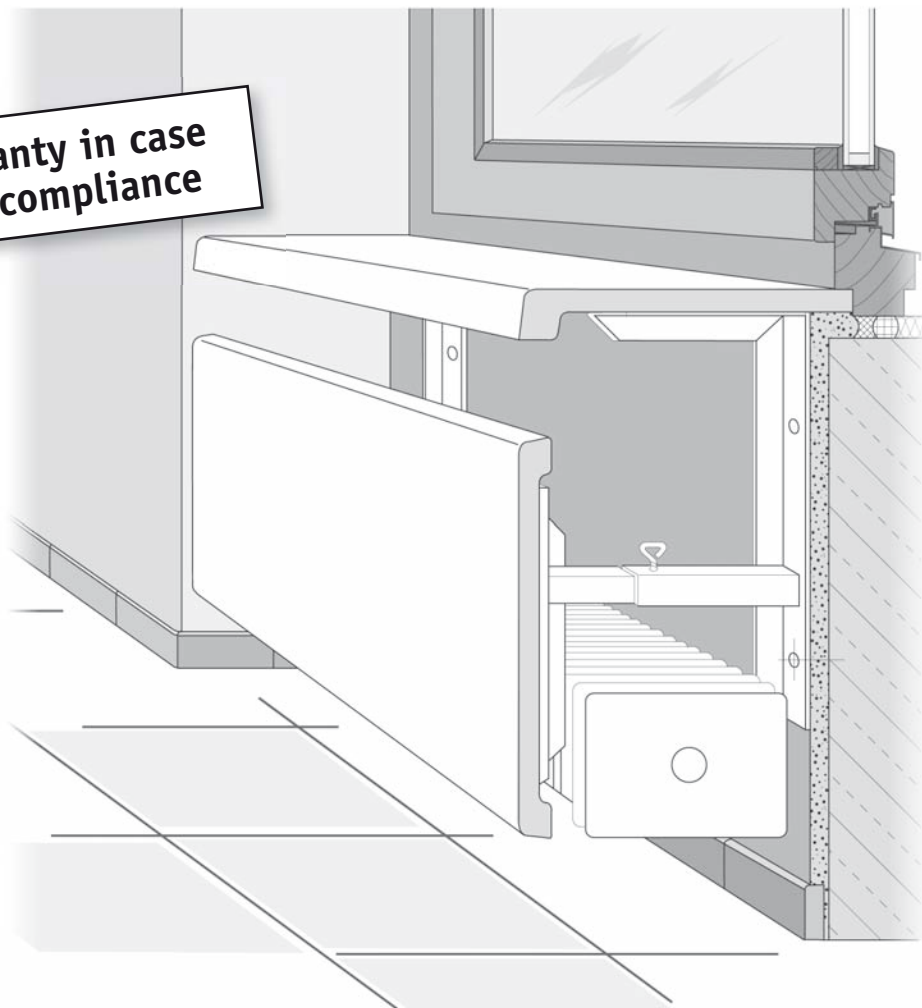


WINDOW SILLS

No warranty in case
of non-compliance



INSTALLATION INSTRUCTIONS

Version 05/2015

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LASTING. BEAUTY.



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instructions
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www.werzalit.com

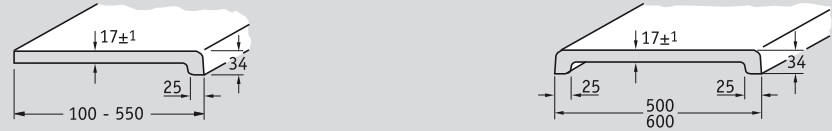
compact window sill

Standard length 4250 mm



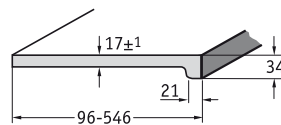
exclusiv window sill

Standard lengths 3000 mm, 4250 mm and 6000 mm



expونا window sill

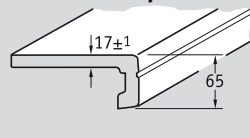
Lengths up to 6000 mm



System window sills with fixed drop-nose

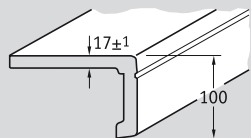
Standard lengths (mm)

exclusiv-drop-nose



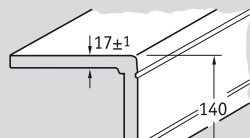
6000

exclusiv-drop-nose



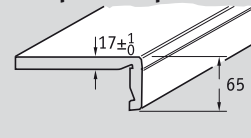
6000

compact-drop-nose



6000

compact-drop-nose



4250

Applications

Indoors, including rooms with high moisture levels (bathroom, kitchen, etc.)

Sealing cut edges

Sealing cut edges is not required for normal installations.

Exception: Only when used in rooms that are constantly exposed to high moisture (swimming pools) or constantly at risk of water exposure, such as regular condensation from poorly insulated windows, is it necessary for **all** cut edges to be sealed free of pores with WERZALIT edge sealant. ABS edges do not count as sealing.

Elongation

Possible elongation of the window sill due to moisture absorption (in some cases 1–3 mm/linear m) must be taken into consideration during fastening, e.g. with oblong holes or oversized holes in the support brackets. Sufficiently large expansion joints must be left at the side connections (wall connection).

☞ See page 4

Important: Building separating joints may not be bridged over!

Note the tolerance dimensions

During installation in a groove (in the window frame), the window sill must be rebated on the back side if necessary to compensate for any possible thickness tolerances.

Installation

The window sills must be installed horizontally level and aligned. An incline towards the window frame is not permitted.

