

TRAVI BEAMS

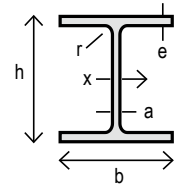
WILSIDER.COM

TABELLA RIEPILOGATIVA MASSE LINEICHE

SUMMARY TABLE OF MASS PER UNIT LENGTH

Profilo Profile	HEAA	HEA	HEB	HEM	IPE	IPN	UNP	UPE
	kg/m							
80					6	5,94	8,65	7,9
100	12,2	16,7	20,4	41,8	8,1	8,34	10,6	9,8
120	14,6	19,9	26,7	52,1	10,4	11,1	13,3	12,1
140	18,1	24,7	33,7	63,2	12,9	14,3	16	14,5
160	23,8	30,4	42,6	76,2	15,8	17,9	18,9	17,0
180	28,7	35,5	51,2	88,9	18,8	21,9	22	19,7
200	34,6	42,3	61,3	103	22,4	26,2	25,3	22,8
220	40,4	50,5	71,5		26,2	31,1	29,4	26,6
240	47,4	60,3	83,2	157	30,7	36,2	33,2	30,2
260	54,1	68,2	93	172		41,9	37,9	
270					36,1			35,2
280	61,2	76,4	103	189		47,9	41,9	
300	69,8	88,3	117	238	42,2	54,2	46,1	44,4
320	74,2	97,6	127	245		61	59,5	
330					49,1			53,2
340	78,9	105	134	248		68		
350							60,6	
360	83,7	112	142	250	57,1	76,1		61,2
380						84	63,1	
400	92,4	125	155	256	66,3	92,4	71,8	72,2
450	99,7	140	171	263	77,6	115		
500	107	155	187	270	90,7	141		
550	120	166	199	278	106	166		
600	129	178	212	285	122			
650	138	190	225	293				
700	150	204	241	301				
800	172	224	262	317				
900	198	252	291	333				
1000	222	272	314	349				

HEAA

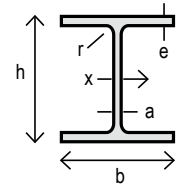


Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions					Sezione Section	Momento di Inerzia Second moment of area	Modulo di Resistenza Elastic section modulus
		h	b	a	e	r	A	J _x	W _x
		mm	mm	mm	mm	mm	cm ²	cm ⁴	cm ³
100	12,2	91,0	100,0	4,2	5,5	12,0	15,6	237,0	52,0
120	14,6	109,0	120,0	42,0	5,5	12,0	18,6	413,0	75,9
140	18,1	128,0	140,0	4,3	6,0	12,0	23,0	720,0	112,4
160	23,8	148,0	160,0	4,5	7,0	15,0	30,4	1.283,0	173,4
180	28,7	167,0	180,0	5,0	7,5	15,0	36,5	1.967,0	235,6
200	34,6	186,0	200,0	5,5	8,0	18,0	44,1	2.944,0	316,6
220	40,4	205,0	220,0	6,0	8,5	18,0	51,5	4.170,0	406,9
240	47,4	224,0	240,0	6,5	9,0	21,0	60,4	5.835,0	521,0
260	54,1	244,0	260,0	6,5	9,5	24,0	69,0	7.981,0	654,1
280	61,2	264,0	280,0	7,0	10,0	24,0	78,0	10.560,0	799,8
300	69,8	283,0	300,0	7,5	10,5	27,0	88,9	13.800,0	975,6
320	74,2	301,0	300,0	8,0	11,0	27,0	94,6	16.450,0	1.093,0
340	78,9	320,0	300,0	8,5	11,5	27,0	100,5	19.550,0	1.222,0
360	83,7	339,0	300,0	9,0	12,0	27,0	406,6	23.040,0	1.359,0
400	92,4	378,0	300,0	9,5	13,0	27,0	117,7	31.250,0	1.654,0
450	99,7	425,0	300,0	10,0	13,5	27,0	127,1	41.890,0	1.971,0
500	107,0	472,0	300,0	10,5	14,0	27,0	136,9	54.640,0	2.315,0
550	120,0	522,0	300,0	11,5	15,0	27,0	152,8	72.872,0	2.792,0
600	129,0	571,0	300,0	12,0	15,5	27,0	164,1	91.900,0	3.218,0
650	138,0	620,0	300,0	12,5	16,0	27,0	175,5	112.900,0	3.676,0
700	150,0	670,0	300,0	13,0	17,0	27,0	190,9	142.700,0	4.260,0
800	172,0	770,0	300,0	14,0	18,0	30,0	218,5	208.900,0	5.426,0
900	198,0	870,0	300,0	15,0	20,0	30,0	252,0	301.100,0	6.923,0
1000	222,0	970,0	300,0	16,0	21,0	30,0	282,2	406.500,0	8.380,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER σ = 1600 kg/cm²
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} - \text{peso della trave} \\ \text{beam weight}$$

