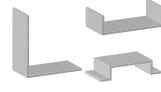




TECHNICAL DETAILS

Galvanized **Profiles**



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I. GENERAL PRESENTATION

General information

TeraSteel is a mature, financially solid company with international expertise on the building materials market, being one of the largest producers of thermal insulating panels, galvanized light structures and steel buildings in Central and Eastern Europe.

In its more than 25 years of experience in the construction materials market, TeraSteel has constantly invested in development, and at this moment has the capacity to offer complete solutions for industrial constructions at the highest quality standards. The 3 TeraSteel production units located in Bistrița-Năsăud County (Romania) and Leskovac (Serbia), are equipped with state-of-the-art technological lines, which allow obtaining quality products, both in terms of technical performance and in terms of aesthetically.

- Thermal insulating panels for walls and roofs with PUR polyurethane foam, fireproof PIR RF, XV, LEAD, and MW mineral wool;
- Galvanized profiles type C, Z, U and Σ ;
- Corrugated metal sheet TRS 153-840 and TRS 85-1120;
- Turnkey halls.

In accordance with the European standards the company's activity is carried out based on the Integrated Management System Quality - Environment - Health and Safety - the certifying authority is SGS Romania.

Cold-formed lightweight galvanized steel profiles are a category of construction materials that develop very fast due to the advantages they present.

Terasteel offers Z, C, U and Σ profile systems having the height of the sections from 100 mm up to 400 mm, the width from 1-4mm and the length from 2m up to 13.5 m (or even oversized lengths).

Cold-formed profiles can be used both as:

- a) Structural steel elements for civil, industrial and agricultural construction works;
- b) Secondary elements of buildings resistance structures such as roof purlins or mullion-transom for walls;

The quality of the basic material is galvanized steel sheet in accordance with the SR EN 10143 and SR EN 10346:2015 standards, tolerance on shape and dimensions respects the requirements of the SR EN 10162 and SR EN 1090-2 standards.

The performance characteristics of the products are in accordance with the SR EN 1090-1+A1:2012; SR EN 1090-2+A1:2012 standards and the execution projects.

The profiles can be made with automatic pre-drill according to the project's requirements. Galvanized lightweight steel profiles are obtained through progressive cold forming of hot galvanized strips which go through several sets of rolls.



Particularities of the galvanized profile systems

The use of profiles made out of thin sheet means practically the use of less steel and the large variety that can be obtained (there can be made customized profiles even in small series without huge increases of costs) allows designers to reach optimized structural configurations at a lower cost.

Areas of use

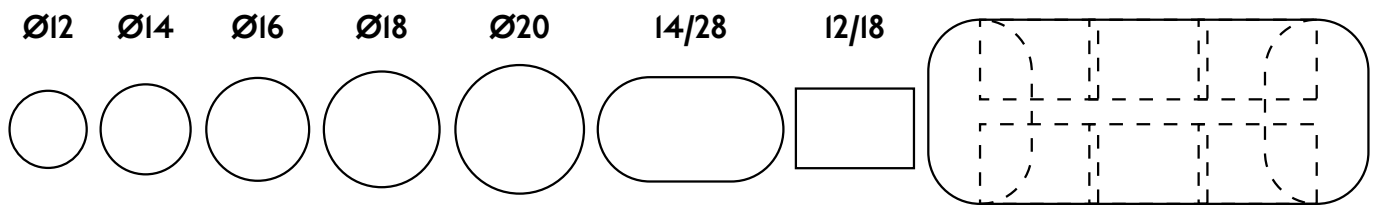
Buildings that lend themselves very well for this construction system:

- Storage halls;
- Halls in which take place production processes;
- Halls in which are carried out various activities (vehicle service station, car wash, small workshops, farms with applications in agriculture);

Are used in the field of construction as components for:

- Main structures (frames with column and beams);
- Secondary structures (to support the coverings and the enclosures);
- Beams for intermediate floors;
- Truss farms (mixed sections C and/or Σ);
- Multistorey, loft conversion.

Various combinations





II.1 Z PROFILE

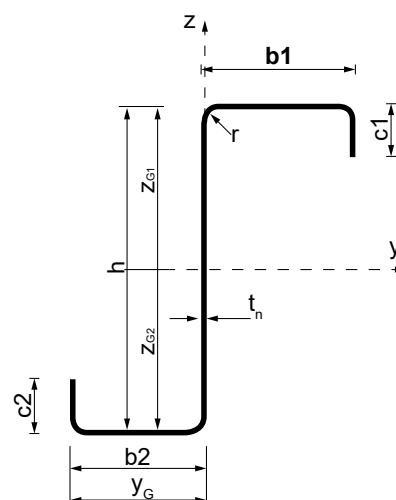
1.1 General features

They are mainly used as purlins.

Technical features

- height of the sections: 100-400mm;
- $b_1, b_2 = 38 \div 100\text{mm}$; $c_1, c_2 = 13 \div 30\text{mm}$; $(c_1/b_1) \max=0.4$; $(c_2/b_2) \max=0.4$; $(b_1, b_2/h) \max=0.5$; $r=4\text{ mm}$;
- bending angle = 90° ;
- widths: from 1 to 4 mm;
- cutting length: 2000 - 13500mm; for other lengths please contact the technical department of Terasteel.
- profiles can be made with automatic pre-drill;
- profiles can be made with equal or unequal sides;
- material quality: S350+Z275.

1.2 Section dimensions and geometrical characteristics



	TYPE	Section Dimensions							
		h (mm)	b ₁ (mm)	b ₂ (mm)	c (mm)	t _n (mm)	t (mm)	r _i (mm)	G (kg/m)
Z100	Z100-1.5	100	47	40	17.1	1.5	1.42	4.0	2.44
	Z100-2	100	47	40	18.3	2	1.91	4.0	3.25
Z120	Z120-1.5	120	47	40	17.1	1.5	1.42	4.0	2.67
	Z120-2	120	47	40	18.3	2.0	1.91	4.0	3.56
	Z120-2.5	120	47	40	19.5	2.5	2.40	4.0	4.45
Z150	Z150-1.5	150	47	40	17.1	1.5	1.42	4.0	3.03
	Z150-2	150	47	40	18.3	2.0	1.91	4.0	4.04
	Z150-2.5	150	47	40	19.5	2.5	2.40	4.0	5.04
Z180	Z180-1.5	180	60	53	20.6	1.5	1.42	4.0	3.77
	Z180-2	180	60	53	21.8	2.0	1.91	4.0	5.02
	Z180-2.5	180	60	53	23.0	2.5	2.40	4.0	6.28
Z200	Z200-1.5	200	72	65	23.6	1.5	1.42	4.0	4.36
	Z200-2	200	72	65	24.8	2.0	1.91	4.0	5.81
	Z200-2.5	200	72	65	26.0	2.5	2.40	4.0	7.26
Z250	Z250-1.5	250	72	65	23.6	1.5	1.42	4.0	4.95
	Z250-2	250	72	65	24.8	2.0	1.91	4.0	6.59
	Z250-2.5	250	72	65	26.0	2.5	2.40	4.0	8.24
	Z250-3	250	72	65	27.2	3.0	2.90	4.0	9.89
Z300	Z300-2	300	88	81	23.8	2.0	1.91	4.0	7.85
	Z300-2.5	300	88	81	25.0	2.5	2.40	4.0	9.81
	Z300-3	300	88	81	26.2	3.0	2.90	4.0	11.77
Z350	Z350-2	350	100	93	24.8	2.0	1.91	4.0	9.04
	Z350-2.5	350	100	93	26.0	2.5	2.40	4.0	11.30
	Z350-3	350	100	93	27.2	3.0	2.90	4.0	13.56
	Z350-3.5	350	100	93	28.5	3.5	3.40	4.0	15.83
	Z350-4	350	100	93	29.7	4.0	3.90	4.0	18.09
Z400	Z400-2	400	100	93	24.8	2.0	1.91	4.0	9.83
	Z400-2.5	400	100	93	26.0	2.5	2.40	4.0	12.28
	Z400-3	400	100	93	27.2	3.0	2.90	4.0	14.74
	Z400-3.5	400	100	93	28.5	3.5	3.40	4.0	17.20
	Z400-4	400	100	93	29.7	4.0	3.90	4.0	19.66

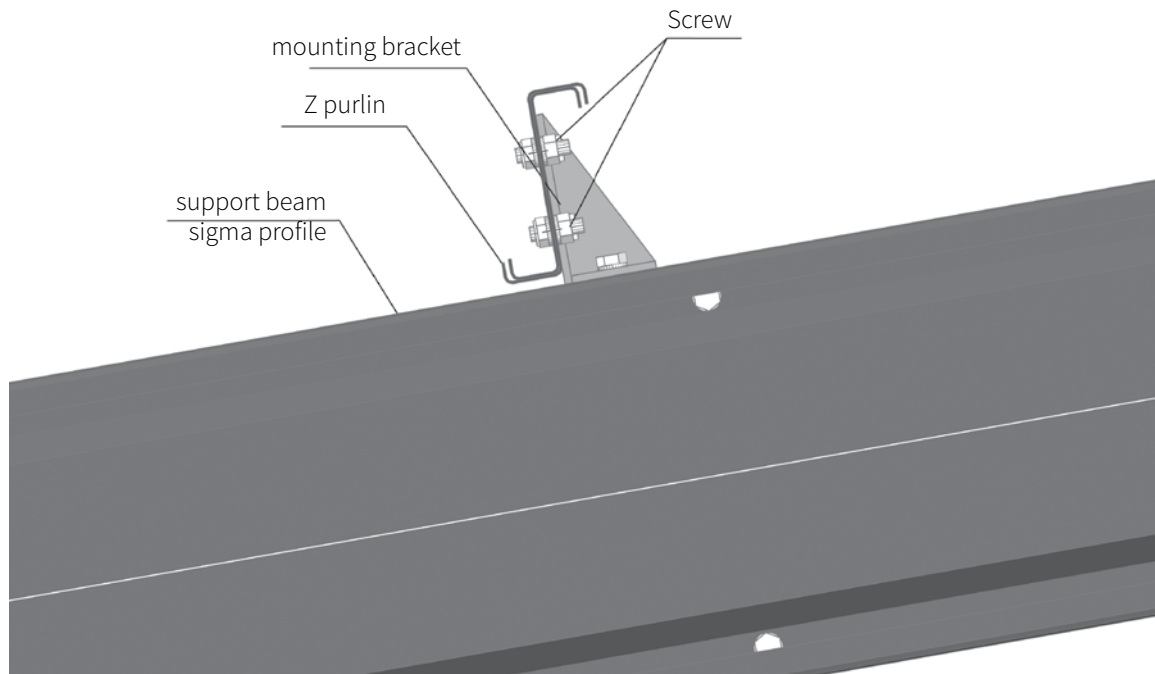
	TYPE	Geometrical characteristic of the gross section										
		A(mm ²)	Y _g (mm)	Z _{G1} (mm)	Z _{G2} (mm)	I _y (mm ⁴)	W _{y1} (mm ³)	W _{y2} (mm ³)	I _z (mm ⁴)	I _t (mm ⁴)	i _y (mm)	i _z (mm)
Z100	Z100-1.5	293.5	40.5	47.6	51.0	450,736.61	9,465.16	8,845.01	142,195.27	197.26	39.2	22.0
	Z100-2	394.7	40.0	47.4	50.7	596,284.67	12,584.16	11,759.59	191,248.57	479.99	38.9	22.0
Z120	Z120-1.5	321.9	40.3	57.5	61.1	693,190.96	12,064.08	11,341.31	142,289.29	216.35	46.4	21.0
	Z120-2	432.9	39.8	57.2	60.9	920,079.50	16,079.26	15,115.85	191,376.63	526.44	46.1	21.0
	Z120-2.5	543.9	39.4	57.0	60.6	1,140,352.68	20,011.84	18,812.70	240,257.24	1,044.35	45.8	21.0
Z150	Z150-1.5	364.5	40.1	72.3	76.3	1,179,328.70	16,319.72	15,453.23	142,402.84	244.98	56.9	19.8
	Z150-2	490.2	39.6	72.0	76.1	1,570,469.44	21,804.34	20,646.56	191,531.30	596.12	56.6	19.8
	Z150-2.5	615.9	39.2	71.8	75.8	1,953,056.27	27,206.24	25,761.52	240,454.04	1,182.59	56.3	19.8
Z180	Z180-1.5	466.5	53.2	87.4	91.2	2,276,862.08	26,054.80	24,967.63	330,980.18	313.55	69.9	26.6
	Z180-2	628.3	52.7	87.2	90.9	3,045,336.97	34,943.55	33,487.39	446,355.91	764.05	69.6	26.7
	Z180-2.5	790.6	52.2	86.9	90.7	3,804,381.69	43,772.33	41,950.65	562,012.31	1,517.88	69.4	26.7
Z200	Z200-1.5	537.5	65.2	97.5	101.1	3,307,434.72	33,938.48	32,706.02	579,901.94	361.27	78.4	32.8
	Z200-2	723.8	64.8	97.2	100.9	4,425,864.66	45,526.34	43,874.95	782,100.45	880.18	78.2	32.9
	Z200-2.5	910.6	64.3	97.0	100.6	5,531,902.47	57,043.38	54,976.59	984,982.16	1,748.28	77.9	32.9
Z250	Z250-1.5	608.5	65.0	122.3	126.3	5,588,723.17	45,711.90	44,242.47	580,075.55	408.99	95.8	30.9
	Z250-2	819.3	64.6	122.0	126.1	7,490,569.07	61,387.66	59,416.31	782,335.88	996.31	95.6	30.9
	Z250-2.5	1030.6	64.1	121.8	125.8	9,377,819.49	77,005.08	74,534.70	985,280.39	1,978.68	95.4	30.9
	Z250-3	1246.4	63.6	121.5	125.6	11,286,616.92	92,865.09	89,888.64	1,192,219.08	3,494.13	95.2	30.9
Z300	Z300-2	972.1	80.5	147.0	151.1	12,877,008.87	87,601.62	85,224.65	1,315,492.55	1,182.12	115.1	36.8
	Z300-2.5	1222.6	80.1	146.8	150.8	16,138,255.18	109,967.15	106,985.85	1,659,082.57	2,347.32	114.9	36.8
	Z300-3	1478.4	79.6	146.5	150.6	19,444,631.59	132,718.55	129,123.23	2,010,694.28	4,144.50	114.7	36.9
Z350	Z350-2	1117.3	92.5	172.0	176.1	20,052,154.64	116,607.88	113,850.07	1,895,935.95	1,358.64	134.0	41.2
	Z350-2.5	1405.0	92.0	171.7	175.9	25,144,471.97	146,425.66	142,965.23	2,391,408.10	2,697.52	133.8	41.3
	Z350-3	1698.8	91.5	171.5	175.6	30,313,993.80	176,782.55	172,607.52	2,898,857.18	4,762.36	133.6	41.3
	Z350-3.5	1994.4	91.0	171.2	175.4	35,487,018.19	207,245.27	202,357.41	3,420,482.33	7,685.24	133.4	41.4
	Z350-4	2288.5	90.5	171.0	175.1	40,591,617.33	237,397.78	231,800.66	3,927,248.50	11,602.80	133.2	41.4
Z400	Z400-2	1212.8	92.4	196.9	201.2	27,544,994.01	139,928.38	136,876.79	1,896,112.67	1,474.77	150.7	39.5
	Z400-2.5	1525.0	91.9	196.6	201.0	34,556,850.25	175,763.55	171,933.08	2,391,631.58	2,927.92	150.5	39.6
	Z400-3	1843.8	91.4	196.4	200.7	41,682,484.24	212,271.50	207,648.29	2,899,128.92	5,168.84	150.4	39.7
	Z400-3.5	2163.8	90.9	196.1	200.5	48,800,424.27	248,830.90	243,416.49	3,414,906.34	8,337.69	150.2	39.7
	Z400-4	2483.5	90.4	195.9	200.2	55,872,277.07	285,247.55	279,044.59	3,927,618.86	12,591.45	150.0	39.8

	TYPE	Geometrical characteristic of the effective cross section								
		Compressive stress				Bending about the y-y axis with the base b1 compressive stress				
		A_{ef} (mm ²)	y_{Gefc} (mm)	z_{Gefc1} (mm)	z_{Gefc2} (mm)	z_{Gefi1} (mm)	z_{Gefi2} (mm)	I_{yef} (mm ⁴)	W_{yef1} (mm ³)	W_{yef2} (mm ³)
Z100	Z100-1.5	227.4	41.1	47.8	50.8	48.3	50.3	441,644.68	9,140.64	8,786.61
	Z100-2	346.1	41.0	47.4	50.7	47.4	50.7	596,284.67	12,584.16	11,759.59
Z120	Z120-1.5	227.6	41.1	57.5	61.1	58.4	60.2	676,538.89	11,582.02	11,244.33
	Z120-2	350.8	40.9	57.3	60.8	57.3	60.8	917,821.81	16,012.64	15,102.86
	Z120-2.5	479.6	40.8	56.7	60.9	57.0	60.6	1,140,352.68	20,011.84	18,812.70
Z150	Z150-1.5	227.1	41.0	72.2	76.4	73.8	74.8	1,142,282.82	15,473.37	15,279.84
	Z150-2	353.7	40.8	72.0	76.1	72.4	75.7	1,559,425.20	21,552.43	20,590.54
	Z150-2.5	491.5	40.7	71.3	76.3	71.8	75.8	1,953,056.27	27,206.24	25,761.52
Z180	Z180-1.5	252.2	53.3	89.2	89.3	95.8	82.8	1,999,210.61	20,865.06	24,155.61
	Z180-2	412.0	53.7	87.2	90.8	88.8	89.3	2,959,837.94	33,337.51	33,142.66
	Z180-2.5	579.6	53.5	87.0	90.6	87.5	90.1	3,763,252.30	42,988.23	41,786.73
Z200	Z200-1.5	258.3	64.7	98.5	100.1	112.5	86.1	2,672,424.64	23,761.32	31,034.85
	Z200-2	442.8	65.3	98.5	99.6	102.0	96.1	4,125,240.51	40,448.15	42,925.80
	Z200-2.5	634.9	65.5	97.2	100.4	98.5	99.1	5,400,164.32	54,800.57	54,515.25
Z250	Z250-1.5	255.4	64.9	123.5	125.1	144.7	103.9	4,326,065.57	29,894.78	41,648.75
	Z250-2	439.2	65.2	123.3	124.8	132.2	115.9	6,714,974.41	50,802.46	57,931.73
	Z250-2.5	633.5	65.4	121.8	125.8	124.7	122.9	9,060,224.81	72,666.32	73,709.86
	Z250-3	843.7	65.2	121.6	125.5	122.6	124.5	11,127,714.78	90,741.25	89,401.69
Z300	Z300-2	426.2	80.6	148.5	149.6	170.2	127.9	10,334,232.76	60,723.60	80,796.02
	Z300-2.5	647.7	80.7	148.3	149.3	158.9	138.7	14,426,763.47	90,805.84	103,995.29
	Z300-3	883.9	80.9	146.8	150.3	151.2	145.9	18,539,798.15	122,626.23	127,062.81
Z350	Z350-2	419.7	92.9	173.9	174.2	208.2	139.9	14,767,181.70	70,927.00	105,564.73
	Z350-2.5	650.2	92.4	173.6	174.0	194.3	153.3	20,965,609.34	107,908.25	136,753.99
	Z350-3	914.1	92.5	173.0	174.1	183.9	163.2	27,450,485.90	149,278.27	168,189.17
	Z350-3.5	1183.5	92.6	171.6	175.0	176.7	169.9	33,815,806.03	191,395.35	199,010.62
	Z350-4	1464.6	92.4	171.3	174.8	174.1	172.0	39,405,131.00	226,332.22	229,103.67
Z400	Z400-2	417.8	92.9	198.9	199.2	242.2	155.9	19,578,051.88	80,839.03	125,577.33
	Z400-2.5	643.5	92.3	198.4	199.2	226.6	171.0	27,939,156.52	123,280.01	163,417.15
	Z400-3	908.5	92.4	198.0	199.1	215.0	182.1	36,685,661.50	170,615.70	201,480.18
	Z400-3.5	1178.7	92.6	196.4	200.2	206.9	189.7	45,278,252.40	218,867.23	238,652.55
	Z400-4	1463.7	92.4	196.1	200.0	200.5	195.6	53,831,815.71	268,423.41	275,281.53

