

Solutions in Steel

INNOVATIVE TECHNOLOGIES FOR SMART SOLUTIONS

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Company

Montanstahl is a dynamic family-owned company active in the production and supply of high quality special steel shapes. Established in 1983 in Switzerland, Montanstahl has achieved a high level of knowhow and ranks among the worldwide market leaders in its business segment. Demand for custom tailored products is continuously rising and Montanstahl adapted to these market requests by investing in innovative technologies. All types of steel from low carbon, through SBQ to stainless and tool steel grades are processed.

In close co-operation with our customers we continuously search for new products and optimized manufacturing processes. During design stage of new profiles we make sure that all manufacturing technologies are taken into consideration to give customers the most cost effective solution and at the same time highest quality standard.

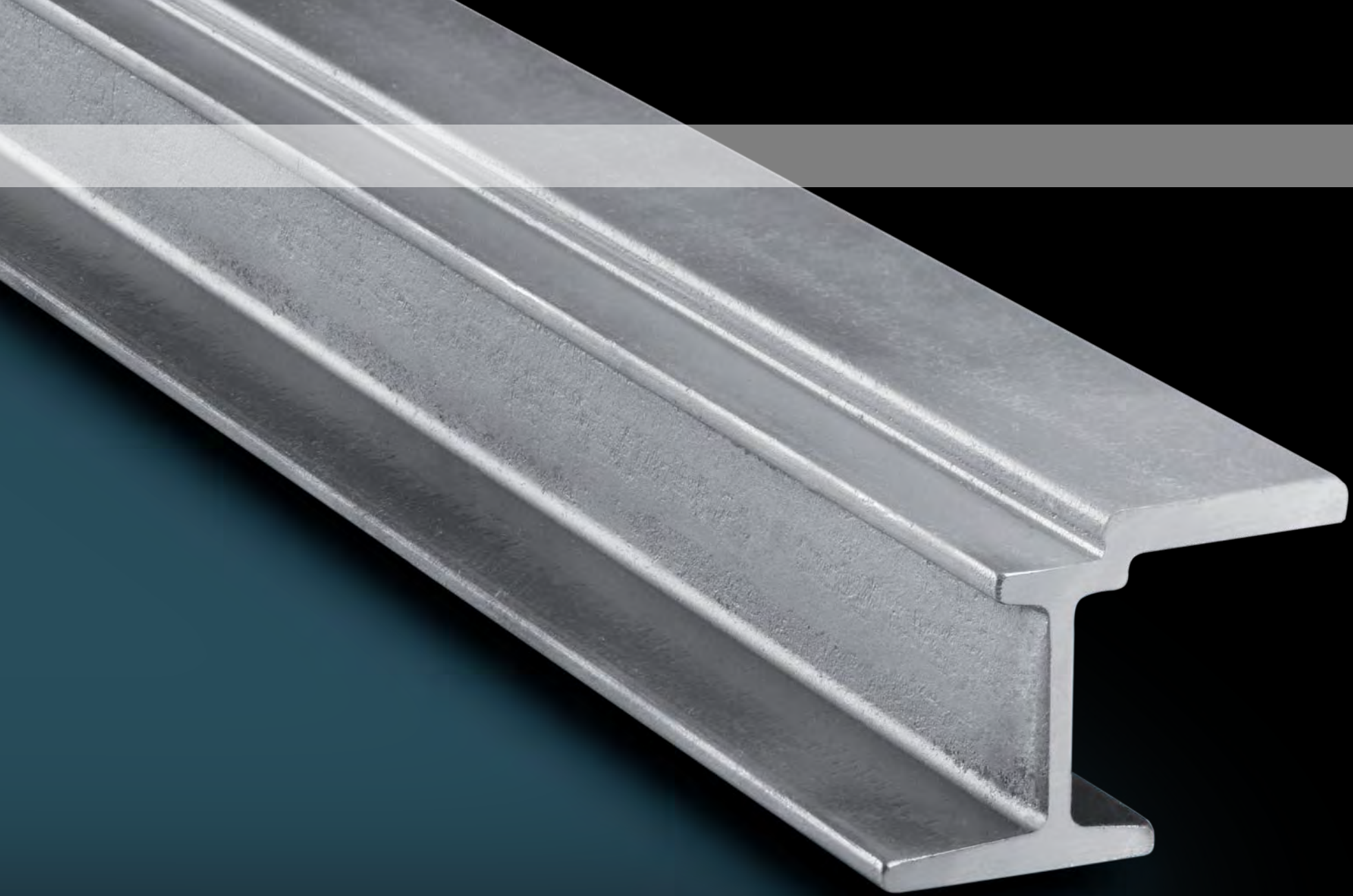
In this brochure you will find detailed data about our product divisions, technologies, processed materials and size ranges. Today we master 5 different production technologies that enable us to manufacture near net shapes

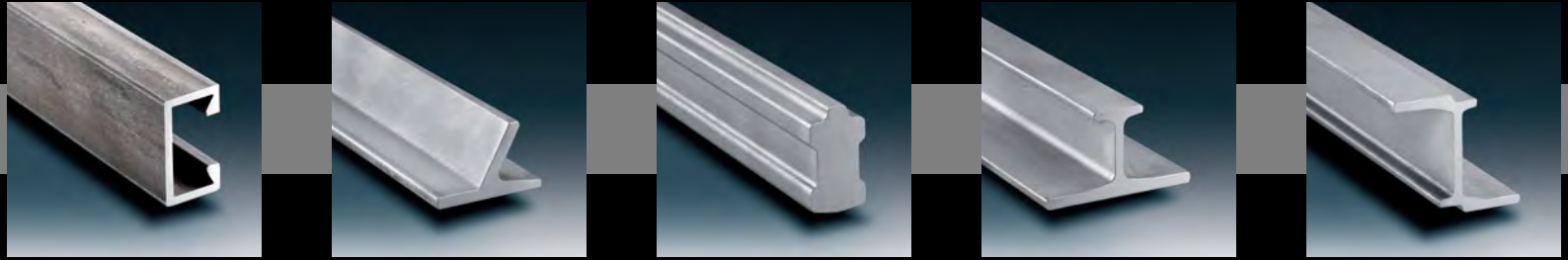
- Hot rolling
- Cold rolling
- Cold drawing
- Laser fusion
- Davex

