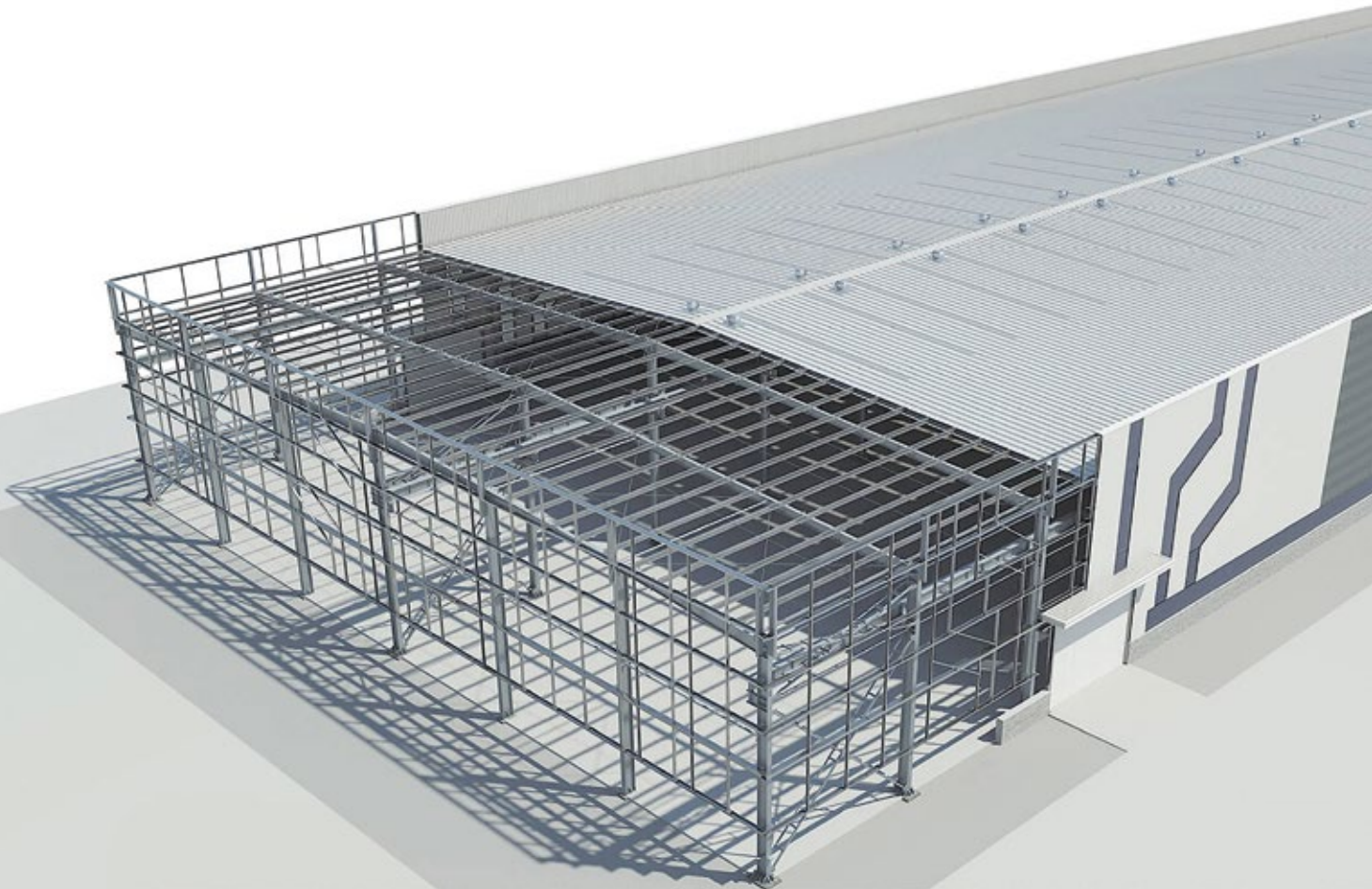


MATERIALS FOR FAST CONSTRUCTION



GALVANIZED STEEL PROFILE FOR LIGHTWEIGHT STEEL STRUCTURES (LWSS)



Z, C and U steel purlins are cold-rolled steel profiles made of the S350GD-275Z-type galvanized structural steel 1.5, 2, 2.5, 3 mm thick and 1600 to 13500 mm long.

They are used in construction as follows:

- the main supporting structure (frames with columns and beams);
- reconstruction and completion (roofing, facade cladding);
- intermediate ceiling and floor beams;
- girders (the C shape is used);
- superstructures and extensions (roof beams or wall beams);
- construction of the roof and attic.

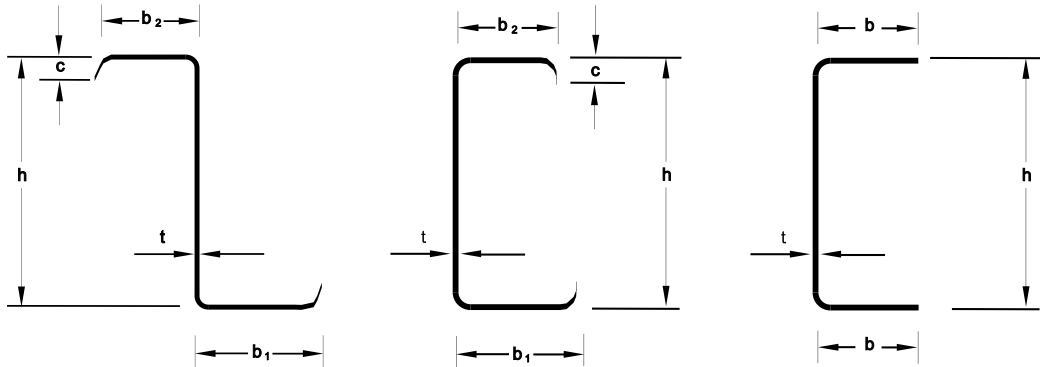
Advantages of shapes for LWSS:

- lightweight structure (relatively low weight);
- excellent corrosion resistance (zinc – 275 g/sq. m);
- ease of installation work;

- uniform quality;
- high strength and rigidity (due to the use of structural steel);
- incredibly increased accuracy of details;
- fast and simple frame assembly;
- low transportation costs;
- profiles are suitable for repeated use (possibility of moving a facility or its part);
- not susceptible to decay and insensitive to the action of insects.

Another advantage is the production process by means of the cold rolling method, which does not lead to a decrease in the fracture and tear strength of the steel. Cold rolling leaves these properties practically unchanged both in the center and at the extreme points.

