SMART UNDER-WINDOW INSULATION SOLUTIONS

TSVLINE.COM

We are PM Group!

Manufacturer and distributor of window and door accessories.

Group PM has been built over more than 20 years through a consistent and disciplined approach to the joinery accessories market, while steadily developing a strong international presence.

From a logistical standpoint, we operate our own subsidiaries in Romania, Italy, and Hungary. Through a strategy of continuous development and strong partnerships with local distributors, we cover the entire European market through exports. Our expansion is supported by ongoing investment, efficient logistics infrastructure, and a growing network of international partners.

Our mission offer solutions to our partners that ensure correct installation and high energy efficiency, designed for long-term performance. We develop products with solid technical specifications, appealing design, and high durability standards, so that every project benefits from efficiency, reliability, and real added value.

We have repositioned our product portfolio to support the current direction of the industry: energy efficiency, durability, and environmental responsibility.

Solutions developed by Grup PM:

- **TSV exterior window sill system**, made of extruded aluminium, ensuring optimal drainage and superior weather protection, certified by ift Rosenheim.
- **TSV Thermo Green,** made 100% from recycled PET, a thermal insulation solution dedicated to efficient window installation, certified by the Passive House Institute in Germany.
- **TSV Werzalit interior window sill,** a warm and moisture-resistant material manufactured from PEFC-certified wood and high-quality resins, synonymous with durability and refinement.

Through innovation, international certifications, and continuous investment in development, **PM Group** remains a trusted partner for professionals in the joinery and construction sectors, offering complete solutions for performance, efficiency, and sustainability.

Together, we build responsibly, with a long-term perspective.

CONTENTS

TSV Exterior Window Sill System

TSV Aluminium WINDOW SILL - 40 mm rim 7

TSV Aluminium END CAPS type "C", type "L" - 40 mm rim 11

TSV Aluminium CORNER CONNECTORS 90° / 135° / 180° - 40 mm rim 17

TSV Aluminium BYPASS PROFILES for window sill individually cutted 23

TSV Mounting Accessories 25

Maintenance instructions - Assembly instructions 31

TSV Thermo Green Insulation System 45

TSV Thermo Green External Window Ledge Raised Profile 50

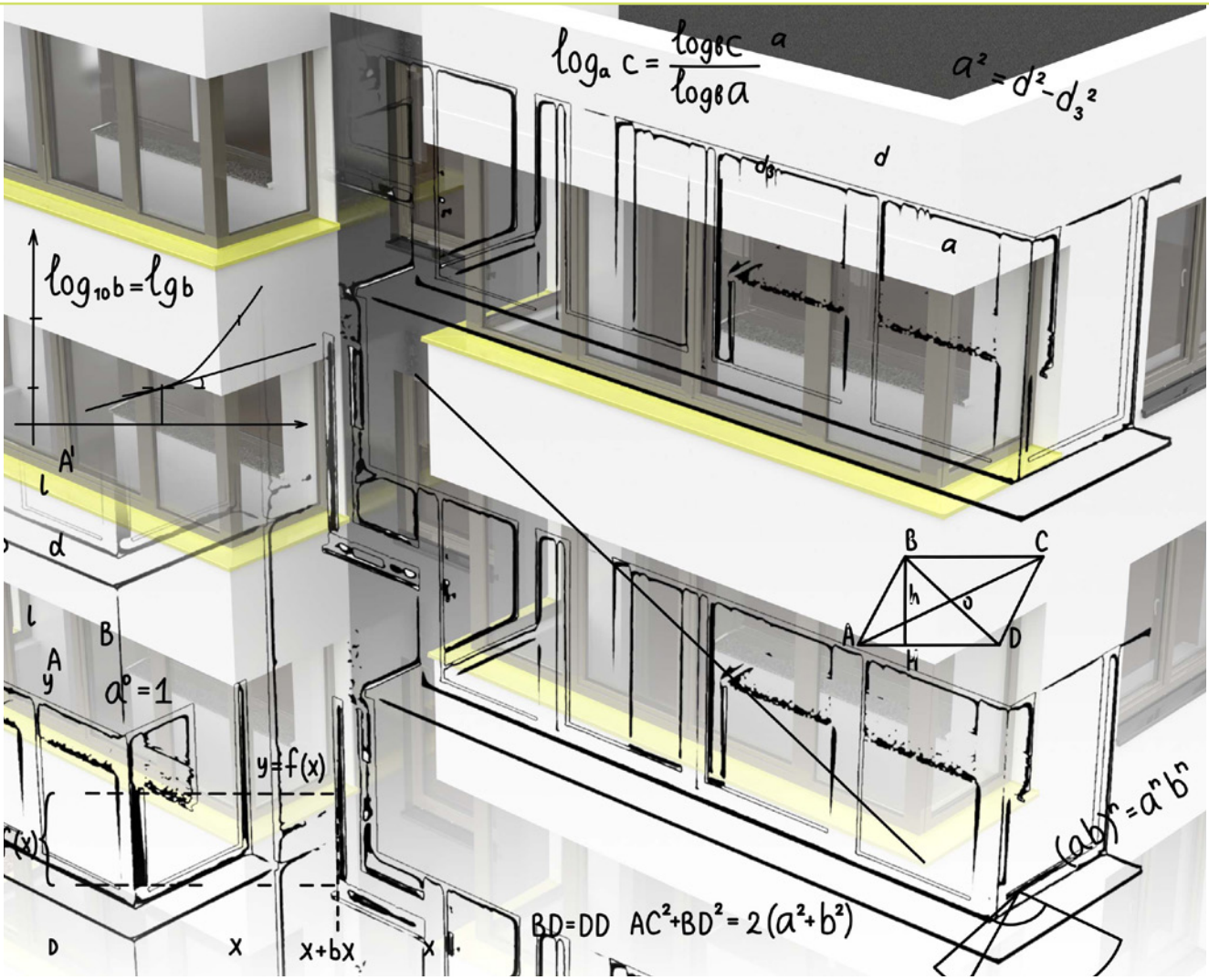
TSV Thermo Green Subframes 52

TSV Thermo Green Plate For Thermal Insulation Under The Exterior/Interior Window Sill 54

Interior Window Sill System

TSV Werzalit 58

PVC Range: TSV Elitus and TSV Linear 68



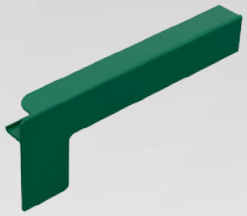
From idea to solution – PM vision

We develop products starting from innovative ideas, integrated into a sustainable vision, to provide our customers with efficient, durable solutions with long-term added value.

Innovation and sustainability are the ground for integrated systems characterised by high technical performance, ease of use, energy efficiency, and modern design.

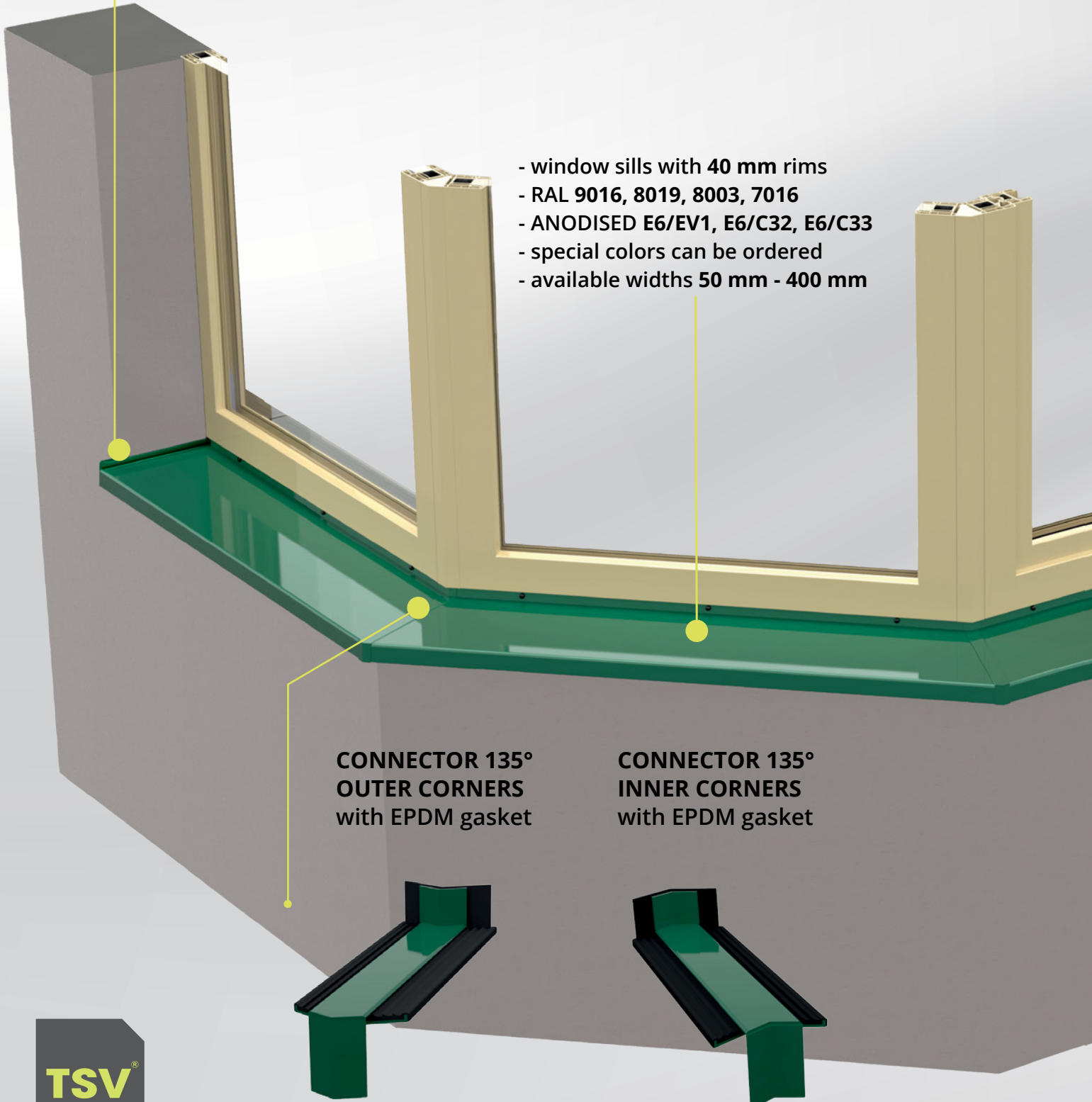
TSV is more than a product – it is a complete solution, designed to meet the highest quality standards and to address current requirements in the construction sector.

- 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 TY



- 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**

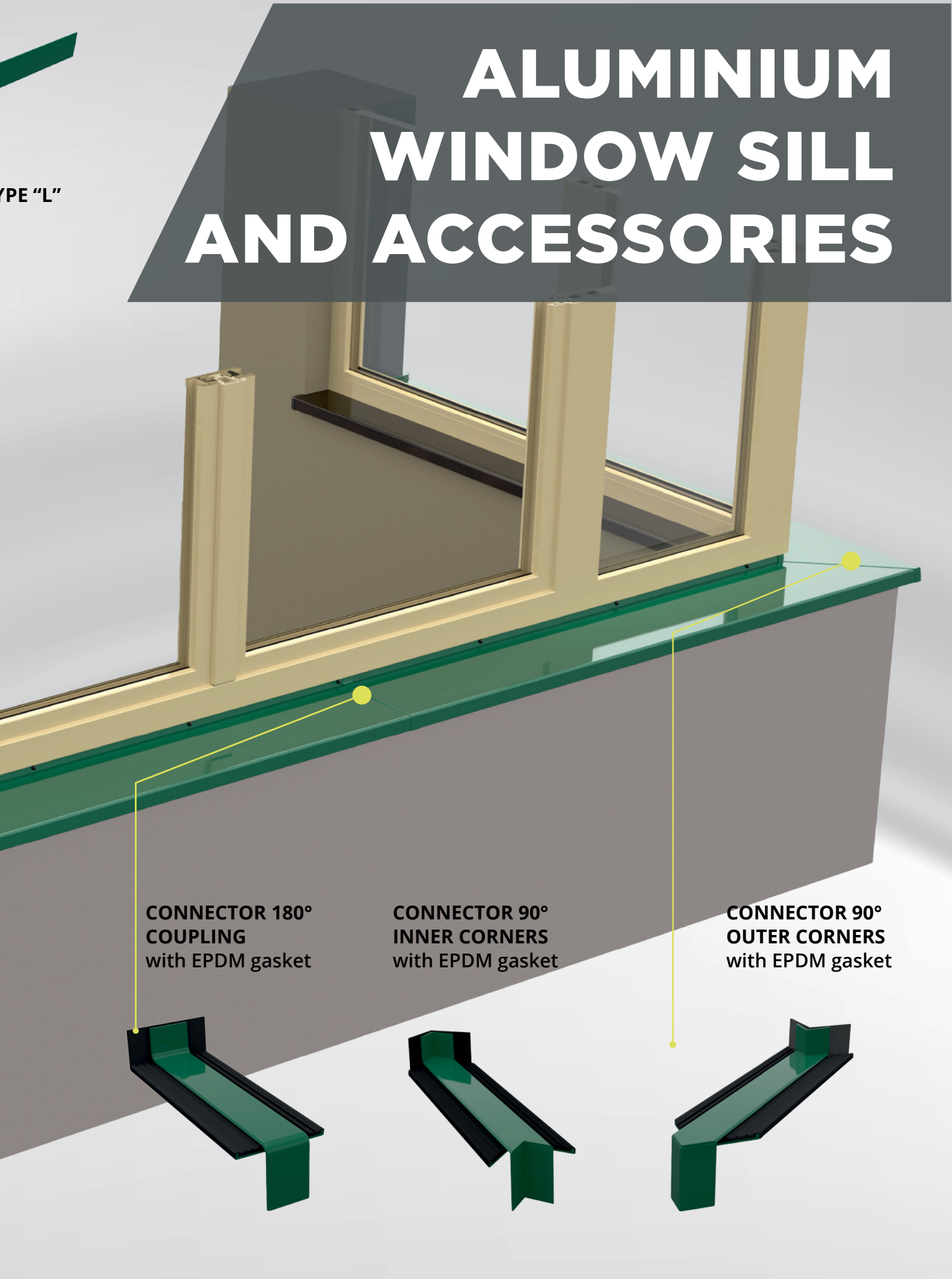
CONNECTOR 135°
OUTER CORNERS
with EPDM gasket

CONNECTOR 135°
INNER CORNERS
with EPDM gasket

TSV®

YPE “L”

ALUMINIUM WINDOW SILL AND ACCESSORIES



CONNECTOR 180° COUPLING
with EPDM gasket

CONNECTOR 90° INNER CORNERS
with EPDM gasket

CONNECTOR 90° OUTER CORNERS
with EPDM gasket

You can also view this product on our website

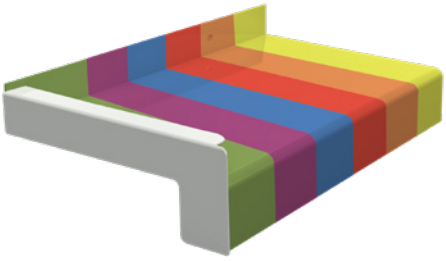
tsvline.com

EXTRUDED ALUMINIUM WINDOW SILL

A certified and technically efficient solution that elegantly protects the lower area of the window and the façade against infiltration.

1

TSV ALUMINIUM WINDOW SILL



NATUR

RAL 9016
WHYTE

E6/EV 1
SILVER

RAL 7016
ANTHRACITE GREY

E6/C32
MEDIUM BRONZE

E6/C33
DARK BRONZE

RAL 8003
CLAY BROWN

RAL 8019
GREY BROWN

Characteristics:

- TSV aluminium sills, manufactured using high-precision extrusion from **AA 6061** alloy, come with a removable protective film.
- Designed for exterior installation, they provide effective weather protection and an aesthetic finish for windows.
- They are resistant to UV radiation, temperature variations, and severe atmospheric conditions, and feature a 40 mm rim for additional protection.
- The TSV system is certified by **ift-Rosenheim**, guaranteeing superior quality and performance.

Available colors:

RAL 9016, RAL 8019, RAL 8003, RAL 7016

E6/EV1, E6/C32, E6/C33, natur*

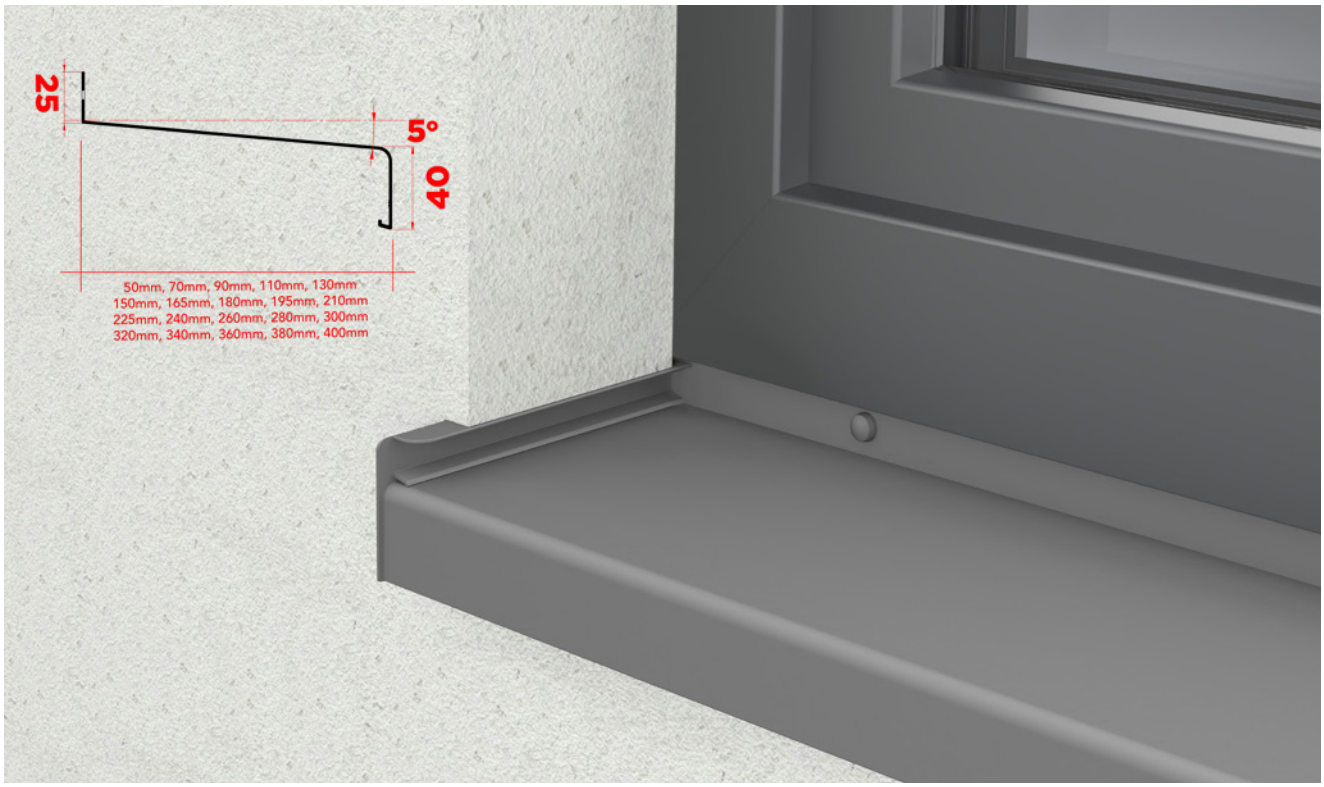
*The natur colour can be painted according to preference.

Available widths:

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

Technical specifications:

- 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.



