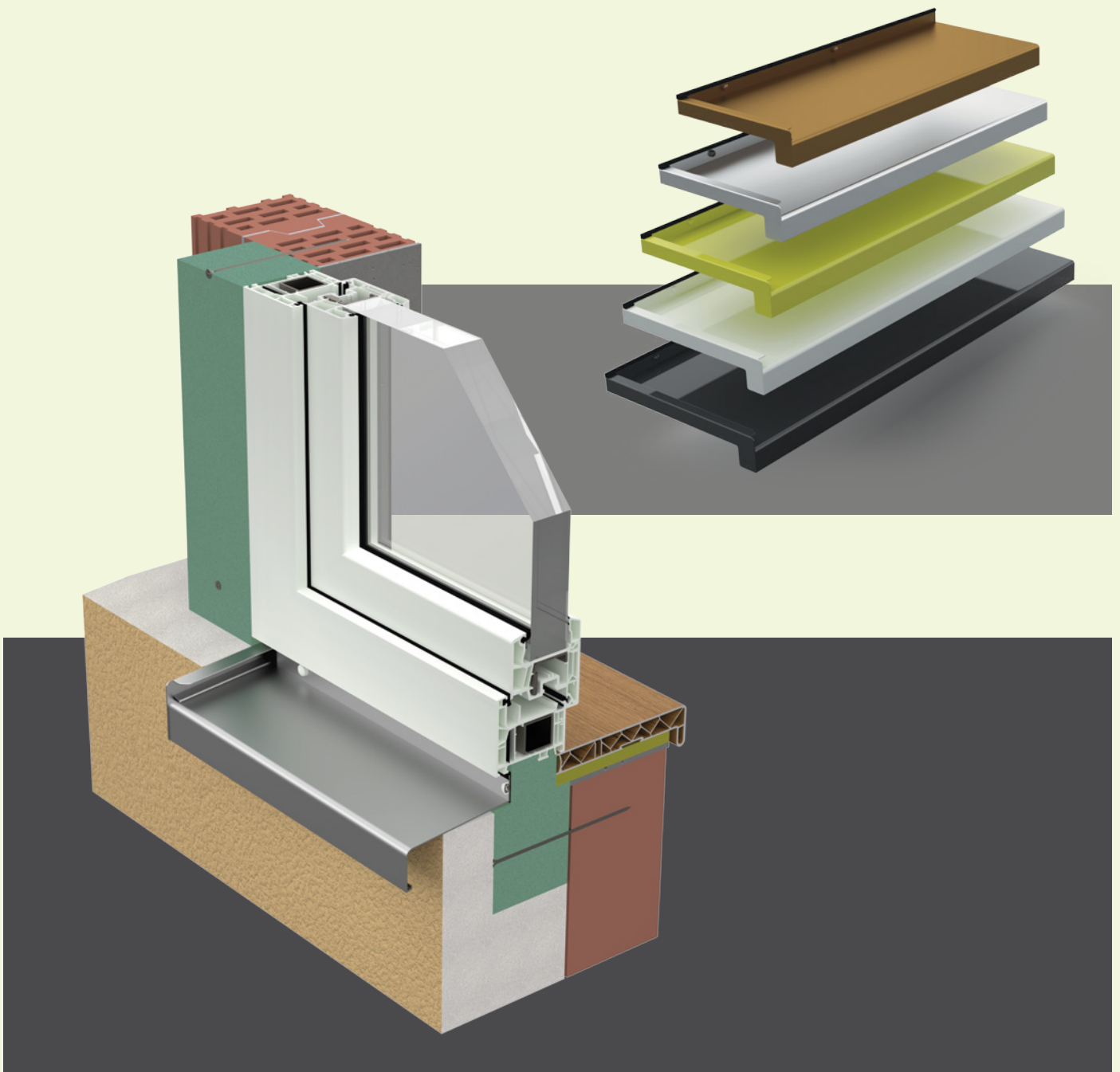


CATALOGUE

Producer and Distributor of PVC and Wood Carpentry Accessories





GROUP PM

producer and supplier of PVC and Wood Carpentry Accessories

PM Group has over 20 years' experience in the market of accessories for PVC and Wood Carpentry. We are present on the global market thanks to two product divisions from our companies: **PM Technic Elements** and **PM Aluminium Line**. Regarding logistics, our warehouses are located in countries such as Romania, Italy and Hungary, and PM Group is expanding continuously.

With over **2000 products in our portfolio** serving **more than 5000 clients in 7 countries**, PM products manufactured in the PM factory in Turkey stand out on the market through their quality and innovative features, providing our clients with benefits in terms of both time and quality.

PM's product range is diverse and covers all stages of the building process which involve woodworking. Our products stand out by their safety as well as their quick and easy assembly, and are delivered with all the accessories needed for assembly.

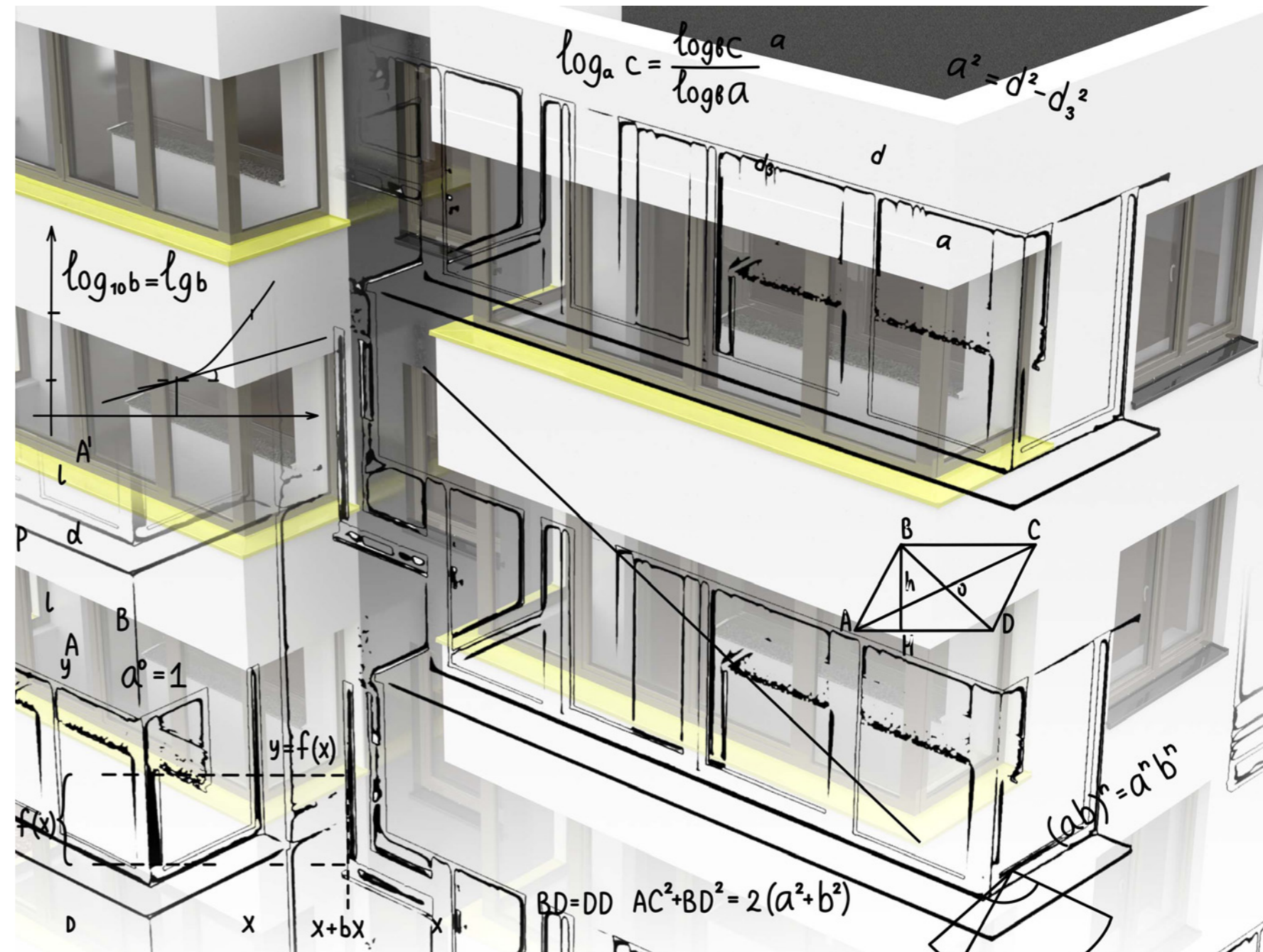
In 2022, we launched the TSV Line brand, showcasing a premium exterior aluminium sill system, both technically and aesthetically efficient, and we are continuously striving to come up with new solutions for the needs identified on site.

CONTENT

TSV	Window Sill	
01	TSV Aluminium WINDOW SILL - 40 mm rim	7
02	TSV Aluminium END CAPS type "C", type "L" - 40 mm rim	11
03	TSV Aluminium END CAPS type "C", type "L" - 25 mm rim	17
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	TSV THERMO GREEN EXTERNAL WINDOW LEDGE RAISED PROFILE	80
	TSV THERMO GREEN SUBFRAMES	82
	TSV THERMO PLATE FOR THERMAL INSULATION UNDER THE EXTERIOR/INTERIOR WINDOW SILL	84

TURNING AN IDEA INTO A PRODUCT

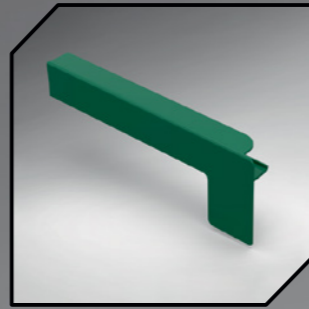
One of the essential parameters on which the design process of the TSV complete system is based is their efficient operation of the montage and the design focus management for which our team of engineers are responsible, ensuring a smooth installation processes. Innovation and quality are the pillars of technological progress, and the passion and professionalism of expert teams ensure a sustainable future for your home.



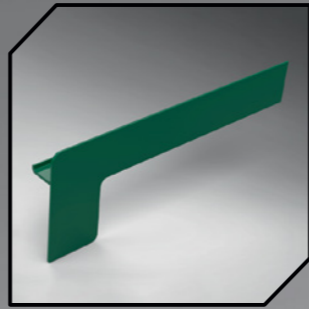
The central element on which TSV products focus is recognized is by its technical and aesthetics performance, which together contribute to the realization of architectural concepts and renovation projects.

All our resources and ideas are for one purpose - to promote the highest quality products and services.

- aluminium caps with 40 mm rim
- "clips-on" system
- RAL 9016, 8019, 8003, 7016
- ANODISED E6/EV1, E6/C32, E6/C33
- special colors can be ordered
- available lengths 50 mm - 400 mm



END CAP TYPE "C"

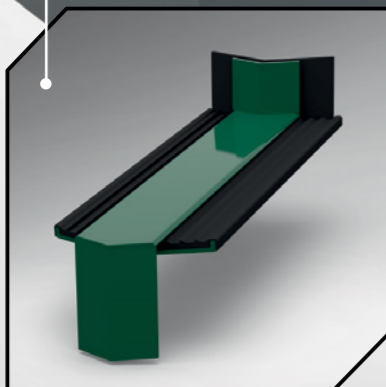


END CAP TYPE "L"

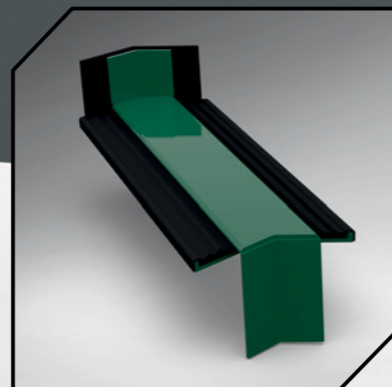
ALUMINIUM WINDOW SILL AND ACCESSORIES

- window sills with 40 mm rims
- RAL 9016, 8019, 8003, 7016
- ANODISED E6/EV1, E6/C32, E6/C33
- special colors can be ordered
- available widths 50 mm - 400 mm

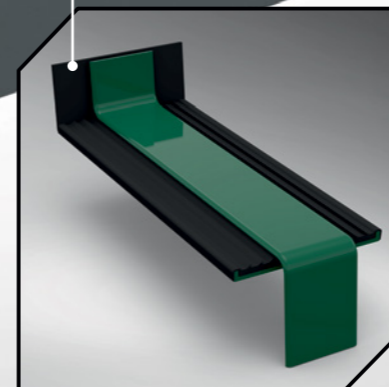
CONNECTOR 135°
OUTER CORNERS
with EPDM gasket



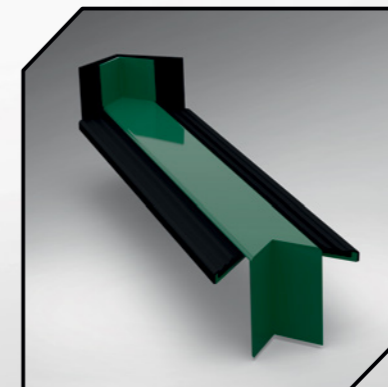
CONNECTOR 135°
INNER CORNERS
with EPDM gasket



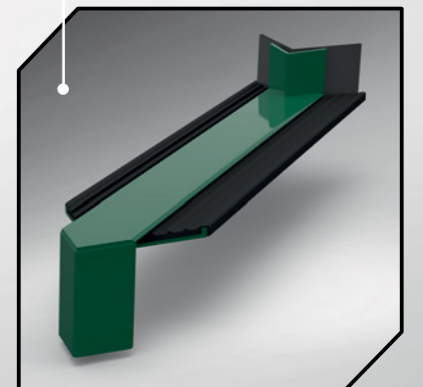
CONNECTOR 180°
COUPLING
with EPDM gasket

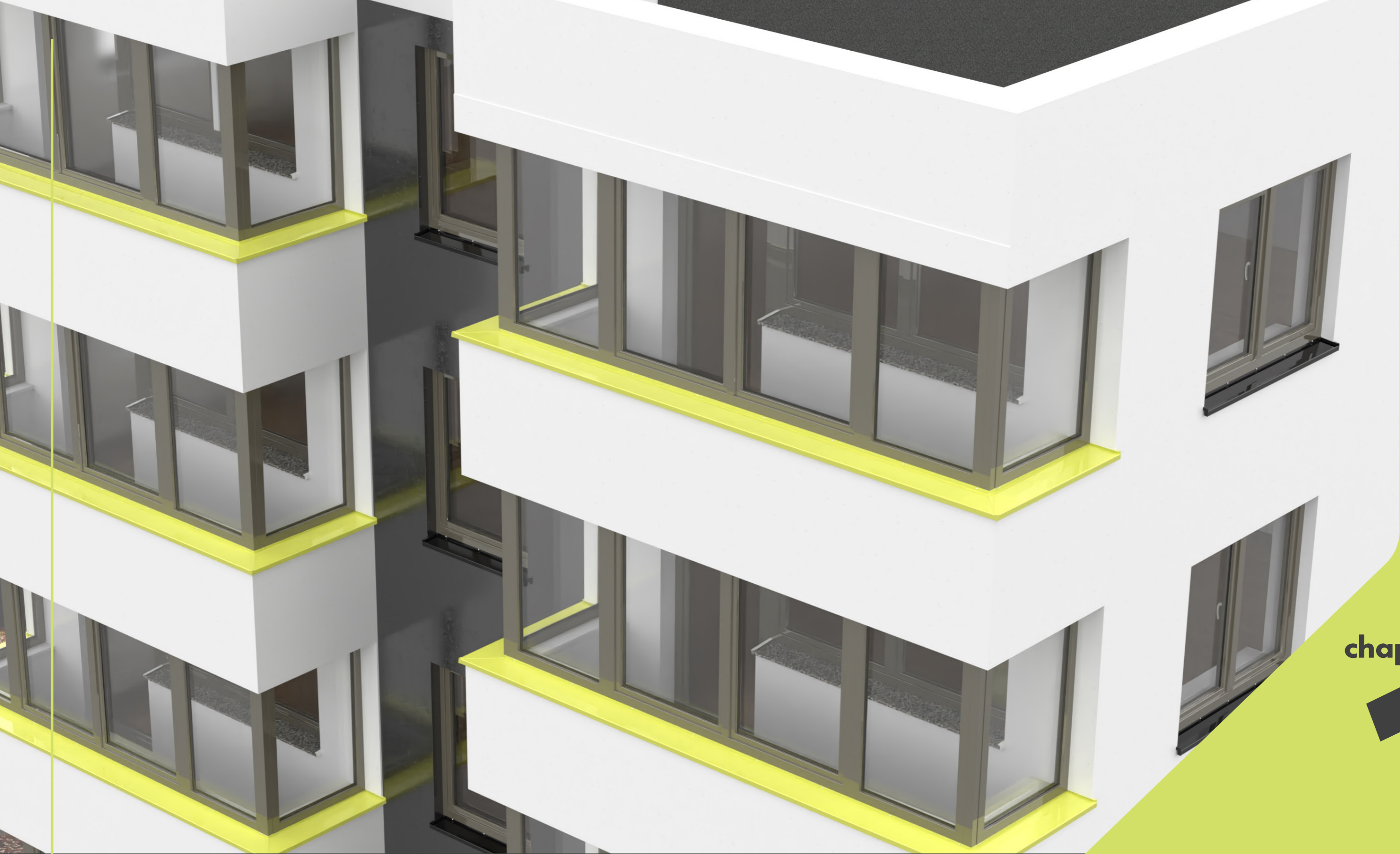


CONNECTOR 90°
INNER CORNERS
with EPDM gasket



CONNECTOR 90°
OUTER CORNERS
with EPDM gasket





chapter

1

TSV ALUMINIUM WINDOW SILL

40 mm rim

The correct solution from a technical and aesthetic point of view, increased efficiency for the external protection of the building at the bottom of the window frame.

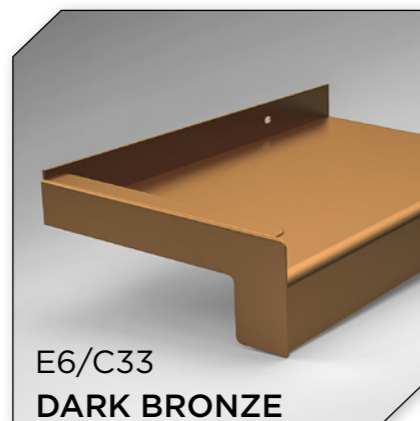
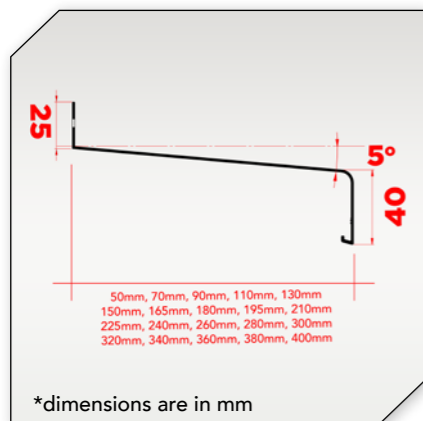
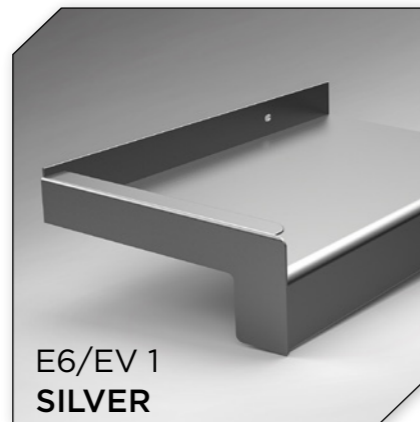
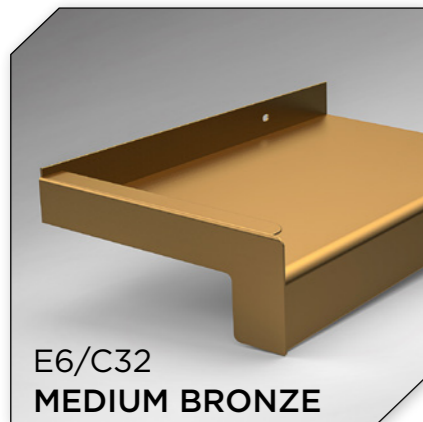
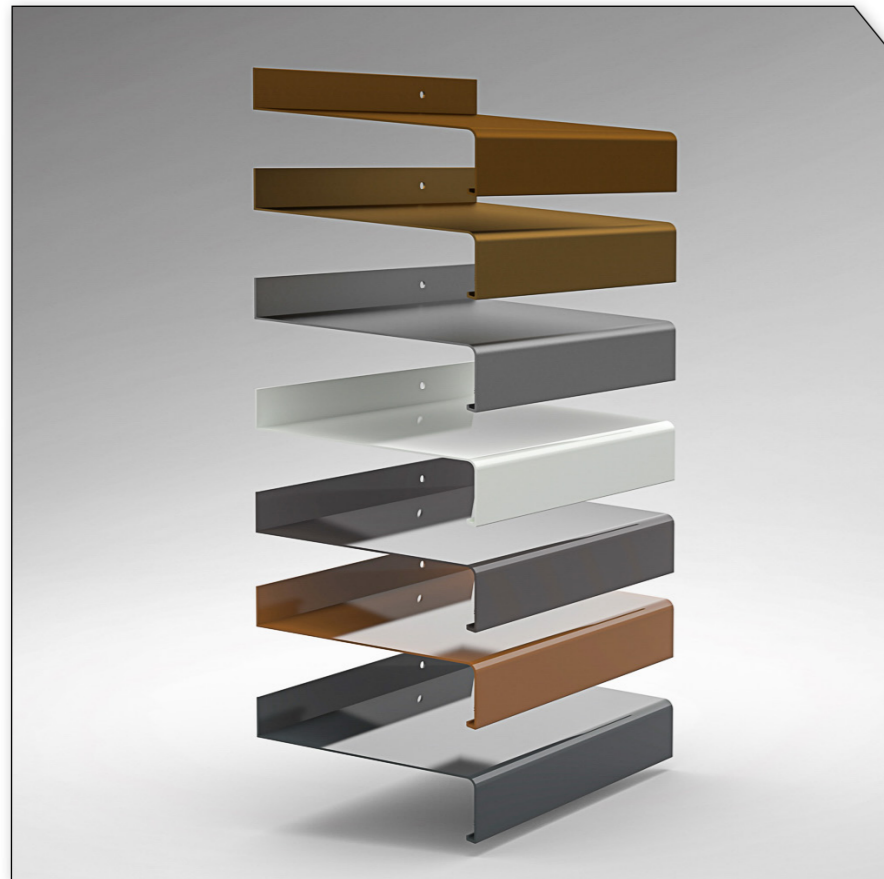


You can visit
the product
on our
website

tsvline.com

01. TSV ALUMINIUM WINDOW SILL

40 mm rim



Product name:

TSV Aluminium Window Sill, 40mm rim

**Benefits
Characteristics:**

TSV aluminium window sills are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile, and protected with removable protective foil.

It's recommended to install outside in order to protect the window frame and prevent rain water from entering your house.

Increased resistance to atmospheric conditions, ultraviolet rays and temperature fluctuations.

**Available colors
Finished surface:**

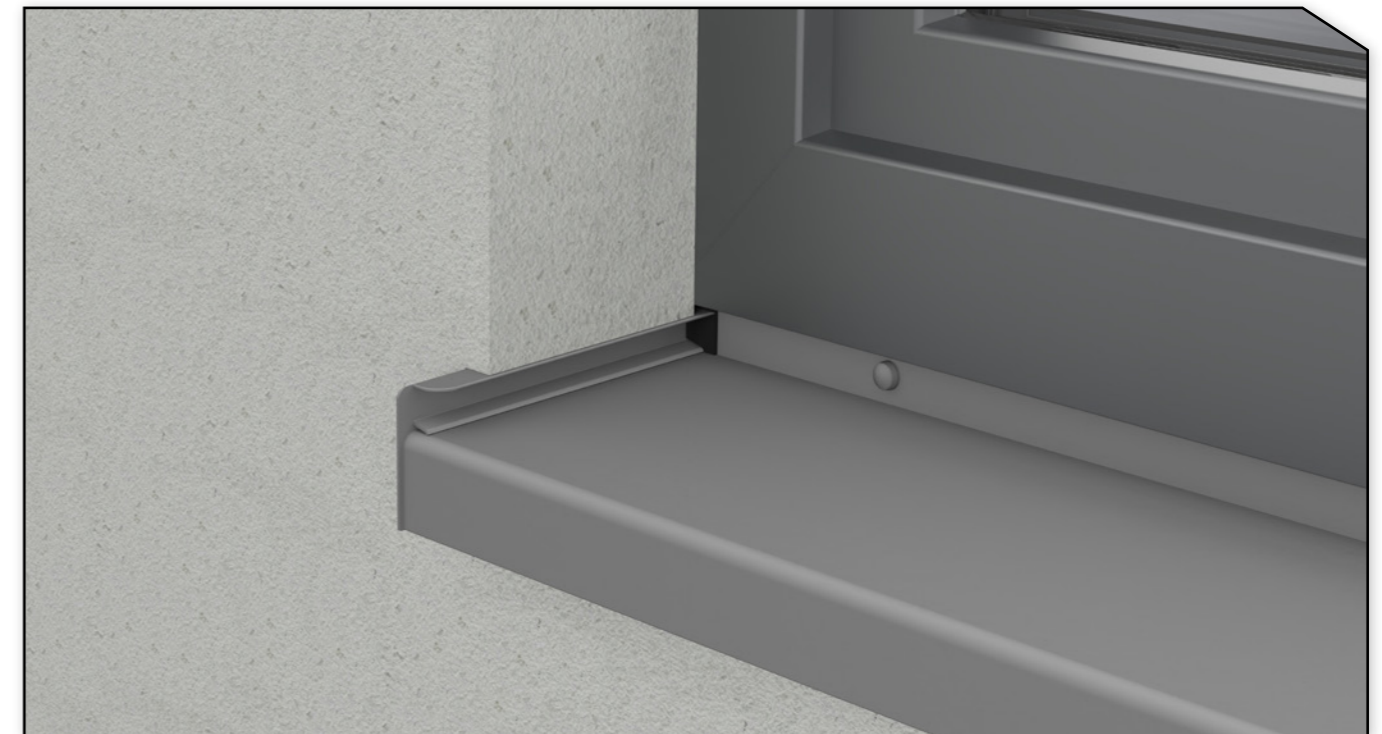
RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

**custom coatings are available for delivery on request*

**Width
available:**

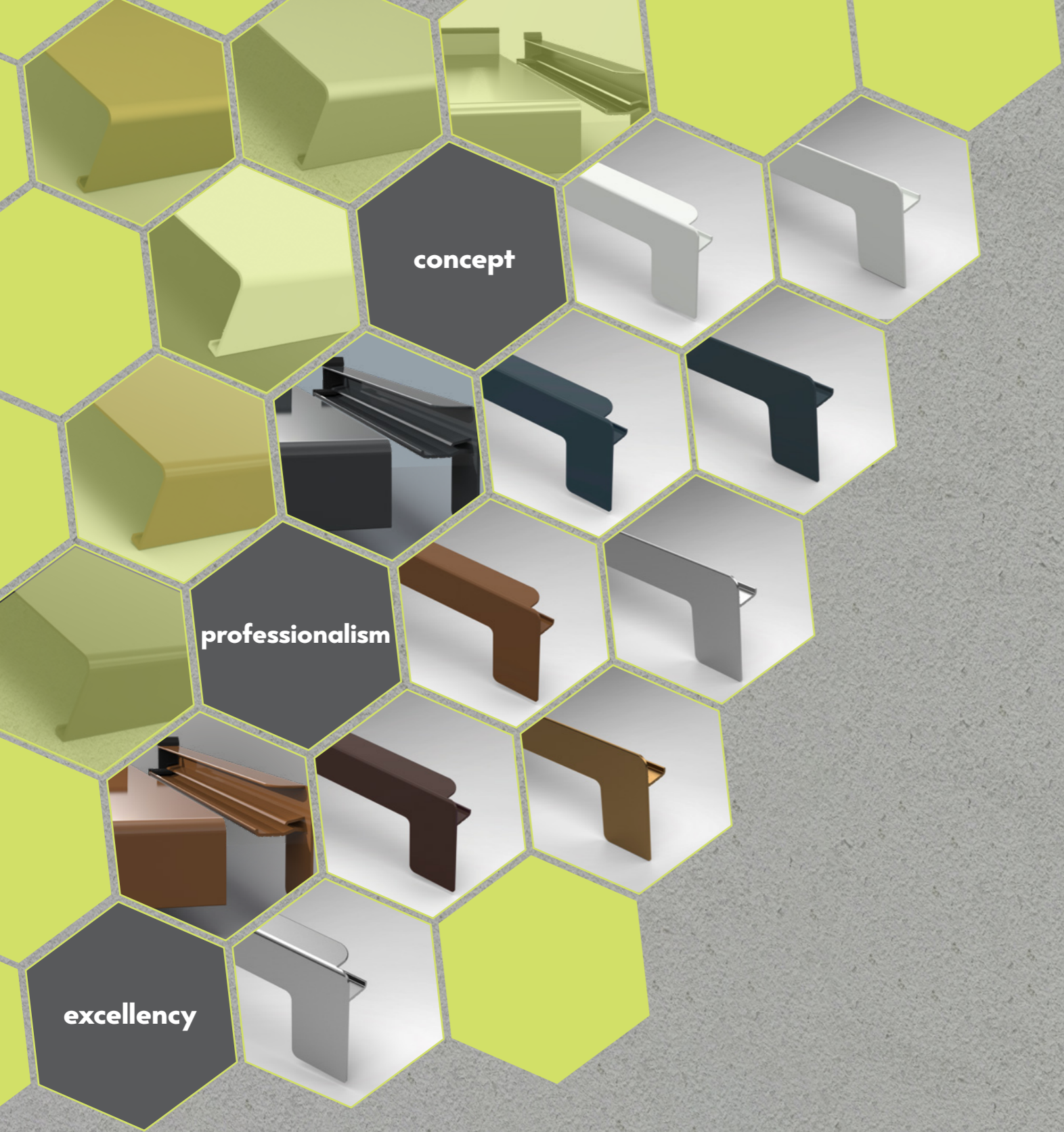
50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm



**TECHNICAL
SPECIFICATIONS**

TSV Aluminium
WINDOW SILL
40 mm rim

- TSV aluminium window sills are fitted with 4.2 × 7 mm oval holes arranged at distances of 300 mm between the holes.
- The paint is applied entirely on one side and on the other of the window sills.
- Inclination angle of the windows sills 5°.
- For the correct installation it's recommended to use the following mounting accessories: self tapping stainless steel screw, screw cap washer hinged, butyl sealing tape, soundproof tape, low expansion foam



concept

professionalism

excellency



chapter

2

END CAPS

aluminium - 40 mm rim

They are produced by the electrostatic painting process, respectively by the electrochemical anodizing process.
Window sill clamping - clips-on system.