Cleaning and care

All typical household cleaners may be used except for highly caustic, bleaching or scouring cleaning products. (**Exception:** Scouring cream)

Cutting and fastening

Use typical wood-working tools.

Circular table saws: Optimal forward feed speed approx. 5 m/min. Saw blade overhang max. 10 mm. Decor side facing up. Use a hard metal saw blade with a high number of teeth, such as a 300 mm diameter saw blade with 96-tooth alternate top bevel or 60-tooth hollow-tooth flat-top. Cutting speed approx. 60 m/sec. depending on the rotating speed and blade diameter, e.g. 4000 rpm, diameter 300 mm.

Proven tooth types: Hollow-tooth, alternate top bevel, hollow-tooth flat-top

Circular hand saws: Decor side facing down, clean cuts can only be achieved with a guide rule.

Drilling: Spiral bit HSS

Always start drilling on the decor side (for through-holes), high speed.

Milling: Use tools with hard metal coatings, cutting angle 20°.

Fastening with screws

Use cylinder sheet screws or particle board screws for fastening to brackets.

Fastening in a mortar bed

This is only possible with the use of wall claws.

Important: No bonding occurs between the window sill and the mortar bed. Due to possible length changes of the window sill, this is only possible for window sills with a length of **max. 2000 mm**. ☞ See page 6

Fastening with spray foam

The low shear strength of spray foam permits only very low elongation, meaning that it may only be used for lengths of **max. 3000 mm**. ☞ See page 5

We strongly recommend only using 2-component foam because it does not expand further due to moisture absorption.

1-component spray foam is generally moisture-curing, which can lead to bulging of the window sill (customer complaints) due to continued expansion after unclamping!

Bonding

We recommend only Sika Bond T2, for more detailed information

☞ See page 5

More information at:

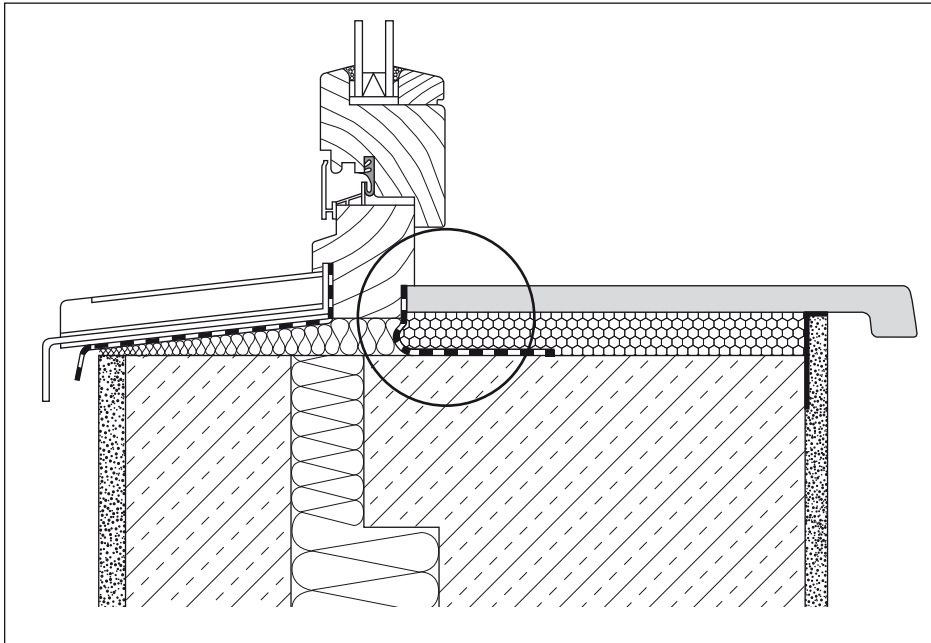
<http://gbr.sika.com/en/builders-merchants-diy/builders-merchants-diy/02a024/02a024sa08.html>

Other installation guidelines

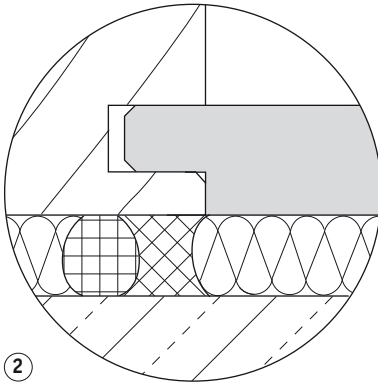
Especially in regard to the connection joints to the window frame and to the wall, the guidelines applicable in England must be observed. ☞ See page 3

WERZALIT processing service

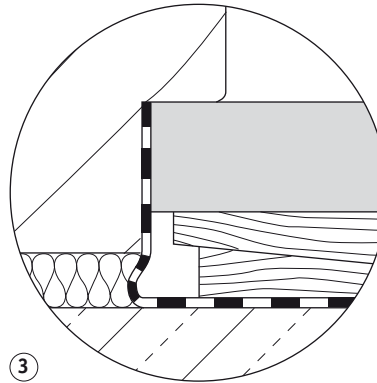
If desired, we perform factory finishing work such as split cuts, cutting to fixed lengths, notching, position marking on the back side of the window sill and edge sealing with 2 mm ABS thick film laminate.



