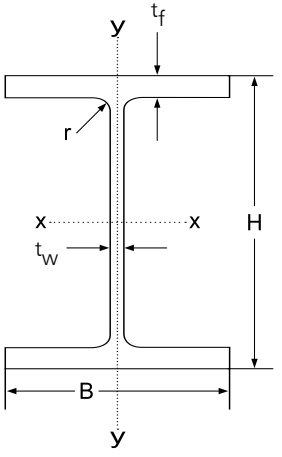
PRODUCT RANGE

Universal Beams & Columns, Channels and Rails

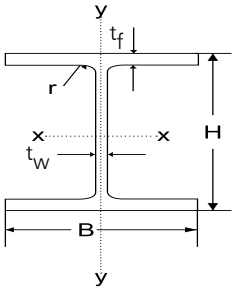
JINDAL STEEL & POWER LIMITED
BUILDING A NEW INDIA

ANNEXURE - A

Description Beams	Sectional Weight	Total Depth	Flange Width	Thickness of Web	Thickness of Flange	Root radius	Area of section	Moment of Inertia		Sectional Modulus		Radius of gyration		Remarks
								X Axis	Y Axis	X Axis	Y Axis	X Axis	Y Axis	
	w	H	B	t_w	t_f	r	A	Ixx	Iyy	Zxx	Zyy	rxx	ryy	
	Kg/m	mm	mm	mm	mm	mm	cm2	cm4	cm4	cm3	cm3	cm	cm	
PARALLEL FLANGE BEAMS														
UB 203X133X 25	25.1	203.2	133.2	5.7	7.8	7.6	31.97	2340	307.6	230.3	46.2	8.56	3.1	
UB 203X133X 30	30	206.8	133.9	6.4	9.6	7.6	38.21	2896	384.7	280	57.5	8.71	3.17	
UB 254x146x31	31.1	251.4	146.1	6	8.6	7.6	39.68	4413	447.5	351.1	61.3	10.55	3.36	
UB 254x146x37	37	256	146.4	6.3	10.9	7.6	47.17	5537	570.6	432.6	78	10.83	3.48	
UB 254x146x43	43	259.6	147.3	7.2	12.7	7.6	54.77	6544	677.4	504.1	92	10.93	3.52	
UB 305 x 165 x 40	40.3	303.4	165	6	10.2	8.9	51.32	8503	764.4	560.5	92.6	12.87	3.86	
UB 305 x 165 x 46	46.1	306.6	165.7	6.7	11.8	8.9	58.75	9899	895.7	645.7	108	12.98	3.9	
UB 305 x 165 x 54	54	310.4	166.9	7.9	13.7	8.9	68.77	11700	1063	753.6	127	13.04	3.93	
HEA 320	97.6	310	300	9.0	15.5	27	124.4	22930	6985	1479	465.7	13.58	7.49	
HEB 320	127	320	300	11.5	20.5	27	161.3	30820	9239	1926	615.9	13.82	7.57	
HEM 320	245	359	309	21	40	27	312	68130	19710	3796	1276	14.78	7.95	
UB 356 x 171 x 45	45	351.4	171.1	7	9.7	10.2	57.33	12070	811.1	686.7	94.81	14.51	3.76	
UB 356 x 171 x 51	51	355	171.5	7.4	11.5	10.2	64.91	14140	968.3	796.4	112.9	14.76	3.86	
UB 356 x 171 x 57	57	358	172.2	8.1	13	10.2	72.56	16040	1108	896	128.7	14.87	3.91	
UB 356 x 171 x 67	67.1	363.4	173.2	9.1	15.7	10.2	85.49	19460	1362	1071	157.3	15.09	3.99	
UB 406 x 178 x 54	54.1	402.6	177.7	7.7	10.9	10.2	68.95	18720	1021	930	115	16.48	3.85	
UB 406 x 178 x 60	60.1	406.4	177.9	7.9	12.8	10.2	76.52	21600	1203	1063	135	16.8	3.97	
UB 406 x 178 x 67	67.1	409.4	178.8	8.8	14.3	10.2	85.54	24330	1365	1189	153	16.87	3.99	
UB 406 x 178 x 74	74.2	412.8	179.5	9.5	16	10.2	94.51	27310	1545	1323	172	17	4.04	
IPEA360	50.2	357.6	170.0	6.6	11.5	18.0	64.0	14520.0	944.3	811.8	111.1	15.06	3.84	
IPE 360	57.1	360.0	170.0	8.0	18.0	18.0	72.7	16270.0	1043	903.6	122.8	14.95	3.79	
IPEO 360	66	364.0	172.0	9.2	14.7	18.0	84.0	19050.0	1251	1047	145.5	15.05	3.86	
IPEA 400/ NPB 400 x 180 x 57.4	57.4	397	180	7	12	21	73.1	20293	1170.6	1022.3	130.1	16.66	4.00	
IPE 400/ NPB 400 x 180 x 66.3	66.3	400	180	8.6	13.5	21	84.5	23128	1317.8	1156.4	146.4.	16.55	3.95	
IPEO 400/ NPB 400 x 180 x 75.7	75.7	404	182	9.7	15.5	21	96.5	26747	1564.2	1324.1	171.9	16.66	4.03	