STANDARD GALVANIZED PROFILES Z, C, U, L, CL



S350GD + Z275MA, Lmax = 13500 mm

Z & C

h (mm)	t (mm)	b1 (mm)	b2 (mm)	C (mm)	Weight, kg/LM	h (mm)	t (mm)	b1 (mm)	b2 (mm)	C (mm)	Weight, kg/LM
10	1.5	56	50	14.5	2.70	200	1.5	74	66	18.3	4.50
	2.0	56	50	14.5	3.60		2.0	74	66	18.3	5.90
	2.5	56	50	14.5	4.40		2.5	74	66	18.3	7.30
	3.0	56	50	14.5	5.20		3.0	74	66	18.3	8.70
120	1.5	47	41	13.3	2.70	210	1.5	69	61	18.3	4.50
	2.0	47	41	13.3	3.60		2.0	69	61	18.3	5.90
	2.5	47	41	13.3	4.40		2.5	69	61	18.3	7.30
	3.0	47	41	13.3	5.20		3.0	69	61	18.3	8.70
140	1.5	52	46	13.3	3.10	220	1.5	64	56	18.3	4.50
	2.0	52	46	13.3	4.10		2.0	64	56	18.3	5.90
	2.5	52	46	13.3	5.00		2.5	64	56	18.3	7.30
	3.0	52	46	13.3	6.00		3.0	64	56	18.3	8.70
150	1.5	47	41	13.3	3.10	250	1.5	74	66	18.3	5.10
	2.0	47	41	13.3	4.10		2.0	74	66	18.3	6.70
	2.5	47	41	13.3	5.00		2.5	74	66	18.3	8.30
	3.0	47	41	13.3	6.00		3.0	74	66	18.3	9.90
160	1.5	74	66	17.3	3.90	260	1.5	69	61	18.3	5.10
	2.0	74	66	17.3	5.20		2.0	69	61	18.3	6.70
	2.5	74	66	17.3	6.50		2.5	69	61	18.3	8.30
	3.0	74	66	17.3	7.70		3.0	69	61	18.3	9.90
172	1.5	68	60	17.3	3.90	300	1.5	90	82	21.3	6.10
	2.0	68	60	17.3	5.20		2.0	90	82	21.3	8.20
	2.5	68	60	17.3	6.50		2.5	90	82	21.3	10.10
	3.0	68	60	17.3	7.70		3.0	90	82	21.3	12.10
180	1.5	64	56	17.3	3.90	350	1.5	100	92	23.3	7.10
	2.0	64	56	17.3	5.20		2.0	100	92	23.3	9.40
	2.5	64	56	17.3	6.50		2.5	100	92	23.3	11.60
	3.0	64	56	17.3	7.70		3.0	100	92	23.3	13.90

S350GD + Z275MA, Lmax = 13500 mm

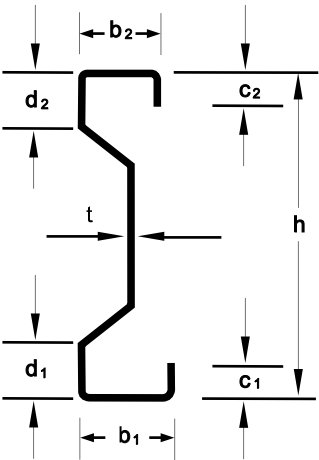
U

h (mm)	t (mm)	b1 (mm)	b2 (mm)	C (mm)	Weight, kg/LM	h (mm)	t (mm)	b1 (mm)	b2 (mm)	C (mm)	Weight, kg/LM
100	1.5	67	67	-	2.70	220	1.5	76	76	-	4.50
	2.0	67	67	-	3.60		2.0	76	76	-	5.90
	2.5	67	67	-	4.40		2.5	76	76	-	7.30
	3.0	67	67	-	5.20		3.0	76	76	-	8.70
120	1.5	57	57	-	2.70	250	1.5	88	88	-	5.10
	2.0	57	57	-	3.60		2.0	88	88	-	6.70
	2.5	57	57	-	4.40		2.5	88	88	-	8.30
	3.0	57	57	-	5.20		3.0	88	88	-	9.90
140	1.5	60	60	-	3.10	260	1.5	81	81	-	5.10
	2.0	60	60	-	4.10		2.0	81	81	-	6.70
	2.5	60	60	-	5.00		2.5	81	81	-	8.30
	3.0	60	60	-	6.00		3.0	81	81	-	9.90
150	1.5	57	57	-	3.10	300	1.5	63	63	-	5.10
	2.0	57	57	-	4.10		2.0	63	63	-	6.70
	2.5	57	57	-	5.00		2.5	63	63	-	8.30
	3.0	57	57	-	6.00		3.0	63	63	-	9.90
160	1.5	84	84	-	3.90	350	1.5	82	82	-	6.10
	2.0	84	84	-	5.20		2.0	82	82	-	8.20
	2.5	84	84	-	6.50		2.5	82	82	-	10.10
	3.0	84	84	-	7.70		3.0	82	82	-	12.10
172	1.5	79	79	-	3.90						
	2.0	79	79	-	5.20						
	2.5	79	79	-	6.50						
	3.0	79	79	-	7.70						
180	1.5	75	75	-	3.90						
	2.0	75	75	-	5.20						
	2.5	75	75	-	6.50						
	3.0	75	75	-	7.70						
200	1.5	88	88	-	4.50						
	2.0	88	88	-	5.90						
	2.5	88	88	-	7.30						
	3.0	88	88	-	8.70						
210	1.5	81	81	-	4.50						
	2.0	81	81	-	5.90						
	2.5	81	81	-	7.30						
	3.0	81	81	-	8.70						

L					
h (mm)	t (mm)	b1 (mm)	b2 (mm)	C (mm)	Weight, kg/LM/nor
75	1.5	50...75	50...75	-	1.80
75	2.0	50...75	50...75	-	2.40

CL					
h (mm)	t (mm)	b1 (mm)	b2 (mm)	C (mm)	Weight, kg/LM/nor
120	2.0	41	35	-	3.30
150	2.0	42	39	-	3.60

STANDARD GALVANIZED PROFILE OMEGA



S350GD + Z275MA,
Lmax = 13500 mm

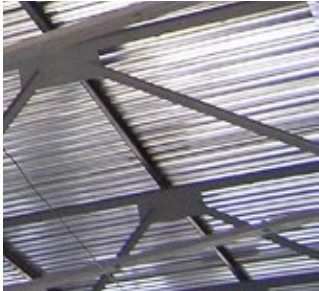
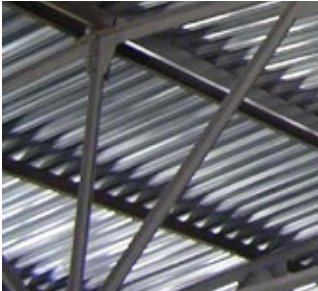
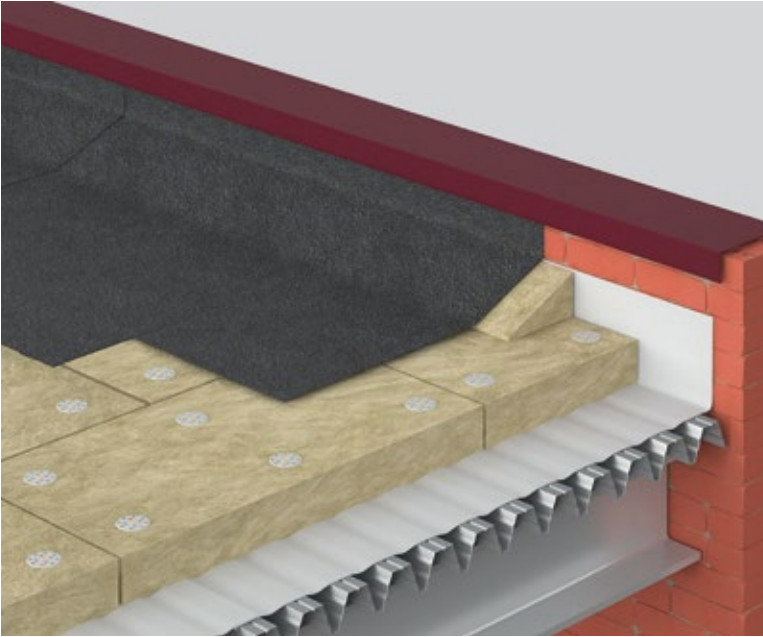
h (mm)	t (mm)	b1 (mm)	b2 (mm)	c1/c2 (mm)	E (mm)	d1/d2 (mm)	Weight, kg/LM
200	1.00	52	45	21.00	89.10	32	2.69
	1.50	52	45	21.00	89.40	32	4.01
	2.00	52	45	21.00	89.80	32	5.32
	2.50	52	45	21.00	90.20	32	6.62
	3.00	52	45	21.00	90.50	32	7.91
	3.50	52	45	21.00	90.90	32	9.19
	4.00	52	45	21.00	91.30	32	10.45
250	1.50	72	65	22.60	115.40	44	5.08
	2.00	72	65	23.80	115.80	44	6.75
	2.50	72	65	25.00	116.20	44	8.41

