



Ship Building Steel Bulb Flat

Bulb plate is one kind of mid structural steel, applying in shipbuilding and bridging industry. In recent years, as rapid development of shipbuilding, there is a large-quantity market demand in bulb plate. It is the important material for vessel's keel corresponding to steel plate for main body.



Executive standard: GB/T9945-2001, EN10067:1996, JIS G3192、ISO 657-19

Grade: ordinary strength (A, B and D); high strength (AH32, AH36, DH32, and DH36). Different plates authenticated by different classification societies shall correspondingly choose bulb plates.

Approved by: CCS GL DNV LR NK KR RINA ABS (ASTM A131) and BV Authentication Classification society

Standard sectional dimentions of hot rolled bulb flat(GB/T9945-2001)										
Model	Size					Sectional Area (m ²)	Theoretical Weight (kg/m)	Center of Gravity (dx/cm)	X-X Characteristic Values	
	b	t	h	r1	r				IX/cm ⁴	Wx/cm ³
HP340×12	340	12	61	15	≤3	58.84	46.20	21.69	6,575	313
HP340×13	340	13	62	15		62.24	48.86	21.34	7,152	335
HP340×14	340	14	63	15		≤4	65.54	51.50	21.10	7,540
HP370×13	370	13	66.5	16.5	≤3	69.70	54.70	23.54	9,469	402
HP370×14	370	14	67.5	16.5		73.40	57.60	23.29	9,980	429
HP370×15	370	15	68.5	16.5		77.10	60.50	23.06	10,483	456
HP400×14	400	14	72	18	≤4	81.48	63.96	25.49	12,924	507
HP400×15	400	15	73	18		85.48	67.10	25.24	13,573	538
HP400×16	400	16	74	18		89.48	70.20	25.00	14,211	568
HP430×14	430	14	76.5	19.5		89.70	70.60	27.70	16,460	594
HP430×15	430	15	77.5	19.5		94.19	73.90	27.46	17,249	629
HP430×17	430	17	79.5	19.5		102.79	80.70	26.95	18,853	700
HP430×19	430	19	81.5	19.5		111.39	87.40	26.53	20,413	770
HP430×20	430	20	82.5	19.5		115.00	90.80	26.30	21,180	804
Material	A/B/AH32/AH36/D/DH32/DH36									



Standard sectional dimentions of hot rolled bulb (GB/T9945-2001)

Model	Size					Sectional Area (m ²)	Theoretical Weight (kg/m)	Center of Gravity (dx/cm)	X-X Characteristic Values	
	b	t	h	r1	r				IX/cm ⁴	Wx/cm ³
HP50×4	50	16	4	2.5	≤1.5	2.87	2.26	3.13	6.88	2.36
HP60×5	60	19	5	3.5		4.31	3.38	3.75	14.73	4.21
HP70×5	70	21	5	3.5		5.09	4.00	4.42	23.97	5.93
HP80×5	80	22	5	4		5.87	4.61	5.08	36.22	7.96
HP90×5.5	90	24	5.5	4		7.07	5.55	5.66	55.86	10.97
HP100×6	100	26	6	5		8.67	6.81	6.31	84.08	14.88
HP120×6.5	120	30	6.5	5	≤2.0	11.19	8.78	7.57	158.20	23.54
HP140×7	140	33	7	6		14.13	11.10	8.86	272.23	34.95
HP140×9	140	35	9	6		16.93	13.30	8.55	326.05	41.59
HP160×8	160	36	8	7		18.04	14.17	10.02	455.35	51.45
HP160×10	160	38	10	7		21.24	16.68	9.72	534.73	60.01
HP180×9	180	40	9	7		22.28	17.50	11.16	716.85	72.26
HP180×11	180	42	11	7		25.88	20.32	10.86	828.50	83.02
HP200×10	200	44	10	8		27.47	21.58	12.39	1,089.90	98.90
HP200×12	200	46	12	8		31.47	24.72	12.08	1,243.10	112.93
HP220×11	220	48	11	8.5		≤3.0	32.94	25.87	13.57	1,584.10
HP220×13	220	50	13	8.5	37.34		29.33	13.27	1,787.20	146.97
HP240×12	240	52	12	9	38.91		30.55	14.75	2,229.60	169.04
HP240×14	240	54	14	9	43.71		34.32	14.45	2,492.40	188.25
HP270×12	270	55	12	9.5	43.92		34.53	16.66	3,206.50	217.83
HP270×14	270	57	14	9.5	49.37		38.77	16.31	3,582.50	201.49
Material	A/B/AH32/AH36/D/DH32/DH36									