For further information, please visit us at www.montanstahl.com



Wolfgang and Michael Stumm
Executive Presidents of Montanstahl AG



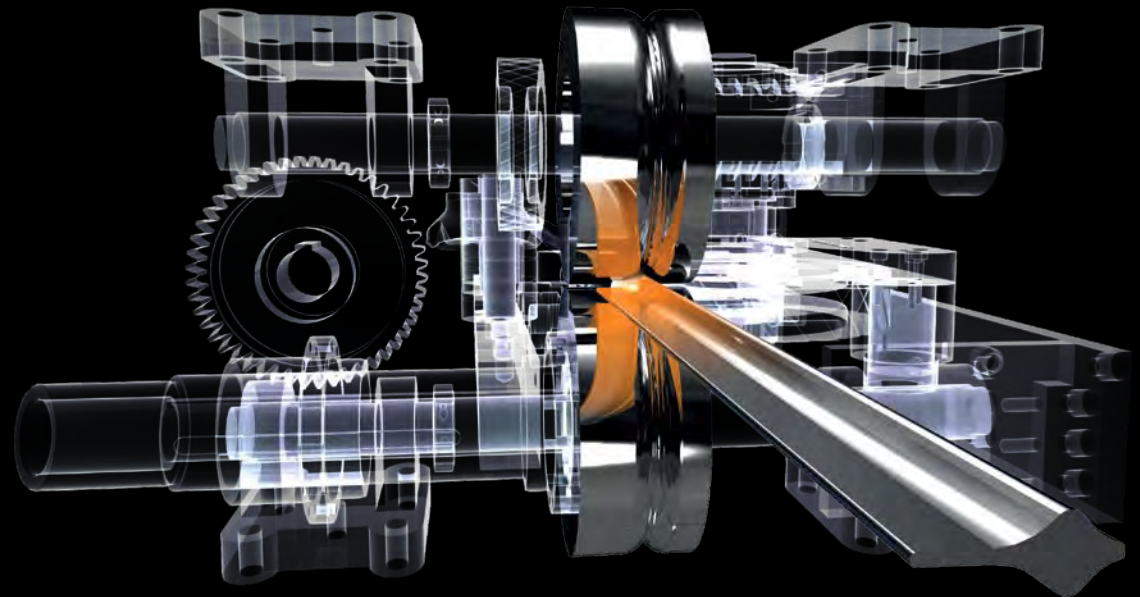


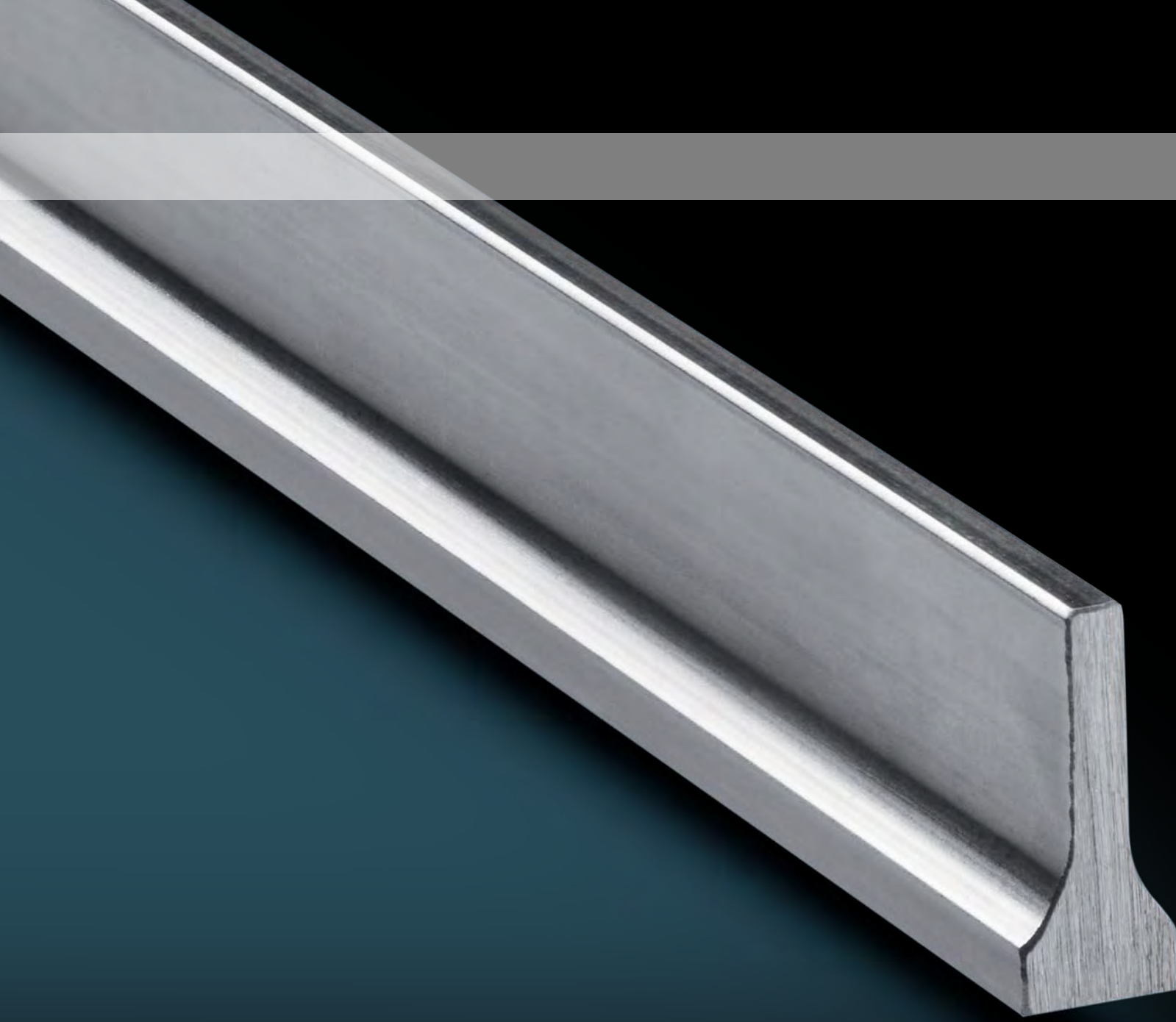
Hot Rolling

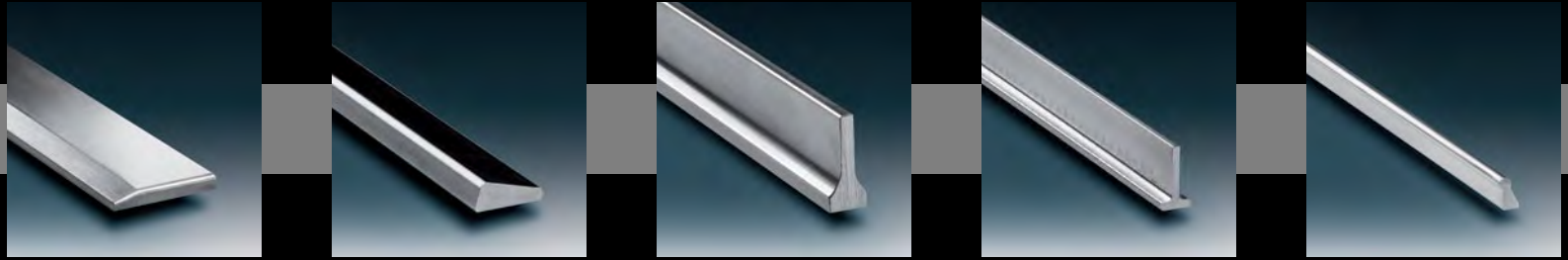
Hot rolling is by far the most popular and well known technology to produce steel sections. Depending on the type of raw material, the desired shape, mechanical properties and the surface aspect the process of hot rolling is a particularly suitable and cost effective manufacturing method. Compared to conventional billet based rolling mills, Montanstahl operates a special hot rolling mill which starts from wire rod. This different production approach offers considerable cost savings to the customers thanks to small production lots and low tooling cost. Furthermore the special set up allows for high degrees of deformation and thus extremely complex shapes can be achieved.

Steel types processed by Montanstahl are all kind of carbon steels, engineering steels, free cutting steels and stainless steels. Typical applications are in general construction, machine components, automotive industry as well as in water treatment plants and ship building.

Tolerances	IT 13 to IT 11
Straightness	down to 1.0 mm/m
Size range	from 100 mm ² to 1500 mm ²
Surface finish	hot rolled
Grades	carbon steel, heat treatable steel, case hardening steel, free cutting steel, stainless steel







