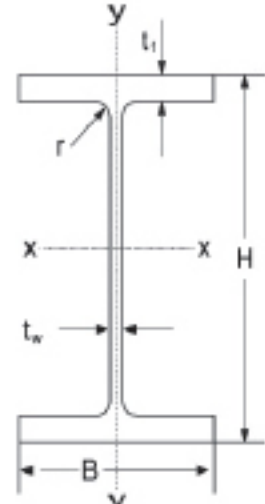


PRODUCT RANGE

Universal Beams & Columns, Channels and Rails

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
	w Kg/m	H mm	B mm	t _w mm	t _f mm	r mm	A cm ²	X Axis I _{xx} cm ⁴	Y Axis I _{yy} cm ⁴	X Axis Z _{xx} cm ³	Y Axis Z _{yy} cm ³	X Axis r _{xx} cm	Y Axis r _{yy} cm	
PARALLEL FLANGE BEAMS; UB SERIES														
UB 203 x 133 x 25	25.1	203.2	133.2	5.7	7.8	7.6	31.97	2340	307.6	230.3	46.2	8.56	3.10	
UB 203 x 133 x 30	30.0	206.8	133.9	6.4	9.6	7.6	38.21	2896	384.7	280.3	57.5	8.71	3.17	
UB 254 x 146 x 31	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 254 x 146 x 37	37.0	256	146.4	6.3	10.9	7.6	47.17	5537	570.6	432.6	78	10.83	3.48	
UB 254 x 146 x 43	43.0	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	3.90	
UB 305 x 165 x 54	54.0	310.4	166.9	7.9	13.7	8.9	68.77	11700	1063	753.6	127	13.04	3.93	
UB 356 x 171 x 45	45.0	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	51.0	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	57.0	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	
UB 457 x 152 x 50	52.3	449.8	152.4	7.6	10.9	10.2	66.64	21370	645	950	84.64	17.91	3.11	
UB 457 x 152 x 60	59.8	454.6	152.9	8.1	13.3	10.2	76.23	25500	794.6	1122	103.9	18.29	3.23	
UB 457 x 152 x 67	67.2	458	153.8	9	15	10.2	85.55	28930	912.6	1263	118.7	18.39	3.27	
UB 457 x 152 x 74	74.2	462	154.4	9.6	17	10.2	94.48	32870	1047.4	1414	135.6	18.6	3.33	
UB 457 x 152 x 82	82.1	465.8	155.3	10.5	18.9	10.2	104.5	36590	1185	1571	152.5	18.71	3.37	
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	1459	175.5	18.76	4.20	
UB 457 x 191 x 82	82.0	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	



