

# SNOW PROTECTION

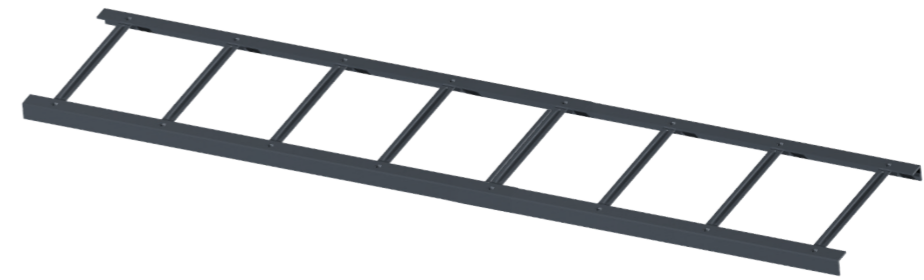
WE  
DEVELOP  
ROOFING  
IDEAS





## › Snow protection

The snow protection system eliminates the phenomenon of excessive snow quantities sliding down from a roof slope. Mounting elements make the installation easier in case of any roof covering.



### SNOWSTOPPER

- Snowstopping grate manufactured from galvanized steel, connections made in the TOX technology.
- Designed for use as a anti-snow protection element on sloping roofs. It also prevents against movements of mass quantities of snow.



1,0 m; 2,0 m; 3,0 m\*



Galvanized\*; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 3009; 3004; 7024



2 pcs.



### FIX UNI

- Adapter for a snowstopping grate. Made from galvanized steel, connection made in the TOX technology.
- Universal adapter which mounts a snowstopping grate to flat roof coverings of an angle ranging from 15 to 60 degrees.



Galvanized\*; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 3009; 3004; 7024



5 pcs.



### FIX DB-DC

- Adapter for a snowstopping grate. Made from galvanized steel, connection made in the TOX technology.
- Adapter which mounts a snowstopping grate to roofs of an angle ranging from 15 to 60 degrees and covered with concrete or ceramic roof tiles.



Galvanized\*; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 3009; 3004; 7024



5 pcs.





# SNOWSTOPPER

TOX - SYSTEM OF JOINING ELEMENTS

TOX is a modern cold joining elements technology. It is well known for, among others, the car industry. Due to the method, we are able to achieve joinings of the highest durability as well as aesthetics of production in comparison to traditional welding.



The TOX joinings has been introduced (is available) for:

- The Eurovent® SNOWSTOPPER snow-stopping grate
- The EUROVENT® FIX brackets of a snow-stopping grate
- The Eurovent® SNOWSTOPPER SET system of snow-stopping protection



## FIX BIBER

- Adapter for a snowstopping grate. Made from galvanized steel, connection made in the TOX technology.
- Used as a mounting element of a snowstopping grate on sloping roofs covered with ceramic beaver-tail roof tiles laid in double-lap pattern.



Galvanized; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 3009; 3004; 7024

5 pcs.



