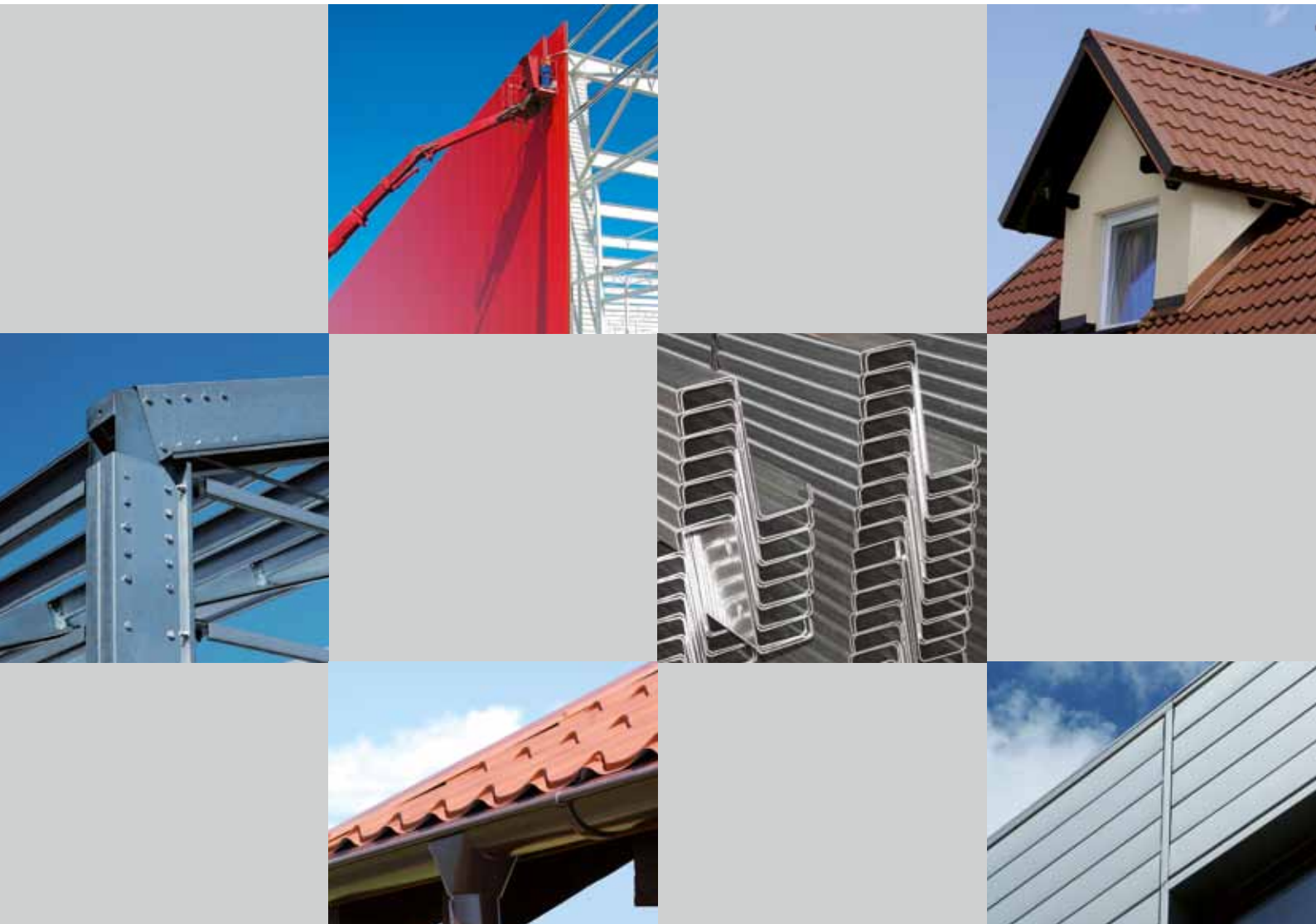


PRODUCT CATALOGUE





SPEKTRUM METAL ROOF TILE

| 4



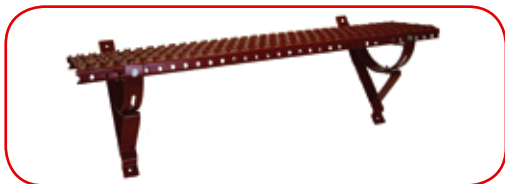
**STANDARD FLASHINGS
SPECIAL FLASHINGS**

| 5
| 27



ROOF VENTILATION SYSTEM

| 6



ROOF SECURITY SYSTEM

| 6



ROOF DRAINAGE SYSTEM

| 7



TRAPEZOIDAL SHEETS – ELEVATION & ROOFING

| 8



TRAPEZOIDAL SHEETS – CONSTRUCTION

| 10



WALL CASSETTES

| 11



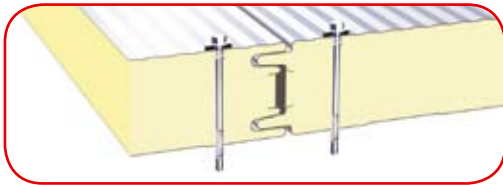
WALL PANELS

| 12



FLAT SHEET

| 13



SANDWICH PANELS WITH POLYURETHANE

| 14



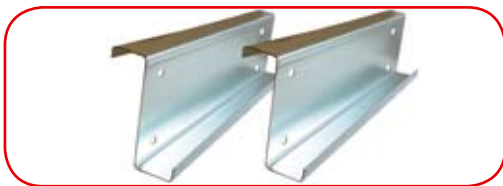
SANDWICH PANELS WITH STYROFOAM

| 18



REFERENCE OBJECTS

| 22



ZET HALLS AND ZET PROFILES

| 24



ACCESSORIES

| 30



COLOURING

| 31

SPEKTRUM METAL ROOF TILE



FUNCTIONS

- Light versatile roof coverings
- Used in different weather conditions

USAGE

- Commercial objects and buildings for living
- New roofs and roofs requiring renovation

ROOF SYSTEM ELEMENTS

- Roof security system
- Roof ventilation system
- Roof drainage system
- Flashings

CHARACTERISTICS

Standard module length: 350 mm

Regulated module length: on client's request
from 280 to 430 mm

Usable width: 1100 mm

Total width: 1175 mm

Profile's height: 39 mm

Height of light profiling: 28 mm

Thickness: 0,5 0,55 0,6 mm

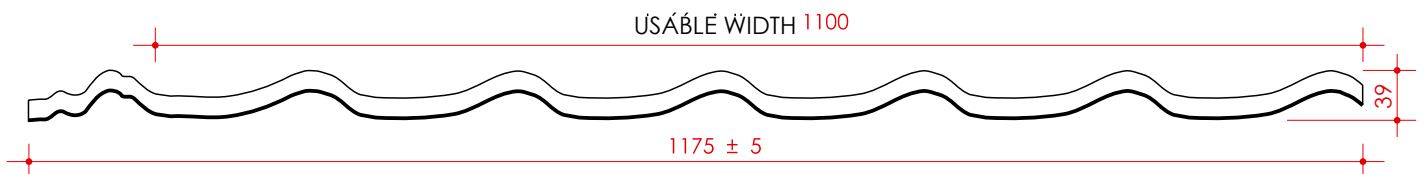
Coatings: polyester, polyester matt, PVC(P)HPS200

Colouring: wide range of Balex Metal colours

Material: S250GD-S280GD + Z275

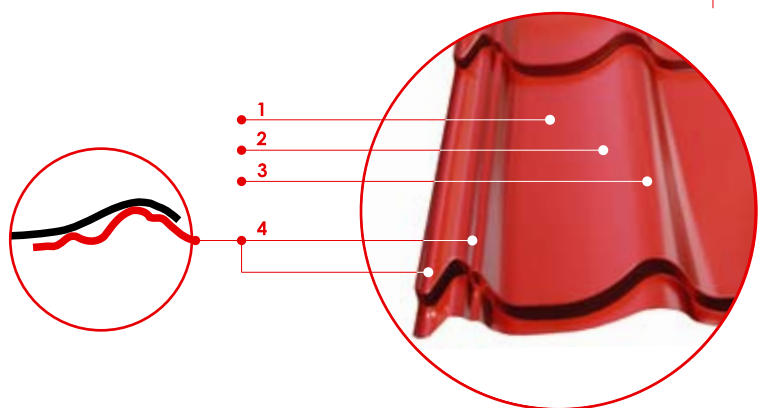
Mass: about 5 kg/m²

About 10 times lighter than traditional ceramic roof tile



DESCRIPTION OF DETAIL

- 1. multi-layered sheet metal with a steel core**
– both sides galvanized
- 2. coatings**
– durable anticorrosive protection
- 3. elegant fold** – height of profile 39 mm
- 4. double capillary groove**
– fight joint of sheet metals
– water drainage from roof slope



FUNCTIONS

- Protection for roof and elevation made of roof tiles and trapezoidal sheets
- Water drainage
- Aesthetics of roof covering

USAGE

- Commercial objects and buildings for living
- Outbuildings
- New roofs and roofs requiring renovation



CHARACTERISTICS

Standard flashings length: 2 m (max. 6 m)

Individual flashings length: on client's request special flashings are produced according to the shape and specific character of the roof