HEA

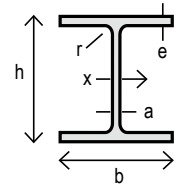


Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions					Sezione Section	Momento di Inerzia Second moment of area	Modulo di Resistenza Elastic section modulus
		h	b	a	e	r	A	J _x	W _x
		mm	mm	mm	mm	mm	cm ²	cm ⁴	cm ³
100	16,7	96,0	100,0	5,0	8,0	12,0	21,2	349,0	73,0
120	19,9	114,0	120,0	5,0	8,0	12,0	25,3	606,0	106,0
140	24,7	133,0	140,0	5,5	8,5	12,0	31,4	1.033,0	155,0
160	30,4	152,0	160,0	6,0	9,0	15,0	38,8	1.673,0	220,0
180	35,5	171,0	180,0	6,0	9,5	15,0	45,3	2.510,0	294,0
200	42,3	190,0	200,0	6,5	10,0	18,0	53,8	3.692,0	389,0
220	50,5	210,0	220,0	7,0	11,0	18,0	64,3	5.410,0	515,0
240	60,3	230,0	240,0	7,5	12,0	21,0	76,8	7.763,0	675,0
260	68,2	250,0	260,0	7,5	12,5	24,0	86,8	10.455,0	836,0
280	76,4	270,0	280,0	8,0	13,0	24,0	97,3	13.673,0	1.010,0
300	88,3	290,0	300,0	8,5	14,0	27,0	112,0	18.263,0	1.260,0
320	97,6	310,0	300,0	9,0	15,5	27,0	124,0	22.928,0	1.480,0
340	105,0	330,0	300,0	9,5	16,5	27,0	133,0	27.693,0	1.680,0
360	112,0	350,0	300,0	10,0	17,5	27,0	143,0	33.090,0	1.890,0
400	125,0	390,0	300,0	11,0	19,0	27,0	159,0	45.069,0	2.310,0
450	140,0	440,0	300,0	11,5	21,0	27,0	178,0	63.722,0	2.000,0
500	155,0	490,0	300,0	12,0	23,0	27,0	197,0	86.975,0	3.550,0
550	166,0	540,0	300,0	12,5	24,0	27,0	212,0	111.932,0	4.150,0
600	178,0	590,0	300,0	13,0	25,0	27,0	226,0	141.203,0	4.790,0
650	190,0	640,0	300,0	13,5	26,0	27,0	241,0	175.178,0	5.470,0
700	204,0	690,0	300,0	14,5	27,0	27,0	260,0	215.301,0	6.240,0
800	224,0	790,0	300,0	15,0	28,0	30,0	286,0	303.442,0	7.680,0
900	252,0	890,0	300,0	16,0	30,0	30,0	320,0	422.075,0	9.480,0
1000	272,0	990,0	300,0	16,5	31,0	30,0	347,0	553.846,0	11.190,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER σ = 1600 kg/cm²
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} \quad \text{— peso della trave} \quad \text{beam weight}$$

