UnionStahl

Your partner for heavy plates.

Catalogue

Over 20 years of experience in the steel trade.

Consultancy. Sales. Processing.

UnionStahl GmbH is one of the leading heavy plate specialists in Europe.

UnionStahl covers all aspects oft he international market: Sales support points and representatives in most European countries as well as in important third countries outside Europe form an effective network for our global customers.

Thanks to a warehouse inventory comprising around 60.000 tonnes of heavy plate, we are one of the few full-range suppliers in the heavy plate field with close connections to all European heavy plate manufacturers.

Besides simple plate, our cutting and processing services allow you to obtain ready-to-assemble components via processes such as cutting, bevelling, milling, drilling, edging, rolling and welding.

Our highly-trained and dedicated employees are available to provide you with reliable, customised solutions to fulfil your requirements.

We are certified according to DIN EN ISO 9001:2015.

WE ARE **EXPERTS** *IN OUR FIELD.*

Active worldwide: We serve the international market across the board and employ approx. 500 employees worldwide.

- Head office
- Sales office
- Sales agency

Vast product selection.
Extensive spectrum of qualities and dimensions.

WAREHOUSE PROGRAMME

As a full-range supplier in the heavy plate area, we stock a wide and deep range of grades and dimensions.

Besides standard formats, we supply the widths 2.250, 2.750, 3.250, 3.500 and 4.000 mm, lengths up to 16.000 mm and unit weights up to 50 t, depending on quality and thickness.

Pressure vessel steels (as per EN 10028-2/3)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
P265GH	3 – 220	1.000 – 4.000	to 16.000	3.1
P295GH	6 – 120	2.000 – 4.000	to 16.000	3.2 TüV, 3.1
P355GH	4 – 350	1.500 – 4.000	to 16.000	3.2 TüV, 3.1
16Mo3	1,5 – 250	1.500 – 3.500	to 16.000	3.2 TüV, 3.1
13CrMo4-5	4 – 250	1.500 – 3.000	to 12.000	3.2 TüV
10CrMo9-10	4 – 150	1.500 – 3000	to 12.000	3.2 TüV
X12CrMo5	6 – 100	2.000 – 3.500	to 14.000	3.2 TüV
P275NH	4 – 150	2.000 – 4.000	to 16.000	3.1
P275NL2/NL1	4 – 150	2.000 – 4.000	to 16.000	3.1
P355NL2/NH	3 – 350	1.500 – 4.000	to 16.000	3.2 TüV, 3.1
P460NL2/NH	5 – 400	2.000 – 3.500	to 16.000	3.2 TüV

Steels according to ASTM/ASME standard				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
SA 36	5 – 110	2.000 – 3.500	to 16.000	3.1
SA283Gr.C*	4 – 30	2.000 – 3.500	to 16.000	3.1
SA285Gr.C*	4 – 30	2.000 – 3.500	to 16.000	3.1
SA516GR.60/Gr.415*	3 – 220	1.000 – 4.000	to 16.000	3.1
SA516Gr.65/Gr.450*	5 – 350	1.000 – 4.000	to 16.000	3.1
SA516Gr.70/Gr.485*	3 – 350	1.500 – 4.000	to 16.000	3.2 LR, 3.1
SA537Cl.1	6 – 200	2.000 – 4.000	to 16.000	3.1
SA387Gr.12Cl.2*	4 – 250	1.500 – 3.000	to 12.000	3.1
SA387Gr.11Cl.2*	5 – 80	2.000 – 3.000	to 12.000	3.1
SA387Gr.22Cl.2*	4 – 160	1.500 – 3.000	to 12.000	3.1
SA387Gr.5Cl.2*	6 – 100	2.000 – 3.000	to 12.000	3.2 TüV

*ASME Sect. II Part A SA20 S5

HIC-resistant plates (as per NACE TM0284)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
P355NL2/NH	6 – 80	2.000 – 3.800	to 14.000	3.2 TüV
SA516Gr.60/65/70*	6 – 80	2.000 – 3.800	to 14.000	3.2 LR