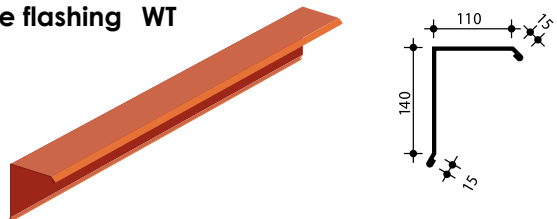
Thickness: 0,5 – 1,00 mm

Coatings: polyester, polyester matt, PVC(P)HPS200, PVDF, galvanized

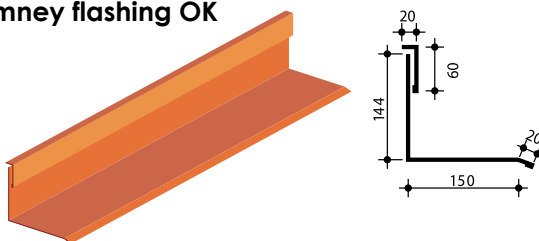
Material: S250GD-S280GD + Z275

Colouring: mostly the same colour as the roofing

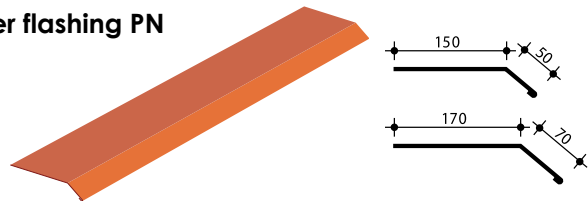
Verge flashing WT



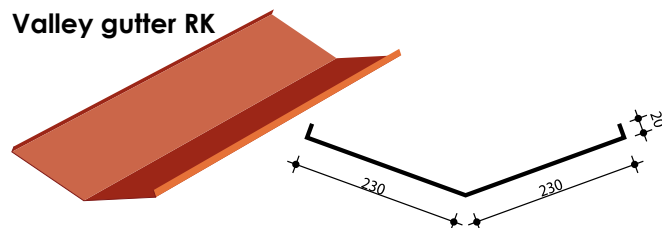
Chimney flashing OK



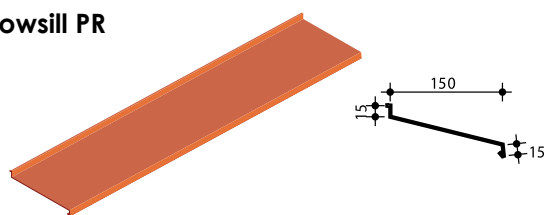
Gutter flashing PN



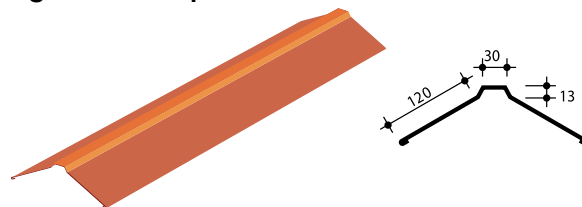
Valley gutter RK



Windowsill PR



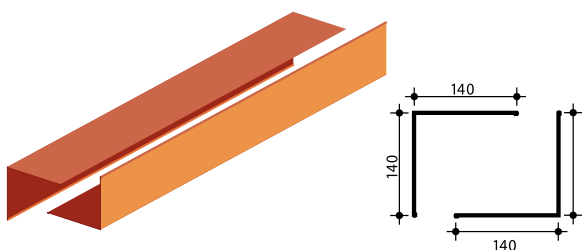
Ridge file for trapezoidal sheet GT



Ridge tile



External and internal corner NZ and NW





USAGE

Different type of roof covering made of trapezoidal sheets and sandwich panels, roof leaned at an angle of 15-45°

VENTILATION SYSTEM

FUNCTIONS: Roof covering ventilation

CHARACTERISTICS

System elements: ventilation chimney, reduction joint, insulated insert (sold in sets)

Material: high quality PVC

Colouring: red, coral-red, brown, black, charcoal, green



Reduction joint



Insulated insert



Ventilation chimneys



ROOF SECURITY SYSTEM

FUNCTIONS

- Prevents snow and ice from sliding down from the roof which may be dangerous for people and may damage the drainage system
- Easy access to the chimney, pipes and other parts of the roof

CHARACTERISTICS

System elements: snow barrier, chimney sweep bench, chimney sweep step

Material: galvanized steel

Colouring: red, brown, brick-red, grey, black



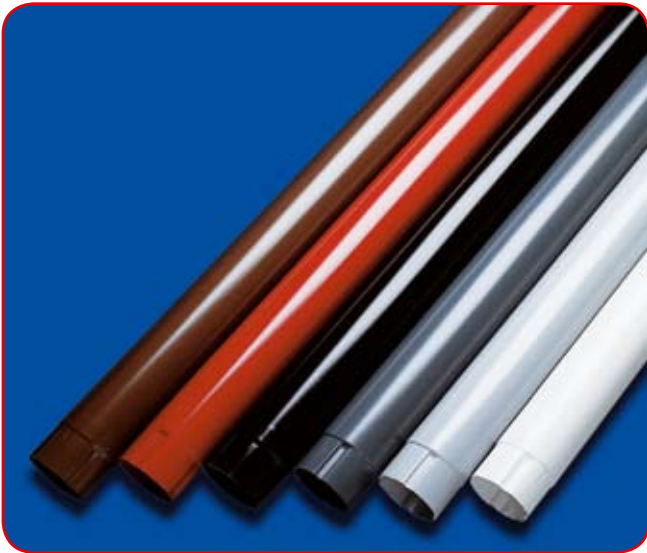
Snow barrier



Chimney sweep bench



Chimney sweep step



ROOF DRAINAGE SYSTEM

FUNCTIONS

- Rain water drainage
- Aesthetics of roof covering

CHARACTERISTICS

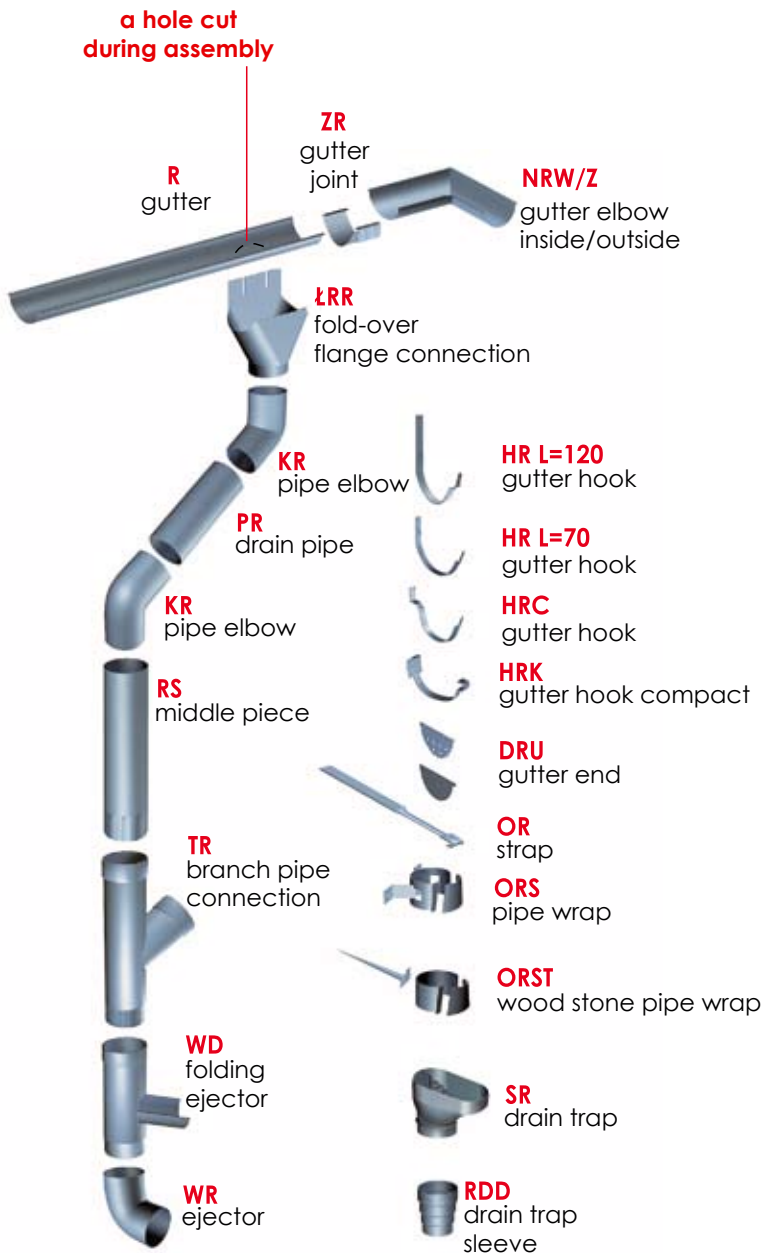
System elements: gutters, pipes, hooks, stays

Standard dimensions: 125/90, 150/100, 100/75*

Material: both sides galvanized steel covered with plastisol

Colouring: red, black, brown, white, grey, silver metallic

* only in brown colour





FUNCTIONS

- Versatile walling and roofing elements (possible to match the sheet with building construction)
- Decorative ceiling (optic profile)
- Economic solution for small and large areas

USAGE

- Commercial units
- Industrial units
- Farms, chicken farms, piggeries, cowsheds
- Garages
- Fences
- Attics

CHARACTERISTICS with organic coatings

Length: on client's request

Max. length: according to the profile

Thickness: 0,5 0,55 0,6 0,7 mm

Organic coatings: polyester, polyester matt, PVC(P) HPS200, PVC(F), PVDF

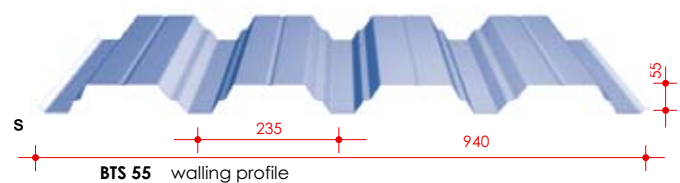
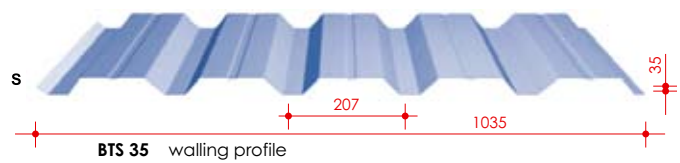
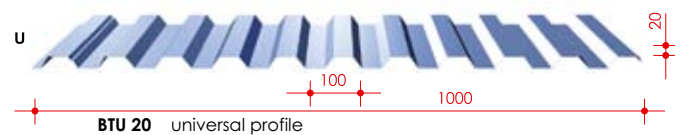
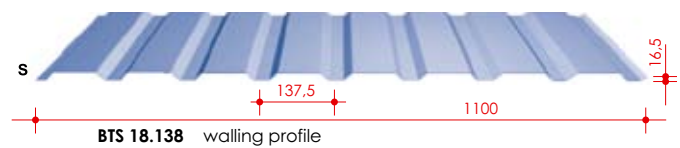
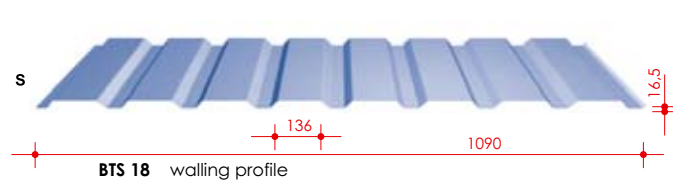
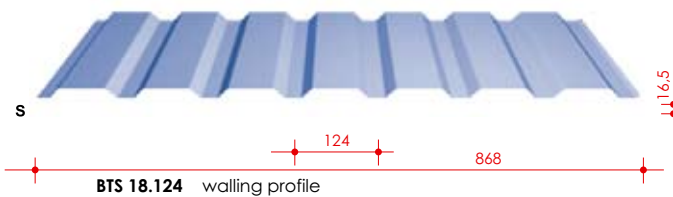
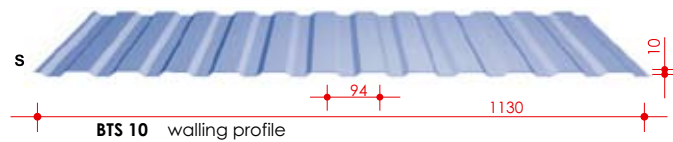
Colouring: wide range of Balex Metal colours

