HRS941 Head can be switched between cutter, combi, spreader ram etc	RAMs can be joined with bespoke coupler and can be used with any spreader that fits 2.25"/58mm but is designed for the P16/P16X with spreader or combi heads. *Manually screwed telescoping top section adds 6"/152mm. Rams have locking nuts to follow the lift and hold without power unit. Both P16 (Legacy) &P16X can use a 12v car battery or any 12v power source		*10Ah powerpack also available. Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Converter available for M28 & other batteries. * IP68 with M18 & waterproof cover (not shown)	*&36.9kN/4.1USt Pull force. Converter available for M28 & other batteries. * IP68 with M18 & waterproof cover (shown)
om	ogurarescuetools.com	powerhawk.com	powerhawk.com	resqtec.com	scorpe.net	scorpe.net

Images not exactly to Scale but comparative within their own series of tools.

OTHER TOOLS IN RANGE:
■= Combi ■= Spreader
■=Cutter ■= Special Tools
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/not given
■= (cyan border) WiFi is present on the model variant `shown in cyan

COMPANY	**TNT RESCUE**	**TNT RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**	**WEBER RESCUE**
SERIES	Storm Surge	Storm Surge	E-Force3	Smart-Force	E-Force3
MODEL VARIANT	ER40	ELS40	RZ1-910 -	RZ1-910 -	RZT2-1170 -
VOLTAGE	18v/20v	18v/20v	28v	18v	28v
TOOLS IN RANGE	■ ■ ■	■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
ORIGIN					
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
RAM TYPE	1-Stage	2-Stage Telescoping	1-Stage	1-Stage	2-Stage Telescoping
WEIGHT IN HAND inc BATTERY exc EXTENSION	19.77kg 43.6lb	18.64kg 41.1lb	17.3kg 38.1lb	18.4kg 40.6lb	20.9kg 46lb
WEIGHT - DEFAULT BATTERY	1.1kg /2.4lb 1.2[1.36]kg /2.6[3]lb	1.1kg /2.4lb 1.2[1.36]kg /2.6[3]lb	1.4kg/1kg 3.2lb/2.3lb	1.1/1.7kg 2.33/3.74lb	1.4kg/1kg 3.2lb/2.3lb
BATTERY Ah OPTIONS	Milwaukee M18 8/9Ah./[Makita6Ah] DeWalt FlexV20 9Ah	Milwaukee M18 8/9Ah./[Makita6Ah] DeWalt FlexV20 9Ah	Weber/ Milwaukee 5Ah*	Milwaukee M18 8Ah/12Ah*	Weber/ Milwaukee 5Ah*
BATTERY DURATION RECHARGE TIME	10-15mins 87 / 60mins	10-15mins 87 / 60mins	<45mins 90mins	60/90mins 45-83mins	<45mins 90mins
LENGTH retracted/extended*	647.7mm /25.5" 1041.4mm /41"	546.1mm /21.5" 1073.15mm /42.25"	540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	543mm /21.4" 1170mm /44.3"
HEIGHT/WIDTH	273mm / 10.75"	273mm / 10.75"	340mm / 13.4"	340mm / 13.4"	351mm / 13.8"
DEPTH (max diam)	205.7mm/ 8.1"	205.7mm/ 8.1"	134mm/ 5.3"	134mm/ 5.3"	134mm / 5.3"
EXTENSION(S) & OPTIONS	150mm/6" 300mm/12" 450mm/18"	150mm/6" 300mm/12" 450mm/18"	175mm/7" 250mm/9.8" 320mm/12.6"	175mm/7" 250mm/9.8" 320mm/12.6"	NO
EN ■ NFPA ■	■	■	■ ■	■ ■	■
EN CLASSIFICATION	-	-	R111/368-17.3	R111/368-18.4	TR189/360-99/27020,9
PUSH FORCE(S for telescoping) t=US Ton	164.6kN 18.5 USt	169.3/58.2kN 19/6.5 USt	111kN 12.47 USt	111kN 12.47 USt	189-99kN 21.2/11.1 USt
STROKE RANGE	368mm 14.5"	329/221mm 12.95/8.7"	368mm 14.5"	368mm 14.5"	360/270mm 13.2-10.6"
TOTAL STROKE DISTANCE	368mm 14.5"	527mm 20.75"	368mm 14.5"	368mm 14.5"	630mm 24.8"
WORKING PRESSURE (HYDRAULIC	722 Bar 10.5K psi	722 Bar 10.5K psi	700 Bar 10.1K psi	550 Bar 7.9K psi	700 Bar 10.1K psi
WiFi/Bluetooth capable	- -	- -	- -	■	- -
SPEED CONTROL ON-BOARD LED	Rotating Star Grip □	Rotating Star Grip □	Rocker switch □	Rocker switch □	Rocker switch □
IN-WATER USE BATTERY/TOOL IP	54 54	54 54	54 54	■ 68* 58	54 54
NOTES	- TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.	TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.	All E-Force tools can convert to hose. Length remaining markers on ram tube.	All E-Force tools can convert to hose. Length remaining markers on ram tube. *IP68 only with battery cover. IP54 splash cover for 12Ah	All E-Force tools can convert to hose. Length remaining markers on ram tube.
WEBSITE	tntrescue.com	tntrescue.com	weber.com	weber.com	weber.com

PUSH IT TO THE LIMIT.

THE NEXT-GEN PENTHEON RAM. MILES AHEAD.

PENTHEON

For decades, first responders and patients alike have been able to count on us for life. To keep this promise we ceaselessly push the boundaries of technology and innovation. For the latest iteration of the Pentheon Rams, our engineers worked tirelessly to build tools that are miles ahead in terms of performance, usability, connectivity and serviceability. Ensuring that the path to a patient's safety is equally fast as it is controlled.
Discover the next-gen Pentheon Rams.

FIND OUT MORE ON HOLMATRO.COM/PENTHEON

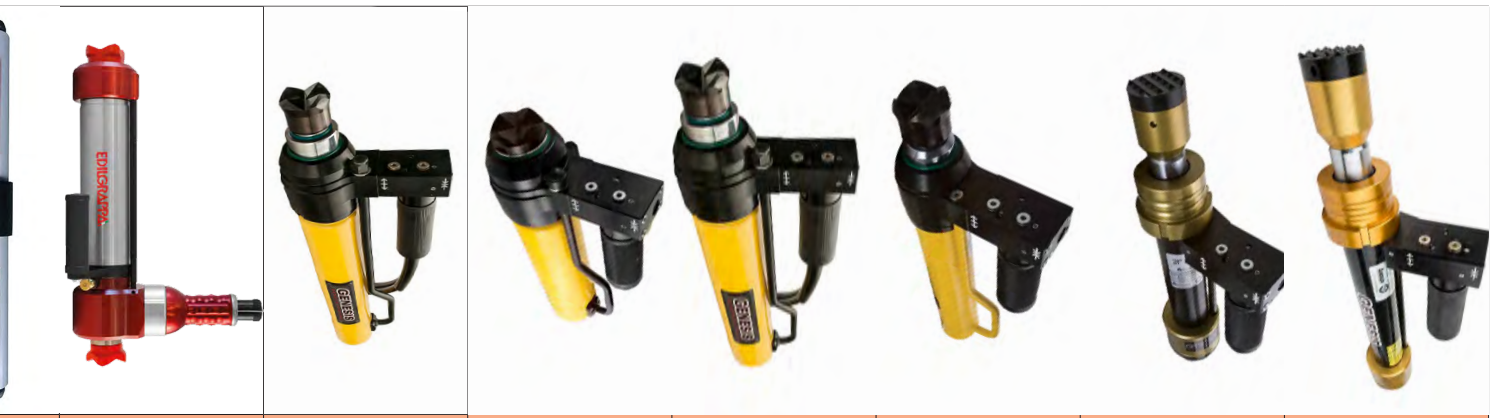
holmatro
mastering **power**

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Cutter
■= Spreader
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = Not Available/not given
THROTTLE is a motorcycle-style rotating hand grip.
~ = approximate

COMPANY	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RES
SERIES MODEL VARIANT	Ram 1	Ram 2	Ram3	Ram4	Ram 5	Ram6
PRODUCT CODE	GYCD-120/570-Q	GYCD-63-110/525-A	GYCD-120/860B	GYCD-100/975	GYCD-155/1240	GYDD-171-388/
TOOLS IN RANGE	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■
ORIGIN						
COST inc tax / VAT	$3500-4500*	$3500-4500*	$3750--4700*	$3750--4700*	$3500-4500*	$3750--470
RAM TYPE	1-Stage	1-Stage	2-Stage Telescoping	2-Stage Telescoping	Double Ended	2-Stage Telescopin
WEIGHT inc Hose exc EXTENSIONS	9.4kg 20.7lb	10kg 22lb	20.4kg 45lb	13.7kg 45lb	10.9kg 24lb	18.5kg 40.7lb
LENGTH retracted/extended*	350mm/ 00" 930mm/0"	350mm/ 00" 1080mm/0"	500mm/ 00" 1390mm/53.3"	460mm/ 00" 1060mm/53.3"	565mm/ 00" 975mm/00"	740mm/ 0 1230mm/0
HEIGHT/WIDTH	180mm / 00"	260mm / 00"	400mm / 15.8"	200mm / 00"	320mm / 00"	200mm / 0
DEPTH (max diam)	90mm / 00"	90mm / 00"	120mm / 4.7"	110mm / 00"	120mm / 00"	110mm / 0
EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)	NO	NO	NO	NO	NO	NO
EN ■ NFPA ■	■*	■*	■* ■	■* ■	■*	■* ■
EN CLASSIFICATION	-	-	-	-	-	-
PUSH FORCE(S for telescoping) t=US Ton	00kN 00 USt	00kN 00 USt	00-00kN 00-00 USt	00-00kN 00-00 USt	00kN 00 USt	00-00kN 00-00 US
STROKE RANGE	-	-	-	-	-	-
TOTAL STROKE DISTANCE	220mm 00"	730mm 00"	890mm 00"	600mm 00"	410mm 00"	490mm 00"
WORKING PRESSURE (HYDRAULIC)	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4
SPEED CONTROL	Throttle	Star Grip	Star Grip	Star Grip	Star Grip	Star Grip
ROTATE HEAD/HANDLE						
LED LIGHTS	□	□	□	□	□	□
IN-WATER USE TOOL IP	54	54	54	54	54	54
NOTES	*CE is listed but you will need to verify this refers to the correct standard. *FOB China	*CE is listed but you will need to verify this refers to the correct standard. *FOB China	*CE & NFPA is listed but you will need to verify this refers to the correct standard. *FOB China	*CE & NFPA is listed but you will need to verify this refers to the correct standard. *FOB China	*CE is listed but you will need to verify this refers to the correct standard. *FOB China	*CE & NFPA is list you will need to this refers to the c standard. *FOB China
WEBSITE	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.c



CUE	EDILGRAPPA	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE	GENESIS RESCUE
	2S700	C-Ram 15-30	C-Ram 19-51	C-Ram 21-46	C-Ram 26-59	Push-Pull 31"	Push-Pull 41"
/576C	150.02804	593.140.1	593.414.1	105.014.9	1005.004.1	031.900.1	041.900.1
0*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ng	2-Stage Telescoping	2-Stage	3-Stage Telescoping	2-Stage Telescoping	2-Stage Telescoping	1-Stage	1-Stage
	17kg 00lb	17.3kg 38.1lb	17.2kg 38lb	15.2kg 21.3lb	18kg 39.6lb	13.6kg 30lb	16.2kg 35.7lb
0" 0"	540mm/ 00" 1284mm/00"	395mm/ 15.5" 775mm /30.5"	480mm /18.9" 1310mm /51.6"	540mm /21.3" 1170mm /49"	650mm /25.6" 1500mm /59"	521mm /20.5" 807mm /31.8"	646mm /25.4" 1054mm /41.5"
0"	315mm / 00"	340mm / 13.4"	221mm / 8.7"	200mm / 7.9"	200mm / 7.9"	204mm / 8.4"	204mm / 8.4"
0"	193mm / 00"	134mm/ 5.3"	109mm/ 4.3"	88mm / 3.5"	88mm / 3.5"	101mm / 4"	101mm / 4"
	NO	300mm/12"	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters	76mm/3" 127mm/5" 254mm/10" Angled V&X-head Pull shackles, pins & adapters
	TR218/385-77/360-17	-	-	-	-	-	-
t	218-77kN 00-00 USt	189.4/99kN 0USt	269/129.5/45.41kN 00 USt	189.4/99kN 0USt	189.4/99kN 0USt	143.7-45.8 kN 16- USt	142-45.8 kN 16- USt
	-	-	-	-	-	-	-
	745.5mm 00"	380mm 15"	830mm 32.7"	630mm 24.8"	850mm 33.5"	286mm 11.3"	408mm 16.1"
4Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700 Bar 10.1K psi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi
)	Throttle	Throttle	Throttle	Throttle	Throttle	Throttle	Throttle
					- 360°		
	-						
	54	54	58	54	54	54	54
ed but verify correct a	-	All E-Force tools can convert to hose. Length remaining markers on ram tube.	All E-Force tools can convert to hose. Length remaining markers on ram tube. *IP68 only with battery cover. IP54 splash cover for 12Ah	All E-Force tools can convert to hose. Length remaining markers on ram tube.		All E-Force tools can convert to hose. *=PULL-FORCE	All E-Force tools can convert to hose. *=PULL-FORCE
com	edilgrappa.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Cutter
■= Spreader
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = Not Available/not given
THROTTLE is a motorcycle-style rotating hand grip.
~ = approximate

COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMAT
SERIES MODEL VARIANT	CORE 5000 TR 5340 LP	CORE 5000 TR 5349 LP	CORE 5000 TR 5350 LP	CORE 5000 TR 5370 LP	CORE 5000 RA 5315 CL	CORE RA 532
PRODUCT CODE	150.032.102	150.032.114	150.032.101	150.032.100	150.032.121	151.000.38
TOOLS IN RANGE					■■■■■	
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
RAM TYPE	2-Stage Telescopic	2-Stage Telescopic	2-Stage Telescopic	2-Stage Telescopic	1-Stage	1-Stage
WEIGHT inc Hose exc EXTENSIONS	9.2/10.4kg 20.3/22.9lb	14.2/15.6kg 31.3/34.4lb	14.6/15.8kg 32.2/34.8lb	16.9/18.1kg 437.3/39.9lb	9.8/11.1kg 21.6/24.5lb	10.7/12k 23.6lb
LENGTH retracted/extended*	335mm / 13.2" 610mm/24"	540mm/ 21.3" 1225mm/48.2"	560mm/ 22" 1285mm/50.6"	635mm/ 25" 1510mm/59.5"	567mm/ 22.3" 967mm/38.1"	515mm/ 20 765mm/30
HEIGHT/WIDTH	280mm / 11"	280mm / 11"	280mm / 11"	281mm / 11.1"	256mm / 11"	280mm / 1
DEPTH (max diam)	105mm / 4.1"	105mm / 4.1"	105mm / 4.1"	109mm / 4.3"	100mm / 4"	105mm / 4
EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	220mm/8.7" (3.3kg/ 7.3lb) 440mm/17.3" (4.6kg/10.1lb) Cross Rams support 2x Sill Supports	330mm/1 (3.5kg/ 7.7l 500mm/19 (4.5kg/ 9.9l Chains&hooks. ram & 2x Sill Su
EN ■ NFPA ■	■ ■	■ ■	■ ■	■ ■	■ ■	■ ■
EN CLASSIFICATION	TR217/150-101/125-9.2	TR217/375-101/350-14.6	TR217/375-101/350-14.6	TR231/450-111/425-16.9	R100/400-9.8	R150/250-1
PUSH FORCE(S for telescoping) t=US Ton	217/101kN 00-00 USt	217/101kN 00-00 USt	217/101kN 00-00 USt	231/111kN 00-00 USt	100kN 00 USt	150kN 00USt
STROKE RANGE	150-125mm 5.9-4.9"	335-330mm 14-13"	375-350mm 14.8-13.8"	450-425mm 17.7-16.7"	-	-
TOTAL STROKE DISTANCE	275mm 10.8"	725mm 28.5"	725mm 28.5"	875mm 34.5"	400mm 15.7"	250mm 9.8"
WORKING PRESSURE (HYDRAULIC)	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4
SPEED CONTROL	rotating throttle	rotating throttle	rotating throttle	rotating throttle	rotating throttle	rotating thro
ROTATE HEAD/HANDLE	- -	- -	- -	- -	- -	- 360°
LED LIGHTS	□ x6 + Laser	□ x6 + Laser	□ x6 + Laser	□ x6 + Laser	-	□ x6 + La
IN-WATER USE TOOL IP	54	54	54	54	54	■ 57
NOTES	Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.	Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed	Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.	Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed	Plunger auto-extends to target when unloaded. Push-button ram ext. does not need original ram head to be removed.	Plunger auto-exte target when unlo Push-button ran does not need o ram head to be re
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.c

RO	HOLMATRO	HOLMATRO	HOLMATRO	HURST (IDEX)	HYDRAM	HYDRAM	HYDRAM
1	CORE RA 5322	CORE RA5331	CORE RA5332	R424	VHE 150	VHE 250	VHE 425
89	151.000.388	151.000.391			VHE150-CX	VHE250-CX	VHE425-CX
	N/A	N/A	N/A	N/A	£2520 $3630 €2940	£2650 $3820 €3090	£2950 $4250 €3440
	Double-ended	1-Stage	Double-ended	2-Stage Telescoping	1-Stage	1-Stage	2-stage Double Ended
kg	15.8/34.8kg 17.1/37.7lb	12.5/13.8kg 27.6/30.4lb	19.3/20.6kg 42.5/45.4lb	21.0kg 46.3lb	8.2kg 18lb	9.3kg 20.5lb	12.9kg 28.4lb
0.3" .1"	750mm/ 29.5" 1250mm/49.2"	615mm/ 24.2" 955mm/37.6"	950mm/ 37.4" 1630mm/64.2"	625mm /24.6" 1500mm /59.1"	408mm /16.06" 558mm /22"	508mm /20" 758mm /30"	728mm /28.7" 00mm /00"
1"	280mm / 11"	280mm / 11"	280mm / 11"	221mm / 8.7"	319mm / 12.6"	319mm / 12.6"	319mm / 12.6"
.1"	105mm / 4.1"	105mm / 4.1"	105mm / 4.1"	112mm / 4.41"	115mm / 4.5"	115mm / 4.5"	115mm / 4.5"
3" lb) .7" lb) Cross- pports	- Conical and wedge tips, base plate, Chains&hooks. Cross-ram & 2x Sill Supports	330mm/13" (3.5kg/ 7.7lb) 500mm/19.7" (4.5kg/ 9.9lb) Chains&hooks. Cross-ram & 2x Sill Supports	- Conical and wedge tips, base plate, Chains&hooks. Cross-ram & 2x Sill Supports	2x Sill Supports 1x Multi-Support	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters
10.7	R150/500-15.8	R150/340-12.5	R150/680-19.3	TR 269/445-134/430-21,0	R 104.6-150-8.18	R 104.6-250-9.28	R 104.6-425-12.88
	150??kN 00/00USt	150kN 00USt	150??kN 00/00USt	269/134kN 00/00USt	104.6kN 11.76USt	104.6kN 11.76USt	104.6kN 11.76USt
	?/?mm ?/?"	-	?/?mm ?/?"	445/430mm 00-00"	150mm 5.9"	250mm 9.8"	212/212mm 9.8/9.8"
	500mm 19.7"	340mm 31"	680mm 26.8"	875mm 34.5"	150mm 5.9"	250mm 9.8"	425mm 16.7"
4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	720Bar / 10.4Kpsi	500Bar / 7.2K psi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi
ttle	rotating throttle	rotating throttle	rotating throttle	Star Grip	throttle	throttle	throttle
	- 360°	- 360°	- 360°				
aser	x6 + Laser	x6 + Laser	x6 + Laser		-	-	-
	57	57	57	54			
ends to oaded. m ext. riginal emoved	Push-button ram ext. do not need original ram head to be removed.	Push-button ram ext. do not need original ram head to be removed.	Push-button ram ext. do not need original ram head to be removed.				
om	holmatro.com	holmatro.com	holmatro.com	jawsoflife.com	hydram.com	hydram.com	hydram.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Cutter
■= Spreader
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = Not Available/not given
THROTTLE is a motorcycle-style rotating hand grip.
~ = approximate

COMPANY	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRA
SERIES MODEL VARIANT	VHES 150	VHES 250	VHES 425	VHEM 250	VHEM 350	VHEM 5
PRODUCT CODE	VHES150-CX	VHES250-CX	VHES425-CX	VHEM250-CX	VHEM350-CX	VHEM500-
TOOLS IN RANGE						
ORIGIN	■■	■■	■■	■■	■■	■■
COST inc tax / VAT	£2990 $4310 €3480	£3120 $4500 €3630	£3450 $4980 €4010	£2990 $4310 €3480	£3150 $4540 €3660	£3520 $5070 €4080
RAM TYPE	1-Stage	1-Stage	1-stage	1-Stage	1-Stage	1-stage Double End
WEIGHT inc Hose exc EXTENSIONS	9.5kg 20.9lb	10.5kg 23.15lb	16.4kg 36.2lb	9.9kg 21.8lb	10.38kg 22.9lb	12.6kg 27.7lb
LENGTH retracted/extended*	438mm / 17.24" 588mm /23.15"	538mm / 21.2" 788mm /31"	775mm / 30.5" 1200mm /47.2"	505mm /19.9" 742mm /29.2"	608mm /24" 942mm /38"	724mm /28 1224mm /4
HEIGHT/WIDTH	311mm / 12.2"	311mm / 12.2"	311mm / 12.2"	335mm / 13.9"	335mm / 13.9"	335mm / 13
DEPTH (max diam)	106mm / 4.2"	106mm / 4.2"	106mm / 4.2"	124mm / 4.9"	124mm / 4.9"	124mm / 4
EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spreaders/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load sp ers/ base/head Chains&hooks. ram & Sill Supp Wheel rim ada
EN ■ NFPA ■	■	■	■	■	■	■
EN CLASSIFICATION	R194/150-9.5	R194/250-10.5	R 194/425-16.4	R 158 -250 -9.88	R 158 -350 –10.38	R 158 -500 –
PUSH FORCE(S for telescoping) t=US Ton	190kN 21.36USt	190kN 21.36USt	190kN 21.36USt	158/76kN 17.76/00USt	158/76kN 17.76/00USt	158/76k 17.76/00
STROKE RANGE				-	-	250/250m 9.8/9.8"
TOTAL STROKE DISTANCE	150mm 5.9"	250mm 9.8"	425mm 16.7"	250mm 9.8"	350mm 13.8"	500mm 19.6"
WORKING PRESSURE (HYDRAULIC)	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.
SPEED CONTROL	throttle	throttle	throttle	throttle	throttle	throttle
ROTATE HEAD/HANDLE						
LED LIGHTS	-	-	-	-	-	-
IN-WATER USE TOOL IP						
NOTES						
WEBSITE	hydram.com	hydram.com	hydram.com	hydram.com	hydram.com	hydram.co

M	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRAM	HYDRAM
00	VHEM 700	VHET 259	VHET 619	VHET 820	VHETS 275	VHETS 575	VHETS 875
CX	VHEM700-CX	VHET259-CX	VHET619-CX	VHETS275-CX	VHETS575-CX	VHETS700-CX	
	£3950 $5690 €4590	£3950 $5690 €4590	£4350 $6260 €5060	£4750 $6840 €5520	£3990 $5750 €4630	£4450 $6420 €5170	£4950 $7150 €5750
ded	1-stage Double Ended	1-stage Double Ended	1-stage Double Ended	1-stage	1-Stage	1-Stage	1-Stage
	17.58kg 38.8lb	12.6kg 27.7lb	00kg 00lb	00kg 00lb	9.88kg 00lb	9.88kg 00lb	9.88kg 00lb
3.5" 8.2"	941mm /37" 1641mm /64.6"	340mm /13.4" 600mm /23.6"	516mm /20.3" 1136mm /44.7"	480mm /18.9" 1300mm /51.2"	345mm /13.6" 620mm /24.4"	515mm /20.3" 1090mm /42.9"	640mm /25.2" 1515mm /59.7"
3.9"	335mm / 13.9"	306mm / 12"	306mm / 12"	306mm / 12"	316mm / 12.4"	316mm / 12.4"	316mm / 12.4"
.9"	124mm / 4.9"	172mm / 6.8"	172mm / 6.8"	180mm / 7.1"	178mm / 7"	178mm / 7"	178mm / 7"
pread- plates, Cross- ports. pters	Flexible load spread-ers/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spread-ers/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spread-ers/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spread-ers/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spread-ers/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spread-ers/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters	Flexible load spread-ers/ base/head plates, Chains&hooks. Cross-ram & Sill Supports. Wheel rim adapters
	■	■	■	■	■	■	■
12.58	R 158 -700 –17.58	TR 230/162-68/ 100-12.6	TR 230/342-68/ 280-16.6	TR 262/342-137.5 /280-22.0	TR 260/168-119/ 110-12.35	TR 260/316-119/ 259-15.45	TR 260/467-119/ 408-20.0
N USt	158/76kN 17.76/00USt	230/119kN 25.85/13.4USt	230/119kN 25.85/13.4USt	262/119kN 29.5/13.4USt	260/119kN 29.2/13.4USt	260/119kN 29.2/13.4USt	260/119kN 29.2/13.4USt
mm "	350/350mm 13.8/13.8"				-	-	-
	700mm 19.6"	260mm 10.2"	620mm 24.4"	820mm 32.3"	275mm 10.8"	575mm 22.64"	875mm 34.45"
2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi	700Bar / 10.2Kpsi
e	throttle	throttle	throttle	throttle	throttle	throttle	throttle
	-	-	-	-	-	-	-
om	hydram.com	hydram.com	hydram.com	hydram.com	hydram.com	hydram.com	hydram.com

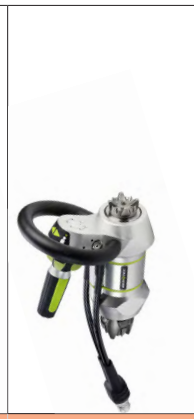
IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Cutter
■= Spreader
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = Not Available/not given
THROTTLE is a motorcycle-style rotating hand grip.
~ = approximate

COMPANY		LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)	LUKAS (IDEX)
SERIES MODEL VARIANT		R410	R412	R414	R420	R422
PRODUCT CODE		81-40-20	81-40-22	81-40-24	81-40-30	81-40-32
TOOLS IN RANGE					■■■■■	
ORIGIN		■	■	■	■	■
COST inc tax / VAT		N/A	N/A	N/A	N/A	N/A
RAM TYPE		1-Stage	1-Stage	1-Stage	2-Stage Telescoping	2-Stage Telescopi
WEIGHT inc Hose exc EXTENSIONS		13kg 00lb	17.7kg 00lb	24.2kg 00lb	16.8kg 00lb	18.8kg 00lb
LENGTH retracted/extended*		450mm /00" 750mm /00"	680mm /00" 1180mm /00"	900mm /00" 1600mm /00"	480mm /00" 1055mm /00"	550mm /0 1255mm /
HEIGHT/WIDTH		175mm /00"	175mm /00"	175mm /00"	221mm / 8.7"	221mm / 8
DEPTH (max diam)		95mm / 00"	95mm / 00"	95mm / 00"	112mm / 4.41"	112mm / 4.
EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)		2x Sill Supports 1x Multi-Support	2x Sill Supports 1x Multi-Support	2x Sill Supports 1x Multi-Support	2x Sill Supports 1x Multi-Support	2x Sill Supp 1x Multi-Su
EN ■ NFPA ■		■ ■	■ ■	■ ■	■ ■	■ ■
EN CLASSIFICATION		R 137/300-13,0	R 137/500-17,7	R 124/700-24,2	TR 269/295-134/280-16,8	TR 269/365-134/3
PUSH FORCE(S for telescoping) t=US Ton		137kN 00USt	137kN 00USt	124kN 00USt	269/134kN 00/00USt	269/134 00/00US
STROKE RANGE		-	-	-	295/280mm 00-00"	365/340r 00-00"
TOTAL STROKE DISTANCE		300mm 11.8"	500mm 00"	700mm 00"	575mm 00"	705mm 00"
WORKING PRESSURE (HYDRAULIC)		500Bar / 7.2K psi	500Bar / 7.2K psi	500Bar / 7.2K psi	500Bar / 7.2K psi	500Bar / 7.2
SPEED CONTROL		Star Grip	Star Grip	Star Grip	Star Grip	Star Gri
ROTATE HEAD/HANDLE						
LED LIGHTS		□	□	□	□	□
IN-WATER USE TOOL IP		54	54	54	54	54
NOTES						
WEBSITE		lukas.com	lukas.com	lukas.com	lukas.com	lukas.con

HOSE-FED RAMS

							
	LUKAS (IDEX)	**LUKAS (IDEX)**	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RESQTEC**
	R424	**R430**	**V2**	**V3T**	**V4**	**V5T**	**V6**
	81-40-34	81-40-40					
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ng	2-Stage Telescoping	3-Stage Telescoping	1-Stage	2-Stage Telescoping	1-Stage	2-Stage Telescoping	1-Stage
	21.0kg 46.3lb	17.7kg 00lb	10.6kg 00lb	12.4kg 00lb	14.3kg 00lb	18.7kg 00lb	17.6kg 00lb
00" 00"	625mm /24.6" 1500mm /59.1"	475mm /00" 1295mm /00"	481mm /00" 788mm /00"	340mm /00" 622mm /00"	711mm /00" 1248mm /00"	556mm /00" 1270mm /00"	537mm /00" 1014mm /37"
.7"	221mm / 8.7"	221mm / 8.7"	205mm / 00"	205mm / 00"	205mm / 00"	205mm / 00"	205mm / 00"
41"	112mm / 4.41"	112mm / 4.41"	252mm/ 00"	268mm/ 00"	252mm/ 00"	268mm/ 00"	252mm/ 00"
ports pport	2x Sill Supports 1x Multi-Support	2x Sill Supports 1x Multi-Support	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates	Multi-Adapter for.... 716mm / 28.2" 586mm / 23" 241.6mm / 9.5" 151.6mm / 6" 99.6mm / 4" Swivel & Power Plates
340-18,8	TR 269/445-134/430-21,0	-	R112/307-10.6	TR203/166-91/116-12.4	R112/537-14.3	TR203/382-91/332-18.7	R112/537-17.6
kN St	269/134kN 00/00USt	269/134/39kN 00/00USt	112kN 00USt	203/91kN 00USt	112kN 00USt	203/91kN 00USt	112kN 00USt
mm	445/430mm 00-00"	295/280/245mm 00-00"	-	-	-	-	-
	875mm 34.5"	820mm 00"	307mm 00"	282mm 00"	537mm 00"	718mm 00"	1548mm 00"
K psi	500Bar / 7.2K psi	500Bar / 7.2K psi	N/A	N/A	N/A	N/A	N/A
p	Star Grip	Star Grip					
	54	54	54	54	54	54	54
			Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.	Ram compatible with all Resqtec shoring struts if using the Multi-Adapter.
n	lukas.com	lukas.com	resqtec.com	resqtec.com	resqtec.com	resqtec.com	resqtec.com

IMAGES NOT TO SCALE

OTHER TOOLS IN RANGE:
■=BATTERY TOOLS
■= Combi
■= Cutter
■= Spreader
■= Special Tools

●●= PARTIAL or OK but not ideal
□□□= Option
N/A = Not Available/not given
THROTTLE is a motorcycle-style rotating hand grip.
~ = approximate

COMPANY	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESCUE	TNT RESC
SERIES MODEL VARIANT	R 20	R 30	R 40	R 50	R 60	TLS 25
PRODUCT CODE						
TOOLS IN RANGE						
ORIGIN						
COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A	N/A
RAM TYPE	1-Stage	1-Stage	1-Stage	1-Stage	1-Stage	2-Stage Telescopi
WEIGHT inc Hose exc EXTENSIONS	12.3kg 27lb	14.5kg 32lb	16.8kg 37lb	18.6kg 41lb	21.3kg 47lb	18.2kg 40lb
LENGTH retracted/extended*	462.3mm /18.2" 629.9mm /24.8"	546.1mm /21.5" 774.7mm /30.5"	673.1mm /26.5" 1028.7mm /40.5"	802.6mm /31.6" 1285.2mm /50.6"	927.1mm /36.5" 1536.7mm /60.5"	425.5mm /16 831.9mm /32
HEIGHT/WIDTH	188mm / 7.4"	188mm / 7.4"	188mm / 7.4"	188mm / 7.4"	188mm / 7.4"	215.9mm / 8
DEPTH (max diam)	88.9mm/ 3.5"	88.9mm/ 3.5"	88.9mm/ 3.5"	88.9mm/ 3.5"	88.9mm/ 3.5"	114.3mm/ 4
EXTENSION(S)/HEADS etc. (OPTIONAL EXTRA in GREEN)						
EN ■ NFPA ■	■	■	■	■	■	■
EN CLASSIFICATION	-	-	-	-	-	-
PUSH FORCE(S for telescoping) t=US Ton	147kN 00 USt	147kN 00 USt	147kN 00 USt	147kN 00 USt	147kN 0 USt	229/82.3k 00 USt
STROKE RANGE	-	-	-	-	-	247/159m 9.75/6.25
TOTAL STROKE DISTANCE	167.6mm 6.6"	229mm 9"	336mm 14"	482mm 19"	609.6mm 24"	406mm 16"
WORKING PRESSURE (HYDRAULIC)	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi	722 Bar 10.5K psi
SPEED CONTROL	Rotating Star Grip	Rotating Star Grip	Rotating Star Grip	Rotating Star Grip	Rotating Star Grip	Rotating Star
ROTATE HEAD/HANDLE						
LED LIGHTS	■	■	■	■	■	■
IN-WATER USE TOOL IP	54	54	54	54	54	54
NOTES	79.6kN Pull	79.6kN Pull	79.6kN Pull	79.6kN Pull	79.6kN Pull	-
WEBSITE	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.com	tntrescue.co

HOSE-FED RAMS

UE	TNT RESCUE	TNT RESCUE		WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE
	TLS 40	TLS 50		RZ1-850	RZ1-1810 Crossrammer	RZ2-1290	RZ3-16540
				RZ1-850	RZ1-1810	RZ2-1290	RZ3-16540
	N/A	N/A		N/A	N/A	N/A	N/A
c	2-Stage Telescopic	2-Stage Telescopic		1-Stage	1-Stage	1-Stage	2-Stage Telescoping
	12.3kg 27lb	20.4kg 45lb		17.3kg 38.1lb	17.3kg 38.1lb	18.4kg 40.6lb	20.9kg 46lb
.75" .75"	501.7mm /19.75" 1022.4mm /40.25"	546.1mm /21.5" 1278.1mm /50.32"		540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	540mm /21.3" 908mm /35.7"	543mm /21.4" 1170mm /44.3"
.5"	184.2mm /7.25"	215.9mm / 8.5"		340mm / 13.4"	340mm / 13.4"	340mm / 13.4"	351mm / 13.8"
.5"	88.9mm/ 3.5"	114.3mm/ 4.5"		134mm/ 5.3"	134mm/ 5.3"	134mm/ 5.3"	134mm / 5.3"
				175mm/7" 250mm/9.8" 320mm/12.6"	175mm/7" 250mm/9.8" 320mm/12.6"	175mm/7" 250mm/9.8" 320mm/12.6"	NO
	■	■		■ ■	■ ■	■ ■	■
	-	-		R111/368-17.3	R111/368-17.3	R111/368-18.4	TR189/360-99/27020,9
kN	229/57.3kN 00 USt	229/82.3kN 00 USt		111kN 12.47 USt	111kN 12.47 USt	111kN 12.47 USt	189-99kN 21.2/11.1 USt
m 5"	371/282mm 14.62/ 11.12"	411/320mm 16.2/12.6"		368mm 14.5"	368mm 14.5"	368mm 14.5"	360/270mm 13.2-10.6"
	653mm 25.7"	731mm 28.8"		368mm 14.5"	368mm 14.5"	368mm 14.5"	630mm 24.8"
i	722 Bar 10.5K psi	722 Bar 10.5K psi		700 Bar 10.1K psi	700 Bar 10.1K psi	550 Bar 7.9K psi	700 Bar 10.1K psi
Grip	Rotating Star Grip	Rotating Star Grip		Rocker switch	Rocker switch	Rocker switch	Rocker switch
	■	■		■	■	■	■
	54	54		54	54	54	54
	-	-		All E-Force tools can convert to hose. Length remaining markers on ram tube.	All E-Force tools can convert to hose. Length remaining markers on ram tube.	All E-Force tools can convert to hose. Length remaining markers on ram tube. *IP68 only with battery cover. IP54 splash cover for 12Ah	All E-Force tools can convert to hose. Length remaining markers on ram tube.
om	tntrescue.com	tntrescue.com		weber.com	weber.com	weber.com	weber.com

'hydraulic' BATTERY SPECIAL TOOLS

Holmatro's Door Ram uses their ***Greenline*** *battery series* **has the widest selection of Special tools within its battery tools including its *RIT* tool's ability to function as a ram using the jaws to spread the telescoping section out 80 cm/31"**
This is a handier-sized variation on an original design by *Powerhawk* where the spreader jaws are inserted into the a cut-out section on the barrel of a full-size, full strength ram.

This is not quite as all-encompassing a group of tools as you might expect and don't forget that many are still limited to hose-fed hydraulics rather than battery. - *Holmatro* for instance has power wedges, rebar/pedal cutters and concrete crushers but not in their battery range. In terms of professional battery hydraulics or 'hydraulic surrogates' we are really only talking about.....

- Tactical Combi/RIT entry tools for forced entry and chain or mesh cutting often with specialist tip options
- Special purpose cutters for pedals, rebar, sheet metal etc.
- Power wedges for opening a gap after insertion into an initially tight space
- Parallel jacking or separation like the Weber Door-Opener and the *Holmatro Door Ram* above for door busting, rail/mesh separation etc.

See our **Guide to Batteries** in the **USAR/EXTRICATION BUYERS GUIDE** for a complete list of rescue-relevant batteries.

RIT/COMBI TOOLS

Since these are all hydraulic-electric tools as distinct from simply elecro-mechanical, there is a degree of crossover between the combi-tools which are true multi-role and the dedicated specialist tools that have a spreading or forced opening capability. The *Weber RIT* tool (opposite) for instance has a telescopic ram attachment and some detachable tips for forced entry can be narrow enough to do the same job as a wedge. It is safe to say that you your agency had to choose only one tool with which to perform or try to perform, ALL rescues it would be a RIT or Rapid Intervention Tool and if you were equipping a helicopter, motorcycle or small vehicle with a tool small enough to do meaningful work across a broad range of rescues it would be either a battery-powered RIT with it's bag of accessories or one of the Power-Drill tools like the *Ogura* but that's not really a single tool as all the head attachments are a quite significant size and weight. In fact, truth-be-told, we would possibly be looking at a hand-hydraulic combi if there was any chance of not having access to fresh batteries or recharging but for the most part, that's not an issue these days. So a RIT or mini-combitool has both spreading and cutting capabilities and with the addition of entry-tool tips it can force open doors, gates and roller shutters as well as acting as a powered wedge, which we will come to next. Their problem would be length of tool in the case of the key brands - *Lukas/Hurst, Weber/Genesis* and *TNT*. The heads may b smaller but the bodies are the same size as their full size Combi, cutter and spreader brethren. The overall tool weight however will be smaller and the jaws are designed to take the entry tips that make RIT combis so useful. The *Lukas/Hurst StrongArm* has tips that look so substantial they wouldn't look out of place on a JCB digger. The images above show the adaptability of a RIT

The *Hilti NRC-6-22* is a more specialised rebar cutter because it cuts flush to the ground or concrete substrate. In rescue this can be extremely useful in removing the sharp stubs that other tools leave as significant snag hazards .

from diminutive cutting to spreading-lifting and forced entry. and don't forget that both *Lukas* and *Weber* have versions that can be used underwater! Police and military are particularly keen on RITs for door busting - electricity is quiet, the tools can be easily self-contained and back-packed to the scene and the range of tips gives good options for lock or hinge attack in terms of how the door is actually opened. Wedges and jacks can also do this job depending on the type of hinge if they have clearance within the door jam to force the door upwards rather than outwards.

POWERED WEDGE

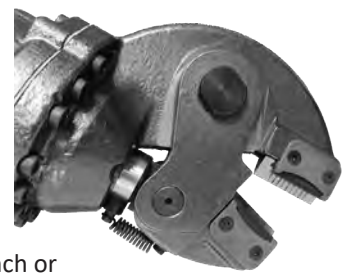
A wedge is a long, triangle of material, metal in the case of rescue tools but there are extremely strong polymers that may end up being used. The wedge is forced forward by the hydraulics or mechanics of the tool forcing a narrow opening into a larger opening albeit over a short distance because it will only be to the height of the triangular wedge - usually just a few inches but this is then enough to get your air bags or spreaders/combi or whatever into the gap to continue lifting and finish the job. The rescue power wedges are quite narrow because they need to get into the smallest gap possible to initiate a lift or spread which is then propped while the tool is extracted and repositioned or a larger tool/bag inserted. Depending on what you are lifting and the subsequent actions, consider lubricating the wedge to ease it progress into small, high-friction gaps.

The *Eder Titan 80 Remote* is one of three similar wedges by Eder aimed at the foresty industry but with numerous application in rescue - the Titan 50 is powered by hand or by a Milwaukee M18 impact driver but this larger self-contained remote version offers rescuers the chance to place and then move to a safe distance to activate it.

REMOTE CONTROL

Our selection in the tables are almost all from the rescue sector but one, the *EDER Titan Pro* is from forestry and has a feature that is becoming more common in battery tools though not yet in rescue - remote control. We are currently looking at a cutter from *Milwaukee* that has remote control cutting and similarly, most powered ascenders and some winches also have remote control. It's surprising that this is not more common in rescue and USAR/structural collapse in particular where the risks of carrying out a forced lift or cut and causing more collapse is quite high. *Titan* is a felling wedge but it's similar in action to the *Holmatro* and *Weber* wedges albeit with a lower power capacity but it does have an 80m/260ft remote control that enables you to place the wedge and then stand well back while you perform the lift - perhaps with binoculars because there is a lot to be said for having sight and feel of your lifted medium during the operation.

REBAR, BAR & PEDAL CUTTERS



While most of the tools we have included are unique to rescue there is a group of tools that we could have filled the entire magazine with - rebar cutters. These are designed to cut iron reinforcing bar used in concrete structures and have quite compact heads because the are only cutting an inch or so of bar (<25mm) . These are most often an anvil-style cutter where a straight blade is pushed forward (parallel with the body of the tool). The material being cut is caught by, and compressed against, a substantial hook- or square-shaped end and the blade pushes through the bar. Some rebar cutters have a blade that rotates or pivots onto and against a fixed 'anvil ' (pic above) and one or two have the more familiar parrot beak with hardened blades often on a straight section within a material capturing curved end to ensure the material is not simply spat out as the jaws close. Construction and demolition use such

Weber has the widest selection of Special tools within its battery tools including its *RIT* tool's ability to function as a ram using the jaws to spread the telescoping section out ___ cm/" This is a handier-sized variation on an original design by *Powerhawk* where the spreader jaws are inserted into the a cut-out section on the barrel of a full-size, full strength ram.

IMAGES NOT TO SCALE

cutters to cut reinforcing bar hence the vast number of models available. Pretty much anyone that makes a battery powered trade tool has a rebar cutter but we have selected only those actively marketed for rescue and those using battery systems that you may already be using like the *Milwaukee M18, DeWalt FlexVolt* and *Makita XGT/LXT*.

Vehicle rescue has traditionally used them as pedal-cutters able to cut through a vehicle's accelerator, brake and/or clutch pedal. There's no real distinction between the blade's capacity to cut metal bar because they will also cut head restraints and seat-backs etc , it is more about less front-end bulk and manoevrability that allows the tool to be used in the tight confines of a vehicle footwell. The *Edilgrappa* and *Ogura* models have a cutting head on the end of a short flexible hose with the controller able to be operated up to a metre away in the case of *Ogura*'s *HRT*. While rebar and pedal cutters have smaller heads there is a rescue range from *Weber/Genesis* for much more substantial cutting and one from *Holmatro*, the *Mini-Cutter* (above) that is somewhere in between able to cut almost an inch (22mm) metal bar, so steering wheels, seat-backs and chains as well as rebar. The *Weber/TNT* model is called a Mass-Transit Cutter in the US because it is marketed towards train/tram/bus operators able to cut more substantial bar, rail and tube materials than the smaller rebar-style cutters. Its huge jaw can accommodate 120mm/almost 5" of material but that is not the same as cutting a 5" solid bar - it will cut a 20mm bar but it will also cut 14mm sheet steel and will run up the outer skin of a train or vehicle leaving a neat 20mm wide line instead of a wavy corned-beef tin style cut so it also falls into the sheet material cutter category below.

SHEET MATERIAL SHEARS/CUTTERS

These are usually like a cross between secateurs and scissors with an action equivalent to a reciprocation saw where the trigger initiates the open and close cutting action. We mostly haven't included this class of tool because the rescue companies don't currently include them. Their uses are limited to some larger panel-sided vehicles and roller shutter entries and rescue agencies have other tools that will do this job. Nevertheless, if you already have the batteries and have got room on your truck they can be handy. We have however, included *Ogura*'s sheet cutter not just because it is part of an existing range but because it is will cut small diameter bar or heavy gauge wire as well as being a sheet material cutter.

LIFTING JACKS

Similar in function to a ram but with a set of 'jaws' to insert into gaps and push or lift or spread apart. These are in-line rather than pivoting as you get with a spreader. Primary usage is on roller shutters, lift doors and doors that open outward so they get more use in Scandinavia than they do in the UK where front doors open inwards. However, as mentioned earlier some door can be removed by lifting upwards rather than outwards. As with Power Wedges, the minimum insertion height is a key consideration. Jacks need more space corresponding to the physical with of the two halves of the jaw when fully closed for insertion. Power wedges are around 6-10mm whereas jacks are closer to 10-15mm.

CONCRETE NIBBLERS/CRUSHERS

Not at all common in Rescue battery tools with some companies like *Holmatro* and *Edilgrappa* so far choosing to stick with hose-hydraulics but there is one from *Weber* (pic below) and a Chinese model that we''re not familiar with. These function in the same way as a cutter or spreader jaw but with a meaty inward facing point on the end of each jaw. This exerts a precise point-load to slab concrete cracking away small sections (hence the term nibbler). It can generally only work from the outer edge of a slab so can work with up to 250mm wide sections at a time but it can often exploit a crack line and perpetuate that crack further into the slab to break off larger sections. The tips are replaceable and this is a very useful tool in structural collapse where extremely noisy disc cutters are often the only other option.

Weber Concrete Crusher Pic courtesy of Richard Wood

holmatro
mastering power

THE FINAL CUT.

THE FIRST CORDLESS MINI CUTTER
TO COMPLETE ANY RESCUE SET.

www.holmatro.com/minicutter

IN THE FOLLOWING TABLES.....
The tool length, width or height and weight are all WORKING spec so they **include the battery**. See our comprehensive Guide to Batteries in the USAR & Arborist BUYERSGUIDES for full range of options. Many companies quote figures without the battery so at first glance seem lighter but when added has a significant affect on both the physical size and weight of a tool when in use. As with all cutting and spreading tools, the largest or highest figures are not necessarily the best for the job. Stroke power is highest at the shortest extension. **All force figures are given in KiloNewtons and US (short)tons**
Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■
If it's an option it is shown as an outline square □□□□
● this feature is only partially present and/or is OK but not ideal.
A model variant is shown in cyan blue and any features or specifications that differ from the standard version are also in cyan or will have a cyan outline to a black or orange square ■■.
WiFi/ -CAPABLE: The tool and/or battery are linked to a mobile device via WiFi &/or Bluetooth to manage functions, servicing and inventory.
TOOLS-IN-RANGE: refers to the other types of tool available jn this specific series of tools using this specific battery.
■=Cutter ■=Spreader ■=Combi ■=Ram
ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.
COST: rarely quoted because these are usually bulk agency purchases. The batteries are an expensive consumable as well - eg. a *Milwaukee* M18 8Ah battery costs £/$/€150-200 though individuals could purchase through *Amazon* etc. and save a packet! Any prices included are a rough guide only & include local taxes/VAT. They vary with exchange rates, extra taxes etc. We usually round up to the nearest Pound£/US Dollar$/Euro€. Cost is for a basic model with included accessories indicated in the notes.

WEIGHT IN HAND: the operational weight that the rescuer experiences in using the tool so it includes any on-board batteries but not backpack batteries and not necessarily any extras like clip-on lighting or tips.
WEIGHT of BATTERY: is for the default battery supplied or preferred by the manufacturer. Those that use 'off-the-shelf' brands like *Milwaukee* and *DeWalt* may well be able to use either higher Ah models for greater capacity/duration or lower Ah for decreased cost and perhaps weight but less duration. CAS is a battery coalition where several brands fit the same tools.

BATTERY DURATION & RECHARGE TIME: Work-time or duration is much trickier as it depends on the resistance of the material being cut/pushed/supported, the temperature, the age of the battery and even how meticulously you follow the recharge guidelines. Consequently some won't quote a figure at all and others are generous to say the least - consider most to be the absolute maximum with minimal workload. Tools last much longer carrying out hundreds of short duration cuts/spreads/lifts than one concerted high-load effort. **Recharge time** can be more specific though it varies wildly between basic and high speed chargers. The time shown is for the charger supplied or preferred by the manufacturer and may give a time-range if referring to different types of charger.

DIMENSIONS: Length by width by depth/height of tool ready to store on the truck and/or ready to work.
STANDARDS: CE ■ NFPA ■ - This varies with the type of tool - combi/RIT, cutters and spreaders have ratings as rescue tools but wedges and rebar cutters may only be CE by virtue of a powertool standard You will know the type of standard by any cut/spread ratings given.

CUT/PUSH/SPREAD FORCE: Is the maximum *theoretical* force that can be exerted and, like spreaders and cutters, is highest closest to the power unit. The strongest jacks are short and single-stage. Telescoping gives you much needed reach but the second stage is very much weaker than the first stage and this is extremely important to remember - you may have easily pushed your target material with the first stage but beware that you don't overwhelm it's capabilities when you extend into the second, telescoping stage. **It is also vital that you push in direct line with the power unit - if your target load starts to stray off-centre as it moves you could damage the jack's's cylinders.**

Our figures are in kN (KiloNewtons) and **US (Short) Tons**. There are 1.10 US short tons to a UK/metric ton (or more accurately tonne).

STROKE RANGE/DISTANCE: The max distance the target load can be pushed/lifted.
ROTATE HEAD/HANDLE: The handle can rotate around the cylinder for better access to the target.
LED LIGHTS ☐: Integral lighting from the handle or housing to illuminate the area being cut/spread.Some may be add-on.
IN-WATER-CAPABLE: The tool/battery can be used underwater
TOOL/BATTERY IP. Ingress protection for dust (first number) & water (second number) - IP54 resists water splashes, IP57 & 67 withstand inundation to 1metre, IP58&68 deeper than 1metre. Trade batteries like *Milwaukee* are **not** waterproof without a bespoke cover and tend not to quote an IP number because they are dependant on the tool to create an effective seal. Specialist batteries like *Holmatro* and *Lukas* are watertight (IP68) but regular trade batteries are no more than IP54 so they are splash proof but not submersible without a bespoke cover.

CE
SCUE TOOL.
TUITIVE
OW3R PUMP
THE REVOLUTIONARY
BATTERY TOOL
SERIES
The new SMART-FORCE battery-powered tool series starts a digital revolution in the rescue equipment market.
More speed, a powerful and MILWAUKEE compatible 18 V battery, intuitive design and numerous smart features packed into a rugged and submersible housing.

IMAGES NOT TO SCALE

COSTS ARE VERY APPROXIMATE included as a relative guide only

SERIES - VARIANT in CYAN BLUE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Cutter
●= PARTIAL FEATURE
□□□= Option
DIMENSIONS include battery
~ = Approximately
N/A = info Not Available/not given

	MODEL VARIANT	Titan 50	Titan 80 Remote	TP10	Pro-Cut 12
	SERIES WiFi/BT-capable	Titan	Titan	-	-
	VOLTAGE	18v	18v	18/20v	18/20v
	COMPANY	**EDER**	**EDER**	**EDILGRAPPA**	**EDILGRAPPA**
	TYPE OF TOOL	WEDGE/ENTRY	REMOTE WEDGE/ENTRY	FLEXI-CUTTER	BAR CUTTER
	TOOLS IN RANGE	-	-	■ ■ ■ ■	■ ■ ■ ■
	ORIGIN				
	~COST inc tax / VAT	£550 $650 €895	£2520 $3450 €2750	£2400 $2900 €2850	£2200 $3200 €3030
	WEIGHT IN HAND inc BATTERY exc ACCESSORIES	3.2kg* 7lb*	9.9kg 21.8lb	8.6kg 18.9lb	7.2kg 15.8lb
BATTERY	WEIGHT - DEFAULT BATTERY	1.1kg 2.4lb	1.1kg 2.4lb	0.7 1kg 1.52.2 lb	0.7kg 1.5 lb
BATTERY	BATTERY Ah OPTIONS	Milwaukee 5Ah	Milwaukee 5Ah	DeWalt FlexVolt 4 6Ah*	DeWalt FlexVolt 4 6Ah*
BATTERY	BATTERY DURATION RECHARGE TIME	<45mins 60-105mins	<45mins 60-105mins	10-15mins /~100 cuts 40-90mins	10-15mins / ~100 cuts 40-90mins
DIMENSIONS	LENGTH retracted with tips/extended	420mm / 16.5" 520mm /20.5"	620mm /24.4" 780mm /30.7"	1034mm/ 40.7" -	494mm/ 19.4" -
DIMENSIONS	HEIGHT/WIDTH	*255mm / 10"	120mm / 4.7"	*348mm / 13.7"	*348mm / 13.7"
DIMENSIONS	DEPTH (max diam)	118mm/ 4.6"	180mm/ 7"	143mm / 5.6"	184mm / 7.2"
STANDARDS	EXTENSION(S) & OPTIONS or CUT/SPREAD CE/NFPAClass	- -	- -	- -	- -
STANDARDS	CE ■ NFPA ■	-	■	■ ■	■ ■
STANDARDS	EN CLASSIFICATION	-	-	-	-
FEATURES/CAPACITIES	CUT / PUSH/SPREAD FORCE t=US Ton	147kN 16.5 USt	245kN 27.5 USt	232.4kN 26.1 USt	120kN 13.4 USt
FEATURES/CAPACITIES	CUT-MATERIAL/BAR Ø STROKE/SPREAD RANGE	50mm / 2" lift height	80mm / 3.15"		12mm / 0.5"
FEATURES/CAPACITIES	JAW OPENING DISTANCE INSERTION HEIGHT	- -	- -	52mm / 2" -	15mm /0.6" -
FEATURES/CAPACITIES	WORKING PRESSURE (HYDRAULIC)	-	-	550 Bar / 8K psi	300 Bar / 4.4K psi
FEATURES/CAPACITIES	HEAD / HANDLE ROTATES	■	-	■ ■	■ ■
FEATURES/CAPACITIES	SPEED CONTROL ON-BOARD LED	Button+Lever	Button+Lever	Trigger	Trigger
FEATURES/CAPACITIES	IN-WATER USE BATTERY/TOOL IP	54 54	54 54	54 54	54 54
	NOTES	These *Eder* wedges are electro-mechanical rather than hydraulic. *Dimensions will vary with impact wrench and battery type, we would recommend the 8Ah.	Designed for felling of large trees - inserted into the back-cut and activated from a safe distance <80m but will work for any incidents requiring forced-separation. 80Pro head can also fit drill as per the Titan50	A flexible head cutter intended for manoeuvring into confined spaces like a vehicle footwell for peddle cutting. *6AH -add 50mm to height	Rotational Blade Multi-material/bar cutter. Anti-jamming release lever *6AH -add 50mm to height
	WEBSITE	eder-maschinenbau.de	eder-maschinenbau.de	edilgrappa.com	edilgrappa.com

MU16-USAR	**SilverCut 20-USAR**	**Mass-Transit Cutter**	**Mass-Transit Cutter**	**Mini-Cutter CCU10**
-	-	SLi	E-Force 2.0	CAS - Generic
18/20v	18/20v	18v	28v	28v
EDILGRAPPA	**EDILGRAPPA**	**GENESIS RESCUE**	**GENESIS RESCUE**	**HOLMATRO**
BAR CUTTER	BAR CUTTER	HD CUTTER	HD CUTTER	CUTTER
£2900 $3520 €3400	£3600 $4400 €4200	>£15000 >$18300 >€17600	£10600 $12950 €12700	£4400 $4940 €4900
9.3kg 20.5lb	10kg 22lb	18.4kg 40.6lb	23kg 51lb	4.9kg 10.8lb
0.7kg 1.5 lb	0.7kg 1.5 lb	1.1/1.7kg 2.4/3.74lb	1.45/1.1kg 3.2/2.4lb	0.4kg 0.9lb
DeWalt FlexVolt 4 6Ah*	DeWalt FlexVolt 6Ah*	Milwaukee 5-8Ah*	Genesis/ Milwaukee 5Ah*	Holmatro CAS (inc Milwk/DeWalt) 2Ah
10-15mins / ~100 cuts 40-90mins	10-15mins / ~100 cuts 40-90mins	60/90mins 45-60-105mins	<45mins 90 60-105mins	<70 cuts 30mins
486mm/ 19.1" -	504mm/ 19.8" -	765mm /30.1" -	743mm /29.3" -	554mm /21.8" -
*348mm / 13.7"	*348mm / 13.7"	188mm / 7.4"	205mm / 8.1"	154mm / 6.1"
184mm / 7.2"	176mm / 7.2"	230mm/ 9"	241mm / 9.5"	92mm / 3.6"
- -	- -	A4 B3 C5 D6 E6 F3	A4 B3 C5 D6 E6	B 1D 2D 3C A4 B3 C2 D4 E4
-	-	-	-	AC59-B-4.9
171kN 19.2 USt	189kN 21.2 USt	111kN 12.5 USt	142 (47*) kN 16 (1.8*) USt	220 kN 24.7 USt
16mm / 0.9"	20mm / 0.8"	20mm / 0.8"	?	22mm / 0.9"
20mm /0.8" -	21mm / 0.8" -	120mm / 4.7" -	120mm / 4.7" -	59mm / 2.3" -
550 Bar / 8K psi	550 Bar / 8K psi	700 Bar / 10.1K psi	700 Bar / 10.1K psi	720 Bar / 10.4K psi
Trigger	Trigger	Rocker switch	Rocker switch	Rocker switch
54 54	54 54	68* 58	54 54	54 54
Rotational Blade Multi-material/bar cutter. Anti-jamming release lever *6AH -add 50mm to height	Anvil Blade Also a 16mm version Multi-material/bar cutter. Anti-jamming release lever *6AH -add 50mm to height	Designed for heavy duty cable/bar cutting in rail and municipal transport incidents *IP68 only with battery cover shown. IP54 splash cover for 12Ah	EARLIER MODEL Designed for heavy duty cable/bar cutting in rail and municipal transport incidents* Also a 3Ah option All E-Force tools can convert to hose.	Small hand-tool capable of getting into tight spaces or being easily carries in a response car/bike. Uses generic (off-the-shelf) batteries
edilgrappa.com	edilgrappa.com	genesisrescue.com	genesisrescue.com	holmatro.com

IMAGES NOT TO SCALE

COSTS ARE VERY APPROXIMATE included as a relative guide only

SERIES - VARIANT in CYAN BLUE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Cutter
●= PARTIAL FEATURE
□□□= Option
DIMENSIONS include battery
~ = Approximately
N/A = info Not Available/not given

	MODEL VARIANT	LE 100 StrongArm	HRS931/941	932S Stubby Shear	923 Pedal Cutter
	SERIES WiFi/ -capable	-	HRS	HRS	HRS
	VOLTAGE	25.2v	18v	18v	18v
	COMPANY	HURST/LUKAS (IDEX)	OGURA	OGURA	OGURA
	TYPE OF TOOL	COMBI /ENTRY	HRS POWER/MOTOR	SHEETCUTTER	PEDAL/BAR CUTTER
	TOOLS IN RANGE	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
	ORIGIN	■	●	●	●
	~COST inc tax / VAT	£7200 $8800 €8600	£21002500 $29002500 €25003000	£2900 $4000 €3450	£2700 $3700 €3200
	WEIGHT IN HAND inc BATTERY exc ACCESSORIES	11.1kg* 24.4lb	3.9/4.2kg 8.6/9.3lb	+5.7kg +12.6lb	+5.4kg +11.9lb
BATTERY	WEIGHT - DEFAULT BATTERY	1.3kg 2.9lb	1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb
BATTERY	BATTERY Ah OPTIONS	StrongArm 4Ah	Makita 5-6Ah*	Makita 5-6Ah*	Makita 5-6Ah*
BATTERY	BATTERY DURATION RECHARGE TIME	30-60mins 75-150mins	<12mins 55-120mins	<12mins 55-120mins	<12mins 55-120mins
DIMENSIONS	LENGTH retracted with tips/extended	775-796mm 30.5-31.3"	303/328mm / 11.9/12.9"	328mm / 12.9" -	240mm / 9.5" -
DIMENSIONS	HEIGHT/WIDTH	195mm / 7.7"	272/273mm / 10.7/10.7"	130mm / 5.1"	105mm / 4.1"
DIMENSIONS	DEPTH (max diam)	210mm / 8.3"	111/111mm / 4.4/4.4"	104mm / 4.1"	84mm / 3.3"
STANDARDS	EXTENSION(S) & OPTIONS or CUT/SPREAD CE/NFPAClass	1E-2D-3D-4D-5D A5 B3 C5 D6 E6	1m Expansion Hose. Cutter, Spreader, mini ram, Stubby Shear, Pedal Cutter, L&S Door Opener.	-	-
STANDARDS	CE ■ NFPA ■	■ ■	-	-	-
STANDARDS	EN CLASSIFICATION	-	-	-	-
FEATURES/CAPACITIES	CUT / PUSH/SPREAD FORCE t=US Ton	155/20-700kN 17.4/ 2.25-78 USt	-	78.4kN 8.8 USt	70.6kN 7.9 USt
FEATURES/CAPACITIES	CUT-MATERIAL/BAR Ø STROKE/SPREAD RANGE	184-215mm 7.2-8.5"	-	2/1.6mm sheet steel/StSt 0.08/0.06" sheet steel/StSt	16mm/⅝" rebar 38x6mm/1.5x0.23" bar
FEATURES/CAPACITIES	JAW OPENING DISTANCE INSERTION HEIGHT	207mm 8.1"	-	26mm 1"	16mm ⅝"
FEATURES/CAPACITIES	WORKING PRESSURE (HYDRAULIC)	700 Bar / 7K psi	N/A	N/A	5.8K-6.4K psi
FEATURES/CAPACITIES	HEAD / HANDLE ROTATES	■	■ ■	■	■
FEATURES/CAPACITIES	SPEED CONTROL ON-BOARD LED	Rotating Star Grip □*	Trigger	-	-
FEATURES/CAPACITIES	IN-WATER USE BATTERY/TOOL IP	■ 68 58		54 54	54 54
	NOTES	LE version =Tactical Black. *LED Light is an option * Add 700g for heaviest door-opening tips shown, Combi tips	FOR USE WITH OGURA HRS HEADS	USE WITH HRS931 or 941 360° swivel head.	USE WITH HRS931 or 941 360° swivel head
	WEBSITE	lukas.com	ogurarescuetools.com	ogurarescuetools.com	ogurarescuetools.com

936 Door Opener	946 8" Door Opener	ESLCC		RIT TOOL
HRS	HRS	Storm Surge		E-Force/Smart-Force
18v	18v	18v/20v		18v
OGURA	**OGURA**	**TNT RESCUE**		**WEBER RESCUE**
ENTRY	ENTRY	COMBI /ENTRY		COMBI /ENTRY
■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■		■ ■ ■ ■
●	●			
£2600 $3600 €3100	£3300 $4550 €3950	£8600 $10500 €10300		£11200 $15400 €13400
+6kg +13.2lb	+8kg +17.6lb	19.1-19.5kg 42.2-43lb		13.3 / 14.2kg 29.3 / 00lb
1-1.36kg 2.2-3lb	1-1.36kg 2.2-3lb	1.1kg /2.4lb 1.2[1.36]kg /2.6[3]lb		1.1/1.7kg 2.33/3.74lb
Makita 5-6Ah*	Makita 5-6Ah*	Milwaukee M18 8/9Ah Makita [6Ah] DeWalt FlexV20 9Ah		Milwaukee M18 5/8Ah
<12mins 55-120mins	<12mins 55-120mins	10-15mins 87 / 60mins		60/90mins 45-83mins
255mm /10" 325mm /12.8"	338mm /13.3" 544mm /21.4"	791mm /31.1" -		540mm /21.3" 908mm /35.7"
155mm / 6.1"	152mm / 6"	299mm / 11.75"		340mm / 13.4"
110mm / 4.3"	142mm / 5.6"	268mm/ 10.5"		134mm/ 5.3"
-	-	A6 B5 C7 D7 E6		Long, Spreader,Door, jack/ ram & pulling tips 1H-2H-3H-4H-5H A6-B7-C6-D7-E7-F3
-	-	■		■ ■
-	-	-		AC140H-13.314.2
39.2kN 4.4 USt	34.3kN 3.8 USt	528/5.3kN 59.3/11.8 USt		111/30-1305kN 12.47/3.3-146 USt
70mm 2.8"	206mm 8.1"	304.8mm 12"		285-380mm 11.2-15"
00mm 0"	00mm 0"	231.77mm 9.12"		215mm 8.5"
N/A	N/A	722 Bar / 10.5K psi		550 Bar / 7.9K psi
■	■			
-	-	Rotating Star Grip ■		Rocker switch ■
54 54	54 54	54 54		■* 54/68* 58
USE WITH HRS931 or 941 360° swivel head	USE WITH HRS931 or 941 360° swivel head	- TNT prices include 2 batteries and Dual Rapid charger. Storm2 series DISCONTINUED Mains adapter=option.		All E-Force tools can convert to hose. Smart=WiFi Capable *for SMART Version-IP68 only with battery cover. IP54 splash cover for 12Ah
ogurarescuetools.com	ogurarescuetools.com	tntrescue.com		weber-rescue.com

IMAGES NOT TO SCALE

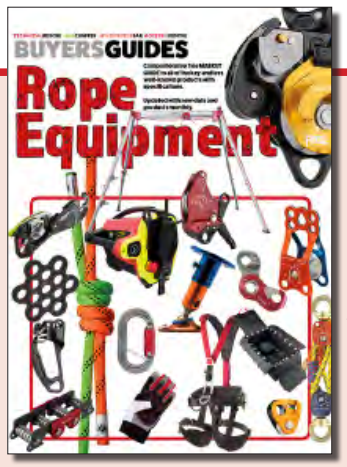
COSTS ARE VERY APPROXIMATE included as a relative guide only

SERIES - VARIANT in CYAN BLUE
OTHER TOOLS IN RANGE:
■= Combi ■= Spreader ■=Ram
■= Cutter
●= PARTIAL FEATURE
□□□= Option
DIMENSIONS include battery
~ = Approximately
N/A = info Not Available/not given

	MODEL VARIANT	BC250 Concrete Crusher	SPK250 Power Wedge	C120 Cutter	DO140 Door Opener
	SERIES WiFi/ -capable	E-Force/Smart-Force	E-Force/Smart-Force	E-Force/Smart-Force	E-Force/Smart-Force
	VOLTAGE	18v	18v	18v	18v
	COMPANY	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE
	TYPE OF TOOL	CONCRETE CRUSHER	COMBI /ENTRY	HD CUTTER	ENTRY
	TOOLS IN RANGE	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■
	ORIGIN				
	~COST inc tax / VAT	£12000 $16500 €14400	£9600 13200 €11500	£11400 $15700 €11600	£8400 $11600 €10100
	WEIGHT IN HAND inc BATTERY exc ACCESSORIES	20.5/21.3kg 45.2/47lb	11.9/12.7kg 26.2/28lb	23.1/00kg 51/00lb	13.2/14.1kg 29.1/31lb
BATTERY	WEIGHT - DEFAULT BATTERY	1.1/1.7kg 2.33/3.74lb	1.1/1.7kg 2.33/3.74lb	1.1/1.7kg 2.33/3.74lb	1.1/1.7kg 2.33/3.74lb
BATTERY	BATTERY Ah OPTIONS	Milwaukee M18 5/8Ah	Milwaukee M18 5/8Ah	Milwaukee M18 5/8Ah	Milwaukee M18 5/8Ah
BATTERY	BATTERY DURATION RECHARGE TIME	60/90mins 45-83mins	60/90mins 45-83mins	60/90mins 45-83mins	60/90mins 45-83mins
DIMENSIONS	LENGTH retracted with tips/extended	- 890mm /35"	770mm / 30.3" 831mm /32.7"	745mm / 29.3" -	619mm / 24.4" 759mm / 29.9"
DIMENSIONS	HEIGHT/WIDTH	380mm / 15"	241mm / 9.5"	238mm / 9.4"	228mm / 9"
DIMENSIONS	DEPTH (max diam)	302mm/ 11.9"	150mm / 5.9"	188mm/ 7.4"	178mm/ 7"
STANDARDS	EXTENSION(S) & OPTIONS or CUT/SPREAD CE/NFPAClass	- - -	- EN 13204 -	1H-2H-3H-4H-5H A6-B7-C6-D7-E7-F3	- EN 13204 -
STANDARDS	CE ■ NFPA ■	- -	■ ■	■ ■	■ ■
STANDARDS	EN CLASSIFICATION	-	-	AC120D-23.1	-
FEATURES/CAPACITIES	CUT / PUSH/SPREAD FORCE t=US Ton	110kN 12.3 USt	248kN 27.8 USt	111/45kN 12.47/5 USt	101kN 11.3 USt
FEATURES/CAPACITIES	CUT-MATERIAL/BAR Ø STROKE/SPREAD RANGE	- -	61mm 2.4"	- -	140mm 5.5"
FEATURES/CAPACITIES	JAW OPENING DISTANCE INSERTION HEIGHT	250mm 9.8"	8mm 0.3"	120mm 4.7"	12mm 0.5"
FEATURES/CAPACITIES	WORKING PRESSURE (HYDRAULIC)	700 Bar /7K psi	700 Bar / 7K psi	550 Bar / 7.9K psi	550 Bar / 7.9K psi
FEATURES/CAPACITIES	HEAD / HANDLE ROTATES	■	-	■	■
FEATURES/CAPACITIES	SPEED CONTROL ON-BOARD LED	Rocker switch ■	Rocker switch ■	Rocker switch ■	Rocker switch ■
FEATURES/CAPACITIES	IN-WATER USE BATTERY/TOOL IP	■* 54/68* 58	■* 54/68* 58	■* 54/68* 58	■* 54/68* 58
	NOTES	Tips can be replaced when worn. Smart=WiFi Capable All E-Force tools can convert to hose. *for SMART Version-IP68 only with battery cover. IP54 splash cover for 12Ah	Smart=WiFi Capable All E-Force tools can convert to hose. *for SMART Version-IP68 only with battery cover shown. IP54 splash cover for 12Ah	Smart=WiFi Capable. All E-Force tools can convert to hose. *for SMART Version-IP68 only with battery cover shown. IP54 splash cover for 12Ah Cuts sheet, bar and sandwiched cross-sections	Smart=WiFi Capable All E-Force tools can convert to hose. *for SMART Version-IP68 only with battery cover shown. IP54 splash cover for 12Ah
	WEBSITE	weber-rescue.com	weber-rescue.com	weber-rescue.com	weber-rescue.com

BUYERSGUIDES

The most comprehensive GUIDEs to Rope Equipment & Water Rescue Eqpt ever produced



FREE-to-ALL BUYERSGUIDES to make better use of all the MARKET GUIDE articles we have in all of our magazines. Digital, page-turning publications that can be downloaded as a PDF but are **continually updated on the same link** so that readers can get the latest version whenever you want to take a look for something. These are sent to all readers and available from our website.

- **CONTINUALLY UPDATING** prices, specifications and new or discontinued products updated weekly with new Product guides added every month.
- **NEW PRODUCTS** incorporated into the tables and introductions as they are released
- **PRICES** monitored and updated monthly and currency conversions listed in GBP£, US$ & Euro€
- **DISCONTINUED MODELS** have a note to that effect before being removed altogether
- **500+ PAGES** in each GUIDE

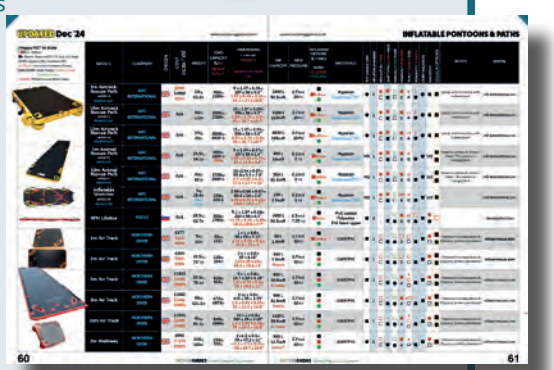
Free Link:
https://accessandrescue.hflip.co/BuyersGuidetoUSARextrication.html

BUYERSGUIDES are **FREE-TO-ALL** on the same links or you can download a pdf version - you can even print a copy off you have enough ink!

Our **WATER RESCUE BUYERSGUIDE** is available now but some these categories are so detailed and complex that they continue to be compiling into late 2026.

FREE link:
https://accessandrescue.hflip.co/GuidetoWaterRescueEquipment

Water Rescue Helmets
Water & Ice Rescue Drysuits
Rescue PFDS
Dog PFDs
Water Rescue Drones & ROVs
Water-Capable Aerial Drones
Inflatable Platforms/Paths
Inflatable Rescue Boats
Inflatable Sleds
Inflatable Rafts
Inflatable & Solid Boards
Inflatable & Solid Stretchers/Collars
Lightweight PM Pulleys & Tandem Pulleys
Mini Hauling Systems
Water Rescue Rope
Throwlines & Throwbags
Water Rescue Knives
Submersible lighting
Water Rescue Manikins



www.rescuemagazines.com

DISC CUTTERS & ROTARY SAWS

Large disc-cutters (also called Cut-Off saws) together with concrete cutting chainsaws, are just about the noisiest and messiest rescue tools in our arsenal especially if they are petrol/gas driven. They are very much a construction industry tool that rescuers co-opt and modify for specific uses but many are simply off-the-shelf tools doing the same job in rescue that they do on a construction site. Since they are required to cut through metal rebar and roller shutters, concrete and brickwork they are kicking up dust and/or sparks from the second they make contact and this can be a scary and dangerous ordeal for a casualty if they are in close proximity. Often used for long access-opening cuts, disc cutters are a heavy load with big engines creating a lot of torque. You can feel the gyroscope style motion when you hold one in free space and squeeze the trigger. These and chainsaws have been used for decades by North American fire crews in particular to cut ventilation holes in roofs during fires to vent the smoke. European firefighters mostly deal with heavy masonry, slate, composite and metal tiles rather than wooden shingles so they don't see the same style of use during firefighting.

LUBRICATION / COOLING/ DUST-SUPPRESSION

Disc cutters and fast moving chains produce a horrendous amount of dust when used for cutting concrete or brick and a tremendous amount of heat when cutting metal so there are a number of mitigating options which all involve water. Water can be applied to the rotating blade and/or the cutting area although water on the blade will migrate quickly to the cut-site anyway. This can be entrained via a standard 1/2"/25mm garden hose style adaptor - *Hozelock* in yellow for instance. This can be via a hose to a tap or a pressurised hand pump like the *Stihl* model above or a battery powered pump like the *Husqvarna WT15i* on the-right which can follow the cutting tool to the remotest of locations. Hydraulic tools have oil-filled hoses and an additional water hose that directs water directly into the bar's chain groove in the same was a a wood-cutting chainsaw feeds lubricating oil. The three major brands in disc cutters are *Husqvarna, Makita* and *Stihl* (though arborists will also be familiar with Echo), but, because of the day-to-day industrial applications for disc cutters, there are brands here that we don't see so often in rescue despite their huge multi-national status - *Hilti* for instance which has tools used by many disaster response teams - incidentally their home flag is Lichtenstein in case it's not familiar to you. The Austrian *Zipper* model is from their construction battery range which so far includes this and a cement mixer running on the common battery. One model that US rescuers in particular will have been familiar with is *CUTTERS EDGE* which produced a concrete cutting chainsaw on the *Jonsered* platform (which we still have but it has seen better days!) and a rotary/circular saw which we also operated along with the K38 Partner (as it used to be) and a *Stihl* - All were petrol/gas variants as battery had not, at that time, caught up with enough grunt for concrete and rebar cutting, with the *Stihl* model being by far our most manoeuvrable in more confined spaces (but not true confined space because liquid fuel combustion engines produce dangerous exhaust fumes). Another industrial giant that has functioned in rescue since the start is the *Stanley* (*Stanley-Black&Decker* but bought by Swedish company *Epiroc AB* in 2024 so we may see more changes?) hydraulic cutting system able to deal with most materials whether they be in a true confined space or even under water. This is an unusually large, noisy, unwieldy and expensive item but for those services that bought them even decades ago,they're usually still going strong and a testament to the merit of that initial, seemingly high, financial outlay. Its hydraulic pump and hoses

TOOL	PETROL/ GAS	BATTERY	CORDED ELECTRIC	HYDRAULIC (HOSE)
ADVANTAGES	Highest power-to-weight ratio – excellent for thick concrete, asphalt, steel	Zero emissions – safe indoors, tunnels, confined spaces	Zero emissions	Zero emissions at the tool
	Completely mobile – no cables, batteries, or power packs	Much quieter than petrol & now similar cut capabilities (in concrete/steel etc.)	Lower cost than battery or petrol (unless using intelligent powerpacks)	Can run underwater
	All-day runtime with quick refuelling	Instant start, minimal maintenance	Consistent power (no fuel or battery fade), Unlimited run time.	Extreme and consistent cutting power & torque
	Works anywhere (remote sites, roads, demolition)	Excellent safety profile (no fuel, no cables)	Lightweight & simple design	Very durable & reliable with long working-life
DISADVANTAGES	Emissions & fumes – unsafe indoors without ventilation	High upfront cost for batteries and chargers	Tethered to power supply (if using a power pack/gennie this is high additional cost	Requires hydraulic power pack - high additional cost
	Noise & vibration – operator fatigue, stricter H&S controls	Limited runtime – battery swaps needed for heavy use	Cable management & trip hazards	Heavy hoses reduce mobility and manoeuvrability
	More maintenance (fuel mix, filters, spark plugs)	Less peak power than petrol for very thick or reinforced cuts	Limited on-site flexibility	High purchase & setup cost
	Cold starts & reliability issues over time	Cold weather impacts battery performance	Less torque than petrol or hydraulic under heavy load	Specialist equipment & training

can operate a wide range of tools including breakers, drill and impact wrenches as well as the two tools included here - the rotary saw and concrete cutting chainsaw. There will be occasions when this is the only tool that can deal with your rescue problem either because of its sheer power or the fact that is can operate under water or in a water torrent. However, such incidents will be infrequent and for the most part, unless you are a dedicated dive team, you may well be looking for the quieter, non-polluting and easier to manoeuvre battery tools or the extra grunt of (but equally manoeuvrable) petrol/gas saws or the cheapest and continuously running (unless there's a power outage) corded saw. This latter point is usually enough to put off prospective buyers but since most fire vehicle still carry an on-board power system or a transportable generator, such tools are worth considering - the average fire department could probably buy 20 corded tools for the price of a full hydraulic system! There are pneumatic wood cutting chainsaws that can be used underwater but we have not included them here because they are wood (soft-material) chainsaws rather than metal/masonry cutting but they will be in the **USAR-EXTRICATION BUYERS GUIDE** version of this article.