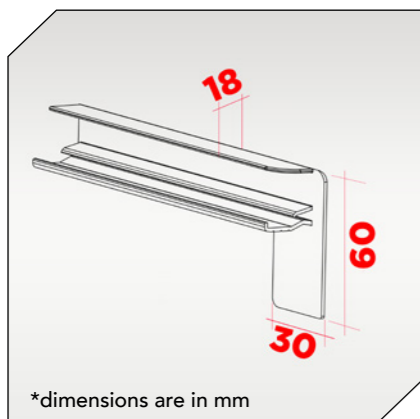
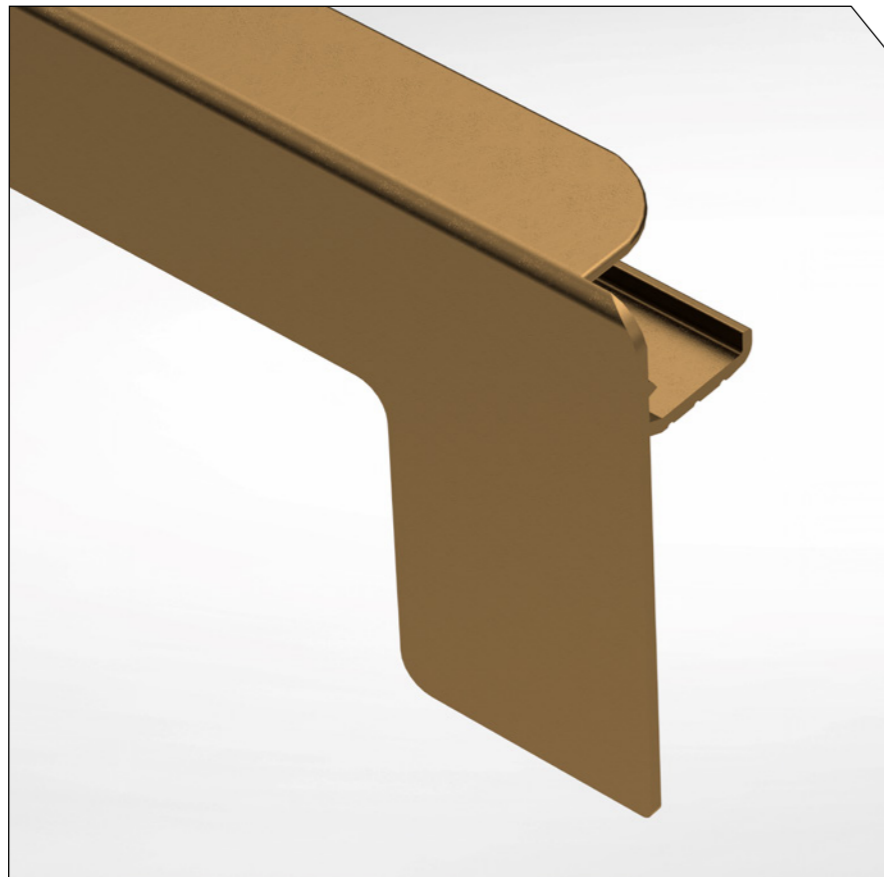


You can visit the product on our website

tsvline.com

02. END CAPS TYPE "C"

from aluminium - 40 mm rim



Product name:

Aluminium End Caps type "C"

**Benefits
Characteristics:**

They are made in perfect harmony with the window sills, respecting the quality guarantee and the rigidity adequate to the structure. It installs very easily thanks to our innovative clips-on system.

The system is recommended to be used for all situations in which the application of thermal insulation represents a later process for realizing the finished facade;

Outstanding performance and increased strength in terms of maintenance and safety.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

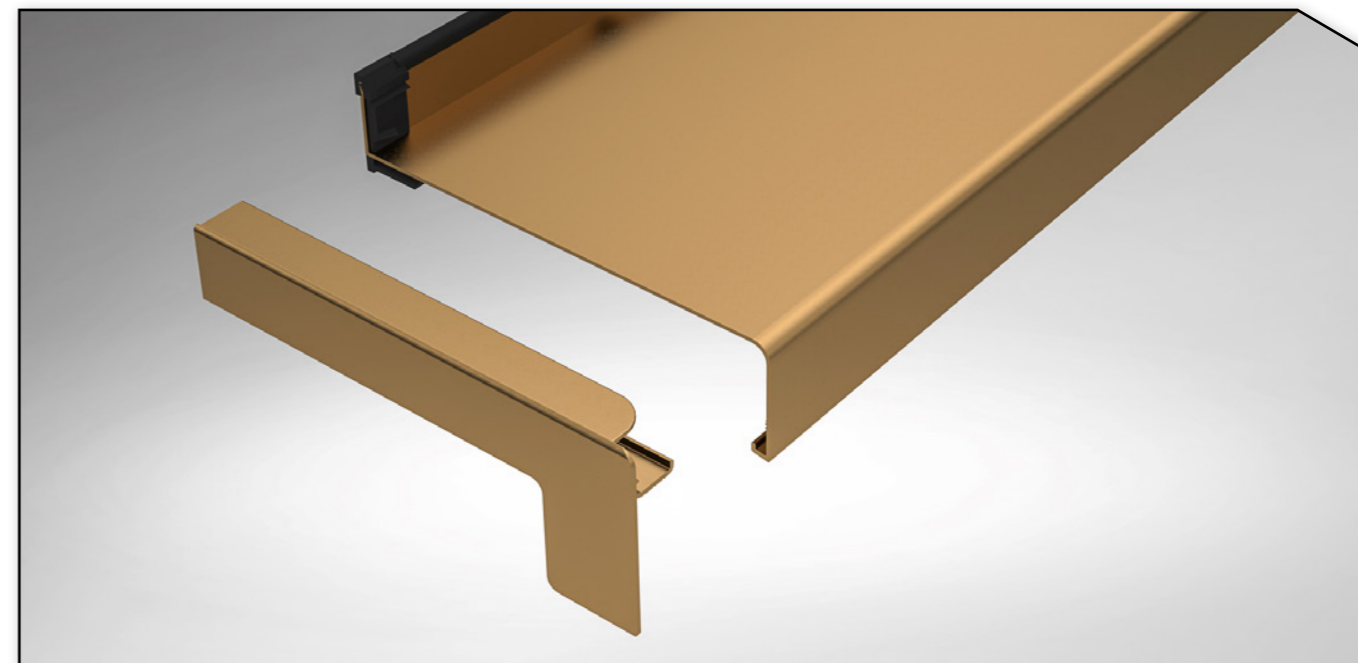
**custom coatings are available for delivery on request*

Width available:

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

Individual packaging - 1 piece left / 1 piece right



TECHNICAL SPECIFICATIONS

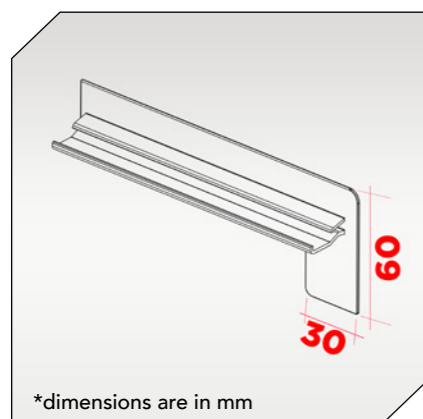
Aluminium end covers type "C"
40 mm rim

- The TSV end covers are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile.

- Suitable for buildings with thermal insulation with a width of 18 mm.

02. END CAPS TYPE "L"

from aluminium - 40mm rim



Product name:

Aluminium End Caps type "L"

Benefits Characteristics:

They are designed to give a decorative look through pattern and colors, respecting the quality guarantee and protection against infiltrations.

Easy to install thanks to our innovative clips-on system.

The system is recommended to be used for all situations in which the thermal insulation has been made, as well as in the case of renovation projects.

Outstanding performance and increased strength in terms of maintenance and safety.

Available colors Finished surface:

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

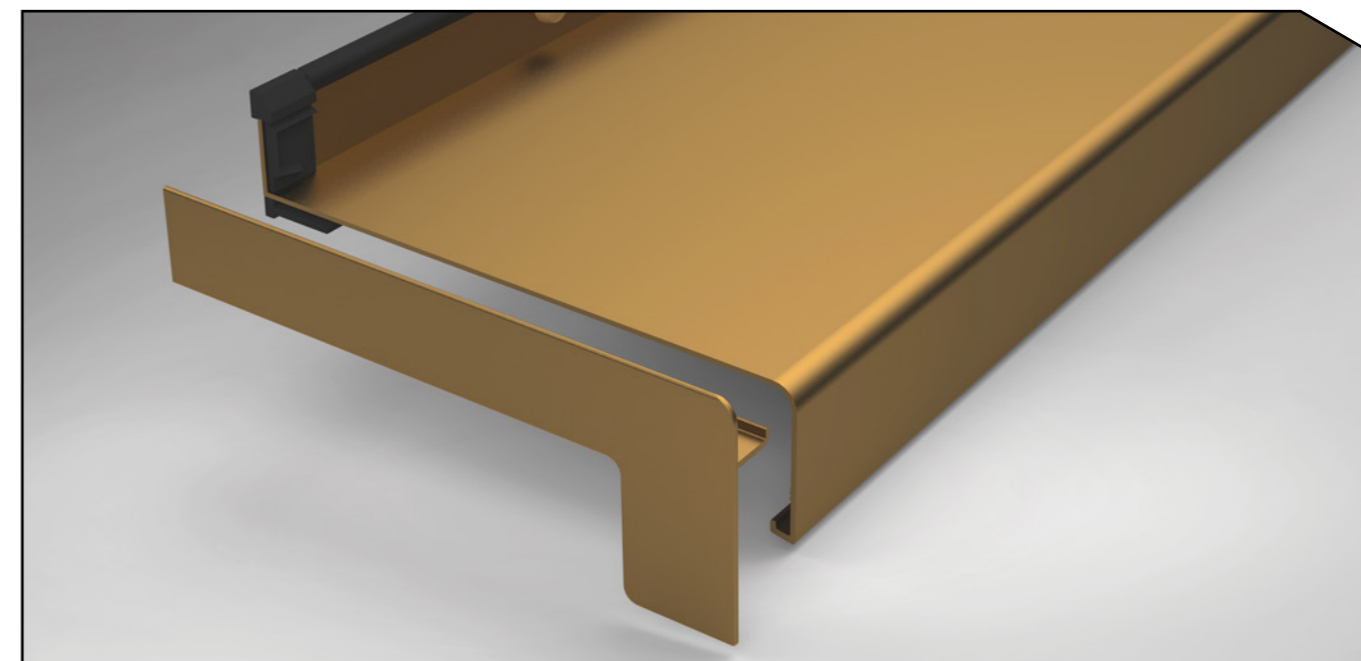
**custom coatings are available for delivery on request*

Width available:

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

Individual packaging - 1 piece left / 1 piece right

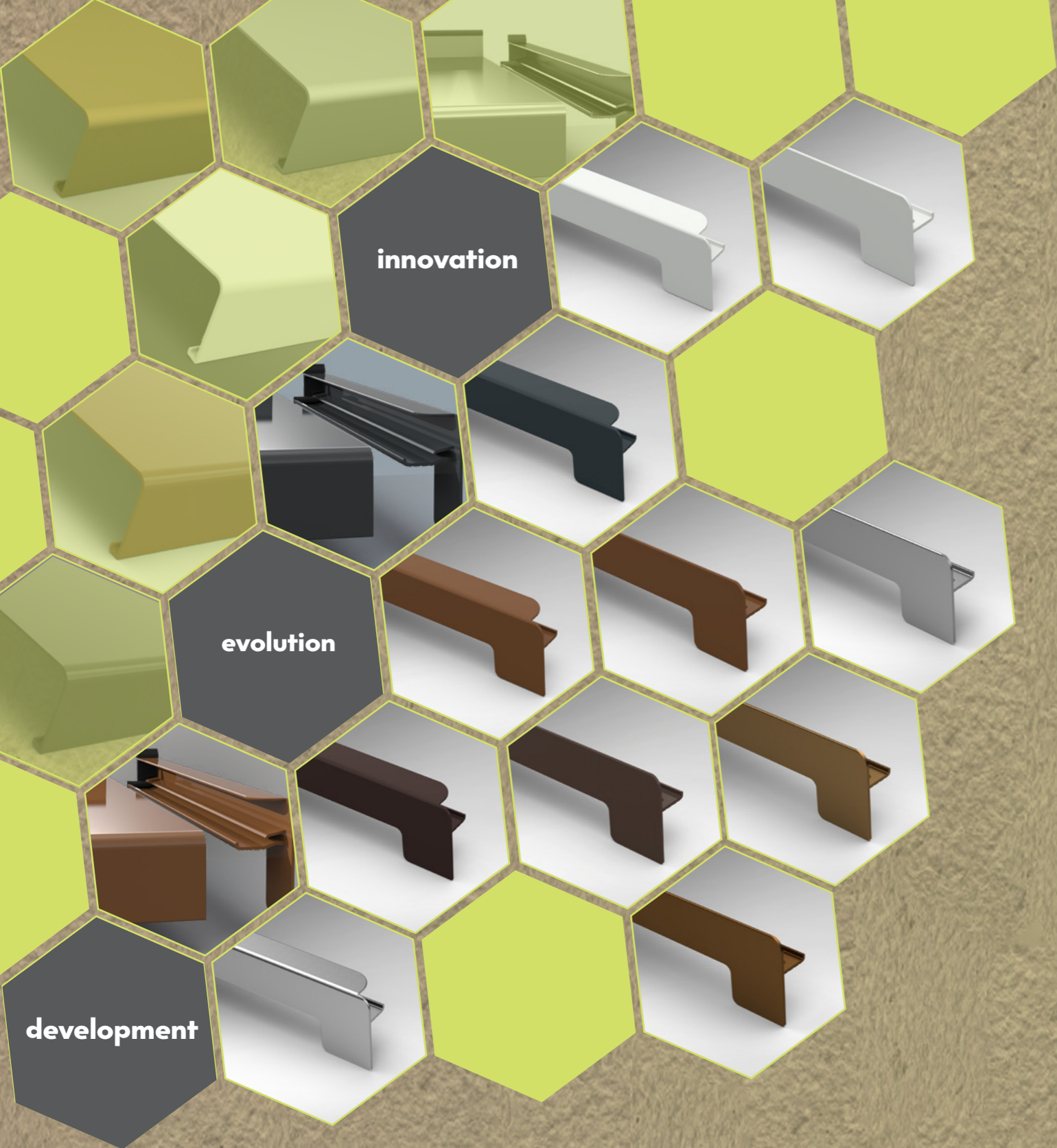


TECHNICAL SPECIFICATIONS

Aluminium end covers type "L"
40 mm rim

The TSV end covers are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile.

- Variable thermal insulation application sizes with 3 width options - 18 mm / 30 and 40 mm (available using the type "L" aluminium side covers together with the plaster compensation profile).



innovation

evolution

development



chapter
3

END CAPS
aluminium - 25 mm rim

They are produced by the electrostatic painting process, respectively by the electrochemical anodizing process.
Window sill clamping - clips-on system.

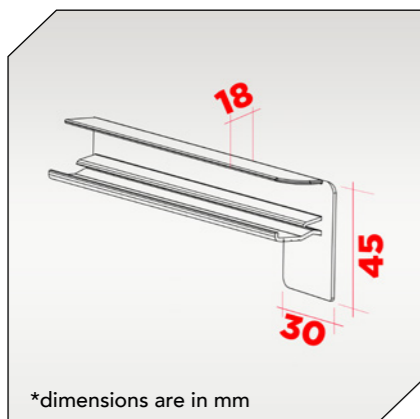
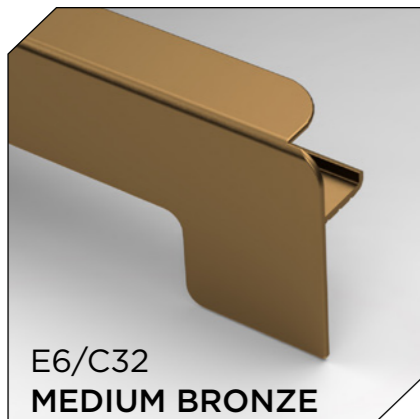
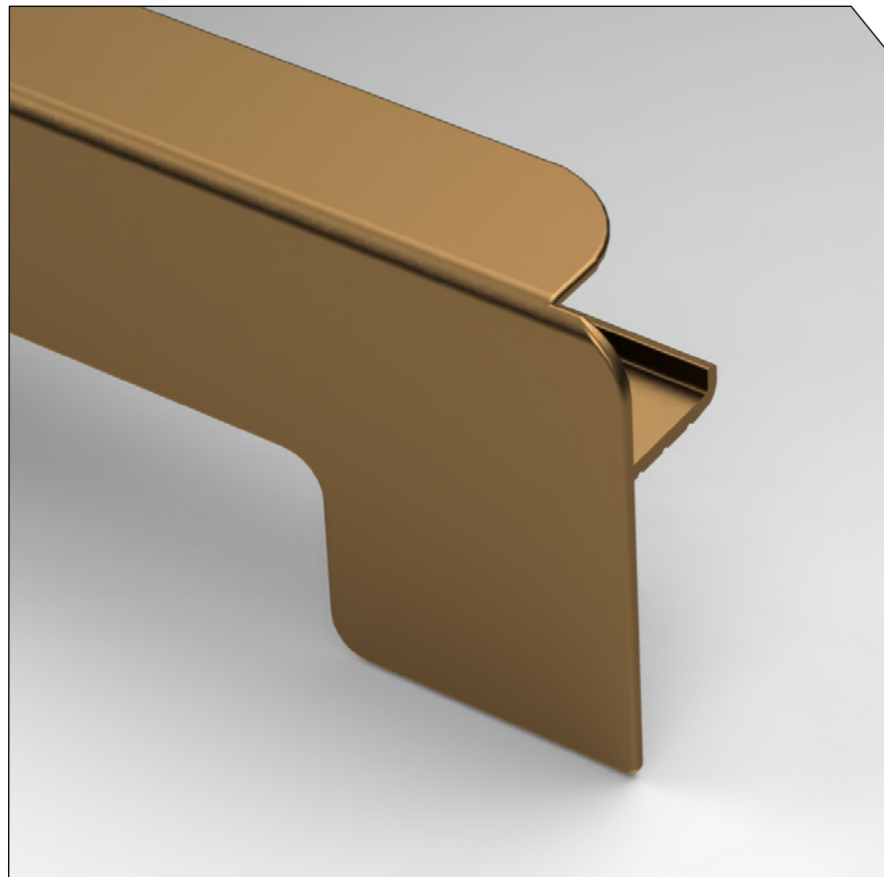


You can visit
the product
on our
website

tsvline.com

03. END CAPS TYPE "C"

from aluminium - 25 mm rim



Product name:

Aluminium End Caps type "C"

**Benefits
Characteristics:**

They are made in perfect harmony with the window sills, respecting the quality guarantee and the rigidity adequate to the structure. It installs very easily thanks to our innovative clips-on system.

The system is recommended to be used for all situations in which the application of thermal insulation represents a later process for realizing the finished facade;

Outstanding performance and increased strength in terms of maintenance and safety.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016
E6/EV1, E6/C32, E6/C33

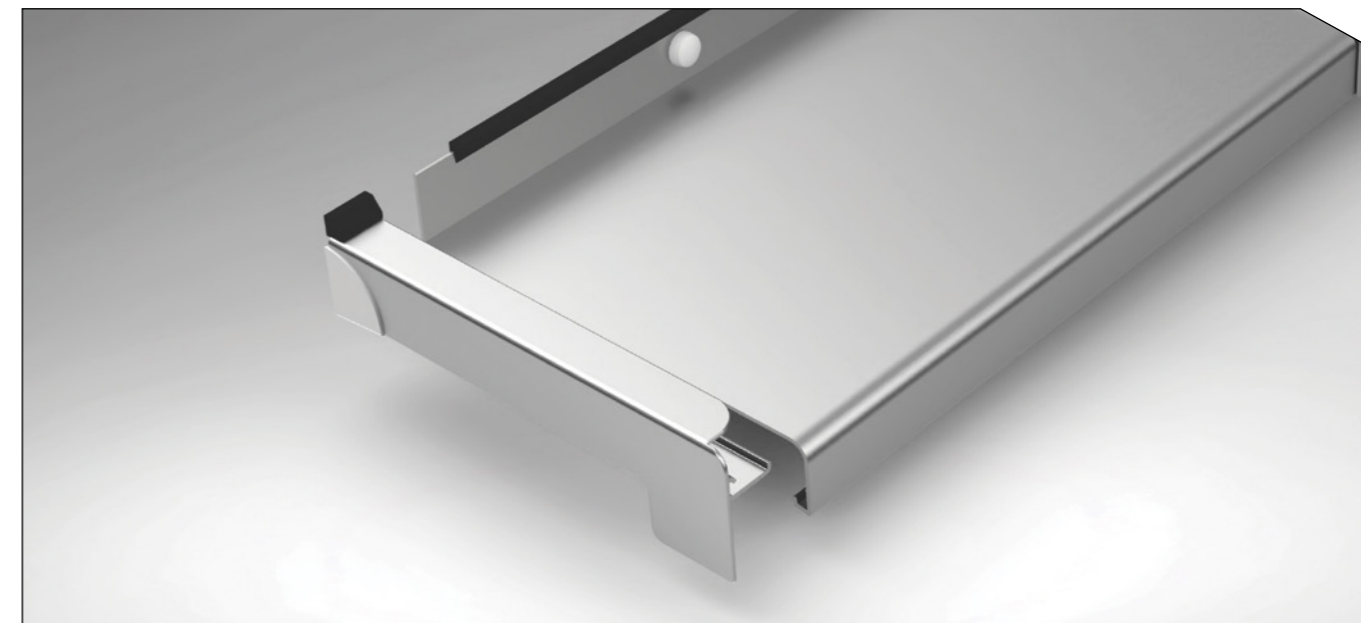
**custom coatings are available for delivery on request*

Width available:

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

Individual packaging - 1 piece left / 1 piece right



TECHNICAL SPECIFICATIONS

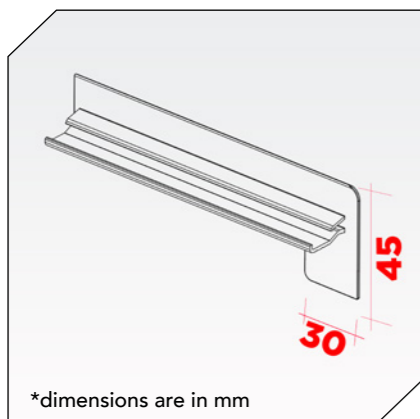
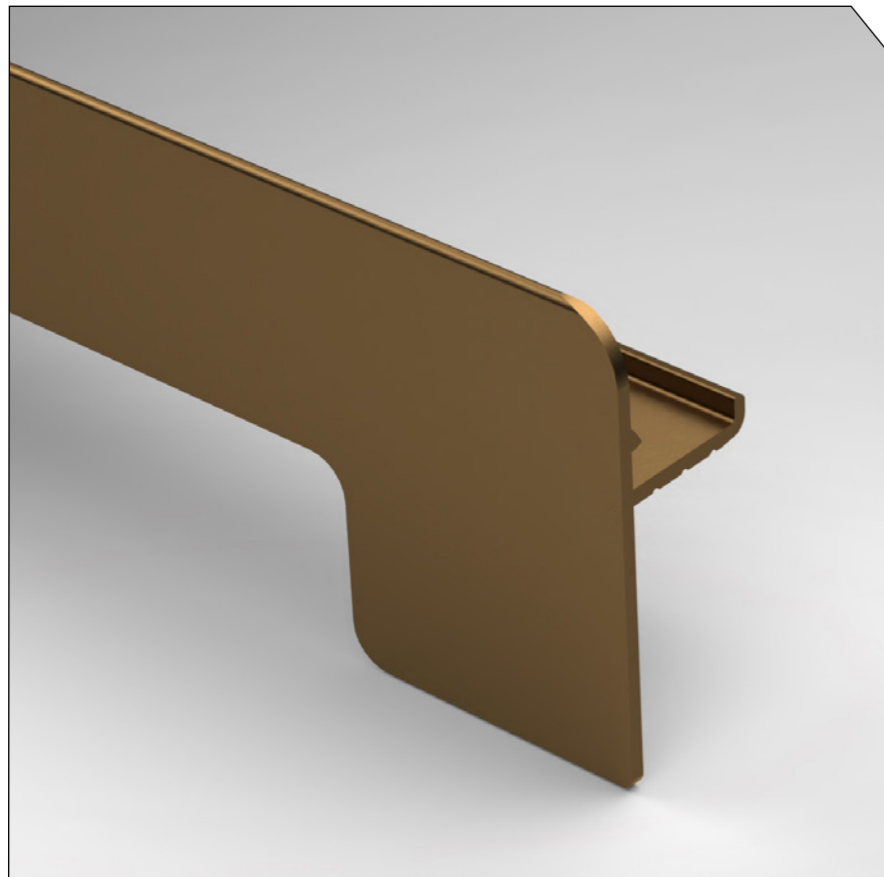
Aluminium end covers type "C"
25 mm rim

- The TSV end covers are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile.

- Suitable for buildings with thermal insulation with a width of 18 mm.

03. END CAPS TYPE "L"

from aluminium - 25 mm rim



Product name:

Aluminium End Caps type "L"

Benefits Characteristics:

They are designed to give a decorative look through pattern and colors, respecting the quality guarantee and protection against infiltrations.

Easy to install thanks to our innovative clips-on system.

The system is recommended to be used for all situations in which the thermal insulation has been made, as well as in the case of renovation projects.

Outstanding performance and increased strength in terms of maintenance and safety.

Available colors Finished surface:

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

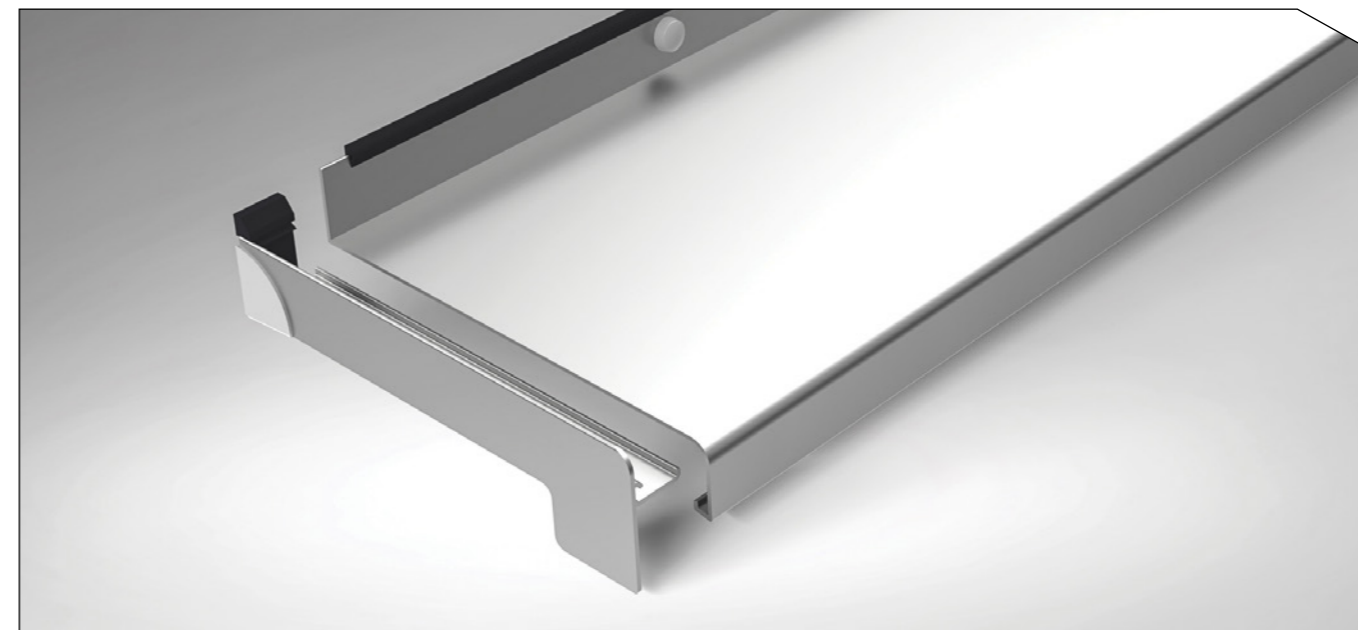
**custom coatings are available for delivery on request*

Width available:

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

Individual packaging - 1 piece left / 1 piece right



TECHNICAL SPECIFICATIONS

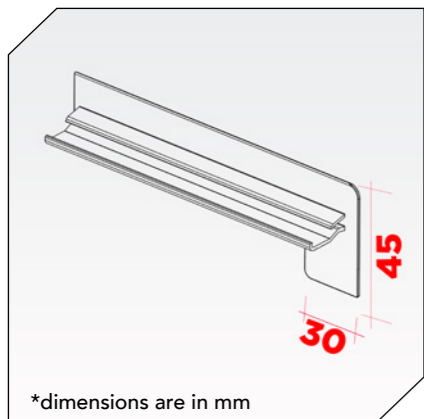
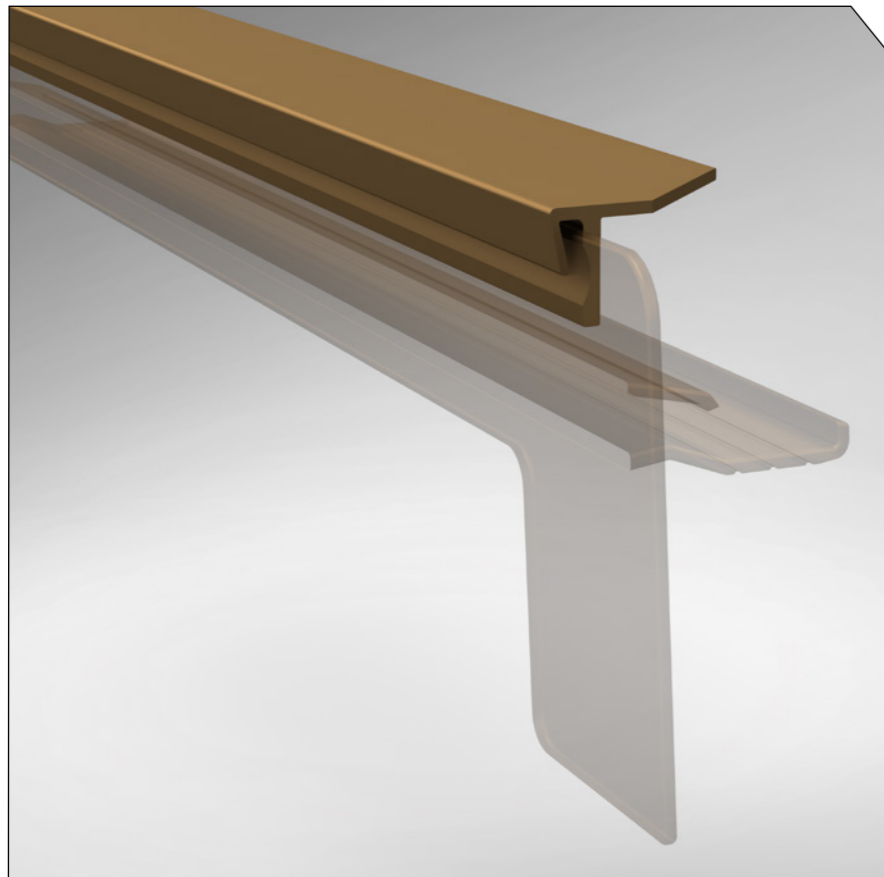
Aluminium end covers type "L" 25 mm rim

The TSV end covers are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile.

- Variable thermal insulation application sizes with 3 width options - 18 mm / 30 and 40 mm (available using the type "L" aluminium side covers together with the plaster compensation profile).

03. PLASTER COMPENSATION PROFILE FOR TYPE "L" SIDE COVERS

from aluminium - 25 mm rim



Product name:

Plaster compensation profile for type "L" side aluminium covers

Benefits Characteristics:

- Designed to provide a decorative appearance due to their pattern and colours, ensuring quality and protection against infiltrations.
- Cutting out the compensation profile enables the use of roller-fastening side profiles.
- Easy installation thanks to our innovative clip-on system.
- The system is recommended for new buildings with unfinished decorative plastering.
- Outstanding performance and increased strength in terms of maintenance and safety.