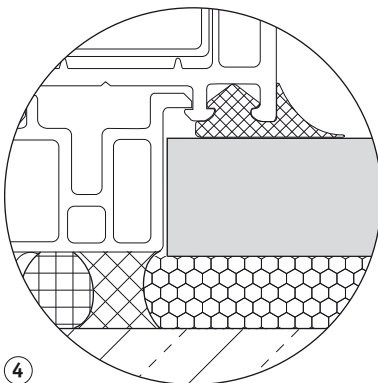
①



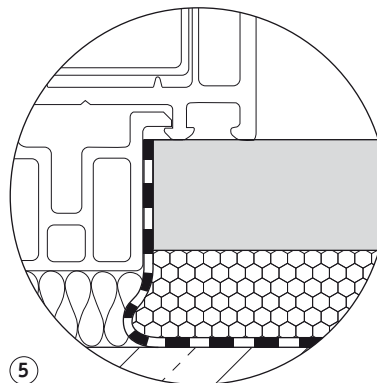
②



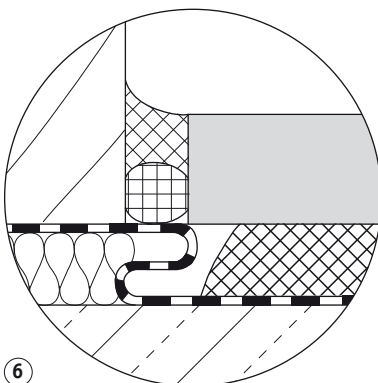
③



④



⑤



⑥

Guidelines, regulations

In accordance with the applicable German Energy Saving Ordinance (EnEV), the inner sealing of the connection joints between the window frame and the walls must be produced with a lastingly air-tight seal according to up-to-date construction practices. The EnEV applies to all new buildings as well as renovations.

The sealing of the connection joint must generally be implemented according to the construction principle of "tighter seal inside than outside". This means that the requirements of an air-tight seal apply to the inner window connection joint. The outer connection joint, on the other hand, must be vapour-permeable and tight against driving rain.

The type of sealing is determined according to the building conditions (uneven surfaces, dimensional differences, condition of the reveal or breasts, plaster, masonry type, etc.)

Please refer to the guidelines listed on page 2.

①

Diagram of window connection

②

Window sill connection in groove of the window frame

Window connection to the wall:
Room-side air-tight sealing with backfilling material and permanently elastic sealant.

③

Window sill connection as butt joint in a rebate (wedged on the underside)

Window connection to the wall:
Room-side air-tight sealing with sealing film.

④

Window sill connection as butt joint in a rebate with seal profile

Window connection to the wall:
Room-side air-tight sealing with backfilling material and permanently elastic sealant.

⑤

Window sill connection as butt joint in a rebate

Window connection to the wall:
Room-side air-tight sealing with sealing film.

⑥

Window sill connection as butt joint with sealant joint

Window connection to the wall:
Room-side air-tight sealing with sealing film.

Fastening with Brackets • Side Connection • Butt Joints

① – ③

Fastening with WERZALIT window sill brackets

①

Fastening spacings

- For only 2 brackets, max. 600 mm in normal applications
- For 3 or more brackets, max. 800 mm in normal applications
- Max. 500 mm if, for instance, it should be possible to walk on the window sill
- Clear overhang of max. 100 mm

②

Brackets

For the WERZALIT brackets, it is possible to use either the short or the long arm as the support arm.

For high loads, such as window sills that can be walked on, the long arm should always be against the wall.

Anchors and screws must be selected according to the required load capacity and the substrate present.

③

Fastening

For fastening the window sill to the brackets, we recommend WERZALIT cylinder sheet screws 3.9 x 16 or pan head screws 4.5 x 16, predrilled with 3.2 mm diameter.

The possible elongation of the window sill must be taken into account, for example with oblong holes or larger holes in the brackets.

④

Side connection for all installation types

On the side connections to the window reveal, an expansion joint of 1.5 mm/m of window sill length per side must be provided and must be filled with an insulation strip of mineral wool before plastering in order to prevent plaster from getting into or filling the expansion joint.

To prevent the plaster edge from tearing off in event of elongation, a strip of film must be inserted between the window sill and the plaster edge or a trowel cut must be made.

⑤ – ⑥

Covered butt joint

(Only for compact, exclusiv and system window sills) Longitudinal joints must be created with expansion joints of 1.5 mm/m (with respect to the total length of both adjoining window sills). To cover the expansion joint, screw a WS connection profile (for system window sills: WS connection profile B) onto one cut edge of the window sill using particle board screws 3 x 20. For installation on brackets, 2 brackets must be used at the butt joints, and the overhang of the window sill must not exceed 40 mm (not available in all colours and decors).

⑦

Covered mitred corners

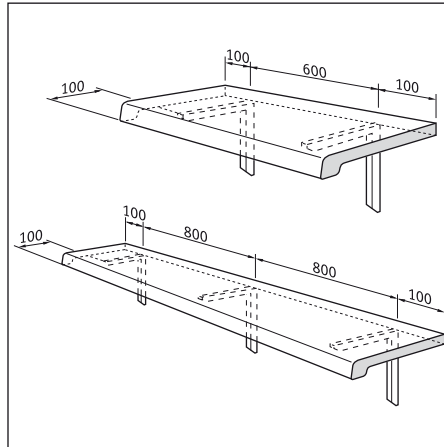
(Only for compact, exclusiv and system window sills) Covered mitred corners can be implemented as shown in ⑤ and ⑥ using WS connection profiles (not available in all colours and decors).

