



Remarks

This Design + Installation Manual contains basic details and information regarding planning and execution.

Further information such as

- general sales conditions
- colour range
- availability
- prices
- etc.

to be obtained from local SWISS-PEARL distributor.

Validity

At the date of project execution the latest edition of the design + installation manual is valid as available on site: www.swisspearl.com

Wind load

All details regarding fastening as set out in this Manual correspond to Swiss building standards, i. e. wind velocity up to 140 km/h. If for any project higher standards are applicable - architect / consultant / contractor have to ensure that all required adaptations shall be made in order to achieve compliance with such local standards and regulations.

Engineering responsibility

Structural engineer / contractor shall assume overall responsibility for the facade engineering and installation including :

- choice of material and type of sub framing
- determine sizes of all sub framing members
- determine all fastening details to sub framing and panels

Advantages

The rear ventilated facade provides the following advantages :

- optimised weather proofing
- ideal system view point building physics
- execution of the work regardless of weather and season
- proven detail solutions
- tolerances in dimensions can easily be accommodated
- sustainability
- durable and lasting value

Project specific ordering

The characteristics of the raw materials determine properties and appearance of SWISSPEARL panels. Subtle visual differences may occur between production batches. Orders should make allowance for this by itemising quantities accordingly, so that panels for adjacent surfaces on the same job can be supplied from identical production batches.

Cladding characteristics

Large size SWISSPEARL fibre cement panels with concealed fastening for rear ventilated facades (so called rain screen claddings).

System description

The SIGMA 8 system consists of large size SWISSPEARL panels of 8 mm thickness, the panel sizes within the maximum panel size of 1220 x 3040 mm. The concealed fastening is made with specifically designed component parts. The fibre cement panels are cut to size according to the requirements of each project and the anchors fitted to the rear side of the panels at the factory.

The panel attachment cleats are installed on building site onto metal or timber vertical sub framings.

- 1 SWISSPEARL panels 8 mm
- 2 Omega clip S8
- 3 Panel clip S8
- 4 U clip S8

SIGMA 8 Façade System



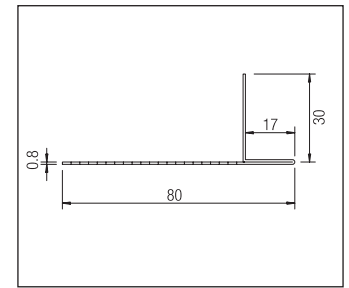
Panel sizes (mm)

SWISSPEARL	CARAT REFLEX XPRESSIV
Thickness	8 mm
Weight of panel	15 kg/m ²

Trimmed net panel sizes		
1220 x 3040	4' - 0 ¹ / ₃₂ " x 9' - 11 ¹¹ / ₁₆ "	■
1220 x 2500	4' - 0 ¹ / ₃₂ " x 8' - 2 ⁷ / ₁₆ "	■
920 x 3040	3' - 0 ⁷ / ₃₂ " x 9' - 11 ¹¹ / ₁₆ "	■
920 x 2500	3' - 0 ⁷ / ₃₂ " x 8' - 2 ⁷ / ₁₆ "	■

Available panel sizes depend on coating technology and colour. Please contact your local authorized SWISS-PEARL distributor.