Available colors Finished surface:

RAL 9016, RAL 8019, RAL 8003, RAL 7016
E6/EV1, E6/C32, E6/C33

**custom coatings are available for delivery on request*

Width available:

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

Individual packaging - 1 piece left / 1 piece right

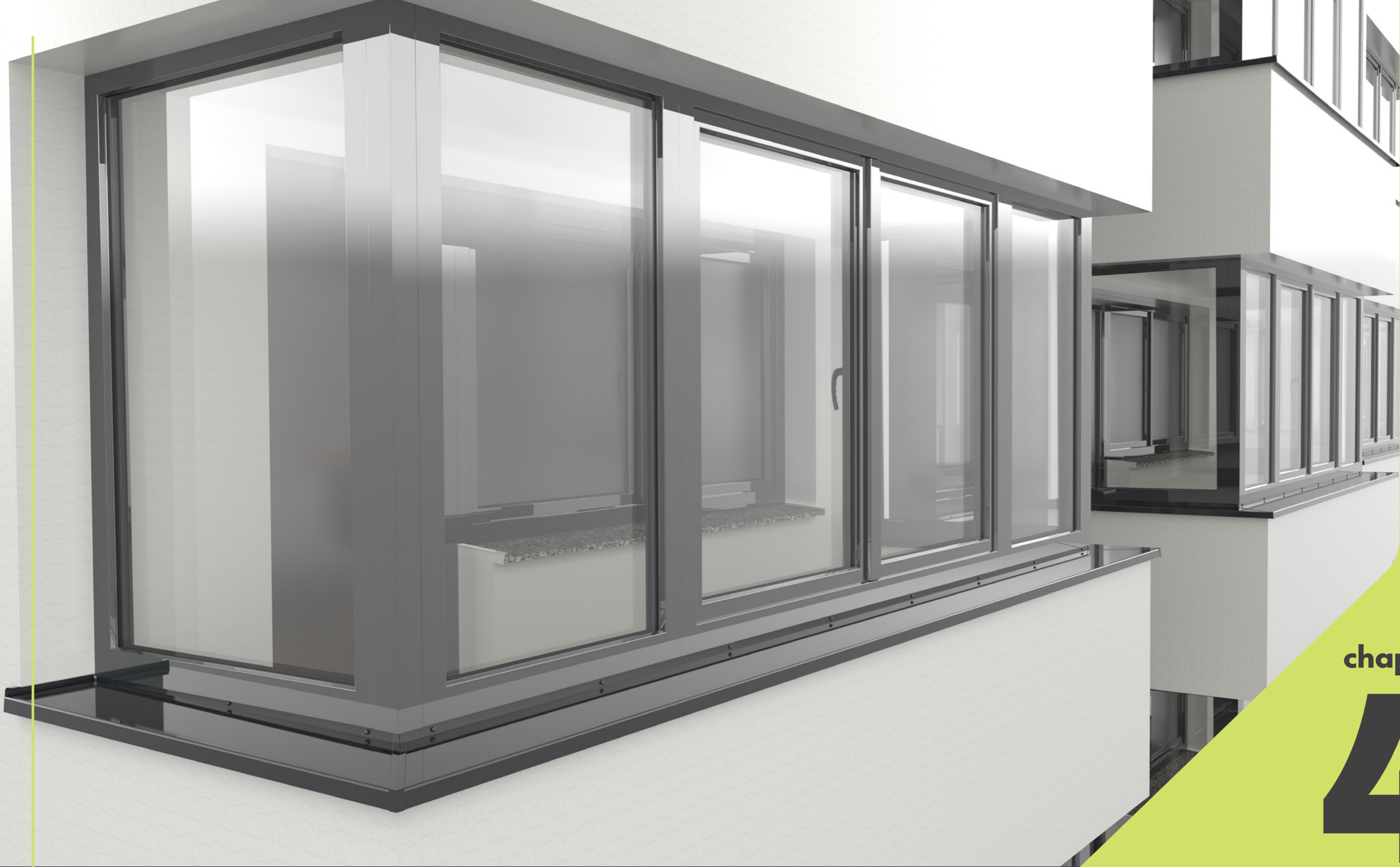


TECHNICAL SPECIFICATIONS

Used together with aluminium end covers type "L" 25 mm rim

- Compensation profiles for side covers are manufactured using the high precision extrusion process, out of an AA 6061 alloy.

- Suitable to be used together with type "L" aluminum end covers for buildings with thermal insulation with 3 width options (18, 30 or 40 mm).



chapter

4

CORNER CONNECTORS
for 40mm aluminium window sill

at an angle of 90°, 135°, 180°



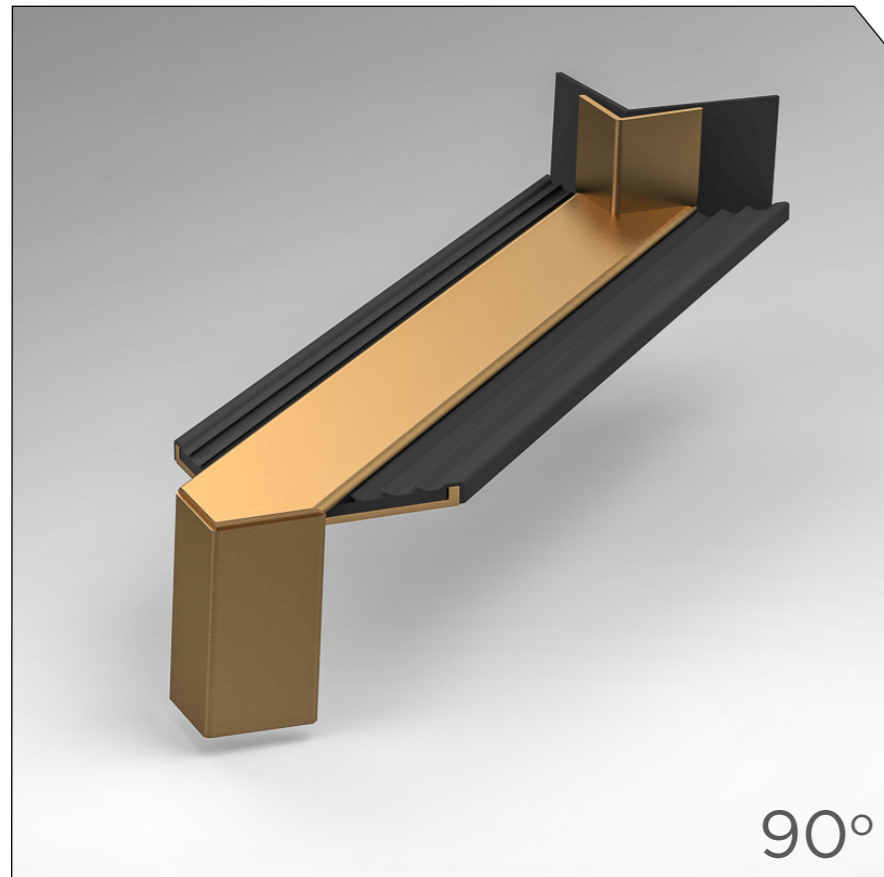
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the product
on our
website

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Made of high quality aluminum, resistant to variable weather conditions and the effects of the passing of time.
Very easy to install and maintain.

04. CORNER CONNECTORS

90° Exterior - 40 mm rim



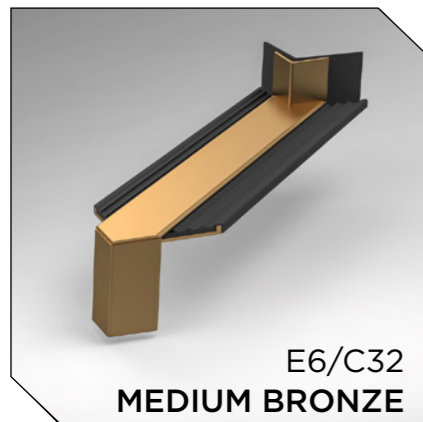
90°



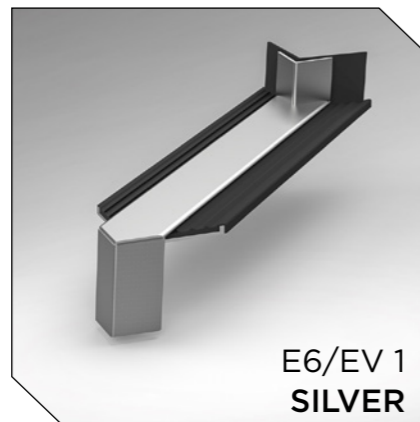
RAL 9016
WHITE



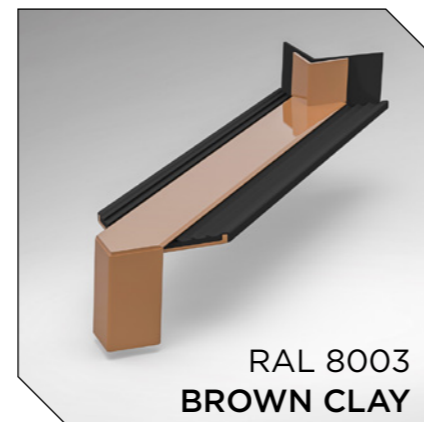
RAL 7016
ANTHRACITE GREY



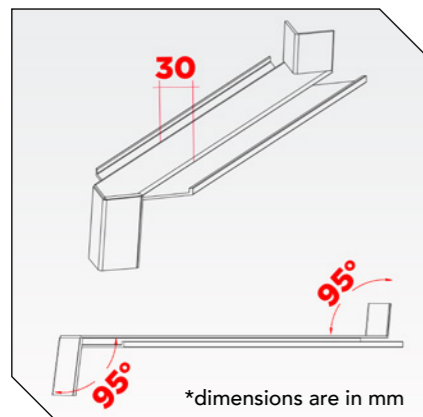
E6/C32
MEDIUM BRONZE



E6/EV 1
SILVER



RAL 8003
BROWN CLAY



*dimensions are in mm



E6/C33
DARK BRONZE



RAL 8019
BROWN GREY

Product name:

CORNER CONNECTORS - angle of 90° EXTERIOR

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 40 mm rim aluminium window sills, mounted at an outer angle of 90°.

Ensures a perfect combination both aesthetically and functionally.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



**TECHNICAL
SPECIFICATIONS**

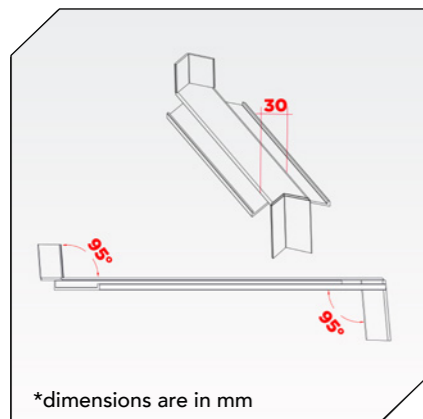
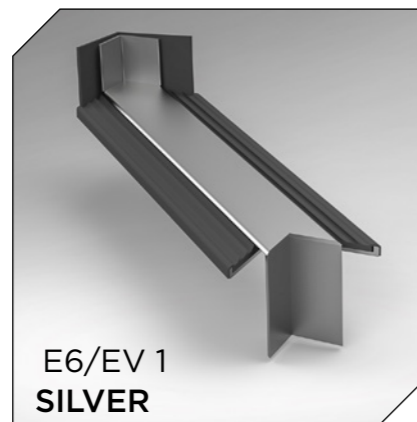
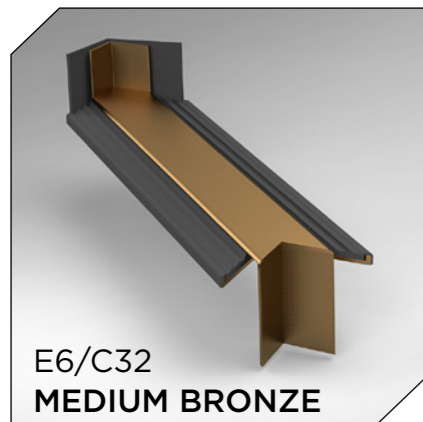
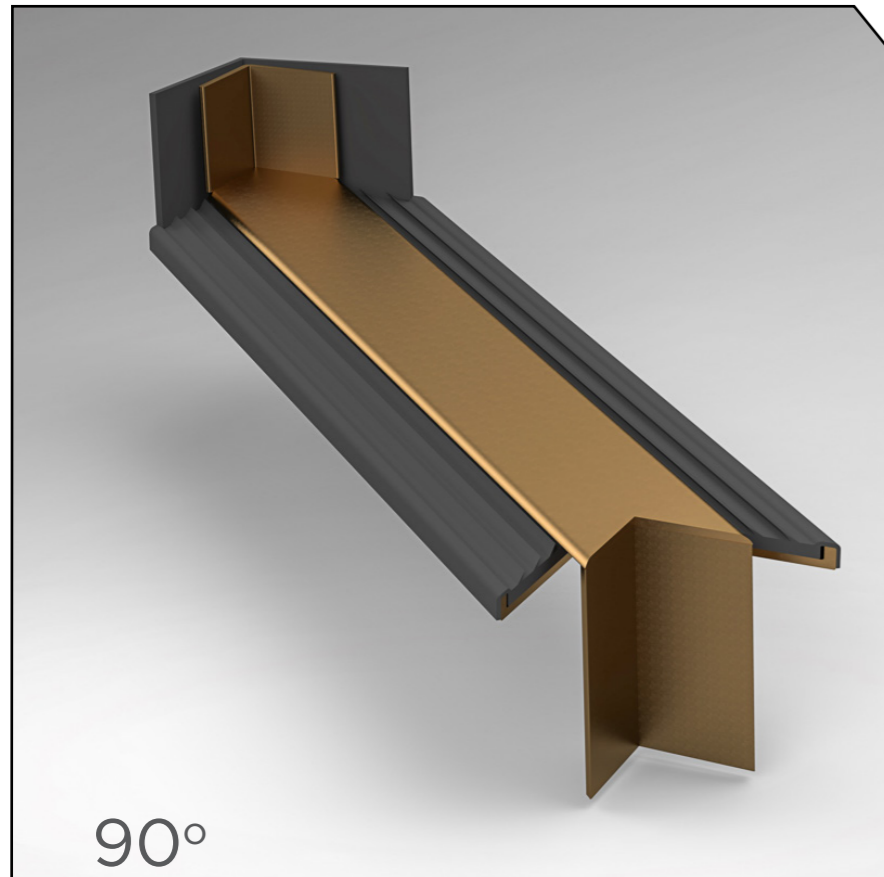
CORNER CONNECTORS
90° exterior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

04. CORNER CONNECTORS

90° Interior - 40 mm rim



Product name:

CORNER CONNECTORS - angle of 90° INTERIOR

Benefits Characteristics:

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 40 mm rim aluminium window sills, mounted at an inner angle of 90°.

Ensures a perfect combination both aesthetically and functionally.

Available colors Finished surface:

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

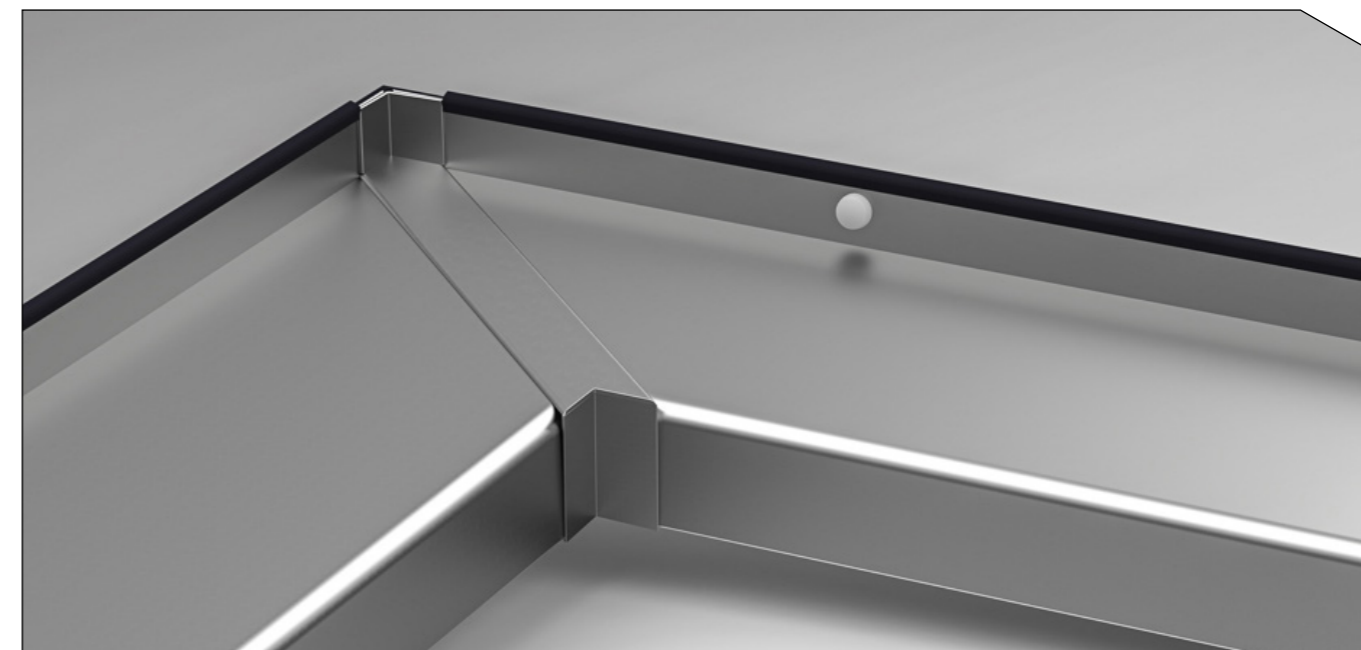
**custom coatings are available for delivery on request*

Available sizes according to nominal width of TSV window sills:

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



TECHNICAL SPECIFICATIONS

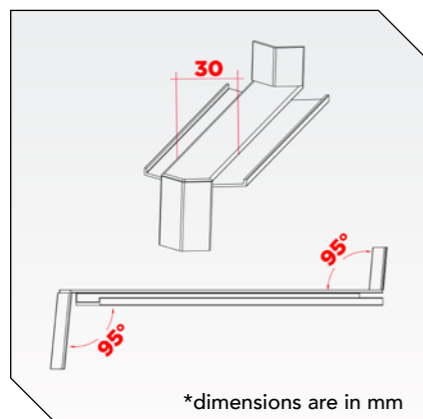
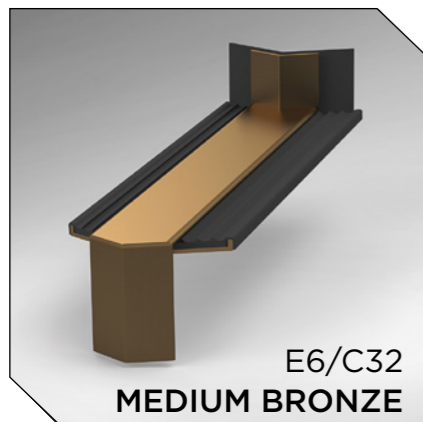
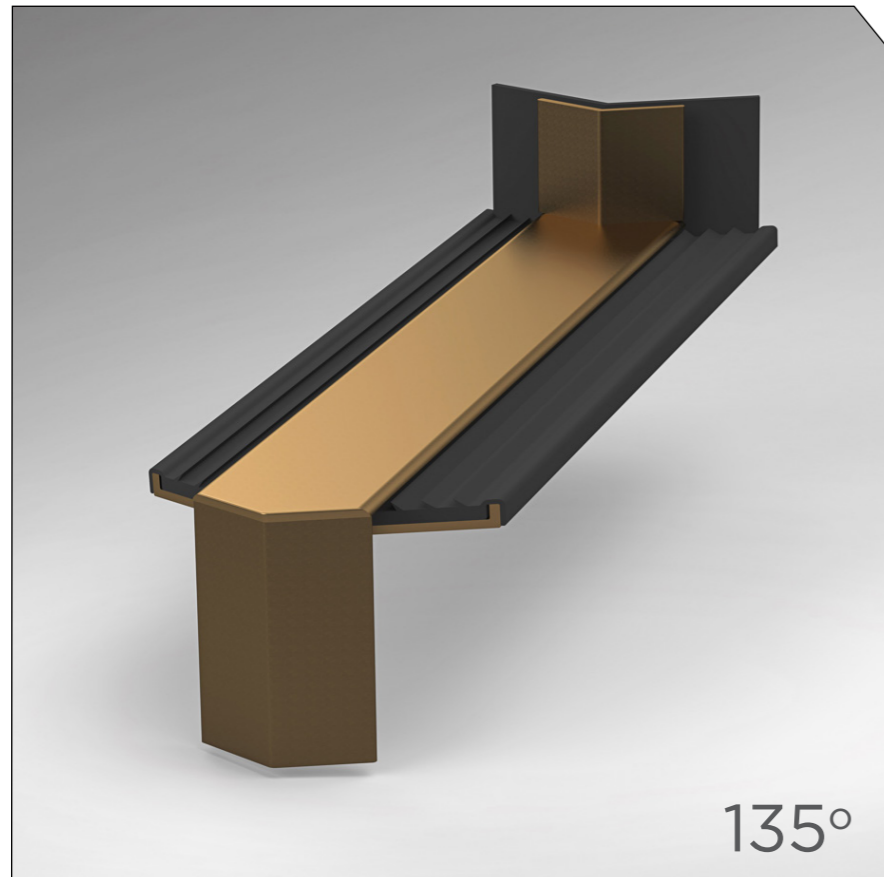
CORNER CONNECTORS
90° interior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

04. CORNER CONNECTORS

135° Exterior - 40 mm rim



Product name:

CORNER CONNECTORS - angle of 135° EXTERIOR

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 40 mm rim aluminium window sills, mounted at an outer angle of 135°.

Ensures a perfect combination both aesthetically and functionally.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



**TECHNICAL
SPECIFICATIONS**

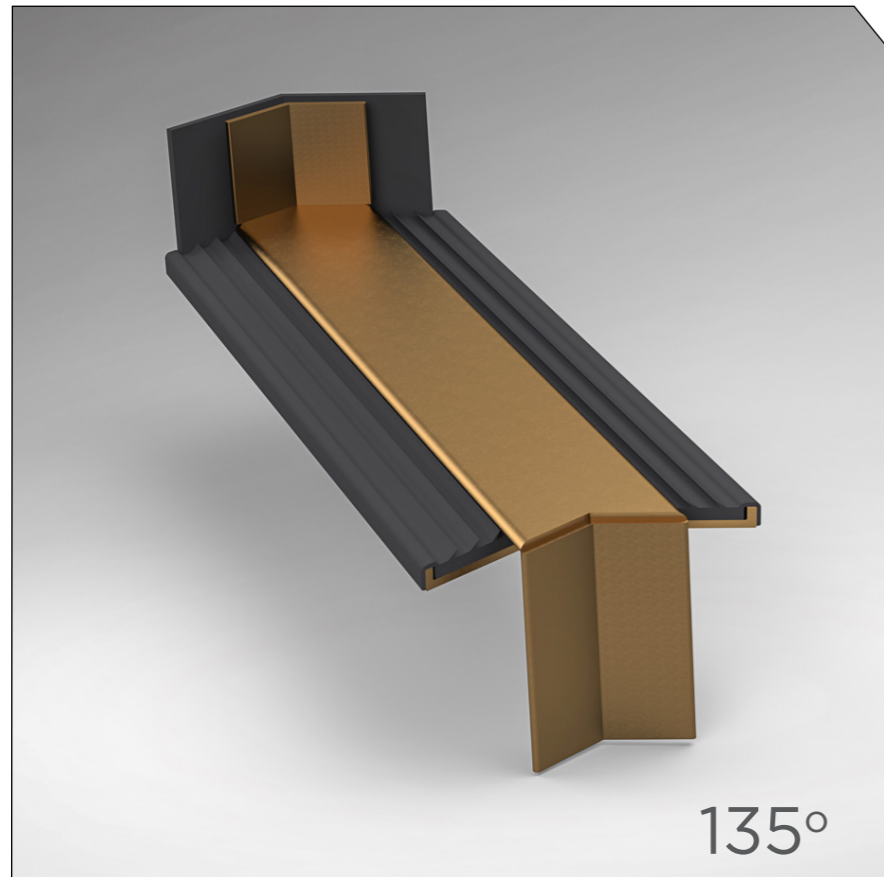
CORNER CONNECTORS
135° exterior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

04. CORNER CONNECTORS

135° Interior - 40 mm rim



135°



RAL 9016
WHITE



RAL 7016
ANTHRACITE GREY



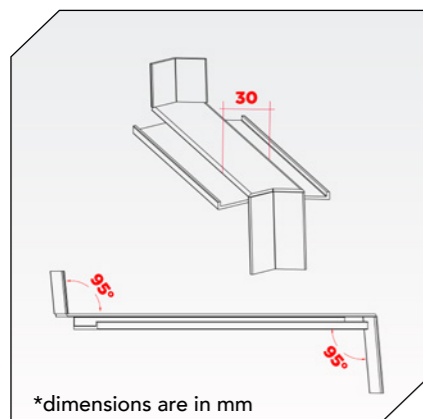
E6/C32
MEDIUM BRONZE



E6/EV 1
SILVER



RAL 8003
BROWN CLAY



*dimensions are in mm



E6/C33
DARK BRONZE



RAL 8019
BROWN GREY

Product name:

CORNER CONNECTORS - angle of 135° INTERIOR

Benefits Characteristics:

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 40 mm rim aluminium window sills, mounted at an inner angle of 135°.

Ensures a perfect combination both aesthetically and functionally.

Available colors Finished surface:

RAL 9016, RAL 8019, RAL 8003, RAL 7016
E6/EV1, E6/C32, E6/C33

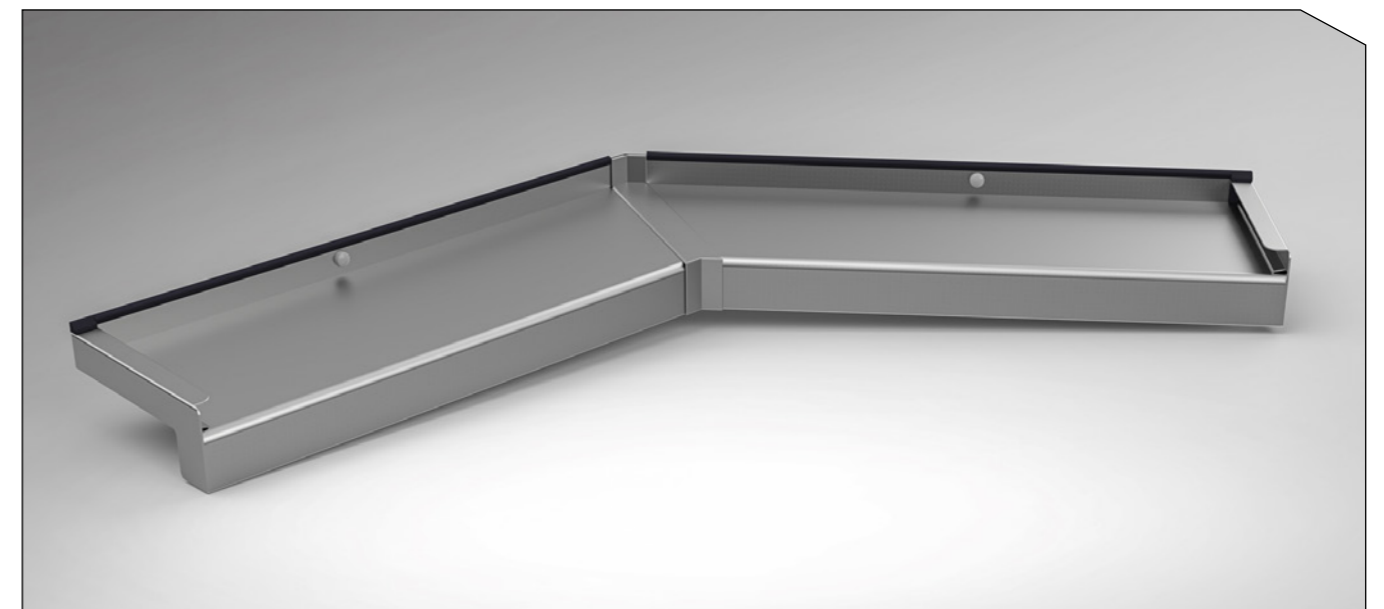
**custom coatings are available for delivery on request*

Available sizes according to nominal width of TSV window sills:

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



TECHNICAL SPECIFICATIONS

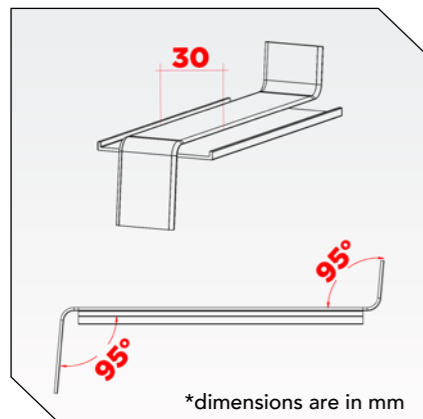
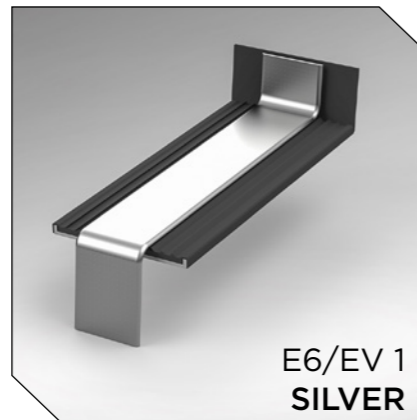
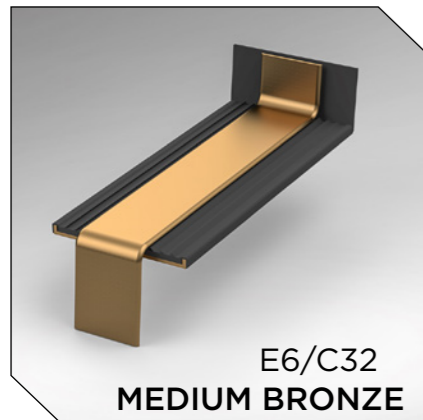
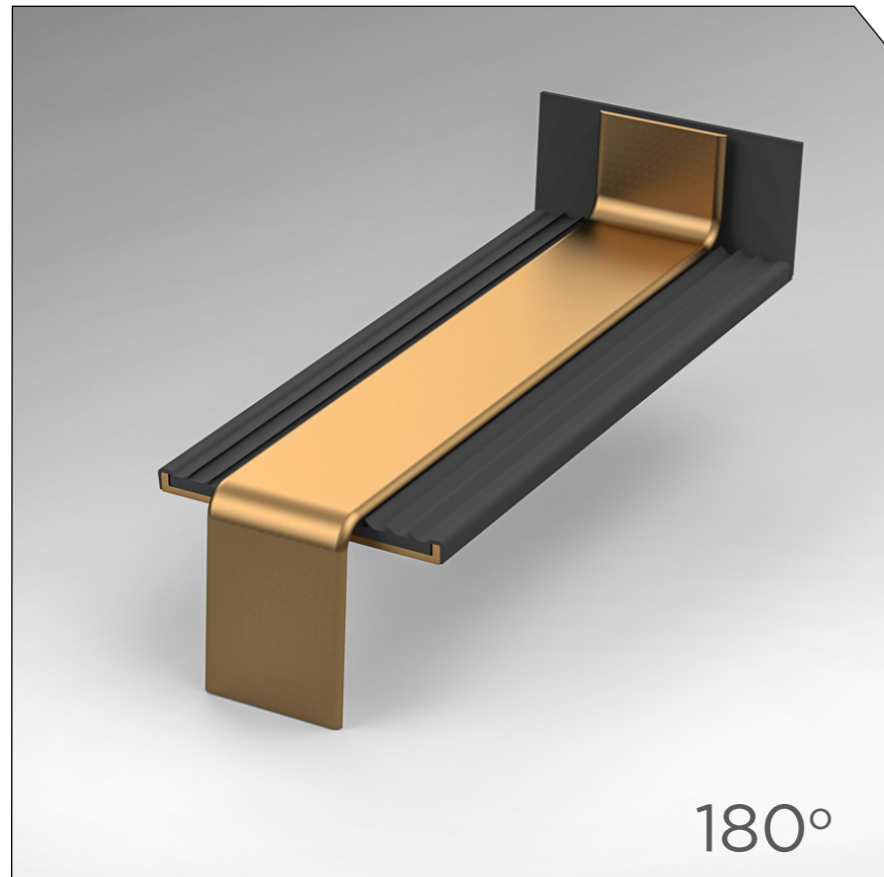
Element de Îmbinare
135° interior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

04. CORNER CONNECTORS

Coupling 180° - 40 mm rim



Product name:

CORNER CONNECTORS - angle of 180°

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 40 mm rim aluminium window sills, mounted at an coupling angle of 180°.