Confined spaces and proximity to a casualty is perhaps the key consideration for rescue (as distinct from recovery). Petrol tools disgorge exhaust fumes thus limiting where they can be used, indeed *Makita* has stopped active selling of fuel saws in North America in favour of battery. Regardless of the power source, all disc-cutters kick out a huge amount of dust and sparks and noise and vibration.

VIBRATION can be dangerous in unstable structures and exacerbate traumatic injury,

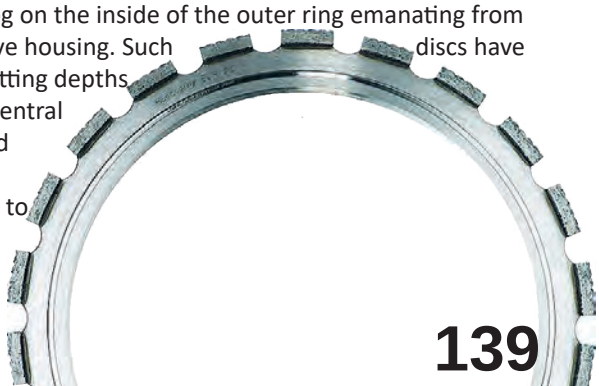
SPARKS can be an ignition source in contaminated atmospheres and/or or cause burns

DUST can be a choking and clogging hazard and equally diffficult it can obscure visibility over the entire rescue scene

HEAT can damage the cutting blade/chain and remains a skin-contact hazard long after the tool has stopped running.

Since we're talking about masonry and metal, it is not usually an ignition source but if wood and other materials are in and around the cutting site, it would be a consideration.

Luckily, all of these things can be mitigated. Most tools have a water spray adjunct to suppress dust and sparks and cool the blade. Back in the last century, we experimented with gels to help suppress dust and sparks hoping it would improve vibration. It didn't, and while spark suppression and short term dust limiting was really good, it didn't cool the blade so well, and quickly became 'engorged' with dust and was non-functional unless renewed every few minutes. These days an additive in the water (borrowed from mining) is used. At the time of writing there doesn't seem to have been much advance on this so water, delivered by regular ½" hose or a power pump like the *Husqvarna* battery powered model opposite, is the way to go. Hydraulic systems can have an additional water (blade-cooling/lubricating/dust-suppressant) hose incorporated into an 'umbilical' with the hydraulic oil hoses for continuous feed from as far away as you have hose length for. Note that some heavier fuel models have wheels to position the disc back and forth rather than just a stand for pivotting. Also note that we have included all disc size models but in any given range, the larger tools will fit a smaller disc if the arbor /spindle is the same size or can be converted whereas a smaller disc tool will NOT fit a larger disc. Note also that there is a RING disc, now mostly confined to *Husqvarna* with the demise of *Partner* tools, and these have no central spindle, instead are driven by a drive-wheel/cog on the inside of the outer ring emanating from a C-shaped drive housing. Such discs have much larger cutting depths as there is no central obstruction and offer different cutting options to rescuers.



IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■
If it's an option it is shown as an outline square □□□□
A circle ●in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■.
MODELSERIES VARIANT: The model name which can also be the product code. **SERIES** is the common platform (if there is one) and normally associated with other tools using the same battery type across a range of tools like Electro-hydraulic rescue tools ■, powered ascender/winch ■,Lighting ■, Recip Saws ■, Concrete breaker ■ or wood chainsaw ■ but could also be petrol tools (eg the same engine as their chainsaws).
VOLTAGE: The battery voltage for the specific types of battery used.... or **FUEL: 2 stroke** using requiring a premix or you mix in an oil additive to a required ratio, usually 25:1 or 50:1 or **4-stroke** used 'neat' with no premix additive.
ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.
COST: Full retail RRP/MSRP including VAT/Tax. Often available for less. Any price in burnt orange £$€ is a currency conversion only and will not include import duty, international shipping etc. for separate battery prices and specifications see our Guide to Batteries in the **USAR BUYERSGUIDE**.
TOOL-ONLY WEIGHT: Refers to the weight of the tool WITHOUT the default battery or a tank of fuel (see next category).
WEIGHT of Default BATTERY/Full FUEL Tank/default cutting disc some are specific disc weights, most are approx.(~) weights for generic diamond disc diameters,- add these to the previous **TOOL-ONLY WEIGHT** to get the operational weight-in-hand that the rescuer has to hold.
BATTERY Ah Options The default AmpHour and optional batteries available for this tool
FUEL CAPACITY: Size of the fuel tank in ml/millilitres
POWER OUTPUT: in **kW**/Kilowatts and **CC** (cubic centimetres (Cylinders for petrol engines) and Horsepower **hp.** Remember that kW is not the same as kWh. kW is the instantaneous power draw that can be compared to a petrol-engine's burst of power. kWh is effectively the stored power of the battery and is a much lower figure. kW and their cc equivalent conversions vary with engine. ie. 3.2kW may be shown a 60-7cc
DURATION: Default BATTERY
Full FUEL Tank: The approximate runtime with a full fuel tank or fresh (new) battery remembering that temperature and age/condition of battery will adversely affect run-time and performance. Petrol engines not so affected unless the fuel mix is not correct or fuel is contaminated.
LENGTH inc Disc: Length of tool to the end of the disc guard, ***with* std abrasive disc** as that's how they are usually stored.
WIDTH/HEIGHT: These tools can be quite bulky in terms of storing on your vehicle and this is almost always dictated by the handle. Some way to quickly detach or fold the handle would be a useful way to save several inches of height and width but it's never been addressed, maybe because it would be a weak-point considering the force and weight applied to the handle during operation.
BLADE: MAX DIAMETER: The physical size of the disc to its outer edges. The guard will dictate the maximum diameter of disc the tool can accommodate. NB: **larger disc models will take a smaller disc if the arbor is the same** (or use a collet converter).
CUTTING DEPTH: Usually this will be to the obvious centre spindle or the disc-mount surrounding it but some may have specialist teeth inserts intended only for more shallow cuts than the overall disc diameter would imply.
SPINDLE (ARBOR) DIAMETER: The all-important size of the hole in the disc into which the spindle or mounting bolt will fit. ***This has to be exact*** to ensure the disc rotates cleanly with no undue clearance that would cause vibration/oscillation and perhaps even lateral movement - either of which would severely limit effectiveness and might cause the disc to shatter.
A collet (thick metal ring) can be used to alter the spindle size to fit discs with different bores - imperial to metric for instance.
SOUND POWER: Is the acoustic 'energy' emitted by the tool regardless of operator (ear) distance from the tool. This is not so much measured as calculated from Sound Pressure measurements within a sound-calibrated (absorption) room.
SOUND PRESSURE is measured at the operator's ear or a metre from the tool at a defined tool load - in the case of circular saws it is with the blade inside a cut.

FEATURES

WATER FEED: Typically needs to be from 5 to 8 litres per minute. ■=Regular (off-the-shelf) hose attachment ranging from ½" /12.7-13mm to ¾" / 19mm
■=Hand Pump - usually with a 'stirrup' on top of a plastic tank to pump the water via a hose attachment
■=Battery Pump offers hands-free constant flow to a predetermined or adjustable flow rate.
TOOL-FREE FUEL DISC: Fuel/oil tank lids can be opened by hand (traditionally a screwdriver was used). **DISCS** can be changed without a spanner.
FUEL PUMP DECOMP: Assisted starting of petrol/gas models. A manual **fuel pump/bubble** for **priming** and a **Decompression** button or valve to reducing pressure in the cylinder.
LED LIGHTS SCRENCH: The cutting area is illuminated by on-board LED lights-usually only on battery tools.. **SCRENCH:** A screwdriver/wrench for changing the disc etc. ■ = it mounts directly on the tool. ●= supplied with tool but not mounted
CARRY STRAP: Usually a shoulder strap and used to carry the tool from the vehicle but can also help to alleviate weight in hand during use. **CART:** A wheeled, sack-truck style mount that carries the weight of the tool which is then rotated into its cutting position while still attached to the cart. Mainly used by civil road and rail crews carrying out maintenance but can have uses in rescue other than building collapse.
UNDER-WATER-USE: Some battery tools can or will be able to be used in water but NOT under water which is basically just hydraulic saws and shown as ■. All can be used in the rain and some have an IP rating for water resistance (not dust) check our BATTERY GUIDEs for specific battery details. **CONFINED SPACE USE:** Related to the above but indicates no exhaust fumes to kill entrants. However, the nature of the tool and what it is cutting often causes a huge amount of sparks and/or heat so is a significant explosion risk in silos, petro-chemical tanks etc. unless meticulously spark/heat suppressed.

9730 REMOTE AREA LIGHT

The new generation of portable scene lighting.

PRODUCT FEATURES

- Up to 4,800 lumens of bright, reliable light
- 13 hour max runtime
- Silent running
- IPX4-rated, water-resistant
- High, Medium, & Low light modes
- Compact unit, quick and easy to deploy

01457 869999 | PELIPRODUCTS.CO.UK

PELI™ | PELI UK AUTHORISED DISTRIBUTOR

IMAGES NOT TO SCALE
£$€= Currency Conversion only- no duty/shipping
OTHER TOOLS IN RANGE:
=Cut/Spread/Ram tools =Recip Saw =Lighting
=Wood Chainsaw =Breaker/Drill
=Ascender/Winch
WATER FEED: =Hose ½" =HandPump =BatteryPump
= Option ~ approximate
= Partial feature/ OK, but not ideal

	SERIES MODEL VARIANT VOLTAGE/FUEL product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	SDCS691X2 54v -	DEWALT			£850 $900 €980 £180 x2 $185 x2 €208 x2	19.2kg 42.2lb	1kg x2 2.2lb x2 ~1kg ~2.2lb	3.7kW (73.5cc)
	CSG-7410ES 12" 2 stroke -	ECHO TOOLS			£1050* $1400* €1200*	9.9kg 21.8lb	0.52kg 1.1lb ~1kg ~2.2lb	3.2kW 4.3hp 73.5cc
	CSG-7410ES 14" 2 stroke -	ECHO TOOLS			£1200* $1600* €1360*	10.7kg 23.5lb	0.52kg 1.1lb ~1.2kg ~2.6lb	3.2kW 4.3hp 73.5cc
	METABO* HPT 2 stroke CM75EBP	HIKOKI (HITACHI)	-		£900 $880 €960	10.6kg 23.4lb	0.8kg 1.83lb ~1.2kg ~2.6lb	3.9kW 5.2hp 75.6cc
	DSH 600-X-30 DSH 600-X-12" 2 stroke 2251367	HILTI	-		£1370 $1595 €1580	9.85kg 21.7lb	0.64kg 1.4lb ~1kg ~2.2lb	3.2kW 4.3hp 63.3cc
	DSH 700-X-30 2 stroke 2357945	HILTI	-		£1680 - €1930	11.5kg 26.2lb	0.67kg 1.5lb ~1kg ~2.2lb	3.5kW 70cc
	DSH 700-X-35 DSH 700-X-14" 2 stroke	HILTI	-		£1720 $1630 €1965	11.8kg 26lb	0.67kg 1.5lb ~1.2kg ~2.6lb	3.5kW 70cc
	DSH 900-X 35 2 stroke 2265862	HILTI	-		£1980 - €2280	11.9kg 26.2lb	0.67kg 1.5lb ~1.2kg ~2.6lb	4.2kW 87cc

RESCUE DISC CUTTERS/CUT-OFF SAWS

BATTERY Ah OPTIONS FUEL CAPACITY	DURATION Default BATTERY Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER MAX CUT DEPTH SPINDLE DIAMETER	SOUND POWER PRESSURE VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
9Ah 6, 12, 15Ah -	- ~8-10mins	933mm 36.7"	236mm 9.3"	241mm 9.5"	300mm / 12" 100mm / 4" 20mm / 25/32"	114.6db 103.6db 4.2m/s²	■	■ -	- -	■ -	- ■	- ■	Dual Batteries	dewalt.com
- 700ml 23.7 US floz	- 20mins	735mm 28"	290mm 11.5"	430mm 17"	300mm/12" 100mm / 4" 20mm / 25/32"	109.2db 98.7db f5m/s² r5.1m/s²	■ ■ ■	■ -	■ ■	- □	- ■		brass hose valve. 4-stage air filtration. *ES= Easy Start version	echotools.com
- 700ml 23.7 US floz	- 20mins	740mm 29"	300mm 12"	430mm 17"	350mm / 14" 125mm / 4.9" 20mm / 25/32"	109.2db 98.7db f5m/s² r5.1m/s²	■ ■ ■	■ -	■ ■	- □	- ■		brass hose valve. 4-stage air filtration. *ES= Easy Start version	echotools.com
1100ml 37.2 US floz	- 18-24mins	630mm 24.8"	225mm 8.9"	420mm 16.5"	355mm / 14" 125mm / 5" 20/25.4mm/ 25/32"/1"	115db 101db f2.4m/s² r2.9m/s²	■ ■	■ -	■ ■	□ -	- ■		*DISCONTINUED* **Hitachi bought German co Metabo then rebranded to Hikoki and concentrate on battery. The US retained the Metabo brand name for a while.*	hikoki.com
- 870ml 29.4 US floz	- ~20-30mins	558mm 22"	326mm 12.8"	370mm 14.6"	300mm / 12" 120mm / 4.75" 20mm / 25/32"	102db 2.5m/s²	■ ■ ■	■ -	■ ■	■ □	- ■			hilti.com
- 900ml 30.4 US floz	- ~24-30mins	800mm 31.8"	261mm 10.3"	434mm 17.1"	300mm / 12" 125mm / 5" 20mm / 25/32"	96db 4.9m/s²	■ ■ ■	■ -	■ ■	■ □	- ■		Not in USA	hilti.com
- 900ml 30.4 US floz	- ~18-27mins	808mm 31.8"	261mm 10.3"	434mm 17.1"	350mm / 14" 125mm / 5" 20mm / 25/32"	96db 4.9m/s²	■ ■ ■	■ -	■ ■	■ □	- ■			hilti.com
- 900ml 30.4 US floz	- ~14-20mins	856mm 33.7"	266mm 10.5"	466mm 18.3"	350mm / 14" 125mm / 5" 20mm / 25/32"	102db 5.2m/s²	■ ■ ■	■ -	■ ■	■ □	- ■		Not in USA	hilti.com

IMAGES NOT TO SCALE
£$€= Currency Conversion only- no duty/shipping
OTHER TOOLS IN RANGE:
■=Cut/Spread/Ram tools ■=Recip Saw ■=Lighting
■=Wood Chainsaw ■=Breaker/Drill
■=Ascender/Winch
WATER FEED: ■Hose ½" ■HandPump ■BatteryPump
□□□= Option ~ approximate
●○= Partial feature/ OK, but not ideal

	SERIES / MODEL / VARIANT / VOLTAGE/FUEL / product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	DSH 900-X-16" 2 stroke	HILTI	-		- $2100 -	11.9kg 26.2lb	0.67kg 1.5lb ~2.5kg ~5.5lb	4.2kW 87cc
	NURON DSH600-22 ATC 22v 2294225	HILTI	■■■■		£1125 $1400 €1295 £305 x2 $241 x2 €352 x2	~9kg 19.8lb	1.31kg x2 2.88lb x2 ~1kg ~2.2lb	3.2kW (60cc)
	NURON DSH700-22 ATC 22v 2294227	HILTI	■■■■		£1200 $1400 €1385 £305 x2 $241 x2 €352 x2	~10.3kg 22.6lb	1.31kg x2 2.88lb x2 ~1kg ~2.2lb	3.5kW (70cc)
	NURON DSH900-22 ATC 22v 2307655	HILTI	■■■■		£1350 $1750 €1555 £375 x2 $315 x2 €425 x2	~11.1kg 24.5lb	1.46kg x2 3.2lb ~1.2kg ~2.6lb	4.3kW (90cc)
	SmartGuard K770 2 stroke 970 46 00-01	HUSQVARNA	-		£850 $1140 €980	10.2kg 22.4lb	0.67kg 1.5lb ~1.2kg ~2.6lb	3.7kW 4.5hp 73.5cc
	SmartGuard RESCUE K770 2 stroke 967 68 xx-xx 967 80 xx-xx	HUSQVARNA	-		£1030 $1400 €1220	10.2kg 22.4lb	0.67kg 1.5lb ~1.2kg ~2.6lb	3.7kW 4.5hp 73.5cc
	SmartGuard K970 2 stroke 967 28 37-01 967 28 78-01	HUSQVARNA	■		£1250 $1650 €1470	11kg 24.3lb	0.75kg 1.6lb ~2.5kg ~5.5lb	4.8kW 6.5Hp 93.6cc
	SmartGuard RESCUE K970 2 stroke 967 63 xx-xx	HUSQVARNA	■		£1860 $2500 €2320	11kg 24.3lb	0.75kg 1.6lb ~2.5kg ~5.5lb	4.8kW 6.5Hp 93.6cc

RESCUE DISC CUTTERS/CUT-OFF SAWS

BATTERY Ah OPTIONS FUEL CAPACITY	DURATION Default BATTERY Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER MAX CUT DEPTH SPINDLE DIAMETER	SOUND POWER PRESSURE VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
- 900ml 30.4 US floz	- ~13-19mins	860mm 33.8"	270mm 10.6"	466mm 18.3"	400mm / 16" 150mm / 6" 20mm / 25/32"	100db 5.2m/s²	■ ■ ■	■ -	■ ■	■ □	- ■		Not yet in Europe	hilti.com
9Ah 5.2, 12, 13.5Ah	~20-30mins -	660mm 25.9"	290mm 11.4"	350mm 13.8"	300mm / 12" 120mm / 4.75" 20/25.4mm/ 25/32"/1"	107db	■ ■ ■	- -	- -	■ □	- ■	- ■	Requires 2 batteries. spindle diam option of 20mm or 1". 'Top-handle' model *Can communicate health and charge status when on tool	hilti.com
9Ah 5.2, 12, 13.5Ah	~22-30mins -	740mm 29.1"	290mm 11.4"	350mm 13.8"	300mm / 12" 120mm / 4.75" 20/25.4mm/ 25/32"/1"	107db	■ ■ ■	- -	- -	■ □	- ■	- ■	Requires 2 batteries. spindle diam option of 20mm or 1". *Reinforced concrete. *Can communicate health and charge status when on tool	hilti.com
12/13.5Ah 5.2, 9, 13.5Ah	~14-20mins -	740mm 29.1"	290mm 11.4"	420mm 16.5"	355mm /14" 152mm / 6" 20/25.4mm/ 25/32"/1"	116db	■ ■ ■	- -	- -	■ □	- ■	- - ■	Requires 2 batteries. spindle diam option of 20mm or 1". *Reinforced concrete. *Can communicate health and charge status when on tool	hilti.com
- 900ml 30.4 US floz	- ~40-50mins	605mm 23.8"	225mm 8.9"	391mm 16.3"	350mm / 14" 125mm / 5" 20mm / 25/32"	115dB 101dB f2m/s² r2.3m/s²	■ ■ ■	■ -	■ ■	□ □	- ■	- -	WIll also take 12" Disc. ***Smartguard*** is an additional hinged guard for the top-front quarter segment of the disc and is available for the models below	husqvarna.com
- 900ml 30.4 US floz	- ~40-50mins	605mm 23.8"	225mm 8.9"	391mm 16.3"	350mm / 14" 125mm / 5" 20mm / 25/32"	115dB 101dB f2m/s² r2.3m/s²	■ ■ ■	■ -	■ ■	■ □	- ■	- -	WIll also take 12" Disc. *Smartguard* additional disc guard option or variant	husqvarna.com
- 1000ml 33.8 US floz	- ~20-30mins	661mm 38"	214mm 8.4"	444mm 17.5"	400mm / 16" 155mm / 6.1" 25.4mm / 1"	115dB 104dB f3.8m/s² r4.2m/s²	■ ■ ■	■ -	■ ■	□ □	- ■	- -	WIll also take 14" Disc *Smartguard* additional disc guard option or variant weighing around a kg/2.2lb	husqvarna.com
- 1000ml 33.8 US floz	- ~20-30mins	661mm 38"	214mm 8.4"	444mm 17.5"	400mm / 16" 155mm / 6.1" 25.4mm / 1"	115dB 104dB f3.8m/s² r4.2m/s²	■ ■ ■	■ -	■ ■	■ □	- ■	- -	WIll also take 14" Disc *Smartguard* additional disc guard option or variant . RESCUE = higher vis, larger starter handle and inc strap	husqvarna.com

IMAGES NOT TO SCALE
£$€= Currency Conversion only- no duty/shipping
OTHER TOOLS IN RANGE:
■=Cut/Spread/Ram tools ■=Recip Saw ■=Lighting
■=Wood Chainsaw ■=Breaker/Drill
■=Ascender/Winch
WATER FEED: ■Hose ½" ■HandPump ■BatteryPump
□□□= Option ~ approximate
●○= Partial feature/ OK, but not ideal

	SERIES MODEL VARIANT VOLTAGE/FUEL product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	SmartGuard RESCUE K970 Ring 370 2 stroke 967 27 xx-xx	HUSQVARNA	■		£5020 $6700 €5900	13.8kg 30.3lb	0.75kg 1.6lb ~1.2kg ~2.6lb	4.8kW 6.5Hp 93.6cc
	SmartGuard RESCUE K970 Ring 430 2 stroke 970 60 xx-xx	HUSQVARNA	■		£5070 $6800 €4480	14.2kg 24.3lb	0.75kg 1.6lb ~2.5kg ~5.5lb	4.8kW 6.5Hp 93.6cc
	K1270 II 2 stroke 967 97 87-01 967 97 87-01	HUSQVARNA	-		£2500 $2300 €2400	13.6kg 30lb	0.9kg 2lb ~2-2.5kg ~4.4-5.5lb	5.8kW 7.8hp 120cc
	K1270 Rail 2 stroke 96798 xx-01	HUSQVARNA	-		£3560 $3700 €4100	16kg 35.2lb	0.9kg 2lb ~2-2.5kg ~4.4-5.5lb	5.8kW 7.8hp 120cc
	BLi/BX K540i 36v 9706640-01	HUSQVARNA	■ ■ ■		£960 $1100 €1150 £350 $480 €400	4.2kg 9.25lb	1.9kg 4.25lb 0.8kg 1.76lb	~2kW (2.7hp) (50cc)
	Pace K1 - 300 94v Pace 970 51 92-01	HUSQVARNA	■		£1600 $1800 €1700 £1045 $803 €950	7.2kg 15.8lb	5kg 11lb ~1kg ~2.2lb	~3.75kW (5)hp (50cc)
	Pace K1- 350 94v Pace 970 44 58-03	HUSQVARNA	■		£1700 $2000 €1900 £1045 $825 €950	7.4kg 16.3lb	5kg 11lb ~1.2kg ~2.6lb	~3.75kW (5)hp (50cc)
	K7000 Chain 200-480, 220-240v Corded 970 75 62-01	HUSQVARNA	■		£6300 $8200 €7300	9.1kg 20lb	- 3.2kg 7.1lb	5.5kW (7.5hp) (120cc)

RESCUE DISC CUTTERS/CUT-OFF SAWS

BATTERY Ah OPTIONS FUEL CAPACITY	DURATION Default BATTERY Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER MAX CUT DEPTH SPINDLE DIAMETER	SOUND POWER PRESSURE VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
- 1000ml 33.8 US floz	- ~20-30mins	785mm 31"	224mm 8.8"	431mm 17"	370mm /14" *270mm/10.6" -	115dB 104dB f2.7m/s² r3.4m/s²	■ ■ ■	■ -	■ ■	■ □	- ■	- -	*Ring saws are driven by drive-wheels (cogs) inside the reinforced housing NOT by a central spindle - hence the much greater cutting depth.	husqvarna.com
- 1000ml 33.8 US floz	- ~20-30mins	815mm 32"	224mm 8.8"	495mm 19.5"	430mm /16" *350mm/13.8" -	115dB 104dB f3.5m/s² r3.4m/s²	■ ■ ■	■ -	■ ■	■ □	- ■	- -	*Ring saws are driven by drive-wheels (cogs) inside the reinforced housing NOT by a central spindle - hence the much greater cutting depth.	husqvarna.com
1250ml 42.3 US floz	- ~25-35mins	730mm 28.7"	243mm 9.6"	434mm 17.1"	350/400mm 14/16" 118/145mm 4.6/5.7" 22/25.4mm/ ⅞"/1"	117dB 104dB f4.5m/s² r3.7m/s²	■ ■ ■	■ -	■ ■	■ □	- ■	- -	Will take 14" disc	husqvarna.com
1250ml 42.3 US floz	- ~25-35mins	730mm 28.7"	243mm 9.6"	434mm 17.1"	350/400mm 14/16" 118/145mm 4.6/5.7" 22/25.4mm/ ⅞"/1"	117dB 104dB f3.4m/s² r3.5m/s²	■ ■ ■	■ -	■ ■	■ □	- ■	- -	RAIL= cut-positioning arm locks onto rails for precise pivot cut Will take 14" disc Reversible cutting arm cuts closer to substrate.	husqvarna.com
9Ah* 5.2, 6, 9.4,15Ah -	10-16mins -	558mm 22"	200mm 7.9"	330mm 13"	250mm / 10" 100mm / 4" 25.4mm / 1"	112.7dB 101.5dB f 3.7m/s² r 2.4m/s²	■ ■ ■	- -	- -	□ -	- ■	- ■	Reversible cutting arm cuts closer to substrate. K535i discontinued *This tool takes batteries from the *BLi* and newer *B..X* series	husqvarna.com
8Ah 4Ah -	20-40mins -	648mm 25.5"	221mm 8.7"	423mm 16.6"	300mm / 12" 121mm /4.75" 20/25.4mm/ 25/32"/1"	113dB 102dB f2m/s² r1.1m/s²	■ ■ ■	- -	- -	■ -	- ■	- ■	Extra blade guard. *Pace* is *Husqvarna*'s high capacity construction battery series	husqvarna.com
8Ah 4Ah -	20-40mins -	648mm 25.5"	221mm 8.7"	400mm 15.75"	350mm / 14" 145mm / 5.7" 20/25.4mm/ 25/32"/1"	105dB 95dB f2.2m/s² r2m/s²	■ ■ ■	- -	- -	■ -	- ■	- ■	Extra blade guard. *Pace* is *Husqvarna*'s high capacity construction battery series. Can take Rail cutting guide	husqvarna.com
- -	Unlimited -	681mm 26.8"	187mm 7.4"	476mm 18.7"	450mm / 17.7" 450mm / 17" -	- 99dB f2.7m/s² r2.1m/s²	■ ■ ■	- -	- -	- -	- ■	- ■	Requires the Husqvarna PP65 powerpack or equivalent for 1 or 3 phase 'intelligent' power, adjusting speed for material being cut.	husqvarna.com

IMAGES NOT TO SCALE
£$€= Currency Conversion only- no duty/shipping
OTHER TOOLS IN RANGE:
=Cut/Spread/Ram tools =Recip Saw =Lighting
=Wood Chainsaw =Breaker/Drill
=Ascender/Winch
WATER FEED: =Hose ½" =HandPump =BatteryPump
= Option ~ approximate
= Partial feature/ OK, but not ideal

	SERIES MODEL VARIANT VOLTAGE/FUEL product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	K970 Chain 2 stroke 967 66 05-01	HUSQVARNA			£3752 $4620 €4200	9.6kg* 21.1lb	0.75kg 1.6lb 3kg 6.6lb	5.5kW (7.5hp) (120cc)
	K3600 mkII 100-120v	HUSQVARNA	-		£6170 $7480 €7000	8.3kg 18.3lb	- ~1.2kg ~2.6lb	4.3kW (5.7hp) (<175cc)
	K760 Cut-n-Break 2 stroke 9671957-01	HUSQVARNA	-		£2800 $3750 €3280	9.6kg 21.1lb	0.67kg 1.5lb 1.9kg x2 4.2lb x2	3.7kW 5hp 150cc
	K4000 Cut-n-Break 100-120v 9670835-01	HUSQVARNA	-		£2610 $3490 €3050	8.4kg 18.5lb	- 1.9kg x2 4.2lb x2	2.7kW (3.6hp) (60cc)
	K4000 mkII 220=480v	HUSQVARNA	-		£1200 $1210 €1250	7.6kg 16.7lb	- ~1.2kg ~2.6lb	2.7kW (3.6hp) (<110cc)
	K7000 220-480v corded	HUSQVARNA	-		£5,900 $7905 €6100	9.8kg 21.6lb	- ~2.5kg ~5.5lb	5.5kW (7.4hp) (<220cc)
	K2500 Hydraulic	HUSQVARNA	-		£2500 $3630 €2900	8.3kg 18.3lb	- ~2.5kg ~5.5lb	5.2kW (7hp) (<210cc)
	K40 Compressed Air	HUSQVARNA	-		£2660 $4445 €2875	9.9kg 21.8lb	- ~1.2kg ~2.6lb	3.2kW (4.3hp) (<130cc)

RESCUE DISC CUTTERS/CUT-OFF SAWS

BATTERY Ah OPTIONS FUEL CAPACITY	DURATION Default BATTERY Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER MAX CUT DEPTH SPINDLE DIAMETER	SOUND POWER PRESSURE VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
1000ml 33.8 US floz	- ~20-30mins	688mm 27.1"	214mm 8.4"	481mm 19"	450mm / 17.7" 450mm / 17" -	112dB 102dB 2.7m/s²	■ ■ ■	■ -	■ ■	- -	- ■	- -		husqvarna.com
- -	Unlimited -	730mm 00"	175mm 00"	410mm 00"	370mm / 14" 270mm / 10.6" -	117dB 104dB 4.5m/s²	■ ■ ■	-	- -	- -	- ■	- ■	corded to mains or a generator	husqvarna.com
- 900ml 30.4 US floz	- ~40-50mins	798mm 31.4"	246mm 9.7"	446mm 17.6"	2x 230mm / 2x 9" 400mm / 16" -	- 101dB f1.9m/s² r2.8m/s²	■ ■ ■	-	■ ■	■ □	- ■	- -	twin-bladed, extra deep cutting tool cuts two grooves then levers out the slither with on-board tool) allowing further depth progress	husqvarna.com
- -	Unlimited -	867mm 34.1"	225mm 8.9"	325mm 12.8"	2x 230mm / 2x 9" 400mm / 16" -	- 95dB f3.2m/s² r3.4m/s²	■ ■ ■	- -	- -	■	- ■	- ■	twin-bladed, extra deep cutting tool cuts two grooves then levers out the slither with on-board tool) allowing further depth progress	husqvarna.com
- -	Unlimited -	631mm 24.8"	221mm 8.7"	313mm 12.3"	350mm / 14" 125mm / 5" 25.4mm / 1"	105dB 95dB f3.5m/s² r3.5m/s²	■ ■ ■	- -	- -	- -	- ■	- ■	corded to mains or a generator	husqvarna.com
- -	Unlimited -	681mm 26.8"	187mm 7.4"	476mm 18.7"	400mm / 16" 155mm / 6" 25.4mm / 1"	111dB 96dB 1.8m/s²	■ ■ ■	- -	- -	- -	- ■	- ■	corded to mains or a generator	husqvarna.com
- -	Unlimited -	727mm 28.6"	260mm 10.2"	462mm 18.2"	400mm / 16" 145mm / 6" 25.4mm / 1"	107dB 85dB f7.5m/s² r5.2m/s²	■ ■ ■	- -	- -	- -	- ■	● ■		husqvarna.com
- -	Unlimited -	685mm 27"	235mm 9.25"	420mm 16.5"	35mm / 14" 125mm / 5" 25.4mm / 1"	107dB 92dB f9.5m/s² r5.2m/s²		- -	- -	- -	- ■	● ■	Requires Air compressor to operate	husqvarna.com

IMAGES NOT TO SCALE
£$€= Currency Conversion only- no duty/shipping
OTHER TOOLS IN RANGE:
■=Cut/Spread/Ram tools ■=Recip Saw ■=Lighting
■=Wood Chainsaw ■=Breaker/Drill
■=Ascender/Winch
WATER FEED: ■Hose ½" ■HandPump ■BatteryPump
□□□= Option ~ approximate
●○= Partial feature/ OK, but not ideal

	SERIES MODEL VARIANT VOLTAGE/FUEL product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	LXT DCE090xxx XEC01xxx 36v (2x 18v) DCE090ZX1	MAKITA	■■■■■	●	£410 $555 €470 £120 x2 $165 x2 €130 x2	4.9kg 10.8lb	0.66kg x2 1.45lb x2 ~1kg ~2.2lb	1.6-2.2kW* (45-55cc)
	XGT CE001xxx GEC01xxx 80v (2x40v) CE001GZ	MAKITA	■■■■■	●	£950 $1700 €1090 £280 x2 $330 x2 €280 x2	10.3kg 22.7lb	1.9kg x2 4.2lb x2 ~1.2kg ~2.6lb	4kW* (70-80cc)
	XGT CE002xxx GEC02xxx 80v (2x40v) CE002GZ	MAKITA	■■■■■	●	£1100 $1490 €1260 £280 x2 $330 x2 €280 x2	11.3kg 24.9lb	1.9kg x2 4.2lb x2 ~1.2kg ~2.6lb	4kW* (70-80cc)
	XGT CE003xxx GEC03xxx 40v CE003GZ	MAKITA	■■■■■	●	£370 $700 €425 £280 $330 €280	5.5kg 12.1lb	1.9kg 4.2lb ~1kg ~2.2lb	1.7-2kW* (45-55cc)
	XGT CE004xxx 40v CE004GZ	MAKITA	■■■■■	●	£400 $540 €460 £280 $330 €280	5.8kg 12.8lb	1.9kg 4.2lb ~1kg ~2.2lb	2.5kW* (50-60cc)
	EK6101 2 Stroke EK6101	MAKITA	■	●	£820 $1050 €830	8.5kg 18.7lb	0.52kg 1.1lb ~1kg ~2.2lb	3.2kW 4.2hp 61cc
	EK8100* 2 Stroke EK8100	MAKITA	■	●	£1290 $1760 €1900	10.3kg 22.7lb	0.8kg 1.83lb ~2.5kg ~5.5lb	4.2kW 5.6hp 81cc
	EK7650H EK7651H 4 Stroke EK7650/1	MAKITA	■	●	£1220 $1665 €1600	12.9kg 28.4lb	0.8kg 1.83lb ~1.2kg ~2.6lb	3kW 4.1hp 75.6cc

BATTERY Ah OPTIONS FUEL CAPACITY	DURATION Default BATTERY Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER MAX CUT DEPTH SPINDLE DIAMETER	SOUND POWER PRESSURE VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
2x6Ah 5, 4 Ah -	10-20mins -	554mm 21.8"	241mm 9.5"	283mm 11.1"	230mm /9" 88mm / 3.5" 22.23mm / ⅞"	114db 103db f5.9m/s² r4m/s²	■ ■	- -	- -	□ -	■ ■	- -	* Not given No Load Speed =6600rpm. 'AFT' stops the motor if the disc jams	makita.com
2x 8Ah 6, 5 , 4 Ah -	>10mins 115 rebar cuts -	786mm 31"	272mm 10.7"	433mm 17"	355mm / 14" 127mm / 5" 20/25.4mm/ 25/32"/1"	120db 109db 2.5m/s²	■ ■	- -	- -	□ -	■ ■	- ■	* No Load Speed =5300rpm Heavier duty tool. 'AFT' stops the motor if the disc jams	makita.com
2x 8Ah 6, 5 , 4 Ah -	>10mins 115 rebar cuts -	825mm 32.5"	272mm 10.7"	487mm 19.2"	355mm / 14" 127mm / 5" 20/25.4mm/ 25/32"/1"	117db 106db 2.5m/s²	■ ■	- -	- -	□ -	■ ■	- ■	* No Load Speed =4200rpm Extra blade guard Heavier duty tool. 'AFT' stops the motor if the disc jams	makita.com
8Ah 6, 5 , 4 Ah -	>10mins -	603mm 23.7"	240mm 9.5"	350mm 13.78"	230mm /9" 88mm / 3.5" 17mm / 11/16"	116db 105db 3m/s²	■ ■	- -	- -	□ -	■ ■	- ■	* No Load Speed =6500rpm 'AFT' stops the motor if the disc jams	makita.com
8Ah 6, 5 , 4 Ah -	>9mins -	663mm 26.1"	240mm 1.6"	406mm 16"	305mm / 12" 121mm / 4.75" 20mm / 25/32"	110db 99db 3.8m/s²	■ ■	- -	- -	□ -	■ ■	- ■	* No Load Speed =5000rpm 'AFT' stops the motor if the disc jams	makita.com
700ml 23.7 US floz	~<45mins ~70-160 1" rebar cuts	554mm 21.8"	241mm 9.5"	283mm 11.14"	305mm / 12" 110mm / 4.3" 22.23mm / ⅞"	113db 97db *3.7m/s²	■ ■	■ -	■ ■	□ -	- ■	- -	* vibration damping system. Gas tools phasedout in N.America. NB: *DPC6430* DISCONTINUED	makita.com
1100ml 37.2 US floz	~<45mins ~100-240 1" rebar cuts	616mm 24.5"	235mm 9.25"	276mm 10.9"	406mm / 16" 147mm / 5.75" 20mm / 25/32"	110db 100db *-5.5m/s²	■ ■	■ -	■ ■	□ -	- ■	- -	*Replaced DPC8132. Gas tools phasedout in N.America. No-load speed 9350rpm *Higher, 3rd party Vibration figures appear to be incorrect	makita.com
1100ml 37.2 US floz	- ~<50mins ~120-260 1" rebar cuts	780mm 30.7"	310mm 12.2"	455mm 17.9"	355mm / 14" 122mm / 4.8" 20mm / 25/32"	102db 92.7db f2.7m/s² r1.8m/s²	■ ■	■ -	■ ■	□ -	- ■	- -	Reversible cutting arm for centred & offset cuts. Note: 4-stroke - no fuel mix. Gas tools discontinued in N. America. Replaced EK7301	makita.com

IMAGES NOT TO SCALE
£$€= Currency Conversion only- no duty/shipping
OTHER TOOLS IN RANGE:
■=Cut/Spread/Ram tools ■=Recip Saw ■=Lighting
■=Wood Chainsaw ■=Breaker/Drill
■=Ascender/Winch
WATER FEED: ■Hose ½" ■HandPump ■BatteryPump
□□□= Option ~ approximate
●○= Partial feature/ OK, but not ideal

	SERIES MODEL VARIANT VOLTAGE/FUEL product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	M18 Forge FCOS230-121 18V 4933471696	MILWAUKEE	■■■■■■		£420 $435 €480 £380 $440 €400	4.5kg 9.9lb	1.54kg 3.4lb ~1kg ~2.2lb	1.8kW (~2.1-2.7hp) (30-35cc)
	MX Fuel COS350G2 72V 4933464881 / 4933479969 / 4933480482	MILWAUKEE	■■		£1700 $1950 €1750 £1500 $1320 €1400	9kg 19.8lb	7kg 15.4lb	4.7kW (~6.3cc) (~85-90hp)
	DS06 Hydraulic DS06300001	STANLEY	■		£1500 $1600 €1700	4.5kg 10lb	- ~1.5kg ~3.3lb	70-140 bar/ 1000-2000 ps
	DS11 Hydraulic DS113000 UW	STANLEY	■		£3000 $3800 €3500	~11kg ~24.2lb	- ~2kg ~4.4lb	70-140 bar/ 1000-2000 ps
	DS12 Hydraulic DS1231801	STANLEY	■		£3900 $5000 €4600	~11.8kg ~26lb	- ~2.4kg ~5.3lb	70-140 bar/ 1000-2000 ps
	AP TSA 230.1 36V 4864-0116620	STIHL	■■		£510 $680 €590 £290 $330 €410	3.9kg 8.6lb	1.8kg 3.96lb ~0.8kg ~1.8lb	2.1kW (~2.8HP) (<45cc)
	AP TSA 300 36V TA02-0116600	STIHL	■■		£870 $1160 €1000 £440 $590 €500	6.3kg 13.9lb	2kg 4.4lb ~1kg ~2.2lb	2.5kW (~3.3HP) (<55cc)
	AP TSA 500 72V TA01-0116600	STIHL	■■		£2000 $2670 €2320 £440x2 $590 x2 €500 x2	9.1kg 20lb	2kg x2 4.4lb x2 ~1.2kg ~2.6lb	4.2kW (~5.6HP) (<75cc)

RESCUE DISC CUTTERS/CUT-OFF SAWS

BATTERY Ah OPTIONS FUEL CAPACITY	DURATION Default BATTERY Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER MAX CUT DEPTH SPINDLE DIAMETER	SOUND POWER PRESSURE VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
12Ah 3,5,6,8Ah -	6-10mins 68 cuts -	660mm 26"	250mm 9.9"	320mm 12.6"	230mm / 9" 85mm / 3.35" 22.2mm / ⅞"	125db 114db 1.8m/s²	■ ■	- -	- -	□ -	- ■	- ■		milwaukee.com
12Ah 8Ah	~12mins -	793mm 31.2"	254mm 10"	404mm 16"	350mm / 14" 125mm / 5" 20/25.4mm/ 25/32"/1"	125.3db 114.3db 3.04m/s²	■ ■	- -	- -	□ -	- ■	- ■	*Fuel* is *Milwaukee*'s higest capacity and largest battery	milwaukee.com
- -	- Unlimited	690mm 27"	180mm 7"	230mm 9"	330/380/460mm 13/15/18" 305mm / 12" -	103.4db 96db f9.9m/s² r5.7m/s²	*■	- -	- -	- -	- -	■ ■	Stanley now owned by Epiroc Sweden *Water-feed direct to bar groove. CS05 & CS06=wood cutting versions	stanleyhydraulic.com
- -	- Unlimited	890mm 35"	230mm 9"	280mm 11"	380/460mm 15/18" 356mm / 14" -	108db 100db f5m/s² r5m/s²	*■	- -	- -	- -	- -	■ ■	*Water-feed direct to bar groove. Flow Range 12 gpm / 45 lpm Working Pressure 1000-2000 psi / 70-140 bar	stanleyhydraulic.com
- -	- Unlimited	1020mm 40"	230mm 9"	280mm 11"	460mm / 18" 450mm / 17" -	108.6db 100.6db f5m/s² r5.3m/s²	*■	- -	- -	- -	- -	■ ■	*Water-feed direct to bar groove. UW= underwater version	stanleyhydraulic.com
7.6 Ah 2.6,5.8.8Ah -	14-22mins -	550mm 21.6"	150mm 5.9"	240mm 9.4"	230mm / 9" 70mm / 2.75" 20mm / 0.78"	1150db 104db f 4.3m/s² r 2.4m/s²	■ ■ ■	- ●* -	- - -	□ - -	- ● -	● - -	*Spindle lock mechanism simplifies disc release but still need to tighten/loosen nut	stihl.com
8.8 Ah 2.6,5.7.6Ah -	12-22mins -	742mm 29.2"	000mm 00"	00mm 00"	300mm / 12" 110mm / 4.3" 20mm / 0.78"	116db 105db f 3m/s² r 2.3m/s²	■ ■ ■	- ●* -	- - -	□ - -	- ● -	● X4 -	*Spindle lock mechanism simplifies disc release but still need to tighten/loosen nut	stihl.com
2x 8.8 Ah 2.6,5.7.6Ah -	20-40mins -	821mm 32.3"	000mm 00"	00mm 00"	350mm / 14" 129mm / 4.9" 20mm / 0.78"	117db 106db f 2.4m/s² r 2m/s²	■ ■ ■	- ●* -	- - -	□ - -	- ● -	● X4 -	uses double AP500 36v batteries and can be used with PS3000 power pack. *Spindle lock mechanism	stihl.com

IMAGES NOT TO SCALE £$€= Currency Conversion only- no duty/shipping OTHER TOOLS IN RANGE: =Cut/Spread/Ram tools =Recip Saw =Lighting =Wood Chainsaw =Breaker/Drill =Ascender/Winch WATER FEED: =Hose ½" =HandPump =BatteryPump = Option ~ approximate = Partial feature/ OK, but not ideal	SERIES MODEL VARIANT VOLTAGE/FUEL product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	TS 410 2 stroke 4238-0112800	STIHL			£1260 $1685 €1460	9.6kg 21.1lb	- 0.5kg 1.1lb ~1kg ~2.2lb	3.2kW 4.4HP 66.7cc
	TS 420 2 stroke 4238-0112810	STIHL			£1270 $1670 €1480	9.8kg 21,6lb	- 0.5kg 1.1lb ~1.2kg ~2.6lb	3.2kW 4.4HP 66.7cc

BATTERY Ah OPTIONS / FUEL CAPACITY	DURATION Default BATTERY / Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER / MAX CUT DEPTH / SPINDLE DIAMETER	SOUND POWER / PRESSURE / VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
- / 710ml / 24 us floz	- / ~14-16mins	525mm / 20.7"	360mm / 14.1"	260mm / 10.2"	300mm / 12" / 100mm / 4" / 20mm / 0.78"	109db / 98db / 3.9m/s²	■ ■ ■	■	■ ■	□ □	- ■	● -		stihl.com
- / 710ml / 24 us floz	- / ~15mins	545mm / 21.4"	360mm / 14.1"	270mm / 10.6"	350mm / 14" / 125mm / 4.9" / 20mm / 0.78"	109db / 98db / 3.9m/s²	■ ■ ■	■	■ ■	□ □	- ■	● -		stihl.com

IMAGES NOT TO SCALE
£$€= Currency Conversion only- no duty/shipping
OTHER TOOLS IN RANGE:
=Cut/Spread/Ram tools =Recip Saw =Lighting
=Wood Chainsaw =Breaker/Drill
=Ascender/Winch
WATER FEED: Hose ½" HandPump BatteryPump
= Option ~ approximate
= Partial feature/ OK, but not ideal

	SERIES MODEL VARIANT VOLTAGE/FUEL product code	COMPANY	TOOLS IN RANGE	ORIGIN	COST Default BATTERY inc tax / VAT	WEIGHT TOOL ONLY exc Battery exc Fuel exc Disc	WEIGHT Default BATTERY Full FUEL Tank Cutting Disc/ Bar&Chain	POWER OUTPUT CC (equivalent) Hydraulic Pressure (Flow-rate)
	TS 440 2 stroke 4238-0112820	STIHL			£1370 $1850 €1610	11.1kg 24.4lb	- 0.5kg 1.1lb ~1.2kg ~2.6lb	3.2kW 4.4HP 66.7cc
	TS 480i 2 stroke 4250-011-2804	STIHL			£1290 $1725 €1495	10kg 22lb	0.53kg 1.2lb ~1kg ~2.2lb	3.9kW 5.3HP 72.2cc
	TS 500i 2 stroke 4250-0112810	STIHL			£1360 $1820 €1580	10.2kg 22.5lb	0.53kg 1.2lb ~1.2kg ~2.6lb	3.9kW 5.3HP 72.2cc
	TS 700 Cutquik 2 stroke 4224-0112801US	STIHL			£1610 $2150 €1970	11.6kg 15.6lb	0.9kg 2lb ~1.2kg ~2.6lb	5kW 6.8HP 98.3cc
	TS 800 Cutquik 2 stroke 4224-0112821US	STIHL			£1425 $1900 €1700	12.5kg 28lb	0.9kg 2lb ~2.5kg ~5.5lb	5kW 6.8HP 98.3cc
	TSA 910i 2 stroke TB01-0112820	STIHL			£1980 $2650 €2300	12.9kg 28.4lb	0.9kg 2lb ~2.5kg ~5.5lb	6.2kW 8.4HP 102.1cc
	GS 461 Rock Boss 2 stroke 4252-20000xx	STIHL			£2690 $3560 €3120	7.5kg 16.6lb	0.57kg 1.25lb 1.6kg 3.5lb	4.3kW 5.8HP 77cc
	ZI BTS350T 2 stroke -	ZIPPER			£850 $1140 €890	12kg 5.4lb	1.1kg 2.4lb ~1.2kg ~2.6lb	3.5kW 4HP 74cc

RESCUE DISC CUTTERS/CUT-OFF SAWS

BATTERY Ah OPTIONS FUEL CAPACITY	DURATION Default BATTERY Full FUEL Tank @ full revs in re-concrete	LENGTH	WIDTH	HEIGHT	BLADE MAX DIAMETER MAX CUT DEPTH SPINDLE DIAMETER	SOUND POWER PRESSURE VIBRATION f=front r=rear	WATER FEED	TOOL-FREE FUEL/DISC	FUEL PUMP DECOMP.	CARRY STRAP CART	LED LIGHTS SCRENCH	UNDER-WATER/ CONFINED SPACE USE	NOTES	www.
- 710ml 24 us floz	- ~15mins	552mm 21.7"	486mm 19.1"	336mm 13.2"	350mm / 14" 125mm / 4.9" 20mm / 0.78"	109db 98db f 3.9m/s² r 3.6m/s²	■ ■ ■	-	■ ■	□ □	- ■	● -	Higher torque than 410 & 420 uses 2-stage belt drive to disc. TS480i Discontinued	stihl.com
- 720ml 24.4 us floz	- ~14mins	730mm 28.7"	336mm 13.2"	486mm 19.1"	300mm /12" 100mm / 4" 20mm / 0.78"	112db 98db 2.2m/s²	■ ■ ■	■ -	■ ■	□ □	- ■	- -	Not UK. electronically controlled fuel injection for greater efficiency.	stihl.com
- 720ml 24.4 us floz	- ~13-15mins	580mm 22.8"	370mm 14.5"	280mm 11"	350mm / 14" 125mm / 4.9" 20mm / 0.78"	112db 98db f 2.4m/s² r 2m/s²	■ ■ ■	■ -	■ ■	□ □	- ■	- -	electronically controlled fuel injection for greater efficiency.	stihl.com
- 1200ml 40.6 us floz	- ~17-19mins	840mm 00"	390mm 15.3"	300mm 12"	350mm / 14" 125mm / 4.9" 20mm / 0.78"	120db 108db f 5.9m/s² r 4.4m/s²	■ ■ ■	■ -	■ ■	□ □	- ■	- -		stihl.com
- 1200ml 40.6 us floz	- ~16-18mins	890mm 00"	495mm 19.5"	335mm 13.2"	400mm / 16" 145mm / 5.6" 20mm / 0.78"	113db 101db ~f 6.6m/s² ~r 4.5m/s²	■ ■ ■	■ -	■ ■	□ □	- ■	- -	Can take after-market Rail cutting guide	stihl.com
- 1200ml 40.6 us floz	- ~16-18mins	670mm 26.3"	390mm 15.3"	300mm 12"	400mm / 16" 145mm / 5.6" 20mm / 0.78"	~114db ~102db ~f 6.5m/s² ~r 3.9m/s²	■ ■ ■	■ -	■ ■	□ □	- ■	- -	electronically controlled fuel injection for greater efficiency with smaller mass. Can take after-market Rail cutting guide	stihl.com
780ml 26.4 us floz	- ~20-30mins	930mm 37"	320mm 12.6"	300mm 12"	457mm / 18" 145mm / 5.6" -	115db 105db f 4.5m/s² r 4m/s²	■ ■ ■	■ -	■ ■	□ -	- ■	- -	Price includes concrete cutting chain	stihl.com
1500ml* 50 us floz	- ~20-30mins	705mm 28"	355mm 14"	480mm 19"	350mm / 14" 125mm / 4.9" 25.4mm / 1"	116db - 2.5m/s²	■	-	■ ■	□ -	- -	- -	*Unusually large fuel tank. T= upgraded from original version	zipper-maschinen.at

VEHICLE EXTRICATION/ STABILISATION STRUTS

Despite having been around since the last century it seemed to take Fire and rescue services a while to fully embrace all-in-one struts - that is a telescopic load bearing strut intergrated with a webbing strap to create a very stable triangle of opposing vector forces to deal with a high centre of gravity combined with a small footprint on the ground. The principle being that while the top of the strut wedges against the high part of a vehicle (normally on its side as the most unstable of loads), the webbing pulls the head down and the bottom of the vehicle towards the base of the strut thus stopping it from slipping away. The struts make a wobbly load into a rock-solid structure that is safe for rescuers to work in. This GUIDE is *not* intended to be an instructional article on how to stabilise with struts as that is a complex subject with a lot of variables.

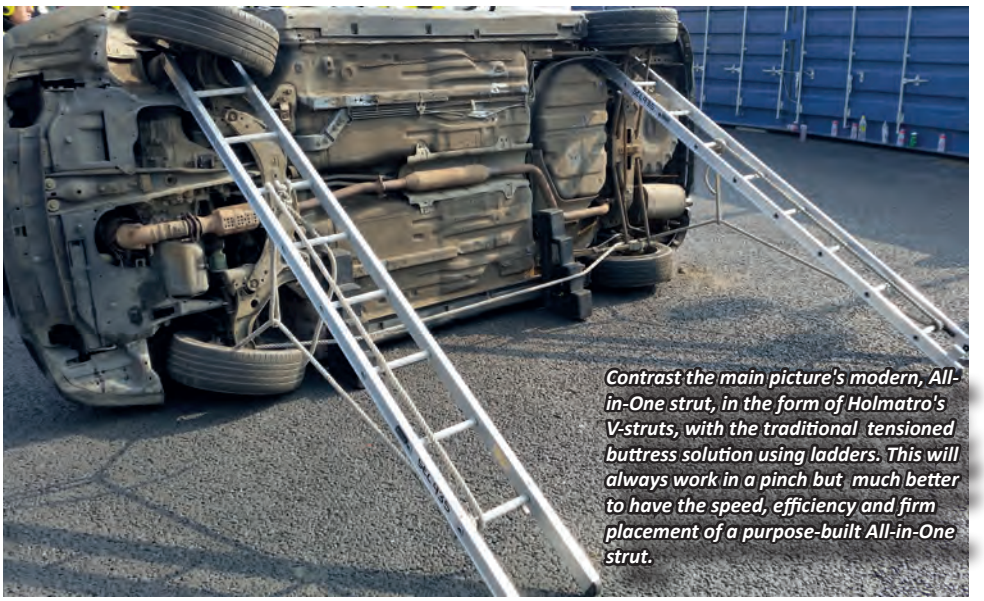
Originally car stabilisation was a haphazard affair, if indeed it was undertaken at all. Then came wooden blocks of various sizes and types and often painted, the ex-serviceman's 'whitewashing' mentality ensuring the shiny gloss painted blocks had little traction and so provided minimal stability when these were used under vehicle sills. They were subsequently replaced by plastic blocks with interlocking nodes and ridges but the principle was the same – to fill in the space between the vehicle and the ground and neutralise the suspension, so that the vehicle became the rescue scene equivalent of a stable operating theatre bed.

This worked fine on upright saloon cars – they already had a low centre of gravity and a wide footprint on the ground. However, block towers were not effective on the higher sills of sports utility vehicles (hence the evolution of sliding stair blocks) or LGV's/Big Rigs and certainly not with cars on their side.

So in these latter cases there was either no effective stabilisation or ladders and rope were pressed into service for cars on their side as were USAR shores, which, with their massive load support capacity could easily be utilised on LGV/ truck cabs and chassis. In the picture opposite (middle), Philadelphia FD have used the equipment they had available to improvise a stabilisation. In this case a Paratech shore with a 'come-along' winch to provide tension. However, the problem with these improvised systems and especially the ladder set-up for a car on its side, is that they are slow to put in place and quite labour intensive, especially for the minimal crew available on the first attendance and early on at an incident. Also note that USAR shores would likely not be available on the first attendance and be delayed until the later arrival of a rescue unit. So a solution was required … … which was one that was easily and rapidly placed by one rescuer, took little space in the already congested locker storage of the first attendance and which didn't have a prohibitive price tag. Enter the all-in one strut….. Weber's *StabFast (left & right)* was one of the first to integrate strut and straps comprising an extendible strut held in place by a single reel mounted ratchet strap, which can either fix to the vehicle directly from the strut base or by a sliding hook where the strap feeds out from the base and is also locked in, at or near the head, creating a highly effective tensioned buttress against the vehicle it is stabilising. Both roving deployments can be employed on cars and on LGV/big Fire and rescue services currently use a variety of labour intensive and sometimes less than optimal methods to deal with stabilising vehicles where there is a high centre of gravity combined with a small footprint on the ground. So it's probably useful to look at the specifics of all in one struts and the different versions available. However, this GUIDE is *not* intended to be an instructional article on how to stabilise with struts as that is a complex subject with a lot of variables.

Originally car stabilisation was a haphazard affair, if indeed it was undertaken at all. Then came wooden blocks of various sizes and types and often painted, the ex-serviceman's

'whitewashing' mentality ensuring the shiny gloss painted blocks had little traction and so provided minimal stability when these were used under vehicle sills. They were subsequently replaced by plastic blocks with interlocking nodes and ridges but the principle was the same – to fill in the space between the vehicle and the ground and neutralise the suspension, so that the vehicle became the rescue scene equivalent of a stable operating theatre bed.



Contrast the main picture's modern, All-in-One strut, in the form of Holmatro's V-struts, with the traditional tensioned buttress solution using ladders. This will always work in a pinch but much better to have the speed, efficiency and firm placement of a purpose-built All-in-One strut.

This worked fine on upright saloon cars – they already had a low centre of gravity and a wide footprint on the ground. However, block towers were not effective on the higher sills of sports utility vehicles (hence the evolution of sliding stair blocks) or LGV's/Big Rigs and certainly not with cars on their side.

So in these latter cases there was either no effective stabilisation or ladders and rope were pressed into service for cars on their side as were USAR shores, which, with their massive load support capacity could easily be utilised on LGV/truck cabs and chassis. In the picture at right (middle), Philadelphia FD have used the equipment they had available to improvise a stabilisation. In this case a *Paratech* shore with a 'come-along' winch to provide tension. However, the problem with these improvised systems and especially the ladder set-up for a car on its side, is that they are slow to put in place and quite labour intensive, especially for the minimal crew available on the first attendance and early on at an incident. Also note that USAR shores would likely not be available on the first attendance and be delayed until the later arrival of a rescue unit. So a solution was required **...**

***RIGHT:** The next step from ad-hoc stabilisation with ladders or wood was to borrow USAR struts (see guide on p148) and create a tensioned buttress with ratchet straps or, as in this case from an incident in Philadelphia, a come-along pulley. However, while you can only work with what you're presented with, be very wary of tensioning outside of the line of the strut. Struts like this Paratech work well enough but they may not be on first attending vehicles so availability and sheer bulk may be against them. Companies like Airshore quickly came up with mini strut sets aimed specifically at vehicle rescue and these too were a step up unless the vehicle was very large and heavy. Something else was needed and Weber in Germany felt they had the answer ....*

... which was one that was easily and rapidly placed by one rescuer, took little space in the already congested locker storage of the first attendance and which didn't have a prohibitive price tag. Enter the all-in one strut..... *Weber's StabFast (right)* was one of the first to integrate strut and straps comprising an extendible strut held in place by a single reel mounted ratchet strap, which can either fix to the vehicle directly from the strut base or by a sliding hook where the strap feeds out from the base and is also locked in, at or near the head, creating a highly effective tensioned buttress against the vehicle it is stabilising. Both roving deployments can be employed on cars and on LGV/big rig cabs and chassis.

Paratech Supporter X2

Note that all of these struts both increase the footprint of any vehicle on the ground and at the same time have a high insertion point with which to counteract a high centre of gravity. *Weber* were the first to push this concept with the *StabFast* (pictured overleaf in a tricky tunnel incident in Germany) and seemed to have the market to themselves for a few years before a number of specialist US strut manufacturers like *Junkyard Dog*, *Rescue 42* and *Res-Q-Jack* introduced their own models followed by *Holmatro* with their *V-Strut*. *Paratech* didn't rest on their

Weber StabFast

laurels either coming up with an all-in-one variant of their screw-adjust shores to produce one of the stronger models on the market (pic previous page). While the ratchet strap is intended to provide the necessary mechanical advantage to securely tension the strut, they all have their own methods for extending the strut - the *Paratech, JD Z-Strut* and *RSQ X* models use a screw thread to provide finite adjustment shown as ■ in the ADJUSTMENT column while most of the rest use incremental adjustment shown as ■ using familiar holes and pins like the *Rescue 42* model (above-right) and simply change the angle slightly to get a firm placement. Some, like the *Res-Q-Jack Apex* can use an electric raise/lift attachment shown as ■. In all cases there are security measures to ensure you can't lose the pins or the 'pin' may actually be more of a sprung, shaped button as with the *Holmatro V-Strut.*

By far the largest range in this Guide is from *Res-Q-Jack* who have taken a leaf out of *Paratech*'s book with a screw adjustment on their *X struts* plus incorporation of a removable jack onto most of their struts and a and now a battery power drive on the *Apex* that allows rapid adjustment and even actual lifting of the load. Obviously this is a cardinal sin in delicate stabilisation processes but there are many incidents when the ability to lift using an integrated strut already in play is very useful. In the picture below, *Res-Q-Jack* struts are performing a coordinated stabilisation AND lift, a job normally requiring struts and lifting bags.

Anchoring the corner of force triangulation is a sturdy, free-running hook on the webbing running from foot to head and this is connected to any structural point low down on the vehicle, often this is one of the many holes and shapes on an alloy or regular 'spoked' wheel but can also be a part of the sill or an opening or bracket on the undercarriage/chassis or, as in the *Weber* example below-left, attached to the seat belt webbing. The heads may be a simple V or channel or may be a custom-designed multi-head with two or three grip options on the one head. This can be something of a compromise over a selection of specialist heads but it does speed things up and there's never a chance you'll misplace one of the heads.

IN THE FOLLOWING TABLES..... We've included struts from *Junkyard Dog*, *Genesis* and *Res-Q-Jack* that technically aren't 'All-in-One' because the ratchet strap is not a complete and fixed element and others, like *Amkus* and *Hurst* could argue that they too could simply add a ratchet strap to their stand-alone struts. But these are sold as specific vehicle stabilisation struts or are part of a range that does include 'All-in-One' struts so they're close enough. Remember also that the range of adjustment for some, means that one strut will cover what might be two struts in another brand's range. The ***Minimum*** or retracted **LENGTH** in our tables is *not* the same as the stored length which might be lower once you take off a head and/or foot plate.
COST: VERY APPROXIMATE in many cases- just a rough guide. Any prices shown as £$€ are currency conversions only and do not include import duties, bulk shipping etc.
Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■

If it's an option it is shown as an outline square □□□□
A circle ●● indicates that this feature is only partially present and/or is OK for that purpose but not ideal.
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■.
ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.
ADJ RANGE is the extension a plain strut can achieve.
MAX WORK-LOAD @2:1 is effectively the WLL Working load limit with a 2:1 safety factor at **FULL* & MINIMUM EXTENSION (*NOT including extension tubes and in tensile or columnar loading).** Minimum Breaking Load would be double this figure.
HD. STD.LD refers to the type of vehicle load the strut can handle: **Heavy Duty** for all types of vehicles inc. trucks/trains/trams. **STandarD** for all cars and most Large Goods Vehicles/trucks and **LightDuty** for cars, vans and light trucks.
ADJUSTMENT: ■=Finite ■=Increments ■=Electric
STAKE HOLES is a hole, eye or a shackle etc. that allows an anchor stake to be driven in on certain types of ground or more precarious positioning but in an ideal world a correctly positioned strut and straps will vector forces so as not to allow the strut to slip.

9730
REMOTE AREA LIGHT

The new generation of portable scene lighting.

PRODUCT FEATURES

- Up to 4,800 lumens of bright, reliable light
- 13 hour max runtime
- Silent running
- IPX4-rated, water-resistant
- High, Medium, & Low light modes
- Compact unit, quick and easy to deploy

01457 869999 | PELIPRODUCTS.CO.UK

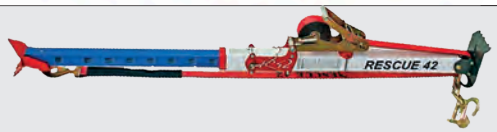
PELI™ | PELI UK AUTHORISED DISTRIBUTOR

IMAGES NOT to SCALE ●●●●●=OK but not ideal
HD. STD.LD: ■=Heavy Duty All inc. trucks/trains/trams.
■=STandarD All cars and most Large Goods Vehicles/trucks
■=LightDuty for cars, vans and light trucks.
COSTS are approximate ~ . Some are only sold in PAIRS
£$€= Currency Conversion Only ☐ ☐ =OPTION
ADJUSTMENT: ■=Finite ■=Increments ■=Electric

	MODEL Product Code	COMPANY	ORIGIN	APPROX COST each pair	WEIGHT	MIN LENGTH	MAX LENGTH
		AOLAI					
	STABILISATION	COVEX		£1900 $2450 €2300	8.9kg 19.6lb	1150mm 45.27"	1950mm 76.77"
	BASIC	COVEX		£1400 $1800 €1200	10.6kg 23.3lb	1100mm 43"	1950mm 76.77"
	KODIAK	GENESIS		£1000 $1265 €1210	4.8kg 10.5lb	686mm 27"	1067mm 42"
	V-STRUT	HOLMATRO		£900 $1100 €1060	7.9kg 17.4lb	1080mm 42.5"	1800mm 70.9"
	X-TEND SMALL	JUNKYARD DOG INDUSTRIES		£2160 $2635 €2950	8.6kg 19lb	686mm 27"	1067mm 42"
	X-TEND MEDIUM	JUNKYARD DOG INDUSTRIES		£2280 $2780 €2780	11.3kg 25lb	990mm 39"	1625mm 64"
	X-TEND LARGE	JUNKYARD DOG INDUSTRIES		£2350 $2800 €2860	12.2kg 27lb	1295mm 51"	2057mm 81"
	X-TEND HD LARGE	JUNKYARD DOG INDUSTRIES		£3350 $4190 €4020	16.8kg 37lb	1295mm 51"	2057mm 81"
	Z-STRUT SMALL	JUNKYARD DOG INDUSTRIES		£3660 $4470 €4360	10.9kg 24lb	686mm 27"	1067mm 42"
	Z-STRUT MEDIUM	JUNKYARD DOG INDUSTRIES		£3750 $4575 €4470	13.15kg 29lb	990mm 39"	1625mm 64"
	Z-STRUT LARGE	JUNKYARD DOG INDUSTRIES		£4630 $5650 €5510	14.5kg 32lb	1295mm 51"	2057mm 81"
	LVS10	LEADER GROUP/ PARATECH		£900 $1150 €1050	8.8kg 19.4lb	980mm 38.6"	1700mm 67"

	ADJ RANGE	MAX WORK LOAD @min2:1 extended	MAX WORK LOAD @min2:1 retracted	STRUT MATERIAL FEET/HEAD	STANDARDS	HD, STD, LD	USAR Capable	STAKE HOLES	ADJUSTMENT	HEAD OPTIONS & NOTES	WWW.
						-	-	-	-	WARNING - DIRECT, ILLEGAL COPY of HOLMATRO V-STRUT,	aolairescue.com
n	800mm 31.5"	1500kg 3307lb	1500kg 3307lb	Alloy	CE	■	■	■	■		hobrand-algebra.nl
n	850mm 33.77"	1500kg 3307lb	1500kg 3307lb	Steel	CE	■	-	-	■		hobrand-algebra.nl
n	381mm 15"	4082kg 9000lb	9072kg 20000lb	Alloy		■	■	■	■	Pointed, V & Chain heads + Extensions tubes. Also by Geneisis, Grizzly strut minus integrated webbing/ ratchet	genesisrescue.com
n	720mm 28.4"	1632kg 3597lb	1632kg 3597lb	Alloy	CE	■	●	■	■	Locking holes at very small intervals. Squeeze and push mechanism for quick release after use. Serrated head for grip. Exhaust protection sleeve on webbing.	holmatro.com
n	381mm 15"	2269kg 5000lb	2269kg 5000lb	Steel		■	-	■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag. Adjusts in 6" increments. HD (no straps) also in range	jydind.com
n	635mm 25"	2269kg 5000lb	2269kg 5000lb	Steel		■	-	■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag. Adjusts in 6" increments. HD (no straps) also in range	jydind.com
n	762mm 30"	2269kg 5000lb	2269kg 5000lb	Steel		■	-	■	■	Std, 90°, Pointed Heads. Adjusts in 6" increments.	jydind.com
n	762mm 30"	4545kg 10000lb	4545kg 10,000lb	Steel		■	-	■	■	Std, 90°, Pointed Heads. Adjusts in 6" increments. X-Tend HD does NOT have integrated webbing/ratchet. All JDI struts are as strong extended as they are when retracted	jydind.com
n	381mm 15"	2269kg 5000lb	2269kg 5000lb	Steel		■	-	■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.	jydind.com
n	635mm 25"	2269kg 5000lb	2269kg 5000lb	Steel		■	-	■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.	jydind.com
n	762mm 30"	2269kg 5000lb	2269kg 5000lb	Steel		■	-	■	■	Std, 90°, Pointed Heads. Comes with picket anchor and accessories bag.	jydind.com
n	720mm 28.4"	4500kg 9921lb	4500kg 9921lb	Alloy		■	■	■	■	Chain wedge, pike, convex surface grip with belt hook location all in one	leadernorthamerica.com

IMAGES NOT to SCALE ●●●●●=OK but not ideal
HD. STD.LD: ■=Heavy Duty All inc. trucks/trains/trams.
■=STandarD All cars and most Large Goods Vehicles/trucks
■=LightDuty for cars, vans and light trucks.
COSTS are approximate ~ . Some are only sold in PAIRS
£$€= Currency Conversion Only ☐ ☐ =OPTION
ADJUSTMENT: ■=Finite ■=Increments ■=Electric

	MODEL Product Code	COMPANY	ORIGIN	APPROX COST each pair	WEIGHT	MIN LENGTH	MAX LENGTH
	LQS/ QUICKSTRUT	LUKAS / HURST		£1600 $2000 €1900	5.1kg 11.2lb	1070mm 42.1"	1850mm 72.8"
	MIGHTY STRUT	MIGHTY STRUTS		£3395 $4500 €3840	10kg 22lb	825mm 32.5"	1206mm* 47.5"
	SUPPORTER X2	PARATECH		£1150 $1450 €1380	15.9kg 35lb	1016mm 40"	1661mm 65.4"
	TELECRIB JR	RESCUE 42		£1780 $2200 €2140	13.6kg 30lb	1041mm 41"	1753mm 69"
	GREENLITE SHORT	RES-Q-JACK		£640 $880 €770	14kg* 31lb*	1067mm 42"	1625.6mm 64"
	GREENLITE LONG	RES-Q-JACK		£720 $990* €860	15.4kg* 34lb*	1372mm 54"	2222.5mm 87.5"
	ALUMINUM X SHORT	RES-Q-JACK		£1450 $2005* €1750	13.6kg* 30lb*	1016mm 40"	1689mm 66.5"
	ALUMINUM X LONG	RES-Q-JACK		£1650 $2150* €1950	19kg* 42lb*	1384mm 54.5"	2216 mm 87.25"
	APEX SHORT	RES-Q-JACK		£1550 $2200* €1850	15.4kg* 34lb*	1146mm 45.1"	1587mm 62.5"
	APEX LONG	RES-Q-JACK		£1750 $2300* €2090	20kg* 44lb*	1492mm 58.75"	2324mm 91.5"
	AUTO X SHORT	RES-Q-JACK		£1000 $1300 €1200	15.8kg* 35lb*	1118mm 44"	1695mm 66.75"
	AUTO X LONG	RES-Q-JACK		£1100 $1420 €1320	17.8kg 38lb*	1384mm 54.5"	2216mm 87.25"
	GREENSTAB	SCORPE		£720 $950 €850	(7) 19kg* (14.4)42lb	1064mm 41.9"	1804mm 71"

ADJ RANGE	MAX WORK LOAD @min2:1 extended	MAX WORK LOAD @min2:1 retracted	STRUT MATERIAL FEET/HEAD	STANDARDS	HD, STD, LD	USAR Capable	STAKE HOLES	ADJUSTMENT	HEAD OPTIONS & NOTES	WWW.
780mm 30.7"	500kg 1100lb	2170kg 4785lb	Alloy	CE	■	-	-	■	Discontinued in USA	lukas.com
355mm 14"	1590kg 3500lb	9545kg 21000lb	Alloy		■	■	■	■	Battery powered by DeWalt, Milwaukee or Makita. *10,15 & 30" Extensions available to give up to 95"max length/height.. Flat and multi-grip head options	mightystruts.com
330mm 13"	4536kg 10000lb	4536kg 10000lb	Alloy		■	■	■	■	Lifting extensions inc HydroFusion and driver attachments converting screw-thread strut to lifting. V, Cone & Chain Wedge heads.	paratech.com
712mm 28"	2269kg 5000lb	2269kg 5000lb	Kevlar Composite		■	-	■	■	Combi-Head	rescue42.com
558mm 22"	1133kg 2500lb	1133kg 2500lb	Steel		■	-	■	■	* Add 22lb for jack attachment. 1134kg/2500lb lift capacity. Ratchet strap not a fixed element. Swivel multi-head.	res-q-jack.com
850mm 33.5"	1133kg 2500lb	1133kg 2500lb	Steel		■	-	■	■	* Add $456/ 22lb for jack attachment shown in pics. 1134kg/2500lb lift capacity. Swivel multi-head.	res-q-jack.com
673mm 26.5"	4399kg 9700lb	4399kg 9700lb	Alloy		■	●	■	■	* Add $828/ 30lb for jack attachment. 2722kg/6000lb lift capacity. Swivel multi-head.	res-q-jack.com
832mm 32.75"	4399kg 9700lb	4399kg 9700 lb	Alloy		■	●	■	■	* Add 30lb for jack attachment. 2722kg/6000lb lift capacity. Variant sold as 'Phoenix' Strut. Swivel multi-head.	res-q-jack.com
441mm 17.4"	3129kg 5669lb	6900kg 12500lb	Alloy		■	-	■	■ □	* Add $975/27lb for jack attachment. 2722kg/6000lb lift capacity. Can add tubes to extend up to 74.5" Swivel multi-head. NEW Battery powered X-DRIVE, DeWalt, Milwaukee or Makita 18v.	res-q-jack.com
832mm 32.75"	3129kg 5669lb	6900kg 12500lb	Alloy		■	-	■	■ □	* Add 27lb for jack attachment shown in pic. 2722kg/6000lb lift capacity. Can add tubes to extend up to 103.5". Swivel multi-head. NEW Battery powered X-DRIVE, DeWalt, Milwaukee or Makita 18v.	res-q-jack.com
577mm 22.75"	1474kg 3250lb	1474kg 3250lb	Alloy		■	-	■	■ □	* Add 22lb for jack attachment. 1134kg/2500lb lift capacity. Swivel multi-head.	res-q-jack.com
832mm 32.75"	1474kg 3250lb	1474kg 3250lb	Alloy		■	-	■	■ □	* Add 22lb for jack attachment. 1134kg/2500lb lift capacity. Swivel multi-head.	res-q-jack.com
740mm 29.1"	2000kg 4409lb	1814kg 4000lb	Alloy Steel		■	-	-	?	Built-in spirit level. * Wt from strut alone to kit inc webbing 5m Strap extension.Anchor plate for the foot + 20cm Connector	scorpe.net

OmniShore

Safety secured.

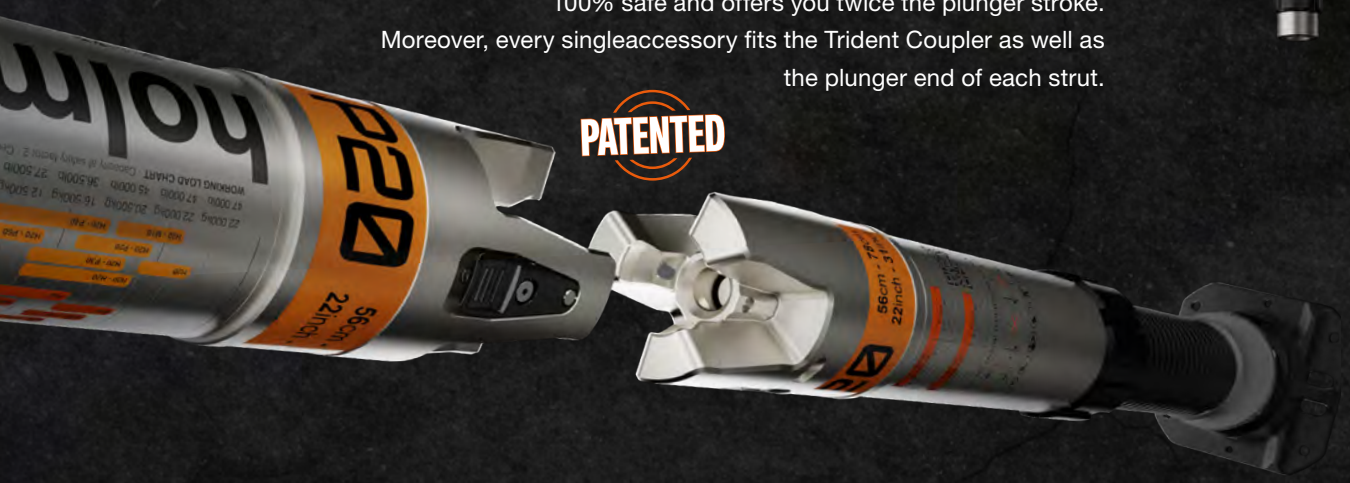
OVERCOME UNLIMITED SHORING CHALLENGES WITH A MINIMUM NUMBER OF COMPONENTS

OmniShore is the world's first and only shoring solution that allows you to build any application with a system of only six different struts. Construct any length up to 17 feet or 5.2 meters with five different struts and without fixed length extension pipes, saving weight and space on your truck.

EXPERIENCE A QUICK AND EASY SETUP IN ONE INTUITIVE WORKFLOW

Our patented Trident Coupler always fits with ease. You can only connect two struts max, so any connection you can make is 100% safe and offers you twice the plunger stroke. Moreover, every singleaccessory fits the Trident Coupler as well as the plunger end of each strut.

PATENTED



TWO CONNECTED STRUTS = TWICE THE PLUNGER STROKE.

Exact measurement is not needed

Two connected struts offer twice the plunger stroke, eliminating the need for precise measurement and allowing fast setup during demanding, time sensitive situations.

EXCEPTIONAL SHORING POWER. READY TO SECURE SAFETY.

Perform all shoring operations with one system, build constructions quickly and easily and take control of every scenario with less people. This is OmniShore.

OMNISHORE CAN DO IT ALL

Vehicle shoring

Flawlessly execute vehicle extrication operations, whether you need controlled vehicle stabilization or lifting.

