

Technical catalog
Z,C and U galvanized profiles



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DESCRIPTION Cold formed steel profiles in the process of lamination, made of construction steel, type S350GD-275Z galvanized, with thicknesses of 1.5, 2, 2.5, 3 mm and lengths of 1.6 ... 13.5 m.

MAIN CHARACTERISTICS. · lightweight;
ADVANTAGES · excellent corrosion resistance ;
 · easu production;
 · uniform quality;
 · high strength and stiffness;
 · increased accuracy of the details;
 · fast and easy assembly;
 · low transport costs;
 · are recyclable inconbustibile not rot and are insensitive to the insects action;
 Another advantage is the manufacturing process by cold rolling, which leads to increased yield, and sometimes Breakthrough phenomenon was more evident in profiles and appreciably over the hearts and soles. Cold pressing leaves these features almost unchanged in hearts and soles.

APPLICATION Used in construction, as components in the composition:
 - Main structure (frames with columns and beams);
 - Secondary structure (roofing, cladding);
 - Intermediate floor beams;
 - Farms barred (sections composed C);
 - Covers (roof purlins or wall beams);
 - Stacking, attics

AGREEMENTS. CERTIFICATIONS In Romania products are interwoven.

TYPES

Tip profil / Grosime	Tip profil / Grosime	Tip profil / Grosime
Z, C, U 100 / 1,5; 2; 2,5; 3	Z, C, U 250 / 1,5; 2; 2,5; 3	Σ 200 / 1; 1,5; 2; 2,5; 3; 3,5; 4
Z, C, U 120 / 1,5; 2; 2,5; 3	Z, C, U 260 / 1,5; 2; 2,5; 3	Σ 250 / 1,5; 2; 2,5; 3; 3,5; 4
Z, C, U 140 / 1,5; 2; 2,5; 3	Z, C, U 300 / 1,5; 2; 2,5; 3	Σ 300 / 1,5; 2; 2,5; 3; 3,5; 4
Z, C, U 150 / 1,5; 2; 2,5; 3	Z, C, U 350 / 1,5; 2; 2,5; 3	Σ 350 / 1,5; 2; 2,5; 3; 3,5; 4
Z, C, U 160 / 1,5; 2; 2,5; 3		Σ 400 / 2; 2,5; 3; 3,5; 4
Z, C, U 172 / 1,5; 2; 2,5; 3	L 75 / 1,5; 2; 2,5	Z, C 160e / 1,5; 2; 2,5; 3
Z, C, U 180 / 1,5; 2; 2,5; 3	CI 120 / 2	Z, C 200e / 1,5; 2; 2,5; 3
Z, C, U 200 / 1,5; 2; 2,5; 3	CI 150 / 2	Z, C 250e / 1,5; 2; 2,5; 3
Z, C, U 210 / 1,5; 2; 2,5; 3	CI 200 / 2	Z, C 300e / 1,5; 2; 2,5; 3
Z, C, U 220 / 1,5; 2; 2,5; 3	CI250 / 2	Z, C 350e / 1,5; 2; 2,5; 3

TECHNICAL CHARACTERISTICS

See "Profile Statement - Sectional Dimensions. Geometric features."

CORROSION RESISTANCE

In contact with a clean atmosphere with a relative humidity of approx. 70%, zinc to corrode at low speed compared with steel, this report and for keeping the unventilated atmospheres, aggressive humid and release of gas or steam in the table corresponding to DIN EN ISO 12944-2.

Also, in a humid or releasing gas, surface zinc is covered with spots that make the product look ugly.

Elasticity coefficient of zinc is much lower than steel, and Zn-Fe intermetallic layers to galvanizing are more brittle.

Given the issues mentioned, are imposed restrictive handling transport and storage galvanized profiles.

Category of corrosion	Loss of thickness [µm/year]		Examples of typical environment	
	Steel	Zinc	Outside	Inside
C1 very easy	≤ 1,3	< 0,1		Relative humidity ≤ 60%
C2 easy	1,3 - 25	0,1 - 0,7	Slightly harmful atmosphere, dry climate	Open building to the temporary condensation
C3 medium	25 - 50	0,7 - 2,1	Town or industry atmosphere, with CO ² average load or temperate Mediterranean climate	Rooms with relatively high air humidity load and slightly harmful
C4 hard	50 - 80	2,1 - 4,2	Industrial and coastal atmosphere with an average of salt	Production halls (chemical industry) swimming pools
C5 - I very hard, Industrial	80 - 200	4,2 - 8,4	Industrial atmosphere with relatively high humidity	Buildings with condensation and strong harmful
C5 - M very hard, marin			Shore, offshore platforms	

PACKAGING. MARKINGS

Packaging profiles is achieved by fixing galvanized metal strip. Package will be marked accordingly done. Profiles will be marked as follows:

- Type profile
- thickness
- length
- roll series
- steel quality + zinc coating
- brand
- Date of manufacture.

Example of marking:

Z200 (2) 7600 71239363 S350GD+Z275MA MBS 28/02/2007

STORAGE

Galvanized profiles stored in well ventilated under covered sheds or ventilated warehouses. Avoid enclosures releases noxious gas, steam or excessive humidity. Avoid prolonged storage in packages. Temporary storage of packet delivery profiles are galvanized before media made of wood. At efecturarea packages will be introduced between wedges separating parts of plastics or rubber. If galvanized parts storage areas with good climate and atmosphere Marine will take additional protective measures to avoid zinc oxide ("white rust").

