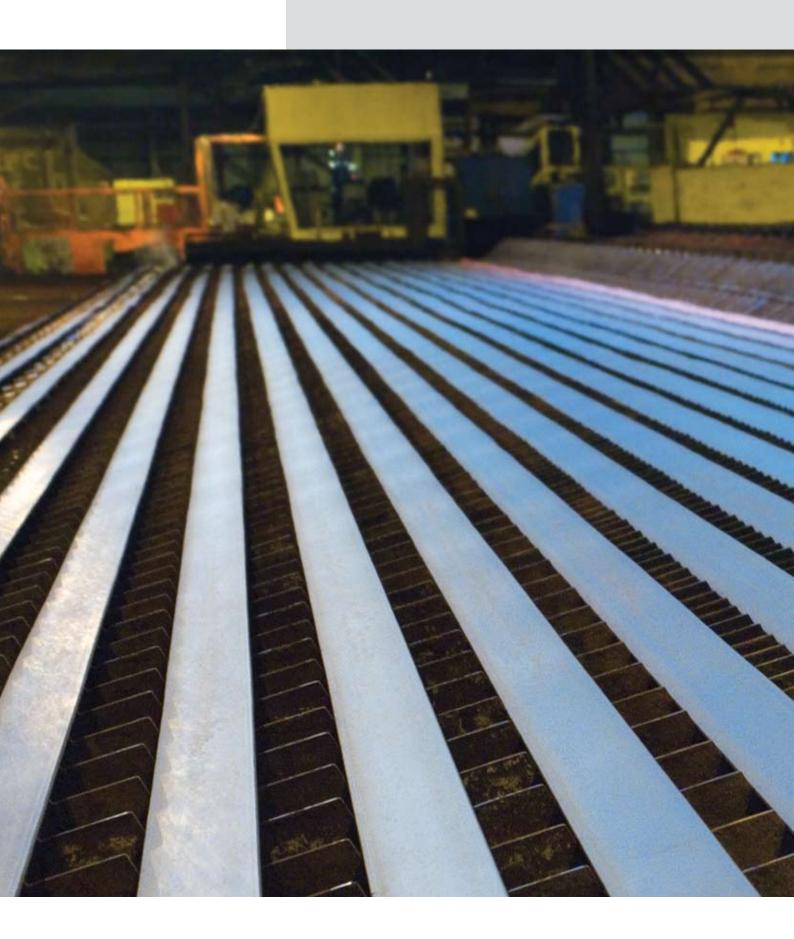
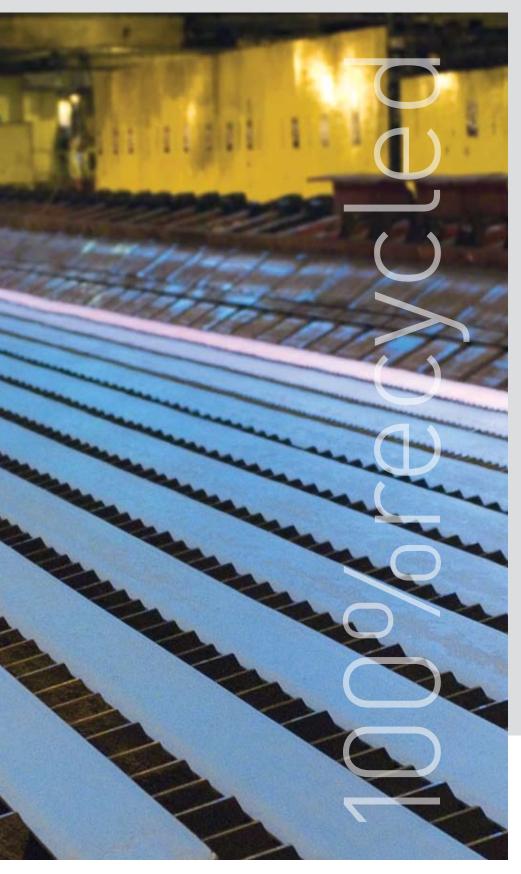
# Wide flat bars simple yet versatile

Universal flat bars







The Celsa Group is one of the largest producers of steel long products in Europe, with manufacturing facilities in Spain, UK, Poland, Norway and France. In total we manufacture around 9 million tonnes of finished product annually, all from 100% recycled scrap metal.

A key and strategic product for Celsa is our range of wide flat bars, produced at Celsa Barcelona, and Celsa Steel UK in Cardiff. Our wide flats are hot rolled and range from 160mm to 400mm in width, and from 6mm to 400mm in thickness. All flats comply with the appropriate UNE/BSi standards, which vary depending on the origin (UK or Spain) and steel grade (please see tables provided). We offer the most extensive range on the market and the quality of our products is indicated by the widely recognised CE mark.

We roll the majority of our wide flats with a minimum length of 5.5 metres and a maximum length of 15.5m, with a guaranteed tolerance of -0 to +100mm.

As well as standard widths, thicknesses, lengths and grades, we can also roll non-standard products for orders in excess of 50 tonnes, for delivery within 6 weeks.

