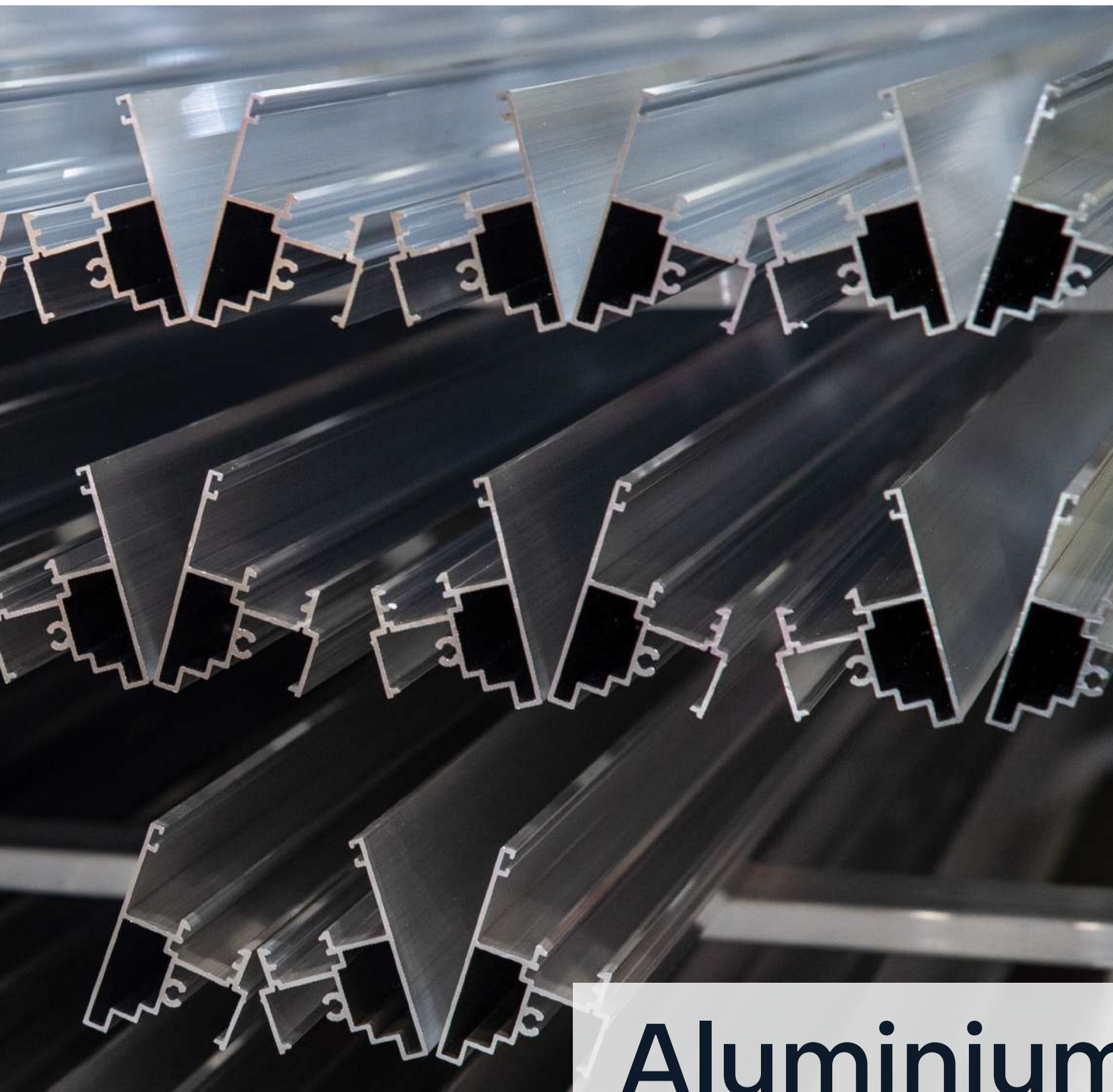




Aluminium profiles

CATALOGUE

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LINKIN

LINKIN

ALUMINIUM EXTRUSION. CONNECTED.

From drawing to delivery.



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About us



For over three decades, LINKIN has stood as a beacon of quality, driven by a passion for sustainability and energy efficiency. Our journey, rooted in familial values and founded in Bulgaria, has expanded to resonate across Europe, where we proudly lead the market with distinction.

From our humble beginnings, we have evolved into an industrial powerhouse, guided by our founding principles of integrity and progress. Our commitment to excellence has forged enduring partnerships, enabled us to navigate challenges, and embrace opportunities for growth.



At LINKIN, we continue to lead with honesty and a steadfast commitment to shaping the future of our industry. Our dedication to efficiency and innovation is evident in how we transform resources into high-quality products and solutions.

With a focus on creativity and sustainability, we leverage cutting-edge technologies to maximise success for our partners.

Why LINKIN?

The aluminium manufacturing edge.

Our new aluminium plant, opened in 2024, is one of the largest and most modern extrusion facilities in the Balkans – built for industrial B2B volumes and consolidating the entire production chain inside a single facility.

One Partner & Full Processing

Automated extrusion lines, surface treatment, powder coating, anodizing, sublimation and precision CNC machining – one partner, from die to dispatch.

Robotic Storage

An automated 2,000-cell high-bay warehouse that eliminates manual handling damage and accelerates dispatch.

Guaranteed Press Capacity

Take control of your planning – your production date, with confirmed capacity reserved in our plant.

EU & Sustainable Advantage

Direct European delivery with zero tariff barriers, complete CBAM risk elimination, closed-loop scrap recycling and clean power from our rooftop solar park.

From drawing to delivery.

DRAWING



CONFIGURE

Define technical specifications, finishes and machining digitally – calculating accurate offers in real time.

ORDER

Submit orders via your Partner Portal and confirm your own production dates directly on our press plan.



PRODUCTION



Your profile. Our aluminium infrastructure.

It is not only the machines. It is how we run them. From order entry to logistics dispatch, every step in our plant is managed in SAP with Industry 4.0 automation.

Every profile bundle is fully traceable: alloy composition, extrusion die, press run, surface treatment, quality inspection. Discipline in every step – documented, verifiable, repeatable.

LINKIN does not merely supply aluminium profiles – we provide the connected manufacturing and digital infrastructure on which your business operates and grows. The Partner Portal and our APIs are your window into the factory.