TRANSPORT

Transport of galvanized profiles shall be such that to avoid zinc coating damage by scratching, impact or friction with hard materials. Is recommended parcel products. Preferably be used only closed vehicles. If shipping, it will be appropriate safeguards to avoid splashing saltwater galvanized parts.

MANIPULATION

It prohibits discharge by throw or inversion height markers galvanized to avoid shocks that could lead to cracking of the zinc layer. At discharge use only hooks and wires coated with less hard than zinc such as rubber or cloth. Downloading of transport will be directly in the storage covered, and if this is not possible, not galvanized parts will get wet.

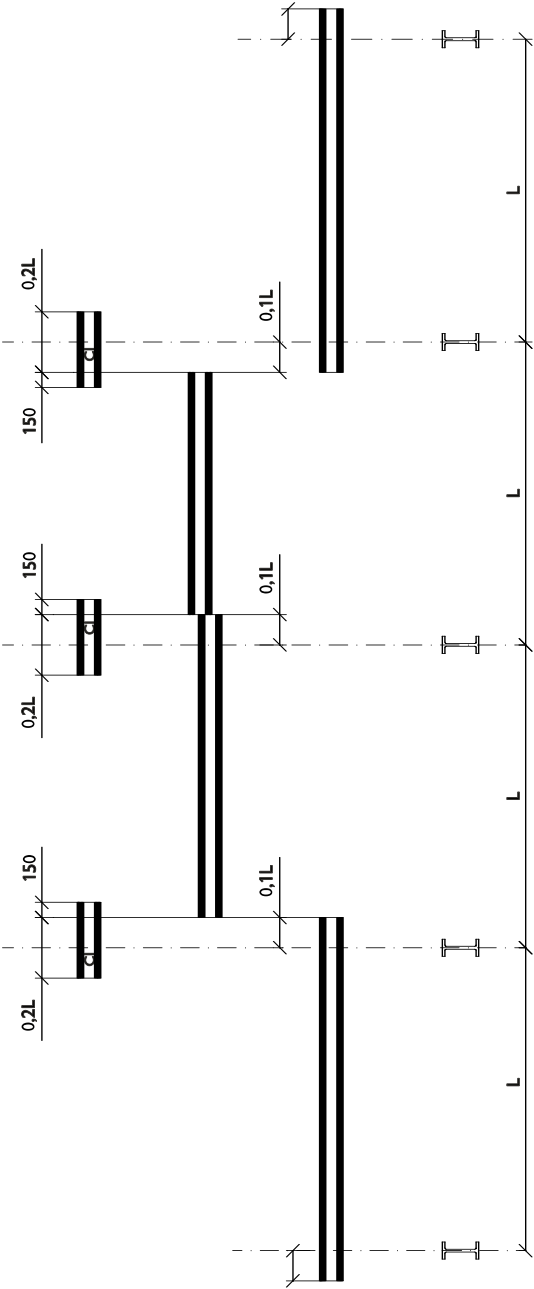
WARRANTY

The warranty period of profiles is 15 years from date of delivery. Respecting the storage, transport and handling instructions, PROINVEST GROUP SRL guarantees the quality and corrosion resistance of galvanized profiles!

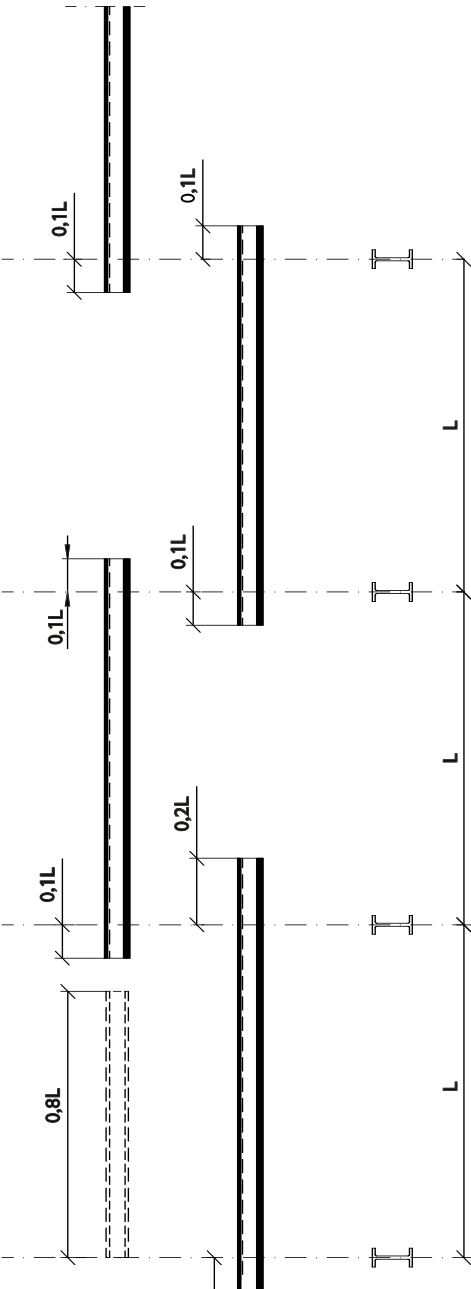
PROVIDED THAT NO WAIVER IS GARANTED

- in cases of majeure forces (conflicts, natural disaster, fires, etc);
- failure to comply with transport, storage and installation required by project execution (www.mbscom.ro);
- improper transport, storage and handling:
 - Deformation during transport or storage;
 - Prolonged contact with alkaline or acidic environments;
 - Excessive moisture;
- cutting or welding Z, C, U galvanized profiles, with the grinding wheel;
- Z, C, U profiles was in direct contact with showers of sparks from grinding, welding and thermal cutting of metals.