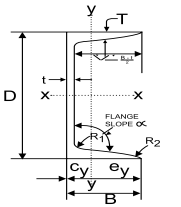
Description Beams	Sectional Weight	Total Depth	Flange Width	Thickness of Web	Thickness of Flange	Root radius	Area of section	Moment of Inertia		Sectional Modulus		Radius of gyration		Remarks
								X Axis	Y Axis	X Axis	Y Axis	X Axis	Y Axis	
	w	H	B	t_w	t_f	r	A	Ixx	Iyy	Zxx	Zyy	rxx	ryy	
	Kg/m	mm	mm	mm	mm	mm	cm2	cm4	cm4	cm3	cm3	cm	cm	
PARALLEL FLANGE BEAMS / CONTD-														
UB 457 x 191 x 67	67.1	453.4	189.9	8.5	12.7	10.2	85.51	29380	1452	1296	152.9	18.54	4.12	
UB 457 x 191 x 74	74.3	457	190.4	9	14.5	10.2	94.63	33320	1671	1458	175.5	18.76	4.2	
UB 457 x 191 x 82	82	460	191.3	9.9	16	10.2	104.5	37050	1871	1611	195.6	18.83	4.23	
UB 457 x 191 x 89	89.3	463.4	191.9	10.5	17.7	10.2	113.8	41020	2089	1770	217.8	18.99	4.29	
UB 457 x 191 x 98	98.3	467.2	192.8	11.4	19.6	10.2	125.3	45730	2347	1957	243.5	19.11	4.33	
IPEA 450/ NPB 450 x 190 x 67.2	67.2	447	190	7.6	13.1	21	85.5	29759	1502.4	1331.5	158.1	18.65	4.19	
IPE 450/ NPB 450 x 190 x 77.6	77.6	450	190	9.4	14.6	21	98.8	33743	1675.9	1499.7	176.4	18.48	4.12	
IPEO 450/ NPB 450 x 190 x 92.4	92.4	456	192	11	17.6	21	117.7	40923	2085.4	1794.9	217.2	18.65	4.21	
IPEA 500/NPB 500 x 200 x 79.4	79.4	497	200	8.4	14.5	21	101.3	42933	1939.2	1727.7	193.9	20.61	4.38	
IPE 500/NPB 500 x 200 x 90.7	90.7	500	200	10.2	16	21	115.5	48199	2141.7	1927.9	241.2	20.43	4.31	
IPEO 500/NPB 500 x 200 x 107.3	107.3	506	202	12	19	21	136.7	57777	2621.7	2283.7	259.5	20.56	4.38	
UB 533 x 210 x 82	82.2	528.3	208.8	9.6	13.2	12.7	104.7	47540	2007	1800	192.3	21.31	4.38	
UB 533 x 210 x 92	92.1	533.1	209.3	10.1	15.6	12.7	117.4	55230	2389	2072	228.3	21.69	4.51	
UB 533 x 210 x 101	101	536.7	210	10.8	17.4	12.7	128.7	61520	2692	2292	256.4	21.87	4.57	