TRACK

Follow real-time production and delivery status with full operational transparency.

DELIVERY

INTEGRATE

Plug our factory directly into your ERP using custom APIs to automate order flow and data updates.

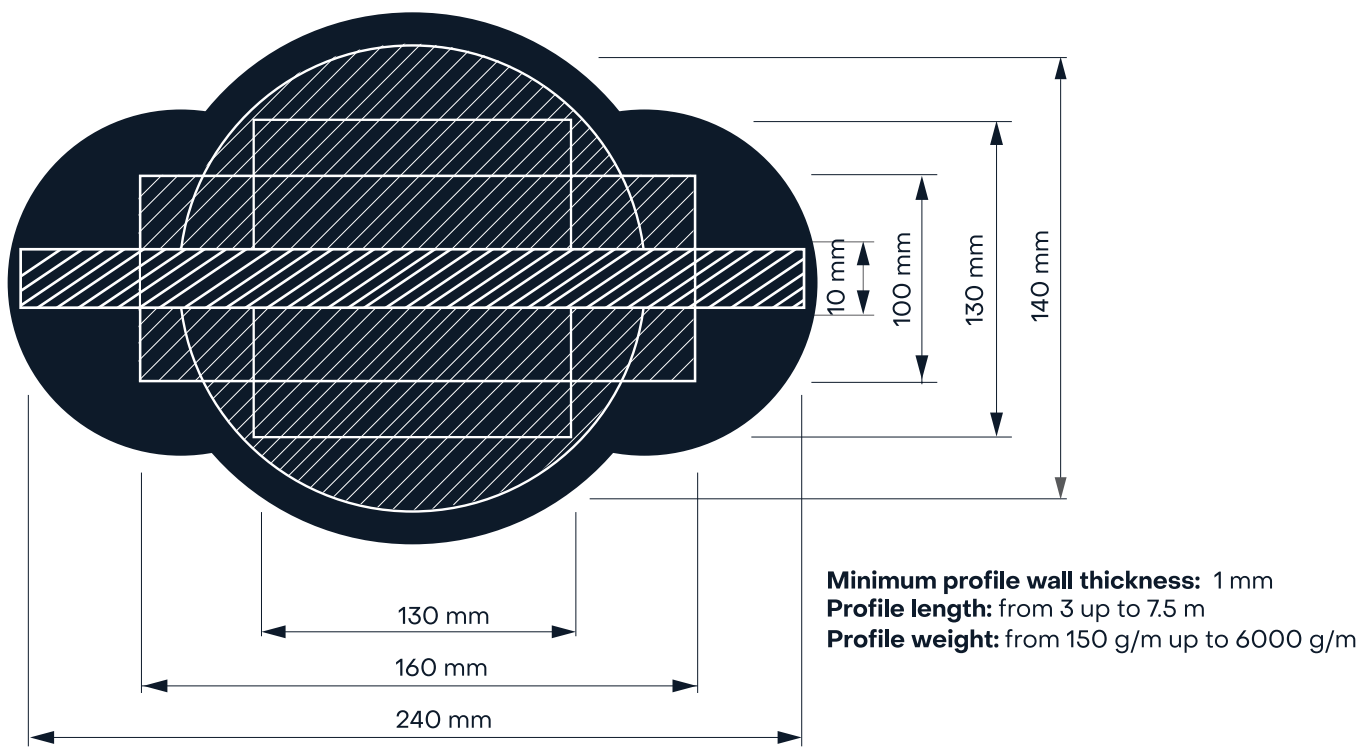
Extrusion



Our state-of-the-art extrusion facilities enable us to precisely extrude aluminium profiles of various shapes and sizes. With advanced machinery and skilled technicians, we ensure the highest quality and dimensional accuracy in every extruded profile we produce.

Extrusion line

- SMS – OMAV 20 MN, 7-inch extrusion press
- Max length of 7500 mm
- Capacity of 7000 t/year
- Fully automated handling of the baskets of profiles from the automatic profile stacker to the ageing oven and from the ageing oven to the storage area



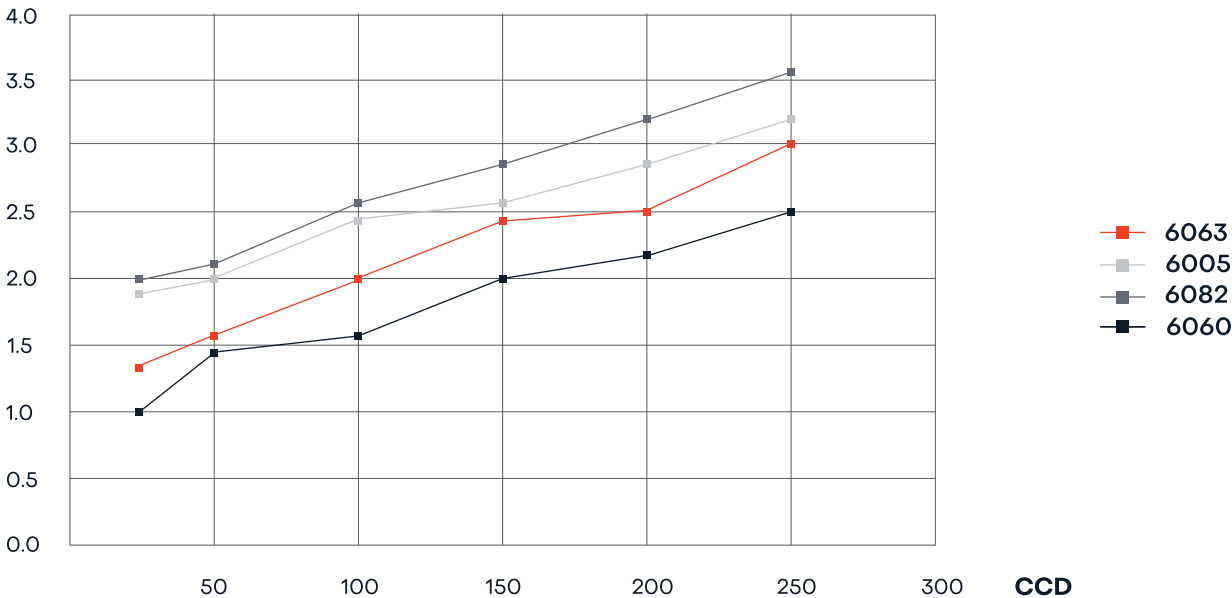
Open profiles	Hollow profiles	Solid profiles
overall hatched zone	Square tubes max 130 x 130 mm	Square bars max 50 x 50 mm
	Rectangular tubes max 160 x 100 mm	Rectangular bars 240 x 15 mm
	Round tubes max diameter 140 mm	Round bars max diameter 50 mm

All inquiries are handled individually!