HEB



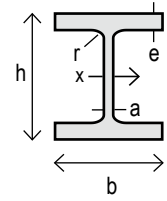
Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions					Sezione Section A cm ²	Momento di Inerzia Second moment of area J _x cm ⁴	Modulo di Resistenza Elastic section modulus W _x cm ³
		h	b	a	e	r			
		mm	mm	mm	mm	mm			
100	20,4	100,0	100,0	6,0	10,0	12,0	26,0	450,0	90,0
120	26,7	120,0	120,0	6,5	11,0	12,0	34,0	864,0	144,0
140	33,7	140,0	140,0	7,0	12,0	12,0	43,0	1.509,0	216,0
160	42,6	160,0	160,0	8,0	13,0	15,0	54,3	2.492,0	311,0
180	51,2	180,0	180,0	8,5	14,0	15,0	65,3	3.831,0	426,0
200	61,3	200,0	200,0	9,0	15,0	18,0	78,1	5.696,0	570,0
220	71,5	220,0	220,0	9,5	16,0	18,0	91,0	8.091,0	736,0
240	83,2	240,0	240,0	10,0	17,0	21,0	106,0	11.259,0	938,0
260	93,0	260,0	260,0	10,0	17,5	24,0	118,0	14.919,0	1.150,0
280	103,0	280,0	280,0	10,5	18,0	24,0	131,0	19.270,0	1.380,0
300	117,0	300,0	300,0	11,0	19,0	27,0	149,0	25.166,0	1.680,0
320	127,0	320,0	300,0	11,5	20,5	27,0	161,0	30.823,0	1.930,0
340	134,0	340,0	300,0	12,0	21,5	27,0	171,0	36.656,0	2.160,0
360	142,0	360,0	300,0	12,5	22,5	27,0	181,0	43.193,0	2.400,0
400	155,0	400,0	300,0	13,5	24,0	27,0	198,0	57.680,0	2.880,0
450	171,0	450,0	300,0	14,0	26,0	27,0	218,0	79.887,0	3.550,0
500	187,0	500,0	300,0	14,5	28,0	27,0	239,0	107.176,0	4.290,0
550	199,0	550,0	300,0	15,0	29,0	27,0	254,0	136.691,0	4.970,0
600	212,0	600,0	300,0	15,5	30,0	27,0	270,0	171.041,0	5.700,0
650	225,0	650,0	300,0	16,0	31,0	27,0	286,0	210.616,0	6.480,0
700	241,0	700,0	300,0	17,0	32,0	27,0	306,0	256.888,0	7.340,0
800	262,0	800,0	300,0	17,5	33,0	30,0	334,0	359.083,0	8.980,0
900	291,0	900,0	300,0	18,5	35,0	30,0	371,0	494.065,0	10.980,0
1000	314,0	1.000,0	300,0	19,0	36,0	30,0	400,0	644.748,0	12.890,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER σ = 1600 kg/cm²
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} - \text{peso della trave} \quad \text{beam weight}$$