*ASME Sect. II Part A SA20 S5

General structural steels (as per EN 10025-2)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
S235JR+AR	4 –180	1.500 – 3.000	to 16.000	2.2
S235JR+N	3 –150	1.500 – 3.500	to 16.000	3.1
S235JRC+N	3 – 30	1.500 – 3.500	to 16.000	3.1
S235J2+N	3 –150	1.500 – 3.500	to 16.000	3.1
S235J2C+N	3 – 30	1.500 – 3.500	to 16.000	3.1
S275JR/J2+N	5 – 150	2.000 – 4.000	to 16.000	3.1
S355J2+N	3 – 350	1.500 – 4.000	to 16.000	3.2 DNV, 3.2 LR, 3.1
S355J2+N DBS 918002-1/2	2 – 100	1.000 – 3.500	to 16.000	3.2 DNV, 3.1
S355J2C+N	3 – 30	1.500 – 4.000	to 16.000	3.2 DNV, 3.1
S355K2+N	4 – 350	2.000 – 4.000	to 16.000	3.1
S355JR/J0	4 – 220	2.000 – 4.000	to 16.000	3.1, 2.2

Weldable fine grain structural steels (as per EN 10025-3/4)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
S275NL	4 –150	2.000 – 4.000	to 16.000	3.1
S355NL	3 – 350	1.500 – 4.000	to 16.000	3.2 DNV, 3.2 LQRA, 3.1
S355ML	6 –150	2.000 – 3.500	to 16.000	3.2 DNV, 3.2 LR, 3.2 LQRA, 3.1
S460NL	5 – 400	2.000 – 3.500	to 16.000	3.2 DNV, 3.1
S460ML	8 –150	2.000 – 3.500	to 16.000	3.2 LR, 3.2 LQRA, 3.1

Weather-resistant steels (as per EN 10025-5)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
S355J2WP	1 –12	1.000 – 2.000	to 12.000	3.1
S355J2W+N	3 – 120	1.000 – 3.000	to 12.000	3.1

Shipbuilding steels				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
Grade A	3 –60	1.500 – 3.500	to 16.000	3.2 DNV, 3.2 LR
Grade D	6 –120	2.000 – 4.000	to 16.000	3.2 DNV, 3.2 LR
Grade E	6 –120	2.000 – 4.000	to 16.000	3.2 DNV, 3.2 LR
D36/DH36	4 – 60	2.000 – 4.000	to 16.000	3.2 DNV, 3.2 BV
E36/EH36	6 – 400	2.000 – 3.500	to 16.000	3.2 DNV, 3.2 LR
F36/FH36	6 –200	2.000 – 3.500	to 16.000	3.2 DNV, 3.2 LR
E40/EH40	8 – 40	2.000 – 3.500	to 16.000	3.2 DNV, 3.2 LR

Bulb flats			
Qualities	Dimensions (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
Grade A, D36	HP 80 x 5 – 430 x 15	to 12.000	3.2 DNV, 3.2 LR

Offshore steels				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
S355G8+M	6 – 100	2.000 – 3.500	to 16.000	3.2 DNV, 3.2 LR
S355G10+N/NLO	15 – 250	2.000 – 3.050	to 12.000	3.2 DNV, 3.2 LR, 3.2 LQRA
S355G10+M/MLO	6 – 100	2.000 – 3.500	to 16.000	3.2 DNV, 3.2 LR, 3.2 LQRA
Norsok MDS-120 Y20	6 – 250	2.000 – 3.500	to 16.000	3.2 DNV, 3.2 LR, 3.2 LQRA
S420G2+M/MLO	8 – 100	2.000 – 4.000	to 16.000	3.2 DNV, 3.2 LR, 3.2 LQRA
Norsok MDS-120 Y30	8 – 100	2.000 – 4.000	to 16.000	3.2 DNV, 3.2 LR, 3.2 LQRA
S460G2+M/MLO	8 – 100	2.000 – 4.000	to 16.000	3.2 DNV, 3.2 LR, 3.2 LQRA
Norsok MDS-120 Y40	8 – 100	2.000 – 4.000	to 16.000	3.2 DNV, 3.2 LR, 3.2 LQRA
S420/S460 QLO	180 – 200	2.000 –2.500	to 8.000	3.2 DNV
API 2H-50	4 – 100	2.000 – 4.000	to 16.000	3.1
API 2W-50	6 – 100	2.000 – 3.500	to 16.000	3.1