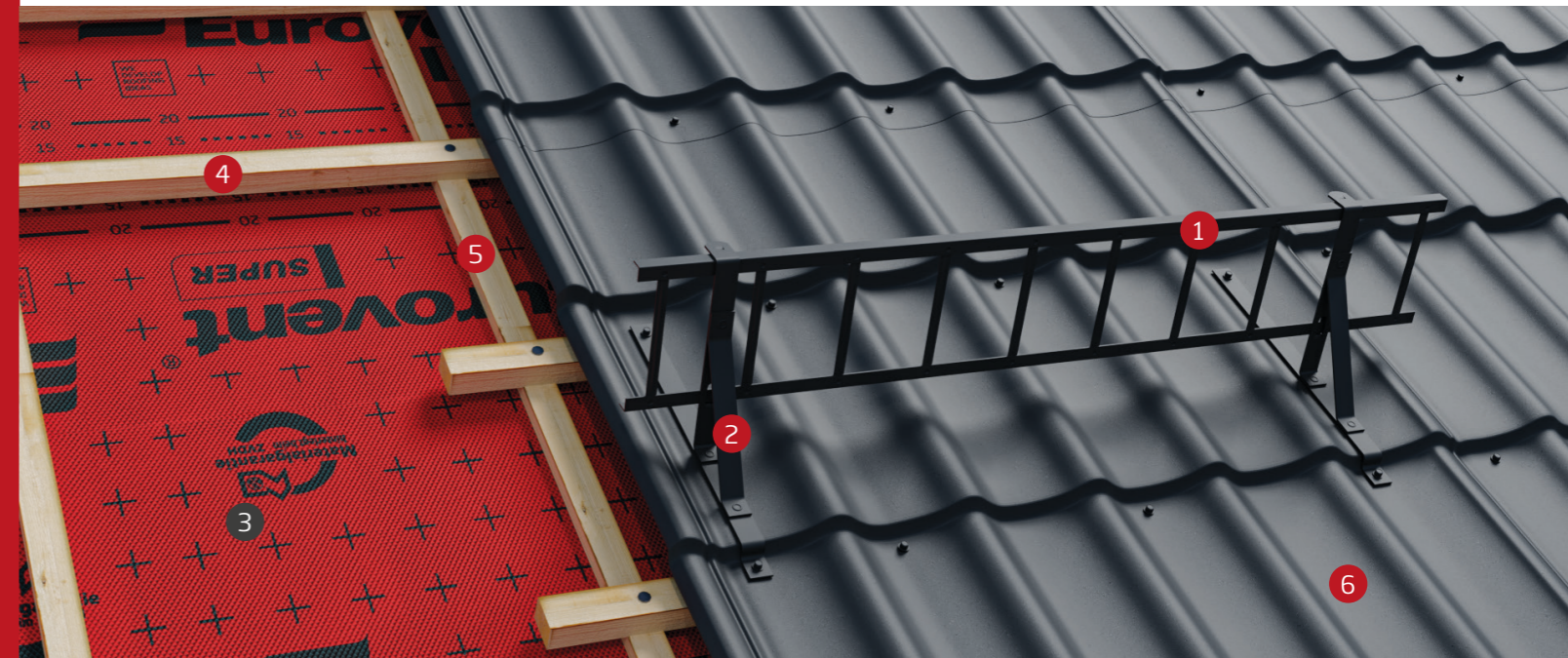
## FIX METAL PANEL

- Adapter for a snowstopping grate. Made from galvanized steel, connection made in the TOX technology.
- Used as a mounting element of a snowstopping grate on sloping roofs covered with metal panel tiles of module 370/35 mm. Blachotrapez JANOSIK; Metro SHAKE II, Pruszyński REGLE, Novatik PREMIUM; HARNAŚ.



Galvanized; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 3009; 3004; 7024

5 pcs.



### › Application of a Eurovent® SNOWSTOPPER SET METAL 350

- |                           |                   |              |
|---------------------------|-------------------|--------------|
| 1 Eurovent® SNOWSTOPPER   | 3 Eurovent® SUPER | 5 Batten     |
| 2 Eurovent® FIX METAL 400 | 4 Counter batten  | 6 Roof cover |



## FIX METAL 350

- Adapter for a snowstopping grate. Manufactured from galvanized steel, connection made in the TOX technology.
- Used as a mounting element of a snowstopping grate on sloping roofs covered with profiled metal roof tile of module 350/20 mm.



Galvanized; RAL: 8004; 8017; 8019;  
9005; 6020; 7016; 3009; 3004; 7024

5 pcs.



## FIX METAL 400

- Adapter for a snowstopping grate. Manufactured from galvanized steel, connection made in the TOX technology.
- Used as a mounting element of a snowstopping grate on sloping roofs covered with profiled metal roof tile of module 400/20 mm.



Galvanized; RAL: 8004; 8017; 8019;  
9005; 6020; 7016; 3009; 3004; 7024

5 pcs.



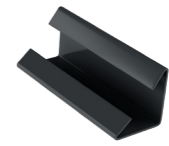
## FIX METAL FLAT

- Adapter for a snowstopping grate. Manufactured from galvanized steel, connection made in the TOX technology.
- Used as a mounting element of a snowstopping grate on sloping roofs covered with flat metal sheet finished with a standing seam.



Galvanized; RAL: 8004; 8017; 8019;  
9005; 6020; 7016; 3009; 3004; 7024

5 pcs.



## CLIP

- The clip for snow-stopping pipe made from galvanized steel.
- Used as an element for connecting several grates into a row in an easy and durable way.



60 mm Galvanized; RAL: 8004; 8017; 8019;  
9005; 6020; 7016; 3009; 3004; 7024

50 pcs.



## FIX METAL VENECJA

- Adapter for a snowstopping grate. Manufactured from galvanized steel, connection made in the TOX technology.
- Used as a mounting element of a snowstopping grate on sloping roofs covered with profiled metal roof tile of module VENECJA 350/35 mm.



Galvanized; RAL: 8004; 8017; 8019;  
9005; 6020; 7016; 3009; 3004; 7024

5 pcs.



## FIX METAL FINNERA

- Adapter for a snowstopping grate. Manufactured from galvanized steel, connection made in the TOX technology.
- Used as a mounting element of a snowstopping grate on sloping roofs covered with profiled metal roof tile of module FINNERA 330/30 mm.

