



ANDERNACH & BLECK

Bright steel is our DNA

BRIGHT STEEL

Delivery program

04/2024





Bright steel at its best.

From production to distribution to management - bright steel is part of our genes.

We produce and perfect shapes that satisfy the very most demanding requirements. With our manufacturing processes matched to your product we produce flexible bright steel solutions in more than 9,000 dimensions.

Bright steel „Made in Hagen“ is to be found in every area of application - whether on the water, on the ground or in the air.

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All intermediate dimensions and dimensions that are not listed in the delivery program can be manufactured on request

DELIVERY PROGRAM OF OUR BRIGHT STEEL PRODUCTS

Further types of steel can be produced on request.

Bright steel products	Steel grades (examples)				
Free cutting steels	11SMn(Pb)30				
	11SMn(Pb)37				
	35S(Pb)20				
	44SMn(Pb)28				
	46S(Pb)20				
	SAE12L14				
	SAE1215				
	SAE1117				
Steels for general purposes	S235JRC				
	S355J2C				
	C15				
	C16				
	C35				
	C45				
	SAE1018				
	SAE1045				
Steels for case hardening	C10R				
	C15R				
	C16R				
	16MnCrS5				
	16MnCrB5				
	20MnCrS5				
	20NiCrMoS2-2				
	17NiCrMoS6-4				
Steels for quenching and tempering	C35E				
	C45E				
	34/41CrS4				
	25/42CrMoS4				
	34CrNiMo6				
	51CrV4				
	SAE4140				
Steels for cold heading and cold extrusion	C15C				
	C20C				
	C35EC				
	C45EC				
	20MnB4				
	33B2				
Steels for rolling bearings	auf Anfrage				
Creep-resistant and high-temperature-resistant steels	15Mo3				
	24CrMo5				
	21CrMoV5-7				
Tool steels	on request				