⑧

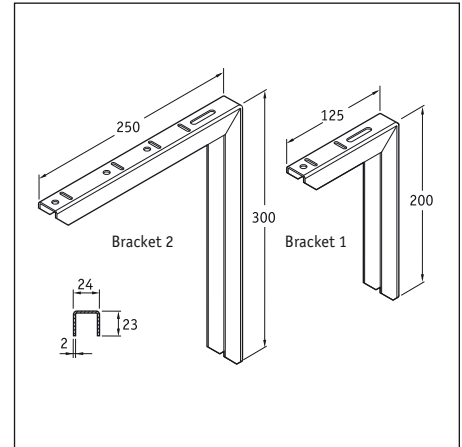
Alternative: Glued mitred corners

Mitred corners can be implemented as glued corners with milled Lamello connectors (always apply the Lamello milling cutter to the decor side due to the thickness tolerances of the window sills).

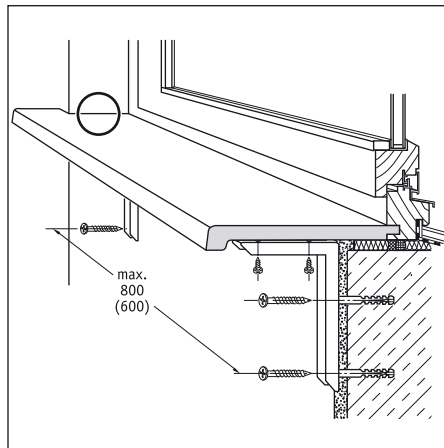
The possible elongation must be taken into account for glued corners. For this reason, a covered butt joint with WS connection profile should be created after no more than 2000 mm of corner length (not available in all colours and decors).



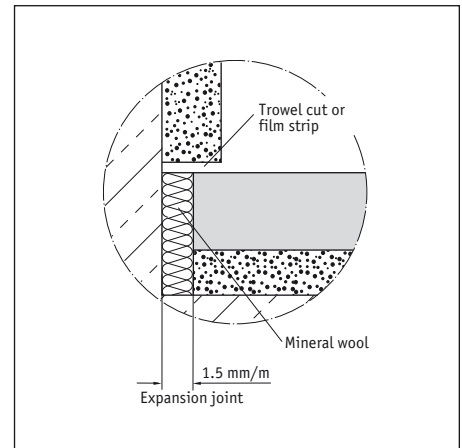
①



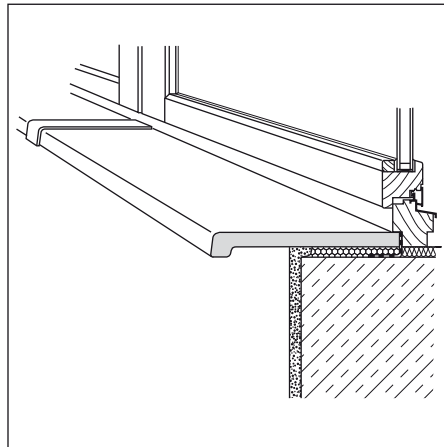
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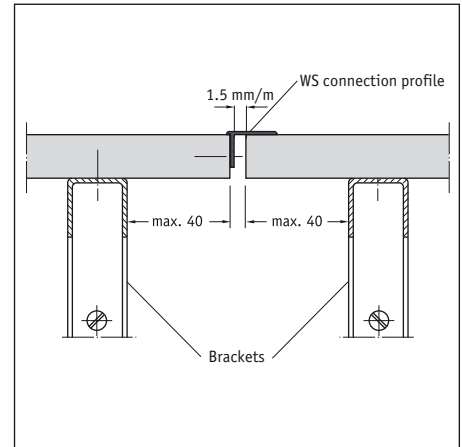
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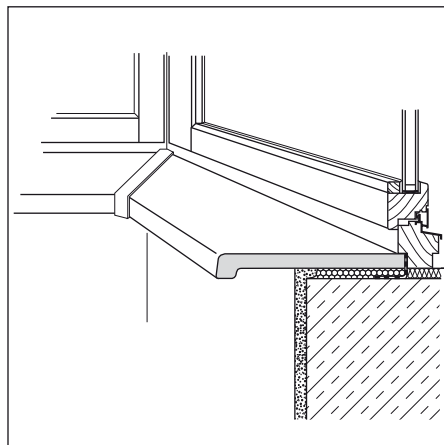
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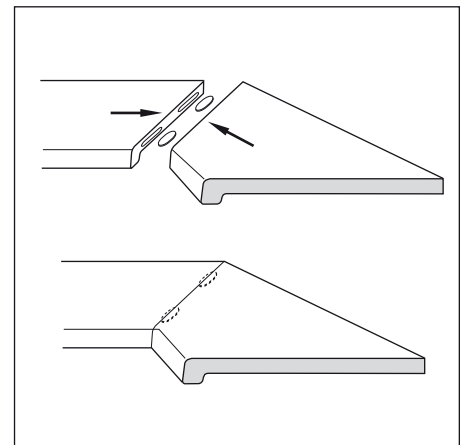
⑤