h (mm)	t (mm)	b1 (mm)	b2 (mm)	c1/c2 (mm)	E (mm)	d1/d2 (mm)	Weight, kg/LM
250	3.00	72	65	26.20	116.50	44	10.05
	3.50	72	65	27.00	116.90	44	11.69
	4.00	72	65	27.00	117.30	44	13.30
300	1.50	88	81	24.00	165.40	44	6.08
	2.00	88	81	24.80	165.80	44	8.09
	2.50	88	81	26.00	166.20	44	10.08
	3.00	88	81	27.20	166.50	44	12.05
	3.50	88	81	29.00	166.90	44	14.03
	4.00	88	81	29.60	167.30	44	15.98
	1.50	100	93	24.00	215.40	44	6.94
350	2.00	100	93	24.80	215.80	44	9.23
	2.50	100	93	26.00	216.20	44	11.51
	3.00	100	93	27.20	216.50	44	13.77
	3.50	100	93	29.00	216.90	44	16.03
	4.00	100	93	29.60	217.30	44	18.27
400	2.00	100	93	25.00	265.80	44	10.02
	2.50	100	93	26.00	266.20	44	12.49
	3.00	100	93	27.00	266.50	44	14.95
	3.50	100	93	29.00	266.90	44	17.41
	4.00	100	93	30.00	267.30	44	19.84

PRODUCTION STANDARDS (type of profile/thickness)

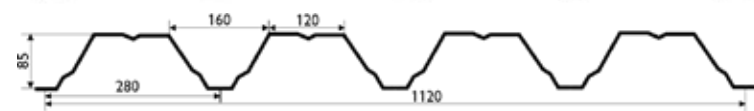
Z. C. U 100 / 1.5; 2; 2.5; 3	Z. C. U 250 / 1.5; 2; 2.5; 3	Σ 200 / 1; 1.5; 2; 2.5; 3; 3.5; 4
Z. C. U 120 / 1.5; 2; 2.5; 3	Z. C. U 260 / 1.5; 2; 2.5; 3	Σ 250 / 1.5; 2; 2.5; 3; 3.5; 4
Z. C. U 140 / 1.5; 2; 2.5; 3	Z. C. U 260 / 1.5; 2; 2.5; 3	Σ 300 / 1.5; 2; 2.5; 3; 3.5; 4
Z. C. U 150 / 1.5; 2; 2.5; 3	Z. 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

85 - 200 MM BEARING/SELF-BEARING CORRUGATED SHEET



The 85-200 mm high-profiled corrugated sheet is an ideal solution for the construction of a terrace-typed flat roof, a pitched roof with small angles of inclination both in combination with insulation and the final coating of the product, and as an independent roof. Being self-bearing, such a corrugated sheet can be advantageously used as a formwork for underpouring intermediate slabs of the inter-floor bridging with concrete. The high-profiled sheet is also intended for industrial use in the construction of large facilities (warehouses, hangars, hypermarkets, fast-constructed buildings, commercial and industrial projects, workshops, car showrooms, economic and agricultural buildings, bunkers); also, it can be used in the construction of roofs with a low inclination (up to 5 degrees). The corrugated sheet can be made in the following heights: 85 mm; 135 mm; 153 mm; 158 mm; 200 mm. The profile can be made solid, hermetic, or it can be made with perforation on the side edges of the waves. This option is practical for ensuring ventilation and airing.

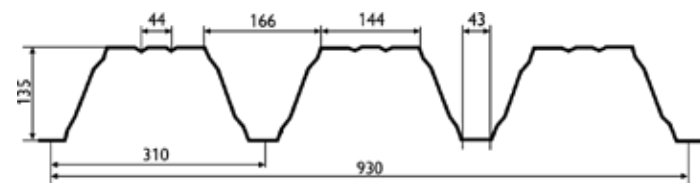
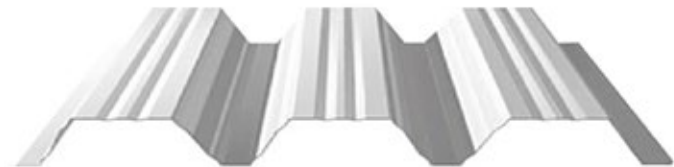
CH 85



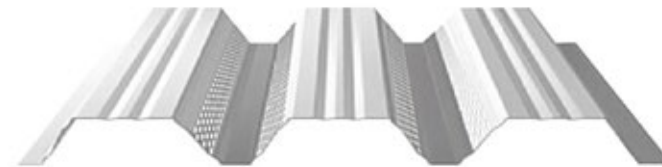
CH 85 AK



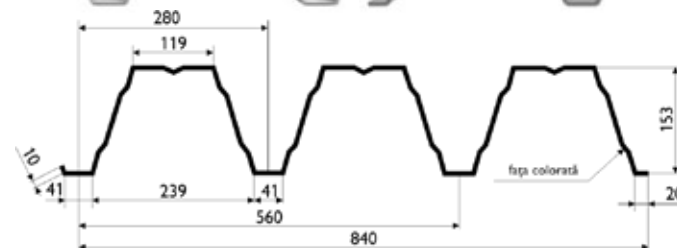
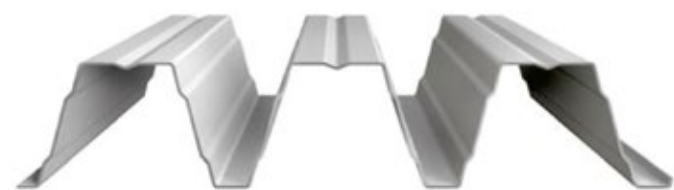
CH 135