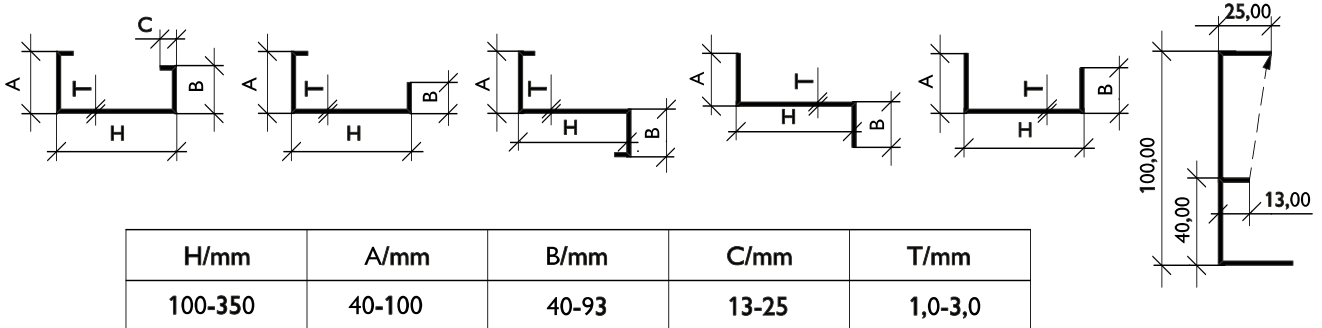
Innadire grinzi C



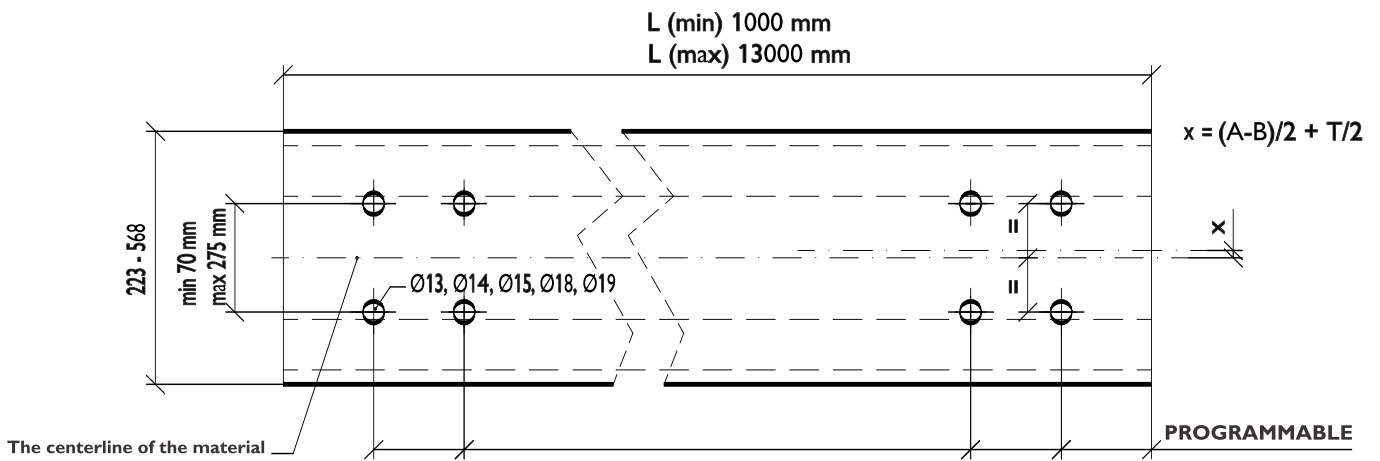
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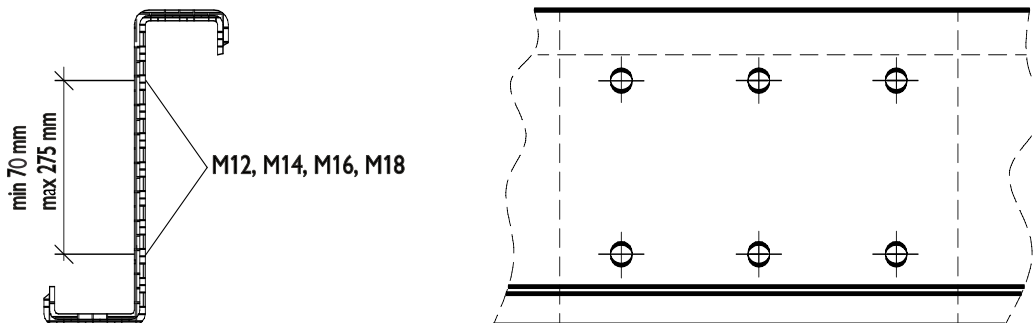
PROFILES AND FLANGE



