



# EUROPEAN I BEAMS: Dimensions and Properties (IPN)

Designation		Dimensions							A mm <sup>2</sup>	Dimensions for Detailing				Surface		Section Properties											
																Strong Axis y - y						Weak Axis z - z					
														G kg/m	h mm	b mm	t <sub>w</sub> mm	t <sub>f</sub> mm	r <sub>1</sub> mm	r <sub>2</sub> mm	d mm	φ	P <sub>min</sub> mm	P <sub>max</sub> mm	A <sub>L</sub> m <sup>2</sup> /m	A <sub>G</sub> m <sup>2</sup> /t	I <sub>y</sub> mm <sup>4</sup>
x10 <sup>2</sup>								x10 <sup>4</sup>		x10 <sup>3</sup>	x10 <sup>3</sup>	x10 <sup>2</sup>	x10 <sup>4</sup>	x10 <sup>3</sup>	x10 <sup>3</sup>	x10	x10 <sup>4</sup>	x10 <sup>3</sup>									
IPN 80	5.94	80	42	3.9	5.9	3.9	2.3	7.58	59	-	-	-	0.304	51.09	77.8	19.5	22.8	3.2	3.41	6.29	3	5	0.91	21.6	0.87	0.09	
IPN 100	8.34	100	50	4.5	6.8	4.5	2.7	10.6	75.7	-	-	-	0.370	44.47	171	34.2	39.8	4.01	4.85	12.2	4.88	8.1	1.07	25	1.6	0.27	
IPN 120	11.1	120	58	5.1	7.7	5.1	3.1	14.2	92.4	-	-	-	0.439	39.38	328	54.7	63.6	4.81	6.63	21.5	7.41	12.4	1.23	28.4	2.71	0.69	
IPN 140	14.3	140	66	5.7	8.6	5.7	3.4	18.3	109.1	-	-	-	0.502	34.94	573	81.9	95.4	5.61	8.65	35.2	10.7	17.9	1.4	31.8	4.32	1.54	
IPN 160	17.9	160	74	6.3	9.5	6.3	3.8	22.8	125.8	-	-	-	0.575	32.13	935	117	136	6.4	10.83	54.7	14.8	24.9	1.55	35.2	6.57	3.14	
IPN 180	21.9	180	82	6.9	10.4	6.9	4.1	27.9	142.4	-	-	-	0.640	29.22	1450	161	187	7.2	13.35	81.3	19.8	33.2	1.71	38.6	9.58	5.92	
IPN 200	26.2	200	90	7.5	11.3	7.5	4.5	33.4	159.1	-	-	-	0.709	27.04	2140	214	250	8.00	16.03	117	26	43.5	1.87	42	13.5	10.5	
IPN 220	31.1	220	98	8.1	12.2	8.1	4.9	39.5	175.8	M10	50	56	0.775	24.99	3060	278	324	8.80	19.06	162	33.1	55.7	2.02	45.4	18.6	17.8	
IPN 240	36.2	240	106	8.7	13.1	8.7	5.2	46.1	192.5	M10	54	60	0.844	23.32	4250	354	412	9.59	22.33	221	41.7	70	2.2	48.9	25	28.7	
IPN 260	41.9	260	113	9.4	14.1	9.4	5.6	53.3	208.9	M12	62	62	0.906	21.65	5740	442	514	10.4	26.08	288	51	85.9	2.32	52.6	33.5	44.1	
IPN 280	47.9	280	119	10.1	15.2	10.1	6.1	61	225.1	M12	68	68	0.966	20.17	7590	542	632	11.1	30.18	364	61.2	103	2.45	56.4	44.2	64.6	
IPN 300	54.2	300	125	10.8	16.2	10.8	6.5	69	241.6	M12	70	74	1.03	19.02	9800	653	762	11.9	34.58	451	72.2	121	2.56	60.1	56.8	91.8	
IPN 320	61.0	320	131	11.5	17.3	11.5	6.9	77.7	257.9	M12	70	80	1.09	17.87	12510	782	914	12.7	39.26	555	84.7	143	2.67	63.9	72.5	129	
IPN 340	68.0	340	137	12.2	18.3	12.2	7.3	86.7	274.3	M12	78	86	1.15	16.90	15700	923	1080	13.5	44.27	674	98.4	166	2.8	67.6	90.4	176	
IPN 360	76.1	360	143	13	19.5	13	7.8	97	290.2	M12	78	92	1.21	15.89	19610	1090	1276	14.2	49.95	818	114	194	2.9	71.8	115	240	
IPN 380	84.0	380	149	13.7	20.5	13.7	8.2	107	306.7	M16	84	86	1.27	15.12	24010	1260	1482	15.0	55.55	975	131	221	3.02	75.4	141	319	
IPN 400	92.4	400	155	14.4	21.6	14.4	8.6	118	322.9	M16	86	92	1.33	14.36	29210	1460	1714	15.7	61.69	1160	149	253	3.13	79.3	170	420	
IPN 450	115	450	170	16.2	24.3	16.2	9.7	147	363.6	M16	92	106	1.48	12.83	45850	2040	2400	17.7	77.79	1730	203	345	3.43	88.9	267	791	
IPN 500	141	500	185	18	27	18	10.8	179	404.3	M20	102	110	1.63	11.60	68740	2750	3240	19.6	95.6	2480	268	456	3.72	98.5	402	1400	
IPN 550	166	550	200	19	30	19	11.9	212	445.6	M22	112	118	1.80	10.80	99180	3610	4240	21.6	111.3	3490	349	592	4.02	107.3	544	2390	
IPN 600	199	600	215	21.6	32.4	21.6	13	254	485.8	M24	126	128	1.97	9.89	138800	4627	5452	23.39	138.0	4674	435	752	4.29	117.6	787	3814	