Material: S250GD-S280GD + Z275



- optic profile
- S walling profile
- U universal profile

WALLING PROFILES





CHARACTERISTICS with metallic coatings

Length: on client's request

Max. length: according to the profile

Thickness: 0,5 0,7 mm

Metallic coatings: aluzinc + easyfilm®, galvanized

Material: S250GD-S280GD + Z275

Special finishing:

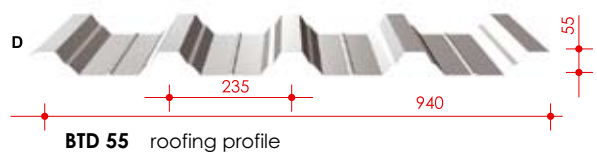
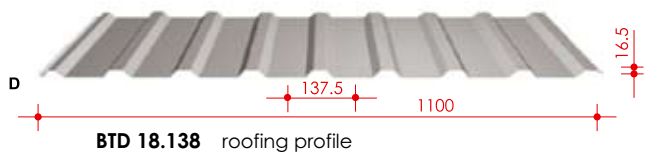
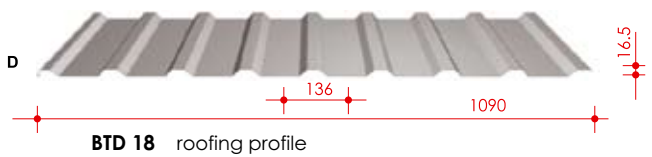
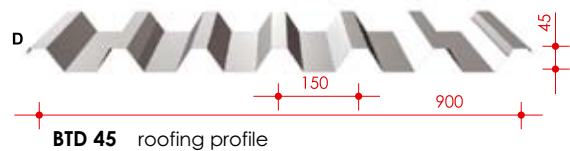
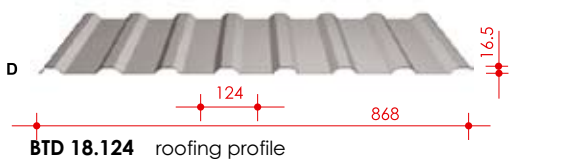
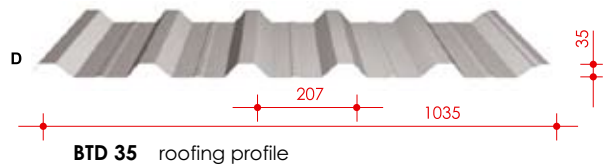
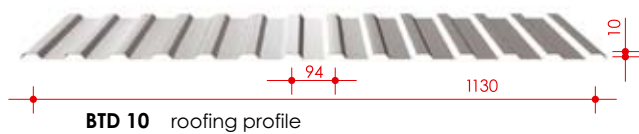
ANTICONDENSATE possibility of using anticondensate layer for profiles BTD 35, BTD 45, BTD 55

EASYFILM® environmentally friendly, thin organic coating (non-chrome, meeting requirements of EU norms)



D roofing profile

ROOFING PROFILES





FUNCTIONS

- Non – purlin roofing construction
- Resistance construction of a large span
- Economic solution for small and large areas

USAGE

- Industrial units
- Commercial units
- Production units
- Logistic centres
- Waste utilisation units

CHARACTERISTICS

Length: on client's request

Max. length: according to the profile

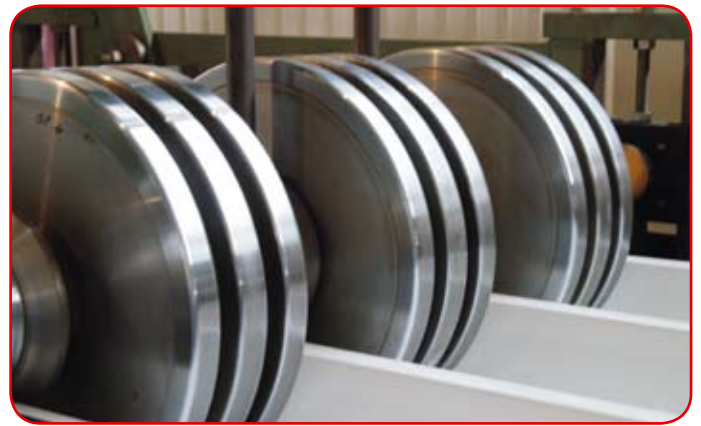
Thickness: 0,75 0,88 1,00 1,25 mm

Coatings :

- **organic:** galvanized + polyester 15 µm
- **metallic:** galvanized

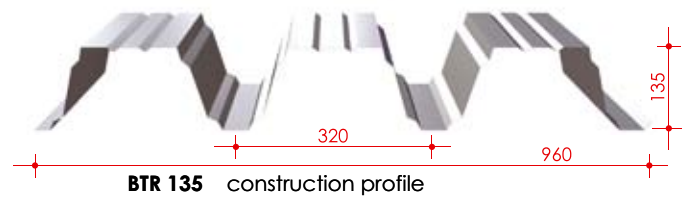
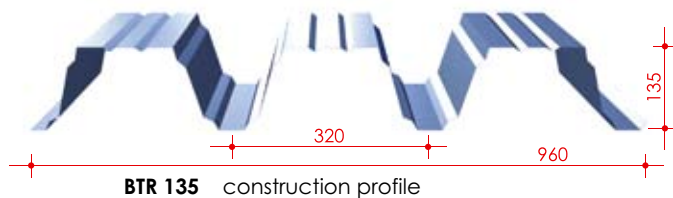
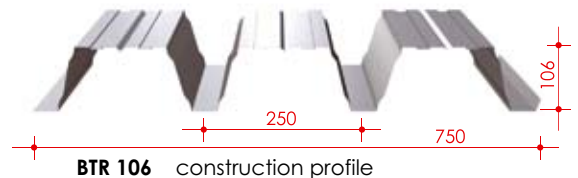
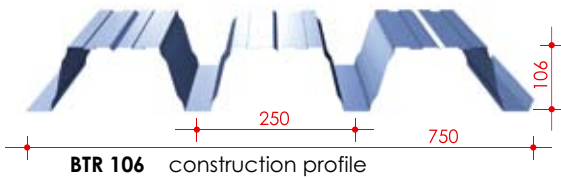
Colouring: BTR 106.250.750 – 9002 colour
BTR 135.320.960 – 9010 colour

Material: S320GD + Z275



BTR WITH ORGANIC COATINGS

BTR WITH METALLIC COATINGS



FUNCTIONS

- Construction – elevation element for covering big areas
- Internal wall finishing

USAGE

- Production halls
- Industrial halls
- Commercial halls
- Warehouses, stockrooms
- Sport halls
- Offices

CHARACTERISTICS

Length: on client's request

Max length: 13,5 m

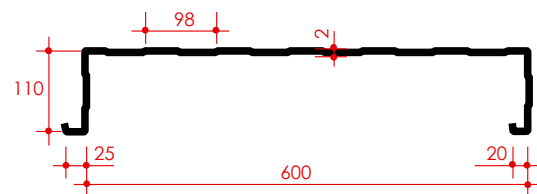
Thickness: 0,75 0,88 mm

Organic coatings: galvanized + polyester 15 µm

Metallic coatings: aluzinc + easyfilm®

Colouring: colour no. 9010

Material: S250GD-S280GD + Z275



KS 100/600 wall cassette



WALL PANELS



FUNCTIONS

- Walling elements laid horizontally and vertically
- External and internal walling elements

USAGE

- Commercial objects
- Offices
- Industrial objects
- Hotels, hostels
- Elevation

CHARACTERISTICS

Length: on client's request

Max. length: 6 m

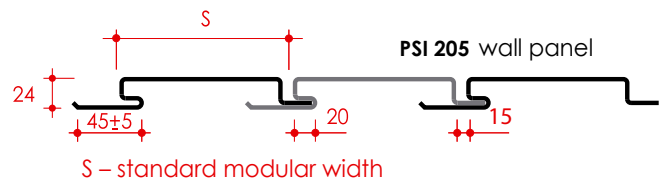
Width S: 205 mm (or from 200 to 400 mm)

Thickness: 0,5 0,55 0,6 0,7 mm

Organic coatings: polyester, PVC(P)HPS200

Colouring: wide range of Balex Metal colours

Material: S250GD-S280GD + Z275



FUNCTIONS

- Material for standard flashings
- Material for specially ordered flashings

USAGE

- Industrial objects
- Commercial objects
- Production objects
- Outbuildings
- Buildings for living



0,40 ÷ 1,25



STEEL SHEETS cut to the ordered length

Width: 1,24 (max 1.5 m)

Thickness: 0,4 – 1,25 mm

Coatings: polyester, PVC(P)HPS200, PVDF, galvanized, aluzinc

Material: S250GD-S320GD + Z275
non-corrosive X5CrNi18-10(1.4301)

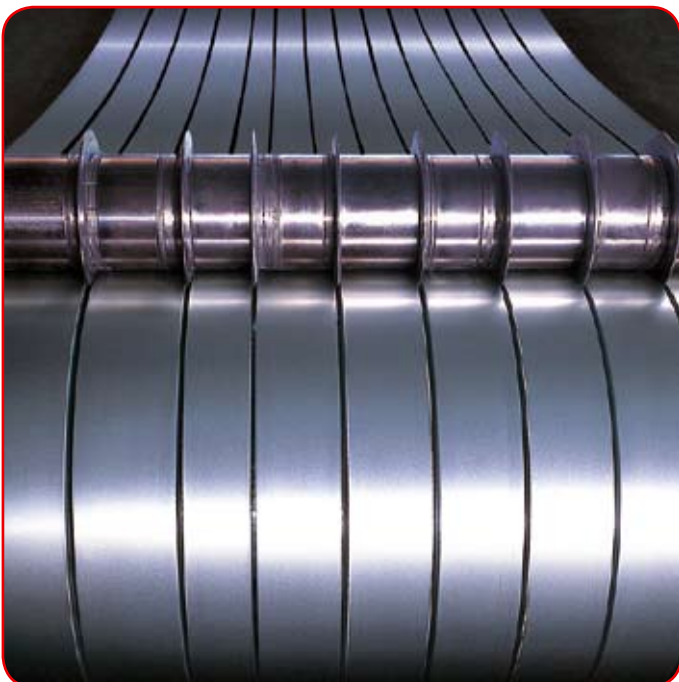
TAPES IN ROLLS cut longwise from the rings