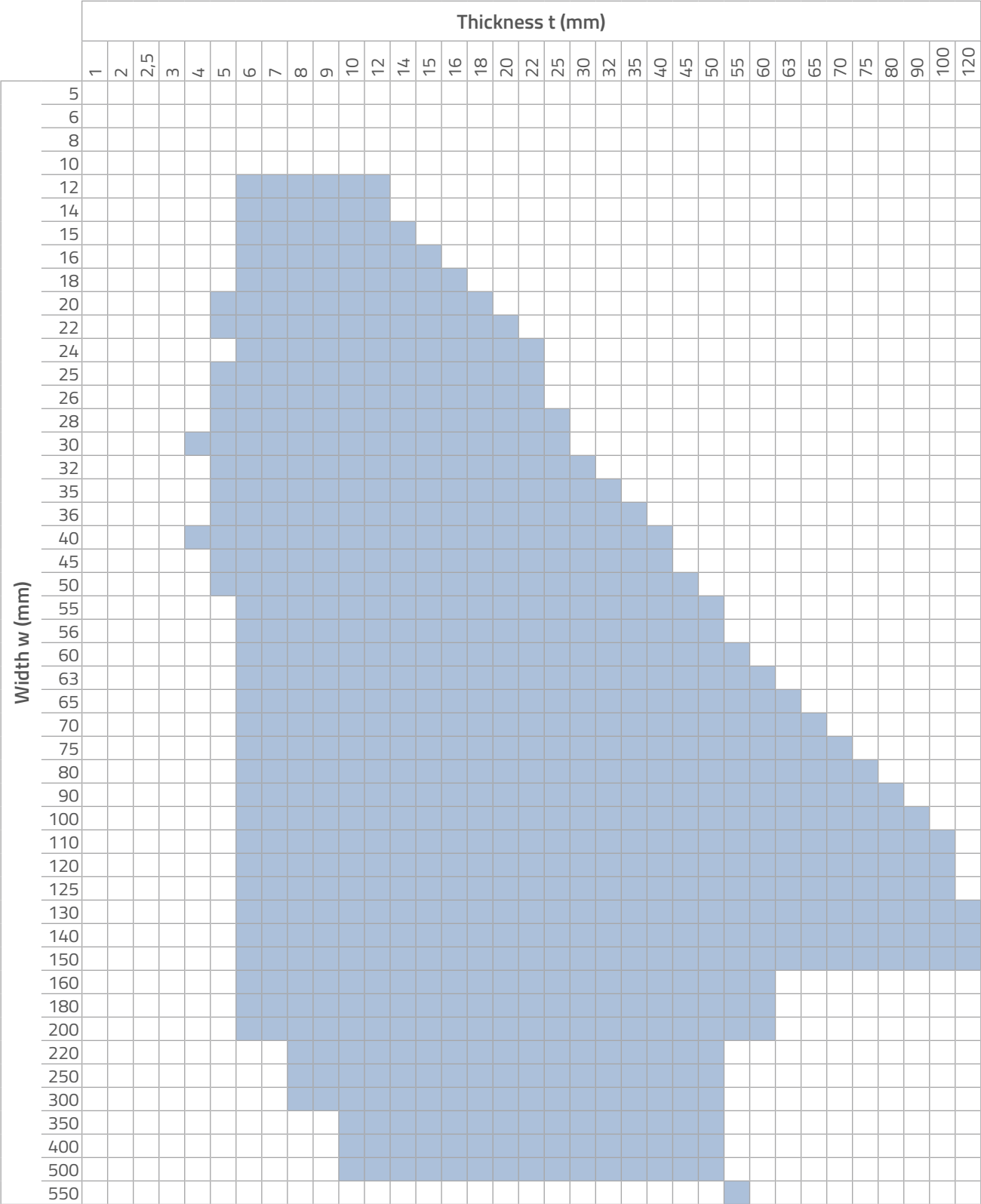
Condition of delivery

+C	drawn	+SR	stress relieved annealed	+QT	quenched and tempered	+POS®	Product-optimised Steel
+A	soft annealed	+AC	annealed to spherical carbides	+FP	treated to a ferrite-pearlite structure		
+N	normalized						





