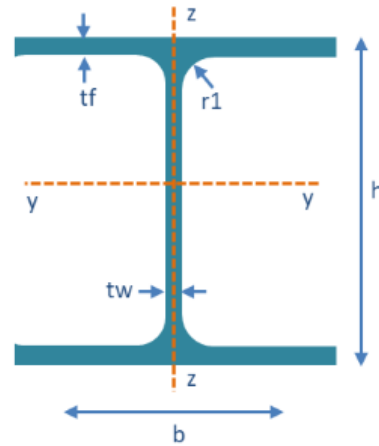


SAGOMARIO



PROFILATI IN ACCIAIO

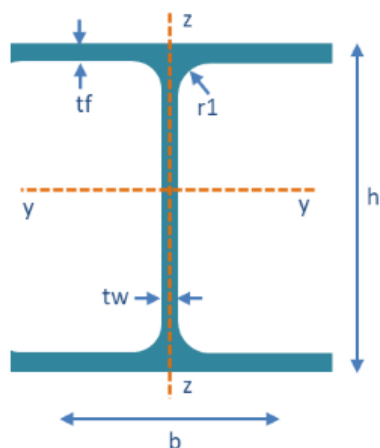
marcodepisapia
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Profili HEA



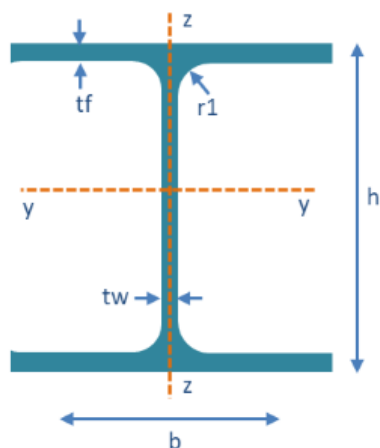
LEGENDA

- A = area
- I_y = momento d'inerzia
- W_y = moduli di resistenza elastico
- $W_{pl,y}$ = modulo di resistenza plastico
- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	$W_{pl,y}$ (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	$W_{pl,z}$ (cm ³)	i_z (cm)	JT (cm ⁴)	I_w (cm ⁶)
HE 100 A	16.7	96	100	5	8	12	0	21.24	349.2	72.76	83.01	4.06	133.8	26.76	41.14	2.51	5.24	2580
HE 120 A	19.9	114	120	5	8	12	0	25.34	606.2	106.3	119.5	4.89	230.9	38.48	58.85	3.02	5.99	6470
HE 140 A	24.7	133	140	5.5	8.5	12	0	31.42	1033	155.4	173.5	5.73	389.3	55.62	84.85	3.52	8.13	15060
HE 160 A	30.4	152	160	6	9	15	0	38.77	1673	220.1	245.1	6.57	615.6	76.95	117.6	3.98	12.19	31410
HE 180 A	36	171	180	6	9.5	15	0	45.25	2510	293.6	324.9	7.45	924.6	102.7	156.5	4.52	14.8	60210
HE 200 A	42.3	190	200	6.5	10	18	0	53.83	3692	388.6	429.5	8.28	1336	133.6	203.8	4.98	20.98	108000
HE 220 A	50.5	210	220	7	11	18	0	64.34	5410	515.2	568.5	9.17	1955	177.7	270.6	5.51	28.46	193300
HE 240 A	60.3	230	240	7.5	12	21	0	76.84	7763	675.1	744.6	10.05	2769	230.7	351.7	6	41.55	328500
HE 260 A	68.2	250	260	7.5	12.5	24	0	86.82	10450	836.4	919.8	10.97	3668	282.1	430.2	6.5	52.37	516400
HE 280 A	76.4	270	280	8	13	24	0	97.26	13670	1013	1112	11.86	4763	340.2	518.1	7	62.1	785400
HE 300 A	88.3	290	300	8.5	14	27	0	112.5	18260	1260	1383	12.74	6310	420.6	641.2	7.49	85.17	1200000
HE 320 A	97.6	310	300	9	15.5	27	0	124.4	22930	1479	1628	13.58	6985	465.7	709.7	7.49	108	1512000
HE 340 A	105	330	300	9.5	16.5	27	0	133.5	27690	1678	1850	14.4	7436	495.7	755.9	7.46	127.2	1824000
HE 360 A	112	350	300	10	17.5	27	0	142.8	33090	1891	2088	15.22	7887	525.8	802.3	7.43	148.8	2177000

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm2)	Iy (cm4)	Wy (cm3)	Wpl,y (cm3)	iy (cm)	Iz (cm4)	Wz (cm3)	Wpl,z (cm3)	iz (cm)	JT (cm4)	Iw (cm6)
HE 400 A	125	390	300	11	19	27	0	159	45070	2311	2562	16.84	8564	570.9	872.9	7.34	189	2942000
HE 450 A	140	440	300	11.5	21	27	0	178	63720	2896	3216	18.92	9465	631	965.5	7.29	243.8	4148000
HE 500 A	155	490	300	12	23	27	0	197.5	86970	3550	3949	20.98	10370	691.1	1059	7.24	309.3	5643000
HE 550 A	166	540	300	12.5	24	27	0	211.8	111900	4146	4622	22.99	10820	721.3	1107	7.15	351.5	7189000
HE 600 A	178	590	300	13	25	27	0	226.5	141200	4787	5350	24.97	11270	751.4	1156	7.05	397.8	8978000
HE 650 A	190	640	300	13.5	26	27	0	241.6	175200	5474	6136	26.93	11720	781.6	1205	6.97	448.3	11030000
HE 700 A	204	690	300	14.5	27	27	0	260.5	215300	6241	7032	28.75	12180	811.9	1257	6.84	513.9	13350000
HE 800 A	224	790	300	15	28	30	0	285.8	303400	7682	8699	32.58	12640	842.6	1312	6.65	596.9	18290000
HE 900 A	252	890	300	16	30	30	0	320.5	422100	9485	10810	36.29	13550	903.2	1414	6.5	736.8	24960000
HE 1000 A	272	990	300	16.5	31	30	0	346.8	553800	11190	12820	39.96	14000	933.6	1470	6.35	822.4	32070000

Profili HEB



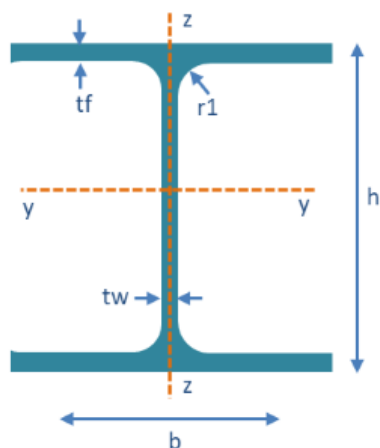
LEGENDA

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- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	$W_{pl,y}$ (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	$W_{pl,z}$ (cm ³)	i_z (cm)	JT (cm ⁴)	I_w (cm ⁶)
HE 100 B	20.4	100	100	6	10	12	0	26.04	449.5	89.91	104.2	4.16	167.3	33.45	51.42	2.53	9.25	3380
HE 120 B	26.7	120	120	6.5	11	12	0	34.01	864.4	144.1	165.2	5.04	317.5	52.92	80.97	3.06	13.84	9410
HE 140 B	33.7	140	140	7	12	12	0	42.96	1509	215.6	245.4	5.93	549.7	78.52	119.8	3.58	20.06	22480
HE 160 B	42.6	160	160	8	13	15	0	54.25	2492	311.5	354	6.78	889.2	111.2	170	4.05	31.24	47940
HE 180 B	51.2	180	180	8.5	14	15	0	65.25	3831	425.7	481.4	7.66	1363	151.4	231	4.57	42.16	93750
HE 200 B	61.3	200	200	9	15	18	0	78.08	5696	569.6	642.5	8.54	2003	200.3	305.8	5.07	59.28	171100
HE 220 B	71.5	220	220	9.5	16	18	0	91.04	8091	735.5	827	9.43	2843	258.5	393.9	5.59	76.57	295400
HE 240 B	83.2	240	240	10	17	21	0	106	11260	938.3	1053	10.31	3923	326.9	498.4	6.08	102.7	486900
HE 260 B	93	260	260	10	17.5	24	0	118.4	14920	1148	1283	11.22	5135	395	602.2	6.58	123.8	753700
HE 280 B	103	280	280	10.5	18	24	0	131.4	19270	1376	1534	12.11	6595	471	717.6	7.09	143.7	1130000
HE 300 B	117	300	300	11	19	27	0	149.1	25170	1678	1869	12.99	8563	570.9	870.1	7.58	185	1688000
HE 320 B	127	320	300	11.5	20.5	27	0	161.3	30820	1926	2149	13.82	9239	615.9	939.1	7.57	225.1	2069000
HE 340 B	134	340	300	12	21.5	27	0	170.9	36660	2156	2408	14.65	9690	646	985.7	7.53	257.2	2454000