Ensures a perfect combination both aesthetically and functionally.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

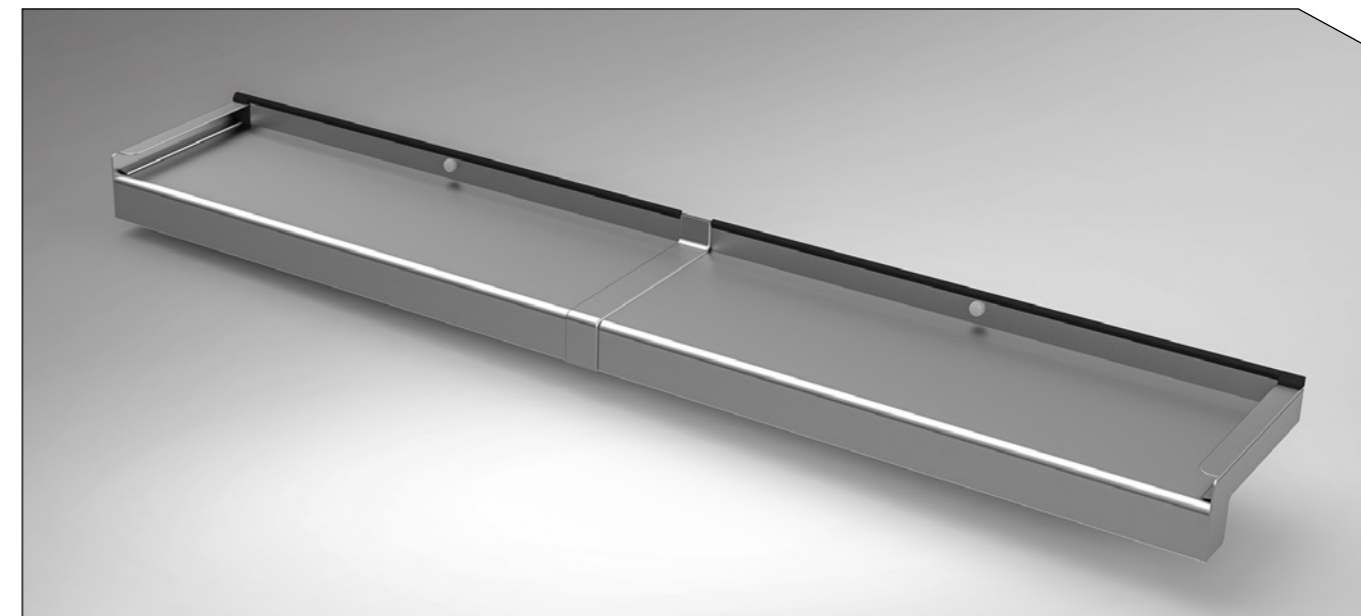
**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.

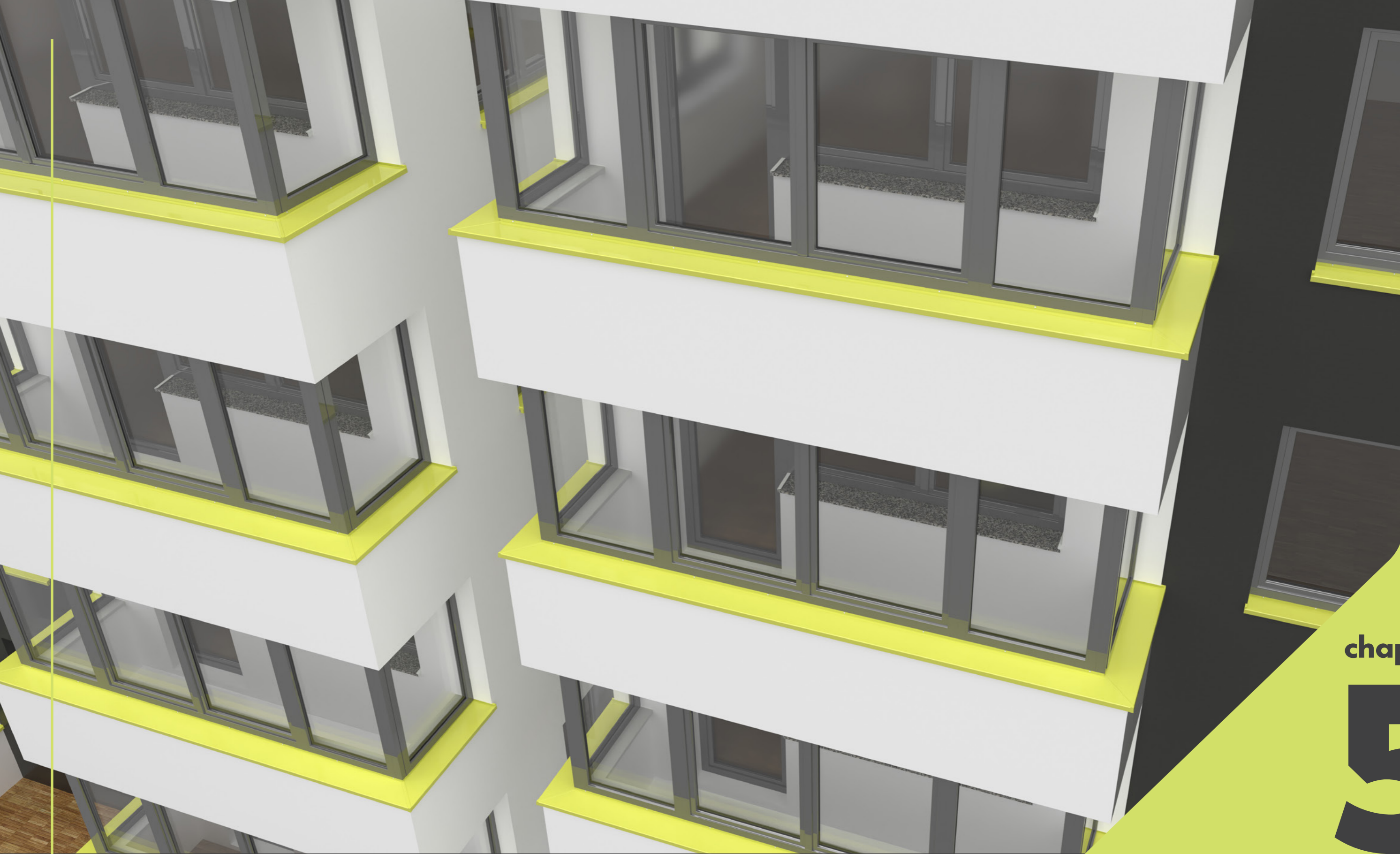


**TECHNICAL
SPECIFICATIONS**

CORNER CONNECTORS
coupling angle 180°

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no 62.



chapter

5

CORNER CONNECTORS
for 25 mm aluminium window sill
at an angle of 90°, 135°, 180°



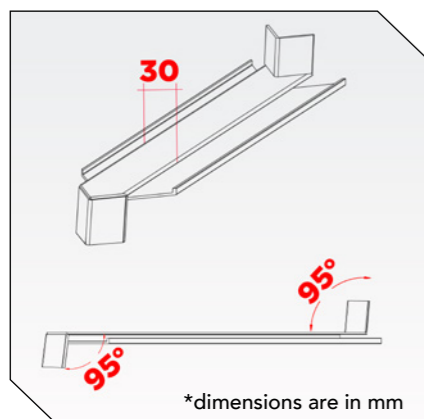
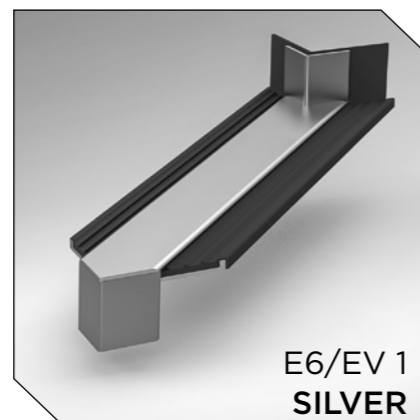
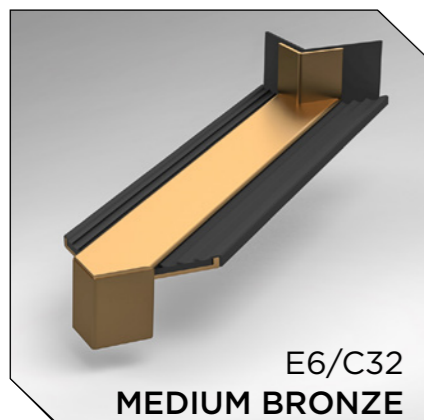
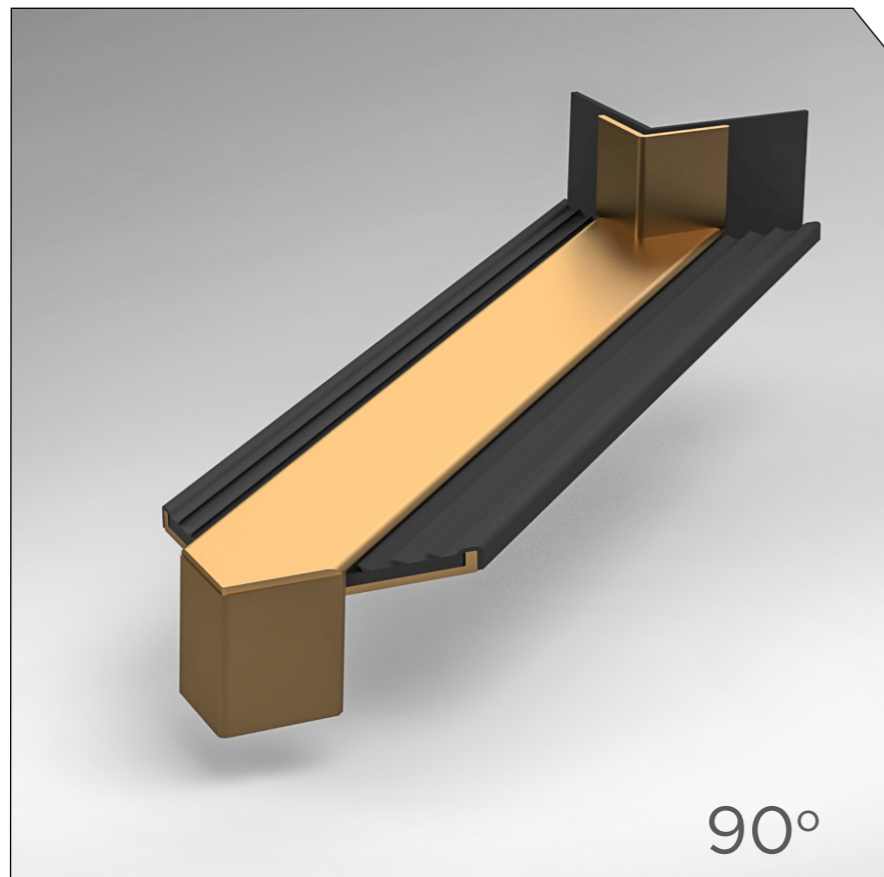
You can visit
the product
on our
website

tsvline.com

Made of high quality aluminum, resistant
to variable weather conditions and the
effects of the passing of time.
Very easy to install and maintain.

05. CORNER CONNECTORS

90° Exterior - rebord 25 mm



Product name:

CORNER CONNECTORS - angle of 90° EXTERIOR

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 25 mm rim aluminium window sills, mounted at an outer angle of 90°.

Ensures a perfect combination both aesthetically and functionally.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

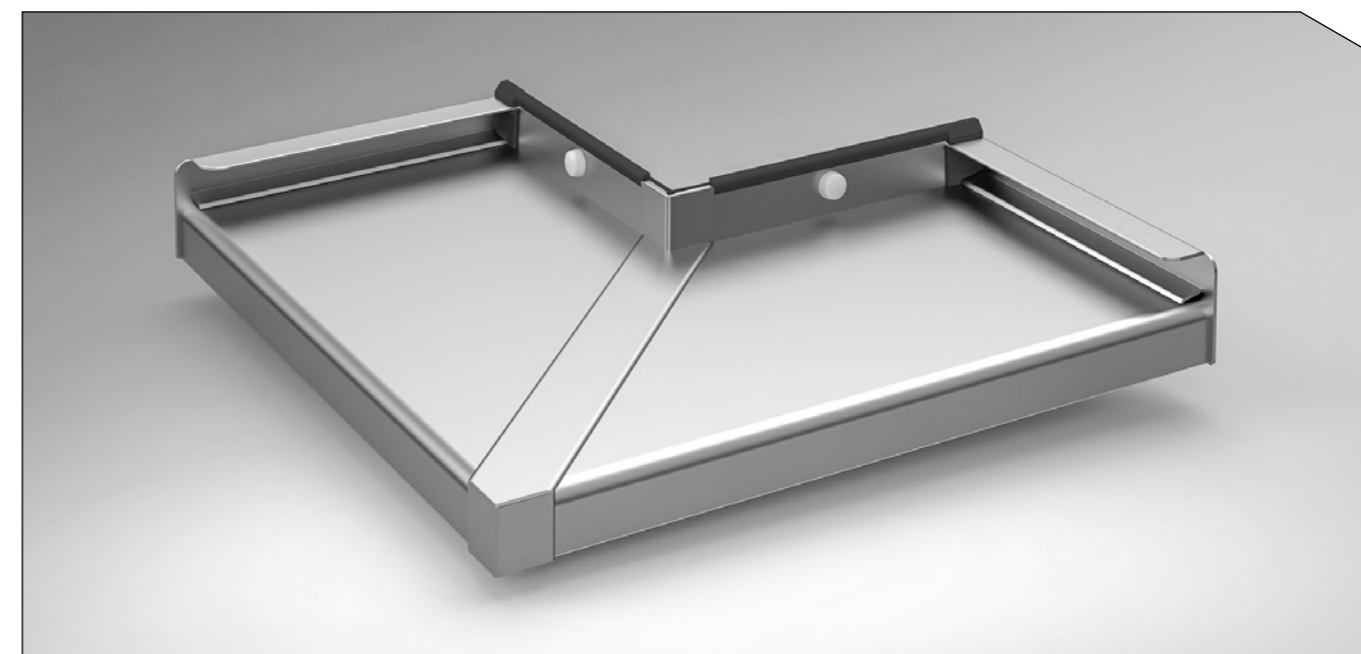
**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



**TECHNICAL
SPECIFICATIONS**

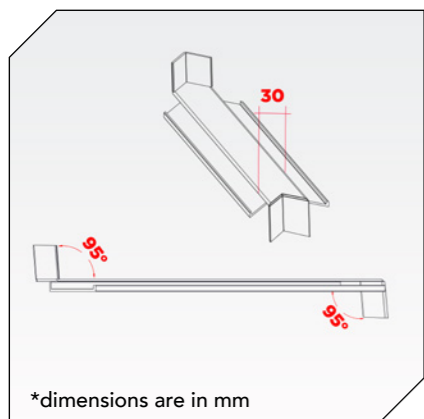
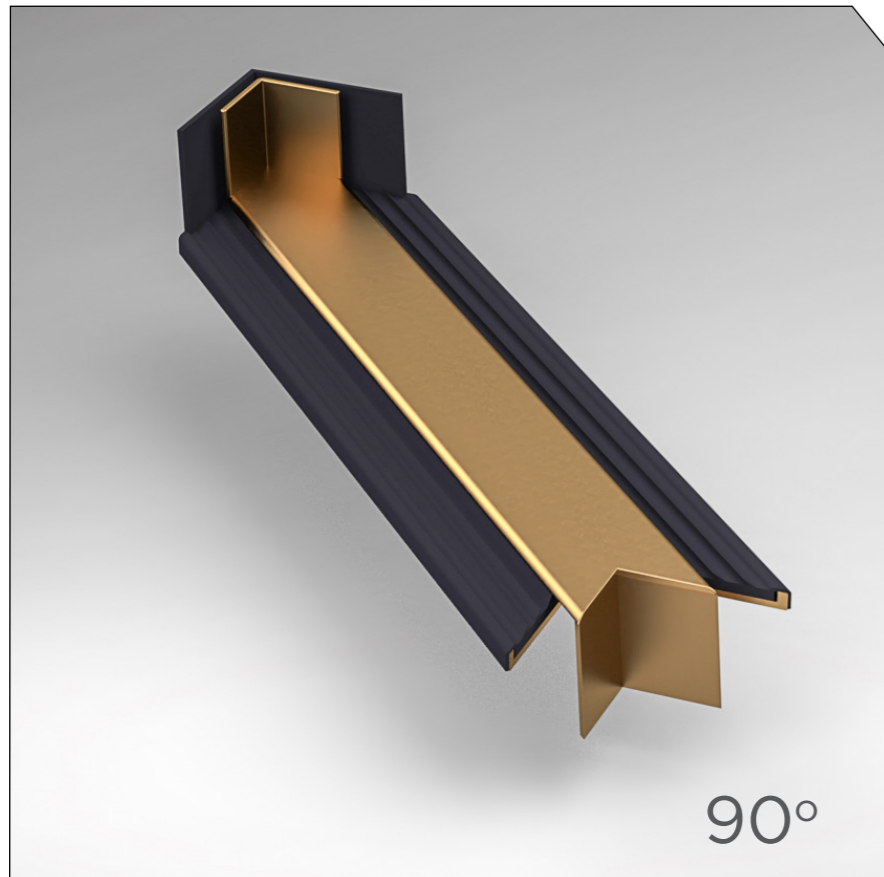
CORNER CONNECTORS
90° exterior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

05. CORNER CONNECTORS

90° Interior - 25 mm rim



Product name:

CORNER CONNECTORS - angle of 90° INTERIOR

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 25 mm rim aluminium window sills, mounted at an inner angle of 90°.

Ensures a perfect combination both aesthetically and functionally.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016
E6/EV1, E6/C32, E6/C33

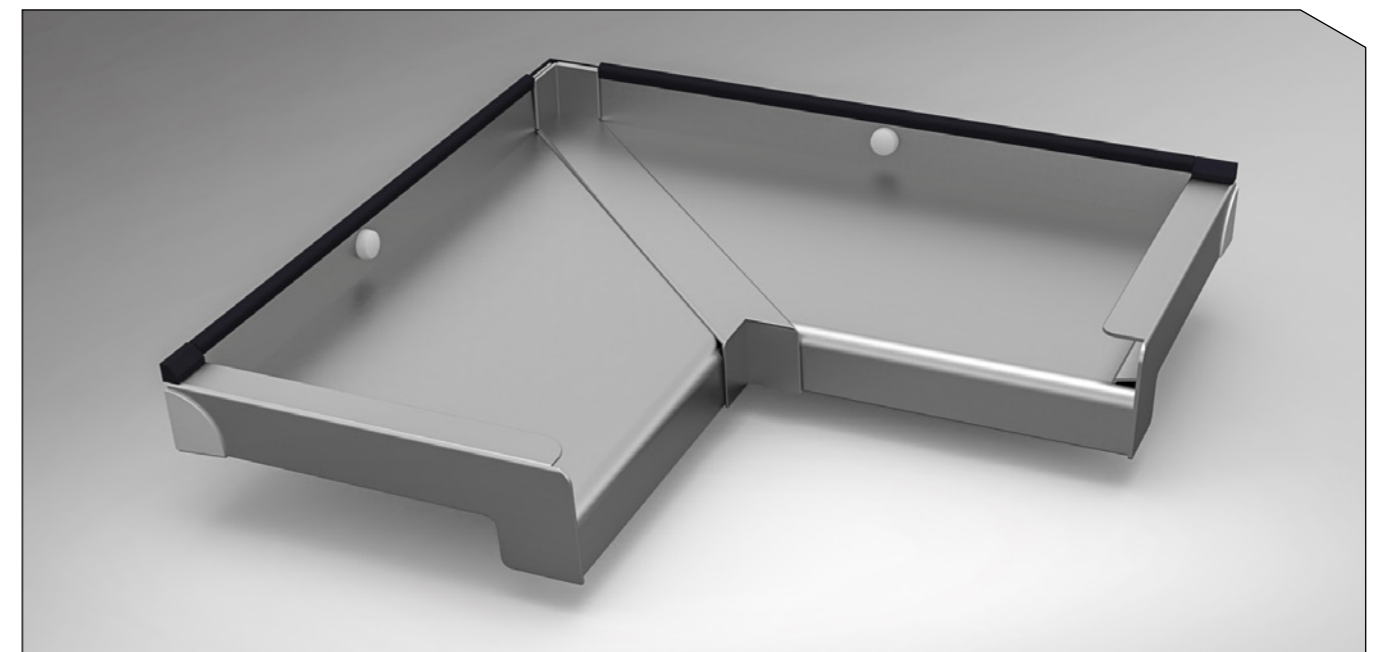
**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



**TECHNICAL
SPECIFICATIONS**

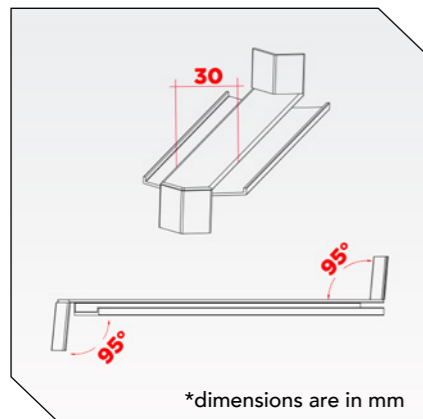
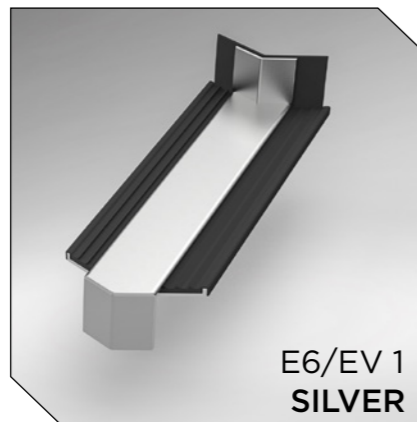
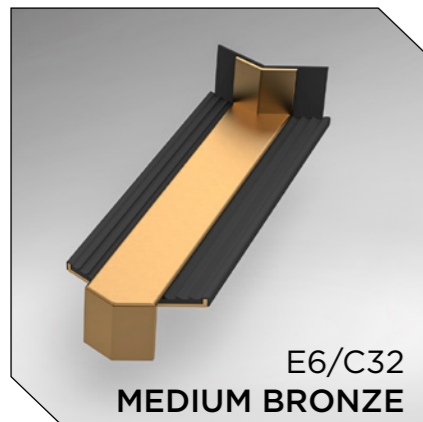
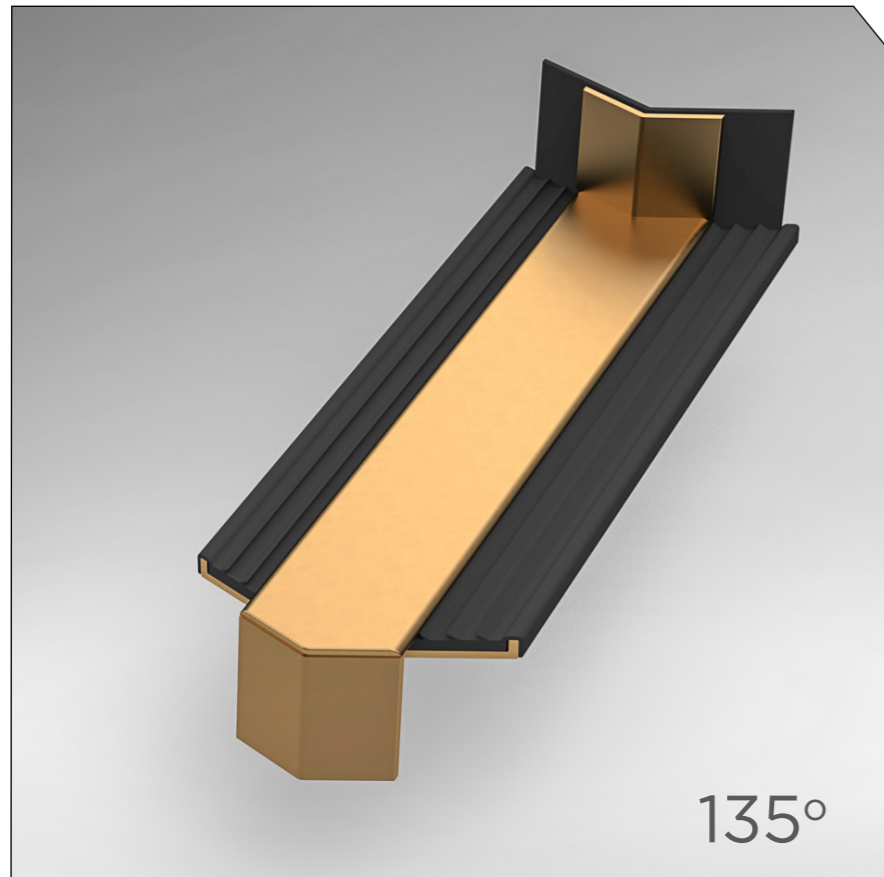
CORNER CONNECTORS
90° interior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

05. CORNER CONNECTORS

135° Exterior - 25 mm rim



Product name:

CORNER CONNECTORS - angle of 135° EXTERIOR

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 25 mm rim aluminium window sills, mounted at an outer angle of 135°.

Ensures a perfect combination both aesthetically and functionally.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



**TECHNICAL
SPECIFICATIONS**

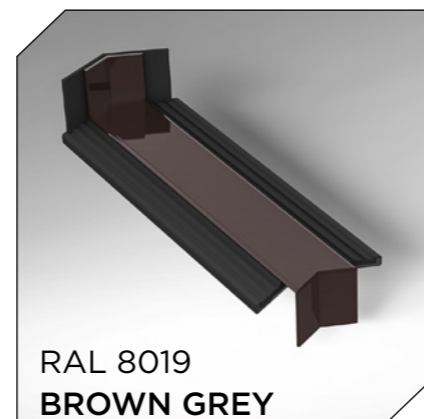
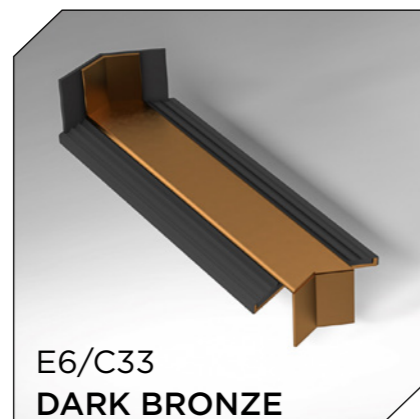
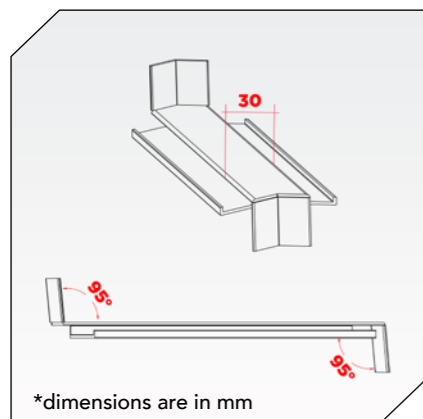
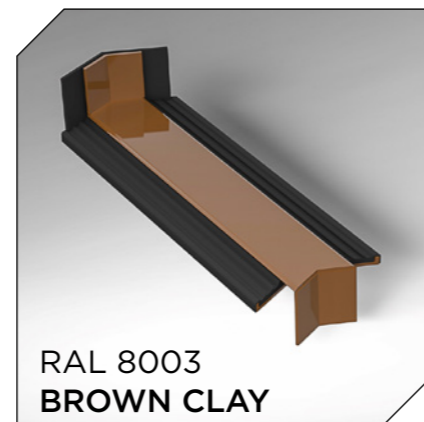
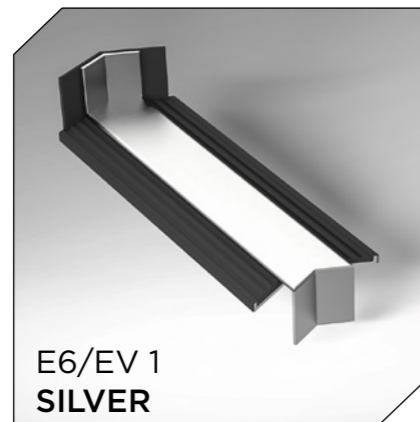
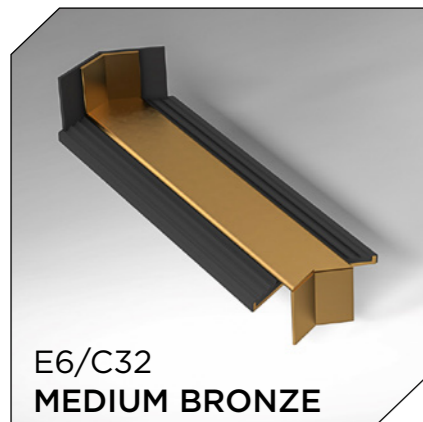
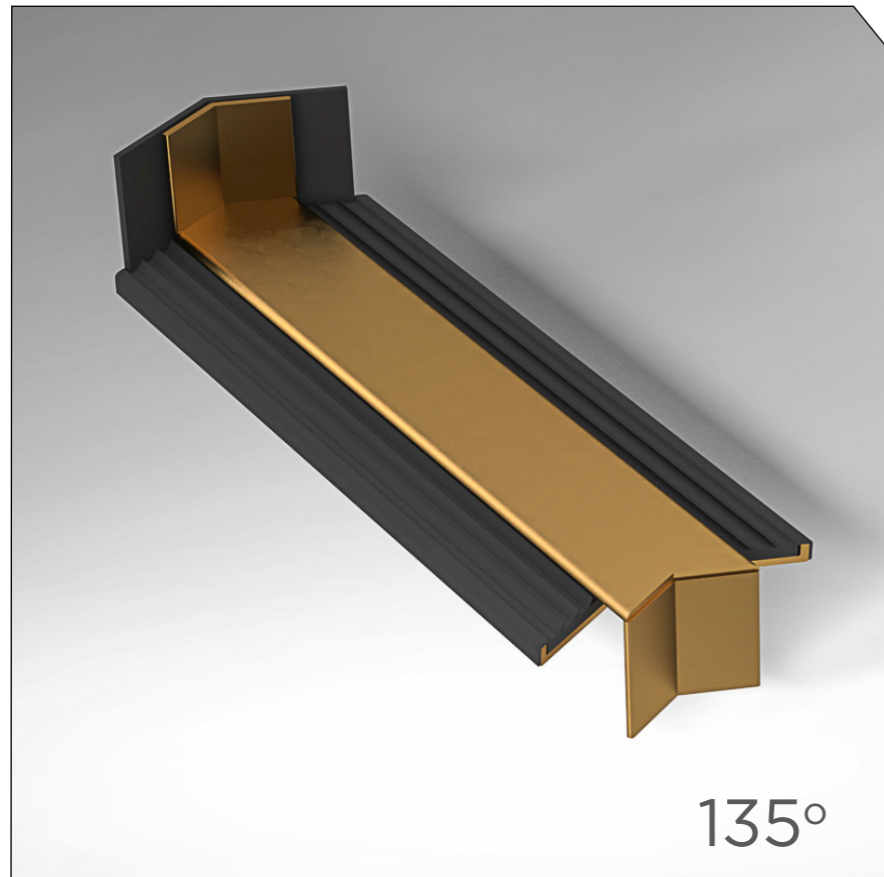
CORNER CONNECTORS
135° exterior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

05. CORNER CONNECTORS

135° Interior - 25 mm rim



Product name:

CORNER CONNECTORS - angle of 135° INTERIOR

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 25 mm rim aluminium window sills, mounted at an inner angle of 135°.

