

# RESPONSIBILITY ALWAYS INVOLVES THE WHOLE PROCESS: HI-ENGINEERED TUBES & SECTIONS.





Market developments imply new opportunities but also many new challenges for the industry.

To ensure you can better meet all the present and future requirements regarding quality, safety and environmental compatibility, we remain steadfast in pursuit of our vision: developing the best cold-rolled steel pipes and profiles in the world on your behalf.



This means focusing on essentials, the requirements of our customers. We believe our solutions are only perfect if they enable you to implement your ideas to the full.

The products of decades of experience, our achievements allow you to stay that all-important one step ahead in terms of quality and efficiency, and to pass this on to your customers as added value.

We consider quality, the environment and health and safety at work to be equally important. As an employer we are always conscious of our responsibility and committed to investing in the continuing professional development of our employees as well as quality assurance.

Therefore both environmental management and quality control at voestalpine Krems have ISO certification.

Our mission is clearly defined: enabling our customers to be successful.

### DESIGNED FOR PROGRESS: HI-ENGINEERED TUBES & SECTIONS.



The industry needs steel solutions which are more individual and more intelligent than ever before. voestalpine Krems ensures you can implement your ideas to the full. With Hi-Engineered Tubes & Sections.

Hi-Engineered Tubes & Sections stand up to conditions in which other tubes and sections have long since failed. Deliberately malleable and yet solid. Thin-walled yet immensely strong. Hi-Engineered Tubes & Sections are highly precise solutions for sophisticated products in virtually any application area.

voestalpine Krems offers a uniquely competent service and range of materials throughout its integrated process chain. Synergies in the voestalpine Group, premium steel and an unending passion



for innovations lasting for decades all combine to produce steel sections for tomorrow.

Enjoy a new kind of freedom when developing your products: unique throughout the world, our products and services and long-lasting development partnerships enable us and our customers to work together to find the right answers even for special requests. Give your ideas totally free rein. Quality +

Know-how + Innovation + Service = Hi-Engineered Tubes & Sections







Working closely together with our customers means we know their processes and requirements better than almost any other company in our industry.



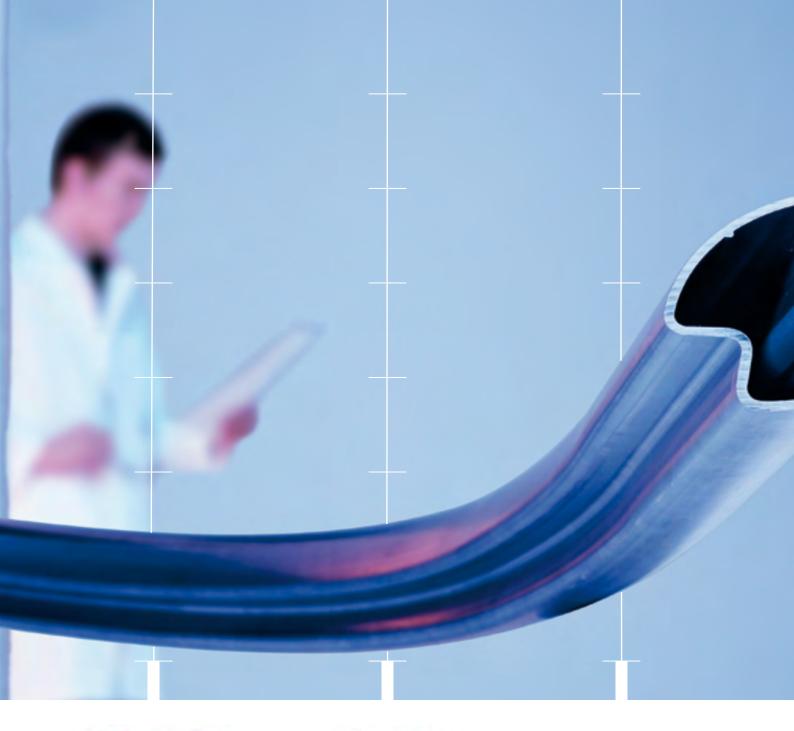
### Research

Operating in a global network of over 600 research partners, voestalpine Krems is continually developing new materials and processing technologies.