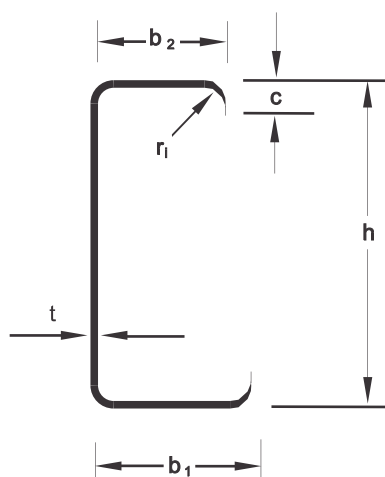
HOLES LAYOUT



JUNCTION



Galvanized profiles C120


STEEL QUALITY
YIELD STRENGTH
TENSILE STRENGTH
MODULUS OF ELASTICITY

	S350GD+275Z
f_y	350 [N/mm ²]
f_u	420 [N/mm ²]
E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
C 120/1,5	120	47	41	13.3	1.5	1.42	3	2.7
C 120/2	120	47	41	13.3	2.0	1.91	3	3.6

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	y _G [mm]	z _{G,1} [mm]	z _{G,2} [mm]	I _y [mm ⁴]	W _{y,1} [mm ³]	W _{y,2} [mm ³]	I _t [mm ⁴]	I _z [mm ⁴]	i _y [mm]	i _z [mm]
C 120/1,5	325	13.62	58.45	61.55	722530	12362	11738	218	87417	47.15	16.40
C 120/2	433	13.73	58.44	61.56	954080	16326	15498	527	113590	46.91	16.19

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS
(1) compressive stress

	A _{ef} [mm ²]	z _{Gef,c} [mm]	z _{Gef,c1} [mm]	z _{Gef,c2} [mm]
C 120/1,5	209	15.15	59.26	60.75
C 120/2	323	14.68	58.86	61.14

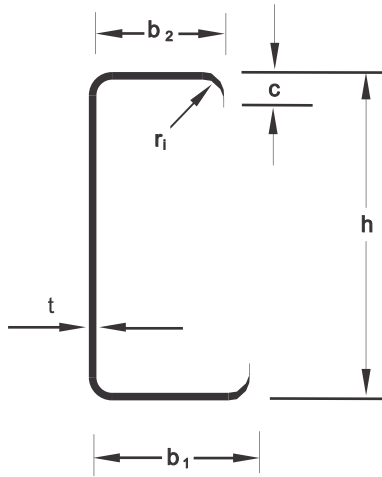
(2) request of bending after y-y axis with b1 foot compressive required

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
C 120/1,5	61.44	58.56	666850	10853	11388
C 120/2	60.11	59.89	909290	15128	15182

(3) request of bending after y-y axis with b2 foot compressive required

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
C 120/1,5	64.00	56.01	677190	10582	12092
C 120/2	62.72	57.28	920160	14671	16064

Galvanized profiles C150



STEEL QUALITY		S350GD+275Z	
YIELD STRENGTH	f_y	350	[N/mm ²]
TENSILE STRENGTH	f_u	420	[N/mm ²]
MODULUS OF ELASTICITY	E	210000	[N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
C 150/1,5	150	47	41	13.3	1.5	1.42	3	3.1
C 150/2	150	47	41	13.3	2.0	1.91	3	4.1
C 150/2,5	150	47	41	13.3	2.5	2.40	3	5.0

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	y _G [mm]	z _{G.1} [mm]	z _{G.2} [mm]	I _y [mm ⁴]	W _{y.1} [mm ³]	W _{y.2} [mm ³]	I _t [mm ⁴]	I _z [mm]	i _y [mm]	i _z [mm]
C 150/1,5	368	12.12	73.28	76.72	1220300	16652	15905	247	93442	57.61	15.94
C 150/2	491	12.24	73.27	76.73	1614900	22040	21046	597	121410	57.36	15.73
C 150/2,5	612	12.36	73.26	76.74	1996200	27247	26014	1175	147320	57.11	15.52

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

(1) compressive stress

	A _{ef} [mm ²]	z _{Gef.c} [mm]	z _{Gef.c1} [mm]	z _{Gef.c2} [mm]
C 150/1,5	207	14.60	74.19	75.81
C 150/2	325	14.19	73.74	76.26
C 150/2,5	454	13.61	73.52	76.48

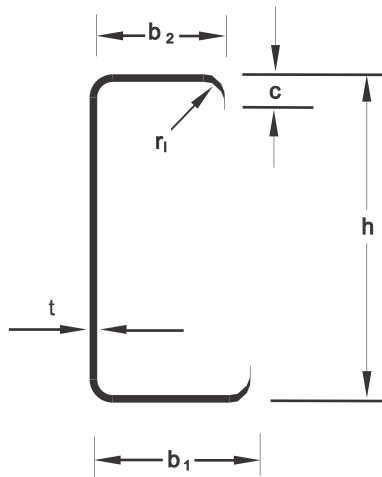
(2) request of bending after y-y axis with b1 foot compressive required

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 150/1,5	78.87	71.13	1091700	13842	15347
C 150/2	75.38	74.62	1534300	20354	20562
C 150/2,5	74.76	75.24	1922400	25716	25549

(3) request of bending after y-y axis with b2 foot compressive required

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 150/1,5	81.76	68.24	1107000	13539	16223
C 150/2	78.45	71.55	1548700	19741	21645
C 150/2,5	77.79	72.21	1939400	24933	26856

