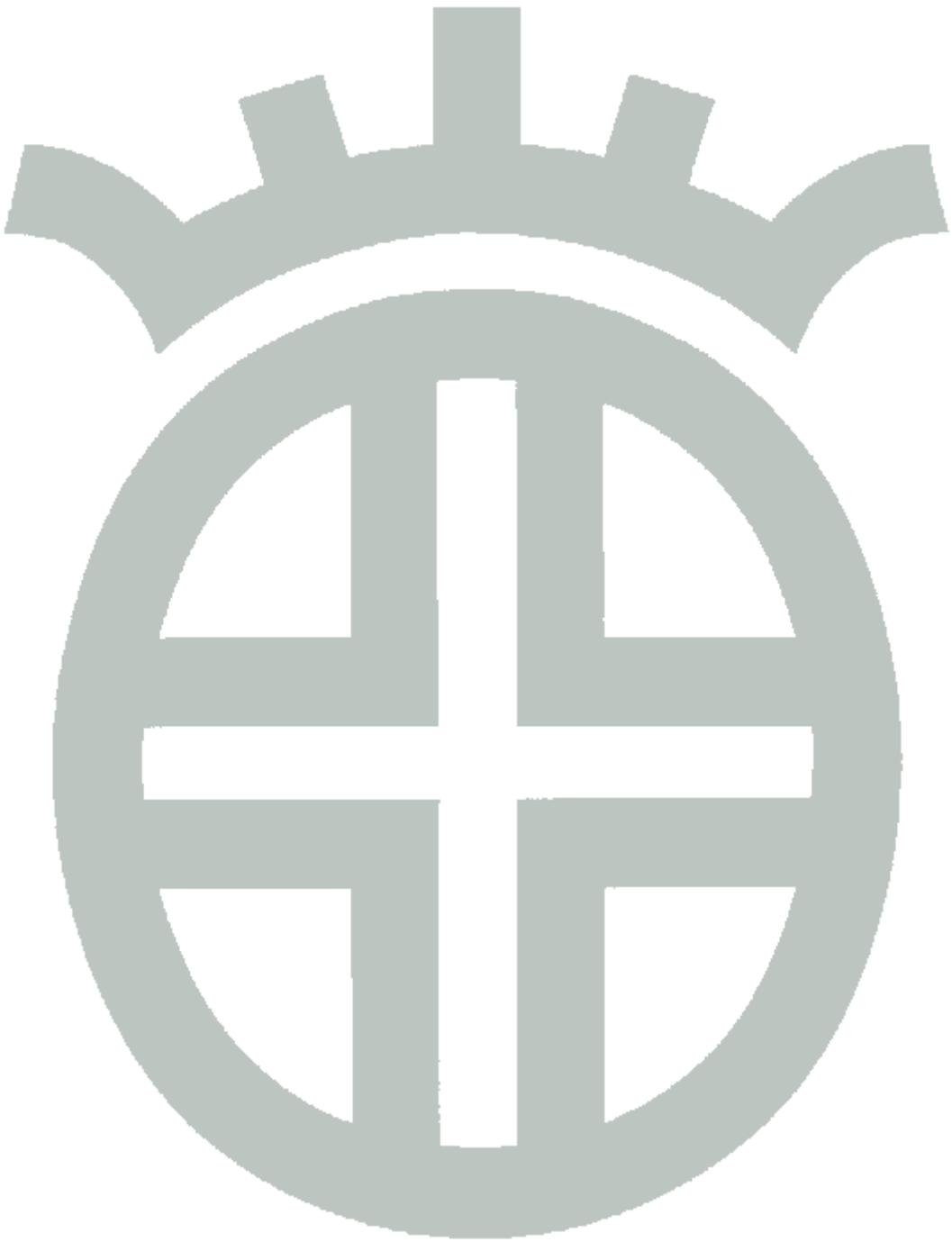


Delivery program
Cut-to-size flange plates from heavy plate

Specification DH-E67-A April 2004

SHED SOME OF THE LOAD

Our tailor-made flange plates help you to take the strain off of your plant and eliminate unproductive scrap.