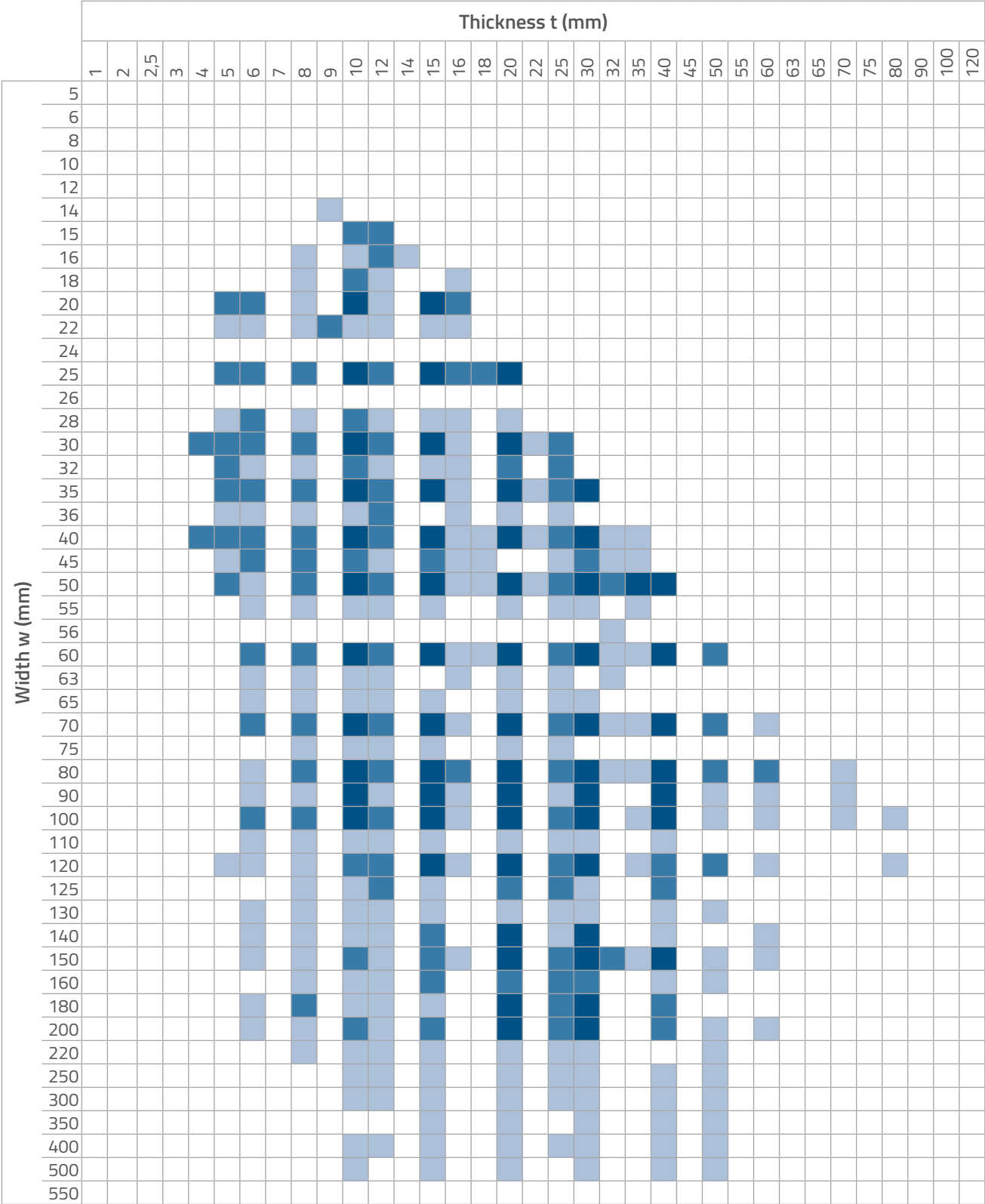
DELIVERY PROGRAM



- Steel grade S235JRC+C
- Steel grade S235JRC+C and C45+C
- Steel grade S235JRC+C, C45+C and S355J2C+C



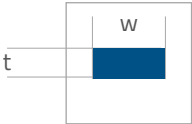
STOCK PROGRAM



- Steel grade S235JRC+C
- Steel grade S235JRC+C and C45+C
- Steel grade S235JRC+C, C45+C and S355J2C+C

FLAT STEELS

SAE 1018



DELIVERY PROGRAM

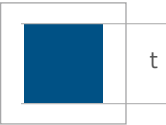
Many dimensions also available directly from stock.

		Width w																			
		3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"	3 3/4"	4"	4 1/2"	5"
		19,05 mm	22,22 mm	25,4 mm	28,57 mm	31,75 mm	34,92 mm	38,1 mm	41,27 mm	44,45 mm	50,8 mm	57,15 mm	63,5 mm	69,85 mm	76,2 mm	82,55 mm	88,9 mm	95,25 mm	101,6 mm	114,3 mm	127 mm
Thickness t	1/4"																				
	6,35 mm																				
	5/16"																				
	7,93 mm																				
	3/8"																				
	9,52 mm																				
	1/2"																				
	12,7 mm																				
	5/8"																				
	15,87 mm																				
	3/4"																				
	19,05 mm																				
	7/8"																				
	22,22 mm																				
	1"																				
	25,4 mm																				
	1 1/8"																				
	28,57 mm																				
	1 1/4"																				
	31,75 mm																				
	1 1/2"																				
	38,1 mm																				
	1 5/8"																				
	41,27 mm																				
	1 3/4"																				
	44,45 mm																				
	2"																				
	50,8 mm																				
	2 1/4"																				
	57,15 mm																				
	2 1/2"																				
	63,5 mm																				
	3"																				
	76,2 mm																				

SQUARES

SAE 1018

DELIVERY PROGRAM



Thickness t
from 1/2" (12,7 mm)
to 4" (101,6 mm)

HEXAGONES

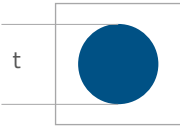
SAE 1018

DELIVERY PROGRAM

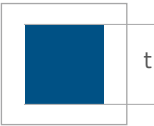


Thickness t
from 3/4" (19,05 mm)
to 3" (76,2 mm)

ROUNDS
DIN EN 10277, h9



SQUARES
DIN EN 10277



DELIVERY PROGRAM

Thickness t (mm)	
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STOCK PROGRAM

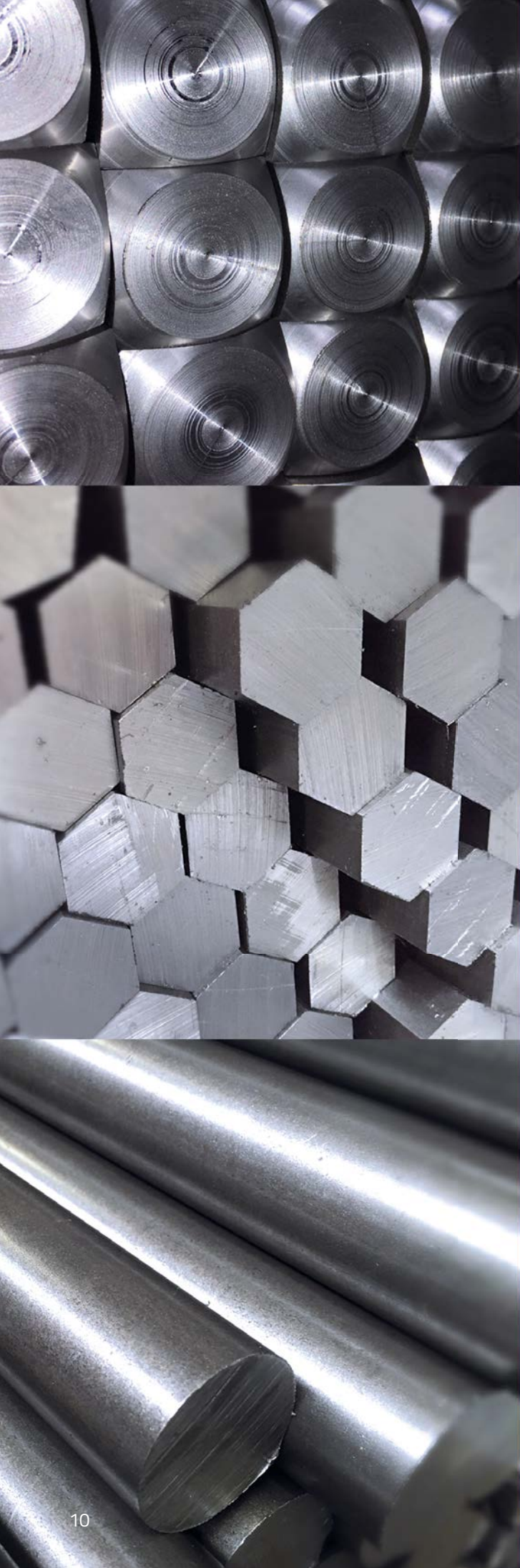
Thickness t (mm)	S355J2C+C	C35+C	C45+C	11SMn30+C	11SMnPb30+C
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DELIVERY PROGRAM

