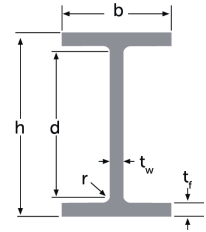


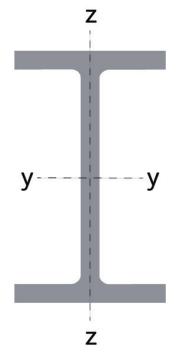
British Steel, the only UK manufacturer of structural sections, is BES 6001 certified, guaranteeing commitment to responsibly sourced materials. Our structural sections are CE marked and tested to the highest standards, providing quality and assurance for the global construction market.



## Design parameters

Designation serial size	Mass per foot	ASTM metric equivalent	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
					$t_w$	$t_f$						
in	lb/ft		h mm	b mm	$t_w$ mm	$t_f$ mm	r mm	d mm			cm <sup>4</sup>	cm <sup>4</sup>
HP 8 x 8	36	HP 200 x 200 x 53	204	207.7	11.3	11.4	10.4	160.4	9.11	14.2	5029	1705
HP 10 x 10	42	HP 250 x 250 x 62	246	256	10.7	10.5	20	185.0	12.2	17.3	8876	2942
HP 10 x 10	57	HP 250 x 250 x 85	254	260	14.4	14.4	20	185.2	9.03	12.9	12532	4229
HP 12 x 12	53	HP 310 x 310 x 79	299	306	11.0	11.0	20	237.0	13.9	21.5	16532	5260
HP 12 x 12	63	HP 310 x 310 x 93	303	308	13.1	13.1	20	236.8	11.8	18.1	19898	6389
HP 12 x 12	74	HP 310 x 310 x 110	308	310	15.5	15.4	20	237.2	10.1	15.3	23825	7661
HP 12 x 12	84	HP 310 x 310 x 125	312	312	17.4	17.4	20	237.2	8.97	13.6	27292	8826
HP 14 x 14.5	73	HP 360 x 370 x 108	346	370	12.8	12.8	20	280.4	14.5	21.9	30645	10816
HP 14 x 14.5	89	HP 360 x 370 x 132	351	373	15.6	15.6	20	279.8	12.0	17.9	37834	13508
HP 14 x 14.5	102	HP 360 x 370 x 152	356	376	17.9	17.9	20	280.2	10.5	15.7	44233	15881
HP 14 x 14.5	117	HP 360 x 370 x 174	361	378	20.4	20.4	20	280.2	9.26	13.7	51195	18394

\*Non-ASTM weight, but still offered by British Steel.  
Additional sizes and gauges may be available – please contact us to discuss your requirements.

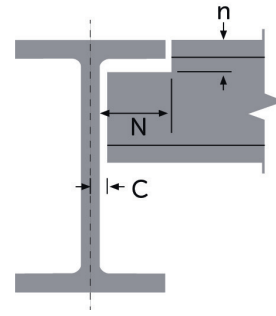


## Design parameters

Radius of gyration		Elastic modulus		Plastic modulus		Buckling parameter	Torsional index	Warping constant	Torsional constant	Area of section	Designation serial size	Mass per foot
Axis	Axis	Axis	Axis	Axis	Axis							
y-y	z-z	y-y	z-z	y-y	z-z	u	x	H	J	cm <sup>2</sup>	in	lb/ft
cm	cm	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>	cm <sup>3</sup>			dm <sup>6</sup>	cm <sup>4</sup>			
8.55	4.98	493	164	557	252	0.827	15.8	0.158	32.8	68.8	HP 8 x 8	36
10.5	6.02	722	230	806	354	0.830	19.0	0.408	39.9	81.3	HP 10 x 10	42
10.6	6.18	987	325	1117	502	0.828	14.7	0.607	93.8	111	HP 10 x 10	57
12.8	7.21	1106	344	1227	526	0.834	22.9	1.09	51.2	101	HP 12 x 12	53
12.9	7.28	1313	415	1467	637	0.832	19.7	1.34	83.2	120	HP 12 x 12	63
13.0	7.35	1547	494	1741	760	0.831	17.1	1.64	132	142	HP 12 x 12	74
13.1	7.42	1749	566	1980	872	0.831	15.4	1.92	187	160	HP 12 x 12	84
14.8	8.82	1771	585	1960	893	0.825	23.5	3.00	89.7	139	HP 14 x 14.5	73
14.9	8.92	2156	724	2404	1109	0.823	19.7	3.80	158	170	HP 14 x 14.5	89
15.0	9.02	2485	845	2788	1295	0.822	17.4	4.54	236	195	HP 14 x 14.5	102
15.2	9.08	2836	973	3203	1495	0.822	15.5	5.33	346	223	HP 14 x 14.5	117

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## Fabrication detail

Designation serial size	Mass per foot	End clearance	Notch		Surface area			A/V ratio (m <sup>-1</sup> )			
					Per metre	Per tonne	Two end faces	Profile 3 sides	Profile 4 sides	Box 3 sides	Box 4 sides
		C	N	n	m <sup>2</sup>	m <sup>2</sup>	m <sup>2</sup>				
in	lb/ft	mm	mm	mm							
HP 8 x 8	36	7.65	110	22	1.20	22.6	0.0138	145	175	90	120
HP 10 x 10	42	7.35	134	32	1.46	23.5	0.0163	150	180	90	125
HP 10 x 10	57	9.2	134	36	1.48	17.4	0.0222	110	135	70	95
HP 12 x 12	53	7.5	158	32	1.77	22.4	0.0202	145	175	90	120
HP 12 x 12	63	8.55	158	34	1.78	19.1	0.0240	120	150	75	100
HP 12 x 12	74	9.75	158	36	1.79	16.3	0.0284	105	125	65	85
HP 12 x 12	84	10.7	158	38	1.80	14.4	0.0320	95	115	60	80
HP 14 x 14.5	73	8.4	190	34	2.11	19.5	0.0278	125	150	75	105
HP 14 x 14.5	89	9.8	190	36	2.13	16.1	0.0340	105	125	65	85
HP 14 x 14.5	102	10.95	190	38	2.15	14.1	0.0390	90	110	55	75
HP 14 x 14.5	117	12.2	190	42	2.16	12.4	0.0446	80	95	50	65

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