	TYPE	Geometrical characteristic of the effective cross section					Resistance according EN 1993.1.1		
		Bending about the y-y axis with the base b2 compressive stress					Elongation	Compression	Bending
		z_{Gef1} (mm)	z_{Gef2} (mm)	$I_{y,ef}$ (mm ⁴)	$W_{y,ef1}$ (mm ³)	$W_{y,ef2}$ (mm ³)	$N_{t,Rd}$ (kN)	$N_{c,Rd}$ (kN)	$M_{y,Rd}$ (kNm)
Z100	Z100-1.5	51.1	47.5	448,888.72	8,785.88	9,452.69	102.72	79.59	3.08
	Z100-2	50.7	47.4	596,284.67	11,759.59	12,584.16	138.15	121.14	4.12
Z120	Z120-1.5	61.4	57.2	687,652.30	11,195.88	12,030.33	112.66	79.67	3.92
	Z120-2	60.9	57.2	920,079.50	15,115.85	16,079.26	151.52	122.78	5.29
	Z120-2.5	60.6	57.0	1,140,352.68	18,812.70	20,011.84	190.38	167.85	6.58
Z150	Z150-1.5	77.7	70.9	1,151,141.59	14,815.40	16,240.48	127.57	79.49	5.19
	Z150-2	76.1	72.0	1,570,469.44	20,646.56	21,804.34	171.58	123.79	7.21
	Z150-2.5	75.8	71.8	1,953,056.27	25,761.52	27,206.24	215.58	172.03	9.02
Z180	Z180-1.5	98.0	80.6	2,059,709.19	21,012.50	25,568.35	163.27	88.28	7.30
	Z180-2	91.8	86.3	2,999,391.28	32,679.26	34,752.48	219.91	144.19	11.44
	Z180-2.5	90.7	86.9	3,804,381.69	41,950.65	43,772.33	276.70	202.84	14.63
Z200	Z200-1.5	113.8	84.8	2,775,851.97	24,402.24	32,724.07	188.12	90.41	8.32
	Z200-2	104.3	93.8	4,217,548.50	40,423.50	44,984.34	253.33	154.97	14.15
	Z200-2.5	101.4	96.2	5,460,621.08	53,830.90	56,786.98	318.70	222.23	18.84
Z250	Z250-1.5	146.2	102.4	4,479,103.69	30,634.06	43,755.42	212.97	89.39	10.46
	Z250-2	134.9	113.2	6,846,928.22	50,771.91	60,467.41	286.76	153.71	17.77
	Z250-2.5	128.4	119.2	9,115,336.32	70,980.37	76,484.11	360.70	221.71	24.84
	Z250-3	125.9	121.2	11,237,677.01	89,266.79	92,711.44	436.25	295.28	31.24
Z300	Z300-2	172.1	125.9	10,590,000.65	61,516.57	84,086.83	340.24	149.18	21.25
	Z300-2.5	161.5	136.1	14,670,597.03	90,813.99	107,828.88	427.90	226.70	31.78
	Z300-3	154.8	142.3	18,669,713.98	120,620.68	131,181.59	517.45	309.36	42.22
Z350	Z350-2	209.9	138.2	15,134,463.64	72,105.55	109,513.83	391.05	146.89	24.82
	Z350-2.5	196.4	151.2	21,404,864.19	109,004.52	141,535.45	491.74	227.56	37.77
	Z350-3	186.7	160.4	27,834,811.04	149,096.69	173,522.55	594.59	319.94	52.18
	Z350-3.5	180.3	166.3	34,044,331.56	188,864.82	204,664.27	698.05	414.22	66.10
	Z350-4	177.2	168.9	39,779,300.66	224,488.31	235,519.66	800.98	512.60	78.57
Z400	Z400-2	243.9	154.2	20,067,411.58	82,288.69	130,118.59	424.47	146.21	28.29
	Z400-2.5	228.8	168.8	28,491,353.10	124,498.74	168,836.16	533.74	225.21	43.15
	Z400-3	217.9	179.2	37,182,559.24	170,601.56	207,549.52	645.34	317.97	59.71
	Z400-3.5	210.7	185.9	45,557,905.08	216,243.85	245,038.24	757.32	412.53	75.69
	Z400-4	204.4	191.7	54,146,854.77	264,888.30	282,476.71	869.23	512.30	92.71

1.3 Assembly method

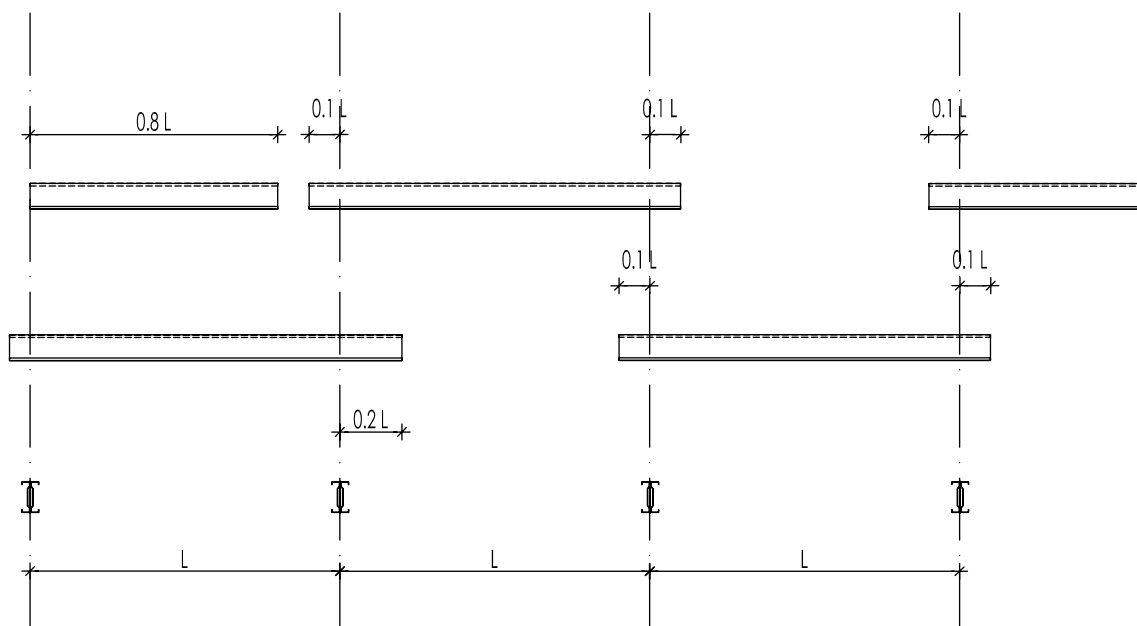
For purlins - is fixed vertically on the support with the superior “flange” towards the roof ridge.



Joining Z profiles

We recommend the followings:

- The length of overlaps for the current bearings is $0.2L$ (L is the beam opening) and $0.3L$ for the first intermediate bearings;
- If it is used a supplementary profile on the first opening, this has a length of $0.8L$.



1.4 Static loads

The Z profiles used as purlins are analyzed as simply supported beams or continuous beam with multiple openings, the joining on bearings is made through profiles overlap.

In the simplified calculation model used to determine the loadbearing capacity of the profiles were considered the following hypotheses:

- for continuous beams on multiple bearings the openings are equal;
- bearings are considered to be in the center of gravity of the profiles
- the load is evenly distributed throughout the length of the profile;
- the length of the overlaps for the current bearings is $0.2L$ and $0.3L$ for the first intermediate bearings;
- for various cases of static systems and load cases the upper bases are considered fixed thus resulting several cases subsequently explained;
- with the increase of the openings the lower bases are considered free, fixed in the middle of the opening with a supporting bar (3.50-5.50 m) or fixed in 2 points at thirds with supporting bars (6.00-6.50 m) thus resulting several cases explained below.

Static systems with:

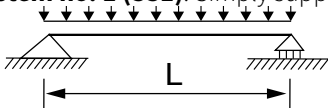


a. one supporting bar

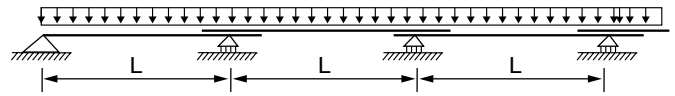
b. two supporting bars

Thus, were analyzed, two types of static systems each with 5 load cases and variations of base fixing that lead to an improved and more efficient load-bearing capacity.

Static system no. 1 (SS1): Simply supported beam;



Static system no. 5 (SS5): Continuous beam with three or multiple openings with overlap on bearings.



Depending on the type of load considered, gravity or suction, and the layout of corrugated sheets, in the table are presented 3 cases of sizing in the ultimate limit state (ULS):

Case 1: Corrugated sheet is placed at both bases of the profiles. It is determined the load-bearing capacity from gravity load.

Case 2: Corrugated sheet is placed at the upper base of the profiles and the load-bearing capacity is determined from gravity load.

Case 3: Corrugated sheet is placed at the upper base of the profiles and the load-bearing capacity is determined from suction load.

In order to do the sizing, in the serviceability limit state (SLS), 2 other cases that correspond to some limit values allowed for arrows were consider. Thus the cases were analyzed:

Case 4: Was determined the load limit for an arrow maximum allowed of $L/200$. Base fixing was considered only for the upper ones, this being the worse case.

Case 5: Was determined the load limit for an arrow maximum allowed of $L/300$. Base fixing was considered only for the upper ones, this being the worse case.

Load-bearing capacity* profile Z-SS1

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS1

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z120/2.5	1	6.06	4.44	3.39	2.67	2.13	1.78	1.44	1.25	1.05	0.93
	2	5.65	4.35	3.39	2.64	2.02	1.55	1.20	0.92	0.72	0.56
	3	2.59	1.67	1.12	0.79	0.58	0.44	0.35	0.29	0.24	0.20
	4	2.94	1.87	1.26	0.89	0.64	0.48	0.35	0.28	0.22	0.17
	5	1.94	1.23	0.83	0.58	0.41	0.30	0.23	0.17	0.13	0.10
Z150/1.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	4.68	3.48	2.66	2.09	1.69	1.39	1.16	0.98	0.84	0.73
	2	4.50	3.45	2.70	2.13	1.71	1.35	1.05	0.86	0.69	0.56
	3	1.30	0.82	0.55	0.40	0.30	0.23	0.18	0.15	0.13	0.11
	4	2.91	1.83	1.23	0.86	0.62	0.46	0.35	0.27	0.21	0.17
	5	1.93	1.21	0.81	0.56	0.40	0.30	0.22	0.17	0.13	0.10
Z150/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	6.36	4.67	3.56	2.80	2.27	1.86	1.56	1.32	1.13	0.98
	2	6.04	4.61	3.61	2.85	2.29	1.86	1.42	1.15	0.94	0.77
	3	1.89	1.21	0.83	0.60	0.45	0.35	0.29	0.24	0.20	0.17
	4	3.96	3.23	1.68	1.18	0.86	0.64	0.49	0.38	0.30	0.24
	5	2.62	1.65	1.11	0.77	0.56	0.41	0.31	0.24	0.19	0.14
Z150/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	7.97	5.85	4.46	3.51	2.84	2.33	1.95	1.65	1.42	1.23
	2	7.58	5.78	4.51	3.57	2.87	2.33	1.90	1.49	1.18	0.97
	3	2.93	1.90	1.30	0.94	0.71	0.55	0.45	0.37	0.31	0.26
	4	5.03	3.20	2.16	1.52	1.11	0.83	0.63	0.49	0.39	0.31
	5	3.33	2.11	1.42	1.00	0.72	0.54	0.41	0.31	0.24	0.19
Z180/1		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	3.46	2.52	1.93	1.52	1.22	1.01	0.84	0.71	0.61	0.53
	2	3.50	2.31	1.81	1.45	1.19	0.99	0.84	0.61	0.52	0.45
	3	1.33	0.87	0.60	0.42	0.31	0.24	0.19	0.15	0.13	0.11
	4	3.33	2.09	1.39	0.97	0.70	0.52	0.40	0.31	0.24	0.19
	5	2.21	1.38	0.92	0.64	0.46	0.34	0.25	0.19	0.15	0.12

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS1

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z180/1.5	1	7.18	5.27	4.02	3.17	2.56	2.11	1.76	1.50	1.29	1.11
	2	6.10	4.71	3.78	3.10	2.57	1.81	1.51	1.27	1.08	0.92
	3	2.30	1.47	1.01	0.71	0.52	0.40	0.32	0.25	0.21	0.18
	4	5.08	3.20	2.14	1.50	1.08	0.81	0.62	0.48	0.38	0.30
	5	3.37	2.12	1.41	0.98	0.71	0.53	0.40	0.31	0.24	0.19
Z180/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	9.55	7.03	5.37	4.23	3.42	2.81	2.36	2.00	1.72	1.49
	2	8.32	6.43	5.15	4.23	3.50	2.88	2.40	2.02	1.72	1.38
	3	3.29	2.11	1.45	1.03	0.76	0.59	0.46	0.38	0.31	0.27
	4	6.85	4.32	2.90	2.04	1.49	1.11	0.85	0.66	0.52	0.42
	5	4.55	2.86	1.92	1.34	0.97	0.72	0.55	0.42	0.33	0.26
Z180/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	12.00	8.81	6.73	5.30	4.29	3.53	2.95	2.51	2.15	1.87
	2	10.44	8.07	6.47	5.29	4.39	3.61	3.01	2.53	2.15	1.78
	3	4.32	2.80	1.93	1.37	1.00	0.78	0.62	0.51	0.42	0.36
	4	8.65	4.68	3.68	2.59	1.89	1.42	1.09	0.85	0.68	0.54
	5	5.74	3.62	2.43	1.71	1.24	0.93	0.71	0.55	0.43	0.34
Z200/1.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	8.38	6.15	4.70	3.70	2.99	2.46	2.06	1.75	1.50	1.30
	2	7.15	5.52	4.44	3.62	2.99	2.51	2.13	1.45	1.25	1.08
	3	3.22	2.12	1.47	1.05	0.77	0.59	0.46	0.37	0.30	0.25
	4	7.08	4.51	3.02	2.11	1.53	1.14	0.87	0.68	0.54	0.43
	5	4.71	3.00	1.99	1.39	1.00	0.75	0.57	0.44	0.34	0.27
Z200/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	11.45	9.07	6.94	5.47	4.43	3.64	3.05	2.59	2.23	1.93
	2	10.00	7.75	6.26	5.18	4.35	3.72	3.15	2.66	2.28	1.96
	3	4.67	3.05	2.10	1.50	1.11	0.85	0.66	0.53	0.44	0.37
	4	9.65	6.08	4.07	2.85	2.07	1.55	1.19	0.93	0.74	0.56
	5	6.42	4.03	2.69	1.88	1.36	1.02	0.77	0.60	0.47	0.37
Z200/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	15.50	11.40	8.70	6.86	5.55	4.57	3.83	3.25	2.79	2.42
	2	12.56	9.73	7.85	6.50	5.46	4.67	3.94	3.34	2.85	2.45
	3	6.17	4.03	2.75	1.95	1.45	1.11	0.87	0.72	0.59	0.50
	4	12.14	7.66	5.14	3.61	2.63	1.98	1.52	1.19	0.94	0.76
	5	8.07	5.08	3.40	2.38	1.73	1.29	0.99	0.77	0.60	0.48

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS1											
Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z250/1.5	1	10.53	7.67	5.89	4.64	3.74	3.10	2.59	2.19	1.89	1.64
	2	9.58	7.31	5.33	4.28	3.52	2.95	2.50	2.15	1.86	1.63
	3	4.34	2.87	1.99	1.43	1.05	0.80	0.63	0.50	0.41	0.34
	4	12.51	7.87	5.26	3.68	2.68	2.00	1.53	1.20	0.95	0.77
	5	8.32	5.23	3.49	2.44	1.77	1.32	1.01	0.78	0.62	0.49
Z250/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	16.71	12.26	9.37	7.39	5.97	4.93	4.13	3.51	3.01	2.62
	2	13.56	10.38	8.28	6.78	5.65	4.79	4.10	3.52	3.05	2.67
	3	6.31	4.14	2.87	2.05	1.51	1.15	0.90	0.72	0.59	0.49
	4	16.80	10.58	7.09	4.97	3.62	2.71	2.08	1.63	1.30	1.05
	5	11.18	7.02	4.70	3.29	2.39	1.78	1.36	1.06	0.84	0.67
Z250/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	21.69	15.93	12.17	9.60	7.76	6.40	5.36	4.56	3.92	3.40
	2	17.44	13.39	10.69	8.76	7.32	6.21	5.33	4.61	3.99	3.46
	3	8.35	5.47	3.78	2.70	1.99	1.52	1.19	0.95	0.78	0.65
	4	21.11	13.31	8.93	6.27	4.57	3.43	2.64	2.07	1.65	1.34
	5	14.05	8.84	5.92	4.15	3.02	2.26	1.73	1.35	1.07	0.86
Z250/3		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	26.17	19.22	14.68	11.58	9.36	7.72	6.47	5.50	4.73	4.11
	2	21.07	16.15	12.91	10.57	8.82	7.48	6.42	5.56	4.81	4.18
	3	14.27	6.96	4.81	3.44	2.55	1.95	1.53	1.23	1.01	0.84
	4	25.51	16.12	10.83	7.62	5.57	4.19	3.22	2.53	2.02	1.64
	5	16.98	10.71	7.18	5.05	3.68	2.76	2.12	1.66	1.32	1.06
Z300/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	21.93	15.99	12.31	9.70	7.82	6.47	5.42	4.59	3.96	3.44
	2	17.98	13.65	10.84	8.68	7.15	6.00	5.10	4.39	3.82	3.35
	3	10.83	5.08	5.55	2.43	1.76	1.31	1.00	0.79	0.63	0.51
	4	28.38	17.95	12.02	8.43	6.14	4.60	3.53	2.77	2.21	1.78
	5	18.98	11.94	7.98	5.60	4.06	3.04	2.33	1.82	1.44	1.16
Z300/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	30.08	22.12	16.93	13.36	10.80	8.91	7.47	6.35	5.46	4.75
	2	23.38	17.75	14.14	11.58	9.66	8.22	7.08	6.16	5.40	4.77
	3	15.05	6.67	4.53	3.17	2.30	1.72	1.32	1.03	0.83	0.68
	4	35.73	22.55	15.12	10.61	7.73	5.80	4.46	3.39	2.78	2.26
	5	23.85	15.00	10.03	7.03	5.12	3.83	2.93	2.30	1.83	1.47

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS1

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z300/3	1	37.47	27.53	21.04	16.60	13.42	11.07	9.29	7.90	6.79	5.90
	2	28.66	21.84	17.41	14.26	11.94	10.17	8.77	7.64	6.70	5.93
	3	15.76	10.52	7.39	5.34	3.97	3.04	2.37	1.89	1.54	1.28
	4	43.22	27.25	18.27	12.84	9.36	7.03	5.41	4.25	3.40	2.75
	5	28.79	18.11	12.11	8.52	6.20	4.65	3.57	2.80	2.22	1.80
Z350/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	26.85	18.84	14.48	11.43	9.21	7.62	6.39	5.42	4.67	4.06
	2	22.79	17.2	13.59	11.06	9.19	7.61	5.81	5.01	4.36	3.83
	3	12.4	8.47	6.06	4.46	3.36	2.58	2.03	1.63	1.33	1.1
	4	44.37	27.91	18.69	13.11	9.54	7.15	5.49	4.31	3.44	2.78
	5	29.55	18.57	12.43	8.71	6.33	4.74	3.63	2.84	2.26	1.82
Z350/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	39.34	28.67	22.06	17.4	14.03	11.61	9.73	8.26	7.12	6.19
	2	29.76	22.5	17.83	14.55	12.14	10.32	8.89	7.73	6.74	5.92
	3	17.07	11.57	8.24	6.03	4.51	3.47	2.72	2.16	1.76	1.45
	4	55.65	35.03	23.46	16.47	11.99	9	6.92	5.43	4.33	3.51
	5	37.07	23.33	15.6	10.94	7.95	5.96	4.57	3.58	2.85	2.3
Z350/3		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	49.02	36	27.54	21.72	17.57	14.5	12.16	10.35	8.9	7.74
	2	37.32	28.28	22.43	18.33	15.32	13.05	11.05	9.63	8.47	7.5
	3	21.39	14.49	10.31	7.53	5.64	4.34	3.4	2.71	2.2	1.82
	4	67.15	42.28	28.34	19.9	14.5	10.89	8.38	6.58	5.26	4.26
	5	44.7	28.13	18.85	13.22	9.62	7.21	5.54	4.34	3.46	2.8
Z350/3.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	58.85	43.26	33.05	26.08	21.1	17.42	14.61	12.41	10.69	9.29
	2	43.73	33.11	26.28	21.46	17.94	15.28	13.2	11.51	10.13	8.98
	3	26.24	17.74	12.6	9.19	6.87	5.28	4.14	3.3	2.69	2.22
	4	78.61	49.55	33.23	23.36	17.04	12.8	9.86	7.75	6.2	5.03
	5	52.39	32.98	22.1	15.52	11.3	8.48	6.52	5.11	4.08	3.3
Z350/4		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	67.5	49.55	37.89	29.9	24.2	19.95	16.74	14.24	12.25	10.65
	2	50.05	37.91	30.12	24.58	20.56	17.5	15.12	13.19	11.61	10.29
	3	31.43	21.19	15.03	10.96	8.18	6.29	4.94	3.94	3.21	2.65
	4	90.12	56.82	38.14	26.82	19.58	14.73	11.35	8.93	7.15	5.81
	5	60	37.8	25.36	17.82	12.99	9.76	7.51	5.89	4.71	3.81