Wall thickness

The decrease of the wall thickness cannot be unlimited. It depends on the profile's size (Circumscribed Circle Diameter) and the alloy to extrude. The recommended minimum material thickness is shown below:

Wall Thickness



Powder coating



LINKIN's aluminium vertical powder coating offers a durable and visually appealing finish for surfaces. Applied electrostatically and cured under heat, it forms a protective layer against corrosion, UV rays, and abrasion. With a wide variety of colours and finishes available, it is ideal for architectural, automotive, and industrial applications.

Vertical powder coating

- EUROIMPIANTI
- Profiles up to 7000 mm
- Applicable standard Qualicoat
- Cross section (max): 300 x 80 mm
- Over 800 colours on stock



Here's a step-by-step guide to the powder coating process:

Preparation

Cleaning and preparing the aluminium surface to remove contaminants and ensure proper adhesion.

Curing

Heating the coated aluminium to melt and cure the powder coating, forming a durable finish.

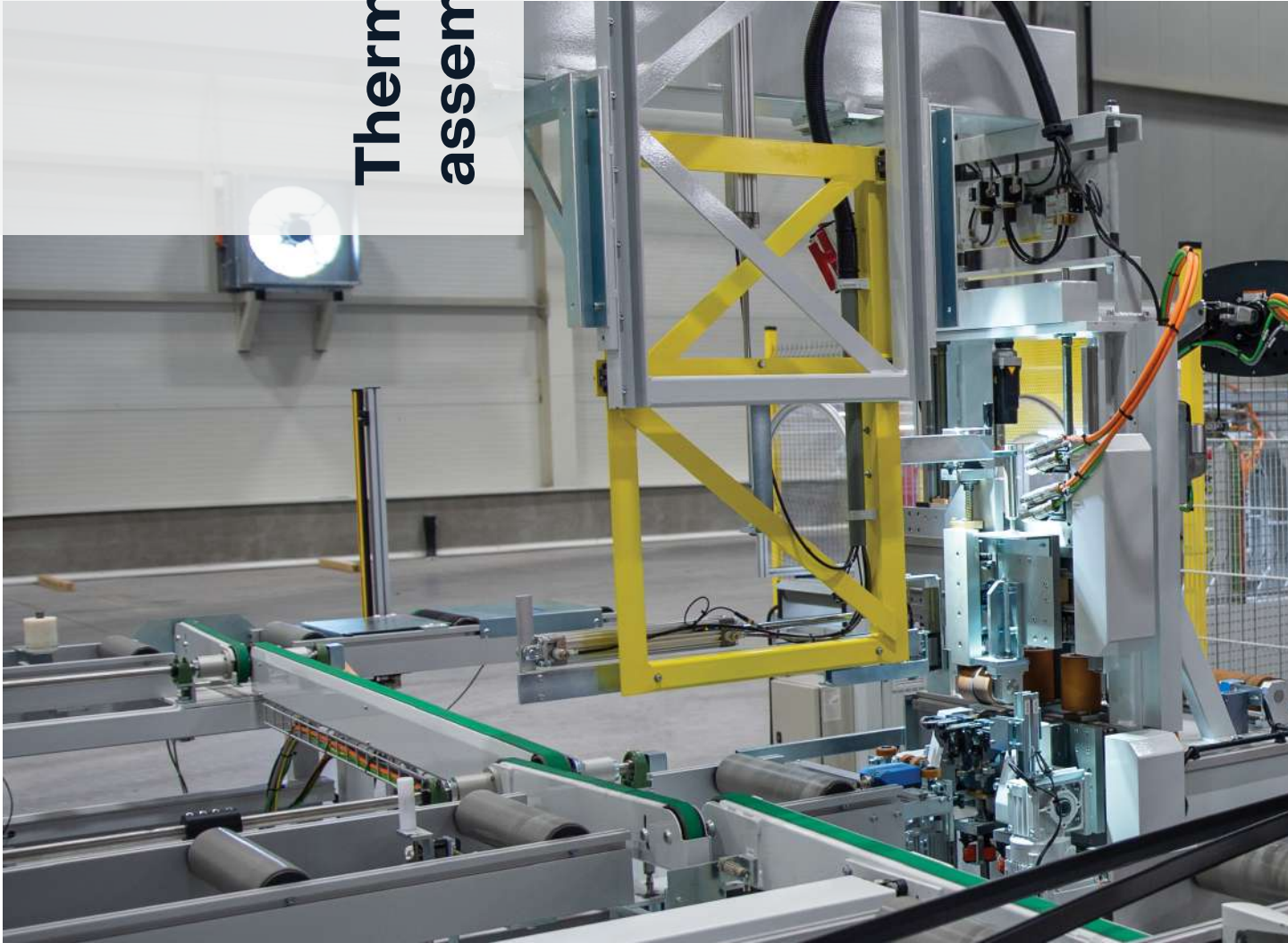
Application

Electrostatically applying the powder coating onto the prepared aluminium surface.

Cooling and inspection

Allowing the coated aluminium to cool and inspecting the surface for quality and uniformity.

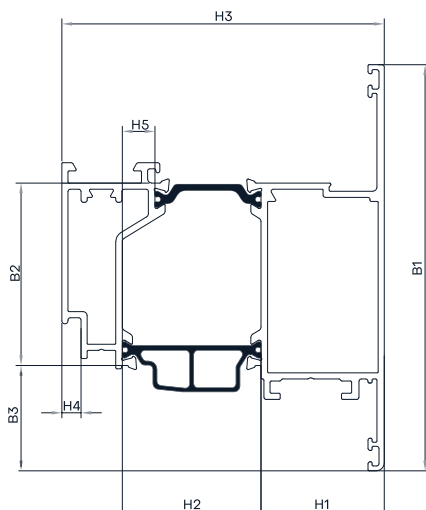
Thermal break assembly



We specialise in thermal break assembly, which involves incorporating insulation materials into aluminium profiles to enhance energy efficiency. Our thermal break assembly process ensures optimal thermal performance and contributes to sustainable building solutions.