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
	w Kg/m	H mm	B mm	t _w mm	t _f mm	r mm	A cm ²	X Axis I _{xx} cm ⁴	Y Axis I _{yy} cm ⁴	X Axis Z _{xx} cm ³	Y Axis Z _{yy} cm ³	X Axis r _{xx} cm	Y Axis r _{yy} cm	
PARALLEL FLANGE BEAMS; UB SERIES CONTD...														
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	101.0	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	109.0	539.5	210.8	11.6	18.8	12.7	138.9	66820	2943	2477	279.2	21.94	4.60	
UB 533 x 210 x 122	122.0	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	2674	301	24.63	4.86	
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	
PARALLEL FLANGE BEAMS; NPB/PIPE SERIES														
IPE 100/NPB 100X55	8.1	100	55	4.1	5.7	7	10.3	171	15.9	34.2	5.8	4.07	1.24	
IPE 120/NPB 120X60	10.37	120	64	4.4	6.3	7	13.2	318	27.7	53	8.6	4.9	1.45	
IPE 140/NPB 140X70	12.89	140	73	4.7	6.9	7	16.4	541	44.9	77.3	12.3	5.74	1.65	
IPE 160/NPB 160X80	15.77	160	82	5	7.4	9	20.1	869	68.3	108.7	16.7	6.58	1.84	
IPEA 180/NPB 180X90	15.37	177	91	4.3	6.5	9	19.6	1063	81.9	120.1	18	7.37	2.05	
IPE 180/NPB 180X90	18.8	180	91	5.3	8	9	23.9	1317	100.9	146.3	22.2	7.42	2.05	
IPE 180/NPB 180X90	21.27	182	92	6	9	9	27.1	1605	117.3	165.4	25.5	7.45	2.08	
IPEA 200/NPB 200X100	18.42	197	100	4.5	7	12	23.5	1591	117.2	161.6	23.4	8.23	2.23	
IPE 200/NPB 200X100	22.36	200	100	5.6	8.5	12	28.5	1943	142.4	194.3	28.5	8.26	2.24	
IPEO 200/NPB 200X100	25.09	202	102	6.2	9.5	12	32	2211	168.9	218.9	33.1	8.32	2.3	
NPB 200X130	27.37	207	133	5.8	8.5	12	34.9	2666	334	257.5	50.2	8.74	3.1	
NPB 200X130	31.55	210	134	6.4	10	12	40.2	3153	401.9	300.3	60	8.86	3.16	
IPEA 220/NPB 220X110	22.18	217	110	5	7.7	12	28.3	2317	171.4	213.5	31.2	9.05	2.46	
IPE 220/NPB 220X110	26.2	220	110	5.9	9.2	12	33.4	2772	204.9	252	37.3	9.11	2.48	
IPEO 220/NPB 220X110	29.35	222	112	6.6	10.2	12	37.4	3134	239.8	282.3	42.8	9.16	2.53	
IPEA 240/NPB 240X120	26.15	237	120	5.2	8.3	15	33.3	3290	240.1	277.7	40	9.94	2.68	
IPE 240/NPB 240X120	30.71	240	120	6.2	9.8	15	39.1	3892	283.6	324.3	47.3	9.97	2.69	
IPEO 240/NPB 240X120	34.31	242	122	7	10.8	15	43.7	4369	328.5	361.1	53.9	10	2.74	
IPEA 270/NPB 270X135	30.73	267	135	5.5	8.7	15	39.1	4917	358	368.3	53	11.21	3.02	
IPE 270/NPB 270X135	36.07	270	135	6.6	10.2	15	45.9	5790	419.9	428.9	62.2	11.23	3.02	
IPEO 270/NPB 270X135	42.26	274	136	7.5	12.1	15	53.8	6947	513.5	507.1	75.5	11.36	3.09	
IPEA 300/NPB 300 x 150 x 36.5	36.5	297	150	6.1	9.2	15	46.53	7173	519	483.1	89.2	12.42	3.34	
IPE 300/NPB 300 x 150 x 42.2	42.2	300	150	7.1	10.7	15	53.81	8356	603.8	557.1	60.5	12.46	3.35	
IPEO 300/NPB 300 x 150 x 49.3	49.3	304	152	8	12.7	15	62.83	9994	745.7	657.5	96.12	12.61	3.45	

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
	w Kg/m	H mm	B mm	t _w mm	t _f mm	r mm	A cm ²	X Axis I _{xx} cm ⁴	Y Axis I _{yy} cm ⁴	X Axis Z _{xx} cm ³	Y Axis Z _{yy} cm ³	X Axis r _{xx} cm	Y Axis r _{yy} cm	
PARALLEL FLANGE BEAMS; NPB/PIPE SERIES CONTD...														
IPE A360/NPB 350 x 170 x 50.2	50.2	357.6	170.0	6.6	11.5	18.0	64.0	14520	944.3	811.8	111.1	15.06	3.84	
IPE 360/NPB 350 x 170 x 57.1	57.1	360.0	170.0	8.0	12.7	18.0	72.7	16270	1043	903.6	122.8	14.95	3.79	
IPEO 360/NPB 350 x 170 x 66	66.0	364.0	172.0	9.2	14.7	18.0	84.0	19050	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	
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			