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS1

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z400/2	1	28.63	21.09	16.22	12.80	10.32	8.54	7.16	6.07	5.23	4.54
	2	27.53	20.70	16.06	12.70	10.28	8.51	6.48	5.58	4.85	4.26
	3	14.52	9.95	7.15	5.27	3.97	3.07	2.41	1.93	1.57	1.30
	4	62.20	39.14	26.21	18.39	13.39	10.04	7.72	6.06	4.83	3.92
	5	41.44	25.31	17.44	12.23	8.89	6.66	5.11	4.01	3.19	2.58
Z400/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	43.78	31.91	24.55	19.37	15.62	12.93	10.84	9.21	7.94	6.90
	2	35.98	27.10	21.42	17.39	13.90	11.65	9.93	8.56	7.45	6.54
	3	20.03	13.64	9.73	7.12	5.34	4.11	3.22	2.57	2.08	1.71
	4	78.06	49.13	32.90	23.10	16.82	12.63	9.71	7.62	6.09	4.94
	5	52.00	31.76	21.89	15.36	11.17	8.37	6.43	5.04	4.02	3.25
Z400/3		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	56.25	41.00	31.55	24.89	20.07	16.61	13.93	11.83	10.20	8.87
	2	44.62	33.62	26.56	21.57	17.93	15.12	12.86	11.08	9.64	8.47
	3	25.17	17.09	12.18	8.91	6.68	5.14	4.02	3.21	2.60	2.14
	4	94.18	59.29	39.74	27.90	20.34	15.27	11.75	9.23	7.38	5.99
	5	62.74	38.33	26.42	18.55	13.51	10.13	7.79	6.11	4.87	3.94
Z400/3.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	70.45	51.70	39.56	31.21	25.25	20.85	17.49	14.88	12.80	11.13
	2	54.03	40.87	32.31	26.32	21.92	18.62	15.76	13.69	12.02	10.63
	3	30.87	20.91	14.88	10.86	8.13	6.25	4.89	3.90	3.17	2.61
	4	110.30	69.51	46.58	32.73	23.87	17.94	13.82	10.86	8.69	7.05
	5	73.48	46.26	31.00	21.77	15.85	11.90	9.15	7.18	5.73	4.65
Z400/4		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	82.48	60.53	46.32	36.54	29.56	24.41	20.48	17.42	14.99	13.03
	2	61.92	46.84	37.03	30.16	25.12	21.32	18.36	15.96	14.01	12.4
	3	36.96	24.97	17.73	12.93	9.66	7.43	5.82	4.63	3.77	3.11
	4	126.35	79.66	53.44	37.58	27.42	20.62	15.89	12.50	10.01	8.14
	5	84.17	53.04	35.55	24.98	18.21	13.68	10.53	8.27	6.61	5.36

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z120/(2+2)	1	7.40	5.60	4.20	3.55	2.85	2.35	1.98	1.68	1.44	1.25
	2	3.75	2.60	2.75	2.05	1.55	1.23	1.13	1.00	0.80	0.67
	3	4.00	2.55	2.40	1.70	1.25	0.97	0.97	0.77	0.62	0.51
	4	5.30	3.35	2.80	1.95	1.43	1.06	0.80	0.63	0.50	0.40
	5	3.55	2.20	1.85	1.30	0.94	0.70	0.53	0.41	0.32	0.25
Z120/(2+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	7.35	5.80	4.40	3.47	2.80	2.32	1.95	1.65	1.42	1.23
	2	2.90	1.88	2.60	1.91	1.45	1.12	1.07	0.85	0.70	0.57
	3	3.95	2.55	2.37	1.70	1.28	0.97	0.96	0.77	0.62	0.51
	4	5.25	3.32	2.92	1.93	1.40	1.05	0.80	0.62	0.47	0.39
	5	3.50	2.20	1.84	1.28	0.92	0.68	0.52	0.40	0.31	0.25
Z120/(2+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	6.20	4.40	3.35	2.70	2.18	1.81	1.50	1.28	1.10	0.95
	2	1.80	1.17	1.92	1.45	1.09	0.84	0.82	0.65	0.52	0.42
	3	3.30	2.20	1.99	1.48	1.11	0.86	0.82	0.66	0.54	0.44
	4	5.15	3.29	2.75	1.92	1.39	1.04	0.79	0.61	0.48	0.38
	5	3.45	2.17	1.82	1.25	0.91	0.68	0.51	0.39	0.31	0.24
Z120/(2,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	9.30	7.35	5.60	4.45	3.60	2.95	2.50	2.10	1.80	1.55
	2	5.30	3.70	3.70	2.75	2.15	1.70	1.50	1.35	1.10	0.90
	3	5.50	3.60	3.10	2.30	1.70	1.30	1.25	1.00	0.80	0.70
	4	6.75	4.30	3.50	2.50	1.80	1.30	1.00	0.80	0.63	0.50
	5	4.50	2.85	2.30	1.60	1.15	0.85	0.65	0.50	0.40	0.30
Z120/(2,5+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	9.20	7.30	5.60	4.40	3.55	2.95	2.45	2.10	1.80	1.55
	2	4.45	3.10	3.45	2.55	2.00	1.55	1.40	1.20	1.00	0.80
	3	5.45	3.55	3.05	2.25	1.70	1.25	1.25	1.00	0.80	0.65
	4	6.65	4.25	3.45	2.40	1.75	1.30	1.00	0.75	0.60	0.50
	5	4.45	2.80	2.30	1.60	1.15	0.85	0.65	0.50	0.40	0.30
Z120/(2,5+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	9.00	6.60	5.00	4.00	3.20	2.68	2.23	1.89	1.63	1.42
	2	3.20	2.10	3.15	2.30	1.75	1.38	1.33	1.08	0.87	0.72
	3	5.00	3.40	3.00	2.15	1.60	1.25	1.23	0.99	0.81	0.67
	4	6.60	4.10	3.40	2.35	1.73	1.28	0.98	0.76	0.60	0.48
	5	4.40	2.75	2.25	1.55	1.14	0.83	0.64	0.49	0.38	0.30

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z120/(2,5+1)	1	6.10	4.45	3.35	2.73	2.20	1.80	1.50	1.30	1.11	0.96
	2	2.03	1.32	2.00	1.50	1.15	0.80	0.83	0.66	0.55	0.43
	3	3.68	2.45	2.25	1.71	1.29	1.00	0.92	0.78	0.64	0.52
	4	6.60	4.80	3.45	2.40	1.73	1.23	0.98	0.76	0.60	0.47
	5	4.40	2.75	2.27	1.55	1.10	0.84	0.64	0.49	0.38	0.30
Z120/(1+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	3.20	2.32	1.72	1.38	1.11	0.90	0.76	0.65	0.55	0.48
	2	1.05	0.67	1.10	0.82	0.61	0.46	0.44	0.33	0.27	0.22
	3	1.42	0.92	0.95	0.68	0.50	0.38	0.41	0.33	0.27	0.22
	4	2.55	1.62	1.41	0.89	0.71	0.53	0.41	0.31	0.25	0.20
	5	1.72	1.07	0.93	0.65	0.47	0.35	0.26	0.20	0.15	0.12
Z120/(1,5+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	5.55	4.10	3.10	2.65	2.10	1.80	1.50	1.30	1.10	0.95
	2	2.00	1.35	2.00	1.45	1.10	0.85	0.80	0.65	0.55	0.40
	3	2.35	1.55	1.65	1.15	0.85	0.65	0.70	0.55	0.45	0.40
	4	3.95	2.50	2.10	1.50	1.10	0.80	0.65	0.50	0.40	0.30
	5	2.60	1.65	1.40	0.95	0.70	0.55	0.40	0.30	0.25	0.20
Z120/(1,5+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	5.50	4.10	3.10	2.45	1.90	1.70	1.45	1.20	1.00	0.90
	2	1.58	1.00	1.75	1.30	0.95	0.75	0.75	0.60	0.50	0.40
	3	2.33	1.51	1.60	1.15	0.85	0.65	0.70	0.55	0.40	0.40
	4	3.85	2.43	2.05	1.45	1.05	0.80	0.65	0.50	0.40	0.30
	5	2.55	1.61	1.40	0.95	0.70	0.55	0.40	0.30	0.25	0.20
Z150/(2+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	10.70	8.25	6.35	5.00	4.05	3.30	2.80	2.35	2.00	1.75
	2	4.55	3.05	3.85	2.80	2.10	1.60	1.55	1.25	1.00	0.80
	3	4.70	3.10	3.35	2.40	1.75	1.30	1.30	1.05	0.85	0.65
	4	9.20	5.80	4.80	3.35	2.45	1.80	1.45	1.10	0.85	0.70
	5	6.10	3.85	3.20	2.25	1.60	1.20	0.90	0.70	0.55	0.45
Z150/(2+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	10.50	8.15	6.05	4.90	3.95	3.25	2.70	2.30	2.00	1.75
	2	3.55	2.25	3.55	2.55	1.95	1.45	1.45	1.15	0.95	0.75
	3	4.65	3.00	3.30	2.35	1.75	1.30	1.30	1.00	0.85	0.65
	4	9.00	5.70	4.75	3.30	2.40	1.80	1.40	1.05	0.85	0.65
	5	6.00	3.80	3.15	2.20	1.55	1.20	0.90	0.70	0.55	0.40

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z150/(2+1)	1	8.10	5.75	4.35	3.55	2.90	2.40	1.95	1.65	1.45	1.25
	2	2.30	1.45	2.50	1.80	1.35	1.05	1.10	0.85	0.70	0.55
	3	4.60	3.00	2.65	1.90	1.40	1.05	1.10	0.85	0.70	0.55
	4	8.95	5.60	4.70	3.30	2.35	1.75	1.35	1.05	0.80	0.65
	5	5.95	3.75	3.10	2.15	1.55	1.15	0.90	0.65	0.50	0.40
Z150/(2,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	13.45	10.30	7.90	6.20	5.05	4.15	3.45	2.95	2.55	2.20
	2	6.40	4.40	4.95	3.65	2.80	2.15	2.00	1.60	1.35	1.10
	3	7.15	4.65	4.25	3.10	2.25	1.70	1.70	1.35	1.10	0.90
	4	11.55	7.35	6.00	4.20	3.05	2.25	1.75	1.35	1.05	0.85
	5	7.70	4.90	4.00	2.75	2.00	1.50	1.15	0.85	0.70	0.55
Z150/(2,5+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	13.50	10.20	7.75	6.15	4.95	4.05	3.40	2.90	2.50	2.15
	2	5.35	3.60	4.75	3.40	2.60	2.00	1.95	1.55	1.25	1.00
	3	7.05	4.60	4.20	3.05	2.25	1.70	1.65	1.30	1.05	0.85
	4	11.40	7.25	5.90	4.15	3.00	2.25	1.70	1.35	1.05	0.85
	5	7.60	4.80	3.90	2.75	1.95	1.45	1.10	0.85	0.65	0.55
Z150/(2,5+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	12.55	9.25	6.95	5.55	4.45	3.70	3.10	2.65	2.25	2.00
	2	3.90	2.55	4.15	3.00	2.25	1.75	1.75	1.40	1.15	0.90
	3	6.90	4.55	4.00	2.90	2.15	1.65	1.60	1.25	1.05	0.85
	4	11.30	7.20	5.90	4.10	2.95	2.20	1.75	1.35	1.05	0.85
	5	7.50	4.75	3.90	2.70	1.95	1.45	1.10	0.85	0.65	0.55
Z150/(2,5+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	8.10	5.85	4.40	3.55	2.90	2.35	2.00	1.70	1.45	1.25
	2	2.45	1.65	2.60	1.90	1.40	1.05	1.15	0.90	0.70	0.55
	3	5.05	3.35	2.90	2.15	1.50	1.25	1.25	0.95	0.80	0.65
	4	11.30	7.20	5.90	4.10	3.00	2.20	1.70	1.30	1.05	0.80
	5	7.50	4.75	3.90	2.70	1.95	1.45	1.10	0.85	0.65	0.50
Z150/(1+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	4.15	3.55	2.30	1.80	1.45	1.20	1.00	0.85	0.70	0.64
	2	1.35	0.85	1.45	1.05	0.75	0.55	0.55	0.45	0.35	0.29
	3	1.95	1.25	1.25	0.90	0.65	0.50	0.50	0.40	0.35	0.28
	4	4.45	2.80	2.40	1.65	1.20	0.90	0.70	0.55	0.40	0.35
	5	2.95	1.85	1.55	1.10	0.80	0.60	0.45	0.35	0.28	0.22

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z150/(1,5+1,5)	1	7.40	5.70	4.10	3.20	2.60	2.10	1.75	1.52	1.30	1.10
	2	2.45	1.60	2.55	1.85	1.40	1.05	1.05	0.85	0.68	0.54
	3	3.25	2.10	2.05	1.50	1.10	0.80	0.92	0.72	0.58	0.48
	4	6.80	4.25	3.55	2.50	1.80	1.35	1.05	0.82	0.65	0.52
	5	4.55	2.45	2.40	1.65	1.20	0.90	0.70	0.54	0.42	0.34
Z150/(1,5+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	7.70	5.50	4.10	3.30	2.65	2.20	1.85	1.56	1.34	1.17
	2	2.00	1.25	2.35	1.65	1.20	0.90	1.00	0.79	0.62	0.49
	3	3.20	2.05	2.10	1.45	1.10	0.83	0.90	0.70	0.56	0.45
	4	6.60	4.20	3.55	2.45	1.80	1.34	1.03	0.80	0.64	0.51
	5	4.45	2.75	2.35	1.60	1.15	0.88	0.68	0.52	0.41	0.33
Z180/(2+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	15.95	11.80	8.95	7.50	6.05	5.00	4.20	3.55	3.05	2.65
	2	6.65	4.35	6.50	4.85	3.75	2.85	2.70	2.20	1.80	1.50
	3	7.70	5.15	5.45	4.00	2.95	2.25	2.50	2.00	1.60	1.35
	4	16.00	10.10	8.80	6.20	4.50	3.35	2.60	2.05	1.60	1.30
	5	10.65	6.70	5.85	4.10	3.00	2.25	1.70	1.35	1.05	0.85
Z180/(2+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	15.85	11.60	8.85	7.40	6.00	4.95	4.15	3.55	3.05	2.65
	2	6.15	3.95	6.25	4.65	3.55	2.70	2.60	2.15	1.75	1.45
	3	7.60	5.05	5.40	3.95	2.95	2.25	2.45	1.95	1.60	1.30
	4	15.70	9.90	8.70	6.10	4.40	3.30	2.55	2.00	1.60	1.25
	5	10.45	6.60	5.75	4.05	2.95	2.20	1.70	1.30	1.05	0.85
Z180/(2+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	9.45	8.15	6.70	5.40	4.45	3.70	3.10	2.60	2.30	1.95
	2	4.15	2.65	4.05	3.00	2.30	1.80	1.85	1.50	1.20	1.00
	3	7.00	4.70	4.20	3.15	2.40	1.85	1.85	1.50	1.20	1.00
	4	15.55	9.80	8.60	6.05	4.40	3.25	2.55	2.00	1.60	1.25
	5	10.35	5.60	5.70	4.00	2.90	2.15	1.65	1.30	1.05	0.80
Z180/(2,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	19.95	15.55	11.90	9.40	7.60	6.25	5.25	4.50	3.85	3.35
	2	10.60	7.15	8.30	6.20	4.75	3.75	3.50	2.85	2.30	1.95
	3	11.10	7.15	7.70	5.60	4.25	3.25	3.15	2.50	2.05	1.70
	4	20.10	12.70	11.00	7.70	5.60	4.20	3.25	2.55	2.00	1.65
	5	13.40	7.25	7.35	5.10	3.70	2.80	2.15	1.65	1.35	1.05

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z180/(2,5+2)	1	19.85	15.45	11.80	9.35	7.55	6.15	5.20	4.45	3.80	3.30
	2	9.25	6.15	8.00	6.00	4.60	3.55	3.35	2.75	2.20	1.85
	3	10.75	7.05	7.65	5.55	4.20	3.20	3.10	2.50	2.05	1.65
	4	19.80	12.50	10.90	7.60	5.55	4.15	3.20	2.50	2.00	1.60
	5	13.20	8.35	7.20	5.05	3.65	2.75	2.10	1.65	1.30	1.05
Z180/(2,5+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	19.35	14.20	10.90	8.55	6.95	5.70	4.80	4.05	3.50	3.05
	2	7.10	4.50	7.45	5.50	4.15	3.20	3.20	2.55	2.05	1.70
	3	10.55	6.80	7.30	5.40	4.05	3.10	3.10	2.45	2.00	1.60
	4	19.60	12.40	10.80	7.55	5.50	4.10	3.20	2.50	1.95	1.60
	5	13.05	8.25	7.15	5.00	3.65	2.70	2.10	1.60	1.30	1.05
Z180/(2,5+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	9.45	8.15	6.70	5.45	4.45	3.70	3.10	2.60	2.25	1.95
	2	4.45	2.90	4.20	3.15	2.35	1.85	1.90	1.55	1.25	1.05
	3	7.35	5.05	4.50	3.40	2.60	2.00	2.00	1.60	1.30	1.10
	4	19.60	12.40	10.80	7.55	5.50	4.10	3.20	2.45	1.95	1.60
	5	13.05	8.25	7.15	5.00	3.65	2.70	2.10	1.60	1.30	1.05
Z180/(1+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	6.20	4.55	3.45	2.75	2.20	1.80	1.50	1.30	1.15	0.95
	2	2.45	1.60	2.25	1.70	1.30	1.00	1.00	0.80	0.65	0.55
	3	3.05	2.05	2.05	1.50	1.15	0.90	0.90	0.75	0.60	0.50
	4	7.90	4.95	4.40	3.05	2.25	1.70	1.30	1.00	0.80	0.65
	5	5.25	3.30	2.90	2.05	1.50	1.10	0.85	0.65	0.55	0.45
Z180/(1,5+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	12.10	8.90	6.80	5.45	4.40	3.65	3.05	2.65	2.25	1.95
	2	4.40	2.85	4.20	3.15	2.40	1.85	1.85	1.50	1.20	0.95
	3	5.35	3.60	3.70	2.75	2.05	1.55	1.65	1.35	1.10	0.90
	4	11.90	7.50	6.60	4.65	3.35	2.50	1.95	1.55	1.20	0.95
	5	7.90	5.00	4.40	3.10	2.25	1.70	1.30	1.00	0.80	0.65
Z180/(1,5+1)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	9.50	8.20	6.75	5.35	4.30	3.55	2.75	2.55	2.00	1.90
	2	3.90	2.45	3.90	2.90	2.20	1.65	1.75	1.40	1.15	0.90
	3	5.30	3.55	3.65	2.70	2.00	1.55	1.60	1.30	1.05	0.85
	4	11.65	7.35	6.50	4.55	3.30	2.45	1.90	1.50	1.15	0.95
	5	7.75	4.85	4.30	3.00	2.20	1.60	1.25	0.95	0.80	0.65

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5											
Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z200/(2+2)	1	20.38	15.08	11.42	9.70	7.84	6.48	5.44	4.63	3.98	3.46
	2	9.32	6.19	8.52	6.44	4.95	3.92	3.74	3.06	2.53	2.11
	3	10.29	7.00	7.52	5.60	4.21	3.31	3.41	2.76	2.29	1.90
	4	22.50	14.19	12.83	8.98	6.54	4.90	3.79	2.97	2.37	1.91
	5	15.00	9.43	8.53	5.97	4.34	3.25	2.51	1.96	1.56	1.26
Z200/(2+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	20.17	14.98	11.30	9.62	7.77	6.42	5.38	4.58	3.94	3.43
	2	8.62	5.61	8.27	6.22	4.75	3.74	3.65	2.97	2.45	2.04
	3	10.15	6.90	7.46	5.51	4.18	3.28	3.38	2.74	2.27	1.89
	4	22.13	13.96	12.64	8.85	6.43	4.82	3.73	2.92	2.32	1.88
	5	14.74	9.28	8.40	5.88	4.27	3.19	2.47	1.93	1.53	1.23
Z200/(2,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	25.50	19.00	14.85	12.15	9.85	8.10	6.80	5.80	5.00	4.35
	2	12.70	8.50	11.45	8.75	6.70	5.25	4.85	4.00	3.30	2.75
	3	13.65	9.30	11.00	8.10	6.15	4.85	4.55	3.70	3.05	2.55
	4	28.26	17.85	16.00	11.20	8.15	6.10	4.70	3.70	2.95	2.35
	5	18.82	11.85	10.65	7.45	5.40	4.05	3.10	2.45	1.95	1.55
Z200/(2,5+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	25.30	18.75	14.60	12.05	9.75	8.05	6.75	5.75	4.95	4.30
	2	12.25	8.10	11.20	8.50	6.60	5.15	4.75	3.95	3.20	2.65
	3	13.50	9.20	10.90	8.00	6.20	4.80	4.50	3.70	3.05	2.50
	4	27.90	17.60	15.80	11.10	8.05	6.05	4.65	3.65	2.90	2.35
	5	18.55	11.70	10.50	7.35	5.35	4.00	3.10	2.40	1.90	1.55
Z200/(2,5+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	22.10	18.30	14.00	11.05	8.90	7.35	6.20	5.25	4.50	3.95
	2	10.35	6.65	10.20	7.70	5.85	4.55	4.45	3.60	2.95	2.45
	3	13.40	8.50	10.35	7.75	5.90	4.55	4.30	3.45	2.80	2.30
	4	27.65	16.55	15.65	11.00	8.00	6.00	4.60	3.60	2.85	2.30
	5	18.40	11.00	10.40	7.30	5.30	3.95	3.05	2.40	1.90	1.50
Z200/(1,5+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	14.85	10.90	8.35	6.60	5.30	4.40	3.70	3.15	2.70	2.35
	2	6.25	4.10	5.65	4.30	3.30	2.60	2.40	1.95	1.60	1.30
	3	7.05	4.80	5.00	3.75	2.90	2.25	2.30	1.90	1.55	1.30
	4	16.85	10.60	9.60	6.75	4.90	3.65	2.85	2.20	1.90	1.40
	5	11.20	7.05	6.40	4.45	3.25	2.40	1.85	1.45	1.25	0.95