⑥

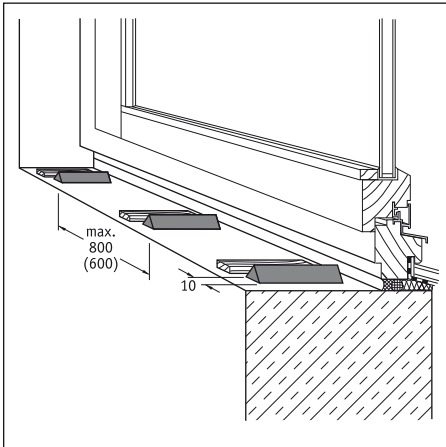


⑦

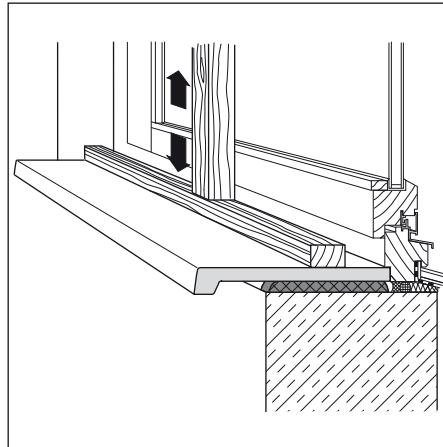


⑧

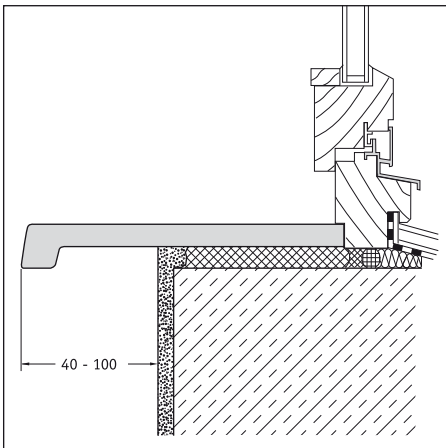
Bonded Installation • Fastening with 2-Component Spray Foam



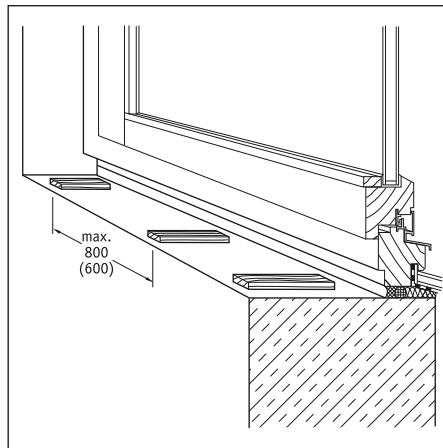
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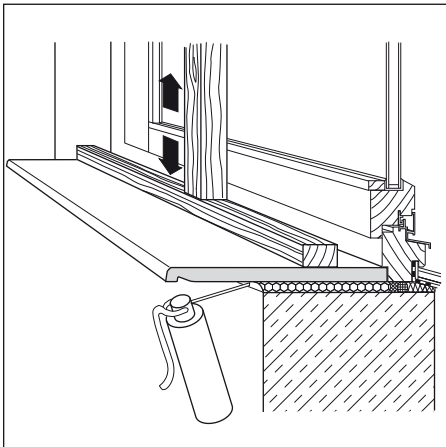
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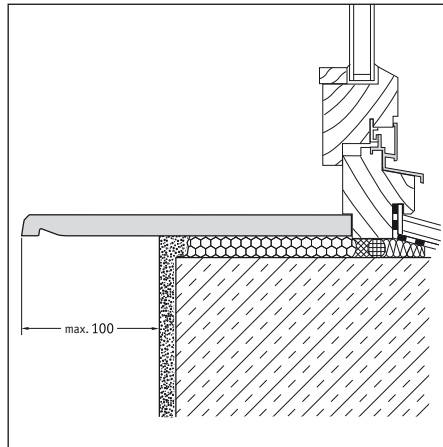
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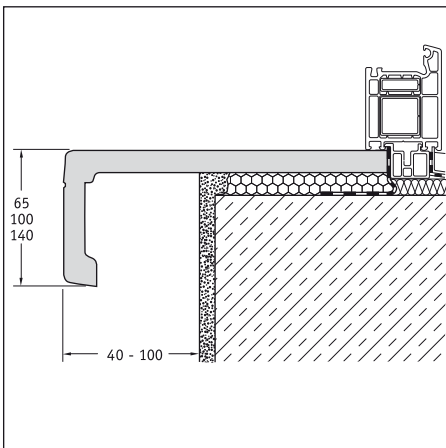
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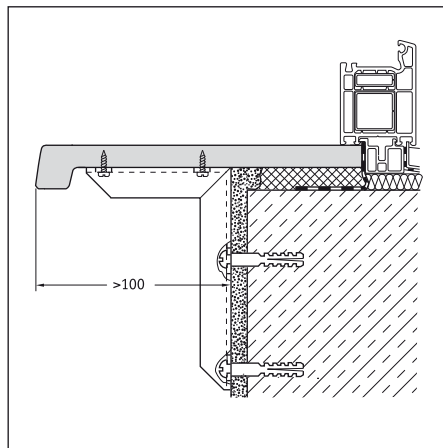
5



6



7



8

1 - 3

Bonded fastening with SikaBond T2

Bonding with SikaBond T2 produces a stress-free and elastic connection between the substrate and the window sill. This method is therefore particularly well suited for window sills up to 6000 mm in length. Uneven substrates can be easily compensated for. Any elongation of the window sill is absorbed by the adhesive. It is absolutely essential that the minimum adhesive layer thickness (bead height) of 1.5 mm/linear m of window sill be complied with.

Provide sufficiently large expansion joints at the side connections. *See page 4, Figure 4*

WERZALIT window sills can be bonded to practically all building materials, including concrete, solid brick, solid clinker, gypsum, lightweight concrete, wood, aluminium and steel. The substrate must be firm, clean, dry and free of grease.

After fitting the window sill, the adhesive points on the back side of the window sill must be cleaned with the cleaning agent Sika Haftreiniger 1 (primer) and a lint-free cloth and then be allowed to air for at least 5 minutes.

1

For precise positioning of the window sill and to ensure compliance with the minimum adhesive layer thickness, appropriately thick spacer supports must be placed on the substrate (wooden slats or the like). The adhesive beads are applied in lines perpendicular to the length of the window sill as triangular beads next to the spacer elements.