HEM

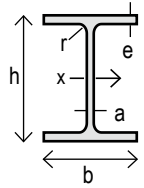


Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions					Sezione Section A	Momento di Inerzia Second moment of area J _x	Modulo di Resistenza Elastic section modulus W _x
		h	b	a	e	r			
		mm	mm	mm	mm	mm			
100	41,8	120,0	106,0	12,0	20,0	12,0	53,2	1.143,0	190,0
120	52,1	140,0	126,0	12,5	21,0	12,0	66,4	2.018,0	288,0
140	63,2	160,0	146,0	13,0	22,0	12,0	80,6	3.291,0	411,0
160	76,2	180,0	166,0	14,0	23,0	15,0	97,1	5.098,0	566,0
180	88,9	200,0	186,0	14,5	24,0	15,0	113,0	7.483,0	748,0
200	103,0	220,0	206,0	15,0	25,0	18,0	131,0	10.642,0	967,0
220	117,0	240,0	226,0	15,5	26,0	18,0	149,0	14.605,0	1.220,0
240	157,0	270,0	248,0	18,0	32,0	21,0	200,0	24.289,0	1.800,0
260	172,0	290,0	268,0	18,0	32,5	24,0	220,0	31.307,0	2.160,0
280	189,0	310,0	288,0	18,5	33,0	24,0	240,0	39.547,0	2.550,0
300	238,0	340,0	310,0	21,0	39,0	27,0	303,0	59.201,0	3.480,0
320	245,0	359,0	309,0	21,0	40,0	27,0	312,0	68.135,0	3.800,0
340	248,0	377,0	309,0	21,0	40,0	27,0	316,0	76.372,0	4.050,0
360	250,0	395,0	308,0	21,0	40,0	27,0	319,0	84.867,0	4.300,0
400	256,0	432,0	307,0	21,0	40,0	27,0	326,0	104.119,0	4.820,0
450	263,0	478,0	307,0	21,0	40,0	27,0	335,0	131.484,0	5.500,0
500	270,0	524,0	306,0	21,0	40,0	27,0	344,0	161.929,0	6.180,0
550	278,0	572,0	306,0	21,0	40,0	27,0	354,0	197.984,0	6.920,0
600	285,0	620,0	305,0	21,0	40,0	27,0	364,0	237.447,0	7.660,0
650	293,0	668,0	305,0	21,0	40,0	27,0	374,0	281.667,0	8.430,0
700	301,0	716,0	304,0	21,0	40,0	27,0	383,0	329.278,0	9.200,0
800	317,0	814,0	303,0	21,0	40,0	30,0	404,0	442.598,0	10.870,0
900	333,0	910,0	302,0	21,0	40,0	30,0	424,0	570.434,0	12.540,0
1000	349,0	1.008,0	302,0	21,0	40,0	30,0	444,0	722.299,0	14.330,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER σ = 1600 kg/cm²
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} - \text{peso della trave} \\ \text{beam weight}$$

IPE



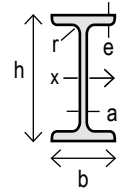
Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions					Sezione Section	Momento di Inerzia Second moment of area	Modulo di Resistenza Elastic section modulus
		h	b	a	e	r	A	J _x	W _x
		mm	mm	mm	mm	mm	cm ²	cm ⁴	cm ³
80	6,0	80,0	46,0	3,8	5,2	5,0	7,6	80,0	20,0
100	8,1	100,0	55,0	4,1	5,7	7,0	10,3	171,0	34,2
120	10,4	120,0	64,0	4,4	6,3	7,0	13,2	318,0	53,0
140	12,9	140,0	73,0	4,7	6,9	7,0	16,4	541,0	77,3
160	15,8	160,0	82,0	5,0	7,4	9,0	20,1	869,0	109,0
180	18,8	180,0	91,0	5,3	8,0	9,0	23,9	1.317,0	146,0
200	22,4	200,0	100,0	5,6	8,5	12,0	28,5	1.943,0	194,0
220	26,2	220,0	110,0	5,9	9,2	12,0	33,4	2.772,0	252,0
240	30,7	240,0	120,0	6,2	9,8	15,0	39,1	3.892,0	324,0
270	36,1	270,0	135,0	6,6	10,2	15,0	45,9	5.790,0	429,0
300	42,2	300,0	150,0	7,1	10,7	15,0	53,8	8.356,0	557,0
330	49,1	330,0	160,0	7,5	11,5	18,0	62,6	11.770,0	713,0
360	57,1	360,0	170,0	8,0	12,7	18,0	72,7	16.270,0	904,0
400	66,3	400,0	180,0	8,6	13,5	21,0	84,5	23.130,0	1.160,0
450	77,6	450,0	190,0	9,4	14,6	21,0	98,8	33.740,0	1.500,0
500	90,7	500,0	200,0	10,2	16,0	21,0	116,0	48.200,0	1.930,0
550	106,0	550,0	210,0	11,1	17,2	24,0	134,0	67.120,0	2.440,0
600	122,0	600,0	220,0	12,0	19,0	24,0	156,0	92.080,0	3.070,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER σ = 1600 kg/cm²
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} - \text{peso della trave}$$