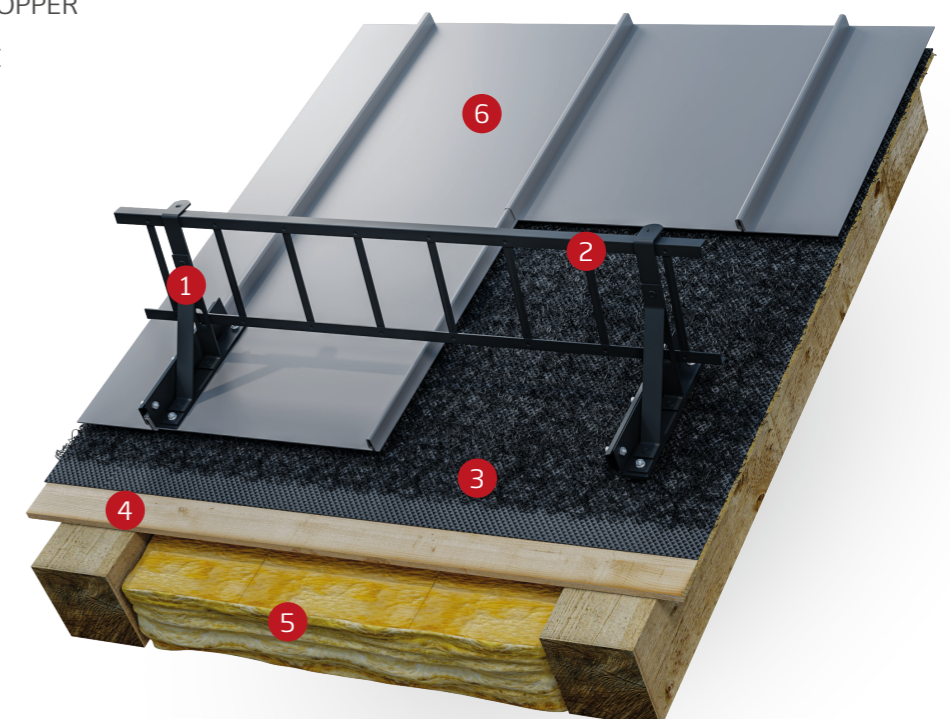


Galvanized; RAL: 8004; 8017; 8019;  
9005; 6020; 7016; 3009; 3004; 7024

5 pcs.

### › Eurovent® FIX METAL FLAT

- 1 Eurovent® FIX METAL FLAT
- 2 Eurovent® SNOWSTOPPER
- 3 Eurovent® METALLIC
- 4 Sarking
- 5 Thermal insulation
- 6 Flat sheet metal

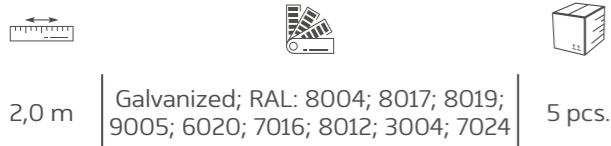






## TUBE

- Snow-stopping pipe made from galvanized steel.
- Designed for use as a protection element protecting against movements of mass quantities of snow. Prevents gutter detachment
- Versions made from copper, aluminum or stainless steel available on order.



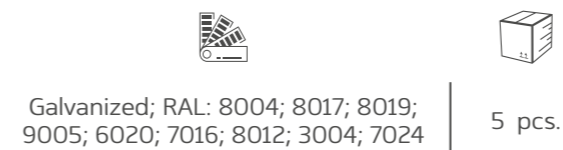
## FIX TUBE UNI

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- Universal fixing of a snow-stopping pipe to the roof covering. Mounted to flat roof slopes of an angle ranging from 15 to 60 degrees.



## FIX TUBE BIBER

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snow-stopping pipe to roof slopes of an angle ranging from 15 to 60 degrees, covered with ceramic roof tiles-beaver-tail roof tiles.



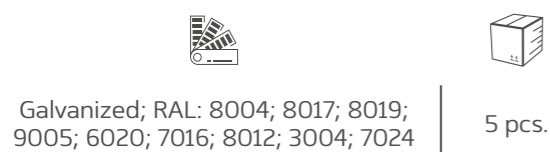
## FIX TUBE METAL 350

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snowstopping pipe on sloping roofs covered with profiled metal roof tile of module 350/20 mm.



## FIX TUBE DB-DC SHORT

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snow-stopping pipe to roof slopes of an angle ranging from 15 to 60 degrees, covered with cement or ceramic roof tiles, requiring over 10 pcs./sqm.



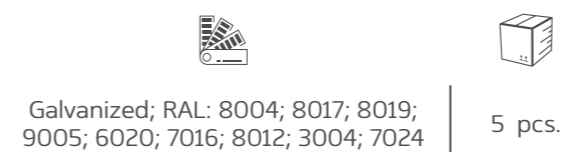
## FIX TUBE DB-DC LONG

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snow-stopping pipe to roof slopes of an angle ranging from 15 to 60 degrees, covered with cement or ceramic roof tiles, requiring less than 10 pcs./sqm.



## FIX TUBE METAL FLAT

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- Used as a mounting element of a snow-stopping pipe on sloping roofs covered with flat metal sheet finished with a standing seam.



## FIX TUBE METAL 400

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snowstopping pipe on sloping roofs covered with profiled metal roof tile of module 400/20 mm.







## FIX TUBE METAL VENECJA

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snowstopping pipe on sloping roofs covered with profiled metal roof tile of module VENECJA 350/35 mm.



Galvanized; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 8012; 3004; 7024

5 pcs.



## FIX TUBE METAL FINNERA

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snowstopping pipe on sloping roofs covered with profiled metal roof tile of module FINNERA 330/30 mm.



Galvanized; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 8012; 3004; 7024

5 pcs.



## END TUBE

- The end of snow-stopping pipes made of plastic.
- Designed for sealing the snow-stopping pipes at their ends.



RAL: 9005

10 pcs.



## CLIP TUBE

- Clip for snow-stopping pipe made from plastic.
- Used as an element enabling efficient connection of two snow-stopping pipes into a line.



RAL: 9005

10 pcs.



## FIX TUBE METAL JANOSIK

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snowstopping pipe on sloping roofs covered with profiled metal roof tile of module JANOSIK 380/35 mm.