- Bead height at least 1.5 mm/linear m of window sill, must also be at least 5 mm higher than the spacer
- Bead width at least 10 mm
- Bead spacing for only 2 adhesive beads: max. 600 mm
- Bead spacing for 3 or more adhesive beads: max. 800 mm

2

After bonding, the window sill must be braced against the window lintel or weighted down sufficiently until the adhesive has finished curing (apply pressure for approx. 4 hours).

4 - 8

Fastening with 2-component spray foam

Suitable for window sills up to 3000 mm long, note the instructions on page 2!

- Provide sufficiently large expansion joints at the side connections. *See page 4, Figure 4*

4

For precise positioning of the window sill on the substrate, appropriately thick spacer supports must be placed at intervals of max. 800 mm (3-point support) or 600 mm (2-point support).

5

Important: Before spraying in the 2-component spray foam, the window sill must be braced against the window lintel or weighted down sufficiently. Then spray the foam into the area of the spacer supports. It is not necessary for the foam to cover the entire surface to achieve the necessary adhesive strength. However, complete filling of the joint in the front area between the breast and the window sill is recommended. The window sill must remain under pressure until the spray foam has cured. Follow the usage instructions of the manufacturer.

8

For bonding or foaming

For an overhang greater than 100 mm, it may be necessary to use additional brackets.

- Before bonding to joint sealing strips, always obtain the approval of the product manufacturer. Otherwise, there is a risk of incompatibility and/or bonding defects!!

Fastening with Wall Claws • Installation with Utility Panel/Ventilation Grille

①

Fastening with wall claws in a mortar bed

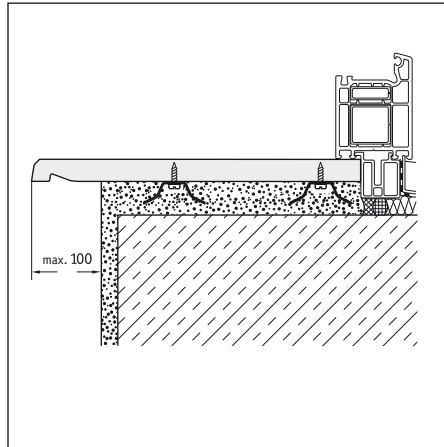
Fastening with wall claws in a mortar bed only permits a small amount of elongation and is therefore only suitable for window sills up to a length of **max. 2000 mm**. *See page 2*

Two wall claws situated in a row are screwed in with cylinder sheet screws 3.9 x 16 from the WERZALIT product selection or pan head screws 4.5 x 16.

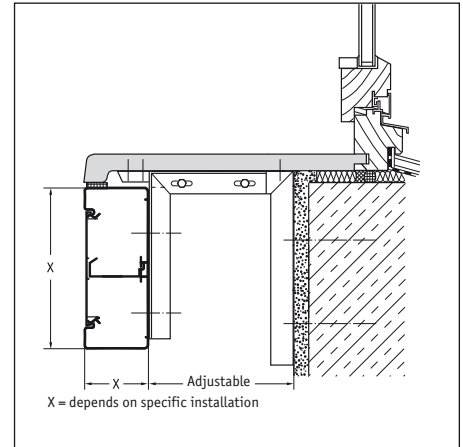
• Fastening spacing of the wall claws: max. 600 mm. For precise positioning of the window sill on the substrate, appropriately thick spacer supports must be placed underneath. *See page 5, Figure ④*

Until curing of the mortar, the window sill must be braced against the window lintel or weighted down sufficiently.

See bonded installation, page 5, Figure ②



①



②

②

Installation with installation channel on adjustable brackets

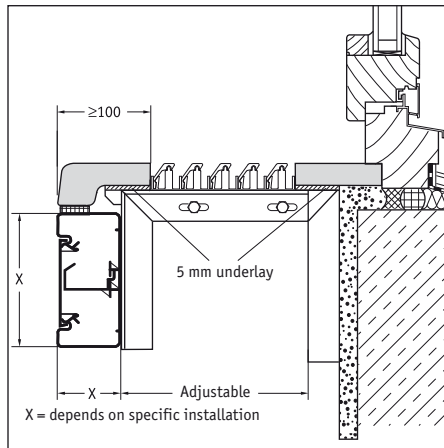
Typical installation channel. Adjustable brackets are available from WERZALIT upon request.

③ - ④

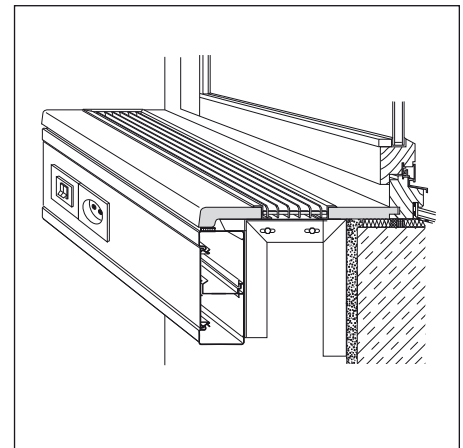
Installation with installation channel and continuous ventilation grille

Window sill with typical installation channel and continuous grille on adjustable brackets (brackets available from WERZALIT upon request).

Example grille manufacturer Emco: www.emco.de
For continuous grilles, the front window sill should be at least 100 mm wide.