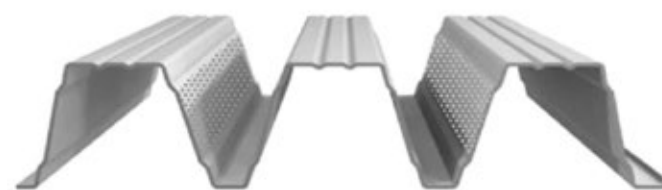
CH 135 AK



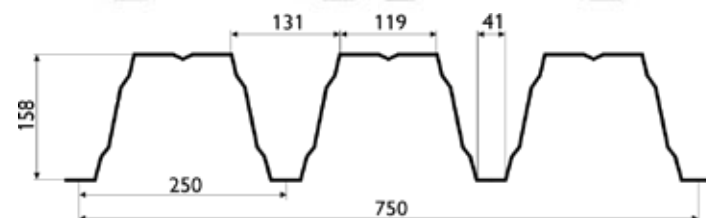
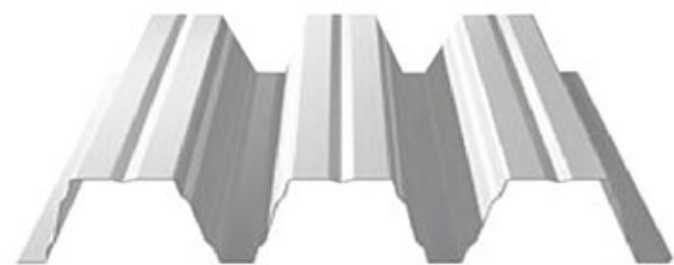
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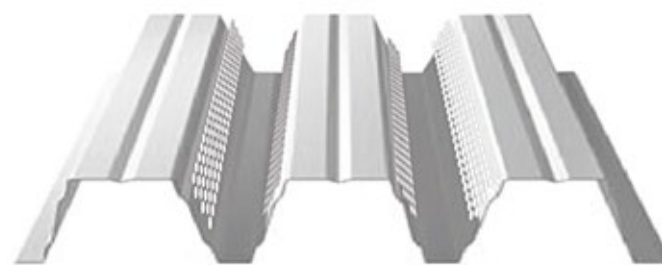
CH 153 AK



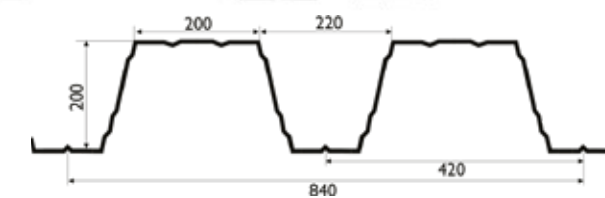
CH 158



CH 158 AK



CH 200

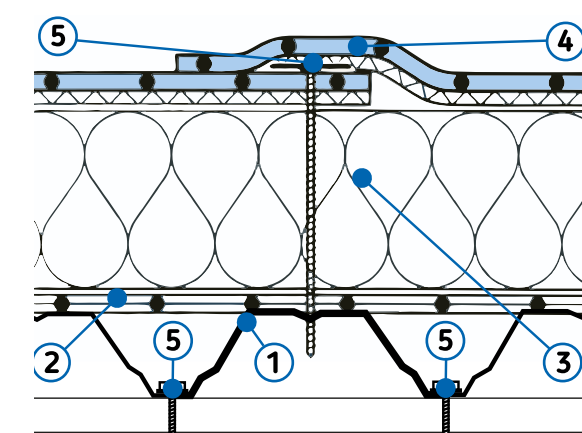


CH 200 AK



Shape type	Steel thickness, mm	Weight (kg/LM)	Maximum length (LM)	Thickness of polymer coating	Standard colors*
CH 85	0,75	8,04	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,88	9,43	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	1	10,71	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	1,25	13,39	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
CH 135	0,75	9,68	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,88	11,35	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	1	12,9	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
CH 153	1,25	16,13	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,75	10,71	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,88	12,57	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	1	14,29	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
CH 158	1,25	17,87	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,75	12	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,88	14,08	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
CH 200	1	16	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	1,25	20	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,75	10,71	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	0,88	12,57	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	1	14,29	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010
	1,25	17,86	13,5	PE 15 μm; PE 25 μm	RAL 9003; RAL 9002; RAL 9006; RAL 9010

*making in a different color is possible upon request



Design of the "roofing pie" with heat insulation

- 1 – corrugated sheet;
- 2 – insulating membrane;
- 3 – mineral wool (heat insulation material);
- 4 – waterproofing coating;
- 5 – fastening elements.

BEARING CORRUGATED SHEET CH DA60

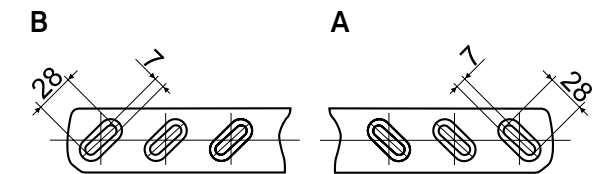
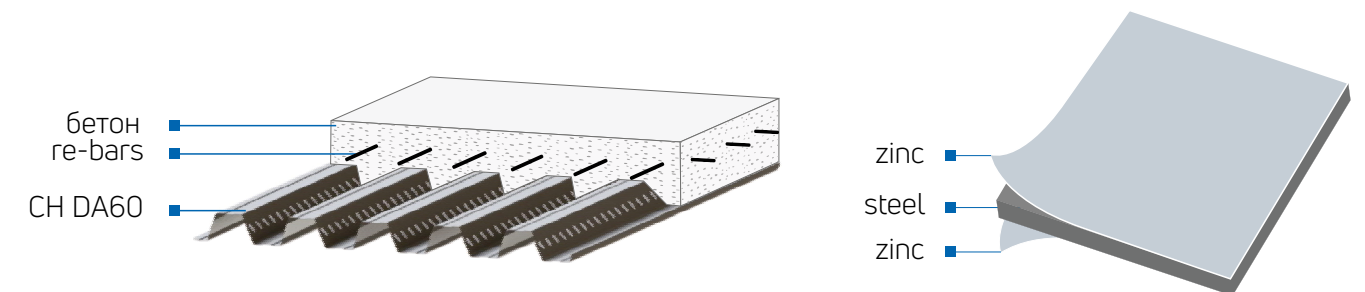
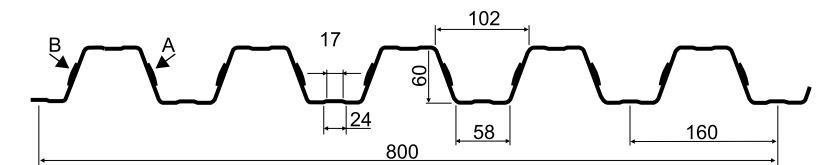
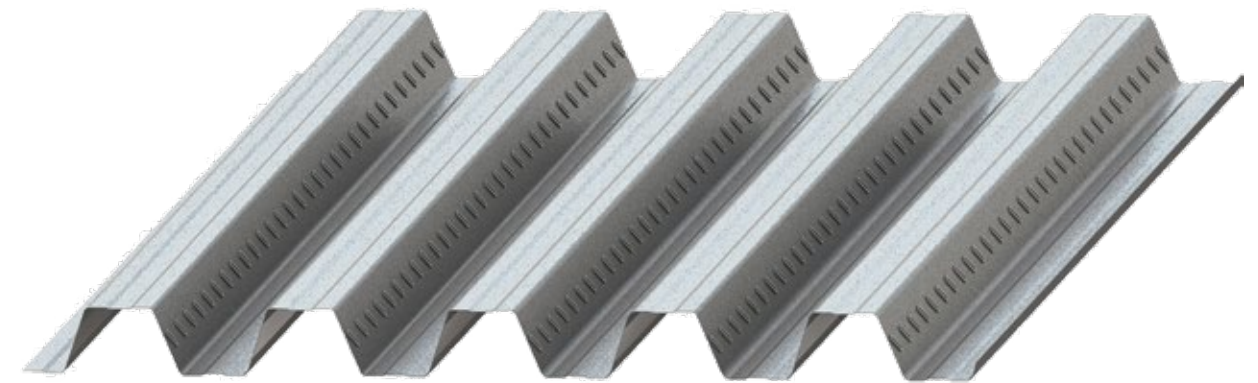