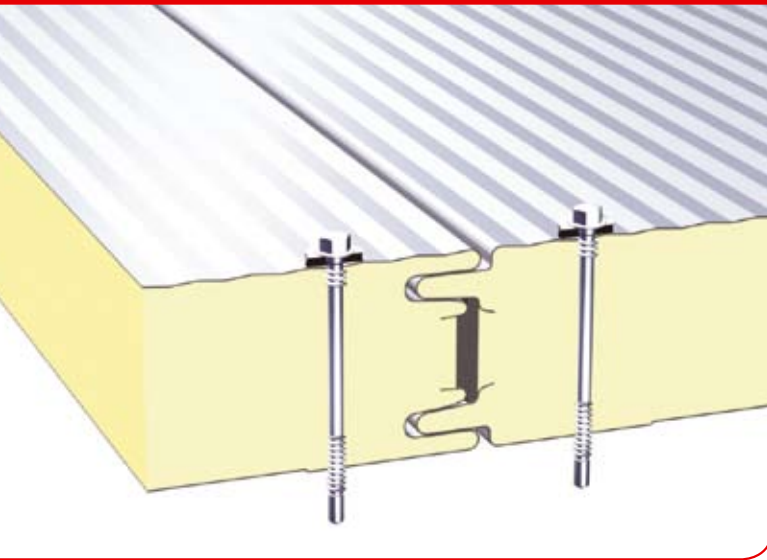
Max. width: 1.31 m

Thickness: 1.5 – 2.5 mm

Coatings: galvanized

Material: S280GD + Z275
S350GD + Z275





FUNCTIONS

- External walls
- Internal dividers
- Internal panel floors

USAGE

- Commercial and industrial buildings
- Bureaus, administrative buildings
- Outbuildings
- Fruit and vegetables storehouses
- Catering plants
- Sport halls

BALEXTHERM ST standard WALL panel

CHARACTERISTICS

Core: stiff polyurethane foam – density 40(+/-3) kg/m³

Thickness: 40 50 60 80 100 mm

Mass: 10,26 10,58 11,08 11,79 12,60 kg/m²

Modular width: 1100 mm

Total width: 1120 mm

Length: max 18 min 2.5 m

Coating thickness: standard 0.5
other 0,4 – 0,63 mm

Organic coatings: polyester, polyester matt, PVDF, PVC(F)

Colouring: wide range of Balex Metal colours

Material: S250GD - S280GD+Z275
non-corrosive X5CrNi18-10(1.4301)

EXTERNAL

L

M

G

INTERNAL

L

G

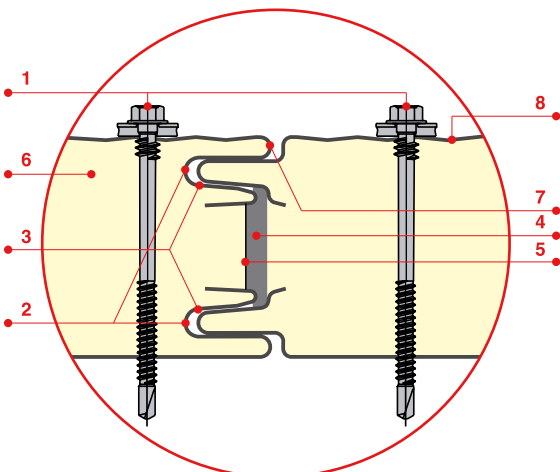
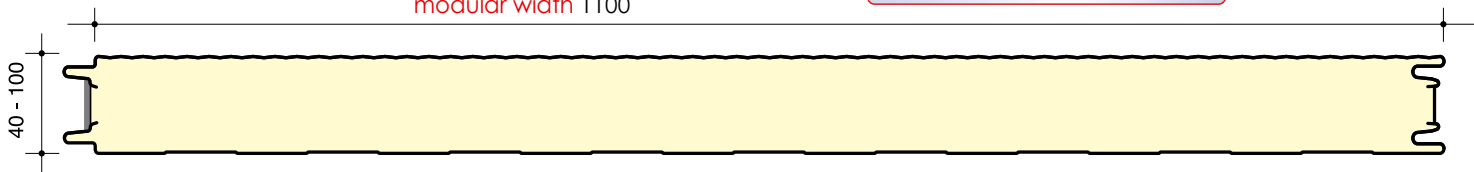


L ruling
S softline
G flat



M microforming
R grooving

modular width 1100



JOINT

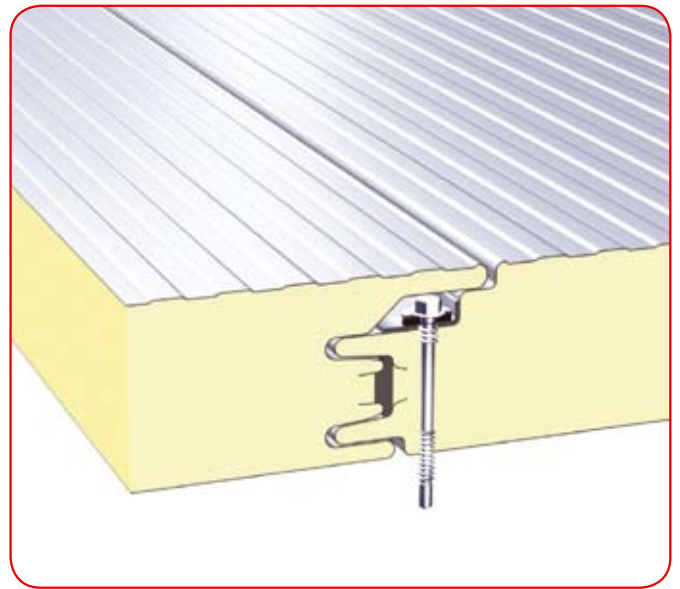
1. Fastening joints
2. Unique, same shape both-sides of panel's joint – fastener, enhancing fire integrity and facilitating the assembly
3. Conical inclination of the interior joint' surface on the panel facilitating the assembly
- 4, 5. Continuous polyurethane seal or made of non flammable material with aluminium foil introduced into production process, preventing the infiltration of steam and retaining high heat insulation
6. Stiff polyurethane foam core produced using environmentally friendly and ozone layer technology with the lowest heat conduction factor of thermo - insulated materials
7. Special shape of facings as a guarantee of the high durability of stainless coating
8. Wide range of external coatings profiles fulfilling high architectural requirements

FUNCTIONS

- External walls
- Internal dividers

USAGE

- Commercial and industrial buildings
- Bureaus, administrative buildings
- Outbuildings



BALEX THERM PLUS WALL panel with invisible joint

CHARACTERISTICS

Core: stiff polyurethane foam – density 40(+/-3) kg/m³

Thickness: 60 80 100 mm

Mass: module 1050 11,41 12,11 12,87 kg/m²
 module 1000 11,38 12,11 12,91 kg/m²

Modular width: standard 1050 mm
 on request 1000 mm

Total width: module 1050 – 1100 mm
 module 1000 – 1050 mm

Length: max 18 min 2.5 m

Coating thickness: standard 0.5

other 0,4 – 0,63 mm

Organic coatings: polyester, polyester matt, PVDF, PVC(P)HPS200, PVC(F)

Metallic coatings: aluzinc

Colouring: wide range of Balex Metal colours

Material: S250GD - S280GD+Z275

non-corrosive X5CrNi18-10(1.4301)

module 1050:

EXTERNAL



INTERNAL

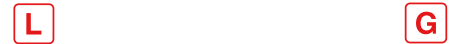


module 1000:

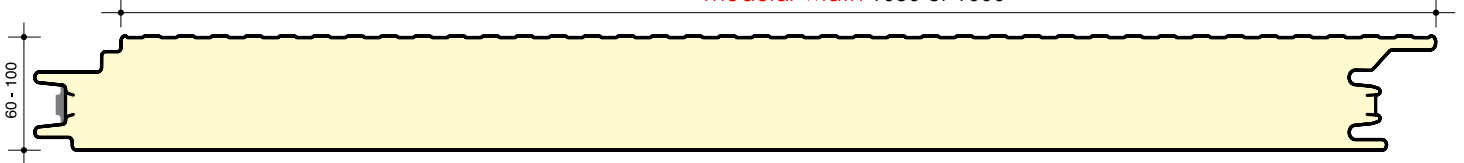
EXTERNAL



INTERNAL

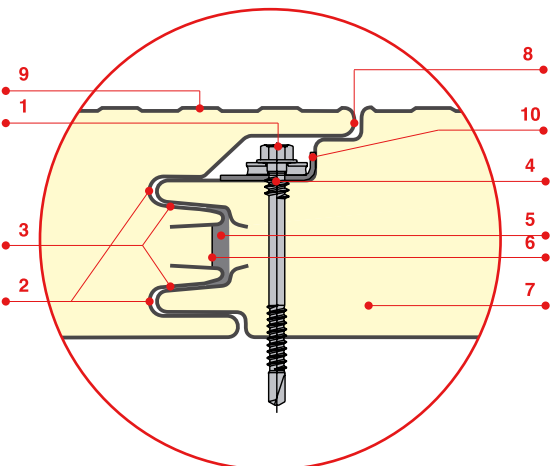


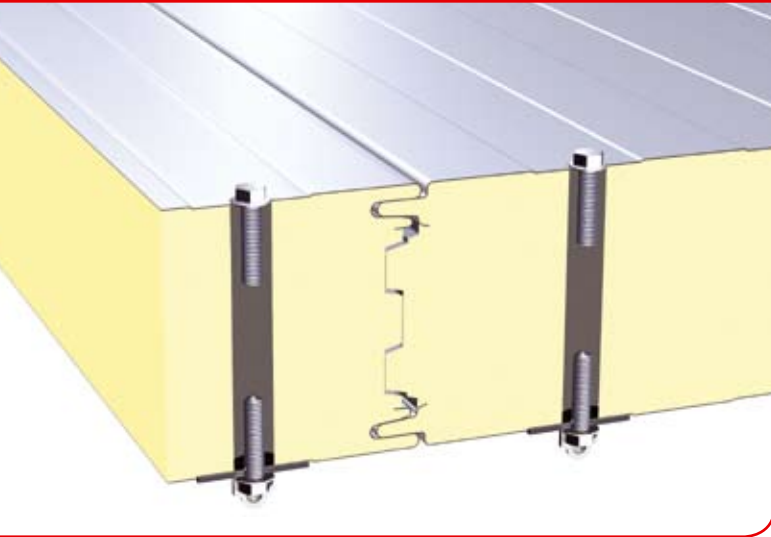
modular width 1050 or 1000



JOINT

1. Invisible fastened joints guaranteed an aesthetic elevation
2. Unique, same shape both-sides of the panel's joint – fastener, enhancing fire resistance an facilitating the assembly
3. Conical inclination of interior joint' surface of panel facilitating the assembly
4. Sheer rabbet facilitating the positioning of fastening joints
5. Continuous polyurethane seal or made of non-flammable material with aluminium foil introduced into production process, preventing the infiltration of steam and retaining high heat insulation
6. Aluminium foil preventing the infiltration of steam and gas diffusion to retain the heat co duction factor
7. Stiff polyurethane foam core produced using environmentally friendly and ozone layer technology with the lowest heat conduction factor of thermo - insulated materials
8. Special shape of facings as a guarantee of the high durability of stainless coating
9. Wide range of external coatings profiles fulfilling high architectural requirements
10. Steel łB pad in the zip enhancing joint resistance





FUNCTIONS

- External walls of cold protective buildings
- Internal dividers of cold protective buildings
- Ceilings for cold stores