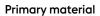


Steel base

Using our own steel base at the most advanced and environment-friendly steel works in Europe allows us to take account of all our customers' requests from the earliest production stage onwards.







Within the voestalpine Group we have access to premium steel of every type and grade. With us as your development partner your innovations stay one step ahead.



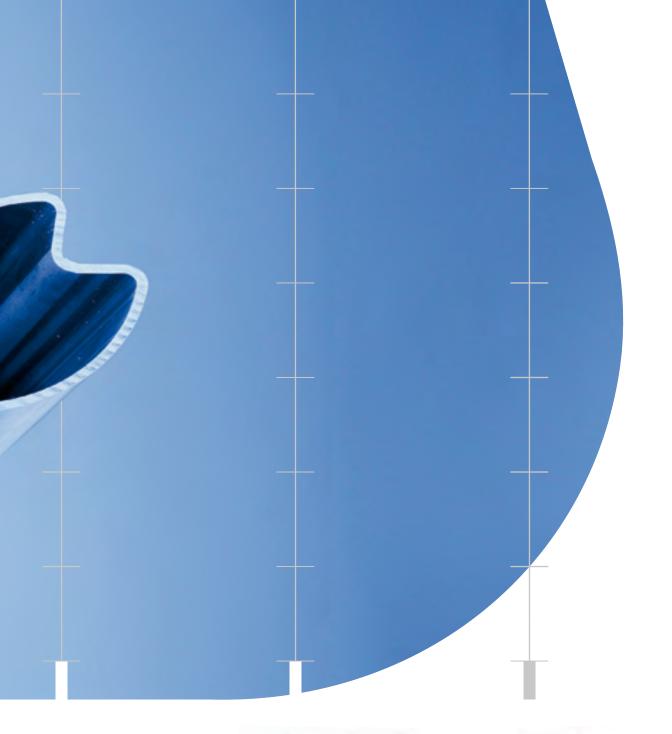
### Process engineering

Precisely coordinated processes throughout all the production stages up to and including the final tests with highly advanced measuring instruments guarantee precision products.



### Rollforming

In our quest for the ideal solution we rely on our cutting-edge production technology, creativity, world-class engineering and continual process optimisation.









### Service

Whether it concerns hand-made samples, pre-series prototypes or optimum series production: we provide you with comprehensive support, helping you to refine your materials processing.

### Markets

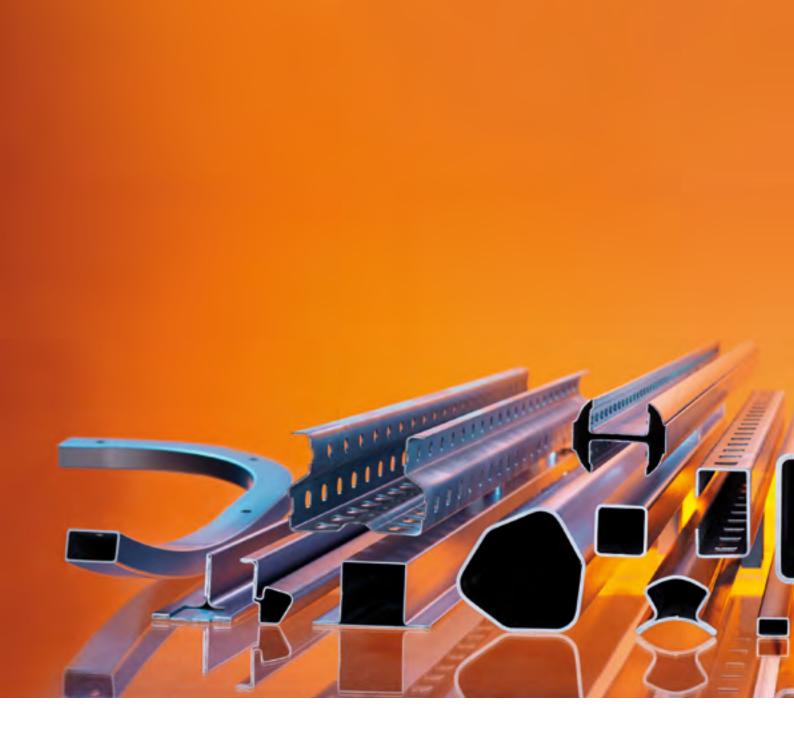
Whether steel and mechanical engineering, the building supplies and automotive industries, our wide-ranging solutions and close relationships with our customers all over the world make us a reliable partner in very different industries.