Thickness t (mm)	
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STOCK PROGRAM

Thickness t (mm)	S235JRC+C	S355J2C+C	C45+C	11SMn30+C	11SMnPb30+C
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HEXAGONES

DIN EN 10277



DELIVERY PROGRAM

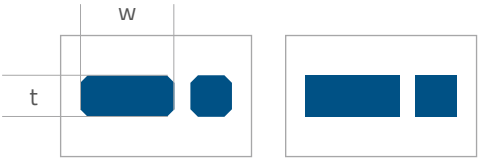
Thickness t (mm)	
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STOCK PROGRAM

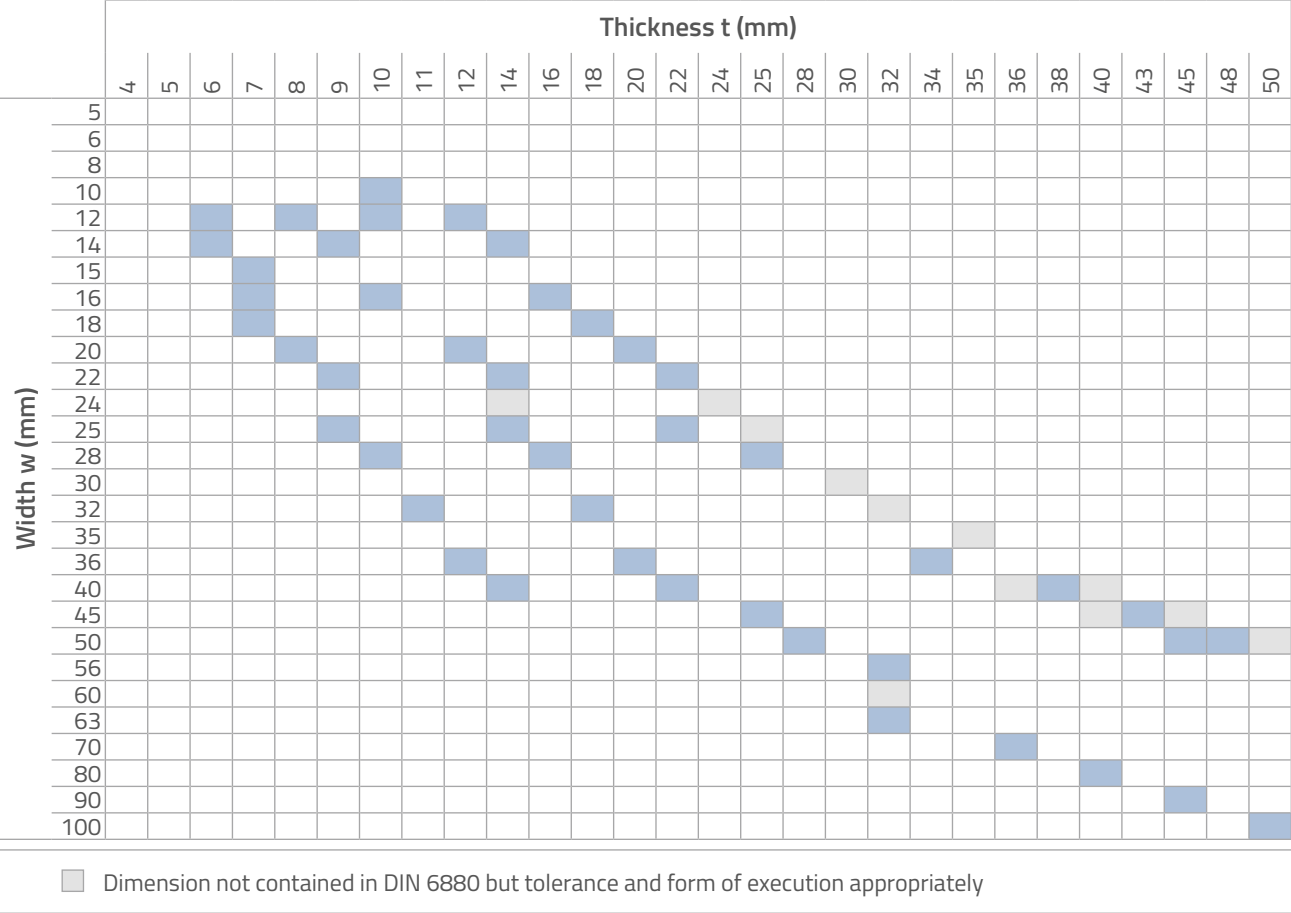
	S235JRC+C	S355J2C+C	C35+C	C45+C	11SMn30+C	11SMnPb30+C
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KEY STEEL