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z250/(3+3)	1	43.95	33.88	25.90	20.47	16.55	13.65	11.48	9.77	8.40	7.30
	2	21.55	14.37	19.83	14.83	11.37	9.05	8.30	6.81	5.61	4.71
	3	23.58	16.09	18.72	13.78	10.43	7.93	7.70	6.25	5.15	4.27
	4	59.19	37.54	32.82	23.05	16.78	12.53	9.70	7.61	6.08	4.92
	5	39.42	25.04	21.87	15.36	11.20	8.32	6.44	5.04	4.02	3.24
Z250/(3+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	43.72	33.63	25.75	20.35	16.45	13.57	10.89	9.70	8.34	7.25
	2	20.88	13.87	19.38	14.48	11.07	8.77	8.01	6.72	5.48	4.63
	3	23.37	15.95	18.60	13.69	10.38	7.88	7.53	6.22	5.12	4.24
	4	58.35	37.13	32.50	22.81	16.61	12.40	9.38	7.53	6.00	4.86
	5	38.88	24.75	21.65	15.21	11.08	8.24	6.22	4.99	3.97	3.21
Z250/(3+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	40.15	32.24	24.55	19.35	15.65	12.92	10.85	9.23	7.94	6.90
	2	19.04	12.30	18.22	13.63	10.43	8.12	7.98	6.55	5.35	4.48
	3	23.08	15.79	17.99	13.32	10.13	7.84	7.62	6.20	5.09	4.22
	4	57.60	36.82	32.19	22.65	16.52	12.30	9.52	7.47	5.95	4.83
	5	38.36	24.54	21.45	15.10	10.90	8.17	6.31	4.94	3.93	3.18
Z250/(3+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	22.15	19.15	16.72	14.83	13.10	10.87	9.18	7.85	6.79	5.90
	2	14.12	9.15	13.35	10.08	7.75	6.04	6.17	5.01	4.15	3.46
	3	22.16	15.17	13.92	10.49	8.04	6.25	6.12	4.99	4.11	3.41
	4	58.00	36.75	32.18	22.60	16.37	12.27	9.49	7.45	5.90	4.80
	5	38.65	24.50	21.45	15.07	10.87	8.14	6.29	4.93	3.92	3.16
Z250/(2+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	27.08	20.55	15.82	12.63	10.25	8.50	7.16	6.10	5.25	4.58
	2	12.07	7.95	11.03	8.31	6.45	5.00	4.89	3.90	3.22	2.68
	3	13.78	9.47	9.80	7.30	5.57	4.32	4.47	3.64	2.99	2.50
	4	39.20	24.80	21.86	15.35	11.15	8.35	6.47	5.08	4.05	3.28
	5	26.10	16.54	14.55	10.23	7.40	5.55	4.30	3.37	2.68	2.17
Z250/(2+1,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	22.14	19.10	16.24	12.95	10.50	8.65	7.28	6.18	5.33	4.62
	2	11.52	7.41	10.95	8.24	5.85	4.93	4.73	3.84	3.19	2.62
	3	13.60	9.31	9.70	7.24	5.66	4.34	4.41	3.61	2.97	2.47
	4	38.47	24.40	21.53	15.12	11.58	8.22	6.36	4.99	4.00	3.22
	5	25.62	16.28	14.35	10.08	7.69	5.45	4.22	3.30	2.64	2.13

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z250/(2,5+2,5)	1	36.57	27.50	21.26	17.00	13.74	11.35	9.53	8.10	6.98	6.06
	2	16.39	10.82	15.30	11.53	8.85	6.95	6.72	5.45	4.57	3.78
	3	18.42	12.58	13.25	9.85	7.47	5.85	6.00	4.89	4.00	3.33
	4	49.10	31.11	27.32	19.18	13.92	10.43	8.08	6.35	5.06	4.10
	5	32.70	20.74	15.46	12.79	9.25	6.93	5.35	4.20	3.35	2.71
Z250/(2,5+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	36.28	27.52	21.19	16.87	13.65	11.25	9.45	8.03	6.92	6.02
	2	15.94	10.40	15.35	11.55	8.77	6.91	6.60	5.34	4.46	3.68
	3	18.18	12.44	13.24	9.79	7.42	5.80	5.96	4.85	3.97	3.30
	4	48.28	30.70	27.00	18.95	13.74	10.30	7.97	6.26	5.00	4.04
Z250/(2,5+1,5)	5	32.15	20.47	17.97	12.63	9.13	6.84	5.29	4.14	3.30	2.67
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	22.18	19.24	16.75	14.86	12.55	10.38	8.70	7.40	6.37	5.54
	2	13.12	8.91	13.13	9.88	7.53	5.85	6.00	4.87	3.99	3.31
	3	17.95	12.60	13.10	9.73	7.40	5.78	5.80	4.68	3.83	3.16
Z250/(1,5+1,5)	4	47.54	31.24	26.78	18.80	13.63	10.22	7.90	6.20	4.95	4.00
	5	31.67	20.84	17.85	12.54	9.05	6.78	5.24	4.10	3.27	2.64
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	14.96	12.86	10.40	8.22	6.66	5.49	4.61	3.92	3.38	2.93
	2	8.23	5.39	7.30	5.52	4.28	3.35	3.20	2.60	2.15	1.81
Z300/(3+3)	3	9.40	6.48	6.62	4.98	3.75	2.96	2.96	2.40	1.99	1.66
	4	29.24	18.49	16.34	11.99	8.32	6.24	4.84	3.80	3.03	2.45
	5	19.48	12.33	10.90	6.80	5.53	4.15	3.22	2.52	2.00	1.62
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	62.80	48.50	37.10	29.30	23.75	19.60	16.45	14.00	12.05	10.50
Z300/(3+2,5)	2	31.00	20.95	28.40	21.60	16.75	13.25	12.50	10.25	8.64	7.22
	3	33.30	23.00	24.80	18.65	14.40	11.25	11.45	9.40	7.75	6.53
	4	100.60	63.35	56.40	39.60	28.85	21.65	16.75	13.20	10.55	8.55
	5	67.00	42.20	37.55	26.35	19.20	14.40	11.15	8.75	6.97	5.65
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z300/(3+2,5)	1	62.50	48.20	36.90	29.15	23.55	19.45	16.35	13.90	11.98	10.42
	2	30.50	20.45	28.65	21.75	16.85	13.30	12.30	10.10	8.50	7.12
	3	33.00	22.80	24.65	18.55	14.30	11.20	11.40	9.30	7.75	6.51
	4	99.70	62.70	55.80	39.15	28.55	21.40	16.60	13.05	10.40	8.45
	5	66.40	41.75	37.15	26.10	19.00	14.25	11.05	8.65	6.90	5.60

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z300/(3+2)	1	40.40	34.75	30.40	27.00	22.50	18.55	15.60	13.25	11.43	9.95
	2	29.65	19.60	28.40	21.35	16.50	12.95	12.10	9.95	8.33	6.95
	3	32.70	22.65	24.55	18.45	14.25	11.15	11.35	9.25	7.74	6.45
	4	98.80	62.15	55.35	38.85	28.30	21.25	16.45	12.95	10.32	8.35
	5	65.80	41.40	36.85	25.85	18.85	14.10	10.95	8.55	6.84	5.55
Z300/(2+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	27.20	23.35	20.45	17.05	13.85	11.45	9.60	8.20	7.05	6.13
	2	17.95	12.15	15.85	12.05	9.40	7.45	6.95	5.75	4.80	4.05
	3	19.45	13.55	14.25	10.75	8.30	6.55	6.45	5.35	4.40	3.71
	4	66.80	41.95	37.50	26.30	19.15	14.40	11.15	8.75	7.00	5.30
	5	44.50	27.95	24.95	17.50	12.75	9.55	7.40	5.80	4.65	3.50
Z300/(2,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	42.95	36.90	29.00	23.10	18.80	15.58	13.15	11.20	9.70	8.40
	2	24.05	16.20	21.65	16.45	12.75	10.15	9.65	7.95	6.65	5.60
	3	26.05	18.05	19.20	14.45	11.15	8.80	8.80	7.30	6.05	5.10
	4	83.65	52.55	46.90	32.90	24.00	18.00	13.95	10.95	8.75	7.10
	5	55.75	35.00	31.20	21.90	15.95	11.95	9.25	7.27	5.80	4.70
Z300/(2,5+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	40.65	34.90	29.60	23.45	18.95	15.65	13.15	11.20	9.65	8.38
	2	23.45	15.60	21.35	16.25	12.60	10.00	9.60	7.90	6.60	5.55
	3	25.80	17.90	19.05	14.40	11.05	8.75	8.75	7.20	6.00	5.05
	4	82.60	51.95	46.30	32.50	23.70	17.75	13.75	10.80	8.65	7.00
	5	55.00	34.60	30.85	21.65	15.75	11.80	9.15	7.18	5.73	4.63
Z350/(4+4)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	112.15	87.35	66.70	52.75	42.65	35.25	29.60	25.20	21.70	18.90
	2	62.50	43.75	54.30	43.10	33.60	27.15	24.00	19.90	16.65	13.95
	3	57.95	40.50	51.85	39.10	29.35	23.05	22.95	18.90	15.85	13.30
	4	192.00	121.35	117.30	82.50	60.15	45.15	35.00	27.50	22.00	17.85
	5	127.90	80.85	78.10	54.95	40.05	30.00	23.25	18.25	14.60	11.85
Z350/(4+3,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	111.75	87.00	66.45	52.45	42.50	35.10	29.50	25.10	21.60	18.75
	2	62.75	43.65	54.00	42.50	33.15	26.70	23.75	19.70	16.50	13.95
	3	57.65	40.25	51.60	38.95	29.45	23.00	22.85	18.80	15.75	13.25
	4	190.15	120.30	116.40	81.90	59.70	44.80	34.70	27.25	21.80	17.70
	5	126.85	80.25	77.45	54.50	39.75	29.80	23.10	18.10	14.50	11.75

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5											
Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z350/(4+3)	1	93.75	80.10	53.85	52.15	42.15	34.85	29.20	24.85	21.40	18.60
	2	62.55	43.30	65.95	41.90	32.65	25.90	23.50	19.45	16.25	13.75
	3	57.30	40.05	51.40	38.85	29.45	23.10	22.75	18.75	15.70	13.20
	4	189.00	119.45	115.65	81.40	59.25	44.50	34.50	27.10	21.65	17.55
	5	125.90	79.65	77.00	54.15	39.45	29.60	22.90	18.00	14.35	11.65
Z350/(4+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	63.95	54.60	48.00	42.60	38.35	32.65	27.35	23.30	20.05	17.45
	2	62.00	49.00	48.10	39.20	30.50	24.20	23.10	19.10	15.95	13.45
	3	57.00	48.30	48.35	38.80	29.70	23.10	22.45	18.50	15.40	13.00
	4	187.95	119.00	115.10	90.00	64.95	48.35	34.30	26.95	21.55	17.50
	5	125.15	79.25	76.70	60.00	43.25	32.15	22.80	17.90	14.30	11.60
Z350/(4+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	40.50	34.55	30.40	27.00	24.25	22.05	20.20	18.65	16.65	14.50
	2	40.75	34.90	30.45	27.05	22.35	17.80	17.35	14.40	12.05	10.20
	3	40.95	35.00	30.55	27.15	23.00	18.35	17.40	14.35	12.00	10.15
	4	187.70	118.80	115.00	80.95	64.85	48.30	34.30	26.90	21.50	17.45
	5	125.00	79.20	76.60	53.85	43.20	32.15	22.80	17.90	14.25	11.55
Z350/(3+3)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	62.85	53.75	46.45	37.50	30.55	25.40	21.40	18.35	15.80	13.75
	2	43.35	30.20	35.10	28.25	22.10	17.55	16.50	13.70	11.50	9.70
	3	40.85	28.55	34.15	24.85	19.40	15.30	15.20	12.60	10.50	8.90
	4	143.25	90.60	87.80	61.80	45.05	33.80	26.20	20.60	16.45	13.35
	5	95.45	60.35	58.50	41.15	30.00	22.50	17.45	13.70	10.95	8.85
Z350/(3+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	62.95	53.90	46.15	38.15	30.85	25.50	21.40	18.20	15.70	13.65
	2	43.50	30.10	34.70	27.85	21.75	17.35	16.50	13.65	11.45	9.65
	3	40.45	28.35	34.00	24.70	19.25	15.25	15.10	12.50	10.45	8.85
	4	141.50	89.60	86.80	61.20	44.55	33.45	25.90	20.35	16.30	13.20
	5	94.50	59.75	57.85	40.70	29.70	22.25	17.25	13.55	10.80	8.75
Z350/(3+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	40.60	34.65	30.10	27.05	24.30	22.10	20.25	17.85	15.40	13.35
	2	40.95	29.70	30.15	27.10	21.30	16.95	16.25	13.45	11.30	9.50
	3	40.15	28.10	30.35	24.60	19.15	15.15	15.00	12.45	10.35	8.80
	4	140.45	88.85	84.15	60.65	44.20	33.15	25.70	20.20	16.05	13.10
	5	93.65	59.15	56.05	40.35	29.40	22.10	17.10	13.40	10.65	8.70

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z350/(3,5+3,5)	1	86.35	74.00	57.20	46.00	37.30	30.75	25.80	22.00	18.95	16.50
	2	53.45	37.35	45.85	35.60	27.80	22.15	20.60	17.00	14.35	12.10
	3	49.65	34.70	42.10	30.95	24.05	19.00	19.00	15.70	13.10	11.05
	4	167.65	106.00	102.65	72.25	52.65	39.50	30.65	24.05	19.25	15.60
	5	111.65	70.65	68.35	48.10	35.05	26.30	20.35	16.00	12.75	10.35
Z350/(3,5+3)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	86.45	74.00	56.95	45.85	37.05	30.60	25.70	21.90	18.85	16.40
	2	53.55	37.25	45.10	35.85	28.00	22.25	20.40	16.80	14.20	11.95
	3	49.35	34.45	41.95	31.00	23.95	18.90	18.90	15.65	13.05	11.00
	4	165.85	105.00	101.75	71.60	52.20	39.15	30.35	23.85	19.05	15.45
	5	110.50	70.00	67.75	47.65	34.75	26.05	20.20	15.85	12.65	10.25
Z350/(3,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	64.15	54.80	48.15	42.75	36.25	29.90	25.10	21.35	18.40	16.00
	2	53.40	36.85	46.15	35.95	27.85	22.20	20.10	16.60	14.00	11.80
	3	49.05	34.20	41.75	30.70	23.85	18.80	18.80	15.55	12.95	10.95
	4	164.65	104.20	101.00	71.10	51.80	38.85	30.10	23.65	18.65	15.35
	5	109.55	69.35	67.25	47.30	34.50	25.85	20.00	15.70	12.55	10.15
Z350/(3,5+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	40.70	34.60	30.40	27.00	24.25	22.05	20.20	18.60	16.70	14.55
	2	41.00	30.30	30.45	27.05	22.15	17.55	17.15	14.20	11.90	10.00
	3	41.05	34.10	30.60	27.20	22.45	17.80	17.00	14.00	11.65	9.80
	4	164.00	103.80	100.55	70.75	51.55	38.70	30.00	23.55	18.55	15.30
	5	109.40	69.10	66.95	47.15	34.35	25.75	19.95	15.65	12.50	15.10
Z350/(2+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	27.25	23.35	20.45	18.15	16.30	13.45	11.30	9.65	8.30	7.20
	2	23.80	16.70	19.25	15.10	11.80	9.45	8.80	7.30	6.15	5.20
	3	23.15	16.25	18.55	13.90	10.80	8.60	8.30	6.90	5.80	4.90
	4	95.15	60.00	58.30	41.00	29.90	22.45	17.40	13.65	10.90	8.85
	5	63.25	40.00	38.85	27.30	19.90	14.90	11.55	9.10	7.25	5.90
Z350/(2,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	43.10	36.85	32.30	28.65	23.50	19.50	16.40	14.05	12.10	10.50
	2	32.65	22.90	26.90	21.60	16.90	13.45	12.50	10.35	8.65	7.30
	3	32.35	22.65	26.95	19.35	15.05	11.90	11.55	9.55	8.00	6.75
	4	119.20	75.10	73.00	51.35	37.40	28.10	21.75	17.10	13.70	11.10
	5	80.00	50.10	48.55	34.20	24.90	18.70	14.50	11.35	9.10	7.35

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5											
Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z350/(2,5+2)	1	40.50	34.85	30.60	27.15	24.00	19.90	16.75	14.35	12.35	10.75
	2	31.85	22.20	26.55	21.80	17.00	13.55	12.65	10.45	8.80	7.35
	3	32.05	22.45	26.80	19.10	14.95	11.85	11.45	9.50	7.90	6.70
	4	117.15	74.00	72.05	50.70	36.95	27.75	21.50	16.90	13.45	10.95
	5	78.15	49.25	48.00	33.75	24.60	18.45	14.30	11.20	8.55	7.25
Z400/(4+4)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	52.20	97.50	81.25	64.45	52.15	43.15	36.20	30.85	26.55	23.10
	2	19.80	49.60	65.60	50.00	39.00	31.00	29.20	24.10	20.25	17.10
	3	22.45	52.75	57.70	43.65	33.85	26.70	26.80	22.15	18.40	15.55
	4	38.20	185.20	162.15	113.80	83.00	62.25	48.25	37.90	30.35	24.65
	5	25.40	123.40	108.00	75.85	55.25	41.45	32.10	25.20	20.15	16.35
Z400/(4+3,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	52.00	97.60	81.20	64.15	51.90	42.95	36.00	30.65	26.40	23.00
	2	19.15	49.00	66.15	50.30	39.25	31.20	29.15	23.85	20.05	16.90
	3	22.30	52.45	57.45	43.50	33.75	26.60	26.65	22.00	18.35	15.45
	4	37.90	183.65	160.85	113.00	82.30	61.80	47.90	37.60	30.10	24.45
	5	25.20	122.40	107.20	75.20	54.85	41.15	31.85	25.00	20.00	16.52
Z400/(4+3)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	51.65	80.20	70.30	62.45	51.60	42.65	35.80	30.50	24.55	22.70
	2	18.45	48.00	66.40	50.50	39.35	31.20	28.85	23.60	19.80	16.70
	3	22.20	52.15	57.20	43.30	33.65	26.50	26.55	21.90	18.35	15.40
	4	37.60	182.35	159.85	112.20	81.75	61.40	47.55	37.35	30.10	24.25
	5	25.00	121.50	106.45	74.75	54.50	40.85	31.65	24.85	20.00	16.10
Z400/(4+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	38.45	54.75	48.00	42.65	38.40	34.90	31.95	28.50	24.55	21.35
	2	16.35	44.25	48.15	42.75	35.20	27.90	27.45	22.60	18.90	14.05
	3	22.05	181.50	48.35	43.00	33.50	26.40	26.45	21.85	18.20	14.90
	4	37.40	181.50	159.00	111.70	81.35	61.10	47.30	37.20	29.70	23.90
	5	24.85	120.90	105.95	74.35	54.20	40.65	31.50	24.70	19.75	15.90
Z400/(4+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	24.55	34.60	30.40	27.00	24.30	22.05	20.25	18.65	17.30	16.20
	2	12.40	33.55	30.45	27.05	24.35	20.65	20.10	16.65	14.00	11.80
	3	19.80	35.00	30.55	27.15	24.45	21.25	20.10	16.65	13.95	11.80
	4	37.45	181.25	158.95	111.60	81.30	61.05	47.25	37.15	29.70	24.10
	5	24.95	120.75	105.85	74.25	54.15	40.60	31.45	24.70	19.70	16.00

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z400/(3+3)	1	34.50	53.95	47.20	42.00	34.50	28.60	24.15	20.65	17.85	15.50
	2	13.05	44.20	42.20	32.25	25.25	20.10	18.70	15.55	13.05	10.95
	3	15.35	35.70	37.75	28.85	22.40	17.75	17.35	14.35	11.95	10.10
	4	28.45	138.25	121.25	85.15	62.10	46.60	36.10	28.35	22.70	18.45
	5	18.90	92.15	80.80	56.70	41.35	31.00	24.00	18.85	15.10	12.50
Z400/(3+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	35.10	53.95	47.30	42.00	35.15	29.15	24.45	20.80	17.95	15.60
	2	12.45	32.45	41.60	31.90	24.85	19.85	18.70	15.50	12.95	10.95
	3	15.20	35.40	37.50	28.65	22.25	17.65	17.20	14.25	11.90	10.05
	4	28.10	136.75	120.00	84.25	61.40	46.10	35.70	28.05	22.45	18.20
	5	18.70	91.15	79.95	56.10	40.90	30.70	23.75	18.65	14.90	12.10
Z400/(3+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	24.50	34.75	30.50	27.10	24.35	22.15	20.25	18.70	17.35	15.55
	2	11.50	31.30	30.50	27.15	24.35	19.35	18.40	15.25	12.70	10.75
	3	15.15	35.10	30.70	27.30	22.20	17.55	17.10	14.20	11.85	10.00
	4	28.00	135.60	119.00	83.55	60.90	45.70	35.40	27.80	22.25	18.05
	5	18.55	11.67	79.30	55.65	40.55	30.40	23.55	18.50	14.75	12.00
Z400/(3,5+3,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	43.30	74.00	65.00	53.25	43.40	36.00	30.40	26.05	22.50	19.55
	2	16.15	40.90	53.25	40.50	31.55	25.30	23.80	19.75	16.55	14.00
	3	18.75	44.00	47.35	35.85	28.00	22.05	22.00	18.20	15.20	12.85
	4	33.35	161.80	141.80	99.50	72.90	54.50	42.25	33.15	26.55	21.55
	5	22.15	107.80	94.45	66.30	48.55	36.25	28.10	22.05	17.65	14.30
Z400/(3,5+3)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	44.00	74.20	65.00	53.95	44.00	36.65	30.75	26.20	22.60	19.65
	2	15.50	40.10	52.75	40.35	31.50	25.15	23.90	19.60	16.60	14.05
	3	18.65	43.65	47.10	35.70	27.80	21.95	21.85	17.85	15.10	12.75
	4	33.00	160.25	140.55	98.65	71.90	54.00	41.85	32.25	26.25	21.35
	5	22.00	106.80	93.60	65.70	47.85	35.90	27.85	21.45	17.45	14.20
Z400/(3,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	38.65	54.90	48.20	42.80	38.50	35.00	30.65	26.10	22.45	19.55
	2	14.55	51.15	48.25	39.70	31.00	24.65	23.65	19.35	16.35	13.80
	3	18.55	43.35	46.95	35.55	27.75	21.85	21.75	17.85	15.00	12.70
	4	32.85	159e	139.50	98.00	71.35	53.60	41.50	32.25	26.05	21.15
	5	21.85	105.95	92.90	65.25	47.55	35.65	27.60	21.45	17.30	14.05