USAGE

- Cold stores
- Stock houses

BALEXTHERM CH metal faced insulating panel for cold stores

CHARACTERISTICS

Core: stiff polyurethane foam – density 40(+/-3) kg/m³

Thickness: 120 160 180 200 mm

Mass: 13,37 15,00 15,82 16,61 kg/m²

Modular width: 1100 mm

Total width: 1120 mm

Length: max 18 min 2.5 m

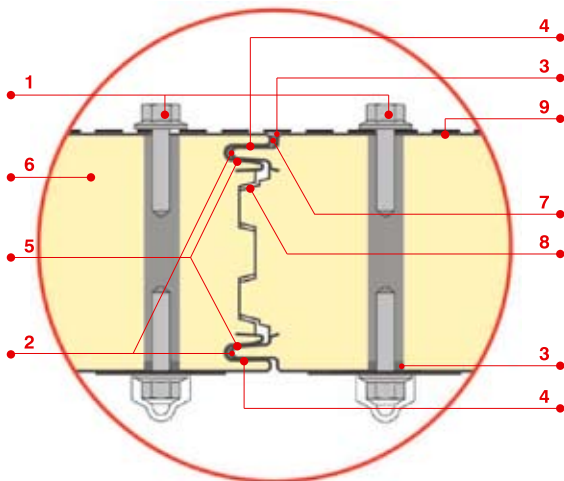
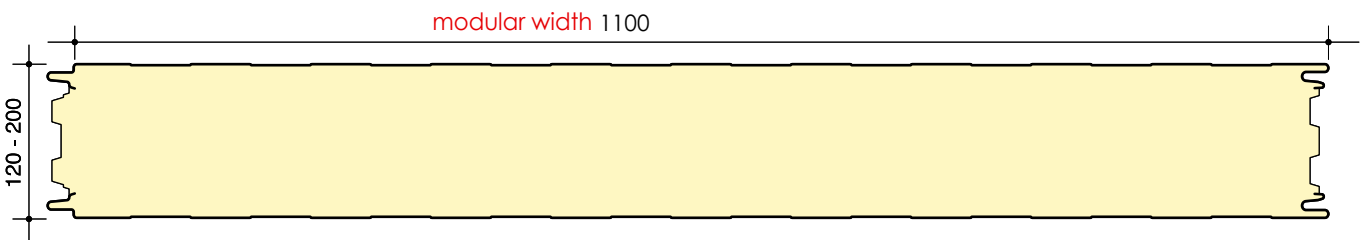
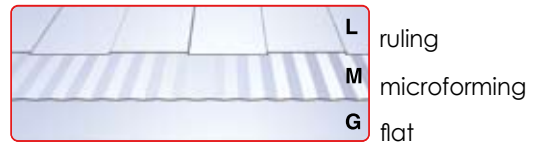
Coating thickness: standard 0.5
other 0,4 – 0,63 mm

Organic coatings: polyester, PVDF, PVC(F)

Metallic coatings: aluzinc

Colouring: wide range of Balex Metal colours

Material: S250GD - S280GD +Z275
non-corrosive X5CrNi18-10(1.4301)



JOINT

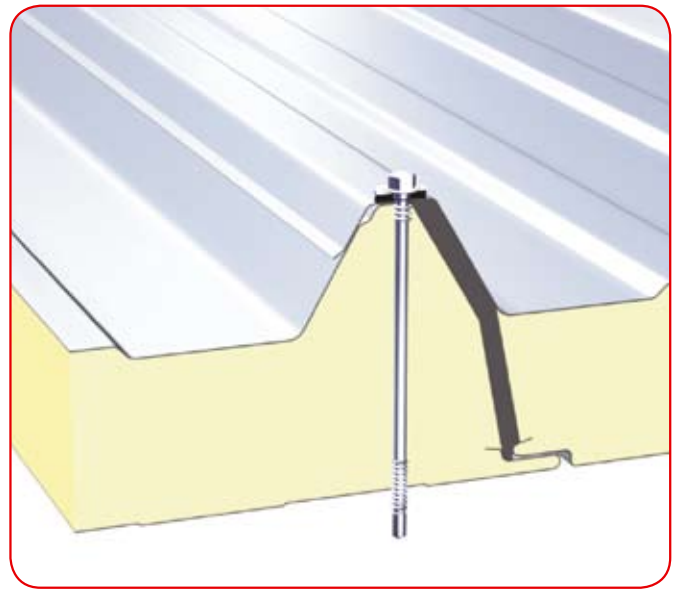
1. Special panel assembly system eliminating the spot - thermal sternum
2. Sealing mass in the lock preventing the infiltration of steam and retaining high heat insulation
3. Permanently flexible sealing mass
4. Unique same shape both-sides of panel - fastener joint enhancing fire integrity and facilitating the assembly
5. Conical inclination of interior joint surface of panel facilitating the assembly
6. Stiff polyurethane foam core produced using environmentally friendly and ozone layer technology with the lowest heat conduction factor of thermo - insulated materials
7. Suitably shaped facings as a guarantee of the high durability of stainless coating
8. Mill joint of core abandoning a linear thermal sternum
9. Wide range of external coatings profiles meeting high architectural requirements

FUNCTIONS

- Roof covering

USAGE

- Commercial and industrial buildings
- Bureaus, administrative buildings
- Outbuildings



BALEXTHERM D ROOF sandwich panel

CHARACTERISTICS

Core: stiff polyurethane foam – density 40(+/-3) kg/m³
Thickness: 40/85 60/105 80/125 100/145 mm
Mass: 10,84 11,65 12,45 13,26 kg/m²
Modular width: 1000 mm
Total width: 1090 mm
Length: max 18 min 2.5 m

Coating thickness:

Standard external 0,5 mm
 internal 0,5 mm
 Other external 0,5 – 0,63 mm
 internal 0,4 – 0,63 mm

Organic coatings: polyester, polyester matt, PVDF, PVC(P)HPS200

Metallic coatings: aluzinc

Colouring: wide range of Balex Metal colours

Material: S250GD - S280GD + Z275

EXTERNAL

T

INTERNAL

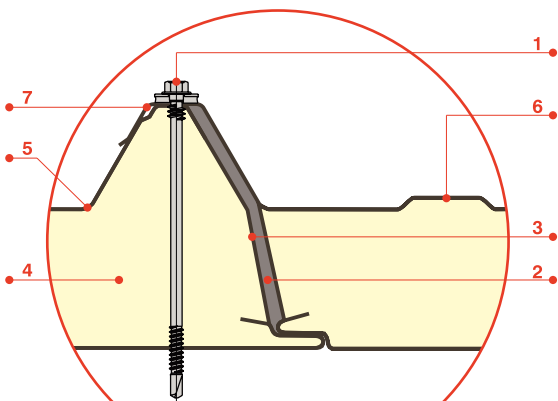
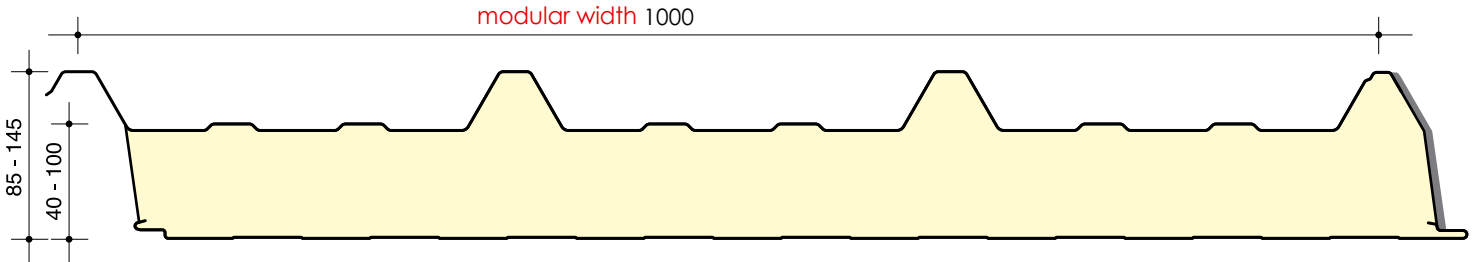
L

G



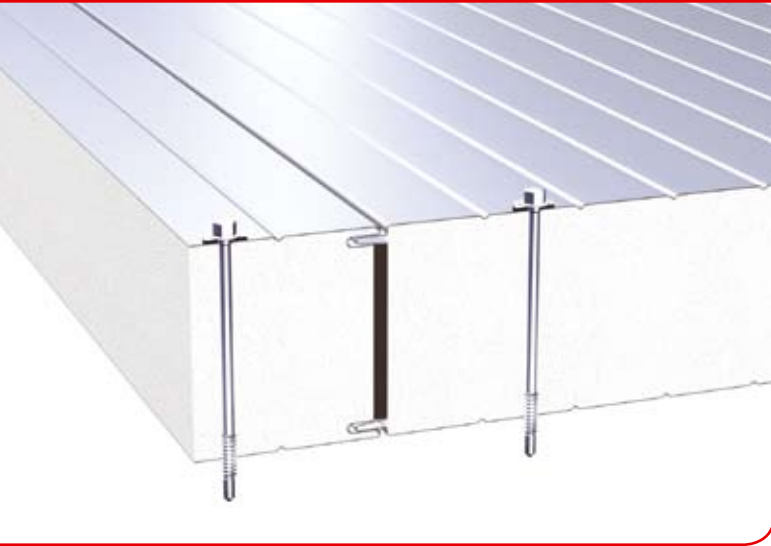
T trapezium
 L ruling
 G flat

modular width 1000



JOINT

1. Fastening joint
- 2, 3. Continuous polyurethane seal or made of non-flammable material with aluminium foil introduced into production process, preventing the infiltration of steam and retaining high heat insulation
4. Stiff polyurethane foam core produced using environmentally friendly and ozone layer technology with the lowest heat conduction factor of thermo - insulated materials
5. Suitable shape of facings as a guarantee of the high durability of stainless coating
6. Trapezoidal profile of external coating enhancing roof panel resistance
7. Special shape of profile for panel integrity



FUNCTIONS

- Walling (PWS) and roofing (PWD) elements
- External walls and dividers
- Retaining heat in buildings

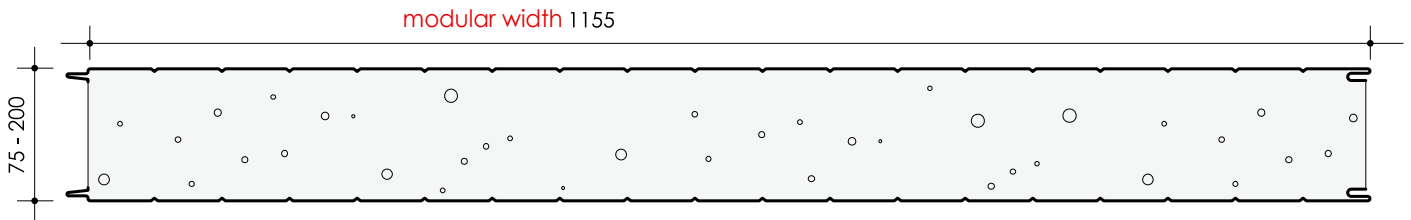
USAGE

- Commercial and industrial buildings
- Bureaus, administrative buildings
- Outbuildings, cold stores