Ventilation profile S8



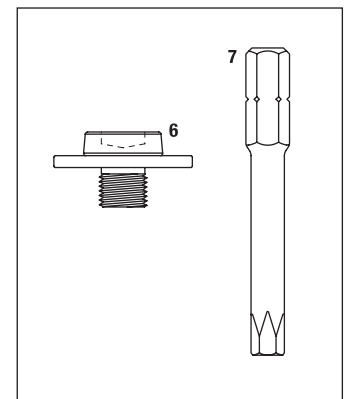
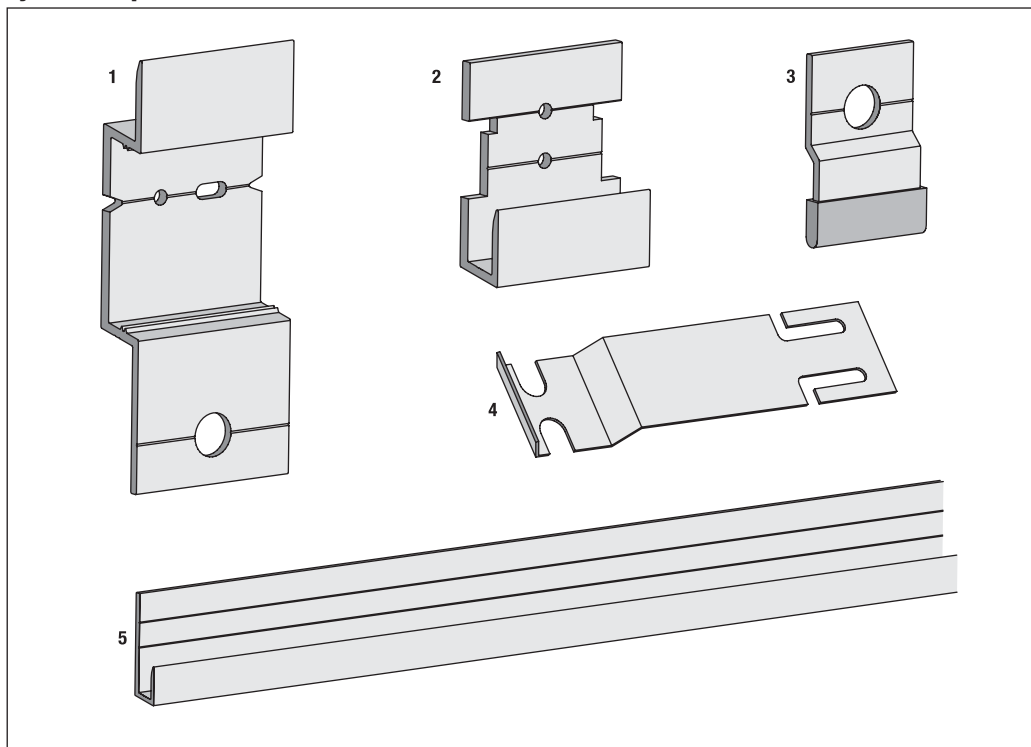
Perforated profile, raw aluminium, 0.8 mm thick, length 2500 mm

Technical data

- Density 1.8 g/cm³
- Modulus of elasticity 15'000 MPa
- Modulus of rupture 24 Mpa
- Bending stress design value 8 MPa
- Temp. Exp. Coefficient 0.01 mm / m1 / K
- Fire rating A2-s1,d0 non inflammable
- Frost proof according to EN 12467