Galvanized; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 8012; 3004; 7024

5 pcs.



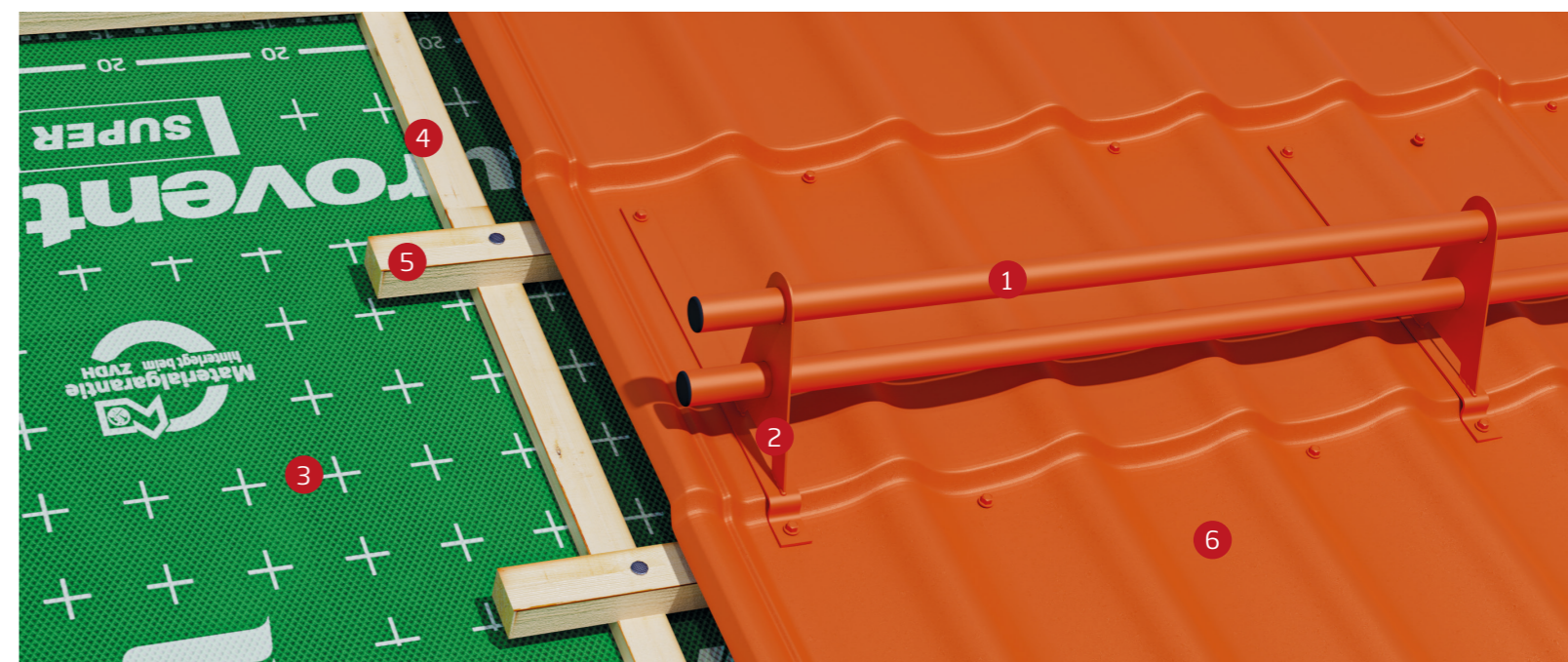
## FIX TUBE METAL GERMANIA

- Adapter for a snow-stopping pipe, manufactured from galvanized steel.
- A mounting element of a snowstopping pipe on sloping roofs covered with profiled metal roof tile of module GERMANIA SIMETRIC 350/30 mm.



Galvanized; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 8012; 3004; 7024

5 pcs.



### › Application of a Eurovent® TUBE SET METAL 400

- |                                |                   |              |
|--------------------------------|-------------------|--------------|
| 1 Eurovent® TUBE               | 3 Eurovent® SUPER | 5 Batten     |
| 2 Eurovent® FIX TUBE METAL 400 | 4 Counter batten  | 6 Roof cover |





## BLOCK UNI

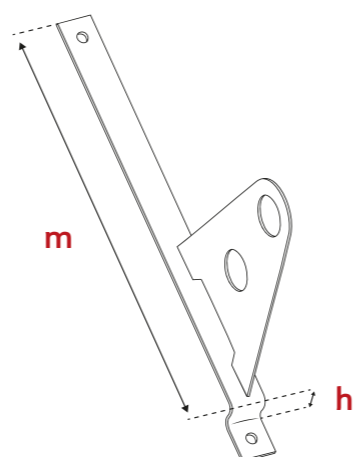
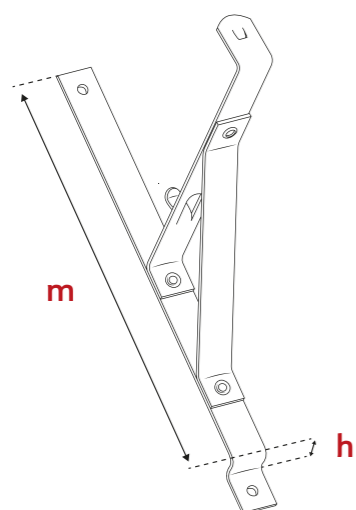
- Grip for snow-stopping log manufactured from galvanized steel.
- A mounting element enabling efficient installation for timber snow-stopping logs on sloping roofs of an angle ranging from 15 to 60 degrees.