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	Iy (cm ⁴)	Wy (cm ³)	Wpl,y (cm ³)	iy (cm)	Iz (cm ⁴)	Wz (cm ³)	Wpl,z (cm ³)	iz (cm)	JT (cm ⁴)	Iw (cm ⁶)
HE 360 B	142	360	300	12.5	22.5	27	0	180.6	43190	2400	2683	15.46	10140	676.1	1032	7.49	292.5	2883000
HE 400 B	155	400	300	13.5	24	27	0	197.8	57680	2884	3232	17.08	10820	721.3	1104	7.4	355.7	3817000
HE 450 B	171	450	300	14	26	27	0	218	79890	3551	3982	19.14	11720	781.4	1198	7.33	440.5	5258000
HE 500 B	187	500	300	14.5	28	27	0	238.6	107200	4287	4815	21.19	12620	841.6	1292	7.27	538.4	7018000
HE 550 B	199	550	300	15	29	27	0	254.1	136700	4971	5591	23.2	13080	871.8	1341	7.17	600.3	8856000
HE 600 B	212	600	300	15.5	30	27	0	270	171000	5701	6425	25.17	13530	902	1391	7.08	667.2	10970000
HE 650 B	225	650	300	16	31	27	0	286.3	210600	6480	7320	27.12	13980	932.3	1441	6.99	739.2	13360000
HE 700 B	241	700	300	17	32	27	0	306.4	256900	7340	8327	28.96	14440	962.7	1495	6.87	830.9	16060000
HE 800 B	262	800	300	17.5	33	30	0	334.2	359100	8977	10230	32.78	14900	993.6	1553	6.68	946	21840000
HE 900 B	291	900	300	18.5	35	30	0	371.3	494100	10980	12580	36.48	15820	1054	1658	6.53	1137	29460000
HE 1000 B	314	1000	300	19	36	30	0	400	644700	12890	14860	40.15	16280	1085	1716	6.38	1254	37640000

Profili HEM



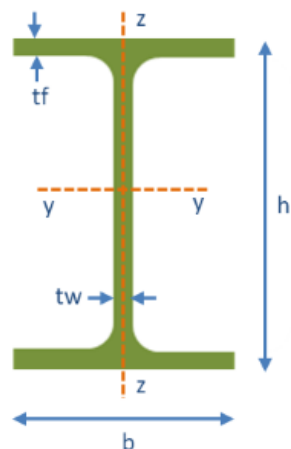
LEGENDA

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- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	$W_{pl,y}$ (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	$W_{pl,z}$ (cm ³)	i_z (cm)	JT (cm ⁴)	I_w (cm ⁶)
HE 100 M	41.8	120	106	12	20	12	0	53.24	1143	190.4	235.8	4.63	399.2	75.31	116.3	2.74	68.21	9930
HE 120 M	52.1	140	126	12.5	21	12	0	66.41	2018	288.2	350.6	5.51	702.8	111.6	171.6	3.25	91.66	24790
HE 140 M	63.2	160	146	13	22	12	0	80.56	3291	411.4	493.8	6.39	1144	156.8	240.5	3.77	120	54330
HE 160 M	76.2	180	166	14	23	15	0	97.05	5098	566.5	674.6	7.25	1759	211.9	325.5	4.26	162.4	108100
HE 180 M	88.9	200	186	14.5	24	15	0	113.3	7483	748.3	883.4	8.13	2580	277.4	425.2	4.77	203.3	199300
HE 200 M	103	220	206	15	25	18	0	131.3	10640	967.4	1135	9	3651	354.5	543.2	5.27	259.4	346300
HE 220 M	117	240	226	15.5	26	18	0	149.4	14600	1217	1419	9.89	5012	443.5	678.6	5.79	315.3	572700
HE 240 M	157	270	248	18	32	21	0	199.6	24290	1799	2117	11.03	8153	657.5	1006	6.39	627.9	1152000
HE 260 M	172	290	268	18	32.5	24	0	219.6	31310	2159	2524	11.94	10450	779.7	1192	6.9	719	1728000
HE 280 M	189	310	288	18.5	33	24	0	240.2	39550	2551	2966	12.83	13160	914.1	1397	7.4	807.3	2520000
HE 300 M	238	340	310	21	39	27	0	303.1	59200	3482	4078	13.98	19400	1252	1913	8	1408	4386000
HE 320 M	245	359	309	21	40	27	0	312	68130	3796	4435	14.78	19710	1276	1951	7.95	1501	5004000
HE 340 M	248	377	309	21	40	27	0	315.8	76370	4052	4718	15.55	19710	1276	1953	7.9	1506	5584000

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	Iy (cm ⁴)	Wy (cm ³)	Wpl,y (cm ³)	iy (cm)	Iz (cm ⁴)	Wz (cm ³)	Wpl,z (cm ³)	iz (cm)	JT (cm ⁴)	Iw (cm ⁶)
HE 360 M	250	395	308	21	40	27	0	318.8	84870	4297	4989	16.32	19520	1268	1942	7.83	1507	6137000
HE 400 M	256	432	307	21	40	27	0	325.8	104100	4820	5571	17.88	19340	1260	1934	7.7	1515	7410000
HE 450 M	263	478	307	21	40	27	0	335.4	131500	5501	6331	19.8	19340	1260	1939	7.59	1529	9251000
HE 500 M	270	524	306	21	40	27	0	344.3	161900	6180	7094	21.69	19150	1252	1932	7.46	1539	11190000
HE 550 M	278	572	306	21	40	27	0	354.4	198000	6923	7933	23.64	19160	1252	1937	7.35	1554	13520000
HE 600 M	285	620	305	21	40	27	0	363.7	237400	7660	8772	25.55	18980	1244	1930	7.22	1564	15910000
HE 650 M	293	668	305	21	40	27	0	373.7	281700	8433	9657	27.45	18980	1245	1936	7.13	1579	18650000
HE 700 M	301	716	304	21	40	27	0	383	329300	9198	10540	29.32	18800	1237	1929	7.01	1589	21400000
HE 800 M	317	814	303	21	40	30	0	404.3	442600	10870	12490	33.09	18630	1230	1930	6.79	1646	27780000
HE 900 M	333	910	302	21	40	30	0	423.6	570400	12540	14440	36.7	18450	1222	1929	6.6	1671	34750000
HE 1000 M	349	1008	302	21	40	30	0	444.2	722300	14330	16570	40.32	18460	1222	1940	6.45	1701	43020000

Profili IPE



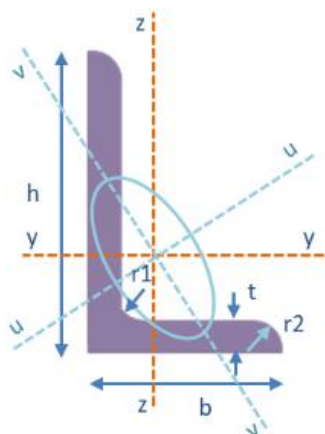
LEGENDA

- A = area
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- W_y = moduli di resistenza elastico
- $W_{pl,y}$ = modulo di resistenza plastico
- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidità torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	$W_{pl,y}$ (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	$W_{pl,z}$ (cm ³)	i_z (cm)	JT (cm ⁴)	I_w (cm ⁶)
IPE 80	6	80	46	3.8	5.2	5	0	7.64	80.14	20.03	23.22	3.24	8.49	3.69	5.82	1.05	0.7	120
IPE 100	8.1	100	55	4.1	5.7	7	0	10.32	171	34.2	39.41	4.07	15.92	5.79	9.15	1.24	1.2	350
IPE 120	10.4	120	64	4.4	6.3	7	0	13.21	317.8	52.96	60.73	4.9	27.67	8.65	13.58	1.45	1.74	890
IPE 140	12.9	140	73	4.7	6.9	7	0	16.43	541.2	77.32	88.34	5.74	44.92	12.31	19.25	1.65	2.45	1980
IPE 160	15.8	160	82	5	7.4	9	0	20.09	869.3	108.7	123.9	6.58	68.31	16.66	26.1	1.84	3.6	3960
IPE 180	18.8	180	91	5.3	8	9	0	23.95	1317	146.3	166.4	7.42	100.9	22.16	34.6	2.05	4.79	7430
IPE 200	22.4	200	100	5.6	8.5	12	0	28.48	1943	194.3	220.6	8.26	142.4	28.47	44.61	2.24	6.98	12990
IPE 220	26.2	220	110	5.9	9.2	12	0	33.37	2772	252	285.4	9.11	204.9	37.25	58.11	2.48	9.07	22670
IPE 240	30.7	240	120	6.2	9.8	15	0	39.12	3892	324.3	366.6	9.97	283.6	47.27	73.92	2.69	12.88	37390
IPE 270	36.1	270	135	6.6	10.2	15	0	45.94	5790	428.9	484	11.23	419.9	62.2	96.95	3.02	15.94	70580
IPE 300	42.2	300	150	7.1	10.7	15	0	53.81	8356	557.1	628.4	12.46	603.8	80.5	125.2	3.35	20.12	125900
IPE 330	49.1	330	160	7.5	11.5	18	0	62.61	11770	713.1	804.3	13.71	788.1	98.52	153.7	3.55	28.15	199100
IPE 360	57.1	360	170	8	12.7	18	0	72.73	16270	903.6	1019	14.95	1043	122.8	191.1	3.79	37.32	313600