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile Z-SS5

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
Z400/(3,5+2)	1	93.75	80.10	53.85	52.15	42.15	34.85	29.20	24.85	21.40	18.60
	2	62.55	43.30	65.95	41.90	32.65	25.90	23.50	19.45	16.25	13.75
	3	57.30	40.05	51.40	38.85	29.45	23.10	22.75	18.75	15.70	13.20
	4	189.00	119.45	115.65	81.40	59.25	44.50	34.50	27.10	21.65	17.55
	5	125.90	79.65	77.00	54.15	39.45	29.60	22.90	18.00	14.35	11.65
Z400/(2+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	63.95	54.60	48.00	42.60	38.35	32.65	27.35	23.30	20.05	17.45
	2	62.00	49.00	48.10	39.20	30.50	24.20	23.10	19.10	15.95	13.45
	3	57.00	48.30	48.35	38.80	29.70	23.10	22.45	18.50	15.40	13.00
	4	187.95	119.00	115.10	90.00	64.95	48.35	34.30	26.95	21.55	17.50
	5	125.15	79.25	76.70	60.00	43.25	32.15	22.80	17.90	14.30	11.60
Z400/(2,5+2,5)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	40.50	34.55	30.40	27.00	24.25	22.05	20.20	18.65	16.65	14.50
	2	40.75	34.90	30.45	27.05	22.35	17.80	17.35	14.40	12.05	10.20
	3	40.95	35.00	30.55	27.15	23.00	18.35	17.40	14.35	12.00	10.15
	4	187.70	118.80	115.00	80.95	64.85	48.30	34.30	26.90	21.50	17.45
	5	125.00	79.20	76.60	53.85	43.20	32.15	22.80	17.90	14.25	11.55
Z400/(2,5+2)		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	62.85	53.75	46.45	37.50	30.55	25.40	21.40	18.35	15.80	13.75
	2	43.35	30.20	35.10	28.25	22.10	17.55	16.50	13.70	11.50	9.70
	3	40.85	28.55	34.15	24.85	19.40	15.30	15.20	12.60	10.50	8.90
	4	143.25	90.60	87.80	61.80	45.05	33.80	26.20	20.60	16.45	13.35
	5	95.45	60.35	58.50	41.15	30.00	22.50	17.45	13.70	10.95	8.85

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Legend:

 Static system without supporting bars
 Static system with one supporting bar
 Static system with two supporting bars




II.2 C PROFILE

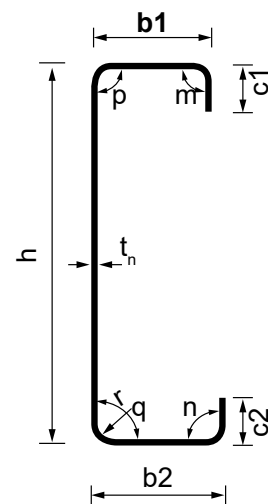
2.1 General features

They are mainly used as mullion-transom for walls

Technical features

- height of the sections: 100-400mm;
- $b_1, b_2 = 38 \div 100 \text{ mm}$; $c_1, c_2 = 13 \div 30 \text{ mm}$; $(c_1/b_1) \text{ max} = 0.4$; $(c_2/b_2) \text{ max} = 0.4$; $(b_1, b_2 / h) \text{ max} = 0.5$; $r = 4 \text{ mm}$;
- bending angle = 90° ;
- widths: from 1 to 4 mm;
- cutting length: 2000 - 13500mm; for other lengths please contact the technical department of Terasteel;
- profiles can be made with automatic pre-drill;
- profiles can be made with equal or unequal sides;
- material quality: S350GD+Z275.

2.2 Section dimensions and geometrical characteristics



	TYPE	Section Dimensions							
		h (mm)	b ₁ (mm)	b ₂ (mm)	c (mm)	t _n (mm)	t (mm)	r _i (mm)	G (kg/m)
C100	C100-1.5	100	47	40	17.1	1.5	1.42	4.0	2.44
	C100-2	100	47	40	18.3	2	1.91	4.0	3.25
C120	C120-1.5	120	47	40	17.1	1.5	1.42	4.0	2.67
	C120-2	120	47	40	18.3	2.0	1.91	4.0	3.56
	C120-2.5	120	47	40	19.5	2.5	2.40	4.0	4.45
C150	C150-1.5	150	47	40	17.1	1.5	1.42	4.0	3.03
	C150-2	150	47	40	18.3	2.0	1.91	4.0	4.04
	C150-2.5	150	47	40	19.5	2.5	2.40	4.0	5.04
C180	C180-1.5	180	60	53	20.6	1.5	1.42	4.0	3.77
	C180-2	180	60	53	21.8	2.0	1.91	4.0	5.02
	C180-2.5	180	60	53	23.0	2.5	2.40	4.0	6.28
C200	C200-1.5	200	72	65	23.6	1.5	1.42	4.0	4.36
	C200-2	200	72	65	24.8	2.0	1.91	4.0	5.81
	C200-2.5	200	72	65	26.0	2.5	2.40	4.0	7.26
C250	C250-1.5	250	72	65	23.6	1.5	1.42	4.0	4.95
	C250-2	250	72	65	24.8	2.0	1.91	4.0	6.59
	C250-2.5	250	72	65	26.0	2.5	2.40	4.0	8.24
	C250-3	250	72	65	27.2	3.0	2.90	4.0	9.89
C300	C300-2	300	88	81	23.8	2.0	1.91	4.0	7.85
	C300-2.5	300	88	81	25.0	2.5	2.40	4.0	9.81
	C300-3	300	88	81	26.2	3.0	2.90	4.0	11.77
C350	C350-2	350	100	93	24.8	2.0	1.91	4.0	9.04
	C350-2.5	350	100	93	26.0	2.5	2.40	4.0	11.30
	C350-3	350	100	93	27.2	3.0	2.90	4.0	13.56
	C350-3.5	350	100	93	28.5	3.5	3.40	4.0	15.83
	C350-4	350	100	93	29.7	4.0	3.90	4.0	18.09
C400	C400-2	400	100	93	24.8	2.0	1.91	4.0	9.83
	C400-2.5	400	100	93	26.0	2.5	2.40	4.0	12.28
	C400-3	400	100	93	27.2	3.0	2.90	4.0	14.74
	C400-3.5	400	100	93	28.5	3.5	3.40	4.0	17.20
	C400-4	400	100	93	29.7	4.0	3.90	4.0	19.66

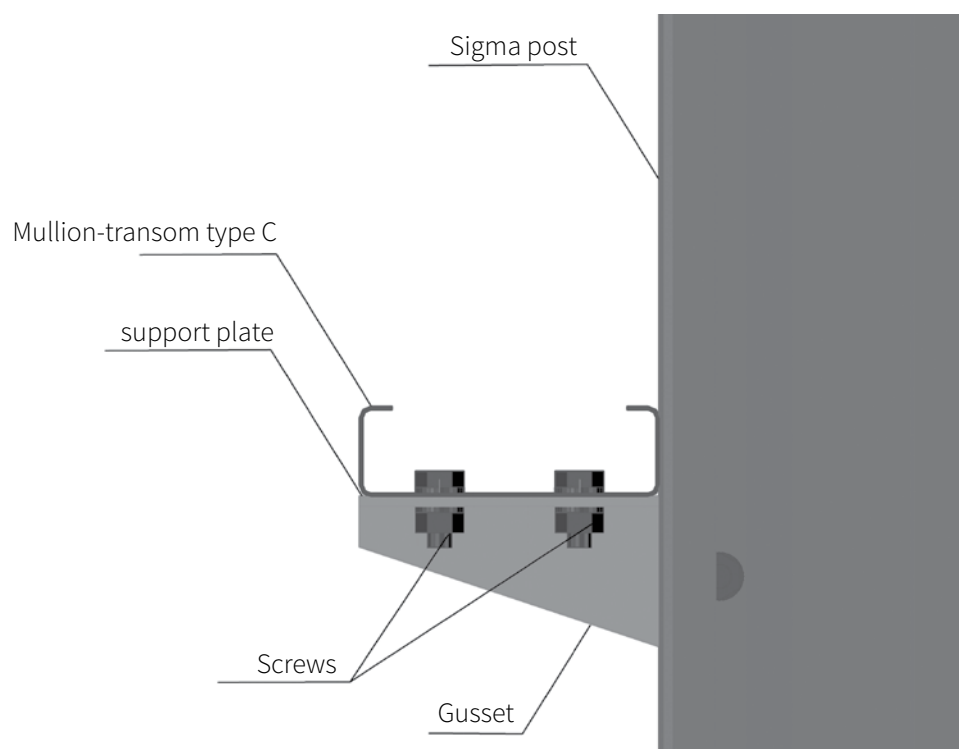
	TYPE	Geometrical characteristic of the gross section										
		A (mm ²)	y _G (mm)	z _{G1} (mm)	z _{G2} (mm)	I _y (mm ⁴)	W _{y1} (mm ³)	W _{y2} (mm ³)	I _z (mm ⁴)	I _t (mm ⁴)	i _y (mm)	i _z (mm)
C100	C100-1.5	293.5	14.4	47.6	51.0	450,736.61	9,465.16	8,845.01	82,397.14	197	39.2	16.8
	C100-2	394.7	14.5	47.4	50.7	596,284.67	12,584.16	11,759.59	109,999.85	480	38.9	16.7
C120	C120-1.5	321.9	13.1	57.5	61.1	693,190.96	12,064.08	11,341.31	87,767.17	216	46.4	16.5
	C120-2	432.9	13.2	57.2	60.9	920,079.50	16,079.26	15,115.85	117,297.15	526	46.1	16.5
	C120-2.5	543.9	13.3	57.0	60.6	1,140,352.68	20,011.84	18,812.70	146,308.43	1044	45.8	16.4
C150	C150-1.5	364.5	11.6	72.3	76.3	1,179,328.70	16,319.72	15,453.23	94,253.13	245	56.9	16.1
	C150-2	490.2	11.7	72.0	76.1	1,570,469.44	21,804.34	20,646.56	126,110.72	596	56.6	16.0
	C150-2.5	615.9	11.7	71.8	75.8	1,953,056.27	27,206.24	25,761.52	157,487.43	1183	56.3	16.0
C180	C180-1.5	466.5	15.9	87.4	91.2	2,276,862.08	26,054.80	24,967.63	213,617.01	314	69.9	21.4
	C180-2	628.3	16.0	87.2	90.9	3,045,336.97	34,943.55	33,487.39	286,832.13	764	69.6	21.4
	C180-2.5	790.6	16.1	86.9	90.7	3,804,381.69	43,772.33	41,950.65	359,574.30	1518	69.4	21.3
C200	C200-1.5	537.5	20.0	97.5	101.1	3,307,434.72	33,938.48	32,706.02	365,680.02	361	78.4	26.1
	C200-2	723.8	20.1	97.2	100.9	4,425,864.66	45,526.34	43,874.95	491,303.73	880	78.2	26.1
	C200-2.5	910.6	20.2	97.0	100.6	5,531,902.47	57,043.38	54,976.59	616,372.60	1748	77.9	26.0
C250	C250-1.5	608.5	17.7	122.3	126.3	5,588,723.17	45,711.90	44,242.47	390,849.19	409	95.8	25.3
	C250-2	819.3	17.8	122.0	126.1	7,490,569.07	61,387.66	59,416.31	525,434.71	996	95.6	25.3
	C250-2.5	1030.6	17.8	121.8	125.8	9,377,819.49	77,005.08	74,534.70	659,592.29	1979	95.4	25.3
	C250-3	1246.4	17.9	121.5	125.6	11,286,616.92	92,865.09	89,888.64	795,551.35	3494	95.2	25.3
C300	C300-2	972.1	20.8	147.0	151.1	12,877,008.87	87,601.62	85,224.65	895,328.90	1182	115.1	30.3
	C300-2.5	1222.6	20.9	146.8	150.8	16,138,255.18	109,967.15	106,985.85	1,126,223.71	2347	114.9	30.4
	C300-3	1478.4	21.0	146.5	150.6	19,444,631.59	132,718.55	129,123.23	1,361,350.78	4145	114.7	30.3
C350	C350-2	1117.3	23.0	172.0	176.1	20,052,154.64	116,607.88	113,850.07	1,305,697.54	1359	134.0	34.2
	C350-2.5	1405.0	23.1	171.7	175.9	25,144,471.97	146,425.66	142,965.23	1,643,251.75	2698	133.8	34.2
	C350-3	1698.8	23.2	171.5	175.6	30,313,993.80	176,782.55	172,607.52	1,987,529.18	4762	133.6	34.2
	C350-3.5	1994.4	23.3	171.2	175.4	35,487,018.19	207,245.27	202,357.41	2,338,502.96	7685	133.4	34.2
	C350-4	2288.5	23.4	171.0	175.1	40,591,617.33	237,397.78	231,800.66	2,679,741.22	11603	133.2	34.2
C400	C400-2	1212.8	21.2	196.9	201.2	27,544,994.01	139,928.38	136,876.79	1,352,352.66	1475	150.7	33.4
	C400-2.5	1525.0	21.3	196.6	201.0	34,556,850.25	175,763.55	171,933.08	1,702,348.10	2928	150.5	33.4
	C400-3	1843.8	21.4	196.4	200.7	41,682,484.24	212,271.50	207,648.29	2,059,468.74	5169	150.4	33.4
	C400-3.5	2163.8	21.5	196.1	200.5	48,800,424.27	248,830.90	243,416.49	2,420,310.05	8338	150.2	33.4
	C400-4	2483.5	21.6	195.9	200.2	55,872,277.07	285,247.55	279,044.59	2,778,062.85	12591	150.0	33.4

	TYPE	Geometrical characteristic of the effective cross section								
		Compressive stress				Bending about the y-y axis with the base b1 compressive stress				
		$A_{ef} (mm^2)$	$y_{Gefc} (mm)$	$z_{Gefc1} (mm)$	$z_{Gefc2} (mm)$	$z_{Gefi1} (mm)$	$z_{Gefi2} (mm)$	$I_{y,ef} (mm^4)$	$W_{y,ef1} (mm^3)$	$W_{y,ef2} (mm^3)$
C100	C100-1.5	227.4	17.7	47.8	50.8	48.3	50.3	441,645	9,141	8,787
	C100-2	346.1	17.3	47.4	50.7	47.4	50.7	596,285	12,584	11,760
C120	C120-1.5	227.6	17.4	57.5	61.1	58.4	60.2	676,539	11,582	11,244
	C120-2	350.8	16.9	57.3	60.8	57.3	60.8	917,822	16,013	15,103
	C120-2.5	479.6	16.2	56.7	60.9	57.0	60.6	1,140,353	20,012	18,813
C150	C150-1.5	227.1	16.9	72.2	76.4	73.8	74.8	1,142,283	15,473	15,280
	C150-2	353.7	16.5	72.0	76.1	72.4	75.7	1,559,425	21,552	20,591
	C150-2.5	491.5	15.9	71.3	76.3	71.8	75.8	1,953,056	27,206	25,762
C180	C180-1.5	252.3	22.3	89.3	89.3	95.8	82.8	1,999,211	20,865	24,156
	C180-2	412.0	22.2	87.2	90.8	88.8	89.3	2,959,838	33,338	33,143
	C180-2.5	579.6	21.8	87.0	90.6	87.5	90.1	3,763,252	42,988	41,787
C200	C200-1.5	258.5	26.6	98.2	100.3	112.5	86.1	2,672,425	23,761	31,035
	C200-2	442.8	27.1	98.5	99.6	102.0	96.1	4,125,241	40,448	42,926
	C200-2.5	634.9	26.9	97.2	100.4	98.5	99.1	5,400,164	54,801	54,515
C250	C250-1.5	255.6	25.8	123.1	125.4	144.7	103.9	4,326,066	29,895	41,649
	C250-2	439.2	26.3	123.4	124.7	132.2	115.9	6,714,974	50,802	57,932
	C250-2.5	633.5	26.2	121.8	125.8	124.7	122.9	9,060,225	72,666	73,710
	C250-3	843.7	25.8	121.6	125.5	122.6	124.5	11,127,715	90,741	89,402
C300	C300-2	426.5	28.7	148.1	150.0	170.2	127.9	10,334,233	60,724	80,796
	C300-2.5	647.8	29.7	148.4	149.2	158.9	138.7	14,426,763	90,806	103,995
	C300-3	883.9	29.9	146.8	150.3	151.2	145.9	18,539,798	122,626	127,063
C350	C350-2	420.7	30.5	173.4	174.7	208.2	139.9	14,767,182	70,927	105,565
	C350-2.5	650.4	32.1	173.3	174.3	194.3	153.3	20,965,609	107,908	136,754
	C350-3	914.1	33.0	173.0	174.1	183.9	163.2	27,450,486	149,278	168,189
	C350-3.5	1183.5	33.3	171.6	175.0	176.7	169.9	33,815,806	191,395	199,011
	C350-4	1464.6	33.1	171.3	174.8	174.1	172.0	39,405,131	226,332	229,104
C400	C400-2	418.0	29.8	198.7	199.4	242.2	155.9	19,578,052	80,839	125,577
	C400-2.5	643.8	31.3	198.0	199.6	226.6	171.0	27,939,157	123,280	163,417
	C400-3	908.5	32.4	198.0	199.1	215.0	182.1	36,685,662	170,616	201,480
	C400-3.5	1178.7	32.6	196.4	200.2	206.9	189.7	45,278,252	218,867	238,653
	C400-4	1463.7	32.5	196.1	200.0	200.5	195.6	53,831,816	268,423	275,282

	TYPE	Geometrical characteristic of the effective cross section					Resistance according EN 1993.1.1		
		Bending about the y-y axis with the base b2 compressive stress					Elongation	Compression	Bending
		z_{Gefi1} (mm)	z_{Gefi2} (mm)	$I_{y,ef}$ (mm ⁴)	$W_{y,ef1}$ (mm ³)	$W_{y,ef2}$ (mm ³)	$N_{t,Rd}$ (kN)	$N_{c,Rd}$ (kN)	$M_{y,Rd}$ (kNm)
C100	C100-1.5	50.8	47.8	451,578	8,890	9,450	102.72	79.59	3.08
	C100-2	50.4	47.7	600,540	11,924	12,583	138.15	121.14	4.12
C120	C120-1.5	61.1	57.5	691,538	11,320	12,029	112.66	79.67	3.94
	C120-2	60.5	57.6	926,052	15,308	16,078	151.52	122.78	5.29
	C120-2.5	60.2	57.4	1,148,816	19,085	20,012	190.38	167.85	6.58
C150	C150-1.5	77.3	71.2	1,156,733	14,956	16,238	127.57	79.49	5.23
	C150-2	75.6	72.4	1,579,815	20,883	21,808	171.58	123.79	7.21
	C150-2.5	75.3	72.3	1,966,307	26,098	27,213	215.58	172.03	9.02
C180	C180-1.5	97.9	80.7	2,061,890	21,058	25,561	163.27	88.31	7.30
	C180-2	91.6	86.5	3,004,828	32,795	34,752	219.91	144.19	11.48
	C180-2.5	90.5	87.1	3,812,878	42,135	43,772	276.70	202.84	14.63
C200	C200-1.5	113.7	84.9	2,778,237	24,445	32,713	188.12	90.48	8.32
	C200-2	104.2	93.9	4,223,631	40,540	44,978	253.33	154.98	14.16
	C200-2.5	101.3	96.3	5,471,173	54,036	56,784	318.70	222.23	18.91
C250	C250-1.5	146.1	102.5	4,482,220	30,678	43,739	212.97	89.45	10.46
	C250-2	134.7	113.4	6,854,367	50,885	60,451	286.76	153.73	17.78
	C250-2.5	128.2	119.4	9,130,580	71,213	76,480	360.70	221.71	24.92
	C250-3	125.6	121.5	11,261,580	89,636	92,716	436.25	295.28	31.29
C300	C300-2	172.0	126.1	10,599,021	61,624	84,056	340.24	149.27	21.25
	C300-2.5	161.3	136.3	14,688,415	91,037	107,802	427.90	226.72	31.78
	C300-3	154.5	142.6	18,701,980	121,027	131,175	517.45	309.36	42.36
C350	C350-2	209.7	138.4	15,145,459	72,211	109,470	391.05	147.25	24.82
	C350-2.5	196.2	151.4	21,425,684	109,221	141,488	491.74	227.66	37.77
	C350-3	186.4	160.7	27,871,699	149,492	173,485	594.59	319.94	52.25
	C350-3.5	180.0	166.6	34,105,096	189,520	204,658	698.05	414.22	66.33
	C350-4	176.8	169.3	39,864,437	225,415	235,534	800.98	512.60	78.90
C400	C400-2	243.7	154.4	20,080,830	82,399	130,067	424.47	146.31	28.29
	C400-2.5	228.6	169.0	28,515,856	124,718	168,776	533.74	225.32	43.15
	C400-3	217.7	179.4	37,224,871	170,994	207,492	645.34	317.97	59.72
	C400-3.5	210.4	186.2	45,626,505	216,886	245,002	757.32	412.53	75.91
	C400-4	204.0	192.1	54,252,122	265,878	282,488	869.23	512.30	93.06

2.3 Assembly method

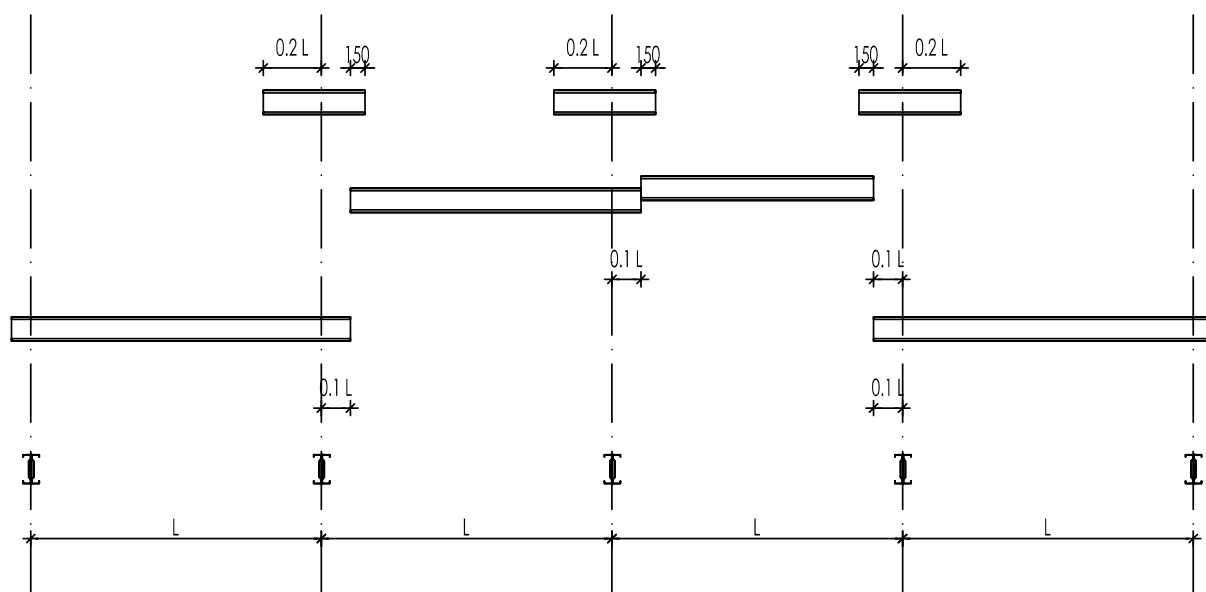
Fixing the mullion-transom type C



Joining C profiles

We recommend the followings:

- in the marginal openings $1.1L + \text{console}$;
- in the current openings $1.0L$;
- joining elements type CI minimum $0.2L + 150\text{mm}$.