UB 533 x 210 x 109	109	539.5	210.8	11.6	18.8	12.7	138.9	66820	2943	2477	279.2	21.94	4.6	
UB 533 x 210 x 122	122	544.5	211.9	12.7	21.3	12.7	155.4	76040	3388	2793	319.7	22.12	4.67	
UB 610 x 229 x 101	101.2	602.6	227.6	10.5	14.8	12.7	128.9	75780	2915	2515	256	24.24	4.75	
UB 610 x 229 x 113	113.0	607.6	228.2	11.1	17.3	12.7	143.9	87320	3434	2874	301	24.63	4.88	
UB 610 x 229 x 125.1	125.1	612.2	229	11.9	19.6	12.7	159.3	98610	3932	3221	343	24.88	4.97	
UB 610 x 229 x 139.9	139.9	617.2	230.2	13.1	22.1	12.7	178.2	111800	4505	3622	391	25.05	5.03	
IPEA 600/ NPB 600 x 220 x 107.6	107.6	597	220	9.8	17.5	24	137	82919	3116.3	2777.8	283.3	24.6	4.77	
IPE 600/ NPB 600 x 220 x 122.4	122.4	600	220	12	19	24	156	92083	3387.3	3069.4	307.9	24.3	4.66	
IPEO 600/ NPB 600 x 220 x 154.5	154.4	610	224	15	24	24	196.8	118302	4520.8	3678.8	403.6	24.52	4.79	
HEAA 600/ WPB 600 x 300 x 128.8	128.8	571	300	12	15.5	27	164.1	91872	6993.4	3217.9	466.2	23.66	6.53	
HEA 600/ WPB 600 x 300 x 177.8	177.8	590	300	13	25	27	226.5	141208	11271.3	4786.7	751.4	24.97	7.05	
HEB 600/ WPB 600 x 300 x 211.9	211.9	600	300	15.5	30	27	270	171041	13530.2	5701.4	902	25.17	7.08	
HEM 600/ WPB 600 x 300 x 285	285	620	305	21	40	27	363.7	237447	18975.5	7659.6	1244.3	25.65	7.22	
HEAA 700/ WPB 700 x 300 x 149.9	149.9	670	300	13	17	27	190.9	142721	7673.1	4260.3	511.5	27.34	6.34	
HEA 700/ WPB 700 x 300 x 204.5	204.5	690	300	14.5	27	27	260.5	215301	12178.8	6240.6	811.9	28.75	6.65	
HEB 700/ WPB 700 x 300 x 240.5	240.5	700	300	17	32	27	306.4	256888	14440.8	7339.7	952.7	28.96	6.68	
HEM 700/ WPB 700 x 300 x 300.7	300.7	716	304	21	40	27	383	329278	18797.4	9197.7	1236.7	29.32	7.01	