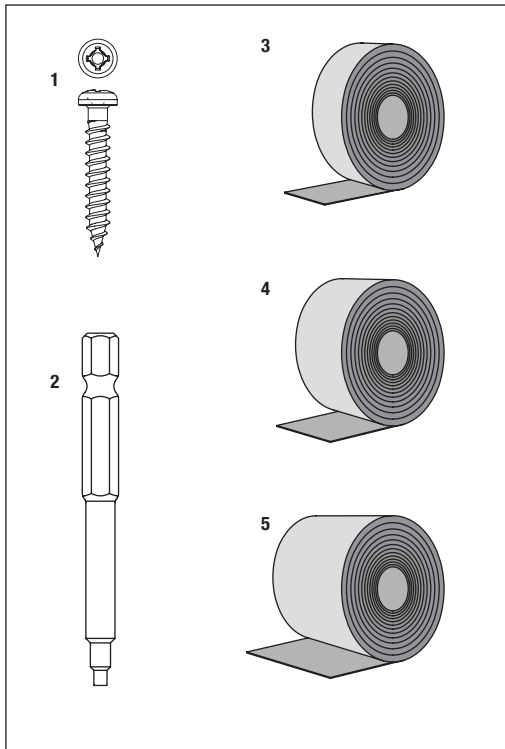
SIGMA 8 Façade System

System components

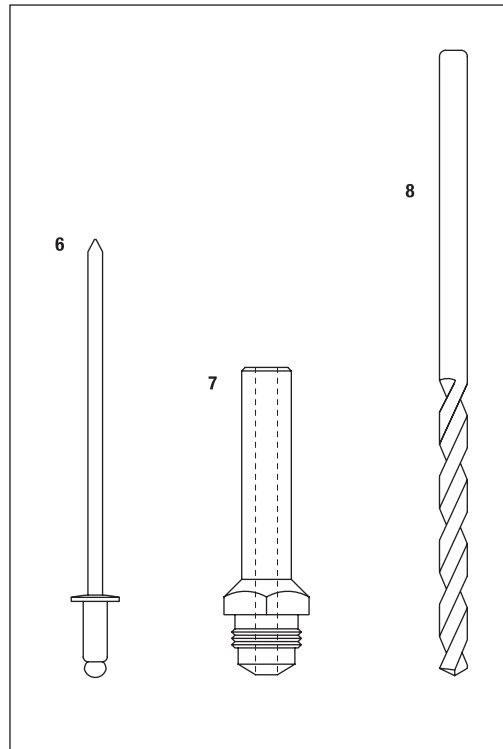


- 1 Omega clip S8, aluminium black anodised
- 2 U clip S8, aluminium black anodised
- 3 Panel clip S8, raw aluminium, with rubber cap
- 4 Panel fixing piece S8, aluminium powder coated, black
- 5 Continuous U clip S8 profile, aluminium black anodised, 3'000 mm long
- 6 Screw S8, stainless steel, M6 x 5 mm, T30 drive, including washer
- 7 Torx bit T30, 50 mm long

Components for timber sub frames



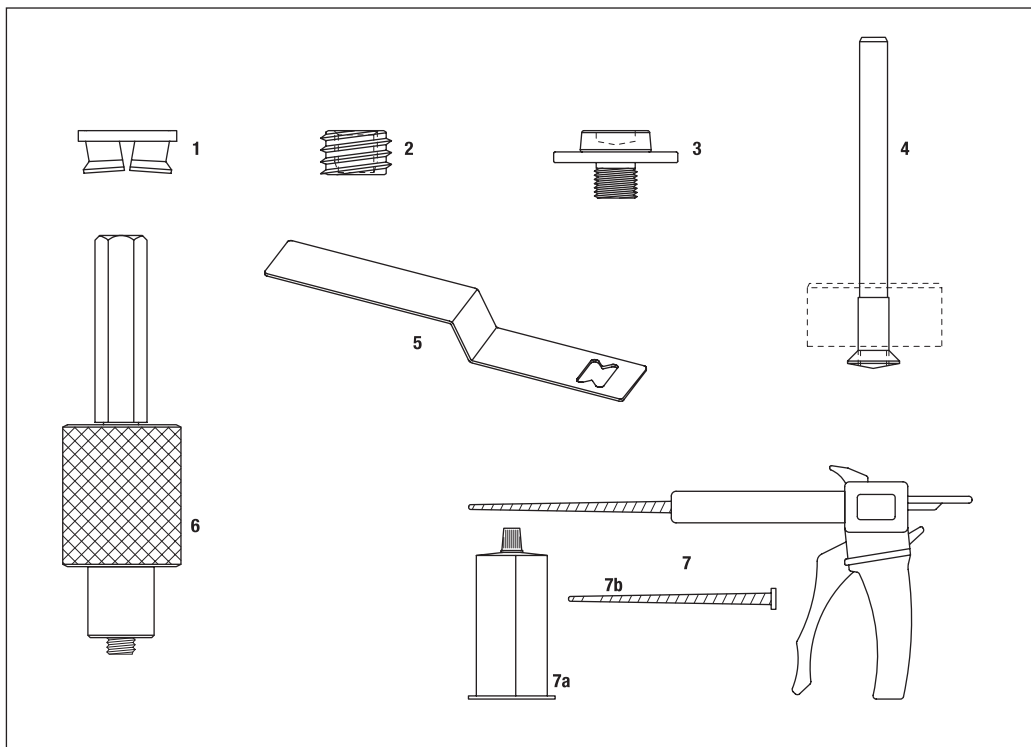
Components for metal sub frames



- 1 Screw S8, 4.8 x 30 mm, SR2 drive, stainless steel, head Ø 8.0 mm, powder coated black
- 2 Bit for SR2 drive, 70 mm long
- 3 EPDM band S8, 70 mm wide (20 m roll)
- 4 EPDM band S8, 160 mm wide (20 m roll)
- 5 EPDM band S8, 180 mm wide (20 m roll)
- 6 Rivet S8, 4.8 x 12 mm, head Ø 9.5 mm, powder coated black, grip range 5 - 7 mm
- 7 Nozzle S8 suitable to GESIPA Accubird®
- 8 Drill bit Ø 4.9 mm, 90 mm long, type A for aluminium, type S for steel