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I _y (cm ⁴)	W _y (cm ³)	W _{pl,y} (cm ³)	i _y (cm)	I _z (cm ⁴)	W _z (cm ³)	W _{pl,z} (cm ³)	i _z (cm)	J _T (cm ⁴)	I _w (cm ⁶)
IPE 400	66.3	400	180	8.6	13.5	21	0	84.46	23130	1156	1307	16.55	1318	146.4	229	3.95	51.08	490000
IPE 450	77.6	450	190	9.4	14.6	21	0	98.82	33740	1500	1702	18.48	1676	176.4	276.4	4.12	66.87	791000
IPE 500	90.7	500	200	10.2	16	21	0	115.5	48200	1928	2194	20.43	2142	214.2	335.9	4.31	89.29	1249000
IPE 550	106	550	210	11.1	17.2	24	0	134.4	67120	2441	2787	22.35	2668	254.1	400.5	4.45	123.2	1884000
IPE 600	122	600	220	12	19	24	0	156	92080	3069	3512	24.3	3387	307.9	485.6	4.66	165.4	2846000

Angolari a lati disuguali



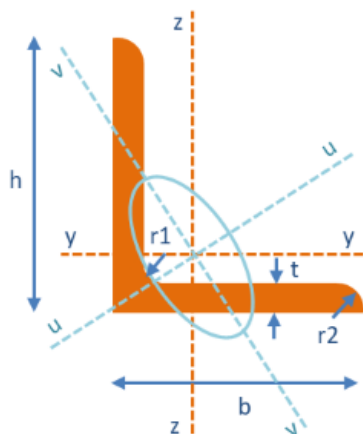
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- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- I_u = Momento d'inerzia rispetto all'asse principale d'inerzia u
- i_u = raggio d'inerzia rispetto all'asse principale d'inerzia u
- I_v = Momento d'inerzia rispetto all'asse principale d'inerzia v
- i_v = raggio d'inerzia rispetto all'asse principale d'inerzia v
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (kg/m)	h (mm)	b (mm)	t (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	i_z (cm)	JT (cm ⁴)	I_u (cm ⁴)	i_u (cm)	I_v (cm ⁴)	i_v (cm)
L 75 x 50 x 6	5.63	75	50	6	7	3.5	7.18	40.54	8.008	2.374	14.44	3.807	1.417	0.90	46.62	2.546	8.36	1.078
L 75 x 50 x 7	6.51	75	50	7	7	3.5	8.3	46.4	9.244	2.363	16.46	4.386	1.407	1.43	53.29	2.532	9.572	1.073
L 75 x 50 x 9	8.23	75	50	9	7	3.5	10.5	57.42	11.62	2.339	20.2	5.494	1.387	3.04	65.7	2.502	11.92	1.066
L 80 x 60 x 10	10.3	80	60	10	7	3.5	13.1	80.2	14.95	2.479	38.31	8.792	1.713	4.67	97.45	2.732	21.06	1.27
L 80 x 60 x 7	7.35	80	60	7	7	3.5	9.36	59.19	10.79	2.514	28.52	6.378	1.745	1.60	72.3	2.779	15.4	1.283
L 80 x 60 x 8	8.32	80	60	8	7	3.5	10.6	66.46	12.21	2.503	31.93	7.203	1.735	2.39	81.07	2.764	17.32	1.278
L 100 x 50 x 10	11.1	100	50	10	9	4.5	14.1	140.6	22.22	3.159	23.43	6.172	1.29	5.00	148.6	3.248	15.45	1.047
L 100 x 50 x 8	8.99	100	50	8	9	4.5	11.5	116	18.09	3.184	19.54	5.041	1.306	2.56	122.8	3.276	12.71	1.054
L 100 x 65 x 11	13.4	100	65	11	10	5	17.1	167	25.31	3.13	55.1	11.41	1.798	7.32	189.4	3.333	32.76	1.386
L 100 x 65 x 7	8.77	100	65	7	10	5	11.2	112.5	16.61	3.174	37.58	7.535	1.834	1.89	128	3.386	22.03	1.405
L 100 x 65 x 9	11.1	100	65	9	10	5	14.2	140.6	21.05	3.153	46.7	9.519	1.817	4.01	159.8	3.361	27.5	1.394
L 110 x 75 x 10	13.8	110	75	10	10	5	17.6	211.6	28.59	3.467	79.68	14.15	2.127	6.17	245.6	3.735	45.7	1.611
L 110 x 75 x 8	11.2	110	75	8	10	5	14.3	173.7	23.2	3.489	65.76	11.52	2.147	3.16	201.9	3.762	37.54	1.622

Profilo	g (kg/m)	h (mm)	b (mm)	t (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I _y (cm ⁴)	W _y (cm ³)	i _y (cm)	I _z (cm ⁴)	W _z (cm ³)	i _z (cm)	JT (cm ⁴)	I _u (cm ⁴)	i _u (cm)	I _v (cm ⁴)	i _v (cm)
L 120 x 60 x 10	13.4	120	60	10	10	5	17.1	249.6	32.54	3.82	42.09	9.086	1.569	6.00	264.3	3.93	27.41	1.266
L 120 x 60 x 8	10.9	120	60	8	10	5	13.9	204.9	26.41	3.844	34.88	7.401	1.586	3.07	217.3	3.958	22.54	1.275
L 120 x 80 x 10	15	120	80	10	11	5.5	19.13	275.5	34.1	3.795	98.11	16.21	2.265	6.67	316.8	4.07	56.82	1.723
L 120 x 80 x 12	17.8	120	80	12	11	5.5	22.69	322.8	40.37	3.772	114.3	19.14	2.245	11.52	370.5	4.041	66.66	1.714
L 120 x 80 x 14	20.5	120	80	14	11	5.5	26.2	367.7	46.44	3.748	129.5	21.96	2.225	18.29	421	4.011	76.25	1.707
L 120 x 80 x 8	12.2	120	80	8	11	5.5	15.49	225.7	27.63	3.817	80.76	13.17	2.283	3.41	259.8	4.095	46.63	1.735
L 130 x 65 x 10	14.6	130	65	10	11	5.5	18.63	320.5	38.39	4.147	54.2	10.73	1.706	6.50	339.5	4.269	35.18	1.374
L 130 x 65 x 12	17.3	130	65	12	11	5.5	22.1	375.5	45.45	4.123	62.96	12.66	1.688	11.23	397.2	4.24	41.26	1.367
L 130 x 65 x 8	11.8	130	65	8	11	5.5	15.09	262.5	31.1	4.171	44.77	8.721	1.722	3.33	278.4	4.295	28.9	1.384
L 150 x 100 x 10	19	150	100	10	13	6.5	24.18	551.7	54.08	4.776	197.8	25.8	2.86	8.33	635.4	5.126	114	2.171
L 150 x 100 x 12	22.6	150	100	12	13	6.5	28.74	649.6	64.23	4.754	231.9	30.58	2.84	14.40	747.5	5.0996	134	2.159
L 150 x 100 x 14	26.1	150	100	14	13	6.5	33.22	743.5	74.12	4.731	264.2	35.21	2.82	22.87	854.2	5.071	153.4	2.149
L 150 x 90 x 10	18.2	150	90	10	12	6	23.15	533.1	53.29	4.798	146.1	20.98	2.512	8.00	590.9	5.052	88.28	1.953
L 150 x 90 x 11	19.9	150	90	11	12	6	25.34	580.7	58.3	4.787	158.7	22.91	2.502	10.65	643.3	5.038	96.04	1.947
L 160 x 80 x 10	18.2	160	80	10	13	6.5	23.18	611.3	58.94	5.135	104.4	16.55	2.122	8.00	648.4	5.289	67.36	1.705
L 160 x 80 x 12	21.6	160	80	12	13	6.5	27.54	719.5	69.98	5.111	122	19.59	2.105	13.82	762.4	5.262	79.1	1.695
L 200 x 100 x 10	23	200	100	10	15	7.5	29.24	1219	93.24	6.455	210.3	26.33	2.682	10.00	1294	6.651	135.2	2.15
L 200 x 100 x 12	25.1	200	100	12	15	7.5	34.8	1440	111	6.433	247.2	31.28	2.665	17.28	1528	6.626	159.2	2.139
L 200 x 100 x 14	31.6	200	100	14	15	7.5	40.28	1654	128.4	6.408	282.2	36.08	2.647	27.44	1754	6.599	182.4	2.128
L 200 x 90 x 10	22.1	200	90	10	13	6.5	28.2	1178	91.93	6.465	155.5	21.48	2.349	9.67	1231	6.608	102.8	1.91
L 200 x 90 x 11	24.3	200	90	11	13	6.5	30.9	1285	100.7	6.452	169.1	23.49	2.34	12.87	1342	6.594	111.9	1.904
L 200 x 90 x 12	26.4	200	90	12	13	6.5	33.6	1391	109.4	6.439	182.3	25.46	2.331	16.70	1452	6.58	120.9	1.898
L 200 x 90 x 15	32.5	200	90	15	13	6.5	41.4	1696	134.8	6.399	219.7	31.22	2.303	32.63	1769	6.535	147	1.884
L 200 x 90 x 9	20	200	90	9	13	6.5	25.5	1068	83.08	6.477	141.6	19.44	2.358	7.05	1117	6.621	93.49	1.916