### Engineering

From basic to detailed engineering: developing products together with our customers enables us to achieve individual tailored solutions.



WHAT WE DO, WE DO WITH TOTAL COMMITMENT.
REGARDLESS OF WHETHER IT CONCERNS
DEVELOPING NEW TECHNOLOGIES OR MEETING
OUR CUSTOMERS' REQUIREMENTS TO THE LETTER.
THE RESULT: HI-ENGINEERED TUBES & SECTIONS.

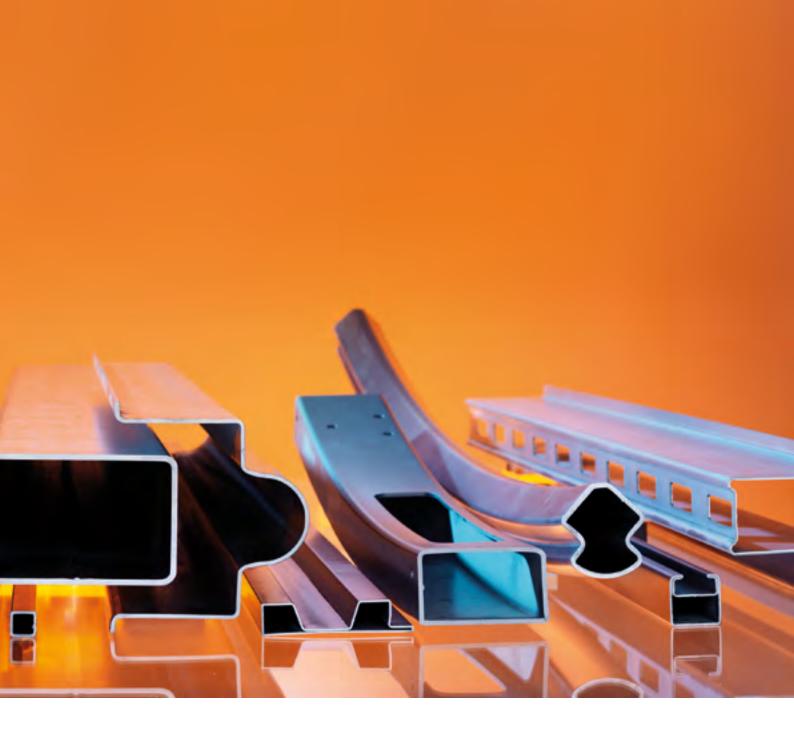


### TAILORED TECHNOLOGY KEEPS YOU ONE STEP AHEAD: HI-ENGINEERED TUBES & SECTIONS.

Hollow sections and profiled tubes

Quality is often something you appreciate only years later. Designed for universal application, our hollow sections and profiled tubes give you quality standards you can rely on for a long time and when subject to extreme stress. Reliability such as this is rarely to be found in such long-lasting products. As so

often, perfection lies hidden in the detail. The closest tolerances, excellent weldability, top performance: perfect material characteristics make any further processing significantly easier for you. Keep on the safe side with voestalpine Krems hollow sections and profiled tubes.



### Tailored tubes and sections

Individually manufactured for our customers, the tailored tubes and sections are designed to meet the technical, functional and design requirements of our customers or their applications exactly. Their versatility in terms of design means they can incorporate functions

of adjacent components, enabling significant reductions in terms of both weight and further processing costs. No need to hold back with any of your plans.

### FURTHER PROCESSING - MORE THAN ONE STEP AHEAD

In our cutting-edge plant facilities we carry out any further processing quickly and cost-effectively. This reduces your production expenses, optimises the processes themselves and cuts costs.