You can
also view
this product
on our
website

tsvline.com

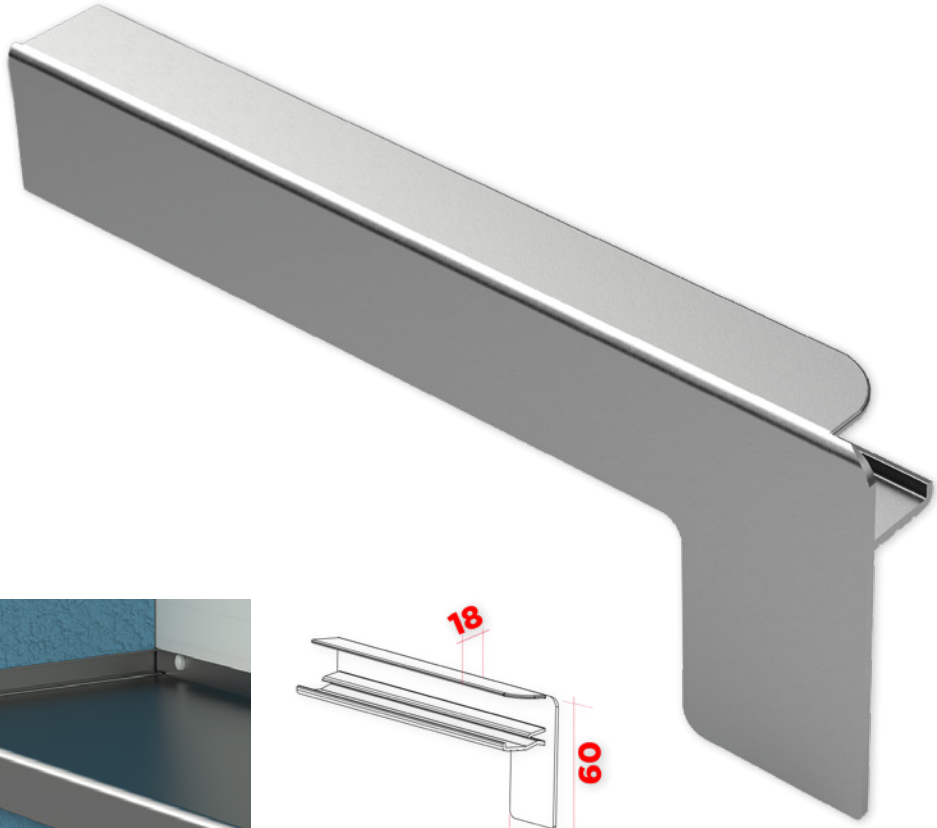
END CAPS
made of extruded aluminum

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

2

END CAPS TYPE “C”

made of extruded aluminum

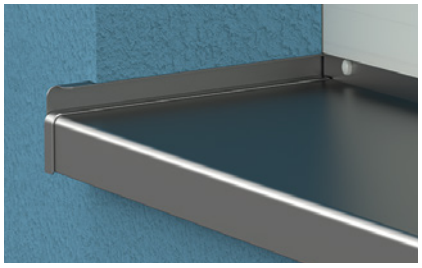


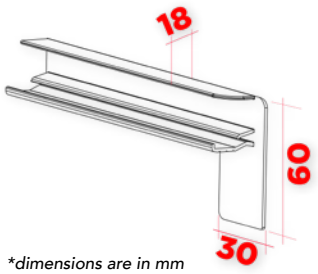
RAL 9016 natur

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019





*dimensions are in mm

Characteristics:

- End caps are designed in perfect harmony with the window sills, ensuring optimal rigidity and consistent quality.
- The innovative clips-on fastening system allows for fast, secure, and precise installation.
- The solution is suitable for installation together with façade thermal insulation.
- The system is recommended for all situations in which the application of thermal insulation is a subsequent step in completing the finished façade.
- Offers high durability, operational safety, and easy maintenance.
- Factory-fitted with a 40 mm rim.

Available colors:

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

*The natur colour can be painted according to preference.

Available widths:

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

Packing unit:

Individual packaging - 1 piece left / 1 piece right

Technical specifications:

- The TSV end covers are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061.

END CAPS TYPE “L”

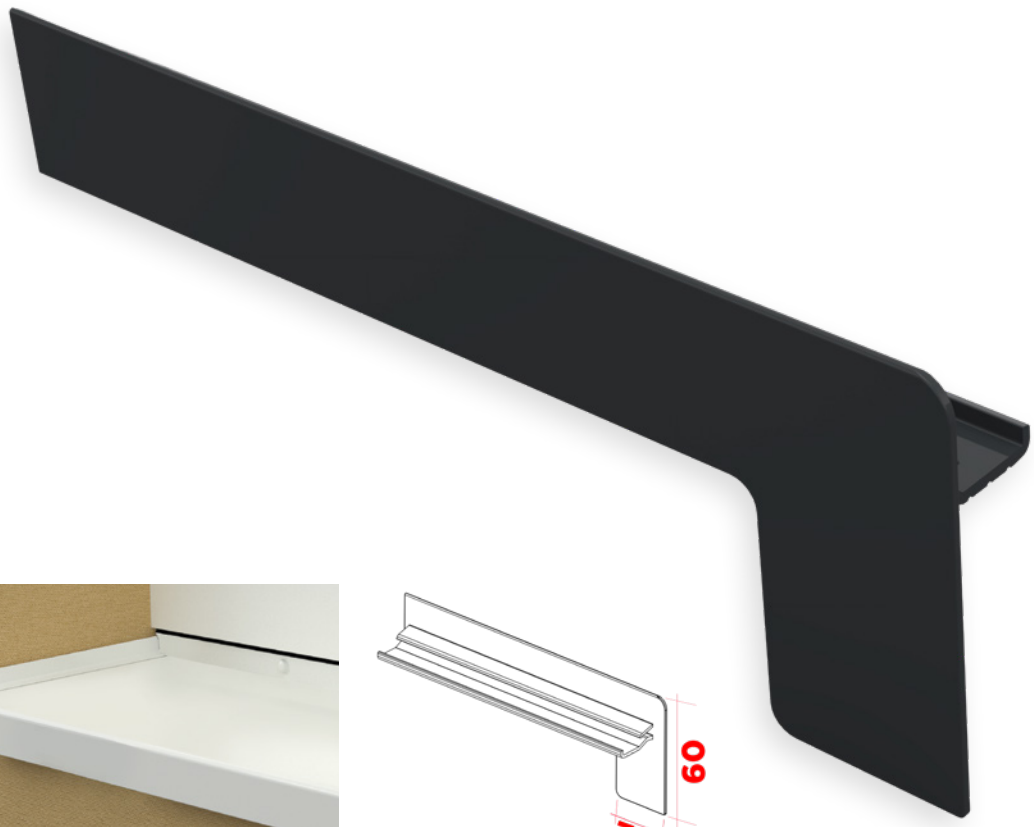
made of extruded aluminum

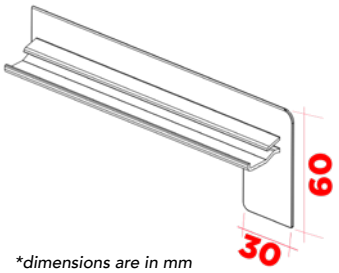
RAL 9016 natur

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019





*dimensions are in mm

Characteristics:

- End caps available in various designs and colours, combining aesthetics with effective protection against infiltration.
- The innovative clip-on fastening system allows for fast and secure installation.
- Recommended for thermally insulated façades and renovation projects.
- Durable, safe, and easy to maintain.
- Factory-fitted with a 40 mm rim.

Available colors:

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

*The natur colour can be painted according to preference.

Available widths:

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

Packing unit:

Individual packaging - 1 piece left / 1 piece right

Technical specifications:

- The TSV end covers are produced with high-precision aluminium extrusion process, by which aluminium alloy material type AA 6061.
- Variable thermal insulation application sizes with 3 width options - 18 mm / 30 and 40 mm (available using the type “L” aluminium side covers toghether with the plaster compensation profile).

PLASTER COMPENSATION PROFILE FOR TYPE “L” SIDE COVERS

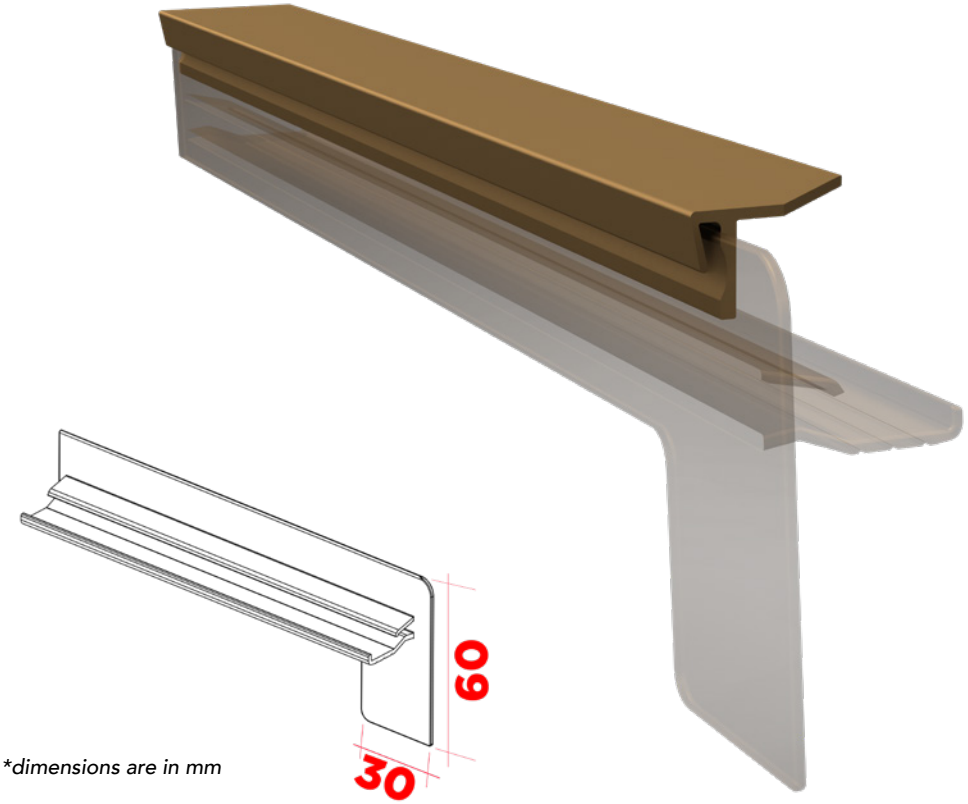
made of extruded aluminum

RAL 9016 natur

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019



*dimensions are in mm

Characteristics:

- Decorative end caps, available in various designs and colours, providing effective protection against infiltration.
- Compatible with lateral profiles for roller shutter fixing, with the compensation profile cut to size.
- Fast and secure installation thanks to the innovative clip-on system.
- Recommended for new constructions without decorative plaster.
- Durable, safe, and easy to maintain.

Available colors:

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

*The natur colour can be painted according to preference.

Available widths:

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

Packing unit:

Individual packaging - 1 piece left / 1 piece right

Technical specifications:

Used together with aluminium end covers type “L”

- 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).

END CAPS TYPE “L”

You can also view this product on our website

tsvline.com

CORNER CONNECTORS
for 40mm aluminium window sill
at an angle of 90°, 135°, 180°

3

CORNER CONNECTORS

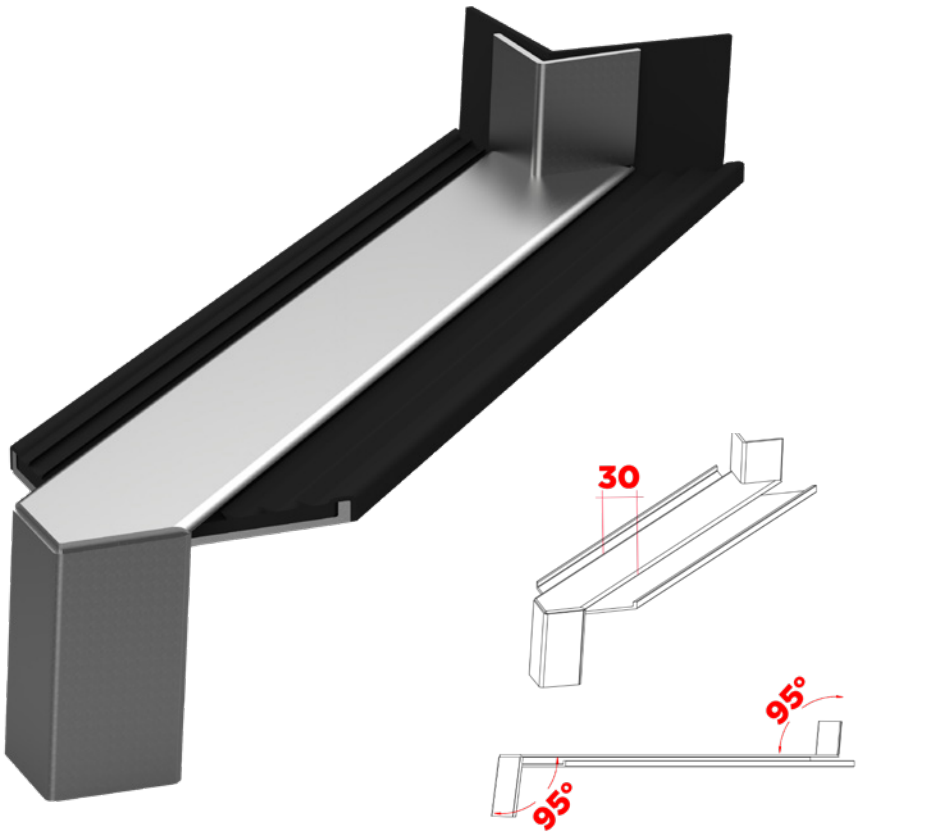
90° Exterior - extruded aluminum

RAL 9016 NATUR

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019



*dimensions are in mm

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.
- Factory-fitted with a 40 mm rim.

Available colors:

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

*The natur colour can be painted according to preference.

Available sizes according to nominal width of TSV window sills:

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

Packing unit:

10 pieces per box. Also sold individually.

Technical specifications:

- 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 page 32.

CORNER CONNECTORS

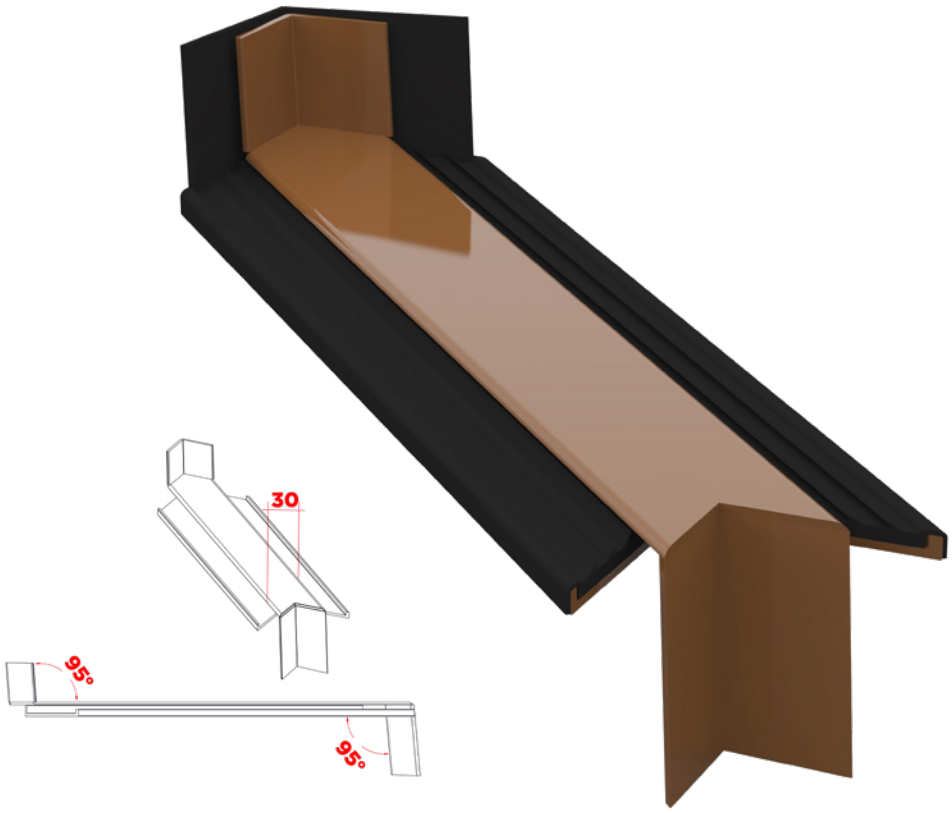
90° Interior - extruded aluminum

RAL 9016 NATUR

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019



**dimensions are in mm*

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.
- Factory-fitted with a 40 mm rim.

Available colors:

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

*The natur colour can be painted according to preference.

Available sizes according to nominal width of TSV window sills:

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

Packing unit:

10 pieces per box. Also sold individually.

Technical specifications:

- 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 page 32.

CORNER CONNECTORS

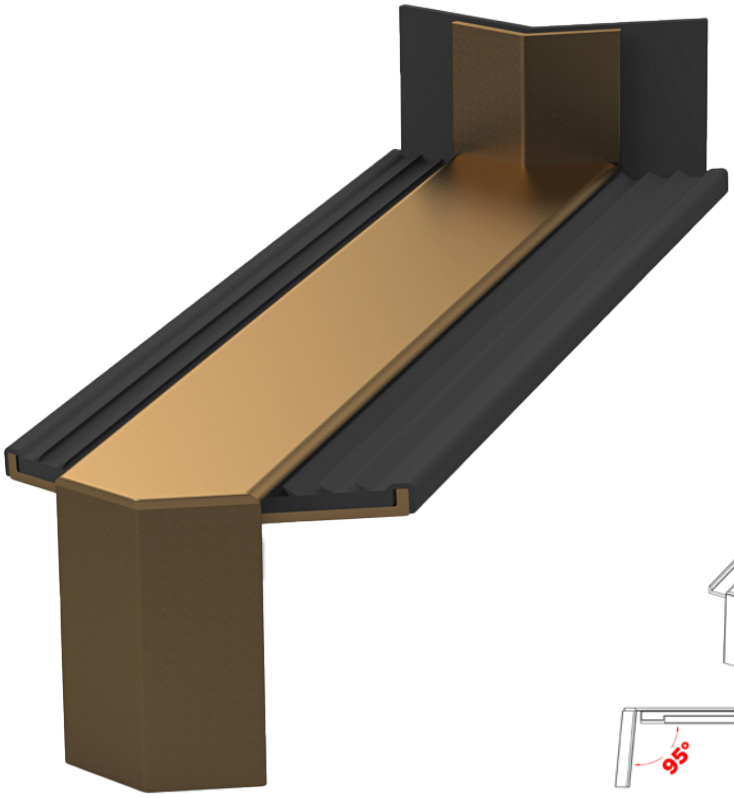
135° Exterior - extruded aluminum

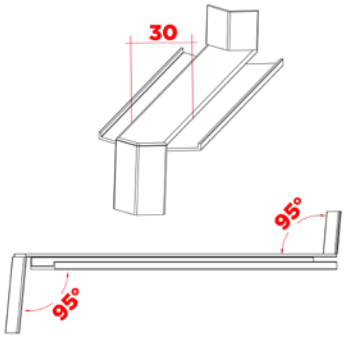
RAL 9016 NATUR

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019





*dimensions are in mm

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.
- Factory-fitted with a 40 mm rim.

Available colors:

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

*The natur colour can be painted according to preference.

Available sizes according to nominal width of TSV window sills:

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

Packing unit:

10 pieces per box. Also sold individually.

Technical specifications:

- 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 page 32.

CORNER CONNECTORS

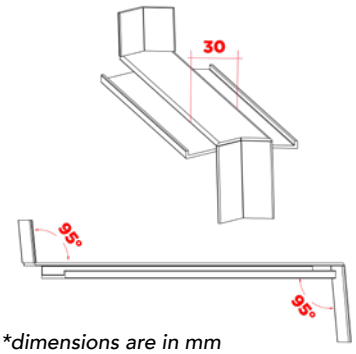
135° Interior - extruded aluminum

RAL 9016 NATUR

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019



*dimensions are in mm

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.
- Factory-fitted with a 40 mm rim.

Available colors:

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

*The natur colour can be painted according to preference.

Available sizes according to nominal width of TSV window sills:

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

Packing unit:

10 pieces per box. Also sold individually.

Technical specifications:

- 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 page 32.

CORNER CONNECTORS

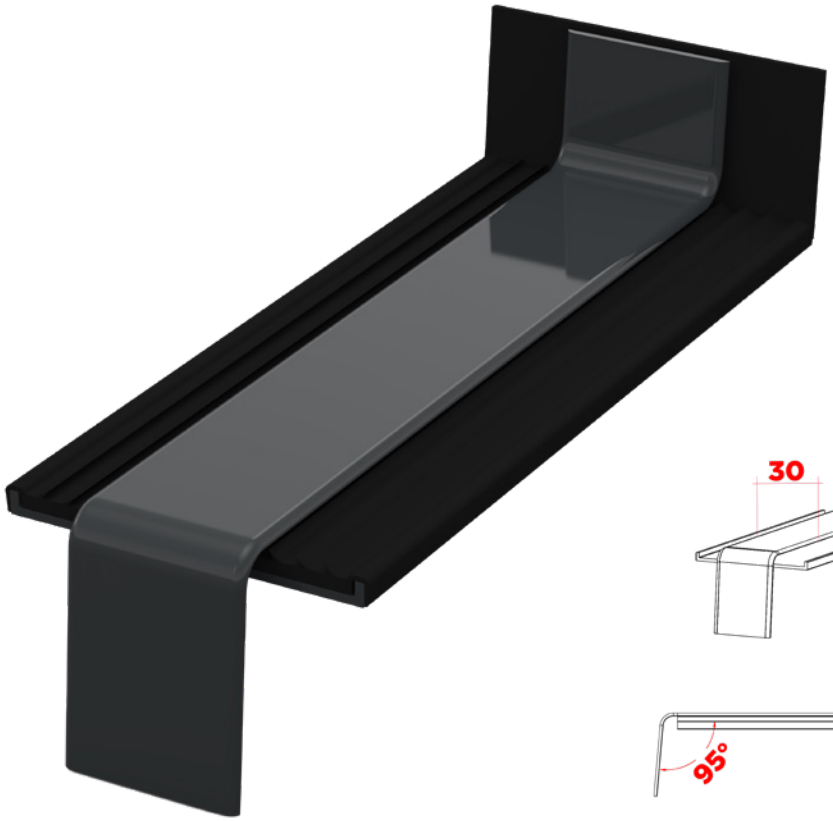
Coupling 180° - extruded aluminum

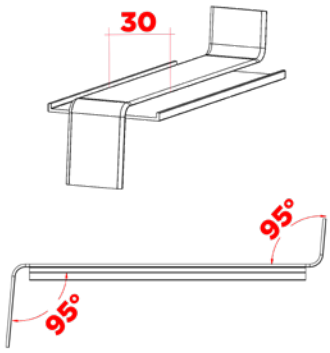
RAL 9016 NATUR

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019





*dimensions are in mm

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.
- Factory-fitted with a 40 mm rim.