Angolari a lati uguali



LEGENDA

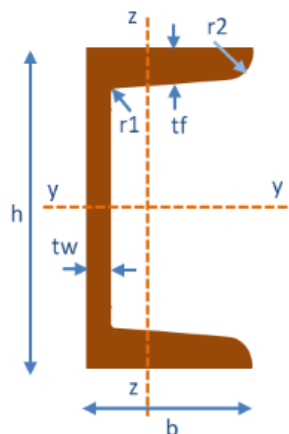
- A = area
- I_y = momento d'inerzia
- W_y = moduli di resistenza elastico
- $W_{pl,y}$ = modulo di resistenza plastico
- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- I_u = Momento d'inerzia rispetto all'asse principale d'inerzia u
- i_u = raggio d'inerzia rispetto all'asse principale d'inerzia u
- I_v = Momento d'inerzia rispetto all'asse principale d'inerzia v
- i_v = raggio d'inerzia rispetto all'asse principale d'inerzia v
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (kg/m)	h (mm)	b (mm)	t (mm)	r_1 (mm)	r_2 (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	i_z (cm)	JT (cm ⁴)	I_u (cm ⁴)	i_u (cm)	I_v (cm ⁴)	i_v (cm)
L 15 x 15 x 3	0.64	15	15	3	3.5	2	0.819	0.1508	0.1467	0.4291	0.1508	0.1467	0.4291	0.03	0.2369	0.5377	0.06474	0.2811
L 20 x 20 x 4	1.14	20	20	4	3.5	2	1.45	0.48798	0.3576	0.5803	0.48798	0.3576	0.5803	0.09	0.7654	0.7267	0.2106	0.3812
L 25 x 25 x 5	1.77	25	25	5	3.5	2	2.26	1.204	0.7076	0.7301	1.204	0.7076	0.7301	0.21	1.888	0.9141	0.52098	0.4802
L 40 x 40 x 5	2.97	40	40	5	6	3	3.79	5.427	1.912	1.197	5.427	1.912	1.197	0.33	8.593	1.506	2.261	0.7725
L 45 x 45 x 6	4	45	45	6	7	3.5	5.09	9.162	2.882	1.341	9.162	2.882	1.341	0.65	14.5	1.687	3.827	0.8669
L 50 x 50 x 6	4.47	50	50	6	7	3.5	5.69	12.84	3.612	1.502	12.84	3.612	1.502	0.72	20.34	1.89	5.339	0.9684
L 55 x 55 x 8	6.46	55	55	8	8	4	8.23	22.04	5.716	1.637	22.04	5.716	1.637	1.88	34.84	2.058	9.242	1.06
L 60 x 60 x 10	8.69	60	60	10	8	4	11.1	34.93	8.408	1.776	34.93	8.408	1.776	4.00	55.06	2.23	14.8	1.156
L 60 x 60 x 5	4.57	60	60	5	8	4	5.82	19.37	4.447	1.825	19.37	4.447	1.825	0.50	30.71	2.297	8.031	1.175
L 60 x 60 x 6	5.42	60	60	6	8	4	6.91	22.79	5.285	1.816	22.79	5.285	1.816	0.86	36.14	2.287	9.441	1.169
L 60 x 60 x 8	7.09	60	60	8	8	4	9.03	29.15	6.89	1.797	29.15	6.89	1.797	2.05	46.15	2.261	12.16	1.161
L 65 x 65 x 7	6.83	65	65	7	9	4.5	8.7	33.43	7.185	1.961	33.43	7.185	1.961	1.49	52.996	2.469	13.87	1.263
L 65 x 65 x 9	8.62	65	65	9	9	4.5	11	41.37	9.048	1.941	41.37	9.048	1.941	3.16	65.45	2.442	17.29	1.255

Profilo	g (kg/m)	h (mm)	b (mm)	t (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I _y (cm ⁴)	W _y (cm ³)	i _y (cm)	I _z (cm ⁴)	W _z (cm ³)	i _z (cm)	J _T (cm ⁴)	I _u (cm ⁴)	i _u (cm)	I _v (cm ⁴)	i _v (cm)
L 70 x 70 x 11	11.2	70	70	11	9	4.5	14.3	61.83	12.69	2.081	61.83	12.69	2.081	6.21	97.6	2.615	26.06	1.351
L 70 x 70 x 6	6.38	70	70	6	9	4.5	8.13	36.88	7.272	2.13	36.88	7.272	2.13	1.01	58.5	2.683	15.27	1.371
L 70 x 70 x 7	7.38	70	70	7	9	4.5	9.4	42.3	8.411	2.122	42.3	8.411	2.122	1.60	67.09	2.672	17.5	1.365
L 70 x 70 x 9	9.34	70	70	9	9	4.5	11.9	52.47	10.6	2.102	52.47	10.6	2.102	3.40	83.09	2.645	21.84	1.356
L 80 x 80 x 10	11.9	80	80	10	10	5	15.1	87.5	15.45	2.407	87.5	15.45	2.407	5.33	138.6	3.029	36.38	1.552
L 80 x 80 x 12	14.1	80	80	12	10	5	17.9	101.7	18.2	2.386	101.7	18.2	2.386	9.22	160.7	2.999	42.7	1.546
L 80 x 80 x 6	7.34	80	80	6	10	5	9.35	55.82	9.571	2.444	55.82	9.571	2.444	1.15	88.52	3.077	23.13	1.573
L 80 x 80 x 7	8.49	80	80	7	10	5	10.8	64.19	11.09	2.436	64.19	11.09	2.436	1.83	101.8	3.068	26.54	1.566
L 80 x 80 x 8	9.66	80	80	8	10	5	12.3	72.25	12.58	2.427	72.25	12.58	2.427	2.73	114.6	3.057	29.88	1.561
L 90 x 90 x 11	14.7	90	90	11	11	5.5	18.7	137.6	21.57	2.712	137.6	21.57	2.712	7.99	218.1	3.414	57.15	1.747
L 90 x 90 x 13	17.1	90	90	13	11	5.5	21.8	158.1	25.08	2.69	158.1	25.08	2.69	13.18	250	3.383	66.2	1.741
L 90 x 90 x 15	19.5	90	90	15	11	5.5	24.9	177.3	28.47	2.669	177.3	28.47	2.669	20.25	279.4	3.351	75.11	1.738
L 90 x 90 x 6	8	90	90	6	11	5.5	10.6	80.31	12.18	2.757	80.31	12.18	2.757	1.30	127.3	3.47	33.34	1.776
L 90 x 90 x 7	9.6	90	90	7	11	5.5	12.24	92.55	14.13	2.75	92.55	14.13	2.75	2.06	146.8	3.463	38.29	1.769
L 90 x 90 x 8	10.9	90	90	8	11	5.5	13.89	104.4	16.05	2.741	104.4	16.05	2.741	3.07	165.6	3.453	43.13	1.762
L 90 x 90 x 9	12.2	90	90	9	11	5.5	15.52	115.8	17.93	2.732	115.8	17.93	2.732	4.37	183.8	3.441	47.88	1.756
L 100 x 100 x 10	15	100	100	10	12	6	19.15	176.7	24.62	3.037	176.7	24.62	3.037	6.67	280.3	3.826	73.01	1.952
L 100 x 100 x 12	17.8	100	100	12	12	6	22.71	206.7	29.12	3.017	206.7	29.12	3.017	11.52	327.6	3.798	85.75	1.943
L 100 x 100 x 14	20.6	100	100	14	12	6	26.2	235	33.48	2.995	235	33.48	2.995	18.29	371.8	3.767	98.2	1.936
L 100 x 100 x 16	23.2	100	100	16	12	6	29.6	261.7	37.7	2.974	261.7	37.7	2.974	27.31	413	3.736	110.5	1.932
L 100 x 100 x 6	9.29	100	100	6	12	6	11.8	111.1	15.09	3.069	111.1	15.09	3.069	1.44	175.9	3.862	46.2	1.979
L 100 x 100 x 7	10.8	100	100	7	12	6	13.7	128.2	17.54	3.063	128.2	17.54	3.063	2.29	203.3	3.857	53.11	1.971
L 100 x 100 x 8	12.2	100	100	8	12	6	15.51	144.8	19.94	3.055	144.8	19.94	3.055	3.41	229.8	3.849	59.86	1.964
L 100 x 100 x 8	12.2	100	100	8	12	6	15.5	144.8	19.94	3.055	144.8	19.94	3.055	3.41	229.8	3.849	59.86	1.964
L 110 x 110 x 10	16.6	110	110	10	13	6.5	21.18	238	29.99	3.352	238	29.99	3.352	7.33	377.7	4.223	98.25	2.154
L 110 x 110 x 12	19.7	110	110	12	13	6.5	25.14	279.1	35.54	3.332	279.1	35.54	3.332	12.67	442.8	4.197	115.5	2.143
L 120 x 120 x 10	18.2	120	120	10	13	6.5	23.18	312.9	36.03	3.674	312.9	36.03	3.674	8.00	497	4.63	128.9	2.358
L 120 x 120 x 11	19.9	120	120	11	13	6.5	25.37	340.6	39.41	3.664	340.6	39.41	3.664	10.65	540.9	4.617	140.3	2.352