SIGMA 8 Façade System

Accessories to set additional anchors on site



The anchors are generally fitted into the panel rear side at the factory only. Additional required anchors can be installed into the panel on building site.

- 1 Anchor S8, stainless steel
- 2 Inner thread sleeve S8, stainless steel
- 3 Screw S8, stainless steel, M6 x 5 mm, T30 drive, including washer
- 4 Anchor drill bit S8, for router with depth gauge
- 5 Anchor installation key S8
- 6 Driver tool S8 to install Inner thread sleeve S8
- 7 Glue starter set S8 with cartridge, hand gun and 5 mixer nozzles
- 7a Glue cartridge S8 with 2 component glue
- 7b Mixer nozzle S8 for glue cartridge S8

Planning

Design and detail the cladding at an early stage to ensure that all components will be duly considered and properly coordinated so that the installation on building site will run smoothly.

Manufacturing

The panels are manufactured according to customer's order. At the factory, the panels are cut to size, the edges impregnated, the anchors installed into the rear face of the panel.

SIGMA 8 metal parts

All clips are system components and to be ordered together with the panels. The clips are to attach to panels and sub frames on building site.

Cladding joints

Joint width is nominally 10 mm and may not be narrower in order to allow any replacement of panels. The construction beyond might be visible through the open horizontal joints, therefore use dark and UV resistant material.

Rear ventilation

Ventilation cavity thickness must be at least 40 mm. Insulation layers to be well attached as not to obstruct the air flow within the void.

Ventilation gaps

Open gaps at bottom and top of cladding must be at least half as wide as thickness of ventilated cavity. Perforated screens (reducing the air flow), must be compensated by increasing the gap width accordingly.

Sub framing

Sub framings are to be made out of timber battens, metal or combinations thereof.

Engineer / sub frame system supplier / contractor are responsible for the engineering and installation of the sub frame, including all pertaining fasteners.

Wind proofing

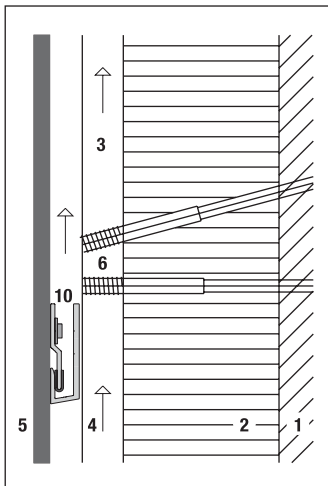
Use wind proofing layer to meet the requirements of open cladding joints whereas it is recommended to use dark and UV resistant material. Wind proofing layer to have a high vapour transmission coefficient.

Sealant material

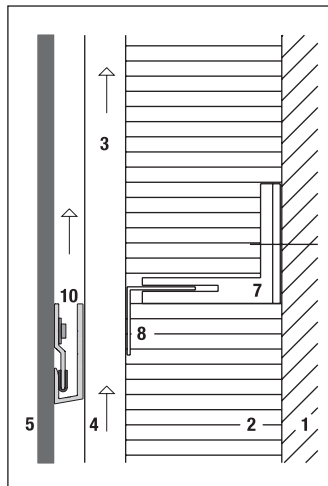
Generally the use of sealant is not required on a rear ventilated cladding. Where the use of sealant is unavoidable verify first its compatibility with the panel in order to avoid permanent staining.