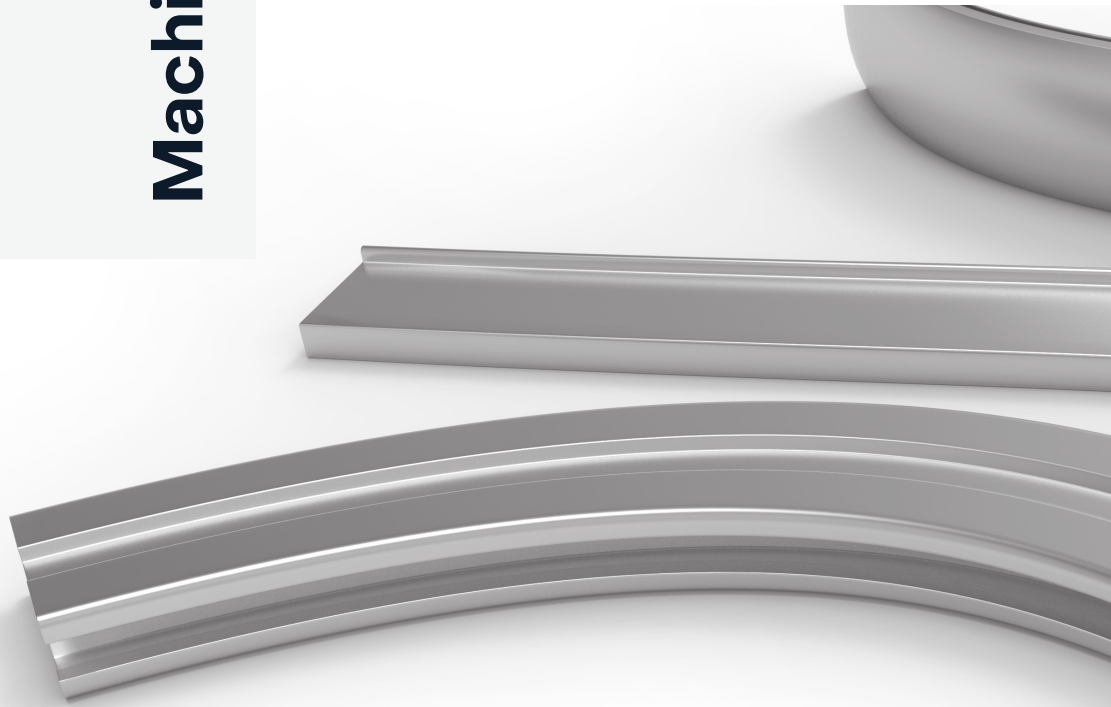
Thermal break assembly

- Muller Technologies
- Advanced 3-in-1 technology for knurling, strip inserting and rolling (crimping)
- 1 machine for 3 operations, only 2 operators for full productivity
- Unique rolling (crimping) process to ensure straight profiles
- Profiles up to 7500 mm
- Applicable standard is EN 14024



Rolling Machine Advanced	Einrollanlage Type Advanced
B1	395
B2	0-245
B3	75
H1	120
H2	15-100
H3	440
H4	120
H5	320

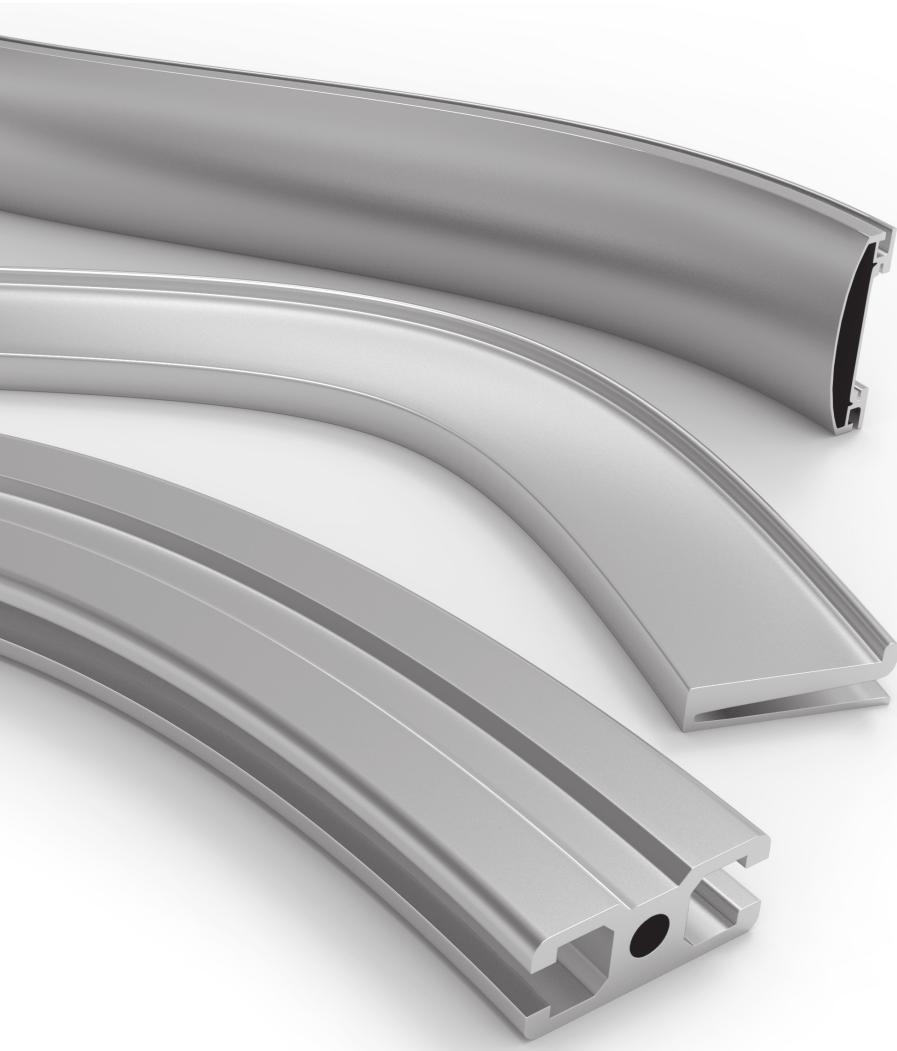
Machining



With our advanced machining capabilities, we can provide precise and customized machining services for aluminium profiles.