Available colors:

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

*The natur colour can be painted according to preference.

Available sizes according to nominal width of TSV window sills:

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

Packing unit:

10 pieces per box. Also sold individually.

Technical specifications:

- 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 page 32.

BYPASS PROFILES

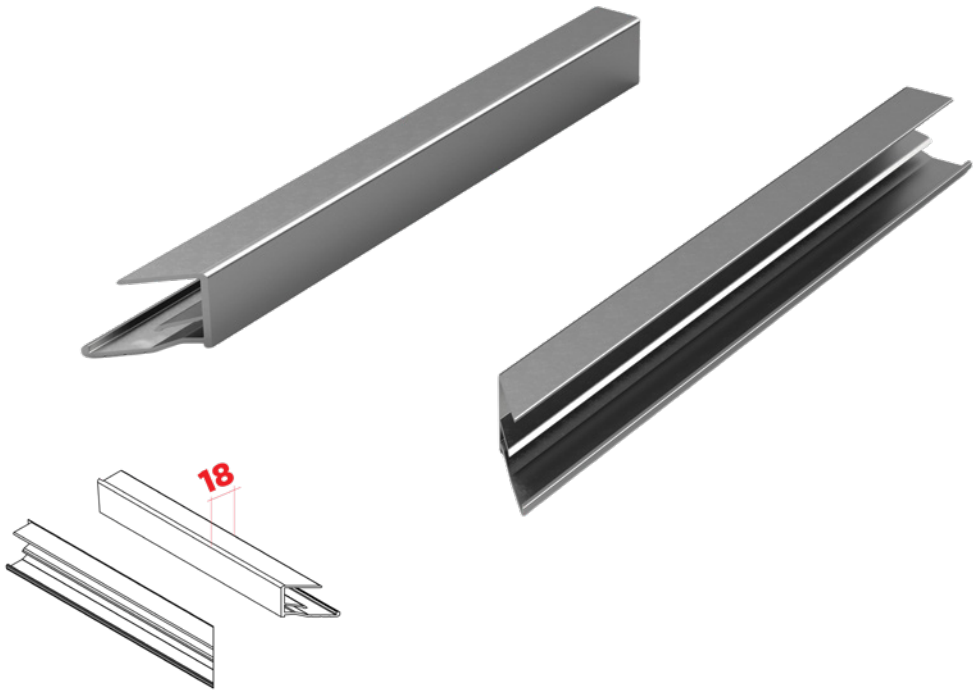
for individually cutted window sills - type “C” / type “L”

RAL 9016 NATUR

E6/EV 1 RAL 7016

E6/C32 E6/C33

RAL 8003 RAL 8019



*dimensions are in mm

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:

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

*The natur colour can be painted according to preference.

Available sizes according to nominal width of TSV window sills:

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

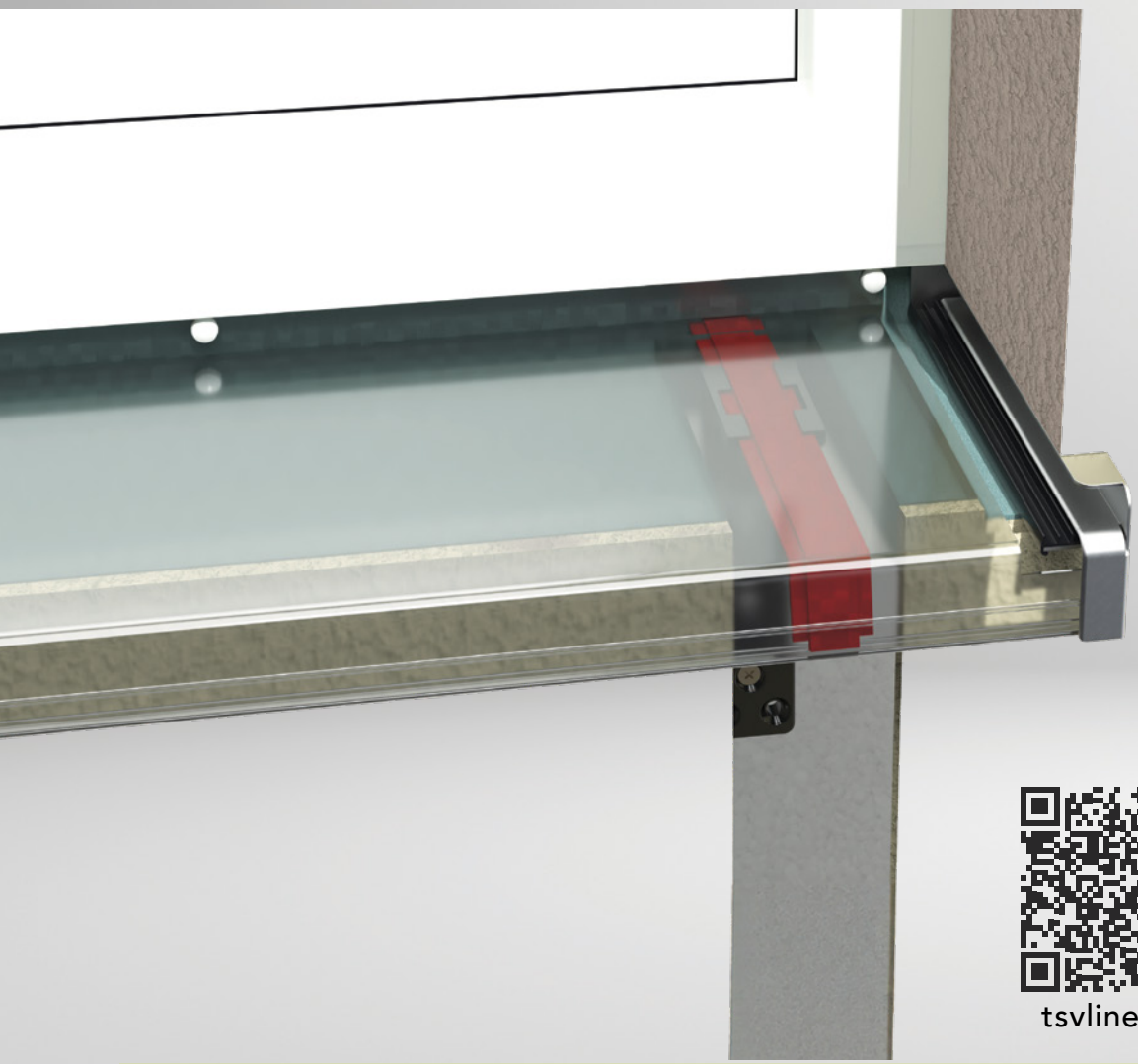
Packing unit:

as required

Technical specifications:

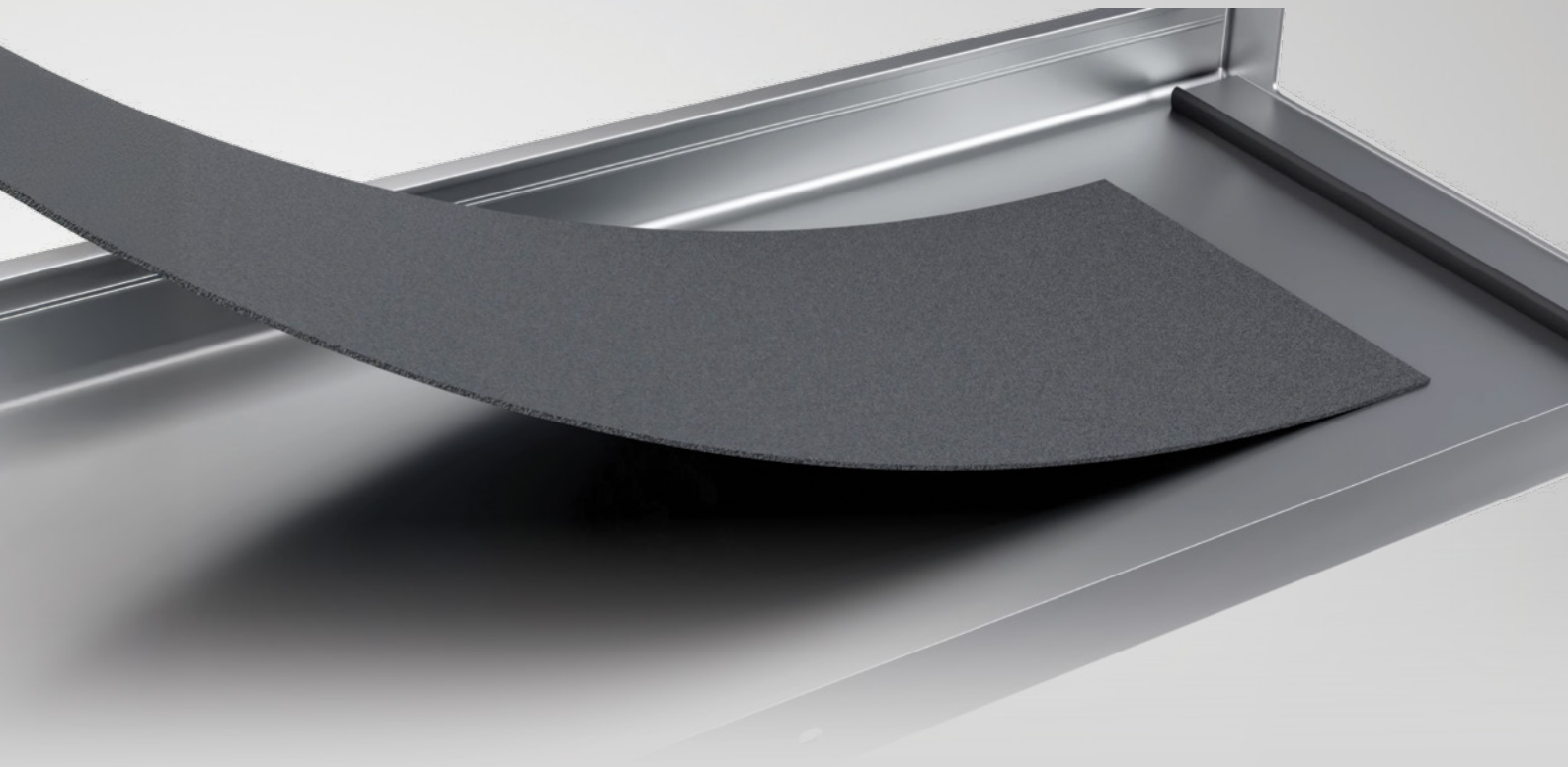
Bypass profiles for aluminium window sills cutted individually

- The TSV bypass profile has a clips-on technology, that is similar with the aluminium end caps clips-on systen, 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”.



You can also view this product on our website

tsvline.com



MOUNTING ACCESSORIES

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

4

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. 32

MASKING CAPS

Screw Masking Caps

Characteristics:
– specially designed to cover TX20 self-tapping mounting screws – 3.9×25 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. 32

SEALING GASKETS

Sealing gaskets for aluminium window sills

additional assembly details - page no. 32

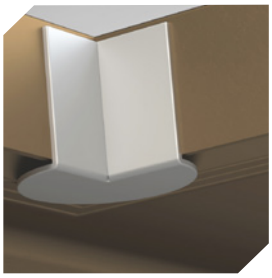
Characteristics:
– made of EPDM material with a width of 27mm;
– location of use – outside;
– color RAL9005;
– flexibility;
– thermal and chemical resistance;
– easy application on length.

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

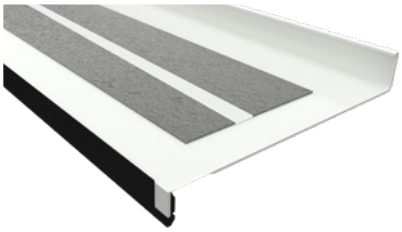
Butyl sealing tape



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.

Size: 60x0,7 mm

Soundproof tape



additional assembly details - page no. 32

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

Size:
- 50x1000 mm
- 80x1000 mm
- 100x1000 mm
- 120x1000 mm

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.

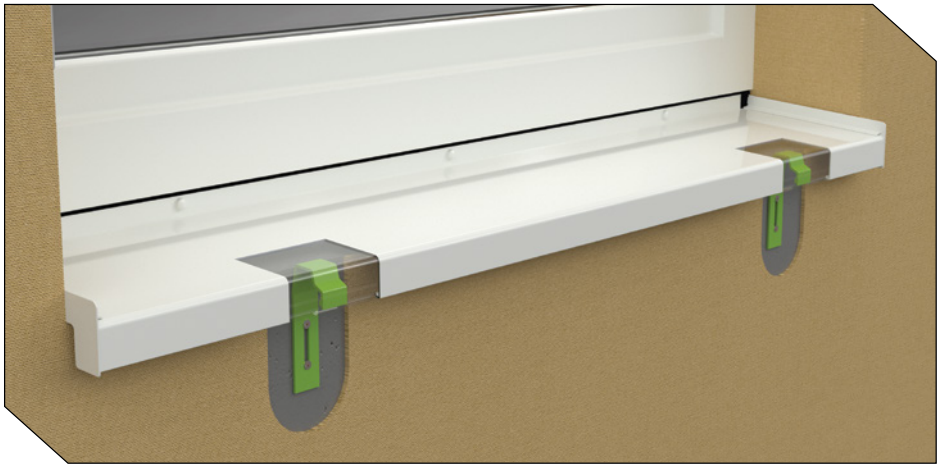
Sill-stabilising mount for decorative-brick walls

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 assembly details - page no. 34*

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.

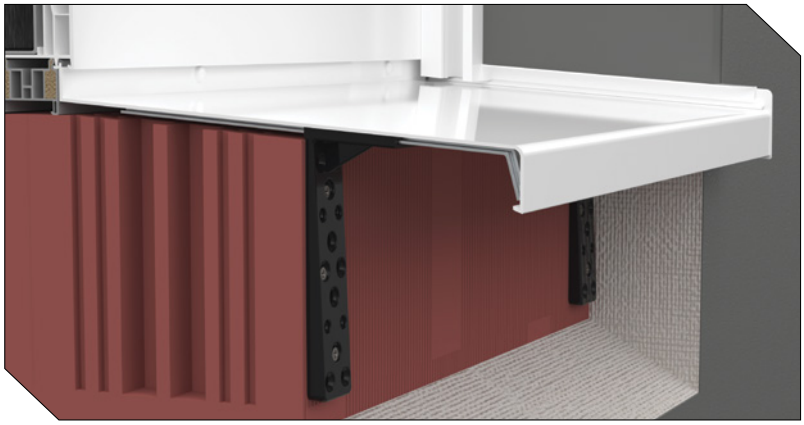
RECOMMENDATIONS:
- it is recommended to use the mount for aluminium sills at least 150 mm wide.

**the stabilising mount applies to plastered facades and is suitable for renovations.*
***additional assembly details - page no. 36*

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 assembly details - page no. 38*

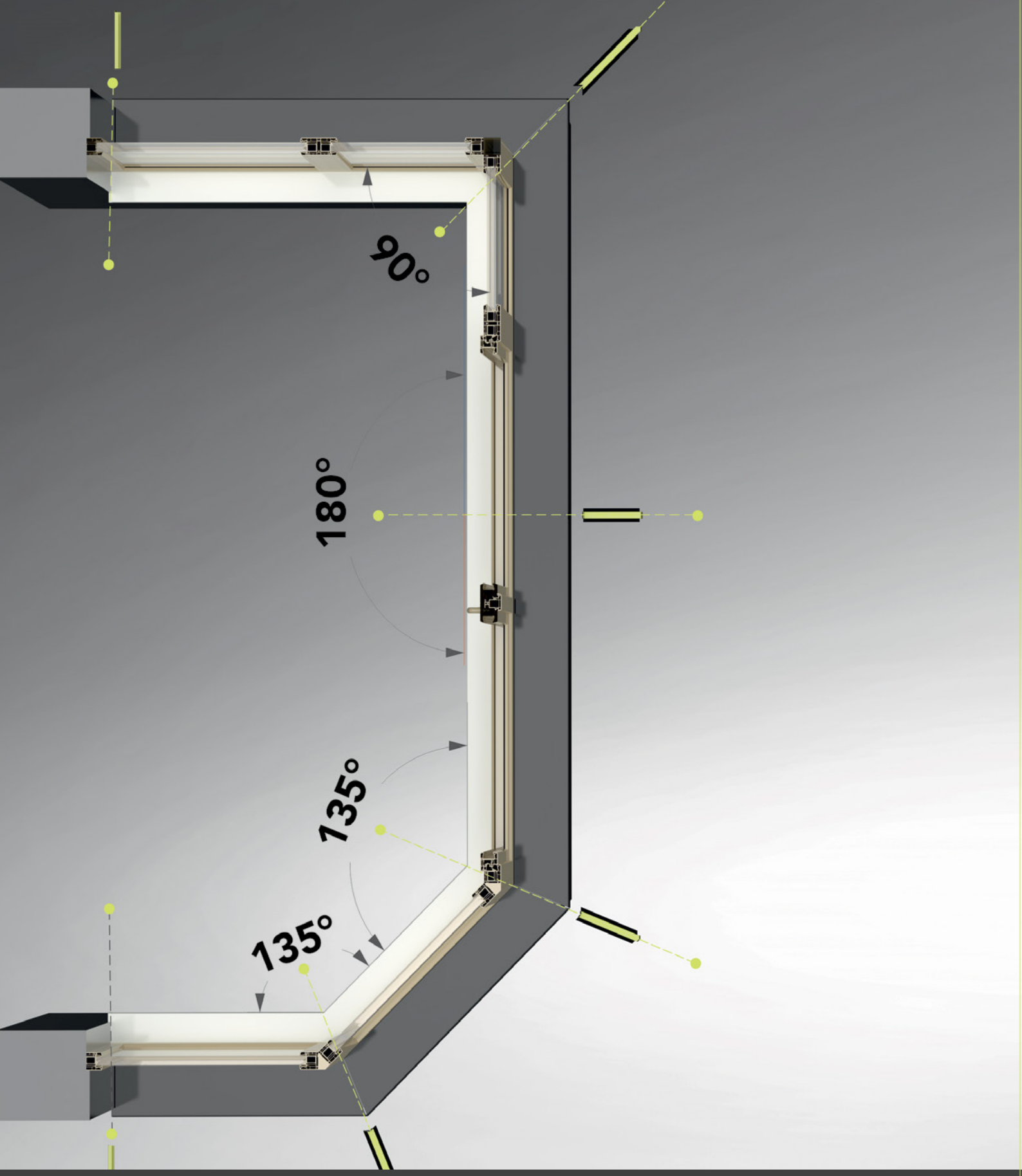
Mount for thermally insulated facades

DETALII:

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



You can also view this product on our website

tsvline.com

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

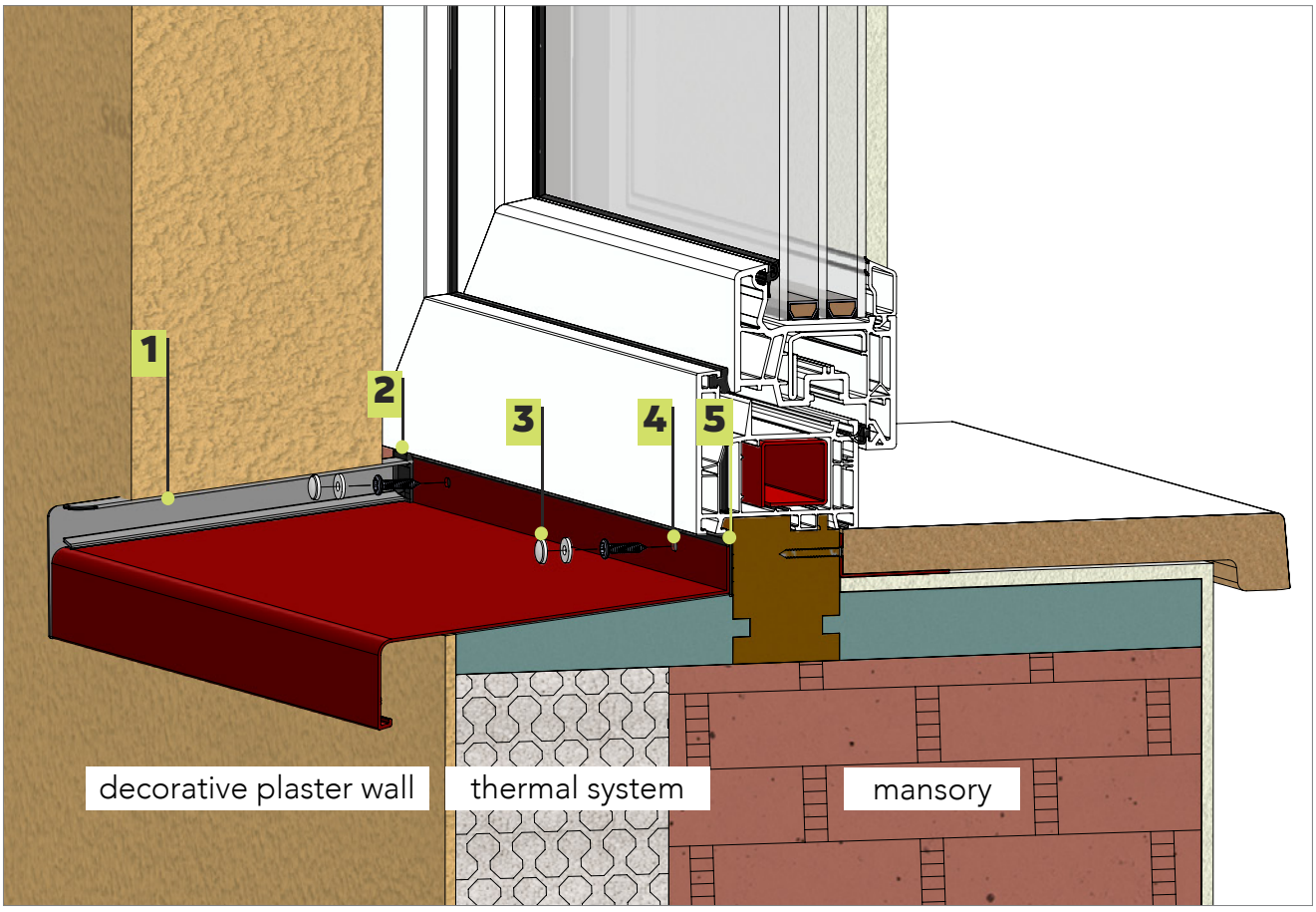
MAINTENANCE AND INSTALLATION INSTRUCTIONS