Profilo	g (kg/m)	h (mm)	b (mm)	t (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I _y (cm ⁴)	W _y (cm ³)	i _y (cm)	I _z (cm ⁴)	W _z (cm ³)	i _z (cm)	J _T (cm ⁴)	I _u (cm ⁴)	i _u (cm)	I _v (cm ⁴)	i _v (cm)
L 120 x 120 x 12	21.6	120	120	12	13	6.5	27.54	367.7	42.73	3.654	367.7	42.73	3.654	13.82	583.7	4.604	151.6	2.346
L 120 x 120 x 13	23.3	120	120	13	13	6.5	29.69	394	46.01	3.643	394	46.01	3.643	17.58	625.3	4.589	162.8	2.341
L 120 x 120 x 15	26.6	120	120	15	13	6.5	33.93	444.9	52.43	3.621	444.9	52.43	3.621	27.00	705.1	4.559	184.7	2.333
L 120 x 120 x 18	31.5	120	120	18	13	6.5	40.1	516.7	61.72	3.588	516.7	61.72	3.588	46.66	816.6	4.51	216.8	2.324
L 120 x 120 x 8	14.7	120	120	8	13	6.5	18.7	255.4	29.11	3.692	255.4	29.11	3.692	4.10	405.4	4.651	105.5	2.372
L 120 x 120 x 9	16.5	120	120	9	13	6.5	21	284.5	32.59	3.683	284.5	32.59	3.683	5.83	451.8	4.642	117.3	2.365
L 130 x 130 x 12	23.5	130	130	12	14	7	29.97	472.2	50.44	3.969	472.2	50.44	3.969	14.98	749.8	5.002	194.5	2.548
L 130 x 130 x 14	27.2	130	130	14	14	7	34.7	540.1	58.2	3.948	540.1	58.2	3.948	23.78	857.1	4.974	223	2.537
L 130 x 130 x 16	30.9	130	130	16	14	7	39.3	605	65.75	3.926	605	65.75	3.926	35.50	959	4.943	250.9	2.528
L 140 x 140 x 10	21.4	140	140	10	15	7.5	27.24	504.4	49.43	4.303	504.4	49.43	4.303	9.33	800.9	5.422	208	2.763
L 140 x 140 x 13	27.4	140	140	13	15	7.5	34.95	638.5	63.37	4.274	638.5	63.37	4.274	20.51	1014	5.386	263	2.743
L 140 x 140 x 15	31.4	140	140	15	15	7.5	40	723.3	72.36	4.253	723.3	72.36	4.253	31.50	1148	5.358	298.6	2.733
L 140 x 140 x 17	35.3	140	140	17	15	7.5	45	804.6	81.13	4.231	804.6	81.13	4.231	45.85	1276	5.327	333.5	2.724
L 150 x 150 x 10	23	150	150	10	16	8	29.27	624	56.91	4.617	624	56.91	4.617	10.00	990.6	5.817	257.5	2.966
L 150 x 150 x 12	27.3	150	150	12	16	8	34.83	736.9	67.75	4.599	736.9	67.75	4.599	17.28	1170	5.796	303.4	2.951
L 150 x 150 x 14	31.6	150	150	14	16	8	40.31	845.4	78.33	4.579	845.4	78.33	4.579	27.44	1343	5.771	348.2	2.939
L 150 x 150 x 15	33.8	150	150	15	16	8	43.02	898.1	83.52	4.569	898.1	83.52	4.569	33.75	1426	5.757	370.2	2.933
L 150 x 150 x 16	35.9	150	150	16	16	8	45.7	949.7	88.65	4.558	949.7	88.65	4.558	40.96	1507	5.742	392	2.928
L 150 x 150 x 18	40.1	150	150	18	16	8	51.03	1050	98.74	4.536	1050	98.74	4.536	58.32	1665	5.712	435	2.92
L 160 x 160 x 15	36.2	160	160	15	17	8.5	46.06	1099	95.47	4.884	1099	95.47	4.884	36.00	1745	6.155	452.6	3.135
L 160 x 160 x 17	40.7	160	160	17	17	8.5	51.82	1225	107.2	4.863	1225	107.2	4.863	52.41	1945	6.127	505.8	3.124
L 180 x 180 x 16	43.5	180	180	16	18	9	55.39	1682	129.7	5.511	1682	129.7	5.511	49.15	2673	6.947	691.8	3.534
L 180 x 180 x 18	48.6	180	180	18	18	9	61.91	1866	144.7	5.49	1866	144.7	5.49	69.98	2963	6.918	768.3	3.523
L 200 x 200 x 16	48.5	200	200	16	18	9	61.79	2341	161.7	6.156	2341	161.7	6.156	54.61	3723	7.762	960	3.942
L 200 x 200 x 18	54.2	200	200	18	18	9	69.11	2600	180.6	6.133	2600	180.6	6.133	77.76	4133	7.733	1067	3.929
L 200 x 200 x 20	59.9	200	200	20	18	9	76.35	2851	199.1	6.11	2851	199.1	6.11	106.67	4529	7.702	1172	3.918
L 200 x 200 x 24	71.1	200	200	24	18	9	90.59	3331	235.2	6.064	3331	235.2	6.064	184.32	5284	7.637	1378	3.8998

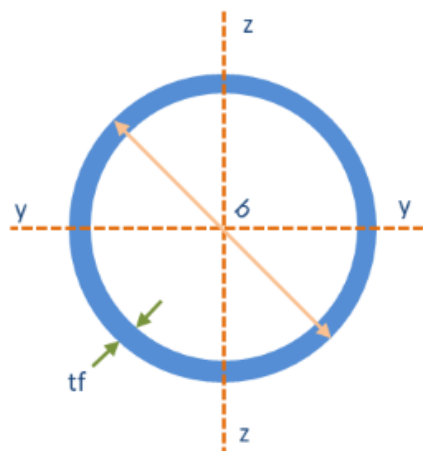
Profili UPN

LEGENDA

- A = area
- I_y = momento d'inerzia
- W_y = moduli di resistenza elastico
- $W_{pl,y}$ = modulo di resistenza plastico
- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidità torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	r1 (mm)	r2 (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	$W_{pl,y}$ (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	$W_{pl,z}$ (cm ³)	i_z (cm)	JT (cm ⁴)	I_w (cm ⁶)
UPN 80	8.64	80	45	6	8	8	4	11	106	26.5	31.8	3.1	19.4	6.36	12.1	1.33	2.16	170
UPN 100	10.6	100	50	6	8.5	8.5	4.5	13.5	206	41.2	49	3.91	29.3	8.49	16.2	1.47	2.81	410
UPN 120	13.4	120	55	7	9	9	4.5	17	364	60.7	72.6	4.62	43.2	11.1	21.2	1.59	4.15	900
UPN 140	16	140	60	7	10	10	5	20.4	605	86.4	103	5.45	62.7	14.8	28.3	1.75	5.68	1800
UPN 160	18.8	160	65	7.5	10.5	10.5	5.5	24	925	116	138	6.21	85.3	18.3	35.2	1.89	7.39	3260
UPN 180	22	180	70	8	11	11	5.5	28	1350	150	179	6.95	114	22.4	42.9	2.02	9.55	5570
UPN 200	25.3	200	75	8.5	11.5	11.5	6	32.2	1910	191	228	7.7	148	27	51.8	2.14	11.9	9070
UPN 220	29.4	220	80	9	12.5	12.5	6.5	37.4	2690	245	292	8.48	197	33.6	64.1	2.3	16	14600
UPN 240	33.2	240	85	9.5	13	13	6.5	42.3	3600	300	358	9.22	248	39.6	75.7	2.42	19.7	22100
UPN 260	37.9	260	90	10	14	14	7	48.3	4820	371	442	9.99	317	47.7	91.6	2.56	25.5	33300
UPN 280	41.8	280	95	10	15	15	7.5	53.3	6280	448	532	10.9	399	57.2	109	2.74	31	48500
UPN 300	46.2	300	100	10	16	16	8	58.8	8030	535	632	11.7	495	67.8	130	2.9	37.4	69100
UPN 320	59.5	320	100	14	17.5	17.5	8.75	75.8	10870	679	826	12.1	597	80.6	152	2.81	66.7	96100
UPN 350	60.6	350	100	14	16	16	8	77.3	12840	734	918	12.9	570	75	143	2.72	61.2	114000
UPN 380	63.1	380	102	13.5	16	16	8	80.4	15760	829	1014	14	615	78.7	148	2.77	59.1	146000
UPN 400	71.8	400	110	14	18	18	9	91.5	20350	1020	1240	14.9	846	102	190	3.04	81.6	221000