KINDS

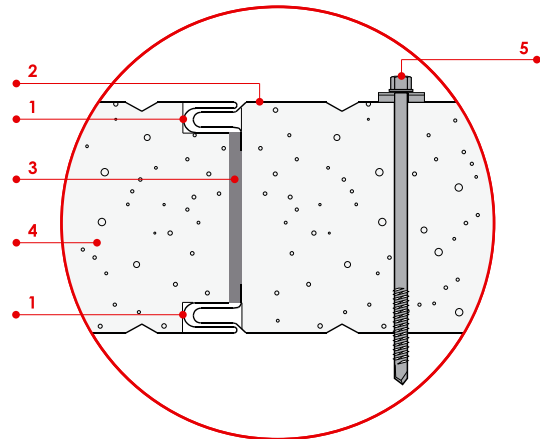
- PWS wall sandwich panel
- with both – sided coating
 - with one-sided coating and laminate
- PWD roof sandwich panels
- with both-sided coating
 - with one-sided coating and laminate

PWS WALL sandwich panel



JOINT

1. Proper shape of facings as a guarantee of the high durability and adhesion of coating
2. External coating profile
3. Continuous polyurethane seal retaining high heat insulation
4. Styrofoam core
5. Fastening joint



CHARACTERISTICS

Core: styrofoam with higher resistance features

PWS thickness: 75, 100, 125, 150, 175, 200 mm

PWD thickness : 75/91,5 , 100/116,5, 125/141,5, 150/166,5,
175/191,5, 200/216,5 mm

Modular width: PWS - 1155 mm; PWD - 1100 mm

Length max: 13.5 m

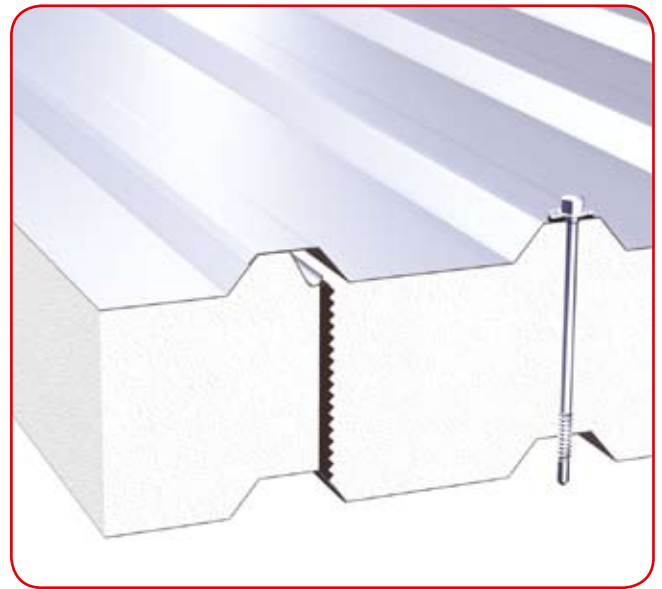
Organic coatings: polyester, polyester matt, PVC(P)HPS200,
PVC(F) – „food safe”

Special finishing: laminate

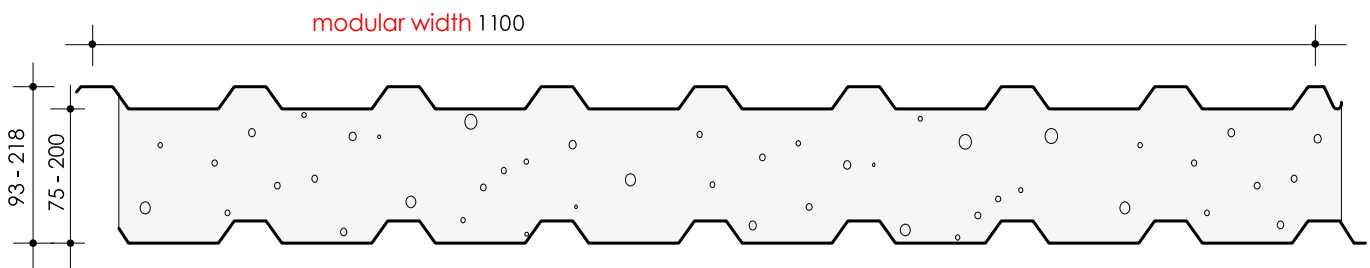
Metallic coatings: aluzinc

Colouring: wide range of Balex Metal colours

Material: S250GD - S280GD + Z275

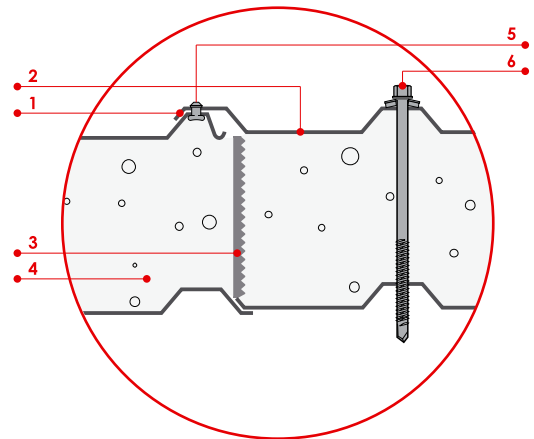


PWD ROOF sandwich panel



JOINT

1. Proper shape of facings as a guarantee of the high durability and adhesion of coating
2. Trapezoidal profile of external coating enhancing roof panel resistance
3. Continuous polyurethane seal retaining high heat insulation
4. Styrofoam core
5. Blind rivet
6. Fastening joint



UNIQUE SOLUTION OF PANEL JOINING





FIRE CLASSIFICATION OF BALEXTERM

Balexterm sandwich panels are classified as non-spreading fire products in accordance with PN-90/B-02867 and PN-B-02872:1996 norms.

Balexterm ST sandwich panels are classified in E-60 fire resistance class – it means, that the fire integrity criteria of covering made of Balexterm panels with soft polyurethane gasket in the joint, covered with carbon fibres is kept for a minimum 60 minutes.

Balexterm PLUS sandwich panels are classified in E-30 fire resistance class class – it means, that the fire integrity criteria of covering made of Balexterm panels with soft polyurethane gasket in the joint, covered with carbon fibres is kept for a minimum 30 minutes.

Balexterm D sandwich panels are classified in E-120 fire resistance class – it means, that the fire integrity criteria of covering made of Balexterm panels with soft polyurethane gasket in the joint, covered with carbon fibres is kept for a minimum 120 minutes.

BALEXTERM HEATING INSULATION

U_c -heat infiltration factor value

Panel	Core thickness [mm]	U_c [W/m ² K]
BALEXTERM ST	40	0,55
	50	0,44
	60	0,37
	80	0,28
	100	0,22
BALEXTERM PLUS 1000	60	0,38
	80	0,28
	100	0,23
BALEXTERM PLUS 1050	60	0,38
	80	0,28
	100	0,23
BALEXTERM D	40/85	0,50
	60/105	0,35
	80/125	0,27
	100/145	0,22
BALEXTERM CH	120	0,19
	160	0,14
	180	0,12
	200	0,10

TRANSPORTING AND STORING THE PANELS

Lorries with crates or trailers are basic means of transport for sandwich panels. It is possible to load long panels (up to 13 m) from both sides of the lorry.

Technical conditions for vehicles transporting sandwich panels are recommended as follows:

- crate with tarpaulin ("net curtain" type)
- crate longer than the transported panels (the panel packages should be put on the truck whole)
- transporting belts fastening the loading should be put on every support of panel packages (the strain of belts must not cause any deformations)

During unloading you should be careful not to drag one panel on top of another. Then they will not get scratched. Sandwich panels should be put on supports, not less than 250 mm above the ground. It is not advisable to store more than two packages , one on top of another.

It is recommended to keep panels in closed and well-ventilated rooms, at normal temperatures, away from fertilizers, acids, lye, salts and other corrosive substances. It is not advisable to store sheet metals without a covering. If they are kept under a canvas cover for a short time (max. two weeks) fresh air must be guaranteed. If the storage period is longer than two weeks, the sheet metals should be put in well-ventilated room and left open to bring fresh air to all the layers. Not using this recommendation may cause a discolouration of the coating called "white corrosion", and a loss of guarantee.

FIRE CLASSIFICATION OF PWS AND PWD

PWS walling panels are classified as non-spreading fire products (PN-90/B-02867).

PWS walling panels are classified in E-30 fire resistance class – it means, that the fire integrity criteria of wall made of PWS sandwich panels is not less than 30 minutes (PN-B-02851) and CEN.

PWD roofing panels are classified as non-spreading fire products (PN-B-02872).

PWD roofing panels are classified in E-30 fire resistance class – it means, that the fire integrity criteria of roofing profile made of PWD sandwich panels is not less than 30 minutes (PN-B-02851 and CEN).



PWS AND PWD HEATING INSULATION

U_c -heat infiltration factor value

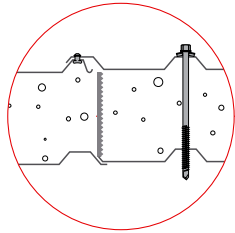
Panel	Core thickness [W/(m ² K)]	U_c
PWS 75.1155	75	0,47
PWS 100.1155	100	0,36
PWS 125.1155	125	0,29
PWS 150.1155	150	0,25
PWS 175.1155	175	0,21
PWS 200.1155	200	0,18
PWD 75.1100	75	0,42
PWD 100.1100	100	0,34
PWD 125.1100	125	0,28
PWD 150.1100	150	0,24
PWD 175.1100	175	0,20
PWD 200.1100	200	0,18





Brands which trusted us:

CASTORAMA, INTERMARCHE, CERESIT HENKEL, MERCEDES, HONDA, LUKOIL, BLACK RED WHITE, FLEXTRONICS, BMW, RIEBBER FOODS POLSKA, VECTOR, FEMAX, POLKOMTEL, BEIERSDORF - LECHIA, VOLKSWAGEN, YAMAHA

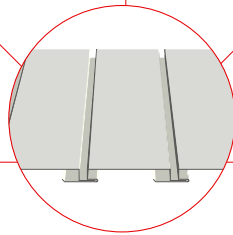


PWD roof sandwich panels



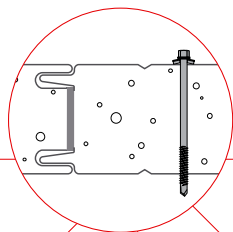
Trapezoidal profiles





Wall panels

PWS wall sandwich panels





FUNCTIONS

- Elevation construction
- Dividers construction
- Wall girders
- Roof purlins

USAGE

- Production halls
- Industrial halls
- Commercial halls
- Warehouses, stockrooms
- Sport halls
- Offices