Machining

- 3-axis profile machining centre with optional 5-sided machining that's easy to use and has a minimal footprint
- All operations, such as routing, drilling, notching and tapping, are performed while the profile bar is stationary to protect the profile surfaces



Whether it's drilling, cutting, or perforation, our skilled people utilize cutting-edge equipment to meet the exact specifications of our clients.

Cutting

The process of cutting aluminium profiles to specific lengths or shapes using sawing, shearing, or CNC machining.

Drilling

Creating holes or openings in aluminium profiles using drill bits or CNC drilling machines.

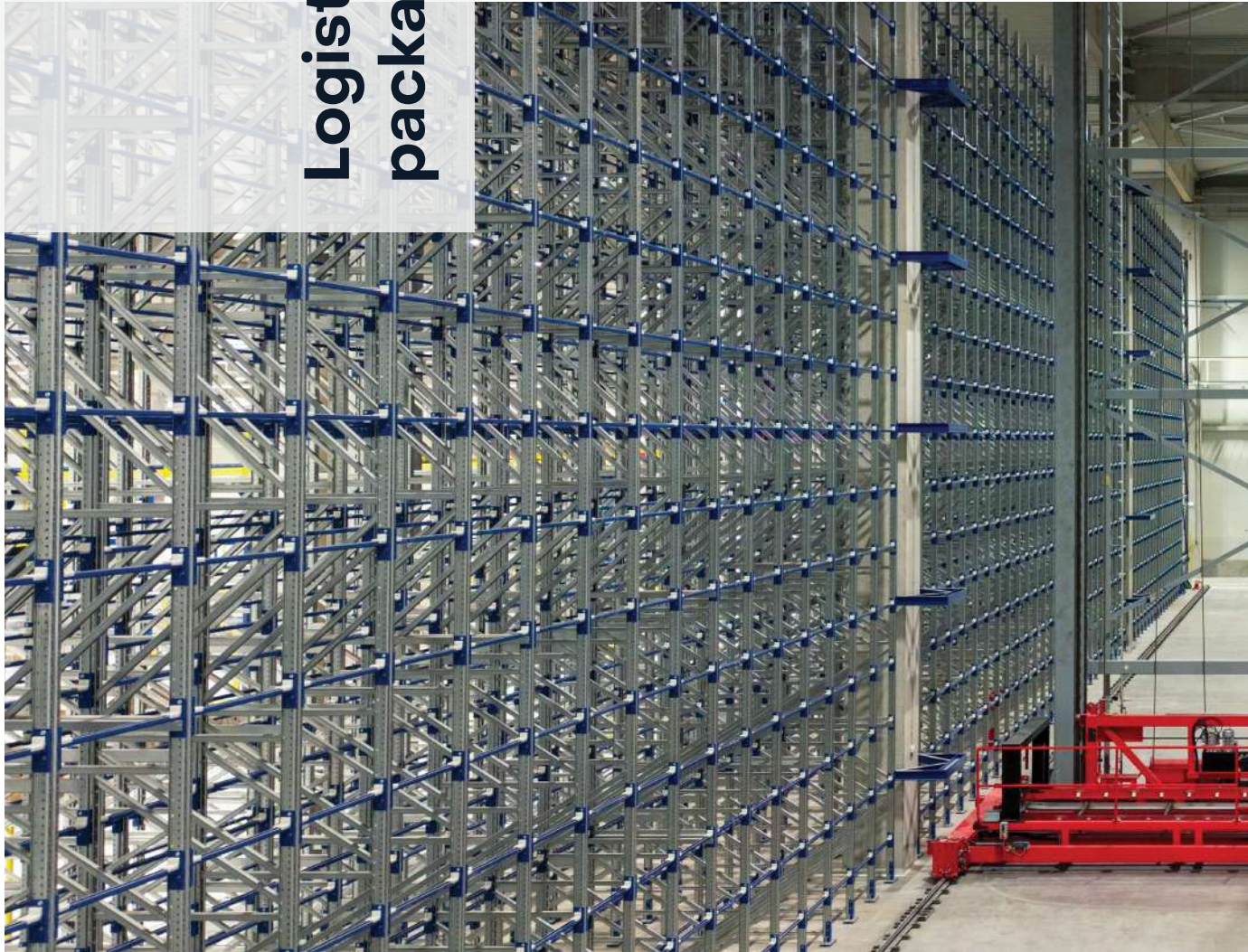
Perforation

Punching or stamping patterns of holes or slots into aluminium profiles for ventilation, drainage, or aesthetic purposes.

Bending

Shaping aluminium profiles into curves or angles using bending machines, providing structural integrity or aesthetic appeal.

Logistics and packaging



Automated warehouse and logistics

- Fully automated warehouse
- 2000 cells
- Profiles up to 7500 mm

Real-Time Automatic Routing

- Customer orders are stored in the automated warehouse after extrusion.
- Software integration between warehouse, SAP ERP, and MES systems.
- Automatic routing based on order shipment date, post-processing, and current status in real time.



Customer-Oriented Picking

- Orders are produced and processed specifically for each customer.
- Picking and packaging are done as per customer specifications.
- Mix-and-match capabilities enable us to maximise truck loads and realise savings on shipping.

Order Traceability

- Full order status traceability allows us to detect delays and implement remedies, ensuring on-time delivery.
- Batch identification on each basket with logging of each operation's input and output.
- Comprehensive traceability enables superior quality control, allowing for detailed root cause analysis and preventive actions.

Aluminium alloys



Aluminium alloys are materials that consist primarily of aluminium as the base metal, with other alloying elements added to enhance their properties for specific applications. These alloys are widely used in various industries due to their lightweight, corrosion resistance, and excellent strength-to-weight ratio.