Tubolari circolari

LEGENDA

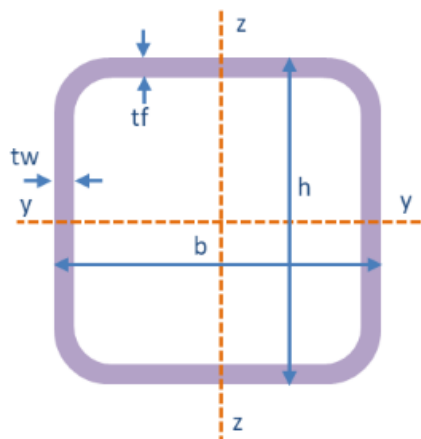
- A = area
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- i_y = raggio d'inerzia
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- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (kg/m)	b=d (mm)	tf=s (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	i_z (cm)	JT=Ip (cm ⁴)
33.7 x 2.6	2.01	33.7	2.6	2.54	3.09	1.84	1.1	3.09	1.84	1.1	6.19
33.7 x 2.9	2.22	33.7	2.9	2.81	3.36	1.99	1.09	3.36	1.99	1.09	6.71
33.7 x 3.2	2.42	33.7	3.2	3.07	3.6	2.14	1.08	3.6	2.14	1.08	7.21
42.4 x 2.6	2.57	42.4	2.6	3.25	6.46	3.05	1.41	6.46	3.05	1.41	12.93
42.4 x 2.9	2.84	42.4	2.9	3.6	7.06	3.33	1.4	7.06	3.33	1.4	14.11
42.4 x 3.2	3.11	42.4	3.2	3.94	7.62	3.59	1.39	7.62	3.59	1.39	15.24
48.3 x 2.6	2.95	48.3	2.6	3.73	9.78	4.05	1.62	9.78	4.05	1.62	19.55
48.3 x 2.9	3.27	48.3	2.9	4.14	10.7	4.43	1.61	10.7	4.43	1.61	21.40
48.3 x 3.2	3.59	48.3	3.2	4.53	11.6	4.8	1.6	11.6	4.8	1.6	23.17
60.3 x 2.9	4.14	60.3	2.9	5.23	21.6	7.16	2.03	21.6	7.16	2.03	43.18
60.3 x 3.2	4.54	60.3	3.2	5.74	23.5	7.78	2.02	23.5	7.78	2.02	46.94
60.3 x 3.6	5.07	60.3	3.6	6.41	25.9	8.58	2.01	25.9	8.58	2.01	51.75

Profilo	g (kg/m)	b=d (mm)	tf=s (mm)	A (cm ²)	I _y (cm ⁴)	W _y (cm ³)	i _y (cm)	I _z (cm ⁴)	W _z (cm ³)	i _z (cm)	JT=I _p (cm ⁴)
76.1 x 2.6	4.75	76.1	2.6	6	40.6	10.7	2.6	40.6	10.7	2.6	81.18
76.1 x 2.9	5.28	76.1	2.9	6.67	44.7	11.8	2.59	44.7	11.8	2.59	89.48
76.1 x 3.2	5.8	76.1	3.2	7.33	48.8	12.8	2.58	48.8	12.8	2.58	97.56
76.1 x 3.6	6.49	76.1	3.6	8.2	54	14.2	2.57	54	14.2	2.57	108.01
88.9 x 2.6	5.57	88.9	2.6	7.05	65.7	14.8	3.05	65.7	14.8	3.05	131.37
88.9 x 3.2	6.81	88.9	3.2	8.62	79.2	17.8	3.03	79.2	17.8	3.03	158.41
88.9 x 3.6	7.63	88.9	3.6	9.65	87.9	19.8	3.02	87.9	19.8	3.02	175.80
88.9 x 4.0	8.43	88.9	4	10.7	96.3	21.7	3	96.3	21.7	3	192.68
114.3 x 3.6	9.9	114.3	3.6	12.5	192	33.6	3.92	192	33.6	3.92	383.97
114.3 x 4.0	11	114.3	4	13.9	211	36.9	3.9	211	36.9	3.9	422.13
114.3 x 4.5	12.1	114.3	4.5	15.5	234	41	3.89	234	41	3.89	468.64
139.7 x 2.9	9.86	139.7	2.9	12.5	292	41.8	4.84	292	41.8	4.84	583.37
139.7 x 3.6	12.2	139.7	3.6	15.4	357	51.1	4.81	357	51.1	4.81	713.30
139.7 x 4.0	13.5	139.7	4	17.1	393	56.2	4.8	393	56.2	4.8	785.72
139.7 x 4.5	14.9	139.7	4.5	19.1	437	62.6	4.78	437	62.6	4.78	874.41
168.3 x 3.2	13.1	168.3	3.2	16.6	566	67.2	5.84	566	67.2	5.84	1131.47
168.3 x 4.0	16.3	168.3	4	20.6	697	82.8	5.81	697	82.8	5.81	1394.18
168.3 x 4.5	18.1	168.3	4.5	23.2	777	92.4	5.79	777	92.4	5.79	1554.43
168.3 x 5.0	20.1	168.3	5	25.7	856	102	5.78	856	102	5.78	1711.69
219.1 x 4.0	21.4	219.1	4	27	1.564	143	7.61	1.564	143	7.61	3127.67
219.1 x 5.0	26.4	219.1	5	33.6	1.928	176	7.57	1.928	176	7.57	3856.09
219.1 x 5.9	31	219.1	5.9	39.5	2.247	205	7.54	2.247	205	7.54	4494.03
273.0 x 4.0	26.7	273	4	33.8	3.058	224	9.51	3.058	224	9.51	6116.50
273.0 x 5.6	36.8	273	5.6	47	4.206	308	9.46	4.206	308	9.46	8413.03
273.0 x 6.3	41.6	273	6.3	52.8	4.696	344	9.43	4.696	344	9.43	9391.65
323.9 x 4.0	31.8	323.9	4	40.2	5.144	318	11.3	5.144	318	11.3	10286.33

Profilo	g (kg/m)	b=d (mm)	tf=s (mm)	A (cm ²)	I _y (cm ⁴)	W _y (cm ³)	i _y (cm)	I _z (cm ⁴)	W _z (cm ³)	i _z (cm)	JT=I _p (cm ⁴)
323.9 x 5.9	46.2	323.9	5.9	58.9	7.453	460	11.2	7.453	460	11.2	14906.40
323.9 x 7.1	55.6	323.9	7.1	70.7	8.869	548	11.2	8.869	548	11.2	17738.70
355.6 x 5.0	43.2	355.6	5	55.1	8.464	476	12.4	8.464	476	12.4	16927.15
355.6 x 6.3	54.5	355.6	6.3	69.1	10.547	593	12.4	10.547	593	12.4	21094.41
355.6 x 8.0	68.3	355.6	8	87.4	13.201	742	12.3	13.201	742	12.3	26402.75
406.4 x 5.0	49.5	406.4	5	63.1	12.704	625	14.2	12.704	625	14.2	25401.50
406.4 x 6.3	62.4	406.4	6.3	79.2	15.849	780	14.1	15.849	780	14.1	31698.87
406.4 x 7.1	70.1	406.4	7.1	89.1	17.756	874	14.1	17.756	874	14.1	35512.68
457.2 x 5.6	62.1	457.2	5.6	79.5	20.312	889	16	20.312	889	16	40514.13
457.2 x 6.3	70.3	457.2	6.3	89.2	22.684	992	15.9	22.684	992	15.9	45368.66
457.2 x 8.0	88.2	457.2	8	113	28.484	1.246	15.9	28.484	1.246	15.9	56968.77

Tubolari quadrati

**LEGENDA**

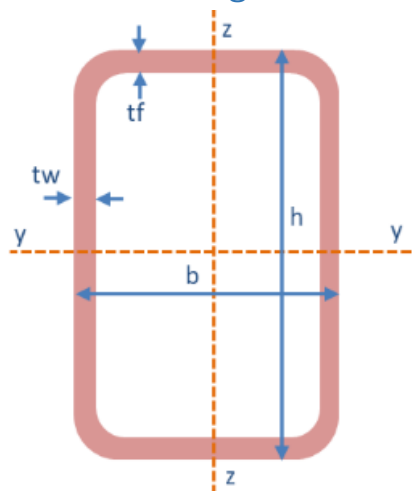
- A = area
- I_y = momento d'inerzia
- W_y = moduli di resistenza elastico
- $W_{pl,y}$ = modulo di resistenza plastico
- i_y = raggio d'inerzia
- I_z = momento d'inerzia
- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	i_z (cm)	JT (cm ⁴)
20 x 1.5	0.87	20	20	1.5	1.5	1.11	0.64	0.64	0.76	0.64	0.64	0.76	0.95
20 x 2.0	1.13	20	20	2	2	1.44	0.79	0.79	0.74	0.79	0.79	0.74	1.17
25 x 1.5	1.11	25	25	1.5	1.5	1.41	1.3	1.04	0.96	1.3	1.04	0.96	1.95
25 x 2.0	1.44	25	25	2	2	1.84	1.63	1.31	0.94	1.63	1.31	0.94	2.43
30 x 2.0	1.76	30	30	2	2	2.24	2.94	1.96	1.15	2.94	1.96	1.15	4.39
30 x 3.0	2.54	30	30	3	3	3.24	3.99	2.66	1.11	3.99	2.66	1.11	5.90
35 x 2.0	2.07	35	35	2	2	2.64	4.81	2.75	1.35	4.81	2.75	1.35	7.19
35 x 3.0	3.01	35	35	3	3	3.84	6.61	3.78	1.31	6.61	3.78	1.31	9.83
40 x 2.0	2.39	40	40	2	2	3.04	7.34	3.67	1.55	7.34	3.67	1.55	10.97
40 x 3.0	3.49	40	40	3	3	4.44	10.2	5.1	1.52	10.2	5.1	1.52	15.20
40 x 4.0	4.52	40	40	4	4	5.76	12.6	6.3	1.48	12.6	6.3	1.48	18.66
50 x 2.0	3.01	50	50	2	2	3.84	14.77	5.91	1.96	14.77	5.91	1.96	22.12
50 x 3.0	4.43	50	50	3	3	5.64	20.85	8.34	1.92	20.85	8.34	1.92	31.15