Description Beams	Sectional Weight	Total Depth	Flange Width	Thickness of Web	Thickness of Flange	Root radius	Area of section	Moment of Inertia		Sectional Modulus		Radius of gyration		Remarks
								X Axis	Y Axis	X Axis	Y Axis	X Axis	Y Axis	
	w	H	B	t_w	t_f	r	A	Ixx	Iyy	Zxx	Zyy	rxx	ryy	
	Kg/m	mm	mm	mm	mm	mm	cm2	cm4	cm4	cm3	cm3	cm	cm	
PARALLEL FLANGE BEAMS / CONTD-														
HEAA 800/ WPB 800 x 300 x 172	172	770	300	14	18	30	218.5	208900	8134	5426	542.2	30.92	6.1	
HEA 800/ WPB 800 x 300 x 224	224	790	300	15	28	30	285.8	303400	12640	7682	842.6	32.58	6.65	
HEB 800/ WPB 800 x 300 x 262	262	800	300	17.5	33	30	334.2	359100	14900	8977	993.6	32.78	6.68	
HEM 800/ WPB 800 x 300 x 317	317	814	303	21	40	30	404.3	442600	18630	10870	1230	33.09	6.79	
HEAA 900/ WPB 900 x 300 x 198	198	870	300	15	20	30	252.2	301100	9041	6923	602.8	34.55	5.99	
HEA 900/ WPB 900 x 300 x 252	252	890	300	16	30	30	320.5	422100	13550	9485	903.2	36.29	6.5	
HEB 900/ WPB 900 x 300 x 291	291	900	300	18.5	35	30	371.3	494100	15820	10980	1054	36.48	6.53	
HEM 900/ WPB 900 x 300 x 333	333	910	302	27	40	30	423.6	570400	18450	12540	1222	36.7	6.6	
PARALLEL FLANGE COLUMNS														
UC 152x152x23	23	152.4	152.2	5.8	6.8	7.6	29.25	1250	399.9	164	52.55	6.54	3.7	Equivalent to WPB 150 x 150 x 23
UC 152x152x30	30	157.6	152.9	6.5	9.4	7.6	38.26	1748	560.5	221.8	73.31	6.76	3.83	Equivalent to WPB 150 x 150 x 30
UC 152x152x37	37	161.8	154.4	8	11.5	7.6	47.11	2210	706.2	273.2	91.48	6.85	3.87	Equivalent to WPB 150 x 150 x 37
UC 203 x 203 X 46	46.1	203.2	203.6	7.2	11	10.2	58.73	4568	1548	449.6	152.1	8.82	5.13	
UC 203 x 203 X 52	52	206.2	204.3	7.9	12.5	10.2	66.28	5259	1778	510.1	174	8.91	5.18	
UC 203 x 203 X 60	60	209.6	205.8	9.4	14.2	10.2	76.27	6125	2065	584.4	200.6	8.96	5.2	
UC 203 x 203 X 71	71	215.8	206.4	10	17.3	10.2	90.43	7618	2537	706	245.9	9.18	5.3	
UC 203 x 203 X 86	86.1	222.2	209.1	12.7	20.5	10.2	109.6	9449	3127	850.5	299.1	9.28	5.34	
UC 254 X 254 X 73	73.1	254.1	254.6	8.6	14.2	12.7	93.1	11420	3908	897.9	307	11.07	6.48	
UC 254 X 254 X 89	88.9	260.3	256.3	10.3	17.3	12.7	113.3	14270	4857	1096	379	11.22	6.55	
UC 254 X 254 X 107	107.1	266.7	258.8	12.8	20.5	12.7	136.4	17510	5928	1313	458.1	11.33	6.59	
UC 254 X 254 X 132	132	276.3	261.3	15.3	25.3	12.7	138.1	22530	7531	1631	576.4	11.58	6.69	
UC 254 X 254 X 167	167.1	289.1	265.2	19.2	31.7	12.7	212.9	30000	9870	2075	744.3	11.87	6.81	
UC 305 x 305 x 97	96.9	307.9	305.3	9.9	15.4	15.2	123.4	22250	7308	1445	478.7	13.42	7.69	
UC 305 x 305 x 118	117.9	314.5	307.4	12	18.7	15.2	150.2	27670	9059	1760	589.4	13.57	7.77	
UC 305 x 305 x 137	136.9	320.5	309.2	13.8	21.7	15.2	174.4	32810	10700	2048	692.2	13.72	7.83	
UC 305 x 305 x 158	158.1	327.1	311.2	15.8	25	15.2	203.4	38750	12570	2369	807.8	13.87	7.9	
UC 305 x 305 x 198	198.1	339.9	314.5	19.1	31.4	15.2	252.4	50900	16300	2995	1037	14.2	8.04	
UC 305 x 305 x 240	240	352.5	318.4	23	37.7	15.2	305.8	64200	20310	3643	1276	14.49	8.15	
UC 305 x 305 x 283	282.9	365.3	322.2	26.8	44.1	15.2	360.4	78870	24630	4318	1529	14.79	8.27	
UC 356 x 368 x 129	129	355.6	368.6	10.4	17.5	15.2	164.3	40250	14610	2264	792.8	15.65	9.43	
UC 356 x 368 x 153	152.9	362	370.5	12.3	20.7	15.2	194.8	48590	17550	2684	947.5	15.79	9.49	
UC 356 x 368 x 177	177	368.2	372.6	14.4	23.8	15.2	225.5	57120	20530	310.3	1102	15.91	9.54	
UC 356 x 368 x 202	201.9	374.6	374.7	16.5	27	15.2	257.2	66260	23690	3538	1264	16.05	9.6	