### 3D laser cutting

We provide profiled tubes, hollow and light steel sections in precisely the shape you require – accurate, flexible fast.

### Perforating, drilling

We provide our tubes and sections with perforation patterns exactly according to your specifications

### Sawing

Maximum precision and optimum material input guarantee the best results and highly reliable production.

### Bending

We shape tubes and sections according to your required radii and without losing any of the specific properties of the products and materials.

### Clinching & spot welding

We join open sections to the ready-to-assemble components you need, so as to ensure logical, durable connections.

### Flanging, indenting, end forming

Using press dies for specific products, we reshape tubes and sections locally in order to create components with additional integrated functions.





OUR PERFORMANCE FOCUSES UNCONDITIONALLY ON OUR CUSTOMERS' NEEDS.

### MOVING YOU INTO THE FAST LANE: HI-ENGINEERED TUBES & SECTIONS FOR VEHICLE MANUFACTURING.

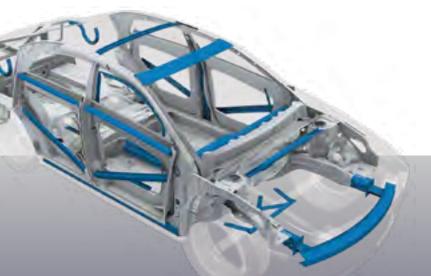
Stronger, lighter, safer - with even more function and design options: advanced voestalpine Krems section solutions for vehicle and cab manufacturing make it easier for you to comply with the statutory, legal, safety and technical requirements of the market. In working together we can develop solutions which will enable you to enter new territory in terms of lightweight construction. What does this mean for you? You can more easily fulfil environmental requirements, improve the balance of your fleet as a whole and cut your production costs. Whether it concerns small series or huge annual quantities: our experts in voestalpine Group's global competence network can formulate the most efficient overarching concept for your needs as early as the development stage. Save yourself time and money by contacting us as soon as you have started the design process.

Examples of applications in vehicle manufacturing:

- » Front, rear and side impact protection
- » Side members
- » Bumpers
- » Window guide rails
- » Load bed frames
- » Locking rails
- » Axle supports and axle components
- » Cross members
- » Dashboard carrier
- » Towing couplings
- » Door impact protection systems
- » Space frame structures

Examples of applications in agricultural and construction machinery:

- » Chain guides
- » Door frames
- » Load bed frames
- » ROPS and FOPS safety cabs
- » Safety frames









## LONG-LASTING AND SAFE: HI-ENGINEERED TUBES & SECTIONS FOR THE CONSTRUCTION INDUSTRY.

Steel used in the construction industry must be capable of withstanding the toughest conditions day in day out. Sometimes the materials are tested to the limits of their load-bearing capacity. voestalpine Krems robust section solutions are high-quality products, deliberately designed to meet the most stringent safety standards. Convinient processing is ensured through excellent weldability and tight tolerances. Moreover, many of the products achieve a significant weight reduction thanks to innovative material technologies, without in any way undermining their safety and reliability.

Examples of applications in the construction industry:

- » Fastening technology
- » Bridge safety rails
- » Anchor rails
- » Partitioning
- » Ceiling rails
- » Runners

Examples of applications in formwork:

- » Frame sections/tubes
- » Cross member sections/tubes
- » Anchor sections/tubes

Examples of applications in container manufacturing:

- » Floor frames
- » Roof frames
- » Corner pillars

Examples of applications in door and gate manufacturing:

- » Door frames
- » Garage doors, industrial doors
- » vrame form, vrame therm, vrame fire advanced system for door and portal manufacturing, also for fire-resistant and thermal partitions





## EFFICIENT SOLUTIONS IN INDIVIDUAL DESIGNS: HI-ENGINEERED TUBES & SECTIONS FOR SOLAR TECHNOLOGY.

Lightweight yet robust. Ready to assemble and fast available. Definitely the more economical alternative to conventional aluminium solutions: voestalpine Krems steel profiles for photovoltaic and solar installations. Structurally optimised, corrosion resistant, economic: combining crucial requirements with an advanced substructure, these individually tailored solutions are perfect for ground-mounted and roof systems.