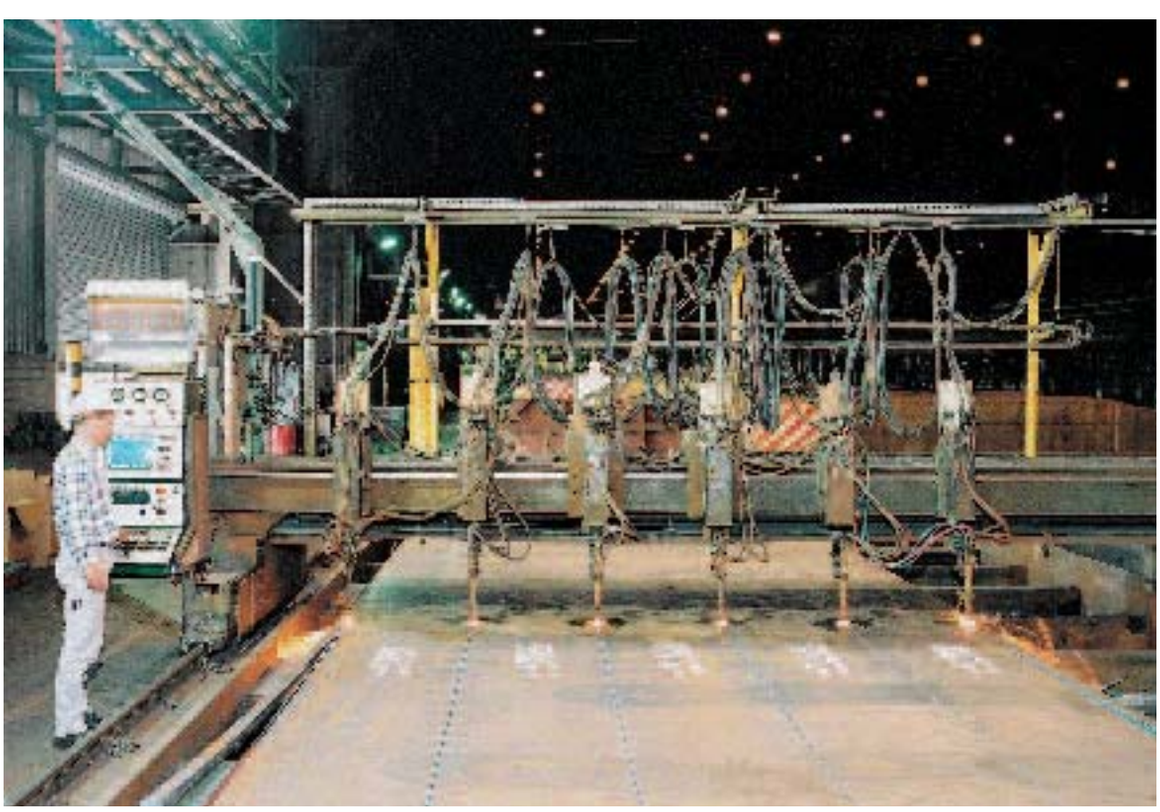
Dillinger Hütte GTS supplies flange plates in sizes specially matched for applications in heavy structural steel engineering, such as steel and composite bridge engineering.

The properties and available dimensions for our cut-to-size flange plates are summarized below. They can be supplied with or without enhanced flame cut surface quality specifications, as you require. Please also note the terms and remarks of our general delivery program.

A special bevelling for welding purposes can be applied to the flange plates on request to meet your specific needs. Our Service Marketing will be pleased to provide assistance and information.

Heavy plates for flange plates

Please be sure to indicate in your order whether you prefer to cut lamellae from heavy plates yourself. This makes it possible for us to adjust the product in such a way that optimum results in terms of distortion and cambering are achieved in flame cutting. Heavy plates ordered with the suffix "lamellae cut quality" are supplied in flatness class S if no other agreement has been made. The conditions applicable to our general delivery program apply in all other instances.



SIZE RIGHT ON

Steel grades:

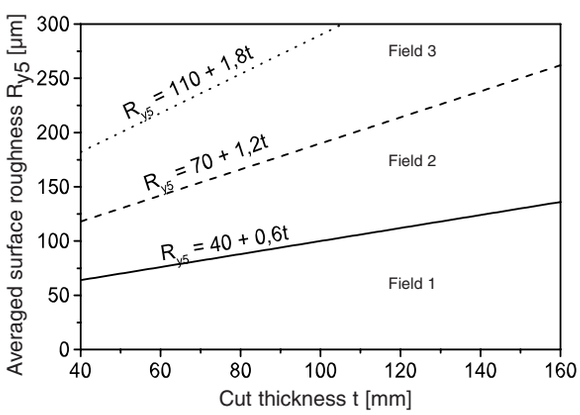
Flange plates can be supplied in all common steel grades in accordance with EN 10025, EN 10155, EN 10113-2 and EN 10113-3 or in accordance with Dillinger Hütte GTS's DI-MC mill standards for thermomechanically rolled grades. Other grades on request.