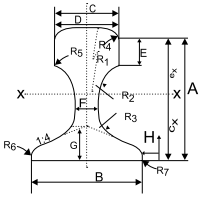
UB - British Universal Beams
UC - British Univeral Columns

NPB - Narrow Parallel Flange Beams as per IS Code 12778 -2004 (Equivalent to IPE - European Narrow flange Parallel beams)
WPB - Wide Parallel Flange Beams as per IS Code 12778 - 2004 (Equivalent to HE - European Wide Flange Beams)

Description Beams	Sectional Weight	Total Depth	Flange Width	Thickness of Web	Thickness of Flange	Cyy*	Area of section	Moment of Inertia		Sectional Modulus		Radius of gyration		Remarks
								X Axis	Y Axis	X Axis	Y Axis	X Axis	Y Axis	
	w	D	B	t	T		A	Ixx	Iyy	Zxx	Zyy	rxx	ryy	
	Kg/m	mm	mm	mm	mm	mm	cm2	cm4	cm4	cm3	cm3	cm	cm	
INDIAN CHANNELS														
ISMC 250 x 80	30.6	250	80	7.2	14.1	2.3	39	3880	211	307	38.5	9.92	2.37	
ISMC 250 x 82	34.2	250	82	9	14.1	2.23	43.5	4080	244	326	40.9	9.68	2.37	
ISMC 300 x 90	36.3	300	90	7.8	13.6	2.35	46.3	6420	313	428	47.1	11.8	2.6	
ISMC 400 x 100	50.1	400	100	8.8	15.3	2.42	63.8	15200	508	760	67	15.4	2.82	



***Cyy is centre of gravity along YY Axis**

Indian Crane Rail Sections	Sectional Weight (Kg/m)		
CR-80	64.2	As per IS : 3443 -1980, SPECIFICATION FOR CRANE RAIL SECTIONS	
CR-100	89		

Track Rails	Sectional Weight (Kg/m)	
UIC54 (On the anvil/Subject to prior agreement)	54.43	As per UIC-860-O
UIC60	60.34	
IRS -52	52	As per IRS -T-12-96

Delivery Conditions for Beams/ Columns/ Channels and Rails

	For Structurals		For Rails
Length :	For prime	10 - 13 meter (-0/+100mm)	13 meter Length, tolerance as norm
	For non-prime	10 - 13 meter (-0/+100mm)	
	For short length	As per lot information	
Dimensional norms : (for prime & short-length material only)	For UB/UC sections	As per BS4-1:1993	As per UIC/ EN/ IRS as applicable
	For IPE/NPB sections	As per IS:12778/ equivalance with EN-19-57	
		As per IS:12778/ equivalance with EN-53-62	
Surface Condition :	For prime	Blue or with slight atmospheric rust	
	For non-prime / short length	Superficial rust to slight rusted material to be acceptable	
Packing :	Bare, Loose and / or in bundles of max 5 MT each		Bare, Loose and / or in bundles of max 5 MT each
Marking :	For prime	Size length / grade / Heat No., order No., Desired shipping marks	As per norms
	For non-prime / short length	As per mutual agreement	
Minimum Order Qty. :	For domestic sales : 5 MT per size per length and 22 MT in total. (In case of lesser order quantitiy, freight for full trailor/truck to buyer's account)		As per mutual agreement
	For exports : 30 MT per size per length per grade for grades S275JR/equivalent and lower; Total order quantity : Min 500MT 50 MT per size per length and 100 MT per grade for grades S355JR/equivalent and higher; Total order quantity : Min 500 MT		
Invoicing :	For domestic sales : On actual weight basis or as per mutual agreement		For domestic sales : On actual weight basis
	For exports : On theoretical weight basis on nominal size & length		For exports : On theoretical weight basis