Ensures a perfect combination both aesthetically and functionally.

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016
E6/EV1, E6/C32, E6/C33

**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.



**TECHNICAL
SPECIFICATIONS**

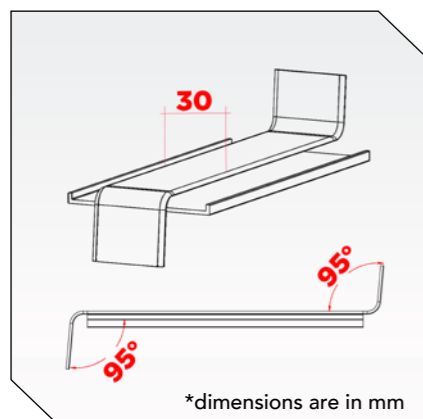
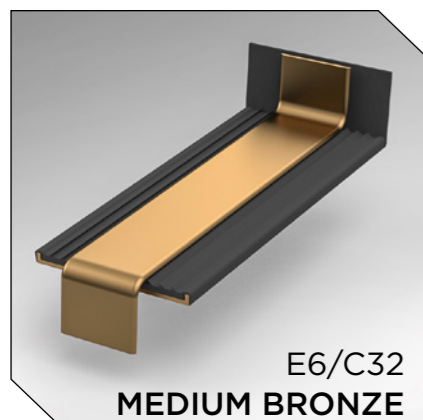
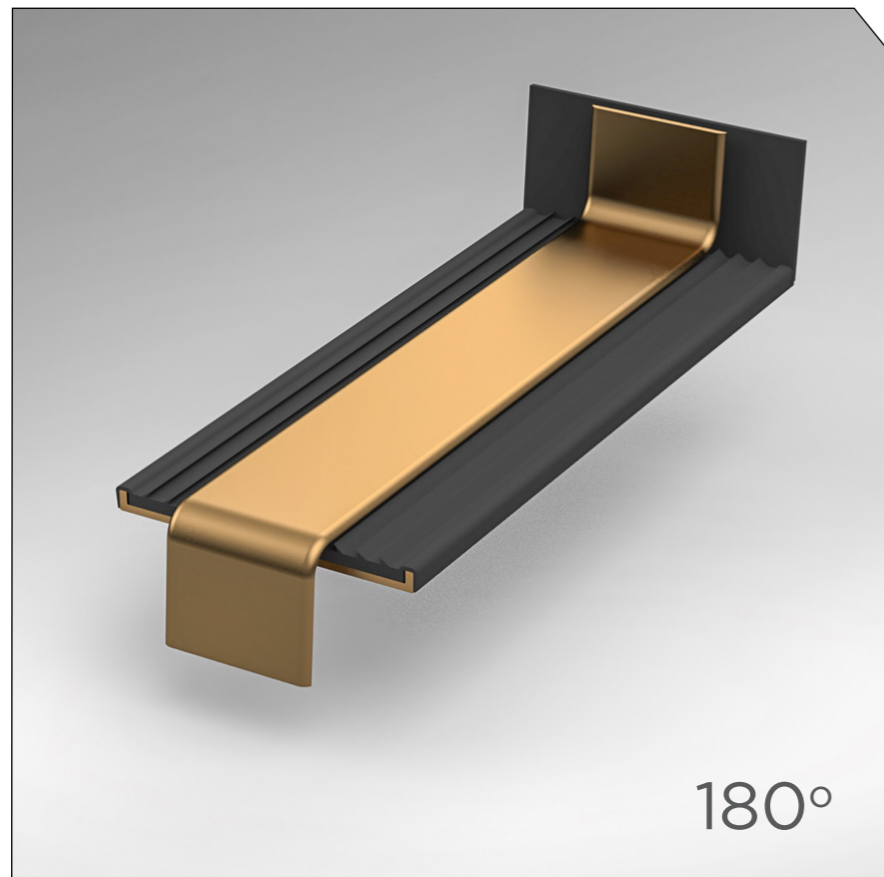
CORNER CONNECTORS
135° interior

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.

05. CORNER CONNECTORS

Coupling 180° - 25 mm rim



Product name:

CORNER CONNECTORS - angle of 180°

**Benefits
Characteristics:**

The TSV corner connectors are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile provided with a sealing gasket, which acts as a water penetration sealing system.

We recommend the corner connectors to be mounted on the exterior, for the angle joints between the 25 mm rim aluminium window sills, mounted at an coupling angle of 180°.

Ensures a perfect combination both aesthetically and functionally

**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33

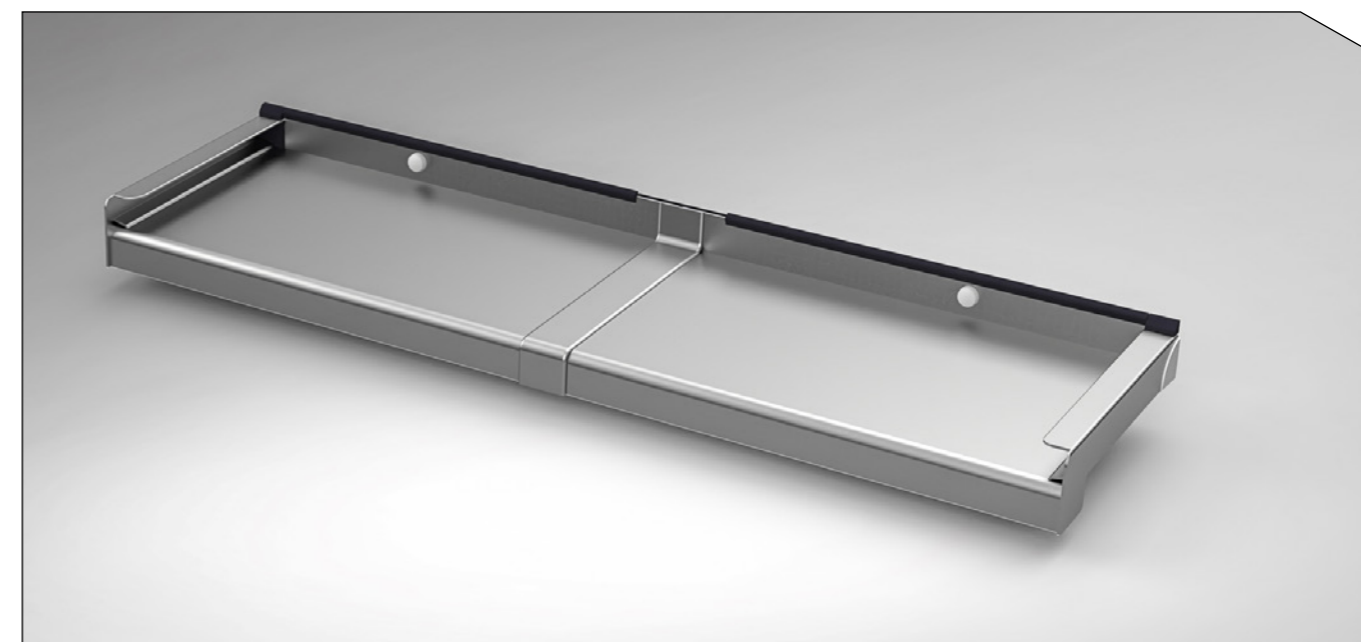
**custom coatings are available for delivery on request*

**Available sizes
according to
nominal width
of TSV window sills:**

50 mm	150 mm	225 mm	320 mm
70 mm	165 mm	240 mm	340 mm
90 mm	180 mm	260 mm	360 mm
110 mm	195 mm	280 mm	380 mm
130 mm	210 mm	300 mm	400 mm

Packing unit:

10 pieces / box.

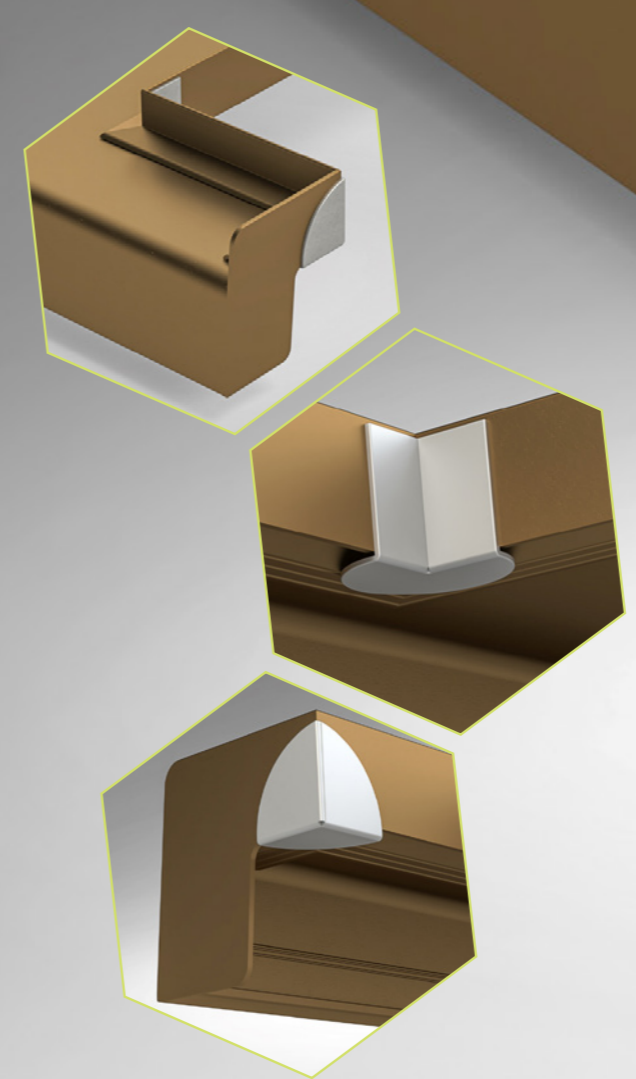
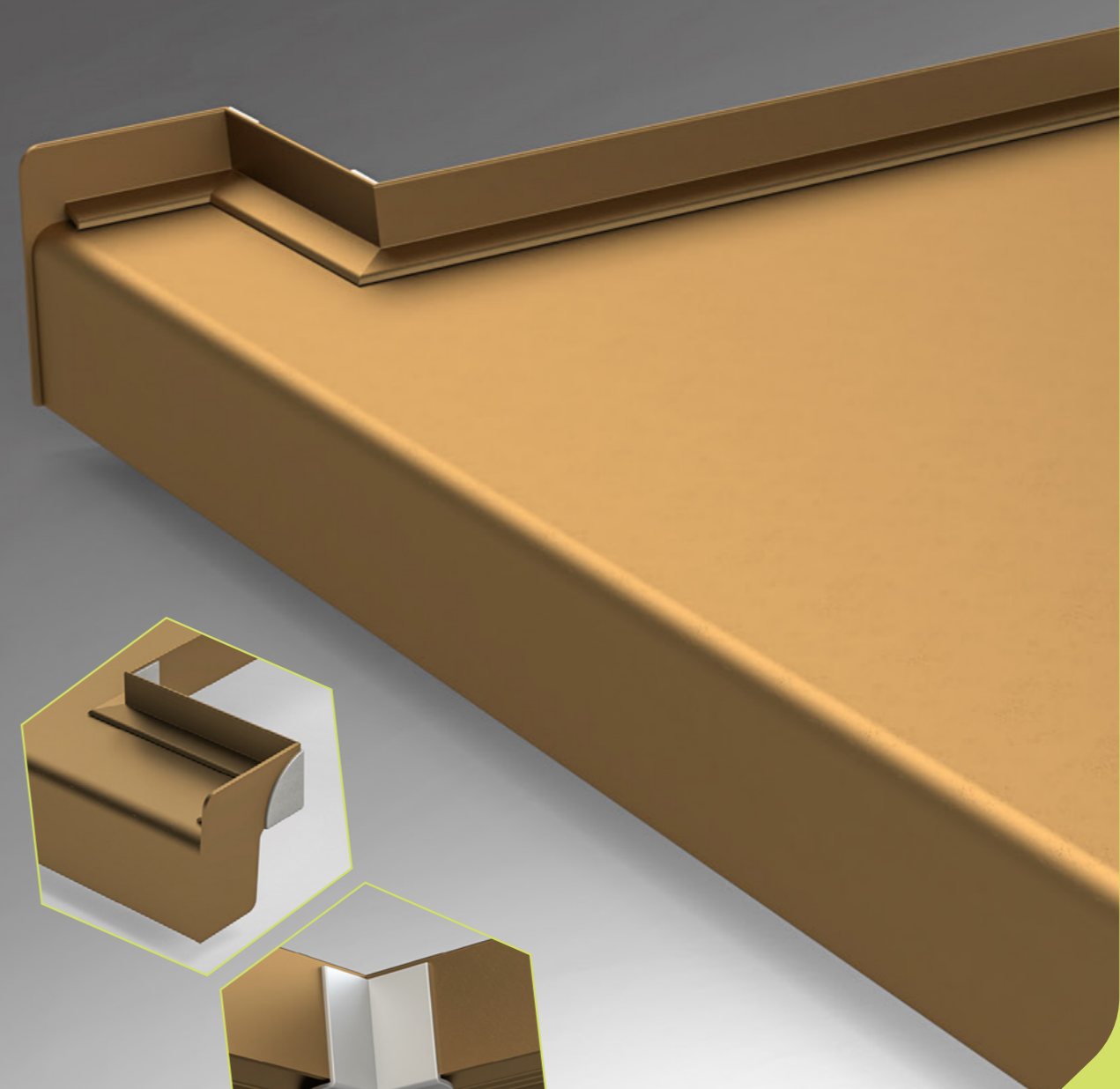
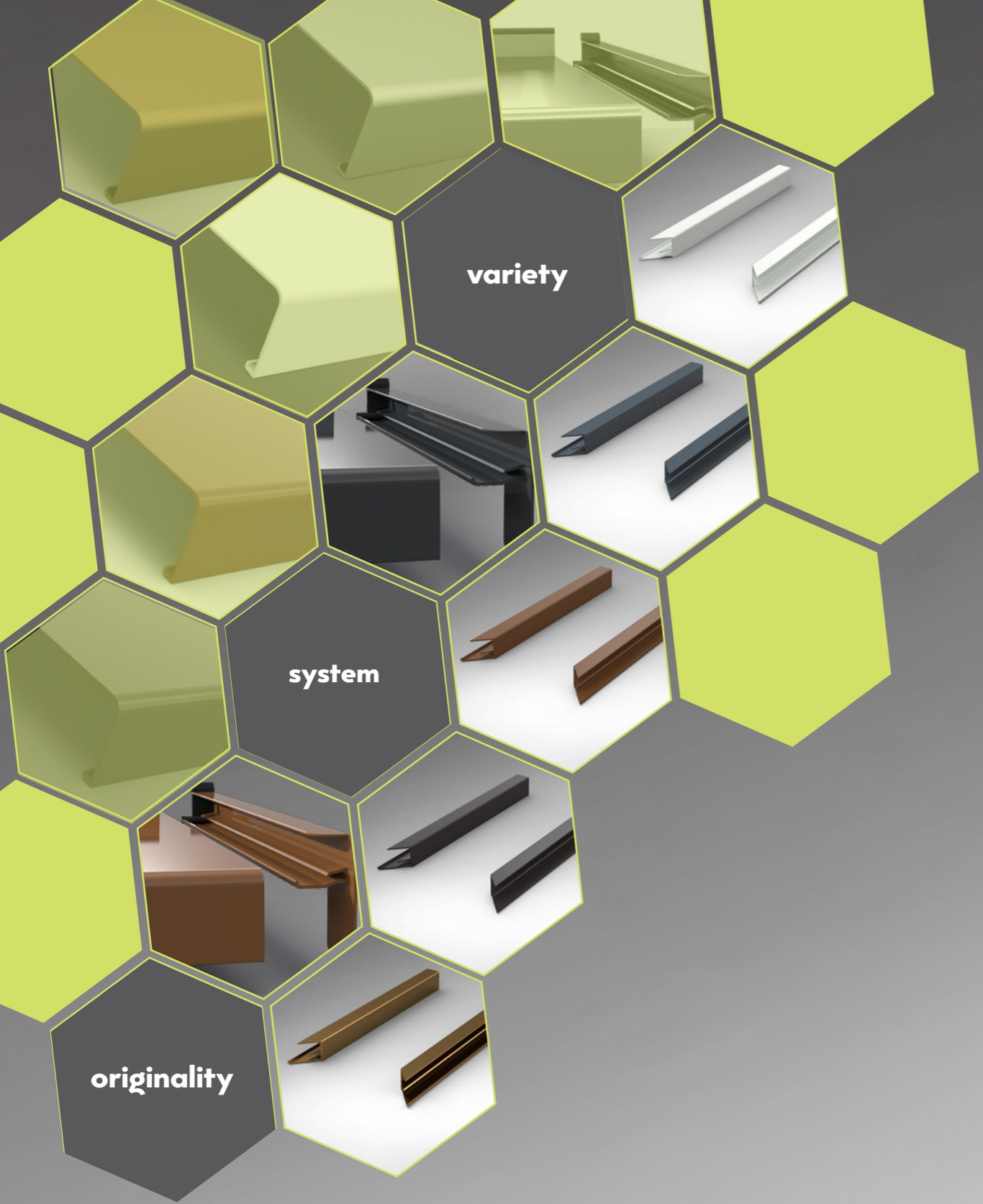


**TECHNICAL
SPECIFICATIONS**

CORNER CONNECTORS
coupling angle 180°

TSV corner connectors are designed to be mounted at an angle of 5°, similar to the inclination of the TSV window sill. The upper part with a width of 30 mm, allows the masking of angular deviations resulting from cutting the aluminium window sill.

When using the TSV corner connectors, we recommend installing the window sill accordingly to the mounting instructions described on the product catalogue – page no. 62.



chapter

6

BYPASS PROFILES for window sills individually cutted

One of the advantages of profiles in construction works is the versatile use when bypassing concrete structures.

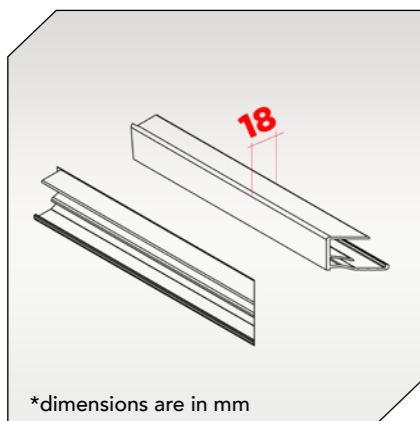
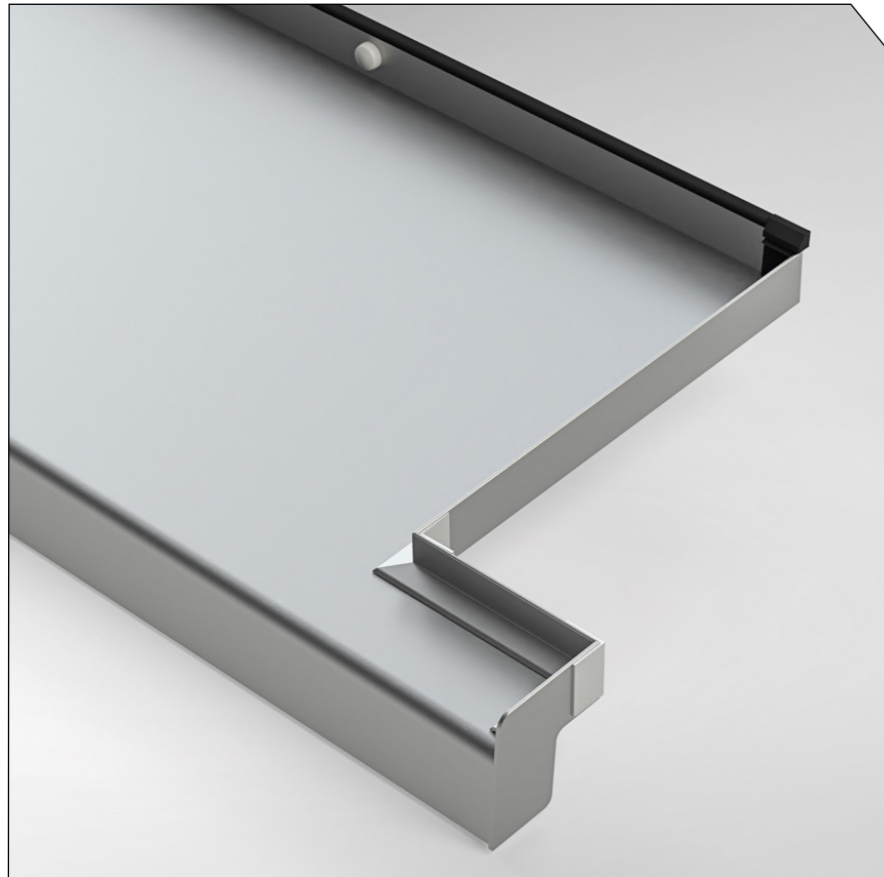


You can visit
the product
on our
website

tsvline.com

06. BYPASS PROFILES

for individually cutted window sills - type "C" / type "L"



Product name:

Bypass profiles type "C" / type "L"

**Benefits
Characteristics:**

Bypass profiles for individually cutted aluminium window sills are produced with highprecision aluminium extrusion process, by which aluminium alloy material type AA 6061, is forced through a die with a specific cross – section profile.

For situations where it's necessary to pre-cut the window sill, we recommend the bypass profile to be mounted on the exterior.

The aluminium bypass profiles are fixed on the pre-cutted area of the window sills, having an important role for sealing and drainage.

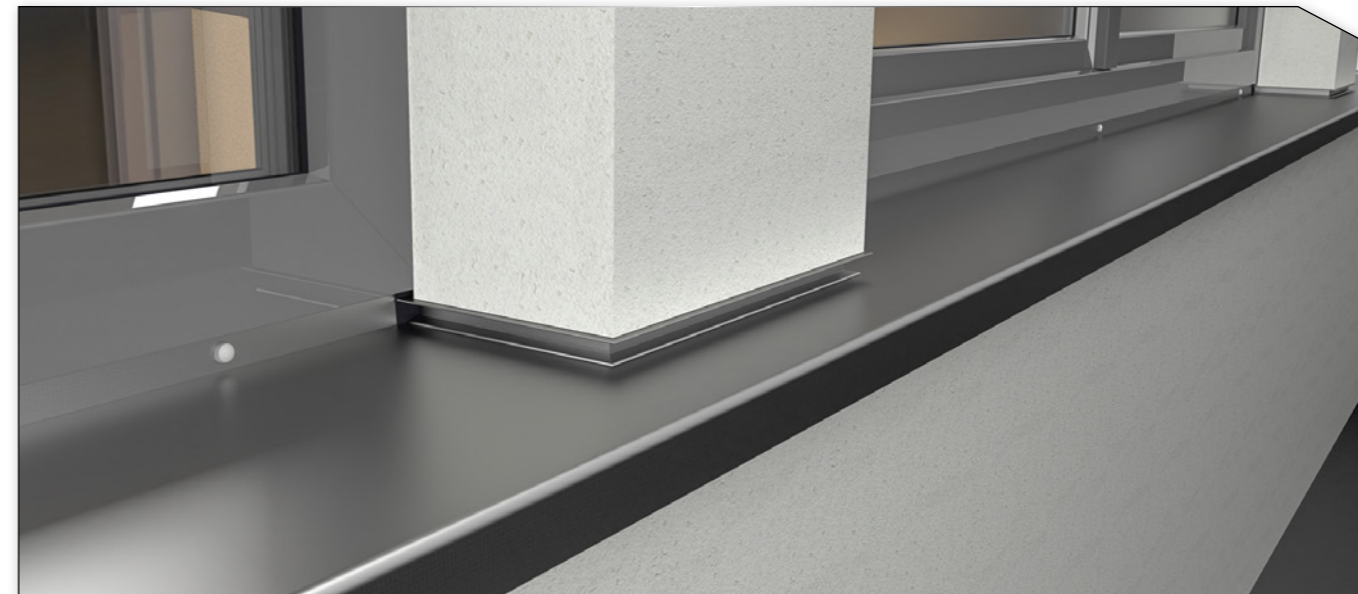
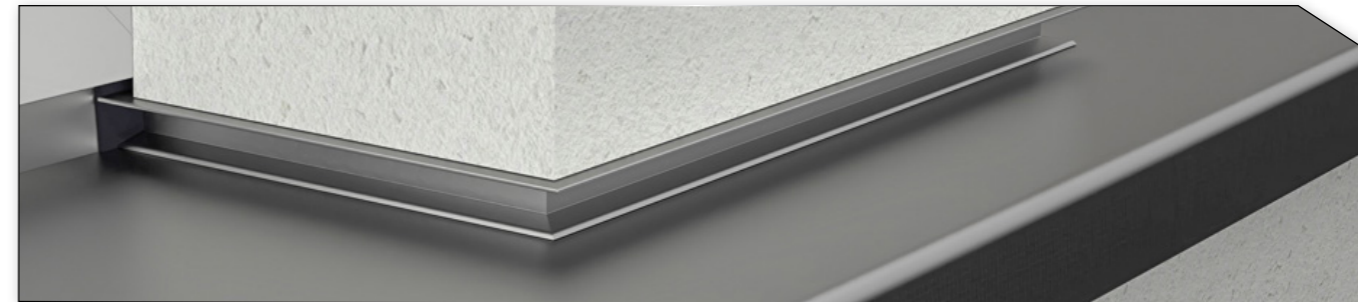
**Available colors
Finished surface:**

RAL 9016, RAL 8019, RAL 8003, RAL 7016
E6/EV1, E6/C32, E6/C33

**custom coatings are available for delivery on request*

Width available:

Depends on the necessity

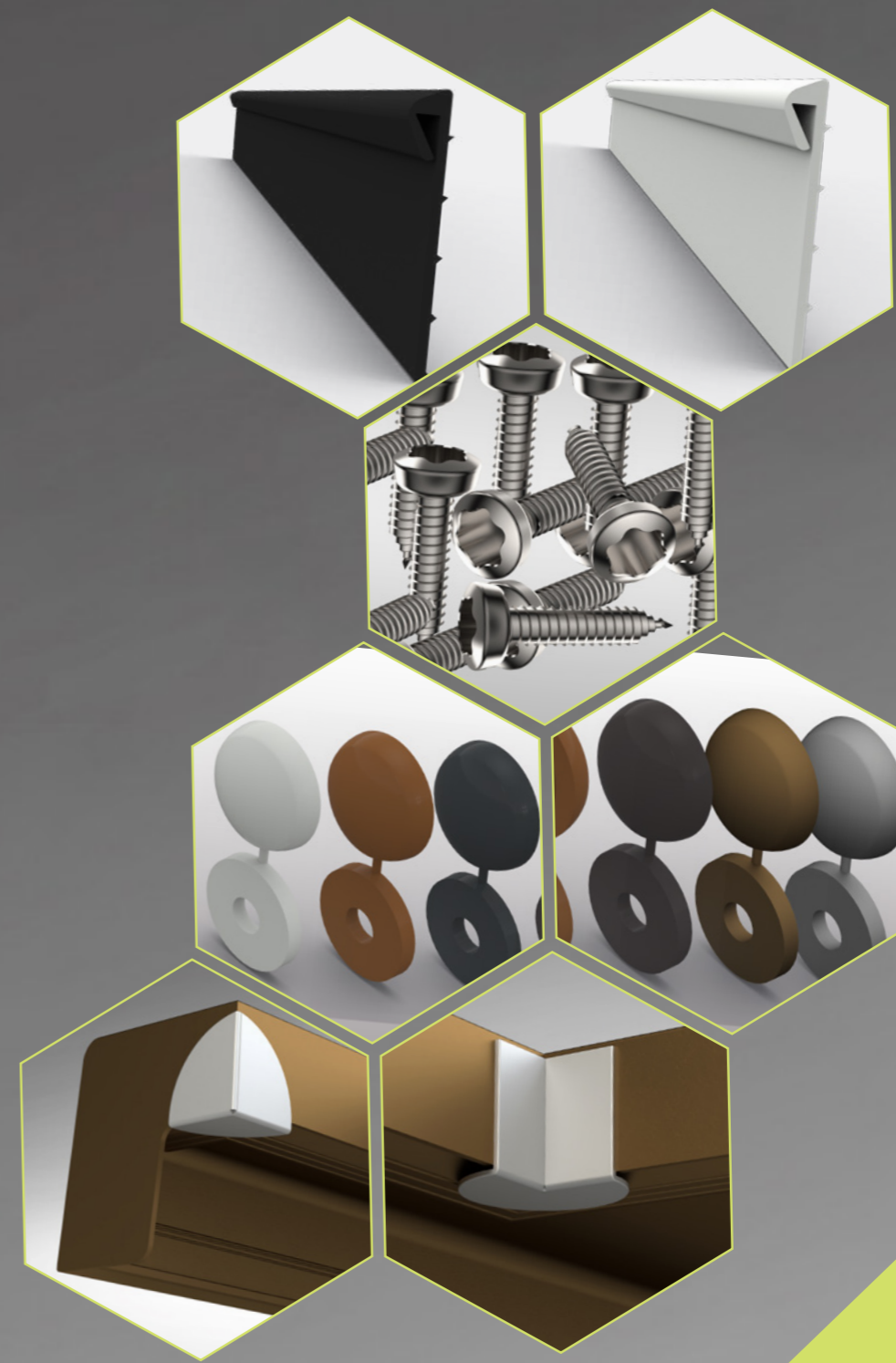


TECHNICAL SPECIFICATIONS

Bypass profiles for aluminium window sills cutted individually

The TSV bypass profile has a clips-on technology, that is similar with the aluminium end caps clips-on system, which used together with the butyl tape applied on the joints, results in a durable and resistant system against water penetration.

The adaptation of bypass profiles is done depending on the guidelines of the construction, taking into account the type end covers used – type "C" / "L".



chapter

7

MOUNTING ACCESSORIES

The mounting accessories are an essential parts of the TSV aluminium window system.



You can visit the product on our website

tsvline.com

08. MOUNTING ACCESSORIES

self-tapping stainless steel screws, masking caps, sealing gaskets, butyl sealing tape

STAINLESS STEEL SCREWS

TX 20 Self-tapping stainless steel screw 3.9x25 mm



Characteristics:

- low corrosion;
- much firmer tightening than conventional screws;
- prolonged wear resistance – 50 years life;
- low thermal conductivity compared to galvanized screws;
- resistance to shear and traction forces;
- flexibility, resistant to high and low temperatures.