Galvanized profiles C200



STEEL QUALITY	S350GD+275Z	
YIELD STRENGTH	f_y	350 [N/mm ²]
TENSILE STRENGTH	f_u	420 [N/mm ²]
MODULUS OF ELASTICITY	E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
C 200/1,5	200	74	66	18.3	1.5	1.42	3	4.5
C 200/2	200	74	66	18.3	2.0	1.91	3	5.9
C 200/2,5	200	74	66	18.3	2.5	2.40	3	7.3

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	y _G [mm]	z _{G.1} [mm]	z _{G.2} [mm]	I _y [mm ⁴]	W _{y.1} [mm ³]	W _{y.2} [mm ³]	I _t [mm ⁴]	I _z [mm ⁴]	i _y [mm]	i _z [mm]
C 200/1,5	527	20.20	97.86	102.14	3254800	33260	31865	354	349580	78.61	25.76
C 200/2	705	20.32	97.85	102.15	4328400	44234	42374	857	459910	78.37	25.55
C 200/2,5	881	20.44	97.85	102.15	5377100	54955	52637	1691	565160	78.13	25.33

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

(1) compressive stress

	A _{ef} [mm ²]	z _{Gef.c} [mm]	z _{Gef.c.1} [mm]	z _{Gef.c.2} [mm]
C 200/1,5	224	21.06	100.70	99.30
C 200/2	381	21.89	100.20	99.80
C 200/2,5	554	22.11	98.93	101.07

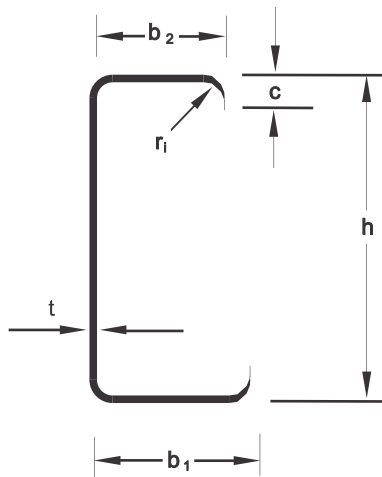
(2) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 200/1,5	116.18	83.82	2449800	21086	29228
C 200/2	108.10	91.90	3698500	34215	40244
C 200/2,5	102.99	97.01	4939300	47958	50917

(3) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 200/1,5	118.54	81.46	2532900	21368	31093
C 200/2	110.75	89.25	3804400	34351	42626
C 200/2,5	106.51	93.49	5005300	46992	53539

Galvanized profiles C250



STEEL QUALITY		S350GD+275Z	
YIELD STRENGTH	f_y	350	[N/mm ²]
TENSILE STRENGTH	f_u	420	[N/mm ²]
MODULUS OF ELASTICITY	E	210000	[N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
C 250/2	250	74	66	18.3	2.0	1.91	3	6.7
C 250/2,5	250	74	66	18.3	2.5	2.40	3	8.3
C 250/3	250	74	66	18.3	3.0	2.90	3	9.9

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	y _G [mm]	z _{G.1} [mm]	z _{G.2} [mm]	I _y [mm ⁴]	W _{y.1} [mm ³]	W _{y.2} [mm ³]	I _t [mm ⁴]	I _z [mm]	i _y [mm]	i _z [mm]
C 250/2	800	18.01	122.63	127.37	7311900	59625	57407	973	490320	95.59	24.75
C 250/2,5	1001	18.13	122.62	127.38	9095700	74175	71409	1922	602500	95.33	24.54
C 250/3	1204	18.26	122.62	127.38	10878000	88713	85396	3374	711530	95.07	24.32

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

(1) compressive stress

	A _{ef} [mm ²]	z _{Gef.c} [mm]	z _{Gef.c1} [mm]	z _{Gef.c2} [mm]
C 250/2	377	20.98	125.27	124.73
C 250/2,5	551	21.23	123.77	126.23
C 250/3	739	20.97	123.61	126.39

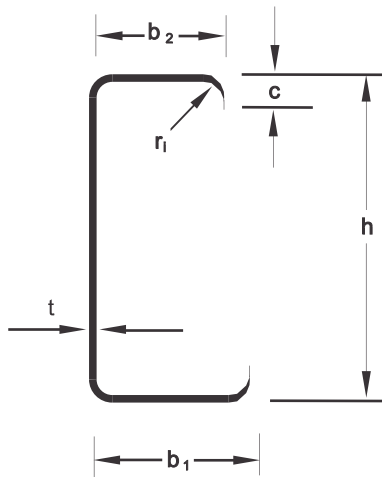
(2) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 250/2	138.86	111.14	6004900	43244	54030
C 250/2,5	132.18	117.82	8089000	61196	68657
C 250/3	128.17	121.83	10092000	78737	82839

(3) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 250/2	141.88	108.12	6163300	43440	57004
C 250/2,5	136.19	113.81	8182000	60082	71901
C 250/3	132.30	117.70	10194000	77050	86608

Galvanized profiles C300



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

	S350GD+275Z
f_y	350 [N/mm ²]
f_u	420 [N/mm ²]
E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
C 300/2,5	300	90	82	21.3	2.5	2.40	3	10.1
C 300/3	300	90	82	21.3	3.0	2.90	3	12.1

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	y _G [mm]	z _{G.1} [mm]	z _{G.2} [mm]	I _y [mm ⁴]	W _{y.1} [mm ³]	W _{y.2} [mm ³]	I _t [mm ⁴]	I _z [mm]	i _y [mm]	i _z [mm]
C 300/2,5	1212	22.12	147.64	152.36	16010000	108440	105080	2327	1107000	114.93	30.22
C 300/3	1459	22.25	147.64	152.36	19182000	129930	125900	4089	1312800	114.67	30.00