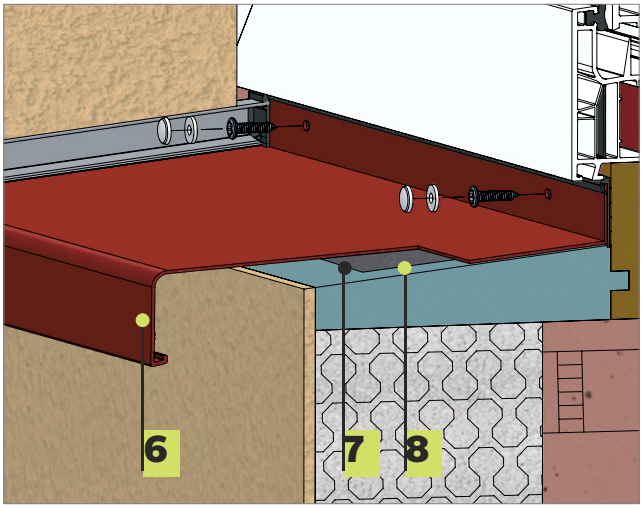
Technical support

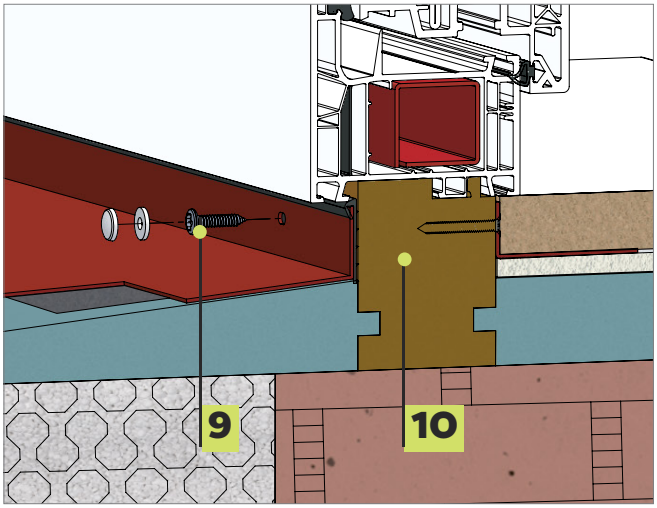
5

INSTRUCTIONS

for a professional installation





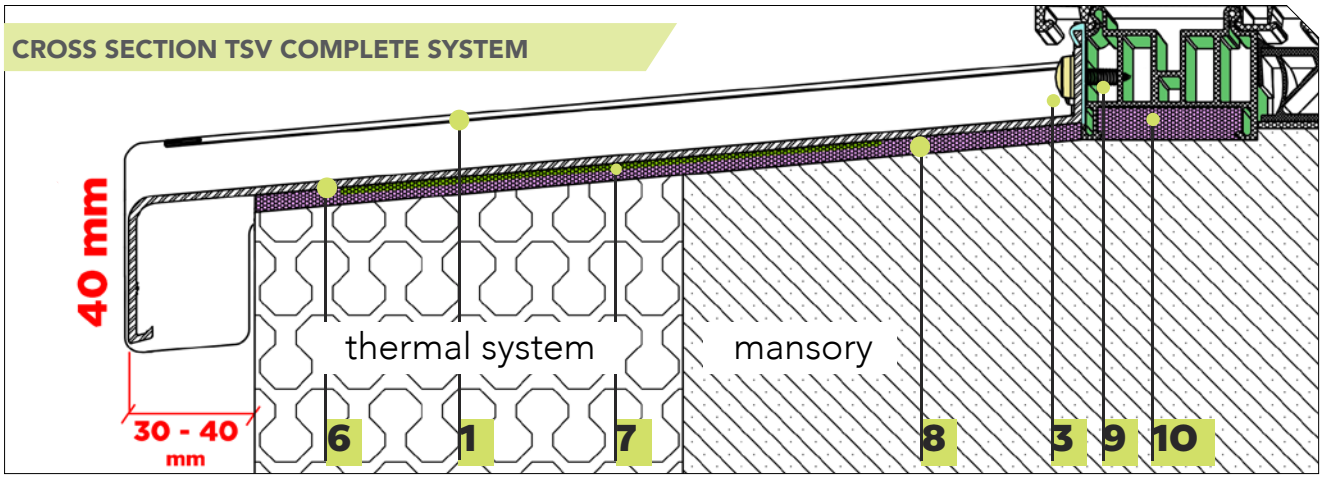


DESCRIPTION (pages 32 – 33)

1. Aluminium End cap type "C"
2. Butyl Sealing Tape
3. ABS Screw Masking Cap
4. Predefined hole 4,2x7 mm
5. EPDM Window sill median gasket
6. TSV Aluminium Window sill - 40 mm rim
7. Soundproof tape
8. TSV Thermo Green plate for thermal insulation under the exterior/interior window sill
9. Stainless steel self-tapping screw TORX 3.9x25 mm
10. TSV Thermo Green external window ledge raised profile

DETAIL

mounting assembly



TSV system installation method:

01 Surface preparation and measurement of window sill length and widthŞ

Installation is recommended on a level surface. For this purpose, the installation area where the aluminium window sill will be mounted should be prepared to eliminate any unevenness resulting from new construction or from adhesive residues in renovation projects. This facilitates proper installation, ensures the flatness of the window sill, and improves adhesion of polyurethane foam compounds.

At this stage, it is also recommended to install the TSV Thermo Green board beneath the exterior sill. Its use is important for eliminating thermal bridges in the lower part of the window.

02 Measuring the aluminium window sill

The preliminary stage of TSV system installation involves taking accurate measurements of the sill installation area:

1. For the sill length, measure the window opening and subtract 3 mm from the measured value; this difference will be compensated by installing the aluminium lateral end caps included in the TSV system.
2. To determine the optimal sill width, measure the distance between the sill profile and the edge of the building façade. It is recommended that the exterior sill extend 30–40 mm beyond the wall for proper rainwater drainage, or according to the specifications provided by the designer.

03 Assembling the TSV window sill

Assembly is carried out as follows:

1. Fit "C" or "L" type aluminium end caps to the edges of the sill.
2. Apply butyl sealing tape to the rear corners of the end caps.
3. Apply acoustic damping tape to the underside of the sill to reduce noise caused by rain.
4. Fit the EPDM gasket to the rear edge of the aluminium sill, cutting it to the required length.

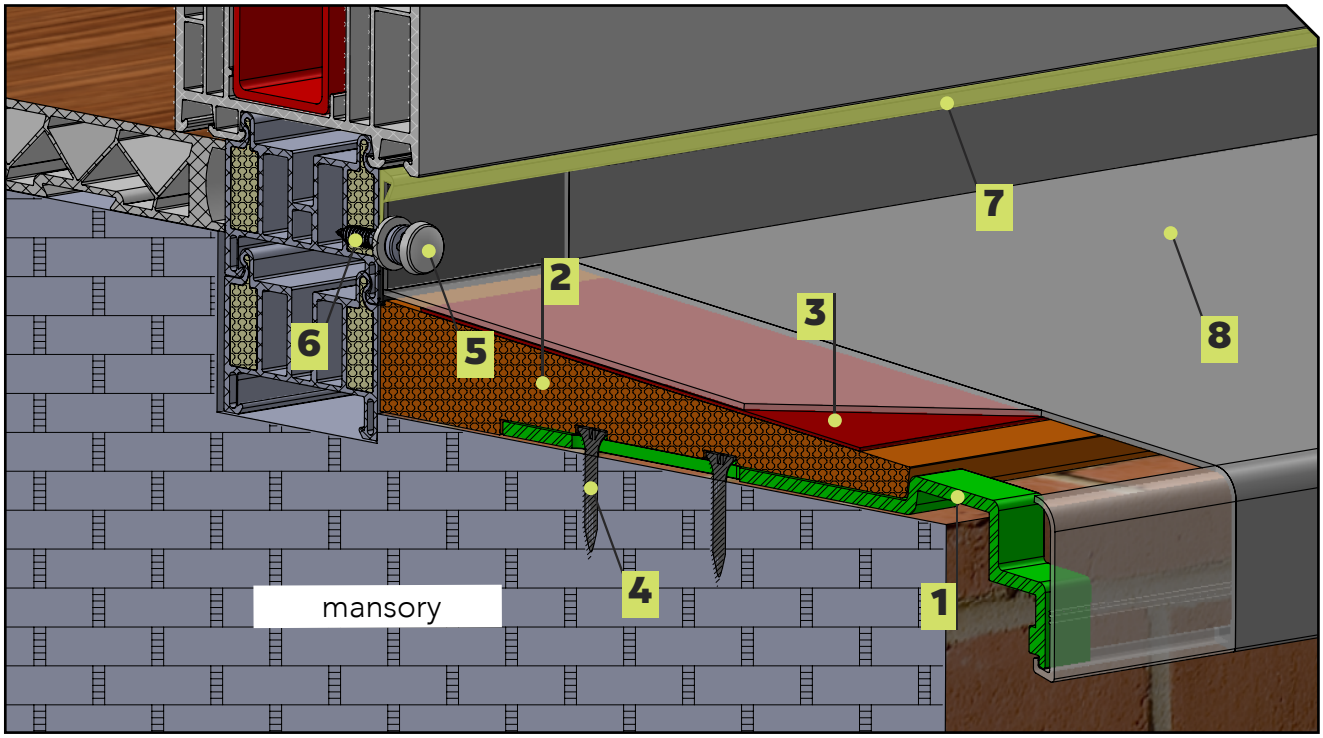
04 Fixing the window sill

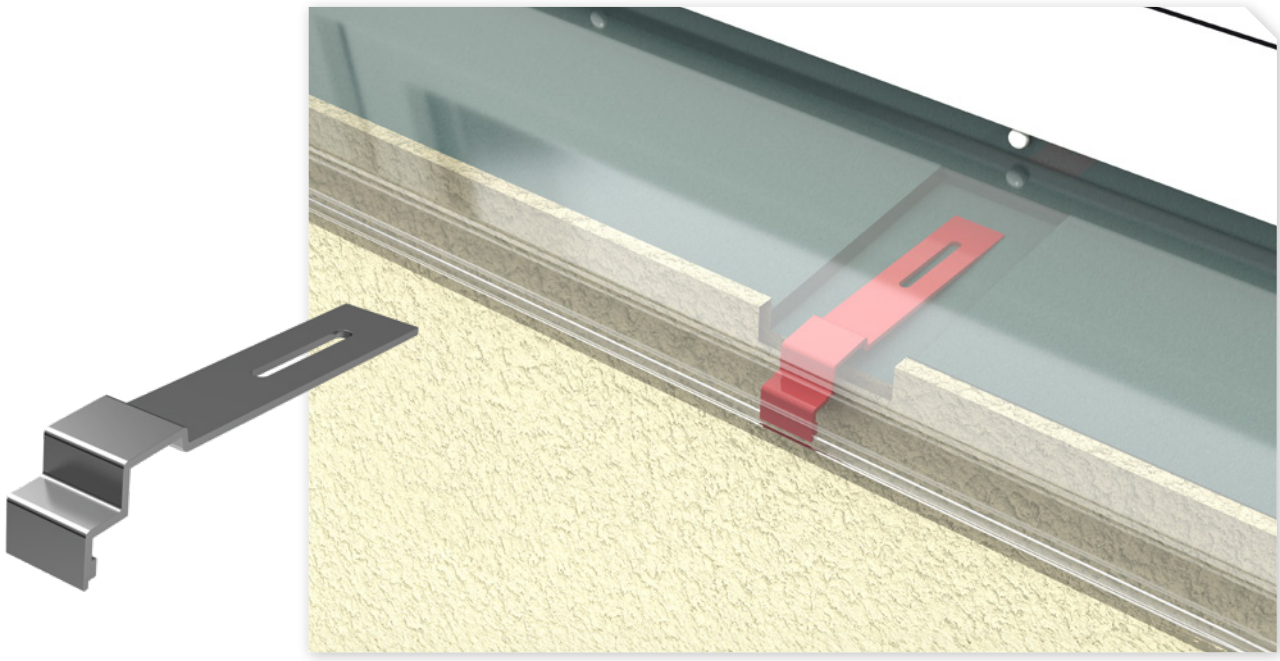
1. Apply low-expansion polyurethane foam or an elastic adhesive to the supporting surface.
2. Place the rear edge of the sill onto the sub-sill or window frame, depending on the installation method used.
3. Mechanically fix the sill to the sub-sill or frame using TORX self-tapping screws (3.9 × 25 mm).
4. Conceal the screws using ABS cover caps.

*** 1**: În cazul proiectelor de construcții noi, se va avea în vedere utilizarea capacelor laterale din aluminiu tip "C" și raportarea valorii măsurate la detaliile de execuție indicate de proiectant, astfel încât montajul thermal systemului să acopere rebordul de 18 mm a capacului din aluminiu tip "C". În cazul proiectelor de renovare fațade, se va avea în vedere măsurarea golului de fereastră existent, dintr-o parte în alta a thermal systemului, astfel încât pentru montaj se vor utiliza capacele leterale din aluminiu tip "L".
**** 2**: Șuruburile autofiletante fac parte din sistemul complet de montaj glafuri din aluminiu TSV, realizate din inox tip TORX. 3,9x25 mm;

INSTRUCTIONS

for the use of sill-stabilising mounts in masonry



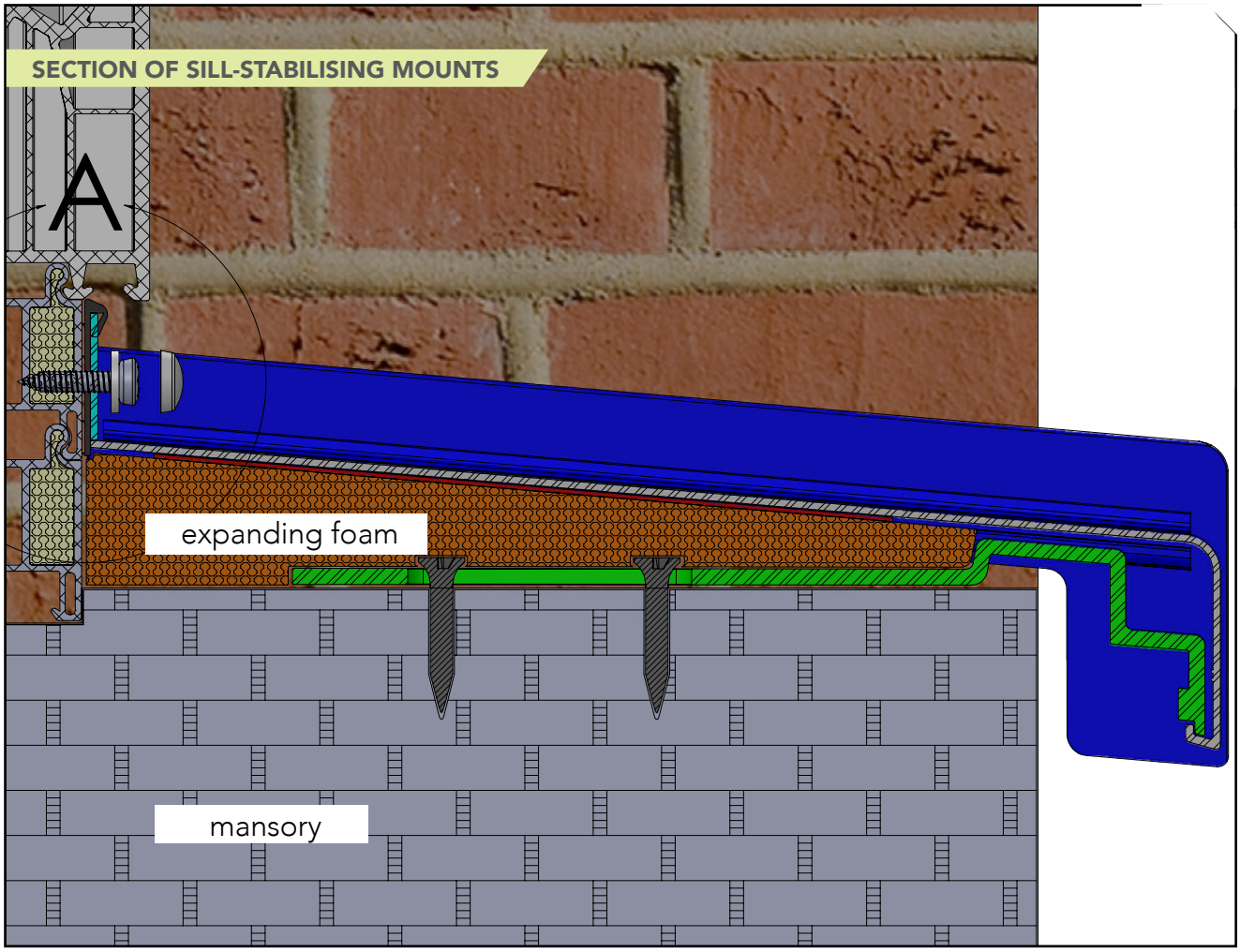


DESCRIPTION

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

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

Window sill stabilisation support for façades with decorative brick walls

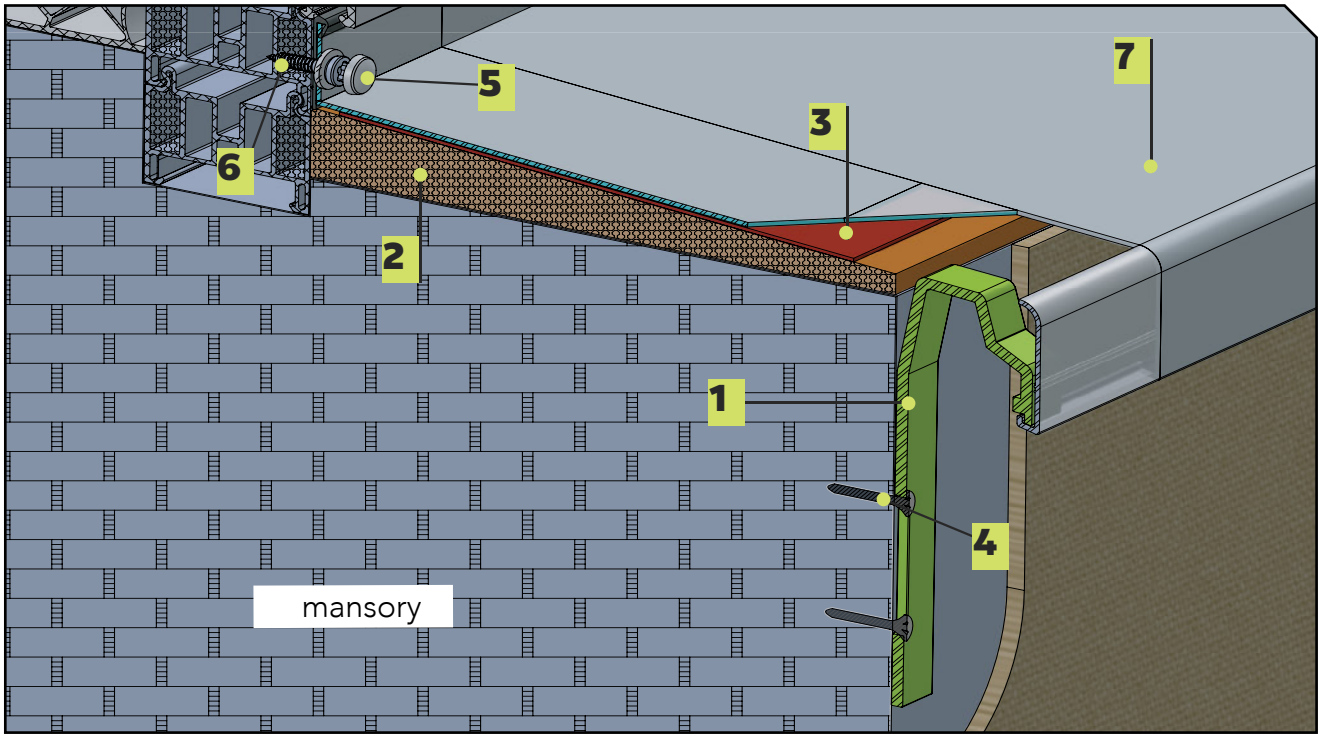
This support is suitable for both new construction and renovation projects and is recommended for aluminium sills with a minimum width of 150 mm.