2.4 Static loads

The C profiles used as mullion-transom for walls are analyzed as simply supported beams.

In the simplified calculation model used to determine the loadbearing capacity of the profiles were considered the following hypotheses:

- for continuous beams on multiple bearings the openings are equal;
- bearings are considered to be in the center of gravity of the profiles;
- the load is evenly distributed throughout the length of the profile;
- the length of the overlaps for the current bearings is $0.2L$ and $0.3L$ for the first intermediate bearings;
- for various cases of static systems and load cases the upper bases are considered fixed thus resulting several cases subsequently explained;
- with the increase of the openings the lower bases are considered free, fixed in the middle of the opening with a supporting bar (3.50 - 5.50 m) or fixed in 2 points at thirds with supporting bars (6.00 - 6.50 m) thus resulting several cases explained below.

Static systems with:



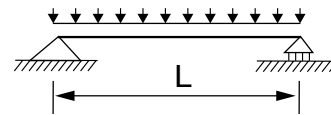
a. one supporting bar



b. two supporting bars

Thus, were analyzed, two types of static systems each with 5 load cases and variations of base fixing that lead to an improved and more efficient load-bearing capacity.

Static system no. 1 (SS1): Simply supported beam;



Depending on the type of load considered, gravity or suction, and the layout of corrugated sheets, in the table are presented 3 cases of sizing in the ultimate limit state (ULS):

Case 1: Corrugated sheet is placed at both bases of the profiles. It is determined the load-bearing capacity from gravity load.

Case 2: Corrugated sheet is placed at the upper base of the profiles and the load-bearing capacity is determined from gravity load.

Case 3: Corrugated sheet is placed at the upper base of the profiles and the load-bearing capacity is determined from suction load.

In order to do the sizing, in the serviceability limit state (SLS), 2 other cases that correspond to some limit values allowed for arrows were consider. Thus were analyzed the cases:

Case 4: Was determined the load limit for an arrow maximum allowed of $L/200$. Base fixing was considered only for the upper ones, this being the worse case.

Case 5: Was determined the load limit for an arrow maximum allowed of $L/300$. Base fixing was considered only for the upper ones, this being the worse case.

Load-bearing capacity* profile C-SS1											
Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C100/1,5	1	2.96	2.16	1.65	1.30	1.06	0.86	0.73	0.61	0.52	0.45
	2	1.39	1.03	0.77	0.58	0.43	0.32	0.24	0.18	0.14	0.10
	3	0.96	0.64	0.45	0.33	0.25	0.20	0.16	0.13	0.11	0.10
	4	0.61	0.39	0.25	0.18	0.13	0.09	0.07	0.05	0.04	0.03
	5	0.40	0.25	0.16	0.11	0.08	0.05	0.04	0.02	0.02	0.01
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C100/2	1	3.91	2.88	2.20	1.73	1.40	1.15	0.97	0.82	0.70	0.61
	2	2.01	1.50	1.14	0.88	0.67	0.52	0.39	0.30	0.23	0.18
	3	1.38	0.94	0.67	0.50	0.38	0.31	0.26	0.21	0.18	0.15
	4	0.87	0.56	0.39	0.27	0.20	0.15	0.11	0.08	0.06	0.05
	5	0.57	0.36	0.24	0.17	0.12	0.09	0.06	0.04	0.03	0.02
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C120/1.5	1	3.70	2.77	2.11	1.66	1.34	1.10	0.93	0.78	0.62	0.58
	2	2.00	1.54	1.19	0.93	0.72	0.55	0.43	0.32	0.25	0.19
	3	0.94	0.70	0.50	0.37	0.28	0.22	0.18	0.15	0.12	0.11
	4	0.90	0.62	0.42	0.29	0.21	0.16	0.12	0.09	0.07	0.056
	5	0.64	0.40	0.27	0.18	0.13	0.09	0.07	0.05	0.039	0.028
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C120/2	1	4.98	3.70	2.82	2.22	1.80	1.47	1.24	1.05	0.90	0.78
	2	2.83	2.16	1.69	1.33	1.04	0.82	0.65	0.51	0.39	0.31
	3	1.58	1.06	0.76	0.56	0.43	0.34	0.28	0.23	0.20	0.17
	4	1.31	0.88	0.60	0.43	0.31	0.24	0.18	0.14	0.11	0.08
	5	0.90	0.57	0.39	0.27	0.20	0.14	0.11	0.08	0.06	0.04

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile C-SS1

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C120/2.5	1	6.20	4.55	3.45	2.76	2.20	1.81	1.52	1.28	1.10	0.96
	2	3.68	2.85	2.23	1.77	1.41	1.13	0.90	0.89	0.78	0.70
	3	2.43	1.63	1.15	0.86	0.65	0.52	0.42	0.35	0.30	0.26
	4	1.80	1.18	0.81	0.59	0.43	0.33	0.25	0.20	0.15	0.12
	5	0.90	0.77	0.52	0.38	0.27	0.20	0.15	0.12	0.09	0.06
C150/1.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	5.05	3.67	2.79	2.21	1.78	1.46	1.23	1.04	0.89	0.77
	2	3.06	2.37	1.87	1.53	1.23	0.99	0.80	0.65	0.52	0.42
	3	1.25	0.81	0.57	0.41	0.31	0.24	0.20	0.16	0.14	0.12
	4	1.76	1.12	0.75	0.53	0.38	0.29	0.22	0.17	0.13	0.10
	5	1.16	0.73	0.49	0.34	0.24	0.18	0.13	0.10	0.08	0.06
C150/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	6.80	5.00	3.80	3.03	2.43	2.00	1.67	1.42	1.22	1.06
	2	4.20	3.27	2.58	2.10	1.71	1.39	1.14	0.93	0.75	0.62
	3	1.89	1.25	0.88	0.65	0.49	0.39	0.31	0.26	0.22	0.19
	4	2.44	1.56	1.06	0.75	0.56	0.42	0.32	0.25	0.20	0.16
	5	1.61	1.02	0.69	0.49	0.36	0.27	0.20	0.15	0.13	0.09
C150/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	8.50	6.20	4.70	3.75	3.00	2.47	2.08	1.76	1.49	1.31
	2	5.40	4.20	3.35	2.73	2.21	1.82	1.50	1.23	1.01	0.84
	3	2.55	1.71	1.22	0.90	0.70	0.55	0.45	0.38	0.32	0.28
	4	3.15	2.05	1.41	1.00	0.75	0.57	0.44	0.35	0.28	0.22
	5	2.10	1.34	0.92	0.66	0.48	0.36	0.28	0.22	0.17	0.13

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile C-SS1											
Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C180/1.5	1	6.93	5.02	3.9	3.05	2.45	2.04	1.7	1.45	1.24	1.08
	2	4.08	3.13	2.53	2.07	1.72	1.44	1.2	1.01	0.83	0.67
	3	2.12	1.43	1	0.73	0.55	0.43	0.34	0.28	0.23	0.2
	4	3	1.9	1.28	0.9	0.65	0.48	0.37	0.29	0.22	0.18
	5	2	1.25	0.84	0.59	0.42	0.31	0.23	0.18	0.14	0.1
C180/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	10.30	7.66	5.83	4.61	3.74	3.07	2.58	2.19	1.88	1.63
	2	5.60	4.33	3.49	2.86	2.38	1.99	1.67	1.40	1.17	0.98
	3	3.13	2.11	1.49	1.09	0.82	0.64	0.51	0.42	0.35	0.30
	4	4.15	2.63	1.77	1.25	0.91	0.68	0.52	0.41	0.32	0.26
	5	2.75	1.72	1.16	0.81	0.59	0.44	0.33	0.25	0.20	0.15
C180/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	12.92	9.55	7.28	5.75	4.65	3.84	3.22	2.74	2.35	2.04
	2	7.1	5.5	4.45	3.64	3.04	2.55	2.15	1.81	1.53	1.29
	3	4.3	2.9	2.07	1.52	1.15	0.91	0.73	0.6	0.5	0.43
	4	5.2	3.36	2.29	1.62	1.19	0.89	0.7	0.55	0.44	0.35
	5	3.5	2.21	1.5	1.06	0.77	0.58	0.44	0.34	0.27	0.21
C200/1.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	8.2	5.96	4.58	3.63	2.91	2.41	2.02	1.7	1.47	1.28
	2	4.77	3.61	2.86	2.34	1.96	1.66	1.41	1.1	0.93	0.8
	3	3.01	2.06	1.47	1.09	0.83	0.64	0.51	0.42	0.35	0.29
	4	4.27	2.68	1.79	1.25	0.9	0.67	0.51	0.4	0.31	0.25
	5	2.83	1.78	1.18	0.82	0.59	0.43	0.33	0.25	0.19	0.15
C200/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	13.30	9.70	7.50	5.90	4.76	3.95	3.30	2.80	2.42	2.10
	2	6.60	5.00	4.00	3.25	2.73	2.30	1.97	1.68	1.44	1.22
	3	4.35	3.00	2.14	1.58	1.20	0.94	0.75	0.61	0.50	0.43
	4	5.75	3.63	2.43	1.70	1.24	0.93	0.71	0.55	0.43	0.35
	5	3.82	2.40	1.60	1.12	0.81	0.60	0.45	0.35	0.27	0.21
C200/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	16.87	12.50	9.50	7.50	6.10	5.04	4.22	3.60	3.07	2.68
	2	8.36	6.30	5.10	4.15	3.50	2.97	2.54	2.17	1.86	1.60
	3	5.90	4.05	2.91	2.16	1.65	1.29	1.03	0.84	0.70	0.59
	4	7.00	4.60	3.12	2.19	1.60	1.20	0.93	0.72	0.58	0.46
	5	4.80	2.95	2.05	1.60	1.04	0.78	0.59	0.46	0.36	0.28

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile C-SS1

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C250/1.5	1	10.28	7.45	5.75	4.54	3.65	3.02	2.53	2.14	1.84	1.6
	2	7.17	5.49	4.42	3.66	3.09	2.61	2.18	1.83	1.57	1.34
	3	3.73	2.53	1.79	1.31	0.99	0.76	0.6	0.49	0.4	0.34
	4	7.86	4.94	3.30	2.31	1.68	1.25	0.96	0.75	0.59	0.47
	5	5.22	3.27	2.18	1.52	1.10	0.82	0.62	0.48	0.38	0.3
C250/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	16.80	12.21	9.44	7.44	5.99	4.95	4.16	3.52	3.04	2.64
	2	9.97	7.63	6.13	5.07	4.28	3.67	3.17	2.76	2.41	2.10
	3	5.36	3.64	2.58	1.89	1.42	1.10	0.87	0.71	0.58	0.49
	4	10.58	6.67	4.47	3.14	2.28	1.71	1.31	1.03	0.82	0.66
	5	7.03	4.42	2.96	2.07	1.50	1.12	0.85	0.66	0.52	0.42
C250/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	22.90	16.99	12.93	10.25	8.32	6.84	5.74	4.89	4.20	3.65
	2	12.57	9.63	7.76	6.42	5.41	4.64	4.00	3.47	3.03	2.65
	3	7.19	4.90	3.47	2.55	1.92	1.49	1.18	0.96	0.80	0.67
	4	13.34	8.43	5.66	3.99	2.91	2.19	1.69	1.33	1.06	0.86
	5	8.86	5.59	3.75	2.63	1.50	1.43	1.10	0.86	0.68	0.54
C250/3		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	27.57	20.45	15.07	12.32	10	8.23	6.91	5.88	5.06	4.4
	2	15.2	11.67	9.82	7.8	6.58	5.65	4.87	4.23	3.7	3.23
	3	9.3	6.34	4.5	3.31	2.51	1.95	1.56	1.27	1.05	0.89
	4	16.19	10.26	6.92	4.89	3.59	2.71	2.1	1.65	1.33	1.08
	5	10.76	6.8	4.58	3.23	2.36	1.77	1.36	1.07	0.85	0.69
C300/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	21.00	15.20	11.70	9.30	7.49	6.20	5.20	4.41	3.79	3.30
	2	13.50	10.15	8.10	6.65	5.60	4.83	4.21	3.69	3.27	2.85
	3	7.70	5.35	3.83	2.84	2.16	1.68	1.33	1.08	0.94	0.74
	4	18.28	11.50	7.70	5.39	3.93	2.94	2.26	1.77	1.41	1.13
	5	12.16	7.55	5.10	3.56	2.59	1.94	1.48	1.15	0.91	0.73
C300/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	30.79	22.4	17.3	13.64	11	9.12	7.64	6.48	5.59	4.85
	2	17.44	13.18	10.5	8.63	7.25	6.23	5.41	4.75	4.19	3.72
	3	10.26	7.12	5.1	3.78	2.87	2.24	1.78	1.44	1.19	1
	4	22.9	13.18	9.71	6.82	4.97	3.73	2.87	2.25	1.79	1.45
	5	15.28	9.55	6.43	4.51	3.28	2.45	1.88	1.47	1.16	0.93

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile C-SS1											
Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C300/3	1	39.53	29.38	22.32	17.69	14.38	11.84	9.94	8.48	7.28	6.33
	2	21.03	15.95	12.73	10.45	8.8	7.56	6.57	5.76	5.08	4.51
	3	13.15	9.1	6.53	4.85	3.69	2.88	2.29	1.86	1.53	1.29
	4	27.78	17.54	11.78	8.3	6.06	4.56	3.52	2.76	2.21	1.8
	5	18.49	11.66	7.81	5.49	4	3	2.3	1.8	1.44	1.16
C350/2		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	25.3	18.43	14.22	11.21	9.03	7.48	6.27	5.32	4.58	3.98
	2	17.65	13.28	10.5	8.56	7.17	6.15	5.34	4.65	4.01	3.49
	3	10.3	7.2	5.21	3.89	2.98	2.33	1.86	1.5	1.24	1.03
	4	28.85	18.16	12.15	8.52	6.2	4.65	3.57	2.79	2.22	1.8
	5	19.2	12.08	8.07	5.65	4.1	3.07	2.35	1.83	1.45	1.17
C350/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	37.3	27.12	20.94	16.52	13.3	11.02	9.24	7.84	6.76	5.87
	2	22.78	17.1	13.54	11.05	9.25	7.92	6.9	6.06	5.39	4.82
	3	13.62	9.51	6.88	5.14	3.94	3.08	2.45	1.99	1.64	1.37
	4	36.2	22.8	15.28	10.72	7.81	5.86	4.5	3.53	2.82	2.28
	5	24.11	15.17	10.15	7.11	5.17	3.87	2.96	2.32	1.84	1.48
C350/3		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	50.30	36.65	28.23	22.28	17.95	14.87	12.47	10.58	9.13	7.93
	2	27.9	21	14.57	11.53	9.35	7.75	6.52	5.56	4.81	4.20
	3	17.31	12.10	8.74	6.53	5.00	3.92	3.12	2.53	2.08	1.74
	4	43.73	27.56	18.48	12.99	9.47	7.12	5.48	4.30	3.44	2.79
	5	29.11	18.32	12.28	8.62	6.27	4.70	3.61	2.82	2.25	1.81
C350/3.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	61.72	45.9	34.9	27.66	22.5	18.52	15.55	13.28	11.4	9.92
	2	32.63	24.58	19.5	15.93	13.36	11.45	9.95	8.74	7.76	6.93
	3	21.32	14.91	10.78	8.06	6.18	4.84	3.88	3.13	2.58	2.16
	4	51.24	32.34	21.72	15.28	11.16	8.4	6.48	5.1	4.08	3.32
	5	34.12	21.5	14.43	10.14	7.39	5.55	4.27	3.35	2.67	2.16
C350/4		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	70.63	52.55	39.96	31.67	25.75	21.2	17.8	15.19	13.05	11.35
	2	37.41	28.17	22.37	18.31	15.34	13.17	11.45	10.07	8.95	7.98
	3	25.62	17.93	12.98	9.72	7.45	5.85	4.68	3.8	3.14	2.63
	4	58.81	37.16	25	17.6	12.88	9.71	7.51	5.92	4.75	3.87
	5	39.15	24.7	16.6	11.68	8.53	6.42	4.94	3.89	3.11	2.52

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.

Load-bearing capacity* profile C-SS1

Profile	Case	Opening [m]									
		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
C400/2	1	28.65	21.05	16.25	12.78	10.31	8.52	7.15	6	5.23	4.5
	2	22.4	16.84	13.35	10.94	9.04	7.53	6.3	5.38	4.68	4.08
	3	11.9	8.3	5.97	4.45	3.4	2.64	2.1	1.7	1.52	1.16
	4	41.78	16.84	13.35	10.94	8.99	6.73	5.18	4.06	3.24	2.62
	5	27.83	16.84	11.7	8.2	5.96	4.46	3.42	2.67	2.19	1.71
C400/2.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	42.58	30.9	23.8	18.85	15.17	8.53	10.55	8.93	7.73	6.7
	2	28.9	21.78	17.28	14.15	11.83	10.15	8.88	7.81	4.67	6.05
	3	15.72	10.9	7.88	5.88	4.48	3.48	2.77	2.24	1.84	1.53
	4	52.44	21.78	17.28	14.15	11.3	8.49	6.53	5.12	4.09	3.31
	5	34.92	21.78	14.68	10.31	7.5	4.45	4.31	3.38	2.69	2.17
C400/3		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	57.16	41.64	32.08	25.32	20.41	16.83	14.1	12.7	10.38	9
	2	35.57	26.8	21.26	17.4	14.58	12.5	10.88	9.55	8.51	7.61
	3	19.94	13.9	10	7.44	5.68	4.42	3.51	2.83	2.33	1.94
	4	63.3	39.88	26.74	18.79	13.7	10.3	7.93	6.23	4.98	4.04
	5	42.14	26.51	17.77	12.48	9.09	6.81	5.23	4.11	3.27	2.65
C400/3.5		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	71.3	51.94	40	31.6	25.45	21.08	17.7	15.02	12.95	11.26
	2	41.6	31.38	24.9	20.38	17.09	14.66	12.75	11.2	9.95	8.88
	3	24.5	17.08	12.3	9.16	7	5.45	4.34	3.5	2.88	2.4
	4	74.16	46.78	31.4	22.08	16.12	12.12	9.35	7.36	5.89	4.79
	5	49.38	31.1	20.86	14.66	10.69	8.02	6.18	4.85	3.87	3.14
C400/4		3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
	1	85.1	63.32	48.14	38.16	31.04	25.55	21.46	18.32	15.73	13.69
	2	47.62	35.94	28.55	23.4	19.61	16.83	14.65	12.87	11.43	10.2
	3	29.43	20.49	14.76	11	8.41	6.56	5.22	4.23	3.48	2.9
	4	85	53.68	36.06	25.4	18.58	13.99	10.8	8.52	6.83	5.56
	5	56.58	35.68	23.97	16.87	12.31	9.26	7.14	5.61	4.49	3.64

*Measurement unit expressed in kN/m

*The tables are informative and do not replace the structural analysis required for the design of the building - according to EN 1993-1-3.