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

(1) compressive stress

	A _{ef} [mm ²]	z _{Gef.c} [mm]	z _{Gef.c.1} [mm]	z _{Gef.c.2} [mm]
C 300/2,5	582	25.12	150.20	149.80
C 300/3	798	25.40	148.81	151.19

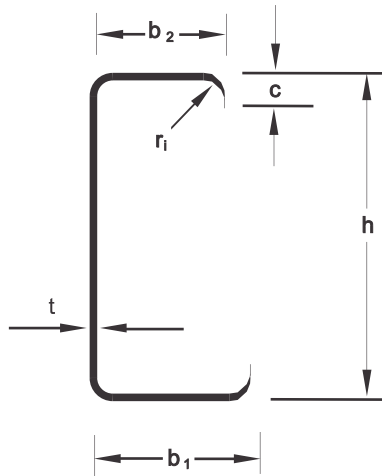
(2) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 300/2,5	166.12	133.88	13269000	79874	99109
C 300/3	159.50	140.50	16974000	106420	120820

(3) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
C 300/2,5	169.14	130.86	13554000	80137	103580
C 300/3	163.43	136.57	17148000	104930	125560

Galvanized profiles C350



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

	S350GD+275Z
f_y	350 [N/mm ²]
f_u	420 [N/mm ²]
E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
C 350/2,5	350	100	92	23.3	2.5	2.40	3	11.6
C 350/3	350	100	92	23.3	3.0	2.90	3	13.9

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	y _G [mm]	z _{G,1} [mm]	z _{G,2} [mm]	I _y [mm ⁴]	W _{y,1} [mm ³]	W _{y,2} [mm ³]	I _t [mm ⁴]	I _z [mm ⁴]	i _y [mm]	i _z [mm]
C 350/2,5	1390	23.89	172.60	177.40	24777000	143550	139670	2668	1559700	133.53	33.50
C 350/3	1673	24.02	172.59	177.41	29717000	172180	167510	4691	1853100	133.27	33.28

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

(1) compressive stress

	A _{ef} [mm ²]	z _{Gef,c} [mm]	z _{Gef,c1} [mm]	z _{Gef,c2} [mm]
C 350/2,5	591	26.99	175.41	174.59
C 350/3	825	27.70	174.74	175.26

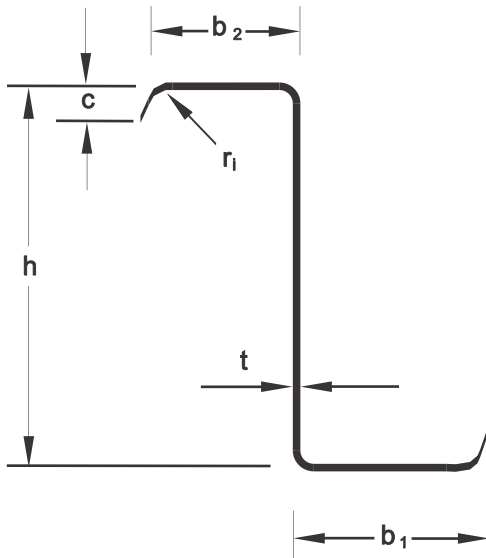
(2) request of bending after y-y axis with b1 foot compressive required

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
C 350/2,5	200.30	149.70	19407000	96892	129640
C 350/3	191.80	158.20	25148000	131120	158960

(3) request of bending after y-y axis with b2 foot compressive required

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
C 350/2,5	203.28	146.72	19797000	97389	134940
C 350/3	195.18	154.82	25545000	130880	165000

Galvanized profiles Z120



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

	S350GD+275Z
f_y	350 [N/mm ²]
f_u	420 [N/mm ²]
E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
Z 120/1,5	120	47	41	13.3	1.5	1.42	3	2.7
Z 120/2	120	47	41	13.3	2.0	1.91	3	3.6

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	z _{G,1} [mm]	z _{G,2} [mm]	I _y [mm ⁴]	W _{y,1} [mm ³]	W _{y,2} [mm ³]	I _t [mm ⁴]	i _y [mm]
Z 120/1,5	325	58.45	61.55	722530	12362	11738	218	47.15
Z 120/2	433	58.44	61.56	954080	16326	15498	527	46.91

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

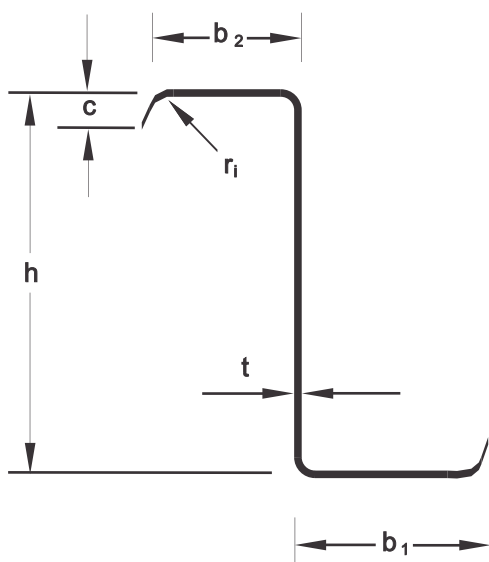
(1) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 120/1,5	61.44	58.56	666850	10853	11388
Z 120/2	60.11	59.89	909290	15128	15182