Here are some key points about the alloys we use in our production:

	6060	6063	6005	6082	1050A
Silicon (Si)	0.30–0.60	0.20–0.60	0.50–0.90	0.70–1.30	0.25
Iron (Fe)	0.10–0.30	0.35	0.35	0.50	0.40
Copper (Cu)	0.10	0.10	0.30	0.10	0.05
Manganese (Mn)	0.10	0.10	0.50	0.40–1.00	0.05
Magnesium (Mg)	0.35–0.60	0.45–0.90	0.40–0.70	0.60–1.20	0.05
Chromium (Cr)	0.05	0.10	0.30	0.25	–
Zinc (Zn)	0.15	0.10	0.20	0.20	0.07
Titanium (Ti)	0.10	0.10	0.10	0.10	0.05
Other	Each	0.05	0.05	0.05	0.03
	Total	0.15	0.15	0.15	–
Aluminium (Al)	Rest	Rest	Rest	Rest	99.50

Physical properties

	6060	6063	6005	6082	1050A
Melting range °C	585–650	585–650	610–650	575–650	645–658
Density [g/cm ³]	2.70	2.70	2.70	2.70	2.70
Electrical Conductivity [MS/m]	34–38	30–36	26–32	24–32	34–36
Thermal Conductivity [W/(m.K)]	200–220	200–220	180–220	170–220	210–230
Specific Heat [J/(kg.K)]	898	898	890	896	900
Thermal Expansion Values					
–50 to 20 °C (10 ^{–6} /K)	21.80	21.80	21.80	21.80	21.80
20 to 100 °C (10 ^{–6} /K)	23.40	23.40	23.40	23.40	23.60
20 to 200 °C (10 ^{–6} /K)	24.50	24.50	24.50	24.50	24.50
20 to 300 °C (10 ^{–6} /K)	25.60	25.60	25.00	25.60	25.50
Young's Modulus [MPa]	69500	69500	69000	70000	69000
Shear Modulus [MPa]	26100	26100	26000	26400	26000

Mechanical properties

	Temper	Wall thickness	Tensile strength	Yield strength	Elongation		Brinell Hardness
		e [mm] *	Rm [MPa (min)]	Rp0,2 [MPa (min)]	A [% (min)]	A50mm [% (min)]	[HBW (typical)] **
6060	T4	e ≤ 25	120	60	16	14	50
	T5	e ≤ 5	160	120	8	6	60
		5 < e ≤ 25	140	100	8	6	60
	T6	e ≤ 5	190	150	8	6	70
		5 < e ≤ 25	170	140	8	6	70
	T64	e ≤ 15	180	120	12	10	60
	T66	e ≤ 5	215	160	8	6	75
		5 < e ≤ 25	195	150	8	6	75
6063	T4	e ≤ 25	130	65	14	12	50
	T5	e ≤ 10	175	130	8	6	65
		10 < e ≤ 25	160	110	7	5	65
	T6	e ≤ 10	215	170	8	6	75
		10 < e ≤ 25	195	160	8	6	75
	T64	e ≤ 15	180	120	12	10	65
		e ≤ 10	245	200	8	6	80
	T66	10 < e ≤ 25	225	180	8	6	80
6005	T4 open	e ≤ 25	180	90	15	13	50
	T4 hollow	e ≤ 10	180	90	15	13	50
	T6 open	e ≤ 5	270	225	8	6	90
		5 < e ≤ 10	260	215	8	6	85
		10 < e ≤ 25	250	200	8	6	85
	T6 hollow	e ≤ 5	255	215	8	6	85
		5 < e ≤ 15	250	200	8	6	85
6082	T4	e ≤ 25	205	110	14	12	70
	T5 open	e ≤ 5	270	230	8	6	90
	T5 hollow	e ≤ 5	270	230	8	6	90
	T6 open	e ≤ 5	290	250	8	6	95
		5 < e ≤ 25	310	260	10	8	95
	T6 hollow	e ≤ 5	290	250	8	6	95
		5 < e ≤ 15	310	260	10	8	95
1050A	F, H112 ***	all	60	20	25	23	20

All values are per EN 755-2:2016 and apply to EXTRUDED PROFILES. Rod/bar and tube are specified separately in the same standard with different values.

* For a profile having different wall thicknesses, the lowest specified value of properties shall be considered as valid for the whole profile cross section.

** Brinell hardness values HBW are for information only (EN 755-2, clause 3.1).

*** Property values are for information only and are not guaranteed minima (EN 755-2, footnote c).

6060	6063	6005	6082	1050A
–	–	–	O, H111	F, H112
T4	T4	T4 open / hollow	T4	–
T5	T5	–	T5 open / hollow	–
T6	T6	T6 open / hollow	T6 open / hollow	–
T64	T64	–	–	–
T66	T66	–	–	–

F – As fabricated. Applies to products of shaping processes in which no special control over thermal conditions or strain hardening is applied. No mechanical property limits are specified.

O – Annealed. Applies to products which are annealed to obtain the lowest strength temper.

H111 – Strain hardened less than required for a controlled H11 temper, after annealing or after hot forming.

H112 – Some temper acquired from shaping at elevated temperature, or from a limited amount of cold work, with specified mechanical property limits. (Paraphrase — see EN 515 for the exact wording.)

T4 – Solution heat treated and naturally aged to a substantially stable condition.

T5 – Cooled from an elevated temperature shaping process and then artificially aged.

T6 – Solution heat treated and then artificially aged.

T64 – Solution heat treated and then artificially aged in underageing conditions (between T6 and T61) to improve formability. The bending temper.

T66 – Solution heat treated and then artificially aged; mechanical property level higher than T6, achieved through special control of the process (6xxx series alloys).

Bendability classes

	6060	6063	6005	6082
T4	–	–	–	B2
T5	B3	B3	–	B3
T6	B3	B3	B3	B3
T64	B2	–	B3	–
T66	B3	B3	–	–

B2 – Material is in a medium strain-hardened, naturally aged or partially aged condition. Bendability for simple symmetrical sections with medium radii is possible. Thin-walled or complicated sections may require special devices or bending machines.

B3 – Material is in a hard, fully age-hardened condition. For simple symmetrical sections, bendability is possible only with relatively large radii. Thin-walled or complicated sections may require special devices or bending machines.