CH DA60 is a corrugated sheet designed for the construction of composite concrete floors and slabs using a special profile created to ensure good mechanical adhesion to concrete. It is used as a permanent formwork. Such a corrugated sheet has higher strength characteristics compared to the ordinary corrugated sheet and increased load-bearing capacity due to the additional stiffness of the ribs.

Advantages of CH DA60:

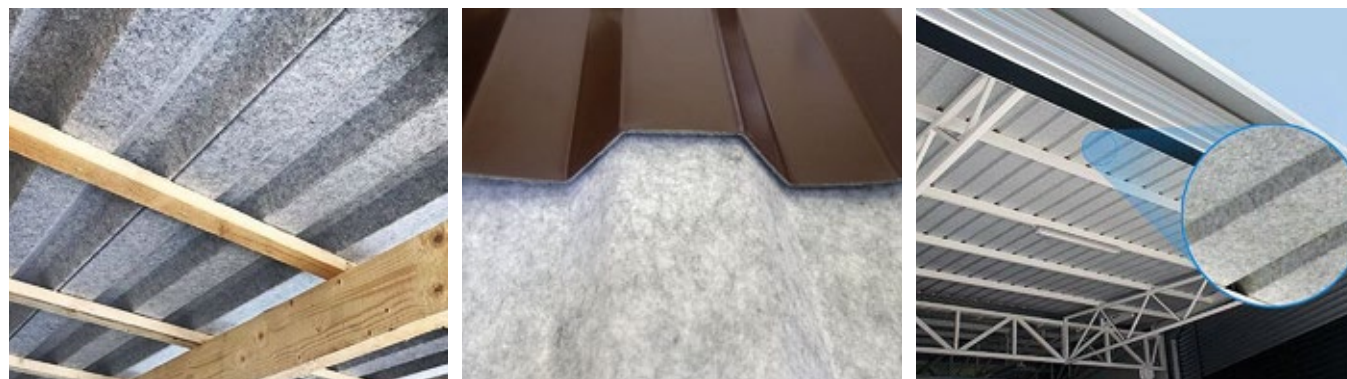
- significant savings in the cost and time of arranging floors;
- increased adhesion of the permanent formwork to concrete (thanks to special teeth on the ribs of the corrugated sheet);
- reduced weight with high strength parameters;
- ease of installation;
- fewer supporting elements are used, which simplifies the structure of a facility and reduces its cost.

CH DA60



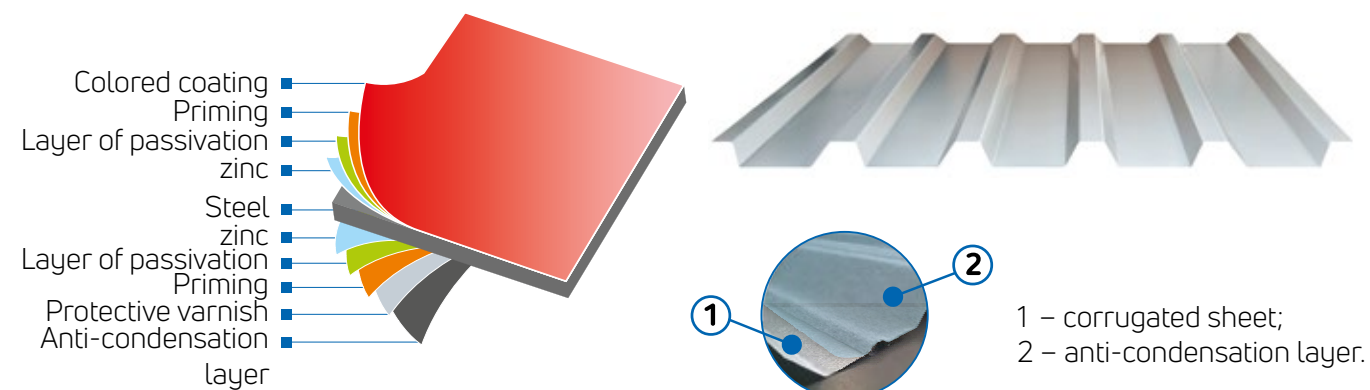
Profile type	Steel thickness (mm)	Weight (kg/LM)	Maximum length (LM)	Coating
CH DA60	0.60	7.50	13.5	zinc
	0.70	8.75	13.5	zinc
	0.80	10.00	13.5	zinc
	1.00	12.50	13.5	zinc
	1.20	15.00	13.5	zinc

ANTI-CONDENSATION COATING



A unique offer is the possibility of applying a protective anti-condensation coating to the reverse side of the «CH» corrugated sheet to solve problems when constructing a single-layer roof with a closed system, as well as to reduce the noise-conducting effect of the sheet (rain, hail).

In the absence of such a layer, and with high air humidity under the roof and temperature drops below the dew point, condensate forms on the inner surface of the ceiling, water vapor turns into water droplets and creates an unpleasant effect. The droplets flow down the waves of the profile and sometimes spill like "rain".



The anti-condensation coating absorbs moisture on its surface among the fibers, preventing the surface tension of water from creating large drops. Such a coating prevents the formation of "drops" and, as soon as the conditions change, dries releasing moisture back into the atmosphere.

Advantages of the anti-condensation coating:

- protection against premature corrosion of the corrugated sheet;
- protection against fungi and mold of wooden structures;
- ventilation of the under-roof space is guaranteed under any weather conditions;
- additional control of the steam propagation process in the heat insulation;
- partial soundproofing gives the effect of noise reduction caused by rain and hail;
- anti-condensation layer is resistant to aging and provides an additional protective layer for your roof;
- anti-condensation protection, which is pre-applied during the production of the corrugated sheet, reduces installation time and cuts costs;
- anti-condensation protection is applied taking into account the connecting seams of the corrugated sheets.