beam weight

IPN

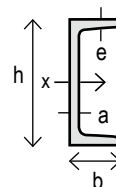


Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions					Sezione Section	Momento di Inerzia Second moment of area	Modulo di Resistenza Elastic section modulus
		h	b	a	e	r			
		mm	mm	mm	mm	mm			
80	5,9	80,0	42,0	3,9	5,9	3,9	7,6	78,0	19,4
100	8,3	100,0	50,0	4,5	6,8	4,5	10,6	170,0	34,1
120	11,1	120,0	58,0	5,1	7,7	5,1	14,2	327,0	54,5
140	14,3	140,0	66,0	5,7	8,6	5,7	18,2	572,0	81,8
160	17,9	160,0	74,0	6,3	9,5	6,3	22,8	934,0	117,0
180	21,9	180,0	82,0	6,9	10,4	6,9	27,9	1.444,0	161,0
200	26,2	200,0	90,0	7,5	11,3	7,5	33,4	2.138,0	214,0
220	31,0	220,0	98,0	8,1	12,2	8,1	39,5	3.050,0	278,0
240	36,2	240,0	106,0	8,7	13,1	8,7	46,1	4.239,0	353,0
260	41,9	260,0	113,0	9,4	14,1	9,4	53,1	5.735,0	441,0
280	47,9	280,0	119,0	10,1	15,2	10,1	61,0	7.575,0	541,0
300	54,2	300,0	125,0	10,8	16,2	10,8	69,0	9.785,0	652,0
320	61,0	320,0	131,0	11,5	17,3	11,5	77,7	12.490,0	781,0
340	68,0	340,0	137,0	12,2	18,3	12,2	86,7	15.670,0	922,0
360	76,1	360,0	143,0	13,0	19,5	13,0	97,0	19.580,0	1.087,0
380	84,0	380,0	149,0	13,7	20,5	13,7	107,0	23.980,0	1.262,0
400	92,5	400,0	155,0	14,4	21,6	14,4	118,0	29.210,0	1.461,0
425	104,0	425,0	163,0	15,3	23,0	15,3	132,0	36.930,0	1.738,0
450	115,0	450,0	170,0	16,2	24,3	16,2	147,0	45.790,0	2.035,0
475	128,0	475,0	178,0	17,1	25,6	17,1	163,0	56.410,0	2.375,0
500	141,0	500,0	185,0	18,0	27,0	18,0	180,0	68.650,0	2.746,0
550	166,0	550,0	200,0	19,0	30,0	19,0	212,0	98.950,0	3.598,0
600	199,0	600,0	215,0	21,6	32,4	21,6	254,0	138.800,0	4.626,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER σ = 1600 kg/cm²
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} - \text{peso della trave} \quad \text{beam weight}$$