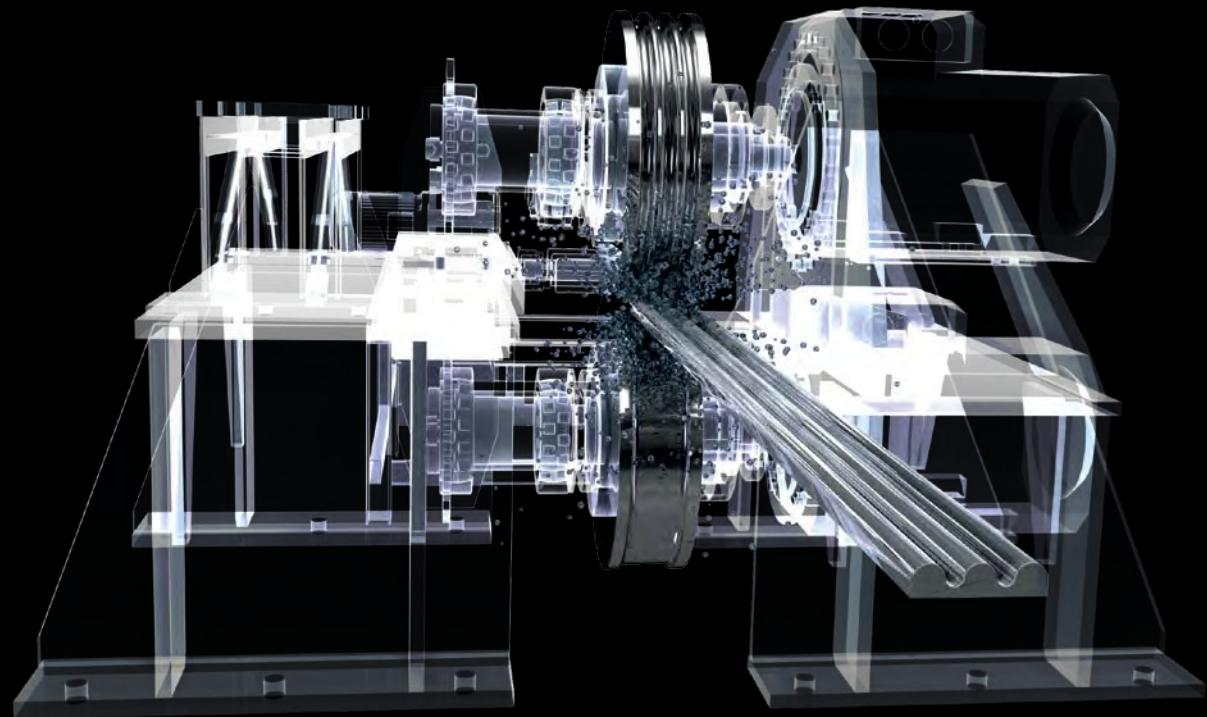
Cold Rolling

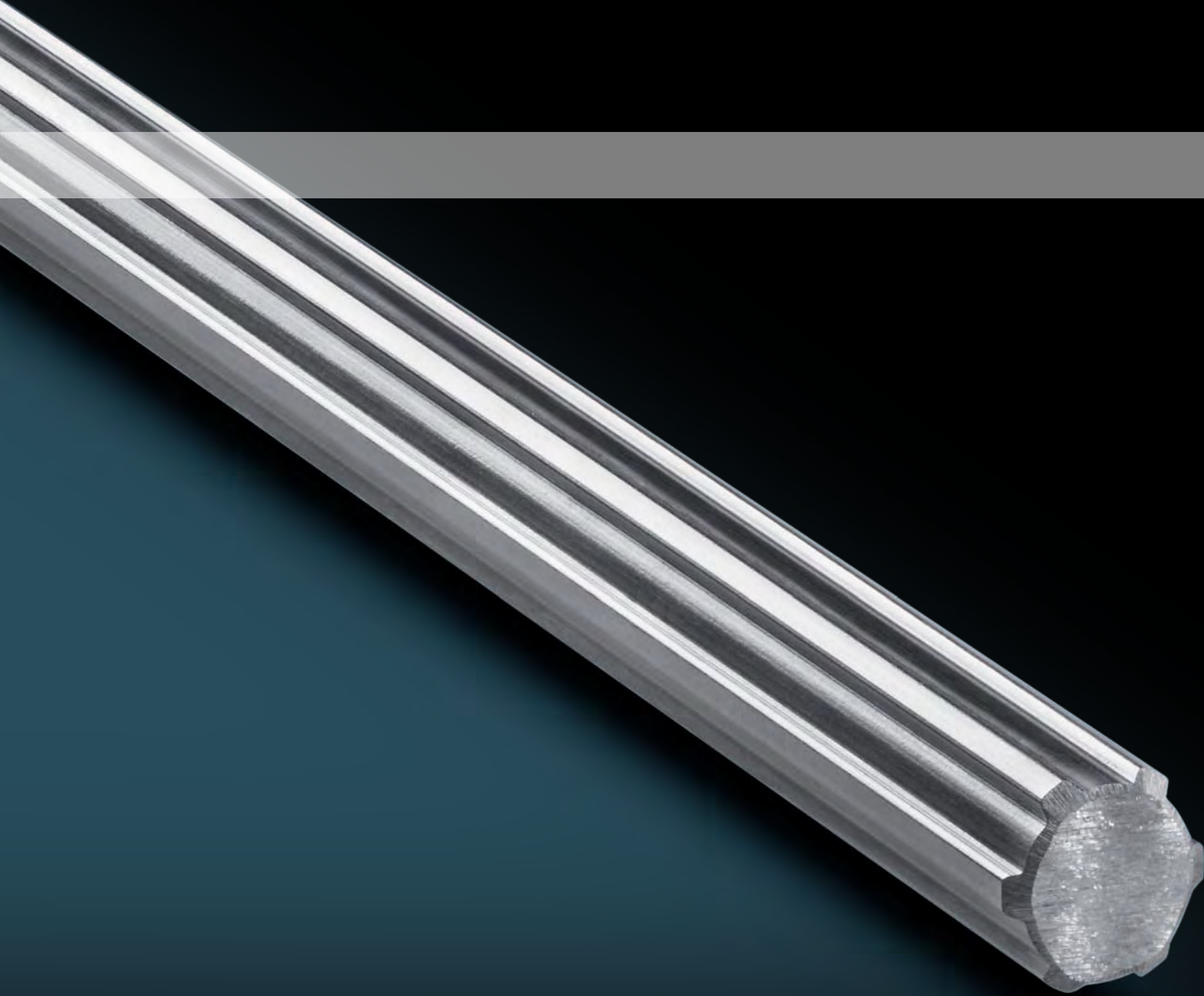
Cold rolling is a very efficient manufacturing process which was developed mainly for small special sections. Compared to hot rolling, cold rolling offers some considerable advantages:

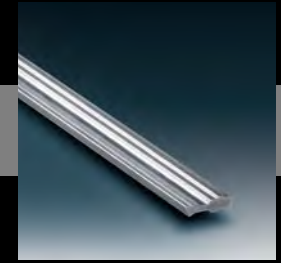
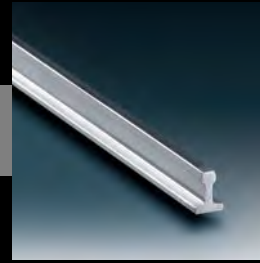
Excellent surface finish, tight tolerances and the possibility to produce very small production lots are the most obvious. Furthermore cold rolling changes the mechanical properties of the material and produces certain useful combinations of hardness, strength, stiffness, ductility and other characteristics known as tempers.

Montanstahl has placed its focus on stainless steel sections. Typical applications are in watch components, food processing, textile, pulp and paper industry, petrochemical industry and nautical components.

Tolerances	IT 11 to IT 9
Straightness	$\leq 1 \text{ mm/m}$
Size range	from 6 mm ² to 400 mm ²
Surface finish	cold rolled bright annealed
Grades	stainless steel & carbon steel