Trench shoring

Create multiple safe zones in shallow or deep trenches in a revolutionary way, so you can shore walls to prevent collapse and cave-ins.

High directionals

Everything you need to build high directionals to take on even the most challenging rope rescue scenarios.

Structural shoring

The most innovative, fast and safe way to support a structure with rakers, spot shores and more to prevent a collapse.

First responders need shoring equipment that is as intuitive, versatile and smart as they are. That is why we have developed OmniShore, a shoring system reimagined from the ground up and designed in accordance with unparalleled standards of quality and safety.

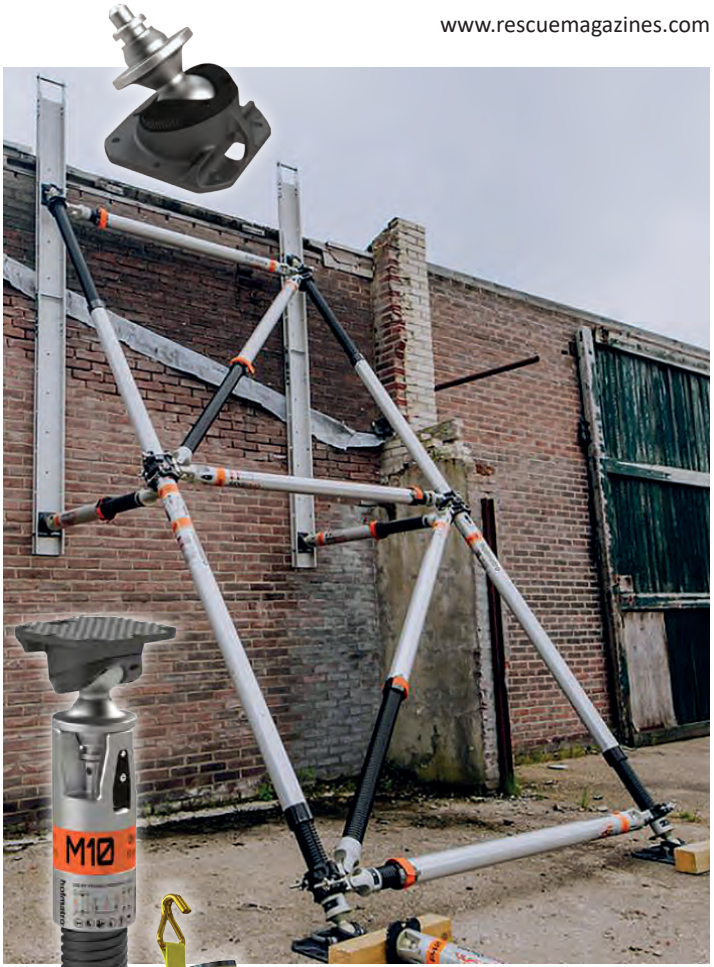
Patented innovations such as the Trident Coupler and OmniLock system allow you to build unlimited applications with less parts, experience a seamless setup with less handling and take full control with less manpower.

Learn more at holmatro.com/omnishore

holmatro
mastering **power**

STRUCTURAL SHORING STRUTS

We've used the term 'structural' to differentiate these heavy duty struts intended to support quite massive loads from the lighter duty vehicle extrication struts. There is crossover of course and many vehicle stabilisation struts are easily tough enough to help shore a timber-structured house but they are 'light-duty' in terms of load support and instead designed for the relatively small weight of a leaning vehicle. In the image below right you can see a *Paratech* shoring strut capable of supporting a 22ton load being used as a vehicle stabilisation strut requiring a fraction of that load capacity. Shoring struts are great universal tools for everything from vehicle accidents, to downed trees, collapsed buildings and sagging trench walls as well as tripods/bipods/monopods for rope rescue and 'crane' style load support or lifting and shifting - this aspect is covered in the Tripods/High Directional Guide.



We can divide shoring strut capabilities into four categories:

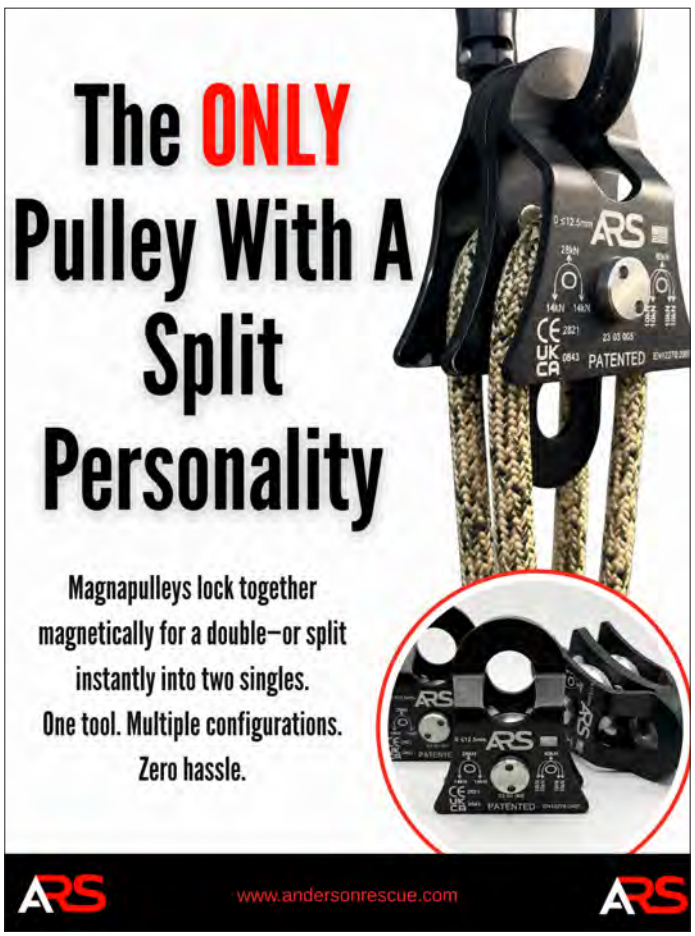
1) **STABILISATION**: The load is primarily downwards into the ground rather than directly onto the strut which is instead resisting lateral movement. Examples of this would be a brick wall being shored/stabilised using raker rails (title pic) or a vehicle on its side as shown on the right where a standard strut is being used in conjunction with a 'Come-Along' winch to triangulate the forces and prevent the vehicle 'submarining'. The inset picture shows a more bespoke version of the Paratech shoring strut designed specifically for vehicle stabilisation with integral ratchet strap.

2) **TOP LOAD SUPPORT**: Which can be the same thing as stabilisation except that the full or part-weight of a shored 'medium', which may be many tons over a protracted period, is applied to the strut either transversely as in columnar/vertical support or laterally as with a trench wall in the *SuperX* pic left. In the case of vertical load support, a significant weight may be applied to the strut at the outset of installation or shortly afterwards and remain on that strut until the end of the incident or replacement by traditional timber or masonry shores. Lateral load support may change from locational input forces only (the forces applied to engage the strut and keep it in position), to very significant loads if there is a shift in the substrate like further collapse of a trench wall. *Paratech*'s tripod head allows an additional single strut to be used on top of the tripod legs to extend the support height (pic above)

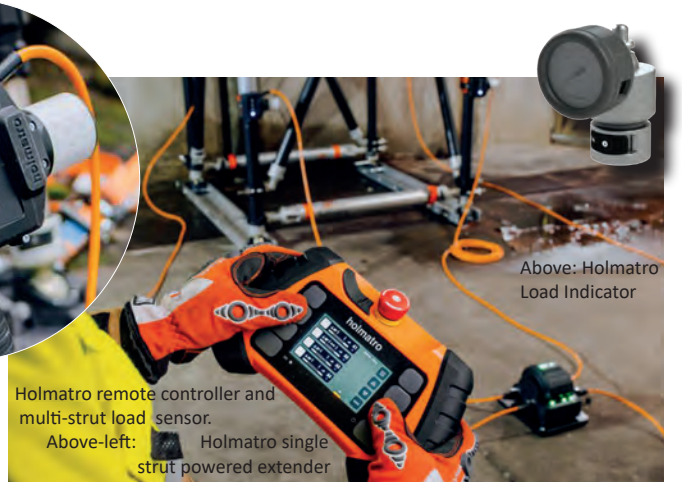
them but can go on to lift/ push the medium in the same way as an airbag. As a stabilisation strut, the ability to exert ***a lifting force rather than simply provide firm initial placement, can be very dangerous in the hands of an inexperienced operator.*** A delicately balanced, unstable load requires a very intricate and delicate placement to ensure that the situation is not made worse. So, although we have included some struts with a full 'structural' lifting capability like the *Holmatro H20*, *Paratech Hydrastut* and *Hydra'am* model , some are intended more for vehicle stabilisation like the *Genesis Kodiak* lifting

3) **UNDERSLUNG LOAD SUPPORT**: As a tripod, bipod/ A-frame, monopod or davit arm, with the use of specialised head and foot attachments struts can be used for regular rope rescue operations and lifting and shifting of very heavy loads like blocks of concrete, tree trunks or large animals. Load vectors are quite complex and rigging of high loads from an A-frame, monopod or off-centre tripod is an advanced procedure.

4) **LIFTING**: Hydraulic struts have very high lifting/pushing force but pneumatically pressurised struts (intended mainly for trench rescue) can also impart such a high force that they not only extend into position without the need to manually extend



struts and power-drill lifting option versus their *Tornado* structural struts (left).



Above: Holmatro Load Indicator

Holmatro remote controller and multi-strut load sensor.
Above-left: Holmatro single strut powered extender

Structural shoring struts are almost all alloy/aluminium tubes around 100mm/4" in diameter. Adjustable struts, indeed all struts, are strongest at their shortest and with the least amount of extension. As the secondary cylinder extends out of the main tube the load support capability reduces. The load capability is actually a lot higher than the specifications suggest because they are always a ratio of the total load. We have listed a minimum of 2:1 normally applied to struts applying a direct lift and therefore a precise load from the outset but for stabilisation, the load variance can be enormous so you would normally apply a safety ratio of around 4:1. There are still some old-school struts requiring manual extension and a large pin inserted into one of 4 or 6 correctly aligned holes in the telescoping tubes -primarily *ProSpan* (and *Genesis Rescue* and *Scorpe*) now that *Idex* have discontinued the *Airshore,* and these remain pretty bombproof and affordable but these have largely transitioned into push-fit connections, sprung plunge-pin or push-button release. The *Holmatro Omnishore* is, at the time of writing, the newest bespoke shoring system and they have opted to use a total of 6 telescoping struts with no fixed-length extensions. Instead each sized strut can be coupled to ONE other strut via their '*Trident*' interlocking coupling on one end (pic right) with angled, interlocking fingers that don't allow any rotation or misalignment. . With any two struts you can pretty much span any distance you need without having to make calculations for a fixed-length extension. With two struts providing a telescoping section top and bottom the Omnishore can span from 30cm/1ft to 5.2m/17ft. Remember that the longer a shore and its extensions are, the smaller the load that it can take; Paratech recommend a maximum of 36" of extensions if joining more than one but for most ***do not use more than one extension per strut.***

Paratech Rescue Guardian - Load-shift sensor & alarm.
Left: Paratech anaolgue single strut load monitor

BASIC STRUT DESIGN

The telescoping aluminium tube we mentioned earlier will either have a series of holes with which to adjust height to specific distances or a full length screw thread which allows finite length adjustment. Even the struts with holes spaced an inch or two inches apart like the *Prospan, Scorpe** and original *Airshore* (left) have additional adjustment on the collar via an angled top on which a pin will ride while you rotate using the keyhole-shaped extensions and then lock into position with that x-shaped screw. This allows an inch or two of more precise adjustment which can make the difference when trying to get a firm fit. The length of adjustment on the *Paratech*-style screw threaded tubes you can see on the right is 'captured' by a collar which will either be wound into place manually or may automatically follow the length of adjustment by pressurising pneumatically and then locking it at the approximate or in some cases, the exact point to which you raise it. Raising of the telescoping section can be manual or use compressed air cylinders, CO2 or even Nitrogen which is particularly useful when setting the struts remotely in dangerous situations like trench or structural

collapse. The most dangerous time in shoring is on entry to the scene and setting the struts ***especially if the pressure settings enable your strut to impart a lift rather than simply engaging firmly - that's when your 'Jacks-Straws' of interlocking support members can come tumbling down!*** The old *Airshore* strut below left, (in its *Idex* blue livery rather than original red) best displays the traditional features still present on *Prospan, Genesis* and *Scorpe** ranges; the round red buttons are plunge pins for connecting foot and head attachments - this replaced simpler pins that you see on the adjustment collar. At the bottom is a valve for compressed air pressurisation of the strut and a pressure release 'screw' that allows you to release the strut from its fully loaded position or to set a pressure release level that doesn't allow the strut to impart a lift, just firm engagement. The original *Airshore* struts ultimately disappeared after being dropped from the *IDEX (Lukas/Hurst/Vetter)* ranges which would have left the field open for *Prospan* and the undisputed leader in this field, *Paratech*, had companies like *Holmatro, Resqtec* and *ResqJack* not stepped up with their own designs. *Holmatro* in particular were in the game early on with their *Powershore* range which was subsequently updated and improved with the *OmniShore* which has one strut in its array of 6 interconnecting pneumatic struts that can impart lift hydraulically if required. These are very slick and at the '*Rolls-Royce*' end of shoring with accessories like multiple strut load-monitoring, remote raising via electric pump and handheld controller plus a smaller single strut remote raising unit (pic top-left) and a single strut analogue load monitor which both *Holmatro* and *Paratech* have a version of. *ResQtec* grew out of lifting airbag pioneer *Zumro* and also have a slick, push-button range with precisely locking heads while *Paratech* didn't waste any time coming up with upgraded locking systems and accessories which still sees them as having the largest range of struts and options. This includes their load monitoring and alarm module *Rescue Guardian* which can monitor up to 10 struts simultaneously and alarm audibly and via blue tooth

9730
REMOTE AREA LIGHT

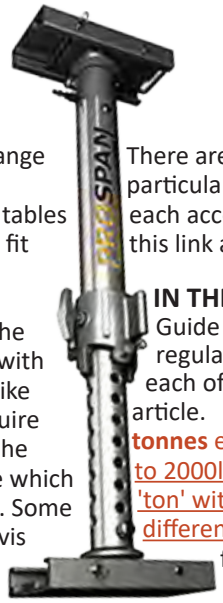
The new generation of portable scene lighting.

PRODUCT FEATURES

- Up to 4,800 lumens of bright, reliable light
- 13 hour max runtime
- Silent running
- IPX4-rated, water-resistant
- High, Medium, & Low light modes
- Compact unit, quick and easy to deploy

01457 869999 | PELIPRODUCTS.CO.UK

PELI™ | PELI UK AUTHORISED DISTRIBUTOR



to connected devices should there be an overload or change in load which is particularly useful in trench rescue and earthquake situations. After each family of struts in our tables is a visual list of all of the foot and head accessories that fit that range of shores. This includes raker rails and walers for structural and trench shoring to spread the load and support across much larger areas. Spot-shoring, where the relatively small area of strut head/foot engages directly with the load is not recommended for particulate structures like brick/breeze block and unstable trench walls - these require much broader load support using boards and walers or the smaller 'spot-walers' shown on the *ProSpan* shore above which can be used without boards on more stable trench walls. Some of the tripod heads and larger feet require an angled clevis to be connected between the plate and the strut but the newest models from *Holmatro, Reqtec, Paratech* etc. will connect directly into the accessory as a locking, push-fit rather than needing to be manually pinned. However, do bear in mind that, excellent though these newer, easier and quicker to use struts are, the older style manual shores using pins are very forgiving of rough handling and neglect, we can attest to the fact that the *Prospan TASS* models for instance will continue to function decades after they've been decommissioned and left to corrode behind the workshop!

There are too many accessories to provide details in this particular article but we have listed all of the available spec for each accessory in the **USAR BUYERSGUIDE** available now on this link and due to be fully complete in late Summer.

IN THE FOLLOWING TABLES..... See our comprehensive Guide to shoring struts in the **USAR BUYERSGUIDE** for regular updates to this article and for a list of specs for each of the accessories (head, feet etc) shown in this article. All load figures are in **metric tons/ tonnes** equivalent to 1000kg and **US (short) tons** equivalent to 2000lbs or 0.9 of a metric ton NB: the use of the word 'ton' without defining short, long, US, UK or metric is best differentiated using 'tonne' for a metric ton. Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■ If it's an option it is shown as an outline square □□□□ **USES** ■Vehicle stabilisation ■Light Structural(timber building etc)■ Heavy concrete Structural & Trench●●● USE or FEATURE is only partially present and/or is **OK but not ideal.** A model variant is shown in cyan blue and any features or specifications that differ from the standard version are also in cyan or will have a cyan outline to a black or orange square ■■.**ORIGIN:** The company's home country, not necessarily the country of

IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.
	Tornado Airstrut B ART.AS.B	GENESIS RESCUE		●■■	N/A
	Tornado Airstrut E ART.AS.E547	GENESIS RESCUE		●■■	N/A
	Tornado Extension ART.AS.18EXT	GENESIS RESCUE		■■■	N/A
	Kodiak Lifting Device 500.600.KLD	GENESIS RESCUE		■●●	N/A
	Kodiak ShortExtension 15	GENESIS RESCUE		■■●	N/A
	Kodiak LongExtension 30	GENESIS RESCUE		■■●	N/A
See **End-Section** for full spec on accessories	ACCESSORIES	GENESIS RESCUE	M foot	23° foot	

manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.**COST:** rarely quoted because these are usually bulk agency purchases. We usually round up to the nearest Pound£/US Dollar$/ Euro€. Cost is for a basic strut excluding any accessories. **WEIGHT:** weight minus any accessories **ADJUSTMENT INCREMENTS:** The distance between locked positions, may be half an inch or FINITE where the strut will lock in the exact position of the load **STROKE:**The total length the strut will adjust from minimum to maximum extension.**PNEUMATIC**: Pneumatically extended with compressed air, CO2, Nitrogen etc **MANUAL**: extended by hand and either pinned or a screw collar may be spun up to meet the extension point. **HYD**: Hydraulically extended either by hand pump or we will see electric/battery power becoming more prevalent. Both hydraulic and pneumatic pressurisation have the advantage of being able to place the strut remotely without placing rescuers into the danger zone. **CONNECT: PUSH-FIT** = No tools or pins are needed to lock together a strut and and accessory head/foot or extension or even two struts - they will either click into place automatically or an integral sprung plunge-pin does the job. **PIN:** a metal pin is manually placed to maintain the head/foot/extension in position. **AUTO LOCKING COLLAR: AUTO** indicates that the strut will automatically default to a locked position during or after inflation/extension. A **LOCKING COLLAR** is manually locked either by being screwed on a thread or by placement of metal pins through the tube and collar.

LIFT ■ the strut can either impart lift/raising (via pneumatics or a manual crank handle) or can have an optional lift attachment added like *Res-Q-Jack*'s *X-Drive* unit using *Milwaukee, Makita* or *DeWalt* 18v batteries.

□ A **RATCHET ATTACHMENT** is used to convert a shoring strut into an All-in-One strut for vehicle extrication where the cranked raising of the strut creates a triangulation (vectoring) of forces via webbing attached to the target load and the strut's base-plate. **(LOAD) MONITOR** = A load cell indicating load on the strut or an alarm to indicate over-load or load shift. **ELECTRIC RAISE**: an electric module to raise the strut (or coordinated struts) remotely without imparting the high lift forces. **It is vital that your load is in-line with the orientation of the strut usually at 90 degrees-unless it is an angled spot-load or distributed load using appropriately angled clevis and Raker-Rail/Waler combinations. if your target load starts to stray off-centre as it moves, the strut arrangement may become loose and collapse - this is why many larger strut heads have screw/nail holes to maintain their orientation. Load Capacities** are for that strut/ext only. **Joining struts & an extension=weaker.**

WEIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
7.7kg 17lb	66cm 26"	94cm 37"	50mm/2" 28cm 11"	14.5t 16USton	7.25t 8USton	6061-T6 Alu Alloy 300 BAR 20.4psi	■ ■	■ ■	■	□ □	- -	- - -		genesisrescue.com
16.3kg 36lb	137cm 54"	213cm 84"	50mm/2" 76.2cm 30"	11.3t 12.5USton	6.5t 7.25USton	6061-T6 Alu Alloy 300 BAR 20.4psi	■ ■	■ ■	■	□ □	- -	- - -		genesisrescue.com
2.9kg 6.5lb	45.7cm 18"	-	-	14.5t 16USton	-	6061-T6 Alu Alloy -	■ ■	■ ■	■	□ □	- -	- - -		genesisrescue.com
7kg 15.5lb	77.5cm 30.5"	113cm 44.5"	Finite 35.6cm 14"	2.26t 2.5USton	2.26t 2.5USton	6061-T6 Alu Alloy -		- -	□	■ ■	- -	- - -	Can also use a power drill to rais. CAUTION-exerts lift - primarily for vehicle stabilisation	genesisrescue.com
3.9kg 8.5lb	38cm 15"	-	-	18.1t 20USton	-	6061-T6 Alu Alloy -	- - -	■		□ □	- -	- - -		genesisrescue.com
~7kg ~15.5lb	76cm 30"	-	-	18.1t 20USton	-	6061-T6 Alu Alloy -i	- - -	■		□ □	- -	- - -		genesisrescue.com

Grizzly End

Flat Base

3" Angle

4" Channel

6" Channel

60° Clevis

5' Raker

IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WL
	Omnishore M10 151.001.601	HOLMATRO		■■■	N/A	3 7
	Omnishore H20 151.002.166	HOLMATRO		■■■	N/A	1 2
	Omnishore P20-OL 151.001.606 151.004.141	HOLMATRO		■■■	N/A	6 1
	Omnishore P30-OL 151.002.159 151.004142	HOLMATRO		■■■	N/A	8 1
	Omnishore P40-OL 151.002.023 151.004143	HOLMATRO		■■■	N/A	1 2
	Omnishore P60-OL 151.002.160 151.004144	HOLMATRO		■■■	N/A	3

Omnishore ACCESSORIES

OmniLock Nut | Ratchet Base | Head/Foot | Beam Support | Strut Clamp | Column Clamp | BiPod Head | Mono & TriPod Head | Multi Head | Swivel Foot/Head | Anchor Hinge Base

the most comprehensive guide to CasEvac & Personal Eqpt ever produced

Available Autumn/Fall 2026.
New products and new product categories added continually.
Our BUYERS GUIDES are **FREE TO ALL** as digital, page-turning publications and always on the same link so you can keep checking back for updates. You can download and print a pdf version if you have a lot of printer ink but the most up-to-date version will always be available on this link and/or via our website: **www.rescuemagazines.com**

https://accessandrescue.hflip.co/GuidetoMedPPEcasevac

CONTENTS

MEDICAL
- CAT/Torniquets
- Trauma Dressings
- Portable AEDs
- Portable Suction
- Laryngoscopes
- Supraglottic Airways
- Naso/Phngl Airways
- BVMs
- Pulse Oximetry
- Portable Resus
- Cervical Collars
- Limb Splints

CASEVAC
- Con-Space Stretchers
- RollUp Stretchers
- Rigid Frame Stretchers
- Spineboards
- Evacuation Triangles

TOOLS
- MultiTools
- Head-Lighting
- Hand-Lighting
- Paramedic Shears
- Resus Manikins
- Trauma Packs

STRUCTURAL SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
3.6kg 7.9lb	28.5cm 11.2"	47cm 18.5"	finite 18.5cm 7.3"	22.9t 25.2UStON	22.9t 25.2UStON	Alu Alloy 12BAR 174 psi	- ■ ■	■	■ -	□ -	□ □	- □ □		holmatro.com
1.4kg 5.1lb	61.3cm 24.1"	115.3cm 45.4"	finite 54cm 21.3"	22.9t 25.2UStON	22.9t 25.2UStON	Alu Alloy 720 BAR 10443 psi	■ ■ -	■	- ■	■	□ □	- □ □	2-stage telescoping, hydraulic strut can be attached to any other strut in this range	holmatro.com
5.7kg 4.8lb	56cm 22"	77.5cm 30.5"	finite 21.5cm 8.5"	22.9t 25.2UStON	22.9t 25.2UStON	Alu Alloy 12BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	OL= add-on Auto-Locking collar	holmatro.com
3.8kg 9.4lb	76cm 29.9"	111.5cm 45.5"	finite 39.5cm 15.6"	22.9t 25.2UStON	22.9t 25.2UStON	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	Shown with optional LockNut. OL= add-on Auto-Locking collar	holmatro.com
1.9kg 6.2lb	105.5cm 41.5"	165cm 65"	finite 59.5cm 23.4"	22.9t 25.2UStON	22.7t 25UStON	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	OL= add-on Auto-Locking collar	holmatro.com
18kg 9.7lb	162cm 63.8"	265cm 104.3"	finite 103cm 40.6"	22.9t 25.2UStON	17t 18.7UStON	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■ □	□ -	□ □	- □ □	OL= add-on Auto-Locking collar	holmatro.com

Bipod Base | Static Base | Raker Thrust Block | Raker Edge Union | Load Cell Monitor | Hand Controller | OmniLock Drive | Power Station | Raker & Waler Rails | Raker & Waler Pins | Nailing Pad | Hydraulic Pump

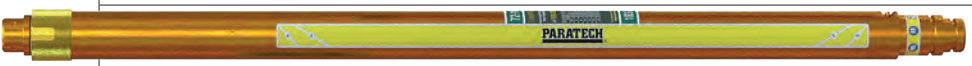
IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WL
	Acme Thread 12-15" 22-796212	PARATECH		■ ■ ■	£340 $460 €404	6
	Acme Thread 19-25" 22-796206	PARATECH		■ ■ ■	£496 $670 €589	5 1
	Acme Thread 25-36" 22-796200	PARATECH		■ ■ ■	£571 $772 €678	6 1
	Acme Thread 37-58" 22-796202	PARATECH		■ ■ ■	£714 $965 €848	1 2
	Acme Thread 56-88" 22-796204	PARATECH		■ ■ ■	£962 $1300 €1142	1 3
	LockStroke 19-25" 22-796006	PARATECH		■ ■ ■	£744 $1005 €883	5 1
	LockStroke 25-36" 22-796000	PARATECH		■ ■ ■	£880 $1190 €1046	7 1
	LockStroke 36-57" 22-796002	PARATECH		■ ■ ■	£932 $1260 €1107	1 2
	LockStroke 55-89" 22-796004	PARATECH		■ ■ ■	£1242 $1680 €1475	1 3
	Lock/Acme Extension 6" 22-796017	PARATECH		■ ■ ■	£193 $260 €229	1 3
	Lock/Acme Extension 12" 22-796012	PARATECH		■ ■ ■	£230 $300 €270	2 4
	Lock/Acme Extension 24" 22-796024	PARATECH		■ ■ ■	£270 $350 €315	3 7
	Lock/Acme Extension 36" 22-796036	PARATECH		■ ■ ■	£310 $400 €360	4 9

STRUCTURAL SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
3kg 6.6lb	31cm 12"	38cm 15"	Finite 7.6cm 3"	19.95t 22UStON	19.95t 22UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ -	■	■	- -	- □	□ □ □	Threaded shaft allows infinite and finite locking positions	paratech.com
.1kg 1.2lb	48cm 19"	64cm 25"	Finite 15.2cm 6"	19.95t 22UStON	19.95t 22UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Threaded shaft allows infinite and finite locking positions	paratech.com
.8kg 4.9lb	64cm 25"	91cm 36"	Finite 28cm 11"	19.95t 22UStON	18t 19.8UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	□ □	- □	□ □ □	Threaded shaft allows infinite and finite locking positions	paratech.com
0.2kg 2.4lb	94cm 37"	147cm 58"	Finite 53.3cm 21"	18t 19.8UStON	15.35t 16.9UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	□ □	- □	□ □ □	Threaded shaft allows infinite and finite locking positions	paratech.com
4.8kg 2.6lb	142cm 56"	224cm 88"	Finite 81.3cm 32"	15.35t 16.9UStON	11t 12UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Threaded shaft allows infinite and finite locking positions	paratech.com
.8kg 2.7lb	00cm 19"	63.5cm 25"	1cm 0.4" 15.2cm 6"	19.95t 22UStON	19.95t 22UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Auto-locking collar in 1cm/0.4" increments	paratech.com
.5kg 6.5lb	64cm 25"	91cm 36"	1cm 0.4" 28cm 11"	19.95t 22UStON	18t 19.8UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Auto-locking collar in 1cm/0.4" increments	paratech.com
0.9kg 24lb	91cm 36"	144.8cm 57"	1cm 0.4" 53.3cm 21"	18t 19.8UStON	15.35t 16.9UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Auto-locking collar in 1cm/0.4" increments	paratech.com
6.2kg 5.7lb	139.7cm 55"	226cm 89"	1cm 0.4" 86.4cm 34"	15.35t 16.9UStON	11t 12UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Auto-locking collar in 1cm/0.4" increments	paratech.com
.7kg 3.8lb	15cm 6"	-	-	20t 22UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com
.1kg 4.6lb	30cm 12"	-	-	20t 22UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com
.2kg 7.1lb	61cm 24"	-	-	20t 22UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com
.4kg 9.7lb	91cm 36"	-	-	18t 19.8UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □	To fit Acme Thread AND/ OR LockStroke Struts	paratech.com

IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	W
	AcmeThread Strut Driver 22-796200SD	PARATECH		■ ●	£3698 $5002 €4394	1 2
	AcmeThread Strut Driver 22-796202SD	PARATECH		■ ●	£4121 $5574 €4897	1 2
	LongShore 203 22-796710	PARATECH		■ ■ ■	£978 $1322 €1162	7
	LongShore 304 22-796720	PARATECH		■ ■ ■	£1237 $1673 €1470	
	LongShore 406 22-796730	PARATECH		■ ■ ■	£1480 $2001 €1758	1
	LongShore 610 22-796360	PARATECH		■ ■ ■	£1752 $2360 €2073	1
	LongShore 1016 22-796390	PARATECH		■ ■ ■	£2675 $3618 €3178	3
	LongShore Ext 135 22-796341	PARATECH		■ ■ ■	£407 $550 €483	
	LongShore Ext 235 22-796342	PARATECH		■ ■ ■	£510 $690 €606	4
	LongShore Ext 435 22-796356	PARATECH		■ ■ ■	£715 $966 €849	6
	LongShore Ext 635 22-796376	PARATECH		■ ■ ■	£923 $1240 €1090	9
	LongShore Adjustable Brace B23 22-796348	PARATECH		■ ■ ■	£747 $1011 €888	6
	LongShore Adjustable Brace B57 22-796350	PARATECH		■ ■ ■	£1020 $1377 €1210	1 3

STRUCTURAL SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	OPTIONS: CONNECT: PUSH-FIT PIN	OPTIONS: AUTO MANUAL LOCKING	OPTIONS: LIFT RATCHET ATTACHMENT	OPTIONS: MONITOR ELECTRIC RAISE	OPTIONS: TRIPOD BIPOD MONOPOD	NOTES	WWW.
0.2kg 2.6lb	64cm 25"	91cm 36"	1cm 0.4" 28cm 11"	2.7t 3UStON	2.7t 3UStON	Alu Alloy -	■		■	- -	- □	□ □ □	Geared Driver uses manual handle to raise the strut	paratech.com
3.4kg 9.6lb	94cm 37"	147cm 58"	1cm 0.4" 53.3cm 21"	2.7t 3UStON	2.7t 3UStON	Alu Alloy -	■		■	- -	- □	□ □ □	Geared Driver uses manual handle to raise the strut	paratech.com
7.3kg 16lb	66cm 26"	91cm 36"	finite 25cm 10"	19.95t 22UStON	18t 19.8UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
10kg 22lb	91cm 36"	127cm 50"	finite 36cm 14"	18t 19.8UStON	16.2t 17.9UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
2.7kg 28lb	122cm 48"	185cm 73"	finite 63cm 25"	19.95t 22UStON	12.8t 14.1UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
8.6kg 41lb	183cm 72"	295cm 116"	finite 112cm 44"	12.8t 14.1UStON	16.3t 18UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/after inflation via air, CO2 or Nitrogen	paratech.com
0.2kg 67lb	290cm 114"	503cm 198"	finite 213cm 84"	7.7t 8.45UStON	1.8t 2UStON	Alu Alloy 8.1-14.8 BAR 116-215 psi	- ■ ■	■	■	- -	- □	□ □ □	Always default to a locked position during/ after inflation via air, CO2 or Nitrogen. 812 Discontinued	paratech.com
00kg 00lb	30.5cm 12"	-	-	19.95t 22UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
4.1kg 9lb	61cm 24"	-	-	19.95t 22UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
5.8kg 15lb	122cm 48"	-	-	16.2t 17.9UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
9.1kg 20lb	170cm 67"	-	-	12.8t 14.1UStON	-	Alu Alloy -	- - -	■	-	- -	- □	□ □ □		paratech.com
6.8kg 15lb	66cm 26"	91cm 36"	finite 24.5cm 10"	00t 00UStON	-	Alu Alloy -	- ■ -	■	■	- -	- □	□ □ □	Threaded shaft for length adjustment on raker and support bracing	paratech.com
4.5kg 2.7lb	152cm 60"	216cm 85"	finite 63.5cm 25"	00t 00UStON	-	Alu Alloy -	- ■ -	■	■	- -	- □	□ □ □	Threaded shaft for length adjustment on raker and support bracing	paratech.com

IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

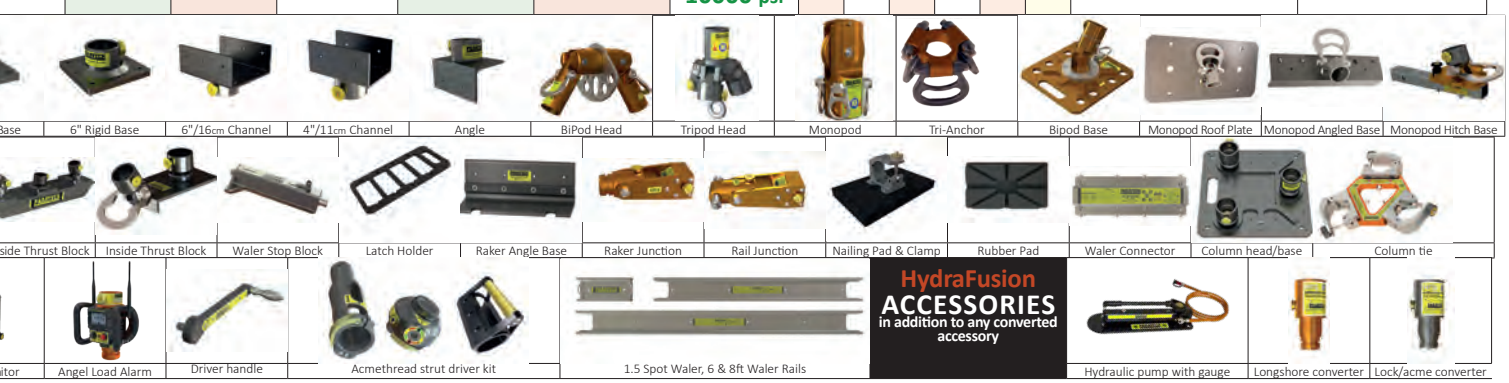
	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WE
	Damage Control Shore 03 22-798S03	PARATECH		● ■ ●	£1508 $2040 €1789	6 1
	Damage Control Shore 06 22-798S06	PARATECH		● ■ ●	£2070 $2800 €2456	1 2
	Damage Control Shore 10 22-798S10	PARATECH		● ■ ●	£2440 $3300 €2902	1 3
	Damage Control Ext 01 22-798X01	PARATECH		● ■ ●	£544 $735 €645	2 6
	Damage Control Ext 02 22-798X02	PARATECH		● ■ ●	£673 $910 €798	4 9
	Damage Control Ext 04 22-798X04	PARATECH		● ■ ●	£927 $1254 €1100	1
	Damage Control Brace 22-798B01	PARATECH		● ■ ●	£979 $1324 €1161	0 0
	HydraFusion Strut 04 22-79HA04K	PARATECH		■ ■ ●	£2850 $3854 €3385	8 1
	HydraFusion Strut 10 22-79HA10K	PARATECH		■ ■ ●	£3310 $4474 €3930	1 2
	HydraFusion Strut 16 22-79HA16K	PARATECH		■ ■ ●	£3770 $5095 €4475	1 3

ALL Paratech Series ACCESSORIES
IMAGES NOT TO SCALE

STRUCTURAL SHORING STRUTS

OPTIONS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
.2kg 3.7lb	66cm 25"	91cm 36"	28cm 11"	20t 22USton	20t 22USton	Anodized Aircraft Alu -	- ■ -	■	■	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
1.8kg 26lb	122cm 47"	185cm 73"	66cm 26"	20t 22USton	20t 22USton	Anodized Aircraft Alu -	- ■ -	■	■	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
7.8kg 9.3lb	183cm 71"	295cm 116"	114cm 45"	20t 22USton	14.5t 16USton	Anodized Aircraft Alu -	- ■ -	■	■	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
.9kg 5.3lb	30.5cm 12"	-	-	20t 22USton	20t 22USton	Anodized Aircraft Alu -	- - -	■	-	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
.3kg .4lb	61cm 24"	-	-	20t 22USton	20t 22USton	Anodized Aircraft Alu -	- - -	■	-	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	paratech.com
7kg 5.4lb	122cm 48"	-	-	20t 22USton	20t 22USton	Anodized Aircraft Alu -	-	■	-	- -	- -	- - -	corrosion proof for marine environments. For sealing of hull ruptures on ships	ooo.com
00kg 00lb	45.7cm 18"	55.8cm 22"	-	20t 22USton	20t 22USton	Anodized Aircraft Alu -	- ■ -	■		- -	- -	- - -	Add 4" for head and foot plates. For sealing of hull ruptures on ships	ooo.com
.5kg 8.7lb	46.2cm 18.2"	55.8cm 22"	finite 10.2cm 4"	9t 10USton	9t 10USton	Anodized Aircraft Alu 690 BAR 10000 psi	■ - -	■	■	- ■	- -	- - -	hydraulic lifting strut can be attached to any *Para* strut via converter can lift 10USt or stabilise 20USst	paratech.com
2.8kg 8.3lb	64cm 25.2"	88.9cm 35"	finite 25.4cm 10"	9t 10USton	9t 10USton	Anodized Aircraft Alu 690 BAR 10000 psi	■ - -	■	■	- ■	- -	- - -	hydraulic lifting strut can be attached to any *Para* strut via converter can lift 10USt or stabilise 20USst	paratech.com
6.9kg 7.2lb	81.3cm 32"	121.2cm 47.7"	finite 40.4cm 15.9"	9t 10USton	9t 10USton	Anodized Aircraft Alu 690 BAR 10000 psi	■ - -	■	■	- ■	- -	- - -	hydraulic lifting strut can be attached to any *Para* strut via converter can lift 10USt or stabilise 20USst	paratech.com



IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	APPROX COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WE
	Prospan PR01	PROSPAN MANUFACTURING		■ ■ ■	£370 $500 €440	6 1
	Prospan PR02	PROSPAN MANUFACTURING		■ ■ ■	£463 $625 €550	8 1
	Prospan PR03	PROSPAN MANUFACTURING		■ ■ ■	£518 $700 €615	10 2
	Prospan PR04	PROSPAN MANUFACTURING		■ ■ ■	£640 $865 €760	14 3
	Prospan Ext 12"	PROSPAN MANUFACTURING		■ ■ ■	N/A	2
	Prospan Ext 24"	PROSPAN MANUFACTURING		■ ■ ■	N/A	3
	Prospan Ext 36"	PROSPAN MANUFACTURING		■ ■ ■	N/A	5 1
	TASS Shore 1	PROSPAN MANUFACTURING		■ ■	N/A	5 1
	TASS Shore 2	PROSPAN MANUFACTURING		■ ■	N/A	7. 1
	TASS Shore 3	PROSPAN MANUFACTURING		■ ■	N/A	9 2
	TASS Shore 4	PROSPAN MANUFACTURING		■ ■	N/A	13 3
	TASS 12" Ext	PROSPAN MANUFACTURING		■ ■	£300 $390 €350	5 1

Prospan & TASS ACCESSORIES

STRUCTURAL SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
.8kg 15lb	54.6cm 21.5"	67.3cm 26.5"	50mm/2" 12.7cm 5"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
.2kg 18lb	74.9cm 29.5"	104cm 41"	50mm/2" 31.7cm 11.5"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 ps	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
.9kg 24lb	107.9cm 42.5"	170cm 67"	50mm/2" 62.1cm 24.5"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
.5kg 32lb	170cm 67"	266.7cm 105"	50mm/2" 96.7cm 38"	9t 10UStON	9t 10UStON	6061-T6 aluminum 7.9-15 BAR 115-220 ps	- ■ ■	■ -	■ □*	- -	- -	- - □	Add 4" for head and foot plates. *Spring-loaded inner collar available for auto-locking at fixed increments	prospanshoring.com
.3kg 5lb	30cm 12"	-	-	9t 10UStON	-	6061-T6 aluminum -	- - -	■ -	-	- -	- -	- - □	Add 4" for head and foot plates	prospanshoring.com
.6kg 8lb	61cm 248"	-	-	9t 10UStON	-	6061-T6 aluminum -	- - -	■ -	-	- -	- -	- - □	Add 4" for head and foot plates	prospanshoring.com
,4kg 12lb	91.4cm 36"	-	-	9t 10UStON	-	6061-T6 aluminum -	-	■ -	-	- -	- -	- - □	Add 4" for head and foot plates. 48 & 60" Extensions discontinued.	prospanshoring.com
.9kg 13lb	58.4cm 23"	70cm 27.5"	12.7mm ½" 12cm 4.5"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
25kg 16lb	66cm 26"	109cm 43"	12.7mm ½" 30cm 12"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
9kg 20lb	78.75cm 31"	121.9cm 48"	12.7mm ½" 56cm 22"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
3.6kg 30lb	109cm 43"	259cm 102"	12.7mm ½" 150cm 59"	9.5t 10.5UStON	3.2t 3.5UStON	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com
.4kg 12lb	30cm 12"	-	-	3.6t 4UStON	-	6005 aluminum -	- ■ -	■	■	- -	- -	- - -	Telescoping Aluminum Support System for vehicles and light structural shoring	prospanshoring.com

IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WE
	Super X Short SPX-EX41	RES-Q-JACK		■ ■	N/A	10 2
	Super X Short SPX-EX41-S	RES-Q-JACK		■ ■ ●	N/A	13 2
	Super X Long SPX-EX56	RES-Q-JACK		■ ■	N/A	14 32
	Super X Long SPX-EX56-S	RES-Q-JACK		■ ■ ●	N/A	17 3
	Super X Trench 18 SPX-TS22	RES-Q-JACK		● ■ ■	N/A	4
	Super X Trench 28 SPX-TS32	RES-Q-JACK		● ■ ■	N/A	6 14
	Super X Trench 38 SPX-TS42	RES-Q-JACK		● ■ ■	N/A	8 1
	Super X 12"Extension SPX-EXT12	RES-Q-JACK		■ ■ ■	£260 $350 €300	2
	Super X 24"Extension SPX-EXT24	RES-Q-JACK		■ ■ ■	£360 $480 €420	3
	Super X 36"Extension SPX-EXT36	RES-Q-JACK		■ ■ ■	£440 $580 €510	5 1
	Super X 48"Extension SPX-EXT48	RES-Q-JACK		■ ■ ■	£520 $690 €600	3
	Super X ACCESSORIES		Static Foot	Swivel Foot		

See **End-Section** for full spec on accessories

STRUCTURAL SHORING STRUTS

OPTIONS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
0.9kg 24lb	131cm 51.6"	175cm 69"	Finite 44cm 17.3"	12.2t 13.4UStON	8.1t 8.9UStON	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- ■*	■* -	- - □	Red inner tube is lighter & lower strength. *Optional X-Drive unit 26.7kN lift force using 18v battery	resqjack.com
.15kg 29lb	131cm 51.6"	175cm 69"	Finite 44cm 17.3"	16.2t 17.8UStON	10.9t 12UStON	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- ■*	■* -	- - □	Black inner tube is heavier & higher strength. Can be supplied as pneumatic. *Optional X-Drive unit 26.7kN lift - 18v battery	resqjack.com
4.9kg 2.8lb	172cm 67.7"	255cm 100.4"	Finite 82cm 32.3"	9.6t 10.6UStON	8.2t 9UStON	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- ■*	■* -	- - □	Red inner tube is lighter & lower strength. *Optional X-Drive unit 26.7kN lift - 18v battery	resqjack.com
7.7kg 39lb	172cm 67.7"	255cm 100.4"	Finite 82cm 32.3"	16.2t 17.8UStON	10.9t 12UStON	6061-T6 aluminum 13.8 BAR 200 psi	- ■ □	■	■	- ■*	■* -	- - □	Black inner tube is heavier & higher strength. *Optional X-Drive unit 26.7kN lift - 18v battery	resqjack.com
.1kg 9lb	56cm 22"	66cm 26"	Finite 10.1cm 4"	17.9t 19.7UStON	17.5t 19.25UStON	6061-T6 aluminum 13.8 BAR 200 psi	- ■ ■	■	■	- ■*	■* -	- - □	*Optional X-Drive unit 26.7kN lift - 18v battery	resqjack.com
.4kg 4.1lb	81.2cm 32"	116cm 46"	Finite 35.5cm 14"	16.5t 18.2UStON	14.5t 15.95UStON	6061-T6 aluminum 13.8 BAR 200 psi	- ■ ■	■	■	- ■*	■* -	- - □	*Optional X-Drive unit 26.7kN lift - 18v battery	resqjack.com
.2kg 18lb	107cm 42.1"	162.5cm 64"	Finite 56cm 22"	15t 16.6UStON	12.4t 13.7UStON	6061-T6 aluminum 13.8 BAR 200 psi	- ■ ■	■	■	- -	- -	- - □		resqjack.com
.7kg 6lb	31cm 12.2"	-	-	17.9t 19.7UStON	-	6061-T6 aluminum -	- - -	■	-	- -	- -	- - □		resqjack.com
.6kg 8lb	61cm 24"	-	-	17.9t 19.7UStON	-	6061-T6 aluminum -	- - -	■	-	- -	- -	- - □		resqjack.com
5kg 11lb	92cm 36"	-	-	17.9t 19.7UStON	-	6061-T6 aluminum -	- - -	■	-	- -	- -	- - □		resqjack.com
.6kg 8lb	122cm 48"	-	-	17.9t 19.7UStON	-	6061-T6 aluminum -	- - -	■	-	- -	- -	- - □		resqjack.com

Small Base Plate | Large Anchor Base Plate | Multi-Head | Tripod Head

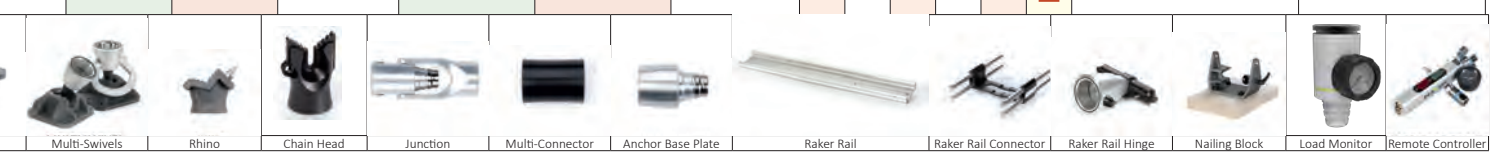
IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WI
	ProFix PMX470	RESQTEC		■■■	N/A	7 16
	ProFix PMX600	RESQTEC		■■■	N/A	8 1
	ProFix PMX880	RESQTEC		■■■	N/A	1 2
	ProFix PMX1400	RESQTEC		■■■	N/A	1 3
	ProFix PMX2300	RESQTEC		■■■	N/A	2 5
	ProFix Hyam250	RESQTEC		■■■	N/A	9 2
	ProFix 15cm Ext EX150	RESQTEC		■■■	N/A	1. 3
	ProFix 30cm Ext EX300	RESQTEC		■■■	N/A	2 5
	ProFix 60cm Ext EX600	RESQTEC		■■■	N/A	
	ProFix 90cm Ext EX900	RESQTEC		■■■	N/A	5 1
	ProFix 120cm Ext EX1200	RESQTEC		■■■	N/A	7 1
	ProFix 150cm Ext EX1500	RESQTEC		■■■	£0 $0 €0	8. 1

ProFix ACCESSORIES	RESQTEC									
		Static Foot	Swivel Foot	Monopod Head	Collumn Gantry	Powerplate	Crown	Beam Support	Edge Support	Fixed Base

STRUCTURAL SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	OPTIONS: CONNECT: PUSH-FIT PIN	OPTIONS: AUTO MANUAL LOCKING	OPTIONS: LIFT RATCHET ATTACHMENT	OPTIONS: MONITOR ELECTRIC RAISE	OPTIONS: TRIPOD BIPOD MONOPOD	NOTES	WWW.
.6kg 5.75lb	47cm 18.5"	66.3cm 26.1"	Finite 14.4cm 5.7"	30t 33UStON	30t 33UStON	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
.8kg 9.4lb	60cm 23.6"	91.4cm 36"	Finite 26.5cm 10.4"	30t 33UStON	30t 33UStON	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
1.7kg 5.8lb	88cm 34.6"	142.9cm 56.25"	Finite 50cm 19.7"	30t 33UStON	30t 33UStON	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
17kg 7.5lb	140cm 55.1"	238.6cm 94"	Finite 93.7cm 36.9"	30t 33UStON	30t 33UStON	Alu 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
26kg 7.3lb	230cm 90.5"	404.2cm 159"	Finite 169.3cm 66.65"	30t 33UStON	17.9t 19.8UStON	Alu Alloy 12 BAR 174 psi	- ■ ■	■	■	- -	- -	□ □ □		resqtec.com
.7kg 1.3lb	44.8cm 17.6"	70.2cm 27.6"	Finite 25.4cm 10"	22.6t 24.9UStON	22.6t 24.9UStON	Alu Alloy 700 BAR 10152 psi	■ - -	■	■	- -	- -	□ □ □		resqtec.com
.76kg 3.9lb	15cm 6"	-	-	30t 33UStON	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
.5kg 5.5lb	30cm 12"	-	-	30t 33UStON	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
4kg 9lb	60cm 23.7"	-	-	30t 33UStON	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
.5kg 2.2lb	90cm 35.6"	-	-	30t 33UStON	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
.2kg 5.9lb	120cm 47.4"	-	-	30t 33UStON	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □		resqtec.com
.75kg 9.3lb	150cm 59.2"	-	-	30t 33UStON	-	Alu Alloy -	- - -	■	■	- -	- -	□ □ □	oo	resqtec.com



IMAGES NOT to SCALE ■Vehicle ■Light Structural ■ Heavy Structural ●●● OK but ideal
□□□□ = OPTION item - can be purchased separately from the strut. ~ = Approximate
ADJUSTMENT INCREMENTS: The distance between each locking point. FINITE will lock at any point
PNEUMATIC = Pneumatically extended with compressed air, CO2, Nitrogen etc
MANUAL= extended by hand HYD = Hydraulically extended-NB: will impart high lift/push force
CONNECT: PUSH-FIT = No tools or pins needed to connect extensions or accessories.
PIN = a metal pin is manually placed to maintain the head/ext in position
AUTO = the strut will automatically follow & lock in the extended position MANUAL= Locks with pins or may be a screw-thread collar wound up manually to lock the strut in the extended position
LIFT= The strut will impart a pressurised lift RATCHET ATTACHMENT= Add-on strut-raising 'ratchet'
MONITOR: Load cell or load-shift alarm ELECTRIC RAISE Extends the strut remotely -No high lift force

	SERIES MODEL VARIANT Product Number	COMPANY	ORIGIN	USES	COST (each) £$€ = Currency conversion only- no duty or shipping etc.	WE
	Air Stabilizer D -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	11 25
	Air Stabilizer E -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	15 3
	Air Stabilizer AA -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	5 1
	Air Stabilizer A -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	6 1
	Air Stabilizer B -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	8 17
	Air Stabilizer C -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	9 2
	Air Stabilizer F -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	22 4
	Air Stabilizer FF -	SCORPE TECHNOLOGIES	■ ■	● ■ ■	N/A	2 5
	Air Stabilizer Ext 15 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	1 0
	Air Stabilizer Ext 30 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	2 0
	Air Stabilizer Ext 46 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	2 0
	Air Stabilizer Ext 61 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	3 0
	Air Stabilizer Ext 76 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	5 11
	Air Stabilizer Ext 91 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	N/A	7 10
	Air Stabilizer Ext 183 -	SCORPE TECHNOLOGIES	■ ■	■ ■ ■	£0 $0 €0	9 21

STRUCTURAL SHORING STRUTS

EIGHT	MIN RETRACTED LENGTH	MAX EXTENDED LENGTH	ADJUSTMENT INCREMENTS /STROKE	MAX WORK LOAD @min2:1 RETRACTED t=metric tonnes	MAX WORK LOAD @min2:1 EXTENDED t=metric tonnes	STRUT MATERIAL OPERATING PRESSURE	OPTIONS: PNEUMATIC MANUAL HYD	CONNECT: PUSH-FIT PIN	AUTO MANUAL LOCKING	LIFT RATCHET ATTACHMENT	MONITOR ELECTRIC RAISE	TRIPOD BIPOD MONOPOD	NOTES	WWW.
1.7kg 5.8lb	114cm 44.8"	170cm 66.9"	56cm 22.1"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
5.4kg 34lb	137cm 53.9"	213cm 83.8"	76cm 29.9"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.8kg 2.8lb	33cm 12.9"	46cm 18.1"	13cm 5.1"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.8kg 15lb	53cm 20.8"	71cm 27.8"	18cm 7.1"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.1kg 7.85lb	66cm 26"	94cm 37"	28cm 11"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.5kg 21lb	84cm 33.1"	124cm 48.8"	40cm 15.7"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
2.2kg 49lb	213cm 83.8"	335cm 131.9"	122cm 48"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
24kg 53lb	236cm 93.9"	366cm 144.1"	130cm 51.2"	0Ct 0UUSton	0Ct 0UUSton	6061-T6 aluminum 7.9-15 BAR 115-220 psi	- ■ ■	■	■	- -	- -	- - □		scorpe.net
.1kg 00lb	15cm 5.9"	-	-	00t 00UUSton	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.2kg 00lb	30cm 11.8"	-	-	00t 00UUSton	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.9kg 00lb	46cm 18.1"	-	-	00t 00UUSton	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.8kg 00lb	61cm 24"	-	-	00t 00UUSton	-	6061-T6 aluminum -	- ■ ■	■	-	- -	- -	- - □		scorpe.net
.4kg 1.9lb	76cm 29.9"	-	-	00t 00UUSton	-	6061-T6 aluminum -	- - -		-			- - -		scorpe.net
.4kg 6.3lb	91cm 35.8"	-	-	00t 00UUSton	-	6061-T6 aluminum -	- - -		-			- - -		scorpe.net
.9kg 1.8lb	183cm 72"	-	-	00t 00UUSton	-	6061-T6 aluminum -	- ■ ■					- - -		scorpe.net

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option COSTs are approximate as purchase is normally in bulk via agency					
COMPANY	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**
MODEL	**12" Base Plate**	**8" Base Plate**	**Adj Angled Foot**	**23° foot**	**Grizzly End**
PRODUCT CODE	ART.500.207	ART.500206	ART.500207.X	ART.AS.23SW	ART.GS.104
HEAD MID FOOT FITS to SERIES	Grizzly, Kodiak Tornado	Grizzly, Kodiak Tornado	Grizzly, Kodiak Tornado	Grizzly, Kodiak Tornado	Grizzly, Kodiak Tornado
ORIGIN					
Approx **COST** each	£460 $620 €535	£420 $560 €490	£420 $560 €490	£440 $580 €510	£380 $510 €445
WEIGHT	3.5kg 7.7lb	2.6kg 5.7lb	2.5kg 5.5lb	2.6kg 5.7lb	1.8kg 4lb
DIMENSIONS	30.5 x 30.5 x 6cm 12 x 12 x 2.5"	20 x 20 x 6cm 8 x 8 x 2.5"	20 x 20 x 6cm 8 x 8 x 2.5"	20 x 20 x 6cm 8 x 8 x 2.5"	15 x 15 x 10cm 6 x 6 x 4"
NOTES	Originally coded as ART.AS.129P	Originally coded as ART.AS.128P	Originally coded as ART.AS.130P		Despite the name, will fit Tornado struts as well
WWW.	genesisrescue.com	genesisrescue.com		genesisrescue.com	genesisrescue.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY		**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**
MODEL		**Hydraulic Pump**	**Ratchet**	**OmniLock Nut**	**Flat Saddle**
PRODUCT CODE		PA09H2S10 / 150.142.066	R24 / 151.002.332	OL01 / 151.002.355	HPL130 / 151.002.292
HEAD MID FOOT FITS to SERIES		Omnishore	Omnishore	Omnishore	Omnishore
ORIGIN					
Approx **COST** each		n/a	n/a	n/a	n/a
WEIGHT		8.9kg 19.6lb	13.2kg 29.1lb	1.9kg 4.2lb	0.4kg 0.9lb
DIMENSIONS		86.5 x 20 x 18.5cm 34.1 x 7.9 x 7.3"	86.9 x 33.9 x 30cm 34.2 x 13.3 x 11.8"	12.1 x 10.4 x 13.3cm 4.8 x 4.1 x 5.2 "	7.4 x 9.7 x 9.7 cm 2.9 x 3.8 x 3.8"
NOTES		2-stage pump (other variations available) 720/72 (bar/Mpa) 10443 psi	For use of Omnishore in vehicle stabilisation	Converts a standard Omnishore strut to auto locking	head or foot support of a strut against a flat surface
WWW.		holmatro.com	holmatro.com	holmatro.com	holmatro.com

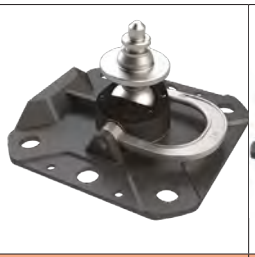
SHORING STRUT HEADS, FEET & ACCESSORIES

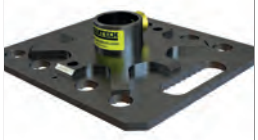
GENESIS RESCUE	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**	**GENESIS RESCUE**
Flat Base	**3" Angle**	**4" Channel**	**6" Channel**	**60° Clevis**	**5' Raker**
ART.AS.FB	ART.AS.141P	ART.AS.125P	ART.AS.126P	ART.AS.140P	ART.AS.RR150
Grizzly, Kodiak Tornado	**Grizzly, Kodiak Tornado**	**Grizzly, Kodiak Tornado**	**Grizzly, Kodiak Tornado**	**Grizzly, Kodiak Tornado**	**Grizzly, Kodiak Tornado**
n/a	£360 $480 €420	£380 $510 €445	£420 $560 €490	£480 $640 4560	£520 $690 €600
00kg 00lb	1.8kg 4lb	1.8kg 4lb	2.2kg 4.8lb	2.5kg 5.5lb	6.5kg 14lb
00cm 00"	15 x 10 x 8cm 6 x 4 x 3"	15 x 10 x 10cm 6 x 4 x 4"	20 x 15 x 10cm 8 x 6 x 6"	20 x 10 x 8cm 8 x 4 x 3"	152cm 60"
	Also coded as ART.AS. 3AC	Also coded as ART.AS.4C	Also coded as ART.AS.6C	Also coded as ART.AS.60C	
genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com	genesisrescue.com
HOLMATRO	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**
Beam Support	**Load Indicator**	**Strut Clamp**	**Column Clamp**	**BiPod Head**	**Mono-Pod Head**
HPL120/ 151.002.312	LSE01 /	CLA90 / 151.002.301	CLA90C / 151.002.494	POD02 / 151.002.444	POD01 / 151.002.445
Omnishore	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**
n/a	n/a	n/a	n/a	n/a	n/a
2.2kg 4.9lb	4kg 8.8lb	2.1kg 4.6lb	3.9kg 8.6lb	5.5kg 12.1lb	3.2kg 7.1lb
17.4 x 20 x 20cm 6.9 x 7.9 x 7.9"	24.2 x 17.6 x 12cm 9.5 x 6.9 x 4.7"	27.9 x 15.3 x 9.7cm 11 x 6 x 3.8"	30.7 x 32.3 x 5cm 12.1 x 12.7 x 2"	28.3 x 18.9 x 13,8cm 11.1 x 7.4 x 5.4"	28.1 x 12.4 x 12.4cm 11.1 x 4.9 x 4.9"
For wooden beams up to 6"/150mm	attach between struts and heads/base plates to show applied load	To link struts in reinforcing systems	Retains three struts as a vertical column support	Rope systems Bi-pod/A-frame. 5-eye Rig plate + 4x Anchor eyes. Use with monopod for Tripod	Rope systems Mono-pod/ Gin-pole. Use with Bipod for Tripod
holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option COSTs are approximate as purchase is normally in bulk via agency					
COMPANY		**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**
MODEL		**Wireless Controller**	**Omnilock Drive**	**Power Station**	**Multi Head**
PRODUCT CODE		WLC50 / 151.004.101	OL02 / 151.002.361	PS01 / 151.002.244	HPL140 / 151.004.176
HEAD MID FOOT FITS to SERIES		**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**
ORIGIN					
Approx **COST** each		n/a	n/a	n/a	n/a
WEIGHT		0.8kg 1.8lb	4.1kg 9lb	2.7kg 6lb	1.8kg 4lb
DIMENSIONS		29.1 x 18.2 x 5.9cm 11.5 x 7.2 x 2.3"	22.8 x 18.9 x 13 cm 9 x 7.4 x 5.1"	30 x 22.5 x 17.9cm 11.8 x 8.9 x 7"	13.2 x 10.2 x 9.7cm 5.2 x 4 x 3.8"
NOTES		wireless remote control	Operate struts from push buttons on this drive powered by the Power Station & remote control	Hard-wire power connection to up to 4 struts	
WWW.		holmatro.com	holmatro.com	holmatro.com	holmatro.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**PARATECH**
MODEL	**Raker Rail Pin**	**Waler Rail**	**Raker Rail**	**Nailing Pad**	**Strut Converter**
PRODUCT CODE	RRP01 / 151.002.501	WR01 / 151.004.140	RR150 / 151.002.296	CLA90N / 151.002.302	22-796035
HEAD MID FOOT FITS to SERIES	**Omnishore**	**Omnishore**	**Omnishore**	**Omnishore**	**Hydra/**
ORIGIN					
Approx **COST** each	n/a	n/a	n/a	n/a	n/a
WEIGHT	0.5kg 1.1lb	22.9kg 50.5lb	8.9kg 19.6lb	3.5kg 7.7lb	2.3kg 5.1lb
DIMENSIONS	20.7 x 4.4 x 3cm 8.2 x 1.7 x 1.2"	211 x 24.3 x 9cm 83.1 x 9.6 x 3.5"	165.4 x 20.7 x 6.2cm 65.1 x 8.2 x 2.4"	40x 30 x 15.2cm 15.7 x 11.8 x 6"	18 x 10 x 10cm 7 x 4 4"
NOTES	to attach bases to a Raker Rail or to connect a second rail.	for trench/wall support	for load spreader plate for walls	attach to strut for nailing of timber supports/braces	For attaching accessory head/base to a Hydrafusion Strut.
WWW.	holmatro.com	holmatro.com	holmatro.com	holmatro.com	paratech.com

SHORING STRUT HEADS, FEET & ACCESSORIES

					
HOLMATRO	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**
Swivel BASE	Swivel Base with D	Bipod Base	Rigid Base	Thrust Block TRB02	Inside L-Trench Block
BPL10 / 151.002.194	BPL11A / 151.002.213	BPL12 / 151.002.365	BPL30 / 151.002.229	TRB02 / 151.002.288	TRB01 / 151.002.344
Omnishore	Omnishore	Omnishore	Omnishore	Omnishore	Omnishore
n/a	n/a	n/a	n/a	n/a	n/a
2.1kg 5.6lb	5.2kg 11.5lb	5.8kg 12.8lb	1kg 2.2lb	7kg 15.4lb	4.4kg 9.7lb
17.4 x 15 x 15cm 6.9 x 5.9 x 5.9"	16.6 X 30 X 30cm 6.5 x 11.8 x 11.8"	12.9 x 30 x 30cm 5.1 x 11.8 x 11.8"	8.8 x 15 x 15cm 3.5 x 5.9 x 5.9"	23.6 x 27 x 22cm 9.3 x 10.6 x 8.7"	15.8 x 30 x 20cm 6.2 x 11,8 x 7.9"
for <65° support	For support against angled surface up to 50° Also available without D-Ring	HD d-ring for ratchet/chain etc. & ground anchor holes	Fixed orientation with holes for nailing on vertical surfaces or stakes in ground.	For attachment of two struts to construct a solid raker. Ground anchor holes.	For attachment of two struts to secure a corner in an L-trench. With nail holes and HD D-ring for ratchet/chains
holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com
PARATECH	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
ock/Acme 3"Converter	Sprung Connect	Adj Threaded Connector	Longshore Converter	12" Hinged Ground Plate	6" 45°Hinge Base
22-796710	22-796170	22-796160	22-796037	22-796180R/ 22-796180C	22-796150..140
Lockstroke, Acme Thread	Lockstroke	Lockstroke	Longshore	All	All
n/a	£150 $200 €175	£150 $200 €175	£240 $320 €0	£320290 $410380 €370340	£210190 $300260 €245220
1.8kg 4lb	1kg 2.2lb	1kg 2.2lb	2kg 4.4lb	5.44.5kg 1210lb	2 1.7kg 4.5 3.8lb
15 x 8 x 8cm 6 x 3 x 3	10 x 6 x 6cm 4 x 2.4 x 2.4"	10 x 6 x 6cm 4 x 2.4 2.4"	15x8x8cm 6x3x3"	30.4cm 12"	15.2cm 6"
Converts an extension to a stand-alone, fixed-length strut. To fit Acme Thread AND/OR LockStroke Struts	?			180° Swivel base without anchor eye on 22-796180C version	22-796140 excludes D-ring
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option COSTs are approximate as purchase is normally in bulk via agency					
COMPANY	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
MODEL	12" Swivel Ground Plate	6" 20° Swivel Base	12" Rigid Ground Plate	6" Rigid Base	Rubber Pad
PRODUCT CODE	22-796180B	22796060	22-796180A	22796050	22-798A00
HEAD MID FOOT FITS to SERIES	All	All	All	All	All
ORIGIN					
Approx **COST** each	£300 $380 €350	£170 $230 €200	£270 $340 €315	£150 $200 €175	£90 $120 €105
WEIGHT	4.2kg 9.3lb	1.3kg 2.8lb	3.9kg 8.6lb	1.3kg 2.8lb	0.5kg 1.1lb
DIMENSIONS	30.4cm 12"	15.2cm 6"	30.4cm 12"	15.2cm 6"	17.1 x 11 x 2cm 6.75 4.3 x 0.8"
NOTES					To buffer the interface between head/foot and shored surface particularly on ships and sheet metal
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
MODEL	3/8" Chain Wedge	Contour Base	V-Base	Cone Base	Offset Cone Base
PRODUCT CODE	22-796130	22-796270	22-796090	22-796080	22-796560
HEAD MID FOOT FITS to SERIES	All	All	All	All	All
ORIGIN					
Approx **COST** each	£160 $210 €185	£200 $260 €235	£95 $120 €110	£140 $180 €165	£150 $200 €175
WEIGHT	1kg 2.2lb	0.7kg 1.8lb	0.6kg 1.4lb	0.5kg 1.2lb	0.5kg 1.2lb
DIMENSIONS	15 x 8 x 6cm 6 x 3.1 x 2.4"	12 x 12 x 4cm 4.7 x 4.7 x 1.6"	10 x 10 x 4cm 4 x 4 x 1.6"	9 x 9 x 8cm 3.5 x 3.5 x 3.1"	10 x10cm 4 x 4"
NOTES	Captures chain links for adjustable length For Vehicle Stabilisation.	Contour grips surfaces in vehicle extrication	90° V will fit any right angled surface	Will dig into sheet metal, concrete & tarmac/asphalt	Will dig into sheet metal, concrete & tarmac/asphalt
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

SHORING STRUT HEADS, FEET & ACCESSORIES

PARATECH	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
6" Channel Base Metric	4" Channel Base Metric	Angle Base	Multi-Chain base	Multi-Base Anchor	Convex Multi-Base
22796136.....133	22796134.....131	22-796092	22-796685	22-796025	22-796269
All	All	All	Vehicle Stab	Vehicle Stab	All
£170 $230 €200	£155 $210 €180	£100 £130 €120	£230 $300 €265	£180 $240 €210	£210 $280 €245
1.1kg 2.5lb	0.9/2kg 2/2lb	0.7kg 1.6lb	1.64kg 3.16lb	0.9kg 2lb	1.48kg 3.26lb
18 x 16 x 6cm 6 x 6 x 2.4"	15.2 x 10 x 5cm 4 x 4 x 2"	10 x 10 x 4.5cm 4 x 4 x 1.8"	15.2 x 15.2 x 5.1cm 6 x 6 2"	12 x 12 x 4cm 4.7 x 4.7 x 1.6"	17.2cm 6.76"
beam support. metric is slightly larger than the imperial versions	beam support. metric is slightly larger than the imperial versions	beam and 90° edge support	For Vehicle Stabilisation. Takes both 3/8" (9.5mm) and 1/2" (12.7mm) either round or square chain	For Vehicle Stabilisation.	For Vehicle Stabilisation. inc Cone Pike, V Shape Notch, Two J Hook Pockets, Convex Gripping Surface, 1" (25.4 mm) Shackle Hole,3/8 in (9.52 mm) Chain Wedge
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com
PARATECH	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	
Spike Base	Rubber Base	Angled Rubber Base	Monopod	Monopod Tri-Anchor	
22-797687	22-796190	22-796266	22-796540	22-796295	
All	All	Acme Thread, Lock Stroke	All	All	
£140 $180 €165	£160 $210 €185	£140 $180 €165	£760 $980 €880	£360 $470 €420	
0.5kg 1.2lb	1.2kg 2.7lb	0.8kg 1.7lb	3.2kg 7lb	4.1kg 9lb	
9 x 9 x 8cm 3.5 x 3.5 x 3.1"	10.2cm 4"	12 x 12 x 3cm 4.7 x 4.7 x 1.2"	20 x 15 x 12cm 8 x 6 x 4.7"	30.5 x 30.5 x 2.5cm 12 x 12 x 1"	
Will dig into sheet metal, concrete & tarmac/asphalt	Provides grip on hard surfaces	Use in conjunction with Elevator supports	4 attachment rings + integral pulley. MBS 18kN per guy ring. Use with Tri-Anchor for hi-loads	High-strength anchor for monopod head. 3 attachment rings, MBS 88kN per ring	
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option COSTs are approximate as purchase is normally in bulk via agency					
COMPANY	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
MODEL	Monopod Angle Base	Monopod Roof Plate	Monopod Hitch Base	Bipod Base	BiPod Head
PRODUCT CODE	22-796590	22-796570	22-796575	22-796180E	22-796820
HEAD MID FOOT FITS to SERIES	All	Longshore	Longshore	Longshore	Longshore
ORIGIN					
Approx COST each	£360 $470 €420	£540 $700 €630	£480 $620 €560	£300 $390 €350	£1200 $1600 €1390
WEIGHT	3.2kg 7lb	6.4kg 14lb	6.1kg 13.4lb	5kg 11.1lb	15kg 33lb
DIMENSIONS	20 x 15cm 8 x 6"	61 x 30.5cm 24 x 12"	35 x 15 x 12cm 13.8 x 6 x 4.7"	30.5cm 12"	40 x 25 x 15cm 15.7 x 9.8 x 5.9"
NOTES	For mounting on a building or lift-shaft edge	Base for mounting/securing to a flat or sloping surface. Holes for bolts and/or pick-ets/stakes	For mounting to a vehicle 2x2" Tow Hitch frame. Plunge-pin locks rotation into 1 of 8 positions	For use with bipod but can be used as monpod/ tripod base with angle limitations	Use with 2x Bipod Bases to create A-frame
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY		**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
MODEL		Angled End	Rubber Corner End	RubberAngled End	Rubber End
PRODUCT CODE		22-798E06	22-798E08	22-798E10	22-798E00
HEAD MID FOOT FITS to SERIES		Damage Control System	Damage Control System	Damage Control System	RSS/ Damage Control System
ORIGIN					
Approx COST each		£210 $280 €245	£55 $70 €65	£55 $70 €65	£50 $65 €60
WEIGHT		1.8kg 4lb	0.4kg 0.9lb	0.4kg 0.9lb	0.35kg 0.8lb
DIMENSIONS		15x10x8cm 5x4x3.1"	10x10x4cm 4x4x1.6"	10x10x4cm 4x4x1.6"	10x10x3cm 4x4x1.2"
NOTES					
WWW.		paratech.com	paratech.com	paratech.com	paratech.com

SHORING STRUT HEADS, FEET & ACCESSORIES

PARATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
Tripod Head	Elevator Supports L or R	Dual Articulating Base	Clamp 335 & Clevis	Column Base/Head	Column Clamp
22-796010	22-796260L ...R	22-796180D	22-798C20 22-796330	22-796680	22-798C10
All*	Acme Thread, Lock Stroke	All	RSS/AcmeThread, LockStroke, Longshore	All	All
£950 $1250 €1100	£480 $620 €560	£720 $900 €835	£320 $420 €370	£620 $780 €720	£340 $450 €395
4.1kg 9lb	3.9kg 8.5lb	11.7kg 25.8lb	3/2.3kg 6.6/5lb	8.3kg 18.2lb	3.2kg 7lb
30 x 30 x 12cm 12 x 12 x 4.7"	00cm 00"	61 x 30.5cm 24 x 12"	20 x 10 x 8cm 8 x 4 x 3.1"	40.6 x 40.6cm 16 x 16"	25x15x12cm 10x6x4.7"
Single swivel anchor eye. Acme strut can be inserted in top receiver to extend support height *mainly for use with Amce/Longshore	Left &/or right arm for support of stalled/stuck elevator. individually coded/ purchased		flying raker and mid-point bracing. Tightener can be a wing-nut.	Attaches to 3 struts to create column support	Ties the centre of 3 struts in a column support
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

PARATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
Rail End 02	Rail End 04	Raker Rail Latch Brace	Latch Holder	Inside Thrust Block	Outside Thrust Block
22-798E02	22-798E04	22-796250	22-796689	22-796401	22-796B02
RSS/ Damage Control System	RSS/ Damage Control System	RSS/ Damage Control System	All	All	All
£120 $160 €140	£140 $185 €165	£210 $280 €245	£0 $0 €0	£0 $0 €0	£210 $280 €0
0.9kg 2lb	1.1kg 2.4lb	1.5kg 3.2lb	2.1kg 4.6lb	4.7kg 10.4lb	2.2kg 4.8lb
12x10x5cm 4.7x4x2"	15x10x5cm 6x4x2"	18 x 11 x 8cm 7.1 x 4.3 x 3.1"	38.1cm 15"	00cm 00"	18x12x10cm 7x4.7x4"
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE
Ext = Fixed length
Extension strut
= Option

COSTs are approximate as purchase is normally in bulk via agency

COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Clamp 335 - wood	Raker Angle Base	Raker Rail 2	Raker Rail 4	Raker Rail 6
PRODUCT CODE	??	22-796475	22-796258A	22-796258B	22-796258C
HEAD MID FOOT FITS to SERIES	All	All	RSS,Longshore	RSS, Longshore	RSS, Longshore
ORIGIN					
Approx COST each	£0 $0 €0	£0 $0 €0	£260 $340 €300	£380 $500 €440	£520 $680 €600
WEIGHT	00kg 00lb	2.5kg 5.6lb	3.2kg 7lb	6.2kg 13.7lb	9.4kg 20.7lb
DIMENSIONS	00cm 00"	00cm 00"	61 x 7 x 5cm 2ft x 2.8" x 2"	122 x 7 x 5cm 4ft x 2.8" x 2"	183 x 7 x 5cm 6ft x 2.8" x 2"
NOTES					
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE
Ext = Fixed length
Extension strut
= Option

COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Strut Driver	Strut Driver	Strut Driver Handle	Load Monitor	Angel Load Alarm
PRODUCT CODE	22-796200SD	22-796202SD	22-797727	22-796500	XX
HEAD MID FOOT FITS to SERIES	RSS/Acme Thread	RSS/Acme Thread	RSS/Acme Thread	All	All
ORIGIN					
Approx COST each	£180 $240 €210	£0 $0 €0	£720 $950 €835	£420 $560 €540	£900 $1200 €1050
WEIGHT	10.2kg 22.6lb	13.4kg 29.6lb	0.8kg 1.8lb	1.2kg 2.6lb	0.7kg 1.5lb
DIMENSIONS	00cm 00"	00cm 00"	20 x 8 x 5cm 8 x 3 x 2"	12x 8 x 6cm 4.7 x 3 x 2.4"	12x 8 x 6cm 4.7 x 3 x 2.4"
NOTES	Fits 64-91cm Strut	Fits 94-147cm Strut	Fits 94-147cm Strut	Provides loading details through the strut	provides loading and alarm sensors for excess loading and system failure/move-ment
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

SHORING STRUT HEADS, FEET & ACCESSORIES

PARATECH	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**	**PARATECH**
Raker Rail 8	**Rail Junction Base**	**Rail Junction**	**Raker Splice Brace**	**45° End**	**Hydraulic Pump**
22-796258D	22-796290	22-796280	22-796300	22-796D45	22-790020
RSS, Longshore	**RSS/Longshore**	**RSS/Longshore**	**RSS/Longshore**	**RSS/Longshore**	**Hydrafusion**
£520 $680 €600	£260 $340 €300	£300 $390 €350	£280 $370 €0	£220 $290 €0	£1950 $2550 €0
12.7kg 28lb	3.3kg 7.3lb	4.4kg 9.7lb	3kg 6.6lb	1.9kg 4.2lb	8kg 17.6lb
244 x 7 x 5cm 8ft x 2.8" x 2"	25 x 15 x 11cm 9.8 x 5.9 x 4.3"	28 x 18 x 13cm 11 x 7.1 x 5.1"	22 x 12 x 10cm 6.7 x 4.7 x 4"	15 x 10 x 8cm 6 x 4 x 3"	35 x 25 x 20cm 13.8 x 9.8 x 7.9"
					With gauge with 10ft hose up to 690bar/10,000psi
paratech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE
Ext = Fixed length
Extension strut
= Option

COSTs are approximate as purchase is normally in bulk via agency

COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
MODEL	Waler 18"	Waler 6ft	Waler 8ft	Spot Waler	Waler Connector
PRODUCT CODE	22-796295	22-796281	22-796283	22-796295	22-796287
HEAD MID FOOT FITS to SERIES	ALL	ALL	ALL	ALL	ALL
ORIGIN					
Approx COST each	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
WEIGHT	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
DIMENSIONS	45.7 x 7 x 5cm 18 x 2.8 x 2"	183 x 7 x 5cm 6ft x 2.8" x 2"	244 x 7 x 5cm 8ft x 2.8" x 2"	00cm 00"	00cm 00"
NOTES					
WWW.	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

IMAGES NOT to SCALE
Ext = Fixed length
Extension strut
= Option

COMPANY	PROSPAN	PROSPAN	PROSPAN	PROSPAN	PROSPAN
MODEL	extension long	xx	xx	xx	xx
PRODUCT CODE	TASS-EXT24	TASS-CH01	XX	TASS-VH01	TASS-BP01
HEAD MID FOOT FITS to SERIES	Prospan	Prospan	Prospan	Prospan	Prospan
ORIGIN					
Approx COST each	£300 $390 €350	£170 $220 €200	£0 $0 €0	£160 $210 €185	£180 $240 €210
WEIGHT	4.5kg 10lb	1kg 2.2lb	00kg 00lb	1.2kg 2.2lb	2.5kg 5.5lb
DIMENSIONS	60x6x6cm 24x2.5x2.5"	12x10x8cm 5x4x3"	00cm 00"	15x10x8cm 6x4x3"	20x20x5cm 8x8x1.2"
NOTES			WLL		
WWW.	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com

SHORING STRUT HEADS, FEET & ACCESSORIES

PARATECH		**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**
Waler Stop Block		xx	xx	xx	extension short
22-796285		XX	XX	XX	TASS-EXT12
RSS		Prospan	Prospan	Prospan	Prospan
£160 $210 €185	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£220 $290 255
1.5kg 3.3lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	2.5kg 5.5lb
18 x10 x 8cm 7 x 4 x 3"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	30x6x6cm 12x2.5x2.5"
paratech.com		prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com

PROSPAN	**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**
xx	Swivel End	4-Shore Wall Mount	2-Shore Wall Mount	Swivel Wale Plate	Gantry Column Plate
XX	PRO-SEA	PRO-QUAD	PRO-DUO	PRO-SWBP	PRO-GCPLT
Prospan	Prospan	Prospan	Prospan	Prospan	Prospan
£0 $0 €0	£0 $169 €0	£0 $0 €0	£0 $237 €0	£0 $237 €0	£0 $0 €0
00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
					Requires 3x Clevis to attach to strut-legs for tripod or use two (top & bottom) as a column support
prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option COSTs are approximate as purchase is normally in bulk via agency					
COMPANY	**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**	**PROSPAN**
MODEL	Base Plate	Raker Base Plate	Baseplate Timber Block	Raker-Rail Splice	2xRaker Nailing Blocks
PRODUCT CODE	TASS/PRO-BP10	PRO-RRBP	PRO-BPTB	PRO-RRSPL	PRO-RRNB
HEAD MID FOOT FITS to SERIES	TASS/Prospan	Prospan	Prospan	Prospan	Prospan
ORIGIN					
Approx **COST** each	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
WEIGHT	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
DIMENSIONS	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
NOTES					
WWW.	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com	prospanshoring.com

IMAGES NOT to SCALE Ext = Fixed length Extension strut = Option					
COMPANY	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RESQTEC**
MODEL	profix block head	rubber protection pad	strap kit	stabilisation kit	extension tube
PRODUCT CODE	PF-HB01	PF-RP01	PF-SK01	PF-SH01	PF-EXT20
HEAD MID FOOT FITS to SERIES	ProFix	ProFix	ProFix	ProFix	ProFix
ORIGIN					
Approx **COST** each	£220 $290 €255	£110 $150 €130	£280 $370 €325	£260 $340 €300	£300 $390 €350
WEIGHT	1.5kg 3.3lb	0.8kg 1.7lb	4kg 8.8lb	2kg 4.4lb	3.5kg 7.7lb
DIMENSIONS	15X10X8cm 6X4X3"	15X12X3cm 6X5X1.2"	40X30X12cm 16X12X5"	18X12X10cm 7X5X4"	50X6X6cm 20X2.5X2.5"
NOTES	Load capacity 4.4 USt	Load capacity 4.4 USt	Load capacity 0.9 USt	Load capacity 4.4 USt	Load capacity 4.4 USt
WWW.	resqtec.com	resqtec.com	resqtec.com	resqtec.com	resqtec.com

SHORING STRUT HEADS, FEET & ACCESSORIES

RES-Q-JACK	**RES-Q-JACK**	**RES-Q-JACK**	**RES-Q-JACK**	**RES-Q-JACK**	**RES-Q-JACK**
Static Foot	Swivel Foot	Small Base Plate	Large Anchor Base Plate	Multi-Head	Tripod Head
XX	XX	XX	XX	XX	XX
SuperX	SuperX	SuperX	SuperX	SuperX	SuperX
£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0
00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb
25 x 25 x 5cm 10 x 10 x 2"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"
resqjack.com	resqjack.com	resqjack.com	resqjack.com	resqjack.com	resqjack.com
RESQTEC	**RESQTEC**	**RESQTEC**	**RESQTEC**	**SCORPE**	
XX	XX	XX	XX	XX	
XX	XX	XX	XX	XX	
ProFix	ProFix	ProFix	ProFix	Air Stabilizer	
£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	£0 $0 €0	
00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	00kg 00lb	
00cm 00"	00cm 00"	00cm 00"	00cm 00"	00cm 00"	
Load capacity 0.9 USt	Load capacity 4.4 USt	Load capacity 4.4 USt	Load capacity 0.9 USt		
resqtec.com	resqtec.com	resqtec.com	resqtec.com	scorpe.net	

'pneumatic' HIGH- PRESSURE AIRBAGS

Outwardly, high pressure lifting bags, or more accurately, cushions, have changed little since their introduction in the 70s save for the incorporation of more technical and robust fibres like the Kevlar derivatives . Otherwise you are looking at a robust and thickly walled rubber square or circle that is inflated using a compressed air cylinder. Placed beneath a vehicle or under a concrete plinth it has enough power to lift between 2 and >135metric tonnes (150 US tons). But don't be fooled by the simplicity of a high pressure bag because placing and using them requires a wise hand. Like hydraulic tools they apply the least load at their greatest size and in the case of a bag, the point-load area diminishes as it inflates. What starts out as a broadly supported load across perhaps two thirds of the bag's width when it is less than half inflated can become only a few inches across at maximum inflation - this can lead to dangerously high loads on the target load, dangerously high loads on a small area of the bag and possibly dangerously unstable such that the load could shift or it could simply 'squeeze' the bags at an angle and eject them with great force - all three of these scenarios are why you should ALWAYS FOLLOW YOUR LIFT with cribbing/stabilisation of some form to capture the progress made should something go wrong. In the image above you can see another key consideration - that of synchronised lifting - you can have separate hoses running through a common cylinder(s) and valve and then to a multiple controller handled by one operator or separate hoses, valves and controls for each.