Plates for pipe/construction tubes (as per ISO 3183)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
L245 NE/API 5L Gr.B	6 – 60	2.000 – 4.000	to 16.000	3.1
L360 NE/API 5L X52	6 – 60	2.000 – 4.000	to 16.000	3.1
L415 ME/API 5L X60	8 – 40	2.000 – 3.500	to 16.000	3.1
L450 ME/API 5L X65	8 – 40	2.000 – 3.500	to 16.000	3.1
L485 ME/API 5L X70	8 – 40	2.000 – 3.500	to 16.000	3.1

High yield strength structural steels – yield strength 690 – 1100 (as per EN 10025-6 or material data sheet)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
S690QL/QL1	3 – 250	2.000 – 3.500	to 14.000	3.2 DNV, 3.2 ABS, 3.2 LR, 3.1
Alform 700M	8 – 60	2.000 – 3.000	to 12.000	3.1
LH690	8 – 50	2.000 – 3.000	to 12.000	3.1
S960QL	4 – 140	2.000 – 3.000	to 12.000	3.1
ALFORM 960 X-TREME	4 – 6	1.500	to 12.000	3.1
LH960	8 – 40	2.000 – 3.000	to 12.000	3.1
S1100QL	4 – 15	2.000 – 2.500	to 12.000	3.1

Thermomechanically rolled high yield strength steels for cold forming (as per EN 10149-2				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
S355MC	2 – 25	1.000 – 2.000	to 12.000	3.1
S700MC	2 – 20	1.500 + 2.000	to 12.000	3.1

Wear-resistant steels according to materials data sheet of the manufacturers				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
300 HB	8 – 60	2.000 – 3.000	to 12.000	3.1
400 HB	3 – 150	1.500 – 3.000	to 12.000	3.1
400 HB W/CR	6 – 60	2.000 – 3.000	to 12.000	3.1
450 HB	4 – 100	1.500 – 3.500	to 12.000	3.1
500 HB	3 – 100	1.500 – 3.500	to 12.000	3.1
600 HB	8 – 40	2.000 – 2.500	to 6.000	3.1
X120Mn12	1,5 – 60	1.000 – 2.500	to 8.000	3.1
27MnB5	3 – 60	1.500 – 3.000	to 12.000	3.1, 2.2
30MnB5	3 – 60	1.500 – 3.000	to 12.000	3.1, 2.2

Creusabro® according to the manufacturer's material sheet				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
Creusabro® 4800	3 – 150	1.500 – 3.000	to 12.000	3.1
Creusabro® 6400	5 – 100	1.500 – 3.800	to 14.000	3.1
Creusabro® 8000	4 – 60	1.500 – 2.500	to 8.000	3.1
Creusabro® DUAL	10 – 20	2.000– 2.500	to 8.000	3.1

Highly wear-resistant pipes and fittings				
Qualities	Nominal width (NW)	Ø (mm)	Wall thicknesses (mm)	Lengths (mm)
400 HB (Highly wear-resistant, seamless pipes with a continuous hardness of approx. 360 – 400 HB)	65	76,1	4,5	to 6.000
	80	88,9	4,5; 8	to 6.000
	100	108	4,5	to 6.000
	100	114,3	8	to 6.000
	125	127	30	to 7.500
	125	133	4,5	to 6.000
	125	139,7	8	to 6.000
	150	168,3	8	to 6.000
	200	219,1	8	to 6.000
Inductively hardened pipes (internal strength 600 HB to centre of the wall, outwards decreasing to approx. 300 HB)	65	73	7,1	to 6.000
	80	88,9	7,62	to 6.000
	100	114,3	8,6	to 6.000
	125	141,3	12,7	to 12.000
	150	168,3	11	to 12.000
	200	219,1	12,7	to 12.000
	250	273,1	12,7	to 12.000
	300	323,9	12,7	to 12.000
	350	355,6	12,7	to 12.000
	400	406,4	12,7	to 12.000
	450	457,2	12,7	to 12.000
	500	508	12,7	to 12.000
	600	610	12,7	to 12.000
Pipes made from rolled/blast-edged and welded plates				