Flatness:

Our flange plates conform with flatness class S (fine flatness) in accordance with EN 10029, Table 5.

Cut edge quality:

Conformity with cut edge category II as per EN ISO 9013 is the standard finish. Averaged surface roughness R_{y5} conforms with not less than Box 3 of Figure 8 in EN ISO 9013.
Enhanced surface roughness specifications are feasible on request, i.e., minimum specification Box 2, Figure 8 in EN ISO 9013.



Averaged surface roughness R_{y5} as per EN ISO 9013

In accordance with the standard, isolated defects, such as single blow-outs are not taken into account in definition of this quality data. Flame cutting burr is removed from the cut edges.

Dimensions and tolerances:

- Tables 1 and 2 show the standard widths and lengths available as a function of required plate thickness. Please note that the total number must be divisible by two in the case of smaller plate widths. Widths other than those stated in Tables 1 and 2, and multiples other than those stated in the tables, are available at special request down to a minimum plate width of 400 mm.
The width tolerance of our flange plates conforms with tolerance class B in EN ISO 9013.

	Nominal width b		
Flange plate thickness t	400 ≤ b < 1000	1000 ≤ b < 2000	2000 ≤ b < 2090
40 < t ≤ 50	± 2.5	± 3.0	± 3.5
50 < t ≤ 100	± 3.5	± 4.0	± 4.5
100 < t ≤ 150	± 4.0	± 5.0	± 6.0

Width tolerances for nominal width: class B as per EN ISO 9013

- We accept 0.1 % of plate length, maximum 20 mm, for the length tolerance, and 0.1 % across plate length for edge straightness. Class A of EN 10029 is met as standard for the thickness tolerance.

- Longitudinally profiled plates are also available cut to size for flange plates on request in accordance with our delivery program for longitudinally profiled plates. Please note that the flatness and thickness tolerances conform to our separate specification for longitudinally profiled plates.

More extensive specifications than those shown here may be feasible; please enquire directly at our mill.

Maximum flange plate length as a function of thickness and width

Table 1

The dimensions shown in Tables 1 can be ordered in any number required.

Table 1.A: Steels in conformity with EN 10025, EN 10155, EN 10113-2

Thickness / mm >	Thickness / mm ≤	Width / mm > ≥ 400 1300	1300 1400	1400 1490	1490 1600	1600 1700	1700 1800	1800 1900	1900 2000	2000 2090
10	40									
40	45		28.0	28.0	24.8	23.4	22.0	28.0	28.0	28.0
45	50		28.0	28.0	22.1	20.9	19.7	28.0	28.0	28.0
50	55		24.0	24.0	20.2	19.0	17.9	24.0	24.0	24.0
55	60		24.0	24.0	18.5	17.4	16.4	24.0	24.0	24.0
60	65		24.0	24.0	17.0	15.9	15.0	24.0	24.0	24.0
65	70		24.0	24.0	15.7	14.8	13.9	24.0	24.0	24.0
70	75		22.6	22.6	14.6	13.7	12.9	24.0	24.0	24.0
75	80		21.2	21.2	13.6	12.8	12.1	24.0	24.0	24.0
80	85		19.8	19.8	12.8	12.0	11.3	24.0	24.0	24.0
85	90							24.0	24.0	24.0
90	95							24.0	24.0	24.0
95	100							24.0	24.0	24.0
100	105							24.0	24.0	24.0
105	110							23.2	23.2	23.2
110	115							22.2	22.2	22.2
115	120							21.2	21.2	21.2
120	125							20.3	20.3	20.3
125	130							19.5	19.5	19.5
130										

Table 1.B: Steels in conformity with EN 10113-3 / mill standards DI-MC

Thickness / mm >	Thickness / mm ≤	Width / mm > ≥ 400 1300	1300 1400	1400 1490	1490 1600	1600 1700	1700 1800	1800 1900	1900 2000	2000 2090
10	40									
40	45		21.2	21.2	21.2	21.2	20.0	21.2	21.2	21.2
45	50		21.2	21.2	20.2	18.9	17.7	21.2	21.2	21.2
50	55		21.2	21.2	18.2	17.0	16.0	21.2	21.2	21.2
55	60		21.2	21.2	16.5	15.4	14.4	21.2	21.2	21.2
60	65		21.2	21.2	15.1	14.1	13.2	21.2	21.2	21.2
65	70		21.2	21.2	13.8	12.9	12.1	21.2	21.2	21.2
70	75							21.2	21.2	21.2
75	80							21.2	21.2	21.2
80	85							21.2	21.2	21.2
85	90							21.2	21.2	21.2
90	95							21.2	21.2	21.2
95	100							20.8	20.8	20.8
100	120									

Please note:

Products in this dimension range available on request.