It is vital to work within the stated capacities of the bags because unlike a hydraulic tool that will simply stop working adequately when overloaded, most high-pressure air bags do not have any form of pressure release that doesn't involve possible serious injury to those around it. Ironically, the low and medium pressure airbags at only 1Bar or less often do have a pressure release valve but that is more to protect the bag than the operator. If in any doubt, use this imperial conversion formula to calculate the approximate lift capacity of any given bag, then err on the side of caution!:

L" x W" x operating pressure (psi) = lift capacity in lbs
eg. 26"x 26" = 676
676 x 116 (psi) = 78416'bs/39.2t(US)/35.5tonne

The main consideration in using an airbag is to differentiate between the **maximum lift capacity when the bag is at its lowest lift height** (when the maximum surface area of bag is in contact with the load) and that which is achievable when the bag is at maximum height. As the bag is inflated it forms the familiar dome shape and as less bag is in contact, less weight can be lifted. In fact at the highest point of the highest capacity bag listed here (the rather non-standard NT8) the amount that can be lifted is only about 6 tonnes compared to the 132 tonnes it can lift at only 70mm/3 inches inflation height.

Most bags have a Kevlar/Aramid mesh (used to be a steel mesh) interlace in their construction which resists intrusion of the load to some extent - the so-called 'sling-effect'. Use of an intermediate protective metal plate is debatable as the rounded bag can easily destabilize and jettison a 'slippery' metal plate. The very first bag to overcome this was the *Zumro* (now *Resqtec*) *NT* bags with an integrated metal plate enabling inter-connection of bags and in some cases a single air feed to all 2, 3 or 4 bags in the stack though greater control and safety would be with separate hose attachments to each. The metal connecting plate also affords much greater protection and a guaranteed flat top and bottom surface offering good protection against a sharp surface. This concept is now used by other manufacturers like the *Vetter* bags on the left where you can

see that, were they not strongly connected by a screw-on metal plate between each bag this 3-stack configuration would struggle to remain in place. In our tables we have listed such connecting bags as **CONNECT** but most simpler bags will **STACK** at least two up and hold well on the substantial grip patterns that are moulded into their upper and lower surfaces but only at the lower inflation pressures with plenty of surface area in contact with each other - inflate too much and the grip area minimises and it is like trying to balance two basketball on top of each other and then an elephant on top of that! Lift height requirements can be under-estimated because the maximum quoted height may involving a point load rather than broad surface lift and this may flatten under heavy load - reducing the actual lift height or the target load may have some flex and deflect/become concave thus requiring greater lift height to move the entire load. Most small to mid-size bags only lift a few inches. If the lift distances are great you may want to consider either a low pressure air bag or a hard metal jack or shore. The latter won't deflect or 'bounce', they provide some degree of auto-cribbing and negate the need to stack bags. Stacking is best avoided altogether. If you must stack to achieve your lift objective always place the largest bag on the base and inflate that fully first before inflating the next one up. Avoid using more than 2 bags except under exceptional circumstances that probably won't be covered by the bag manufacturer's warranty. Obvious exceptions to this advice are the hard-connect bags which are designed to be used two, three or even four bags high and the con-joined bags like *Paratech's MultiForce* above

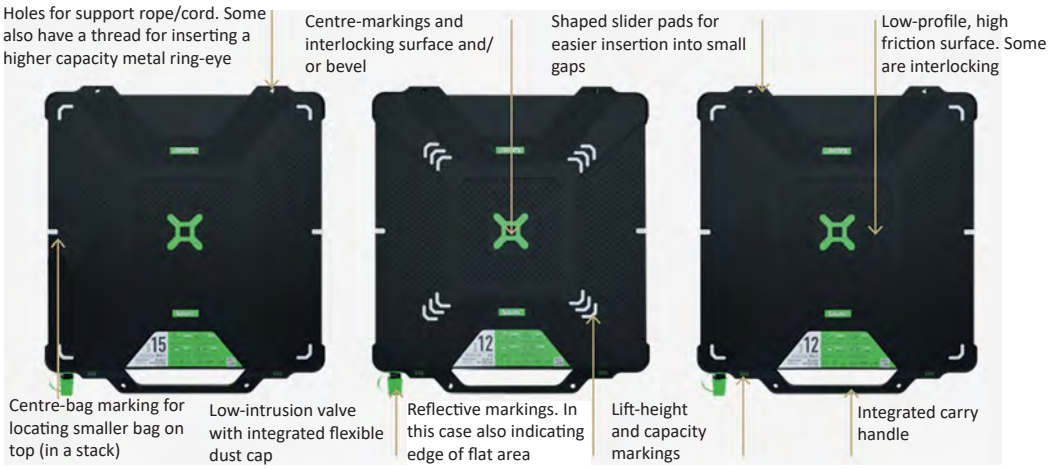
which looks like two bags but is actually one, dual chambered bag. This model also features a hard-handled base with wheels to make it easier to place remotely with a push-pole. Note that the base bag inflates fully first to establish a firm base and grip on the target load before the top bag inflates to provide the lift.

Some bags have a surface pattern that not only provides increased traction but actively interlocks with a stacked bag making them more stable in a stack lift. Most bags have a pronounced dimpled surface or cross-hatch to increase purchase on the load and this will also provide some degree of interlock. Use cribbing or a load-bearing platform beneath Pneumatic airbags to perform lifts at height and be sure to follow up your lifts with cribbing or support struts in case of bag failure or to allow removal and relocation.

LANCO

TentTech · DeconTech · FlexTank

Whether your bags have a square edge profile, which some argue pushes dirt and debris away, or a round edge which pushes into spaces easier, you will need at least half an inch/2.5cm or more clearance in which to insert the bag so consider initial use of a wedge or spreaders to gain the necessary initial insertion height. This is such a key requirement of any lifting operation that we have highlighted the minimum insertion height for each bag at the end of the DIMENSIONS figures in pink.



In recent years we have seen some improvements in design and ergonomics of square high pressure bags leading to something of a two-tier option in many ranges - traditional (albeit enhanced) bags or cushions at the more affordable end and the more sophisticated and expensive bags with extra features like a carry handle, rigging eye (for rope/cord), enhanced markings giving lift capacities and heights etc. (markngs may also be on the side to identify in a stored stack) as on these *Holmatro* and *Paratech* bags, and an engineered surface that has greater traction and usually a flatter profile when inflated (hence the term 'flat bag'. The *Trelleborg/SAVA* images at the top detail these features but some features, like a profiled/ textured surface and reflective markings are also present on the cheaper, traditional airbags. Note that the *Holmatro* airbags operate at both 8 and 12 bar pressures so have two sets of lift capacities depending on what pressure you use.

Finally, don't forget that lifting is only one of an airbag's capabilities it is equally, if not more, adept at sealing and stabilising by pushing against a restraint - in the case of the leaky tanker on the right, the bag pushes a seal-pad against the hole and against two ratchet straps. In trench rescue they can often be used to provide support for emergency trench boards pushing against the back wall rather than having to backfill or place short shores because they are much easier to place remotely without exposing rescuers to the dangers of further collapse.

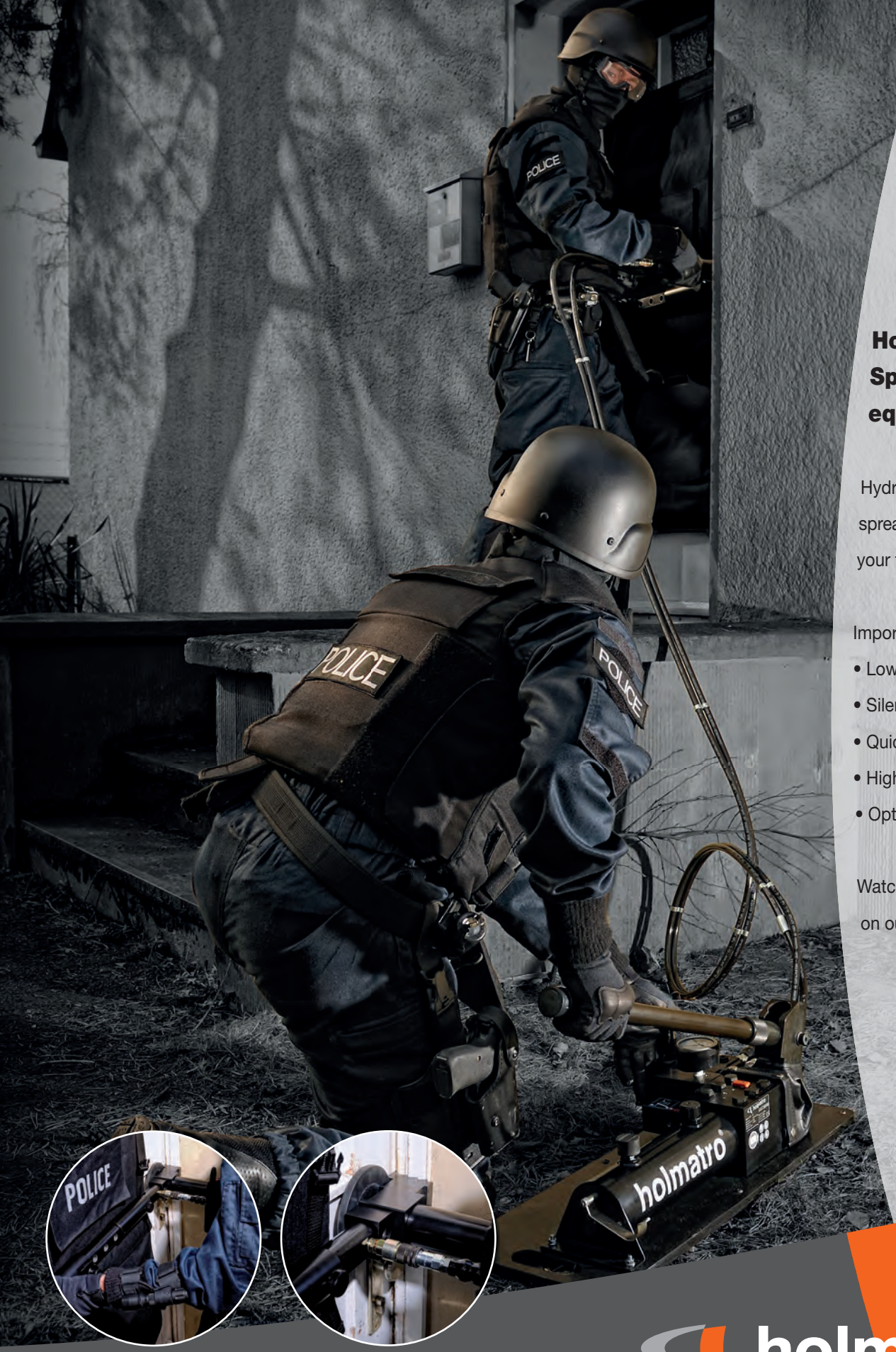
As with rams it is vital to centralise the lift on the centre of the bag - if your target load starts to stray off-centre as it moves the bag could be squeezed out with some force and the load will collapse back down if you have not followed the lift with cribbing.

IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■
If it's an option it is shown as an outline square □□□□
A circle ●●● indicates that this feature is only partially present and/or is OK for that purpose but not ideal.
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or coloured square ■■.
ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.
WEIGHT: Refers to the operational weight not including inflation equipment.
DIMENSIONS: The Length by width by **depth/height** of the bag ready to store on the truck and/or ready to work. The height figure is highlighted in pink because it is key to being able to insert the bag into any given space prior to initiating the lift.

LIFT CAPACITY: Our figures are in **M**etric tonnes and **US (Short) Tons**. There are 1.10 US short tons to a metric tonne.

NB. LIFT CAPACITY reduces as the bag reaches full inflation and full height. Max Lift Capacity figures are at minimum insertion height at the start of the lift, reducing by perhaps 50% as the bag reaches max height. Where we show 2 sets of figures the lowest number will be lift capacity at maximum height of the bag. For all others, assume that the max lift capacity is at the minimum lift height and will be considerably less when at maximum height.



Holmatro Special Tactics equipment

Hydraulic breaching, cutting, spreading and lifting tools for your tactical operations.

Important features:

- Low visibility
- Silent operation
- Quick & easy use
- High forces
- Optimal portability

Watch the application videos on our website!

Holmatro | Special Tactics equipment
tactical@holmatro.com | **www.holmatro.com**

holmatro
mastering **power**

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLA
SERIES MODEL VARIANT	5T	10T	15T	20T	
PRODUCT CODE VARIANT	ALQD-5	ALQD-10	ALQD-15	ALQD-20	A
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	2.4kg / 5.3lb	4.2kg / 9.3lb	6kg / 13.2lb	8.5kg / 18.7lb	11.
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	30 x 30 x 2.5cm 11.8 x 11.8 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	45 x 45 x 2.5cm 17.7 x 17.7 x 1"	55 x 55 x 2.5cm 21.6 x 21.6 x 1"	61 x 24
INFLATED HEIGHT	16cm / 6.3"	21cm / 8.2"	25cm / 00"	30cm / 11.8"	34
Max LIFT CAPACITY @min ht @max height	00 tonnes 6.1 UStON	10.06 tonnes 11.1 UStON	13.4 tonnes 14.9 UStON	21.9 tonnes 24.2 UStON	26 29
MAX WORKBURSTPRESSURE	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR
AIR VOLUME	42L / 1.48cuft	86L / 3cuft	152L / 5.36cuft	296L / 10.45cuft	416
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolai

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLA
SERIES MODEL VARIANT	OO	OO	OO	OO	
PRODUCT CODE VARIANT	00	00	00	00	
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00
INFLATED HEIGHT	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	00
Max LIFT CAPACITY @min ht @max height	00 tonnes 00 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON	0 0
MAX WORKBURSTPRESSURE	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	■ ■ -	■ ■ -	■ ■ -	■ ■ -	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolai

AI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE
30T	40T	50T	70T	OO	OO
ALQD-30	ALQD-40	ALQD-50	ALQD-70	00	00
N/A	N/A	N/A	N/A	N/A	N/A
5kg / 25lb	19.1kg / 42lb	23.9kg / 52.7lb	26.3kg / 58lb	00kg / 00lb	00kg / 00lb
61 x 2.5cm x 24 x 1"	78 x 78 x 2.7cm 30.7 x 30.7 x 1.1"	87 x 87 x 2.7cm 34 x 34 x 1.1"	100 x 98 x 2.8cm 39 x 38.5 x 1.2"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"
4cm / 13"	42cm / 16.5"	47cm / 18.5"	49cm / 19.2"	00cm / 00"	00cm / 00"
.9 tonnes .7 UStON	44.5 tonnes 49.1 UStON	54.9 tonnes 60.6 UStON	64.9 tonnes 71.6 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON
R / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8 32BAR / 116 464 psi	8-12BAR / 00psi	8-12BAR / 00psi
L / 14.7cuft	921L / 32.5cuft	1305L / 46cuft	1505L / 53.1cuft	00L / 00cuft	00L / 00cuft
2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	3x■ ■ -	3x■ ■ -
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
rescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com

AI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	AOLAI RESCUE	ENERPAC
OO	OO	OO	OO	OO	B1A
00	00	00	00	00	350.321.002
N/A	N/A	N/A	N/A	N/A	£ $ €
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
00 x 2.5cm x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"	00 x 00 x 2.5cm 00 x 00 x 1"
0cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"
0 tonnes 0 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON
BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi	8-12BAR / 00psi
L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
■ ■ -	■ ■ -	■ ■ -	■ ■ -	■ ■ -	2x■ - ●
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
rescue.com	aolairescue.com	aolairescue.com	aolairescue.com	aolairescue.com	enerpac.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

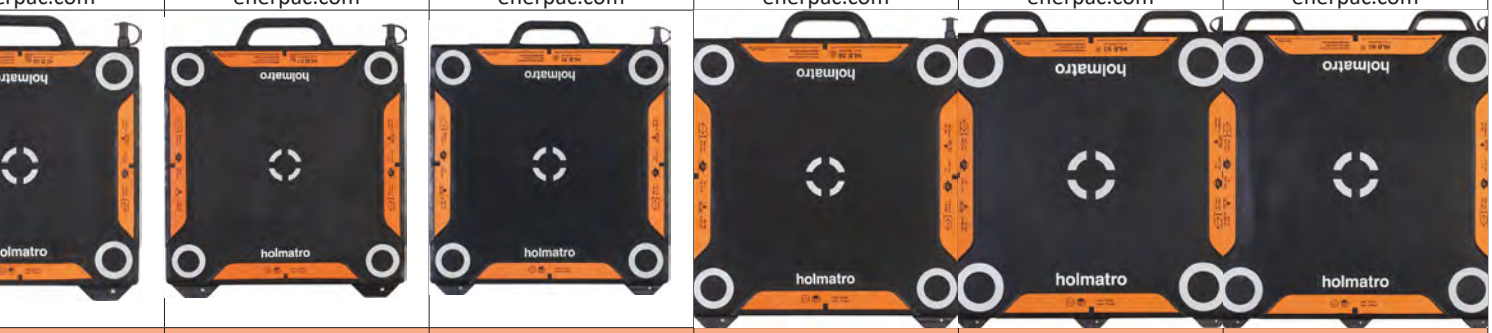
COMPANY	**ENERPAC**	**ENERPAC**	**ENERPAC**	**ENERPAC**	**EN**
SERIES MODEL VARIANT	B3A	B6A	B11A	B14A	
PRODUCT CODE VARIANT	350.321.006	350.321.008	350.321.011	350.321.016	35
ORIGIN					
Approx **COST** inc tax / VAT	£ $895 €	£ $1408 €	£ $1736 €	£ $1970 €	£
WEIGHT exc inflation eqpt	1.3kg / 2.8lb	2.4kg / 5.3lb	4kg / 8.8lb	5.3kg / 11.6lb	8.1
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	22.9 x 22.9 x 2.8cm 9 x 9 x 1.1"	30.5 x 30.5 x 2.8cm 12 x 12 x 1.1"	38.1 x 38.1 x 2.8cm 15 x 15 x 1.1"	45.7 x 45.7 x 2.8cm 18 x 18 x 1.1"	55.9 x 22 x
INFLATED HEIGHT	12.9cm / 5.1"	15cm / 5.9"	17.8cm / 7"	21.8cm / 8.6"	26.9
Max LIFT CAPACITY @min ht @max height	2.81 tonnes 3.1 UStON	5.8tonnes 6.4 UStON	9.8 tonnes 10.8 UStON	12.9 tonnes 14.2 UStON	20 22
MAX WORKBURSTPRESSURE	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12
AIR VOLUME	15L / 0.53cuft	41.9L / 1.48cuft	86L / 3.04cuft	152L / 5.37cuft	295.9
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	enerpac.com	enerpac.com	enerpac.com	enerpac.com	ene

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOLMATRO**	**HOI**
SERIES MODEL VARIANT	HLB2	HLB6	HLB8	HLB11	
PRODUCT CODE VARIANT	350.321.002	350.321.006	350.321.008	350.321.011	35
ORIGIN					
Approx **COST** inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	0.7kg / 1.5lb	1.6kg / 3.5lb	2.1kg / 4.6lb	3.2kg / 7lb	4.5
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	16(+4) x 16 x 2.2cm 7.9(+1.6) x 6.3 x 0.9"	24.5(+4) x 24.5 x 2.2cm 9.65(+1.6) x 9.65 x 00"	29.5(+4) x 29.5 x 2.2cm 11.6(+1.6) x 11.6 x 00"	40.3 x 32.5 x 2.5cm 15.87 x 12.8 x 00"	46.7 x 18.39 x
INFLATED HEIGHT	9.4cm / 3.7"	14.1cm / 5.55"	17.9cm / 7.05"	20.7cm / 8.15"	23.6
Max LIFT CAPACITY @min ht @max height	*1.4-2.1 tonnes 1.5-2.3 UStON	*3.8-5.6 tonnes 4.2-6.1 UStON	*5.6-8.4 tonnes 6.1-9.25 UStON	*7.4-11.2 tonnes 8.15-12.3 UStON	*10.5 11.5-
MAX WORKBURSTPRESSURE	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BA
AIR VOLUME	0.8L / 0.03cuft	2.2L / 0.06cuft	3.3L / 0.12cuft	5.4L / 0.19cuft	8.7L
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2
MATERIAL REINFORCEMENT	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitri 3 lay
NOTES	*Operates at both 8 & 12 bar EN13731	*Operates at both 8 & 12 bar EN13731	*Operates at both 8 & 12 bar EN13731	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates EN13731,
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holr

NERPAC	ENERPAC	ENERPAC	ENERPAC	ENERPAC	ENERPAC
B22A	B28A	B35A	B46A	B59A	B77A
0.321.021	350.321.031	350.321.038	350.321.053	350.321.063	350.321.063
$2481 €	£ $3038 €	£ $3926 €	£ $4782 €	£ $5407 €	£ $6036 €
kg / 17.8lb	11.2kg / 24.6lb	13.6kg / 29.9lb	18.2kg / 40.1lb	22.5kg / 49.6lb	25.3kg / 44.8lb
55.9 x 2.8cm x 22 x 1.1"	61 x 61 x 3cm 24 x 24 x 1.2"	68.6 x 68.6 x 3cm 27 x 27 x 1.2"	78.7 x 78.7 x 3cm 31 x 31 x 1.2"	88.9 x 88.9 x 3cm 35 x 35 x 1.2"	91.4 x 91.4 x 3cm 38 x 38 x 1.2"
9cm / 10.6"	29.9cm / 11.8"	35.8cm / 14.1"	41.9cm / 16.5"	44.9cm / 17.7"	50.8cm / 20.5"
.6 tonnes 2.7 UStON	25.1 tonnes 27.7 UStON	32 tonnes 35.3 UStON	42.1 tonnes 46.4 UStON	53.3 tonnes 58.8 UStON	67.2 tonnes 77 UStON
BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi	8-12BAR / 116psi
L / 10.45cuft	416.25L / 14.7cuft	620.1L / 21.9cuft	920.3L / 32.5cuft	1325.2L / 46.8cuft	1503.6L / 53.1cuft
2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
erpac.com	enerpac.com	enerpac.com	enerpac.com	enerpac.com	enerpac.com



LMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO
HLB16	HLB21	HLB31	HLB38	HLB53	HLB63
0.321.016	350.321.021	350.321.031	350.321.038	350.321.053	350.321.063
N/A	N/A	N/A	N/A	N/A	N/A
5kg / 10lb	5.6kg / 12.3lb	8.6kg / 19lb	10kg / 22lb	15kg / 33lb	17kg / 37.5lb
x 39 x 2.5cm x 15.35 x 00"	51.7 x 44 x 2.5cm 20.35 x 17.32 x 1"	66.2 x 53 x 2.7cm 26.06 x 20.8 x 00"	66.2 x 58.5 x 2.7cm 00 x 00 x 00"	76.7 x 69 x 2.7cm 30.2 x 27.17 x 00"	82.7 x 75 x 2.7cm 32.56 x 29.53 x 1.06"
6cm / 9.29"	26.6cm / 10.47"	32.1cm /12.64 "	35.2cm / 13.86"	41.1cm / 16.18"	45.6cm / 17.95"
-15.8 tonnes -17.4 uston	*13.6-21.4 tonnes 15-23.5 UStON	*20.8-31.2 tonnes 22.9-34.4 UStON	*25.2-37.7 tonnes 27.7-31.5 UStON	*35.4-53 tonnes 39-58.4 UStON	*42.1-63.2 tonnes 46.4-69.6 UStON
AR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi
L / 0.31cuft	13.4L / 0.37cuft	24L / 0.85cuft	37L / 1.31cuft	58L / 2.05cuft	74L / 2.61cuft
2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■
ile Rubber yer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid
at both 8 & 12 bar cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes
matro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holmatro.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

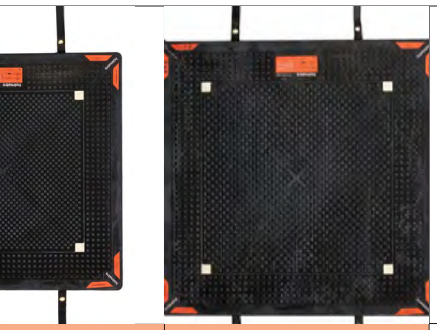
NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	HOLMATRO	HOLMATRO	HOLMATRO	HOLMATRO	HO
SERIES MODEL VARIANT	HLB85	HLB96	Stack Bag HSB27	Stack Bag HSB40	Stack
PRODUCT CODE VARIANT	350.321.085	350.321.096	350.321.021	350.321.021	35
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	23kg / 50.7lb	25kg / 55.1lb	9.2kg / 20.3lb	13kg / 28.6lb	23.8
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	94.8 x 87 x 2.7cm 37.3 x 34.3 x 1"	98.7 x 91 x 2.7cm 38.8 x 35.83 x 1"	52 x 52 x 2.7cm 20.5 x 20.5 x 1"	62 x 62 x 2.7cm 24.4 x 24.4 x 1"	84 x 33
INFLATED HEIGHT	55cm /21.65"	56.5cm /22.24"	17cm / 6.7"	17cm / 6.7"	17
Max LIFT CAPACITY @min ht @max height	*58.1-87.2 tonnes 64-96.1 UStON	*63.9-95.9 tonnes 70.4-105.7 UStON	*18-27 tonnes 19.8-29.7 UStON	*29.4-39.6 tonnes 32.4-43.6 UStON	*49.3 54.3
MAX WORKBURSTPRESSURE	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BAR / 116-174psi	*8-12BA
AIR VOLUME	118L / 4.17cuft	135L / 4.77cuft	170L / 6cuft	266.2L / 9.4cuft	555
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	3x■ ■ ■	3x■ ■ ■	3
MATERIAL REINFORCEMENT	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitrile Rubber 3 layer Aramid	Nitri 3 lay
NOTES	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731, cord-attachment eyes	*Operates at both 8 & 12 bar EN13731/NFPA	*Operates at both 8 & 12 bar EN13731/NFPA	*Operates EN1
WEBSITE	holmatro.com	holmatro.com	holmatro.com	holmatro.com	holr

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	MATJACK	MATJACK	MATJACK	MATJACK	MA
SERIES MODEL VARIANT	3.3t Air lifting Bag	6t Air lifting Bag	13t Air lifting Bag	15t Air lifting Bag	22t Ai
PRODUCT CODE VARIANT	103K	106K 106	113K 113	115K 115	1
ORIGIN					
Approx COST inc tax / VAT	£700 $800 €800	£900 $1050 €1050*	£1190 $1560 €1375*	£1150 $1300 €1320*	£1480 $
WEIGHT exc inflation eqpt	1.4kg / 3lb	1.6 2.7kg / 4 6lb	5.4 6.8kg / 12 15lb	7 9kg / 15.4 19.8lb	10 12.
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	30.5 x 15.24 x 1.8cm 12 x 6 x 0.75"	25 x 25 x 3.175cm 10 x 10 x 1.25"	37.5 x 37.5 x 3.17cm 15 x 15 x 1.25"	53.3 x 38.1 x 3.17cm 21 x 15 x 1.25"	50 x 5 20 x
INFLATED HEIGHT	6cm / 2.5"	11.25cm / 4.5"	6cm / 2.5"	19cm / 7.5"	25.
Max LIFT CAPACITY @min ht @max height	2.9 tonnes 3.3 UStON	5.4 tonnes 6 UStON	11.8 tonnes 13 UStON	13 tonnes 15 UStON	2 2
MAX WORKBURSTPRESSURE	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2B
AIR VOLUME	12.7L / 0.45cuft	~40L / 141cuft	76L / 2.7cuft	~100L / 3.53cuft	~185
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2
MATERIAL REINFORCEMENT	Nitrile Rubber 4LyrAramid	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitri 4Lyr Ara
NOTES		*=25% cheaper than Aramid prices shown	*=25% cheaper than Aramid prices shown	*=25% cheaper than Aramid prices shown	*=25% che pri
WEBSITE	matjack.com	matjack.com	matjack.com	matjack.com	ma



LMATRO	HOLMATRO		MATJACK
Bag HSB74	Stack Bag HSB92		1.5t Air lifting Bag
0.321.021	350.321.021		101K
N/A	N/A		£650 $750 €750
3kg / 52.5lb	28kg / 61.7lb		0.9kg / 2lb
84 x 2.7cm x 33 x 1"	92 x 92 x 2.7cm 36.2 x 36.2 x 1"		15.24 x 15.24 x 1.8cm 6 x 6 x 0.75"
cm / 6.7"	17cm / 6.7"		6cm / 2.5"
-73.8 tonnes -81.3 USton	*61.5-92.2 tonnes 67.8-101.6 USton		1.3 tonnes 1.5 USton
AR / 116-174psi	*8-12BAR / 116-174psi		8.2BAR / 120psi
L / 19.6cuft	691L / 24.4cuft		~7L / 0.25cuft
x	3x		2x -
ile Rubber yer Aramid	Nitrile Rubber 3 layer Aramid		Nitrile Rubber 4LyrAramid
at both 8 & 12 bar 3731/NFPA	*Operates at both 8 & 12 bar EN13731/NFPA		
matro.com	holmatro.com		matjack.com

ATJACK	MATJACK	MATJACK	MATJACK	MATJACK	MATJACK
r lifting Bag	32t Air lifting Bag	37t Air lifting Bag	50t Air lifting Bag	70t Air lifting Bag	86t Air lifting Bag
22K 122	132K 132	137K 137	150K 150	170K 170	186K 186
$1700 €1700*	£1800 $2100 €2100*	£2050 $2350 €2350*	£2550 $3000 €3000*	£3050 $3650 €3650*	£3600 $4300 €4300*
7kg / 22 28lb	12.7 15.9kg / 28 35lb	15.4 19.5kg / 34 43lb	20.4 28kg /45 62lb	29.5 36.8kg / 65 81lb	53.6kg / 118lb
50 x 3.17cm 20 x 1.25"	62.5 x 52.5 x 3.2cm 25 x21 x 1.25"	105 x 40 x 3.2cm 42 x 16 x 1.25"	73.7 x 73.7 x 3.2cm 29 x 29 x 1.25"	86 x 86 x 3.2cm 34 x 34 x 1.25"	106.7 x 106.7 x 3.2cm 42 x 42 x 1.25"
4cm / 10"	27.6cm / 11"	22.5cm / 9"	38.1cm / 15"	45.7cm /18"	60cm / 24"
0 tonnes 2 USton	29 tonnes 32 USton	33.6 tonnes 37 USton	45.5 tonnes 50 USton	63.6 tonnes 70 USton	87.2 tonnes 86 USton
AR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi	8.2BAR / 120psi
L / 6.53cuft	~270L / 9.5cuft	~325L / 11.4cuft	~560L / 19.8cuft	~735L / 26cuft	~905L / 32cuft
2x -	2x -	2x -	2x -	2x -	2x -
ile Rubber mid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 4Lyr Aramid 3lyr Steel	Nitrile Rubber 3lyr Steel
eaper than Aramid ces shown	*=25% cheaper than Aramid prices shown	*=25% cheaper than Aramid prices shown	*=25% cheaper than Aramid prices shown	*=25% cheaper than Aramid prices shown	*=25% cheaper than Aramid prices shown
tjack.com	matjack.com	matjack.com	matjack.com	matjack.com	matjack.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INT
SERIES MODEL VARIANT	Stakjack 8 KSM17	Stakjack 8 KSM25	Stakjack 8 KSM49	Stakjack 8 KSM60	Stakjac
PRODUCT CODE VARIANT	KSM17/08	KSM25/08	KSM49/08	KSM60/08	K
ORIGIN					
Approx COST inc tax / VAT	£780	£995	£1550	£2365	
WEIGHT exc inflation eqpt	8kg / 18lb	12kg / 27lb	20kg /44lb	23kg / 51lb	8
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	52 x 52 x 2.5cm 20.4 x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"	52 x 20.4
INFLATED HEIGHT	17.5cm / 6.9"	17.5cm / 6.9"	17.5cm / 6.9"	17.5cm / 6.9"	17.
Max LIFT CAPACITY @min ht @max height	3.6 - 17.2tonnes 4 - 19USton	7.8-2.55tonnes 8.6 - 28.1USton	17.9-49.2tonnes 18.7-54.2USton	24.6-59.8 tonnes 27.1-65.9USton	5.4 - 6 -
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	12B
AIR VOLUME	305L / 10.7cuft	465L / 16.4cuft	893L / 31.5cuft	1074L / 37.9cuft	479
STACK/CONNECT HI-VIZ	3x■ ■ ■	3x■ ■ ■	3x■ ■ ■	3x■ ■ ■	3
MATERIAL REINFORCEMENT	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBI Kev
NOTES	EN13731 Flat, not curved, top profile	EN13731 Flat, not curved, top profile	EN13731 Pic shows stack of 3 bags Flat, not curved, top profile	EN13731 Flat, not curved, top profile	E Flat, not c
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-inte

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

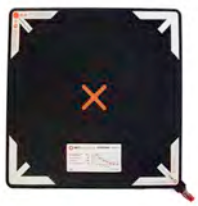
COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INT
SERIES MODEL VARIANT	Powermat 8 KS5	Powermat 8 KS10	Powermat 8 KS12	Powermat 8 KS16	Power
PRODUCT CODE VARIANT	KS05/08	KS10/08	KS12/08	KS16/08	
ORIGIN					
Approx COST inc tax / VAT	£295	£410	£480	£570	
WEIGHT exc inflation eqpt	1.8kg / 4lb	3.6kg / 7.9lb	4.1kg / 9lb	5.1kg / 11.2lb	8k
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	27 x 27 x 2.5cm 10.6 x 10.6 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	40.8 x 40.8 x 2.5cm 16.1 x 16.1 x 1"	46 x 46 x 2.5cm 18.1 x 18.1 x 1"	52 x 20.4
INFLATED HEIGHT	15cm / 5.9"	23cm / 8.9"	23cm / 8.9"	25cm / 9.8"	32
Max LIFT CAPACITY @min ht @max height	4.2tonnes 4.6USton	10.5tonnes 11.5USton	10.2tonnes 11.2USton	13.6tonnes 15USton	2 23
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	23L / 0.8cuft	69L / 2.4cuft	89L / 3.1cuft	124L / 4.4cuft	186
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2
MATERIAL REINFORCEMENT	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	Kev
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-inte

ERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
k 12 KSM26	Stakjack 12 KSM38	Stakjack 12 KSM74	Stakjack 12 KSM90	Powermat 8 KS1	Powermat 8 KS3
SM26/12	KSM38/12	KSM74/12	KSM90/1	KS01/08	KS03/08
N/A	N/A	N/A	N/A	£180	£240
kg / 18lb	12kg / 27lb	20kg /44lb	23kg / 51lb	0.5kg / 1.1lb	1.3kg / 2.9lb
52 x 2.5cm x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"	15 x 15 x 2.5cm 5.9 x 5.9 x 1"	22.5x 22.5 x 2.5cm 8.6 x 8.6 x 1"
5cm / 6.9"	17.5cm / 6.9"	17.5cm / 6.9"	17.5cm / 6.9"	00cm / 00"	00cm / 00"
25.9 tonnes 28.5 UStON	11.8 = 38.2 tonnes 13 - 42.1 UStON	34.1 - 73.8 tonnes 37.6 - 81.4UStON	45.1 -89.6 tonnes 49.7 -98.8UStON	0.9 tonnes 1 UStON	2.6 tonnes 2.9UStON
AR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	8BAR / 116psi	8BAR / 116psi
L / 16.9cuft	731L / 25.8cuft	1403L / 49.5cuft	1687L / 59.6cuft	3L / 0.1cuft	12L / 00cuft
x	3x	3x	3x	2x -	2x -
R Rubber vlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Rubber Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord
EN13731 urved, top profile	EN13731 Flat, not curved, top profile	EN13731 Flat, not curved, top profile	EN13731 Flat, not curved, top profile	EN13731	EN13731
ernational.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com

ERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
mat 8 KS21	Powermat 8 KS29	Powermat 8 KS33	Powermat 8 KS46	Powermat 8 KS54	Powermat 8 KS67
KS21/08	KS29/08	KS33/08	KS46/08	KS54/08	KS67/08
£655	£885	£1010	£1200	£1635	£1980
g / 17.6lb	12kg / 27lb	13.5kg / 29.8lb	14.5kg / 32lb	20kg / 44.1lb	23kg / 50.7lb
52 x 2.5cm x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	65.8 x 65.8 x 2.5cm 25.9 x 25.9 x 1"	77.5 x 77.5 x 2.5cm 30.5 x 30.5 x 1"	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"
cm / 12.6"	35cm / 13.8"	38cm / 14.8"	43cm / 16.7"	48cm / 18.7"	50cm / 19.7"
1tonnes .14UStON	26.6tonnes 29.3UStON	30.3tonnes 33.4UStON	42.5tonnes 46.8UStON	51.1tonnes 56.3UStON	62.2tonnes 68.6UStON
AR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi
6L / 6.6cuft	311L / 11cuft	391L / 13.8cuft	672L / 22.1cuft	797L / 28.1cuft	1051L / 37.1cuft
2x -	2x -	2x -	2x -	2x -	2x -
SBR vlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
ernational.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com

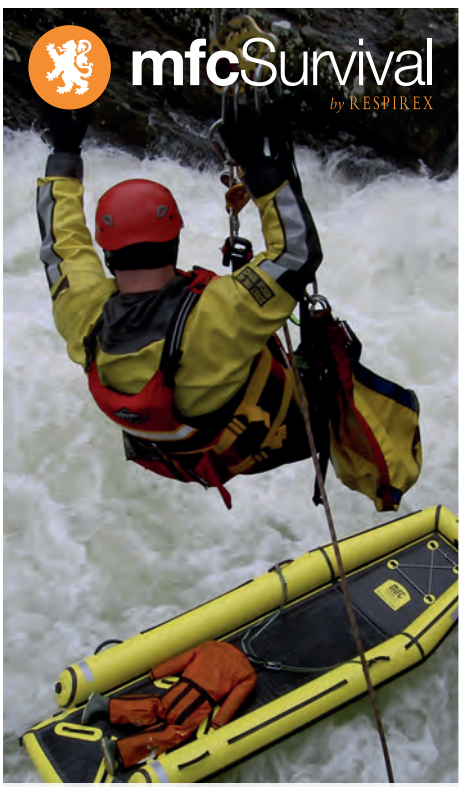
images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



COMPANY	MFCINTERNATIONAL	MFCINTERNATIONAL	MFCINTERNATIONAL	MFCINTERNATIONAL	MFCINT
SERIES MODEL VARIANT	Powermat 12 KS2	Powermat 12 KS5	Powermat 12 KS8	Powermat 12 KS16	Power
PRODUCT CODE VARIANT	KS02/12	KS05/12	KS08/12	KS16/12	
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	0.5kg / 1.1lb	1.3kg / 2.9lb	1.8kg / 4lb	3.6kg / 7.9lb	4.
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	15 x 15 x 2.5cm 5.9 x 5.9 x 1"	22.5 x 22.5 x 2.5cm 8.6 x 8.6 x 1"	27 x 27 x 2.5cm 10.6 x 10.6 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	40.8 x 16.1
INFLATED HEIGHT	8cm / 3.1"	13cm / 5.1"	16cm / 6.3"	23cm / 9"	25
Max LIFT CAPACITY @min ht @max height	1.4 tonnes 1.5 UStON	4.1 tonnes 4.5 UStON	6.6 tonnes 7.3 UStON	13.6 tonnes 15 UStON	1 17
MAX WORKBURSTPRESSURE	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12B
AIR VOLUME	4l / 0.1cuft	18L / 0.6cuft	34L / 1.2cuft	100L / 3.5cuft	128
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2
MATERIAL REINFORCEMENT	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	Kev
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-inte

TERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
mat 12 KS18	Powermat 12 KS23	Powermat 12 KS30	Powermat 12KS43	Powermat 12 KS49	Powermat 12 KS68
KS18/12	KS23/12	KS30/12	KS43/12	KS49/12	KS68/12
N/A	N/A	N/A	N/A	N/A	N/A
1kg / 9lb	5.1kg / 11.2lb	8kg / 17.6lb	12kg / 27lb	13.5kg / 29.8lb	14.5kg / 32lb
40.8 x 2.5cm x 16.1 x 1"	46 x 46 x 2.5cm 18.1 x 18.1 x 1"	52 x 52 x 2.5cm 20.4 x 20.4 x 1"	62 x 62 x 2.5cm 24.4 x 24.4 x 1"	65.8 x 65.8 x 2.5cm 25.9 x 25.9 x 1"	77.5 x 77.5 x 2.5cm 30.5 x 30.5 x 1"
cm / 9.8"	28cm / 11"	32cm / 12.6"	38cm / 15"	41cm / 16.1"	48cm / 18.9"
6 tonnes 7.6 UStON	20.9 tonnes 23 UStON	27.6 tonnes 30.4 UStON	40.6 tonnes 44.8 UStON	45.2 tonnes 49.8 UStON	63.8 tonnes 70.3 UStON
AR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi
3L / 4.5cuft	180L / 6.4cuft	268L / 9.5cuft	449L / 15.8cuft	565L / 20cuft	906L / 32cuft
2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■	2x■ - ■
SBR vlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord	SBR Kevlar Cord
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
ernational.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com



Water Rescue

www.mfc-survival.com

Vehicle Recovery

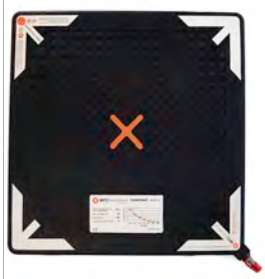
Tel: +44 (0) 1443 433 075

Mountain Rescue

sales@mfc-survival.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL		PARATECH	PA
SERIES MODEL VARIANT	Powermat 12 KS81	Powermat 12KS97		MaxiForce KPI-1	Maxi
PRODUCT CODE VARIANT	KS81/12	KS97/12		22-888110G3	22-
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A		N/A	
WEIGHT exc inflation eqpt	20kg / 44.1lb	23kg / 50.7lb		0.6kg / 1.2lb	1.0
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	84 x 84 x 2.5cm 33.1 x 33.1 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"		15.2 x 15.2 x 1.9cm 6 x 6 x ¾"	15.2 x 6 x
INFLATED HEIGHT	52cm / 20.5"	57cm / 22.4"		7.6cm / 3"	8.9
Max LIFT CAPACITY @min ht @max height	75.5 tonnes 83.2 UStON	93.2 tonnes 102.7 UStON		1.3 tonnes 1.5 UStON	3. 3
MAX WORKBURSTPRESSURE	12BAR / 174psi	12BAR / 174psi		12.4BAR / 180psi	12.4
AIR VOLUME	1151L / 40.6cuft	1518L / 53.6cuft		00L / 00cuft	00
STACK/CONNECT HI-VIZ	2x■ - ■	2x■ - ■		■ - ■	
MATERIAL REINFORCEMENT	SBR Kevlar Cord	SBR Kevlar Cord		3 layer Neoprene Aramid	3 laye A
NOTES	EN13731	EN13731		EN13731	E
WEBSITE	mfc-international.com	mfc-international.com		paratech.com	para

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	PA
SERIES MODEL VARIANT	MaxiForce KPI-22	MaxiForce KPI-28	MaxiForce KPI-32	MaxiForce KPI-35L	MaxiF
PRODUCT CODE VARIANT	22-888160G3	22-888165G3	22-888170G3	22-888180G3	22-
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	7.2kg / 15.9lb	9.1kg / 20.1lb	10kg / 22lb	11.1kg / 24.5lb	13.
DEFLATED DIMENSIONS (valve) Length (+Valve) x Width x Height/depth	50.8 x 50.8 x 2.2cm 20 x 20 x ⅞"	50.8 x 66 x 2.2cm 20 x 26 x ⅞"	610 x 610 x 2.2cm 24 x 24 x ⅞"	38.1 x 106.6 x 2.2cm 15 x 42 x⅞"	71.1 x 28
INFLATED HEIGHT	27.4cm / 10.8"	29.9cm / 11.8"	33cm / 13"	24.1cm / 9.5"	38.8
Max LIFT CAPACITY @min ht @max height	23.2 tonnes 25.6 UStON	30.9 tonnes 34 UStON	34.4 tonnes 38 UStON	35.8 tonnes 39.5 UStON	47 52
MAX WORKBURSTPRESSURE	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 laye A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	paratech.com	paratech.com	paratech.com	paratech.com	para

RATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
Force KPI-3	MaxiForce KPI-5	MaxiForce KPI-8	MaxiForce KPI-10	MaxiForce KPI-12	MaxiForce KPI-17
-888120G3	22-888130G3	22-888130G3	22-888138G3	22-888140G3	22-888150G3
N/A	N/A	N/A	N/A	N/A	N/A
0kg / 2.3lb	1.4kg / 3.1lb	2.5kg / 5.5lb	3.7kg / 8.3lb	4.0kg / 8.8lb	5.4kg / 12lb
30.5 x 1.9cm x 12 x ¾"	25.4 x 25.4 x 1.9cm 10 x 10 x ¾"	30.5 x 30.5 x 2.2cm 12 x 12 x ⅞"	30.5 x 45.7 x 2.2cm 12 x 18 x ⅞"	38.1 x 38.1 x 2.2cm 15 x 15 x ⅞"	38.1 x 53.3 x 2.2cm 15 x 21 x ⅞"
9cm / 3.5"	13.7cm / 5.4"	16.3cm / 6.4"	18cm / 7.1"	20.6cm / 8.1"	22.6cm / 9"
2 tonnes .5 UStON	4.9 tonnes 5.4 UStON	7.5 tonnes 8.2 UStON	11.7 tonnes 12.9 UStON	12.4 tonnes 13.7 UStON	17.3 tonnes 19 UStON
BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi
L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
-	-	-	-	-	-
r Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
atech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

RATECH	PARATECH	PARATECH	PARATECH	PARATECH	PARATECH
orce KPI-44	MaxiForce KPI-55	MaxiForce KPI-74	MaxiForce Compact	MaxiForce Basic	MaxiForce Remote
-888190G3	22-888195G3	22-888200G3	22-88D025CG3	22-88D025BG3	22-88D025G3
N/A	N/A	N/A	N/A	N/A	N/A
6kg / 30lb	20.5kg / 45.2lb	26.3kg / 58lb	23.4kg / 51.6lb	24.6kg / 54.2lb	27.5kg / 60.6lb
71.1 x 2.2cm x 28 x ⅞"	81.2 x 81.2 x 2.5cm 32 x 32 x 1"	93.9x 93.9 x 2.5cm 37 x 37 x 1"	62.1 x 60 x 12.4cm 00 x 00 x 5"	73.2 x 71.1 x 12.4cm 28.8 x 28 x 5"	78 x 71.1 x 15.3cm 30.7 x 28 x 6"
3cm / 15.3"	43.2cm / 17"	50.8cm / 20"	66cm / 26"	66cm / 26"	66cm / 26"
.8 tonnes 2.7 UStON	63.3 tonnes 69.7 UStON	80.9 tonnes 89.2UStON	28 tonnes 31 UStON	28 tonnes 31 UStON	28 tonnes 31 UStON
BAR / 180psi	12.4BAR / 180psi	12.4BAR / 180psi	10.3 20.6BAR/150 300psi	10.3 20.6BAR/150 300psi	10.3 20.6BAR/150 300psi
L / 00cuft	00L / 00cuft	00L / 00cuft	888.3L / 31.4cuft	888.3L / 31.4cuft	888.3L / 31.4cuft
-	-	-	* *	* *	* *
r Neoprene Aramid	3 layer Neoprene Aramid	3 layer Neoprene Aramid	Neoprene Aramid	Neoprene Aramid	Neoprene Aramid
EN13731	EN13731	EN13731	* * 2-'chambered' bag Integrated trolley wheels. EN13731/NFPA	* * 2-'chambered' bag Integrated trolley wheels. EN13731/NFPA	* * 2-'chambered' bag Integrated trolley wheels. EN13731/NFPA
atech.com	paratech.com	paratech.com	paratech.com	paratech.com	paratech.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RE**
SERIES MODEL VARIANT	SQ 1	SQ 3	SQ 6	SQ 9L	
PRODUCT CODE VARIANT	-	-	-	-	
ORIGIN					
Approx **COST** inc tax / VAT	€335	€400	€530	N/A	
WEIGHT exc inflation eqpt	0.55kg / 1.2lb	1.25kg / 2.76lb	2kg / 4.41lb	3.3kg / 7.3lb	3.5
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	15 x 15 x 2.5cm 5.9 x 5.9 x 1"	22.5 x 22.5 x 2.5cm 8.8 x 8.8 x 1"	30 x 30 x 2.5cm 11.8 x 11.8 x 1"	45 x 30 x 2.5cm 17.72 x 11.8 x 1"	38 x 15
INFLATED HEIGHT	8.0cm / 3.1"	13cm / 5.1"	16cm / 6.3"	19cm / 7.5"	21
Max LIFT CAPACITY @min ht @max height	1.1 tonnes 1.2 UStON	2.7 tonnes 3 UStON	5.5 tonnes 6.1 UStON	8.9 tonnes 9.8 UStON	10 11
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	● - ●	● - ●	● - ●	● - ●	
MATERIAL **REINFORCEMENT**	Oo Oo	Oo Oo	Oo Oo	Oo Oo	
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	rescue.resqtec.com	paratech.com	paratech.com	rescue.resqtec.com	rescue.

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RESQTEC**	**RE**
SERIES MODEL VARIANT	SQ 21	SQ 25	SQ 33	SQ 45	
PRODUCT CODE VARIANT	-	-	-	-	
ORIGIN					
Approx **COST** inc tax / VAT	€1055	€1185	€1340	€1920	
WEIGHT exc inflation eqpt	7kg / 15.4lb	9kg / 19.8lb	11kg / 24lb	14kg / 30.9lb	18k
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	55 x 55 x 2.5cm 21.6 x 21.6 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	69 x 69 x 2.5cm 27.1 x 27.1x 1"	78 x 78 x 2.5cm 31.7 x 31.7 x 1"	87 x 34.2
INFLATED HEIGHT	30cm / 11.8"	34cm / 13.4"	38cm / 15"	42cm / 16.5"	47
Max LIFT CAPACITY @min ht @max height	21.1 tonnes 23.2 UStON	25.2 tonnes 27.7 UStON	33 tonnes 36.3 UStON	44.6 tonnes 49.1 UStON	5 60
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00
STACK/CONNECT HI-VIZ	● - ●	● - ●	● - ●	● - ●	
MATERIAL **REINFORCEMENT**	Oo Oo	Oo Oo	Oo Oo	Oo Oo	
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.

ESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC	RESQTEC
SQ 10	SQ 13L	SQ 13L	SQ 13L	SQ 14	SQ 20
-	-	-	-	-	-
€562	€896	N/A	N/A	€800	€1105
kg / 7.72lb	4.5kg / 9.9lb	6.5kg / 14.33lb	7.8kg / 17.2lb	5kg / 11lb	00kg / 00lb
38 x 2.5cm x 15 x 1"	50 x 37.5 x 2.5cm 19.7 x 14.7 x 1"	75 x 37.5 x 2.5cm 029.5x 14.7 x 1"	102x 32 x 2.5cm 40.1 x 12.6 x 1"	45 x 45 x 2.5cm 17.72 x 17.72 x 1"	75 x 37.5 x 2.5cm 29.5 x 14.7 x 1"
cm / 8.27"	23cm / 9"	23cm / 9"	20cm / 7.87"	25cm / 9.8"	00cm / 00"
.1 tonnes 1.1 UStON	13.2tonnes 14.5 UStON	20.2 tonnes 22.2 UStON	24 tonnes 26.4 UStON	13.1 tonnes 14.9 UStON	00 tonnes 00 UStON
AR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi
L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
● - ●	● - ●	● - ●	● - ●	● - ●	● - ●
Oo Oo	Oo Oo	Oo Oo	Oo Oo	Oo Oo	Oo Oo
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731 DISCONTINUED?
.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com
ESQTEC	RESQTEC		RESQTEC	RESQTEC	RESQTEC
SQ 55	SQ 70		LT ONE S3	LT ONE S5	LT ONE S7
-	-		-	-	-
€2685	€3200		N/A	N/A	N/A
kg / 39.7lb	22.5kg / 49.6lb		1.9kg / 00lb	4.4kg / 00lb	9.5kg / 00lb
87 x 2.5cm x 34.2 x 1"	94.5 x 94.5 x 2.5cm 37.2 x 37.2 x 1"		36 x 31 x 2.1cm 00 x 00 x 0.8"	54 x 49 x 2.1cm 00 x 00 x 1"	74 x 68.8 x 2.3cm 00 x 00 x 0.9"
cm / 18.5"	52cm / 20.47"		16cm / 6.3"	25cm / 9.8"	35cm / 13.8"
5 tonnes 0.5 UStON	70.4 tonnes 77.4 UStON		8.3 tonnes 9.1 UStON	21.5 tonnes 23.7 UStON	44 tonnes 48.5 UStON
AR / 116psi	8BAR / 116psi		12BAR / 174psi	12BAR / 174psi	12BAR / 174psi
L / 00cuft	00L / 00cuft		52L / 00cuft	221L / 00cuft	611L / 00cuft
● - ●	● - ●		2x■ ● ●	2x■ ● ●	2x■ ● ●
Oo Oo	Oo Oo		Oo Oo	Oo Oo	Oo Oo
EN13731	EN13731		EN13731. Dimpled surface interlocks with other LTs One Bags & Resqtec cribbing	EN13731. Dimpled surface interlocks with other LTs One Bags & Resqtec cribbing	EN13731. Dimpled surface interlocks with other LTs One Bags & Resqtec cribbing
.resqtec.com	rescue.resqtec.com		rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**RESQTEC**	**RESQTEC**	**RESQTEC**	**SCORPE**	**S**
SERIES MODEL VARIANT	NT 2 Hybrid	NT 4 Hybrid	NT 8 Hybrid	Air S 1.3T	A
PRODUCT CODE VARIANT	-	-	-	-	
ORIGIN					
Approx **COST** inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	6.5kg / 14.3lb	15.5kg / 34.1lb	38kg / 84lb	0.7kg / 1.54lb	1.3
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	60.9 x 60.9 x 2.5cm 24 x 24 x 1"	60.9 x 60.9 x 2.5cm 24 x 24 x 1"	00 x 00 x 00cm 00 x 00 x 00"	15 x 15 x 2.2cm 5.9 x 5.9 x 0.86"	20 x 7.8 x
INFLATED HEIGHT	00cm / 00"	00cm / 00"	00cm / 00"	9cm / 3.5"	11.
Max LIFT CAPACITY @min ht @max height	6.2 -26 tonnes /UStON 6.8 -28.6 UStON	9.5 - 70 tonnes 10.4 - 77 UStON	14 - 156 tonnes 15.4 - 172 UStON	1.3 tonnes 1.4 UStON	4 4
MAX WORKBURSTPRESSURE	12BAR / 174psi	12BAR / 174psi	00BAR / 00psi	10BAR / 145psi	10B
AIR VOLUME	00L / 00cuft	00L / 00cuft	00L / 00cuft	5.4L / 0.2cuft	9L
STACK/CONNECT HI-VIZ	3x■ ● ●	3x■ ● ●	3x■ ● ●	2x■ - ●	2
MATERIAL REINFORCEMENT	Aramid & Rubber 3D Aramid fibres	Aramid & Rubber 3D Aramid fibres	Aramid & Rubber 3D Aramid fibres	SBR 3D Fibres	3D
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	rescue.resqtec.com	rescue.resqtec.com	rescue.resqtec.com	scorpe.net	sc

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

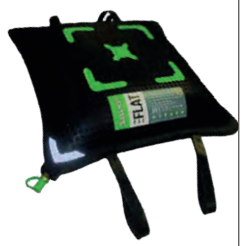
NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**SCORPE**	**SCORPE**	**SCORPE**	**SCORPE**	**S**
SERIES MODEL VARIANT	Air S 38T	Air S 54T	Air S 65T	Air S81T	A
PRODUCT CODE VARIANT	-	-	-	-	
ORIGIN					
Approx **COST** inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	8.5kg / 18.7lb	12.5kg / 27.5lb	16.5kg / 36.4lb	19.5kg / 23lb	11k
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	62 x 62 x 2.2cm 24.4 x 24.4 x 0.86"	75 x 75 x 2.2cm 29.5 x 29.5 x 0.86"	84 x 84 x 2.2cm 33 x 33 x 0.86"	92 x 92 x 2.2cm 36.2 x 36.2 x 0.86"	56 x 22
INFLATED HEIGHT	34.5cm / 13.5"	41cm / 16"	46.5cm / 18.31"	51.5cm / 20.28"	17
Max LIFT CAPACITY @min ht @max height	38 tonnes 41.9 UStON	54 tonnes 59.5 UStON	65 tonnes 71.6 UStON	81 tonnes 69.3 UStON	3 36
MAX WORKBURSTPRESSURE	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10B
AIR VOLUME	414L / 14.6cuft	720L / 25.4cuft	1044L / 36.8cuft	1449L / 51.1cuft	320
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	3
MATERIAL REINFORCEMENT	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	3D
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	scorpe.net	scorpe.net	scorpe.net	scorpe.net	sc

CORPE	SCORPE	SCORPE	SCORPE	SCORPE	SCORPE
ir S 4T	Air S 8T	Air S 13T	Air S 18T	Air S 24T	Air S 30T L
-	-	-	-	-	-
N/A	N/A	N/A	N/A	N/A	N/A
kg / 2.8lb	2.2kg / 4.85lb	3.4kg / 7.5lb	4.1kg / 9lb	6kg / 13.2lb	7.5kg / 16.5lb
20 x 2.2cm 7.8 x 0.86"	30 x 30 x 2.2cm 11.8 x 11.8 x 0.86"	38 x 38 x 2.2cm 15 x 15 x 0.86"	42 x 42 x 2.2cm 16.5 x 16.5 x 0.86"	51 x 51 x 2.2cm 2o x 20 x 0.86"	100 x 32 x 2.2cm 39.4 x 12.6 x 0.86"
5cm / 4.5"	17.5cm / 6.9"	22cm / 8.66"	24.5cm / 9.65"	29.5cm / 11.6"	21.5cm / 8.5"
4 tonnes .4 UStON	8 tonnes 8.8 UStON	13 tonnes 14.3 UStON	18 tonnes 19.8UStON	24 tonnes 26.5 UStON	30 tonnes 33 UStON
AR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi
/ 0.3cuft	54L / 1.9cuft	99L / 3.5cuft	117L / 4.1cuft	225L / 7.9cuft	324L / 11.4cuft
2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●
SBR D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
orpe.net	scorpe.net	scorpe.net	scorpe.net	scorpe.net	scorpe.net
CORPE	SCORPE	SCORPE	SCORPE	SCORPE	
ir S 33T	Air S40T	Air S 60T	Air S 75T	Air S 90T	
-	-	-	-	-	
N/A	N/A	N/A	N/A	N/A	
kg / 24.2lb	12kg / 26.4lb	18kg / 39.6lb	22kg / 48.5lb	26kg / 57.3lb	
56 x 2.5cm x 22 x 1"	62 x 62 x 2.5cm 24.4 x 24.4x 1"	75 x 75 x 2.5cm 29.5 x 29.5 x 1"	84 x 84 x 2.5cm 33 x 33 x 1"	92 x 92 x 2.5cm 36.2 x 36.2 x 1"	
cm / 6.7"	17cm / 6.7"	17cm / 6.7"	17cm / 6.7"	17cm / 6.7"	
3 tonnes 6.4 UStON	40 tonnes 44 UStON	60 tonnes 66.1 UStON	75 tonnes 82.6 UStON	90 tonnes 99.2 UStON	
AR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	10BAR / 145psi	
L /11.3cuft	420L / 14.8cuft	680L / 24cuft	900L /31.8cuft	1120L /39.5cuft	
3x■ - ●	3x■ - ●	3x■ - ●	3x■ - ●	3x■ - ●	
SBR D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres	SBR 3D Fibres
EN13731	EN13731	EN13731	EN13731	EN13731	
orpe.net	scorpe.net	scorpe.net	scorpe.net	scorpe.net	

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height



COMPANY	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRE
SERIES MODEL VARIANT	SAVA SLK 1	SAVA SLK 3	SAVA SLK 5	SAVA SLK 6	SAV
PRODUCT CODE VARIANT	761.10.01	761.10.03	761.10.03	Discontinued	7
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	0.55kg / 1.2lb	1.25kg / 3lb	2kg / 4lb	2kg / 4lb	4
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	15 x 15 x 2.2cm 6 x 6 x 0.8"	22.5x 22.5 x 2.2cm 9 x 9 x 0.8"	27 x 27 x 2.2cm 11 x 11 x 0.8"	30 x 30 x 2.5cm 12 x 12 x1"	38 x 15
INFLATED HEIGHT	8cm / 3.1"	13cm / 5.1"	15cm / 6"	16cm / 6.3"	21
Max LIFT CAPACITY @min ht @max height	1.1 tonnes 1.2 UStON	2.7 tonnes 3 UStON	5.1 tonnes 5.6 UStON	5.5 tonnes 6.1 UStON	1 11
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	5L / 0.2cuft	15L / 0.5cuft	22.5L / 0.8cuft	42L / 1.5cuft	76.5
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731 DISCONTINUED	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRE
SERIES MODEL VARIANT	SAVA SLK 32	SAVA SLK 40	SAVA SLK 45	SAVA SLK 55	SAV
PRODUCT CODE VARIANT	761.10.06	761.10.07	Discontinued	Discontinued	7
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	14kg / 31lb	15kg / 33lb	14kg / 31lb	18kg / 40lb	22.
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	65.8 x 65.8 x 2.5cm 26 x 26 x1"	70.8 x 70.8 x 2.5cm 28 x 28 x1"	78 x 78 x 2.5cm 31 x 31 x1"	87 x 87 x 2.5cm 34 x 34 x1"	90.8 x 36
INFLATED HEIGHT	38cm / 15"	40.5cm / 16"	42cm / 16.5"	47cm / 18.5"	52
Max LIFT CAPACITY @min ht @max height	32.6 tonnes 36 UStON	40.7 tonnes 45 UStON	44.6 tonnes 49.1 UStON	55 tonnes 60.5 UStON	68 75
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BA
AIR VOLUME	450L / 15.9cuft	558L / 19.7cuft	921L / 32.5cuft	1305L / 46.1cuft	1206
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731 DISCONTINUED	EN13731 DISCONTINUED	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

LLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
A SLK 10	SAVA SLK 14	SAVA SLK 20	SAVA SLK 21	SAVA SLK 25	SAVA SLK 30
61.10.04	Discontinued	761.10.05	Discontinued	Discontinued	Discontinued
N/A	N/A	N/A	N/A	N/A	N/A
g / 8.8lb	5kg / 11lb	7kg / 15lb	7kg / 15lb	9kg / 20lb	11kg / 24lb
38 x 2.5cm x 15 x1"	45 x 45 x 2.5cm 18 x 18 x1"	50.8 x 50.8 x 2.5cm 20 x 20 x1"	55 x 55 x 2.5cm 22 x 22 x1"	61 x 61 x 2.5cm 24 x 24 x1"	69 x 69 x 2.5cm 27 x 27 x1"
cm / 8.3"	25cm / 9.8"	30cm / 11.8"	30cm / 11.8"	34cm / 13.4"	38cm / 15"
0.2 tonne 1.2 UStON	13.5 tonnes 14.9 UStON	20.4 tonnes 22.4 UStON	21.1 tonnes 23.2 UStON	25.2 tonnes 27.7 UStON	33 tonnes 36.3 UStON
AR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi
5L / 2.7cuft	152L / 5.4cuft	189L / 6.6cuft	296L / 10.5cuft	416L / 14.7cuft	621L / 21.9cuft
-	-	-	-	-	-
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731 DISCONTINUED	EN13731	EN13731 DISCONTINUED	EN13731 DISCONTINUED	EN13731 DISCONTINUED
eborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com

LLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
A SLK 67	SAVA SLK 70	VEGA 2	VEGA 5	VEGA 10	VEGA 17
61.10.08	Discontinued	608046	608047	608049	608050
N/A	N/A	N/A	N/A	N/A	N/A
5kg / 50lb	22.5kg / 50lb	0.5kg / 1.2lb	1.2kg / 3lb	2.5kg / 5.5lb	4kg / 8.8lb
90.8 x 2.5cm x 36 x1"	94.5 x 94.5 x 2.5cm 37 x 37 x1"	15 x 15 x 2.2cm 6 x 6 x 0.8"	23.5 x 23.5 x 2.2cm 9.2 x 9.2 x 0.8"	32 x 32 x 2.5cm 12.6 x 12.6 x 1"	40 x 40 x 2.5cm 15.7 x 15.7 x 1"
2cm / 20"	52cm / 20.5"	8cm / 3.1"	13cm / 5.1"	17cm / 6.9"	22cm /8.5"
3.3 tonnes 5.3 UStON	70.4 tonnes 77.4 UStON	1.4 tonnes 1.5 UStON	4.9 tonnes 5.4 UStON	9.8 tonnes 10.8 UStON	16.7 tonnes 18.4 UStON
AR / 116psi	8BAR / 116psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi
5L / 42.6cuft	1505L / 53.2cuft	4.5L / 0.16cuft	22.4L / 0.79cuft	63.4L / 2.24cuft	131.7L / 4.65cuft
-	-	-	-	-	-
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731 DISCONTINUED	EN13731	EN13731	EN13731	EN13731
eborg.com	trelleborg.com	ooo.com	trelleborg.com	trelleborg.com	trelleborg.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**TRELLEBORG**	**TRELLEBORG**	**TRELLEBORG**	**TRELLEBORG**	**TRE**
SERIES MODEL VARIANT	VEGA 25	VEGA 33	VEGA 41	VEGA 50	V
PRODUCT CODE VARIANT	608051	608052	608053	608054	
ORIGIN					
Approx **COST** inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	5.7kg / 12.6lb	7.5kg / 16.5lb	9.3kg / 20.5lb	11.2kg / 24.7lb	15.5
DEFLATED DIMENSIONS (valve) **Length** (+Valve)**x Width x** Height/depth	48 x 48 x 2.5cm 18.9 x 18.9 x 1"	55 x 55 x 2.5cm 22 x 22 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	67 x 67 x 2.5cm 26.4 x 26.4 x 1"	76 x 30 x
INFLATED HEIGHT	26cm / 10.4"	30cm /11.9"	34cm / 13.2"	37cm / 14.4"	41c
Max LIFT CAPACITY @min ht @max height	25.1 tonnes 27.6 UStON	33.2 tonnes 36.5 UStON	41.2 tonnes 45.3 UStON	50.2 tonnes 55.2 UStON	65 71
MAX WORKBURSTPRESSURE	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BAR / 174psi	12BA
AIR VOLUME	236L / 8.33cuft	365L / 12.89cuft	681L / 24.05cuft	897L / 31.68cuft	1010
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**TRELLEBORG**	**TRELLEBORG**	**TRELLEBORG**	**TRELLEBORG**	**TRE**
SERIES MODEL VARIANT	NOVA 21	NOVA 31	NOVA 41	NOVA 51	N
PRODUCT CODE VARIANT	608064	608065	608066	608067	
ORIGIN					
Approx **COST** inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	4kg / 8.8lb	5.7kg / 12.6lb	7.5kg / 16.5lb	9.3kg / 20.5lb	11.2
DEFLATED DIMENSIONS (valve) **Length** (+Valve)**x Width x** Height/depth	40 x 40 x 2.2cm 15.7 x 15.7 x 0.87"	48 x 48 x 2.2cm 18.9 x 18.9 x 0.87"	55 x 55 x 2.2cm 22 x 22 x 0.87"	61 x 61 x 2.2cm 24 x 24 x 0.87"	67 x 26.4 x
INFLATED HEIGHT	22cm / 8.5"	26cm / 10.4"	30cm / 11.9"	34cm / 13.2"	37c
Max LIFT CAPACITY @min ht @max height	20.5 tonnes 22.6 UStON	31.2 tonnes 34.3 UStON	41.3 tonnes 45.4 UStON	51.4 tonnes 56.5UStON	63 69
MAX WORKBURSTPRESSURE	15BAR / 218psi	15BAR / 218psi	15BAR / 218psi	15BAR / 218psi	15BA
AIR VOLUME	152L / 5.37cuft	273.4L / 9.66cuft	422L / 14.9cuft	585L / 20.66cuft	786L
STACK/CONNECT HI-VIZ	● - ■	● - ■	● - ■	● - ■	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	R A
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trell

LLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
EGA 65	VEGA 80	VEGA 100	NOVA 2	NOVA 6	NOVA 13
608055	608056	608057	608061	608062	608063
N/A	N/A	N/A	N/A	N/A	N/A
kg / 34.2lb	19kg / 41.9lb	23.3kg / 51.4lb	0.5kg / 1.2lb	1.2kg / 3lb	2.5kg / 5.5lb
76 x 2.7cm x 30 x 1.1"	84 x 84 x 2.7cm 33 x 33 x 1.1"	93 x 93 x 2.7cm 36.5 x 36.5 x 1.1"	15 x 15 x 2.2cm 6 x 6 x 0.9"	23.5 x 23.5 x 2.2cm 9.2 x 9.2 x 0.87"	32 x 32 x 2.2cm 12.6 x 12.6 x 0.87"
cm / 16.3"	46cm / 17.9"	51cm / 20.1"	8cm / 3"	13cm / 4.9"	17cm / 6.9"
.2 tonnes .7 UStON	80.2 tonnes 88.2 UStON	100.2 tonnes 110.2 UStON	1.7 tonnes 1.9 UStON	6.2 tonnes 6.8 UStON	12.3 tonnes 13.5 UStON
AR / 174psi	12BAR / 174psi	12BAR / 174psi	15BAR / 218psi	15BAR / 218psi	15BAR / 218psi
L / 35.67cuft	1381L / 48.77cuft	1895L / 66.92cuft	5.2L / 0.18cuft	25.8L / 0.91cuft	73.2L / 2.59cuft
■ - ■	■ - ■	■ - ■	● - ■	● - ■	● - ■
Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731
eborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com

LLEBORG	TRELLEBORG	TRELLEBORG			
OVA 63	NOVA 81	NOVA 100			
608068	608069	608070			
N/A	N/A	N/A			
kg / 24.7lb	15.5kg / 34.2lb	19kg / 41.9lb			
67 x 2.2cm 26.4 x 0.87"	76 x 76 x 2.7cm 30 x 30 x 1.1"	84 x 84 x 2.7cm 33 x 33 x 1.1"			
cm / 14.4"	41cm / 16.3"	46cm / 17.9"			
.2 tonnes 9.5 UStON	81.5 tonnes 89.7 UStON	100.3 tonnes 110.3 UStON			
AR / 218psi	15BAR / 218psi	15BAR / 218psi			
/ 27.76cuft	1167L / 41.21cuft	1595L / 56.33cuft			
● - ■	● - ■	● - ■			
Rubber Aramid	Rubber Aramid	Rubber Aramid			
EN13731	EN13731	EN13731			
eborg.com	trelleborg.com	trelleborg.com			

