

Special Profiles

Bulb flats



Corus Special Profiles is a business unit within the Corus group. We specialise in the manufacture of hot rolled, special shaped steel profiles for a range of industries around the world.

We offer a range of bulb flat sections which are used as plate stiffeners in the shipbuilding industry, and other industries such as bridge building. We offer a range of sizes up to 430mm wide from a regular rolling programme. The table overleaf shows details, please contact us if you need further information.

Tolerances : In accordance with BS EN 10067:1997

1. Dimensional variation – all dimensions in mm

Width b			Thickness t			Radius of curvature of corners r_1 for thicknesses		
Over	Up to	Permitted Variation	From	Up to	Permitted Variation	Over	Up to	Max.
-	120	+/- 1.5	-	8	+ 0.7 - 0.3	-	5	1.5
120	180	+/- 2.0	7	11	+ 1.0 - 0.3	5	9	2.0
180	300	+/- 3.0	9	13	+ 1.0 - 0.4	9	13	3.0
300	430	+/- 4.0	12	20	+ 1.2 - 0.4	13	20	4.0

2. Straightness variation : straightness tolerance q shall be 0.0035 L (entire length of bar)

3. Weight variation : the weights shown in the table overleaf have been calculated from the cross section with a density of 0.785 kilogram per square centimetre per metre run. Permitted weight variations are :

- + 6% - 2.0% of the total weight, for consignments of 5 tonnes and over
- + 8% - 2.7% of the total weight, for consignments under 5 tonnes.

Steel specifications :

Classification Society	A	B	D	A32/36 * D32/36 * E32/36	D40
Lloyds	F	F	F	F	F
DNV	F	F	O	F	F
ABS	F	F	F	F	F
BV	F	F	F	F	F
GL	F	F	F	F	F
Class NK	F	F	F	F	F
RINA	F	F	F	F	F

F = Full approval.
O = Order by order approval.
** = up to 12mm thickness.

* = Equivalent to AH32/36 and DH32/36 for Lloyds Register, and KA32/36 and KD32/36 for Class NK.

Bulb flats are also available in a range of steel specifications suitable for bridge building, in accordance with BS EN 10025:2004.

Bundling, marking & labelling :

Die (hard) stamping : each bar is die stamped with a bar number and steel grade.

Colour coding : bar ends can be colour coded according to customer requirements.

Labels : each bundle has a label showing full order details.



Width	Thickness	Mass per unit length	Bulb height	Bulb width	Bulb radius	Area of cross section	Surface area
b (mm)	t (mm)	(kg/m)	c (mm)	d (mm)	r (mm)	(cm ²)	(m ² /m)
160	7	11.4	22	22.2	6	14.6	0.365
	8	12.7	22	22.2	6	16.2	0.367
	9	14.0	22	22.2	6	17.8	0.369
	11.5	17.3	22	22.2	6	21.8	0.374
180	8	14.8	25	25.5	7	18.9	0.411
	9	16.2	25	25.5	7	20.7	0.413
	10	17.6	25	25.5	7	22.5	0.415
	11.5	19.7	25	25.5	7	25.2	0.418
200	8.5	17.8	28	28.8	8	22.6	0.456
	9	18.5	28	28.8	8	23.6	0.457
	10	20.1	28	28.8	8	25.6	0.459
	11	21.7	28	28.8	8	27.6	0.461
220	12	23.2	28	28.8	8	29.6	0.463
	9	21.0	31	32.1	9	26.8	0.501
	10	22.8	31	32.1	9	29.0	0.508
	11	24.5	31	32.1	9	31.2	0.506
240	12	26.2	31	32.1	9	33.4	0.507
	9.5	24.4	34	35.4	10	31.2	0.546
	10	25.4	34	35.4	10	32.4	0.547
	11	27.4	34	35.4	10	34.9	0.549
260	12	29.3	34	35.4	10	37.3	0.551
	10	28.3	37	38.7	11	36.1	0.593
	11	30.3	37	38.7	11	38.7	0.593
	12	32.4	37	38.7	11	41.3	0.595
280	10.5	32.4	40	42.0	12	41.2	0.636
	11	33.5	40	42.0	12	42.6	0.637
	12	35.7	40	42.0	12	45.5	0.639
	13	37.9	40	42.0	12	48.4	0.641
300	11	36.7	43	45.3	13	46.7	0.681
	12	39.0	43	45.3	13	49.7	0.683
	13	41.5	43	45.3	13	52.8	0.685
320	11.5	41.2	46	48.6	14	52.6	0.727
	12	42.5	46	48.6	14	54.2	0.728
	13	45.0	46	48.6	14	57.4	0.730
	14	47.5	46	48.6	14	60.6	0.732
340	12	46.1	49	52.0	15	58.8	0.772
	13	48.8	49	52.0	15	62.2	0.774
	14	51.5	49	52.0	15	65.5	0.776
	15	54.2	49	52.0	15	69.0	0.778
370	12.5	53.1	53.5	56.9	16.5	67.8	0.839
	13	54.6	53.5	56.9	16.5	69.6	0.840
	14	57.5	53.5	56.9	16.5	73.3	0.842
	15	60.5	53.5	56.9	16.5	77.0	0.844
400	16	63.5	53.5	56.9	16.5	80.7	0.846
	13	60.8	58	61.9	18	77.4	0.907
	14	63.9	58	61.9	18	81.4	0.908
	15	67.0	58	61.9	18	85.4	0.910
430	16	70.2	58	61.9	18	89.4	0.912
	14	70.6	62.5	66.8	19.5	89.7	0.975
	15	73.9	62.5	66.8	19.5	94.1	0.976
	17	80.6	62.5	66.8	19.5	108.0	0.980
	20	90.8	62.5	66.8	19.5	115.0	0.986



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we don't generalise
we specialise