SANDWICH PANELS



Sandwich panels are an excellent solution for the construction of walls and roofs of buildings, as well as for enclosing structures of industrial equipment, air conditioners, etc. The panels are produced in a continuous process of connecting the insulating layer with the outer cladding, most often of steel. The final product is similar to a classic "bilayer sandwich", hence the name. The panel consists of several layers. The steel shell serves as protection against external atmospheric influences, such as rain or snow, and also performs a decorative function. Such panels are also resistant to corrosive factors. They retain their parameters under the influence of moisture, steam, snow, chemicals or other difficult conditions.

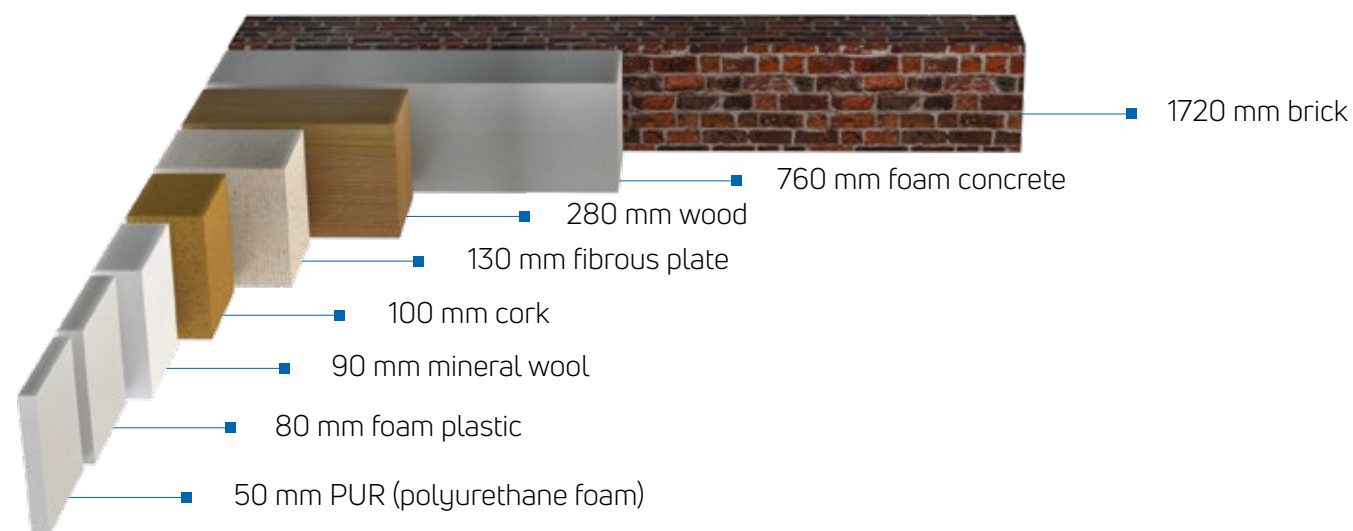
The middle, made of polyurethane foam (PUR), polyisocyanurate foam (PIR), expanded polystyrene plates (EPS) or mineral wool (MW), guarantees heat and acoustic insulation. In combination with the outer shell, they become a protective barrier against fire, snow load, wind, temperature changes and other factors.

Переваги сендвіч-панелей:

- excellent insulating properties;
- ideal protection against weather conditions;
- preservation of properties and appearance for many years;
- hermeticity (tightness): water, snow and dampness will not get inside. Perfectly made connections ensure complete tightness for many years, subject to compliance with installation standards;
- noise insulation. The correctly selected core material can provide very good noise absorption parameters;
- flame retardant properties meet the requirements. The right type of filler can ensure a fire resistance class up to EI 240 (mineral wool);
- simple and fast installation, low construction costs, and operating costs are lower than in other facilities. A 50 mm thick polyurethane foam panel has the same heat transfer coefficient as a 760 mm thick foam concrete wall or a 1720 mm thick brick wall.

Scope of application of the sandwich panels:

- warehouses,
- production workshops,
- small and large halls of commercial facilities,
- public buildings, such as sports complexes and swimming pools,
- farm buildings, such as cowsheds, poultry houses, mushroom greenhouses.

COMPARISON OF HEAT TRANSFER

They are suitable for storing products, are used in the creation of refrigerators and freezers. The sandwich panels can also be used at food processing plants: in all places where required are hygienic conditions without affecting the food in contact with the panels, as well as resistance to chemicals used in the processing and cleaning of food products.

The sandwich panels can be used as walls of facilities, both external and internal partitions, roofs and suspended ceilings (slabs) in halls with additional protection. With special coatings of the outer shell, they can be very resistant in areas with conditions of increased salinity (for example, in coastal areas) or in places with an increased level of industrial pollution.

PUR / PIR SANDWICH PANELS

The PUR and PIR sandwich panels have a polyurethane foam filler. This is a material with excellent thermal insulation properties, which is specified in the thermal conductivity indicators, as described above. In addition, foam is a good sound insulation material. Coefficient of specific acoustic resistance: $R_w = 25-27$ dB, and coefficient of acoustic absorption: $\alpha_w = 0.15$.

Density of the polyurethane foam (PUR) filler: $\rho = 40 \pm 4$ kg/m³.

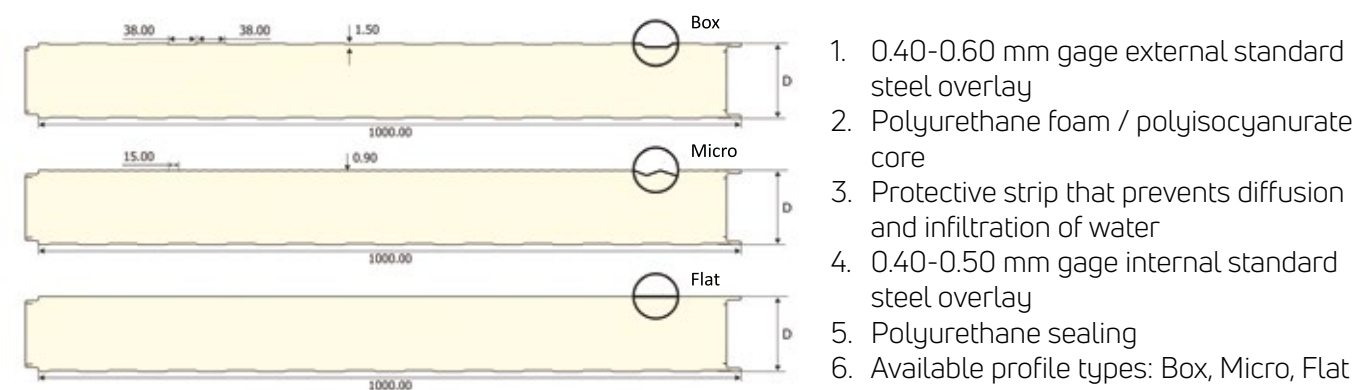
Panels with polyurethane foam filler show very good results during fire tests: depending on the thickness, the fire resistance coefficient reaches EI 30.

The range of PUR and PIR panels includes three types of wall panels (with two types of fastening) and two types of roof panels.