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**VETTER**	**VETTER**	**VETTER**	**VETTER**	**V**
SERIES MODEL VARIANT	S.Tec12 V1	S.Tec12 V3	S.Tec12 V5	S.Tec12 V6V7	S.T
PRODUCT CODE VARIANT	1314009300	1314009500	1314018200	1314009600	13
ORIGIN					
Approx **COST** inc tax / VAT	N/A	N/A	€526	€667	
WEIGHT exc inflation eqpt	0.5kg / 1.1lb	1kg / 2.2lb	1.4kg / 3.1lb	1.9kg / 4.2lb	3.3
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	14 x 13 x 2.5cm 5.5 x 5.1 x 0.98"	25.5 x 20 x 2.5cm 10 x 7.9 x 0.98"	28 x 28 x 2.5cm 10 x 7.9 x 0.98"	29.5 x 29.5 x 2.5cm 11.6 x 11.6 x 0.98"	37 x 15 x
INFLATED HEIGHT	7.5cm / 2.9"	12cm / 4.8"	14.5cm / 5.7"	16.5cm / 6.5"	37c
Max LIFT CAPACITY @min ht @max height	1 tonne 1.1 UStON	3.26 tonne 3.6 UStON	5.6 tonnes 6.2UStON	6.3 tonnes 7 UStON	9. 10
MAX WORKBURSTPRESSURE	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BA
AIR VOLUME	5.66L / 0.2cuft	22.6L / 0.8cuft	28.4L / 1cuft	39.6L / 1.4cuft	121.
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcan CR
NOTES	EN13731	EN13731	EN13731	EN13731	E
WEBSITE	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	**VETTER**	**VETTER**	**VETTER**	**VETTER**	**V**
SERIES MODEL VARIANT	S.Tec12 V31V33	S.Tec12 V35L	S.Tec12 V40	S.Tec12 V50	S.Te
PRODUCT CODE VARIANT	1314002800	1314008300	1316003500	1316001000	13
ORIGIN					
Approx **COST** inc tax / VAT	€1690 €1816	€1714	€2091	€2764	
WEIGHT exc inflation eqpt	10.1kg / 22.3lb	10kg / 22.1lb	9.3kg / 20.5lb	11.8kg / 26.2lb	13.8
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	69 x 65 x 2.5cm 00 x 00 x 0.98"	115 x 43 x 2.5cm 00 x 00 x 0.98"	61 x 61 x 2.5cm 24 x 24 x 0.98"	67 x 67 x 2.5cm 26.6 x 26.6 x 0.98"	78 x 30.7 x
INFLATED HEIGHT	37cm / 14.6"	31cm / 12.2"	33.5cm / 13.2"	37.6cm / 14.8"	39c
Max LIFT CAPACITY @min ht @max height	31.3 tonnes 34.6 UStON	35.8 tonnes 39.5 UStON	40.3 tonnes 44.5 UStON	50.07 tonnes 55.2 UStON	59 65
MAX WORKBURSTPRESSURE	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BA
AIR VOLUME	517.5L / 18cuft	349.4L / 12.3cuft	603.1L / 21.3cuft	798.5L / 28.2cuft	110
STACK/CONNECT HI-VIZ	■ - ■	■ - ■	■ - ■	■ - ■	
MATERIAL REINFORCEMENT	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcan CR
NOTES	EN13731 V33 DISCONTINUED	EN13731	EN13731	EN13731	E
WEBSITE	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter

ETTER	VETTER	VETTER	VETTER	VETTER	VETTER
ec12V10	S.Tec12 V12	S.Tec12 V18	S.Tec12 V20	S.Tec12 V24	S.Tec12 V24L
14002200	1314002400	1314002500	1314011800	1314002600	1314002700
€846	€868	N/A	€1115	N/A	N/A
kg / 7.3lb	3.9kg / 8.6lb	5.7kg / 12.6lb	7.2kg / 15.9lb	7.2kg / 15.9lb	6.8kg / 15lb
37 x 2.5cm 15 x 0.98"	52 x 35 x 2.5cm 20 x 13 x 0.98"	52 x 47 x 2.5cm 20 x 19 x 0.98"	58 x 48 x 2.5cm 23 x 19 x 0.98"	62 x 52 x 2.5cm 24 x 20 x 0.98"	00 x 00 x 2.5cm 12.2 x 40.2 x 0.98"
cm / 14.6"	31cm / 12.2"	27cm / 10.6"	28cm / 11"	30.6cm / 12"	20.9cm / 7.1"
6 tonnes .6 UStON	10.8 tonnes 13.1 UStON	17.7 tonnes 19.5UStON	19.4 tonnes 21.4UStON	24 tonnes 26.5 UStON	24 kN 26.5UStON
R/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi
7L / 4.3cuft	192.5L / 6.8cuft	190.3L / 6.9cuft	224.1L / 7.9cuft	296.4L / 10.1cuft	211.5L / 7.5cuft
-	-	-	-	-	-
ized Rubber R/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid
EN13731	EN13731	EN13731	EN13731	EN13731	EN13731 V26 DISCONTINUED
-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com

ETTER	VETTER	VETTER	VETTER	VETTER	VETTER
ec12 V59	S.Tec12 V83	S.Tec12 V102	C.Tec12 VCB N30	C.Tec12 VCB N 75	C.Tec12 VCB172
16001100	1316001200	1316001300	1316004600	1316004700	1316003900
€2981	€3892	€4534	N/A	N/A	N/A
kg / 30.6lb	19kg / 42.1lb	23.1kg / 50.9lb	12kg / 26.4lb	22.4kg / 49.4lb	58kg / 127.9lb
78 x 2.5cm 27.2 x 0.98"	86 x 86 x 2.5cm 33.9 x 33.9 x 0.98"	95 x 95 x 2.5cm 37.4 x 37.4 x 0.98"	56.5 x 56.5 x 7cm 22.2 x 22.2 x 2.8"	89 x 89 x 7cm 35 x 35 x 2.8"	135 x 135 x 7cm 53.2 x 53.2 x 2.8"
cm / 15.5"	46.5cm / 18.3"	51.5cm / 20.3"	27.5cm / 10.8"	43.5cm / 17.1"	69cm / 27.2"
.4 tonnes 5.5 UStON	82.6 tonnes 91.1 UStON	101.6 tonnes 112 UStON	7 - 30.1 tonnes 7.7-33.2 UStON	12 - 74.6 tonnes 13.2 - 82.3UStON	15 - 171.7 tonnes 16.5 - 189.3UStON
R/116 203psi	8 14BAR/116 203psi	8 14BAR/116 203psi	12 48BAR/174 696psi	12 48BAR/174 696psi	12 48BAR/174 696psi
4L / 39cuft	1645.2L / 58.1cuft	2302L / 81.3cuft	328L / 11.6cuft	1269L /44.8cuft	5048L / 178.3cuft
-	-	-	3x	3x	3x
ized Rubber R/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid	Vulcanized Rubber CR/Aramid
EN13731	EN13731 DISCONTINUED	EN13731 DISCONTINUED	EN13731	Image shows 3 bags connected. EN13731	EN13731
-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

COMPANY	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WE
SERIES MODEL VARIANT	8-BAR W3	8-BAR W10	8-BAR W20	8-BAR W25	
PRODUCT CODE VARIANT	8123357	8123373	8123390	8123403	
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	1.3kg / 2.9lb	3.5kg / 7.7lb	7kg / 15.4lb	9kg / 19.8lb	
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	23 x 23 x 2.5cm 9 x 9 x 1"	38 x 38 x 2.5cm 15 x 15 x 1"	55 x 55 x 2.5cm 21.65 x 21.65 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	7 3
INFLATED HEIGHT	130cm / 51.2"	210cm / 82.68"	300cm / 118"	340cm / 133"	
Max LIFT CAPACITY @min ht @max height	2.7 tonnes 3 UStON	10.1 tonnes 11.1 UStON	21.1 kg 23.2 UStON	25.2 tonnes 27.8 UStON	
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	
AIR VOLUME	15L / 0.53cuft	86L / 3cuft	296L / 10.4cuft	416L / 14.7cuft	9
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	
NOTES	EN13731	EN13731	EN13731	EN13731	
WEBSITE	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	We

images not to Scale
● ● ● =OK but not ideal
SBR= Styrene-Butadiene Rubber

NB: LIFT CAPACITY
Figures quoted may not be at maxmum height. Where two figures are given the lowest will be at max height, the highest will be at partial lift height

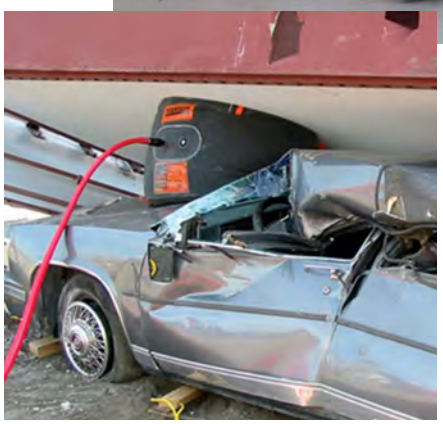
COMPANY	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WEBER RESCUE	WE
SERIES MODEL VARIANT	8-BAR W-FB 5/17	8-BAR W-FB 10 /17	8-BAR W-FB 20/17	8-BARW-FB 40/17	8-B
PRODUCT CODE VARIANT	1104649	1102509	1102510	1102511	
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	
WEIGHT exc inflation eqpt	7.3kg / 16.1lb	7.3kg / 16.1lb	9.2kg / 20.3lb	14.5kg / 32lb	2
DEFLATED DIMENSIONS (valve) Length (+Valve)x Width x Height/depth	48 x 48 x 2.5cm 21 x 21 x 1"	55 x 55 x 2.5cm 21 x 21 x 1"	61 x 61 x 2.5cm 24 x 24 x 1"	78 x 78 x 2.5cm 30.71 x 30.7 x 1"	9
INFLATED HEIGHT	170cm / 66.9"	170cm / 66.9"	170cm / 66.9"	170cm / 66.9"	1
Max LIFT CAPACITY @min ht @max height	21.1 tonnes 23.2 UStON	21.1 tonnes 23.2 UStON	25.2 tonnes 27.8 UStON	44.6 tonnes 49.1 UStON	
MAX WORKBURSTPRESSURE	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	8BAR / 116psi	
AIR VOLUME	224L / 7.9cuft	224L / 7.9cuft	350L / 12.3cuft	520L / 18.4cuft	8
STACK/CONNECT HI-VIZ	2x■ - ●	2x■ - ●	2x■ - ●	2x■ - ●	
MATERIAL REINFORCEMENT	Rubber Aramid	Rubber Aramid	Rubber Aramid	Rubber Aramid	
NOTES	EN13731 Stack up to 3 high	EN13731 Stack up to 3 high	EN13731 Stack up to 3 high	EN13731 Stack up to 3 high	S
WEBSITE	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	Weber-rescue.com	We

EBER RESCUE	WEBER RESCUE	WEBER RESCUE
8-BAR W41	8-BAR W52	8-BAR W66
8123438	8123446	8123454
N/A	N/A	N/A
14kg / 30.9lb	18kg / 39.7lb	22.5kg / 49.6lb
8 x 78 x 2.5cm 0.7 x 30.7 x 1"	87 x 87 x 2.5cm 34.25 x 34.25 x 1"	95 x 95 x 2.5cm 37.4 x 37.4 x 1"
420cm / 165"	470cm / 185"	520cm / 204"
44.6 tonnes 49.1 UStON	55 tonnes 60.6 UStON	70.4 tonnes 77.6 UStON
8BAR / 116psi	8BAR / 116psi	8BAR / 116psi
921L / 32.5cuft	1305L / 46cuft	1505L / 53.1cuft
2x■ - ●	2x■ - ●	2x■ - ●
Rubber Aramid	Rubber Aramid	Rubber Aramid
EN13731	EN13731	EN13731
eber-rescue.com	Weber-rescue.com	Weber-rescue.com
EBER RESCUE	OO	OO
AR W-F 50/17	OO	OO
1102512	00	00
N/A	N/A	N/A
20.6kg / 45.4lb	00kg / 00lb	00kg / 00lb
2 x 92 x 2.5cm 36 x 36 x 1"	00 x 00 x 00cm 00 x 00 x 00"	00 x 00 x 00cm 00 x 00 x 00"
170cm / 66.9"	00cm / 00"	00cm / 00"
64 tonnes 70.5 UStON	00 tonnes 00 UStON	00 tonnes 00 UStON
8BAR / 116psi	00BAR / 00psi	00BAR / 00psi
810L / 28.6cuft	00L / 00cuft	00L / 00cuft
2x■ - ●	■■■	■■■
Rubber Aramid	O O	O O
EN13731 tack up to 3 high	EN13731	EN13731
eber-rescue.com	OO.com	OO.com

agazines.com

'pneumatic' LOW /MED PRESSURE AIRBAGS

The previous Guide covered high pressure airbags which provide tremendous lift strength but a downside of operating at pressures of 8 to 12 BAR is that the risk of a burst over such a small area is significant and potentially hazardous to the rescuer Another downside is that this small area of lift will deform and buckle the relatively soft skin of large surface area vehicles like articulated lorries, tankers, train carriages, train engines and aircraft. Lowand medium pressure bags spread their lift over a much larger surface area. We have NOT including the dedicated aircraft lift bags manufactured by companies like Vetter (including a system specifically for the Airbus 380) and Eurocraft because they are virtually never used by fire and rescue agencies in dealing with road accidents. If only money was no object....! You will notice that the largest single, double and triple bag systems discussed here will also cope with smaller aircraft but are not precise enough or powerful enough to deal with standard long-haul aircraft. Very few companies provided 'Time to inflate' data so as a rough guide the Vetter 1/6 (610mm / 24") bag takes 20 seconds to inflate at 1 bar and the much bigger 1/23 (1200mm / 47") bag takes about three and a half minutes.



ABOVE: NOTE that there are some bags here that are not designed to LIFT, they are designed to CATCH. Just like a a high-fall air bag they will exhaust air out of vents as a large vehicle is righted and 'hits' the catch bags to then be lowered under control to the ground. These bags are not generally symmetrical, the SAVA Catch bag (Savatech now owned by Trelleborg) for instance is trapezoidal with a 140cm square base and a 100cm more rounded top and can be infltaed using an electric or gas/petrol blower.

Some companies differentiate between Low Pressure and Medium pressure as 0.5 Bar/ 7-9 psi and 1 bar / 14-15 psi but we have alwayssimly temed anything up to about 2 bar as a 'low-pressure' bag. There is some cross over in size between the smallest low-pressure bags and the largest high pressure bags but primarily we are dealing here with bags with a large surface area (or footprint) and less than 2bar pressure. This ensures that the lift pressure is distributed across a much larger area and indeed most tasks will require a multiple set of airbags in a coordinated lift. Some of the maximum lift capacity figures are ONLY quoted with a pair of bags and will therefore pose some inequalities in the data. Some bags like the MFC BR and HL1, Eurocraft Jumbo and Sc Inflatables Catchbag are manufactured in a wedge shape to provide the maximum purchase on both the ground and a sloping vehicle side. In the case of the Catchbag this has been specifically designed to be inserted as a 'wedge' on a raised vehicle which is then deflated to bring the vehicle upright in a controlled manner. Some bags are large cylinders and these tend to be the most resilient but least conforming. The largest bags are giant cubes which inflate virtually to a sphere when not restricted by the lift object or . Lampe and Vetter provide low pressure bags that are exactly the same shape as the standard square high pressure mat. Paratech market a specific 'Trench Bag' for use in a trench collapse rescue and this is an excellent application for any of the equal-sided bags in this article where the low pressure 'squashy' bag can safely fill the void between shoring boards and trench wall.

There seems to have been a move away from low pressure bags in some services in recent times in favour of point loaded 'hard' shoring, for example certain Paratech models and the hydraulic Holmatro Powershore which provides both the lift and the followup shoring in the one strut. There is, however, something very reassuring about the way leviathon-sized air bags cope

with really large loads because there is much less danger of a point-load failure and with the angled bags in particular, virtually no danger of slippage. Remember that low pressure airbags are used in multiples (or pairs at the very least) and fed by hoses running from a multiplier so that they provide their own redundancy for a neighboring bag but larger stabilisation struts can be used to good effect as follow-up shoring on specific structural hard-points on the vehicle/coach.

IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■
If it's an option it is shown as an outline square □□□□
A circle ●in the 'USE' columns indicates that this feature is only partially present and/or is OK for that purpose but not ideal.
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a black or orange square ■■.
ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag
COST: This remains an official secret within the industry. This is because the cost of one tool is huge and vastly different to the cost of multiples that they sell to entire fire services. But this is the same situation for virtually every piece of equipment we ever have in **TECHNICALRESCUE** where we always quote the single item cost on the understanding that any bulk purchase will of course be a lower figure.
WEIGHT: Refers to the operational weight that the rescuer experiences in lifting the bag-only so it excludes attached hoses and controllers etc.
DEFLATED DIMENSIONS: For round bags this will be the diameter by the DEFLATED height shown in magenta because it is important to know the insertion height - ie. the gap into which you can get your bag before inflating.
INFLATED HEIGHT: The all important- lft height that your bag can achieve.
MAX AIR VOLUME: This is not as straight-frward as it should be because there is a 'nominal volume' as well as a maximum volume . We're quoting maximum air volume but some manufacturers data may not make the distinction clear. Nominal air volume is the general amount of air needed to make the bag function properly, The max imum volume is that which should not be exceeded or you risk rupturing the seams or a contact point.
LIFT CAPACITY: Is the maximum load that should be applied to a single bag. Unlike solid, point-loading of a strut, it is much easier to share the load across two or three bags without one bag taking all the load and throwing out your calculations because you assumed each of, let's say three supports, would only be carrying a third of the load. **It is again vital that you push in direct line with the base of the bag- if your target load starts to stray off-centre as it moves, the bag(s) can be forced out sideways.** Our figures are in kg (Kilogramss) and pounds (lbs) but where tons/tonnes are mentioned there are 1.10 US short tons to a UK/metric tonne (if we use the term 'ton' it will mean US Short Ton not a UK ton).
TIME to MAX INFLATION: This is not a figure given by manufacturers so most of these rows will be empty but it's a useful figure if only in very general terms and would refer to the fastest time that the bag could be fully inflated.
MAX PRESSURE PRV: The inflation pressure which in these bags will be aorund 0.5 and 1 bar but could be anywhere between 0 and 3 BAR or 0 to 15 PSi Pounds per square inch. **PRV= Pressure Relief Valve** which will exhaust air should the bag's internal air pressure approach a level which could rupture the seams.
STACK/CONNECT REFLECT: Unlike most high pressure bags/ mats these much larger bags are not generally used in a stack or indeed required to be used in a stack given their huge lift heights. So the webbing loops you see on most bags are for lifting and shifting and/or to keep multiple bags in line. However, the flat-topped medium pressure bags (1BAR) can be stacked and then joined/connected via the web restraint loops that most have ***but while these can take up to a tonne of load, these are not load bearing*** connections in the same way as some of the metal connections and heavy duty straps found on high pressure bags. The web loops will, at best, just keep the bags in position as you inflate - if they come off-centre when under load these may tear out.
REFLECT =Reflective strips or decals to improve visibility in low light and at night.

FEATURES:
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/ not given

COSTs are approx only

COMPANY	MATJACK	MATJACK	MATJACK
MODEL	2.5t 2418 Cushion	3.6t 3024 Cushion	5.8t 3618 Cushion
CODE NUMBER	L102 L102G	L103 L103G	L105 L105G
ORIGIN			
COST inc tax / VAT	£1600 $2000 €1900	£2100 $2615 €2500	£2300 $2900 €2700
WEIGHT exc inflation eqpt	6.4kg / 14.1lb	8-10kg / 17-22lb	15kg / 33lb
DEFLATED DIMENSIONS Length x Width x Height/depth	61 x 61 x 2.5-7.6cm 24 x 24 x 1-3"	76 x 76 x 2.5-7.6cm 30 x 30 x 1-3"	91.4 x 91.4 x 2.5-7.6cm 36 x 36 x 1-3"
INFLATED HEIGHT	45.7cm / 18"	61cm / 24"	45.7cm / 18"
LIFT CAPACITY	2.2 tonnes /2.5USton	3.26 tonnes /3.6USton	5.2 tonnes /5.8USton
MAX PRESSURE PRV	0.7BAR / 10psi	0.7BAR / 10psi	0.7BAR / 10psi
MAX AIR VOLUME	170L / 6cuft	283L / 10cuft	382L / 13.5cuft
HANDLES/EYES HI-VIZ	- - -	- - -	- - -
MATERIALS	Hypalon/Neoprene	Hypalon/Neoprene	Hypalon/Neoprene
NOTES	L102G=Grip top surface	L103G=Grip top surface	G=Grip top surface
WEBSITE	matjack.com	matjack.com	matjack.com

FEATURES:
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/ not given

COSTs are approx only

COMPANY	MATJACK	MATJACK	MATJACK	MATJACK	MATJACK
MODEL	5.8t 3630 Cushion	8t 4848 Cushion	10t Cushion	8t 4848 Cushion	15t Cushion
CODE NUMBER	L107 L107G	L112 L112G	L119	L120	L124
ORIGIN					
Approx COST inc tax / VAT	£2600 $3300 €3050	£3400 $4300 €4000	£4800 $6000 €5600	£5200 $6500 €6100	£6500 $8200 €770
WEIGHT exc inflation eqpt	~16.8kg / 37lb	~39.5kg / 87lb	~81.6kg / 180lb	~70kg / 154lb	~110kg / 243lb
DEFLATED DIMENSIONS Length x Width x Height/depth	91.4 x 91.4 x 2.5-7.6cm 36 x 36 x 1-3"	122 x 122 x 2.5-7.6cm 48 x 48 x 1-3"	122 x 122 x 2.5-7.6cm 56 x 56 x 1-3"	152 x 152 x 2.5-7.6cm 60 x 60 x 1-3"	183 x 183 x 2.5-7. 72 x 72 x 1-3"
INFLATED HEIGHT	76.2cm / 30"	122cm / 48"	183cm / 72"	152cm / 60"	183cm / 72"
LIFT CAPACITY	5.2 tonnes /5.8UStON	7.1 tonnes /8UStON	9.1 tonnes /10UStON	7.1 tonnes /8UStON	13.6 tonnes /15US
MAX PRESSURE PRV	0.7BAR / 10psi	0.62BAR / 9psi	0.48BAR / 7psi	0.62BAR / 9psi	0.48BAR / 7psi
MAX AIR VOLUME	637L / 22.5cuft	1812L / 64cuft	3710L / 131cuft	3540L / 125cuft	6120L / 216cuft
HANDLES/EYES HI-VIZ	- - -	- - -	- - -	- - -	- - -
MATERIALS	Hypalon/Neoprene	Hypalon/Neoprene	Hypalon/Neoprene	Hypalon/Neoprene	Hypalon/Neopren
NOTES	G=Grip top surface	G=Grip top surface	G=Grip top surface	G=Grip top surface	Grip surface on to
WEBSITE	matjack.com	matjack.com	matjack.com	matjack.com	matjack.com

FEATURES:
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/ not given

COSTs are approx only

COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIO
MODEL	BK- 1 Bar	CK- 1 Bar	DK- 1 Bar	A- 0.5 Bar	B- 0.5 Bar
CODE NUMBER	LB0020/003	LB0021/003	LB0022/003	LB0015	LB0016
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT exc inflation eqpt	17kg / 37.5lb	22.5kg / 49.6lb	25kg /55.1lb	15kg / 33lb	17kg / 37.5lb
DEFLATED DIMENSIONS Length x Width x Height/depth	76 x 5cm 30 x 2"	91 x5cm 36 x 2"	122 x 10cm 48 x 4"	61 x 5cm 24 x 2"	76 x 5cm 30 x 2"
INFLATED HEIGHT	59cm / 23.2"	61cm / 61"	100cm / 39.3"	43cm / 17"	59cm / 23"
LIFT CAPACITY	4.65 tonnes /5.1UStON	3347kg /00lb	11.9 tonnes /13.1UStON	1.5 tonnes /3280lb	2.32 tonnes /5125
MAX PRESSURE PRV	1BAR / 14.5psi	1BAR / 14.5psi	1BAR / 14.5psi	0.5BAR / 7.3psi	0.5BAR / 7.3psi
MAX AIR VOLUME	620L / 22cuft	900L / 31.7cuft	3010L / 106cuft	222L / 7.8cuft	450L / 15.9cuft
HANDLES/EYES HI-VIZ	- 8 x	- 8 x	- 8 x	- 8 x	- 8 x
MATERIALS	Neoprene-coated Kevlar	Neoprene-coated Kevlar	Neoprene-coated Kevlar	Hypalon-coated Nylon	Hypalon-coated Ny
NOTES	8 web eyes	8 web eyes	8 web eyes	Pressure Relief Valve	Pressure Relief Val
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.c

	MATJACK	**MATJACK**	**MATJACK**	**MATJACK**	**MATJACK**	**MFC INTERNATIONAL**
	20t Cushion	**8400 Med 1**	**13000 Med 2**	**18000 Med 3**	**33600 Med 4**	**AK- 1 Bar**
	L130	MJ8000	MJ13000	MJ18000	L122G	LB0019/003
00	£8000 $10000 €9500	£1800 $2250 €2100	£2200 $2800 €2600	£2800 $3500 €3300	£3600 $4500 €4200	£00 $00 €00
	~150kg / 330lb	7.7kg / 17lb	12.25kg / 27lb	16.3kg / 36lb	31.75kg / 70lb	15kg / 33lb
6cm	213 x 213 x 2.5-7.6cm 84 x 84 x 1-3"	61 x 2.5-7.6cm 24 x 1-3"	75 x 2.5-7.6cm 30 x 1-3"	91.4 x 2.5-7.6cm 36 x 1-3"	122 x 10cm 48 x 4"	61 x 5cm 24 x 2"
	213cm / 84"	43cm / 17"	61cm / 24"	61cm / 24"	93.5cm / 37"	43cm / 17"
ton	18.1 tonnes /20USton	1.76 tonnes /00USton	5.9 tonnes /6.5USton	8.6 tonnes /0USton	15.25tonnes /16.8USton	2.9 tonnes /3.2USton
	0.48BAR / 7psi	1BAR / 14.5psi	1BAR / 14.5psi	1BAR / 14.5psi	1BAR / 14.5psi	1BAR / 14.5psi
	9700L / 343cuft	177L / 6.25cuft	255L / 9cuft	347L / 12.25cuft	453L / 16cuft	295L / 10.4cuft
	- - -	- 2 x	- 2 x	- 8 x	- 4 x	- 8 x
ne	Hypalon/Neoprene	Aramid reinforced Neoprene	Aramid reinforced Neoprene	Aramid reinforced Neoprene	Aramid reinforced Neoprene	Neoprene-coated Kevlar
op	Grip surface on top	8 web eyes	8 web eyes	8 web eyes	8 web eyes	8 web eyes
	matjack.com	matjack.com	matjack.com	matjack.com	matjack.com	mfc-international.com

NAL	**MFC INTERNATIONAL**	**MFC INTERNATIONAL**	**MFC INTERNATIONAL**	**MFC INTERNATIONAL**	**MFC INTERNATIONAL**	**MFC INTERNATIONAL**
	C- 0.5 Bar	**D- 0.5 Bar**	**120- High Lift**	**210 - High Lift**	**2-Tier**	**3-Tier**
	LB0017	LB0018	LB0077	LB0078	LB0067	LB0068
	N/A	N/A	N/A	N/A	N/A	N/A
	22.5kg / 49.6lb	25kg / 49.6lb	38.5kg / 85lb	48.5kg / 107lb	10kg / 85lb	48.5kg / 107lb
	91 x 5cm 36 x 2"	122 x 10cm 48 x 4"	135 x 10cm 53 x 4"	145 x 10cm 57 x 4"	55 x 45 x 5cm 21.7 x 17.7 x 2"	55 x 45 x 5cm 21.7 x 17.7 x 2"
	61cm / 24"	100cm / 39"	120cm / 47"	210cm /83"	40cm / 15.7"	60cm /23.6"
5lb	3.34 tonnes /7379lb	5.95 tonnes /13120lb	7.2 tonnes /15800lb	9 tonnes /19800lb	2.1 tonnes /0lb	1.8 tonnes /00lb
	0.5BAR / 7.3psi	0.5BAR / 7.3psi	0.5BAR / 7.3psi	0.5BAR / 7.3psi	1BAR /14.5psi	1BAR /14.5psi
	673L / 23.8cuft	1900L / 67.1cuft	2500L / 88cuft	5200L / 184cuft	110L / 00cuft	150L / 00cuft
	- 8 x	- 8 x	- - -	- - -	* *	* *
lon	Hypalon-coated Nylon	Hypalon-coated Nylon	Neoprene-coated Nylon	Neoprene-coated Nylon	Hypalon-coated Nylon	Hypalon-coated Nylon
ve	Pressure Relief Valve	Pressure Relief Valve	0.5 Bar Pressure Relief Valve	0.5 BarPressure Relief Valve	* * Pre-connected/stacked but individually inflated.	* * Pre-connected/stacked but individually inflated.
om	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com	mfc-international.com

FEATURES:
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/ not given

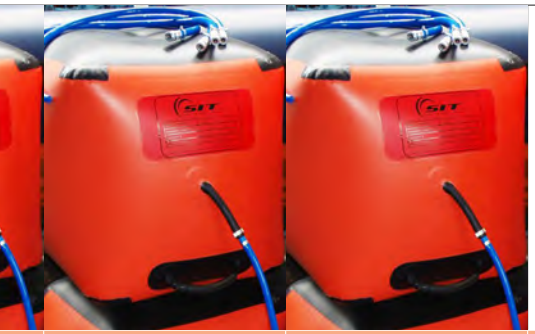
COSTs are approx only

COMPANY	PARATECH	PARATECH	PARATECH	PARATECH	SIT
MODEL	AK 3.3ton	BK 5.1ton	CK 7.4ton	AK 13.7ton	OO
CODE NUMBER	22-887005K	22-887010K	22-887015K	22-887020K	-
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT exc inflation eqpt	15kg / 35lb	17kg / 38lb	22kg / 50lb	25kg / 56lb	00kg / 00lb
DEFLATED DIMENSIONS Length x Width x Height/depth	61 x 5cm 24 x 2"	76 x 5cm 30 x 2"	91 x 5cm 36 x 2"	122 x 10cm 48 x 4"	00 x00cm 0 x 00"
INFLATED HEIGHT	43cm / 17"	59cm / 23"	61cm / 24"	100cm / 39.4"	00cm / 00"
LIFT CAPACITY	3 tonnes /6560lb	4.6 tonnes /10250lb	6.7 tonnes /14761lb	11.9 tonnes /26248lb	00 tonnes /00USto
MAX PRESSURE PRV	1BAR / 14.7psi ■	1BAR / 14.7psi ■	1BAR / 14.7psi ■	1BAR / 14.7psi ■	00BAR / 00psi
MAX AIR VOLUME	295L / 10.4cuft	620L / 22cuft	895L / 31.6cuft	3002L / 106cuft	00L / 00cuft
HANDLES/EYES HI-VIZ	- 8 x ■ ●	- 8 x ■ ●	- 8 x ■ ●	- 4 x ■ ●	1 x ■ - ■
MATERIALS	Neoprene-coated Aramid, Kevlar reinforced	Neoprene-coated Aramid, Kevlar reinforced	Neoprene-coated Aramid, Kevlar reinforced	Neoprene-coated Aramid, Kevlar reinforced	
NOTES	8x web eyes	8x web eyes	8x web eyes	8x web eyes	NB: SIT Ltd make ma bags for other compa rather than selling dire customers.
WEBSITE	paratech.com	paratech.com	paratech.com	paratech.com	sitltd.com

FEATURES:
●= PARTIAL FEATURE
□□□= Option
N/A = info Not Available/ not given

COSTs are approx only

COMPANY	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
MODEL	Sava MS45 4.4ton	Sava MS122 7.7ton	Sava MS210 9.9ton	Sava Catch Bag SCB1	Sava Catch Bag S
CODE NUMBER	527296	527297	527298	574577	596823
ORIGIN					
Approx COST inc tax / VAT	N/A	N/A	N/A	N/A	N/A
WEIGHT exc inflation eqpt	16kg / 35lb	30kg / 66lb	43kg / 95lb	22kg / 50lb	17kg /37lb
DEFLATED DIMENSIONS Length x Width x Height/depth	102 x 10cm 40 x 4"	135 x 10cm 53 x 4"	145 x 10cm 57 x 4"	140/100 x 10cm 55/39 x 4"	110/80 x 10cm 43/31 x 4"
INFLATED HEIGHT	45cm / 18"	122cm / 48"	210cm / 83"	00cm / 00"	00cm / 00"
LIFT CAPACITY	4 tonnes /00USton	7 tonnes /00USton	9 tonnes /00USton	00 tonnes /00USton	00 tonnes /00USto
MAX PRESSURE PRV	0.5BAR / 7.3psi ■	0.5BAR / 7.3psi ■	0.5BAR / 7.3psi ■	<0.2BAR / 00psi	<0.2BAR / 00psi
MAX AIR VOLUME	551L / 20cuft	2618L / 93cuft	5199L / 184cuft	2000L / 71cuft	1320L / 46cuft
HANDLES/EYES HI-VIZ	- - -	- - -	- - -	- 4 x ■ ■	- 4 x ■ ■
MATERIALS					
NOTES	1/2" female valve	3/4" Male Valve	3/4" Male Valve	Can be inflated with an electric/gas blower	Can be inflated with electric/gas blowe
WEBSITE	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com



	SIT	SIT	TRELLEBORG	TRELLEBORG	TRELLEBORG	TRELLEBORG
	OO	OO	Sava MA 3ton	Sava MB 4.7ton	Sava MC 6.7ton	Sava MD 12ton
	-	-	521478	521479	521481	521482
	N/A	N/A	N/A	N/A	N/A	N/A
	00kg / 00lb	00kg / 00lb	7.5kg / 17lb	12kg / 27lb	15kg / 33lb	35kg / 77lb
	00 x00cm 0 x 00"	00 x00cm 0 x 00"	61 x 5cm 24 x 2"	76 x 5cm 30 x 2"	91 x 5cm 36 x 2"	122 x 8cm 48 x 3"
	00cm / 00"	00cm / 00"	43cm / 17"	59cm / 23"	61cm / 24"	100cm / 39"
on	00 tonnes /00USton	00 tonnes /00USton	3 tonnes /10250lb	4.7 tonnes /14761lb	6.7 tonnes /00USton	13.2 tonnes /00USton
	00BAR / 00psi	00BAR / 00psi	1BAR / 14.5psi	1BAR / 14.5psi	1BAR / 14.5psi	1BAR / 14.5psi
	00L / 00cuft	00L / 00cuft	251L /9cuft	535L / 19cuft	793L / 28cuft	2337L / 83cuft
	1 x ■ - ■	1 x ■ - ■	● ● -	● ● -	● ● -	● ● -
ny nies ct to	NB: SIT Ltd make many bags for other companies rather than selling direct to customers.	NB: SIT Ltd make many bags for other companies rather than selling direct to customers.	8x web eyes. 3/8" male valve	8x web eyes		
	sitltd.com	sitltd.com	trelleborg.com	trelleborg.com	trelleborg.com	trelleborg.com

G	VETTER	VETTER	VETTER	VETTER	WEBER RESCUE	WEBER RESCUE
CB2	1/6	1/9	1/13	1/23	W6 1-Bar	W13 1-Bar
	-	-	-	-	-	-
	N/A	N/A	N/A	N/A	N/A	N/A
	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	7.5kg / 00lb	15kg / 00lb
	00 x00cm 0 x 00"	00 x00cm 0 x 00"	00 x00cm 0 x 00"	00 x00cm 0 x 00"	61 x00cm 0 x 00"	91 x00cm 0 x 00"
	00cm / 00"	00cm / 00"	00cm / 00"	00cm / 00"	43cm / 00"	61cm / 00"
on	00 tonnes /00USton	00 tonnes /00USton	00 tonnes /00USton	00 tonnes /00USton	3 tonnes /00USton	6.7 tonnes /00USton
	00BAR / 00psi	00BAR / 00psi	00BAR / 00psi	00BAR / 00psi	1BAR / 14.5psi	1BAR / 14.5psi
	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft	00L / 00cuft
	- 8 x ■ ●	- 8 x ■ ●	- 8 x ■ ●	- 8 x ■ ●	- 8 x ■ ●	- 8 x ■ ●
n an er						
	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	vetter-rescue.com	weber-rescue.com	weber-rescue.com

OmniShore

Safety secured.

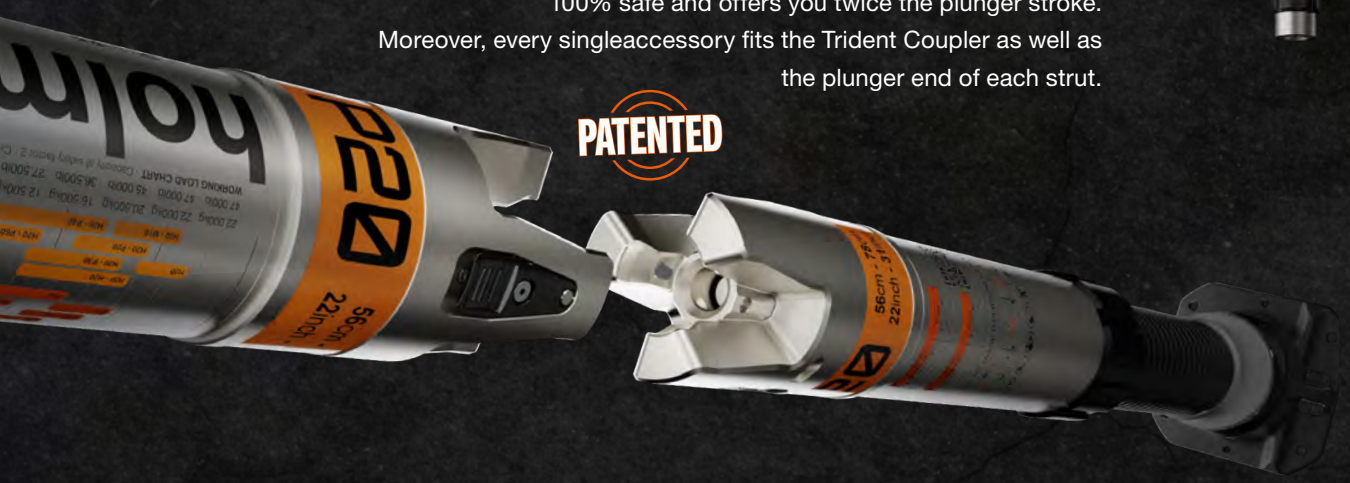
OVERCOME UNLIMITED SHORING CHALLENGES WITH A MINIMUM NUMBER OF COMPONENTS

OmniShore is the world's first and only shoring solution that allows you to build any application with a system of only six different struts. Construct any length up to 17 feet or 5.2 meters with five different struts and without fixed length extension pipes, saving weight and space on your truck.

EXPERIENCE A QUICK AND EASY SETUP IN ONE INTUITIVE WORKFLOW

Our patented Trident Coupler always fits with ease. You can only connect two struts max, so any connection you can make is 100% safe and offers you twice the plunger stroke. Moreover, every singleaccessory fits the Trident Coupler as well as the plunger end of each strut.

PATENTED



TWO CONNECTED STRUTS = TWICE THE PLUNGER STROKE.

Exact measurement is not needed

Two connected struts offer twice the plunger stroke, eliminating the need for precise measurement and allowing fast setup during demanding, time sensitive situations.

EXCEPTIONAL SHORING POWER. READY TO SECURE SAFETY.

Perform all shoring operations with one system, build constructions quickly and easily and take control of every scenario with less people. This is OmniShore.

OMNISHORE CAN DO IT ALL

Vehicle shoring

Flawlessly execute vehicle extrication operations, whether you need controlled vehicle stabilization or lifting.

Trench shoring

Create multiple safe zones in shallow or deep trenches in a revolutionary way, so you can shore walls to prevent collapse and cave-ins.

High directionals

Everything you need to build high directionals to take on even the most challenging rope rescue scenarios.

Structural shoring

The most innovative, fast and safe way to support a structure with rakers, spot shores and more to prevent a collapse.

First responders need shoring equipment that is as intuitive, versatile and smart as they are. That is why we have developed OmniShore, a shoring system reimagined from the ground up and designed in accordance with unparalleled standards of quality and safety.

Patented innovations such as the Trident Coupler and OmniLock system allow you to build unlimited applications with less parts, experience a seamless setup with less handling and take full control with less manpower.

Learn more at holmatro.com/omnishore

holmatro
mastering **power**

UPDATED Aug '26

HEAVY DUTY, USAR-CAPABLE LIFTING FRAMES

Our **ROPE EQUIPMENT BUYERSGUIDE** contains a full list of Tripods/Quadpod and other AHDs (Artificial High Directionals)but we have modified that list for USAR to only those with minimum lift capacity of 400kg/just under half a US ton. This is because, in rope rescue, all tripods and frames are capable of lifting or lowering live-loads, whether that be a rescuer, a victim or a rescuer *and* victim in a stretcher rarely exceeding 300kg. Here we are concerned more with the ability to use a device to lift and shift collapse materials - concrete, metal, wooden beams etc. Airbags and hydraulics can of course be used to lift or spread very heavy objects but only a heavy duty AHD enables you to lift and shift to one side if only by a foot or two or to lift over large distances with a suitably strong pulley system or winch. This is much easier with the gantry style frames but any tripod configuration will allow some lateral movement if you have guyed the top sufficient to counter any load moving outside of the prescribed footprint. If you were careful enough with your load monitoring you could use any tripod/AHD so our roughly half ton cut-off will be deemed to be too arbitrary by some but we have to draw the line somewhere in determining what constitutes 'Heavy Duty'. The *Skedco* and *Lyon Obelisk* models for instance could feel aggrieved that their tripods are just a strong as some we have included, they just choose to list a more conservative max load figure and there are others that may well be listing a load capacity that is misleading at best but we can only go with their stated figures. Consult the **ROPE EQUIPMENT** guide for a full list and for a more detailed background to rope-rescue AHDs.

There are 7 distinct types of stand-alone AHDs:
1) **MONOPOD** - single leg with anchor points on the head for back-stays as well as a main attachment for the lowering system. *TerrAdaptor* version shown left.
2) **BIPOD/A-FRAME** - two legs which can luff out beyond an edge if properly guyed.
3) Traditional **TRIPOD** with a fixed head and attached legs
4) Traditional **QUADPOD** with a fixed head and attached legs
5) **BEAM** where a gantry is created between two sets of legs to span much wider gaps or trenches.
6) **MULTIPOD** which is a modular system of detachable legs, head(s) and components capable of creating a tripod, and bipod and often a monopod depending on head-anchor configurations.
7) **TETRAPOD/ TETRAHEDRAL FRAME**; which used to be just the Australian Larkin Frame but there is now some competition. This is effectively a pyramidal shape (or two pyramids joined) with a rigid frame connecting the three feet together and tipped over so that it pivots on the edge created between two legs - simple genius. This is a true luffing frame in that the load-head can be safely moved in-board of the edge for safe rigging by pulling down on the rear 'tail' of the frame. When ready that same tail is then lifted (under strict control) so that the head and load are luffed out beyond the edge so that all ropes clear the edge and edge negotiation is safe and simple.

HEAVY-DUTY SHORING STRUT SYSTEMS

We could also have a 7th class for modular crossovers from USAR, but while these are radically different, the end product is still one of the previous 6 classes, just a lot, lot, lot stronger! These are structural shoring struts that can be combined with specialist heads and feet to create a gin-pole, bipod or tripod. The AHD guide in our **USAR/EXTRICATION BUYERS GUIDE** gives greater detail on their uses outside of rope rescue. *Airshore* pioneered the tripod adjunct and in fact the largest tripod we ever had was an enormous and very unwieldy beast made of *Airshore's* two or three largest struts plus their largest extensions connecting to a solid machined head (and machined plates for feet) that were strong enough to support collapsed structures. These were in fact, seen inside the Pentagon as columns supporting the ceilings following the 9.11 attacks. These also made great large animal rescue tripods able to support weights far in excess of regular tripods so we used it for cows and horses and In the image

HEAVY DUTY LIFTING FRAMES

below from 2013, Cornwall Fire&Rescue service in the UK were still using the *Airshore* tripod to good effect. *Paratech* then took up the challenge with their version and latterly we have had perhaps the slickest offering from *Holmatro* with their *OmniShore* system (pic opp and above right) . Unlike regular rope access and rescue tripods the modular shoring systems have two unique tricks up their sleeve

1) they are often pneumatic, hydraulic and electric extension as well as the more usual manual so they can actually be manipulated under load or at least under tension - you can adjust the length of one or more legs over short distances - we thought it worth a mention as we once found it very useful in freeing a piece of jammed hardware that was operating way outside of normal margins.

2) Load cell monitors are available (Holmatro has a bespoke system and *Paratech* uses the '*Guardian Angel*' system -pic above right) that can tell you exactly what loads are being applied. These kinds of tripod systems really are the shire-horses of the industry enabling you to attempt tasks that would otherwise be impossible or risky at best. They are of course, not light. The machined head alone on our old *Airshore* weighed as much as an entire mountain rescue tripod. Even today, slick though these things are, you can tell that they are geared more towards an Urban Search & Rescue environment than they are a remote gorge. Top-right is *Holmatro*'s sophisticated 8.7kg tripod head is a combination of their Monopod and Bipods heads with an integral, rotating rigging plate for the main load lines, an integral pulley sheave and no less than 8 stainless steel shackles for tensioning, restraint or guy lines.

Notice that two of the strut attachments are mounted bilaterally while the third is extended and rotates freely to be connected in a 'lazy-leg' configuration if required. More on this shortly. In monopod or gin pole configuration you can really see the difference in bulk - above is Holmatro's 3.2kg/7.1lb monopod head while Harken/SMC's rather more mountain orientated *Space Station* right it is around half the weight at 1.8kg/4lb and the *Arizona Vortex* head below-left is almost half the weight again at 1kg/2.2lb.

LIGHT ALLOY MODULAR SYSTEMS

Light alloy, modular systems like TerrAdaptor and AZV are primarily for rope rescue and are lighter for a reason - they need to be transportable into remote areas via light, all-terrain vehicles or human/animal transport. The tripods/AHDs in this guide, on the other hand, are larger, longer and heavier and need to be trasnported by larger vehicles

Right: One of two heavy-duty USAR tripod/bipods by vehicle rescue specialist Res-Q-Jack which can utilise their 'winch' used on all-in-one struts to effect a lift and/or extend the legs.

and fire trucks etc. Nevertheless, as mentioned in the opening paragraph, many of the lighter rope rescue models will easily perform lighter USAR tasks, particularly load support and stabilisation rather than heavy-lift so be sure to check the modesl in our **ROPE EQUIPMENT BUYERS GUIDE**.

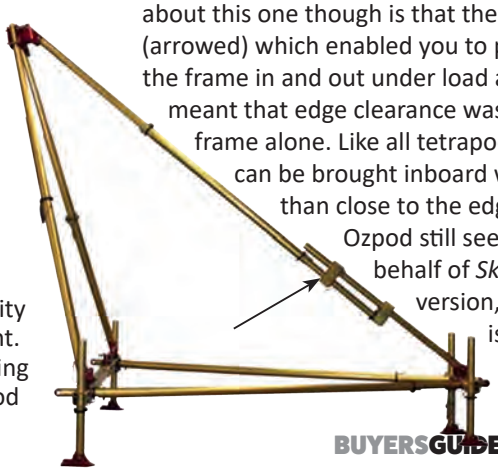
FIXED HEAD TRIPODS

Rather than attaching a modular head some have the leags and head permanently attached to each other and you simply fold everything inwards for storage and transportation in one bag. As with all lightweight AHDs the legs telescope and pin in place to give shorter or greater working height. The majority of tripods and certainly all square/rectangular section AHDs, will accept some kind of mount for a winch and this is most common in industrial 'con-space' tripods. There was a time when virtually all tripods used for industrial access and rescue were one-piece, fixed head tripods and these are still the cheapest option but they do have quite specific and limited applications - they are great for over-hole entries but can still help with stabilisation and lifting lumps of masonry or timber. It is best to use lighter fixed and modular head tripods within their foorptint where their load capacity is highest directly beneath the head.

FOOT RESTRAINTS

USAR tripods and tripod systems tend to have extremely strong foot attachments, far stronger than rope rescue tripods that tend to use a narow profile swivel foot on a few inches wide. In contrast many USAR tripods have a big, load bearing footprint derived from their shoring and stabilisation uses and a range of different designs from wide swivels with multiple anvchor points like this *Holmatro OmniShore* to smaller but no less strong (and heavy) feet around 4"/10cm square like this *Res-Q-Jack* model. Notwithstnading that some tripods may be be erected with all legs at differnt lengths on a rubble pile, it is still the case that they all be linked with rope, web or chain to atop the risk of spreading. Some heads are spread-limiting but it is still a good habit to retain unless the restraints are getting your way. Most have eyes or larger attachment rings on the foot or at the base of the legs - these can have a rope threaded or simply clip in a carabiner and adjust the rope, webbing or chain to allow the required spread. On these heavier-duty tripods such rings/eyes are virtually always caaboe of full load bearing for hauling and progress capture.

LAZY-LEG



In the image above of *Eyolf's Pythagorus* system you can see that the two forward legs are hard up against the edge, in this case at around 90 degrees to the vertical rather than angled forward like the *SAR Products Quadpod* below. The single leg at the rear is a lazy-leg in that it takes very little of the load that is applied to the A-frame legs, in fact virtually none until or unless the load moves in-board of the edge. Instead, its function here is to offer stability and security to the two A-frame legs to restrict rearward movement. It can also be used to increase the footprint for spanning larger holes or gaps than an equilateral tripod/quadpod might offer and to bridge uneven height. Most lazy leg head attachments allow greater rotation and in the case of some round-tube models, can be adjusted through the head and locked to alter the length. All legs on the AZV and TerrAdaptor can extend through and beyond the head to be locked into place with pins.

STANDARDS: As usual, European CE are the most comprehensive and applicable across the work and rescue spectrum but there are several that apply from anchors and PPE fall restraint to Machinary Directive but EN795-B for mobile anchor devices is probably best. For rescue applications NFPA is always a good indication of a bombproof product but we are seeing a move away from large & heavy in rescue driven by the tactical and wilderness markets so NFPA may end up needing a category below 'T' for Technical.

TETRAHEDRAL FRAMES (TETRAPODS)

We're calling this a TETRAPOD. The iconic *Larkin Frame* above from Australia (distributed outside Oz by *Lyon Equipment* in the UK) is an offset pyramid which you tip over in order to clear an edge or it can sit upright in a standard tripod configuration except with solid leg restraints instead of the usual webbing or rope! The *Larkin* is a simple, fixed structure but is nonetheless very versatile. In this image you can see how guying and manoeuvring the 'tail' of the frame allows the head to clear an edge by quite a large margin. The frame pivots on two feet and there are pulleys on fixed eyes at the two top corners of the frame. We only know of two competitive designs to this, one is another of our old favourites - the *SRTe OzPod (below)* which was taken over by *DB Sala's Rollgliss* and then *3M* and then disappeared along with all *SRTe* gear. The *Ozpod* was a modular system comprising a tripod (or A-Frame) and a base frame that converted it into a tetrahedral frame. The interesting thing about this one though is that the frame had a hinged 'break' (arrowed) which enabled you to pull back on a handle to luff the frame in and out under load as well as pivot the frame. It meant that edge clearance was greater than pivoting the frame alone. Like all tetrapods the rescuer and casualty can be brought inboard within (or on) the frame rather than close to the edge. The tripod part of this Ozpod still seems to be produced by or on behalf of *Skedco* in the US. A more recent version, though by no means new, is *Kong's Grizzly*. This differs in having no rigid section between the two feet - what

ARBORIST'S ADVANTAGE

YOU ARE PACKING IN DECADES OF DEPENDABILITY

Developed by Greg Good and manufactured by Harken, the GRCS is the backcountry at height lifting and control system you can pack in to handle equipment and limbs to and from the canopy. The GRCS secures a self-tailing winch to the tree trunk via its ratchet-tightened steel mounting plate. GRCS. Trust decades of experience to control the heaviest loads.

LEARN MORE ABOUT GRCS TREE MOUNT SYSTEM

Made In Wisconsin, USA

Dead lift rating of 3,000 lbs

Kit comes with the two-speed winch mounted on the plate. Also includes 254 mm aluminum SpeedGrip lock-in winch handle B10ASG

HARKEN™

harken.com

would be one of the edges of the pyramid. Like the *OzPod*, this is modular in that the legs or poles can be used to create a bespoke monopod and bipod. The components shackle together with the shackle then creating load bearing eyes at each corner. Multipods and tetrapods can take longer to set up than more basic tri/quadpods, we required a single rescue technician to set up the *Ozpod* as shown on the previous page within 5 minutes, no mean feat. In contrast a much simpler tri/quadpod will go up in a couple of minutes and a modular and tetrapod in 3-5minutes. None of these times include attaching stays/rigging.

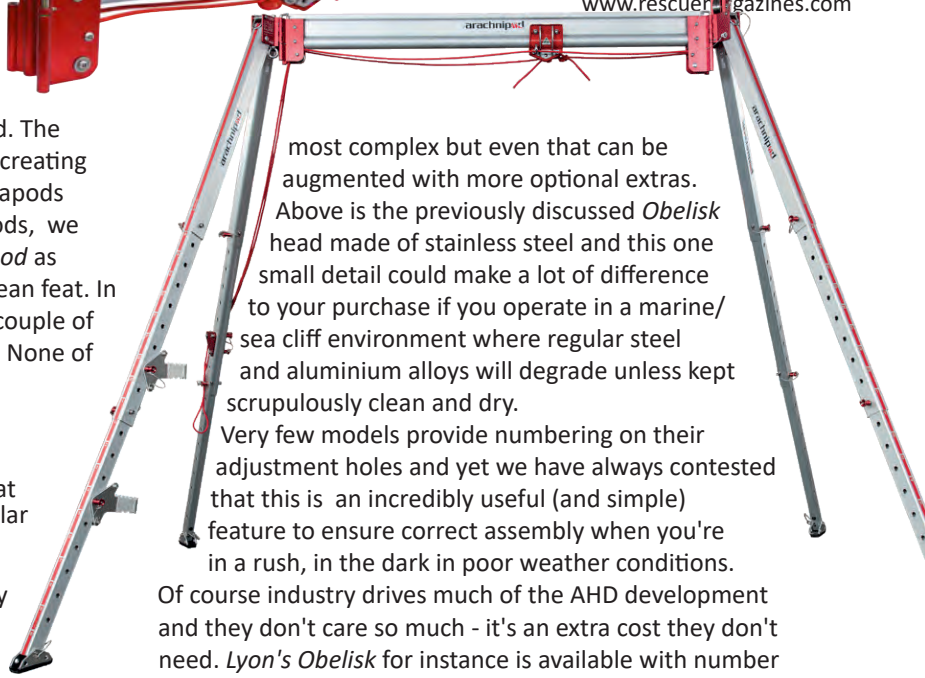
BEAM GANTRIES

In the modern era it was *Ferno's Archnipod* (right)that introduced a transverse beam to attach to their regular A-frame legs and create a gantry that could span a much wider opening or a section of trench. With an eye (or two) on a sliding trolley controlled by a pulley adjustment system this provides a versatile option. We also found this to be useful for improving lateral positioning options on a cliff/building edge but this is not a use you see much (or it's not really allowed) because they are designed to be loaded vertically not with the slight side-pull that an edge negotiation imparts. Nevertheless, properly guyed, this works and we found it much safer than the alternative which is to pendulum the main line(s) to negotiate an obstacle. In the case of the *Arachnipod* you can have a 2, 3 or 4 metre/13ft beam.

Then there's the *Obelisk* from *Lyon Eqpt* in the UK. They came up with a true cross between a quadpod and a manageable sized beam gantry with a very slick trolley system that's about as bombproof as they come. Their stainless steel beam is only 40cm/15" wide but can take one or two sliding eyes that then fix into position with plunge-pins. *SAR Products*, also in the UK have a *Multipod* that also has moveable eyes albeit with fewer fix positions. Both of these give you some options when positioning the load. As a modular head there is scope for both *Lyon* and *SAR Products* to expand the beam options should demand require it. The *SAR Products* head is not as slick as *Lyon*'s but it does offer a tripod option as well as a quadpod.

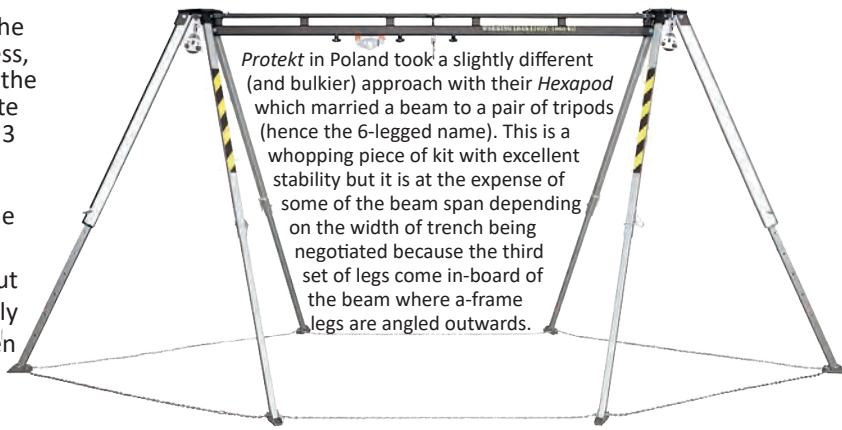
VARIOUS OTHER FEATURES

There are often a number of variants of similar tripods and it is sometimes difficult to decide what constitutes a distinct model and what is too small a variation to warrant a separate entry, especially where industrial access is concerned. The rescue models tend to be more distinct as complete kits. *Mittelmann* for instance have 4 models but the *Mid* is simply a half height version of the *Uni* and the *Octopus* has fixed suction cup feet instead of either the regular round or swivelling feet. We've included the *Uni* with the *Mid* as a variant and the *Mini* with the *Octopus* as a variant. *Protekt* too have many variations on their models which you will need to explore yourself but we have included no less than 6 key models (and excluded their small wheeled model altogether!). The *Arachnipod* is a very complex system with numerous kit options for the tripod, quadpod and beam systems that we could not hope to list separately in this guide - there are 8 variations on the one tripod - so our prices give the most basic rescue model to the most complex but even that can be augmented with more optional extras. Above is the previously discussed *Obelisk* head made of stainless steel and this one small detail could make a lot of difference to your purchase if you operate in a marine/sea cliff environment where regular steel and aluminium alloys will degrade unless kept scrupulously clean and dry.



Very few models provide numbering on their adjustment holes and yet we have always contested that this is an incredibly useful (and simple) feature to ensure correct assembly when you're in a rush, in the dark in poor weather conditions. Of course industry drives much of the AHD development and they don't care so much - it's an extra cost they don't need. *Lyon's Obelisk* for instance is available with number for an additional charge. The *Arachnipod* remains the finest proponent of clear markings with numbers and letters on the top and bottom sections to really ensure there are no mix ups. Their standard feet above show just how clear their marking is, at least while the tripod is new. It's worth maintaining these markings with your own resin paint or marker. These feet also exhibit five features already covered -

1) a swivelling foot that is
2) detachable so that you swap in larger or more specialist feet.
3) A tactile/grippy base for smooth, hard surfaces.
4) A hole for driving in a ground stake and
5) a pointed or spiky end that can dig into softer ground.



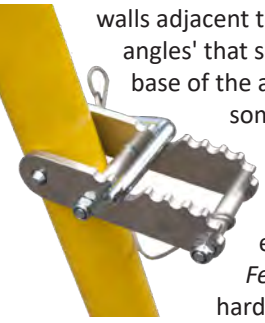
Protekt in Poland took a slightly different (and bulkier) approach with their *Hexapod* which married a beam to a pair of tripods (hence the 6-legged name). This is a whopping piece of kit with excellent stability but it is at the expense of some of the beam span depending on the width of trench being negotiated because the third set of legs come in-board of the beam where a-frame legs are angled outwards.

CMC™

Optimize twin tension systems with CMC's SQUID™ Rig Plate

CMCPRO.COM

Talking of feet, two or three models have suction cup feet intended to used for tank and silo entry but only where you have a relatively clean, non-rusty surface. On site industrial rescue teams may opt for these as their dedicated feet but broad-spectrum teams would be better suited to a modular foot. Nevertheless, in the right situations these suction cup feet are excellent providing the best traction you will get on a a shiny surface. They are basically glass cups using a vacuum lever to suck the cup onto the surface. The *Mittelmann's Octopus* above also has scaffolding style tubes around the frame which we suppose you could jerry-rig to any round-tube frame but these are bespoke sizing and powder-coating. They provide securing for leg restraint (above the metal surface of the tank), extra handholds for entry/egress extra and can also assist in wedging the frame against other surfaces/ walls adjacent the entry point. Mittelmann also sell some 'right angles' that secure on the inside of tripod legs (with the base of the angle flush to the ground) to give hole-entrants something to hold onto as they go in or exit.



Protekt and *Ferno* have steps attached to the leg to aid in rigging or tending the head once erected and similarly *Ferno* also offer a universal hardware attachment plate for connecting pretty much anything you can think of from hybrid descenders to clipping your bag of sandwiches clear of the ground.

WINCHES

Winches are an option on virtually all of these AHDs, either as a bespoke item where the manufacturer can supply a specific attachment to fit the type of tube or as an off-the shelf universal fitting. This can then have a hand winch attached to a leg to provide a smoother, mechanically advantaged option for hauling and lowering. Costs increase considerably for any of these add-ons, the Harken hand winch on this *TerrAdaptor* for instance will set you back about $_____ as a modular option. *Kong* are about the only one we've included as a variant to the basic *Cevedale* tripod because their *Rescue 1* and *Rescue 2* models have 1 and 2 winches respectively integrated into the leg. The basic tripod is $2290 compared to $9000 when a pair of *Ortles* Hand winches are included.

IN THE FOLLOWING TABLES:.....

ORIGIN: Is the parent company - an inset flat may indicate the manufacturer's country if different but we don't always know.

COST: Is for the most basic tripod configuration (not a monopod/bipod option). Some also have a price listed for a variant or the most expensive version or, in the case of Aracnipod TEMS, the best selling (3m) of their 3 most expensive versions**.** Prices are **a**pproximate, include VAT@20% &/or US State Sales Tax. We generally round up the cost. **£$€ in orange is a currency conversion only.**

MATERIALS- HEAD LEGS: The head is the section that ties the legs together and provides the main attachment points. The true Tetrahedral frames typically don't have a 'head' instead just having load bearing eyes in the corners. Legs are all aluminium alloy but some of the 'alu' heads are cast rather than machined.

TUBE PROFILE TELE-SECTIONS: The cross section of material which will be either round tube, square or rectangular and the number of telescoping sections in each leg, usually 2 but some are 3 or even 1 which will not reduce further for transport.

MARKED INCREMENTS: The total number of length adjustments available on any given leg. Usually this will be some kind of independent pin that needs to be secured to the frame to prevent loss but some (like the heavy duty shoring struts) have an integrated sprung plunger or similar locking mechanism built into the leg. **MARKED**= ■=the holes are numbered/ lettered-much better for coordinating construction.

LAZY-LEG WINCH ADAPTER: Whether the system includes a Lazy-Leg (usually longer) and/or an adapter to the head that accepts a Lazy-Leg because it needs to be able to rotate up and down to a shallower angle than the side legs. WINCH ADAPTER allows a winch to be connected to a leg.

WEIGHT: for the basic tripod/quadpod unless sold as a complete kit. Excludes additional accessories: leg restraints and pulleys etc, unless integrated into the structure of the tripod.

PACK(S) DIMENSIONS: The number of carry bags/packs required to transport the AHD and the dimensions of the largest pack. ☐= bespoke bag(s) is an option not included in kit price.

MIN / MAX WORKING HEIGHT: The working height is the maximum clearance that you can expect beneath the main load connection point IT IS NOT the overall height of the AHD though there will no doubt be some in here that have supplied that info instead! The Minimum heigh is achieved by compressing the leg to it's minimum setting but will always be dictated by the length of the longest leg section.

MAX FOOTPRINT: The largest circular hole that the **tripod** or **quadpod** can span and remain functional. This can simply refer to the standard to which it adheres - NFPA= 70"/178cm & CE 78"/203cm - a lazy leg can increase the span width much more.

TYPE of DEVICE:

- ■ **MONOPOD:** Single leg with load bearing head
- ■ **BI-POD** Two-legged A-frame with load bearing head
- ■ **TRIPOD:** Three legged frame with load bearing head
- ■ **QUADPOD:** Four legged frame with load bearing head
- ■ **BEAM:** Load-bearing gantry between two sets of legs.
- ■ **TETRAPOD Single or Double Tetrahedral frame**
- ■ **INDEPENDANT STRUTS: Each leg=load-bearing/shoring strut**

MAXIMUM DEVICE LOAD: As with the footprint, this figure can simply be the minimum required to meet a standard like 600lb in the US - they frequently hold much greater loads or quote a higher load for non-human weight. This max weight should be applied to the frame **only via the main load attachment point(s).** This is akin to the Working Load Limit (NOT to the

MBL/MBS) and will increase as heigh of AHD is decreased. NOT the max load that can be applied to the lateral (guy) eyes.

TYPE OF HEAD MONO BIPOD: Whether the head is readily detachable or fixed/bolted or is a beam. BEAM or gantry is an alternative form of head. It is a beam that spans between two pairs of legs and enables a wider work width and/or the main hard point to be moved. They allow a moving but lockable 'trolley' to be used as the load's attachment point. **MONOPOD** or GIN head mounts to a single pole. Many in this list are already capable of operating as a **BIPOD** head.

CONNECTION: is the type of load-bearing main attachment points at the head - for most this is a swivelling ring bolt to help negate unnecessary torque loads on your carabiner/ connector but some have a fixed ring bolt, a shackle or in the case of the AZV a machined eye. The other commonest option is a drilled eye in a plate or multiple eyes in a rigging plate. The *TerrAdaptor* and *AZV,* have machined eye s with pins for connecting any type of hardware, usually a pulley or a lowering device(see ad-right).

INTEGRATED PULLEYS: pulley sheaves built into the structure of the AHD. Can also act as the main connection point carrying the load bearing rope(s) back to a separate anchor.

LATERAL/REAR (GUY) EYES: On or near the head. Some are fully load bearing but their orientation or position restricts use to anchor/ stay attachment to keep the AHD stable and resist the direction of load. If none are shown, use main eye(s).

FOOT HINGES BALL-JOINT DETACHES: The foot can swivel upwards for storage or to change from flat to spike etc. like this *Obelisk* foot. BALL JOINT enables 360° rotation and lateral movement of the leg. DETACHES means it can be easily removed for change of foot type and/or storage

ANCHOR EYES SPIKE GRIP: holes that allow spikes or ground stakes to be driven through. SPIKE:the foot is, or incorporates, a spike to dig into ground for a solid purchase (like this *Obelisk*).

GRIP for hard surfaces: May be a tactile/ grippy surface like rubber or studs (like this *Obelisk*) or plastic/metal ribbing for purchase on hard surfaces. At least one model has suction cups

SIDE RESTRAINT ANCHOR EYES: These are eyes or eye bolts to, or through which you connect the leg restraints. ANCHOR = rated for load-bearing deviation pulleys or hardware

LEG RESTRAINTS LEGS LOCK: Rope, webbing or chains used to stop legs from spreading. ■=Legs are/can be locked in place.

VERTICAL EDGE: Can operate at, up to or slightly over a cliff or building edge. Properly guyed quadpods offer more stable option than a tripod unless it has a lazy leg.

LUFFING: The frame head can be manoeuvred over and beyond the edge (not just by guying)

HOLE/CON-SPACE:Can be positioned over a hole/well/entry for confined space entry/ vertical entry/rescue.

CONFINE: NOT to be CONFUSED with HOLE/CON-SPACE (above) where the entry is *into* a confined space but the AHD could be the size of a double decker bus! Here we mean that the device can be taken into, and operated within, a confined space - usually only devices with legs that can retract to allow a frame of less than 4ft in height.

SHORING: Tripods etc. constructed from fully-load bearing shoring struts that could, individually, hold up a house.

STANDARDS: EN365=PPE against falls from height
EN1495=Mast climbing platforms
PD CEN/TS 16415= Personal Fall protection for max 2 persons.
EN795= PPE Anchor devices B= mobile, relates to all AHDs
EN1808 =Suspended access equipment

MADE IN

PYTHAGORAS
HARD TO SPELL - EASY TO RIG

EYOLF
www.eyolf.ca

UPDATED Aug '2

NOTES: Images NOT to Scale
Accessories shown may be an optional extra.
COSTS: £$€ shown in burnt orange are currency conversions only. Prices are approximate & include local tax/ VAT

TYPES OF DEVICE:
■=MONOPOD ■ BI-POD
■ TRIPOD ■ QUADPOD
■ BEAM/GANTRY
■ TETRAPOD
■ INDEPENDANT STRUTS

USES: ●●●●= OK BUT NOT IDEAL
□□□□ =Available as an Option

	MANUFACTURER	**FERNO**	**FERNO**	**HOLMATRO**
	MODEL VARIANT PRODUCT CODE	**Arachnipod Std Advantage** APOD-STD APOD-ADV	**Arachnipod TEMS 2m 3/4m** APOD-TEMS APOD-TEMS3/APOD-TEMS4	**Omnishore** 1x M10 1xP60 2xP60
	ORIGIN			
	COST Base model inc Tax/VAT **Variant or Top model**	£3290 $3600 €3830 £3350 $3700 €3900	£10055 $12800 €11705* £11000 $13800 €12600	n/a
STRUCTURE	**TYPE of DEVICE**	■ ■ ■	■ ■ ■ ■ ■	■ ■ ■ ■
STRUCTURE	**MATERIALS HEAD** **LEGS**	Alu Alu	Alu Alu	Alu Alu
STRUCTURE	**TUBE PROFILE TELE-SECTIONS**	Rectangular 3	Rectangular 3	Round 2*
STRUCTURE	**MARKED INCREMENTS**	■ 20x 10cm/4"	■ 20x 10cm/4"	- *finite over 2.4m
STRUCTURE	**LAZY LEG WINCH ADAPTER**	■ □	■ □	■ -
SPECIFICATIONS	**WEIGHT (BASIC TRIPOD)**	27 26kg 70 72.2lb	>32kg >70lb	36.3-79.5 133.5 kg 80-175lb 293lb 11oz
SPECIFICATIONS	**PACK(S) DIMENSIONS**	■ 1 210cm 82.7"	■ 3 210-400cm 82.7- x 157.5"	□ 1-3
SPECIFICATIONS	**MIN WORKING HEIGHT**	170cm / 5ft 5"	170cm / 5ft 5"	*38-164-326cm / 1- 5-10ft 3-4-8"
SPECIFICATIONS	**MAX WORKING HEIGHT**	267cm / 8ft 9"	269cm / 8ft 10"	*56-267-523cm / 1-8-17ft 10-9-2"
SPECIFICATIONS	**MAX FOOTPRINT**	250cm / 8ft 3"	253-534*cm/ 11-17ft-5"	530cm / 17ft (@60°)
HEAD	**MAXIMUM DEVICE LOAD**	220-400kg 484-880lb	175-400kg 385-880lb	2400kg 5291lb
HEAD	**TYPE OF HEAD MONO BIPOD**	Detachable □ ■	2x Detachable □ ■ + Beam*	Detachable ■ ■
HEAD	**MAIN LOAD EYES**	2 Ring Bolts	4 Ring Bolts + Sliding/locking Eye	7 Rig Plate Eyes
HEAD	**INTEGRATED PULLEY(S)**	1 (Dbl sheave- 1 wire, 1 rope)	2 (each=Dbl sheave- 1 wire, 1 rope)	1
HEAD	**LATERAL (GUY) EYES**	3 (on top of each leg)	3 or 4 (top of each leg)	8 (on tripod head)
HEAD	**LEG STEP LEG EYE**	□ □	□ □	- -
FEET	**HINGED BALL-JOINT DETACH**	■ - ■	■ - ■	■ ■ ■
FEET	**ANCHOR HOLES SPIKE GRIP**	■ ■ ■	■ ■ ■	■ - ■
FEET	**SIDE RESTRAINT ANCHOR EYES**	■ -	■ -	■ ■
FEET	**LEG RESTRAINTS LEGS LOCK**	Rope	Rope	Webbing with Ratchets
USES	**VERTICAL EDGE LUFFING**	■ ●	■ ●	■ ●
USES	**HOLE CONFINE SHORING**	■ ■	■ ■	■ ■ ■
	STANDARDS	EN795B, CEN/TS 16415/B	EN795B, CEN/TS 16415/A	Machinery Directive
	NOTES	Tripod can UPGRADE TO TEMS. Alpha-numeric increment labels. Option-Foot steps & anchor points for legs.	**2,3 or 4m Bridge options create the wider footprint. Option-Foot steps & anchor points for legs.	Tripod= Bipod + Monopod. * theoretical min height with smallest adj strut M10- *Max height using 2xP60 struts *Thread enables finite adjustment.
	WEBSITE	ferno.com.au	ferno.com.au	holmatro.com

KASK QUANTUM SERIES

PRESENTING THE UPDATED KASK QUANTUM SERIES

The KASK Series made to engage the extreme elements, with fire-resistant and fire-retardant materials. Made EN 1385 compliant with Quantum Protection Panels*.
Ready for wildland firefighting, technical, water, and mountain rescue.
Where the unexpected, unknown, unpredictable call home.
This is what KASK Quantum Series was made for.

ROTATIONAL IMPACT W311 TEST PASSED

Every KASK helmet is tested for Rotational Impact Performance.

KASK

Performance is a beautiful thing.