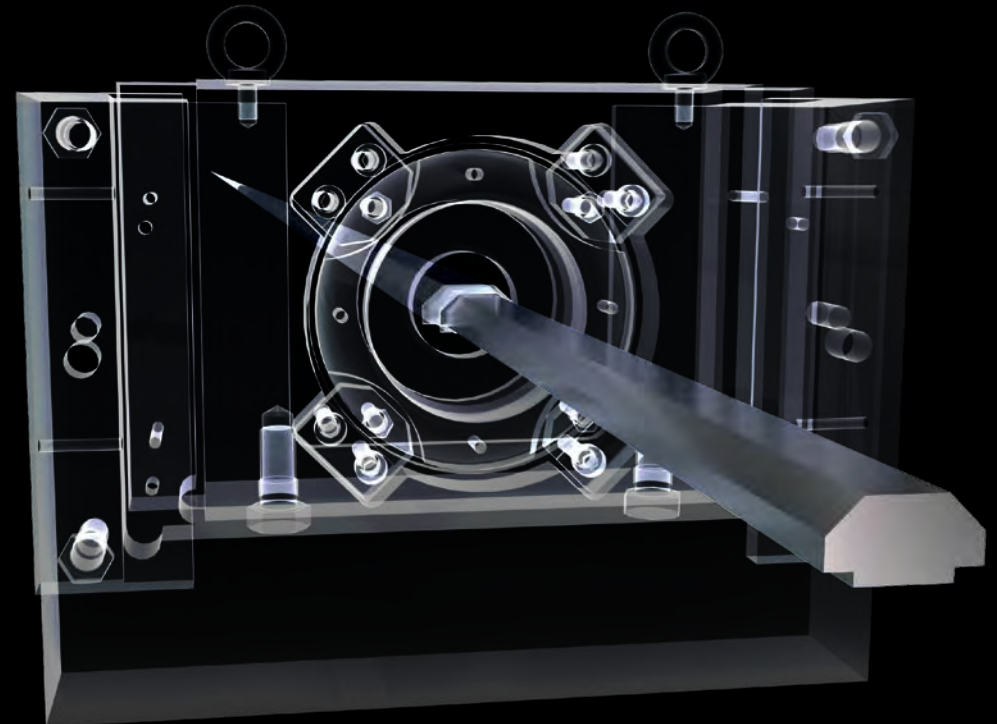
Cold Drawing

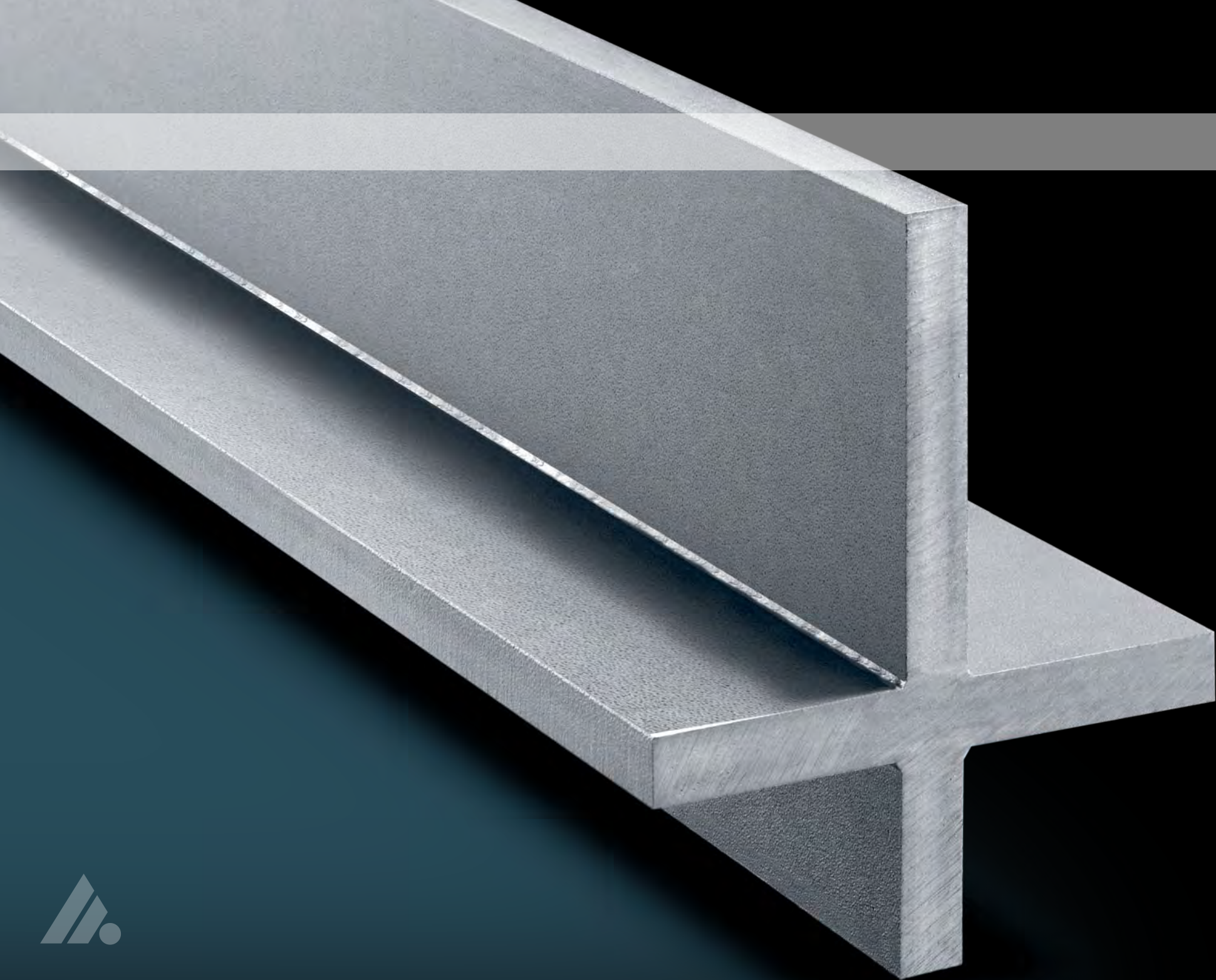
This technology is a precision deformation process which reduces the cross sectional area of metal wire or pre-rolled sections into a secondary or final shape by pulling it through precision dies.

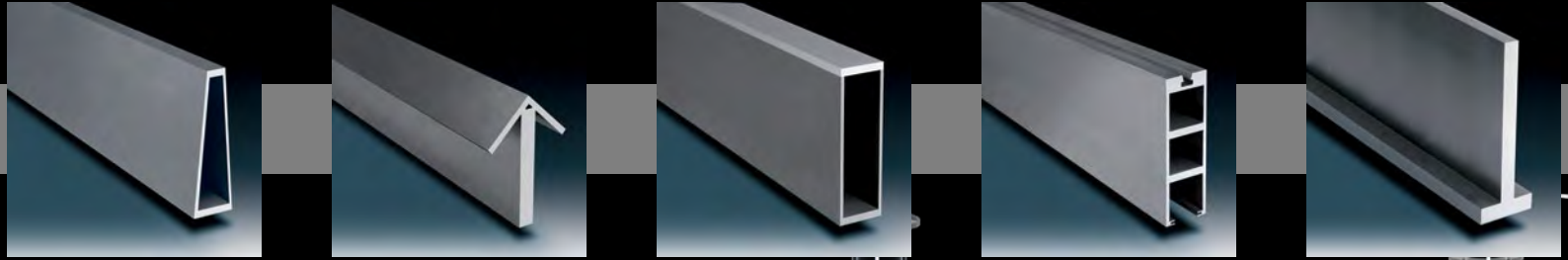
Montanstahl has specialized in stainless steel cold drawn sections and offers special shapes according to customer drawing as well as standard steel sections like flats, half rounds and key steel.

Cold drawing is an extremely cost-effective technology to refine tolerances and surface condition of medium and larger size sections. Typical applications are in automotive components, machinery, plant construction and in fluid engineering.

Tolerances	IT 12 to IT 9
Straightness	down to 0.5 mm/m
Size range	from 60 mm ² to 10000 mm ²
Surface finish	cold drawn
Grades	stainless steel & carbon steel