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	A (cm2)	Iy (cm4)	Wy (cm3)	iy (cm)	Iz (cm4)	Wz (cm3)	iz (cm)	JT (cm4)
50 x 4.0	5.78	50	50	4	4	7.36	26.15	10.46	1.89	26.15	10.46	1.89	38.93
60 x 2.0	3.64	60	60	2	2	4.64	26.05	8.68	2.37	26.05	8.68	2.37	39.02
60 x 3.0	5.37	60	60	3	3	6.84	37.14	12.38	2.33	37.14	12.38	2.33	55.56
60 x 4.0	7.03	60	60	4	4	8.96	47.07	15.69	2.29	47.07	15.69	2.29	70.25
70 x 2.0	4.27	70	70	2	2	5.44	41.96	11.99	2.78	41.96	11.99	2.78	62.89
70 x 3.0	6.31	70	70	3	3	8.04	60.27	17.22	2.74	60.27	17.22	2.74	90.23
70 x 4.0	8.29	70	70	4	4	10.56	76.95	21.98	2.7	76.95	21.98	2.7	115.00
80 x 2.0	4.9	80	80	2	2	6.24	63.32	15.83	3.19	63.32	15.83	3.19	94.91
80 x 3.0	7.25	80	80	3	3	9.24	91.45	22.86	3.15	91.45	22.86	3.15	136.96
80 x 4.0	9.55	80	80	4	4	12.16	117.38	29.35	3.11	117.38	29.35	3.11	175.59
80 x 5.0	11.78	80	80	5	5	15	141.25	35.31	3.07	141.25	35.31	3.07	210.94
100 x 2.0	6.15	100	100	2	2	7.84	125.54	25.11	4	125.54	25.11	4	188.24
100 x 3.0	9.14	100	100	3	3	11.64	182.71	36.54	3.96	182.71	36.54	3.96	273.80
100 x 4.0	12.06	100	100	4	4	15.36	236.34	47.27	3.92	236.34	47.27	3.92	353.89
100 x 5.0	14.92	100	100	5	5	19	286.58	57.32	3.88	286.58	57.32	3.88	428.69
120 x 2.0	7.41	120	120	2	2	9.44	219.13	36.52	4.82	219.13	36.52	4.82	328.61
120 x 3.0	11.02	120	120	3	3	14.04	320.53	53.42	4.78	320.53	53.42	4.78	480.48
120 x 4.0	14.57	120	120	4	4	18.56	416.73	69.46	4.74	416.73	69.46	4.74	624.36
120 x 5.0	18.06	120	120	5	5	23	507.92	84.65	4.7	507.92	84.65	4.7	760.44
150 x 3.0	13.85	150	150	3	3	17.64	635.57	84.74	6	635.57	84.74	6	952.96
150 x 4.0	18.34	150	150	4	4	23.36	830.53	110.74	5.96	830.53	110.74	5.96	1244.85
150 x 5.0	22.77	150	150	5	5	29	1.017.42	135.66	5.92	1.017.42	135.66	5.92	1524.31
180 x 3.0	16.67	180	180	3	3	21.24	1.109.37	123.26	7.23	1.109.37	123.26	7.23	1663.57
180 x 4.0	22.11	180	180	4	4	28.16	1.454.56	161.62	7.19	1.454.56	161.62	7.19	2180.71
180 x 5.0	27.48	180	180	5	5	35	1.787.92	198.66	7.15	1.787.92	198.66	7.15	2679.69
200 x 3.0	18.56	200	200	3	3	23.64	1.529.43	152.94	8.04	1.529.43	152.94	8.04	2293.61
200 x 4.0	24.62	200	200	4	4	31.36	2.008.71	200.87	8	2.008.71	200.87	8	3011.81
200 x 5.0	30.62	200	200	5	5	39	2.473.25	247.33	7.96	2.473.25	247.33	7.96	3707.44
200 x 6.0	36.55	200	200	6	6	46.56	2.923.35	292.33	7.92	2.923.35	292.33	7.92	4380.83

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	A (cm2)	Iy (cm4)	Wy (cm3)	iy (cm)	Iz (cm4)	Wz (cm3)	iz (cm)	JT (cm4)
220 x 4.0	27.13	220	220	4	4	34.56	2.688.31	244.39	8.82	2.688.31	244.39	8.82	4031.08
220 x 5.0	33.76	220	220	5	5	43	3.314.58	301.33	8.78	3.314.58	301.33	8.78	4969.19
220 x 6.0	40.32	220	220	6	6	51.36	3.923.22	356.66	8.74	3.923.22	356.66	8.74	5880.21
250 x 4.0	30.9	250	250	4	4	39.36	3.970.90	317.67	10.04	3.970.90	317.67	10.04	5954.77
250 x 5.0	38.47	250	250	5	5	49	4.904.08	392.33	10	4.904.08	392.33	10	7353.06
250 x 6.0	45.97	250	250	6	6	58.56	5.814.23	465.14	9.96	5.814.23	465.14	9.96	8716.07

Tubolari rettangolari

**LEGENDA**

- A = area
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- W_y = moduli di resistenza elastico
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- i_y = raggio d'inerzia
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- W_z = moduli di resistenza elastico
- $W_{pl,z}$ = modulo di resistenza plastico
- i_z = raggio d'inerzia
- JT = fattore di rigidezza torsionale
- I_w = momento d'inerzia settoriale

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	A (cm ²)	I_y (cm ⁴)	W_y (cm ³)	i_y (cm)	I_z (cm ⁴)	W_z (cm ³)	i_z (cm)	JT (cm ⁴)
20 x 10 x 1.5	0.64	20	10	1.5	1.5	0.81	0.38	0.38	0.69	0.12	0.24	0.38	0.27
20 x 10 x 2.0	0.82	20	10	2	2	1.04	0.46	0.46	0.67	0.14	0.28	0.36	0.32
30 x 15 x 1.5	0.99	30	15	1.5	1.5	1.26	1.41	0.94	1.06	0.45	0.61	0.6	1.06
30 x 15 x 2.0	1.29	30	15	2	2	1.64	1.76	1.18	1.04	0.56	0.74	0.58	1.29
30 x 20 x 1.5	1.11	30	20	1.5	1.5	1.41	1.71	1.14	1.1	0.89	0.89	0.8	1.77
30 x 20 x 2.0	1.44	30	20	2	2	1.84	2.16	1.44	1.08	1.11	1.11	0.78	2.21
40 x 20 x 2.0	1.76	40	20	2	2	2.24	4.45	2.22	1.41	1.44	1.44	0.8	3.34
40 x 20 x 3.0	2.54	40	20	3	3	3.24	6.08	3.04	1.37	1.89	1.89	0.76	4.40
40 x 30 x 2.0	2.07	40	30	2	2	2.64	5.89	2.95	1.49	3.73	2.48	1.19	6.86
40 x 30 x 3.0	3.01	40	30	3	3	3.84	8.14	4.07	1.46	5.08	3.39	1.15	9.36
50 x 25 x 2.0	2.23	50	25	2	2	2.84	9.01	3.6	1.78	2.96	2.37	1.02	6.87
50 x 25 x 3.0	3.25	50	25	3	3	4.14	12.55	5.02	1.74	4	3.2	0.98	9.30
50 x 30 x 2.0	2.39	50	30	2	2	3.04	10.16	4.06	1.83	4.51	3.01	1.22	9.51

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	A (cm ²)	Iy (cm ⁴)	Wy (cm ³)	iy (cm)	Iz (cm ⁴)	Wz (cm ³)	iz (cm)	JT (cm ⁴)
50 x 30 x 3.0	3.49	50	30	3	3	4.44	14.21	5.69	1.79	6.18	4.12	1.18	13.06
50 x 30 x 4.0	4.52	50	30	4	4	5.76	17.67	7.07	1.75	7.52	5.02	1.14	15.89
60 x 20 x 2.0	2.39	60	20	2	2	3.04	12.58	4.19	2.03	2.09	2.09	0.83	5.74
60 x 20 x 3.0	3.49	60	20	3	3	4.44	17.63	5.88	1.99	2.77	2.77	0.79	7.61
60 x 30 x 2.0	2.7	60	30	2	2	3.44	15.95	5.32	2.15	5.3	3.53	1.24	12.27
60 x 30 x 3.0	3.96	60	30	3	3	5.04	22.51	7.5	2.11	7.28	4.85	1.2	16.92
60 x 40 x 2.0	3.01	60	40	2	2	3.84	19.32	6.44	2.24	10.23	5.11	1.63	20.24
60 x 40 x 3.0	4.43	60	40	3	3	5.64	27.39	9.13	2.2	14.31	7.16	1.59	28.39
80 x 30 x 2.0	3.33	80	30	2	2	4.24	32.89	8.22	2.79	6.87	4.58	1.27	18.00
80 x 30 x 3.0	4.9	80	30	3	3	6.24	46.96	11.74	2.74	9.48	6.32	1.23	24.94
80 x 40 x 2.0	3.64	80	40	2	2	4.64	38.97	9.74	2.9	13.12	6.56	1.68	30.29
80 x 40 x 3.0	5.37	80	40	3	3	6.84	55.85	13.96	2.86	18.43	9.21	1.64	42.72
80 x 40 x 4.0	7.03	80	40	4	4	8.96	71.13	17.78	2.82	23.01	11.5	1.6	53.47
80 x 60 x 2.0	4.27	80	60	2	2	5.44	51.14	12.79	3.07	32.78	10.93	2.45	60.20
80 x 60 x 3.0	6.31	80	60	3	3	8.04	73.65	18.41	3.03	46.9	15.63	2.42	86.25
80 x 60 x 4.0	8.29	80	60	4	4	10.56	94.26	23.56	2.99	59.64	19.88	2.38	109.78
100 x 20 x 2.0	3.64	100	20	2	2	4.64	48.7	9.74	3.24	3.39	3.39	0.85	10.73
100 x 20 x 3.0	5.37	100	20	3	3	6.84	69.77	13.95	3.19	4.52	4.52	0.81	14.31
100 x 40 x 2.0	4.27	100	40	2	2	5.44	67.91	13.58	3.53	16.01	8	1.72	40.79
100 x 40 x 3.0	6.31	100	40	3	3	8.04	98	19.6	3.49	22.55	11.27	1.67	57.68
100 x 40 x 4.0	8.29	100	40	4	4	10.56	125.68	25.14	3.45	28.21	14.11	1.63	72.39
100 x 50 x 2.0	4.58	100	50	2	2	5.84	77.52	15.5	3.64	26.3	10.52	2.12	60.62
100 x 50 x 3.0	6.78	100	50	3	3	8.64	112.12	22.42	3.6	37.44	14.98	2.08	86.60
100 x 50 x 4.0	8.92	100	50	4	4	11.36	144.13	28.83	3.56	47.37	18.95	2.04	109.87
100 x 60 x 2.0	4.9	100	60	2	2	6.24	87.12	17.42	3.74	39.51	13.17	2.52	82.84
100 x 60 x 3.0	7.25	100	60	3	3	9.24	126.24	25.25	3.7	56.65	18.88	2.48	119.10
100 x 60 x 4.0	9.55	100	60	4	4	12.16	162.57	32.51	3.66	72.2	24.07	2.44	152.11
120 x 40 x 2.0	4.9	120	40	2	2	6.24	107.73	17.96	4.16	18.9	9.45	1.74	51.55