NOTES: Images NOT to Scale
Accessories shown may be an optional extra.
COSTS: £$€ shown in burnt orange are currency conversions only. Prices are approximate & include local tax/ VAT

TYPES OF DEVICE:
■=MONOPOD ■ BI-POD
■ TRIPOD ■ QUADPOD
■ BEAM/GANTRY
■ TETRAPOD
■ INDEPENDANT STRUTS

USES: ●●●●= OK BUT NOT IDEAL
□□□□ =Available as an Option

	MANUFACTURER	IRUDEK	JSP	KONG
	MODEL VARIANT PRODUCT CODE	Trip4 10020960000.8	Confined Space Rescue Tripod FAR1003	Cevedale Rescue1 Rescue2 842020000KK 842010000KK 842000000KK
	ORIGIN			
	COST Base model inc Tax/VAT Variant or Top model	£860 $1085 €1003 - - -	£990 $1400 €1300 - - -	£1730 $2290 €1710 £8670 $9000 €7160
STRUCTURE	TYPE of DEVICE	■	■	■
STRUCTURE	MATERIALS HEAD LEGS	Cast Alu Alu	Cast Alu Alu	- Alu
STRUCTURE	TUBE PROFILE TELE-SECTIONS	Square 2	Rectangular 2	Round 2
STRUCTURE	MARKED INCREMENTS	- 9 x 10cm/ 4"	- 2x 50cm/20"	- 3 6
STRUCTURE	LAZY LEG WINCH ADAPTER	- ■	- □	- □ ■
SPECIFICATIONS	WEIGHT (BASIC TRIPOD)	23.6kg 52lb	13kg 28lb 10oz	14 20-25kg 30 44-55lb 13oz
SPECIFICATIONS	PACK(S) DIMENSIONS	■ 1	□ 1	■ 1 130 x 45 x 30cm 51.2 x 17.7 x 11.8"
SPECIFICATIONS	MIN WORKING HEIGHT	222cm / 7ft 3"	115cm / 3ft 9"	160165cm / 5ft 3 5"
SPECIFICATIONS	MAX WORKING HEIGHT	314cm / 10ft 3"	215cm / 7ft 0"	254cm / 8ft 3"
SPECIFICATIONS	MAX FOOTPRINT	245cm / 8ft 0"	150cm / 4ft 11"	180cm / 0ft 0"
HEAD	MAXIMUM DEVICE LOAD	500kg 110lb	500kg 1100lb	1223kg MBS not certified load? 2697lb MBS not certified load?
HEAD	TYPE OF HEAD MONO BIPOD	Fixed - -	Fixed - -	Fixed - -
HEAD	MAIN LOAD EYES	2 Ring Bolts	2 Ring Bolts	3 Ring Bolts
HEAD	INTEGRATED PULLEY(S)	2	1	0 (2 detachable supplied)
HEAD	LATERAL (GUY) EYES	0	0	3 (on tripod head)
HEAD	LEG STEP LEG EYE	- -	- -	- -
FEET	HINGED BALL-JOINT DETACH	■ - -	■ - -	□ - □
FEET	ANCHOR HOLES SPIKE GRIP	■ - ■	- - -	□ - □
FEET	SIDE RESTRAINT ANCHOR EYES	■ -	■ -	■ □
FEET	LEG RESTRAINTS LEGS LOCK	Webbing ■	Webbing with cams	Wire cable or Rope
USES	VERTICAL EDGE LUFFING	● -	● -	● -
USES	HOLE CONFINE SHORING	■ ● -	■ - -	■ ● -
	STANDARDS	EN795B ATEX II 2G Ex h II c T6	EN795B,	EN 795/B EN 1496/B CEN/TS 16415/A
	NOTES	Trip4 has two winch mounts on legs that smaller Trip 1 does not have		*Rescue versions Include 1 and/or 2 integrated rope winches. Kong also has a stand-alone monopods - STELVIO and 4D.
	WEBSITE	irudek.com	jspsafety.com	kong.it

HEAVY DUTY LIFTING FRAMES

expansion column

KRATOS	KRATOS	PARATECH	
Tripod FA6000100 FA6000200	Quadpod FA6010400	Strut Tripod -	
£550 $750 €650 £650 $900 €750	£900 $1065 €985 - - -	*head-kit:£3400 $4300 €4100 *1x 55"strut £1334 $1700 €1600	
Alu Alu	Alu Alu	Cast Alu Alu	
Square 2	Square 2	Round 1,2 or 3	
- 6	- 6	-	
-	-	-	
14.3 22.35kg 31lb 8oz	15.6kg 34lb 6oz	28.6* + 5.8-16.2kg (for 19-55"strut) 63* + 12.7-35.7lb (for 19-55"strut)	
		1-3	
115 190cm / 3 6ft 9 2"	121cm / 4ft	*94cm / 3ft 1"	
215 290cm / 7 10ft	320cm / 10ft 6"	330cm / 11ft	
162 205cm / 5 6ft 3 8"	175cm / 5ft 9"	2.7m / 9ft	
500kg 1100lb	500kg 1100lb	2358.7kg 5200lb	
Fixed - -	Fixed - -	Detachable -	
2 Ring Bolts	1 Ring Bolt	1 Ring Bolt	
2	2	0	
6 or 8 (2 on each mid-leg & head)	6 or 8 (2 on each mid-leg & head)	3	
		- -	
- -	- -	-	
- -	- -	-	
-	-		
Webbing	Webbing	Chain -	
-	-	*	
-	-		
N795:2012 B, ATEX 2014/34/UE, Machinery Directive, EN 1808	EN795:2012 B, ATEX 2014/34/UE, Machinery Directive, EN 1808		
		*minimum practical height but could use a 6" strut and be a foot high! *Not designed to be used off-centre. *Kit contains head, 3xbases,chain & case	
kratossafety.com	kratossafety.com	paratech.com	

NOTES: Images NOT to Scale
Accessories shown may be an optional extra.
COSTS: £$€ shown in burnt orange are currency conversions only. Prices are approximate & include local tax/VAT

TYPES OF DEVICE:
■=MONOPOD ■ BI-POD
■ TRIPOD ■ QUADPOD
■ BEAM/GANTRY
■ TETRAPOD
■ INDEPENDANT STRUTS

USES: ●●●●= OK BUT NOT IDEAL
□□□□ =Available as an Option

	MANUFACTURER	**PROTEKT**	**PROTEKT**	**PROTEKT**
	MODEL VARIANT PRODUCT CODE	**TM15 TM15-G** AT017 AT017G	**TM15 Mini** AT017 MINI	**TM16 Compact** TM16000
	ORIGIN	■	■	■
	COST Base model inc Tax/VAT **Variant or Top model**	n/a £645 $820 €754	£700 $865 €792 - - -	£1545 $1960 €1805 - - -
STRUCTURE	**TYPE of DEVICE**	■	■	■
STRUCTURE	**MATERIALS HEAD** **LEGS**	Alu Alu	Alu Alu	Alu Alu
STRUCTURE	**TUBE PROFILE TELE-SECTIONS**	Round 2	Round 3	Round 2
STRUCTURE	**MARKED INCREMENTS**	- 6x	- 10x	- 10x & 14x
STRUCTURE	**LAZY LEG WINCH ADAPTER**	- □	- □	■ □
SPECIFICATIONS	**WEIGHT** (BASIC TRIPOD)	28.7kg 63lb	19kg 41lb 13oz	16.5kg 36.4lb
SPECIFICATIONS	**PACK(S) DIMENSIONS**	□ 1 226 x 33 x 29cm 89 x 13x 11.4"	□ 1 133 x 33 x 29cm 52.4 x 13 x 11.4"	□ 1 117 x 33 x 29cm
SPECIFICATIONS	**MIN WORKING HEIGHT**	197cm / 6ft 5"	111cm / 0ft 0"	106cm / 0ft 0"
SPECIFICATIONS	**MAX WORKING HEIGHT**	313cm / 10ft 3"	227cm / 0ft 0"	166cm / 0ft 0"
SPECIFICATIONS	**MAX FOOTPRINT**	174cm / 50ft 8"	109cm / 0ft 0""	284cm / 0ft 0"
HEAD	**MAXIMUM DEVICE LOAD**	1000kg 2200lb	1000kg 2200lb	500kg 1100lb
HEAD	**TYPE OF HEAD MONO BIPOD**	Fixed - -	Fixed - -	Fixed - -
HEAD	**MAIN LOAD EYES**	3	3 Plate Eyes	3 Plate Eyes
HEAD	**INTEGRATED PULLEY(S)**	3	3	3
HEAD	**LATERAL (GUY) EYES**	3*	3*	3*
	LEG STEP LEG EYE	□ □	□ □	□ □
FEET	**HINGED BALL-JOINT DETACH**	■ - -	■ - -	■ - ■
FEET	**ANCHOR HOLES SPIKE GRIP**	- ■ ■	- ■ ■	- - ■(suction cups)
FEET	**SIDE RESTRAINT ANCHOR EYES**	■ -	■	■
FEET	**LEG RESTRAINTS LEGS LOCK**	Chain -	- ■	Chain -
USES	**VERTICAL EDGE LUFFING**	● -	● -	■ -
USES	**HOLE CONFINE SHORING**	■ - -	■ ■ -	■ ■ -
	STANDARDS	EN795B, CEN/TS 16415/A	EN795B, CEN/TS 16415/A	EN795B, CEN/TS 16415/B
	NOTES	Comes with detachable footholds on legs. G=most basic version, no anodizing or foot-step plates etc.	*+3 Pulley Roller Guides that can also function as stay eyes.	Intended for tank work/rescue - suction cup feet can be replaced with conventional foot
	WEBSITE	protekt.pl	protekt.pl	protekt.pl

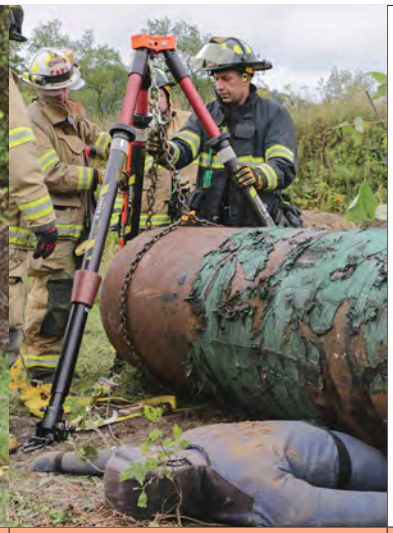
HEAVY DUTY LIFTING FRAMES

PROTEKT	PROTEKT	PROTEKT	SKYLOTEC
TM9-N TM9-N	TM14ZSE TM14/TM7 AT016	TM12- Hexapod TM12	Triboc AP-004
£455 $575 €528 - - -	£675/385 $860/490 €790/450 £1310 $1665 €1530	£820 $1040 €955 - - -	£1150 $1400 €1260 - - -
Steel Alu	Steel Alu	Steel heads/Alu beam Alu	Alu Alu
Rectangular 2	Rectangular 2	Rectangular 2	Rectangular 2
- 5x	- 7x	- 5x	- 8x 11cm/4"
- □	- □	- □	- □
15.45kg 52.3lb	65kg 143lb	86kg 190lb	23.48kg 51.6lb
□ 1 176 x 26 x 23cm	□ 1 228 x 32 x 30cm	□ 3 251-280 x 36 x 31cm	■ 1 172 x 22 x 22cm 68 x 9 x 9"
180cm / 5ft 10"	179cm / 5ft 11"	139cm / 0ft 0"	157cm / 5ft 2"
209cm / 6ft 10"	289cm / 9ft 5"	221cm / 0ft 0"	252cm / 5ft 0"
149cm / 4ft 10"	271cm / 8ft 10"	223 x 983cm / 0ft 0"	249cm / 8ft 2"
500kg 1100lb	500kg 1100lb	1000kg 2200lb	500kg 440lb
Fixed - -	Detachable -	2xFixed + Beam - -	Fixed - -
3 Plate Eyes	2 Plate Eyes	2 Ring Bolts + 1 Moveable Eye	3 Plate Eyes + 1 Ring Bolt
3	1	0	0
3*	Vehicle anchor Plate	3*	2 capped Pins
- -	- -	- -	- -
■ - -	■ - -	■ - -	■ - -
■ -	■ - -	■ -	■ -
■	-	■	■ -
Chain -	-	Chain -	Chain -
● -	■	● -	● -
■ - -	■ - -	■ - -	■ ●
CEN/TS 16415/B	EN795B&E, CEN/TS 16415/B&E, EN 1496B	CEN/TS 16415/B	EN795B, CEN/TS 16415/B
	ZSE is a modification of basic TM14 tripod. TM7 is the same but cannot be ZSE configured	Central beam=2.8m wide	
protekt.pl	protekt.pl	protekt.pl	skylotec.com

NOTES: Images NOT to Scale
Accessories shown may be an optional extra.
COSTS: £$€ shown in burnt orange are currency conversions only. Prices are approximate & include local tax/ VAT

TYPES OF DEVICE:
■=MONOPOD ■ BI-POD
■ TRIPOD ■ QUADPOD
■ BEAM/GANTRY
■ TETRAPOD
■ INDEPENDANT STRUTS

USES: ●●●●= OK BUT NOT IDEAL
□□□□ =Available as an Option



expansion column

	MANUFACTURER	RES-Q-JACK	RES-Q-JACK	
	MODEL VARIANT PRODUCT CODE	STEELX/RJ3 TRIPOD -	SUPER X -	
	ORIGIN			
	COST Base model inc Tax/VAT Variant or Top model			
STRUCTURE	TYPE of DEVICE			
	MATERIALS HEAD LEGS			
	TUBE PROFILE TELE-SECTIONS			
	MARKED INCREMENTS			
	LAZY LEG WINCH ADAPTER			
SPECIFICATIONS	WEIGHT (BASIC TRIPOD)			
	PACK(S) DIMENSIONS			
	MIN WORKING HEIGHT			
	MAX WORKING HEIGHT			
	MAX FOOTPRINT			
HEAD	MAXIMUM DEVICE LOAD	1818kg 4000lb	27270kg 6000lb	
	TYPE OF HEAD MONO BIPOD			
	MAIN LOAD EYES			
	INTEGRATED PULLEY(S)			
	LATERAL (GUY) EYES			
	LEG STEP LEG EYE			
FEET	HINGED BALL-JOINT DETACH			
	ANCHOR HOLES SPIKE GRIP			
	SIDE RESTRAINT ANCHOR EYES			
	LEG RESTRAINTS LEGS LOCK			
USES	VERTICAL EDGE LUFFING			
	HOLE CONFINE SHORING			
	STANDARDS			
	NOTES			
	WEBSITE	resqjack.com	resqjack.com	

AHP

APPALACHIAN HITCHING POST

Getting to the Edge Faster Starts at the Hitch

AHP (APPALACHIAN HITCHING POST)

- Reduce complexity of AHD setups
- Compatible with various Vortex configurations
- Connects to standard 2” receiver
- Available with 90° adapter

MINI HAULING KITS <2.5kg/5lb

Useful for everything from raising a casualty out of a hole to correcting the angle of lean on a tree to adjusting a stretcher from horizontal to vertical, we used to call these *Casualty Pulley Systems* or *CPS*, a term we've used since the early 1980's, but we don't lay claim to it or to the concept - that was primarily down to Dave Allport, then of *Troll Safety Equipment* in the UK. He came up with a combination of tiny yachting pulleys, a hand ascender and small diameter cord that gave you a mini package you could stow on your harness and upon reaching a rope-stranded casualty you could clip on and raise or de-weight their system sufficient to perform a pick-off rescue. Dave may have been more ornery than Yosemite Sam but back then he was often ahead of the game and we bought the first CPS model and swore by it for years. Testament to its longevity is that the *Troll* offspring, *SAR Products* sells a virtually unchanged product (pic far right) as did *Troll*'s latter day owners *Miller/Dalloz* (now *Honeywell Miller*) which we haven't included because none of the components are theirs and their website is even harder to get any sense from than *3M*'s!

We messed about with the *CPS* through the 80s and 90s - made it smaller by replacing the *Kong Cam Clean* ascender with a *Wild Country Ropeman* - one of those tiny cam-only ascenders, we made it longer using miles of cord or whatever we could squeeze in and still attach to our harness, and eventually swapped out the nylon sheave yachting pulleys for the smallest triple and double alloy pulleys available at that time - I think it was *SRTe* (became*3M/DB Sala* but discontinued along with most of *SRTe*'s excellent range). The reason we swapped them was of course because we'd started using it for more and more tasks and eventually overloaded the nylon sheaves, warping them. Heavier duty pulleys were no bad thing but until the turn of this century, they lacked the integral progress capture of those original yachting pulleys with their simple 'V' notch into which you jam the cord. *CAMP*'s *Oyssa* represents the latest in yacht pulleys in stark contrast to their reinventing of the traditional ratchet-strap with the *GRAVITY* (right) . They've taken the bold step of having a self-contained kit using a steel ratchet to provide up to 73cm of lift on a 3to4:1 ratchet cam- simple, strong and cheap. Meanwhile, *Harken* have arrived on the scene as reputed producers of high quality yacht pulleys and winches with their access-specific *Wingman* (above-left) with alloy sheaves and swivels. *SRTe*'s original *MiniHaul* miniaturized a '*WallHauler*' style integral cam but it was still pretty bulky. *ISC* and *Mammut* went one better with custom-designed mini integral cams while the *Bluewater/SMC* model and the iconic *Aztek* (ad opposite) took a simpler approach and use a prusik cord for progress capture but this can increase drag during hauling. For a while *DMM* had the very slick *RPM* which featured modular sheaves that you can swap from single to doubles but they were too slick for the market which wasn't prepared to pay for it. This Guide considers only the smaller pulley systems less than 5lb/2.5kg and generally a 2m/6'7" deployed length. There will therefore be a fine line between some full size rescue pulley systems with short rope lengths like the *SMC HX* and larger 'mini' systems with extra rope like the *Stein* kit. *Protekt* has 2 kits but neither can be described as 'mini'. We will add larger 'team' kits in a later guide but on the whole, these 'mini' kits should be easily hung off your harness. You should **always have some form of redundant safety when hauling**.

The smallest cord/rope diameter will invariably be the smallest and lightest kits but *Edelrid's KAA* (left) is so far unique in using 25mm/1" webbing instead of cord enabling use of a broad cam as a PCD and an innovative lowering handle. those with an add-on cam, like the *Sar-Products* (right), rather than an integrated-cam, can reduce the package weight by fitting a smaller cam or prusik. Even with 4mm cord, a mini pulley system has far more uses than just the originally envisaged rescue pick-off aid. It can be used for self-rescue, tension zip lines, take temporary load for repositioning of anchors, shift heavy weights, provide adjustable guys for shelters or aerials etc. and in storm work can help stabilise or counter the lean of a branch or tree although this will cross over into full size pulley systems so you would need to know your limits. *Skylotec/ Climbing Technology* quote the efficiency of their *Lifty 6* as 79% while *Petzl* and *Edelrid* quote 91% for the *Jag and KAA*. That has a lot to do with the quality of the bushings or bearing and of the sheaves. Generally speaking, alloy sheaves on stainless bearings will be the most efficient but they will also be the heaviest and most expensive relative to size. If you want the smallest lightest system you'll need something like the *SAR Products CPS* with cord and nylon marine pulleys (the original diminutive *Mammut Rescyou* has been discontinued following a recall). If you want ultra-heavy duty you'll want something like the *CT Lifty* (if Skylotec keep it in their range), the *Aztek* system in any of its various guises or perhaps CAMPS webbing & ratchet cam GRAVITY. If you want compact, special purpose systems it will probably be the *Edelrid KAA or ISC Haulerbiner* and for perhaps the best compact all-rounder, the *Petzl Jag* with full strength alloy sheaves.

With the exception of *SAR Products* which is included in this Guide because Dave Allport effectively re-invented mini-hoists for rescue, everyone else is here because they manufacture at least one or more components. In the case of *PMI* and *Bluewater,* they make the rope but not the hardware so you could presumably put these together yourselves from components. Nevertheless, these are all top-end manufacturers who you can trust to produce a kit with all the necessary individual certification and quality as a package. This means you don't need to write your own risk assessments or list components that are 'fit-for-purpose' because they will underwrite the whole kit. No specific standards for these but where CE is listed it will be because EN358 covers PPE as a work positioning/restraint device or there's the European Machinery Directive for non-human lifting. NB: The retracted length often includes the carabiners/maillons. The 2m *Petzl Jag* for instance is 34cm but without carabiners is only 20cm.

rock exotica®
GEAR FOR THE Z AXIS

AZTEK | SYSTEM

- Switches from a simple 4:1 (with a change of direction) to a simple 5:1.
- Color-coded asymmetrical prusiks are rope friendly and can be released under light tension.
- Use AZTEK for pick off, load release hitch, high-directional guyline, litter attendant tether, litter scoop, edge restraint and much more.
- AZTEK System length ranges from just 9" to over 13'.
- Features high-efficiency ball bearings and machined aluminum parts.

AZTEK Kit includes:
AZTEK PULLEYS
6mm PRUSIKS (2)
50' 8mm STATIC CORD
44" 6mm PURCELL PRUSIK CORD
PRO OR STANDARD BAG

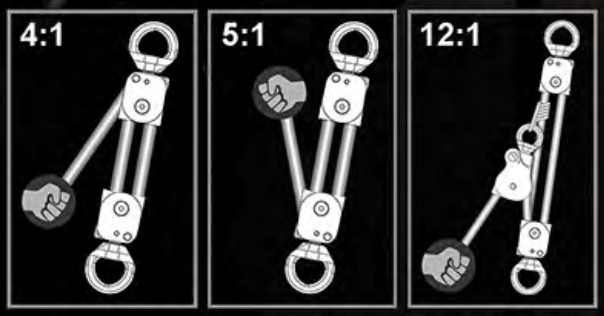
COLOR CODED

EDGE RESTRAINT

LOW TENSION RELEASE

50' CORD LENGTH

SWIVEL CONNECTION



The AZTEK kit can be configured as a 4:1, 5:1 or 12:1 with the use of an additional pulley.

EDGE RESTRAINT

MIN LENGTH 9" (22.8cm) — < WIDE RANGE OF OPERATION > — MAX LENGTH 13' (4m)

Images NOT to Scale
COST: INC local taxes/VAT . £$€ shown in burnt orange are currency conversions only & do not inc shipping, import duty or tax
KIT: CE = Captive Eye, PC = Progress Capture
WWL Working Load Limit. Safety ratios vary from 5:1 to 15:1 so MBS not quoted so much, instead....**BREAK LOAD** is an approximate failure load NOT a 'minimum' due to multiple components
INTENDED MA= most pulley systems can be flipped to pull upwards so a 3:1 can become a 4:1 etc. but integrated cam locations can make this impractical.

MANUFACTURER	3M/DB SALA	BLUEWATER	CAMP	CAMP	CMC	EDELRID	
MODEL VARIANT PRODUCT CODE	Rollglis Micro-Haul 8701...	Mini Haul ?	Oyssa ?	Gravity Rescue Ratchet 3122	Aztek Pro Series 500104	KAA 881320800170	4: Syst
ORIGIN							
COST (for min size option)	£720 $900 €823	£200 $247 €227	£190 $230 €215	£54 $70 €55	£390 $489 €447	£200 $250 €220	-
WEIGHT (for min size option)	2.2kg 4.8lb	1.1kg 2.35lb	370g 13.1oz	720g 1lb 9oz	2.3kg 5lb	500g 5lb	
MAX LOAD- SWL MBS	300kg 8kN 661lb 1798lbf	-kg 13.3kN -lb 2990lbf	120kg 7kN 264lb 1574lbf	120kg 22kN 264lb 1574lbf	800kg 36kN 1760lb 8093lbf	600kg 22kN 1323lb 4947lbf	2 44
DEPLOYED LENGTH options	2m 6'7"	8m 27"	1m 3.28'	1.1m 3'7"	3.5m 12'	0.8/1.5/4m 3'3"/4'9"/15'9"	
POUCH/RETRACTED SIZE	36 x 16cm 14 x 7"	23 x 13 x 13cm 9 x 5 x 5"	14 x 10 x 7cm 5.5 x 4 x 2.75"	37cm 14.6"	24 x 15 x 10cm 9.5 x 6 x 4"	20 x 7.6 x 7.5cm 8 x 3 x 3"	
ROPE/CORD LENGTH/ Ø	14m/46' 8mm 5/16"	35m/115' 8mm 5/16"	7.6m/25' 4mm <3/16"	1.1m/ 3'7" 33mm Plystr Web 1.3"	15m/50' 8mm 5/16"	4m/13' 25mm webbing 1"webbing	
SHEAVE (WHEEL) Ø	Alu 3x 0mm 3x 0"	Alu 2x 30mm 2x 1.2"	Nylon 3x 20mm 3x 0.8"	none (Steel ratchet)	Alu 2x 28mm 2x 1.1"	Nylon 2x 26mm 2x 1.1"	2x 2x
STORAGE/ DEPLOYMENT BAG				none			
FIXED SWIVEL CHEEKS	■	■	■	none	■		
PC CAM PRUSIK	■	■	■	none	■		
BUSHING BEARING PIN	■	■		none	■		
MA EFFICIENCY	6:1	4:1	6:1	>3:1<5:1	4:1 5:1 80%	4:1 5:1 91%	
STANDARDS	CE NFPA			CE EAC		CE	
INCLUDED ITEMS NOTES	DISCONTINUED Various rope connection hardware options	1x 6mm Maillon, 2x double pulleys 2x auto carabiners 1x sewn prusik Pouch	2x triple pulleys with integrated cleat, 2x 4mm Maillons, 7.6m cord, pouch	73cm of lift using a ratchet cam giving between 3:1 and 5:1 of advantage - greater with less web wound on.	2x swivel pulleys, 2x sewn prusiks, 15m/50ft CMC Aztek cord, pouch	webbing, Mesh, Pouch, Top assembly with handle, Bottom assembly	443 D
WEBSITE	capitalsafety.com	bluewaterropes.com	camp.it	camp.it	cmcrescue.com	edelrid.com	h

MINI HAULING KITS

HARKEN	HARKEN	HEIGHTEC	HEIGHTEC	ISC	KONG	KONG	KONG
1 Purchase em IN2624/.6M	Wingman IN404	Hexan UP15	Vantage P10	HaulerBiner HB165.2	Maxi-Hoist#4 20800	Mini-Hoist#7 208001	Hop (Hoist#5) 20820
$410 -*	£570 $525 €580	£232 $291 €267	£214 $268 €245	£204 $320 €0	£312 $494 €272	£288 $328 €243	£342 $430 €392
2.3kg 5lb	2kg 4.4lb	700g 1lb 9oz	750g 1lb 11oz	650g 1lb 7oz	1820g 4lb	680g 1.5lb	1.22kg 2lb 11oz
00kg 10kN 5lb 2248lbf	300kg 45kN 675lb 10115lbf	150kg 25kN 337lb 5620lbf	140kg 14kN 308 3147lbf	140kg 16kN 308 3500lbf	140kg -kN 310lb -lbf	300kg 5.9kN 661lb 1322lbf	140kg 4kN 310lb 899lbf
2m 6'7"	3.5m 12'	2m 6'7"	1/1.5/2/5m 3'3"/4'9"/6'7"/16'3"	1.05/1.65/3m 3'5"/5'4"/9'10"	4m 13'	1.15m 3.9'	1/2m 3.28'/6'7"
35cm 13.75"	20.3" 38x33cm 8" 15x13"	n/a	n/a	32cm 11.8"	55cm 21.6"	30cm 11.8"	32/34cm 11.8/13.4"
15m/50' 8mm 5/16"	15m/50' 8mm 5/16"	15m/50' 5mm 3/16"	4m/13' 8mm 5/16"	15m/50' 6mm 1/4"	15m/50' 10mm 25/64"	6.5m/21' 5mm 3/16"	15m/50' 10mm 25/64"
Delrin 57/35mm 2.25/1.4"	Alu 2x 46/33mm 2x 1.8/1.3"	Nylon 2x 20mm 2x 0.8"	Alu 2x n/a 2x n/a	Nylon 3x 20mm 3x 0.8"	Alu 2x 35mm 2x 1.38"	Nylon 2x 34mm 2x 1.34"	Alu 40.5 & 35mm 1.6 & 1.38"
none			none		none	none	
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■		■	■	■
4:1 5:1	4:1 5:1	6:1	4:1 5:1	6:1 7:1	4:1 5:1	6:1 7:1	4:1 5:1
CE	NFPA CE UKCA	CE	CE UKCA	CE	CE	-	CE
*USA-ONLY RPS Discontinued		2x Alloy S/g carabiners 1x Triple nylon pulley 1x Triple sheave/ cleat Pouch	Cut resistant sheath. cord,	Also rebadged by STERLING ROPE as Mi-ni-Hauler and Raise&Res-cue Elite kit. Cord, 2x Triple pulley-carabi-ners, mesh, pouch	Rope 2x Twin Evo dbl Pulleys, 1x Cam, 2 carabiners, 1x maillon	Cord 1 dbl pulley, 1xtriple pulley with cam, 2x carabiners	Rope 1x Turbo Roll pulley 1x Futura Miniblock 1x Mini Twin Evo dbl pulley 2x Maillons
arken.com	harken.com	heightec.com	heightec.com	iscwales.com	kong.it	kong.it	kong.it

Images NOT to Scale
COST: INC local taxes/VAT . £$€ shown in burnt orange are currency conversions only & do not inc shipping, import duty or tax
KIT: CE = Captive Eye, PC = Progress Capture
WWL Working Load Limit. Safety ratios vary from 5:1 to 15:1 so MBS not quoted so much, instead....**BREAK LOAD** is an approximate failure load NOT a 'minimum' due to multiple components
INTENDED MA= most pulley systems can be flipped to pull upwards so a 3:1 can become a 4:1 etc. but integrated cam locations can make this impractical.

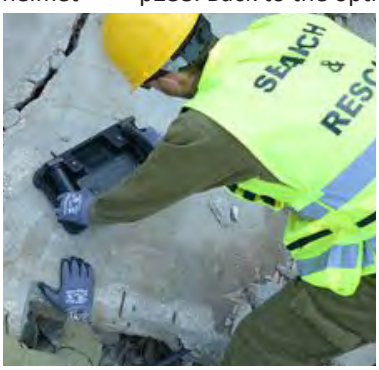
MANUFACTURER	LYON EQUIPMENT	PETZL	PMI/SMC	PMI/SMC	ROCK EXOTICA	SAR PRODUCTS	PR
MODEL VARIANT PRODUCT CODE	Cas. Pick-Off Hoist LCH	Jag P044AA..00..01..02	Adv-Tech Haul System KT36158	Jr Haul System KT36128	Aztek Pro P41	Casualty Pul-ley System P0001	Res Sy
ORIGIN							
COST (for min size option)	£319 $417 €380	£232 $370 €230	£581 $721 €696	£281 $348 €336	£541 $440 €590	£252 $330 €301	
WEIGHT (for min size option)	450g 1lb	610g 1lb 5.5oz	1.43kg 3lb 2.4oz	840g 1lb 14oz	2.3kg 5lb	866g 1lb 15oz	
MAX LOAD- SWL MBS	150kg 9kN 330lb 2023lbf	600kg 16kN 1323lb 3597lbf	- 34kN - 7643lbf	- 34kN - 7643lbf	800kg 36kN 1760lb 8093lbf	150kg 9kN 330lb 2023lbf	1 33
DEPLOYED LENGTH options	1.3m 4.2'	1/2/5m 3'3"/6'7"/16'3"	2m 6'7"	2m 6'7"	4m 13'	2m 6'7"	
POUCH/RETRACTED SIZE	21cm 8.25"	34 cm 12.5"	36 x 16cm 14 x 7"	30 x 16cm 12 x 7"	24cm 9.52"	20 x 16 x 7cm 8 x 6.25 x 7.25"	4 15
ROPE/CORD LENGTH/ Ø	9m/30' 4mm <3/16"	7.5m/25' 8mm 5/16"	10m/33' 9mm 3/8"	10m/33' 7mm 9/32"	15m/50' 8mm 5/16"	15m/50' 6mm 1/4"	3
SHEAVE (WHEEL) Ø	Nylon 2x 20mm 2x 0.8"	Alu 2x 25mm 2x 1"	Alu 2x 35mm 2x 1.37"	Alu 2x 35mm 2x 1.37"	Alu 2x 28mm 2x 1.1"	Nylon 2x 20mm 2x 0.8"	
STORAGE/ DEPLOYMENT BAG							
FIXED SWIVEL CHEEKS	■	■	■	■	■	■	
PC CAM PRUSIK	■	■	■	■	■	■	
BUSHING BEARING PIN	■	■	■	■	■	■	
MA EFFICIENCY	6:1	4:1 5:1	4:1 5:1	4:1 5:1	4:1 5:1 80%	6:1	
STANDARDS	CE	CE UKCA EAC	BERRY	BERRY	CE		
INCLUDED ITEMS NOTES	DISCONTINUED Ascender, cord, 2x snap carbine hooks, 2x triple pulleys, integrated pouch	91% Efficiency Jag Traxion PC pulley, dbl pulley, 2 x Auto Carabiners mesh cover Integrated pouch Also full size rescue kits	HX PC pulley, Dbl pulley, 5mm Maillon 2x carabiners, 3m release cord, pouch. Can use 7-12mm rope	2 SMC JRB dbl pulleys, 2x carabiners, Prusik hitch Maillon, 2m 5mm cord Pouch	2x Omni pulleys, 2x prusiks, AZTEK cord, 6mm travel restraint, Bag,	Ascender, cord, 2x maillons, 2x triple pulleys pouch, carabiner	1x 1x 2x
WEBSITE	lyon.co.uk	petzl.com	pmirope.com	pmirope.com	rockexotica.com	sarproducts.com	sarp

SAR RODUCTS	SKYLOTEC	SKYLOTEC	SKYLOTEC	SKYLOTEC	STEIN	STERLING ROPE	STERLING ROPE
cue Pulley stem P0002	Mini Haul System SET-337-23	CT Up-You-Go H251 & 2K117	CT Lifty 2K114	CT Lifty 6 2K115	5:1 Hauler Kit SS-8160110020	Pocket Hauler Kit KTPHAULERB	Aztek Elite Arbor KTAZTEKA
n/a	£588 $600 €547	£237 $296 €252	£335 $366 €325	£365 $386 €355	£270 $440 €310	£319 $390 €359	£526 $650 €630
2kg 4lb 6oz	950g 2lb 1oz	850g 1lb 15oz	1.72kg 3lb 12oz	2.3kg 5lb	3kg 6lb 10oz	1.54kg 3lb 6oz	1.72kg 3lb13oz
150kg 9kN 0lb 2023lbf	400kg 18kN 880lb 4046lbf	400kg 18kN 880lb 4046lbf	160kg 16.3kN 352lb 3664lbf	240kg 24.5kN 528lb 5507lbf	240kg 22.5kN 528lb 5507lbf	0 22kN 0 5058lbf	800kg 36kN 1760lb 8093lbf
10m 33'	4m 13'	1/2 /5m 3'3"/6'7"/16'3"	2/5m 6'7"/16'3"	2m 6'7"	2m 6'7"	2m 6'7"	2m 6'7"
0 x 20cm 5.75 x 8"	35cm 13.7"	34cm 12.5"	24 x 26 x 12cm 9.5 x 10 x 4.7"	24 x 26 x 12cm 9.5 x 10 x 4.7"	38cm 15"	14 x 23 x 2.7cm 5.5 x 9x5"	24cm 9.52"
30m/100' 8mm 5/16"	23m/75' 8mm 5/16"	10m/33' 8mm 5/16"	10m/33' 9.5mm 3/8"	15m/50' 9.5mm 3/8"	25m/82' 12mm <1/2"	15m/50' 8mm 5/16"	15m/50' 8mm 5/16"
Nylon 2x 51mm 2x 2"	Nylon 2x 22mm 2x 0.9"	Alu 2x 25mm 2x 1"	Alu 2x 39mm 2x 1.5"	Alu 3x 39mm 3x 1.5"	Alu 2x 50mm 3x 2"	Alu 2x 28mm 2x 1.1"	Alu 2x 28mm 2x 1.1"
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■		■	■	■	■	■	■
3:1 4:1	6:1	4:1 5:1 80%	4:1 86%	6:1	4:1 5:1	4:1 5:1	4:1 5:1 80%
	CE	CE	CE	CE	CE		
Cord,pouch, tandem pulley single pulley, CE carabiners	Cord,pouch, 1x triple pulley 1x triple with cam, 2x CE carabiners Bag NB: 3:1 (SET-302-40) is not a mini system	Dbl & PC cam pulley, 2x Oval CE Carabiners Pouch. climbingtechnology.com	Being Phased out? Cord, PC cam, Maillon, 2x Double pulleys, 2x CE Carabiners Pouch. climbingtechnology.com	Being Phased out? Rope, Separate PC Cam, Maillon, 2xTriple pulleys, 2xCE carabiners, pouch. climbingtechnology.com	Rope 2x ISC RP064 pulleys 1x Stein sewn hitch Bag	2x Dryad double pulleys 50ft rope with sewn eye, 2xAutolock Carabiners, 1x sewn prusik, 1x6mmMaillon Aztek t pouch	2x Omni pulleys, 2x prusiks, AZTEK cord, (Arbor version lacks the 6mm travel restraint), Waist pouch, 3xCarabiners (2=CE)
roducts.com	skylotec.com	skylotec.com	skylotec.com	skylotec.com	steininternational.com	sterlingrope.com	sterlingrope.com

Title Pic: Leader Group's Leader Cam and opposite, in use with the White Helmets in remote probe mode with the operator's screen shrouded for better visibility

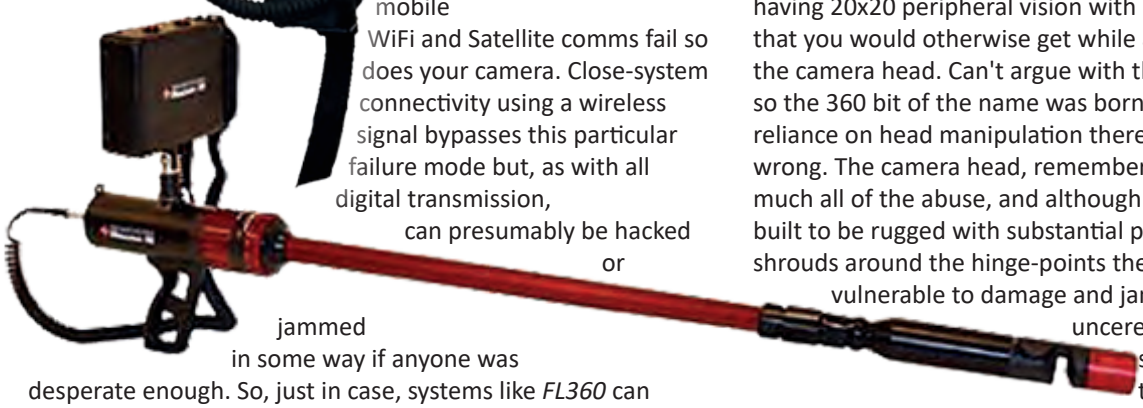
Handheld SEARCH CAMERAS

Aside from the use of drones as a vehicle on which to mount search cameras, there hasn't been much to get excited about in void-searching camera development in recent years. That's testament to how good and robust the existing technology is I suppose with one or two of the top models virtually unchanged since the last century. Applications for pole-mounted search cameras began evolving about 20 years ago so that vehicle extrications in particular together with water searches saw more regular use of cameras previously marketed only for victim location in building collapse rescue. 'Pole-mounted' evolved into 'cable-lowered' and even helmet or ROV mounted. The biggest change within the market in recent years has been the purchasing of many of the main players in each sector by just three entities; *Scorpe, Savox* and *Leader Group* or *Groupe Leader* depending on which country you're in. The latter two companies dominate our sector as one-stop shops for disaster response equipment with *Delsar, Search Cam* and *Con-Space* on one side and *LeaderScan*, *LeaderCam* and *LeaderSound* (breath analysis) on the other – all are industry icons, as valuable today as they were in the 1990s. Another legendary name from that period that seemed to disappear for a while outside of France is the *Vibrascope* and associated *Vibraphone*. This company was bought by *Scorpe* and added structural movement monitors to their existing range of hydraulic tools and lifting bags so they truly are a one-stop-shop.



The problem with many sectors of rescue is that the market is so specialised and financially small, that development stagnates once something is found to work well. Look at *Conspace Communications*' hard-wired system. That has hardly changed in over 30 year and is still the leading, if not sole, main contender for prospective purchasers of intrinsically safe, duplex comms. The same goes for *Search Cam* (both brands now being under the *Savox* umbrella). There will be changes of course; optics, acoustics and electronics are all superior now even if the outward appearance is the same and 'see-through-wall' technology (pic below) has definitely come of age to such an extent that it may be a key game changer for rescuers and we can include it in this guide as well as the forthcoming Thermal Imaging Camera Guide, more on this on p288. Back to the optical cameras and there was a period in the early 2000's when much smaller systems like *Red Box* began to appear aimed more specifically at vehicle extrication and even underwater search at a more affordable price. Disaster response, however, continued to specify the larger, more complex and proven robust systems so *SearchCam* has remained at the forefront and is now sold as the *3000* together with its smaller brother the *Recon III*. The visually similar *Pro-Eye* from *Yone Corp* in Japan expanded on the underwater capability with a system that has sonar as well as a camera while *Groupe Leader* augmented their *LeaderSearch* acoustic system with *Leader Cam*, a system more in tune with the proliferation of separated camera and TV systems. One notable model that piqued a lot of interest when launched a several years ago and the impetus for us compiling this guide is the *FirstLook360* which we have mentioned a few times in our magazine and in our Emag *Access&Rescue*. This has taken many of the best features of current market leaders and incorporated some neat additions to set it apart. Not least is its ability to

wirelessly transmit high resolution images to smartphones and tablets, doesn't everything these days? Apparently not and ironically, it's Andy Ibbetson, the son of the founder of *Con-Space Communications* Terry, that has co-developed this new camera, presumably drawing on his and Terry's decades of experience in the confined space rescue sector. I say 'ironically' because, unlike the *Con-Space Comms* system, which is firmly rooted in 'old' reliable technology, *FirstLook360* embraces every element of smart technology which is why it remains worlds apart from most of the others. And the same reason that *Con-Space Comms* has stood the test of time could conceivably be why the *FL360* uses direct, one-one wireless connectivity rather than relying on satellite or mobile network-dependant connectivity. Electronic, fly-by-wire and direct transmission is far superior most of the time but when mobile WiFi and Satellite comms fail so does your camera. Close-system connectivity using a wireless signal bypasses this particular failure mode but, as with all digital transmission, can presumably be hacked or jammed in some way if anyone was desperate enough. So, just in case, systems like *FL360* can be hardwired as well. You sometimes can have it all ways and it has to be said that catastrophic failures predicted by the doom-merchants for fly-by-wire and satellite dependent systems when they first appeared have proven largely baseless and indeed have probably been far less that the 'mechanical' or analogue systems they replaced. One thing the *FL360* doesn't do which most of the others list as a key feature is have a mechanically articulating camera head. The *LeaderCam* top-left and above right (as featured on Issue 73's front cover in use with the White Helmets in Syria and here with sunlight shroud on the screen) can be made to look sideways at the flick of a toggle by the camera operator. Plus, of course, the person manipulating the camera can rotate the pole – which is a handy back-up should articulation jam. *Agility Corp*, the new kids on the block, thought, what's the point of all that sophisticated camera head articulation and associated telemetry? If we stitch together the image from two wide-angle, side facing cameras



to give a full 360 degree view it wouldn't need to move to look sideways. In the picture on the right you can see one half of the protruding 'bubble' lens at the top next to square LED lights (there's also a battery level and pairing indicator just below the 'F' of the product name.) It's like having 20x20 peripheral vision with no time-lag that you would otherwise get while articulating the camera head. Can't argue with that and so the 360 bit of the name was born. With no reliance on head manipulation there's less to go wrong. The camera head, remember, takes pretty much all of the abuse, and although they're built to be rugged with substantial protective shrouds around the hinge-points they're still vulnerable to damage and jamming when unceremoniously shoved through a small opening in dusty, dirty, sharp-edged, re-bar filled concrete.

CAMERA POLES

The original *Search Cam* now in its '*3000*' version (large pic left) and with a lighter, less costly variant the *Recon III* (smaller pic left) had the TV screen permanently mounted at the end of the pole making the whole assembly heavier and cumbersome because it limited your ability to manoeuvre the camera and pole. Subsequent *SearchCam* models made the screen detachable and this is a standard feature of most modern camera systems which either have the screen hardwired like *Leader-Cam* or wireless like *FL360* but either way this enables much easier forward-operating of the camera by a separate person. This is not always the case, in the picture below, the operator is manoeuvring the *Tactical*

Electronics Core pole while viewing a detached screen fastened to his arm – there are definitely times when it's easiest to view something by twiddling the pole yourself, and some, even the aforementioned *FL360* have the option to be mounted to the pole for single operator use. One model has been specifically downsized to be used by one operator – the *Yone Nano* system (right) has a teeny 7mm head on an otherwise standard looking search camera system with a toggle directed camera, on-handle screen and it runs on double AA batteries, truly light and portable. *Savox* had something similar with their diminutive '*Mongoose*' but that seems to have now disappeared.

Most companies in this sector are first and foremost search camera specialists using or designing the pole or delivery system for that camera. One company however, is a pole specialist that has had a camera designed to utilise their poles. *Reach and Rescue* in he UK have an enormous telescopic pole that can reach up to 55ft/17m indeed, they have a pole adapted specifically to fit the *FL360* in addition to its standard pole offerings. This is currently the longest pole in the search camera sector and while it would be outstanding in large void searches, it might have limited applications in regular building collapse where the spectre of 'making progress through he rubble' rears its head.

Physically getting a rigid pole into a space to search can be problematic so camera heads have become compact so that a single manageable bore hole can be drilled in slabs or through brickwork to allow initial entry of the camera and pole.
A much easier device to get into limited spaces is the endoscope-type camera also called a borescope or fiberscope, that has mostly migrated across to rescue from 'inspection' in other sectors. These use a flexible tube from the screen or relay to the camera. The tube can be 'bent' into shape to ease entry into spaces and such cameras have proven particularly useful in vehicle crashes where the rescuers are able to identify specific foot and limb entrapment points before they commence metal relocation. I remember attending an incident many years ago where the first arriving crew commenced a dash-roll only to find that an extraneous bolt on the old van's steering servo had penetrated the casualty's knee which was now being pulled off along with the steering wheel and dash! Had they existed at the time, a quick look with a flexible camera system would have identified this and enabled an alternative course of action. Since they have evolved from endoscope systems some of these systems can still marry back to an endoscope system ie. have a regular or magnifying eye piece connected to the end of the tube instead of, or as well, as a screen to aid clearer imaging of what the camera is looking at. The downside to these semi-flexible tube systems like SnakeCam (right) and Unifire's (above) is that they are not usually capable of having the camera detached and

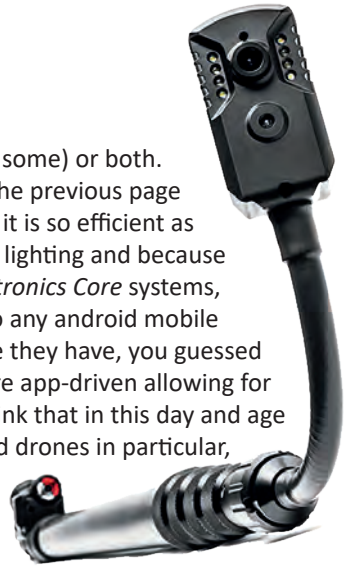
Yone Corporation's Pro Eye

used separate from the pole/tube and screen. The *Core* system (below) aimed more at tactical users but equally applicable to rescue, offers a number of camera options including this borescope/endoscope-style camera which uses an eyepiece and monitor option with wireless transmission.

REMOTE OPERATION

The ''remote probe' idea, where the camera head is detached and lowered into a void was really pioneered by *Con Space* with their audio-only attachment to the hard-wired *Con-Space Communications* system so its no surprise that Con-Space's second cousin once removed, the *FL360* also has this option with a metal eye that can be screwed in to the camera head as the most robust of lowering attachments. *Leadercam* has a variant, the *RD90* which attaches to a 90m cable and, unlike their standard camera head listed in the following table, is waterproof to the full 90m of the cable.

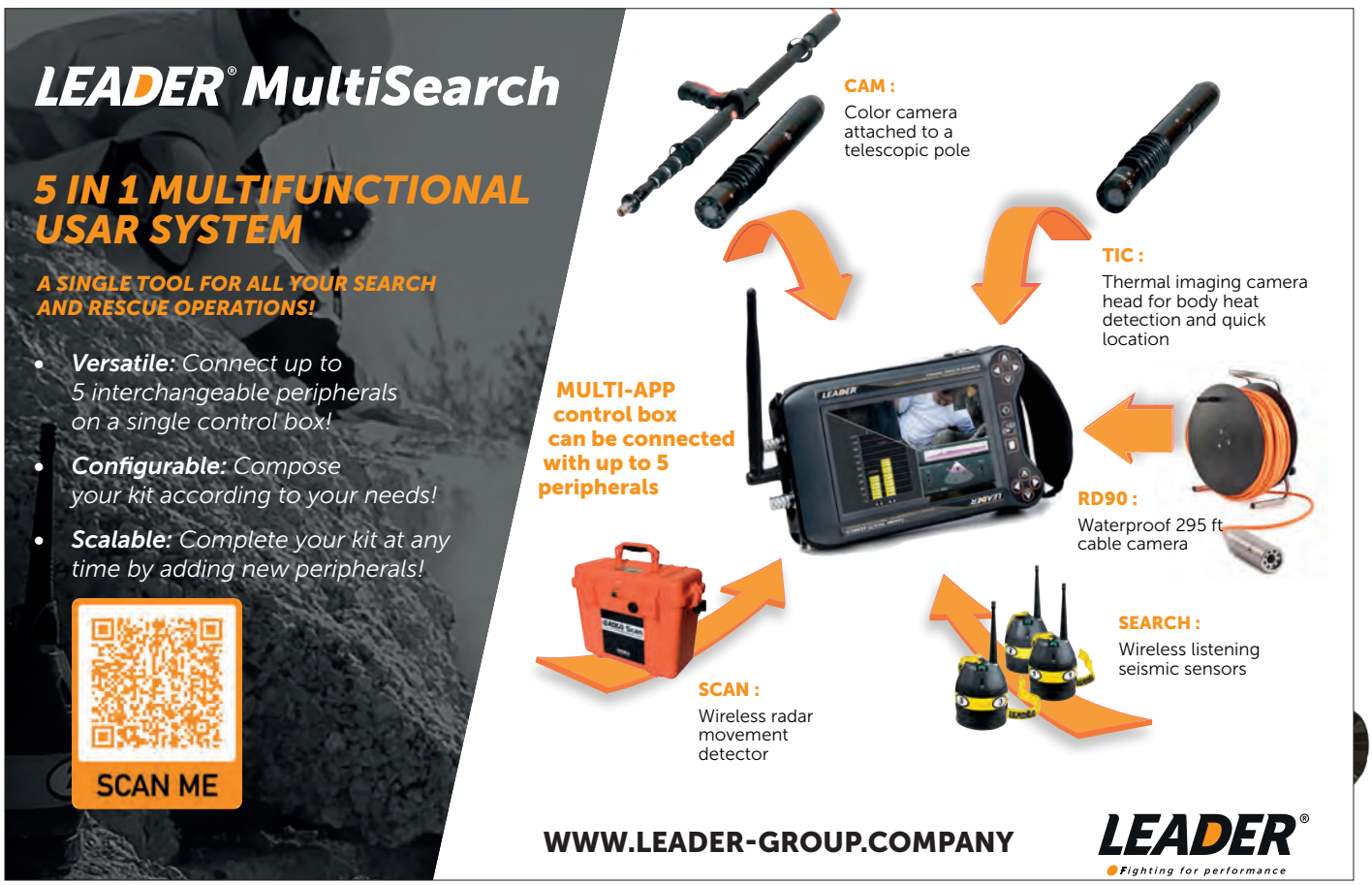
Many of the cameras have a two-way mic so that the operator can listen for, or communicate directly with the victim with the added huge advantage of full visual acuity of the victim and surroundings thanks to either on-board lighting or



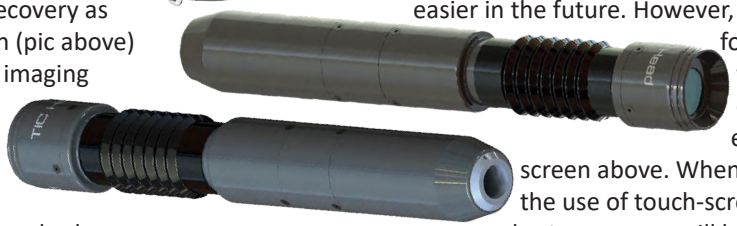
an infra-red camera (an option for some) or both. *FL360*'s 'probe' head pictured on the previous page deserves special mention because it is so efficient as a probe with all-around vision and lighting and because it has, along with the T*actical Electronics Core* systems, the ability to transmit wirelessly to any android mobile device, be it tablet or smart-phone they have, you guessed it, an app for that. Both systems are app-driven allowing for updates and ad-ons. You would think that in this day and age of remote operated everything and drones in particular, that wireless would be standard in rescue but as we mentioned before, this is too specialist an area to attract much funding for development so most of the old stalwarts are updated as best they can be and continue to be sold. There is not necessarily anything wrong with that, look how many wood-burning *Aga* or Range cookers are increasingly sold today in preference to modern alternatives and yet your average Victorian cook would be entirely familiar with it. It's solid and reliable even in the midst of Armageddon, much like some of these cameras! One area that can drive development is the military and one of the few ruggedised, wireless camera systems in this list is from Tactical Electronics with one of the most comprehensive range of camera head options in this list. The *Core* (pic above) also has an encrypted signal partially negating our hacking concern mentioned earlier.

CAMERAS, SCREENS & ELECTRONICS

Quality of electronics and optical components are obviously key to the best systems. You want to be able to see what the camera sees and hear with as much clarity as possible. Headphones, as shown by the Leader Cam in our title picture, accentuate and concentrate the mind to listen for relevant sounds cutting out extraneous noise that might otherwise inhibit your ability to hear the faint signs of life coming from an external screen speaker. At least three systems here, the *Savox, Leader Group* and *Scorpe* systems allow integration of other assets such as acoustic monitoring, structural movement, breath analysis and even radar in the case of *LeaderScan*. The optics themselves don't necessarily make things easier when you're exploring a monotone dusty void where even exposed skin looks like concrete dust. It can even be the case that enhanced resolution just confuses things as it shows



up every grain of dust. This is where infra-red, thermal imaging and Sense-Through-Wall technology stands out as invaluable tools but we have yet to see a system with multiple camera systems on one head and the ability to switch seamlessly between them. Thermal imaging can offer the best option for live-person recovery as shown by the *Core system* screen (pic above) and *Leader Group* has a thermal imaging camera option for its system which replaces the existing standard camera head when you need it. The TI camera head (pics right) simply replaces the standard camera above it by screwing onto, and plugging back into, the pole of the *LeaderCam*. Thermal imaging effectiveness becomes marginal for hypothermic or near-death victims with little surface temperature to detect or paradoxically in very hot environments where masonry retains and emits heat long after the collapse and can mask the bodies diminishing thermal signature. Modern cameras are pretty much all daylight colour with LED illumination with some switching to infrared in low light which can accentuate and contrast skin tones more easily. Unless everything is covered in dust or is the same colour in which case camera orientation can be a real problem.



Without wishing to sound like a rep for the *FirstLook360*, its modernity means it has a useful handle on 'spatial orientation' in environments that are otherwise incredibly difficult to reconcile with what you think you should be seeing. This is to be expected for the newest camera on the market and similarly it has a higher resolution screen than most because it's the newest and is using easily upgradeable technology. Touchscreen overlays on the tablet(s) it's transmitting to, show the camera's real-time orientation – effectively an artificial horizon and depth perception indication because, don't forget, it has that 360 degree view – like two bubble observation ports stitched together back-to-back or the product images you see online where you can navigate all around them, back, front, top, bottom. It's not 3D but it is virtual 3D. This system and the *Tactical Core* models allow video snapshots to be taken of the entire void which is relayed back to larger screens (which might be on the other side of the world!) and enable support personnel to examine for clues in greater detail and report back to the frontline operators if they spot anything worth checking out. With some, like the *FL360*, images are GPS tagged so the operator knows exactly where to go even if frontline rescuers have long since moved on to another search area.

As mentioned earlier, screens have mostly become a detached component, no longer firmly fastened to the telescopic pole but handheld and most often used by a second rescuer while the first manoeuvres the camera. We will now see more systems with wifi compatibility and using apps so that regular tablets and smart phones can be used instead of a dedicated screen. The *FL360* for instance uses a *Samsung S2* tablet, albeit the top-end *LTE* version costing $850 but you can get lesser *S2* models for about $300 and the incredibly versatile *Tactical Electronics Core* systems use virtually anything including radio networks so you can see how replacement and augmentation will become cheaper and easier in the future. However, there is something to be said for the simplicity of a screen with a handful of colour-coded buttons with icons as exemplified by the Search Cam screen above. When rain and dust are hindering the use of touch-screens, more conventional button screens will keep working.

THROUGH WALL IMAGING

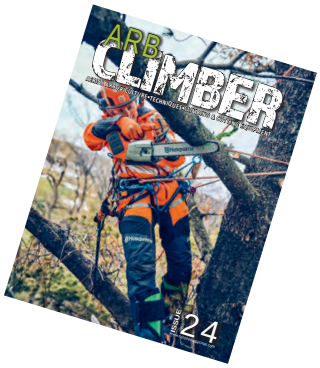
www.rescuemagazines.com

BUYERSGUIDES

the most comprehensive **GUIDES** to **safety and access equipment** ever produced

FREE-to-ALL BUYERSGUIDES to make better use of all the MARKET GUIDE articles we have in all of our magazines. Digital, page-turning publications that can be downloaded as a PDF but are **continually updated on the same link** so that readers can get the latest version whenever you want to take a look for something. These are be sent to all readers and available from our website.

- **CONTINUALLY UPDATING** prices, specifications and new or discontinued products updated weekly with new Product guides added regularly.
- **NEW PRODUCTS** incorporated into the tables and introductions as they are released
- **PRICES** monitored and updated quarterly and currency conversions listed in GBP£, US$ & Euro€
- **DISCONTINUED MODELS** have a note to that effect before being removed altogether
- **SAFETY NOTICES** & **RECALLS** shown
- **300-500+ PAGES** in each GUIDE
- **2x PRINT/PDF magazines TECHNICAL&WILDERNESSRESCUE** and **ARBCLIMBER**
- **6x BUYERS GUIDES: ROPE EQPT, ARBORIST EQPT USAR/EXTRICATION and WATER RESCUE available now. CASUALTY MANAGEMENT - late 2026 & BLACK EQPT Winter 2026/27**



Click the QR code to go to our homepage then click on a magazine or Buyers Guide cover.

UNDERWATER USE

A number of the cameras in this list will operate underwater or at least under the surface of the water, in other words you can break the plane of the surface to get a much clearer view underwater without going too deep – similar to a periscope of a glass bottom boat. Some however, are designed to be used underwater and have attributes that lend themselves to dive team searches or perhaps in place of a dive team search. The *Reach&Rescue Underwater*, *Yone ProEye 751 SNR* with Sonar and the *JW Fishers* models are clearly designed with an aquatic environment in mind but don't forget some of the regular models like the *LeaderCam* in it's *RD90* variant, the *Red Box Snake eye* and even the venerable *SearchCam 3000* which have camera heads that will all go beyond 20m/60 feet in depth. It's true that these will mostly be involved in body or evidence searches rather than rescue but as has been proven time and time again with cold-water drowning victims, they're not dead until they're warm and dead.

Assets like underwater cameras can be the difference between being just-in-time or having not-much-hope-in-the first-place. It could be argued that any team or agency with available cameras AND with bodies of water on their response patch should leave the cameras packaged to be able to search underwater straight from the box since a change to structural collapse mode (if a change is even required) will never be as time sensitive as a drowning victim. It may be that the regular set up using a telescopic pole is your best approach to shallow water searches, particularly for victims that have fallen through ice where a pole can search an area in a radius of several metres from the entry hole or flow-predicted search hole.

Cold, deep open water on the other hand will generally benefit from a cable-lowered camera worked in a pre-determined search pattern via boat. Remember that many camera systems offer cable lengths that are far in excess of the camera's depth-rating. This is not an oversight, this is because your camera may be operating LATERALLY from the screen rather than straight down – you may for instance be using a crew on the bank/shore rather than in a boat so that the camera head may be hundreds of feet away and only a few feet deep rather than being hundreds of feet deep. Or you may be search well or liquid storage tank with a large void before reaching the water. This all sounds obvious but you may want to mark your cables with a maximum depth indication for those occasions when you ARE sending the camera straight down into water.

Another option is a rescue swimmer using a handheld camera like the JW *Fishers CHV-2* or *CM-1* with pistol grip (option). This is effectively a hard-wired dive camera capable of working the deepest of all the models in our guide. Nevertheless, it is prospectively still immensely useful even if used at the surface as a sub-water periscope or slightly deeper by a duck-diving rescuer without full scuba because surface monitoring of the screen by attentive observers may spot something the swimmer doesn't. In the case of the *MC-2 Mini Camera* this can be mounted on a pole or even on a helmet (pics left) but is otherwise a fully functioning dive camera which have no lens or camera movement other than being pointed in a particular direction by the rescuer.

Finally mention should be made of *Yone's Pro Eye* variant with sonar (pic below) This adds a whole new tool to your array because it is a colour camera on a cable which extends out from a sonar sensor sitting just below the water surface. Once a target is identified the camera can be lowered to visualise the sonar's detection. You don't have to use sonar since the camera can still operate as a stand-alone device but there is a gunwale clamp on the camera mount and two different screens in the system case – one for sonar and one for simultaneously colour imaging. The *Yone* cameras are also oddly unique in using propriety power tool 12v batteries that are easily obtainable from DIY stores, which is useful.

Make Searching Open Waters Safer & Easier with JW Fishers Underwater Equipment

Hand Held Underwater Metal Detectors

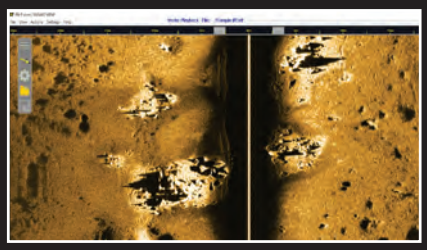
Pulse 8X

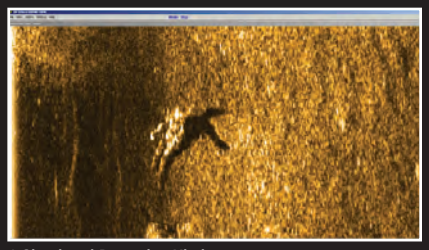
- Detects ALL metals on land & underwater
- Audio and Visual output
- Commercial construction
- Ideal for evidence recovery
- Rated #1 by US Homeland Security

SAR-1

- "Snareless" design with VIBRATING handle
- Bright red LED display
- Specialized for low visibility environments
- 200' depth rating

Side Scan Sonar





* Simulated Drowning Victim

600kHz - CW

- Simple to operate
- Up to 225' (75m) range on each side
- Displays images on laptop or tablet
- Commercial construction
- Works in all waters, regardless of clarity
- In use by public safety dive teams

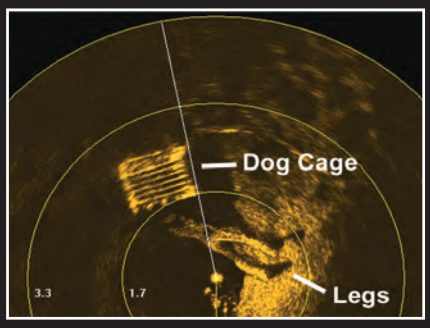
450kHz / 900 kHz - CHIRP

- Fully digital
- Up to 495' (150m) range on each side
- Breaks down for easy transport (case included)
- Commercial construction
- Low cost and easy operation
- Complete turnkey system

Remote Operated Vehicle with Sector Scanning Sonar

SeaLion-3

- 7 vectored, thruster system
- Front and rear 1080p HD cameras
- Two monitors for viewing and control
- Picture in picture (PIP) functionality
- Easily transportable
- Commercial construction
- 1,000' depth capability



SCAN-650

- Target sizing capability
- 360° sweep pattern
- High resolution imagery
- User friendly software
- Commercial construction
- ROV, pole or tripod mountable
- Starting at $6,995

JW FISHERS

PHONE: (508) 822-7330
info@jwfishers.com
jwfishers.com

Red Box Snake Eye

Agility Corp First Look 360

Reach&Rescue

www.rescuemagazine.com

Leader Group LeaderCam

Scorpe Vibrascope

Savox SearchCam Recon III

IN THE FOLLOWING TABLES.....

We have included ONLY cameras that are actively marketed to and for rescuers even though there are a number of inspection cameras from other industries that might be viable. The majority of these are pole cameras which helps to narrow the field but there are a couple of flexible wire cameras because they are specifically sold to rescuers.

Options are shown as an outline box.... ☐ ☐ ☐

COST: Very approximate. Some manufacturers are oddly reticent to provide a price. We get this in all of our guides and particularly for high cost item which always makes us suspicious that there is differential pricing going on or they feel that a higher cost comparison counts against them.

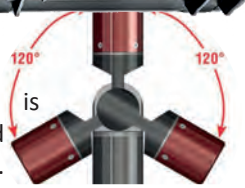
WEIGHT: There are 2 weights given, the first is the complete system including a case if that is how the system is sold. This is an important figure because it affects the overall shipping limits when moving equipment into a disaster zone. The second figure (in burnt orange) is the weight of the camera unit plus pole as it feels to the person holding and/or controlling it. For some cameras this may include the display screen because it is permanently attached. If not, the display screen is given as a separate weight in green in the SCREEN column.

MIN to MAX Length : the length of pole from shortest extension to longest. A single figure is the MAX extension. Many have extension or longer pole options and some, like the *Reach&Rescue* and *JWFishers* don't fit the pole in the case so you would need to factor in that extra weight to the system total.

SUPPLIED CABLE: refers to a camera extension cable to enable the camera to be clipped on and lowered or used remote from the operator. Most kits are supplied with a minimum length so you will again need to factor in the weight of longer lengths if purchased extra to the kit (in terms of air transport for overseas deployments). Cable lengths are shown in burnt orange and in brackets for optional lengths.

SCREEN RESOLUTION, SIZE, WEIGHT: We often see a screen resolution AND a camera resolution but if one is substantially lower than the other you will presumably not be seeing the image to best advantage. Screen or Monitor resolution is usually in Pixels and is shown in burnt orange. Size and weight

Tactical Electronics Core



ProEye 751 SNR

of the screen as distinct from the whole kit is important where the screen is fully detached and may be handheld or worn on the sleeve. For some it remains 'embedded' in the carry case (eg. the P*roEye Sonar, Reach & Rescue* and *JW Fishers* models) which is sat on the ground or a stand so weight isn't such an issue.

CAMERA Resolution for the camera may be given in a number of scales including TVL, lux (for the light source operating limit rather than resolution) and Pixels.

ADJ RANGE (in black) refers to the articulation angle of the camera head. Some can be controlled by the operator to rotate through as much as 240 degrees (*Recon III* above right). The *FL360* on the other hand, doesn't articulate at all but has taken the more obvious option of a camera head that already sees a 360 degree view of the space. *Reach&Rescue*'s camera head is a flexible but stiff articulation that is adjusted manually but normally views in the direction of the pole.

Field of View: is what the camera actually sees or rather the view you see from peripheries to straight in front. In the case of the *FL360* you see the entire 360 degree view but for most the view is dependant on how wide-angle the lens is. Endoscope style cameras tend to be quite narrow while larger lenses on *SearchCam* and *ProEye* give up to 260 degrees of view. Wide angle can sometimes lead to distortion at the peripheries.

IN-USE COLUMNS

CAMERA DETACH: refers to the ability to remove the camera from its pole or mount and attach it to a cable for lowering.
COLOUR / B&W CAMERA: refers to the output to your screen being in full colour which may convert to Infra-Red in low light, or Black and White which is the minority of cameras in our Guide here even the *Mini JWFishers* has a colour option.
THERMAL / IR CAMERA: refers to thermal imaging and/or Infra Red (IR) in black. Options are shown in an outline box ☐.
IP RATING: is an internationally recognised ingress protection figure for water, dust and gas – none of which is necessarily the same, ie. just because a product is waterproof doesn't mean it's intrinsically safe. The first figure is solids (dust) where 6 is the highest/best. The second figure is for liquids where 8 is the highest/best meaning waterproof beyond 1m and 7 is waterproof up to 1m below water. IP68 is therefore the best.

JW Fishers VRM 2 Monitor

CAMERA IMMERSION: is further qualification of the IP Rating to show the actual depth capability of the camera – remember NOT to use cable longer than your camera's depth rating if lowering straight down into water.
DATA STORAGE: may be to a hard drive (in black) generally the case with laptops and tablets, SD card in burnt orange for transfer to other devices for manipulation or USB in green which is again normally only with a laptop option as with *JW Fishers*.
IMAGE/VIDEO CAPTURE: refers to either still images or video in burnt orange.
GPS/GPSIMAGE TRACK: this may be on-board GPS to indicate the location of the camera and operator (black square) or it might be an image tracking GPS (in burnt orange) which shows where any given image is taken so that search teams can return to the spot.
HD CARRY CASE: The HD in burnt orange refers to a heavy duty, waterproof, shockproof case like the *Peli, Explorer, Storm, Hardigge, IMPH* or *Otter.* The cases pictured here are all toughened, waterproof cases. A case listed as a black square will be a more standard hard carrying case, not necessarily waterproof or shock proof but well up to transporting the camera system. An outline square indicates a soft pack option – maybe a back pack or a fabric carry bag.

IMAGES NOT to SCALE,
COST: INC local taxes/VAT .
£$€=Currency Conversion Only
ROBUST?: ■ Heavy Duty, ■ Standard Duty ■ Light Duty.
ADJUSTMENT: ■= Standard feature.
□ □ □ = Option

MODEL product code	COMPANY	ORIGIN	Approx COST Basic System excluding accessories	WEIGHT PACKAGE TOTAL IN HAND	LENGTH MIN to MAX SUPPLIED CABLE	SCREEN RESOLUTION SIZE WEIGHT	CA Dia
First Look 360 0607-12xxx	AGILITY TECHNOLOGIES		£9600 $13300 €11520	15.5kg/34.2lb 1.4kg/3lb	3m 118"	2048x1536 246mm /9.7" 0.39kg/0.9lb	49 1
Leader-Cam	LEADER GROUP		£8400 $11700 €10080	14kg/31lb 2.78kg/6lb	2.4 - 3.4m* 7.8 - 11' (1x25m or 2x90m cable options)	800 x 480 178mm / 7" 1.38kg /3 lb	4 1
DV2	JW FISHERS		£4700 $6500* €5640	27kg/59lb 6.8kg/15lb	No Pole 50m / 150ft (300m/1000ft option)	* 264mm/10.4" 10.9kg/24 lb*	1
DHC-2	JW FISHERS		£4800 $6600* €5760	23kg/51lb 3.2kg/7lbs*	No Pole 50m / 150ft (300m/1000ft option)	800 x 600 * 264mm/10.4" 10.9kg/24 lb*	1
MC-2 Mini Camera	JW FISHERS		£3050 $4230* €3660	15.4kg / 34lb 0.45kg / 1lb*	Pole adapter= $225 50m / 150ft (300m/1000ft option)	800 x 600 * 264mm/10.4" 10.9kg/24 lb*	6 2
Underwater Camera System GE3631PROC	REACH & RESCUE		£2656 $3700 €3190	10.2kg /22.5lb exc pole 2-4kg/4.4-8.8lb	*5m 16.4ft 20m / 65ft (30 & 40m options)	800 x 480 178mm / 7"	2
SnakeCam (RBW Kit) BVA6	RED BOX AVIATION		£4500 $6200 €5400	1.4kg / 3lb	0.45m 1.5' 9.25m* (500m option)	640 x 480* 127mm / 5"	3
SearchCam Recon III 6000-11xxx	SAVOX		£6600 $9200 €7920	18kg /40lb 4kg /8.8lb	1.09-1.43m 43-56.5"	18.2kg	4 1
SearchCam 3000 6000-11xxx	SAVOX		£10800 $15000 €12960	6kg /13.2lb 4kg /8.8lb	1.04 -2.34m 41-92"	811 x 507 146mm / 5.75"	4 1
Vibrascope BVA6	SCORPE		£12000 $16700 €14400	13.2kg 29lb 6.4kg/14lb	0.5 - 2m 5m (100m option)	178mm / 7"	3
DS100	SECA		£1890 $2600 €2270	7kg/15.4lb 3.5kg/7.7lb	1.2 - 4m 4 - 13ft	640x480 127mm / 5" 3.5kg /7.7lb	6 2

AMERA Lens ameter	CAMERA RESOLUTION ADJ RANGE FIELD OF VIEW	LIGHTS	BATTERY DURATION RECHARGE	OPERATING TEMP	TWO-WAY MIC	CAMERA DETACH	COLOUR/B&W CAMERA	THERMAL / IR CAMERA	IP RATING	CAMERA-ONLY IMMERSION	DATA STORE SD USB	WIRELESS STREAMING	IMAGE VIDEO CAPTURE	MAINS/12v CHARGER	GPS/GPS IMAGE TRACK	ROBUST? CARRY CASE	NOTES	WWW.
9.5mm 1.95"	1920 x 960 - 360°	6 x wide-angle LED	Li-Ion* 3-5 hrs 1.5 hrs	-10 to 60C 14 to140F	■	■	■	□	68	3m 10ft	■	■	■ ■	■ ■	■	■	*WIll also operate using 4x CR123A cells	agilitycorp.com
47mm 1.85"	700 x 480 0-170° 260°	8 x LED	NiMH or 10x AA 2.3 hrs 3.3 hrs	-10 to 60C 14 to 140F	■	■	■	■ □	54	2m# 6.5ft	■	NO	■ ■	■	□	■	* figures for Std kit. Option fpr Poles up to 5.66m/18.6' Batteries compatible with Leader Scan, Hasty & Search #RD90 version waterproof to 90m. now with GPS	leader-group.eu
27mm 5"	0.8 lux /480L NO 170°	2 x 1500 lumen LED	Marine, AC-mains or 12v DC	-25 to 60C -14 to 140F	□	■	■ □	NO	-	150m# 500ft	■ ■ □	NO	■	■ ■	NO	■	*+~$3500 For VRM-2 screen module. Camera can be linked to any suitable laptop/display. #300m/1000' housing available. *exc cable, add 9kg/20lb /150ft Wt includes integral case	jwfishers.com
14mm 4.5"	0.8 lux /480L NO 170°	2 x 1500 lumen LED	Marine, AC-mains or 12v DC	-25 to 60C -14 to 140F	□	■	■ □	NO	-	150m 500ft	■ ■ □	NO	■	■ ■	NO	■	*+~$3500 For VRM-2 screen module.Camera can be linked to any suitable laptop/display. #300m/1000' housing available. *exc cable, add 9kg/20lb /150ft *Wt includes integral case	jwfishers.com
60mm .375"	NO 50°	Halogen or 12 x LED option	Marine, AC-mains or 12v DC	-25 to 60C -14 to 140F	□	■	■ □	NO	-	150m 500ft	■ ■ □	NO	■	■ ■	NO	■	*+~$3500 For VRM-2 screen module & exc lights.Camera can be linked to any suitable laptop/display. Camera is B&W as standard but colour and EuroPAL options. *exc cable, add 4kg/9lb /150ft	jwfishers.com
23mm 0.9"	480 TVL 360° (manual) 120°	12 x LED	Li Ion 6-8 hrs 8 hrs	-10C to 50C 14 to 122 F	■	■	■	NO	68	30m 100ft	■	NO	■ ■	■ ■	NO	■	*Poles an be 5m, 9m 13m or 17m/55ft long. Pole can be simultaeously fitted with rescue aids and body recovery hook (shown).	reachandrescue.com
30mm 1.2"	512 x 492 90° 46°	4 x LED 1 XeNon	6v NiMH 35mins x 2 (6hr option)	0 to 50C -32 to 122F	NO	■	■	□	68	30m 100ft	■* ■*	NO	■*	■	NO	■ ■	*Basic kit uses a lower res screen with no audio-visual record capability. * Up to 500m cable available + 1.2-7.8m Pole option	redboxaviation.com
47mm 1.85"	0-240°	16 x LED	Li Ion 2.5 hrs	-10 to 60C 14 to 140F	NO	■	■	■	68	30m 100ft	■	NO	NO	■	NO	■	upgraded from Recon II but still a more basic, version.	savox.com
47mm 1.85"	0-240°	16 x LED	Li Ion 2 hrs	-10 to 60C 14 to 140F	■	■	■	■	54	23m 75ft	■	NO	■ ■	■	NO	■	can be used with screen detached	savox.com
39mm	0.5 lux 0-360°	6 x LED	12v NiMH 4.5 Ah 4-5 hrs 4 hrs	-20 to 50C -4 to 122F	■	■	□ ■	□	66	60m 200ft	■	NO	■ ■	■ ■	NO	■	Data for waterproof camera, more basic camera available.	scorpe.eu
55mm 2.56"	420 TVL 0-110° 90°	36 x LEDs	11.1v Li 7hrs 4.5 hrs	-10 to 55C 14 to 131F	■	■	■	■	67	1m 3ft	■	□	■	■ ■	NO	□ ■	DM version has wireless AND wired camera	dartsystems.co.uk

IMAGES NOT to SCALE,
COST: INC local taxes/VAT .
£$€=Currency Conversion Only
ROBUST?: ■ Heavy Duty, ■ Standard Duty ■ Light Duty.
ADJUSTMENT: ■= Standard feature.
□ □ □ = Option

MODEL product code	COMPANY	ORIGIN	Approx COST Basic System excluding accessories	WEIGHT PACKAGE TOTAL IN HAND	LENGTH MIN to MAX SUPPLIED CABLE	SCREEN RESOLUTION SIZE WEIGHT	CA Dia
CORE POLE	TACTICAL ELECTRONICS		£7800 $9500 €9360	1.56kg/3.4lb	0.6-3.2m 4-10ft (5.3m/17ft option)	1280 x 720 127mm / 5" 0.4kg / 0.85 lb	4 1
WSC4926	UNIFIRE		£530 $660 €640	0.67kg/1.5lb	0.9m* 3ft	712 x 486 60mm / 2.36" 5oz	4 1
Pro Eye 751 SNR	YONE CORPORATION	●	£12000 $16700 €14400	19kg/42lb 8.5kg/18.7lb	2.4m 7.8ft 10m* 33ft	795 x 595 142mm / 5.6"	3
ProEye 951 S-IR	YONE CORPORATION	●	£11500 $16000 €13800	19kg/42lb 9kg/20lb	(20m/65ft option)	800 x 480 228mm / 9"	3 1
ProEye 991 NH Nano-Cam	YONE CORPORATION	●	£9000 $12500 €10800	15kg/33lb 3.3kg/7.3lb	0.7-1.7m 2.3-5.6ft	64mm / 2.5"	6 (

A perfect tool to locate missing objects

the Pulse 8X u/w metal detector.

Rated #1 by U.S. Homeland Security

- Easy operation
- Detects ALL metals
- Use on land & underwater
- Audio and Visual output
- Commercial construction
- Ideal for evidence recovery
- In use by law enforcement agencies worldwide
- Starting at $2,395

JW FISHERS

JW Fishers Mfg., Inc.
(800)822-4744
(508)822-7330
Email: info@jwfishers.com
www.jwfishers.com

AMERA Lens ameter	CAMERA RESOLUTION ADJ RANGE FIELD OF VIEW	LIGHTS	BATTERY DURATION RECHARGE	OPERATING TEMP	TWO-WAY MIC	CAMERA DETACH	COLOUR/B&W CAMERA	THERMAL / IR CAMERA	IP RATING	CAMERA-ONLY IMMERSION	DATA STORE SD USB	WIRELESS STREAMING	IMAGE VIDEO CAPTURE	MAINS/12v CHARGER	GPS/GPS IMAGE TRACK	ROBUST? CARRY CASE	NOTES	WWW.
2mm 1.65"	1280 x 720 0-360° (manual) 70°	4 x LED	3xCR123 2.5hrs	-20 to 50C -4 to 122F	■	■	■ ■	■ ■	NO	NO	■	■	■ ■	NO	NO	■	Hardwire option. 4 different camera head options -Fixed, Flexible, Flat/Under door and small-bore endoscope as well as a K9 camera.	tacticalelectronics.com
1mm 1.61"	320 x 240 0-360° (manual) 45°	4 x LED	4 x AA 2hrs	-10 to 50C 14 to 122F	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	■ ■	*Cable available in 3ft lengths up to 12ft	unifireusa.com
6mm 1.4"	811 x 507** 0-180° 231°	12 x LED	12v NiMH (Li-Ion option) 3-6hrs 5 hrs	-10 to 50C 14 to 122F	NO	■	■	■	67	50m	NO	NO	■	■	■	■	DSX version without sonar. SNR=SONAR & Colour visual cameras 3, 5 & 6m pole options. **PAL version = 795 x 595 *4,20,30 & 50m cable options	yone-co.co.jp
2mm 1.25"	1280 x 960 0-180° 231°	12 x LED	12v NiMH 3hrs <1hrs	-10 to 50C 14 to 122F	■	■	■	■	67	50m	□*	NO	■ ■	■	NO	■	Standard version with colour camera. Second camera interchangeable with IR/TiC *OPTION with 8gb or 4gb SD Older version =7" screen IR=Thermal Cam +20% £$€	yone-co.co.jp
.9mm 0.27"		4 x LED 8 Auxilliary	6x AA 2-4hrs	-10 to 50C 14 to 122F	NO	■	■	NO	67	10m	■	NO	NO	NO	NO	■		yone-co.co.jp

MULTI-ROLE HELMETS

TECHNICAL RESCUE is very much the 'jack-of-all-trades in terms of the range of disciplines covered and is not necessarily the same as USAR. True Urban Search & Rescue was originally limited to structural collapse and confined space rescue in an urban environment whereas TECHNICAL RESCUE can encompass USAR *plus* rope rescue, water rescue, trench and industrial rescue and vehicle extrication. More recently the definitions have become more interchangeable and will vary between countries and between services. However, for the purposes of TECHNICAL RESCUE magazine and our BUYERS GUIDEs we will use the terms interchangeably with the exception that USAR will not generally include water rescue and vertical rope rescue (as distinct from rigging and heavy lift involving ropework). However, there is no doubt that USAR's involvement in disaster response has shown that all of the disciplines associated with technical rescue can be needed with the addition of landslides/debris flow and vehicle rescue is also back in the frame because so many floods, landslides, earthquakes, sink holes etc. involve persons trapped in vehicles. So maybe there is no longer any viable difference unless we focus on the original term 'URBAN' and say that USAR only applies to built up-urban areas. Nonsense of course so it's a can of worms that we will leave alone for now and simply term all of these helmets as 'MULTI--ROLE' and it's up to you to discern the standards and manufacturer recommended uses to determine which helmets most suits your needs.

Many helmets in our Water rescue helmets Guide and in our Climbing Helmets Guide will meet more than one standard but for a true multi-role helmet for this guide we need it to also meet one of the Technical Rescue specific standards (ISO18639 Technical rescue, EN16473 Technical rescue and/or NFPA 1951-Technical rescue. We have also included helmets with water and or climbing standards that *also* meet one of the firefighting or ATV/quadbike standards as these meet the definition of multi-role albeit not specific to, for collapse or con-space. Many in USAR use one of the many excellent climbing helmets which provide protection from falling objects as well as side or frontal impact during climbing/abseiling. For the majority of activities this might be the only risk being mitigated in which case you will want to consult our Guide to Climbing Helmets in the ROPE EQUIPMENT BUYERS GUIDE or Arborist Helmets in our ARBORTITS BUYERS GUIDE. Both types of helmet are generally lighter and cheaper than their USAR/Multi-Role

counterparts.

As we mention in the **WATER RESCUE HELMETS GUIDE**, multi-role helmets are much bulkier and heavier than their individual disciplines might prefer but having different helmets for rope rescue, extrication, water rescue and USAR is a lot of money, storage space and requires you to have the right helmet at the right time!

Gallet were one of the first to introduce multi-role with their excellent F2 helmet capable of being used for rope rescue, vehicle extrication, USAR and wildland firefighting (as distinct from structural firefighting). We used this in its original and later variants for decades so it seems to have taken other manufacturers quite a while to cotton onto the need for true multi-role helmets. However, once they did, we have seen some very nifty helmets with reducing weights from the fire sector driven by the much larger fire service market which made R&D a financial possibility hence this Draeger helmet with strong water rescue capabilities. In the last 5 years or so we have seen some of the other sectors become more involved - the climbing, skiing and water rescue sectors have all expanded the designs of their helmets and reallyupset the apple cart in terms of traditional market monopolies. The very slick Sweet Protection Ascender SAR has come across from skiiing while the KASK Quantum has come in from the pure height safety and climbing markets.

We are advocates for purchasing life-safety equipment from the key manufacturers that you know are experts in their field - companies that either specialise in fire-rescue equipment like Draeger, Rosenbauer and MSA or specialise in helmets like Kask, Sweet Protection or Team Wendy. However, these days you are bombarded by, not only cheaper alternatives masquerading as products well above their pay-grade but by bone-fide safety helmets that have stepped up with features and accessories that make them far more useful than their base helmet would suggest. Take this helmet from German/US company Green Devil. They supply the construction industry primarily and this is an activity that really does cross over into USAR with protection from falling objects and lateral impact - often metal or masonry.
Their ANSI compliant and EN397 safety helmet can be upgraded with a rechargeable LED light, integral goggle-visor with an additional goggle layer , hands-free comms and ear defenders.