Normal (open) installation / PPN

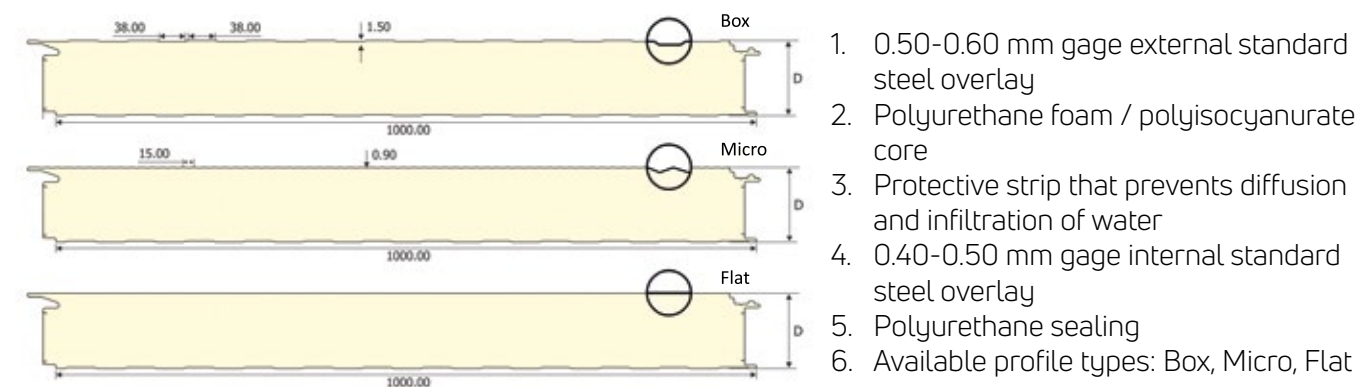
- Normal open installation (visible mounting) – a standard wall panel with the thickness range from 30 to 120 mm.

Suitable for vertical or horizontal installation of a wall. Mounting to the structure using screws is carried out through the panels.

**Concealed installation / PPA**

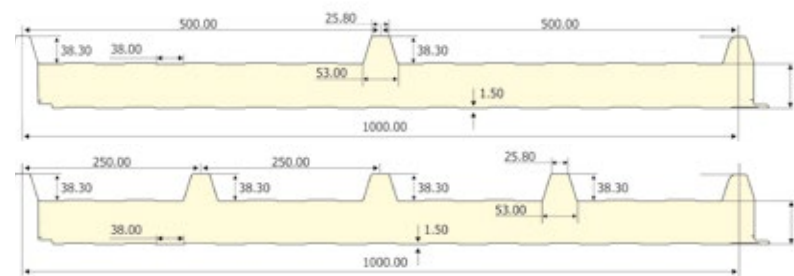
- Concealed installation (invisible mounting) – a special wall panel with hidden fasteners with a thickness range from 40 to 120 mm.

Suitable for vertical or horizontal installation of a wall. Mounting to the structure by means of screws is carried out inside the panel locks. These panels create a more aesthetic appearance of the facade thanks to hidden attachment points.



3- and 5-rib roofing panel PA3 and PA5

This roof panel with 3 or 5 ribs is suitable for a sloping roof with a small and medium angle of inclination. These panels have a trapezoidal outer surface. The thickness range is from 30 to 150 mm.



1. 0.40-0.60 mm gage external standard steel overlay
2. Polyurethane foam / polyisocyanurate core
3. Protective strip that prevents diffusion and infiltration of water
4. 0.40-0.50 mm gage internal standard steel overlay
5. Polyurethane sealing
6. Available profile types: Box, Flat

Frigo Wall is a panel of a refrigerating chamber with the reverse direction of heat flow. The thickness ranges from 100 to 220 mm. Suitable for the walls of refrigerating chambers and freezers, as well as ceilings and suspended ceilings (slabs).

MW (MINERAL WOOL) SANDWICH PANELS

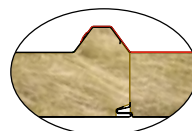
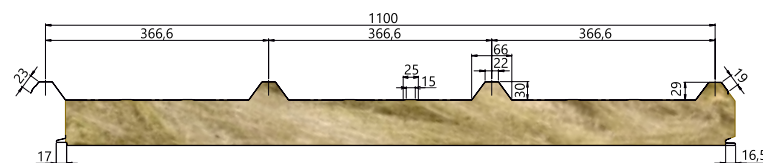
Mineral (rock) wool has good thermal insulation properties, which is confirmed by the declared thermal conductivity of $\lambda = 0.04 \text{ W/m} \cdot \text{K}$. The MW panels have extremely good noise insulation properties. The weighted average specific acoustic resistance coefficient is $R_w = 32 \text{ dB}$, and the acoustic absorption coefficient is $\alpha_w = 0.1$. Density of mineral wool filler: $\rho = 100\text{-}140 \text{ kg/m}^3$. The fire resistance of sandwich panels filled with mineral wool allows the product to be classified as: **A1 – Non-flammable**

The results of fire resistance tests of the MW panels show very high fire resistance indicators. Depending on the thickness and type of panels, they have a fire resistance class ranging from EI 30 to EI 240. The range of mineral wool sandwich panels includes:

4-rib roofing panel PA4 is suitable for a sloping roof with a small and medium angle of inclination. These panels have a trapezoidal outer surface. Thickness ranges from 60 to 200 mm. The PA4 mineral wool sandwich panels for roofing are suitable for roofs with a slope $> 5^\circ$ (3° only with additional insulation), their fire resistance rate is high, up to 240 minutes.

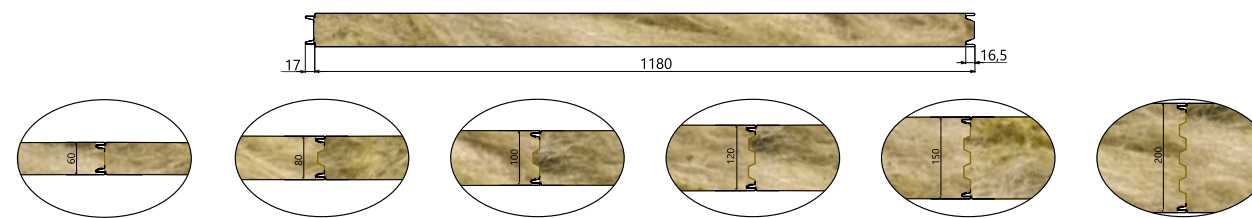
Geometric characteristics:

- length: minimum 2500 mm, maximum 13500 mm;
- useful width: PA4 VM – 1100 mm;
- thickness: 60, 80, 100, 120, 150, 200 mm;
- profile range: external – 4 ribs; internal – Flat (flat profile) and Box (ribbed profile).

**Normal (open) installation / PPN VM**

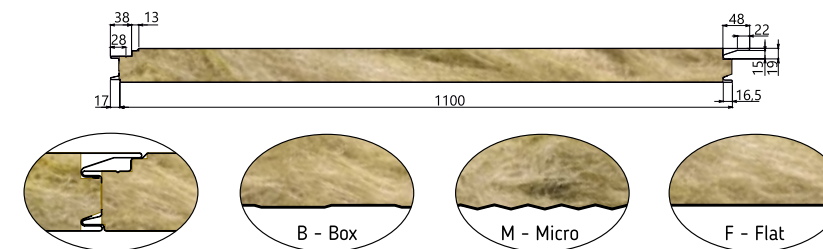
Normal open installation (visible mounting) – a standard wall panel with the thickness range from 60 to 200 mm.