ZET HALLS

Wall girders span: 1.18 m

Roof purlins span: 1.19 m

Framework structure:

- cold bent ZET sections joined in multibranch elements with lacings
- beams joining with systems steel fasteners

Construction material: cold bent Z-profiles made of galvanized tape

ENCLOSURE

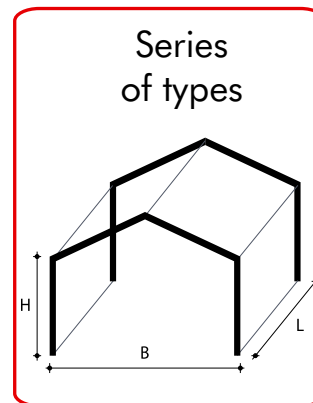
Sandwich panels

- with polyurethane **BALEXTHERM**
- with styrofoam **PWS and PWD**

Trapezoidal sheets

- BTS 10
- BTS 18, BTD 18
- BTU 20
- BTS 35, BTD 35
- BTD 45, BTD 45.333
- BTS 55, BTD 55

Inclination of a roof slope: 20°



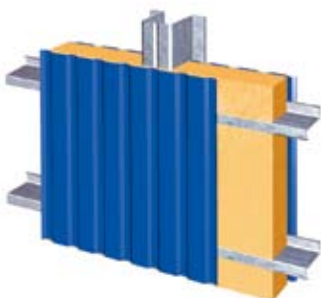
		L=4,5 m			
B \ H	4,5m	4,0m	3,5m	3,0m	
15 m	x	x			
12 m	x	x	x		
10 m	x	x	x		
8 m	x	x	x		
6 m			x	x	

H - height

B - width

L - frame modular span

EXEMPLARY ENCLOSURES



- **external facing** made of trapezoidal sheets
- wind insulation
- thermal insulation
- steam insulation
- **internal facing** made of trapezoidal sheets



- **BALEXTHERM** and **PWS, PWD** sandwich panels fixed with self-drilling screws for girders or purlins
- **wall or roof** made of sandwich panels is a possibility for immediate object development

Executive project of steel structure is included in the price of whole construction.



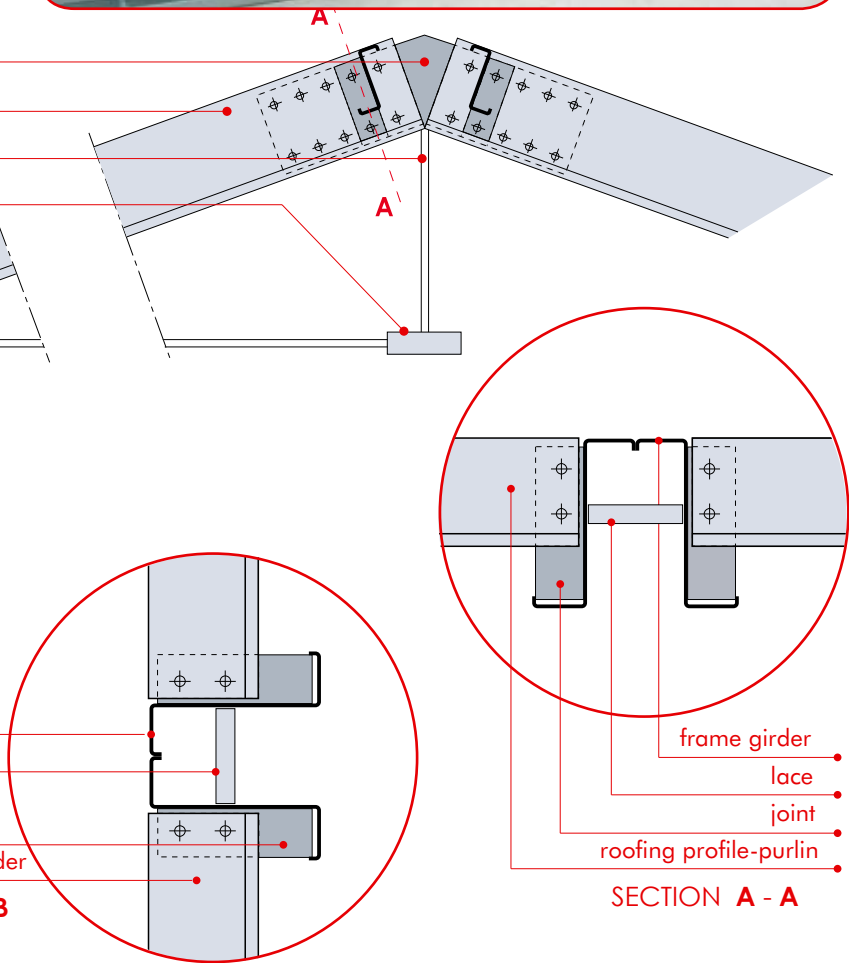
- ridge joint
- frame girder
- tie cantilever
- roman screw

- corner joint
- tie

- joint

- spot footing
- column
- lace
- joint
- walling profile - girder

SECTION B - B



- frame girder
- lace
- joint
- roofing profile-purlin

SECTION A - A





FUNCTIONS

- Elevation construction
- Dividers construction
- Wall girders
- Roof purlins

USAGE

- Production halls
- Industrial halls
- Commercial halls
- Warehouses, stockrooms
- Sport halls
- Offices
- Workshops

ZET SECTIONS

Material: galvanized tape

Length: max 14 m

Thickness and class of steel:

Z 150 – Z 225

Thickness: 1.5 2.0 2.5 mm - steel S280GD + Z275

Thickness: 2.0 2.5 mm - steel S280GD + Z275

Z250 – Z 300

Thickness: 2.0 2.5 3.0 mm - steel S320GD + Z275



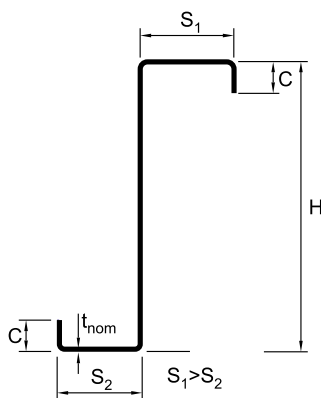
Diameter and span of holes:

Z 150, Z 175: B = 70 mm
Ø14 Ø17 Ø18

Z 200, Z 225: B = 100 mm
Ø14 Ø17 Ø18

Z 250: B = 150 mm Ø 18

Z 300: B = 190 mm Ø18



Dimensions:

height	150, 175, 200, 225	250	300
C	20	22	30
t_{nom}	1.5 2.0 2.5	2.0 2.5 3.0	2.0 2.5 3.0
S_1	65.5	78,0	79,0 80,0 93,0 94,0 95,0
S_2	59.5	67,0	68,0 69,0 85,0 86,0 87,0

B holes span

C length of edge bracing

t_{nom} sheet metal thickness

S_1, S_2 width of booms measured from an external facing

SIGMA SECTIONS

Material: galvanized tape

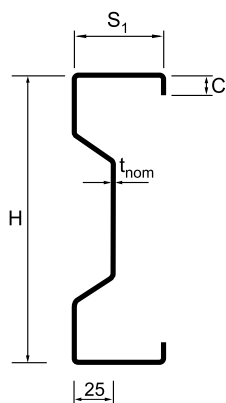
Length: max 14 m

Thickness and class of steel:

Σ 140 – Σ 230

Thickness: 1.5 2.0 2.5 mm – steel S280GD + Z275

– steel S320GD + Z275



Diameter and span of holes:

Σ140: B = 100 mm, Ø 14

Σ170: B = 130 mm, Ø 14

Σ200: B = 160 mm, Ø 18

Σ230: B = 190 mm, Ø 18

Dimensions:

height	140, 170, 200, 230
C	15
t_{nom}	1.5 2.0 2.5
S_1	56
S_2	56

B holes span

C length of edge bracing

t_{nom} sheet metal thickness

S_1, S_2 width of booms measured from an external facing

FUNCTIONS

- Finishing elements of different walling and roofing covering
- Water drainage
- Aesthetics of roof covering

USAGE

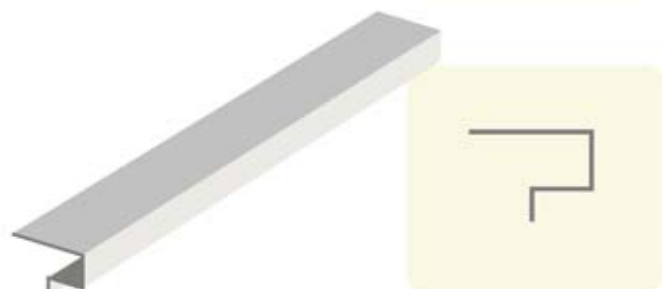
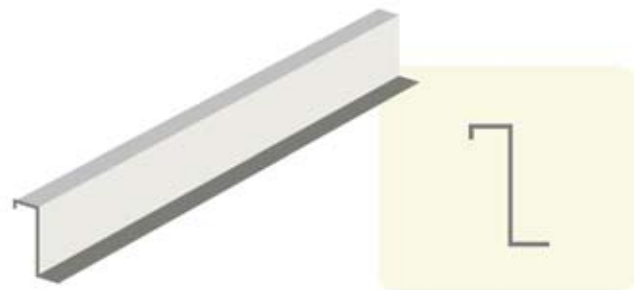
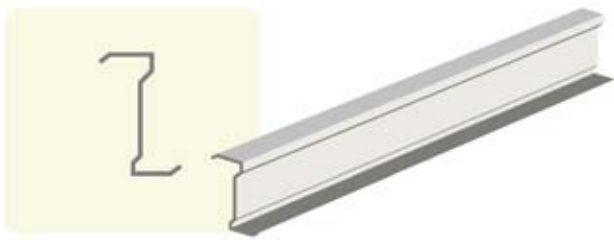
- Commercial buildings
- Production buildings
- Outbuildings
- Buildings for living

**CHARACTERISTICS****Kinds:**

- standard flashings
- flashings on client's request

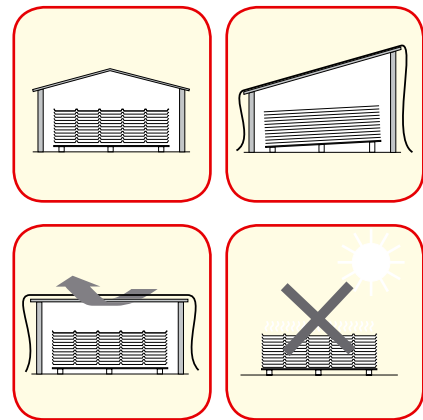
Length: to 11,5 m**Dimensions:** on special request**Thickness:** standard flashings 0,5 – 2,00 mm
special flashings max. 2,5 mm**Coatings:** polyester, PVC(P), PVDF, galvanized**Material:** S250GD - S280GD+Z275

non-corrosive X5CrNi18-10(1.4301)



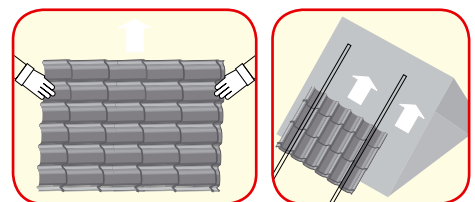
Sheet metals storage

Sheet metals should be laid on rests, not less than 250 mm above the ground. It is not advisable to store more than 4 packages on top of each other, leant at an angle that the water could flow out properly. Sheet metals should be kept in closed and well-ventilated room, at normal temperatures, away from fertilizers, acids, lye, salts and other corrosive substances. It is not advisable to store sheet metals without covering them. If they are kept under a canvas cover for a short time (max. two weeks) fresh air must be guaranteed. If the storage period is longer than two weeks, the sheet metals should be put in well-ventilated room and left open to bring fresh air to all the layers. Not using this recommendation may cause a discoloration of the coating called "white corrosion", and a loss of guarantee. The protective foil must be removed no later than one month from the day of production. Otherwise the foil may permanently stick to the sheet metal facing.