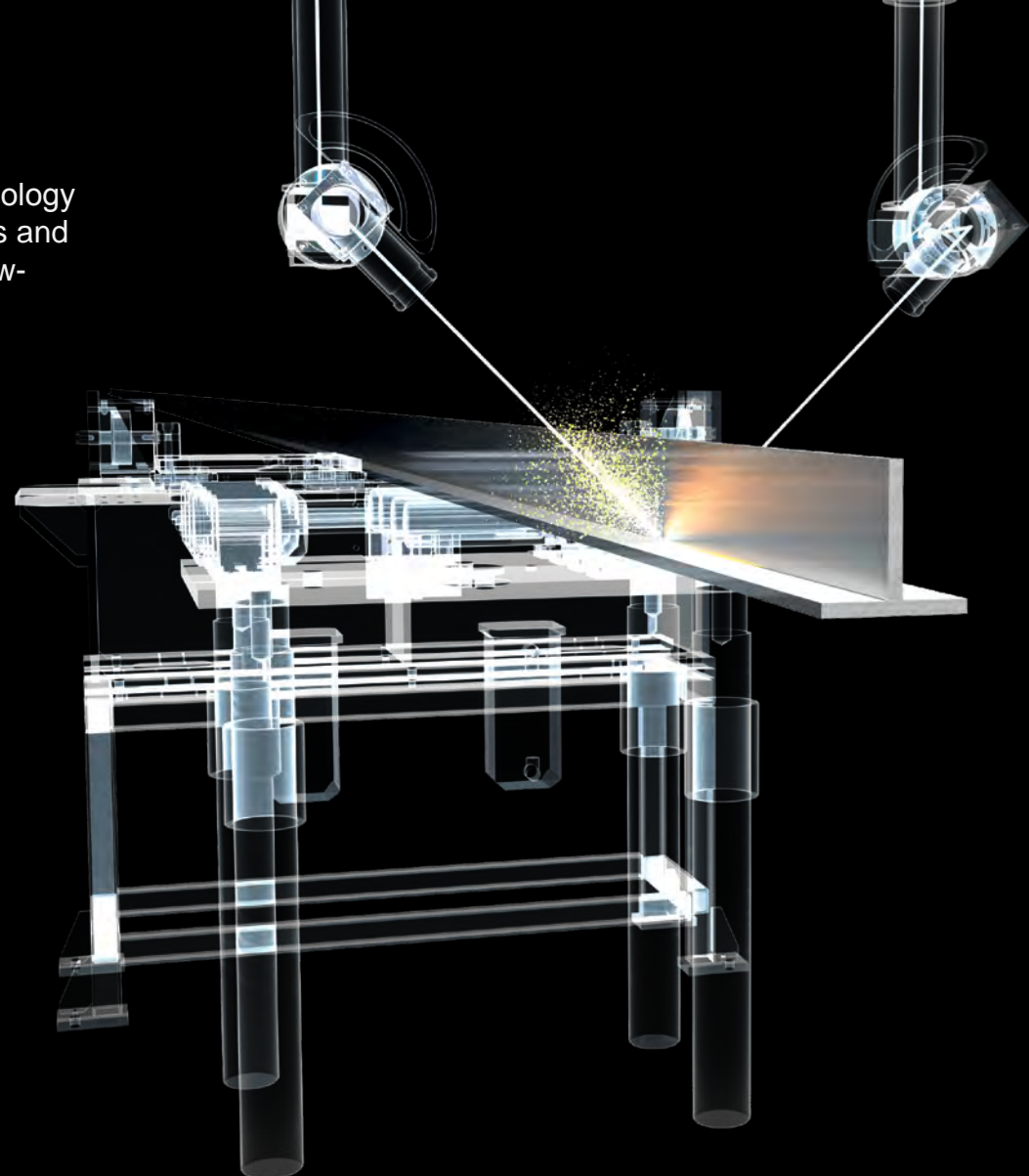
Laser Fusion

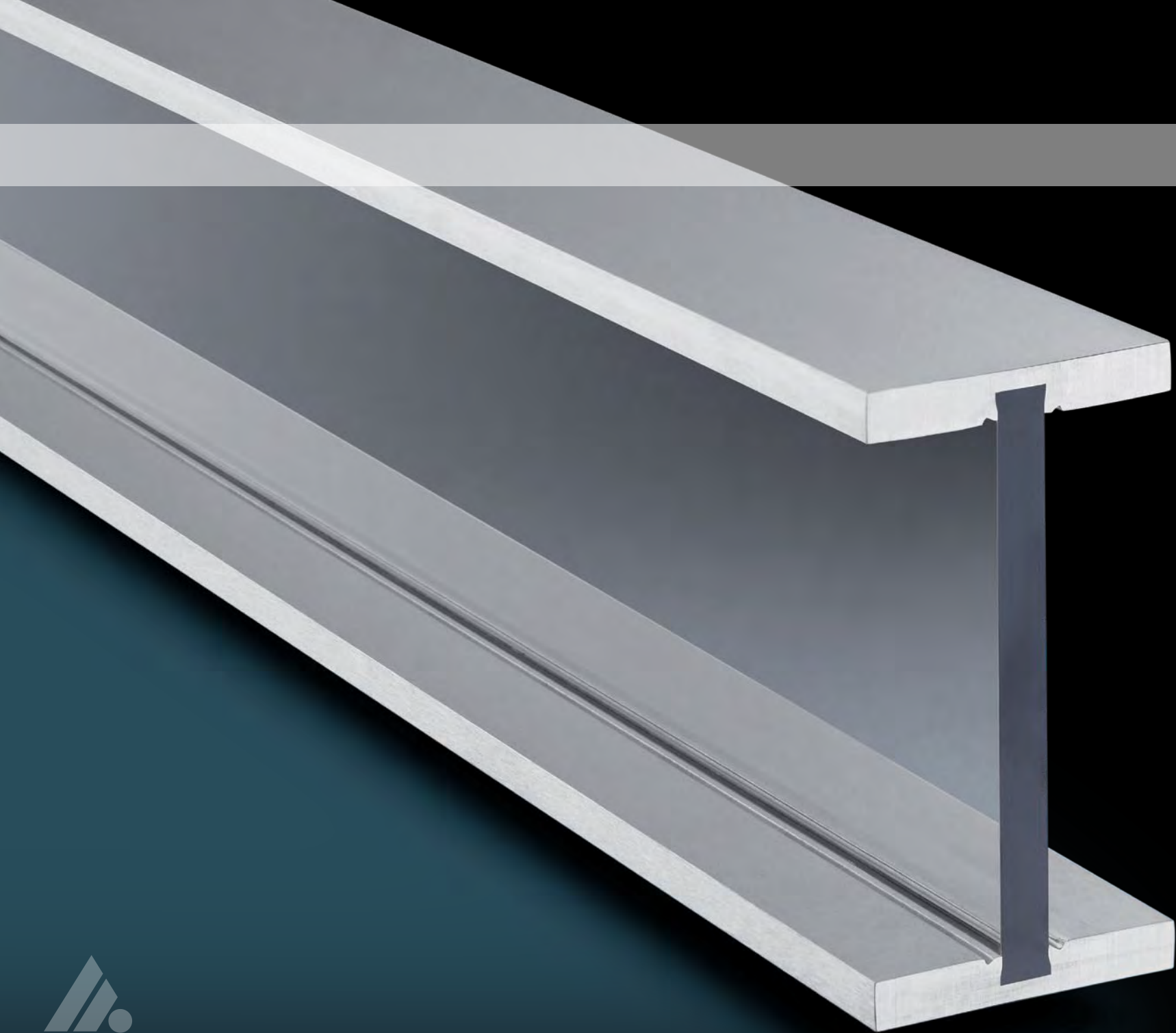
In many fields where a high degree of precision is required, laser technology has become a basic feature. Like no other tool the laser is able to focus and discharge energy to a precise point. These are ideal conditions for a low-stress and reliable fusion of steel.

