

Hot rolled Steel Plates, Sheets and Coils

Prefabrications

Wide flats from plates and wide flats from strip

Wide flats from plate and strip that are ready for assembly and dimensionally accurate speed up the manufacture of steel structures and assembly, and avoid wasting material. Thanks to the extensive range available, steel grades best suited for the application in question can be used.

Applications

- Welded girders
- Stiffeners
- Bridge girders
- Welded girders in the automotive industry
- Chamfered profile slabs

Ruukki is a metal expert you can rely on all the way, whenever you need metal based materials, components, systems or total solutions. We constantly develop our product range and operating models to match your needs.

Wide Flats from Plates

Wide flats that are made of heavy plates are flame cut or plasma cut. The available steel grades are in compliance with the production programme. When ordering, the smallest item weight for these products is 2000 to 5000 kg, depending of the plate thickness. This is also the smallest heavy plate available that is cut to wide flats in compliance with the order.

Wide flats made of heavy plates can be delivered with rolled surface, shot-blasted surface or shot-blasted and shop-primed surface. The priming is carried out before the flame cutting. The edges of the wide flats are chamfered in order to remove the burr resulting from flame cutting as well as to smoothen the sharp edges. The edges of plasma-cut wide flats are finished mechanically.

The chamfering of the edges is carried out only if agreed at the time of ordering.

- **Delivery time**
The delivery time for wide flats made of heavy plates is one (1) week longer than that of a heavy plate.
- **Inspection document**
Test report EN 10204-2.2 or Inspection Certificate EN 10204-3.1 will be given as required in the order.
- **Packing and marking**
Wide flats made of heavy plates are strapped into bundles with 4 – 6 steel bands depending on the dimensions of the bundle. Identification marking is hard-stamped on every flat. Other markings on the bundles are made with black ink.

- **Note**
Service Centres also produce wide flats from other materials, in other quantities and dimensions.

Wide Flats from Strip

The steel grade selection is the strip products in production program. The smallest item weight is about fifteen (15) tonnes, which is cut to wide flats from strip in compliance with the order.

The long edges of wide flats from strip can be made of hot rolled strips, can be chamfered to the radius of $R = 1$ mm. The chamfering is carried out mechanically pressing with rolls. Chamfering of edges must be agreed upon in advance.

- **Delivery time**
The delivery time for wide flats made of coils is one (1) week longer than that of a hot rolled coil.
- **Inspection document**
Test report EN 10204-2.2 or Inspection Certificate EN 10204-3.1 will be given as required in the order.
- **Packing and marking**
The plate identification or number indicated by the customer can be hard-stamped on every flat. The size of the bundles, protection and packing must be agreed upon in conjunction with the order. The bundles are furnished with labels containing product information.

● Wide flats from plate: dimensions, shapes, roughness of a cut face and tolerances

Table 1

Dimensions of wide flat from plate	Dimension range mm		Tolerance
Thickness	10 – 60		EN 10029, Class A or as agreed
Width	150 – 800		± 1.5 mm
Length	4500 – 19500		+ 4 mm or + 0.04 % for lengths over 10000 mm
Flatness	6 mm/m ¹⁾		EN 10029 ¹⁾
Edge camber	L / 1000		L= length of wide flat mm
Quality class for surface	u	R _z 5	EN ISO 9013 (31 March 2003), in which u = perpendicularity tolerance (mm) and R _z 5 = average of its profile depth (µm).
- oxy-propane cut	Range 4	Range 3	
- plasma cut	Range 5	Range 4	

¹⁾ In case of thickness under 20 mm, flatness of 3 mm/m is possible if agreed upon separately.

• **Wide flats from strip: dimensions for steel grades of various yield strength classes**

Table 2

Thickness mm	Yield strength of the steel grade ≤ 355 MPa		(355) - 550 MPa		(550) – 650 MPa	
	Maximum width mm	Maximum length mm	Maximum width mm	Maximum length mm	Maximum width mm	Maximum length mm
4,00 - 7,00	700	10 000	600	10 000	500	8 000
7,01 - 8,50	700	14 000	500	14 000	300	12 000
8,51 - 9,00	700	14 000	500	14 000	–	–
9,01 - 10,00	700	14 000	400	14 000	–	–

The minimum width in all yield strength classes is 120 mm, when the thickness < 6 mm.

The minimum width in all yield strength classes is 150 mm, when the thickness ≥ 6 mm.

The minimum length in all yield strength classes is 2000 mm.

• **Wide flats from strip: tolerances and roughness of a cut face**

Table 3

Dimensions of wide flat from strip	Tolerance
Thickness	Stricter than EN 10051, Class A
Width	0, + 1.0 mm
Length (10 m or less)	0, + 6 mm
Length (more than 10 m)	± 6 mm or 0, + 12 mm, agreed at the time of order
Flatness	3 mm/m, EN 10051
Edge camber	L / 1000, L = length of flat, mm
Quality class for surface	Mechanical cutting (Quality standard for mechanically cut surface does not exist yet)

NB: Any stricter tolerances must be agreed separately.

• **Our Customer Service is happy to give you further information**

Sales, Technical Customer Support

info.metals@ruukki.com

Rautaruukki Corporation, P.O. Box 138, FI-00811 Helsinki, Finland. tel. +358 20 5911

www.ruukki.com

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