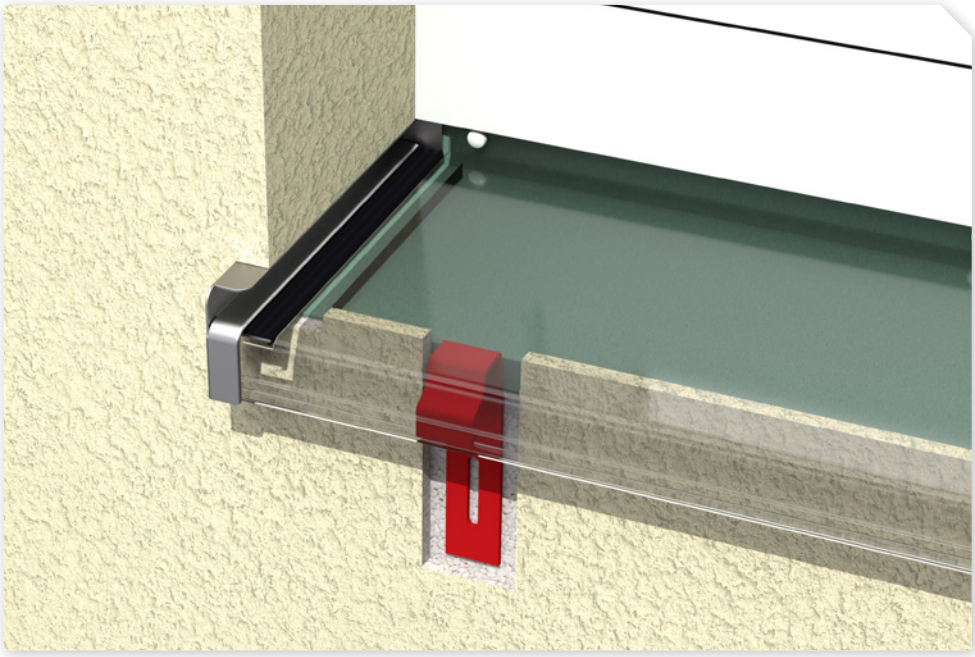
Installation details:

- **Fixing**: The support features a 40 × 6 mm slot designed for precise anchoring into the masonry.
- **Function**: It is installed horizontally, directly beneath the sill, to ensure structural stability.
- **Advantage**: Its design allows installation without damaging or affecting the appearance of the decorative brick façade.

INSTRUCTIONS

for the use of sill-stabilising mounts in masonry



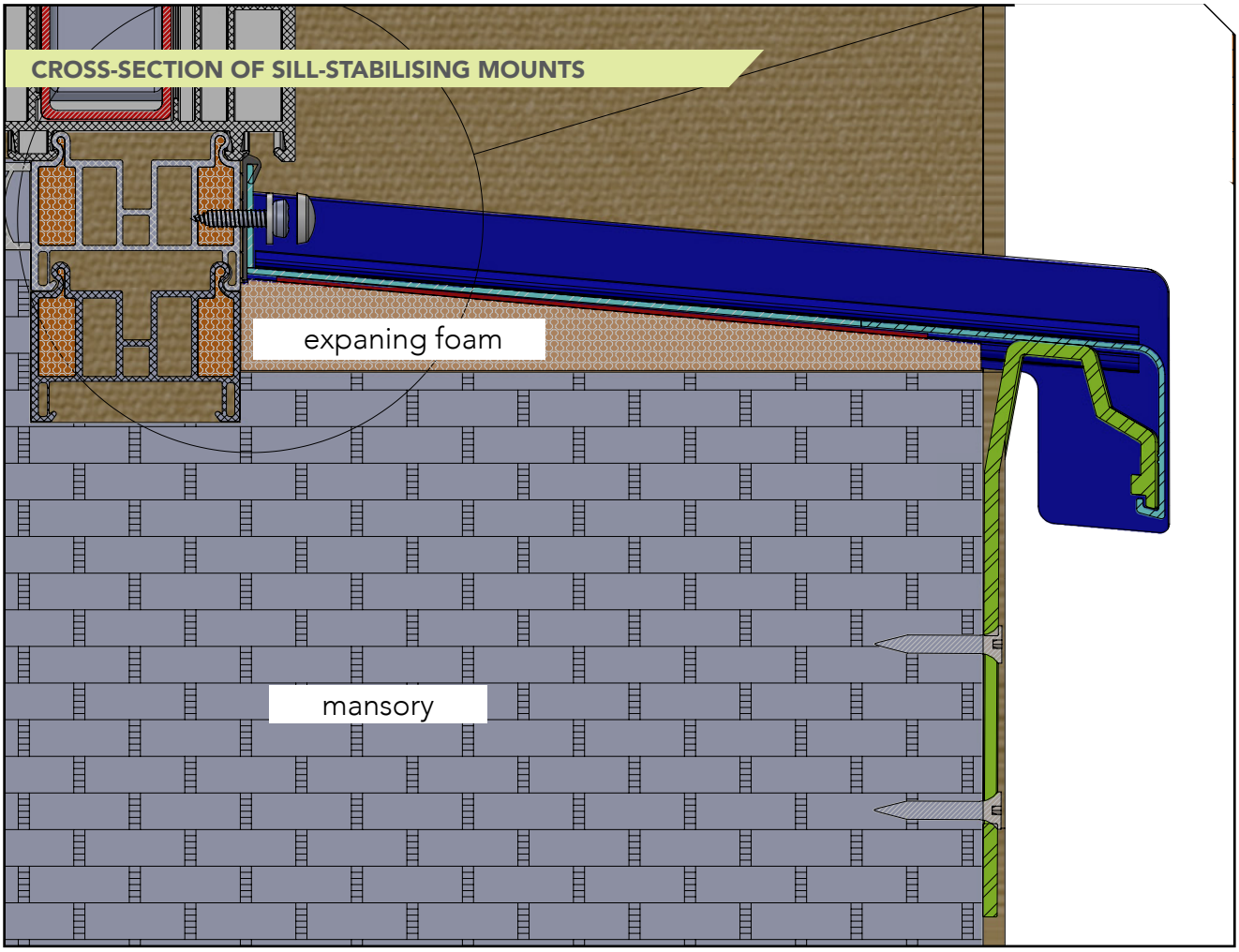


DESCRIPTION

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

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

Window sill stabilisation support for plastered façades

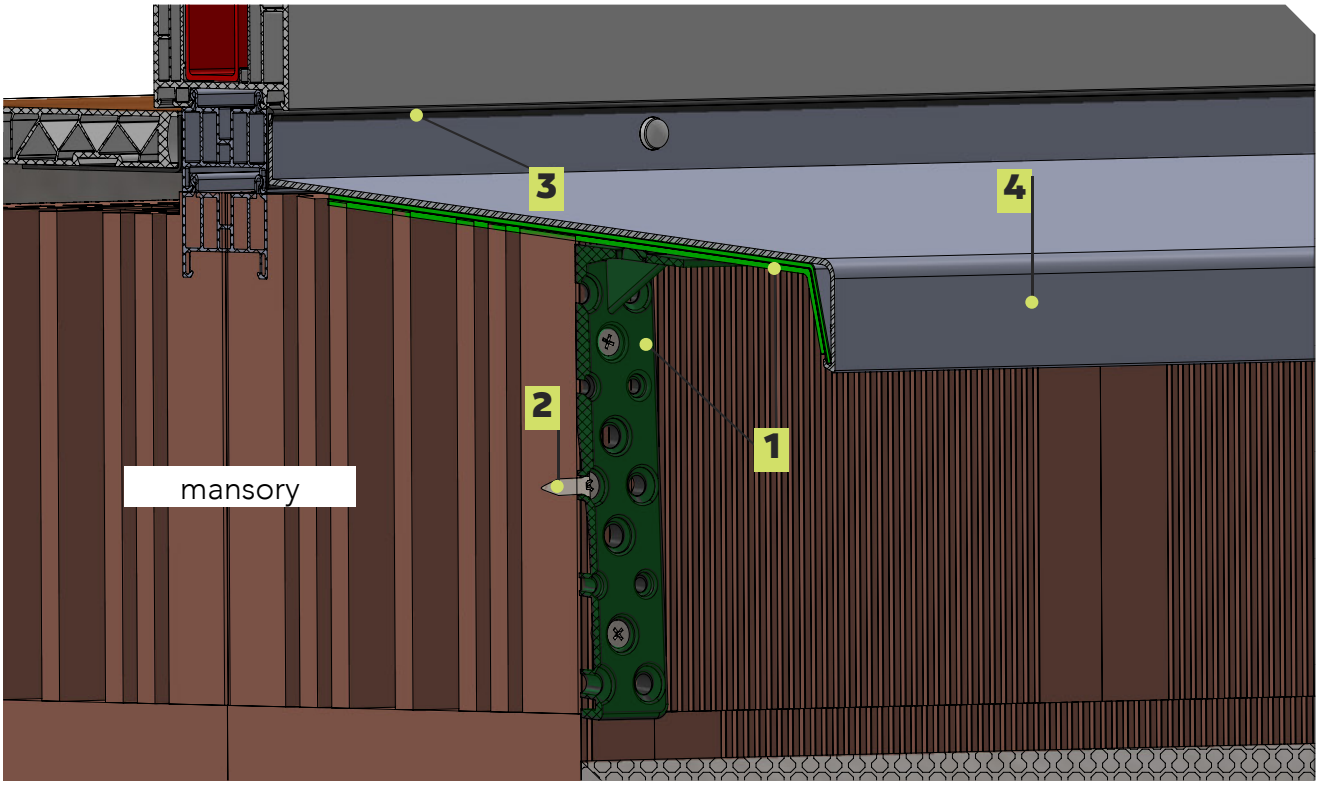
This stabilisation support is recommended for the installation of aluminium sills with a minimum width of 150 mm on finished or plastered façades.

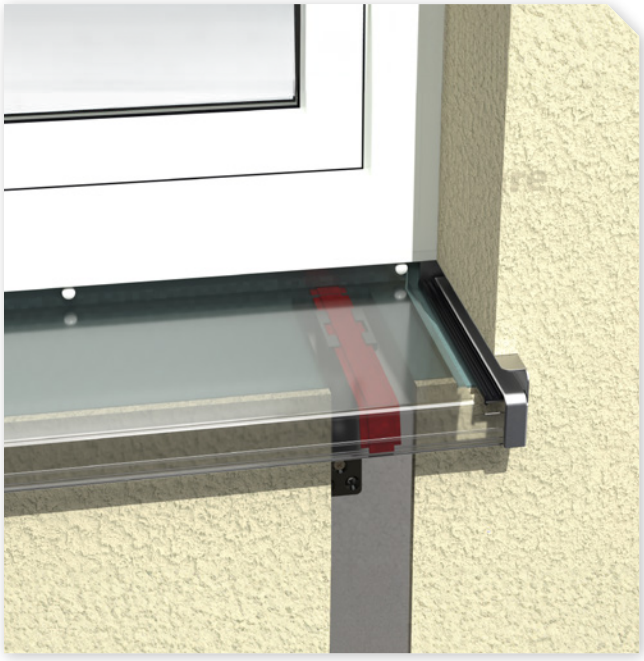
Installation instructions:

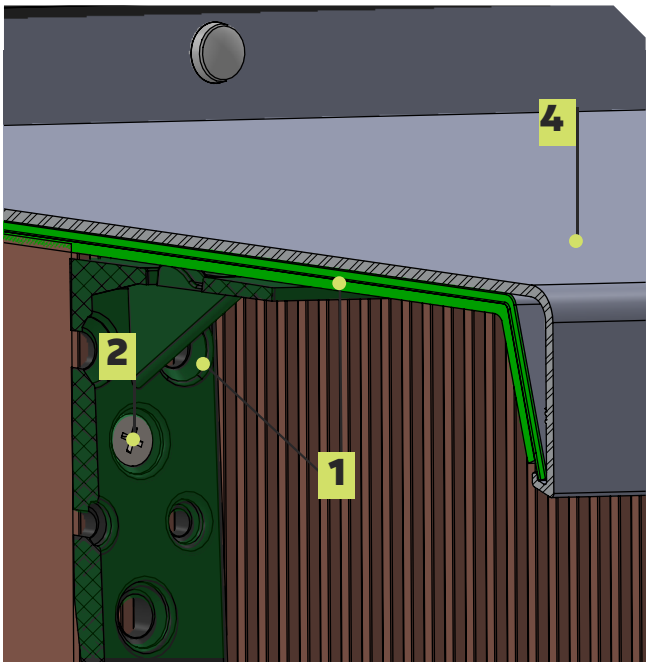
- **Fixing**: Use the 40 × 6 mm adjustment slot to ensure secure and precise anchoring into the wall structure.
- **Function**: It is installed vertically, directly beneath the sill, to ensure structural stability.
- **Finishing**: After mechanically fixing both the support and the sill, plaster repair work is carried out to conceal the installation area and restore the façade's appearance.

INSTRUCTIONS

for the use of sill-stabilising mounts in masonry





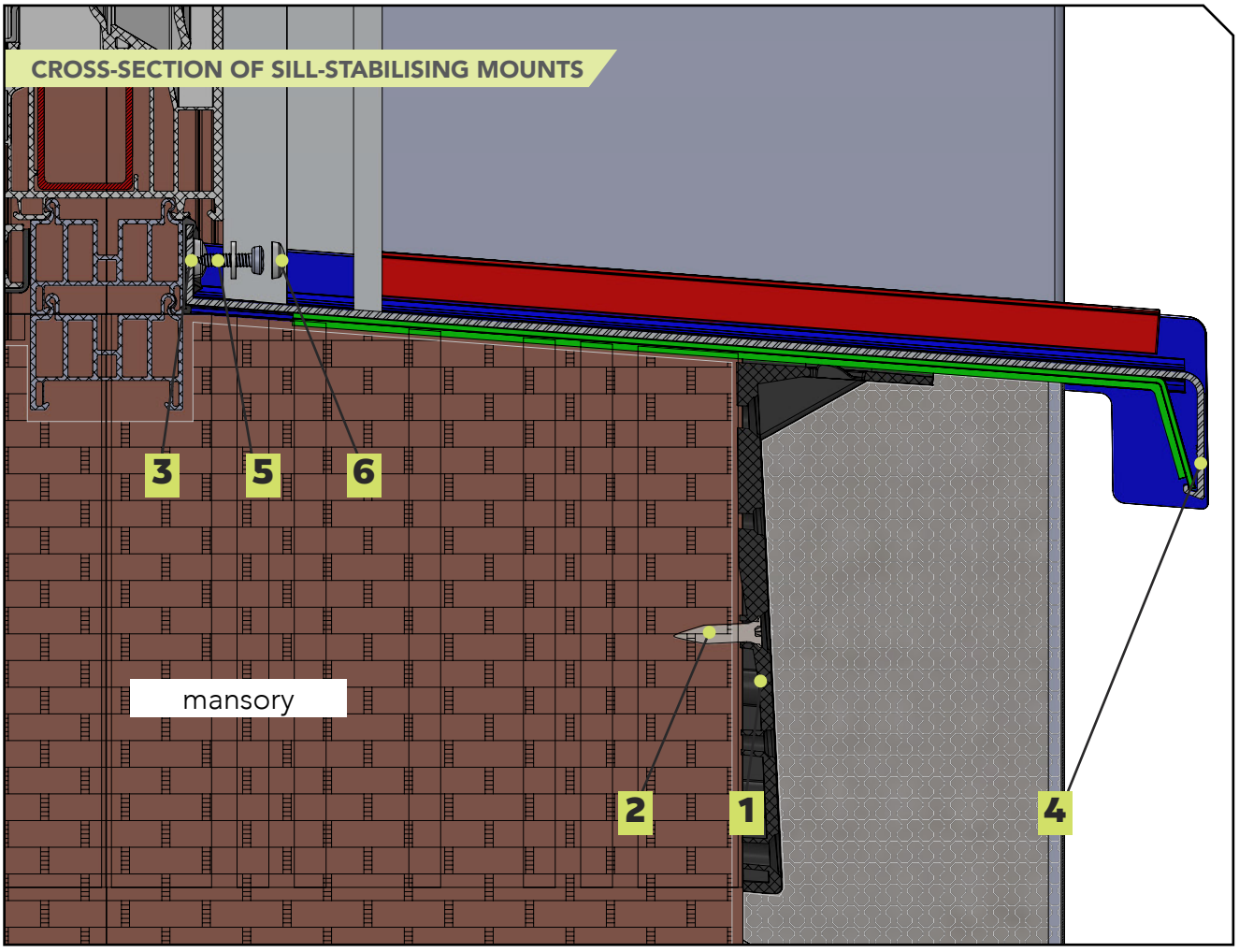


DESCRIPTION (pages 38 – 39)

1. Sill-stabilising mount
2. Masonry mounting screw
3. EPDM Window sill median gasket
4. TSV Aluminium Window sill - 40 mm rim
5. Stainless steel self-tapping screw TORX 3.9x25 mm
6. ABS Screw Masking Cap

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 **Window sill stabilisation support for thermally insulated façades**

This support is specially designed for installing aluminium window sills wider than 150 mm on buildings to be thermally insulated.

Important: The support is installed before applying the thermal insulation system, directly onto the structural layer of the building.

For maximum installation flexibility, the support consists of two distinct elements:

- Fixing:
  - *Vertical bracket*: Fixed directly to the masonry and fitted with multiple mounting holes, allowing adaptable installation at various distances from the wall.
  - *Horizontal support:* Made from an aluminium profile and available in various sizes, configured to match any thickness of thermal insulation layer.
- Function: Prevents deformation of the sill under the action of strong wind, until the thermal insulation is installed.
- Finishing: Since it is mounted directly on the masonry, the support requires no additional finishing.

MAINTENANCE INSTRUCTIONS

How to maintaine 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.

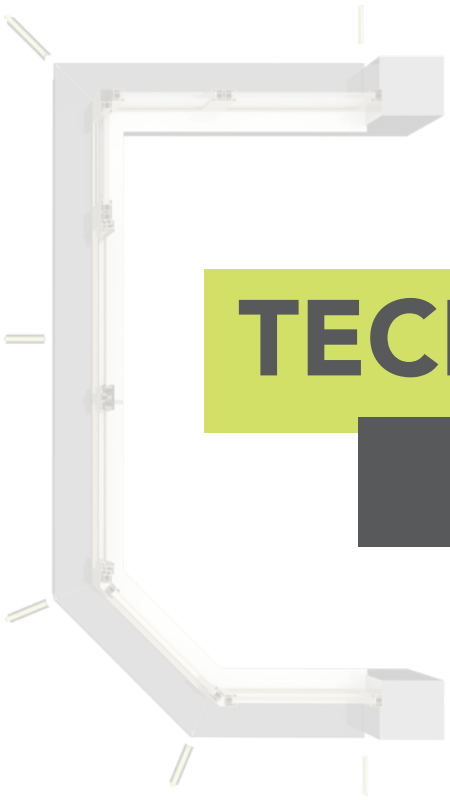
Cleaning cand be made with water and a clean cloth.

Window cleaning solutions can also be used without any problems.

To remember!

TSV aluminium window sills and covers are resistant to gypsum, lime chloride and ce ment 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).



TECHNICAL SUPPORT

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.

ift-Nachweis

Classification Report

Number	24-004191-PR01 (NW-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**
Designation	**TSV-ALWS40** **Alu Seitenendabdeckungen TSV***40-NC/RC*** TYP C Premium**
Details window sill TSV-ALWS40	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
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

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

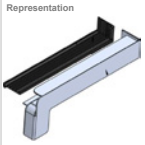
Thomas Stefan, Dipl.-Ing. (FH)
Head of Testing Department
Building Component Testing

Martin Heßler, Dipl.-Ing. (FH)
Project Engineer
Building Component Testing

Ve-RB1-I-4172-de/ 01.04.2021

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)

Representation



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.

Identity-Check
www.ift-rosenheim.de/ift-geprueft
ID: 7E0-898CD

ift Rosenheim GmbH
Theodor-Gietl-Str. 7-9
83026 Rosenheim
GERMANY
+49 8031 261-0
info@ift-rosenheim.de
www.ift-rosenheim.de

Notified Body 0757
DE BAY 18
Accredited Test Laboratory
EN ISO/IEC 17025

ift-Nachweis

Classification Report

Number	25-000900-PR01 (NW-E04-02-en-01)
Owner	PM ALUMINIUM LINE S.R.L. 167 Corneliu Coposu Street Birou 2, Et.2 400228 Cluj-Napoca Romania
Product	**Rain proof window sill system**
Designation	Shipping name: **TSV-ALWS40** Aluminium window sill end piece TSV***40-NC/RC*** TYP L PREMIUM; Aluminium window sill end piece TSV***40-NC/RC*** TYP C; Longitudinal butt joint connector 180° TSV-**-H180-40-****
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
Window sill end piece TYP C	Details The edging consists of an extruded aluminium profile with an EPDM moulded part installed in the rear corner. In addition, the rear corner connection between the window sill profile and the edging piece is covered on three sides with an aluminium-butyl adhesive tape
Longitudinal butt joint connector	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 connection between the window sill profile and the edging piece is covered on three sides with an aluminium-butyl adhesive tape
Window sill end piece TYP L Premium	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 covered 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. Testing of driving rain tightness in new condition

Result **)

Driving rain tightness 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
28.05.2025

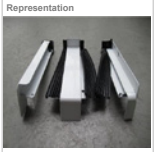
Wolfgang Jehl, Dipl.-Ing. (FH)
Deputy Head of Testing Department
Building Component Testing

Felix Alexander Wild
Operating Testing Officer
Building Component Testing

Ve-RB1-I-4002-en/ (2024-12)

Basis *)
EN 1027:2016-03
EN 12114:2000-03
*) and corresponding national versions (e.g. DIN EN)
Test report: 25-000900-PR01 PB-A01-02-en-01

Representation



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.