Suitable for vertical or horizontal installation of a wall. Mounting to the structure using screws is carried out through the panels.

**Concealed installation / PPA VM**

Concealed installation (invisible mounting) – a special wall panel with hidden fasteners with a thickness range from 60 to 200 mm.

Suitable for vertical or horizontal installation of a wall. Mounting to the structure by means of screws is carried out inside the panel locks. These panels create a more aesthetic appearance of the facade thanks to hidden attachment points.



Mineral wool panels with normal and concealed mounting are a vertical and horizontal solution for cladding external walls, for extensions that require fire resistance up to 240 minutes and high heat insulation. This material is a self-bearing panel with a metal coating and high-density mineral wool insulation ($\geq 100 \text{ kg/m}^3$), with fibers located perpendicular to the surface of the panel and located in the cavity, laid in the longitudinal direction with offset joints and transversely compacted in such a way as to completely fill the space between the metal of the shells.

Geometric characteristics:

- length: minimum 2500 mm, maximum 13500 mm;
- useful width: PPN VM – 1180 mm, PPA VM – 1100 mm;
- thickness: 60, 80, 100, 120, 150, 200 mm;
- profile range: external – Flat (flat profile), Box (ribbed profile) and M (micro profile); internal – Flat (flat profile) and Box (ribbed profile).

The thickness of the steel shell is 0.4/0.5 mm for the panel with EPS, PUR and PIR filling, and 0.5/0.6 mm for the panel with MW; the steel galvanization is 200 g/m². The applied coating is the 25-micron polyester. The panels must be covered with a protective film on both sides for transportation.

Available colors for all types of sandwich panels:

RAL 1015, RAL 1018, RAL 3000, RAL 3005, RAL 3009, RAL 3011, RAL 5010, RAL 6003, RAL 6005, RAL 6020, RAL 6021, RAL 7011, RAL 7016, RAL 7035, RAL 8003, RAL 8004, RAL 8017, RAL 8019, RAL 9001, RAL 9002, RAL 9005, RAL 9006, RAL 9007, RAL 9010. Other colors can be made to order.

CARTRIDGES (LINEAR TRAYS)



Cartridges (linear trays) are elements used when designing and constructing insulated external walls for industrial facilities that meet the following requirements: large spans between load-bearing structures, sound insulation and fire protection.

The linear trays replace structural galvanized profiles and wall panels in the interior of industrial facilities.

The advantages of linear trays are ease of installation, functionality and increased load-bearing capacity of elements. The cartridges are a simple answer to two questions at once:

First: when using cartridges, after filling with insulation, a client has the opportunity to choose any facade material for cladding the outer side of the wall.

Secondly: the inner side of the mounted cartridges is a finished cladding of the room, that is, the client receives the finished inner surface of the facility, which saves the project estimate

The cartridges are available in 5 types, namely: KS100 / 600, KS115 / 600, KS125 / 600, KS135 / 600 and KS150 / 600. The steel thickness is 0.75 mm, 0.88 mm and 1.00 mm; standard colors for ordering: RAL 9001, RAL 9002, RAL 9006 and RAL 9010.

The linear trays are made of galvanized and pre-painted steel sheet with mechanical properties, of high-quality structural steel S320 GD + Z100 (or Z275).

Scope of application:

- in commercial real estate;
- in industrial buildings.

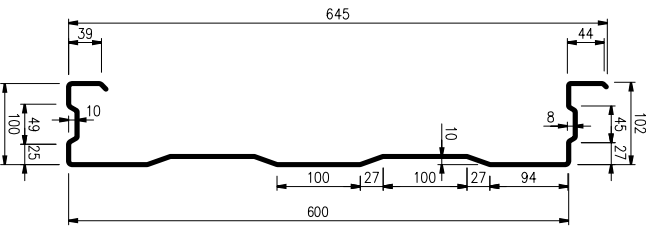
Examples of application:

- farm and utility facilities;
- shopping centers;
- production areas;
- warehouses;
- hangars;
- logistic complexes;
- sports facilities;
- workshops;
- car showrooms;
- exhibition centers.

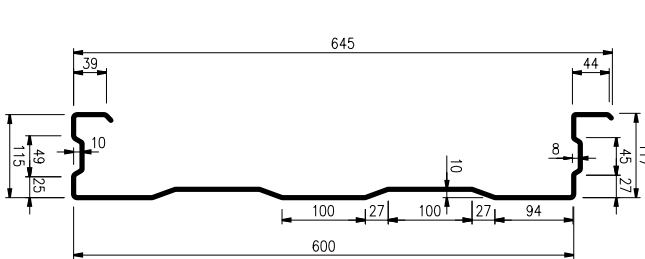
Technical characteristics:

Width	600 mm
Depth	100 mm, 115 mm, 125 mm, 135 mm, 150 mm
Thickness	0.75 mm, 0.88 mm, 1.00 mm
Length	max. 13000 mm
Coating	PE 15 µm*, PE 25 µm
Colors	RAL 9002*, RAL 9001, RAL 9006, RAL 9010

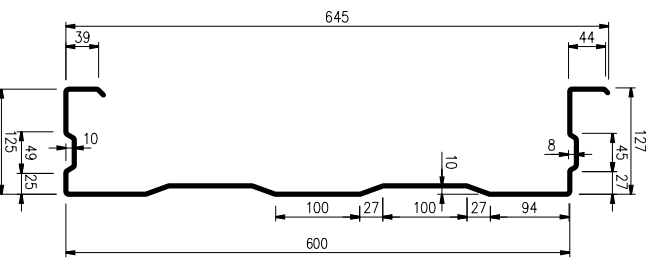
KS 100/600



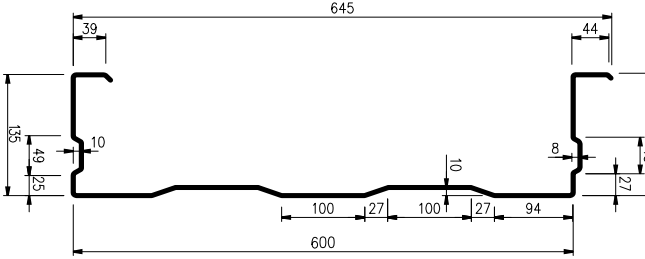
KS 115/600



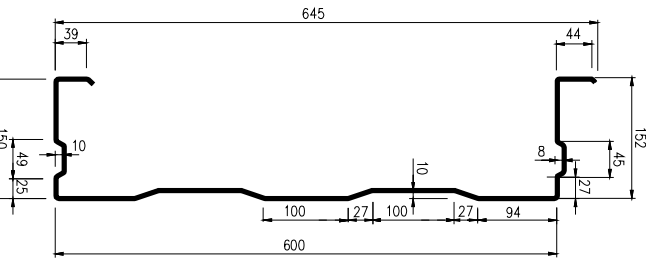
KS 125/600



KS 135/600



KS 150/600





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