Characteristic properties & applications

EN AW-6060 ISO AlMgSi

Applications

- Window frames, doors and curtain walling
- Interior furniture, shopfitting and decorative trim
- Electronic heat sinks and lighting tracks
- Automotive trim and non-structural sections

Characteristic properties

- The most extrudable alloy in this range: intricate, thin-walled and asymmetric sections
- Good anodising and surface-finish quality
- Good atmospheric corrosion resistance
- Moderate strength; available in T4, T5, T6, T64 and T66
- T64 gives the best cold-bending performance in this range (bendability class B2)
- Readily welded by TIG and MIG

EN AW-6063 ISO AlMg0.7Si

Applications

- Architectural façades, glazing and window systems
- Heat sinks and cooling profiles
- Pipes, tubes and hollow sections
- Modular display and light transport framing

Characteristic properties

- The best surface finish in this range for anodising and powder coating
- Thermal conductivity 200–220 W/(m·K)
- Higher strength than 6060 at comparable formability (T6: Rm 215 vs 190 MPa)
- Good atmospheric corrosion resistance
- Readily welded by TIG and MIG

EN AW-6082 ISO AlSi1MgMn

Applications

- Load-bearing structures: bridges, trusses, gantries and cranes
- Automotive chassis parts, subframes and suspension components
- Marine superstructures, stiffeners and deck framing
- Machined structural components

Characteristic properties

- The highest-strength alloy in this range
- A structural substitute for mild steel at roughly one third the density
- Good resistance to marine and industrial atmospheres
- Good machinability in T6
- Lower extrudability than 6060/6063: thicker walls and simpler sections





EN AW-6005 ISO AISiMg

Applications

- Rail vehicle bodysells, bus and coach framing, truck bodies
- Solar mounting systems and support structures
- Ladders, scaffolding, walkways and safety railings
- Load-bearing profiles that still need a thin wall

Characteristic properties

- Structural strength while still extruding well as hollow sections
- Good corrosion resistance in outdoor and industrial atmospheres
- Good weldability, with strength recoverable by post-weld ageing
- A practical middle ground between 6063 and 6082

EN AW-1050A ISO Al99.5

Applications

- Busbars, conductors and transformer foil
- Chemical process tanks, vessels and pipework
- Food, pharmaceutical and technical foil
- Reflectors, cookware and signage

Characteristic properties

- Commercially pure aluminium, minimum 99,5 % Al
- The highest electrical and thermal conductivity in this range
- Very high ductility for deep drawing, bending and spinning
- Good corrosion resistance, including many chemical environments
- High optical and thermal reflectivity
- Low strength

Standards



The standards we are following in our aluminium extrusion are:

EN 755-1

Technical conditions for inspection & delivery

EN 755-2

Mechanical properties

EN 755-3

Round bars, tolerances on dimensions and form

EN 755-4

Square bars, tolerances on dimensions and form

EN 755-5

Rectangular bars, tolerances on dimensions and form

EN 755-6

Hexagonal bars, tolerances of dimensions and form

EN 755-7

Permissible dimensional and shape deviations for tubes pressed using a combined die

EN 755-8

Porthole tubes, tolerances on dimensions and form


EN 755-9

Profiles, tolerances on dimensions and form

EN 515

Temper designation

EN 573-3

Chemical composition and form of products

EN 12020-1

Technical conditions for inspection and delivery (for precision profiles only)

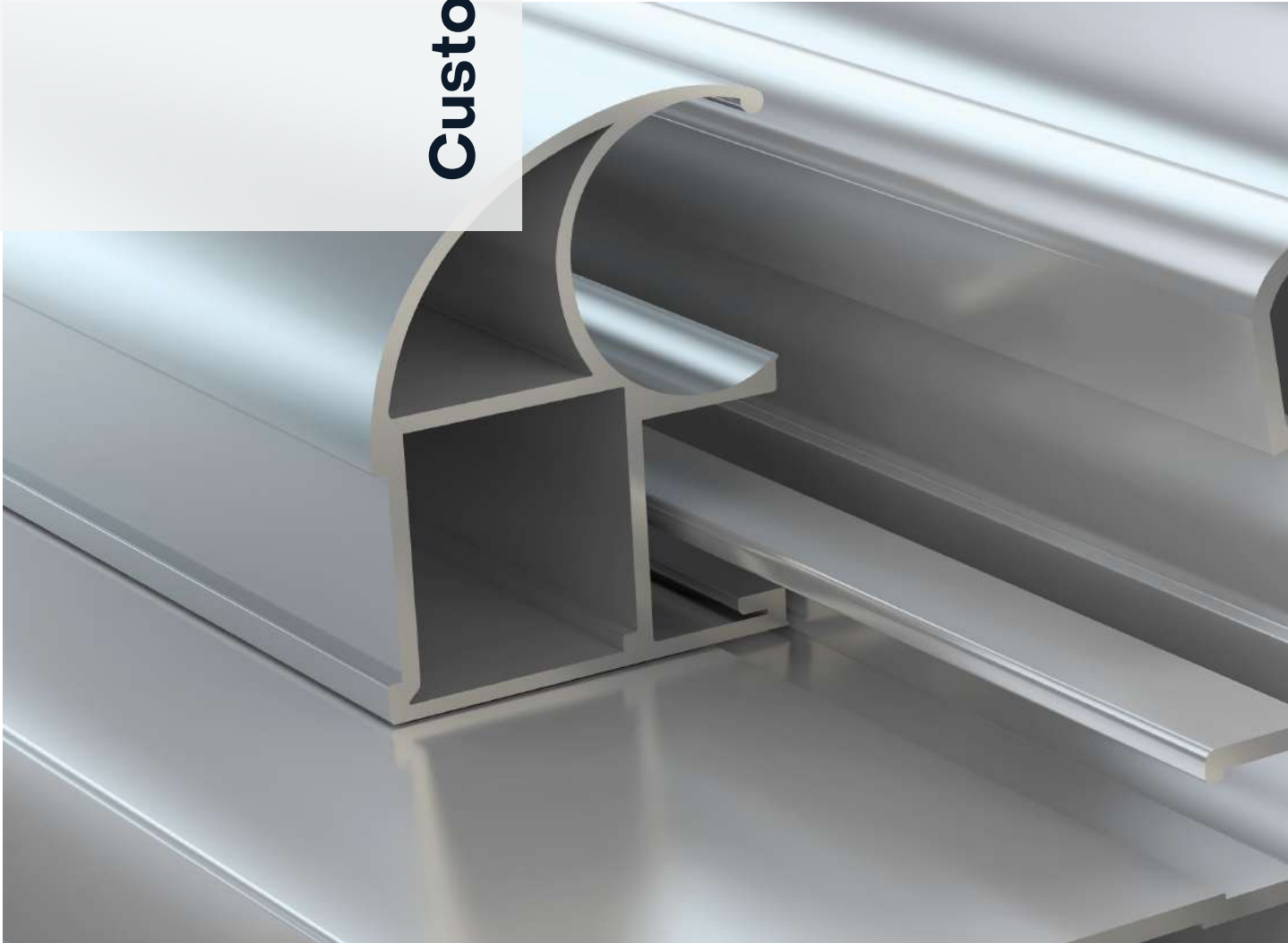
EN 12020-2

Tolerances on dimensions and form (for precision profiles only)

ISO 2768-1

Tolerances for linear and angular dimensions without individual tolerance indications.