(2) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 120/1,5	64.00	56.01	677190	10582	12092
Z 120/2	62.72	57.28	920160	14671	16064

Galvanized profiles Z150



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

	S350GD+275Z
f_y	350 [N/mm ²]
f_u	420 [N/mm ²]
E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
Z 150/1,5	150	47	41	13.3	1.5	1.42	3	3.1
Z 150/2	150	47	41	13.3	2.0	1.91	3	4.1
Z 150/2,5	150	47	41	13.3	2.5	2.40	3	5.0

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	z _{G,1} [mm]	z _{G,2} [mm]	I _y [mm ⁴]	W _{y,1} [mm ³]	W _{y,2} [mm ³]	I _t [mm ⁴]	i _y [mm]
Z 150/1,5	368	73.28	76.72	1220300	16652	15905	247	57.61
Z 150/2	491	73.27	76.73	1614900	22040	21046	597	57.36
Z 150/2,5	612	73.26	76.74	1996200	27247	26014	1175	57.11

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

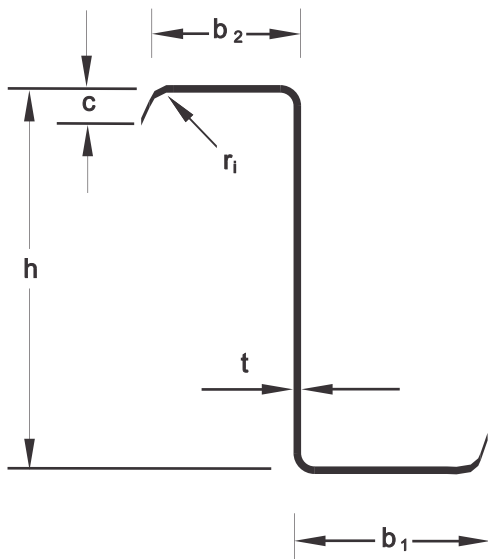
(1) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 150/1,5	78.87	71.13	1091700	13842	15347
Z 150/2	75.38	74.62	1534300	20354	20562
Z 150/2,5	74.76	75.24	1922400	25716	25549

(2) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 150/1,5	81.76	68.24	1107000	13539	16223
Z 150/2	78.45	71.55	1548700	19741	21645
Z 150/2,5	77.79	72.21	1939400	24933	26856

Galvanized profiles Z200



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

	S350GD+275Z
f_y	350 [N/mm ²]
f_u	420 [N/mm ²]
E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
Z 200/1,5	200	74	66	18.3	1.5	1.42	3	4.5
Z 200/2	200	74	66	18.3	2.0	1.91	3	5.9
Z 200/2,5	200	74	66	18.3	2.5	2.40	3	7.3

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	z _{G,1} [mm]	z _{G,2} [mm]	I _y [mm ⁴]	W _{y,1} [mm ³]	W _{y,2} [mm ³]	I _t [mm ⁴]	i _y [mm]
Z 200/1,5	527	97.86	104.14	3254800	33260	31865	354	78.61
Z 200/2	705	97.85	102.15	4328400	44234	42374	857	78.37
Z 200/2,5	881	97.85	102.15	5377100	54955	52637	1691	78.13

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

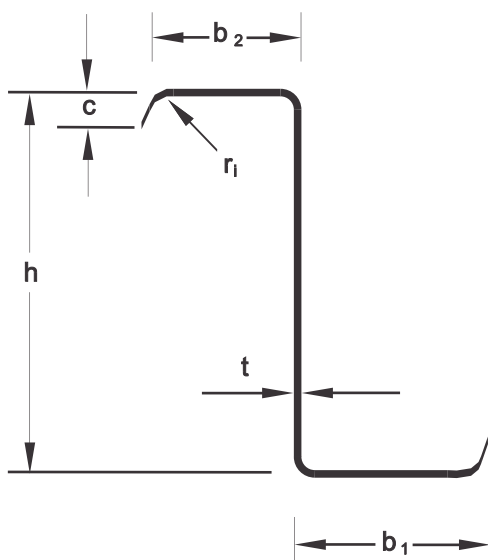
(1) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 200/1,5	116.18	83.82	2449800	21086	29228
Z 200/2	108.10	91.90	3698500	34215	40244
Z 200/2,5	102.99	97.01	4939300	47958	50917

(2) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 200/1,5	118.54	81.46	2532900	21368	31093
Z 200/2	110.75	89.25	3804400	34351	42626
Z 200/2,5	106.51	93.49	5005300	46992	53539

Galvanized profiles Z250



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

f_y

f_u

E

S350GD+275Z

350 [N/mm²]

420 [N/mm²]

210000 [N/mm²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
Z 250/2	250	74	66	18.3	2.0	1.91	3	6.7
Z 250/2,5	250	74	66	18.3	2.5	2.40	3	8.3
Z 250/3	250	74	66	18.3	3.0	2.90	3	9.9

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	z _{G,1} [mm]	z _{G,2} [mm]	I _y [mm ⁴]	W _{y,1} [mm ³]	W _{y,2} [mm ³]	I _t [mm ⁴]	i _y [mm]
Z 250/2	800	122.63	127.37	7311900	59625	57407	973	95.59
Z 250/2,5	1001	122.62	127.38	9095700	74175	71409	1922	95.33
Z 250/3	1204	122.62	127.38	10878000	88713	85396	3374	95.07