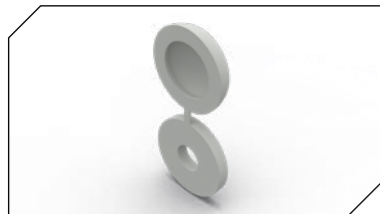
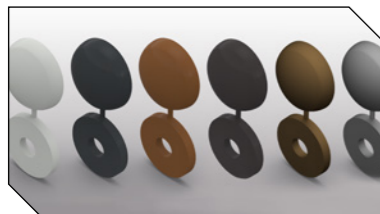
Packing unit:

- 100 pieces / set

additional assembly details - page no. 62 - sketch no.1 and no.3

MASKING CAPS

Screw Masking Caps



Characteristics:

- specially designed to cover TX20 self-tapping mounting screws – 3.9x25 mm;
- durability – made of ABS;
- easy to apply;
- wide range of colors: RAL7016, RAL8003, RAL8019, RAL9016, SILVER, BRONZE;
- the washer is attached to the body of the masking cap.

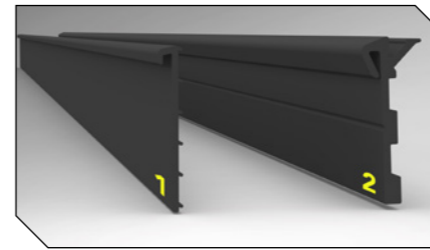
Packing unit:

- 100 pieces / set

additional assembly details - page no. 62 - sketch no.1 and no.3

SEALING GASKETS

Sealing gaskets for aluminium window sills



additional assembly details - page no. 62 - sketches no.3, no.4

Characteristics:

- made of EPDM material with a width of 27mm;
- location of use – outside;
- color RAL9005;
- flexibility;
- thermal and chemical resistance;
- easy application on length.

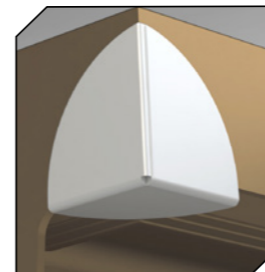
RECOMMENDATIONS:

- Model (1) is used for the situation in which a solban profile is mounted under the window frame.
- Model (2) is used in the situation where a low profile is NOT mounted under the window frame.

Availability per linear meter.

SEALING TAPES

Butyl sealing tape

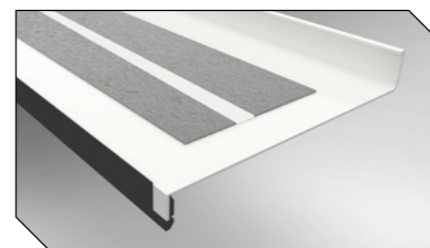


Characteristics:

- made of butyl rubber, and on the outside aluminium foil;
- resistant to UV radiation;
- application temperatures + 5° C – + 40° C;
- thermal resistance -40° C – + 90° C;
- fast adhesion on most materials;
- classification as waterproofing material;
- self-adhesive;
- insulates against water vapor;
- easy application.

Available size: 60x0,7 mm

Soundproof tape



additional assembly details - page no. 62 - sketch no.2

Characteristics:

- made of bituminous membrane;
- location of use – to be mounted outside;
- self-adhesive;
- durability and endurance over time.

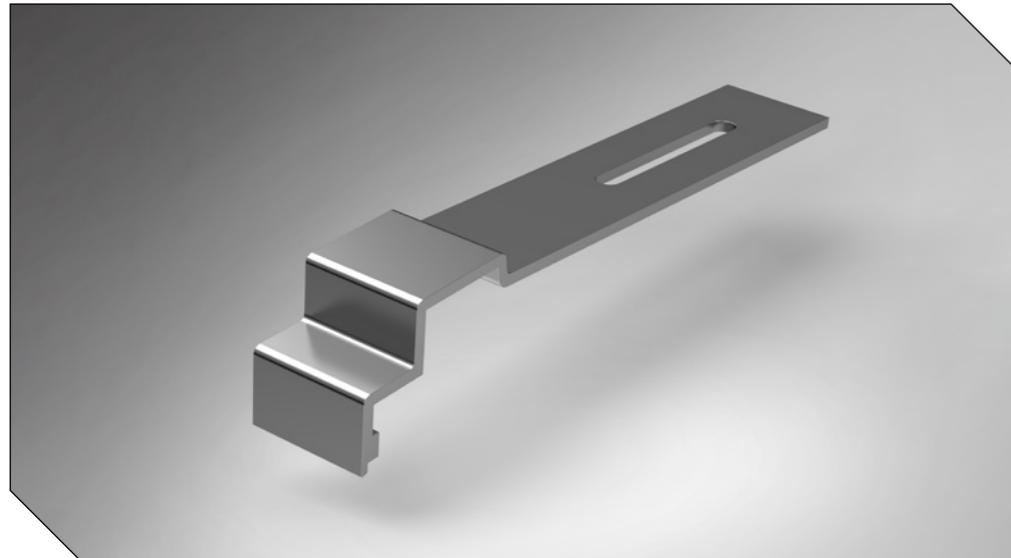
Available sizes:

- 50x1000 mm
- 80x1000 mm
- 100x1000 mm
- 120x1000 mm

08. MOUNTS FOR STABILISING SILLS INTO MASONRY

For fixing sills on buildings with various types of facades: with decorative-brick walls, plastered, or thermally insulated facades.

Sill-stabilising mount for decorative-brick walls



CHARACTERISTICS:

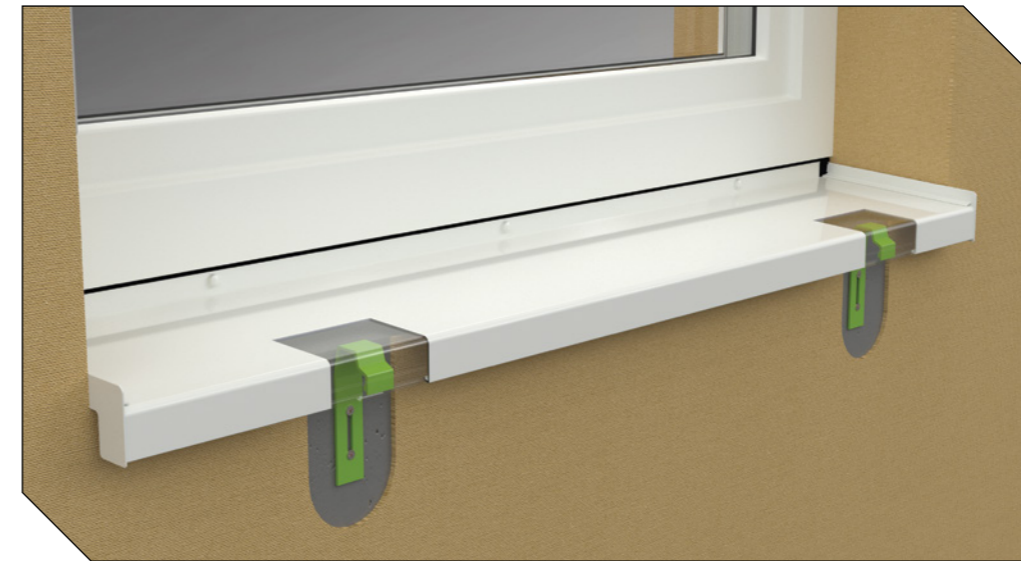
- manufactured using the high-precision extrusion process, out of an AA6061 alloy;
- high corrosion performance, due to electrostatic coating;
- a 40 x 6 mm slit for fixing the mount into the masonry;
- durability and resistance at high temperatures;
- easy horizontal encasing and fixing onto the fitting surface.

RECOMMENDATIONS:

- it is recommended to use the mount for aluminium sills at least 150 mm wide;

**the stabilising mount applies to facades that do not require plastering and is suitable for new buildings or renovations;
**additional mounting details – page 64*

Sill-stabilising mount for plastered facades



CHARACTERISTICS:

- manufactured using the high-precision extrusion process, out of an AA6061 alloy;
- high corrosion performance, due to electrostatic coating;
- a 40 x 6 mm slit for vertically fixing the mount into the masonry;
- durability and resistance at high temperatures;
- easy encasing.

RECOMMENDATIONS:

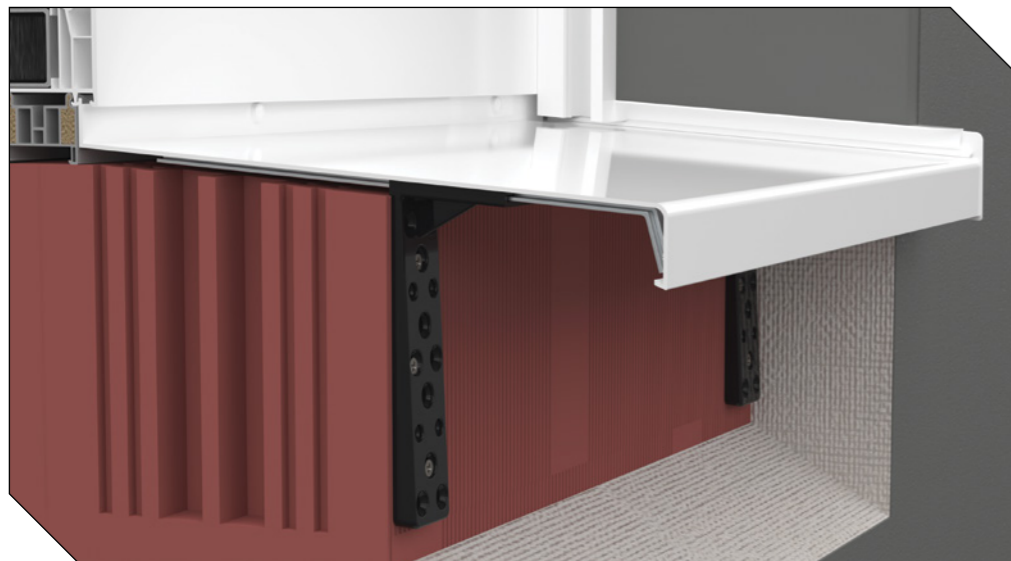
- it is recommended to use the mount for aluminium sills at least 150 mm wide;

**the stabilising mount applies to plastered facades and is suitable for renovations;
**additional mounting details – page 66*

08. SILL-STABILISING MOUNT

FOR THERMALLY INSULATED FACADES

Mount for thermally insulated facades



CHARACTERISTICS:

- manufactured using the high precision extrusion process, out of an AA6061 alloy;
- high corrosion performance, due to electrostatic coating;
- durability and resistance at high temperatures;
- easy vertical encasing and fixing onto the fitting surface.

RECOMMENDATIONS:

- it is recommended to use the mount for aluminium sills at least 150 mm wide;

**the stabilising mount applies to thermally insulated facades and is suitable for new buildings;*

***additional mounting details – page 68*

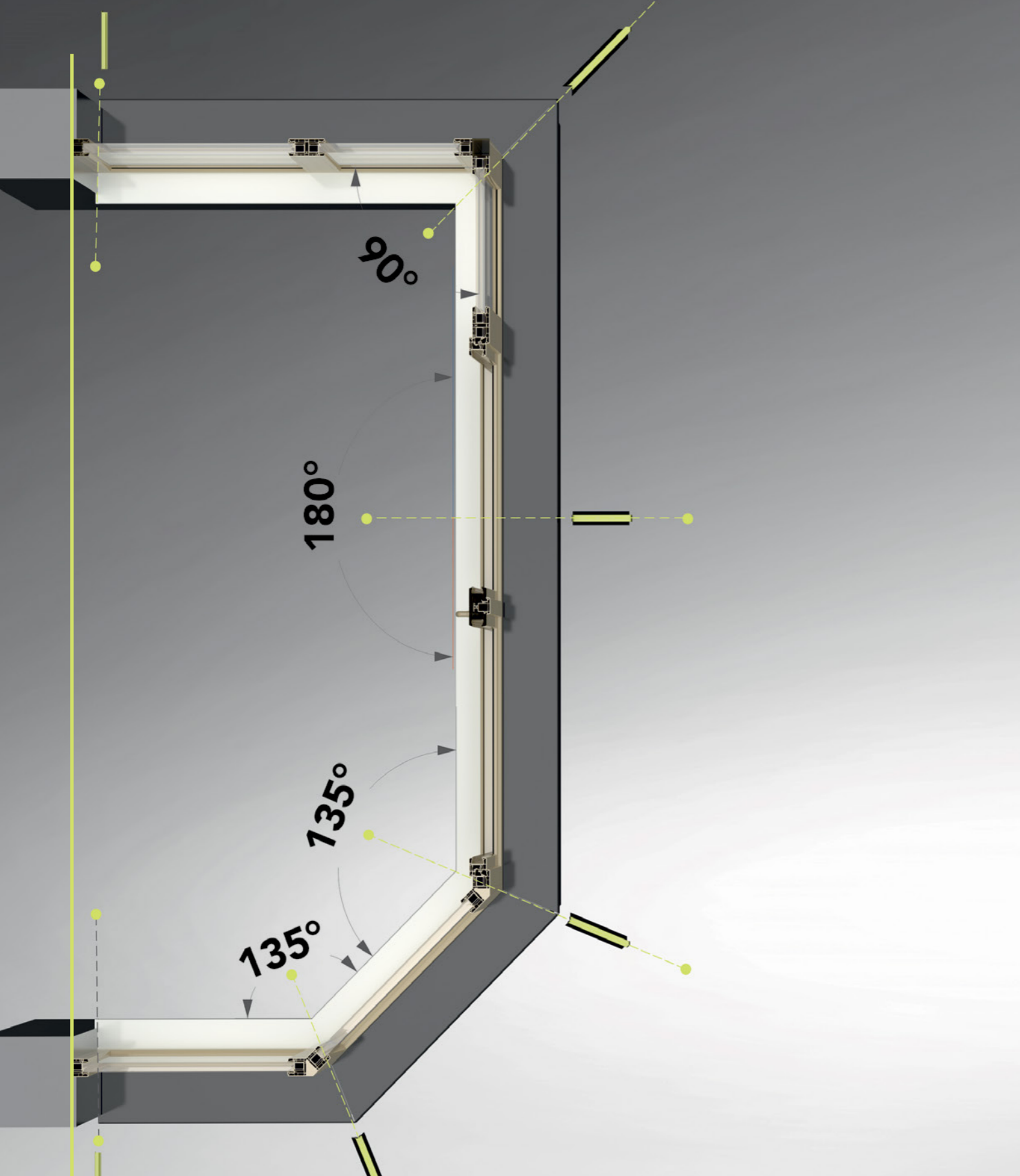
Mount for thermally insulated facades



DETAILS:

Mount composed of two elements:

- 1) Injection-moulded plastic bracket with multiple fastening holes providing greater mounting tolerance, not subject to fixed dimensions;
- 2) Mount of various lengths made of aluminium profile suited for thermal insulation of various widths within the building

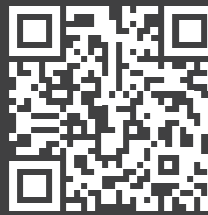


- Measuring the aluminium window sill
- Preparation of the installation space
- Mounting the aluminium window sill
- How are they maintained?
- General recommendations

chapter
8

**MAINTENANCE AND
INSTALLATION INSTRUCTIONS**

Technical support

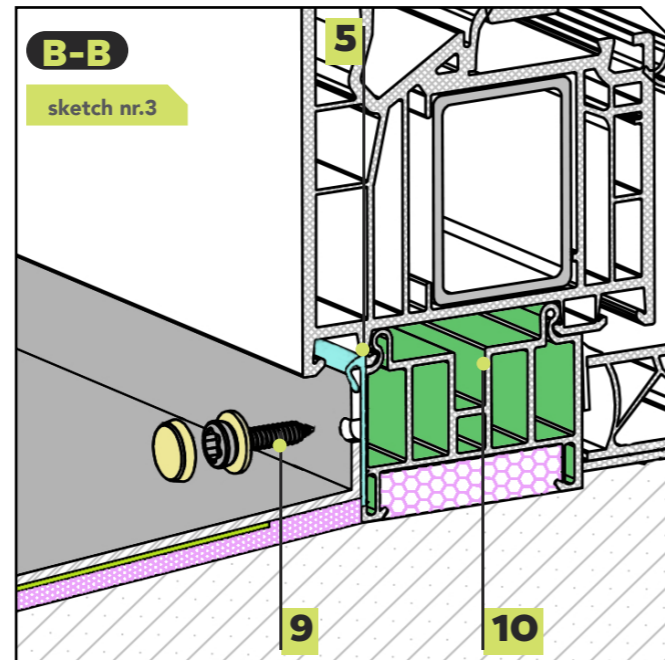
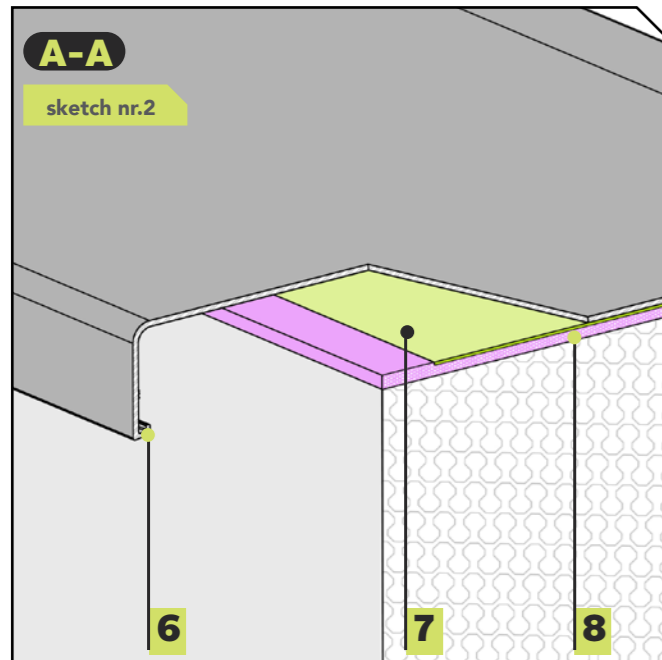
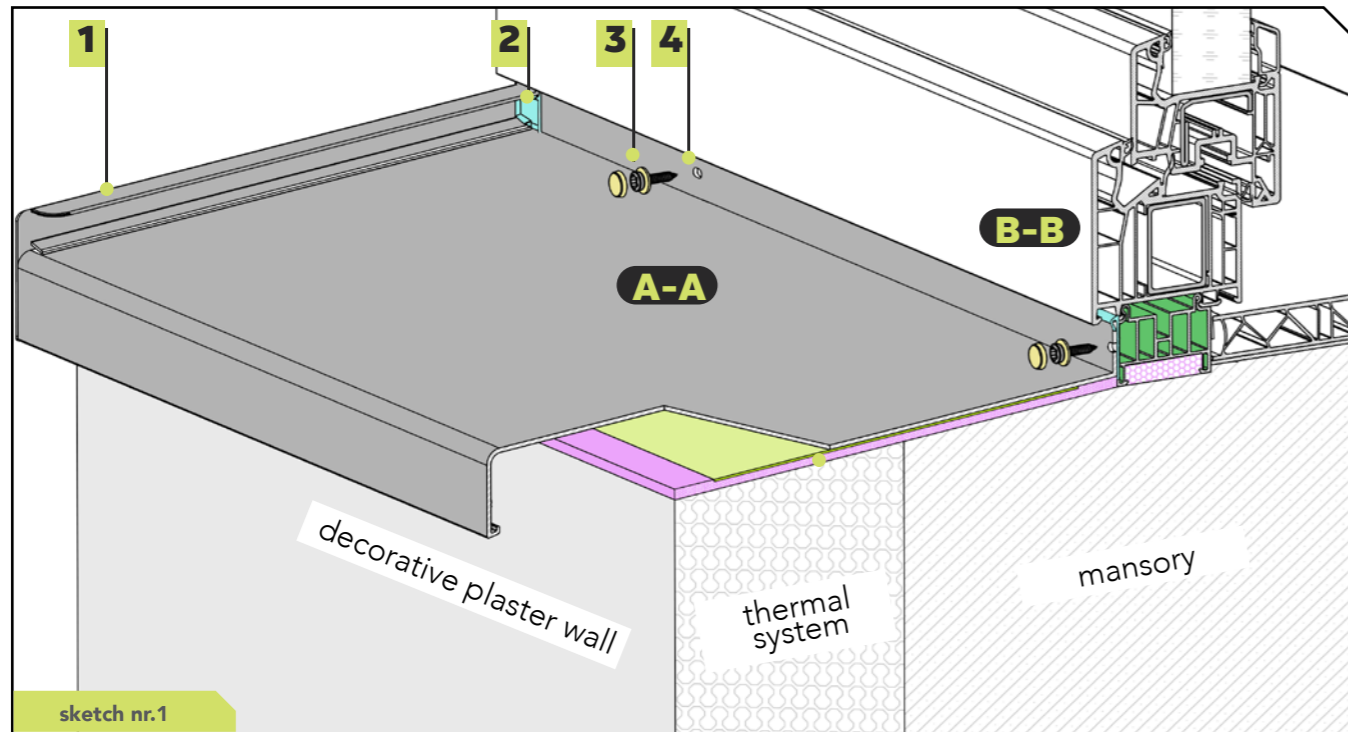


You can visit
the product
on our
website

tsvline.com

10. INSTRUCTIONS

for a professional installation

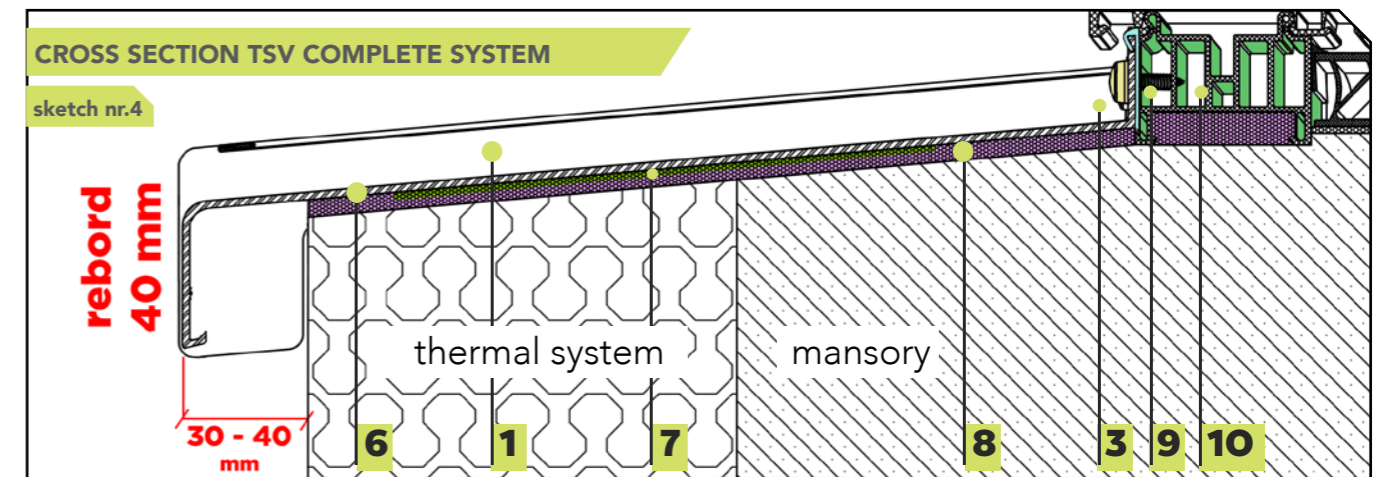


DESCRIPTION

- | | | |
|-------------------------------------|---|--|
| 1 Aluminium End cap type "C" | 5 EPDM Window sill median gasket | 9 Stainless steel self-tapping screw TORX 3.9x25 mm |
| 2 Butyl Sealing Tape | 6 TSV Aluminium Window sill - 40 mm rim | 10 Solbanc profile |
| 3 ABS Screw Masking Cap | 7 Soundproof tape | |
| 4 Predefined hole 4,2x7 mm | 8 Low expansion polyurethane mounting foam | |

10. DETAIL

mounting assembly



Mounting the aluminium window sill

01 Measuring the aluminium window sill

On the preliminary stage of the window sill installment, we recommend to measure correctly the installation space underneath the window frame.

The measurement of the installation space¹ will have to take into account the decrease of 3 mm from the windows sill measured length, which will be compensated by the applied aluminium end caps.

In order to determine the optimal width of the window sill that needs to be installed, the distance between the solbanc profile and the edge of the building facade shall be measured.

02 Preparation of the installation space

Installation of the aluminium window sill is recommended to be carried out on a surface without unevenness.

For this, the surface of the installation space on which the aluminium window sill will be mounted is prepared, in order to eliminate all the unevenness appeared after the new construction projects, respectively of the mounting adhesives in case of retrofitting projects.

03 Mounting the aluminium window sill

The assembly involves in the first stage the application on the window sill of the following components:

1. EPDM gasket on the top of the aluminium window sill, cutted to the required length;
2. aluminium side covers type "C" or type "L" (depending on the final destination of the system);
3. butyl sealing tape, applied to the corners of the end caps;
4. soundproofing tape against the sound from rainfall cutted to the required length.

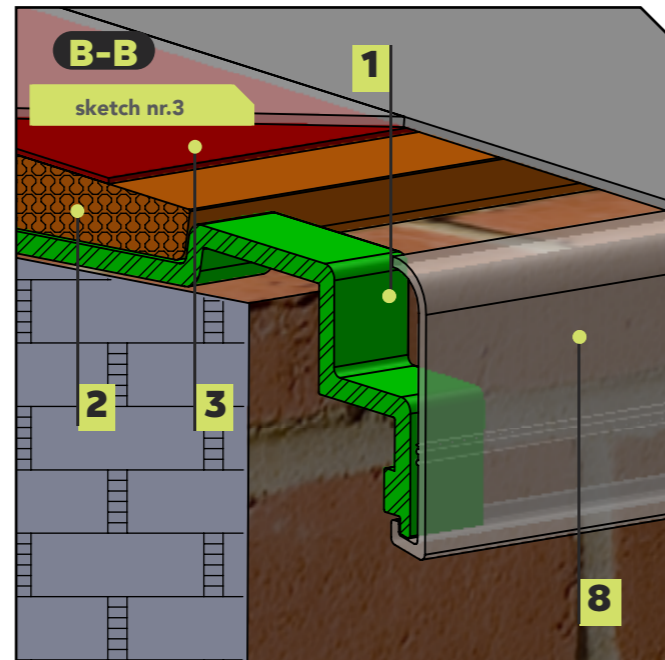
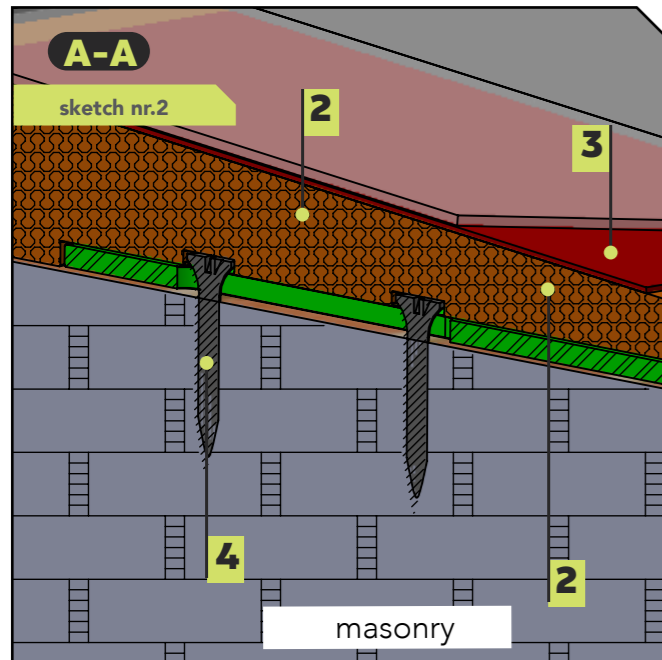
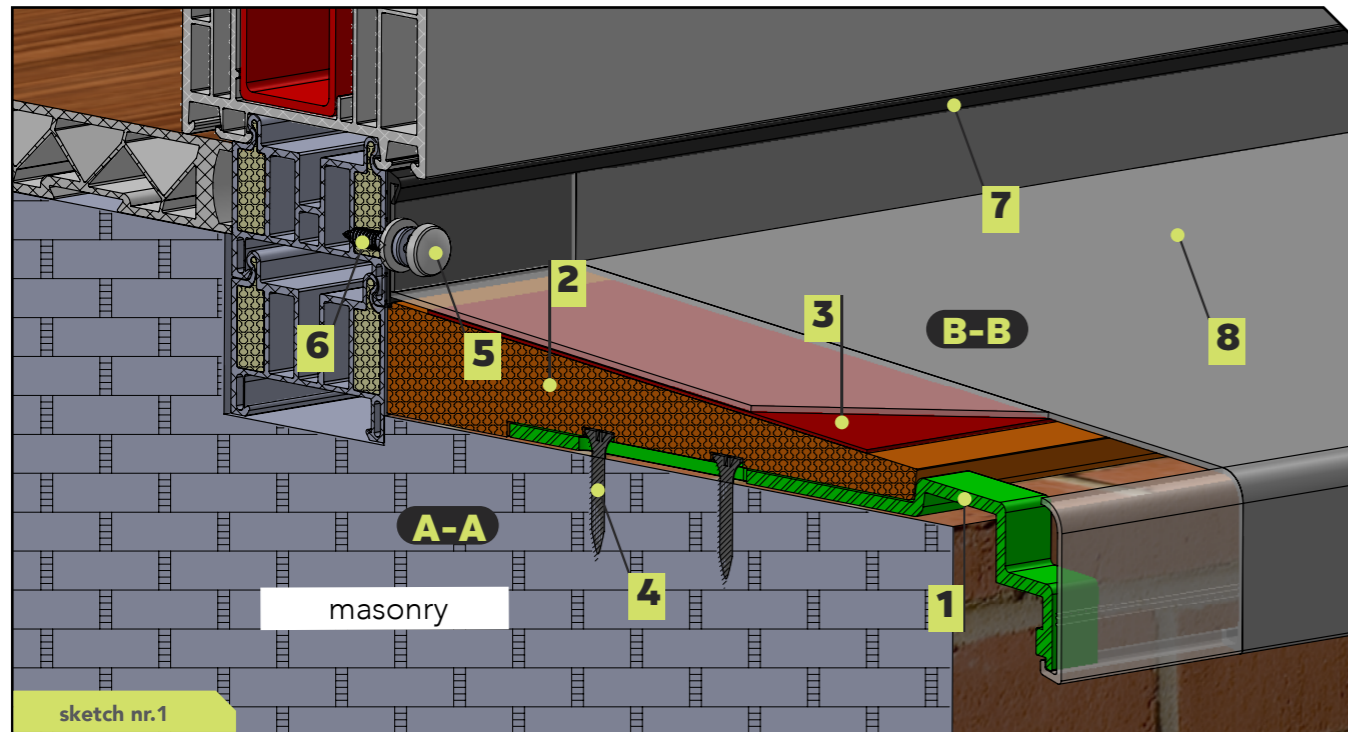
The second stage involves the application of polyurethane foam applied to the horizontal surface of the installation space, followed by the fixation of the window sill to the solbanc profile to the mounting dimensions, with the help of the self-tapping screws protected by the ABS masking caps.