Custom profiles



We produce custom aluminium profiles from drawings supplied by our clients, or developed together with our team from a functional specification. Alloy, temper and tooling are selected to suit the section geometry, the loads it carries and the finish it needs.

Custom profiles are used across a wide range of industries:

Construction

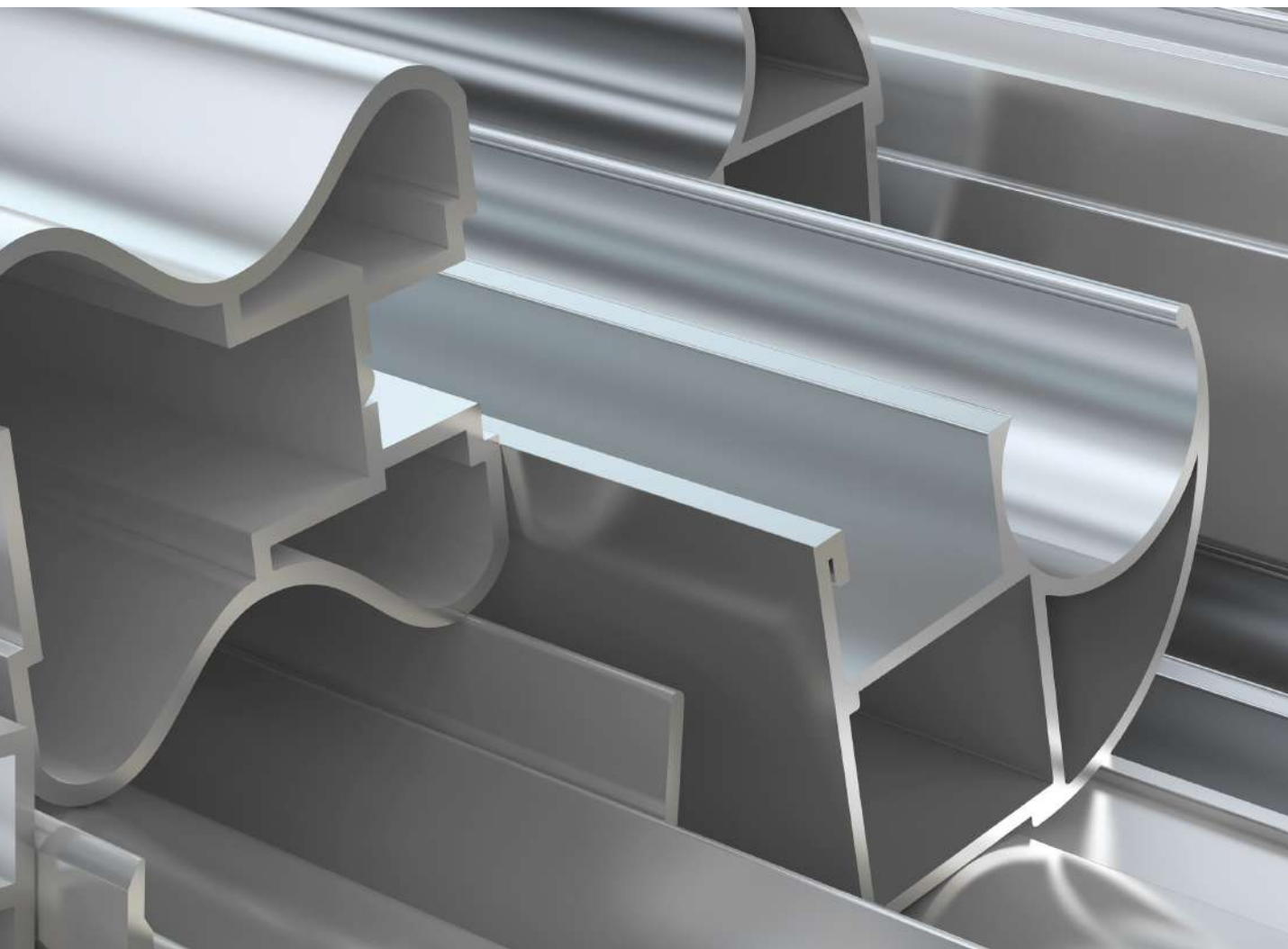
Curtain walling, window and door systems, façade sub-frames and structural members. Anodised or coated 6060 and 6063 where the profile is visible; 6082 where the section carries load.

Manufacturing

Machine frames, guarding, conveyor and linear-motion sections, jigs and modular T-slot framing. Profiles that bolt together rather than weld shorten build time and allow later reconfiguration.

Marine

Superstructure framing, deck sections, rails and fittings, typically 6082 or 6005A. Good resistance to marine atmospheres; immersed and splash-zone service needs alloy and protection agreed per project.



Electronics

Heat sinks, cooling profiles, chassis and enclosures. 6063 combines 200–220 W/(m·K) thermal conductivity with the extrudability needed for close-pitch fin arrays.

Retail Fixtures and advertising

Modular display systems, shopfitting, signage, LED light-box and tension-fabric frames. Custom sections let one fixture family share a single visual language across many sizes.

Transportation & Rail

Chassis, subframes, truck/trailer bodies, bus/coach frames and rail bodyshells. 6005A hollow profiles provide high strength with low weight, reducing fuel/energy use and enabling efficient welded structures.

Renewable Energy

PV module frames, mounting rails, roof and ground-mount structures, tracker components. Anodised 6xxx profiles are specified for long outdoor service life with minimal maintenance.

Furniture

Table and desk frames, cabinet and wardrobe sections, shelving, handles and edge trim. 6060 and 6063 hold a consistent anodised finish across long runs – which matters when profiles sit side-by-side in a visible assembly.

Sporting Goods

Frames, masts, poles, tracks and telescopic sections. Good strength-to-weight and formability, with an anodised finish that stands up to handling and weather.

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