Welded clad plates according to Union materials data sheet			
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)
SP 630	5 + 3; 6 + 4; 8 + 5; 10 + 5; 10 +10	1.000 – 1.500	to 3.000

Round bars		
Qualities	Ø (mm)	Lengths (mm)
X120Mn12	12; 14; 16; 18; 20; 25; 30; 35; 40; 50	to 6.000

Steels for quenching and tempering (as per EN 10083-1/2)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
42CrMo4	3 –150	1.000 – 3.000	to 12.000	3.1
C45	8 –160	1.500 – 3.000	to 12.000	3.1

Case hardening steels (as per EN 10084)				
Qualities	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
16MnCr5	3 – 150	1.000 – 3.000	to 12.000	3.1
20MnCr5	8 – 150	2.000 – 3.000	to 12.000	3.1

Ballistic steels/Armour plates for civil applications				
Qualities/Hardness range	Thicknesses (mm)	Widths (mm)	Lengths (mm)	Inspection certificates acc. to DIN EN 10204
AP34	2,18 – 3	1000	to 3000	2.2
Ballistic steel (280-330HB) – G	3 – 150	1000 – 2500*	to 6000*	3.1
Ballistic steel (340-390HB) – H	3 – 80	1000 – 2500*	to 6000*	3.1
Ballistic steel (420-480HB) – O	4 – 30	1000 – 2500*	to 6000*	3.1
Ballistic steel (480-540HB) – Z	3 – 150	1000 – 2500*	to 6000*	3.1
Ballistic steel (570-640HB) – T	4 – 100	2000 – 2500*	to 6000*	3.1

*** Corresponds to the standard dimensions. Other dimensions on request.**

Our company is approved for the processing of military ballistic steels for the German Armed Forces according to TL 2350-0000/-0003.

Ballistic steels/Armor plates

We are one of the leading European stockists and contract manufacturers of steel components for ballistic protection.