Identity-Check
www.ift-rosenheim.de/ift-geprueft
ID: E69-0F882

ift Rosenheim GmbH
Theodor-Gietl-Str. 7-9
83026 Rosenheim
GERMANY
+49 8031 261-0
info@ift-rosenheim.de
www.ift-rosenheim.de

Notified Body 0757
DE BAY 18
Accredited Test Laboratory
EN ISO/IEC 17025

ift-Nachweis

Classification Report

Number	25-002446-PR01 (NW-E04-02-en-01)
Owner	PM ALUMINIUM LINE S.R.L. 167 Corneliu Coposu Street Birou 2, Et.2 400228 Cluj-Napoca Romania
Product	Rain proof window sill system
Designation	Shipping name: TSV-ALWS40 Aluminium window sill end piece TSV***40-RC****TYP L; Internal corner connector TSV 40 ALUMINIUM CORNER CONNECTOR 90° INNER TSV-***-H90-I40-****; External corner connector TSV 40 ALUMINIUM CORNER CONNECTOR 90° OUTER TSV-***-H90-I40-****
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= 150 mm; Surface Powder-coated white
Window sill end piece TYPE L	Details The edging consists of an extruded aluminium profile with an EPDM moulded part installed in the rear corner. In addition, the rear corner connection between the window sill profile and the edging piece is covered on three sides with an 60 mm x 0,7 mm aluminium-butyl adhesive tape
Internal corner connector 90°	Details The edging consists of an extruded aluminium profile into which two EPDM moulded parts with drainage grooves are inserted over the entire construction depth. The rear connection between the window sill profile and the edging piece is covered on three sides with an 60 mm x 0,7 mm aluminium-butyl adhesive tape
External corner connector 90°	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 covered on three sides with an 60 mm x 0,7 mm aluminium-butyl adhesive tape
Special features	The test was carried out with rear-ventilated installation without any major pressure difference across the window sill. Testing of driving rain tightness in new condition
Note	Watertigthness of the connection between the aluminium-butyl adhesive tape and the building structure have to be ensured

Result **)

Driving rain tightness 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
31.07.2025

Thomas Stefan, Dipl.-Ing. (FH)
Head of Testing Department
Building Component Testing

Felix Alexander Wild
Operating Testing Officer
Building Component Testing

Ve-RB1-I-4002-en/ (2024-12)

Basis *)
EN 1027:2000-06
EN 12114:2000-03
*) and corresponding national versions (e.g. DIN EN)
Test report: 25-002446-PR01 PB-E04-02-en-01

Representation

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 abstract.

Identity-Check
www.ift-rosenheim.de/ift-geprueft
ID: A7D-96AD8

ift Rosenheim GmbH
Theodor-Gietl-Str. 7-9
83026 Rosenheim
GERMANY
+49 8031 261-0
info@ift-rosenheim.de
www.ift-rosenheim.de

Notified Body 0757
DE BAY 18
Accredited Test Laboratory
EN ISO/IEC 17025

ift-Nachweis

Classification Report

Number	25-003507-PR01 (NW-E04-02-en-01)
Owner	PM ALUMINIUM LINE S.R.L. 167 Corneliu Coposu Street Birou 2, Et.2 400228 Cluj-Napoca Romania
Product	**Rain proof window sill system** **Shipping name: TSV-ALWS40**
Designation	Aluminium window sill with aluminium corner connector 135° OUTER and aluminium corner connector 135° INNER
Details	Manufacturer PM ALUMINIUM LINE S.R.L., Cluj-Napoca; Material Aluminium; Surface powder-coated white
Details window sill	Tested overhang 180 mm; Upstand height 25 mm; Front drip edge 40 mm; Sealing behind the upstand EPDM profile; Screw connection distance e=100 mm
Details Corner connector 135° INNER	TSV 40 aluminium corner connector 135° INNER TSV-***-H135-I40-**** Aluminum profile with EPDM rear seal and aluminum-butyl tape at back and bottom + EPDM molded part with drainage grooves
Details Corner connector 135° OUTER	TSV 40 aluminium corner connector 135° OUTER TSV-***-H135-E40-**** Aluminum profile with EPDM rear seal and aluminum-butyl tape at back and bottom + EPDM molded part with drainage grooves
Special features	The test was carried out with rear-ventilated installation without any major pressure difference across the window sill. Testing of driving rain tightness in new condition.

Result **)

Driving rain tightness 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
28.11.2025

Thomas Stefan, Dipl.-Ing. (FH)
Head of Testing Department
Building Component Testing

Florian Walter
Operating Testing Officer
Building Component Testing

Ve-RB1-I-4002-en/ (2024-12)

Basis *)
EN 1027:2016-03
EN 12114:2000-03
*) and corresponding national versions (e.g. DIN EN)
Test report: 25-003507-PR01 PB-E04-02-en-01

Representation

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 abstract.

Identity-Check
www.ift-rosenheim.de/ift-geprueft
ID: 805-40FD3

ift Rosenheim GmbH
Theodor-Gietl-Str. 7-9
83026 Rosenheim
GERMANY
+49 8031 261-0
info@ift-rosenheim.de
www.ift-rosenheim.de

Notified Body 0757
DE BAY 18
Accredited Test Laboratory
EN ISO/IEC 17025

QUALITY CERTIFICATE

RAL aluminium powder coated

CERTIFICATE

for a **COATING APPLICATOR**

QUALICOAT

SEASIDE

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

QUALITY LABEL
INTERNATIONAL
Qualanod
FOR ANODISING
ARCHITECTURE

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

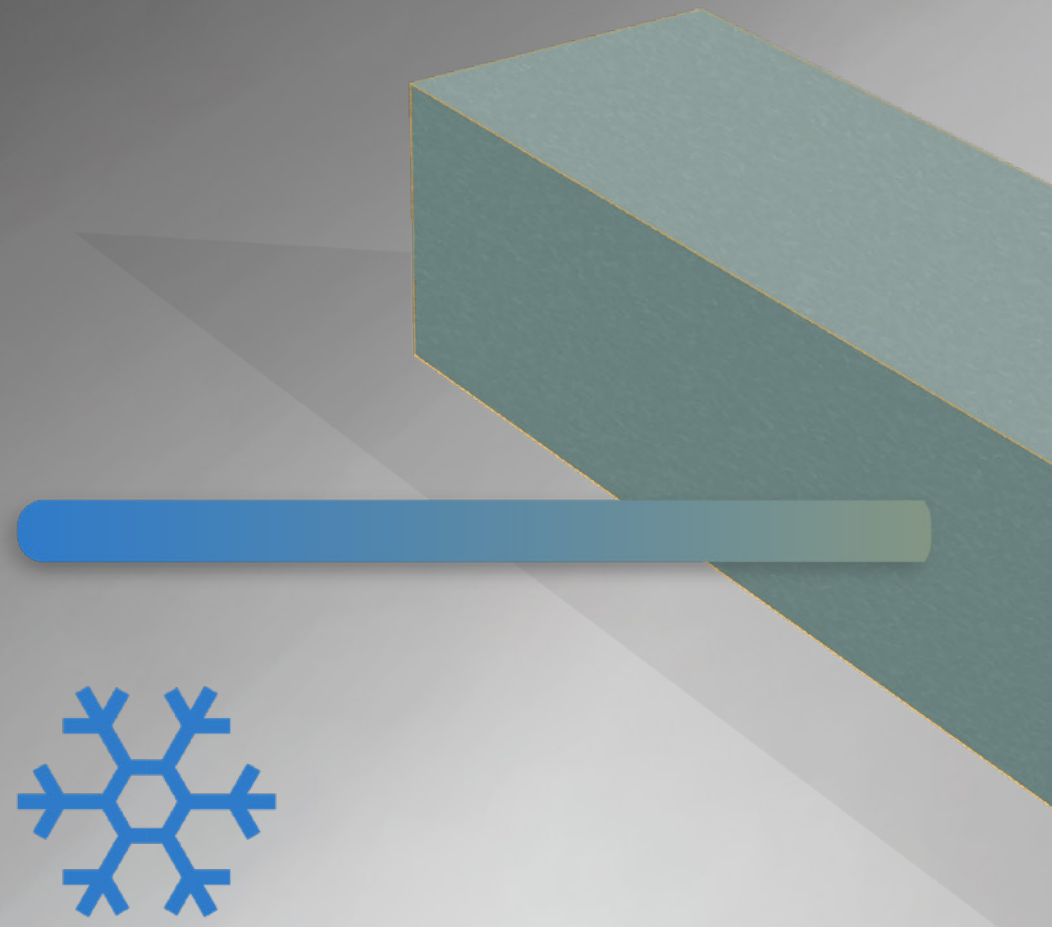
CERTIFICATION BODY

Monica Gerber
Geberal Secretary

Website: www.qualanod.net
E-Mail: info@qualanod.net // Phone: +41 (0)43 305 09 77 / 81

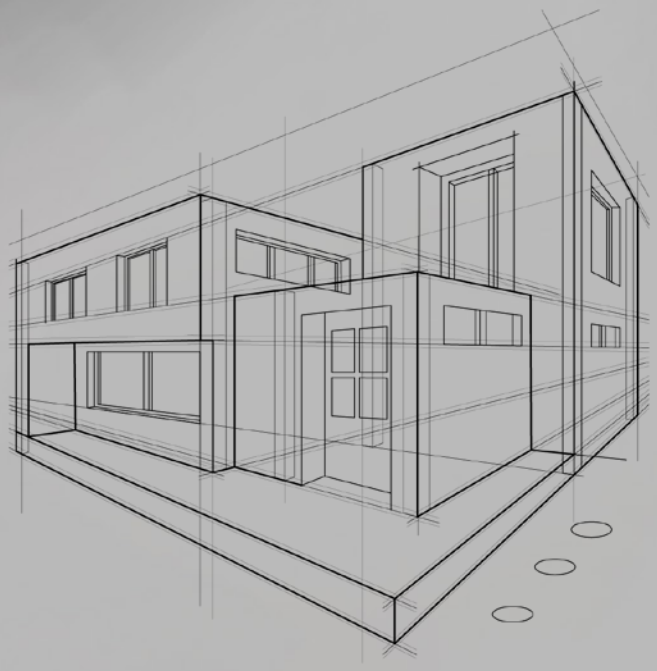
Mailing address:
QUALANOD P.O. Box, CH-8027 Zurich

Domicile:
QUALANOD
ARCO Association Management AG
(certification body)
Tödistrasse 42, CH-8002 Zurich



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

tsvline.com



TSV Thermo Green
The number ONE choice for
woodwork insulation

6

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.

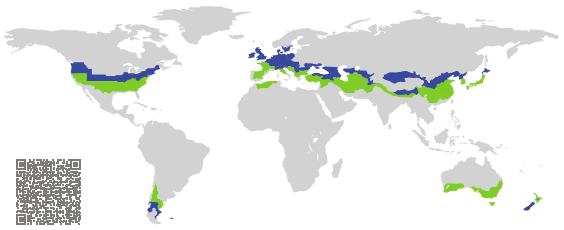
Thermal insulation performance U: 0.6 W/(m²k)

CERTIFICATE

Certified Passive House Component

Component-ID 2259wm03 valid until 31st December 2026

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany



Category: **Window mounting system**
Manufacturer: **PM Technic Elements, Cluj-Napoca, Romania**
Product name: **TSV Thermo Green**

This certificate was awarded based on the following criteria for the cool, temperate climate zone

Efficiency $\Delta U \leq 0.05\ W/(m^2 \cdot K)$

Hygiene $f_{Rsi = 0.25} \geq 0.70$

cool, temperate climate

CERTIFIED COMPONENT
Passive House Institute

www.passivehouse.com

ECO PLATFORM EPD EN 15804 VERIFIED

DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No: **TAK0000155**

This is to certify:

That the Sandwich Core Materials

with type designation(s)
Kerdyn® Green - Series

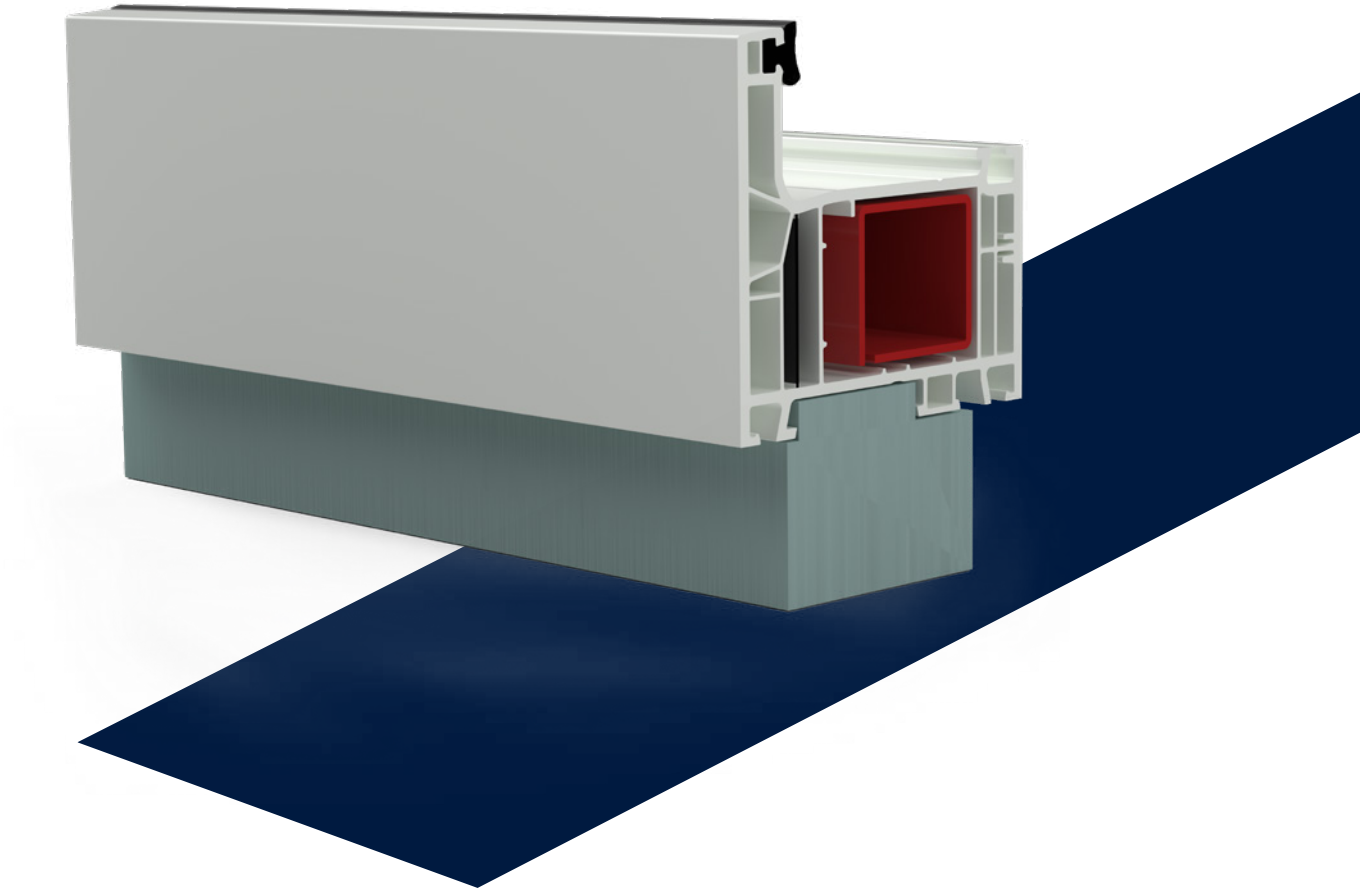
is found to comply with
DNV GL class programme DNVGL-CP-0084 – Type approval – Sandwich core materials

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

The advantages of TSV Thermo Green:

- High level of thermal insulation
- High flexural strength
- High compressive strength
- Waterproof and damp-proof
- High tensile strength
- Easy to handle and process
- Can be attached using screws
- Lightweight material
- Versatile use of adhesives and resins



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***

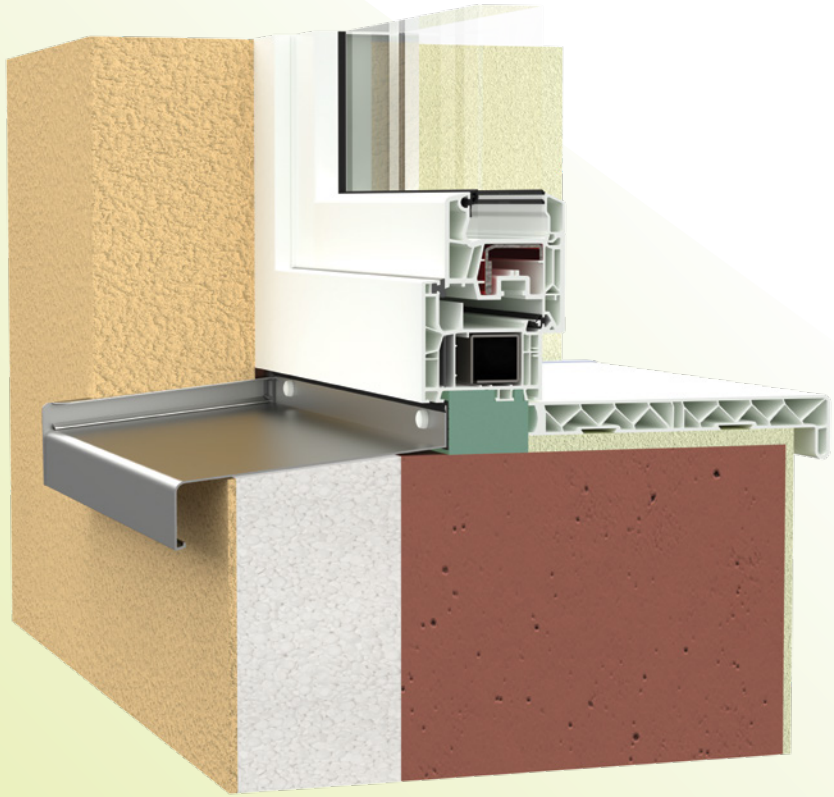
TSV THERMO GREEN EXTERNAL WINDOW LEDGE RAISED PROFILE

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 **(31,1 kg/ cm²)** is also suitable for use in the assembly of large and heavy windows.

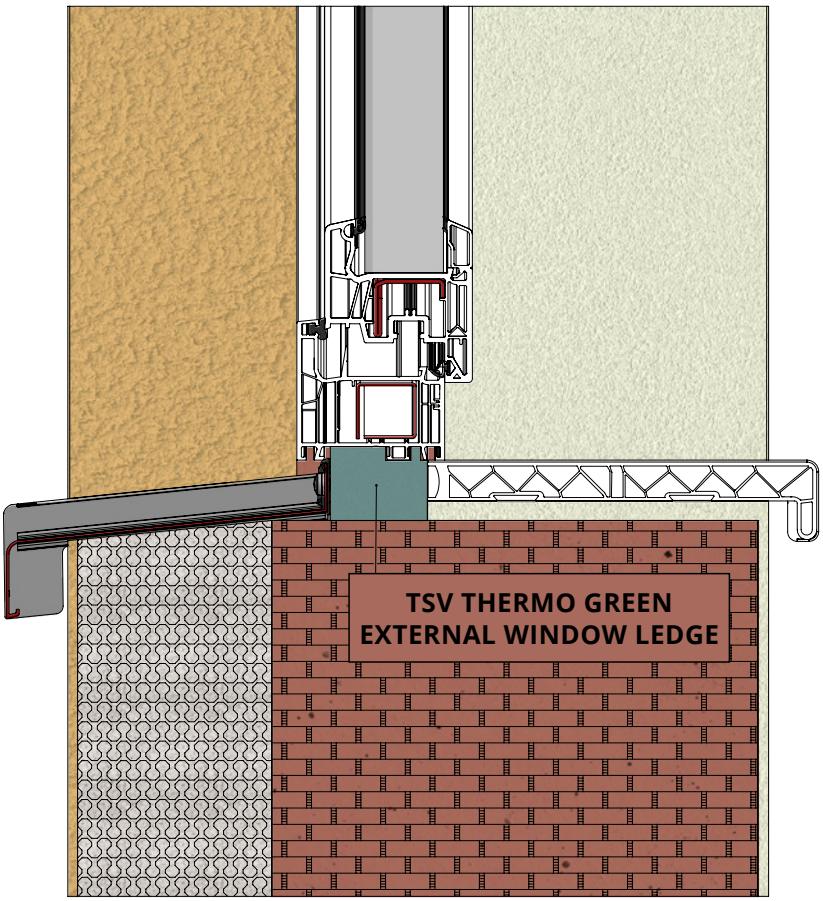
The standard height of the TSV sub-sill is 38 mm and 68 mm, or it can be customised depending on the profile and project, being suitable for different types of PVC, wood, or aluminium joinery.



