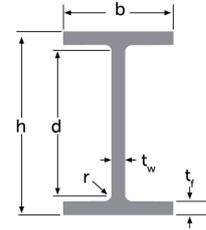


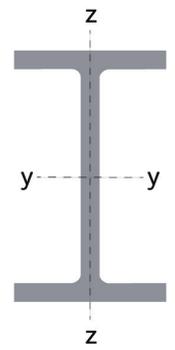
British Steel, the only UK manufacturer of structural sections, is BES 6001 certified, guaranteeing commitment to responsibly sourced materials. Our structural sections are CE and UKCA marked and tested to the highest standards, providing quality and assurance for the global construction market.



Design parameters

Designation	Serial size	Mass per metre	Depth of section	Width of section	Thickness		Root radius	Depth between fillets	Ratios for local buckling		Second moment of area	
					of web	of flange			Flange	Web	Axis	Axis
					t_w	t_f			B/2T	d/t	y-y	z-z
	in	kg/m	h	b	mm	mm	r	d			cm ⁴	cm ⁴
IPE 160	160 x 82 x 16	15.8	160.0	82.0	5.0	7.4	9.0	127.2	5.54	25.4	869	68
IPE 180	180 x 91 x 19	18.8	180.0	91.0	5.3	8.0	9.0	146.0	5.69	27.5	1317	101
IPE 200	200 x 100 x 22	22.4	200.0	100.0	5.6	8.5	12.0	159.0	5.88	28.4	1943	142
IPE 220	220 x 110 x 26	26.2	220.0	110.0	5.9	9.2	12.0	177.6	5.98	30.1	2772	205
IPE 240	240 x 120 x 31	30.7	240.0	120.0	6.2	9.8	15.0	190.4	6.12	30.7	3892	284
IPE 270	270 x 135 x 36	36.1	270.0	135.0	6.6	10.2	15.0	219.6	6.62	33.3	5790	420
IPE 300	300 x 150 x 42	42.2	300.0	150.0	7.1	10.7	15.0	248.6	7.01	35.0	8356	604
IPE 400	400 x 180 x 66	66.3	400.0	180.0	8.6	13.5	20.0	333.0	6.67	38.7	23015	1317
IPE 450	450 x 190 x 78	77.6	450.0	190.0	9.4	14.6	20.0	380.8	6.51	40.5	33597	1675
IPE 500	500 x 200 x 91	90.7	500.0	200.0	10.2	16.0	20.0	428.0	6.25	42.0	48017	2141
IPE 600	600 x 220 x 122	122.0	600.0	220.0	12.0	19.0	20.0	522.0	5.79	43.5	90952	3384
IPE 750 x 134	762 x 267 x 134	133.9	750.0	264.0	12.0	15.5	20.0	679.0	8.52	56.6	151894	4768
IPE 750 x 147	762 x 267 x 147	147.2	753.0	265.0	13.2	17.0	20.0	679.0	7.79	51.4	167254	5291
IPE 750 x 173	762 x 267 x 173	173.7	762.0	267.0	14.4	21.6	20.0	678.8	6.18	47.1	207014	6875
IPE 750 x 196	762 x 267 x 196	196.9	770.0	268.0	15.6	25.4	20.0	679.2	5.28	43.5	241470	8177

Additional sizes and gauges may be available – please contact us to discuss your requirements.

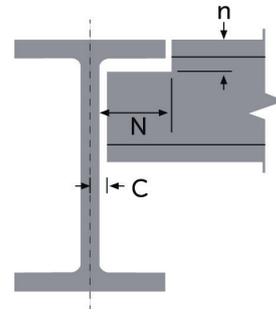


Design parameters

Radius of gyration		Elastic modulus		Plastic modulus		Buckling parameter	Torsional index	Warping constant	Torsional constant	Area of section	Designation	Mass per metre
Axis	Axis	Axis	Axis	Axis	Axis							
y-y	z-z	y-y	z-z	y-y	z-z	u	x	H	J	cm ²		kg/m
cm	cm	cm ³	cm ³	cm ³	cm ³			dm ⁶	cm ⁴			
6.58	1.84	109	17	124	26	0.881	20.6	0.0040	3.54	20.1	IPE 160	15.8
7.42	2.05	146	22	166	35	0.881	21.9	0.0075	4.73	23.9	IPE 180	18.8
8.26	2.24	194	28	221	45	0.883	22.0	0.0131	6.92	28.5	IPE 200	22.4
9.11	2.48	252	37	285	58	0.884	22.9	0.0228	9.03	33.4	IPE 220	26.2
9.97	2.69	324	47	367	74	0.886	22.6	0.0376	13.0	39.1	IPE 240	30.7
11.2	3.02	429	62	484	97	0.884	25.0	0.0708	15.9	45.9	IPE 270	36.1
12.5	3.35	557	81	628	125	0.882	26.9	0.126	19.9	53.8	IPE 300	42.2
16.5	3.96	1151	146	1301	228	0.882	28.5	0.492	49.7	84.1	IPE 400	66.3
18.5	4.12	1493	176	1695	276	0.878	30.3	0.794	65.0	98.5	IPE 450	77.6
20.4	4.31	1921	214	2186	335	0.876	31.5	1.25	87.1	115	IPE 500	90.7
24.3	4.68	3032	308	3471	483	0.871	32.9	2.86	154	154	IPE 600	122.0
29.8	5.27	4051	361	4679	569	0.855	48.7	6.43	125	172	IPE 750 x 134	133.9
29.8	5.30	4442	399	5144	632	0.854	44.8	7.17	163	188	IPE 750 x 147	147.2
30.5	5.56	5433	515	6252	811	0.864	37.4	9.42	279	222	IPE 750 x 173	173.7
31.0	5.70	6272	610	7208	960	0.869	32.8	11.3	417	252	IPE 750 x 196	196.9

Additional sizes and gauges may be available – please contact us to discuss your requirements.





Fabrication detail

Designation	Mass per metre	End clearance	Notch		Surface area			A/V ratio (m ⁻¹)			
					Per metre	Per tonne	Two end faces	Profile 3 sides	Profile 4 sides	Box 3 sides	Box 4 sides
	kg/m	C mm	N mm	n mm	m ²	m ²	m ²				
IPE 160	15.8	5	50	18	0.623	39.4	0.0040	270	310	200	240
IPE 180	18.8	5	54	18	0.698	37.1	0.0048	255	290	190	225
IPE 200	22.4	5	58	22	0.768	34.3	0.0057	235	270	175	210
IPE 220	26.2	5	64	22	0.848	32.4	0.0067	220	255	165	200
IPE 240	30.7	5	68	26	0.922	30.0	0.0078	205	235	155	185
IPE 270	36.1	5	76	26	1.04	28.8	0.0092	195	225	145	175
IPE 300	42.2	6	82	26	1.16	27.5	0.0108	190	215	140	165
IPE 400	66.3	6	96	34	1.47	22.2	0.0168	155	175	115	140
IPE 450	77.6	7	102	36	1.61	20.7	0.0197	145	165	110	130
IPE 500	90.7	7	106	36	1.75	19.3	0.0230	135	150	105	120
IPE 600	122.0	8	114	40	2.02	16.6	0.0308	115	130	90	105
IPE 750 x 134	133.9	10	138	46	2.55	19.0	0.0504	90	100	70	80
IPE 750 x 147	147.2	9	138	42	2.53	17.2	0.0444	100	115	80	95
IPE 750 x 173	173.7	9	136	38	2.51	14.5	0.0376	120	135	95	110
IPE 750 x 196	196.9	8	136	36	2.50	12.7	0.0344	130	145	105	120

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