II.3 Σ PROFILE

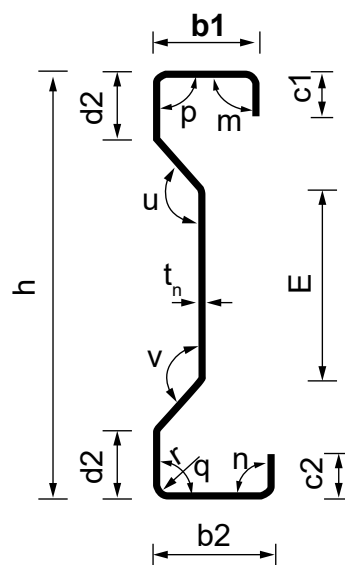
3.1 General features

They are mainly used to form columns and flitch beams

Technical feature

- height of the sections: 100-400mm;
- $b_1, b_2 = 38 \div 100 \text{ mm}$; $c_1, c_2 = 13 \div 30 \text{ mm}$; $(c_1/b_1) \max = 0.4$; $(c_2/b_2) \max = 0.4$; $(b_1, b_2/h) \max = 0.5$; $32 < (d_1, d_2) < 48 \text{ mm}$; $u, v = 140^\circ$; $r = 4 \text{ mm}$;
- bending angle = 90° ;
- widths: from 1 to 4 mm;
- cutting length: 2000 - 13500mm; for other lengths please contact the technical department of Plastsiste;
- profiles can be made with automatic pre-drill;
- profiles can be made with equal or unequal sides;
- material quality: S350+Z275.

3.2 Section dimensions and geometrical characteristics



	TYPE	Section Dimensions									
		h (mm)	b ₁ (mm)	b ₂ (mm)	c (mm)	E (mm)	d (mm)	t _n (mm)	t (mm)	r _i (mm)	G (kg/m)
Σ200	Σ200-1.5	200	52	45	22.1	89.2	32	1.50	1.42	4.0	4.02
	Σ200-2	200	52	45	23.3	89.5	32	2.00	1.91	4.0	5.35
	Σ200-2.5	200	52	45	24.5	89.8	32	2.50	2.40	4.0	6.69
	Σ200-3	200	52	45	25.8	90.2	32	3.00	2.90	4.0	8.03
	Σ200-3.5	200	52	45	27	90.5	32	3.50	3.40	4.0	9.37
	Σ200-4	200	52	45	28.2	90.9	32	4.00	3.90	4.0	10.71
Σ250	Σ250-1.5	250	72	65	22.6	115.2	44	1.50	1.42	4.0	5.09
	Σ250-2	250	72	65	23.8	115.5	44	2.00	1.91	4.0	6.78
	Σ250-2.5	250	72	65	25	115.8	44	2.50	2.40	4.0	8.48
	Σ250-3	250	72	65	26.2	116.2	44	3.00	2.90	4.0	10.17
	Σ250-3.5	250	72	65	27.5	116.5	44	3.50	3.40	4.0	11.87
	Σ250-4	250	72	65	28.5	116.9	44	4.00	3.90	4.0	13.60
Σ300	Σ300-1.5	300	88	81	24	165.2	44	1.50	1.42	4.0	6.08
	Σ300-2	300	88	81	25.3	165.5	44	2.00	1.91	4.0	8.12
	Σ300-2.5	300	88	81	26.5	165.8	44	2.50	2.40	4.0	10.14
	Σ300-3	300	88	81	27.7	166.2	44	3.00	2.90	4.0	12.17
	Σ300-3.5	300	88	81	29	166.5	44	3.50	3.40	4.0	14.20
	Σ300-4	300	88	81	30.1	166.9	44	4.00	3.90	4.0	16.23
Σ350	Σ350-1.5	350	100	93	23.6	215.2	44	1.50	1.42	4.0	6.95
	Σ350-2	350	100	93	24.8	215.5	44	2.00	1.91	4.0	9.26
	Σ350-2.5	350	100	93	26	215.8	44	2.50	2.40	4.0	11.58
	Σ350-3	350	100	93	27.2	216.2	44	3.00	2.90	4.0	13.89
	Σ350-3.5	350	100	93	28.5	216.5	44	3.50	3.40	4.0	16.21
	Σ350-4	350	100	93	29.6	216.9	44	4.00	3.90	4.0	18.52
Σ400	Σ400-2	400	100	93	25	265.5	44	2.00	1.91	4.0	10.06
	Σ400-2.5	400	100	93	26	265.8	44	2.50	2.40	4.0	12.56
	Σ400-3	400	100	93	27.2	266.2	44	3.00	2.90	4.0	15.07
	Σ400-3.5	400	100	93	28.5	266.5	44	3.50	3.40	4.0	17.58
	Σ400-4	400	100	93	29.7	266.9	44	4.00	3.90	4.0	20.09

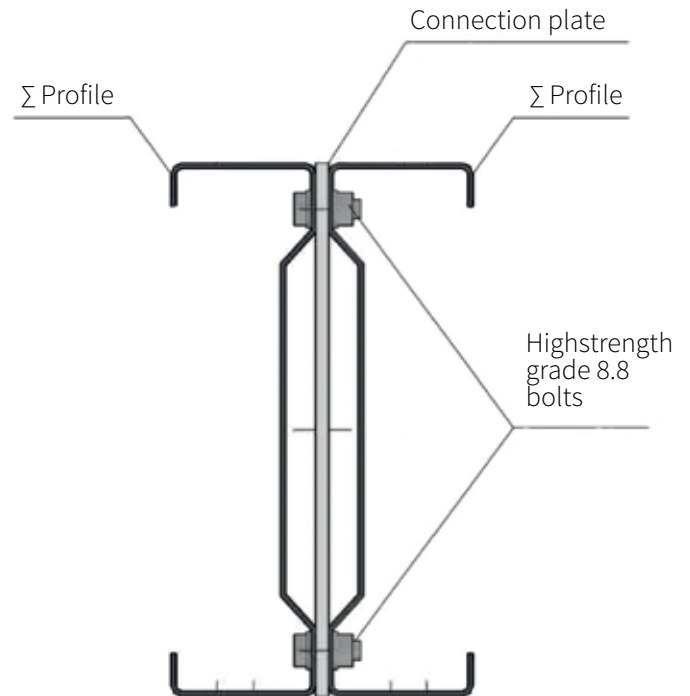
	TYPE	Geometrical characteristic of the gross section										
		A (mm ²)	Y _G (mm)	Z _{G1} (mm)	Z _{G2} (mm)	I _y (mm ⁴)	W _{y1} (mm ³)	W _{y2} (mm ³)	I _z (mm ⁴)	i _t (mm)	i _y (mm)	i _z (mm)
Σ200	Σ200-1.5	511.6	19.6	98.0	102.0	2,814,865	28,723	27,597	117,610	384	74.2	15.2
	Σ200-2	682.0	19.9	98.0	102.0	3,725,754	38,018	36,527	155,118	909	73.9	15.1
	Σ200-2.5	852.3	20.2	98.0	102.0	4,622,414	47,167	45,318	191,706	1,776	73.6	15.0
	Σ200-3	1023.2	20.5	98.0	102.0	5,507,857	56,203	53,999	227,766	3,070	73.4	14.9
	Σ200-3.5	1193.5	20.8	98.0	102.0	6,375,602	65,057	62,506	262,459	4,873	73.0	14.8
	Σ200-4	1363.8	21.0	98.0	102.0	7,228,221	73,757	70,865	296,128	7,273	72.8	14.7
Σ250	Σ250-1.5	648.0	24.1	123.0	127.0	5,774,032	46,943	45,465	299,380	486	94.4	21.6
	Σ250-2	864.0	24.4	123.0	127.0	7,658,133	62,261	60,300	397,353	1,152	94.2	21.5
	Σ250-2.5	1080.0	24.7	123.0	127.0	9,521,217	77,408	74,970	494,259	2,250	93.9	21.4
	Σ250-3	1296.0	25.0	123.0	127.0	11,362,865	92,381	89,471	590,010	3,888	93.7	21.3
	Σ250-3.5	1512.0	25.3	123.0	127.0	13,189,333	107,230	103,853	685,731	6,174	93.4	21.3
	Σ250-4	1732.8	25.6	123.0	127.0	15,072,511	122,541	118,681	783,591	9,242	93.3	21.3
Σ300	Σ300-1.5	775.0	28.5	148.0	152.0	10,105,168	68,278	66,481	528,060	581	114.2	26.1
	Σ300-2	1033.9	28.8	148.0	152.0	13,423,737	90,701	88,314	703,392	1,379	113.9	26.1
	Σ300-2.5	1292.3	29.1	148.0	152.0	16,708,544	112,896	109,925	876,631	2,692	113.7	26.0
	Σ300-3	1550.6	29.5	148.0	152.0	19,963,819	134,891	131,341	1,048,574	4,652	113.5	26.0
	Σ300-3.5	1809.0	29.8	148.0	152.0	23,199,299	156,752	152,627	1,221,072	7,387	113.2	26.0
	Σ300-4	2066.9	30.1	148.0	152.0	26,383,696	178,268	173,577	1,388,102	11,023	113.0	25.9
Σ350	Σ350-1.5	885.0	31.1	173.0	177.0	15,686,467	90,673	88,624	750,540	664	133.1	29.1
	Σ350-2	1180.0	31.4	173.0	177.0	20,845,352	120,493	117,770	999,409	1,573	132.9	29.1
	Σ350-2.5	1474.8	31.7	173.0	177.0	25,968,131	150,105	146,713	1,247,352	3,073	132.7	29.0
	Σ350-3	1770.0	32.1	173.0	177.0	31,054,138	179,504	175,447	1,494,216	5,310	132.5	29.0
	Σ350-3.5	2065.0	32.4	173.0	177.0	36,117,758	208,773	204,055	1,742,580	8,432	132.3	29.0
	Σ350-4	2359.0	32.7	173.0	177.0	41,113,237	237,649	232,278	1,984,114	12,581	132.0	29.0
Σ400	Σ400-2	1281.0	30.7	197.8	202.2	28,731,793	145,257	142,096	1,012,845	1,708	149.8	28.1
	Σ400-2.5	1600.0	30.9	197.8	202.2	35,781,609	180,898	176,961	1,260,146	3,333	149.6	28.1
	Σ400-3	1919.6	31.2	197.8	202.2	42,813,355	216,448	211,738	1,509,833	5,759	149.3	28.1
	Σ400-3.5	2240.0	31.6	197.8	202.2	49,822,313	251,882	246,401	1,761,183	9,147	149.1	28.0
	Σ400-4	2559.8	31.9	197.8	202.2	56,769,116	287,003	280,757	2,008,794	13,652	148.9	28.0

	TYPE	Geometrical characteristic of the effective cross section								
		Compressive stress				Bending about the y-y axis with the base b1 compressive stress				
		A_{ef} (mm ²)	y_{Gefc} (mm)	z_{Gefc1} (mm)	z_{Gefc2} (mm)	z_{Gefi1} (mm)	z_{Gefi2} (mm)	$I_{y,ef}$ (mm ⁴)	$W_{y,ef1}$ (mm ³)	$W_{y,ef2}$ (mm ³)
	Σ200-1.5	452.1	16.2	102.0	98.0	100.4	99.6	2,541,660	25307	25527
	Σ200-2	640.7	17.2	101.4	98.6	98.9	101.1	3,464,190	35023	34269
	Σ200-2.5	829.4	17.9	100.7	99.3	98.0	102.0	4,357,660	44450	42737
	Σ200-3	1013.3	18.2	100.6	99.4	98.0	102.0	5,191,280	52962	50904
	Σ200-3.5	1186.0	18.4	100.4	99.6	98.0	102.0	5,992,580	61135	58764
	Σ200-4	1358.1	18.7	100.3	99.6	98.0	102.0	6,765,520	69018	66346
Σ250	Σ250-1.5	511.1	17.7	127.6	122.4	132.4	117.6	4,803,420	36286	40837
	Σ250-2	767.0	19.8	126.9	123.1	127.1	122.9	6,853,260	53925	55757
	Σ250-2.5	1008.2	21.1	126.4	123.6	125.4	124.6	8,722,780	69538	70028
	Σ250-3	1260.0	22.0	126.2	123.8	124.3	125.7	10,580,000	85562	84674
	Σ250-3.5	1515.6	22.7	125.8	124.2	123.5	126.5	12,420,000	100607	98197
	Σ250-4	1750.4	23.1	125.3	124.7	123.0	127.0	14,160,000	115099	111536
Σ300	Σ300-1.5	541.6	18.4	152.7	147.3	166.2	133.8	7,827,610	47084	58523
	Σ300-2	825.6	21.3	152.4	147.6	158.8	141.2	11,250,000	70872	79699
	Σ300-2.5	1118.6	23.2	151.4	148.6	153.5	146.5	14,880,000	96962	101537
	Σ300-3	1403.4	24.5	151.2	148.8	151.5	148.5	18,190,000	120070	122428
	Σ300-3.5	1696.8	25.6	151.0	149.0	150.3	149.7	21,370,000	142139	142778
	Σ300-4	1994.1	26.4	150.8	149.2	149.4	150.6	24,540,000	164292	162972
Σ350	Σ350-1.5	561.5	18.4	177.3	172.7	200.2	149.8	11,550,000	57711	77107
	Σ350-2	850.3	21.3	177.4	172.6	191.5	158.5	16,720,000	87282	105491
	Σ350-2.5	1171.2	23.8	177.0	173.0	184.6	165.4	22,190,000	120202	134149
	Σ350-3	1480.3	25.5	176.2	173.8	180.4	169.6	27,530,000	152573	162315
	Σ350-3.5	1794.1	26.9	176.0	174.0	177.5	172.5	32,760,000	184533	189943
	Σ350-4	2113.2	27.9	175.8	174.2	176.1	173.9	37,900,000	215258	217887
Σ400	Σ400-2	828.8	21.1	202.3	197.7	222.2	177.8	22,630,000	101853	127241
	Σ400-2.5	1139.1	23.6	201.6	198.4	214.1	185.9	30,100,000	140544	161922
	Σ400-3	1446.8	25.3	201.1	198.9	209.3	190.7	37,380,000	178614	196029
	Σ400-3.5	1752.7	26.7	200.8	199.2	205.7	194.3	44,630,000	217023	229685
	Σ400-4	2065.1	27.8	200.5	199.5	202.8	197.2	51,820,000	255493	262793

	TYPE	Geometrical characteristic of the effective cross section				
		Bending about the y-y axis with the base b2 compressive stress				
		z_{Gef11} (mm)	z_{Gef12} (mm)	$I_{y,ef}$ (mm ⁴)	$W_{y,ef1}$ (mm ³)	$W_{y,ef2}$ (mm ³)
$\Sigma 200$	$\Sigma 200-1.5$	95.8	104.2	2,537,480	26485	24354
	$\Sigma 200-2$	97.5	102.5	3,468,920	35581	33841
	$\Sigma 200-2.5$	97.8	102.2	4,314,740	44119	42218
	$\Sigma 200-3$	97.8	102.2	5,126,240	52438	50139
	$\Sigma 200-3.5$	97.7	102.3	5,903,200	60411	57715
	$\Sigma 200-4$	97.7	102.3	6,647,960	68061	64970
$\Sigma 250$	$\Sigma 250-1.5$	112.2	137.8	4,656,370	41517	33780
	$\Sigma 250-2$	118.1	131.9	6,728,120	56956	51020
	$\Sigma 250-2.5$	120.3	129.7	8,629,590	71756	66516
	$\Sigma 250-3$	121.8	128.2	10,540,000	86532	82227
	$\Sigma 250-3.5$	122.8	127.2	12,390,000	100903	97401
	$\Sigma 250-4$	122.8	127.2	14,010,000	114166	110142
$\Sigma 300$	$\Sigma 300-1.5$	125.8	174.2	7,347,020	58410	42172
	$\Sigma 300-2$	135.0	165.0	10,920,000	80873	66154
	$\Sigma 300-2.5$	140.8	159.2	14,470,000	102806	90871
	$\Sigma 300-3$	143.6	156.4	17,880,000	124506	114317
	$\Sigma 300-3.5$	145.4	154.6	21,230,000	146026	137311
	$\Sigma 300-4$	146.7	153.3	24,510,000	166994	159894
$\Sigma 350$	$\Sigma 350-1.5$	138.4	211.6	10,450,000	75494	49353
	$\Sigma 350-2$	149.0	201.0	15,600,000	104700	77652
	$\Sigma 350-2.5$	157.6	192.4	21,180,000	134399	110088
	$\Sigma 350-3$	162.9	187.1	26,620,000	163456	142285
	$\Sigma 350-3.5$	166.8	183.2	32,050,000	192157	174969
	$\Sigma 350-4$	168.8	181.2	37,240,000	220547	205538
$\Sigma 400$	$\Sigma 400-2$	167.0	233.0	21,000,000	125739	90113
	$\Sigma 400-2.5$	176.7	223.3	28,540,000	161510	127811
	$\Sigma 400-3$	183.1	216.9	36,050,000	196885	166225
	$\Sigma 400-3.5$	187.9	212.1	43,570,000	231834	205482
	$\Sigma 400-4$	191.7	208.3	51,010,000	266153	244863

3.3 Assembly method

Beam or column detail



	TYPE	Resistance according EN 1993.1.1		
		Elongation	Compression	Bending
		$N_{t,Rd}$ (kN)	$N_{c,Rd}$ (kN)	$M_{y,Rd}$ (kNm)
Σ200	Σ200-1.5	179.04	158.24	8.52
	Σ200-2	238.68	224.25	11.84
	Σ200-2.5	298.30	290.29	14.78
	Σ200-3	358.11	354.66	17.55
	Σ200-3.5	417.73	415.10	20.20
	Σ200-4	477.32	475.34	22.74
Σ250	Σ250-1.5	226.80	178.89	11.82
	Σ250-2	302.40	268.45	17.86
	Σ250-2.5	378.00	352.87	23.28
	Σ250-3	453.60	441.00	28.78
	Σ250-3.5	529.20	530.46	34.09
	Σ250-4	606.49	612.64	38.55
Σ300	Σ300-1.5	271.25	189.56	14.76
	Σ300-2	361.87	288.96	23.15
	Σ300-2.5	452.30	391.51	31.80
	Σ300-3	542.70	491.19	40.01
	Σ300-3.5	633.15	593.88	48.06
	Σ300-4	723.42	697.94	55.96
Σ350	Σ350-1.5	309.75	196.53	17.27
	Σ350-2	413.00	297.61	27.18
	Σ350-2.5	516.18	409.92	38.53
	Σ350-3	619.50	518.11	49.80
	Σ350-3.5	722.75	627.94	61.24
	Σ350-4	825.65	739.62	71.94
Σ400	Σ400-2	448.35	290.08	31.54
	Σ400-2.5	560.00	398.69	44.73
	Σ400-3	671.85	506.38	58.18
	Σ400-3.5	784.00	613.45	71.92
	Σ400-4	895.92	722.79	85.70



II.4 U PROFILE

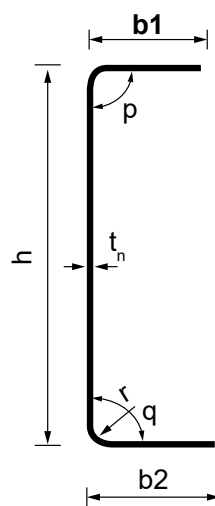
4.1 General features

They are mainly used as guiding profiles

Technical features

- height of the sections: 100-400mm;
 - $b_1, b_2 = 38 \div 100\text{mm}$; $(b_1, b_2 / h) \max = 0.6$; $r = 4\text{ mm}$;
 - bending angle = 90° ;
 - widths: from 1 to 4 mm;
 - cutting length: 2000 - 13500mm;
- for other lengths please contact the technical department of Terasteel;
- profiles can be made with automatic pre-drill;
 - profiles can be made with equal or unequal sides;
 - material quality: S350+Z275.