* 1: In the case of new construction projects, take into consideration the use of aluminium end covers type "C" and compare the measured value to the execution details indicated by the design engineer, so that when the installation of the thermo system is finished it will cover the available 18 mm top edge aluminium end cover type "C". For the installation of the aluminium end caps type "L", in case of facade retrofit projects, it's mandatory to take into consideration the measurement of the existing installation space from one side of the thermal system to the other.

** 2: Self-tapping screws are part of the complete TSV aluminium window assembly system, made from stainless steel TORX type.

10. INSTRUCTIONS

for the use of sill-stabilising mounts in masonry

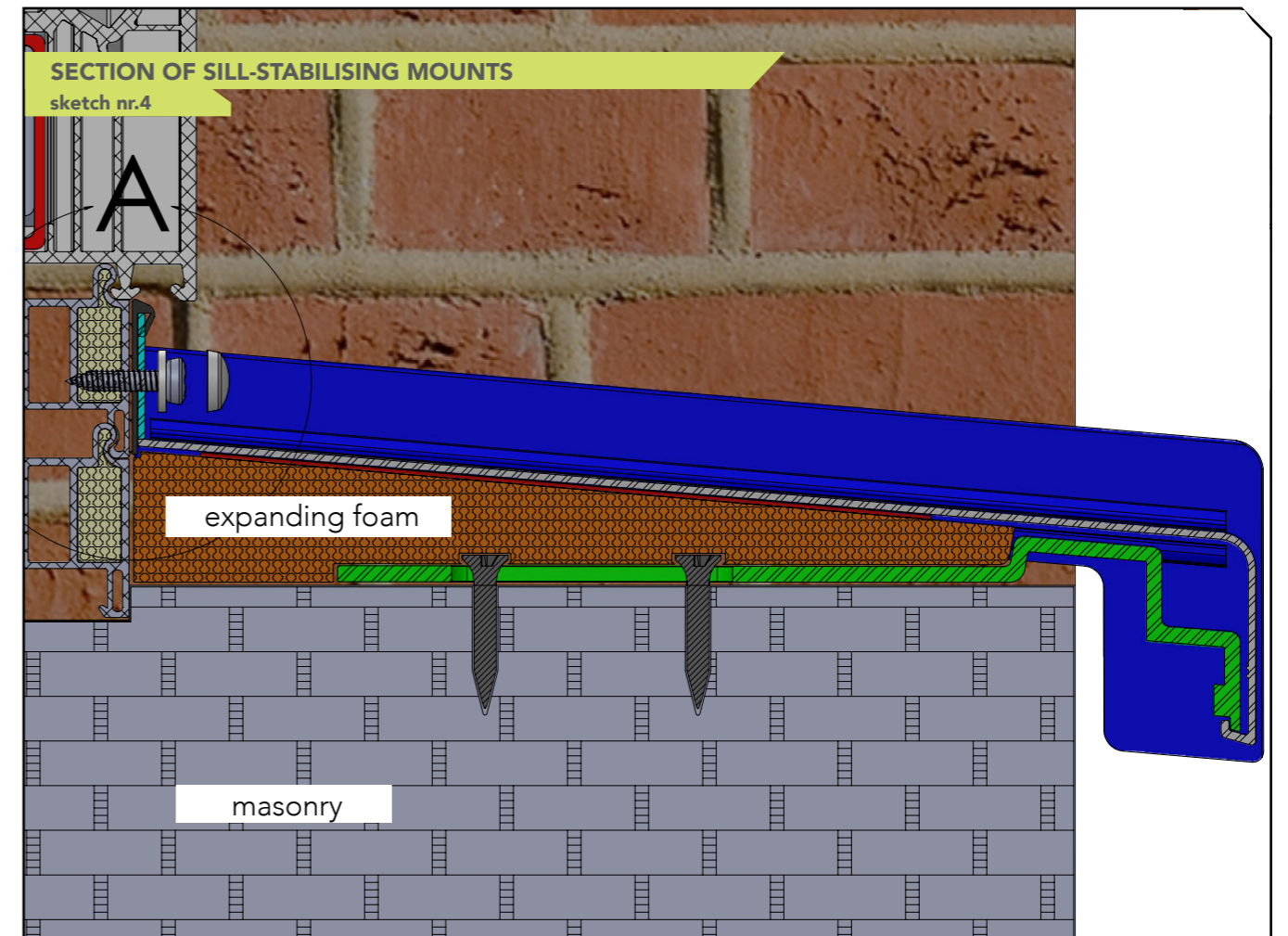


DESCRIPTION

- | | |
|---|--|
| 1 Horizontal sill-stabilising mount | 5 ABS Screw Masking Cap |
| 2 Low expansion polyurethane mounting foam | 6 Stainless steel self-tapping screw TORX 3.9x25 mm |
| 3 Soundproof tape | 7 EPDM Window sill median gasket |
| 4 Masonry mounting screw | 8 TSV Aluminium Window sill - 40 mm rim |

10. DETAIL

mounting assembly



Ways to use sill-stabilising mounts in masonry

The preliminary step in mounting sill-stabilising mounts entails establishing the type of facade on which the sills are to be fixed. The mounts have varying characteristics for quick mounting suitable for the building's various stages of development and for various types of facades: with decorative-brick walls, plastered, or thermally insulated facades.

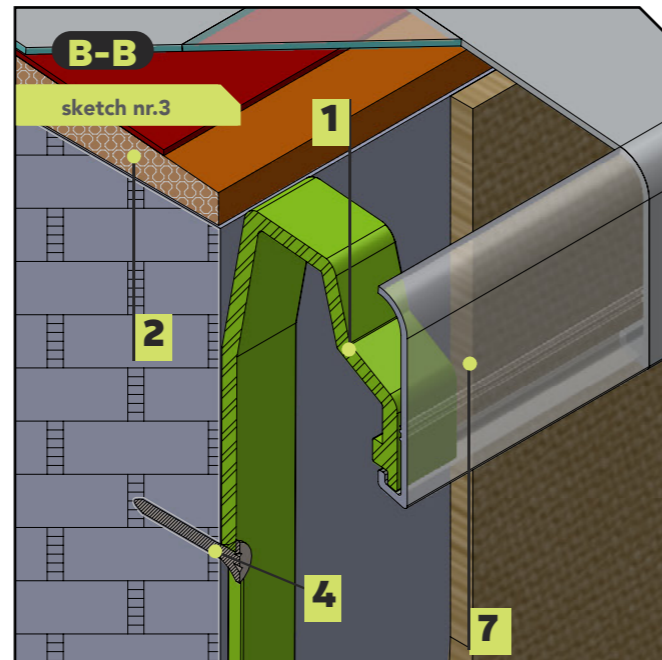
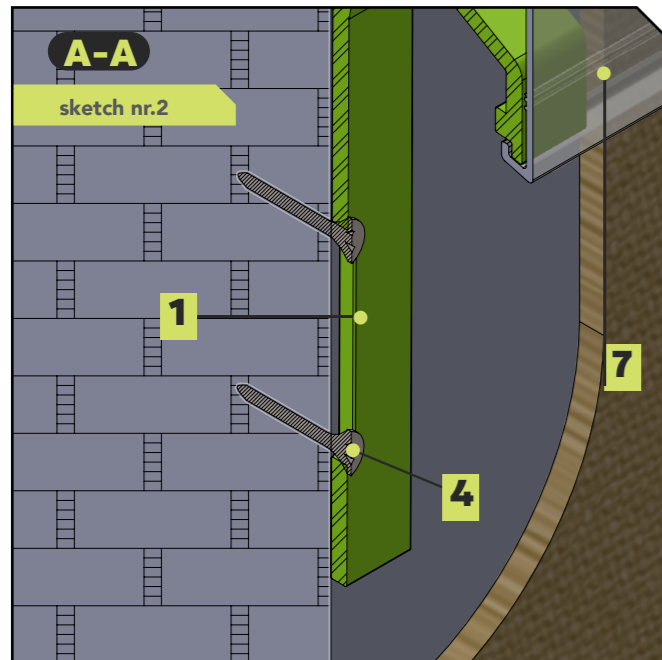
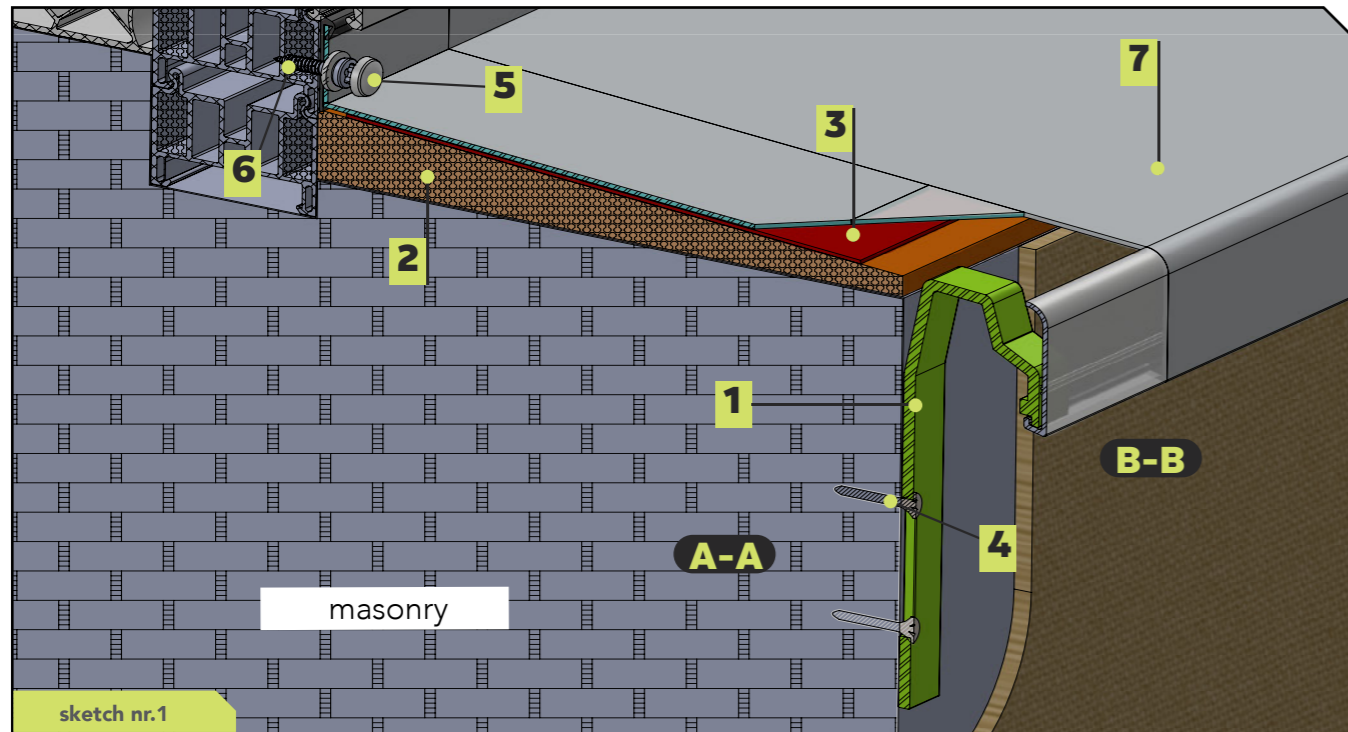
01 Sill-stabilising mount for decorative-brick walls

The mount is recommended for new buildings or renovating existing ones for mounting aluminium sills at least 150 mm wide. The mount has a 40 x 6 mm slit for fixing it into the masonry.

The mount is mounted horizontally under the sill, stabilising it, and does not require works that damage the structure of the decorative-brick wall.

10. INSTRUCTIONS

for the use of sill-stabilising mounts in masonry

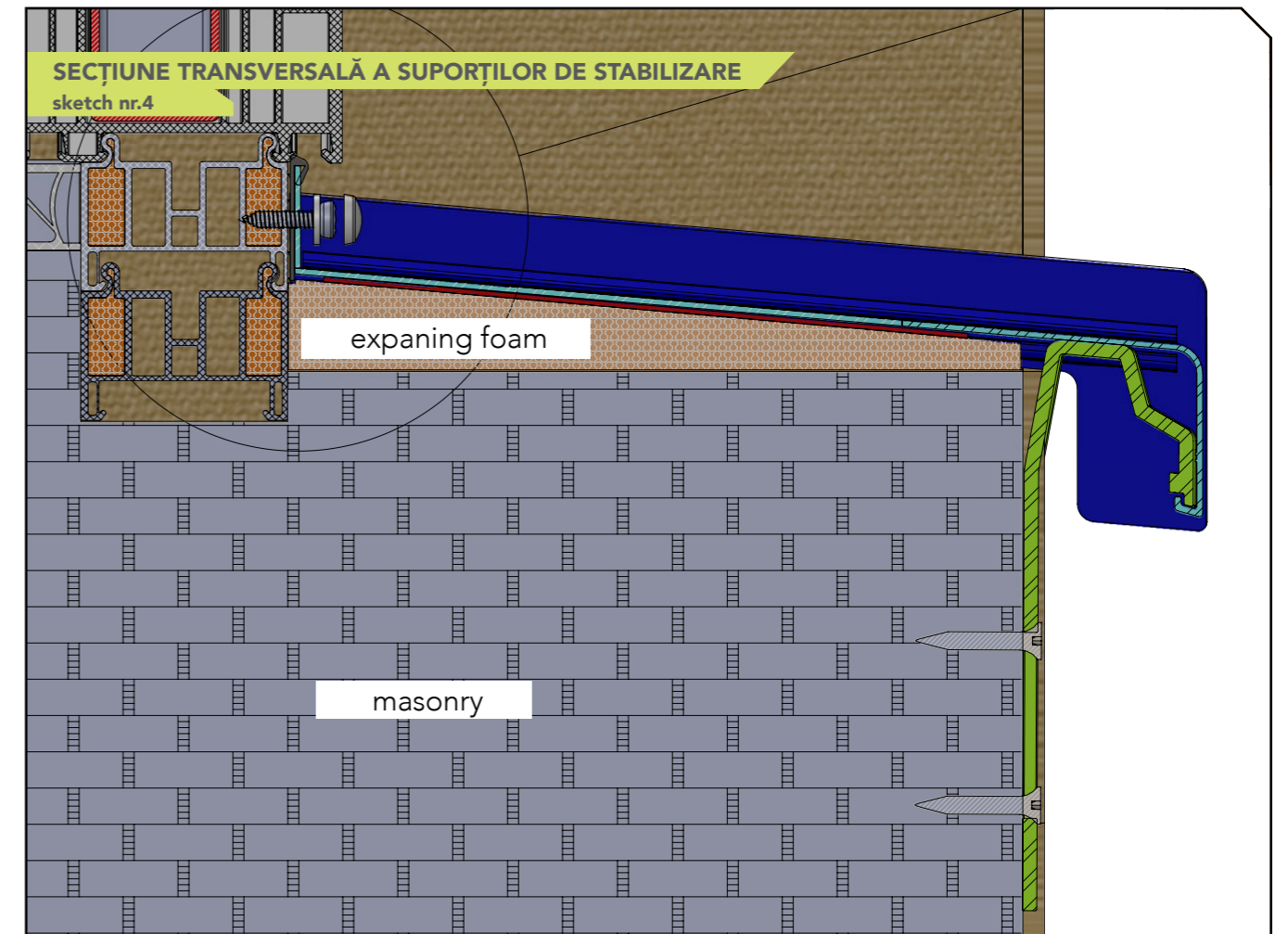


DESCRIPTION

- | | |
|---|--|
| 1 Vertical sill-stabilising mount | 5 ABS Screw Masking Cap |
| 2 Low expansion polyurethane mounting foam | 6 Stainless steel self-tapping screw TORX 3.9x25 mm |
| 3 Soundproof tape | 7 TSV Aluminium Window sill - 40 mm rim |
| 4 Masonry mounting screw | |

10. DETAIL

mounting assembly



Ways to use sill-stabilising mounts in masonry

The preliminary step in mounting sill-stabilising mounts entails establishing the type of facade on which the sills are to be fixed. The mounts have varying characteristics for quick mounting suitable for the building's various stages of development and for various types of facades: with decorative-brick walls, plastered, or thermally insulated facades.

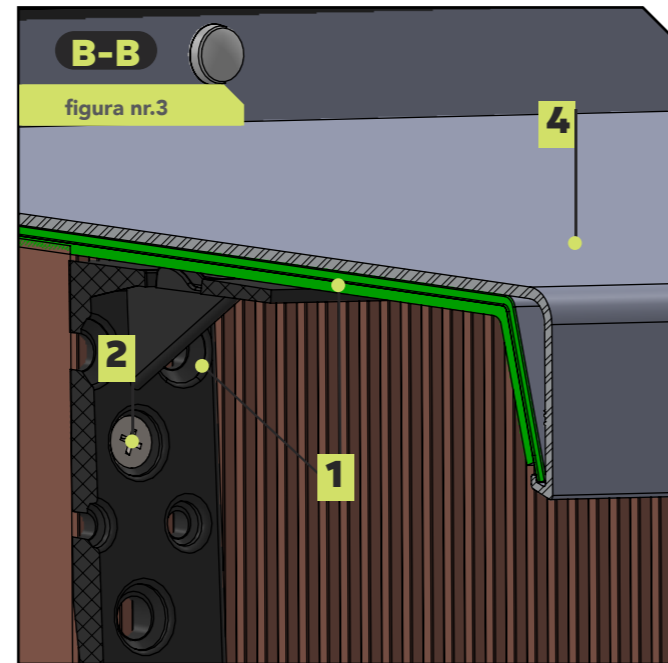
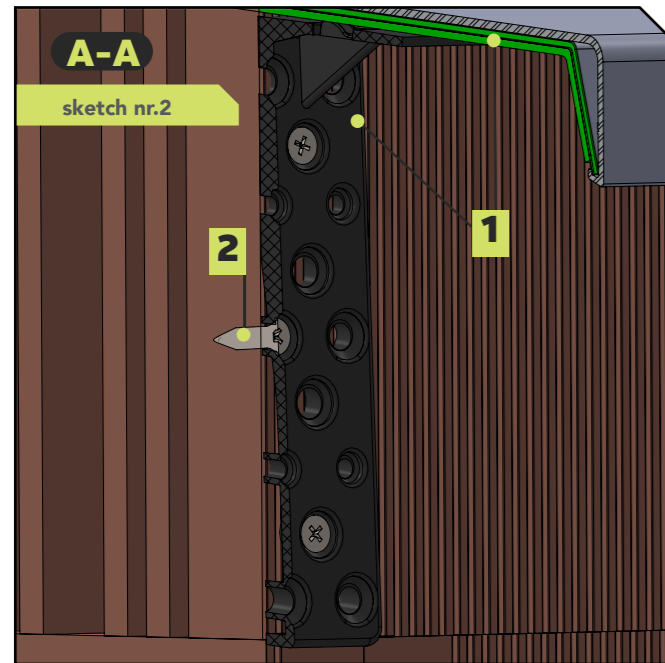
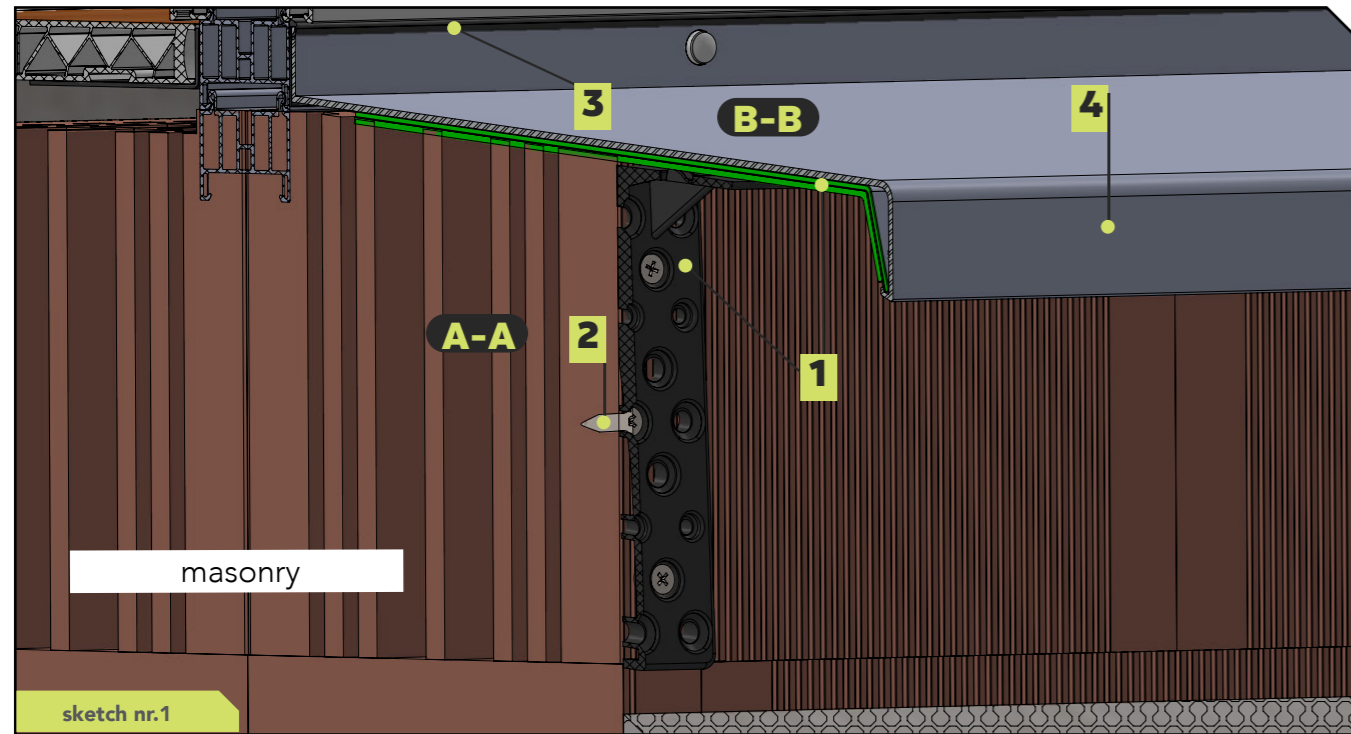
02 Sill stabilising mount for a plastered facade

The mount is recommended for existing buildings that are already plastered, for mounting aluminium sills with a width of 150mm and above. The mount has a 40 x 6mm cleft for fixing it into the walling.

The mount is mounted horizontally straight onto the walling, under the sill, stabilising it, followed subsequently by repair works on the building's plastering.

10. INSTRUCTIONS

for the use of sill-stabilising mounts in masonry

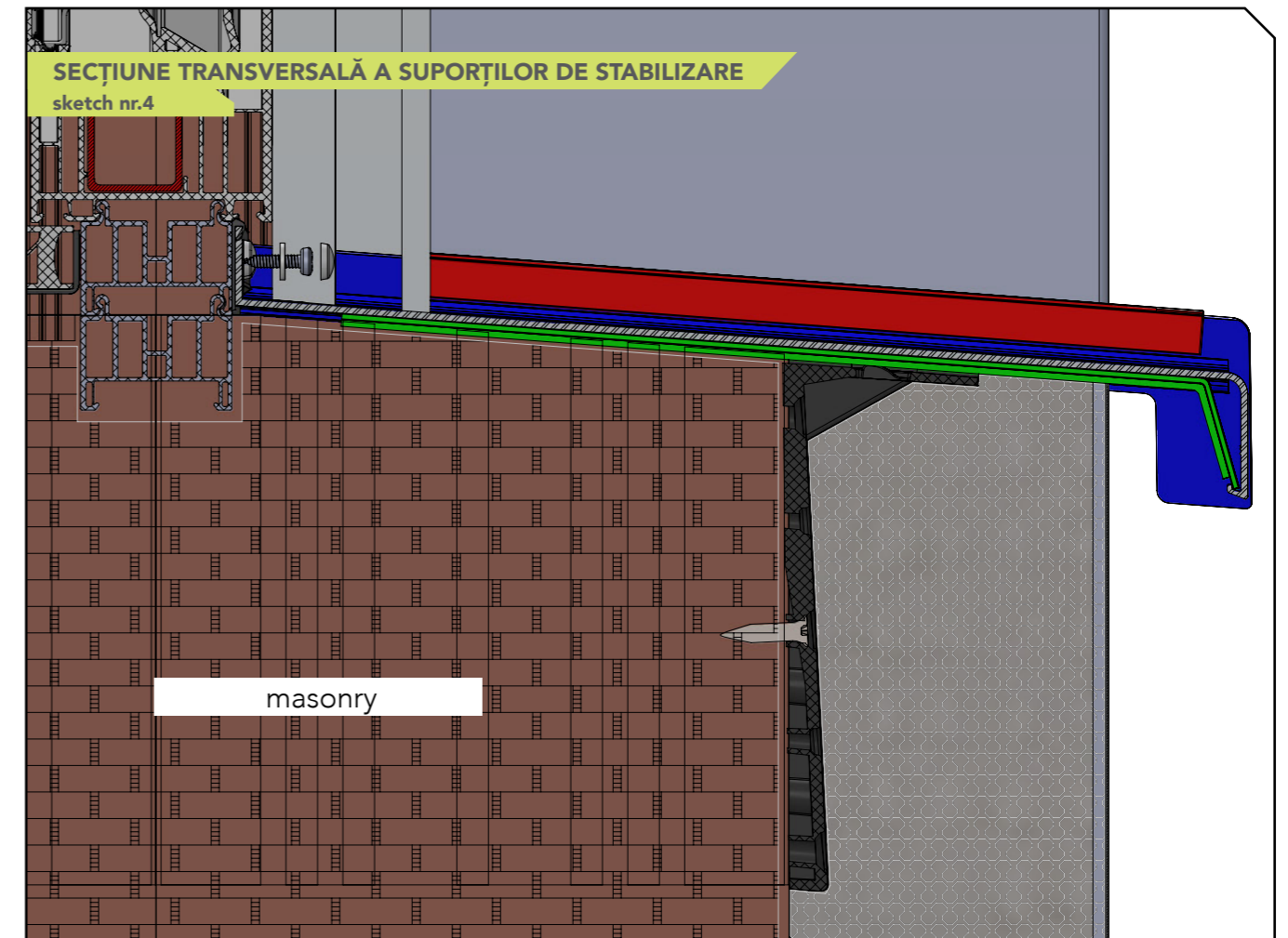


DESCRIPTION

- 1** Sill-stabilising mount
- 2** Masonry mounting screw
- 3** EPDM Window sill median gasket
- 4** TSV Aluminium Window sill - 40 mm rim

10. DETAIL

mounting assembly



Ways to use sill-stabilising mounts in masonry

The preliminary step in mounting sill-stabilising mounts entails establishing the type of facade on which the sills are to be fixed. The mounts have varying characteristics for quick mounting suitable for the building's various stages of development and for various types of facades: with decorative-brick walls, plastered, or thermally insulated facades.

03 Sill stabilising mount for thermally insulated facades

The mount is recommended for buildings with a thermal insulation system, for mounting aluminium sills at least 150 mm wide. It is composed of two elements for higher mounting flexibility:

- The vertical bracket which is fixed directly into the masonry and has multiple fastening holes enabling mounting at various distances.
- The mount made of aluminium profile which we provide in various sizes for thermal insulation of varying thickness.

10. MAINTENANCE INSTRUCTIONS



01 How to maintain your aluminium window sill?

The complete TSV aluminium window system is a lifelong investment, whether we are talking about new construction projects or retrofit projects.

To keep the window sill system and covers always in perfect condition, regular maintenance is required.

To restore the characteristic glaze, we recommend cleaning the aluminium window sills and covers, from dust or other deposits that will damage the proper functioning of the system over time.

Cleaning can be made with water and a clean cloth.

Window cleaning solutions can also be used without any problems.



02 To remember!

TSV aluminium window sills and covers are resistant to gypsum, lime chloride and cement from new construction and / or retrofitting.

It is NOT permitted to clean them with nitrocellulose varnishes, varnish thinners and solvents (acetone, ethyl acetate, benzene, chlorinated hydrocarbons, dibutylphthalate, toluene, xylene, methanol, dichloromethane, phenols, alcohol, tetrahydrofuran, softening).



General recommendations

TSV recommends a professional installation, which means respecting the following simple procedures when installing the aluminium exterior window system, as follows:

- The angle inclination of the window sills should not be less than 5°;
- The distance of the edge of the aluminium window sills from the finished facade should be approximately 30 – 40 mm;
- The sealing of the window systems involves the proper fixing of the solbanc profile, using the median gasket behind the window sill and the stainless steel screws and the corresponding masking caps;
- Consideration will be given to the adoption of an anti-noise measures, which involves the application of a soundproof tape on the lower surface of the aluminium window sill – recommended to apply on at least 50% of the surface;
- When installing aluminium window sills with lengths larger than 3000 mm, it is recommended to use a connecting piece (coupling) at 180°, which helps to compensate for the expansion of the window sill system due to thermal changes.

QUALITY CERTIFICATE

Rosenheim

ift-Nachweis		ift
Classification Report		ROSENHEIM
Number	24-004191-PR01 (NW-E04-02-en-01)	Basis *) EN 1027:2000-06 EN 12114:2000-03 *) and corresponding national versions (e.g. DIN EN) Test Report 24-004191-PR01 (PB-E04-02-en-01)
Owner	PM ALUMINIUM LINE S.R.L. 167 Corneliu Coposu Street Birou 2, Et.2 400228 Cluj-Napoca Romania	
Product	Watertight window sill system	Representation 
Designation	TSV-ALWS40 Alu Seitenendabdeckungen TSV**40-NC/RC** TYP C Premium	
Details	Manufacturer PM ALUMINIUM LINE S.R.L., Cluj-Napoca; Tested overhang 180 mm; Upstand height 25 mm; Sealing behind the upstand EPDM profile; Screw connection distance e= 300 mm; Surface powder-coated white	Validity There is no time limit. When using this document the up-to-dateness of above basis and the conformity of the product have to be observed. The data and results given relate solely to the tested/described specimen. This test does not allow any statement to be made on further characteristics of the present structure regarding performance and quality, in particular the effects of weathering and ageing. Notes on publication The ift-Guidance Sheet "Conditions and Guidance for the Use of ift Test Documents" applies. The cover sheet can be used as an abstract.
Details edging piece TYP C Premium	Manufacturer PM ALUMINIUM LINE S.R.L., Cluj-Napoca; Details: The edging consists of an extruded aluminium profile into which an EPDM moulded part with drainage grooves is inserted over the entire construction depth. The rear corner connection between the window sill profile and the edging piece is additionally tightend in the back corner on three sides with an aluminium-butyl adhesive tape	
Special features	The test was carried out with rear-ventilated installation without any major pressure difference across the window sill	Identity-Check  www.ift-rosenheim.de/ift-cert/ue/ ID: 7E0-898CD
Results **)	Watertightness based on EN 1027:2016-03  No water penetration at up to 1950 Pa **) Decision rule: For the evaluation of conformity, the measurement uncertainty was not taken into account.	
ift Rosenheim 23.12.2024		
 Thomas Stefan, Dipl.-Ing. (FH) Head of Testing Department Building Component Testing		 Martin Heßler, Dipl.-Ing. (FH) Project Engineer Building Component Testing
 Rosenheim GmbH Theodor-Geiser-Str. 7-9 83028 Rosenheim GERMANY +49 89 31 261-0 ift@ift-rosenheim.de www.ift-rosenheim.de		 DIN EN ISO 9001:2015  DIN EN ISO 14001:2015  DIN EN ISO 45001:2018  DAKS  Accredited Test Laboratory EN ISO/IEC 17025

QUALITY CERTIFICATE

RAL aluminium powder coated

CERTIFICATE

for a COATING APPLICATOR



to use the quality label in conformity with the QUALICOAT 2022 Specifications, applicable from 1 January 2022

Licence No.:	1406
Date of Granting:	08.01.2004
Valid until:	31.12.2025

Zurich, 1 January 2022

QUALICOAT



Ivo Vermeeren
President



Sue C. C. Paredi
Managing Director

QUALITY CERTIFICATE

anodizing aluminium

Authorization to use the quality sign



Licence number: 1605

is authorized to use the quality sign which is shown above, according to the regulations for the use of the quality label for ARCHITECTURAL ANODIZING as described in the current edition of the Specifications for the QUALANOD quality label for sulfuric acid-based anodizing of aluminium (Edition 01.01.2021). Architectural anodizing is one of the four types of anodizing covered by the Specifications.