The equipment technology developed by Montanstahl utilizes the advantages of laser fusion to produce special sections with outstanding product characteristics. Special sections made of carbon and stainless steel have been successfully marketed by Montanstahl in the most diverse industry sectors. All necessary certificates and approvals for a broad range of applications have been obtained.

Typical applications are in architecture, building and construction, machinery, food processing plants, automotive, shipbuilding as well as water treatment plants and petrochemical industries.

Tolerances	IT 13 to IT 12
Straightness	down to 1.0 mm/m
Size range	from 25x25 mm to 2000x1000 mm
Surface finish	hot rolled & shot blasted
Grades	stainless steel & carbon steel





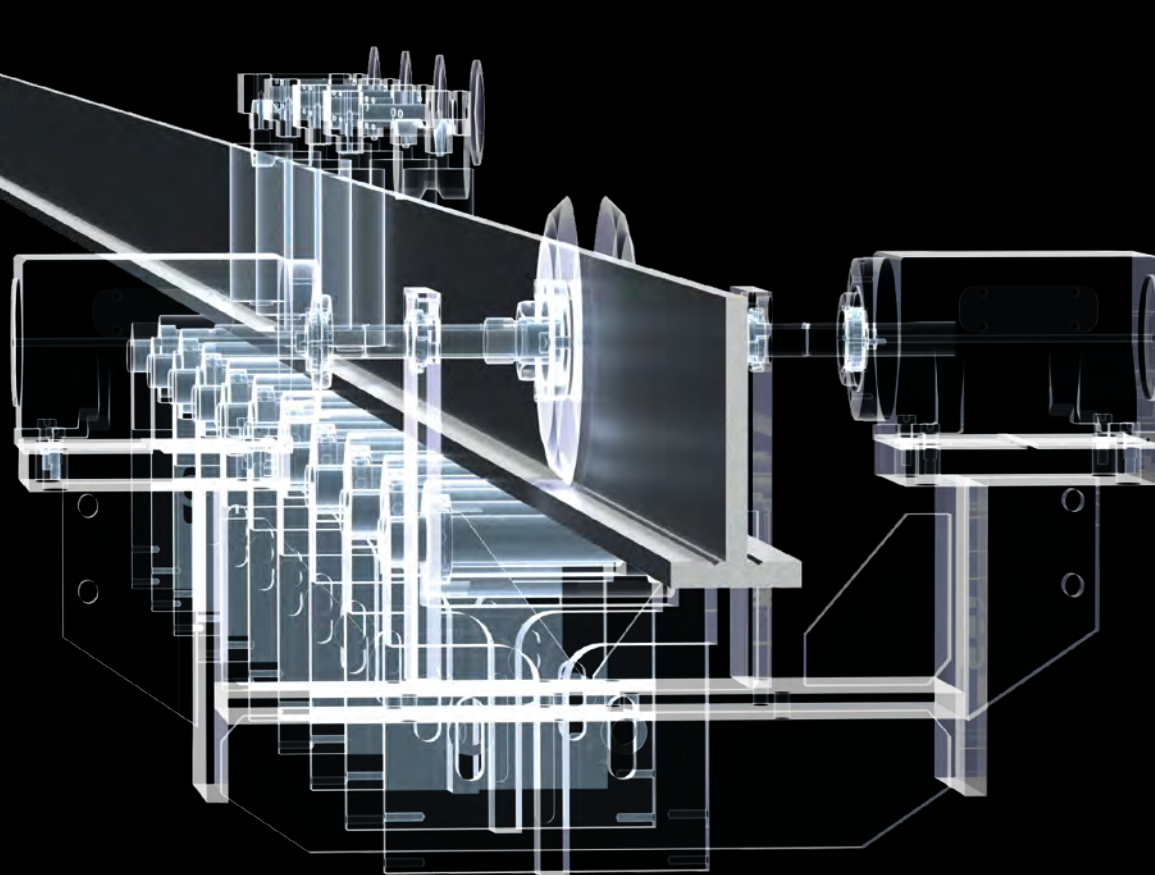


Davex

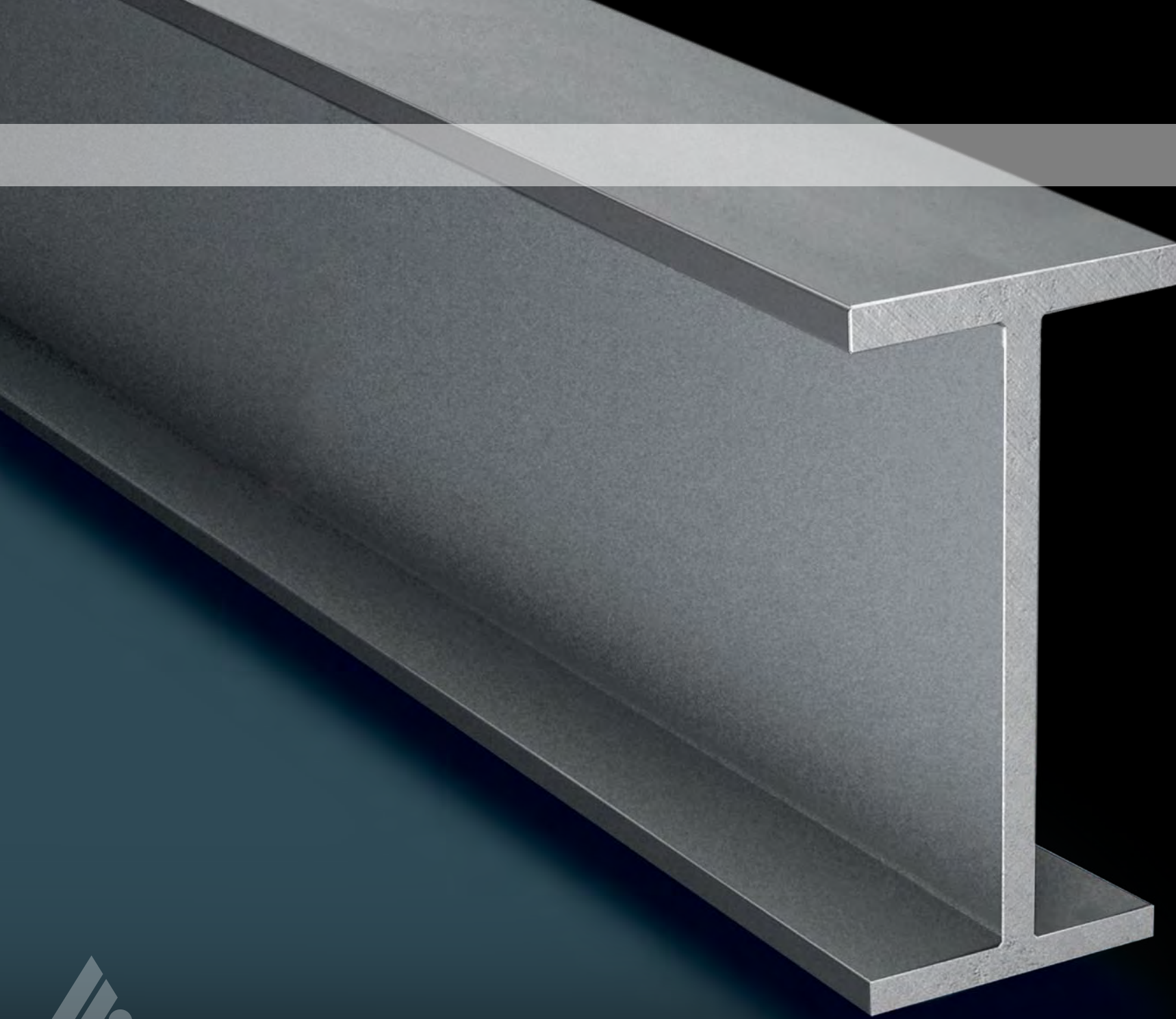
This innovative technology is based on a mechanical roll forming process. Due to the high design flexibility, functional optimization and high precision, these profiles have achieved a great popularity amongst architects for visible and representative steel-glass curtain walls. Apart from standard geometries like I-beams and T-beams we offer the possibility to create asymmetric beams or double web beams for higher structural performance.