Minimum plate length: 8 m, lengths longer than those stated on request.

Please also note the conditions and remarks applicable in our general delivery program.

Maximum flange plate length as a function of thickness and width

Table 2

The dimensions shown in these tables can be ordered in an equal number.

Table 2.A: Steels in conformity with EN 10025, EN 10155, EN 10113-2

Thickness / mm >	Thickness / mm ≤	Width / mm > ≥ 400 ≤ 650	650 725	725 800	800 900	900 1025	1025 1100	1100 1200	1200 1300
10	40								
40	45		28.0	24.8	22.0	28.0	28.0	28.0	28.0
45	50		28.0	22.1	19.7	28.0	28.0	28.0	28.0
50	55		24.0	20.2	17.9	24.0	24.0	24.0	24.0
55	60		24.0	18.5	16.4	24.0	24.0	24.0	23.4
60	65		24.0	17.0	15.0	24.0	24.0	23.4	21.6
65	70		24.0	15.7	13.9	24.0	23.7	21.7	20.0
70	75		22.6	14.6	12.9	24.0	22.1	20.2	18.6
75	80		21.2	13.6	12.1	24.0	20.7	18.9	17.4
80	85		19.8	12.8	11.3	24.0	19.4	17.7	16.3
85	90					24.0	18.3	16.7	15.3
90	95					24.0	17.3	15.8	14.5
95	100					24.0	16.4	14.9	13.7
100	105					24.0	14.8	13.5	12.4
105	110					23.2	14.8	13.5	12.4
110	115					22.2	13.5	12.3	11.3
115	120					21.2	13.5	12.3	11.3
120	125					20.3	12.4	11.3	10.4
125	130					19.5	12.4	11.3	10.4
130									

Table 2.B: Steels in conformity with EN 10113-3 / mill standards DI-MC

Thickness / mm >	Thickness / mm ≤	Width / mm > ≥ 400 ≤ 650	650 725	725 800	800 900	900 1025	1025 1100	1100 1200	1200 1300
10	40								
40	45		21.2	21.2	20.2	21.2	21.2	21.2	21.2
45	50		21.2	20.4	17.9	21.2	21.2	21.2	20.6
50	55		21.2	18.4	16.2	21.2	21.2	20.3	18.6
55	60		21.2	16.7	14.5	21.2	20.3	18.4	16.9
60	65		21.2	15.3	13.4	21.2	18.8	16.9	15.4
65	70		21.2	14.0	12.3	21.2	17.1	15.5	14.2
70	75					21.2	15.9	14.4	13.1
75	80					21.2	14.7	13.4	12.2
80	85					21.2	13.8	12.5	11.4
85	90					21.2	12.9	11.7	10.6
90	95					21.2	12.1	11.0	10.0
95	100					20.8	11.4	10.3	9.4
100	120								

Please note:

Products in this dimension range available on request.

Minimum plate length: 8 m, lengths longer than those stated on request.

Please also note the conditions and remarks applicable in our general delivery program.

Order example

Cut-to-size flange plates

_____ plates of dimensions
Number

_____ mm x _____ mm x _____ mm
thickness width length

in accordance with Dillinger Hütte GTS's current delivery program for heavy plate
finished-to-size flange plates with
❍ Category II for cut edge roughness (Box 1-3 in EN ISO 9013, figure 8)
❍ Category I for cut edge roughness (Box 1-2 in EN ISO 9013, figure 8)
in grade: _____ as per
❍ EN 10025 ❍ EN 10155
❍ EN 10113-2 ❍ EN 10113-3
❍ Material sheet DI-MC (latest valid edition)

DILLINGER HÜTTE GTS

AG der Dillinger Hüttenwerke
Marketing
D - 66748 Dillingen/Saar
P.O. Box 15 80
Tel: +49 68 31 47 - 31 94
Fax: +49 68 31 47 - 30 89

GTS Industries
Marketing
F - 59379 Dunkerque Cedex
P.O. Box 63 17
Tel: +33 3 28 29 31 56
Fax: +33 3 28 29 69 28

e-mail: info@dillinger.biz
http://www.dillinger.de