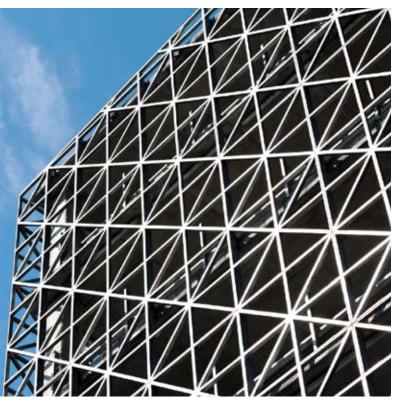


# applications

Wide flat bars are a highly versatile product, having an endless number of applications in sectors as diverse as the automotive industry, the naval industry, construction, agriculture, mining and metal joinery. They can also be used as an alternative to cut sheet metal, and its associated uses.

2

## construction





#### Bracing

The benefits of using hot rolled wide flats are not restricted to their use as a structural component. A growing number of architects consider wide flats to be a multi-functional product which can satisfy both the structural and aesthetic requirements of a contemporary building design. Exposed cross bracing is an example of how wide flats provide both structural stability and strong geometric architectural detail.

#### Staircases & Fire escapes

Our hot rolled wide flats are the perfect product choice for staircase and fire escape fabrication. They can be used in applications that range from simple, practical fire escapes to the most innovative, architectural staircase designs.





#### Stiffening plates

Universal flat bars are widely used as stiffening plates in complex structural steel designs. They are especially suited to designs which incorporate a cross bracing detail or where intersecting sections require increased stabilization.

#### Connections

Wide flats can be easily cut and drilled which makes them perfect for a diverse range of connection applications. Connection plates can be welded to large sections and trusses, which can then be transported to site and safely assembled to form larger structures and buildings.

#### **Base plates**

Wide flats are a practical and cost effective component which can be found in most structural steel framework designs. They are especially suited to designs which require a transition between steel and other construction materials. They are widely used as column base plates which allow a steel structure to be safely secured to concrete foundation pads.









#### Portal frames

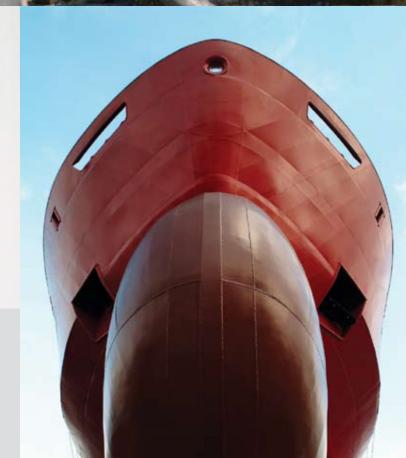
The economic and structural benefits of hot rolled wide flat bars are widely recognized by steel frame fabricators. They are often used in column and beam fabrication as part of steel portal frames; an increasingly popular warehouse and industrial building design solution.





# transport

Wide flat bars are used extensively in the manufacture and fabrication of trailers, commercial truck and freight train bodies, as well as being used in ship building and railway track connections. The popularity of wide flats in this industry stems from a diverse product range and the products' inherent versatility.



## plant, cranes and agricultural machinery



The universal appeal of wide flats is demonstrated by their utilization throughout the specialist plant and machinery manufacturing industries. This versatile product range is ideal for use as a structural component in the fabrication and manufacture of specialist construction and demolition plant, cranes and agricultural machinery.





### Wide flat bars

Universal flat bars

### product range

GROUP<sup>™</sup>

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Mass per metre (kg/m)												
Width (w)	Thickness (t) mm											
mm	6	8	10	12	14	15	16	18	20	25	30	40
160		10.0	12.6	15.1	17.6	18.8	20.1	22.6	25.1	31.4		
180	8.5	11.3	14.1	17.0	19.8	21.2	22.6	25.4	28.3	35.3		
200	9.4	12.6	15.7	18.8	22.0	23.6	25.1	28.3	31.4	39.3		
220	10.4	13.8	17.3	20.7	24.2	25.9	27.6	31.1	34.5	43.2	51.8	69.1
250	11.8	15.7	19.6	23.6	27.5	29.4	31.4	35.3	39.3	49.1	58.9	78.5
300	14.1	18.8	23.6	28.3	33.0	35.3	37.7	42.4	47.1	58.9	70.7	94.2
350						41.2	44.0	49.5	55.0	68.7	82.4	109.9
400						47.1	50.2	56.5	62.8	78.5	94.2	125.6

These sizes are typical, other sizes are possible - please contact us for details.

### steel grades

Spanish Standard	British Standard	Grade
UNE EN 10025:2:2006	BS EN 10025:2004	S-235-JR
UNE EN 10025:2:2006	BS EN 10025:2004	S-235-J0
UNE EN 10025:2:2006	BS EN 10025:2004	S-275-JR
	BS EN 10025:2004	S-275-J0
	BS EN 10025:2004	S-355-JR
UNE EN 10025:2:2006	BS EN 10025:2004	S-355-JO
UNE EN 10025:2:2006	BS EN 10025:2004	S-355-J2 (t ≤ 12mm)
UNE EN 10083:1997		C45 (F114)

These grades are typical, other grades are possible - please contact us for details.

#### size

	Celsa Barcelona	Celsa UK
Standard length	бm	бm
Special lengths	Available on request (5.5 to 15.5m)	Available on request (5.5 to 15.5m)
Length tolerance	-0 +100mm	-0 +100mm
Size and tolerance standard	EURONORM 91:1981	BS 4360:1990







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