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***

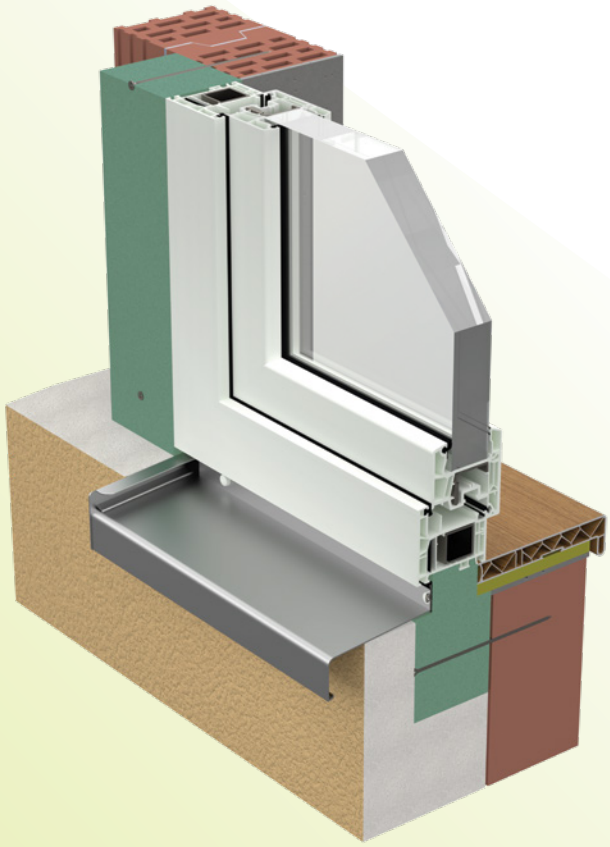


TSV THERMO GREEN SUBFRAMES

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.

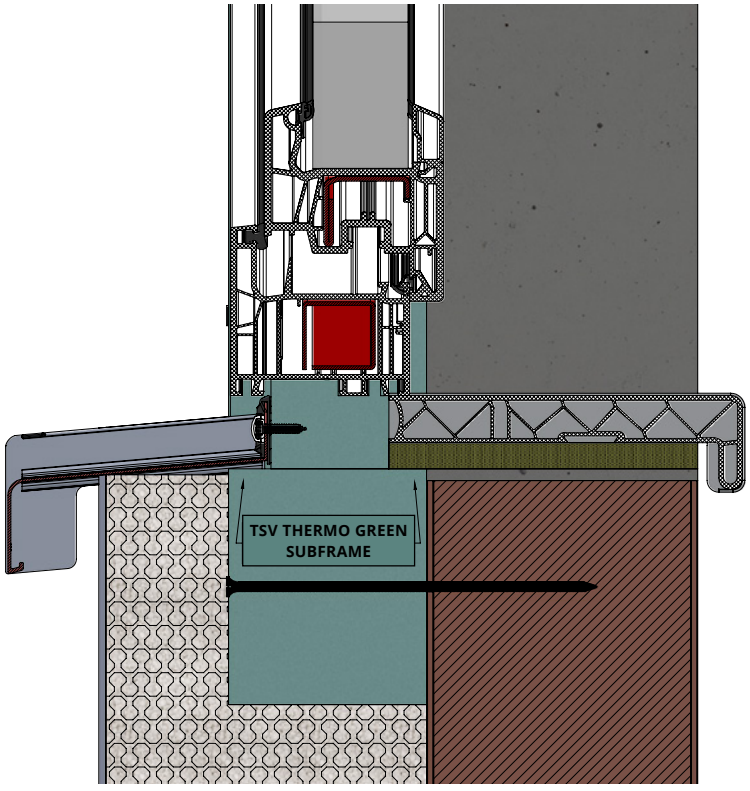
Due to the remarkable processing possibilities, the TSV Thermo Green subframes can be adapted to the dimensions requested by the clients. They are also very easy to assembly due to their reduced weight. The TSV Thermo Green subframes are attached mechanically by screwing them to the surface of the building,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



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

Product benefits

- ***Performanță izolare termică foarte bună - U: 0,6 W/(m2k)***
- ***Realizat 100% din PET reciclat***
- ***Densitate nominală: 180 kg/m³***
- ***Asigură un montaj rapid și corect datorită greutății reduse și posibilității de adaptare pe diferite dimensiuni***
- ***Formă și volum stabil datorită rezistenței mari la compresiune***
- ***Rezistență sporită la umiditate***
- ***Economie de timp pentru client datorită faptului că este ușor de manevrat și de prelucrat***
- ***Posibilitate de prelungire a profilelor la orice lungime prin lipirea sau fixarea cu șuruburi***
- ***Nu necesită perforare prealabilă pentru fixare***
- ***Datorită densității materialului muchiile de izolație nu se deteriorează***
- ***Produs certificat cu conținut reciclat foarte mare conform Environmental Product Declaration ISO 14025 și EN 15804***
- ***Certificat conform standardului DNVGL-CP-0084 pentru materiale de construcții tip sandwich***



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 window sills. 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.

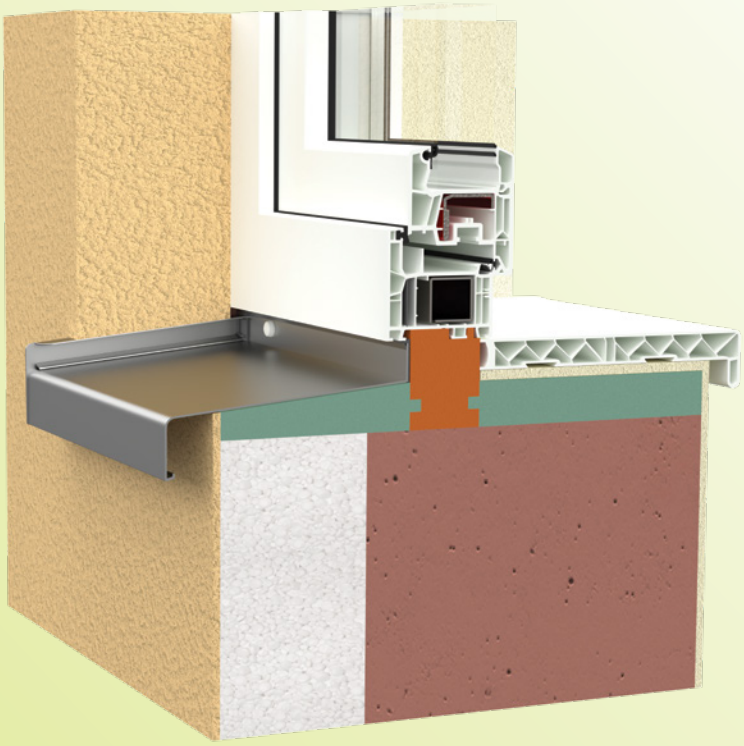
Due to its high compressive strength (over 1,000 kg/mm), it is also suitable for situations where the client wishes to use the sills to support decorative items (flower pots, relaxation area, storage space...).

Exterior window sill plate dimensions

Widths:	150 mm, 200 mm, 250 mm and 300 mm
Thickness:	30 mm
Length:	up to 2440 mm/ piece

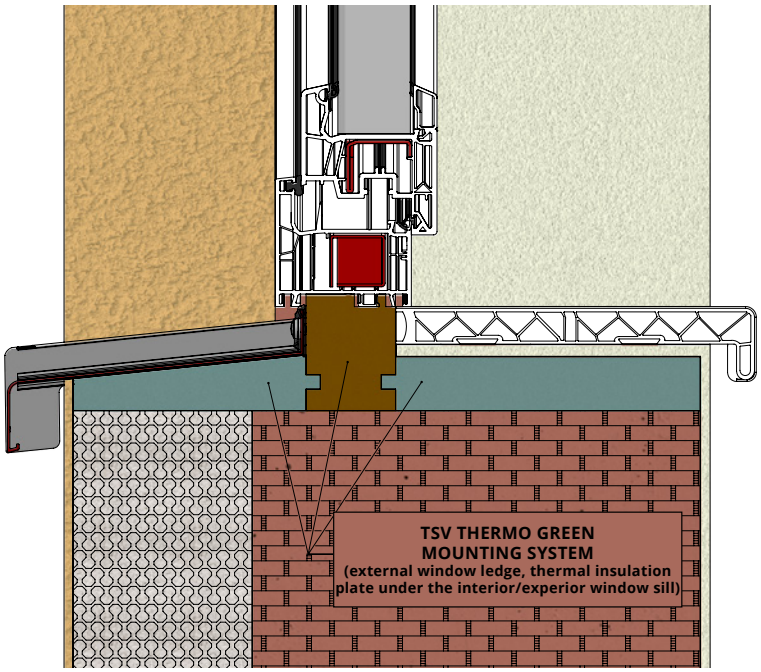
Interior window sill plate dimensions

Widths:	150 mm, 200 mm, 250 mm, 300 mm 350 mm and 400 mm
Thickness:	30 mm
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.
Can be manufactured for any window profile requested by the client.


INTERIOR DESIGN

TSV Werzalit interior window sill system

combines high durability with resistance to moisture and wear, offering a premium and functional solution for any interior.

7

din 1923

WERZALIT

Whether new construction or renovation – a window sill must meet the highest building physics standards. Window sills from WERZALIT are manufactured in a patented process as high-pressure moulded parts. They are resistant to building moisture, dimensionally stable and durable. WERZALIT window sills stand for quality in every respect.

In interior design, the choice of the right window sill is also a question of aesthetics. Whether as a discreet room element or a striking accent – WERZALIT offers you a wide range of shapes, decors and dimensions.

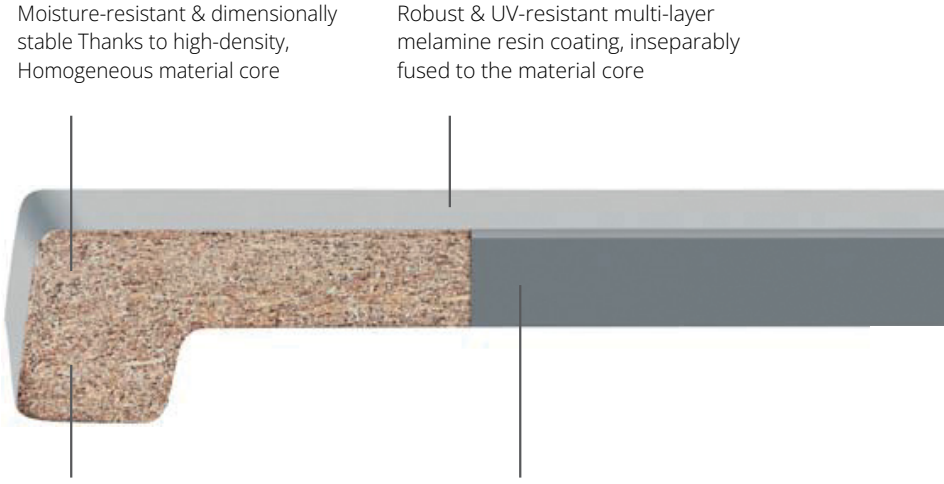
The window sill types are available exclusively with a classic shaped edge, compact in a simple, modern design and expona with a right-angled, ABS-coated front edge, plus the system window sills exclusiv-trim and compact-trim with viewing screens.
WERZALIT window sills are made of PEFC-certified wood and high-quality resins. WERZALIT has over 100 years of experience in the production and application of compression molded parts. This benefits the products in the selection of raw materials and in the manufacturing process.

The advantages at a glance

- 25 years original WERZALIT warranty
- Large selection of shapes, decors and dimensions
- Delivery lengths up to 6.00 m
- High quality, durable
- Stable
- UV-resistant
- Resistant to building moisture
- Food-safe
- Easy to clean
- No health risks
- Environmentally friendly
- PEFC certified

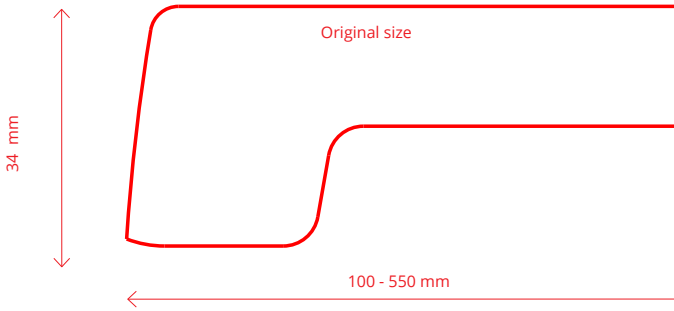
PEFC
PEFC/04-31-1282

www.pefc.de



Exclusiv

exclusive is the classic series with typical, integrated shaped edge. It is available as a window sill or intelligent system window sill. Different colours, decors and three different surfaces enable the realisation of your individual ideas in interior design.



exclusiv interior window sill

The 34 mm thick shaped edge gives the high-quality exclusiv window sill its classic look. Due to material properties such as robustness, dimensional stability and ease of maintenance, this window sill has proven itself in both private and public buildings.

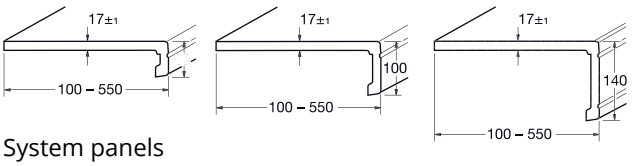
exclusive panel system window sill

The exclusiv-blende system window sill with viewing panel offers optimal conditions for commercial construction or the installation-friendly renovation of window sills in need of renovation. Because with its privacy screen, it is ideal as a push-over solution. It can be equipped with integrated radiator cladding or with installation and cable ducts.

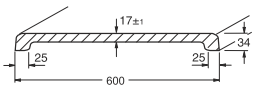
Standard lengths: 6 m without end cap

Custom dimensions up to 6 m, including the corresponding end edge. This flexibility allows precise adaptation to the requirements of each project, regardless of the width or depth of the window opening.

System window sill

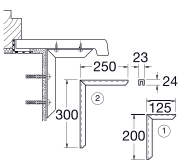


System panels

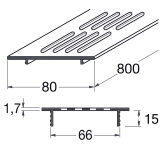


Double window sill

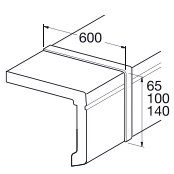
Accessories



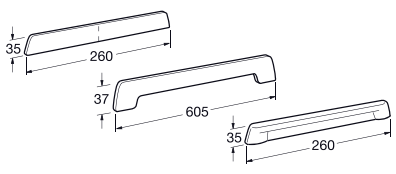
Consoles



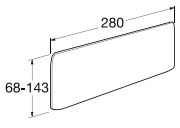
Louver



Window sill-
Connection Profiles



exclusively
End caps



Page Closurecaps
for aperture

Compact

The compact series impresses with its straightforward, discreet design language.

compact interior window sill

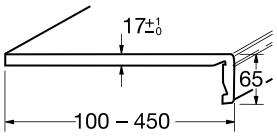
The compact interior window sill has a contemporary, linear look with its distinctive chamfer on the front edge and its slender appearance. Due to its material properties, it can be used in both private and public areas. A flush wall closure is possible.

compact-bezel system window sill

In both new construction and building renovation, the compact blende system window sill is a perfect and uncomplicated solution. Thanks to the privacy screen, it can be used as a push-over over window sills in need of renovation and thus saves the walls from knocking open. In addition, it is possible to equip it with radiator cladding or installation and cable ducts.

Standard lengths: 6 m without end cap

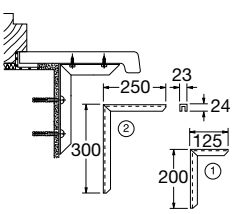
Custom dimensions up to 6 m, including the corresponding end edge. This flexibility allows precise adaptation to the requirements of each project, regardless of the width or depth of the window opening.



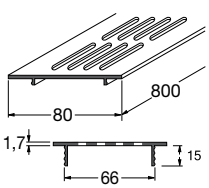
System panels

System window sill

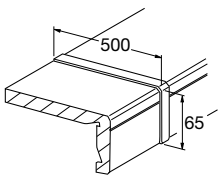
Accessories



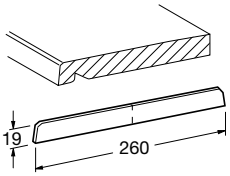
Consoles



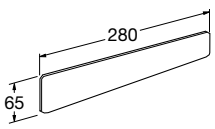
Louver



Window sill-
Connection Profiles



End caps



Page Closurecaps
for aperture

Expona

The expona interior window sill impresses with its right-angled edge, which is also available in different decors.

Individual made-to-measure

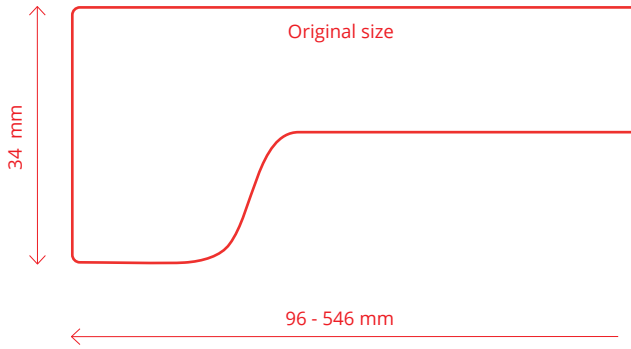
You get expona custom-made. We take care of the coating of the front and side edges as well as the cutting of width and length for you ex works. With its wide range of dimensions, expona can be used for very wide and deep window fronts.

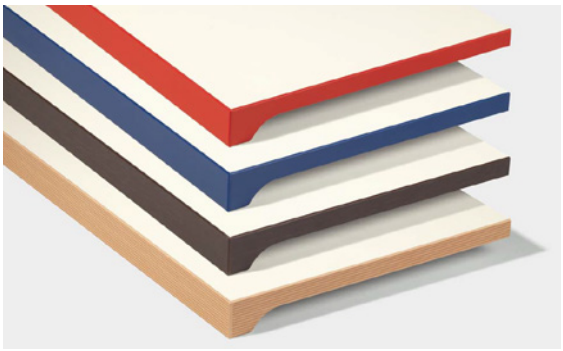
New edge, new look

Thanks to its simplicity and elegance, expona has all the prerequisites for a modern classic. The straight front edge with ABS edge coating is available in the same décor as the surface or in 4 special decors.

Standard lengths: 6 m without end cap

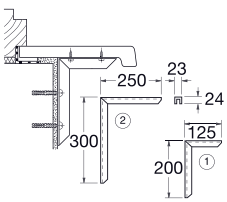
Custom dimensions up to 6 m, including the corresponding end edge. This flexibility allows precise adaptation to the requirements of each project, regardless of the width or depth of the window opening.



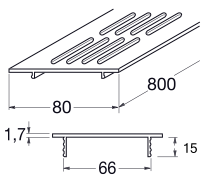


Special decors

Accessories



Consoles



Louver

ABS edges for expona

327 red

338 blue

055 black

416 multiplex

Decors

Choose from a variety of combinations

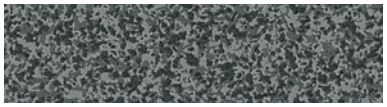
Decors Uni - Surface: smooth, semi-gloss

001
white

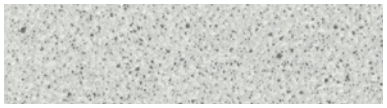
167
creme

018
light grey


021
metallic

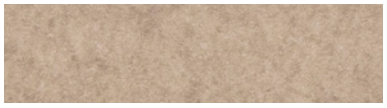

112
puntinella

Decors Stone - Surface: smooth, semi-gloss


131
quarz


030
smokey white


031
smokey shadow

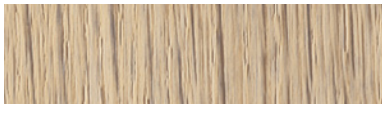

041
sahara

Piatră decor - Suprafaţă structură perlată


320
betolit

Decors Wood - Surface: Fine structure


447
akazie

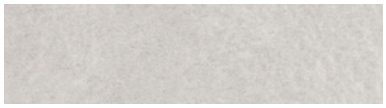

448
rustic oak

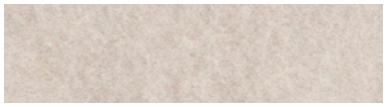
Decors Stone - Surface: smooth, semi-gloss

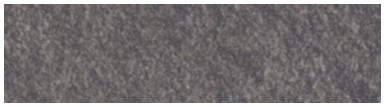
070
marmor bianco


009
marmor beige


310
dolomit


042
grey stone


043
Sand stone


090
copper stone


091
concrete light


092
water drops

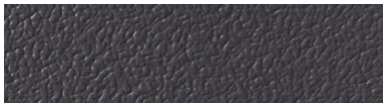

040
frozen infinity


093
storm

Decors Uni - Surface: Pearl structure


400
polar white


418
light grey


420
dark grey

Custom-made machining

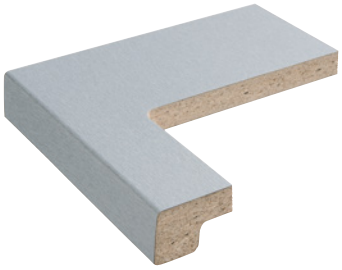
Benefit from the unique WERZALIT window sill processing service for the exclusiv, compact and expona series. We fulfil individual processing requirements from cutting to edge coating with the highest manufacturing precision. This not only saves work, but also money. And the quality is right down to the last detail.