Galvanized; RAL: 8004; 8017; 8019; 9005; 6020; 7016; 3009; 3004; 7024

10 pcs.

## EUROVENT® FIX METAL, EUROVENT® FIX TUBE METAL – TECHNICAL DATA



FIX	Module length „m“ [mm]	Embossing height „h“ [mm]
FIX METAL 350   FIX TUBE METAL 350	350	20
FIX METAL 400   FIX TUBE METAL 400	400	20
FIX METAL FINNERA   FIX TUBE METAL FINNERA	330	30
FIX METAL VENECJA   FIX TUBE METAL VENECJA	350	35
FIX METAL PANEL   FIX TUBE METAL JANOSIK	370   380	35
FIX TUBE METAL GERMANIA	350	30

## METAL ROOFS – PRODUCERS LIST

Metal roof tiles types	Module	Producer	FIX METAL	FIX TUBE METAL
<b>A</b> Adamante	350	Ruukki	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Allano	350	Bratex	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Amalfi Plus	350	Blachdom Plus	FIX METAL VENECJA	FIX TUBE METAL VENECJA
<b>B</b> Bella Sara	350	Budmat	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Bona Plus	350	Blachdom Plus	FIX METAL 350	FIX TUBE METAL 350
Bona Plus	400	Blachdom Plus	FIX METAL 400	FIX TUBE METAL 400
<b>C</b> Centro	350	Bratex	FIX METAL VENECJA	FIX TUBE METAL VENECJA
<b>D</b> Diament Eco Plus	350	Blachotrapez	FIX METAL 350	FIX TUBE METAL 350
Diament Eco Plus	400	Blachotrapez	FIX METAL 400	FIX TUBE METAL 400
<b>F</b> Finezja Max	350	Florian	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Finnera	330	Ruukki	FIX METAL FINNERA	FIX TUBE METAL FINNERA
Florina	400	Florian	FIX METAL 400	FIX TUBE METAL 400
Frigge	350	Ruukki	FIX METAL VENECJA	FIX TUBE METAL VENECJA
<b>G</b> Germania Simetric	350	Blachotrapez	FIX METAL GERMANIA	FIX TUBE METAL GERMANIA
Gryf	350	Pruszyński	FIX METAL VENECJA	FIX TUBE METAL VENECJA
<b>I</b> Imperia Plus	350	Blachdom Plus	FIX METAL 350	FIX TUBE METAL 350
Imperia Plus	400	Blachdom Plus	FIX METAL 400	FIX TUBE METAL 400
<b>J</b> Janosik	380	Blachotrapez	FIX METAL PANEL	FIX TUBE METAL JANOSIK
<b>K</b> Kinga	350	Florian	FIX METAL 350	FIX TUBE METAL 350
Kinga	400	Florian	FIX METAL 400	FIX TUBE METAL 400
Kingas	350	Blachotrapez	FIX METAL 350	FIX TUBE METAL 350
Kingas	400	Blachotrapez	FIX METAL 400	FIX TUBE METAL 400
Kingas 15	350	Blachotrapez	FIX METAL 350	FIX TUBE METAL 350
Kingas 15	400	Blachotrapez	FIX METAL 400	FIX TUBE METAL 400
Kingas Eco Plus	350	Blachotrapez	FIX METAL 350	FIX TUBE METAL 350
Klara	350	Florian	FIX METAL 350	FIX TUBE METAL 350
Korona Plus	350	Blachdom Plus	FIX METAL 350	FIX TUBE METAL 350
Korona Plus	400	Blachdom Plus	FIX METAL 400	FIX TUBE METAL 400
<b>L</b> Lidia Max	350	Florian	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Loara	350	Pruszyński	FIX METAL VENECJA	FIX TUBE METAL VENECJA
<b>M</b> Maja Max	350	Florian	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Monterrey Feb Forma	350	Ruukki	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Murano	350	Budmat	FIX METAL VENECJA	FIX TUBE METAL VENECJA
Mustang	350	Blachpol	FIX METAL VENECJA	FIX TUBE METAL VENECJA
<b>O</b> Optima Arad	350	Pruszyński	FIX METAL VENECJA	FIX TUBE METAL VENECJA