UPN

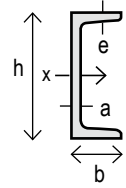


Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions				Sezione Section A cm ²	Modulo di Resistenza Elastic section modulus W _x cm ³
		h	b	a	e		
		mm	mm	mm	mm		
30	4,3	30,0	33,0	5,0	7,0	5,4	4,3
40	4,9	40,0	35,0	5,0	7,0	6,2	7,1
50	5,6	50,0	38,0	5,0	7,0	7,1	10,6
65	7,1	65,0	42,0	5,5	7,5	9,0	17,7
80	8,6	80,0	45,0	6,0	8,0	11,0	27,5
100	10,6	100,0	50,0	6,0	8,5	13,5	41,1
120	13,4	120,0	55,0	7,0	9,0	17,0	60,7
140	16,0	140,0	60,0	7,0	10,0	20,4	86,4
160	18,8	160,0	65,0	7,5	10,5	24,0	116,0
180	22,0	180,0	70,0	8,0	11,0	28,0	150,0
200	25,3	200,0	75,0	8,5	11,5	32,2	191,0
220	29,4	220,0	80,0	9,0	12,5	37,4	245,0
240	33,2	240,0	85,0	9,5	13,0	42,3	300,0
260	37,9	260,0	90,0	10,0	14,0	48,3	371,0
280	41,8	280,0	95,0	10,0	15,0	53,3	448,0
300	46,2	300,0	100,0	10,0	16,0	58,8	535,0
320	59,5	320,0	100,0	14,0	17,5	75,8	679,0
350	60,6	350,0	100,0	14,0	16,0	77,3	734,0
380	63,1	380,0	102,0	13,5	16,0	80,4	829,0
400	71,8	400,0	110,0	14,0	18,0	91,5	1.020,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER σ = 1600 kg/cm²
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

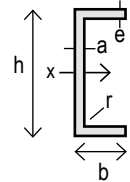
$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} - \text{peso della trave} \\ \text{beam weight}$$

UPS



Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions				Sezione Section
		h	b	a	e	A
		mm	mm	mm	mm	cm ²
25	1,3	25,0	12,0	4,0	4,0	1,7
30	1,7	30,0	15,0	4,0	4,5	2,2
35	2,2	35,0	17,0	4,0	5,0	2,8
40	2,9	40,0	20,0	5,0	5,5	3,7
50	3,9	50,0	25,0	5,0	6,0	4,9
60	5,1	60,0	30,0	6,0	6,0	6,5

UPE



Profilo Profile	Peso Weight kg/m	Dimensioni Dimensions					Sezione Section	Momento di Inerzia Second moment of area	Modulo di Resistenza Elastic section modulus
		h	b	a	e	r	A	J _x	W _x
		mm	mm	mm	mm	mm	cm ²	cm ⁴	cm ³
80	7,9	80,0	50,0	4,0	7,0	10,0	10,1	107,0	26,8
100	9,8	100,0	55,0	4,5	7,5	10,0	12,5	207,0	41,4
120	12,1	120,0	60,0	5,0	8,0	12,0	15,4	364,0	60,6
140	14,5	140,0	65,0	5,0	9,0	12,0	18,4	600,0	85,6
160	17,0	160,0	70,0	5,5	9,5	12,0	21,7	911,0	114,0
180	19,7	180,0	75,0	5,5	10,5	12,0	25,1	1.350,0	150,0
200	22,8	200,0	80,0	6,0	11,0	13,0	29,0	1.910,0	191,0
220	26,6	220,0	85,0	6,5	12,0	13,0	33,9	2.680,0	244,0
240	30,2	240,0	90,0	7,0	12,5	15,0	38,5	3.600,0	300,0
270	35,2	270,0	95,0	7,5	13,5	15,0	44,8	5.250,0	389,0
300	44,4	300,0	100,0	9,5	15,0	15,0	56,6	7.820,0	522,0
330	53,2	330,0	105,0	11,0	16,0	18,0	67,8	11.010,0	667,0
360	61,2	360,0	110,0	12,0	17,0	18,0	77,9	14.830,0	824,0
400	72,2	400,0	115,0	13,5	18,0	18,0	91,9	20.980,0	1.050,0

CARICHI NETTI UNIFORMEMENTE RIPARTITI PER $\sigma = 1600 \text{ kg/cm}^2$
 UNIFORMLY DISTRIBUTED NET LOADS PER σ

$$Q \text{ (kg)} = \frac{8 \times W_x \times 1600}{L \text{ (cm)}} \text{ — peso della trave} \\ \text{beam weight}$$