③

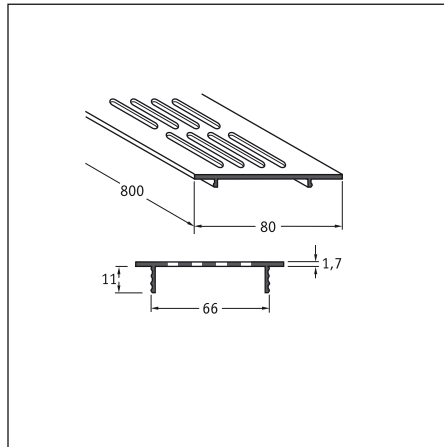


④

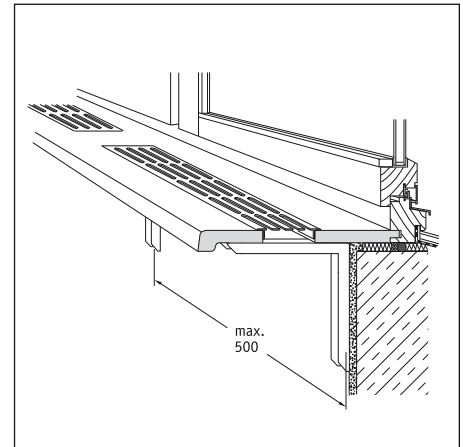
⑤ - ⑥

Installation with ventilation grille (WERZALIT)

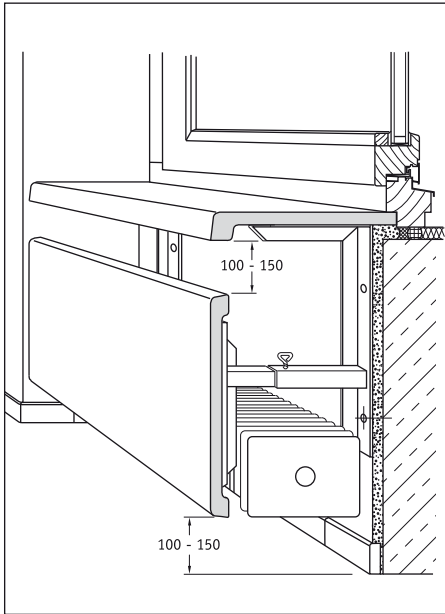
Window sill with WERZALIT aluminium ventilation grille 800 x 80 mm, cut-out dimensions 785 x 67 mm, glue on the ventilation grille with silicone. We recommend using a hand router for creating the cut-outs. Ventilation cut-outs weaken the stability of the window sill. For this reason, the bracket spacing must be reduced from max. 600 mm or 800 mm down to max. 500 mm. In the area of the ventilation grilles, the brackets must extend to 30 mm from the front edge of the window sill. Between the individual ventilation grille cut-outs, at least 200 mm of window sill must remain intact over the entire window sill depth.



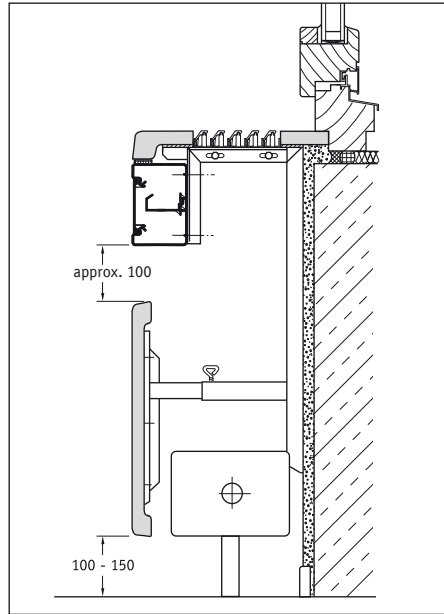
⑤



⑥



1



2

1

Fastening the window sill on telescoping brackets
Installation of the brackets and fastening of the window sills. *See bracket installation, page 4*
The telescoping brackets (available on request) offer the additional possibility of fastening a vertical window sill double profile as removable convactor panelling.

2

Fastening on telescoping brackets
Example with customer-provided installation channel, continuous ventilation grille and additional convactor panelling.

3

exclusiv-drop-nose system window sill with 140mm fixed drop-nose
Installation channel to be procured by the customer.

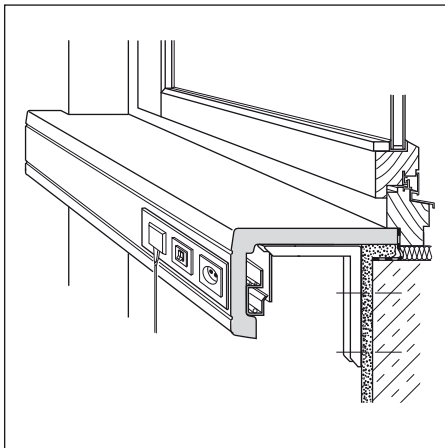
Bracket installation *See page 4*

4

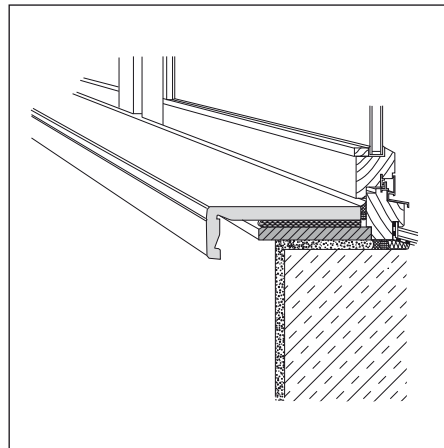
Overtop window sill
compact-drop-nose system window sill as overtop window sill on an existing sill.