## METAL ROOFS

### - PRODUCERS LIST

Metal roof tiles types	Module	Producer	FIX METAL	FIX TUBE METAL
<b>P</b> Perła Plus	350	Blachdom Plus	FIX METAL 350	FIX TUBE METAL 350
	400	Blachdom Plus	FIX METAL 400	FIX TUBE METAL 400
	350	Bratex	FIX METAL 350	FIX TUBE METAL 350
<b>R</b> Rialto	350	Budmat	FIX METAL VENECJA	FIX TUBE METAL VENECJA
	350	Florian	FIX METAL VENECJA	FIX TUBE METAL VENECJA
	350	Florian	FIX METAL 350	FIX TUBE METAL 350
	400	Florian	FIX METAL 400	FIX TUBE METAL 400
	350	Pruszyński	FIX METAL 350	FIX TUBE METAL 350
	400	Pruszyński	FIX METAL 400	FIX TUBE METAL 400
<b>S</b> Sofia	350	Florian	FIX METAL 350	FIX TUBE METAL 350
	400	Florian	FIX METAL 400	FIX TUBE METAL 400
	350	Pruszyński	FIX METAL 350	FIX TUBE METAL 350
	400	Pruszyński	FIX METAL 400	FIX TUBE METAL 400
<b>T</b> Talia	350	Blachotrapez	FIX METAL VENECJA	FIX TUBE METAL VENECJA
	350	Florian	FIX METAL VENECJA	FIX TUBE METAL VENECJA
	350	Blachodach	FIX METAL 350	FIX TUBE METAL 350
<b>V</b> Vello	350	Bratex	FIX METAL VENECJA	FIX TUBE METAL VENECJA
	350	Budmat	FIX METAL VENECJA	FIX TUBE METAL VENECJA



# Snow Zones

In accordance with the regulations included in the Polish Standard PN-EN 1991-1-3, owners of buildings are obliged to ensure security to the buildings users, as well as to outsiders as far as the snow sliding down from roof slopes is concerned. The aforementioned standard precisely states the rules and the number of protecting elements which are supposed to be installed on a roof slope.



## Snow-stopping grates and logs

The position of snow-stopping grates and logs brackets for particular zones:



Two rows of snow-stopping grates are recommended to be positioned in case of roofs which slope length is bigger than 6,5 m.

For roofs which angle is bigger than 40° and the slope length bigger than 8 m, two rows of snow breakers are recommended to be installed.

## Snowstop – snow breaker

Snowstops are an alternative solution in terms of snow protection for snow-stopping grates and logs. In order to make their work effective, it is recommended to dispose them on the entire roof slope surface, while their disposal and quantity depend on a roof angle and the snow zone in which a particular building is located. The table presented below shows a precise number of snowstops for 1 m<sup>2</sup> of a roof slope in dependence on an angle and the load value of snow on the roof.

The formula for calculation of roof loading with snow is applied when the value (s) is not provided in a construction project.

$$S = Q_k \cdot C \cdot Y_1 \text{ [kN/m}^2\text{]}$$

Where:

$Q_k$  – Load value of snow on the ground:

- zone 1            0,7 kN/m<sup>2</sup>
- zone 2            0,9 kN/m<sup>2</sup>
- zone 3            1,2 kN/m<sup>2</sup>
- zone 4            1,6 kN/m<sup>2</sup>
- zone 5            ≥ 2,0 kN/m<sup>2</sup>

$Y_1$  – factor of safety = 1,5

C – factor of the roof shape

The formula for calculation of a factor of the roof shape (C).

1. Pent roof and gable roof:

$$C_1(\alpha) = \begin{cases} 0,8 \\ 0,8 \left( \frac{60 - \alpha}{30} \right) \\ 0,0 \end{cases}$$

2. Gable roof for zones of bigger load or zones 4 and 5:

$$C_2(\alpha) = \begin{cases} 0,8 \\ 0,8 + 0,4 \left( \frac{\alpha - 15}{15} \right) \\ 1,2 \left( \frac{60 - \alpha}{30} \right) \\ 0,0 \end{cases}$$

1. roof angle:

- $\alpha \leq 30^\circ$
- $30^\circ < \alpha \leq 60^\circ$
- $\alpha > 60^\circ$

2. roof angle:

- $\alpha \leq 15^\circ$
- $15^\circ < \alpha \leq 30^\circ$
- $30^\circ < \alpha \leq 60^\circ$
- $\alpha > 60^\circ$

Number of snowstops (pieces/m<sup>2</sup>)

		load value of snow on the roof S (kN/m <sup>2</sup> ).										
		S ≤ 1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	12,00
roof slope angle	20°	2,0	2,1	2,1	2,2	2,2	2,5	2,8	3,3	3,5	3,8	4,6
	25°	2,1	2,2	2,2	2,3	2,5	2,7	3,1	3,5	4,0	4,4	5,2
	30°	2,1	2,2	2,2	2,4	2,8	3,2	3,8	4,2	4,6	4,9	5,5
	35°	2,2	2,3	2,3	2,5	2,9	3,3	3,9	4,4	4,6	5,2	6,2
	40°	2,3	2,4	2,4	2,6	3,0	3,4	4,2	4,5	5,0	5,3	6,8
	45°	2,5	2,6	2,7	2,8	3,1	3,6	4,4	4,9	5,2	5,5	7,0
	50°	3,1	3,3	3,6	4,0	4,3	4,7	5,2	5,6	5,9	6,1	7,1
	55°	3,2	3,4	3,7	4,1	4,4	4,8	5,4	5,8	6,0	6,3	7,2
	60°	3,3	3,8	4,2	4,4	4,7	5,1	5,4	6,0	6,4	6,8	7,4



# SNOWSTOP

Snowstops used as an element breaking mass quantities of snow sliding down from roof slopes to the eaves area. Made from galvanized steel, lacquered with a polyester paint. Available in a dozen of models dedicated for different types of roof coverings.