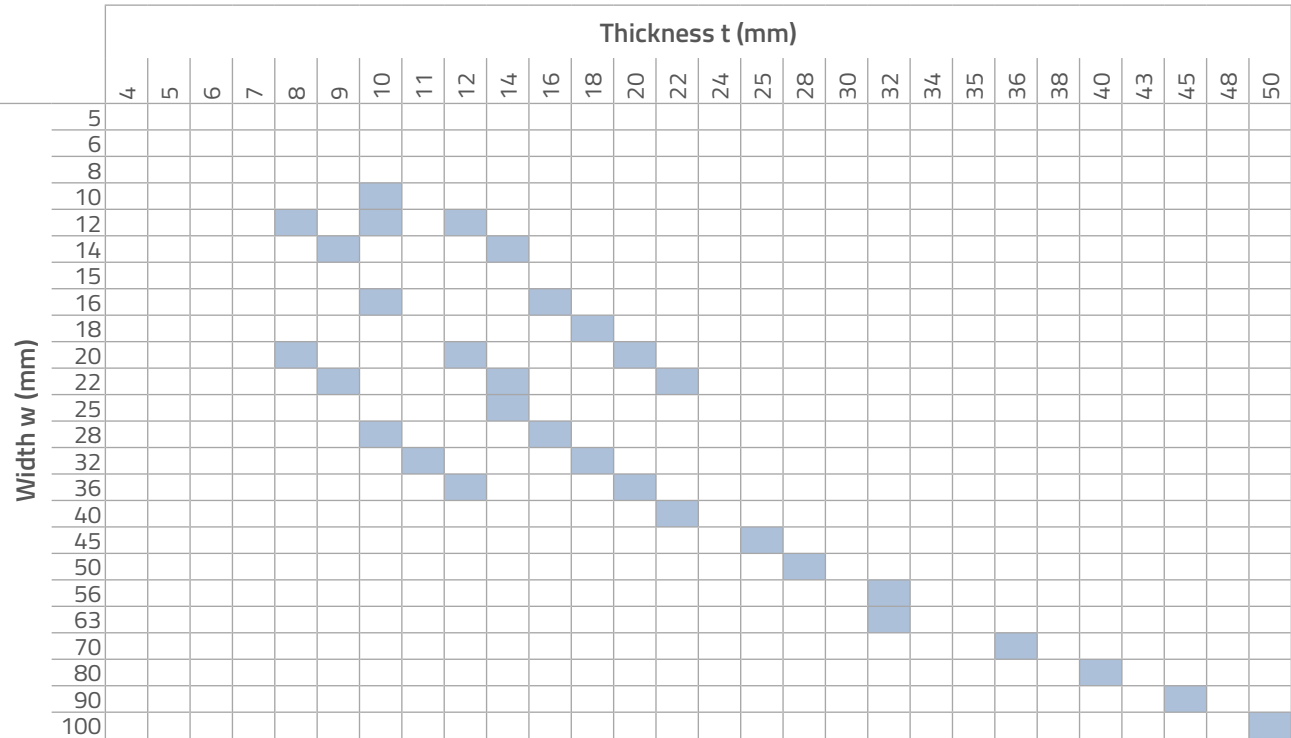
DIN 6880, Steel grade C45+C,
Sharp edges and with broken edges