Armor protection classes

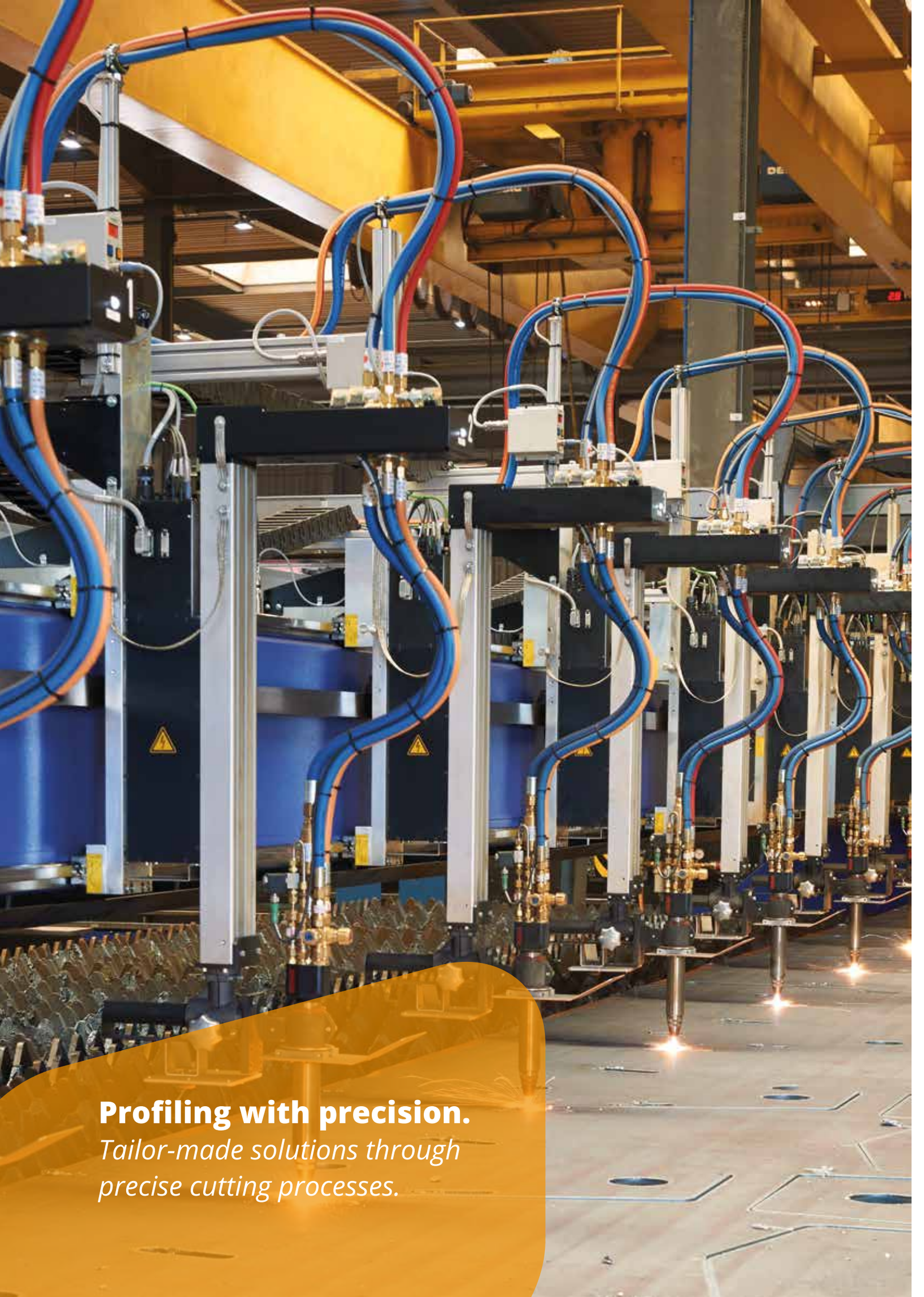
VPAM PM 2007

STANAG

Plates

standard and cut-to-size dimensions

from stock and new production/section



Profiling with precision.

Tailor-made solutions through precise cutting processes.

PROFILING

State-of-the-art systems technology along with our personnel, who have acquired long-standing expertise, ensure that we can supply above-average quality with short and reliable delivery schedules.

Depending on the quality, thickness, dimensions, tolerance and quality requirements, we manufacture up to 600 mm material thickness on our CNC oxyacetylene, plasma and laser cutting machines.

Flame-cut blanks can be deburred automatically.

Oxy-fuel cutting

Oxy-fuel cutting systems

- Table sizes 6 x 30 m and 12 x 30 m
- Material thicknesses 10 – 300 mm
- Oxyacetylene cutting systems with up to 12 torches
- Unit weight (input material) maximum 28 t
- Automatic torch positioning
- Suitable for mirror-inverted cutting (e.g. for gear racks)

Oxy-fuel cutting system f. thick plates (150 – 600 mm)

- Table size 4 x 8 m
- Unit weight (input material) maximum 45 t

Strip burning system with 32 torches

- Material thicknesses: 6 –140 mm
- Smallest possible thickness/width combination: 50 x 6 mm and square from 50 x 50 mm, further combinations available on request
- Lengths up to 13.000 mm
- Least possible deviation of straightness, i.e. little twisting or warping

Plasma cutting

CNC plasma cutting systems

- Incl. swivel head for attaching a weld seam preparation (bevelling)
- Table size 5 x 28 m
- Material thicknesses 4 – 40 mm
- Cutting systems with up to 2 torches
- Signing for the preparation of welded structures or for forming
- Programmable plasma bevel unit

Laser cutting

Advantages of laser cutting

- Laser systems up to 20 kW
- Table sizes up to 4 x 18 m
- Material thicknesses up to 35 mm
- Automatic loading and unloading (lift arm)
- Laser cutting with CO_2 and nitrogen
- Small heat-affected zone
- None to minimal distortion due to heat
- Smallest tolerances possible (+/-0,1 mm)

Minimal angular deviation (max. 0,3 mm); lower tolerances after consultation.