8004; 8019; 8017;  
9005; 7016; 8012\*



100 pcs.



3 000 pcs.



**UNI**  
for flat roof coverings  
Models SHORT, LONG



**DB**  
BRAAS, IBF, EURONIT,  
JOPEK – BEAVER-TILE,  
NELSKAMP, KORAMIC,  
CREATON VIVA, RUPP TOPAS



**DC-1**  
TONDACH HRANICE 11,  
CREATON MZ23, KORAMIC 32,  
RÖBEN MONZA PLUS,  
RUPP TARMAUTE



**DC-2**  
TONDACH ROMAŃSKA 12,  
CREATON HARMONIA NEU,  
BRAAS / RUPP SIRIUS 13,  
KORAMIC E80, JAKOBI D10,  
RÖBEN FLEMING, RÖBEN  
BORNHOLM  
Models: SHORT; LONG



**DC-3**  
TONDACH: FRANCUSKA 12,  
FALCOVKA, MARSYLKA 12,  
RUPP RUBIN, CREATON:  
DOMINO, RATIO NEU,  
PIATTA, BRAAS ARMER 12V,  
KORAMIC ALEGRA 89,  
BOGEN INNOVO 12



**DC-4**  
TONDACH: FRANCUSKA 14,  
MARSYLKA 14



**METAL**  
metal roof covering



**DC-5**  
TONDACH ROMAŃSKA L15,  
CREATON FUTURA



**DC-6**  
TONDACH STODO,  
JIRCANKA

\* on order



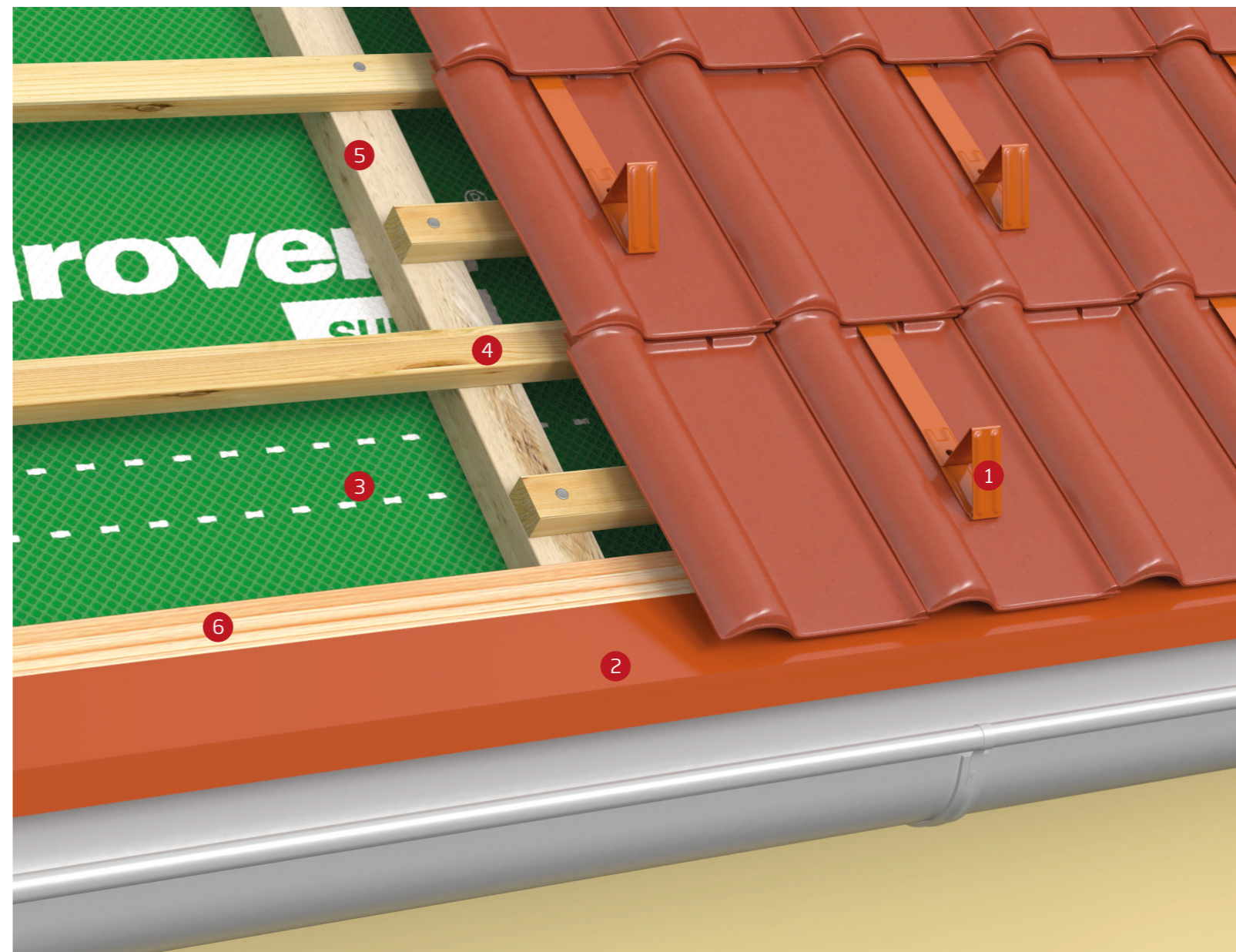
**DC-7**  
CREATON: PREMION



**DC-8**  
CREATON HARMONICA



**DC-9**  
CREATON BALANCE



## › Application of a snow-breaker Eurovent® SNOWSTOP

- 1 Eurovent® SNOWSTOP
- 2 Eurovent® EAVES PLANK
- 3 Eurovent® SUPER
- 4 Counter batten
- 5 Batten
- 6 Eaves board