Fastening with adhesive or foam, depending on the situation.

Butt joint connection to window frame with sealant joint *See details, page 3*



3



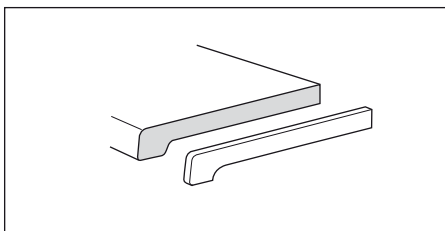
4

5 - 10

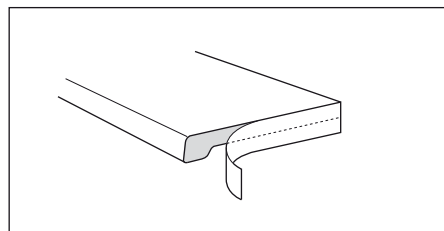
Edge sealing

5

Factory applied ABS edges
(not for system window sills)
Open cut edges can be laminated at the factory with ABS edges (2mm thick film laminate). This ABS edge sealing is matched to the ordered window sill decor and guarantees a seamless fit in furniture quality. For the expona window sill, the ABS edge sealing of the front and side edges can be implemented in the same decor as the window sill or in a different colour.



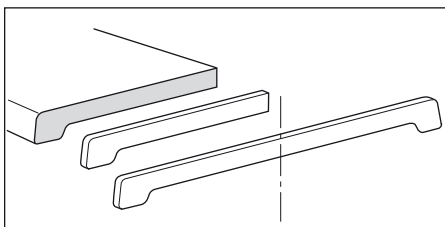
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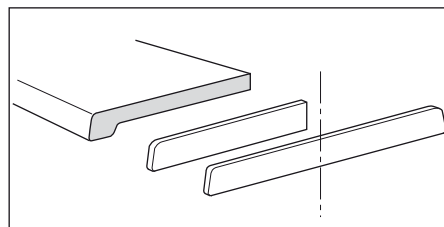
6

6

Laminate strips affixed by the customer
Lining of the open window sill edges with WERZALIT laminate strips in the same colour or decor that are coated with thermoplastic glue (not available for all colours and decors).
Apply with a hot iron. Setting: Silk/wool (approx. 145 °C). Finish the edges afterwards with a file and sandpaper.



7

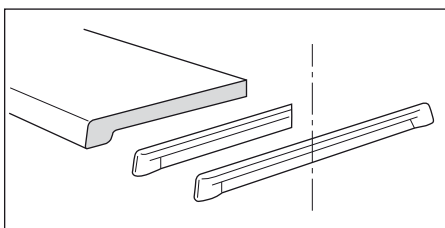


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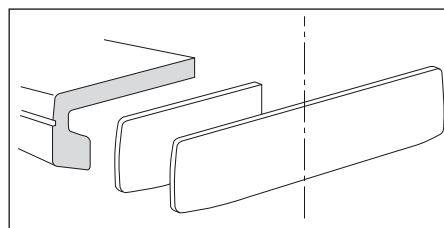
7 - 10

Overlapping plastic end caps
(not for expona window sill)
Covering of the window sill open edges with plastic end caps with overlapping borders, also for system window sills compact-drop-nose and exclusiv-drop-nose (not available in all colours and decors).

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 Pattex glue cartridges.



9



10

Product Description • Technical Data

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
1. Density	700 – 800	kg/m ³	EN 323
2. Flexural strength	30 – 35	N/mm ²	EN 310
3. Elasticity modulus	4000 – 5000	N/mm ²	EN 310
4. Transverse tensile strength, vertical to the surface	1.0 – 2.0	N/mm ²	EN 319
5. Screw withdrawal strength ¹⁾	800 – 1300	N	WERZALIT TEST STANDARD
6. Swelling after storage in water at 20 °C	after 2 h	0.3 – 0.6	%
	after 24 h	5.0 – 8.0	%
7. Moisture content	5 – 10	%	EN 322
8. Temperature resistance under	permanent load	-50 to +90	°C
	temporary load	+180	°C
9. Fire behaviour, material class (B2 = normal flammability)	B2	DIN 4102	
10. Length change due to moisture/heat exposure ²⁾	1 – 3	mm/m	WERZALIT TEST STANDARD
11. Thermal conductivity λ 10	0.18	W/m · K	DIN 52 612
12. Water vapour permeability, diffusion-equivalent air layer thickness	5 – 15	m	DIN 52 615
13. Cross-cut test ³⁾	Gt 0A – Gt 1A	EN ISO 2409	
14. Scratch resistance	3 – 5.5	N	EN 438
15. Brinell hardness ⁴⁾	60 – 65	N/mm ²	WERZALIT TEST STANDARD
16. Abrasion behaviour	200 – 300	U	EN 438
17. Light fastness ⁵⁾	Level 6 – 8	DIN 54 004	
18. Chemical resistance	good to very good	EN 438	
19. Cigarette burn resistance	resistant to burns	as for EN 438	

¹⁾ 4 mm particle board screw, using a hole of 3 mm diameter, 10 mm deep

²⁾ Maximum expected length change under extreme climate fluctuations

³⁾ Gt 0A is the best, Gt 4A is the worst value

⁴⁾ 1000 N, 15 s application time, (force/area)

⁵⁾ For colour group Emotion light-fastness level 6 – 7

This technical data sheet can and should only be considered to provide non-binding advice.

We ask that all information concerning working with our products be adapted to the local conditions and the materials used.

If you have additional questions, please contact our Building Service department. Subject to changes due to technical improvements.

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