Standard sectional dimentions of hot rolled bulb flat steel

Model	Size					Sectional Area (m ²)	Theoretical Weight (kg/m)	Center of Gravity (dx/cm)	X-X Characteristic Values		
	b	t	h	r1	r				IX/cm ⁴	Wx/cm ³	
HP80×5	80	5	19	4	≤1.5	5.41	4.25	4.90	33.87	6.91	
HP80×6	80	6	20	4		6.21	4.88	4.78	38.70	8.10	
HP100×7	100	7	22	5		8.74	6.86	5.87	85.30	14.50	
HP100×8	100	8	23	5		9.74	7.65	5.78	94.30	16.31	
HP120×6	120	6	23	5		≤2	9.32	7.32	7.21	133	18.50
HP120×7	120	7	24	5			10.52	8.26	7.07	149	21.00
HP120×8	120	8	25	5			11.72	9.20	6.96	165	23.60
HP140×7	140	7	26	5.5			12.43	9.75	8.32	241	29.00
HP140×8	140	8	27	5.5			13.83	10.85	8.18	266	32.50



HP140×10	140	10	29	5.5	≤3	16.63	13.05	7.99	315	39.50
HP160×7	160	7	29	6		14.60	11.46	9.66	373	38.60
HP160×8	160	8	30	6	≤2	16.20	12.72	9.50	411	43.30
HP160×9	160	9	31	6		17.80	13.97	9.37	449	47.90
HP160×11	160	11	33	6	≤3	21.00	16.49	9.16	522	57.00
HP180×8	180	8	33	7		18.86	14.80	10.89	609	55.90
HP180×9	180	9	34	7	≤2	20.66	16.22	10.73	664	61.80
HP180×10	180	10	35	7		22.46	17.63	10.59	717	67.70
HP180×11	180	11	36	7	≤3	24.26	19.04	10.47	770	73.50
HP200×9	200	9	37	8	≤2	23.66	18.57	12.12	942	77.70
HP200×10	200	10	38	8		25.66	20.14	11.96	1,017	85.10
HP200×11	200	11	39	8		27.66	21.71	11.82	1,091	92.30
HP200×12	200	12	40	8		29.66	23.28	11.69	1,164	99.50
HP220×10	220	10	41	9		29.00	22.77	13.35	1,396	105.00
HP220×11	220	11	42	9		31.20	24.50	13.19	1,496	114.00
HP220×12	220	12	43	9		33.40	26.22	13.04	1,595	122.00
HP240×10	240	10	44	10		32.49	25.50	14.77	1,865	126.00
HP240×11	240	11	45	10		34.89	27.39	14.58	1,997	137.00
HP240×12	240	12	46	10		37.29	29.27	14.42	2,127	148.00
HP260×10	260	10	47	11		36.11	28.35	16.22	2,434	150.00
HP260×11	260	11	48	11	≤3	38.71	30.39	16.00	2,605	163.00
HP260×12	260	12	49	11		41.31	32.43	15.81	2,774	175.00
HP280×11	280	11	51	12		42.68	33.50	17.44	3,333	191.00
HP280×12	280	12	52	12		45.48	35.70	17.23	3,647	206.00
HP280×13	280	13	53	12		48.28	37.90	17.04	3,757	221.00
HP300×11	300	11	54	13		46.78	36.70	18.90	4,192	222.00
HP300×12	300	12	55	13		49.79	39.09	18.70	4,459	239.00
HP300×13	300	13	56	13		52.79	41.44	18.45	4,722	256.00
HP320×12	320	12	58	14		54.25	42.60	20.12	5,525	275.00
HP320×13	320	13	59	14		57.25	45.09	19.89	5,849	294.00
HP320×14	320	14	60	14	≤4	60.85	47.60	19.68	6,168	313.00
Material	A/B/AH32/AH36/D/DH32/DH36									