# SNOWSTOPPER SET

The system of snow-stopping protection, set from a snow-stopping grate SNOWSTOPPER, adapters FIX and clips CLIP. Constitutes efficient protection against snow movements down from roof slopes of an angle ranging from 15 to 60 degrees.

	1,0 m; 2,0 m; 3,0 m
	Galvanized; RAL: 8004; 8017; 8019; 6020; 9005; 7016; 3009; 7024; 3004
	1 set
	12 sets



**BIBER**  
for beaver tile-roof tiles.

**DB-DC**  
for cement and ceramic roof tiles.

**METAL FLAT**  
for flat metal coverings finished with a standing seam.



**UNI**  
for flat roof coverings flat coverings, e.g. bituminous shingles.



**METAL PANEL**  
for panel metal sheet of module 370/35 mm. Metro SHAKE II, Pruszyński REGLE, Novatik PREMIUM, Novatik HARNAŚ, Blachotrapez JANOSIK.



**METAL 350**  
for profiled metal roof tile of module 350/20 mm.



**METAL 400,**  
for profiled metal roof tile of module 400/20 mm.



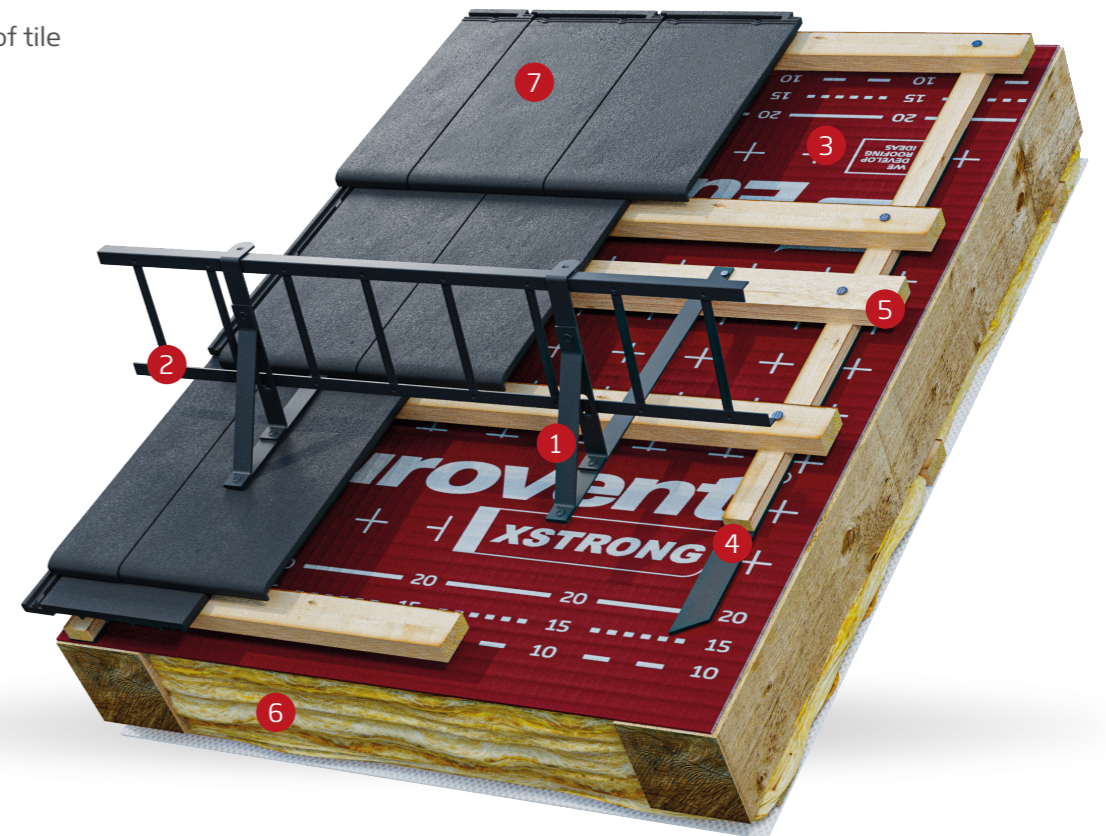
**METAL FINNERA**  
for profiled metal roof tile of module FINNERA 330/30 mm.



**METAL VENECA**  
for profiled metal roof tile of module VENECA 350/35 mm.

## › Eurovent® SNOWSTOPPER SET DB-DC

- 1 Eurovent® FIX DB-DC
- 2 Eurovent® SNOWSTOPPER
- 3 Eurovent® XSTRONG
- 4 Eurovent® PUR
- 5 Additional batten
- 6 Thermal insulation
- 7 Roof tile





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[www.eurovent.de](http://www.eurovent.de)