DELIVERY PROGRAM



STOCK PROGRAM



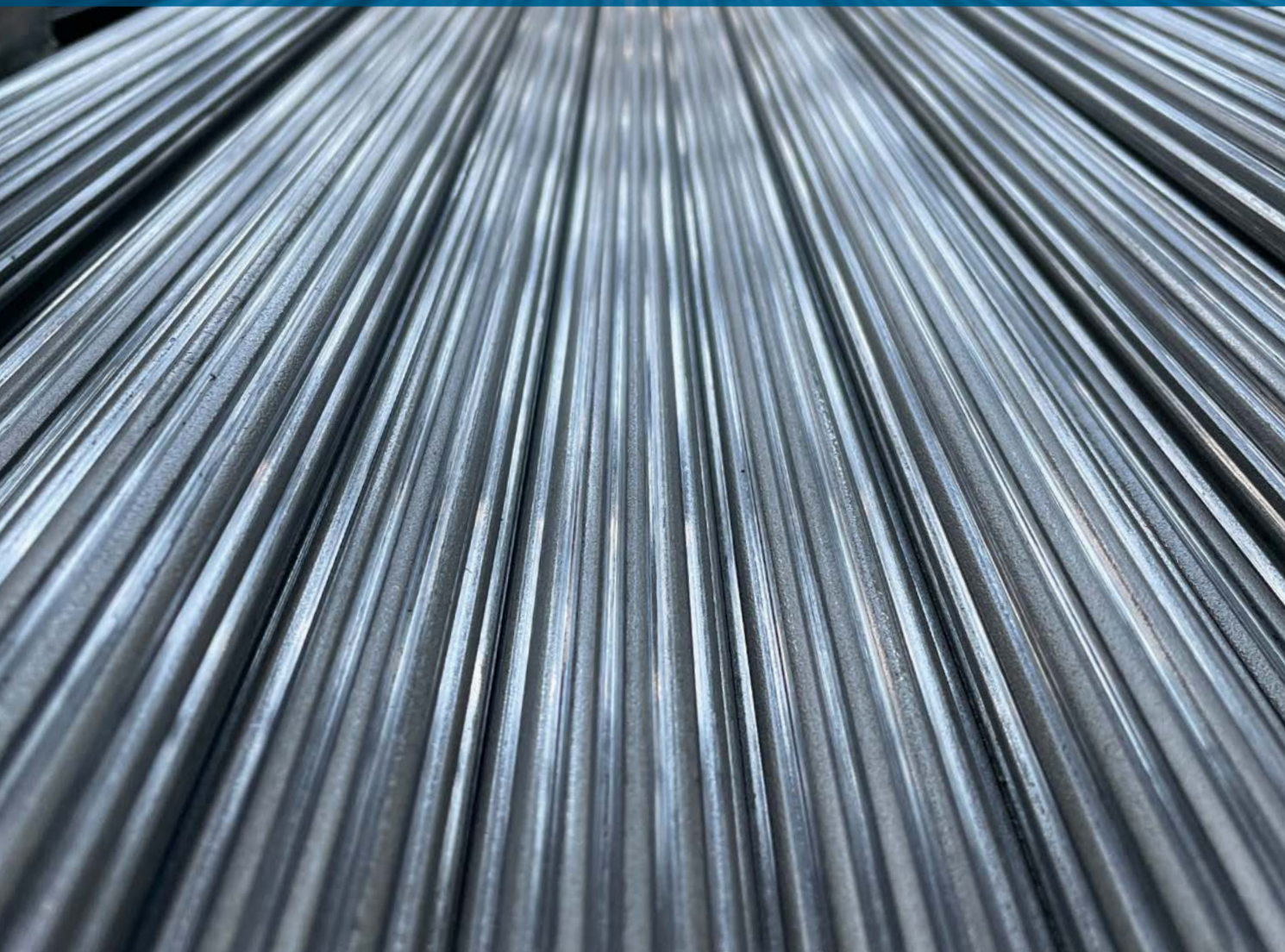
CUSTOM-MADE PRODUCTS

Individually tailored to your needs

Bright steel can be produced in an infinite number of shapes and dimensions. We develop tailor-made solutions based on drawings or samples and the technological requirements of our customers.

Our experienced engineers and technicians work closely with you to analyze problems and develop new ideas together. In doing so, we not only take technical aspects into account, but also commercial aspects such as cost savings and product optimization for the customer.

It goes without saying that we provide the best quality semi-finished products and advise you on the selection of the right material. So you can be sure that the end product will meet the highest standards. We support you in determining the optimum work steps and, through the targeted use of specific production processes such as GFS annealing, ensure that the material takes on additional advantageous properties that make your production processes even more efficient and reduce the follow-up costs during further processing.