Any USAR operator trying to break through reinforced concrete at an incident would find all of these features useful. The only downside is that technically, EN397 uses the non-climbing chinstrap so it would not be certified for rope rescue operations even though the rest of the helmet is the same - if you get hung up, the chin strap will not break-away and you run the risk of being strangled (apparently). So while out advice would still be to stick to brands that you know and use, some of these helmets from specialists in the safety field like Green Devil or

IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■
If it's an option it is shown as an outline square □□□□□
A circle ●●●●●in the 'USE' row indicates that the helmet or feature is OK but not ideal.
A model variant is shown in cyan blue and any features or specifications that differ from the standard are also in cyan or will have a cyan outline to a square or circle ■●.

.

USES: refers to the range of activities that the helmet is INTENDED for as defined by the standards or the manufacturers stated uses. Multi-Role helmets are usually heavier and bulkier so not perfect for water or in-water rescue but good enough!
◆ = **WATER RESCUE/SWIFTWATER** - flood and swiftwater plus use of non-powered watercraft
◆ = **BOAT CREW/PWC** - Powered watercraft and rescue boats that may travel at high speeds
◆ = **TACTICAL** - suitable for military or police use - often just the colour but some will incorporate Rails for military accessories.
◆ = **USAR/COLLAPSE**- suitable for urban rescue, extrication and disaster response. Often a little bulky for extreme con-space but user-decides.
◆ = **FIREFIGHTING** - inherent fire retardency - helmet furniture will also withstand heat
◆ = **ROPE RESCUE** - required impact resistance to crown and sides enabling full vertical/at height use.

ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.
COST: **£$€** = ***currency conversion only*** *and may not include bulk shipping, import duty and taxes etc.* Prices are a guide only & include local taxes/VAT. They vary with exchange rates, extra taxes etc. Usually rounded up to the nearest Pound£/US Dollar$/Euro€.
Cost shown is basic model-no accessories.
WEIGHT: Is for a mid-sized helmet (if sized) and excludes add-on brackets and fittings like ear protection/lighting unless stated in the NOTES.

STANDARDS / PROTECTION: A number of helmets meet the key elements of water rescue with some provisos indicated in the notes by an asterisk. Mostly this is the requirement for lower weight on the head, considered a key requirement for rescue swimming rather than being in or near water which the heavier multi-role helmets can't always meet. Some need the addition of optional padding/flotation and some have different vent requirements but all can be used for water rescue in some specific form or with some specific exclusions.
EN 1385 ■ ***Canoeing/rafting/surf/Dive*** There is no true standard for surfing helmets and general dive helmets (other than deep-sea commercial types) so the canoe/whitewater standard does most of the heavy lifting for water rescue helmets. Cave rescue generally uses EN 12492 but where sumps and diving are involved this may also require EN1385
PAS 028 ■ ***Marine/Fast-Craft*** used on high speed water craft - a high degree of impact resistance and environmental protection - often with visor and ear protection options.
EN 12492 ■ ***Climbing/Mountaineering***
One of two that cover rope access and rescue.
EN397 ■ ***Work at height*** with protection against falling objects is not usually relevant as it has limited side and impact resistance in a fall and a chin strap designed to separate at low loads.
EN 16473 ■ ***Technical rescue/USAR*** **Europe-specific** - designed to provide rescuers with a multi-role helmet covering flood & swifwater rescue,USAR incidents, rope rescue, wilderness SAR and other technical rescue operations like trench and confined space rescue.
ISO18639 ■ ***Technical rescue/USAR*** **- worldwide-**crosses over for most USAR activities but more RTC/vehicle rescue, less vertical rope rescue
NFPA ■ 1951***Technical rescue*** US version
EN 16471 ■ ***Wildland fire fighting*** - NOT structural. only applicable as an additional standard that Park rangers and firefighters might need alongside other standards in a true multi-role helmet.
EN1077 ■ Ski/Snowboard (impact) high speed impact resistance, sometimes with MIPS, the rotational resistance technology, could well become a favoured standard in water rescue. Along with.....
FS/ATV1 ■ ***Quad bikes*** (UK Only) For land use but a frequentl used asset in difficult terrain
KWF ■ ***Forestry/Arb*** a German foresty 'award' for helmets particularly suitable for tree work and applicable to Technical Rescue because of the frequency of storm damage and timber cutting for shoring materials.

SIZES: Number of different sizes and the range
SIZE ADJUST: How the sizes are adjusted
VENTED: Holes and open shapes to vent head-heat. Some have very few and are shown as ●
RAILS: Military style, heavy duty attachments **EYE PROTECT**: Visor or goggles. 'lost'=store inside shell □option
EAR PROTECT: A full ear cover to protect from water hydraulics, impact and cold. Some will have a grill or similar form of augmentation to improve hearing that would otherwise be muffled. The more technical multi-role helmets may have comms-integral ear protection (see NOTES). partial ear coverage is shown as ●
CHIN STRAP: The means of securing (web material is given in STRAPS/HEADBANDS)
SHELL: Main shell material
PADDING / LINER: Inside comfort and impact
STRAPS/HEADBAND: materials used
LIGHT BRACKET CLIPS: Integrated clips/hooks for a headband/ clip on lighting
REFLECTIVE: Light-reflective tape/decals to enhance visibility to others in low light or when using search and area lighting.
TEMP RANGE °C °F: Operational temperatures but usually dictated by standards rather than the helmet's true temperature limits.
OTHER COLOURS: Options other than shown

KASK QUANTUM SERIES

PRESENTING THE UPDATED KASK QUANTUM SERIES

The KASK Series made to engage the extreme elements, with fire-resistant and fire-retardant materials. Made EN 1385 compliant with Quantum Protection Panels*.
Ready for wildland firefighting, technical, water, and mountain rescue.
Where the unexpected, unknown, unpredictable call home.
This is what KASK Quantum Series was made for.

Every KASK helmet is tested for Rotational Impact Performance.

KASK

Performance is a beautiful thing.

IMAGES NOT TO SCALE
◆ = KAYAK/CANOE
◆ = BOAT CREW/PWC
◆ = TACTICAL
◆ = USAR
◆ = FIREFIGHTING
◆ = ROPE RESCUE
●●●●=Partial feature/OK- not ideal
□□□□= Option ~ = approximate
COST: Including VAT/Local Tax
£$€ = currency conversion only,
CHIN STRAP: QR=Quick-release buckle
FR=Fire Resistant
STANDARDS:
EN1385 Canoeing/rafting
PAS 028 Marine/Fast-Craft
EN12492 Climbing/Mountaineering
EN397 Height safety
UIAA Mountaineering
ISO18639 Technical rescue
EN16473 Technical rescue
NFPA 1951-Technical rescue
EN16471 Wildland fire fighting
EN1077 Ski/Snowboard (impact)
FS/ATV1 ATV/quad bikes (UK-Only)
KWF Forestry/Arb
MATERIALS: PC=Polycarbonate
(E)PP=(Expanded) Polypropylene
ABS=Acrylonitrile Butadiene Styrene
PTP=Polybutylene Terephthalate
E*PS*=Expanded *Polystyrene*
HD= High Density

COMPANY	**BULLARD**	**BUSCH PROTECTIVE**	**BUSCH PROTECTIVE**	**DR**
MODEL	**USAR**	**ATR-1**	**ATR-1M**	**HPS AQ**
product code		ATR-1	ATR-1M	
USES		◆●◆◆◆	◆●◆◆	◆
ORIGIN				
COST inc tax / VAT		£296 N/A €345	N/A $400 N/A	£00 $
WEIGHT		680-720g / 1.5-1.6lb	680g / 1.5lb	645
SIZES		3 sizes 48-66cm 19-26"	1 size 54-62cm 21.26-24.4"	1 size 52-
SIZE ADJUST		Ratchet dial & crown pad	Ratchet dial & crown pad	Rat
CHIN STRAP		QR, Velcro & padding	QR & Velcro	QR &
STANDARDS/PROTECTION		■■■■■	■■■	■
CONSTRUCTION				
SHELL		'SMC' carbon-fiber reinforced Duroplast (ABS)	'SMC' carbon-fiber reinforced Duroplast (ABS)	
PADDING / LINER		EPP/EPP/foam pad system pad system	Closed cell EVA/EPP foam	
STRAPS/HEADBAND		FR ?	?	
FEATURES				
LIGHT BRACKET CLIPS		■NVG/MPLS ■	■NVG/MPLS ■	■
RAILS EYE PROTECT		■ARC □half/full/goggles	●□half /full or goggles	□NV
VENTED EAR PROTECT		■ □	■ □	■
REFLECTIVE NAPE GUARD		■	■	
TEMP RANGE °C °F				
OTHER COLOURS		■■■□■■□	■■■■■	■
NOTES		Slight brim deflects water & sun. Not for US market. □=Luminous	Specifically for the US market	*except for ven
WEBSITE		busch-protective.com	busch-protective.com	oc

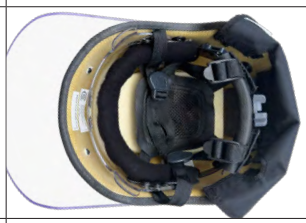
RAEGER	**DRAEGER**	**FUTURE SAFETY**	**ION**	**KASK**
UA-RESCUE	**HPS 3500 PRO-RESCUE**	**MANTA 4**	**MISSION**	**QUANTUM CABRIO***
000	000	MH4	ooo	WHE00142..3
◆ ◆ ◆	◆ ◆ ◆ ◆ ◆	◆ ◆ ◆ ◆ ◆	◆ ◆ ◆ ◆ ◆ ◆	● ● ◆ ◆ ◆ ◆ ◆* ◆
$000 €000	£000 $000 €000	£164 $000 €000	£120 $00 €00	£220 $296 €250
g / 000lb	781g / 1.72lb	670g / 1.47lb	390-430g / 0.86-0.95lb	690670g / 1.5/1.47lb
62cm 20-24.4"	1 size 50-66cm 19.7-25"	2 sizes 53-65cm 21-24"	1 size 55-60cm 0-0"	UNI 52-63cm
chet Dial	Ratchet Dial	Ratchet Dial	Ratchet Dial	Ratchet Dial
& retainer	QR, Velcro & Chin-Cup	QR & retainer	Fidlock (magnet)	velcro & FR QR buckle
■ ■ ■ ■	■ ■ ■ ■	■ ■ ■ ■ ■	■ ■ B (no ears)	■ ■ * ■ ■ *
ABS	Fibre reinforced, heat-resistant Thermoplastic	ABS	Polycarbonate & Polyurethane	PC & PTP alloy
EPS	EPS	EPP	EPS	EPS & Thermoformed PS
?	FR ?		Nylon	FR Nylon. TPS
■ ■	■ ■ all 4 sides	□ ■	- -	■ 4
G Adapter -	- □ half /full/goggles/mesh	□ ■ lost goggle-visor	- -	- -
■ ■	■ adjustable □ euro-slot	■ +clip-on covers □	■ ■ Detachable	■ □
□	■ □	■ +*	■	■
				-30 to 50°C -22 to 122°F
■ ■ ■	■ ■ ■ ■ ■ □ □ □ ■	■ ■ ■ ■ ■ □ ■ ■	□	■ ■ ■ ■ ■ □ □ □ ■
tilation requirements	*Complies with addition of extra protection panels *except for ventilation requirements	*luminous strips that can clip on to cover vents. Additional standards to MH3	High shock absorption. Weight with and without ear pads	*Complies only with addition of extra protection panels *CABRIO is vented & meets climbing std EN12492
oo.com	ooo.com	future-safety.com	ion-products.com	kask-safety.com

IMAGES NOT TO SCALE
◆ = KAYAK/CANOE
◆ = BOAT CREW/PWC
◆ = TACTICAL
◆ = USAR
◆ = FIREFIGHTING
◆ = ROPE RESCUE
●●●● =Partial feature/OK- not ideal
□□□□ = Option ~ = approximate
COST: Including VAT/Local Tax
£$€ = currency conversion only,
CHIN STRAP: QR=Quick-release buckle
FR=Fire Resistant

STANDARDS:
- EN1385 Canoeing/rafting
- PAS 028 Marine/Fast-Craft
- EN12492 Climbing/Mountaineering
- EN397 Height safety
- UIAA Mountaineering
- ISO18639 Technical rescue
- EN16473 Technical rescue
- NFPA 1951-Technical rescue
- EN16471 Wildland fire fighting
- EN1077 Ski/Snowboard (impact)
- FS/ATV1 ATV/quad bikes (UK-Only)
- KWF Forestry/Arb

MATERIALS: PC=Polycarbonate
(E)PP=(Expanded) Polypropylene
ABS=Acrylonitrile Butadiene Styrene
PTP=Polybutylene Terephthalate
EPS=Expanded *Polystyrene*
HD= High Density

COMPANY	FUTURE SAFETY	MSA	MSA	PACIFI
MODEL	MANTA 4	GALLET F2XR	V-GUARD V2	PAT
product code	MH4	ooo		
USES	◆◆◆◆◆◆	●●◆◆◆◆◆◆		
ORIGIN	🇬🇧	🇺🇸		
COST inc tax / VAT	£164 $000 €000	£240 $224 €265		
WEIGHT	670g / 1.47lb	750g / 1.65lb		
SIZES	2 sizes 53-65cm 21-24"	UNI 000		
SIZE ADJUST	Ratchet Dial	Ratchet Dial		Rat
CHIN STRAP	QR & retainer	velcro & FR QR buckle		
STANDARDS/PROTECTION	■■■■■	■■■■■■		
CONSTRUCTION				
SHELL	ABS	PU coated Thermoplastic		
PADDING / LINER	EPP	EPS & Removable textile		
STRAPS/HEADBAND		FR Polyester & Aramide		
FEATURES: LIGHT BRACKET CLIPS	□■	■		
RAILS EYE PROTECT	□ ■lost goggle-visor	□Full or Half Visor		
VENTED EAR PROTECT	■+clip-on covers □	● ■Detachable		
REFLECTIVE	■ +*	■		
TEMP RANGE °C °F		-30 to 120°C -22 to 248°F		
OTHER COLOURS	■■■■■□■■	■■■□■■■■■		
NOTES	*luminous strips that can clip on to cover vents. Additional standards to MH3	Price is base model - double that to include all of the accessories		
WEBSITE	future-safety.com	msasafety.com	msasafety.com	

C HELMETS	PACIFIC HELMETS	PAB AKRAPOVIC	PAB AKRAPOVIC	ROSENBAUER
ROLLER	CHALLENGER	MP1	MP2	HEROS 10 UNVENTED
R6L	R6V	MP1	MP2	1576xxx 1577xxx
		£85 $100 €89	£95 $120 €84	£000 $000 €000
		350g / 0.77lb	750g / 1.65lb	800g / 1.76lb
		1 size 52-64cm/20.4-25.2"	1 size 52-64cm/20.4-25.2"	1 size 48-67cm/18.9-25.2"
chet Dial		Ratchet Dial	Ratchet Dial	Ratchet Dial
		PAB QR side-release	PAB QR side-release	QR & retainer
				+AS/NZ
				
		FR Thermoplastic	FR Thermoplastic	FR Thermoplastic
		replaceable	replaceable	replaceable
		FR	FR	FR
		- lost goggle-or full visor	- lost goggle-or full visor	goggle-or full visor
			-	Detachable
			optional stickers	optional stickers
		-30 to 50°C -22 to 122°F	-30 to 50°C -22 to 122°F	-40 °C to 300 °C
		=Luminous Green decal shown can be silver	=Luminous Green decal shown can be silver	Top 5-level LED is integral, optional rear LED above adjustment dial. Vented or unvented non-EN12492 versions
		pab.hr	pab.hr	rosenbauer.com

IMAGES NOT TO SCALE
- ◆ = KAYAK/CANOE
- ◆ = BOAT CREW/PWC
- ◆ = TACTICAL
- ◆ = USAR
- ◆ = FIREFIGHTING
- ◆ = ROPE RESCUE

●●●●=Partial feature/OK- not ideal
□□□□= Option ~ = approximate
COST: Including VAT/Local Tax
£$€ = currency conversion only,
CHIN STRAP: QR=Quick-release buckle
FR=Fire Resistant

STANDARDS:
- EN1385 Canoeing/rafting
- PAS 028 Marine/Fast-Craft
- EN12492 Climbing/Mountaineering
- EN397 Height safety
- UIAA Mountaineering
- ISO18639 Technical rescue
- EN16473 Technical rescue
- NFPA 1951-Technical rescue
- EN16471 Wildland fire fighting
- EN1077 Ski/Snowboard (impact)
- FS/ATV1 ATV/quad bikes (UK-Only)
- KWF Forestry/Arb

MATERIALS: PC=Polycarbonate
(E)PP=(Expanded) Polypropylene
ABS=Acrylonitrile Butadiene Styrene
PTP=Polybutylene Terephthalate
EPS=Expanded *Polystyrene*
HD= High Density

COMPANY	SWEET PROTECTION	TEAM WENDY	WRS International
MODEL	ASCENDER SAR	EXFIL SAR BACKCOUNTRY SAR TACTICAL	TECHNICAL RESCUE
product code		82R-xx	
USES	◆◆◆◆◆◆◆	◆●◆◆◆◆	●◆◆◆◆◆◆
ORIGIN			
COST inc tax / VAT	£111 $149.95 €130	£000 $357466 €000	£198 $267 €231
WEIGHT	395g / 0.87lb	720g / 1.6lb	760g / 1.67lb
SIZES	1 size 53-61cm/ 20.8-24"	1 sizes 53-63cm 20.8-24.8"	1 size 50-65cm/ 19.7-25.6"
SIZE ADJUST	Ratchet dial	BOA Ratchet dial	2x Ratchet dials
CHIN STRAP	QR buckle& Retainer	Fidlock magnetic buckle	QR & retainer
STANDARDS/PROTECTION	■■□	■■	■■■■■
CONSTRUCTION			
SHELL	ABS thermoplastic shell	Lexan Polycarbonate	FR Thermoplastic
PADDING / LINER	EPP multi impact+ comfort	EPS/Zorbium foam	replaceable
STRAPS/HEADBAND		Nylon	
FEATURES: LIGHT BRACKET CLIPS	■	■	■■
RAILS EYE PROTECT	- -	■ □Half-or full visor	- ■lost goggle-or full visor
VENTED EAR PROTECT	● ■Detachable	*■ □	● □
REFLECTIVE	■	optional stickers	optional stickers
TEMP RANGE °C °F			-20 to 50°C -22 to 122°F
OTHER COLOURS	■■□■	□■	□■■□□■
NOTES	ear protection not shown	TACTICAL: As BACKCOUNTRY but metal MVG rails instead of PC rails.*optional vent covers	=Luminous Green decal shown can be silver
WEBSITE	sweetprotection.com	teamwendy.com	wrsinternational.com

PETZL HELMET SOLUTIONS

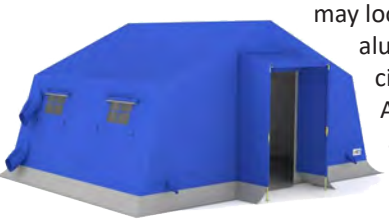
A helmet solution that includes the STRATO® HI-VIZ, STRATO® VENT HI-VIZ helmet, XENA®, PIXA®, DUO® Headlamps and our SLOT & HELMET ADAPT for helmet mounting. petzl.com

PETZL®

Access the inaccessible®

EMERGENCY RESCUE SHELTERS

We use the term 'Rescue' in the title to indicate RAPID DELPOYMENT and differentiate these emergency shelters from those designed for refugee or disaster-victim temporary housing. Of course, ALL of these shelters could do that job and many do, but generally speaking, shelters intended for use by rescuers are erected within minutes and have different requirements and construction standards (and fitments) than mid-to long term occupancy shelters. Primary amongst them is the need to be able to transport easily and erect within minutes. There are many mid to long term shelters that may look identical but have substantial aluminium or steel frames like this civil protection model from *Lanco.* Aluminium frame tents however, are a plausible option and we may well add them in at a later date. If you look at ROFI's inflatable versus alu-frame model the 606, there is only 43kg difference for a 6m half dome shelter. Time to deploy though is vastly different- even the largest inflatables go up in minutes while a frame tent can take hours. We have NOT included Manually erected metal frame shelters or decontamination/ shower shelters though some of those we have included can be adapted for such use.



There are three distinct constructions for rescuers' shelters:
1) **HIGH PRESSURE - PNEUMATIC/PUMP- INFLATE & FORGET**
2) **LOW PRESSURE - POWERED -CONTINUAL/REGULAR INFLATION**
3) **MANUAL - POP-UP FRAME**- a rigid frame that concertina's up and locks into position - think garden gazebo or covered market stall.
a fourth category that we have not included in this guide but may be added later is
4) **MANUAL** - SOLID FRAME - Aluminium or steel poles instead of an inflatable frame. Longer time to erect and heavy/ bulky but no other equipment needed to maintain them.

All four types have been in regular use for the past 40 or 50 years so they don't need much introduction but there are some subtle improvements to the more recent models that weren't present on the models we were using in the last century.

Speed of erection and ease of transport are key to shelters used by day-to-day emergency services requiring something small enough to fit on a fire or rescue truck and used for a few hours as distinct from disaster response which has a much more coordinated heavy-lift of equipment into areas where they may stay erected for many days or weeks. Putting aside the vast number of civilian or household pop-up shelters with their concertina metal frames, by far the largest category in the emergency sector are the high-pressure one-time inflatable frame shelters. These can use compressed air cylinders for rally rapid inflation and once up may only need periodic topping up to allow for temperature differentials. The second category we have listed, the low-pressure continual inflation models suffer from having to have a powered fan running continuously - so logisitics, noise and bulk to contend with - but maintain their form (while the fans are running or with regular top-ups) and can sustain multiple punctures and still function. Pressure relief valves allow for accidental over-inflation on high-pressure models rather than rupturing the seams and for high temperature expansion but this expelled air then needs to be replaced as the temperature goes back down.

Materials

All professional shelters are waterproof when new. This can obviously change as the material gets worn - often as a result of wind continually rubbing the shell against a a metal frame which is not an issue for fully inflatable shelters. These can all be patched but inflatables will require a more substantial glue or weld. Fire resistance. There may also be external factors like fire /volcano ash or building debris actively damaging the shell which is not an issue for mountain or flood rescue but is for disaster response and fire-rescue.

Floor area is obviously larger on the outside than it is on the inside for the pneumatic and inflating models. We have listed mostly the outside area because it is the area of land that you need to have available for the shelter but some, like the Vetter MT-series are quoting the usable or internal area. For internal space all others you should allow for a 20-40cm/8-16" reduction in length <u>and</u> width for pneumatic (inflate & forget) models and 50 to 100cm/20-40" for the largest fan-inflating models. For the pop-up shelters there is little to no difference in the internal versus external floor area. A key decision is whether to have a fixed 9attached) floor or a detachable or add-on floor. The former provide better weather-proofing, hygiene and speed of erection while an open base allows the shelter to be lifted and placed over an obstacle or an incident

like a vehicle.

with slack material remembering that ALL inflatable shelters will vary in rigidity depending on temperature fluctuations. 'Inflate and forget' shelters may need regular topping up assuming that they have pressure relief valves to exhaust heated air as it expands.

resistance & Staking is a very important consideration for temporary structures like this with big 'sail' areas that can be badly affected by gusts - and the sheer weight of the shelter is not necessarily foolproof - witness the number of very large inflatable bouncy castles that have literally taken off with people in/on them. The key companies in this sector go to great lengths to ensure their shelters can withstand at least 20-40mph - there's no accounting for the kinds of extremes we see these days. In the image above, MFC use a giant fan to test side and front-on exposure and one company, *Nixus* in Slovakia - uses a small jet aircraft to test some of theirs - that may just be one or two as a one-off test rather than their standard test method but a useful indicator nonetheless. All shelters offer ground stake anchor points either as an engineered hardpoint - generally welded - at the base like the IC Brindle title picture opposite with elasticated cord then attached or as material flaps with eyelets through which you drive a ground stake. The picture opposite also shows the most effective anchor option, a **ballast skirt** around the base. This is a tube or flap of material attached to the upper construction of the shelter either all the away around or as separate flaps as shown opposite. These can be sealed tubes that you can fill with water and/or flat and weighted with sand bags, water containers or best of all, a vehicle as long as it's not going to be driven off every 5 minutes.

Higher up around the eaves will be eyes for corded stays which are hugely important in maintaining the internal cube area during high winds. If you only staked at the ground the chances are the top half would deflect in high winds and create a rhomboid that would severely impact your inside working space. Of course, much of what you do inside can assist with stability in wind whether it be storage cases or beds pushed up against the inner wall.

Angled walls that are tight as a drum when erected like this Lanco modular shelter (three separate sections) offer a better defence against wind than an upright, square wall up

Water resistance shouldn't be an issue for any of these shelters expect over time as materials wear or tears appear. The ticker, coated materials are the most resilient but also the heaviest and bulkiest so it is a decision based on the operational parameters - lighter, less resilient materials for the most temporary and remote of work locations.. The much bigger issue is to ensure that there is no pooling on the roof due to slack materials- this can be catastrophic. A decent angle and firm guys will help ensure good flow off the roof but if you get some deflation in the cooler night and the shallowest of curves appears in the roof this can be enough to pool an ever increasing expanse of water with very significant weight increases as rain continues.

Small or Large?: The smallest emergency shelters are really pop-up tents that can be the size of a person's body (bivvi) as well as the larger versions shown at the top that are equally at home as a family picnic shelter, but in inflatable terms the *Rigloo* is currently the smallest and shown left as a weather-protective casualty handling station in a mountain environment. Small shelters like this *Rescuer* and an even smaller 1.2m x 1.8m *Refuge* version can be inflated by hand/foot pump - almost prohibitively time-consuming for the larger, standard sized shelters which really do need either a compressed air cylinder for the most rapid of inflation or an electric fan/pump. At the largest end of 'emergency' shelters is this modular *Lanco* giant which comes in 3 sections allowing you to use just the front and rear joined or insert mid sections. While we haven't included the full size field hospitals that can take days to erect we have included some like this that are huge but can easily be ready to use within an hour using an experienced crew. Many of these can be modified to create treatment centres or search-team dorms with separate cubicles inside adding to bulk and set-

time but considerably improving casualty and/or team comfort. The *MFC* model below has 3 such cubicles running down one wall with a wide access and/or storage area on the opposite wall. Just because they are large, does not mean they are entirely unwieldy, many have carry handles around the base so that even the largest *Nixus* model above can be lifted and carried by personnel to locate/relocate as required. This model has an integral floor but models without a floor can easily be lifted over obstructions or over vehicles and work areas that

may not instantly come to mind as a good idea - for instance a trench rescue which can take many hours and might end in failure if undertaken during heavy rain could be entirely covered but these larger shelters.

Joining & Hubs

Although we haven't included the very largest, framed shelters there are a good many of these fast-erecting shelters that can be con-joined to create enormous corridors

of tents. The majority offer the means to connect one model to another via their doorways so end-to-end connection is common. In some cases the manufacturer offers a central hub where a shelter or line of shelters can be connected like spokes to a central chamber like this 4-opening model from Ego which we think is now discontinued and the *Lanco* model below left.

Exo-frames:

From a strength and resistance to wind standpoint, there are a handful of inflatables that go up in minutes that can then be reinforced with an alloy (or even steel if you can cope with the weight) external frame as distinct from nay that can use one or two strengthening poles for the apex and eaves. A full exo-frame is bulky and heavy but if your work environment is going to be a constant wind challenge this could be the way to go.

LANCO is widely recognized for its industry-leading production of fully integrated deployable solutions, including soft walled shelters, generators, heaters, air filtration devices and flexible tanks, currently used by defense agencies worldwide, as well as civilian governments, international organizations / agencies, and commercial customers

LANCO

TentTech · DeconTech · FlexTank

.www.lanco.eu
www.lanco-usa.com

IN THE FOLLOWING TABLES.....

Any use, feature, accessory or component that is inherent in the tool is shown as a solid coloured square ■■■■■■

Optional features or accessories are shown as an outline square □□□□□□

A circle ●○ indicates that this feature is only partially present and/or is OK for that purpose but not ideal.

A model VARIANT is shown in cyan blue. Any features or specifications that differ from the standard are also in cyan or have a cyan outline to a black or coloured square ■■■■■■

ORIGIN: The company's home country, not necessarily the country of manufacture which is indicated by an inset flag or two equally sized flags if the tool is made in both countries.

COST: ***Very approximate if marked with a*** **~** symbol because it's subject to agency bulk purchasing and a lot of optional elements like materials, windows, ports etc. but most manufacturers give a generic price per size - you just need to ensure that the price takes into account all the features you need. NOTE that **prices Include local taxes/VAT.** but disaster response charities and govt agencies often do not pay VAT/ tax on this type of equipment. Prices in burnt orange £$€, are, **currency conversions only** and do not include shipping or duty.

CONSTRUCTION: Colour coded to three types

- PNEUMATIC/PUMP- INFLATE & FORGET
- POWERED FAN -CONTINUAL INFLATION
- MANUAL - POP-UP FRAME

TIME to ERECT: Depending on the type of inflatable shelter the fastest time will be for a rigid-frame 'pop-up'. Inflatable is fastest with a compressed air cylinder which is usually twice as fast as an electric fan/inflater. Most require more than just inflation to be ready to use.

WEIGHT: **Shelter-Only**: does not include inflation/erection tools, stakes, additional groundsheets etc. and definitely NOT capital items like fans, pumps, air cylinders and generators. Add 5 to 20kg for the transport weight with the included bits and pieces like stakes, guy and carry bag.

MATERIALS: If two fabrics are given the first will be the roof and is generally lighter than the wall-material.

- FLAME-RETARDANT
- WATERPROOF

AIRVOLUME: TOTAL VOLUME/SPACE INSIDE the SHELTER in cubic metres/feet. Useful for calculating air-flow requirements and total storage volume. The lower figure in Litres and CuFt is the **volume of air required to fill the tubes** - useful to know for CABA-filled tubes to ensure you have enough!

LENGTH, WIDTH,HEIGHT: DEPLOYED / PACKED The dimensions in metres/feet for the shelter when erected - HEIGHT: unless two figures are given, this will be the maximum which is to the outside apex **so the top of side-walls inside will generally be at least half a full metre lower for an average 4 x 3 inflate&forget shelter**. You may also need to allow a further reduction in height for the inflated beams which are 25-35cm in diameter.

PACKED means rolled and stowed ready for transport excluding any fans, cylinders power-source, lighting etc.

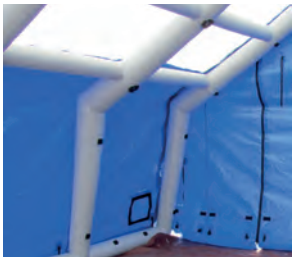
AREA: DETACHABLE **FIXED FLOOR** in Square Metres/feet and most refer to the entire footprint rather than just the internal space. **Internal areas are given in *italics*** and if there are two figures, the smaller area is internal. To convert external floor area to internal floor space in inflatable models you will need to assume around 50cm reduction in width to allow for beams, and up to 1m for continual-inflation models. These figures in green (or as an option □) indicate whether the floor is detachable so that the shelter can be lifted over and onto a site/vehicle/ incident.

DOORS: either a fixed number or an option range for customising. **FULL-SPAN:** entrances may be a doorway with a roll-up closure or it may be a full-span opening with a roll-up or removable panel across the full width of the shelter. In some cases the full-span panel may also have a doorway in it shown as **1+** ■. These entrances are closed/opened/secured by one or two of three options: **Zip Velcro Tie**: The 'door' can be sealed via zip or velcro/hook&loop or both and/or can be tied open

WINDOWS: **Clear**/Translucent plastic. **Mesh** which stops insect but allows air flow and/or the window space can be **Open**ed to allow max air flow. For customisation, a std window costs around £$€500 and a wall section will have either a door or a window, not usually both in the same section.

CONNECTABLE Stakes Guys Skirt: Whether the shelter can be connected to another door opening via zip/velcro and/or/ tie. **Stakes** or pegs supplied as ground anchors. **Guys** or cords for staying the top of the shelter in high winds. '**Skirt**' refers to **Vehicle or ballast pads** which are wide flaps around the base that can be ballasted or your vehicle(s) can park on them to ensure the shelter withstands high winds.

PORTS: Some or all of the total number of ports may be differentiated into: Vent - For air entry often with a mosquito mesh
Power - smaller port that can close over a narrow cable or umbilical
Water: unusual, but some have integrated, sealed direct fitting for hose pipe and valves particularly in medical tents. most will simply run a regular hose through an HVAc or Power port
HVAC: Much larger ports to allow fans to push air into the shelter - either ambient or heated or cooled. Can be used for any utility.
Openings, often sealable, that allow utilities, comms, air and externally generated heat/cold to enter the shelter. The total number of ports or inlets is in black. Some ports are specific to a use - for instance a **water** inlet may involve a hose or water pipe coupling and **power** tends to be quite small and lower down for sockets and around the eaves for lighting.
The largest **HVAC** port could be used for any pipes or cabling you want to enter the shelter but is large to allow externally powered air, either as circulating ambient air, heated of cooled. As a rough guide adding each extra port costs around £$€120.
Air vents are different as they are 'passive' and tend to be a meshed opening above the doors and not suitable as an inlet port which are otherwise set low to the ground, often near the corners.



ROOF TRANSLUSCENT OPAQUE:
Some shelters have a clear or white roof which lets plenty of light in like this Canadian Tulmar model. Others are opaque and may require more internal lighting but most offer the option of transluscent/clear or opaque.

PRV: (unrelated to Roof type) **Pressure Relief Valve** for inflatable shelters - present on most as protection against over-inflation and bursting of seams.

BRANDING HEATER LIGHTING PUMP: Almost always an option rather than part of the price though some will provide a hand pump as standard and this is a last resort, slow erection method but it is at least , infallible.

OTHER COLOURS: Colours available in addition to the one shown.

RESCUER

RIGLOO

PRE-HOSPITAL EMS

Fast Pack Sack

Scan me

Place Over Patient
P.O.P
Technology

FAST DEPLOYING EMERGENCY SHELTER

1. CARRY **2. INFLATE** **3. OPERATE**

Removable floor

Place shelter *over* casualty. 3 points of access. Multi use floor.

Lone Responder deployable

Carry, inflate, operate and repack.

Structured for hands free operation

Strong and durable. Fits a stretcher. Reusable.

Protect from exposure

Privacy & dignity. Ripstop shell waterproof 8000mm HH. Operating range from -50°C to +60°C and SPF 30. Mosquito nets. Air flow controls.

Operational in ~ 1 minute

With time of the essence, medics need to quickly control the environment.

CARRY SIZE	CARRY WEIGHT
H 60cm | 23.6" **W** 30cm | 11.81" **D** 20cm | 7.87"	**Shelter & Fast Pack Sack** 7kg | 15.5lbs **Backpack & Pump** 3.2kg | 7.05 lbs

OPERATING ROOM	DESIGNED TO TREAT
H 1.2m | 3.93ft **W** 1.6m | 5.24ft **D** 2.6m | 8.53ft	• Reusable • Inflates in < 1 minute • Exposure Protection • Removable Floor

www.rigloo-rs.com info@rigloo-rs.com
Rigloo Ltd, 4/41 Burnblea Street, Hamilton, UK, ML3 6RF

A NEW APPROACH TO CASUALTY CARE

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	AIRQUEE	AIRQUEE	AIRQUEE	A
MODEL VARIANT	Rapid Deployment	Emergency Response	Airtight Frame 1	Airti
PRODUCT CODE	AQ6268SP1	AQ5911	AQ5109	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax/VAT £$€=Currency conv.	£3715 $4720 €4350	£4795 $6090 €5610	£3290 $4180 €3850	£3520
WEIGHT - Shelter-Only	70kg / 154lb	140kg / 308lb	122kg / 269lb	15
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	PVC-coated polyester -	PVC-coated polyester -	PVC-coated polyester -	PVC-co
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 0
LENGTH DEPLOYED / ~PACKED	5 0.9 m /16.4 2.95'	6 1.2m /19.7 4'	5.4 1.1 m /17.7 3.6'	5.4 1.1
WIDTH DEPLOYED / ~PACKED	3.6 0.6m /11.8 2'	5.05 0.9m /16.6 2.95'	4.75 0.9 m /15.4 2.95'	5.6 0.9
HEIGHT DEPLOYED / ~PACKED	2.6 0.6m /8.5 2'	3.3 0.5m /10.8 1.7'	2.95 0.9 m /9.7 2.95'	2.85 0.
AREA: DETACHABLE FIXED FLOOR	18sqm / 194sqft	00sqm / 00sqft	00sqm / 00sqft	00s
DOORS FULL-SPAN Zip Velcro Tie	1-2	1	0	0
WINDOWS Clear Mesh Opens	4-4	0	0	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	6 2 2 - 2	0 0 0 - 0	0 0 0 - 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	240/110v powered blower required Inc Repair kit, delivery hose,pegs/ cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes R hose,peg
WEBSITE	airquee.com	airquee.com	airquee.com	air

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	AIRSHELTA	AIRSHELTA	AIRSHELTA	AI
MODEL VARIANT	Link Hub	Aireshelta 3.6	Aireshelta 6	Pac
PRODUCT CODE	00	00	00	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	<4mins	<2mins	<2mins	
COST inc tax/VAT £$€=Currency conv.	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	00kg / 00lb	30kg / 66lb	00kg / 90lb	3
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	PU-coated nylon neoprene tubes	PU-coated nylon ?	PU-coated nylon ?	PU-c neop
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 0
LENGTH DEPLOYED / ~PACKED	6.4 00m / 21 00'	3.2 0.8m / 10.5 2.6'	00 00m / 00 00'	3.2 0.5
WIDTH DEPLOYED / ~PACKED	6.4 00m / 21 00'	3.6 0.8m / 11.8 2.6'	6.7 00m / 22 00'	3.2 0.5
HEIGHT DEPLOYED / ~PACKED	3.33 00m / 11 00'	2.63 0.8m / 8.6 2.6'	3.35 00m / 11 00'	2.6 0
AREA: DETACHABLE FIXED FLOOR	00sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	10.2
DOORS FULL-SPAN Zip Velcro Tie	4x 3.6m	0	0	1+
WINDOWS Clear Mesh Opens	3 - -	0	0	1-4
CONNECTABLE Stakes Guys Skirt	-	-		
PORTS Vent Power Water HVAC	0 0- 0 0- 0	0 0- 0 0- 0	0 0- 0 0- 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV		-		
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Links to Airepod and Carpod	240/110v blower required Inc Repair kit, delivery hose,pegs/ cord and Valise.	240/110v blower required Inc Repair kit, delivery hose,pegs/ cord and Valise.	240/110v Inc Repair kit, Option- v
WEBSITE	aireshelta.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.com	aireshelta.co

IRQUEE	AIRQUEE	AIRQUEE	AIRQUEE	AIRQUEE
ght Frame 2	Airtight Frame 3	Airtight Frame 4	INFLATABLE SHELTER	INFLATABLE SHELTER
AQ7364	AQ5109	AQ6780	AQ2229	AQ2621
00mins	00mins	00mins	00mins	00mins
$4470 €4120	£5320 $7660 €6225	£11340 $14400 €13270	£3235 $4110 €3785	£4195 $5330 €4910
5kg / 341lb	190kg / 418lb	419kg / 922lb	251kg / 5520lb	360kg / 792lb
ated polyester	PVC-coated polyester	PVC-coated polyester	PVC-coated polyester	PVC-coated polyester
0L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt
m /00 00'1.1	8 1.8 m /26.2 5.9'	10.07 1.6 m /35.1 5.25'	9 1m /29.5 3.3'	9.95 1.4m /32.6 4.6'
m /18.4 2.95'	5.6 0.9 m /18.4 2.95'	6.45 1.3 m /21.2 4.3'	6.5 1.2m /21.3 4'	8 1.2m /26.2 4'
9 m /9.4 2.95'	2.9 0.9 m /9.5 2.95'	4.45 1.3m /14.6 4.3'	3.3 1m /10.8 3.3'	4.3 1.2m /14.1 4'
sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft
	0	0	0	0
	0	0	0	0
	-	-		-
0 - 0	0 0 0 - 0	0 0 0 - 0	0 0 0 - 0	0 0 0 - 0
			-	-
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
quee.com	airquee.com	airquee.com	airquee.com	airquee.com
RSHELTA	AIRSHELTA	AIRSHELTA	AIRSHELTA	AIRSHELTA
ddock Pod	Airepod	Carpod	Carpod Lg	Cubicle Shelter
00	00	00	00	00
<2mins	2mins	2-3mins	4-5mins	<5mins
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
2kg / 82lb	37kg / 110lb	45kg / 99lb	50kg / 110lb	52kg / 200lb
oated nylon prene tubes	PU-coated nylon neoprene tubes	PU-coated nylon neoprene tubes	PU-coated nylon neoprene tubes	PU-coated nylon neoprene tubes
0L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt
5m / 10.5 1.8'	5 0.6m / 16.4 2'	5 0.6m / 16.4 2'	5 0.7m / 16.4 00'	6.5 0.9m / 00 00'
5m / 10.5 1.8'	3.2 0.55m / 10.5 1.8'	4 0.6m / 13.1 2'	5 0.65m / 16.4 2.1'	4.5 0.7m / 00 00'
.5m / 8.5 1.6'	2.6 0.5m / 8.5 1.6'	2.6 0.5m / 8.5 1.6'	2.6 0.5m / 8.5 1.6'	2.8 0.5m / 00 00'
2sqm / 00sqft	16sqm / 00sqft	22sqm / 00sqft	25sqm / 00sqft	29sqm / 00sqft
	1+	1+	1+	1+
- -	1-6 - -	1-6 - -	1-6 - -	1-6 - -
0- 0 0- 0	0 0- 0 0- 0	0 0- 0 0- 0	0 0- 0 0- 0	0 0- 0 0- 0
v blower required ,pegs/cord and Valise. water-fillable skirt	240/110v blower required Inc Repair kit, ,pegs/cord and Valise. Option- water-fillable skirt	240/110v blower required Inc Repair kit, ,pegs/cord and Valise. Option- water-fillable skirt	240/110v blower required Inc Repair kit, ,pegs/cord and Valise. Option- water-fillable skirt	240/110v blower required. Inc Repair kit, pegs/cord/Valise. 3x cubicles. Option- water-fillable skirt
m airesheltana.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.com	aireshelta.com airesheltana.com

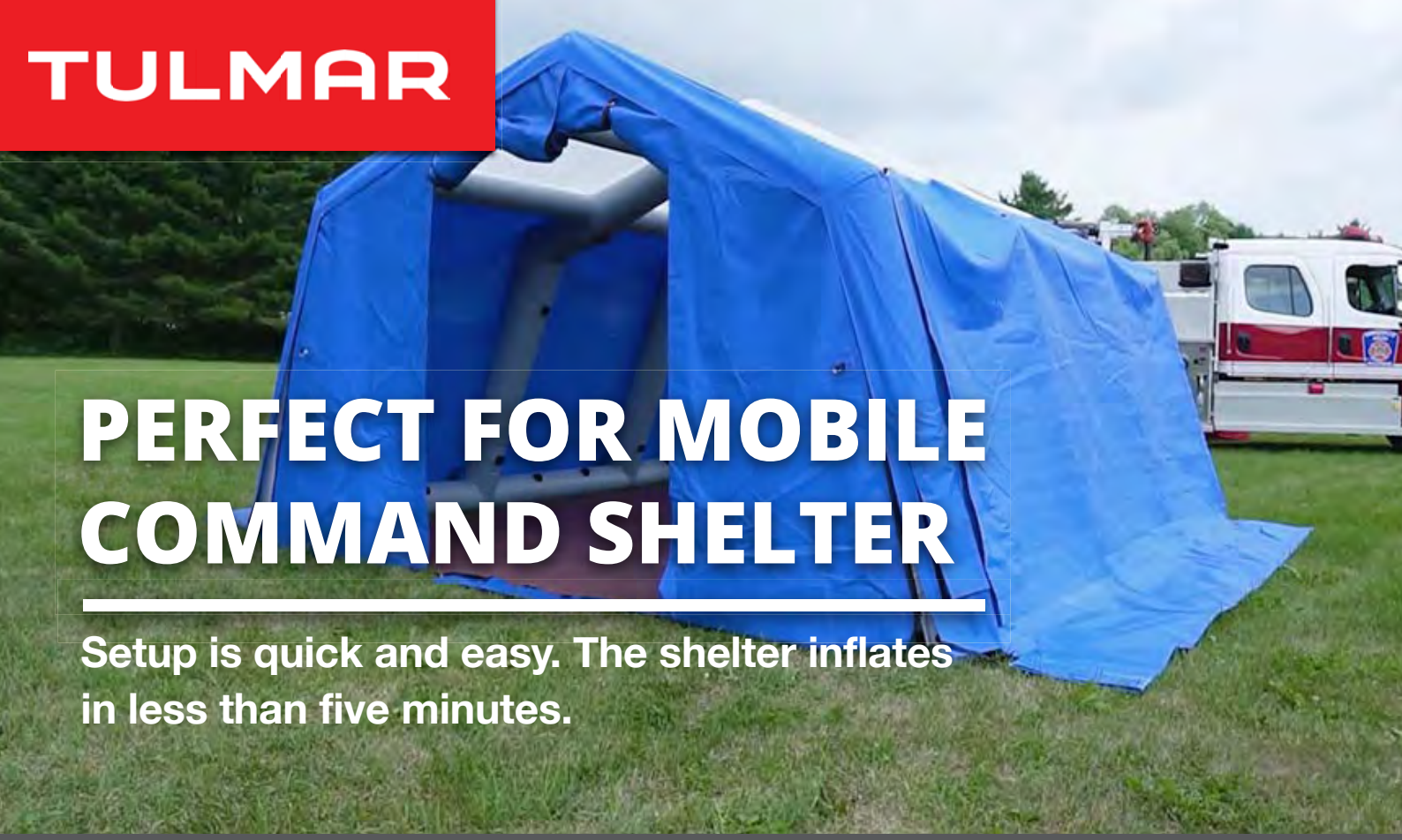
IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	EGO	EGO	EGO
MODEL VARIANT	EU30-T	EU45-T	EU60-T
PRODUCT CODE	-	-	-
ORIGIN			
CONSTRUCTION TIME-to-ERECT	12-20mins*	15-25mins*	18-30mins*
COST inc tax/VAT £$€=Currency conv.	~£15000 $19050 €17550	~£20000 $25400 €23400	~£25000 $31750 €29250
WEIGHT - Shelter-Only	160kg /352lb	200kg / 327lb	260kg / 572lb
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	PVC-coated 650g/m	PVC-coated 650g/m	PVC-coated 650g/m
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt
LENGTH DEPLOYED / ~PACKED	5.6 1.2m / 18.4 3.9'	8.25 1.4m / 27.2 4.6'	10.9 1.6m / 35.8 5.25'
WIDTH DEPLOYED / ~PACKED	6 0.9m / 19.7 2.95'	6 1m / 19.7 3.3'	6 1.1m / 19.7 3.6'
HEIGHT DEPLOYED / ~PACKED	3.1 0.8m / 10.1 2.6'	3.1 0.9m / 10.1 2.95'	3.1 1m / 10.1 3.3'
AREA: DETACHABLEFIXED FLOOR	30sqm / 645.8sqft ☐	45sqm / 495sqft ☐	60sqm / 645.8sqft ☐
DOORS FULL-SPAN Zip Velcro Tie	2	4	2-4
WINDOWS Clear Mesh Opens	0-2	0-4	2-4
CONNECTABLE Stakes Guys Skirt	- -	- -	- -
PORTS Vent Power Water HVAC	2 2 0 - 2	4 2 0 - 2	4 0 0 - 4
TRANSLUSCENT OPAQUE ROOF PRV			
BRANDING HEATER LIGHTING PUMP			
OTHER COLOURS NOTES	Inc Repair kit/hammer/pegs/cord/ Valise. NB: ES, EZ & EL discontinued. *inc 3mins inflation	Includes Repair kit, hammer, pegs/ cord and Valise. *inc 4mins inflation	Includes Repair kit, hammer, pegs/ cord and Valise. *inc 6mins inflation
WEBSITE	ego-rescue.com	ego-rescue.com	ego-rescue.com

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	IC BRINDLE	IC BRINDLE	IC BRINDLE
MODEL VARIANT	ICB33	ICB34	ICB44
PRODUCT CODE	-	-	-
ORIGIN			
CONSTRUCTION TIME-to-ERECT	~5-10mins*	~6-12mins*	~8-15mins*
COST inc tax/VAT £$€=Currency conv.	£1500 $1905 €1755	£2000 $2540 €2340	£2800 $3556 €3280
WEIGHT - Shelter-Only	60kg / 00lb	64kg / 00lb	94kg / 00lb
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	550D PU-coated poly. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester
INTERNAL VOLUME / AIR in TUBES (L)	~21m³ / 741CuFt	~28m³ / 989CuFt	~38m³ /1342CuFt
LENGTH DEPLOYED / ~PACKED	3 0.9m / 9.85 2.95'	3 0.9m / 9.85 2.95'	4 1m / 13.1 3.3'
WIDTH DEPLOYED / ~PACKED	3 0.7m / 9.85 2.25'	4 0.7m / 13.1 2.25'	4 0.75m / 13.1 2.5'
HEIGHT DEPLOYED / ~PACKED	2.6 0.6m / 8.5 2'	2.6 0.6m / 8.5 2'	2.7 0.67m / 8.9 2.2'
AREA: DETACHABLEFIXED FLOOR	7.5-9sqm / 80-97sqft	10.5-12sqm / 113-129sqft	14-16sqm / 150-172sqft
DOORS FULL-SPAN Zip Velcro Tie	1	1	2
WINDOWS Clear Mesh Opens	2 -	2 -	2 -
CONNECTABLE Stakes Guys Skirt			
PORTS Vent Power Water HVAC	4 2 0 - 2	4 2 0 - 2	4 2 0 - 2
TRANSLUSCENT OPAQUE ROOF PRV			
BRANDING HEATER LIGHTING PUMP			
OTHER COLOURS NOTES	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise. *inc 1-3mins inflation	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise. *inc 1-3mins inflation	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise. *inc 2-4mins inflation
WEBSITE	icbrindle.com	icbrindle.com	icbrindle.com

TULMAR



PERFECT FOR MOBILE COMMAND SHELTER

Setup is quick and easy. The shelter inflates in less than five minutes.

PRODUCT INFO & SPECS

Tulmar's inflatable shelter system was developed to meet the requirements of emergency responders who required rapidly deployable shelters. The modular design allows canopies, end walls and floors to be easily detached for repair or replacement. Interconnect panels are available to join multiple shelters for custom configurations. Can be erected in less than five minutes—simply unpack from valise and inflate.

Shelter Footprint	Interior Square Footage	Packed Dimensions	Weight
3.7 M X 4.6 M	17 sq M	61 cm X 61 cm X 135 cm	102 kg
12 FT X 15 FT	180 sq FT	24 in X 24 in X 52 in	225 lbs
4.5 M X 6.1 M	27.5 sq M	71 cm X 71 cm X 152 cm	168 kg
15 FT X 20 FT	300 sq FT	28 in X 28 in X 60 in	370 lbs

Material is rated to operate from -30C - 60C to -22F -140F

The exposed parts of the Tulmar shelter are constructed with anti-fungus, anti-mildew, antibacterial and antimicrobial treatments.
The interior structure is made with anti-mildew and anti-fungal material.
This preserves the integrity of the shelter.

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	IC BRINDLE	IC BRINDLE	IC BRINDLE	IC
MODEL VARIANT	ICB45	ICB56	ICB58	
PRODUCT CODE	-	-	-	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~8-15mins*	~12-20mins*	~15-25mins*	
COST inc tax/VAT £$€=Currency conv.	£3500 $4445 €4095	£5500 $6985 €6435	£7500 $9525 €8775	£9500
WEIGHT - Shelter-Only	97kg / 210lb	140kg / 309lb	195kg / 430lb	22
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	550D PU-coated poly. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester	550D PU-coated poly. 630g PVC coated Polyester	550D P 630g PVC
INTERNAL VOLUME / AIR in TUBES (L)	~49m³ / 1730CuFt	~78m³ / 2754CuFt	~107m³ / 3779CuFt	~134
LENGTH DEPLOYED / ~PACKED	4 1m / 13.1 3.3'	5 1.1m / 16.4 3.6'	5 1.1m / 16.4 3.6'	6 1.2
WIDTH DEPLOYED / ~PACKED	5 0.75m / 16.4 2.5'	6 0.75m / 19.7 2.5'	8 0.8m / 26.25 2.6'	8 0.80
HEIGHT DEPLOYED / ~PACKED	2.7 0.67m / 8.9 2.2'	2.8 0.74m / 9.2 2.4'	3 0.74m / 9.85 2.4'	3 0.74
AREA: DETACHABLE FIXED FLOOR	17.8-20sqm / 191-215sqft	27-30sqm / 290-323sqft	36.7-40sqm / 395-430sqft	44-48sq
DOORS FULL-SPAN Zip Velcro Tie	2	2	2	2
WINDOWS Clear Mesh Opens	2-6 -	2-8 -	2-9 -	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	4 2 0 - 2	4 2 0 - 2	4 2 0 - 2	4 2
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	4x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise. *inc 2-4mins inflation	14x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise. *inc 3-5mins inflation	14x Lift & Shift handles. Inc. Repair kit, pegs/cord and Valise. *inc 3-5mins inflation	14x Lift Inc. Repair kit
WEBSITE	icbrindle.com	icbrindle.com	icbrindle.com	icb

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	LANCO	LANCO	LANCO	
MODEL VARIANT	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatab
PRODUCT CODE	ARZ30	ARZ40	ARZ50	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~8-15mins*	~12-25mins*	~12-25mins*	
COST inc tax/VAT £$€=Currency conv.	~£10000 $12700 €11700	~£12500 $15875 €14625	~£15000 $19050 €17550	~£18000
WEIGHT - Shelter-Only	103kg / 227lb	124kg / 273lb	142kg / 313lb	173
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530 P
INTERNAL VOLUME / AIR in TUBES (L)	~85m³/ 3002CuFt	~110m³ / 3885CuFt	~140m³ / 4944CuFt	~170
LENGTH DEPLOYED / ~PACKED	5.72 1.13m / 18.8 3.7'	7.5 1.2m / 24.6 4'	9.38 1.63m / 30.8 5.3'	11.21 1
WIDTH DEPLOYED / ~PACKED	5.5 0.75m / 18 2.5'	5.5 0.9m / 18 3'	5.5 0.45m / 18 1.5'	5.5 0.
HEIGHT DEPLOYED / ~PACKED	2-2.95 0.65m / 6.5-9.7 2.1'	2-2.95 0.6m / 6.5-9.7 2'	2-2.95 0.45m / 6.5-9.7 1.5'	2-2.95 0.
AREA: DETACHABLE FIXED FLOOR	30sqm / 322sqft	40sqm / 431sqft	50sqm / 539sqft	61s
DOORS FULL-SPAN Zip Velcro Tie	1 -	1-2 -	1-2 -	1-2
WINDOWS Clear Mesh Opens	0 to 6 -	0 to 8 -	0 to 10 -	0 to 1
CONNECTABLE Stakes Guys Skirt	-	-	-	
PORTS Vent Power Water HVAC	4 2 0 - 2	4 2 0 - 2	4+ 2 0 - 2	6+ 2
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP	- - -	- - -	- - -	
OTHER COLOURS NOTES	Inc Repair kit/hose/Valise. Option for 550g/m² tent skin. Lift & shift handles. *inc 2-4mins inflation	Inc Repair kit/hose/Valise. Option for 550g/m² tent skin. Lift & shift handles. *inc 2-4mins inflation	Inc Repair kit/hose/Valise. Option for 550g/m² tent skin. Lift & shift handles. *inc 2-4mins inflation	Inc Repair ki for 550g/m² handles. *i
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

BRINDLE	LANCO	LANCO	LANCO	LANCO
ICB68	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatable Rescue Tent	Inflatable Rescue Tent
-	ARZ5	ARZ10	ARZ20	ARZ204
~20-30mins	~5-10mins*	~5-10mins*	~8-15mins*	~8-15mins*
$12065 €11115	~£3500 $4445 €4095	~£5000 $6350 €5850	~£7500 $9525 €8775	~£8000 $10000 €9000
5kg / 496lb	32kg / 70.5lb	52kg / 115lb	80kg / 176lb	82kg / 181lb
U-coated poly. coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester	240 & 530g/m² PVC-coated Polyester
m³ / 4732CuFt	~16m³ / 565CuFt	~28m³ / 989CuFt	~55m³ / 1942CuFt	~56m³ / 2000CuFt
m / 19.7 3.9'	1.7 0.9m / 5.6 3'	3.2 1m / 10.5 3.28'	4 1.2m / 13.1 4'	3.8 1.2m / 12.5 4'
m / 26.25 2.6'	3.2 0.6m / 10.5 2'	3.4 0.7m / 11.1 2.3'	5 0.85m / 16.4 2.8'	5.5 0.87m / 18 2.85'
4m / 9.85 2.4'	2.3-2.76 0.46m / 6.5-9 1.5'	2.3-2.76 0.46m / 6.5-9 1.5'	2-2.7 0.55m / 6.5-8.9 1.8'	2-2.95 0.45m / 6.5-9.7 1.5'
m / 473-516sqft	5sqm / 54sqft	10sqm / 108sqft	20sqm / 215sqft	21sqm / 225sqft
	1x -	1x -	1 -	1 -
-	0 or 2 -	0 to 2 -	0 to 4 -	0 to 4 -
	-	-	-	-
0 - 2	2 1 0 - 1	4 2 0 - 2	4 2 0 - 2	4 2 0 - 2
	---	---	---	---
& Shift handles. , pegs/cord and Valise.	- Inc Repair kit/hose/Valise. Option for 550g/m² tent skin. Lift & shift handles. *inc 2-4mins inflation	Inc Repair kit/hose/Valise. Option for 550g/m² tent skin. Lift & shift handles. *inc 2-4mins inflation	Inc Repair kit/hose/Valise. Option for 550g/m² tent skin. Lift & shift handles. *inc 2-4mins inflation	Inc Repair kit/hose/Valise. Option for 550g/m² tent skin. Lift & shift handles. *inc 2-4mins inflation
rindle.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com

LANCO
le Rescue Tent
ARZ60
~12-25mins*
$22860 €21060
kg / 381.4lb
g/m² PVC-coated Polyester
m³ / 6004CuFt
.63m / 36.8 5.3'
75m / 18 2.5'
45m / 6.5-9.7 1.5'
qm / 657sqft
-
0 -
-
2 0 - 2
---
t/hose/Valise. Option tent skin. Lift & shift nc 2-4mins inflation
lanco-usa.com

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	LANCO	LANCO	LANCO	L
MODEL VARIANT	Link Hub	Self Erecting Tent	Self Erecting Tent	Self E
PRODUCT CODE	AZF-CT33	AZF29	AZF-33	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~10-15mins*	~10-15mins*	~10-15mins*	
COST inc tax/VAT £$€=Currency conv.	~£14500 $18415 €16965	~£12000 $15240 €14040	~£13500 $17145 €15795	~£15500
WEIGHT - Shelter-Only	223kg / 492lb	126kg / 278lb	160kg / 353lb	18
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC Additional
INTERNAL VOLUME / AIR in TUBES (L)	~90m³ / 2178CuFt	~81m³ / 2861CuFt	~30m³ / 3178CuFt	~118
LENGTH DEPLOYED / ~PACKED	6 1.4m / 19.7 4.6'	5.15 1.2m / 17 3.9'	5.15 1.3m / 17 00'	7.55 1.
WIDTH DEPLOYED / ~PACKED	6 1m / 19.7 3.3'	5.6 0.9m / 18.7 2.95'	6.3 0.9m / 20.7 2.95'	5.6 1
HEIGHT DEPLOYED / ~PACKED	2.15-3.4 0.9m / 7-11.22.95'	2.2-2.8 0.8m / 7.2-9.2 2.6'	2.4-3.15 0.8m / 7.9-10.3 2.6'	2.2-2.8 0.
AREA: DETACHABLE FIXED FLOOR	33sqm / 355sqft	29sqm / 312sqft	33sqm / 355sqft	42s
DOORS FULL-SPAN Zip Velcro Tie	2 -	2 -	2 -	2
WINDOWS Clear Mesh Opens	0-8 -	0-4 -	0-4 -	0-6
CONNECTABLE Stakes Guys Skirt	-	-	-	
PORTS Vent Power Water HVAC	12 0☐ 2 - 8	12 0☐ 2 - 8	12 0☐ 2 - 8	12 0
TRANSLUSCENT OPAQUE ROOF PRV	☐	☐	☐	
BRANDING HEATER LIGHTING PUMP	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐
OTHER COLOURS NOTES	Inc Repair kit/ hose/pegs/cord/ Valise. Elasticated ground stake eyes. *inc 4-7mins inflation	Inc Repair kit/ hose/pegs/cord/ Valise. Elasticated ground stake eyes. *inc 4-7mins inflation	Inc Repair kit/ hose/pegs/cord/ Valise. Elasticated ground stake eyes. *inc 4-7mins inflation	Inc Repair k Valise. Elastica *inc 4-
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	LANCO	LANCO	LANCO	L
MODEL VARIANT	Modular Inflatable Tent	Modular Inflatable Tent	Inflatable Tent Ext Frame	Inflatable
PRODUCT CODE	AZM8-4(3modules) AZM8-4(5)	AZM11-6 (3modules) AZM11-4(5)	INX29	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~20-35mins*	~25-45mins*	~12-20mins	
COST inc tax/VAT £$€=Currency conv.	~£35000 $44450 €40950	~£50000 $63500 €58500	~£18000 $22860 €21060	~£22000
WEIGHT - Shelter-Only	566kg / 1248lb	765kg / 1687lb	~180kg / 397lb	~22
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	700g/m²PVC-coated Polyester. Additional Internal alu frame	700g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. External alu frame	750g/m²PVC Extern
INTERNAL VOLUME / AIR in TUBES (L)	~430m³ / 15190CuFt	~630m³ / 22250CuFt	~90m³ / 3178CuFt	~130
LENGTH DEPLOYED / ~PACKED	7.7-12.5 2m / 25-41 6.6'	16.8-22.2 ?m / 55-73 ?'	4.83 1.2m / 16 3.9'	7.23 1
WIDTH DEPLOYED / ~PACKED	8.3 1.2m / 27.2 3.9'	11.2 ?m / 36.7 ?'	5.95 0.9m / 19.5 2.95'	5.95 1
HEIGHT DEPLOYED / ~PACKED	3.2-4.15 1.2m /10.4-13.6 3.9'	4.35-6 ?m / 14.3-20 ?'	2.2-2.8 0.8m / 7.2-9.2 2.6'	2.2-2.8 0.
AREA: DETACHABLE FIXED FLOOR	103.75sqm / 1117sqft	248.6sqm / 2676sqft	30sqm / 323sqft	45s
DOORS FULL-SPAN Zip Velcro Tie	2-3	2	1-2 -	1-2
WINDOWS Clear Mesh Opens	4-5 -	16 -	0-4 -	0-6
CONNECTABLE Stakes Guys Skirt	-	-	-	
PORTS Vent Power Water HVAC	30 8 4 - 8	30+ 0☐ 0☐ - 0☐	12 0☐ 2 - 8	12 0
TRANSLUSCENT OPAQUE ROOF PRV	☐	☐	☐	
BRANDING HEATER LIGHTING PUMP	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐
OTHER COLOURS NOTES	3 separate modules zipped together- min=two end sections minus middle *inc 8-12mins inflation	Inc Repair kit/hose,pegs/cord/Valise. Ext frame=3.05m high *inc 10-15mins inflation	Inc Repair kit/hose,pegs/cord/Valise. . Ext frame=3.05m high. *inc 5-7mins inflation	Inc Repair kit/ . Ext fra *inc 5-
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

LANCO	LANCO	LANCO	LANCO	LANCO
recting Tent	Self Erecting Tent	Self Erecting Tent	Self Erecting Tent	Self Erecting Tent
AZF42	AZF-48	AZF56	AZF-63	AZF-76
~12-18mins*	~12-18mins*	~15-20mins*	~15-22mins*	~18-25mins*
) $19685 €18135	~£17000 $21590 €19890	~£18500 $23495 €21645	~£20000 $25400 €23400	~£24000 $30480 €28080
0kg / 397lb	229kg / 505lb	234kg / 516lb	~260kg / 573lb	~300kg / 661lb
C-coated Polyester. Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame	750g/m²PVC-coated Polyester. Additional Internal alu frame
m³ / 4167CuFt	~140m³ / 4944CuFt	~157m³/ 5542CuFt	~195m³ / 6886CuFt	~240m³ / 8476CuFt
4m / 24.8 4.6'	7.55 1.5m / 00 4.9'	9.95 1.6m / 33 5.25'	9.95 1.7m / 33 5.6'	12 1.8m / 40 5.9'
m / 18.4 3.3'	6.3 1.1m / 20.7 3.6'	5.6 1.1m / 18.4 3.6'	6.3 1.2m / 20.7 4'	6.3 1.3m / 20.7 4.3'
9m / 7.2-9.2 2.95'	2.4-3.15 0.9m / 7.9-10.3 2.95'	2.2-2.8 0.95m / 7.2-9.2 3'	2.4-3.15 1m / 7.9-10.3 3.3'	2.4-3.15 1.1m / 7.9-10.3 3.6'
qm / 452sqft	48sqm / 516sqft	56sqm / 602sqft	63sqm / 678sqft	76sqm / 818sqft
-	2 -	2 -	2 -	2 -
-	0-6 -	0-8 -	0-8 -	0-8 -
-	-	-	-	-
2 - 8	12 0 2 - 8	12 0 2 - 8	12 0 2 - 8	12 0 2 - 8
kit/ hose/pegs/cord/ ted ground stake eyes. 7mins inflation	Inc Repair kit/ hose/pegs/cord/ Valise. Elasticated ground stake eyes. *inc 4-7mins inflation	Inc Repair kit/ hose/pegs/cord/ Valise. Elasticated ground stake eyes. *inc 4-7mins inflation	Inc Repair kit/ hose/pegs/cord/ Valise. Elasticated ground stake eyes. *inc 4-7mins inflation	Inc Repair kit/ hose/pegs/cord/ Valise. Elasticated ground stake eyes. *inc 4-7mins inflation
lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com

LANCO	LANCO
Tent Ext Frame	Inflatable Tent Ext Frame
INX42	INX56
~15-25mins	~18-30mins
) $27940 €25740	~£26000 $33020 €30420
20kg / 485lb	~260kg / 573lb
C-coated Polyester. nal alu frame	750g/m²PVC-coated Polyester. External alu frame
m³/ 4591CuFt	~175m³/ 6180CuFt
.4m / 24 4.6'	9.63 1.6m /32 5.25'
m / 19.5 3.3'	5.95 1.1m / 19.5 3.6'
9m / 7.2-9.2 2.6'	2.2-2.8 1m / 7.2-9.2 3.3'
qm / 484sqft	59sqm / 635sqft
-	1-2 -
-	0-8 -
-	-
2 - 8	12 0 2 - 8
hose,pegs/cord/Valise. me=3.05m high. 7mins inflation	Inc Repair kit/hose,pegs/cord/Valise. . Ext frame=3.05m high. *inc 5-7mins inflation
lanco-usa.com	lanco.eu lanco-usa.com

LANCO

TentTech · DeconTech · FlexTank

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	LANCO/ROFI	LANCO/ROFI	LANCO/ROFI	LAN
MODEL VARIANT	ROFI Rapid	ROFI Rapid	ROFI Rapid	RO
PRODUCT CODE	504	506	508	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~8-15mins*	~10-18mins*	~12-20mins*	
COST inc tax/VAT £$€=Currency conv.	~£9500 $12065 €11115	~£12500 $15875 €14625	~£15000 $19050 €17550	~£16500
WEIGHT - Shelter-Only	~158kg / 348lb	~195kg / 430lb	~225kg / 496lb	~26
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	Mil-spec PVC-coated polyester	Mil-spec PVC-coated polyester	Mil-spec PVC-coated polyester	Mil-spe p
INTERNAL VOLUME / AIR in TUBES (L)	~60m³/ 2119CuFt	~90m³ / 3178CuFt	~120m³ / 4238CuFt	~115r
LENGTH DEPLOYED / ~PACKED	5 1.1m / 16.4 3.6'	6 1.2m / 19.7 3.95'	8 1.3m / 26.2 4.3'	6 1.4
WIDTH DEPLOYED / ~PACKED	4 1m / 13.1 3.3'	5 1m / 16.4 3.3'	5 1m / 16.4 3.3'	6 1m
HEIGHT DEPLOYED / ~PACKED	3 0.7m / 9.8 2.3'	3 0.8m / 9.8 2.6'	3 1m / 9.8 3.3'	3.2 1
AREA: DETACHABLEFIXED FLOOR	20sqm / 215sqft	30sqm / 323sqft	40sqm / 431sqft	36sq
DOORS FULL-SPAN Zip Velcro Tie	0-4	0-6	0-8	0-6
WINDOWS Clear Mesh Opens	0-4 -	0-6	0-8	0-6
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	2-6 1-2 2 - 2-4	6-8 2 2 - 2-4	6-10 2 2-4 - 2-4	6-8 2
TRANSLUSCENT OPAQUE ROOF PRV	-			
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise. *inc 3-5mins inflation	Includes Repair kit, delivery hose,pegs/cord and Valise. *inc 3-5mins inflation	Includes Repair kit, delivery hose,pegs/cord and Valise. *inc 4-6mins inflation	Inc Repair kit/ Lift & *inc 4-
WEBSITE	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL
MODEL VARIANT	INFLATABLE SHELTER 16	Inflatable Shelter 20	Inflatable Shelter 25
PRODUCT CODE	SHW/16/001	SHW/20/001	SHW/25/001
ORIGIN			
CONSTRUCTION TIME-to-ERECT	~8-15mins*	~8-15mins*	~10-18mins*
COST inc tax/VAT £$€=Currency conv.	~£3200 $4065 €3745	~£3800 $4830 €4450	~£4800 $6100 €5620
WEIGHT - Shelter-Only	58kg / 128lb	68kg / 150lb	78kg / 172lb
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU
INTERNAL VOLUME / AIR in TUBES (L)	~40m³ / 1412CuFt	~49m³ / 1730CuFt	66m³ / 2331CuFt
LENGTH DEPLOYED / ~PACKED	4 1.3m / 13.1 4.3'	5 1.3m / 16.4 4.3'	5 1.2m / 16.4 3.95'
WIDTH DEPLOYED / ~PACKED	4 0.66m / 13.1 2.2'	4 0.66m / 13.1 2.2'	5 0.66m / 16.4 2.2'
HEIGHT DEPLOYED / ~PACKED	3.53 0.5m / 11.5 1.7'	3.53 0.5m / 11.5 1.7'	2.9 0.5m / 9.5 1.7'
AREA: DETACHABLEFIXED FLOOR	14.12sqm / 152sqft	17.65sqm / 189sqft	22.65sqm / 244sqft
DOORS FULL-SPAN Zip Velcro Tie	2x 1.2m	2x 1.2m	2x 1.2m
WINDOWS Clear Mesh Opens	1-2	2	2
CONNECTABLE Stakes Guys Skirt			
PORTS Vent Power Water HVAC	3 0 2 0 1	3 0 2 0 1	3 0 2 0 1
TRANSLUSCENT OPAQUE ROOF PRV			
BRANDING HEATER LIGHTING PUMP			
OTHER COLOURS NOTES	[FR=] Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation	FR=] Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation	[FR=] Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com

NCO/ROFI	LANCO/ROFI	LANCO/ROFI	MFC INTERNATIONAL	MFC INTERNATIONAL
FI Rapid	ROFI Rapid	ROFI Rapid	INFLATABLE SHELTER 9	INFLATABLE SHELTER 12
606	608	610	SHW/09/001	SHW/12/001
~12-22mins*	~15-25mins*	~18-30mins*	~5-10mins*	~6-12mins*
$20995 €19305	~£19000 $24130 €22230	~£22000 $27940 €25740	~£1800 $2290 €2110	~£2400 $3050 €2810
0kg / 573lb	~305kg / 6720lb	~350kg / 772lb	36kg / 79lb	46kg / 100lb
ec PVC-coated olyester	Mil-spec PVC-coated polyester	Mil-spec PVC-coated polyester	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU
m³ / 4061CuFt	~155m³ / 5474CuFt	~195m³ / 6886CuFt	~21m³ / 00CuFt	~28m³ / 989CuFt
m /19.7 4.6'	8 1.5m / 26.2 4.9'	10 1.6m / 32.8 5.25'	3 1.2m / 9.8 3.95'	4 1.2m / 13.1 3.95'
/ 19.7 3.3'	6 1.1m / 19.7 3.6'	6 1.2m / 19.7 3.95'	3 0.66m / 9.8 2.2'	3 0.66m / 10 2.2'
m / 10.5 3.3'	3.2 1m / 10.5 3.3'	3.2 1m / 10.5 3.3'	2.63 0.41m / 8.6 1.35'	2.63 0.41m / 8.6 1.35'
qm / 388sqft	48sqm / 517sqft	60sqm / 646sqft	7.9sqm / 85sqft	10.6sqm / 114sqft
	0-8	0-10	1x 1.2m	1x 1.2m
	0-8	0-10	0-2	0-2
2 - 2-4	6-10 2 2-4 - 4	8-14 2-4 2-4 - 4-6	3 0 2 0 1	3 0 2 0 1
hose,pegs/cord/Valise. shift handles. -6mins inflation	Inc Repair kit/hose,pegs/cord/Valise. Lift & shift handles. *inc 4-7mins inflation	Inc Repair kit/hose,pegs/cord/Valise. Lift & shift handles. *inc 5-8mins inflation	[FR=] Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation	FR=] Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation
lanco-usa.com	lanco.eu lanco-usa.com	lanco.eu lanco-usa.com	mfc-international.com	mfc-international.com

MFC International
by RESPIREX
HELPING YOU DELIVER RESCUE UNDER PRESSURE

Inflatable Shelters

- Quick and easy to deploy
- Welded and taped frame & canopy for leak-tightness
- Easily join multiple shelters together
- Heater & cabling sleeves included
- Includes opening windows with blinds
- Attachment points for lighting and ballast included
- Wide range of sizes and colour options
- Fully customisable

mfc-international.com

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	MFC INTERNATIONAL	MFC INTERNATIONAL	MFC INTERNATIONAL	
MODEL VARIANT	Inflatable Shelter 30	Inflatable Shelter 36	Inflatable Shelter 51	
PRODUCT CODE	SHW/30/001	SHW/36/001	SHW/51/001	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~12-20mins*	~12-22mins*	~15-25mins*	
COST inc tax/VAT £$€=Currency conv.	~£5800 $7370 €6790	~£7200 $9145 €8425	~£9500 $12065 €11115	£0
WEIGHT - Shelter-Only	88kg / 194lb	105kg / 231lb	125kg / 276lb	0
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	
INTERNAL VOLUME / AIR in TUBES (L)	~79m³ / 2790CuFt	_~98m³ / 3460CuFt	~140m³ / 4950CuFt	00m³ 0
LENGTH DEPLOYED / ~PACKED	6 1.2m / 19.7 3.9'	6 1.3m / 19.7 4.3'	8.5 1.2m / 27.9 3.9'	4 00
WIDTH DEPLOYED / ~PACKED	5 0.66m / 16.4 2.2'	5 0.66m / 16.4 2.2'	5 0.66m / 16.4 2.2'	4 00
HEIGHT DEPLOYED / ~PACKED	2.9 0.41m / 9.5 1.3'	3.1 0.5m / 10.1 1.6'	3.1 0.5m / 10.1 1.6'	00 0
AREA: DETACHABLEFIXED FLOOR	27.2sqm / 293sqft	32.04sqm / 344sqft	45.39sqm / 489sqft	00s
DOORS FULL-SPAN Zip Velcro Tie	2x 1.2m	2x 1.2m	2x 1.2m	2x
WINDOWS Clear Mesh Opens	4	4	4	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	3 0 2 0 1	3 0 2 0 1	3 0 2 0 1	0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	FR= Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation	FR= Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation	FR= Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation	Includes F hose,peg
WEBSITE	mfc-international.com	mfc-international.com	mfc-international.com	nixus2

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	Quick	Quick	Quick	
PRODUCT CODE	NX-QM4040	NX-QM4060	NX-QM4080	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax/VAT £$€=Currency conv.	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	00kg / 00lb	00kg / 00lb	00kg / 00lb	0
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	?/?	?/?	?/?	
INTERNAL VOLUME / AIR in TUBES (L)	-	-	-	00r
LENGTH DEPLOYED / ~PACKED	4 00m / 13.1 00'	4 00m / 13.1 00'	4 00m / 13.1 00'	5.6 0
WIDTH DEPLOYED / ~PACKED	4 00m / 13.1 00'	6 00m / 19.7 00'	8 00m / 00 00'	4 00
HEIGHT DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
AREA: DETACHABLEFIXED FLOOR	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00
DOORS FULL-SPAN Zip Velcro Tie	0	0	0	0
WINDOWS Clear Mesh Opens	0	0	0	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes F hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
Lite	Lite	Quick	Quick	Quick
-LITE-40-40	NX-LITE-50-50	NX-QM3030	NX-QM3045	NX-QM3060
00mins	00mins	00mins	00mins	00mins
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
?/?	?/?	?/?	?/?	?/?
0L / 00 00CuFt	00m³ 00L / 00 00CuFt	-	-	-
m / 13.1 00'	5 00m / 16.4 00'	3 00m / 9.8 00'	3 00m / 9.8 00'	3 00m / 9.8 00'
m / 13.1 00'	5 00m / 16.4 00'	3 00m / 9.8 00'	4.5 00m / 00 00'	6 00m / 19.7 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 00sqft	00sqm / 00sqft	00sqm / 00sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0 - - - -	0 - - - -	0 - - - -	0 - - - -	0 - - - -
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
PGK	PGK	PGK	PGK	PGK
-PGK-56-40	NX-PGK-56-63	NX-PGK-56-76	NX-PGK-56-100	NX-PGK-60-40
~00mins*	~00mins*s	~00mins*	~00mins*	~00mins*
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
?/?	Polyester500D PU-Coated or1000D PVC-coated	?/?	?/?	?/?
m³ / 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt
0m / 18.4 00'	5.6 00m / 18.4 00'	5.6 00m / 18.4 00'	5.6 00m / 18.4 00'	6 00m / 19.7 00'
m / 13.1 00'	6.3 00m / 00 00'	7.6 00m / 00 00'	10 00m / 32.8 00'	4 00m / 13.1 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	1+	0
	0	0	0	0
0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	PGK	PGK	PGK	
PRODUCT CODE	NX-PGK-60-63	NX-PGK-60-76	NX-PGK-60-100	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~00mins*	~00mins*	~00mins*	
COST inc tax/VAT £$€=Currency conv.	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	00kg / 00lb	00kg / 00lb	00kg / 00lb	0
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	?/? ?	?/? ?	?/? ?	
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 0
LENGTH DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
WIDTH DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
HEIGHT DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
AREA: DETACHABLE FIXED FLOOR	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00
DOORS FULL-SPAN Zip Velcro Tie	0	0	0	0
WINDOWS Clear Mesh Opens	0	0	0	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes R hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	Pro	Pro	Pro	
PRODUCT CODE	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	00mins	00mins	00mins	
COST inc tax/VAT £$€=Currency conv.	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	00kg / 00lb	00kg / 00lb	00kg / 00lb	0
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	?/? ?	?/? ?	?/? ?	
INTERNAL VOLUME / AIR in TUBES (L)	-	-	-	
LENGTH DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
WIDTH DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
HEIGHT DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
AREA: DETACHABLE FIXED FLOOR	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00
DOORS FULL-SPAN Zip Velcro Tie	0	0	0	0
WINDOWS Clear Mesh Opens	0	0	0	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes R hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
Pro	Pro	Pro	Pro	Pro
-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24
~00mins*s	~00mins*	00mins	00mins	00mins
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
?/?	?/?	?/?	?/?	?/?
0L / 00 00CuFt	00m³ 00L / 00 00CuFt	-	-	-
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com		