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	A (cm ²)	Iy (cm ⁴)	Wy (cm ³)	iy (cm)	Iz (cm ⁴)	Wz (cm ³)	iz (cm)	JT (cm ⁴)
120 x 40 x 3.0	7.25	120	40	3	3	9.24	156.23	26.04	4.11	26.66	13.33	1.7	73.01
120 x 40 x 4.0	9.55	120	40	4	4	12.16	201.35	33.56	4.07	33.42	16.71	1.66	91.78
120 x 40 x 5.0	11.78	120	40	5	5	15	243.25	40.54	4.03	39.25	19.63	1.62	108.00
120 x 60 x 2.0	5.53	120	60	2	2	7.04	135.58	22.6	4.39	46.24	15.41	2.56	106.46
120 x 60 x 3.0	8.2	120	60	3	3	10.44	197.31	32.88	4.35	66.41	22.14	2.52	153.36
120 x 60 x 4.0	10.8	120	60	4	4	13.76	255.2	42.53	4.31	84.77	28.26	2.48	196.27
120 x 60 x 5.0	13.35	120	60	5	5	17	309.42	51.57	4.27	101.42	33.81	2.44	235.33
120 x 80 x 3.0	9.14	120	80	3	3	11.64	238.38	39.73	4.53	127.04	31.76	3.3	251.02
120 x 80 x 4.0	12.06	120	80	4	4	15.36	309.04	51.51	4.49	163.64	40.91	3.26	323.84
120 x 80 x 5.0	14.92	120	80	5	5	19	375.58	62.6	4.45	197.58	49.4	3.22	391.53
150 x 50 x 3.0	9.14	150	50	3	3	11.64	311.39	41.52	5.17	54.03	21.61	2.15	147.63
150 x 50 x 4.0	12.06	150	50	4	4	15.36	404.1	53.88	5.13	68.58	27.43	2.11	187.94
150 x 50 x 5.0	14.92	150	50	5	5	19	491.58	65.54	5.09	81.58	32.63	2.07	224.08
150 x 60 x 3.0	9.61	150	60	3	3	12.24	343.81	45.84	5.3	81.04	27.01	2.57	206.49
150 x 60 x 4.0	12.69	150	60	4	4	16.16	446.74	59.57	5.26	103.61	34.54	2.53	264.74
150 x 60 x 5.0	15.7	150	60	5	5	20	544.17	72.56	5.22	124.17	41.39	2.49	318.00
150 x 80 x 3.0	10.55	150	80	3	3	13.44	408.64	54.49	5.51	153.73	38.43	3.38	343.18
150 x 80 x 4.0	13.94	150	80	4	4	17.76	532.03	70.94	5.47	198.32	49.58	3.34	443.68
150 x 80 x 5.0	17.27	150	80	5	5	22	649.33	86.58	5.43	239.83	59.96	3.3	537.57
150 x 100 x 3.0	11.49	150	100	3	3	14.64	473.48	63.13	5.69	253.3	50.66	4.16	499.96
150 x 100 x 4.0	15.2	150	100	4	4	19.36	617.31	82.31	5.65	328.55	65.71	4.12	649.42
150 x 100 x 5.0	18.84	150	100	5	5	24	754.5	100.6	5.61	399.5	79.9	4.08	790.63
180 x 80 x 3.0	11.96	180	80	3	3	15.24	639.39	71.04	6.48	180.43	45.11	3.44	438.78
180 x 80 x 4.0	15.83	180	80	4	4	20.16	834.93	92.77	6.44	233.01	58.25	3.4	567.99
180 x 80 x 5.0	19.63	180	80	5	5	25	1.022.08	113.56	6.39	282.08	70.52	3.36	689.06
180 x 120 x 3.0	13.85	180	120	3	3	17.64	827.38	91.93	6.85	443.76	73.96	5.02	875.23
180 x 120 x 4.0	18.34	180	120	4	4	23.36	1.082.78	120.31	6.81	578.27	96.38	4.98	1141.95
180 x 120 x 5.0	22.77	180	120	5	5	29	1.328.42	147.6	6.77	706.42	117.74	4.94	1396.61

Profilo	g (Kg/m)	h (mm)	b (mm)	tw (mm)	tf (mm)	A (cm ²)	Iy (cm ⁴)	Wy (cm ³)	iy (cm)	Iz (cm ⁴)	Wz (cm ³)	iz (cm)	JT (cm ⁴)
200 x 100 x 3.0	13.85	200	100	3	3	17.64	947.25	94.72	7.33	323.89	64.78	4.28	745.21
200 x 100 x 4.0	18.34	200	100	4	4	23.36	1.240.29	124.03	7.29	420.77	84.15	4.24	969.98
200 x 100 x 5.0	22.77	200	100	5	5	29	1.522.42	152.24	7.25	512.42	102.48	4.2	1183.36
200 x 150 x 3.0	16.2	200	150	3	3	20.64	1.238.34	123.83	7.75	797.66	106.35	6.22	1462.72
200 x 150 x 4.0	21.48	200	150	4	4	27.36	1.624.50	162.45	7.71	1.043.74	139.17	6.18	1915.50
200 x 150 x 5.0	26.69	200	150	5	5	34	1.997.83	199.78	7.67	1.280.33	170.71	6.14	2351.40
250 x 100 x 3.0	16.2	250	100	3	3	20.64	1.641.52	131.32	8.92	394.48	78.9	4.37	1001.22
250 x 100 x 4.0	21.48	250	100	4	4	27.36	2.155.26	172.42	8.88	512.98	102.6	4.33	1304.60
250 x 100 x 5.0	26.69	250	100	5	5	34	2.652.83	212.23	8.83	625.33	125.07	4.29	1593.31
250 x 150 x 3.0	18.56	250	150	3	3	23.64	2.099.11	167.93	9.42	959.75	127.97	6.37	2007.63
250 x 150 x 4.0	24.62	250	150	4	4	31.36	2.760.47	220.84	9.38	1.256.95	167.59	6.33	2632.57
250 x 150 x 5.0	30.62	250	150	5	5	39	3.403.25	272.26	9.34	1.543.25	205.77	6.29	3235.96
300 x 100 x 3.0	18.56	300	100	3	3	23.64	2.593.79	172.92	10.47	465.07	93.01	4.44	1263.90
300 x 100 x 4.0	24.62	300	100	4	4	31.36	3.412.23	227.48	10.43	605.19	121.04	4.39	1647.90
300 x 100 x 5.0	30.62	300	100	5	5	39	4.208.25	280.55	10.39	738.25	147.65	4.35	2013.85
300 x 150 x 3.0	20.91	300	150	3	3	26.64	3.255.38	217.03	11.05	1.121.84	149.58	6.49	2575.82
300 x 150 x 4.0	27.76	300	150	4	4	35.36	4.288.45	285.9	11.01	1.470.17	196.02	6.45	3380.31
300 x 150 x 5.0	34.54	300	150	5	5	44	5.296.17	353.08	10.97	1.806.17	240.82	6.41	4158.41

Scarica Ver.Steel: l'app per il progetto e verifica di sezioni in acciaio



Progetta e verifica **travi**, **colonne** e **aste pendolo** in acciaio con la massima semplicità. Moduli avanzati dedicati ai **collegamenti** bullonati e saldati.

Scarica Ver.Steel (clicca qui)