CRANE RAIL TRACK KBS

Flat and square bright steel solutions for your crane

Product features

- Length:

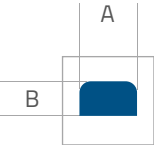
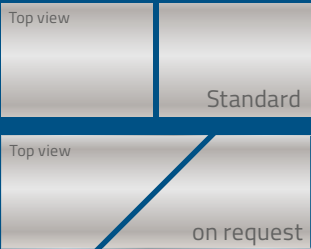
min. 6000 mm
max. 6400 mm
- Deviation of straightness:

max. 1 mm/m
- Weldability:

similar to S355
CEV max. 0,47 %
- Tolerance:

IT11 (± possible)

Head joint and inclined joint available



DELIVERY PROGRAM

Product	Width A [mm]	Width tolerance [mm]	Thickness B [mm]	Thickness tolerance [mm]	Material standard
KBS40.30	40,000	+0,000 / -0,160	30,000	+0,000 / -0,130	DIN EN 10277:2018-09
KBS50.30	50,000	+0,000 / -0,160	30,000	+0,000 / -0,130	DIN EN 10277:2018-09
KBS50.40	50,000	+0,000 / -0,160	40,000	+0,000 / -0,160	DIN EN 10277:2018-09
KBS50.50	50,000	+0,000 / -0,160	50,000	+0,000 / -0,160	DIN EN 10277:2018-09
KBS55.55	55,000	+0,000 / -0,190	55,000	+0,000 / -0,190	DIN EN 10277:2018-09
KBS60.30	60,000	+0,000 / -0,190	30,000	+0,000 / -0,130	DIN EN 10277:2018-09
KBS60.40	60,000	+0,000 / -0,190	40,000	+0,000 / -0,160	DIN EN 10277:2018-09
KBS60.50	60,000	+0,000 / -0,190	50,000	+0,000 / -0,160	DIN EN 10277:2018-09
KBS60.60	60,000	+0,000 / -0,190	60,000	+0,000 / -0,190	DIN EN 10277:2018-09
KBS65.45	65,000	+0,000 / -0,190	45,000	+0,000 / -0,160	DIN EN 10277:2018-09
KBS70.50	70,000	+0,000 / -0,190	50,000	+0,000 / -0,160	DIN EN 10277:2018-09
KBS70.40	70,000	+0,000 / -0,190	40,000	+0,000 / -0,160	DIN EN 10277:2018-09
KBS70.70	70,000	+0,000 / -0,190	70,000	+0,000 / -0,190	DIN EN 10277:2018-09
KBS80.50	80,000	+0,000 / -0,190	50,000	+0,000 / -0,190	DIN EN 10277:2018-09
KBS80.80	80,000	+0,000 / -0,190	80,000	+0,000 / -0,190	DIN EN 10277:2018-09
KBS50.20	50,000	+0,000 / -0,160	20,000	+0,000 / -0,130	DIN EN 10277:2018-09
KBS100.50	100,000	+0,000 / -0,220	50,000	+0,000 / -0,160	DIN EN 10277:2018-09

Your dimensions are not listed? Please contact us.



DIMENSIONS AND TOLERANCES BRIGHT STEEL

Drawn, to DIN EN 10277

Tolerance classes for the manufactured state

Product form	Tolerance class to DIN ISO 286-2			
	h9	h10	h11	h12
Rounds				
Squares				
Hexagones				

Tolerances for drawn flat steels

Width (mm)	Tolerances (mm)		Tolerance class to DIN ISO 286-2
≤ 18	+ 0,00 mm	- 0,11 mm	h11
> 18 ≤ 30	+ 0,00 mm	- 0,13 mm	h11
> 30 ≤ 50	+ 0,00 mm	- 0,16 mm	h11
> 50 ≤ 80	+ 0,00 mm	- 0,19 mm	h11
> 80 ≤ 100	+ 0,00 mm	- 0,22 mm	h11
> 100 ≤ 150	+ 0,50 mm	- 0,50 mm	
> 150 ≤ 200	+ 1,00 mm	- 1,00 mm	
> 200 ≤ 300	+ 2,00 mm	- 2,00 mm	
> 300 ≤ 400	+ 2,50 mm	- 2,50 mm	
> 400 ≤ 500	+ 1,00 %	- 1,00 %	

Thickness mm	Tolerances ¹⁾ mm	Tolerance class to DIN ISO 286-2
> 3 ≤ 6	- 0,075	h11
> 6 ≤ 10	- 0,090	h11
> 10 ≤ 18	- 0,110	h11
> 18 ≤ 30	- 0,130	h11
> 30 ≤ 50	- 0,160	h11
> 50 ≤ 60	- 0,190	h11
> 60 ≤ 80	- 0,300	h12
> 80 ≤ 100	- 0,350	h12