Unloading, carrying sheet metals.

When carrying the sheet metals, you have to make sure they are not pulled across the ground or another second sheet. They will not get scratched.

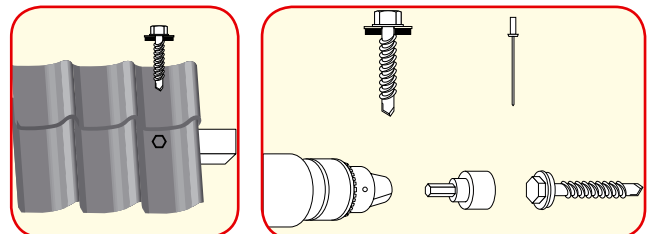


Max. length of sheet metals

The length of sheet metals is limited only by assembly requirements and transportation. Using the sheet metals longer than 6 m is not recommended due to problems while unloading, pulling up the roof or assembling.

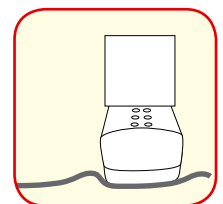
Fixing the sheet metals

The sheet metals can be fixed with self-tapping screws for wooden or metal battens, according to the their sort. The screws should be screwed with a drill (with a clutch). While screwing make sure the pressure force is right not to scrunch the EPDM pad. EPDM pad should stick out of the edge of upper steel pad. The overlap joint and the joint of the two sheet metals is best to be made with a tight blind rivet "POP rivet".



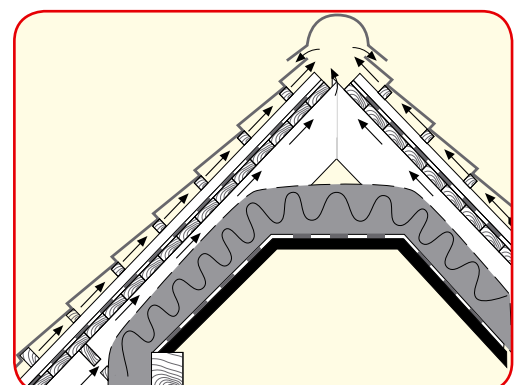
Walking on the sheet metals

While walking on sheet metals you should step only onto the hollow wearing soft shoes, which should be cleaned (specially of metal pieces) every time before stepping on. Walking on the sheet metals should be limited to minimum.



Ventilation of roof slope

Before starting the process of assembly you should make sure that the project of roof slope ventilation is correct. The air should naturally flow from the eaves to the ridge to divert water vapour. If the ventilation is insufficient the bottom of the sheet metal may be damaged. Proper ventilation in hot weather prevents excessive warm-up of the sheet metal and indirectly rooms of the attic. Therefore the supports should be wider than 25 mm.

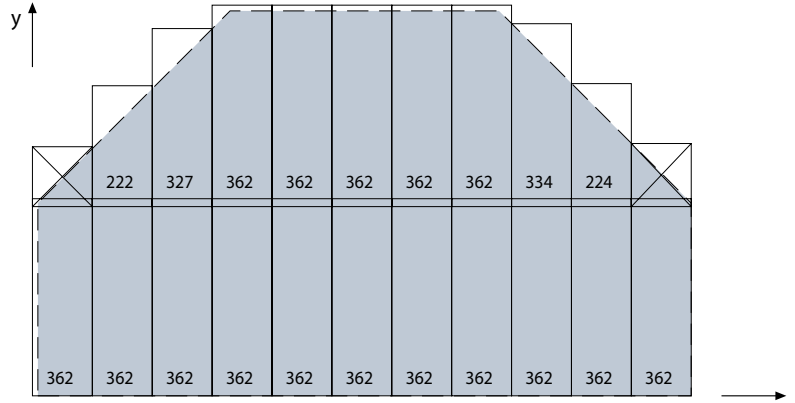


Roof self-measurement and assembly of the sheet metals

The roofs' structures are often very complicated, so Balex Metal recommends to have the assembly done by qualified roofers. If the structure is simple, with basic technical knowledge and after consulting on the problem with a specialist you can make the measurements and assemble the sheet metals yourself. Ready made flashings ordered from our company will be very useful. The measurement should be based on roof framing dimensions, because usually a roof structural dimensions are different from the design dimensions.

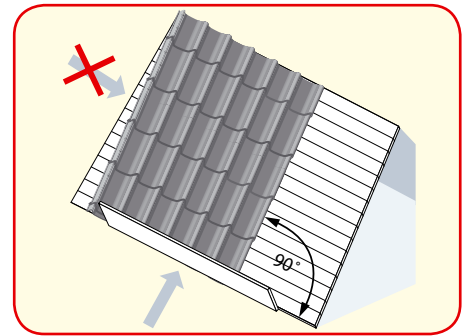
Roof slope optimisation

Balex Metal uses a computer programme to optimise the sheet metal wear. Computer optimisation allows you to cut down the waste to a technological minimum. Therefore it is recommended to measure the roof slope in real terms.



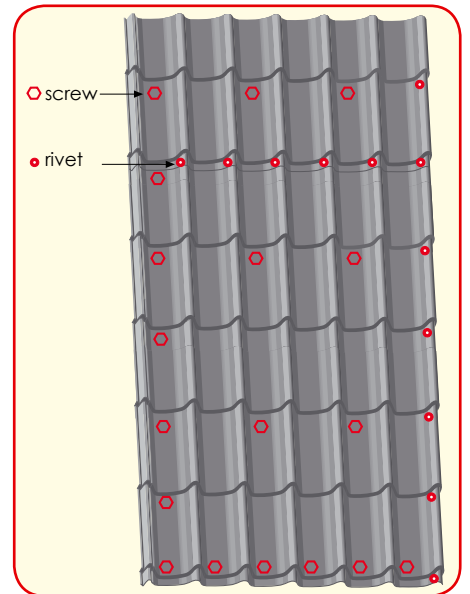
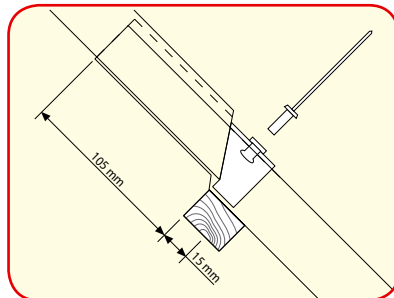
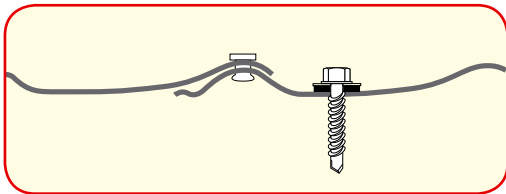
Steel roof tile assembly

The sheet metals are laid in rows from the eaves to the ridge, starting from the right lower corner. The sheets are put on the supports and fixed with Farmer self-tapping screws (after fixing the drain pipe hooks and gutter flashings first). It is very important for the first row of sheet metals to be put at the right angle to the eaves. Changing the angle of the sheet metal is impossible, because they are profiled longwise. It is common to fix a straight board near the eaves forcing the right angle for assembly. After fixing the board, the first few sheets should be laid without screws to find a correct position, then the sheet metals assembly should start.



Arranging the screws and rivets in the steel roof tile

The screws should be located in every second wave, in every second row of the roof tile, in every wave next to the eaves and ridge and in every row of roof tiles on the fish plate edge. 7 - 8 screws are used per 1m² of the roof slope. The screws should be always put in the lower part of the wave. The joint of plates along the longer side and the fish plate edge should be fixed using tight blind rivets which are located on top of the profile. The joints of longer sides of the sheet metals cannot be screwed to the patches.



Fixing the finishing elements (flashings)

The finishing elements should be fixed using short or tight blind rivets. The distance of fastening should not be greater than 300 mm. The wind stoppers should be close to the nearest wave top.



FUNCTIONS

- Supplementary elements of walling and roofing system made of:

SPEKTRUM metal roof tile
Trapezoidal profiles
Sandwich panels
Zet halls

USAGE

- Individual buildings
- Industrial buildings



Roof windows

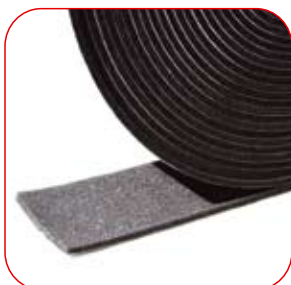
FAKRO
VELUX



Roof membrane



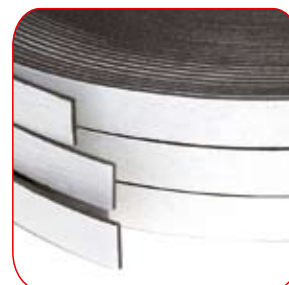
Roof lights for trapezoidal profiles



Sealing tapes
for sandwich panels



Sealing tapes
for elevation
trapezoidal profiles



Insulating tapes



Adjusting paints



Joints:
→ screws
→ rivets



Screws
for sandwich panels



Hanging rollers

→ **Organic coatings**

SP poliester



SP polyester matt



PVC(P) HPS200



PVC(F) food safe



→ **Metallic coatings:**

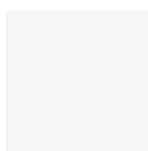
AZ aluzinc Easyfilm®



Z galvanized



Non-corrosive steel





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Balex Metal Sp. z o.o. is a leading manufacturer of construction materials in Poland. The offer of the company includes complete solutions and steel roof and wall systems for residential, commercial and rural constructions. The products gained trust and appreciation in Poland, Belorussia, Lithuania, Latvia, Estonia, Ukraine, Czech Republic, Slovakia, Sweden and Norway. Consultancy and sale is being realized by own net of regional branches, cooperating distributors and a team of professional advisers.



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