Little to no reworking of the cutting contours.

Cutting and laser tolerances

Cutting tolerances according to EN ISO 9013 or after consultation.

Preferred drawing formats

- .dxf
- .dwg

3D – CAD

The handling and creation of three-dimensional components is part and parcel of our daily work.

We can process all current file formats (for example .step, .iges, .prt, .ipt, .sldprt etc).
Software: Sheet Metal 3D - Solidworks, Brics CAD, IBE – Blechcenter and nc CAD 32

Weld seam preparation (bevelling)

Mechanically integrated

- Grinding units:
  - Bevelling of 9 m per cycle and extension till 12 m possible
  - Workpiece thickness up to 100 mm and workpiece width from 100 mm
  - Angulation without component rotation
  - 85° upper bevel as well as 45° lower bevel
- Welded edge former:
  - No restriction due to component length
  - Workpiece thicknesses up to 50 mm

Automatically integrated

- 6-axis robots (bevelling in two levels as well as contours)
- Guaranteed repeat accuracy
- Bevel cut length up to 200 mm

Preheating

- Material-specific heat treatment for thermal cutting
- Computer-controlled preheating process
- Energy-saving thanks to utilisation of the latest thermal technology
- Logging of the entire process

Extensive capabilities.
Machinery and expertise for customised solutions.

PROCESSING

We are able to manufacture in line with customer requirements thanks to our equipment and expertise. We provide all services from a single source. That means you benefit from our specialist knowledge and our experience in the sector. Together we can work out ideas for individual solutions.

Press braking

- Maximum compressive force: 800 t
- Maximum bending length: 4.500 mm

Rolling

- Maximum thickness: 100 mm
- Rolling width: 3.000 mm
- Diameter (FM): 500 – 3.200 mm

Milling

- Maximum unit weight: 10 t
- Maximum dimensions: 2.000 x 8.250 mm

Drilling

- Different diameters possible
- Thread cutting

Welding

Welding methods:

- Manual metal arc welding
- Metal active gas welding (MAG)
- Tungsten inert gas welding (TIG)

Certificates:

- IN EN ISO 3834-2 (EN 729-2)
- DIN EN 1090-2

SERVICES

Our highly-qualified and committed employees check your enquiries for plates, flame-cut parts and further-processed components in respect to technical feasibility and will be pleased to offer advice on possible alternatives (quality, tolerances, design and dimensions) if required. Typical questions we look into here include:

- Is there actually a solution for the planned application?
- Is there a better technical solution?

The specifications or delivery details enclosed with the enquires are processed and commented on. We endeavour to cover all possible requirements (insofar as technically feasible). Otherwise, we shall be pleased to help in an advisory role. Properties required additionally can be verified subsequently.

We monitor compliance with the delivery schedules during the further course of the project. We organise transportation by truck, rail, ship or aircraft. Complete and timely provision of the order documentation is part of the service scope.

We were one of the first stockists to utilise barcode technology for identifying and tracking our products.