### Advantages:

- » Cost-and time-saving through ready-to-fit solutions
- » Technical advice on optimising cross-sections in terms of co-design
- » Inline processing (perforations, punching) or attaching adjacent components possible
- » Wider spans between supports by using steel instead of aluminium

### Application Examples:

- » Ground-mounted systems, solar trackers
- » Roof-mounted systems
- » Self-supporting covers
- » Back rails for thin-film modules
- » Solar power plant components



### ECONOMICAL STORAGE SYSTEMS: HI-ENGINEERED TUBES & SECTIONS FOR STORAGE AND CONVEYOR TECHNOLOGY.

Efficient products for economical storage systems.

Both our wide range of products and services and our innovative response to individual requests and requirements make us the ideal partner for implementing your projects.

Our long experience in manufacturing custom cross-sections for very different storage systems as well as custom materials for optimum static solutions gives you critical competitive edge.

### Advantages:

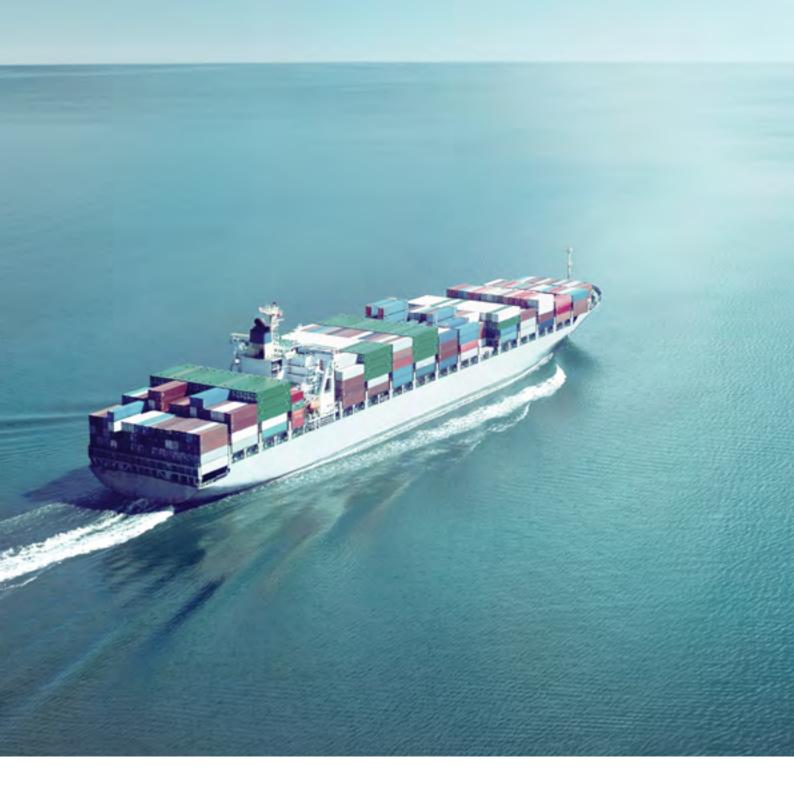
- » High level of technical competence thanks to decades of experience
- » Top product quality
- » Savings during assembly thanks to our close tolerances

### Application Examples:

- » Vertical members
- » Pallet supports
- » Slide rails
- » Side plates
- » Diagonals
- » Support angles
- » Runners
- » Guide sections







ADVANTAGES OF OUR WORLDWIDE COMPETENCE NETWORK: HI-ENGINEERED TUBES & SECTIONS.



We are there for our customers, wherever and whenever they need us. Our affiliated companies in all the key markets enable us to respond quickly and flexibly to individual customer requests. voestalpine Group's worldwide competence network allows us to assemble the right brains around a table and have their combined expertise develop customised solutions for every project. As the world's largest roll-forming group,

our unique global sales structure and the logistics solutions we and our customers coordinate between us enable us to deliver exactly what will take our customers forward quickly and reliably: Hi-Engineered Tubes & Sections.

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