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
Pro	Pro	Pro	Pro	Pro
-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24	NX-PRO-35-24
00mins	00mins	00mins	~00mins*	~00mins*
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
?/?	?/?	?/?	?/?	?/?
-	-	-	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	ERA/L	ERA/L	ERA/L	
PRODUCT CODE	NX-ERA-35-24	NX-ERA-40-43	NX-ERA-40-64	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~00mins*	~00mins*	~00mins*	
COST inc tax/VAT £$€=Currency conv.	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	00kg / 00lb	00kg / 00lb	00kg / 00lb	0
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coat 480 g
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 0
LENGTH DEPLOYED / ~PACKED	2.4 00m / 11.6 00'	4.3 00m / 00 00'	6.4 00m / 00 00'	4 0
WIDTH DEPLOYED / ~PACKED	3.5 00m / 11.6 00'	4 00m / 00 00'	4 00m / 00 00'	5 0
HEIGHT DEPLOYED / ~PACKED	2.5 00m / 00 00'	2.7 00m / 00 00'	2.9 00m / 00 00'	2.9
AREA: DETACHABLE FIXED FLOOR	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00
DOORS FULL-SPAN Zip Velcro Tie	0	0	0	0
WINDOWS Clear Mesh Opens	0	0	0	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes R hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	NIXUS	NIXUS	NIXUS	
MODEL VARIANT	ERA/L	ERA/L	ERA/L	
PRODUCT CODE	NX-ERA-55-50-RB	NX-ERA-55-60	NX-ERA-55-75-RB	NX
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~00mins*	~00mins*	~00mins*	
COST inc tax/VAT £$€=Currency conv.	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	00kg / 00lb	00kg / 00lb	00kg / 00lb	0
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 0
LENGTH DEPLOYED / ~PACKED	5 00m / 00 00'	6 00m / 00 00'	7.5 00m / 00 00'	80 0
WIDTH DEPLOYED / ~PACKED	5.5 00m / 00 00'	5.5 00m / 00 00'	5.5 00m / 00 00'	5.5 0
HEIGHT DEPLOYED / ~PACKED	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 0
AREA: DETACHABLE FIXED FLOOR	3.1sqm / 0sqft	3.1sqm / 00sqft	3.1sqm / 00sqft	3.3
DOORS FULL-SPAN Zip Velcro Tie	0	0	0	0
WINDOWS Clear Mesh Opens	0	0	0	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes R hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
ERA/L	ERA/L	ERA/L	ERA/L	ERA/L
-ERA-50-40	NX-ERA-50-50	NX-ERA-50-60-RB	NX-ERA-50-75-RB	NX-ERA-55-40
~00mins*	~00mins*	~00mins*	~00mins*	~00mins*
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
ed 650 450or250 m² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester
0L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt
0m / 00 00'	5 00m / 00 00'	6 00m / 00 00'	7.5 00m / 00 00'	4 00m / 00 00'
0m / 00 00'	5 00m / 00 00'	5 00m / 00 00'	5 00m / 00 00'	5.5 00m / 00 00'
00m / 00 00'	2.9 00m / 00 00'	2.9 00m / 00 00'	3.1 00m / 00 00'	3.1 00m / 00 00'
sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft	00sqm / 0sqft
	0	0	0	0
	0	0	0	0
0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

NIXUS	NIXUS	NIXUS	NIXUS	NIXUS
ERA/L	ERA/L	ERA/L	ERA/L	ERA/L
-ERA-55-80	NX-ERA-60-40	NX-ERA-60-50-RB	NX-ERA-60-60	NX-ERA-60-75-RB
~00mins*	~00mins*	~00mins*	~00mins*	~00mins*
00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00	£00 $00 €00
0kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb	00kg / 00lb
??	??	??	??	??
0L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt
0m / 00 00'	4 00m / 00 00'	5 00m / 00 00'	6 00m / 00 00'	7.5 00m / 00 00'
00m / 00 00'	6 00m / 00 00'	6 00m / 00 00'	6 00m / 00 00'	6 00m / 00 00'
0m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'	00 00m / 00 00'
sqm / 00sqft	3.3sqm / 00sqft	3.3sqm / 00sqft	3.3sqm / 00sqft	3.3sqm / 00sqft
	0	0	0	0
0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com	nixus2protect.com

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

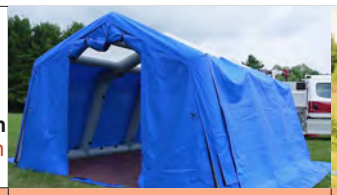
COMPANY	NIXUS	NIXUS	OO	
MODEL VARIANT	ERA/L	ERA/L	OO	
PRODUCT CODE	NX-ERA-60-80	NX-ERA-60-100 -RB	00	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	~00mins*	~00mins*	00mins	
COST inc tax/VAT £$€=Currency conv.	£00 $00 €00	£00 $00 €00	£00 $00 €00	£0
WEIGHT - Shelter-Only	00kg / 00lb	00kg / 00lb	00kg / 00lb	0
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	PVC-coated 650 450or250 480 gm² Polyester	PVC-coated 650 450or250 480 gm² Polyester	?/? ?	
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 00L / 00 00CuFt	00m³ 0
LENGTH DEPLOYED / ~PACKED	8 00m / 00 00'	10 00m / 00 00'	00 00m / 00 00'	00 0
WIDTH DEPLOYED / ~PACKED	6 00m / 00 00'	6 00m / 00 00'	00 00m / 00 00'	00 0
HEIGHT DEPLOYED / ~PACKED	3.4 00m / 00 00'	3.4 00m / 00 00'	00 00m / 00 00'	00 0
AREA: DETACHABLEFIXED FLOOR	00sqm / 00sqft	00sqm / 00sqft	8sqm / 0sqft	8s
DOORS FULL-SPAN Zip Velcro Tie	0	0	0	0
WINDOWS Clear Mesh Opens	0	0	0	0
CONNECTABLE Stakes Guys Skirt				
PORTS Vent Power Water HVAC	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP				
OTHER COLOURS NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes R hose,peg
WEBSITE	nixus2protect.com	nixus2protect.com	OO.com	

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	RIGLOO	RIGLOO	RIGLOO	SA
MODEL VARIANT	Rescuer	Defender	Refuge	Safes
PRODUCT CODE	rig-res	rig-def	rig-ref	
ORIGIN				
CONSTRUCTION TIME-to-ERECT	2-6mins	2-6mins	<2-5mins	
COST inc tax/VAT £$€=Currency conv.	£1200 $2480 €2145	£1620 $2685 €2320	£300 $400 €355	£900
WEIGHT - Shelter-Only	7kg / 15.4lb	7-9kg /15.4-19.8lb	4kg / 8.8lb	5.75
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	Polyester &Nylon Ripstop® 68D 210T - 8000mm	Polyester &Nylon Ripstop® 68D 210T - 8000mm	Polyester & Nylon 80g 210T ? - 8000mm	66D 210T TPU+150 600D Ox -
INTERNAL VOLUME / AIR in TUBES (L)	~5m³ / 177CuFt	~5m³ / 177CuFt	~3m³ / 106CuFt	~4m
LENGTH DEPLOYED / ~PACKED	2.6 0.6m / 8.5 2'	2.6 0.6m / 8.5 2'	1.8 0.4m / 5.9 1.3'	2.1 0.
WIDTH DEPLOYED / ~PACKED	1.6 0.3m / 5.25 1'	1.6 0.3m / 5.25 1'	1.2 0.3m / 3.9 1'	1.1 0
HEIGHT DEPLOYED / ~PACKED	1.2 0.2m / 3.9 0.7'	1.2 0.2m / 3.9 0.7'	1.2 0.2m / 3.9 0.7'	1.2 0.
AREA: DETACHABLEFIXED FLOOR	4sqm / 43sqft	4sqm / 43sqft	2sqm /21.5sqft	2sq
DOORS FULL-SPAN Zip Velcro Tie	1	1	2	6
WINDOWS Clear Mesh Opens	6 * -	6 * -	6 - -	4
CONNECTABLE Stakes Guys Skirt	-	-	- -	-
PORTS Vent Power Water HVAC	0 - - - -	0 - - - -	0 - - - -	0
TRANSLUSCENT OPAQUE ROOF PRV	-	-	-	
BRANDING HEATER LIGHTING PUMP	- -	- -	- -	
OTHER COLOURS NOTES	Inc Repair kit, ,pegs/cord stirrup-pump. rucksack. Diagrams on skirt. *Mesh door (not window)	Inc Repair kit, ,pegs/cord stirrup-pump. rucksack. Diagrams on skirt. *Mesh door (not window)	Includes Repair kit, ,pegs/cord stirrup-pump, Glo-Sticks & rucksack.	Includes Re stirrup-p *inc 15 s *inc 3-
WEBSITE	rigloo-rs.com	rigloo-rs.com	rigloo-rs.com	saf

OO	PRO-SAFE	PRO-SAFE	PRO-SAFE	PRO-SAFE
OO	Shelter	Shelter	Shelter	Shelter
00	NH402	NH335	NH336	NH338
00mins	~00mins*	~00mins*	~00mins*	~20-40mins*
00 $00 €00	~£3500 $4445 €4100	~£7500 $9525 €00	~£10000 $12700 €11700	~£25000 $31750 €29250
0kg / 00lb	45kg / 99lb	83.2kg / 183lb	165kg / 363lb	316kg / 696lb
?/?	PVC	PVC	PVC	PVC
0L / 00 00CuFt	~19m³ / 671CuFt	~65m³ / 2296CuFt	~100m³ / 3531CuFt	~230m³ / 8122CuFt
0m / 00 00'	3.7 1.1m / 12 3.6'	5 1.3m / 16.4 4.3'	6 00m / 20 4.6'	12.8 1.7m / 42 5'
0m / 00 00'	2.1 0.7m / 7 3.2'	5 1m / 16.4 3.3'	6 00m / 20 4.25'	6 1.5m / 22 4.9'
0m / 00 00'	2.4 0.5m / 8 1.7'	2.6 0.66m / 8.5 2.2'	2.8 00m / 9.2 2.8'	3 1.15m / 10 3.8'
qm / 0sqft	~7.8sqm / 84sqft	~25sqm / 269sqft	~36sqm / 388sqft	~<80sqm /860sqft
	2	1-2	1-4	2-4
	4	4	0-8	0-12
0 0 0	1-2 0 0 0 1-2	2-6 2 0 0 2-4	2-6 2 0 0 2-4	11-18 4-6 3-5 0 4-6
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise. *inc 1-3mins inflation	240/110v powered blower or air cylinder required. Inc Repair kit, delivery hose,pegs/cord and Valise. *inc 2-4mins inflation	240/110v powered blower or air cylinder required. Inc Repair kit, delivery hose,pegs/cord and Valise. *inc 2-4mins inflation	240/110v powered blower or air cylinder required. Inc Repair kit/ hose,pegs/cord/Valise. *inc 5-8mins inflation
OO.com	OO.com	OO.com	OO.com	OO.com
AFESHEL	SHELTER STRUCTURES	SHELTER STRUCTURES	SHELTER STRUCTURES	SHELTER STRUCTURES
shel Shelter	Triage Tent 8	Triage Tent 16	FR30	FR45
SAF-01	SS-T08	SS-T16	SS-FR30	SS-FR45
1-3min*	~5-10mins*	~8-15mins*	~12-20mins*	~15-25mins*
$1145 €1055	~£1800 $2290 €2110	~£3500 $4445 €4100	~£6000 $7620 €7020	~£8500 $10795 €9945
kg / 12.65lb	35kg / 77lb	58kg / 128lb	88kg / 194lb	120kg / 265lb
PE silvered Ripstop D Oxford/140g PE d+80g fabric/foil 8000mm	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU	210D HT Nylon. Welded/Taped PU
³ / 141CuFt	~21m³/ 741CuFt	~40m³ / 1412CuFt	~79m³ / 2790CuFt	~135m³ / 4768CuFt
5m / 6.9 1.6'	31.1m / 9.8 00'	4 1.3m / 13.1 4.3'	6 1.4m / 20 4.6'	8 1.6m / 26.2 5.25'
.3m / 3.6 1'	2.8 00m / 9.2 00'	4 0.66m / 13.1 2.2'	5 0.8m / 16 2.6'	5.5 0.8m / 18 2.6'
2m / 3.9 0.7'	2.6 00m / 00 00'	2.8 0.5m / 9.2 1.7'	2.8 0.66m / 9.2 2.2'	3.1 0.66m / 10.20 2.2'
m / 21.5sqft	8sqm / 8.5sqft	16sqm / 172sqft	30sqm / 320sqft	45sqm /484sqft
- -	1x 1.2m	2x 1.2m	1-2	1-4
- -	0-2	1-2	4-6	6
-	-	-	-	-
0 - - - -	0-3 0 2 - 1	2-8 0 2-4 - 2-4	2-10 0 2-6 - 2-4	2-12 0 2-6 - 2-6
-				
- -				
epair kit, ,pegs/cord ump, & rucksack. econds inflation ! 5mins inflation	Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 2-4mins inflation	Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 3-5mins inflation	Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 4-6mins inflation	Inc Repair kit/hose,pegs/cord/Valise. optional ballast bags. *inc 5-8mins inflation
feshel.com	shelterstructuresamerica.com	shelterstructuresamerica.com	shelterstructuresamerica.com	shelterstructuresamerica.com

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space



COMPANY	TULMAR SAFETY SYSTEMS	TULMAR SAFETY SYSTEMS	VETTER	V
MODEL VARIANT	Tulmar Shelter 1	Tulmar Shelter 2	Universal Tent PZ12	Univer
PRODUCT CODE	9508	9509	1520009202	15
ORIGIN				
CONSTRUCTION TIME-to-ERECT	<5mins	<5mins	1-2min*	
COST inc tax/VAT £$€=Currency conv.	£00 $13852 €00	£00 $16490 €00	~£12000 $15000 €14000	~£14000
WEIGHT - Shelter-Only	102kg / 225lb	168kg / 370lb	55kg / 121lb	65
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	Coated PVC	Coated PVC	Double side PU Coating on HT Polyester	Double si HT
INTERNAL VOLUME / AIR in TUBES (L)	00m³ 00L/ 88CuFt	00m³ 00L/ 113CuFt	31.1m³ 1632L/1098 57.6CuFt	39m³2025
LENGTH DEPLOYED / ~PACKED	3.7 1.35m / 12 2'	6.1 1.52m / 20 5'	3.7 1.1m / 11.8 0.43'	4.9 1
WIDTH DEPLOYED / ~PACKED	4.6 0.61m / 15 2'	4.6 0.71m / 15 2.'	3.36 0.85m / 12.4 2.8'	3.86 0
HEIGHT DEPLOYED / ~PACKED	00 0.61m / 8.1 00'	00 0.71m / 9.7 0.71'	2.58 0.4m / 8.3 0.16'	2.48
AREA: DETACHABLEFIXED FLOOR	17sqm / 180sqft ☐	27.5sqm / 300sqft ☐	12sqm / 00sqft	18s
DOORS FULL-SPAN Zip Velcro Tie	2 +	2+	1+	1+
WINDOWS Clear Mesh Opens	0 ☐ ☐ ☐	0	2	2-4
CONNECTABLE Stakes Guys Skirt	*	*	-	
PORTS Vent Power Water HVAC	3 0☐ 1 1 1	3 0☐ 1 1 1	0 0☐ 0☐ - 0☐	0 0
TRANSLUSCENT OPAQUE ROOF PRV			☐	
BRANDING HEATER LIGHTING PUMP	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐
OTHER COLOURS				
NOTES	Inc Repair kit, delivery hose,and Valise. Removable side walls . *Skirt = water ballast tubes	Inc Repair kit, delivery hose,and Valise. Removable side walls . *Skirt = water ballast tubes	Inc Repair kit/delivery hose,pegs/ cord/Valise. Optional ballast bags. *inc <1mins inflation	Inc Repair ki cord/Valise. (*inc >
WEBSITE	tulmar.com	tulmar.com	vetter.de	v

IMAGES NOT TO SCALE. Construction:
PNEUMATIC/PUMP- INFLATE & FORGET
POWERED FAN -CONTINUAL INFLATION
MANUAL - POP-UP FRAME
~ = approx ☐☐☐☐ =Option
~COST inc VAT £$€=Currency Conversion
AREA in *ITALICS* = internal floor space

COMPANY	VETTER	VETTER	VETTER	V
MODEL VARIANT	Medical Tent MT20	Medical Tent MT30	Medical Tent MT40	Medic
PRODUCT CODE	1521009202	1521009302	1521009402	15
ORIGIN				
CONSTRUCTION TIME-to-ERECT	≥2min	≥3min	≥4mins	
COST inc tax/VAT £$€=Currency conv.	~£25000 $31000 €25000	~£35000 $44000 €31000	~£50000 $63000 €58000	~£65000
WEIGHT - Shelter-Only	74.5kg / 00lb	107.5kg / 00lb	156.5kg / 00lb	35
MATERIALS - ROOF/ WALLS FLOOR (if different) FIRE-RESISTANT WATERPROOF	Double side PU Coating on HT Polyester	Double side PU Coating on HT Polyester	Double side PU Coating on HT Polyester	Double si HT
INTERNAL VOLUME / AIR in TUBES	60m³ 3500L/ 2119 123.6CuFt	89m³ 4800L/ 3143 169.5CuFt	118m³ 6200L/ 4167 218.9CuFt	~133m³ 70
LENGTH DEPLOYED / ~PACKED	3.7 1.6m / 12 9.5'	5.5 1.8m / 18 0.45'	7.3 2m / 24 6.6'	8.2 2
WIDTH DEPLOYED / ~PACKED	5.88 1.1m / 19.3 3.6'	5.88 1.2m / 19.3 3.9'	5.88 1.3m / 19.3 4.3'	5.6 1.
HEIGHT DEPLOYED / ~PACKED	3.3 1m / 10.8 3.3'	3.3 1.1m / 10.8 3.6'	3.3 1.2m / 10.8 3.9'	3.3 1.
AREA: DETACHABLEFIXED FLOOR	20sqm / 215sqft	30sqm / 323sqft	40sqm / 431sqft	45s
DOORS FULL-SPAN Zip Velcro Tie	2+	2-4	2-4	2-6
WINDOWS Clear Mesh Opens	5 -	4 -	6 -	0
CONNECTABLE Stakes Guys Skirt	-	-	-	
PORTS Vent Power Water HVAC	4 0☐ 0☐ - 4	4 0☐ 0☐ - 0	4 0☐ 0☐ - 0	0 0
TRANSLUSCENT OPAQUE ROOF PRV				
BRANDING HEATER LIGHTING PUMP	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐
OTHER COLOURS				
NOTES	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.	Includes R hose,peg
WEBSITE	vetter.de	vetter.de	vetter.de	v

VETTER	VETTER	VETTER	VETTER	VETTER
sal Tent PZ17	Universal Tent PZ20	Universal Tent PZ25	Universal Tent PZ30	Universal Tent PZ40
520009302	1520009402	1520009502	1520009602	1520010702
2-3min*	2-4min*	3-5mins*	4-6mins*	5-8mins*
$18000 €16000	~£16000 $20000 €18000	~£18000 $23000 €21000	~£20000 $26000 €23000	~£25000 $32000 €29000
5kg / 143lb	75kg / 165lb	85kg / 187lb	104kg / 229lb	117kg / 258lb
de PU Coating on Polyester	Double side PU Coating on HT Polyester	Double side PU Coating on HT Polyester	Double side PU Coating on HT Polyester	Double side PU Coating on HT Polyester
5L/ 1377 71.5CuFt	46m³ 2331L/ 1625 82.3CuFt	60m³ 2568L/ 2119 90.7CuFt	89m³ 2866L/ 3143 101.2CuFt	119m³ 4058L/ 4203 143.3CuFt
.1m / 16 3.6'	5 1.1m / 16 3.6'	5 00m / 16 0.45'	6 1.1m / 19.2 0.46'	8 1.1m / 25.6 0.46'
.85m / 13 2.8'	4.36 0.85m / 14 2.8'	5.36 00m / 17.2 0.33'	5.5 0.85m / 17.6 0.33'	5.5 0.85m / 17.6 0.33'
3 0.6m / 8 2'	2.48 0.6m / 7.9 0.24'	2.58 00m / 8.3 0.24'	3.1 0.6m / 9.9 0.24'	3.1 0.85m / 9.9 0.33'
sqm / 00sqft	20sqm / 00sqft	25sqm / 00sqft	30sqm / 0sqft	40sqm / 0sqft
	1+	1+	1+	1+
	2-4	2-4	2-6	2-6
-	-	-	-	-
0 0 - 0	0 0 0 - 0	0 0 0 - 0	0 0 0 - 0	0 0 0 - 0
t/delivery hose,pegs/ Optional ballast bags. 1mins inflation	Inc Repair kit/delivery hose,pegs/ cord/Valise. Optional ballast bags. *inc 1-2mins inflation	Inc Repair kit/delivery hose,pegs/ cord/Valise. Optional ballast bags. *inc 2-3mins inflation	Inc Repair kit/delivery hose,pegs/ cord/Valise. Optional ballast bags. *inc 2-3mins inflation	Inc Repair kit/delivery hose,pegs/ cord/Valise. Optional ballast bags. *inc 3-4mins inflation
etter.de	vetter.de	vetter.de	vetter.de	vetter.de

VETTER	VETTER
al Tent MT45	Medical Tent MT60
521009502	1521009602
≥5mins	≥6mins
$85000 €75000	~£80000 $100000 €93000
0kg / 772lb	205kg / 00lb
de PU Coating on Polyester	Double side PU Coating on HT Polyester
00L/4697247.2CuFt	178m³ 95000L/6286 6286CuFt
.1m / 27 6.9'	11 2.3m / 36 00'
4m / 19.3 4.6'	5.88 1.5m / 19.3 4.9'
2m / 10.8 3.9'	3.3 1.3m / 10.8 4.3'
qm /484sqft	60sqm / 646sqft
	2-6
-	6 -
-	-
0 0 - 0	4 0 0 - 0
Repair kit, delivery s/cord and Valise.	Includes Repair kit, delivery hose,pegs/cord and Valise.
etter.de	vetter.de

Images NOT to [illegible] rescuemagazines.com

Pro/High Power BATTERIES

18 to 72 volt

Battery power is the new steam locomotive from James Watt's Rocket era - been around for a while but still changing the world as it evolves. We have limited this guide initially to a minimum of 18v because there are just too many 12v batteries to consider. So, while there are pro tools that run on 12v platforms (indeed we have hydraulic rescue tools running on the Makita 12v batteries) if there are no Hydraulic rescue tools or disc cutters using them we haven't included them and at the moment 18v is the minimum for pro tools while 12v are generally reserved for home/smallholding use.

DeWalt are a confusing brand because the US and Europeans use two different voltages and DeWalt keep changing their ranges - currently you could buy 5 different series of DeWalt batteries but there should only be three and the Europeans merge two of those series into one! The Europeans also give a different product code which, unlike the US, does not always reflect the Ah rating for the battery. The US sensibly uses a code to reflect the voltage and then the AH eg. DCB2015 is a 20volt 15Ah battery. We disappeared down a rabbit-hole with this one! There are four leading bespoke brands for batteries in our sectors: Holmatro, Lukas, Husqvarna and Stihl. These will all drive their own products but Husqvarna and Stihl have started to branch out and be used by other brands of equipment - the Skylotec Powered Ascender uses Husqvarna and the Edel Powered Ascender used the Stihl platform - we will see more of this. Two of the three key rescue hydraulics brands *Holmatro* and *Lukas* continue to service just their own products and in the case of the genius horseshoe-shaped *Holmatro* battery that's probably due to being limited to those hydraulic tools with a regulation barrel around which it can fit. The *Lukas* batteries could perhaps more easily be applied to new equipment but we may well see both of these companies adopt one of the off-the-shelf batteries for their ancillary products. *Weber* as the other major player in rescue hydraulics has already taken the leap and uses *Milwaukee M18* batteries which are a lot cheaper and a lot easier to get hold of.

BATTERY TECHNOLOGY

The game-changer in battery tools was the improvement in off-the-shelf Lithium ion batteries engineered for trade tools like saws and drills. *Ogura* were the first to cotton onto this over 30 years ago uti[illegible] we now see many too[illegible] particularly *Milwaukee*, because [illegible] readily available and service ma[illegible] cutting/spreading rescue gear - [illegible] impact drivers. *Holmatro* initiall[illegible] the *DeWalt* 24v platform but so[illegible] requirements of rescue gear in t[illegible] and withstanding water and dust ingress would benefit from a bespoke battery. Their unique, semi-circular wrap-around battery is engineered to streamline the tool as it sits around the barrel, and operate to the specific requirements of the motor. Along with *IDEX* (*Lukas*, *Hurst* and *Vetter*), *Holmatro* continued to work on their own batteries not only to streamline the tool profiles and enhance waterproofing but also because the batteries are high cost consumables that make the tools more profitable. The blue battery on the right is a salt-water resistant version of the two that *Lukas Hydraulik* have on their latest fully submersible tools and are the next stage on from the more ergonomic looking but slightly older white battery beneath.

Holmatro, Lukas and *Libervit* tools are not only waterproof, they can operate entirely underwater and even swap out batteries underwater on *Holmatro* and *Lukas/Hurst* tools. There are also clip-on waterproof

BATTERIES

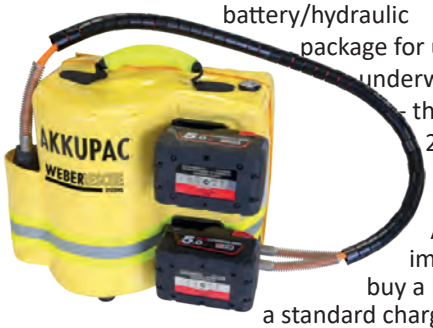
covers for some trade batteries like *Makita* and *Milwaukee* and *Weber Hydraulik* uses such a system on their Smart range to make them waterproof (see images below) but this is an adjunct, albeit a less expensive option, rather than integral waterproofing. Incidentally, before we get onto backpacks, Weber also has a hydraulic power unit for conventional hose-tools (right) which uses batteries instead of liquid fuel.

BACKPACKS

A brand that often goes under the radar outside of its native France is *Libervit* with a waterproof backpack housing one (or two) 48v batteries giving 45 (90) minutes of use. *Libervit* may even have been the first underwater battery powered rescue tool, they were certainly the first that we saw. The backpack concept pioneered by *Powerhawk* and continued by *Libervit* is now in evidence in many battery tools requiring prolonged runtimes when a battery change is awkward - *ResQtec, Husqvarna, Makita, Hitatchi* (now *Hikoki)*, *Stihl* and many more. Expect to see more being offered in rescue systems. Backpacks are a means to provide much improved duration and taking the weight off the tool in-hand and this is something we've been fans of since the start. *Powerhawk* first used this concept in the 90's though it was more out of necessity at that time because it used a 12v car battery, in fact any old car battery including the ones at the scene of an accident via long 'jump' leads so you would never be short of power supply options. This is still the case with the *Legacy P16* but their later models can also use this smaller bespoke battery. *Resqtec* and *Libervit* are so far the only two in our sector to go with a hardened backpack but *Makita* (above) also has them for rescue tools using that platform.

magazines.com

In fact they have two different types which highlight the way things might go - the integrated enlarged battery cell in a backpack as with the green *ResQtec* below and a multi-battery carrier in this case using batteries in series. *Libervit* tools were the first to really tackle underwater use but are NOT included here because they are not direct-attach batteries; they have a hydraulic/electric backpack which is a principle that ALL regular hydraulic tools could use and indeed many do. *Weber* for instance has the previously mentioned hydraulic backpack powered by M18 batteries (yellow pic below) but **all of the primarily hydraulic tools, even where powered by battery backpacks, are larger and heavier than their direct-connect battery counterparts**. *Libervit's B.A.S.* backpack battery (right) seems to have replaced their original hardened backpack and is now housed in a cordura pack. As a lead-connected backpack the BAS is fairly typical size-wise- perhaps wider than most because of the hydraulic pump element at 280x230x390 mm /11x9x15.5". They also have a large battery/hydraulic package for use underwater - their *M38* but it weighs 22kg/45lb.



CHARGERS

A much overlooked but vitally important consideration. If you buy a kit it will invariably come with a standard charger. In some cases they may provide a 'Rapid' charger which seems great until you realise that their base charger is a 'rapid'. For all other we would generally expect a standard charger and a rapid/quick charger and maybe a further enhancement as Milwaukee has with their 'Super' charger in addition to 'Rapid' and 'Standard' chargers. The difference in speed of charging is very roughly, twice as fast for a 'Rapid' versus a 'Standard' but don't forget that charge times increase as the Ah of your battery increases - a 3Ah may take 30minutes while an equivalent 6Ah would be 70mins. If you need fast turn-around a rapid charger is essential but some contest that fast charging lessens the life of your battery. Not sure that's true these days as much as it was back in the days of NiMH and lead acid!

The next consideration is the ability charge multiple batteries at the same time. Most manufactures have at least a twin battery option but some have considerably more either as a racked system secured to your vehicle or as a more portable option like this Milwaukee 6-bay charger. Finally a quick word about maintenance or rather, avoiding unnecessary downtime. *Hilti* (among a few)have this handy diagnostic device to gauge the capacity, cell health and electronics to ensure that all is functioning well or give you a heads-up that your battery is deteriorating and may need replacing or side lining from critical tasks.

IN THE FOLLOWING TABLES

We have included the all-important consideration (if cost is a consideration) of what other tool classes your battery will operate:

FITS TOOLS FOR.....

We have given a generic idea of what types of tools this particular battery will fit because cross-platform capability can be such a key consideration for smaller services/departments/agencies:

= **OPE** - Outdoor Power Equipment - for rescuers the key consideration here are chainsaws and blowers

= **Trade Tools** - Can be any number of over 200 tools in the case of Milwaukee, DeWalt and Makita etc but it really refers to hand tools like hand drills, impact drill and hammer drills used in vehicle extrication and/or building collapse etc.

=**Lighting** - A specifically useful item for your battery platform to power - may be anything from a hand torch to area lighting.

=**Rescue Hydraulics** - Cutters, spreaders, combi, rams and special tools like door breakers and re-bar cutters

=**Disc Cutter** - either smaller disc cutters or larger circular saws for metal/concrete/masonry cutting

ⓘ=**Special Tools** - Other rescue-specific equipment detailed in the NOTES section

We've added an icon key to the additional features which indicate, from left to right:

LED charge indication: This may be visible continuously or you may need to press the button to see what power you have left.

On-board cooling - rare, but the battery itself has active cooling as distinct from the charger which is often fan-cooled.

Wifi or Bluetooth connectivity of the battery (not necessarily the tool) for service management & inventory

The **IP rating** indicating degree of water resistance 54/55/56 or waterproof 57/58

Operating temperature - battery performance is at optimum room temp - colder and hotter will affect performance and work duration.

FUEL
REDLITHIUM
M18 REDLITHIUM
HIGH OUTPUT HD12.0
M18
PERFORMANCE DRIVEN
TRADE FOCUSED
SYSTEM WIDE
milwaukeetool.com
©2023 Milwaukee Tool

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LE
	20vMax DCB203	DEWALT			£35 $00 €00	350g 12.4oz	Li ion 20v	2 Ah	00 Wh	11
	20vMax DCB230	DEWALT			£50 $130 €60	522g 1.15lb	Li ion 20v	3 Ah	00 Wh	17
	20vMax DCB200	DEWALT			£36 $45 €42	1.27kg 2.8lb	Li ion 20v	3 Ah	00 Wh	0
	20vMax DCB240	DEWALT			£63 $79 €73	522g 1.15lb	Li ion 20v	4 Ah	80 Wh	17
	20vMax DCB204	DEWALT			£80 $00 €00	700g 00oz	Li ion 20v	4 Ah	00 Wh	17
	20vMax DCB205	DEWALT			£63 $79 €73	630g 1.4lb	Li ion 20v	5 Ah	00 Wh	17
	20vMax DCB206	DEWALT			£0 $00 €00	00g 2.25lb	Li ion 20v	6 Ah	00 Wh	17
	20vMax DCB210	DEWALT			£0 $00 €00	00g 0oz	Li ion 20v	10 Ah	00 Wh	17
	XR DCB2105	DEWALT			£0 $00 €00	00g 00oz	Li ion 20v	5 Ah	00 Wh	17
	XR DCB2108	DEWALT			£0 $220 €00	00g 00oz	Li ion 20v	8 Ah	00 Wh	17

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Yrs) Life	LED CHARGE STATUS	IN-USE COOLING FAN	WFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
10mm 00"	00mm 00"	45mm 1.8"	1500	2 & 4-bank Standard Rapid			■	-	-	-	-	NB: DEWALT 18v. DISCONTINUED. BEWARE: DEWALT batteries and product codes are chaotic and not at all intuitive	dewalt.com
78mm 7"	89mm 3.5"	45mm 1.8"	90mins				■	-	-	-	-		dewalt.com
0mm 10"	00mm 4.5"	00mm 0.75"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	45mm 1.8"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	3mm 75"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	75mm 3"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	75mm 3"	90mins				■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	75mm 3"					■	-	-	-	-		dewalt.com
78mm 7"	89mm 3.5"	75mm 3"					■	-	-	-	-	Also available as an oil-resistant version	dewalt.com
78mm 7"	89mm 3.5"	75mm 3"					■	-	-	-	-		dewalt.com
													expansion row

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	XR Powerstack DCBP034 DCBP034-XJ	DEWALT			£0 $00 €00	320g 00oz	Li ion 20v	1.7 Ah	00 Wh	18 7
	XR Powerstack DCBP518-XJ	DEWALT			£0 $00 €00	300g 12.8oz	Li ion 20v	5 Ah	00 Wh	18 7
	Max FlexVolt DCB606 DCB546	DEWALT			£144 $180 €165	1.05kg 00oz	Li ion 20-60v	2/6 Ah	00 Wh	0 (
	Max FlexVolt DCB609 DCB547	DEWALT			£180 $185 €208	1.44kg 00oz	Li ion 20-60v	3/9 Ah	00 Wh	13 5.
	Max FlexVolt DCB612 DCB548	DEWALT			£190 $320 €220	1.46kg 0lb	Li ion 20-60v	4/12 Ah	00 Wh	13 5.
	Max FlexVolt DCB615	DEWALT			£0 $00 €00	2.04kg 4.55lb	Li ion 20-60v	5/15 Ah	00 Wh	19 7.
	36v DCB361	DEWALT			£0 $300 €00	1.44kg 38.4oz	Li ion 36v	2 Ah	00 Wh	0 (
	Max DCB404	DEWALT			£0 $00 €00	1.6kg 3.53lb	Li ion 40v	4 Ah	00 Wh	18 7
	Max XR DCB406	DEWALT			£0 $00 €00	1.96kg 4.32lb	Li ion 40v	6 Ah	300 Wh	18 7
	Max XR DCB407	DEWALT			£80 $00 €00	2.1g 4.6lb	Li ion 40v	7.5 Ah	00 Wh	18 7

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Yrs) Life ■	LED CHARGE STATUS	IN-USE COOLING FAN	WfFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
37mm 7.4"	34mm 1.3"	46mm 1.8"	60mins				■	-	-	-	-		dewalt.com
37mm 7.4"	150mm 5.9"	66mm 2.62"	75mins	multi voltage charger	70cuts 4x4 PT Spruce		■	-	-	-	-	Enhanced power to weight/Ah ratio +50%	dewalt.com
0mm 00"	85mm 00"	90mm 00"	40-90mins				-	-	-	-	-		dewalt.com
38mm .433	87mm 3.543"	97mm 3.813"	60-140mins				-	-	-	-	-		dewalt.com
38mm 433"	87mm 3.543"	97mm 3.813"	80-180mins				■	-	-	-	-		dewalt.com
92mm 563"	111mm 4.375"	97mm 3.813"	100-233mins				■	-	-	-	-		dewalt.com
0mm 00"	00mm 00"	00mm 00"	30mins				-	-	-	-	-	discontinued	dewalt.com
34mm .25"	137mm 5.375"	126mm 4.938"	90mins				■	-	-	-	-		dewalt.com
34mm .25"	137mm 5.375"	126mm 4.938"	130mins				■	-	-	-	-		dewalt.com
34mm .25"	137mm 5.375"	126mm 4.938"	60mins				-	-	-	-	-		dewalt.com

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	E-Force LBP-56V125 LBP-50-150	ECHO			£190 $235 €210	1kg 2.25lb	Li ion 56/50.4v	2or2.5Ah	113/ 126 Wh	18 7
	E-Force LBP-56V250 LBP-50-250	ECHO			£290 $250 €300	1.8kg 4lb	Li ion 56/50.4v	4.5or5Ah	252 Wh	18 7
	E-Force LBP-56V400A LBP-50-400	ECHO			£299 $350 €356	2.4kg 5.3lb	Li ion 56/50.4v	8or9Ah	400 Wh	222 8
	PXC+ SEALED 4511501 4511618	EINHELL			£4547 $000 €000	580590kg 00lb	Li ion 18v	3 Ah		
	PXC+ SEALED 4511553 4511627	EINHELL			£5657 $000 €000	590600kg 00lb	Li ion 18v	4 Ah		
	PXC 4511437	EINHELL			£63 $000 €000	890g 0lb	Li ion 18v	5.2 Ah		
	PXC+ 4511502	EINHELL			£79 $000 €000	00kg 00lb	Li ion 18v	4-6 Ah		
	PXC+ 4511600	EINHELL			£115 $000 €000	1.05kg 0lb	Li ion 18v	5-8 Ah		
	E force 107.289.3	GENESIS RESCUE			$1050	1.45g 3.2lb	Li ion 28v	5 Ah	145 Wh	13 5
	Nuron B22-55	HILTI			£80 $118 €90	550g 1.2lb	Li ion 22v	2.6 Ah	54 Wh	13 5
	Nuron B22-85	HILTI			£100 $160 €90	760g 1.7lb	Li ion 18/20v	4 Ah	85 Wh	13 5

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Yrs) Life	LED CHARGE STATUS	IN-USE COOLING FAN	WfFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
34mm .24"	88mm 3.46"	66mm 2.6"	42-47mins	Dual-port. LCJU-560 Rapid LCJQ-560 Ultra-Rapid		2	■	-	-	-	0-45 32-113		echotools.com
34mm .24"	88mm 3.46"	100mm 3.96"	57-89mins	Dual-port. LCJU-560 Rapid LCJQ-560 Ultra-Rapid		2	■	-	-	-	0-45 32-113	NB: will not fit 2500T Top-handle CSaw	echotools.com
2.2mm .75"	88mm 3.46"	107mm 4.25"	60-225mins	Dual-port Rapid. Ultra-Rapid.		2	■	-	-	-	0-45 32-113	NB: will not fit 2500T Top-handle CSaw	echotools.com
						3	■	-	-	57		Sealed= water and dustproof	einhell.com
						3	■	-	-	57		Sealed= water and dustproof	einhell.com
						3	■	-	-				einhell.com
						3	■	-	-				einhell.com
						3	■	-	-				einhell.com
35mm 5.3"	81mm 3.2"	84mm 3.3"	90mins	Standard		1	■	-	-	-		Milwaukee M28 replacement (in case of discontinuation by Milwaukee) for Genesis E-Force tools	genesisrescue.com
33mm 5.2"	82mm 3.2"	48mm 1.9"	30-180mins <500	4-Bay Compact Fast/Standard Ultimate		2	■	-	-	-	-17 +60 1-140		hilti.com
33mm 5.2"	82mm 3.2"	53mm 2.62"	30-240mins <500	4-Bay Compact Fast/Standard Ultimate		2	■	-	-	-	-17 +60 1-140		hilti.com

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	Nuron B22-110	HILTI			£150 - €280	910g 2lb	Li ion 22v	5 Ah	110 Wh	13 5
	Nuron B22-170	HILTI			- - -	1.31kg 2.88lb	Li ion 22v	8 Ah	170.6 Wh	15 6
	Nuron B22-195	HILTI			£305 $241 €000	1.33kg 2.93lb	Li ion 22v	9 Ah	194 Wh	15 6
	Nuron B22-255	HILTI			£375 - €425	1.84kg 4.05lb	Li ion 22v	12 Ah	255 Wh	15 6
	Nuron B22-290	HILTI			£238 $315 €000	1.8kg 3.99lb	Li ion 22v	13.5 Ah	290 Wh	15 6
	B36 B36/5.2	HILTI			£395 $535 €450	1.35kg 3lb	Li ion 36v	5.2 Ah	187 Wh	16 6
	B36 B36/9	HILTI			£500 $675 €570	2.03kg 3lb	Li ion 36v	9 Ah	324 Wh	18 7
	Greenline EVO3 BPA286	HOLMATRO	ⓘ		~£00 ~$00 ~€00	1kg 2.2lb	Li ion 28v	6 Ah*	151 Wh	14 5
	Pentheon PBPA288	HOLMATRO	ⓘ		~£00 ~$00 ~€00	1.6kg 3.5lb	Li ion 28v	8 Ah	202 Wh	18 7
	100 40- B70	HUSQVARNA			£100 $135 €115	800g 1.8lb	Li ion 36v	2 Ah	75.6 Wh	13 5
	100 40-B140	HUSQVARNA			£150 $205 €170	1.25kg 2.8lb	Li ion 36v	2 Ah	144 Wh	13 5

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Yrs) Life	LED CHARGE STATUS	IN-USE COOLING FAN	WFFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
33mm 5.2"	82mm 3.2"	67mm 2.6"	30-300mins <500	4-Bay Compact Fast/Standard Ultimate		2	■	-	-	-	-17 +60 1-140	DISCONTINUED In USA	hilti.com
57mm 5.2"	87mm 3.4"	76mm 3"	30-480mins <500	4-Bay Compact Fast/Standard Ultimate		2	■	-	-	-	-17 +60 1-140	DISCONTINUED	hilti.com
55mm 5.1"	87mm 3.4"	76mm 3"	30-540mins <500	4-Bay Compact Fast/Standard Ultimate		2	■	-	-	-	-17 +60 1-140		hilti.com
55mm 5.1"	87mm 3.4"	99mm 3.9"	30-720mins <500	4-Bay Compact Fast/Standard Ultimate		2	■	-	-	-	--17 +60 1-140	DISCONTINUED In USA	hilti.com
58mm 5.2"	87mm 3.4"	99mm 3.9"	30-720mins <500	4-Bay Compact Fast/Standard Ultimate		2	■	-	-	-	-17 +60 1-140	May replace B22-255 in Europe but not yet stated	hilti.com
57mm 5.6"	92mm 3.6"	81mm 3.2"	35-130mins <1000	4-Bay Fast 12v Car		2	■	-	-	-	17 +60 1-140		hilti.com
31mm 7.1"	99mm 3.9"	103mm 4"	56-255mins <1000	4-Bay Fast 12v Car		2	■	-	-	-	17 +60 1-140		hilti.com
43mm 5.6"	111mm 4.4"	62mm 2.4"	90mins ~500	Std EU Std USA Vehicle		2	■	-	-	54	-20 +55 -4 131	* replaced 5Ah version ⓘ Powers door ram	holmatro.com
38mm 7.4"	107mm 4.2"	110mm 4.3"	69mins ~500	2 & 4-bank On-Tool charging for 3 tools + Standard 3.3Ah		■	■	-	-	■ 68	-20 +55 -4 131	ⓘ Also powers the OMNILOCK shoring struts. Saltwater Submersible On tool charging	holmatro.com
32mm 5.2"	117mm 4.6"	98mm 3.8"	>600	Rapid, QC250 Standard		2	■	-			-10 +40 14 104		husqvarna.com
32mm 5.2"	117mm 4.6"	98mm 3.8"	40/50mins 1hr10-2hr40 >600	Rapid, Standard	35-45mins	2	■	-			-10 +40 14 104		husqvarna.com

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	BLi BLi30	HUSQVARNA	ⓘ		£280 $310 €320	1.9kg 4.2lb	Li ion 36v	7.7 Ah	270 Wh	13 5
	BLi BLi200	HUSQVARNA	ⓘ		£240 $325 €350	1.3kg 2.8lb	Li ion 36v	5.2 Ah	180 Wh	13 5
	BLi BLi200X	HUSQVARNA	ⓘ		£260 $350 €360	1.3kg 2.8lb	Li ion 36v	5.2 Ah	180 Wh	13 5
	BLi BLi300	HUSQVARNA	ⓘ		£340 $460 €395	1.9kg 4.2bz	Li ion 36v	9 Ah	324 Wh	15 6
	PACE B380-X	HUSQVARNA			£1050 $825 €950	5kg 11lb	Li ion 94v	4 Ah	374 Wh	24 9
	PACE B750-X	HUSQVARNA			£750 $560 €750	3kg 6.6lb	Li ion 94v	8 Ah	750 Wh	24 9
	BLiX 40-B140X	HUSQVARNA	ⓘ		£210 $235 €210	800g 1.8lb	Li ion 36v	4 Ah	75.6 Wh	13 5
	BLiX 40-B220X	HUSQVARNA	ⓘ		£310 $310 €285	1.4g 3.17lb	Li ion 36v	6 Ah	216 Wh	13 5
	BLiX 40-B330X	HUSQVARNA	ⓘ		£420 $445 €411	1.9g 4.25lb	Li ion 36v	9 Ah	324 Wh	15 6
	BLiX 40-B540X	HUSQVARNA	ⓘ		£650 $900 €760	2.86kg 6.3lb	Li ion 36v	15 Ah	540 Wh	15 6
	BLi BLi950X	HUSQVARNA	ⓘ		£1400 $1870 €1650	9.4kg 20.7lb	Li ion 36v	31.1Ah	1120 Wh	36 1

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WfFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
32mm 5.2"	155mm 6.1"	98mm 3.8"	>600	Rapid, Standard Vehicle 4 & 8-bank		1 pro	■	-	-		-10 +40 14 104	ⓘ Powered ascender/ winch	husqvarna.com
32mm 5.2"	115.6mm 4.5"	98mm 3.8"	50/60mins 1h5/4hr 1500	40-C80 Standard QC250 Quck Vehicle 4 & 8-bank	2hr10	1 pro	■	-	-		-10 +40 14 104	ⓘ Powered ascender/ winch	husqvarna.com
32mm 5.2"	115.6mm 4.5"	98mm 3.8"	50/60mins 1h5/4hr 1500	Rapid, Standard Vehicle 4 & 8-bank		1 pro	■	-	-		-10 +40 14 104	ⓘ Powered ascender/ winch	husqvarna.com
55mm 5.1"	115.6mm 4.5"	98mm 3.8"	50/60mins 1h5/4hr 1500	Rapid, Standard Vehicle 4 & 8-bank	3hr55	1 pro	■	-	-		-10 +40 14 104	ⓘ Powered ascender/ winch	husqvarna.com
45mm 9.6"	197mm 7.75"	100mm 4"	45mins <1500	C900X Std Fast, C1800XUltra-Fast		1 pro	■	-	-		-10 +40 14 104	warranty 2yr for private/domestic use	husqvarna.com
45mm 9.6"	197mm 7.75"	133mm 5.2"	45-75mins <1500	C900X Std Fast, C1800XUltra-Fast		1 pro	■	-	-		-10 +40 14 104	warranty 2yr for private/domestic use	husqvarna.com
32mm 5.2"	117mm 4.6"	98mm 3.85"	>600	QC330-Standard 40-C750 Rapid X8-bank		1 pro	■	-	✱	X4	-10 +40 14 104	On-board Temperature gauge. ⓘ Powered ascender/ winch	husqvarna.com
32mm 5.2"	117mm 4.6"	98mm 3.85"	<1500	QC330-Standard 40-C750 Rapid X8-bank		1 pro	■	-	✱	X4	-10 +40 14 104	On-board Temperature gauge. ⓘ Powered ascender/ winch	husqvarna.com
55mm 5.1"	130.5mm 5.1"	93mm 3.6"	<1500	QC330-Standard 40-C750 Rapid X8-bank		1 pro	■	-	✱	X4	-10 +40 14 104	On-board Temperature gauge. ⓘ Powered ascender/ winch	husqvarna.com
55mm 5.1"	130.5mm 5.1"	93mm 3.6"	<1500	QC330-Standard 40-C750 Rapid X8-bank		1 pro	■	■	✱	X4	-10 +40 14 104	On-board temp gauge. ⓘ Powered ascender/ winch	husqvarna.com
58mm 4.5"	262mm 10.3"	121mm 4.75"	<1500	QC330-Standard 40-C750 Rapid X8-bank	3hr55	1 pro	■	-	□	-	-10 +40 14 104	ⓘ Powered ascender/ winch via battery adapter which is charged normally	husqvarna.com

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	EXL/X2 E2	IDEX (HURST/ LUKAS)			£1040 $1200 €1200	500g 0oz	Li ion 25.2V	5Ah	126 Wh	17 (
	EXL- Strongarm	IDEX (HURST/ LUKAS)			£910 $1045 €1045	1.3kg 2.9lb	Li ion 25.2V	4Ah	98 Wh	15 (
	EXL E3 Standard	IDEX (HURST/ LUKAS)			£1040 $1200 €1200	1.2kg 2.6oz	Li ion 25.2V	5 Ah	126 Wh	17 (
	EXL E3 Standard	IDEX (HURST/ LUKAS)			£1390 $1600 €1600	1.6kg 3.5oz	Li ion 25.2V	9 Ah	226.8 Wh	17 (
	E3 Connect	IDEX (HURST/ LUKAS)			£1150 $1300 €1300	1.2kg 2.6oz	Li ion 25.2V	5 Ah	126 Wh	17 (
	E3 Connect	IDEX (HURST/ LUKAS)			£1570 $1800 €1800	1.6kg 3.5oz	Li ion 25.2V	9 Ah	226.8 Wh	17 (
	E3 Saltwater	IDEX (HURST/ LUKAS)			£1740 $2000 €2000	1.6kg 3.5oz	Li ion 25.2V	9 Ah	226.8 Wh	17 (
	LXT BL1820B	MAKITA		●	£60 $80 €70	380g 13.4oz	Li ion 18V	2 Ah	36 Wh	11 (
	LXT BL1830B	MAKITA		●	£70 $90 €80	640g 1.4lb	Li ion 18V	3 Ah	54 Wh	11 (
	LXT BL1840B	MAKITA		●	£85 $110 €95	640g 1.4lb	Li ion 18V	4 Ah	72 Wh	11 (
	LXT BL1850B	MAKITA		●	£100 $130 €110	640g 1.4oz	Li ion 18V	5 Ah	90 Wh	11 (

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Years)	LED CHARGE STATUS	IN-USE COOLING FAN	WfFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
76mm 00"	97mm 00"	70mm 00"	150mins ~500	Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle						54	-20 +55	E2 DISCONTINUED	lukas.com jawsoflife.com
52mm 00"	86mm 00"	78mm 00"	~500	Standard						54	-20 +55	Fits Lukas/Hurst StrongArm tools only. Discharge LEDs as per SCBA Grn, Ylw, Red	lukas.com jawsoflife.com
76mm 00"	97mm 00"	70mm 00"	90mins ~1000	Standard 4Ah 4-bank 3Ah 110v Adapter 12v vehicle			■			68	-20 +55	Fresh water Submersible Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
76mm 00"	97mm 00"	89mm 00"	~1000	Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle	60mins in 3m of water		■			68	-20 +55	Fresh water Submersible Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
76mm 00"	97mm 00"	89mm 00"	~500	Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle	60mins in 3m of water		■		■	68	-20 +55	Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
76mm 00"	97mm 00"	89mm 00"	~500	Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle	60mins in 3m of water		■		■	68	-20 +55	Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
76mm 00"	97mm 00"	89mm 00"	~500	Standard 3Ah 4-bank 3Ah 110v Adapter 12v vehicle	60mins in 3m of water		■		■	68	-20 +55	Salt water Submersible Change batteries underwater. Battery has on-board LED for night-changes	lukas.com jawsoflife.com
13mm 00"	75mm 00"	45mm 00"	22-45 mins ~1000	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-20 +60 -4 140		makitatools.com
13mm 00"	75mm 00"	62mm 00"	24-60 mins ~1000	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-20 +60 -4 140		makitatools.com
13mm 00"	75mm 00"	62mm 00"	36-90 mins ~1000	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-20 +60 -4 140		makitatools.com
13mm 00"	75mm 00"	62mm 00"	45-110 mins ~1000	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-20 +60 -4 140		makitatools.com

*COMPARISON BETWEEN AP 300.0 P C AND AP 300 S.

**TIME TO REACH 80% CHARGE AT AMBIENT / PACK TEMPERATURES OF 25–40°C IN COMBINATION WITH AL 1802 MO.

***UP TO 3,000 CYCLES WITHOUT NOTICEABLE PERFORMANCE LOSS; STILL USABLE THEREAFTER.

STIHL
CHARGED
WITH
NEXT LEVEL POWER
by the new STIHL ALLPRO Battery System
DISCOVER MORE
AT STIHL.CO.UK OR
SCAN THE QR CODE.

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	LXT BL1860B	MAKITA		●	£120 $165 €130	660g 1.45lb	Li ion 18v	6 Ah	108 Wh	11 (
	LXT BL1890	MAKITA		●	£200 $275 €210	1kg 2.2lb	Li ion 18v	9 Ah	0 Wh	11 (
	XGT BL4020	MAKITA		●	£95 $130 €110	690g 1.5lb	Li ion 40v	2 Ah	72 Wh	11 4
	XGT BL4025	MAKITA		●	£100 $145 €120	710g 1.5lb	Li ion 40v	2.5 Ah	90 Wh	11 4
	XGT BL4040F	MAKITA		●	£160 $200 €170	1kg 2.2lb	Li ion 40v	4 Ah	144 Wh	13 5
	XGT BL4050F (high output)	MAKITA		●	£190 $240 €200	1.3kg 2.8lb	Li ion 40v	5 Ah	180 Wh	15
	XGT BL4080F (high output)	MAKITA		●	£280 $330 €280	1.9kg 4.2lb	Li ion 40v	8 Ah	288 Wh	15
	MX Fuel XC3 MXF CP203	MILWAUKEE			£420 $420 €420	2.7kg 6lb	Li ion 72v	3 Ah	216 Wh	20 1
	MX Fuel XC6 MXF XC406	MILWAUKEE			£650 $660 €650	0g 0oz	Li ion 72v	6 Ah	432 Wh	23 (
	RedLithium Forge XC8 MXF XC608	MILWAUKEE			£1120 $1210 €1150	4.5kg 9.8lb	Li ion 72v	8 Ah	576 Wh	26 1
	RedLithium Forge RedLithium Forge C12 MXF HD812	MILWAUKEE			£1500 $1320 €1400	7kg 15.4lb	Li ion 72v	12 Ah	864Wh	30 (

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Yrs) Life	LED CHARGE STATUS	IN-USE COOLING FAN	WfFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
3mm 00"	75mm 00"	62mm 00"	55-130 mins ~1000	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-20 +60 -4 140		makitatools.com
3mm 00"	75mm 00"	62mm 00"	70-200 mins ~800	2-bank Rapid Standard Back/Power Pack			■	-	-	-	-20 +60 -4 140		makitatools.com
8mm 4.6"	77mm 3"	65mm 2.5"	22-30mins ~1000	2-bank Rapid Standard Back/Power Pack			■	■	● *	-	-20 +60 -4 140	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
8mm 4.6"	77mm 3"	65mm 2.5"	28-38mins ~1000	2-bank Rapid Standard Back/Power Pack			■	■	● *	-	-20 +60 -4 140	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
3mm .23"	82mm 3.22"	71mm 2,8"	45-67mins ~1000	2-bank Rapid Standard Back/Power Pack			■	■	● *	-	-20 +60 -4 140	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
2mm 6"	79mm 3.1"	92mm 3.6"	50-85mins ~1000	2-bank Rapid Standard Back/Power Pack			■	■	● *	-	-20 +60 -4 140	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
2mm 6"	85mm 3.3"	94mm 3.7"	76mins ~800	2-bank Rapid Standard Back/Power Pack			■	■	● *	-	-20 +60 -4 140	*Digital coms between battery and tool regarding staus and power draw etc.	makitatools.com
0mm 0.8"	120mm 7.1"	90mm 3.8"	00mins ~800	Super			■	■	■		-28 +60 -18 140		milwaukee.com
0mm 00"	140mm 00"	100mm 00"	45mins ~800	Super			■	■	■		-28 +60 -18 140		milwaukee.com
0mm 0.8"	160mm 7.1"	120mm 3.8"	45mins ~800	Super			■	■	■		-28 +60 -18 140		milwaukee.com
0mm 00"	180mm 00"	140mm 00"	45mins ~800	Super			■	■	■		-28 +60 -18 140		milwaukee.com

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	M28 BX3 B3	MILWAUKEE			£220 $240 €240	1.1kg 2.25lb	Li ion 28V	3 Ah	84 Wh	13
	M28 BX5 B5	MILWAUKEE			£270 $300 €300	1kg 2lb	Li ion 28V	5 Ah	140 Wh	13
	M18 Forge Forge XC6	MILWAUKEE			£230 $250 €140	1kg 2.2lb	Li ion 18V	6 Ah	108 Wh	0
	M18 Forge Forge XC8	MILWAUKEE			£300 $330 €310	1.08kg 2.38lb	Li ion 18V	8 Ah	144 Wh	10 5
	M18 Forge Forge HD12	MILWAUKEE			£380 $440 €400	1.54kg 3.4lb	Li ion 18V	12 Ah	216 Wh	14 5
	M18 Compact CP1.5	MILWAUKEE			£60 $65 €70	450g 0.9lb	Li ion 18V	1.5 Ah	27 Wh	11
	M18 Compact CP2	MILWAUKEE			£70 $75 €80	500g 1.1lb	Li ion 18V	2 Ah	36 Wh	0
	M18 Compact CP3	MILWAUKEE			£90 $100 €96	0.65kg 1.4lb	Li ion 18V	2.8 Ah	54 Wh	0
	M18 Extended XC3	MILWAUKEE			£95 $105 €100	0.75g 1.65lb	Li ion 18V	2.8 Ah	54 Wh	0
	M18 Extended XC4	MILWAUKEE			£100 $110 €110	0.78g 1.7lb	Li ion 18V	4 Ah	72 Wh	0
	M18 Extended XC5	MILWAUKEE			£80 $160 €202	700g 1.5lb	Li ion 18V	5 Ah	90 Wh	8 3

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Yrs) Life ■	LED CHARGE STATUS	IN-USE COOLING FAN	WfFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
30mm 00"	88mm 00"	82mm 00"	60 mins ~800-1000	Rapid			■				-20 +60 -4 140	DISCONTINUED	milwaukee.com
30mm 00"	88mm 00"	82mm 00"	90 mins ~800-1000	Rapid			■				-20 +60 -4 140	DISCONTINUED	milwaukee.com
0mm 00"	00mm 00"	00mm 00"	0 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com
95mm 5.6"	95mm 3.4"	154mm 3.5"	45 mins 83 mins 162 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140	oil resistant	milwaukee.com
47mm 5.8"	0mm 00"	104mm 4.1"	45 mins 130 mins 241 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140	oil resistant	milwaukee.com
15mm 00"	75mm 00"	60mm 00"	21 mins 21 mins 31 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com
0mm 00"	00mm 00"	00mm 00"	27 mins 27 mins 42 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com
0mm 00"	00mm 00"	00mm 00"	34 mins 34 mins 57 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com
0mm 00"	00mm 00"	00mm 00"	34 mins 34 mins 57 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com
0mm 00"	00mm 00"	00mm 00"	48 mins 48 mins 76 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com
0mm 3.1"	50mm 2"	80mm 3.1"	60 mins 60 mins 105 mins ~1000	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com

IMAGES NOT TO SCALE COSTS in £$€= Currency conversion only. Most costs=max MSRP - you will often find for a lot less. OTHER TOOLS IN RANGE: =CSaw =Trade-Tools =DiscCutter =OPE =Rescue Tools =Lighting ⓘ=Special Tools ●=PARTIAL FEATURE = Option ~= approximate	SERIES MODEL NB: 20v/60v in the US is 18v/54v in Europe	COMPANY	FITS TOOLS FOR:...	ORIGIN	~ COST inc tax / VAT	WEIGHT	BATTERY TYPE VOLTAGE	AMP HOURS Ah	ENERGY WorkHours Wh	LEN
	M18 Extended XC6	MILWAUKEE			£130 $145 €140	0.73g 1.6lb	Li ion 18v	6 Ah	108 Wh	11
	M18 Compact/ High Output CP3 HO	MILWAUKEE			£110 $120 €120	0.6g 1.3lb	Li ion 18v	3 Ah	54 Wh	11
	M18 High Output HO5.5	MILWAUKEE			£160 $165 €160	1.21kg 0oz	Li ion 18v	5.5 Ah	99 Wh	14
	M18 High Output HO6	MILWAUKEE			£170 $190 €180	1kg 2.2lb	Li ion 18v	6 Ah	108 Wh	14
	M18 High Output HO8	MILWAUKEE			£200 $220 €210	1.08kg 2.38lb	Li ion 18v	8 Ah	144 Wh	14
	M18 High Output HO12	MILWAUKEE			£300 $330 €310	1.54kg 3.4lb	Li ion 18v	12 Ah	216 Wh	15
	AP (Pro) AP 100	STIHL	ⓘ		£126 $150 €170	1.3kg 2.86lb	Li ion 36v	2.6Ah	94 Wh	16 6
	AP (Pro) AP 200	STIHL	ⓘ		£156200 $210270 €220260	1.3kg 2.86lb	Li ion 36v	4.8Ah 5.2Ah	187 Wh	16 6
	AP (Pro) AP 300	STIHL	ⓘ		£288 $240 €310	1.8kg 4lb	Li ion 36v	3Ah	227 Wh	16 6
	AP (Pro) AP 300 S	STIHL	ⓘ		£288 $330 €410	1.8kg 4lb	Li ion 36v	7.6/7.8Ah	281 Wh	16 6
	AP (Pro) AP 500 S	STIHL	ⓘ		£385 $590 €500	2kg 4.4lb	Li ion 00v	8.8/9.4 Ah	337 Wh	16 6

NGTH	WIDTH	DEPTH	RECHARGE Min to Max Time Charger-dependant CHARGE CYCLES	MULTI CHARGERS	REPRESENTATIVE ENDURANCE	WARRANTY (Yrs) Life	LED CHARGE STATUS	IN-USE COOLING FAN	WFFi/BLUETOOTH	IP-RATING WATERPROOF	OP TEMP °C °F	NOTES	www.
5mm 00"	80mm 00"	75mm 00"	70 mins 70 mins 125 mins ~900	2,3,4 & 6-bank Super Rapid Standard		-	■	-	-	-	-20 +60 -4 140		milwaukee.com
5mm 00"	80mm 00"	65mm 00"	35 mins 35 mins 65 mins ~1000	2,3,4 & 6-bank Super Rapid Standard			■				-20 +60 -4 140		milwaukee.com
0mm 00"	90mm 00"	80mm 00"	65 mins 65 mins 115 mins ~900	2,3,4 & 6-bank Super Rapid Standard			■				-20 +60 -4 140		milwaukee.com
0mm 00"	90mm 00"	80mm 00"	35 mins 65 mins 123 mins ~900	2,3,4 & 6-bank Super Rapid Standard			■				-20 +60 -4 140		milwaukee.com
5mm 00"	90mm 00"	85mm 00"	45 mins 83 mins 153 mins ~900	2,3,4 & 6-bank Super Rapid Standard			■				-20 +60 -4 140		milwaukee.com
5mm 6"	95mm 00"	95mm 00"	60 mins 130 mins 241 mins ~800	2,3,4 & 6-bank Super Rapid Standard			■				-20 +60 -4 140	HD9 Discontinued	milwaukee.com
5mm 5.5"	115mm 4.5"	76mm 3"	-	AL101 Standard AL301 Rapid AL301 4-bank AL501 Fastest	-	-	■	-	-	X4	-10 +40 14 104	ⓘ Powered ascender/ winch Upraded from previous 2Ah model but being phased out?	stihl.com
5mm 5.5"	115mm 4.5"	76mm 3"	200 mins 50 mins 50 mins 45 mins	AL101 Standard AL301 Rapid AL301 4-bank AL501 Fastest	42mins 161T CSaw	-	■	-	■	X4	-10 +40 14 104	ⓘ Powered ascender/ winch 200S=Wifi-capable	stihl.com
5mm 5.5"	115mm 4.5"	76mm 3"	250 mins 65 mins 65 mins 35 mins	AL101 Standard AL301 Rapid AL301 4-bank AL501 Fastest	50mins 161T CSaw	-	■	-	-	X4	-10 +40 14 104	ⓘ Powered ascender/ winch.	stihl.com
5mm 5.5"	115mm 4.5"	76mm 3"	300 mins 70 mins 70 mins 45 mins 1200 over 5yrs	AL101 Standard AL301 Rapid AL301 4-bank AL501 Fastest	60mins 161T CSaw	-	■	-	□	X4	-10 +40 14 104	ⓘ Powered ascender/ winch 300S connect has Wifi-option	stihl.com
5mm 5.5"	115mm 4.5"	76mm 3"	355 mins 90 mins 90 mins 55 mins 2530 over 10yrs	AL101 Standard AL301 Rapid AL301 4-bank AL501 Fastest	74mins 161T CSaw	-	■	-	□	X4	-10 +40 14 104	500S connect has Wifi-option	stihl.com

SMART FORCE

MORE THAN A RESCUE TOOL.

BATTERY DRIVEN
RAPID INTERV

Cutting, spreading, pressin
Replaceable tips for breaking doors and w
lifting of loads, pulling obstacle

WEBER RESCUE SYSTEMS

N COMBI TOOL FOR
VENTION TEAMS

g and pulling with one device.
vindows, cutting steel and security sections,
es or opening vehicles (extrication).

Weber Rescue UK
Essex CO9 2EX
rescue@weberuk.com

Genesis RESCUE SYSTEMS
Kettering, OH 45429
https://genesisrescue.com

www.weber-rescue.com

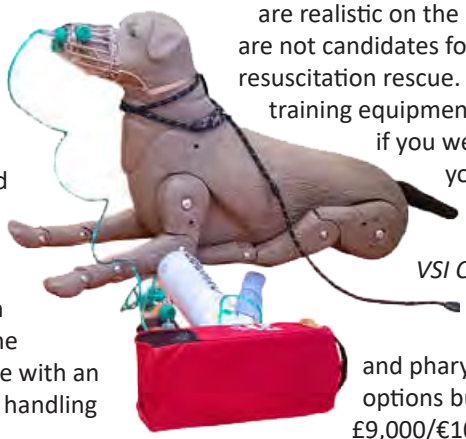
Discover more!

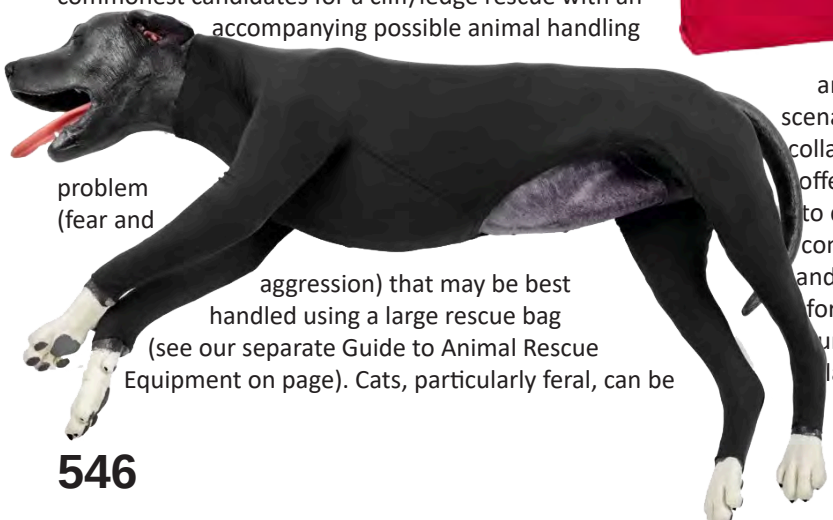
ANIMAL RESCUE MANIKINS

This Guide is concerned with manikins for rescue-training in the field or in realistic rescue or entrapment scenarios. We have not included most of the excellent veterinarian training aids aimed more at clinical or medical intervention settings, these are often hyper-realistic and very expensive but are not intended to be 'roughly' handled as might be the case with a field-training manikin. Not that we are advocating rough handling during any rescue but the set-ups and break-downs of a training sessions and possible rescue-failures during the rescue mean that they all need to be robust. We have included one or two smaller-animal CPR manikins like the *Simulaids* and *Erler Zimmer* models that can be slung into bog or building site but these are still more for on-site medical intervention, including CPR and pulse-finding (which are worthy training sessions), than physical removal of the animal from it's entrapment.

CATS, DOGS, SHEEP & GOATS

Dogs are a common rescue problem that can have the emotional impact of a child rescue for some pet-owning rescuers not to mention a similar response from the owners who might consider this to be one of their children and become keen to impart the urgency of the situation to rescuers. Cats too, though seldom actually requiring rescue, can, if injured during their entrapment/fall require more medical intervention than there would normally be with horses and cows which tend not to be in the same kind of exposed locations although we did once have a cow that was stuck in mud at the bottom of a cliff and so required both mud extraction and raising up the cliff. Sheep and dogs are the commonest candidates for a cliff/ledge rescue with an accompanying possible animal handling problem (fear and aggression) that may be best handled using a large rescue bag (see our separate Guide to Animal Rescue Equipment on page). Cats, particularly feral, can be a problem and would rather die than have you rescue them so a stout pair of gauntlets are a good idea if you get close enough to make a grab for them but they too might benefit from a rescue bag. The CPR version of the *Simulaids dog CASPER* (left) and the *Erler Zimmer CAPPER* cat and *COOPER* dog (below) have a flat base so while they are realistic on the upper half they are not candidates for a complex, post-resuscitation rescue. Some of the vet training equipment is outstanding and if you were a rich service you might want to stump up for something like the *VSI Canine Life Support* model (below-left) with CPR, Venous and pharyngeal intervention options but costs almost £9,000/€10500/$13000 ! *Resquip*'s fully articulating and pretty realist dog is the best bet for general dog rescue scenarios in the vertical, ice, mud, confined space or structural collapse scenarios but the amorphous *Ruth Lee* model (above) offers a less expensive option that you won't be scared to drop, throw in the marshland or bury under loads of concrete. The limbs don't articulate in the same way as socket and pin models but the dog bends as well as being reinforced for stiffening in the correct areas such that it can sit up unaided but not stand. That skill is usually the domain of the larger livestock.





HORSES, COWS and DONKEYS

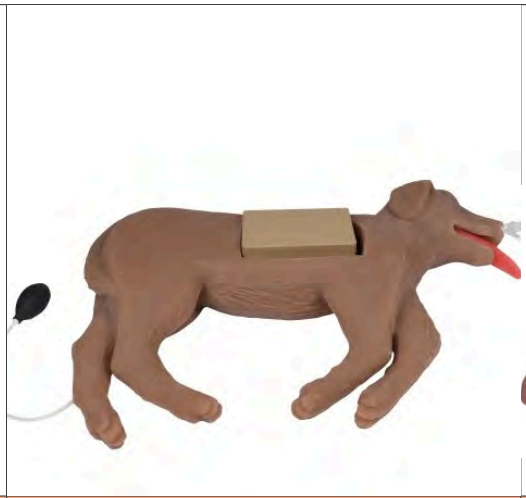
There is significant size, weight and monetary value attached to large livestock that can tax your equipment and the poor animal being rescued if not carried out correctly. Larger, more realistic manikins for training have significantly improved rescue response and handling skills but the majority of services with agricultural risks on their patch often have specialist teams and /or advisors to make sure that crews make the right calls. Such manikins are necessarily quite complex and expensive investments but they are a virtual necessity for rescue agencies that deal with a handful of or even one such incident every year. *Safequip* in the UK have largely cornered the equine and bovine rescue manikin market having followed the venerable *Lucky* from *Rescue Critters* which has been around for a good number of years. *Safequip* worked closely with rescuers led by our old colleague Jim Green in Hampshire to produce fully articulating manikins that could also stand on their own four hooves and provide a more realistic rescue option. To make setting up training sessions easier the horse and cow come with a 4-wheel trolley to move them around - castors as standard or more all-terrain pneumatic tyres for a little extra.

IMAGES NOT TO SCALE

COST: includes 20% VAT in Europe or 10% State Tax in the US
£$€= Currency Conversion only- no duty/ shipping

USES/FEATURES
- DIRECT VERTICAL LIFT
- WATER/BOG RESCUE
- SELF-SUPPORTING/STANDS on FEET
- MEDICAL INTERVENTION
- CPR

= Option ~ approximate
= Partial feature/ OK, but not ideal



COMPANY	ERLER ZIMMER	ERLER ZIMMER
MODEL	COOPER	CAPPER
product code	VET4660	VET4880
USES		
ORIGIN		
COST inc tax / VAT	£650 $000 €520	£000 $000 €730
REALISM	Realistic	Realistic
WEIGHT	00kg / 00lb	00kg / 00lb
SIZES	1 size	1 size
LENGTH Total Torso	00m / 00" 00m / 00"	00m / 00" 00m / 00"
WIDTH	00m / 00"	00m / 00"
HEIGHT Total Torso	00m / 00" 00m / 00" 00 hands	00m / 00" 00m / 00" 00 hands
MATERIALS	-	-
ARTICULATION	NONE	NONE
SPECIAL FEATURES	Naso & Oropharyngeal CPR Femoral pulse	Oropharyngeal CPR Femoral pulse
LIFT POINTS DRAG EYES	- -	- -
WHEELS FRAME	-	-
REPLACEABLE PARTS	-	-
WARRANTY	- year	- year
CUSTOM MARKINGS LOGO		
OTHER COLOURS		
NOTES	-	Cat is more expensive than the dog
WEBSITE	erler-zimmer.de	erler-zimmer.de

RESCUE CRITTERS	**RESCUE CRITTERS**	**RESQUIP**
FETCH	**LUCKY**	**HORSE**
920	750	ooo
◆◆◆●	◆◆●	◆◆◆
£000 $3835 €2770	£000 $16389 €14200	£000 $000 €000
Realistic	Realistic	Realistic
00kg / 00lb	364kg / 800lb	200kg / 440lb 400kg / 880lb
1 size	1 size	2 sizes Std & Heavy
00m / 00" 00m / 00"	00m / 00" 00m / 00"	2.3m / 83" 1.6m / 63"
00m / 00"	00m / 00"	0.65m / 26"
00m / 00" 00m / 00" 00 hands	00m / 00" 1.5m / 60" 15 hands	2.2m / 87" 1.5m / 60" 15 hands
-	-	HD Polymer/Rubber
NONE	Thighs/shoulder, Knees, Fetlock/Ankle	Head, Neck, Thighs/shoulder, Knees, Fetlock/Ankle Limbs can be locked to self support
Oropharyngeal CPR Femoral pulse		Realistic Tail, hooves and ears Removable Ears-natural or distressed
- -	- -	Neck & Back -
-	☐ Support frame ($2599)	■ 4 xCastors & base frame ☐ Over-body suspension frame
-	-	■ All
- year	- year	1 year
		☐ dapple etc. ☐
		■ ■ ☐ ■
-	-	See: Glide Mats & slings in ANIMAL LIFT EQPT
rescuecritters.com	rescuecritters.com	resquip.com

IMAGES NOT TO SCALE

COST: includes 20% VAT in Europe or 10% State Tax in the US
£$€= Currency Conversion only- no duty/ shipping

USES/FEATURES
- DIRECT VERTICAL LIFT
- WATER/BOG RESCUE
- SELF-SUPPORTING/STANDS on FEET
- MEDICAL INTERVENTION
- CPR

= Option ~ approximate
= Partial feature/ OK, but not ideal

COMPANY	RESQUIP	RESQUIP	
MODEL	COW	DOG	
product code	ooo	ooo	
USES			
ORIGIN			
COST inc tax / VAT	£000 $000 €000	£000 $000 €000	
REALISM	Realistic	Realistic	
WEIGHT	00kg / 00lb	30kg / 66lb	
SIZES			
LENGTH Total Torso	00m / 00" 00m / 00"	00m / 00" 00m / 00"	
WIDTH	00m / 00"	00m / 00"	
HEIGHT Total Torso	00m / 00" 00m / 00" 00 hands	00m / 00" 00m / 00" 00 hands	
MATERIALS		-	
ARTICULATION	Neck, Thighs/shoulders, Knees, Ankle Limbs can be locked to self support	Neck, Thighs, Knees, Ankle	
SPECIAL FEATURES	Realistic udders, hooves and ears	-	Robu
LIFT POINTS DRAG EYES	2x Back Under Chest	- -	
WHEELS FRAME		-	
REPLACEABLE PARTS		-	
WARRANTY		- year	
CUSTOM MARKINGS LOGO			
OTHER COLOURS			
NOTES	See: Glide Mats & slings in ANIMAL LIFT EQPT	-	
WEBSITE	resquip.com	resquip.com	

RUTH LEE	**SIMULAIDS**	
CANINE	**CASPER DOG**	
ooo	ooo	
£820 931 975 $000 €000	£555 $000 €000	
Amorphous	Realistic	
10kg / 22lb 20kg / 44lb 25kg / 55lb	00kg / 00lb	
3 sizes	1 size	
00m / 00" 00m / 00"	00m / 00" 00m / 00"	
00m / 00"	00m / 00"	
00m / 00" 00m / 00" 00 hands	00m / 00" 00m / 00" 00 hands	
Flame retardant polyester	-	
Bend at Neck, Tail, Shoulders/thighs	NONE	
ust enough to be buried under rubble, run over or submerged - Sinks.	Naso & Oropharyngeal CPR	
- -	- -	
-	-	
-	-	
- year	- year	
-	-	
ruthlee.com	simulaids.com	

Shoring reinvented.

First responders need shoring equipment that is as intuitive, versatile and smart as they are. That is why we have developed OmniShore, a shoring system reimagined from the ground up and designed in accordance with unparalleled standards of quality and safety.

Patented innovations such as the Trident Coupler and OmniLock system allow you to build unlimited applications with less parts, experience a seamless setup with less handling and take full control with less manpower.

Learn more at holmatro.com/omnishore

holmatro
mastering **power**