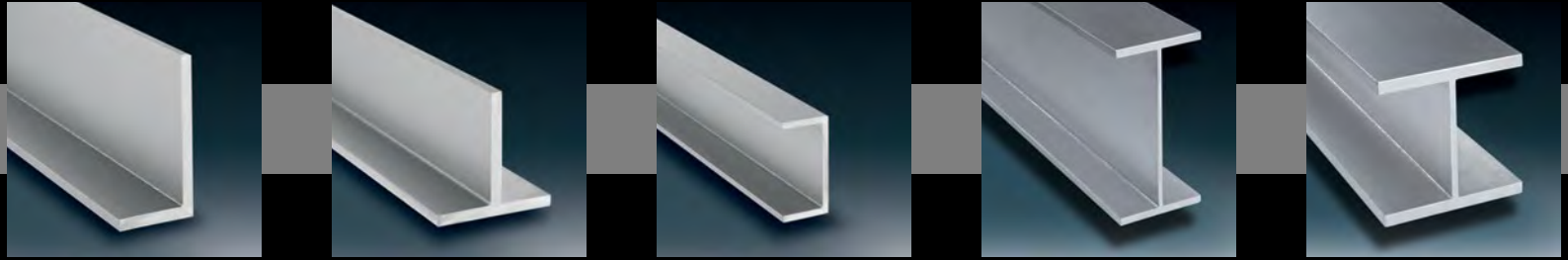
The process allows to position the profile components to each other at wish and to individually select the material thickness of both web and flange.

The Davex technology offers huge benefits when it comes to decorative stainless steel sections where, prior to joining, the individual flat components can be polished. This is more cost-effective than polishing a complex shape.



Tolerances	IT 13 to IT 12
Straightness	down to 1.0 mm/m
Size range	from 100x50 mm to 400x200 mm
Surface finish	hot rolled and cold finished
Grades	stainless steel & carbon steel





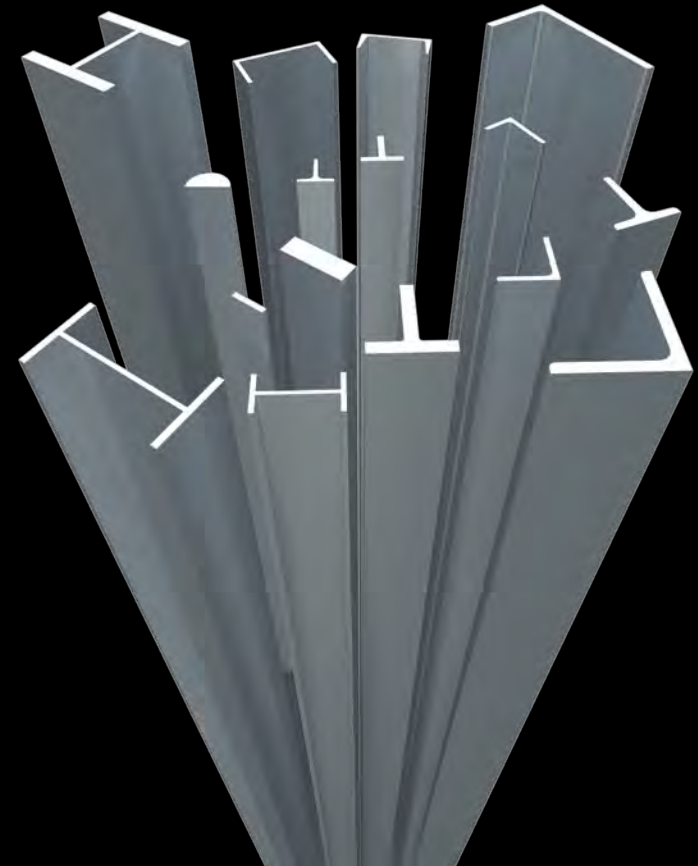
Structural Sections

Apart from special shapes Montanstahl carries a large program of **structural sections in stainless steel**. The size range is very wide and encompasses:

- equal leg angles
- unequal leg angles
- tapered channels
- non-tapered channels
- I beams
- H beams
- tees
- zees
- cold drawn flats
- key steel
- half rounds
- half ovals

We comply with the request of fast and on-time deliveries, lean organization and efficient logistics.

Tolerances	according to DIN, EN and ASTM
Straightness	down to 1.0 mm/m
Size range	from 8x3 mm to 1000x500 mm
Surface finish	hot rolled and cold finished
Grades	stainless steel



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