¹⁾ For all tolerances + 0 holds good

Types of length and tolerances

Length types	Length mm	Tolerances mm
Manufacturing length	3000 - 9000 ²⁾	> 200
Stock length	3000 or 6000 ²⁾	+ 200
Cut length	up to 9000	by agreement, but at least 2 mm

²⁾ Dimension ≤ 25 mm: for each bundle up to 5% bars with short length
(minimum two thirds of the nominal length)
Dimension > 25 mm: for each bundle up to 10% bars with short length
(minimum two thirds of the nominal length)

TOLERANCES

Drawn to ASTM - A 108
(Carbon content ≤ 0.28 %)

Flat steels

Dimension range width	Tolerance width + thickness
≤ 3/4" (19,05 mm)	+0" / -0,003" (-0,076 mm)
> 3/4" (19,05 mm) ≤ 1-1/2" (38,1 mm)	+0"/ -0,004" (-0,102 mm)
> 1-1/2" (38,1 mm) ≤ 3" (76,2 mm)	+0" / -0,005" (-0,127 mm)
> 3" (76,2 mm) ≤ 4" (101,6 mm)	+0" / -0,006" (-0,152 mm)
> 4" (101,6 mm) ≤ 6" (152,4 mm)	+0" / -0,008" (-0,203 mm)
> 6" (152,4 mm)	+0" / -0,013" (-0,330 mm)

Squares

Dimension range	Tolerance
≤ 3/4" (19,05 mm)	+0" / -0,002" (-0,051 mm)
> 3/4" (19,05 mm) ≤ 1-1/2" (38,1 mm)	+0" / -0,003" (-0,076 mm)
> 1-1/2" (38,1 mm) ≤ 2-1/2" (63,5 mm)	+0"/ -0,004" (-0,102 mm)
> 2-1/2" (63,5 mm) ≤ 4" (101,6 mm)	+0" / -0,006" (-0,152 mm)
> 4" (101,6 mm) ≤ 5" (127 mm)	+0" / -0,010" (-0,254 mm)
> 5" (127 mm) ≤ 6" (152,4 mm)	+0" / -0,014" (-0,356 mm)

Rounds

Dimension range	Tolerance
≤ 1-1/2" (38,1 mm)	+0" / -0,002" (-0,051 mm)
> 1-1/2" (38,1 mm) ≤ 2-1/2" (63,5 mm)	+0" / -0,003" (-0,076 mm)
> 2-1/2" (63,5 mm) ≤ 4" (101,6 mm)	+0" / -0,004" (-0,102 mm)
> 4" (101,6 mm) ≤ 6" (152,4 mm)	+0" / -0,005" (-0,127 mm)
> 6" (152,4 mm) ≤ 8" (203,2 mm)	+0" / -0,006" (-0,152 mm)
> 8" (203,2 mm) ≤ 9" (228,6 mm)	+0" / -0,007" (-0,178 mm)

Hexagones

Dimension range	Tolerance
≤ 3/4" (19,05 mm)	+0" / -0,002" (-0,051 mm)
> 3/4" (19,05 mm) ≤ 1-1/2" (38,1 mm)	+0" / -0,003" (-0,076 mm)
> 1-1/2" (38,1 mm) ≤ 2-1/2" (63,5 mm)	+0" / -0,004" (-0,102 mm)
> 2-1/2" (63,5 mm) ≤ 3-1/8" (79,38 mm)	+0" / -0,005" (-0,127 mm)
> 3-1/8" (79,38 mm) ≤ 4" (101,6 mm)	+0" / -0,006" (-0,152 mm)



Bright steel is our DNA.

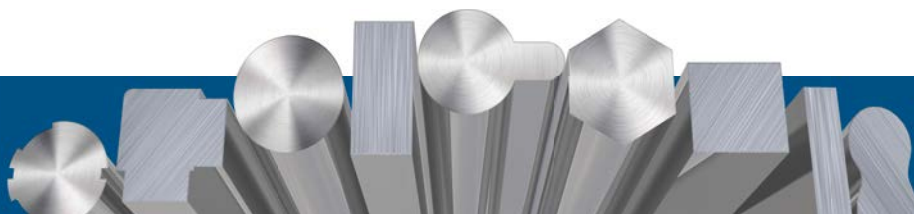


Version: 04/2024 | All information without guarantee of completeness and correctness. Subject to technical changes.



ANDERNACH & BLECK

Bright steel is our DNA



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