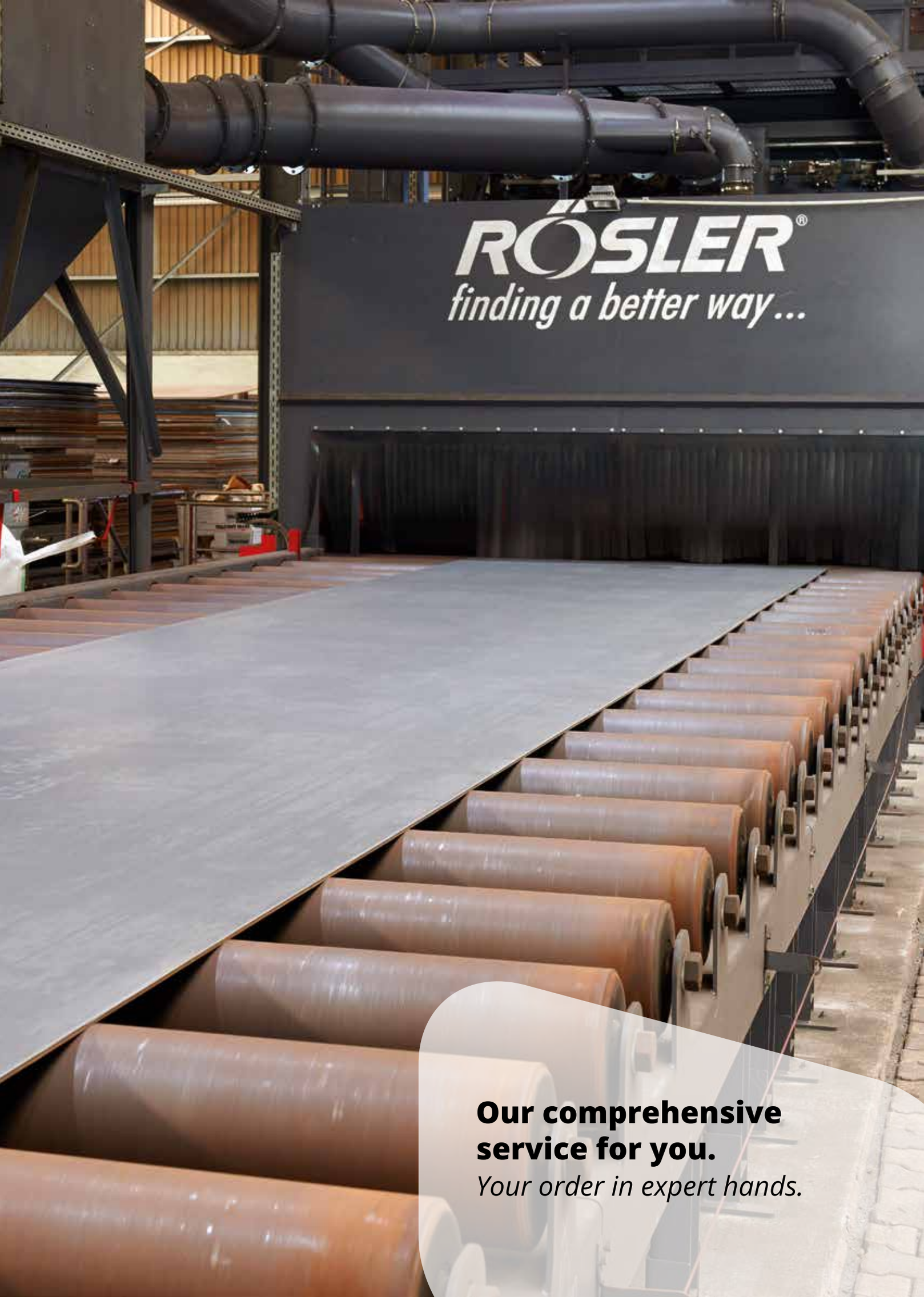
That allows us to inform you about material properties or the order status at any time.

We offer the following additional services

- Storage of customer-specific material: Plates, profiled pieces, processed parts
- Shotblasting
- Painting
- Pickling and oiling
- Markings with paint marker and template
- Packing in line with customer requirements (e.g. pallets handled in accordance with IPPC Standard, shrink film for airfreight)
- Transport handling and shipment (container stowage in the port)
- Documentation authoring on customer request

We are also able to conduct additional material tests. These are performed by our qualified personnel or by independent test laboratories.

- Ultrasonic testing (e.g. according to EN 10160, SA435, SA578)
- Dimensional and tolerance inspections
- Chemical properties (spectral analysis, wet-chemical analysis, PMI)
- Mechanical properties (e.g. tensile test, notch impact test, hardness validation, weld bend test, tensile test in direction of thickness (acc. to EN 10164 o. ASTM A770), PWHT, bending test)
- Structural investigation (macro and micro etched), grain size determination and determination of purity
- Acceptances by TÜV, DNV, LR, ABS, BV etc.



Our comprehensive service for you.

Your order in expert hands.

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