4.2 Section dimensions and geometrical characteristics

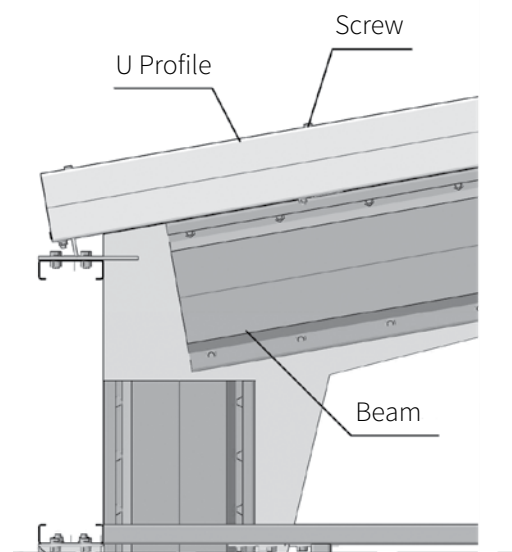
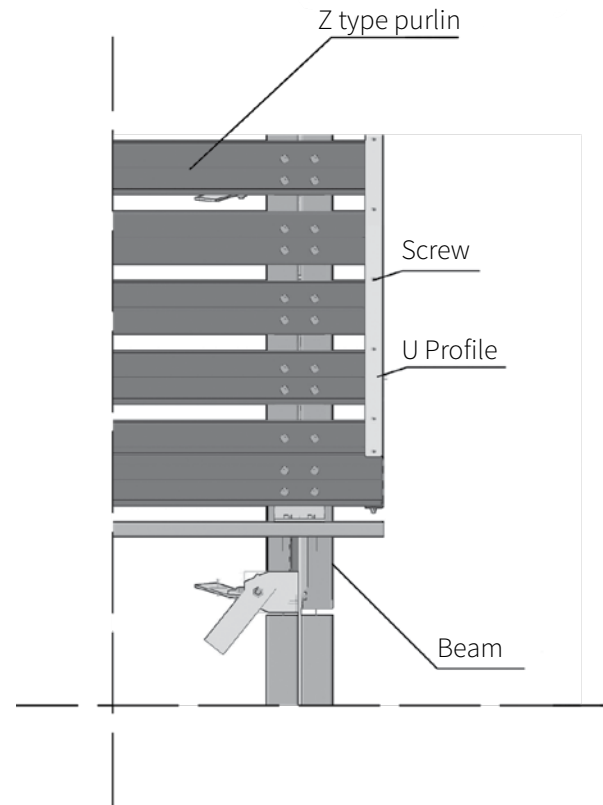


	TYPE	Section Dimensions						
		h (mm)	b ₁ (mm)	b ₂ (mm)	t _n (mm)	t (mm)	r _i (mm)	G (kg/m)
U100	U100-1.5	103	55	55	1.5	1.42	4.0	2.42
	U100-2	104	55	55	2.0	1.91	4.0	3.23
U120	U120-1.5	123	55	55	1.5	1.42	4.0	2.66
	U120-2	124	55	55	2.0	1.91	4.0	3.54
	U120-2.5	125	55	55	2.5	2.40	4.0	4.44
U150	U150-1.5	153	55	55	1.5	1.42	4.0	3.01
	U150-2	154	55	55	2.0	1.91	4.0	4.01
	U150-2.5	155	55	55	2.5	2.40	4.0	5.03
U180	U180-1.5	183	55	55	1.5	1.42	4.0	3.37
	U180-2	184	55	55	2.0	1.91	4.0	4.48
	U180-2.5	185	55	55	2.5	2.40	4.0	5.62
U200	U200-1.5	203	75	75	1.5	1.42	4.0	4.07
	U200-2	204	75	75	2.0	1.91	4.0	5.43
	U200-2.5	205	75	75	2.5	2.40	4.0	6.80
U250	U250-1.5	253	75	75	1.5	1.42	4.0	4.66
	U250-2	254	75	75	2.0	1.91	4.0	6.21
	U250-2.5	255	75	75	2.5	2.40	4.0	7.78
	U250-3	256	75	75	3.0	2.90	4.0	9.33
U300	U300-2	304	75	75	2.0	1.91	4.0	6.99
	U300-2.5	305	75	75	2.5	2.40	4.0	8.76
	U300-3	306	75	75	3.0	2.90	4.0	10.51
U350	U350-2	354	100	100	2.0	1.91	4.0	8.56
	U350-2.5	355	100	100	2.5	2.40	4.0	10.71
	U350-3	356	100	100	3.0	2.90	4.0	12.86
	U350-3.5	357	100	100	3.5	3.40	4.0	15.00
	U350-4	358	100	100	4.0	3.90	4.0	17.14
U400	U400-2	404	100	100	2.0	1.91	4.0	9.35
	U400-2.5	405	100	100	2.5	2.40	4.0	11.69
	U400-3	406	100	100	3.0	2.90	4.0	14.04
	U400-3.5	407	100	100	3.5	3.40	4.0	16.38
	U400-4	408	100	100	4.0	3.90	4.0	18.71

	TYPE	Geometrical characteristic of the gross section										
		A (mm ²)	Y _G (mm)	Z _{G1} (mm)	Z _{G2} (mm)	I _y (mm ⁴)	W _{y1} (mm ³)	W _{y2} (mm ³)	I _z (mm ⁴)	I _t (mm ⁴)	i _y (mm)	i _z (mm)
U100	U100-1.5	308.8	15.0	51.5	51.5	533,737	10,364	10,364	96,481	231.6	41.5	17.6
	U100-2	411.4	15.2	52.0	52.0	715,850	13,766	13,766	127,193	548.5	41.7	17.5
U120	U120-1.5	338.8	13.8	61.5	61.5	801,791	13,037	13,037	102,082	254.1	48.6	17.3
	U120-2	451.0	13.9	62.0	62.0	1,073,814	17,320	17,320	134,546	601.3	48.7	17.2
	U120-2.5	566.0	14.3	62.5	65.5	1,357,589	21,721	20,727	170,478	1179.2	48.9	17.4
U150	U150-1.5	383.8	12.3	76.5	76.5	1,332,828	17,423	17,423	108,845	287.9	58.9	16.8
	U150-2	511.4	12.4	77.0	77.0	1,782,541	23,150	23,150	143,423	681.9	59.0	16.7
	U150-2.5	641.0	12.7	77.5	77.5	2,249,488	29,026	29,026	181,721	1335.4	59.2	16.8
U180	U180-1.5	428.8	11.1	91.5	91.5	2,036,614	22,258	22,258	114,190	321.6	68.9	16.3
	U180-2	571.0	11.2	92.0	92.0	2,721,406	29,580	29,580	150,440	761.3	69.0	16.2
	U180-2.5	716.2	11.5	92.5	92.5	3,429,943	37,080	37,080	190,617	1492.1	69.2	16.3
U200	U200-1.5	518.8	16.7	101.5	101.5	3,220,820	31,732	31,732	277,478	389.1	78.8	23.1
	U200-2	691.4	16.8	102.0	102.0	4,304,610	42,202	42,202	366,779	921.9	78.9	23.0
	U200-2.5	866.2	17.2	102.5	102.5	5,419,096	52,869	52,869	462,989	1804.6	79.1	23.1
U250	U250-1.5	593.8	14.6	126.5	126.5	5,413,121	42,791	42,791	294,157	445.4	95.5	22.3
	U250-2	791.0	14.8	127.0	127.0	7,228,841	56,920	56,920	388,756	1054.7	95.6	22.2
	U250-2.5	991.0	15.2	127.5	127.5	9,090,037	71,294	71,294	490,737	2064.6	95.8	22.3
	U250-3	1188.8	15.3	128.0	128.0	10,925,144	85,353	85,353	583,782	3566.4	95.9	22.2
U300	U300-2	891.0	13.3	152.0	152.0	11,142,342	73,305	73,305	405,809	1188.0	111.8	21.3
	U300-2.5	1116.2	13.6	152.5	152.5	14,000,020	91,803	91,803	512,286	2325.5	111.9	21.4
	U300-3	1338.8	13.7	153.0	153.0	16,818,051	109,922	109,922	609,354	4016.4	112.0	21.3
U350	U350-2	1091.0	19.0	177.5	177.5	19,267,747	108,551	108,551	941,712	1454.7	132.9	29.4
	U350-2.5	1363.7	19.1	177.5	177.5	24,110,707	135,835	135,835	1,169,344	2841.1	133.0	29.3
	U350-3	1638.8	19.4	178.0	178.0	29,057,454	163,244	163,244	1,413,569	4916.4	133.2	29.4
	U350-3.5	1911.0	19.6	178.5	178.5	33,936,916	190,123	190,123	1,638,361	7803.3	133.3	29.3
	U350-4	2183.0	19.8	179.0	179.0	38,826,714	216,909	216,909	1,860,184	11642.7	133.4	29.2
U400	U400-2	1191.0	17.5	202.0	202.0	26,477,288	131,076	131,076	971,312	1588.0	149.1	28.5
	U400-2.5	1488.7	17.6	202.5	202.5	33,123,617	163,573	163,573	1,206,023	3101.5	149.2	28.5
	U400-3	1788.8	17.9	203.0	203.0	39,902,452	196,564	196,564	1,457,942	5366.4	149.4	28.5
	U400-3.5	2086.0	18.1	203.5	203.5	46,590,777	228,947	228,947	1,689,694	8517.8	149.4	28.4
	U400-4	2383.4	18.3	204.0	204.0	53,289,793	261,224	261,224	1,918,365	12711.4	149.5	28.3

4.3 Assembly method

Gutter detail



	TYPE	Resistance according EN 1993.1.1		
		Elongation	Compression	Bending
		N _{t,Rd} (kN)	N _{c,Rd} (kN)	M _{y,Rd} (kNm)
U100	U100-1.5	108.08	108.08	3.63
	U100-2	143.99	143.99	4.82
U120	U120-1.5	118.58	118.58	4.56
	U120-2	157.85	157.85	6.06
	U120-2.5	198.10	198.10	7.25
U150	U150-1.5	134.33	134.33	6.10
	U150-2	178.99	178.99	8.10
	U150-2.5	224.35	224.35	10.16
U180	U180-1.5	150.08	150.08	7.79
	U180-2	199.85	199.85	10.35
	U180-2.5	250.67	250.67	12.98
U200	U200-1.5	181.58	181.58	11.11
	U200-2	241.99	241.99	14.77
	U200-2.5	303.17	303.17	18.50
U250	U250-1.5	207.83	207.83	14.98
	U250-2	276.85	276.85	19.92
	U250-2.5	346.85	346.85	24.95
	U250-3	416.08	416.08	29.87
U300	U300-2	311.85	311.85	25.66
	U300-2.5	390.68	390.68	32.13
	U300-3	468.58	468.58	38.47
U350	U350-2	381.85	381.85	37.99
	U350-2.5	477.31	477.31	47.54
	U350-3	573.58	573.58	57.14
	U350-3.5	668.85	668.85	66.54
	U350-4	764.05	764.05	75.92
U400	U400-2	416.85	416.85	45.88
	U400-2.5	521.05	521.05	57.25
	U400-3	626.08	626.08	68.80
	U400-3.5	730.10	730.10	80.13
	U400-4	834.19	834.19	91.43

Galvanized profiles comparison

Corrosion class	Lifetime of the corrosion protection layer - years	
	Type of steel	
	S275GD+Zn140	S350GD+Zn275
C1 - very low	Building life cycle	
C2 - low	25	48
C3 - medium	7	14
C4 - high	3	6

Warranty

The warranty of Terasteel profiles varies depending on the environment (degree of corrosion) in which the elements are used and can last until the building life cycle..

Packing

Lightweight metal profiles are packed in bundles of maximum 3t. In order to be packed the metal profiles are laid manually on wood rods laid on a horizontal plane. The number of wood rods varies depending on the length of the profiles, and their layout, will be one rod towards the ends of the profiles and one rod at about 2-3m from the others. See Fig. 1

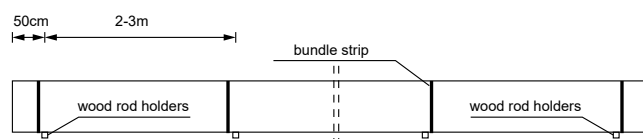


Fig. 1

In the case of C, U and Σ profiles, they are laid out on rows, the first row with the heart down and on the following row the profiles are laid down in-between with the heart up. See Fig. 2

Z Profiles are laid down side by side in one row. For an easier support and layout of the first profiles on rods are used wood

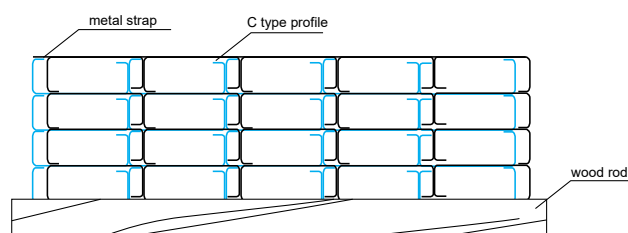


Fig. 2

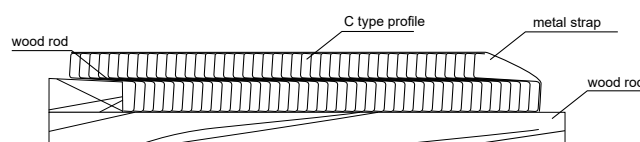


Fig. 3

blocks fixed on the rods. See Fig. 3

Once the profiles are laid down they are tied / fixed with metal straps using manual or pneumatic machines. The number of ties / fixes varies depending on the length of the profiles, and their layout will be one tie / fix towards the ends of the profiles and one tie / fix at about 2-3m from the others. See Fig. 1





Storage

Once they are tied, the profiles are transported, with the help of the forklift, to the storage or loading area. Short-term storage of the profiles will be made at a distance from the ground, on rod holders like in fig. 1, on plane surfaces, slightly inclined on the longitudinal direction of the profiles to allow the draining of any rain water.

Transport

The transport of the profiles is done preferably with covered vehicles, in bundles that can be stacked, fixed with straps.

Unload

The unloading of the profiles is done with mechanical machines: crane with textile straps, forklift with protected forks (rubber). Improper handling, tilting, throwing, dragging, etc. or any other maneuvers that may lead to the deterioration of the profiles and/or of the zinc coating is forbidden.

Long-term storage is done in covered, dry, well ventilated areas with plane surface slightly inclined on the longitudinal direction of the profiles. It is forbidden to store the elements in spaces with high humidity or harmful or corrosive environments. It is forbidden to unload the profiles while it is raining. If, however, they are unloaded in humid conditions, the profiles are stored loose, with distance between them on rod holders at a distance from the ground on a plane surface slightly inclined to allow the elimination of water/humidity and to prevent black or white rust.

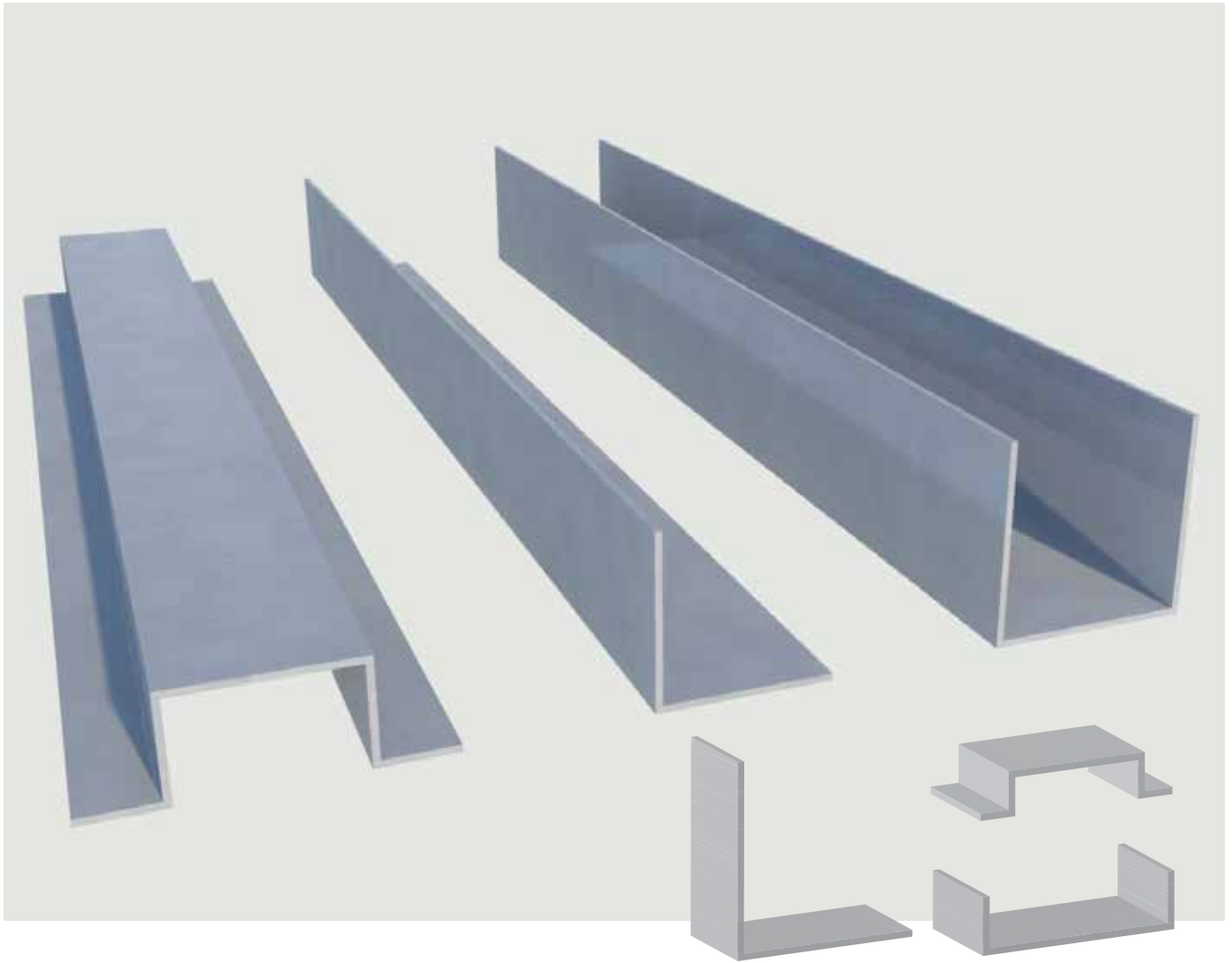


Certifications

Structural elements made out of steel from cold formed laminates are produced by TeraSteel in a factory production control system certified by SRAC CERT SRL, certificate number **2003 - CPR - 726**.

Based on this certification TeraSteel issues the performance statement and applies the **CE** marking of conformity on the products delivered.





III. GUIDING AND ALIGNMENT L, Ω , U PROFILES

III.1 Galvanized L Profile

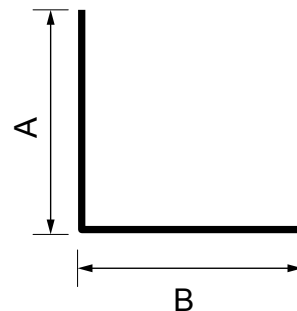
Unfolded width: 100mm, 120mm, 140mm, 160mm, 180mm and 200mm

Material: galvanized sheet

Thickness: 1.50mm and 2.00mm

Length: 6000mm

Note: the minimum size of sides is 30mm (A_{min} , B_{min} = 30mm)



III.2 Galvanized U Profile

Unfolded width: 100mm, 120mm, 140mm, 160mm, 180mm and 200mm

Material: galvanized sheet

Thickness: 1.50mm and 2.00mm

Length: 6000mm

Note: the minimum size of sides is $A_{min} = 30mm$

The B side has to be at least 20 mm bigger than A ($B \geq A + 20mm$)



III.3 Galvanized Ω Profile

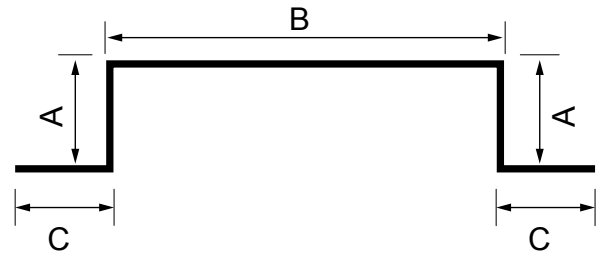
Unfolded width: 100mm, 120mm, 140mm, 160mm, 180mm and 200mm

Material: galvanized sheet

Thickness: 1.50mm and 2.00mm

Length: 6000mm

Note: the minimum size of sides is 30mm ($A_{min}, B_{min} = 30mm$). The B side has to be at least 20 mm bigger than A ($B \geq A + 20mm$)





Production hall Cluj Napoca - 4.500 sqm

IV. TURNKEY HALLS

We offer complete solutions for turnkey halls, from design (in accordance with Eurocode) to production and assembly for Terasteel hall systems.

The system includes:

- foundation project stamped and checked by MLPAT;
- metal structure resistance project stamped by a licensed MLPAT supervisor, request A2;
- sandwich panels with PUR or PIR foam for enclosures (walls and roof);
- masking accessories out of galvanize sheet painted with polyester paint (25micron);
- PVC or Aluminum joinery in any configuration desired by the client;
- skylights, smoke vents including daily ventilation systems;
- industrial sectional doors operated manually or electric;
- beams out of galvanized pressed profiles;
- columns out of galvanized pressed profiles;
- horizontal and vertical bracing;
- purlin lines on each side;
- purlin lines to attach the panels;
- boards, gussets at the base of the column and connecting pieces between all the main structure elements;
- galvanized high-strength grade 8.8 bolts;
- technical assistance from the designers and the project manager.

One supplier for all the needs of your Project.

Advantages of the TeraSteel halls systems

- low steel consumption that leads to a lower cost of the construction (EUR/m²)
- low steel consumption that leads to a lower cost of the construction (EUR/m²)
- less infrastructure works than using the traditional way
- durable materials, lower maintenance costs
- easy assembly, high modularity
- green buildings with a reduce CO₂ footprint
- can be easily disassembled and relocated

TeraSteel offers you an online price estimator for metallic halls
www.terasteel.ro/configurator





Chicken processing hall Hungary - 16.000 sqm



Production hall Vâlcea - 1.500 sqm



Storage hall Rm. Vâlcea - 3150 sqm



V. GALVANIZED STRIPS

We supply galvanized strips according to the client's requirements. The galvanized steel sheets are in accordance with the SR EN 10143 and SR EN 10346 standards.

Features:

- material quality: S350GD and DX51D sheet
- zinc coating: 100-275 gr/m²
- sheet thickness: 0.5 mm - 4 mm
- widths: 23 mm - 1500 mm
- interior diameter of the roll: 508-510 mm

Packing

Galvanized strips are fixed with metal straps, individually labeled and stored on wooden euro pallets. The weight of each pallet is set based on each client's possibility to unload them.

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This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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TOGETHER WE
BUILD BETTER