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

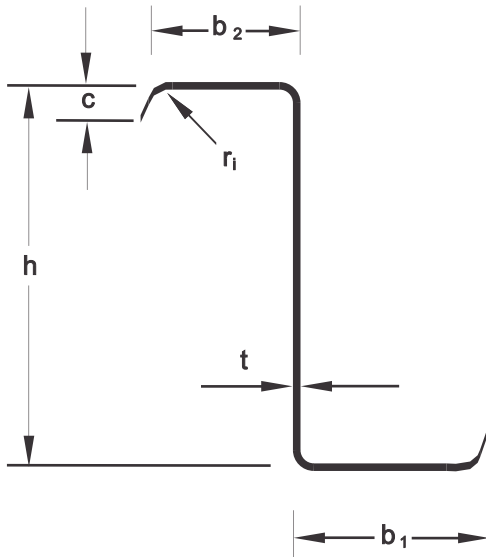
(1) request of bending after y-y axis with b₁ foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 250/2	138.86	111.14	6004900	43244	54030
Z 250/2,5	132.18	117.82	8089000	61196	68657
Z 250/3	128.17	121.83	10092000	78737	82839

(2) request of bending after y-y axis with b₂ foot compressive requierd

	z _{Gef,i1} [mm]	z _{Gef,i2} [mm]	I _{y,ef} [mm ⁴]	W _{y,ef,1} [mm ³]	W _{y,ef,2} [mm ³]
Z 250/2	141.88	108.12	6163300	43440	57004
Z 250/2,5	136.19	113.81	8182800	60082	71901
Z 250/3	132.30	117.70	10194000	77050	86608

Galvanized profiles Z300



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

f_y
f_u
E

S350GD+275Z
350 [N/mm ²]
420 [N/mm ²]
210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
Z 300/2,5	300	90	82	21.3	2.5	2.40	3	10.1
Z 300/3	300	90	82	21.3	3.0	2.90	3	12.1

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	z _{G.1} [mm]	z _{G.2} [mm]	I _y [mm ⁴]	W _{y.1} [mm ³]	W _{y.2} [mm ³]	I _t [mm ⁴]	i _y [mm]
Z 300/2,5	1212	147.64	152.36	16010000	108440	105080	2327	114.93
Z 300/3	1459	147.64	152.36	19182000	129930	125900	4089	114.67

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

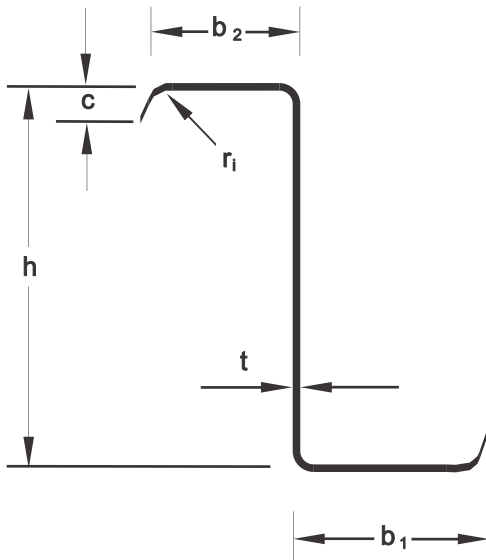
(1) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
Z 300/2,5	166.12	133.88	13269000	79874	99109
Z 300/3	159.50	140.50	16974000	106420	120820

(2) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
Z 300/2,5	169.14	130.86	13554000	80137	103580
Z 300/3	163.43	136.57	17148000	104930	125560

Galvanized profiles Z350



STEEL QUALITY

YIELD STRENGTH

TENSILE STRENGTH

MODULUS OF ELASTICITY

	S350GD+275Z
f_y	350 [N/mm ²]
f_u	420 [N/mm ²]
E	210000 [N/mm ²]

SECTIONAL DIMENSIONS

	h [mm]	b ₁ [mm]	b ₂ [mm]	c [mm]	t _n [mm]	t [mm]	r _i [mm]	G [kg/m]
Z 350/2,5	350	100	92	23.3	2.5	2.40	3	11.6
Z 350/3	350	100	92	23.3	3.0	2.90	3	13.9

GEOMETRICAL CHARACTERISTICS OF RAW SECTIONS

	A [mm ²]	z _{G.1} [mm]	z _{G.2} [mm]	I _y [mm ⁴]	W _{y.1} [mm ³]	W _{y.2} [mm ³]	I _t [mm ⁴]	i _y [mm]
Z 350/2,5	1390	172.60	177.40	24777000	143550	139670	2668	133.53
Z 350/3	1673	172.59	177.41	29717000	172180	167510	4691	133.27

GEOMETRICAL CHARACTERISTICS OF EFFICIENT TRANSVERSAL SECTIONS

(1) request of bending after y-y axis with b1 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
Z 350/2,5	200.30	149.70	19407000	96892	129640
Z 350/3	191.80	158.20	25148000	131120	158960

(2) request of bending after y-y axis with b2 foot compressive requierd

	z _{Gef.i1} [mm]	z _{Gef.i2} [mm]	I _{y.ef} [mm ⁴]	W _{y.ef.1} [mm ³]	W _{y.ef.2} [mm ³]
Z 350/2,5	203.28	146.72	19797000	97389	134940
Z 350/3	195.18	154.82	25545000	130880	165000

References