Date of issue of the licence: 19.01.1996
Period of validity of the licence: until 31.12.2025
Zurich, 15 December 2021

QUALANOD



Dr. Metin Yilmaz
President

CERTIFICATION BODY

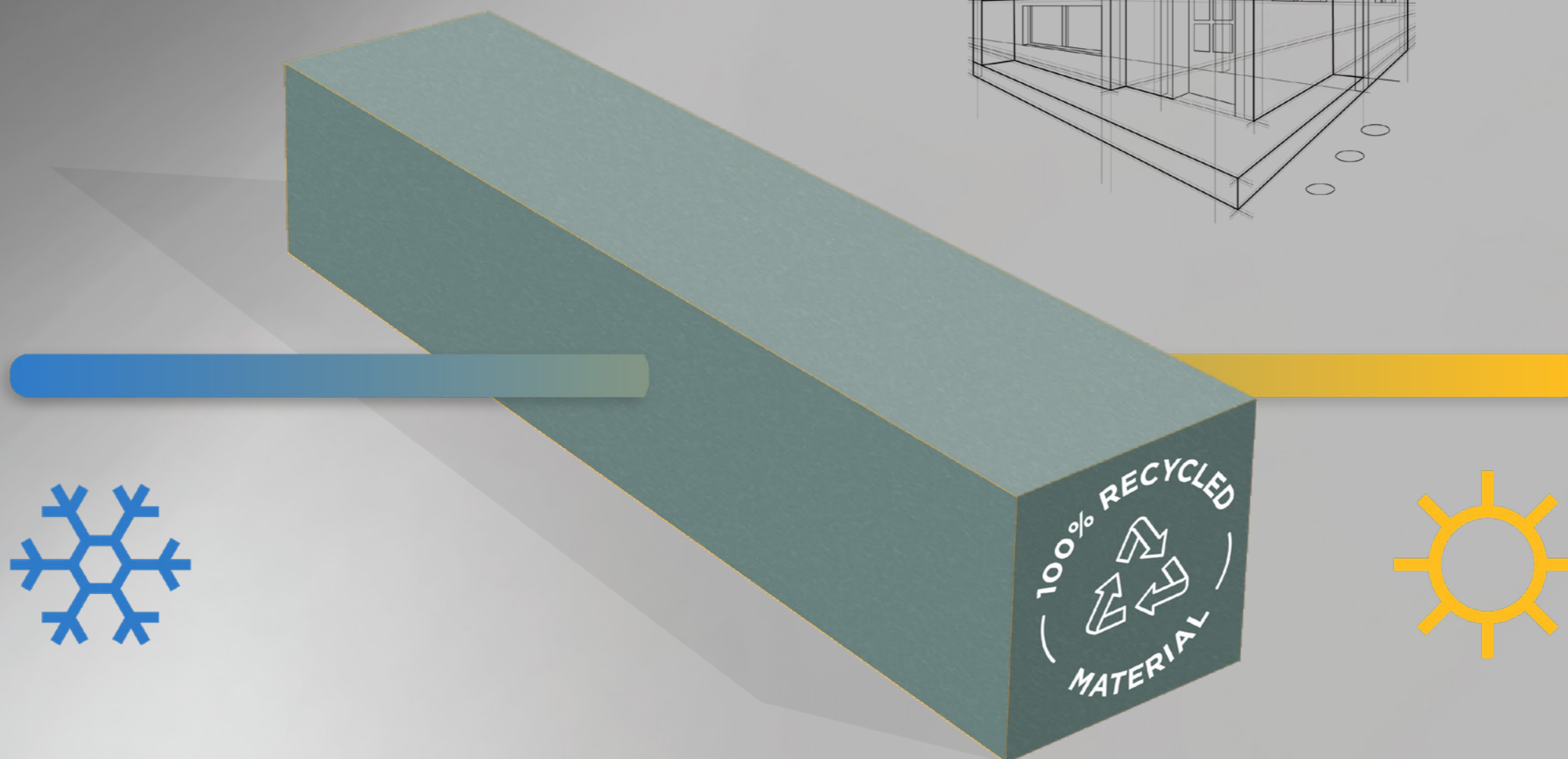


Monica Gerber
General Secretary



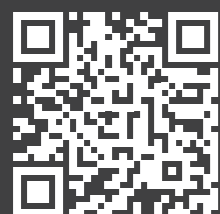
Mailing address:
QUALANOD P.O. Box, CH-8027 Zurich
Domicile:
QUALANOD
ARCO Association Management AG
(certification body)
Todstrasse 42, CH-8002 Zurich





chapter

9



tsvline.com

- *External window ledge raised profile*
- *Subframes*
- *Thermal insulation plate under the exterior/interior sill*

TSV THERMO GREEN

The number ONE choice for woodwork insulation

TSV THERMO GREEN

innovative functional material made of 100% recycled PET

TSV Thermo Green stands out through features of increased thermal efficiency, good fireproofing properties and low emission of burnt gas. It is a lightweight material, but with high mechanical resistance. Its easy handling and outstanding technical characteristics make the TSV Thermo Green PET thermoplastic material a material with multiple possible uses in the construction field.

The material is a perfect solution for circumstances where a good balance is needed between mechanical performance, top resin absorption performance and a more sustainable approach to the lightweight composite sandwich solution. Highly adaptable, it is the ideal solution for a large range of applications.



DNV·GL

Certificate No:
TAK0000155

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Sandwich Core Materials

with type designation(s)
Kerdyn® Green - Series

is found to comply with
DNV GL class programme DNVGL-CP-0084 – Type approval – Sandwich core materials



Thermal insulation performance U: 0.6 W/(m²k)

Characteristics	unit	TSV Thermo green *	TSV Thermo green **	Standard
Density rating	kg/m³	80	180	ISO 845
	lb/ft³	4,99	11,2	
Thermal insulation performance (U)	W/(m²k)	0,45	0,6	EN12667
Compressive strength	MPa	1.00	3,05	ASTM D1621
	Psi	145	442	
Flexural strength	MPa	-	3,2	EN310
	Psi	-	462,7	
Vicat softening temperature	°C	-	77,6	ISO 306
	°F	-	171,7	
Tensile strength	MPa	1,40	2,50	ASTM D-1623
	Psi	203	363	
Thermal conductivity	W/(mK)	0.0270	0.0403	EN12667
Thermal expansion coefficient	K-1	-	LL 64.8*10-6 UL 65.4*10-6	DIN 53752
Class of reaction to fire	Class	E 1)	E 2)	EN 13501
Resistance to screw retraction force	N	-	450	EN320
Water absorption (28 days)	Vol.-%	2,4	≤ 0,5	ISO 16535
Waterproof and damp-proof (7 days)	%	-	0,5	EN 12087
Wear resistance	High resistance to damage over time			

* Thermal insulation plate under the exterior/interior sill

** External window ledge, base thermal insulation and subframes



High level of thermal insulation



High flexural strength



High compressive strength



High tensile strength



Easy to handle and process



Can be attached using screws



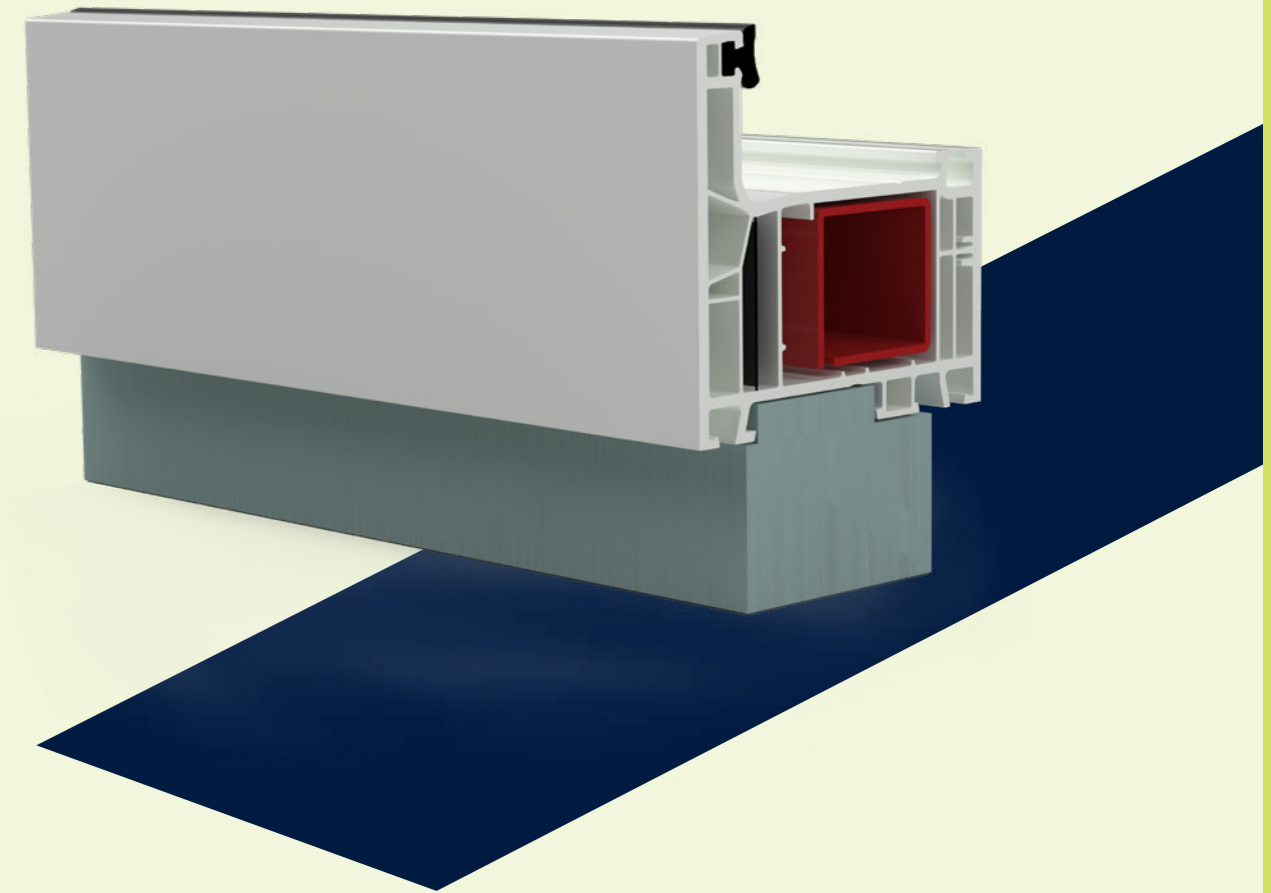
Very lightweight material



Versatile use of adhesives and resins



Waterproof and damp-proof



TSV THERMO GREEN PRODUCT LINE

- *External window ledge raised profile suitable for any type of window profile*
- *Base thermal insulation profile for optimal thermal insulation and waterproofing of doors*
- *Subframes*
- *Thermal insulation plate under the exterior/interior sill*

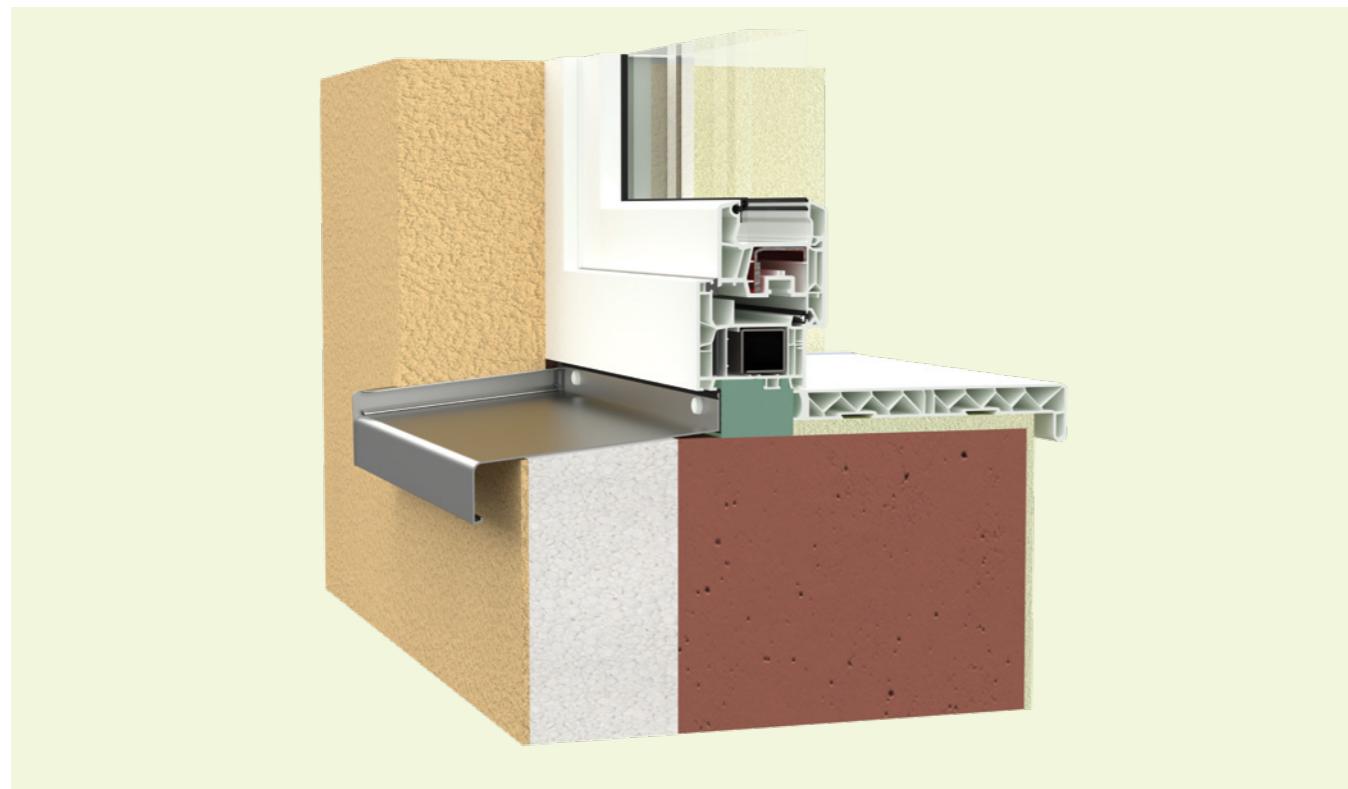
TSV THERMO GREEN EXTERNAL WINDOW LEDGE RAISED PROFILE

suitable for any type of window profile, it successfully replaces the classic plastic external window ledge and offers the best thermal insulation.

This material's qualities make it ideal for the optimal thermal insulation of the gap under the window, between the exterior sill and the interior sill.

The TSV Thermo Green external window ledge is suitable for any window profile and ensures highly accurate positioning of the interior and exterior sill. It enables the correct assembly of the window, is suitable for any window length and, due to its high compressive strength (**3000 kg/mm**), is also suitable for use in the assembly of large and heavy windows.

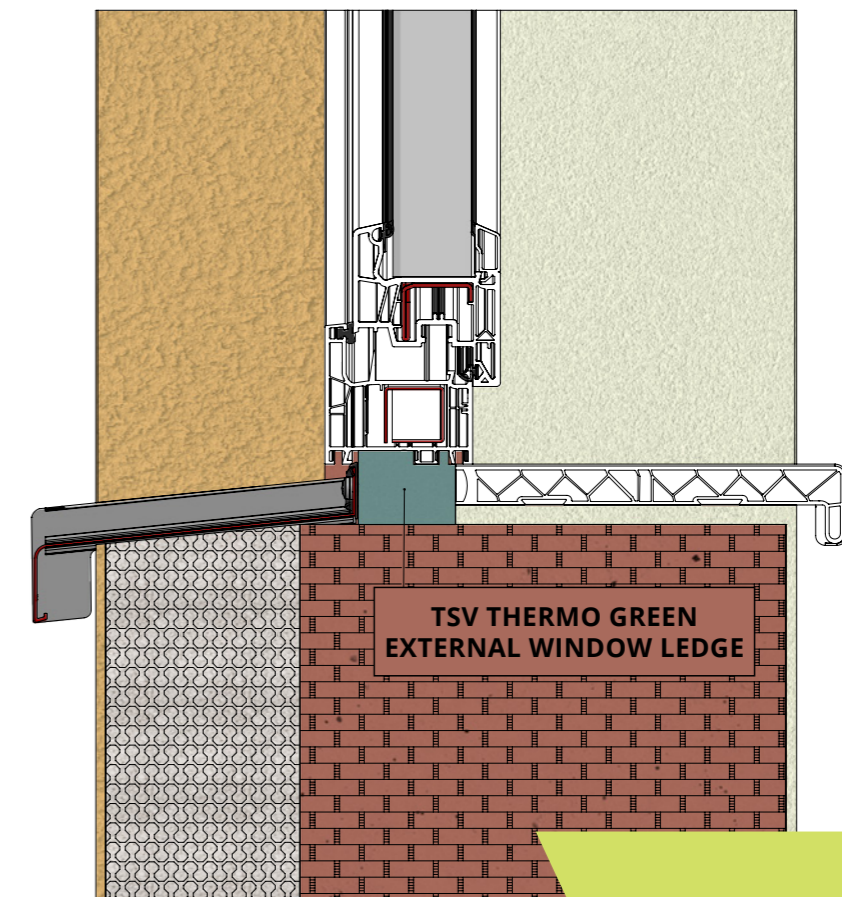
The TSV external window ledge is 38 mm and 68 mm in height, making it suitable for different types of plastic, wooden or aluminium joinery.



Product in stock, delivered within 2 to 3 working days. Can be manufactured for any window profile requested by the client.

PRODUCT BENEFITS

- **Very good thermal insulation performance (above the average for triple-glazed glass)**
U: 0.6 W/(m²k)
- **Made of 100% recycled PET**
- **Density rating: 180 kg/m³**
- **Ensures the correct assembly of the exterior and interior sill**
- **No distortion due to its high compressive strength**
- **Suitable for all types of PVC or aluminium profiles**
- **Can be used for any type of construction work, both new builds and renovation**
- **Can be screwed to the TSV aluminium window sill**
- **Product certified with very high level of recycled content according to the Environmental Product Declaration ISO 14025 and EN 15804**
- **Certified according to the standard DNVGL-CP-0084 for sandwich-type construction materials**

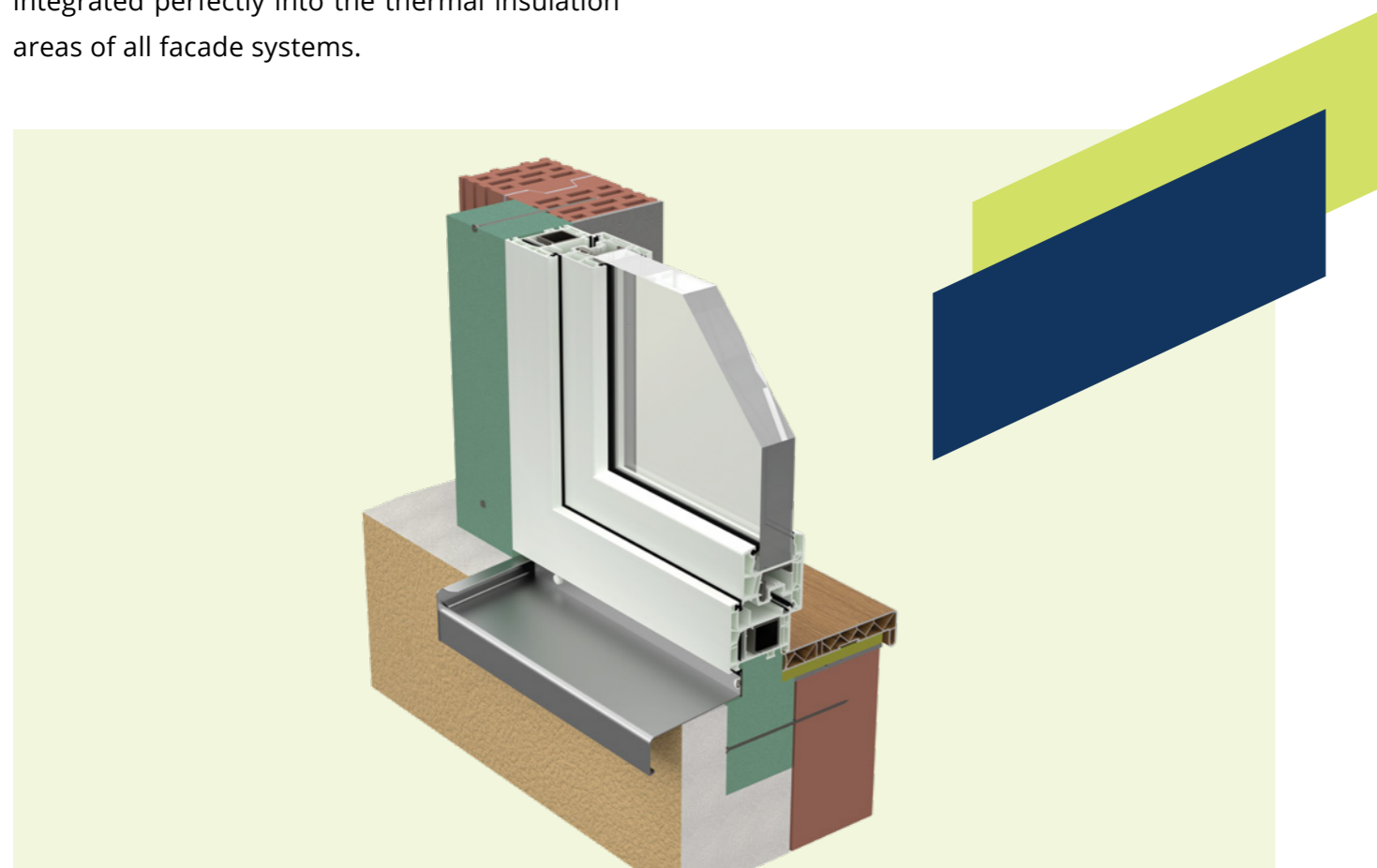


TSV THERMO GREEN SUBFRAMES

The TSV Thermo Green subframes are used to thermally insulate the gap around a window or door. Made of 100% recycled PET, the TSV Thermo Green subframes stand out through their resistance to weather, very high thermal efficiency and quick and easy assembly. The TSV Thermo Green subframes can be screwed to the masonry, thus offering high stability for the PVC joinery or woodwork.

The TSV Thermo Green subframes can be integrated perfectly into the thermal insulation areas of all facade systems.

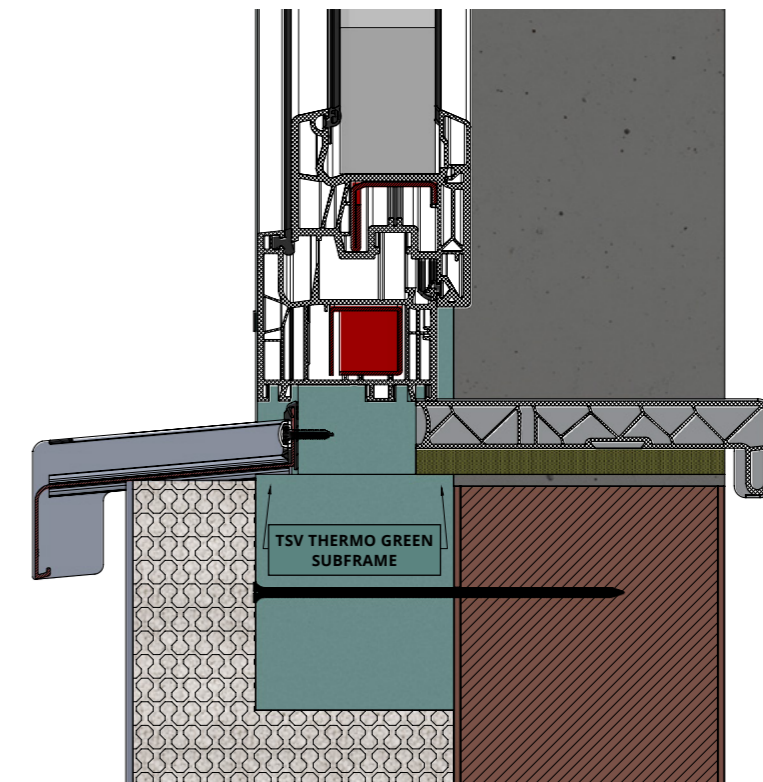
Due to the remarkable processing possibilities, the TSV Thermo Green subframes can be adapted to the dimensions requested by the clients. They are also very easy to assembly due to their reduced weight. The TSV Thermo Green subframes are attached mechanically by screwing them to the surface of the building, thus offering high stability.



Product in stock, delivered within 2 to 3 working days. Can be manufactured to the dimensions requested by the client.

PRODUCT BENEFITS

- **Very good thermal insulation performance - U: 0.6 W/(m²k)**
- **Made of 100% recycled PET**
- **Density rating: 180 kg/m³**
- **Quick and correct assembly due to the reduced weight and the adaptability to different dimensions**
- **Stable shape and volume due to their high compressive strength**
- **Increased resistance to humidity**
- **Time saving for the client since through ease of handling and processing**
- **Possibility of extending the profiles to any length by gluing or screwing extensions**
- **No prior drilling required for installation**
- **The edges of the insulation do not deteriorate thanks to the density of the material**
- **Product certified with very high level of recycled content according to the Environmental Product Declaration ISO 14025 and EN 15804**
- **Certified according to the standard DNVGL-CP-0084 for sandwich-type construction materials**

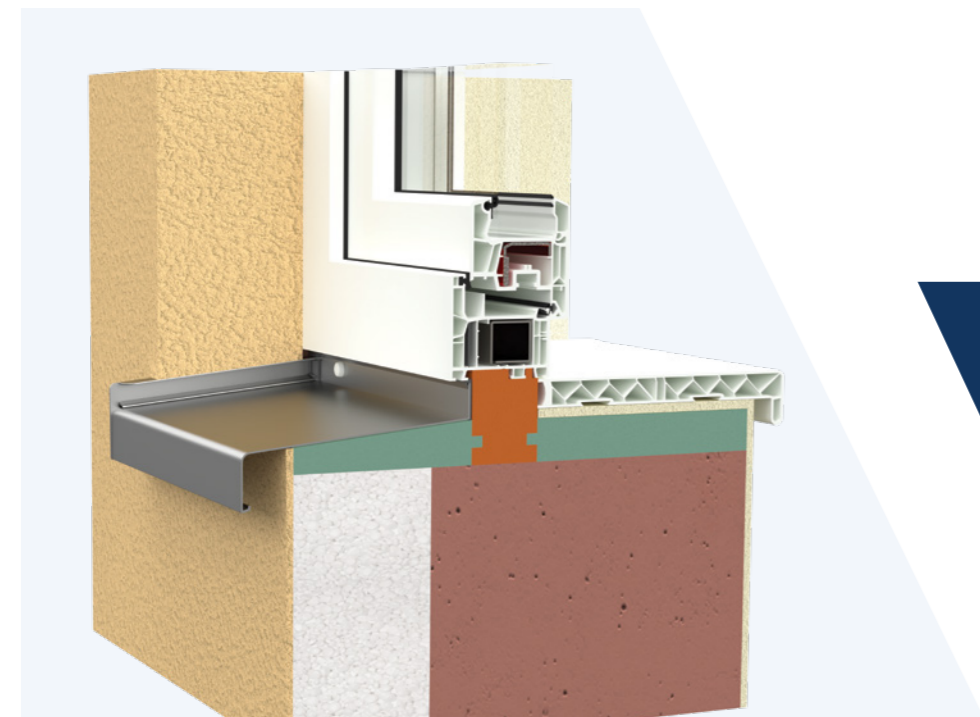


TSV THERMO GREEN PLATE FOR THERMAL INSULATION UNDER THE EXTERIOR/INTERIOR WINDOW SILL

This material's qualities make it ideal for the optimal thermal insulation of the gap under exterior and interior windowsills. The TSV Thermo Green plate has an angle of approximately 5° for mounting the exterior window sill and is straight for mounting the interior window sill.

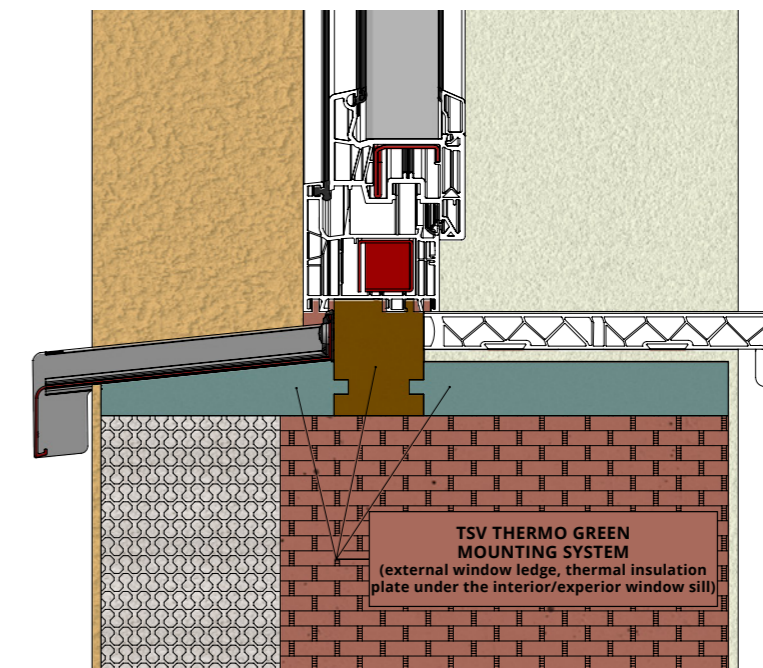
Due to its high compressive strength (over 1,000 kg/mm), it is also suitable for situations where the client wishes to use the sills to support decorative items (flower pots, relaxation area, storage space...).

Exterior window sill plate dimensions		Interior window sill plate dimensions	
Widths:	150 mm, 200 mm, 250 mm and 300 mm	Widths:	150 mm, 200 mm, 250 mm, 300 mm 350 mm and 400 mm
Thickness:	30 mm	Thickness:	30 mm
Length:	up to 2440 mm/ piece	Length:	up to 2440 mm/ piece



PRODUCT BENEFITS

- **Very good thermal insulation performance - U: 0.45 W/(m2k)**
- **Made of 100% recycled PET**
- **Density rating: 80 kg/m³**
- **Quick and correct assembly due to the reduced weight and the adaptability to different dimensions**
- **Stable shape and volume due to their high compressive strength**
- **Increased resistance to humidity**
- **Time saving for the client since through ease of handling and processing**
- **Possibility of extending the profiles to any length by gluing or screwing extensions**
- **No prior drilling required for installation**
- **The edges of the insulation do not deteriorate thanks to the density of the material**
- **Product certified with very high level of recycled content according to the Environmental Product Declaration ISO 14025 and EN 15804**
- **Certified according to the standard DNVGL-CP-0084 for sandwich-type construction materials**



Product in stock, delivered within 2 to 3 working days.



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