Tailor-made cutting

WERZALIT supplies window sills pre-cut to size on request Requirements with appropriate notches, milling etc. In contrast to classic yard goods, you only pay for what you really need – without worthless leftovers. You save a lot of work and do not bear the risk of waste.

Furniture-quality edge coating

WERZALIT is the only manufacturer to take care of the coating for you open cut edges for the window sill types exclusiv, compact and expona. This ABS edge coating is matched to the ordered window sill décor for exclusiv and compact and can be freely selected at expona. It guarantees a seamless finish in furniture quality. Measured by the effort and the result of the manual application, the use of a small surcharge is definitely worthwhile.

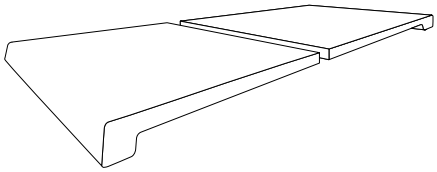


Notches on request

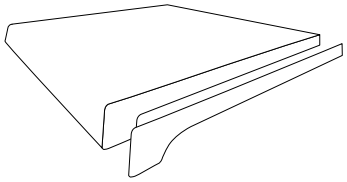
ABS edge coating in furniture quality

Factory Machining

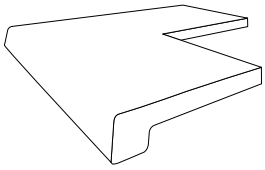
Examples of exclusiv, exclusiv-blende, compact, compact-blende and expona



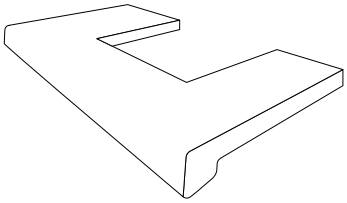
Separation cuts
(longitudinal section)



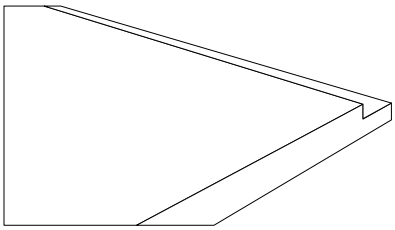
ABS edge coating *
(Thick layer laminate 2 mm)



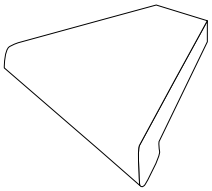
Notches
(Release the outer corner)



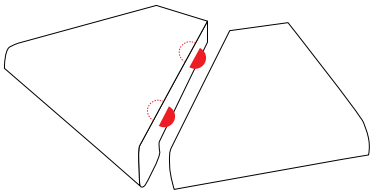
Notch center



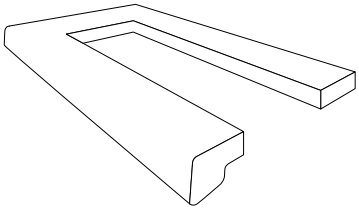
Fold out trailing edge



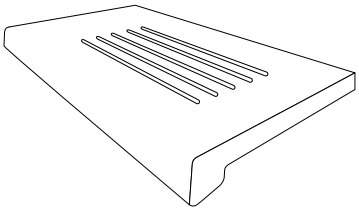
Mitre cut **



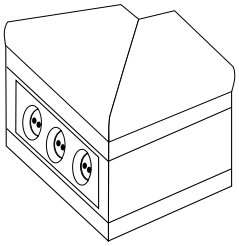
Miter connection with lameless **



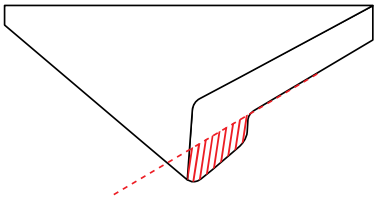
Ventilation grille cut-out



Milling ventilation slots



Holes for switches ***



Mill the leading edge flush ****

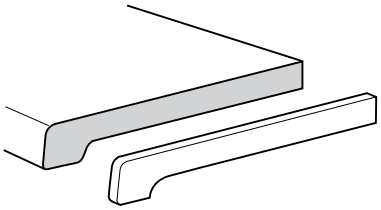
* Not possible with exclusive aperture and compact aperture
** At exclusiv-blende and compact cover on request
*** Only with exclusiv-blende with fixed aperture 140 mm
**** Only for exclusiv

Side caps

Factory applied ABS edges

Open cut edges can be laminated at the factory with ABS edges (2 mm thick film laminate).

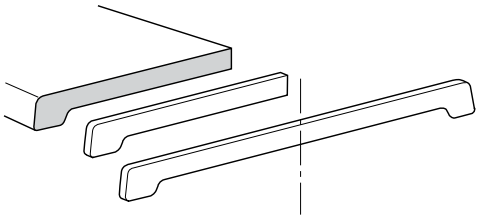
This ABS edge sealing is matched to the ordered window sill decor and guarantees a seamless fit in furniture quality.



Overlapping plastic end caps

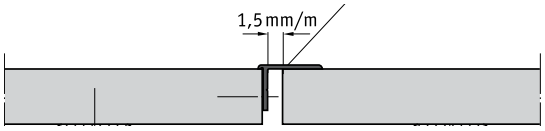
The end caps have rounded edges on both sides. They can be sawn to create 2 caps depending on the required width.

Install by gluing with a hot glue gun and glue cartridges.



Butt joint with cover profile

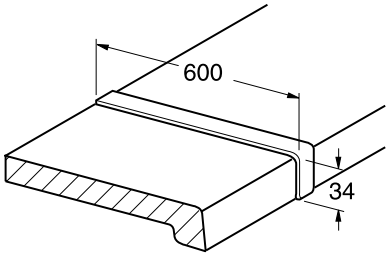
Longitudinal joints must be executed with expansion gaps of 1.5 mm per linear meter, calculated based on the total length of both connected window sills. To cover this expansion gap, cover profiles are used, fixed to one of the two window sill sections.



Cover profile for butt joints for Exclusiv window sills

The cover profile for butt joints allows the necessary expansion gap to be concealed. It is made of aluminum, comes pre-drilled, and is fixed to one of the two window sill sections using 3.0 × 30 mm chipboard screws.

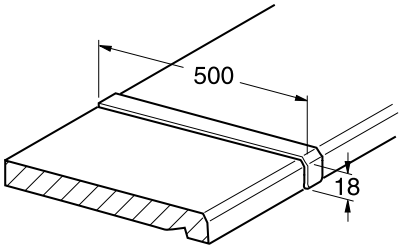
The dimensions of the cover profile are 600 × 34 mm and it can be cut to the required length.



Cover profile for butt joints for Compact window sills

The cover profile for butt joints allows the necessary expansion gap to be concealed. It is made of aluminum, comes pre-drilled, and is fixed to one of the two window sill sections using 3.0 × 30 mm chipboard screws.

The dimensions of the cover profile are 500 × 18 mm and it can be cut to the required length.



WERZALIT window sills consist of a particle board core with a melamine surface coating.

The technological properties of the product satisfy the requirements of DIN EN 312-7.

The particle board core consists of processed wood.

Exclusively untreated forest wood in the form of scraps, thinning timber and round timber from sustainably managed domestic forests is used.

No imported wood is used, in particular no tropical wood.

Recycled wood is also not used.

A duroplastic synthetic resin is used as binding agent.

The formaldehyde emissions of the window sills correspond to the lowest emission class E1 for particle board, and the requirements according to Annex I of the German Banned Chemicals Ordinance are satisfied.

No isocyanates, phosphates or halogens and no substances such as PVC, lindane or PCP are added.

As a surface coating, multiple layers of papers impregnated

with duroplastic synthetic resin are pressed seamlessly onto the particle board core during manufacturing. The decor is printed using inks that contain no toxic heavy metals (chromium, lead, cadmium).

Burning of the waste pieces in small-scale combustion systems (boilers, stoves, fireplaces) is prohibited by the German Small- Scale Combustion Systems Ordinance.

Burning is permitted without restrictions in systems for industrial wood incineration according to Section 4 of the German Federal Emission Protection Regulations, No. 8.2.

Waste pieces are classified as category AII according to the German Recycled Wood Ordinance.

Waste pieces and removed material may generally be disposed of as normal waste or bulky refuse in a landfill or waste incinerator; however, always consider the rules of the respective waste disposal company.

Technical data		Values	Unit	Test specification
Swelling after storage in water at 20 °C	after 2h after 24h	0,3 – 0,6 5,0 – 8,0	% %	EN 317
Moisture content		5 – 10	%	EN 322
Temperature resistance under	permanent load temporary load	-50 bis +90 +180	°C °C	EN 438
Fire behaviour, material class (B2 = normal flammability)		B2		DIN 4102
Length change due to moisture/heat exposure		1 – 3	mm/m	
Water vapor resistance		>Grad 3	m	to DIN 438-2
Cross-cut test [1]		Gt 0A – Gt1A		EN ISO 2409
Scratch resistance		3 – 5,5	N	EN 438
Flexural stenght		30 – 35	N/mm²	EN 310
Abrasion behaviour		200 – 300	U	EN 438
Light resistance		Level 6 – 8		DIN 54 004
Chemical resistance		good to very good		EN 438
Cigarette burn resistance		resistant to burns		as for EN 438

[1] Gt 0A is the best, Gt 4A is the worst value

This technical data sheet can and should only provide non-binding advice. We ask that you adapt all information about working with our products to local conditions and the other materials used. For more technical information, please refer to our respective individual brochures and assembly instructions.
If you have additional questions, please contact our Building Service department

The TSV interior sill is the right choice for an elegant and durable finish in any interior space. Suitable for residential, office, or commercial spaces, it is in perfect harmony with current design trends.

PVC RANGE

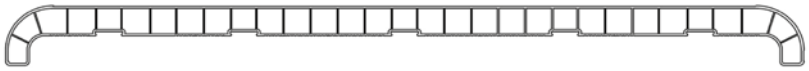
TSV Elitus

Made from PVC covered with ELESGO acrylic protective film.

ELESGO®

TSV Linear

Made from recycled PVC.



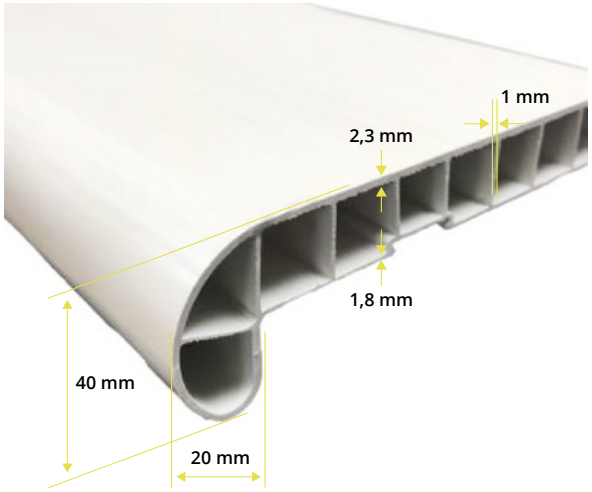
TSV Elitus

Made from high-quality PVC combined with stone powder, the TSV Elitus sill is covered with ELESGO decorative film, which provides a protective layer with superior mechanical and chemical resistance. The product features a stylised design with a rounded contour and a varied colour range, suited for residential and commercial applications. The composite material used provides high resistance to water, chemical agents, and abrasion, contributing to an extended service life and dimensional stability under conditions of thermal variation and humidity.

The applied ELESGO film is a high-performance acrylic laminate, obtained by impregnating the décor with thermo-reactive acrylic resins and hardening using Electron Beam Curing (EBC) technology. This technological process imparts increased hardness, superior resistance to scratching and abrasion, and excellent stability against UV radiation and common chemical agents. The base of the sill is pre-sanded before application of the laminating film, ensuring optimal adhesion and a smooth, uniform, easy-to-maintain final surface.

Characteristics

- High resistance to scratches and UV radiation
- High heat resistance
- Easy-to-clean and maintain surface
- Waterproof – suitable for high-humidity environments
- Gloss or matt finish, depending on the selected model
- Free from formaldehyde



Available widths:

100 mm / 150 mm / 200 mm / 250 mm / 300 mm / 350 mm / 400 mm / 450 mm / 500 mm / 600 mm.

Maximum sill length: 6000 mm

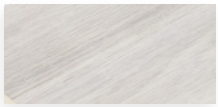
Weight: 5.4 kg/m

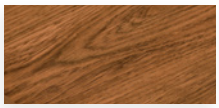
Texture	pearl	high gloss	matt	silk gloss	silk wood	clean touch
Weight gram/m² (*)	~ 210	~ 210	~ 210	~ 210	~ 210	~ 210
Scratch resistance EN 438-2:2016	level 3	level 3	level 3	level 3	level 3	level 3
Gloss level at a 60° angle	~ 10 ± 3	> 80	~ 10 ± 3	~ 33 ± 3	can't be measured	~ 3 ± 1.5
Stain resistance EN 438-2:2016 (**)	Group 1, 2 level 4	Group 1 level 4 Group 2 level 2 (***)	Group 1, 2 level 4	Group 1, 2 level 4	Group 1, 2 level 4	Group 1, 2 level 4
Bending radius mm	≥ 5	≥ 5	≥ 5	≥ 5	≥ 5	≥ 5
Type of protective film	PP	PET	PP	PET	PP	PET

White matt

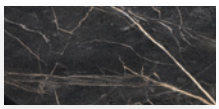
White highgloss

White tree (bianco)


Lagos (white oak)


Antique oak


Venato (light marble)

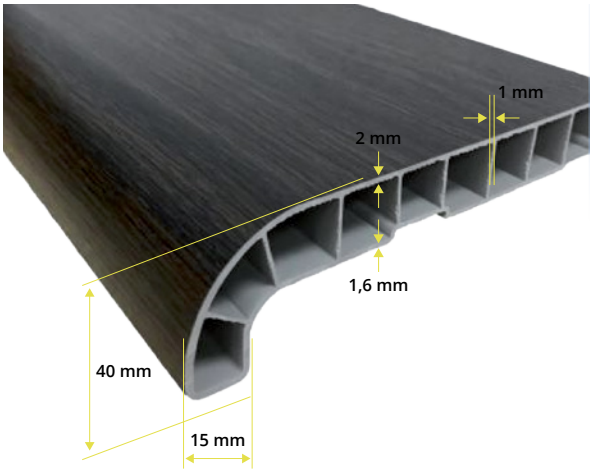

Firestone (dark marble)

TSV Linear

The TSV Linear interior sill is made from 100% high-quality recycled PVC, featuring a modern appearance and a varied colour range.

Characteristics:

- Easy-to-clean and maintain surface
- Waterproof – suitable for high-humidity areas
- Gloss or matt finish, depending on the model chosen
- Free from formaldehyde impurities



Available widths:

100 mm / 150 mm / 200 mm / 250 mm / 300 mm / 350 mm / 400 mm / 450 mm / 500 mm / 600 mm.

Maximum sill length: 6000 mm

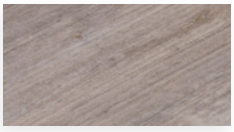
Weight: 5.3 kg/m

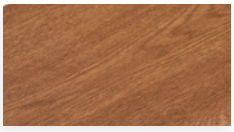
CHARACTERISTICS	UNIT	WINSHIELD ECO	TEST METHOD
Thickness (Micrometric)	mm	0.20	
Weight	g/cm²	210	
Tensile strength	N/mm²		
MD		30	
TD		25	
Elongation	%		
MD		190 %	
TD		150 %	
100% Modulus	N/mm²		
MD		24	
TD		21	
Specific gravity	g/cm³	1.3	ASTM-D792
Dimensional stability		-2	80°C 10 min.
Gloss (60°)		16	
Embossing retention		No significant changes in embossing or gloss	80°C 10 min.
Fire resistance		Self-extinguishing	
Light resistance		8	Blue scale DIN 53387-2-F
Accelerated UV	hr	5500	Q Panel 340 nm
Chemical resistance		Resistant to common household detergents. Easy to clean	
Cold flexibility	-25°C	Pass	Over a rod with 30 mm diameter
Scratch resistance	cN	> 20	Erichsen 435

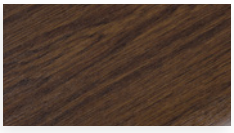
White highgloss

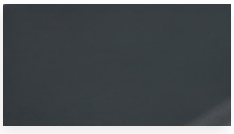
White satin


Marble


Larch Terra Brown


Golden Oak

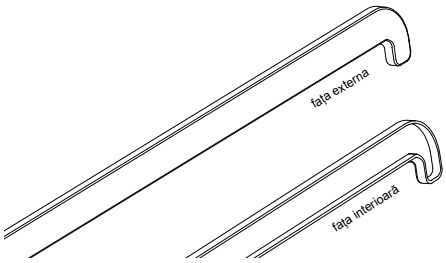

Dark Oak


Anthracite Sand

Accessories

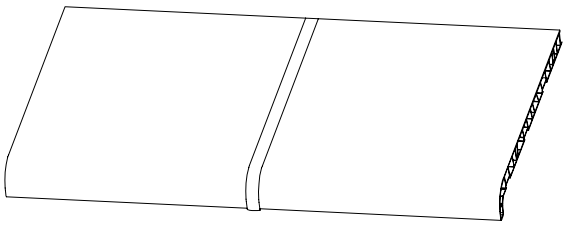
Sill end caps

600 mm wide and available in a range of colours to match the sills. End caps are made from plastic, PVC.



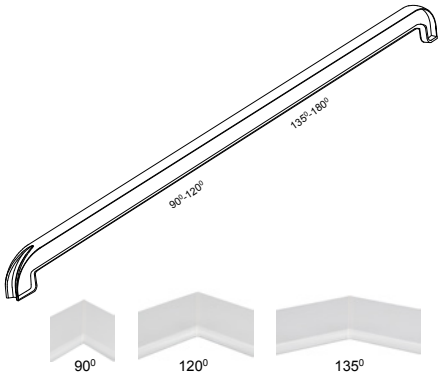
180° joining element

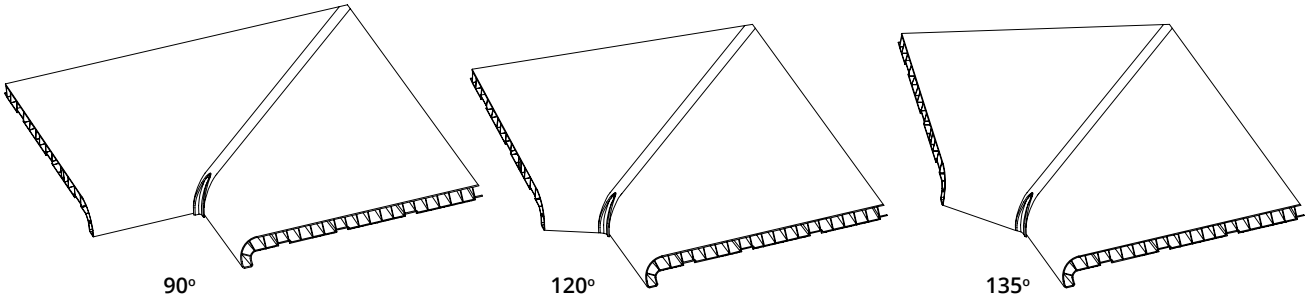
The 180° joining of sills is achieved with a gap of 1.5 mm per 1 m of sill for the joining cap (depending on the total length of the two sills being joined). The gap is covered by the sill joining cap. Elements are made from plastic, PVC.



90°, 120°, and 135° angle joining element

The element allows two sills to be joined at an angle of 90°, 120°, and 135°. It is recommended that the two sills being joined lie in the same plane. Elements are made from plastic, PVC.






INTERIOR DESIGN


INTERIOR DESIGN


INTERIOR DESIGN


TSV
window sill


werzalit®
since 1923.
TSV
PM

TSV ROMANIA - Apahida Warehouse
407042, Șesului street
Apahida | Cluj | Romania
E-mail: info@tsvline.ro
Phone: (+40) 736 104 353

TSV ROMANIA - Central Area Warehouse
400228, Corneliu Coposu street 167
Cluj - Napoca | Cluj | Romania
E-mail: info@tsvline.ro
Phone: (+40) 723 300 257

TSV ROMANIA - depozit București
070000, Sperantei street 101
Eli Park 3, Buftea,
Bucharest | Romania
E-mail: office@tsvline.ro
Phone: (+40) 739 875 311

www.tsvline.ro

TSV HUNGARY
2142 Nagytarcsa, Alsó Ipari körút 1 |
Budapest | Hungary
E-mail: office@tsvline.hu
contact@tsvline.hu
Phone: +36 70 6351917; +36 70 6352353

TSV ITALY - Center Warehouse
05100 Terni (TR),
Via Maestri del Lavoro n. 24/B
Phone: +39 0744 171 1779
E-mail:: commerciale@pmpartner.it

TSV ITALY - North Warehouse
24043 Bergamo, Fornovo San Giovanni
via Cascina Bruciata 2 (BG)
Phone: +39 0363 184 6528
E-mail: info@pmpartner.it

TSV ITALY - South Warehouse
Santa Sofia D`epiro (CS)
E-mail: info@pmpartner.it
Phone: +39 0984 655123

www.tsvline.com