SIGMA 8 Façade System

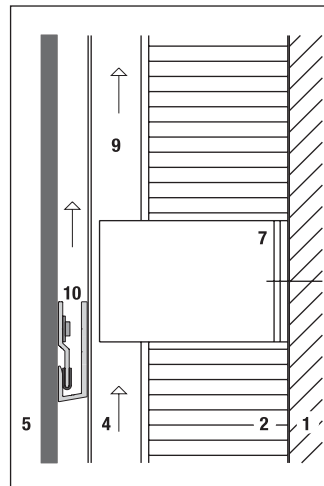
Sub framing systems



Double threaded dowels to keep timber batten in position



Horizontal angle and timber batten

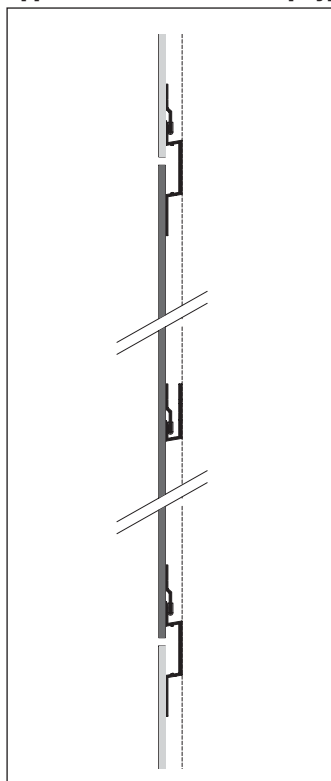


Vertical support profile fastened to brackets

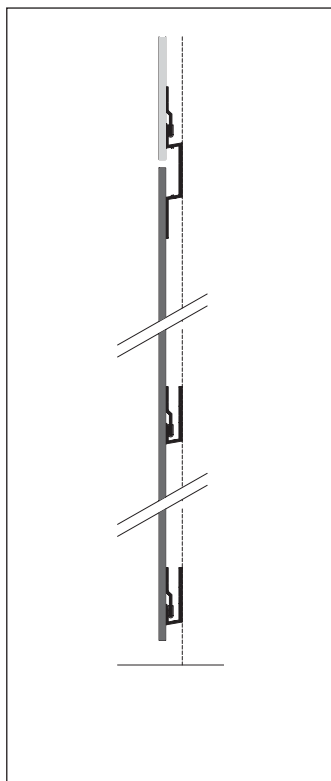
- 1 Wall face
- 2 Thermal insulation
- 3 Vertical batten
- 4 Rear ventilation
- 5 8 mm panel

- 6 Double threaded dowels
- 7 Bracket on PVC pad
- 8 Horizontal angle
- 9 Vertical support profile
- 10 SIGMA 8 metal parts

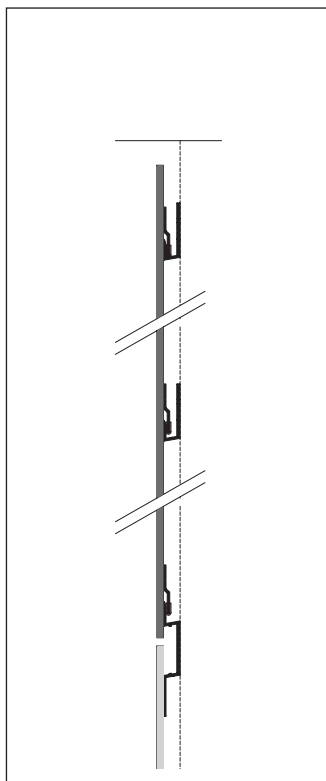
Application / location of clip types



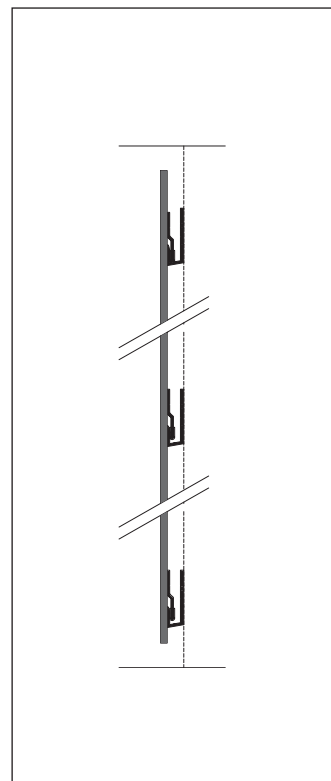
In mid cladding



Bottom of cladding



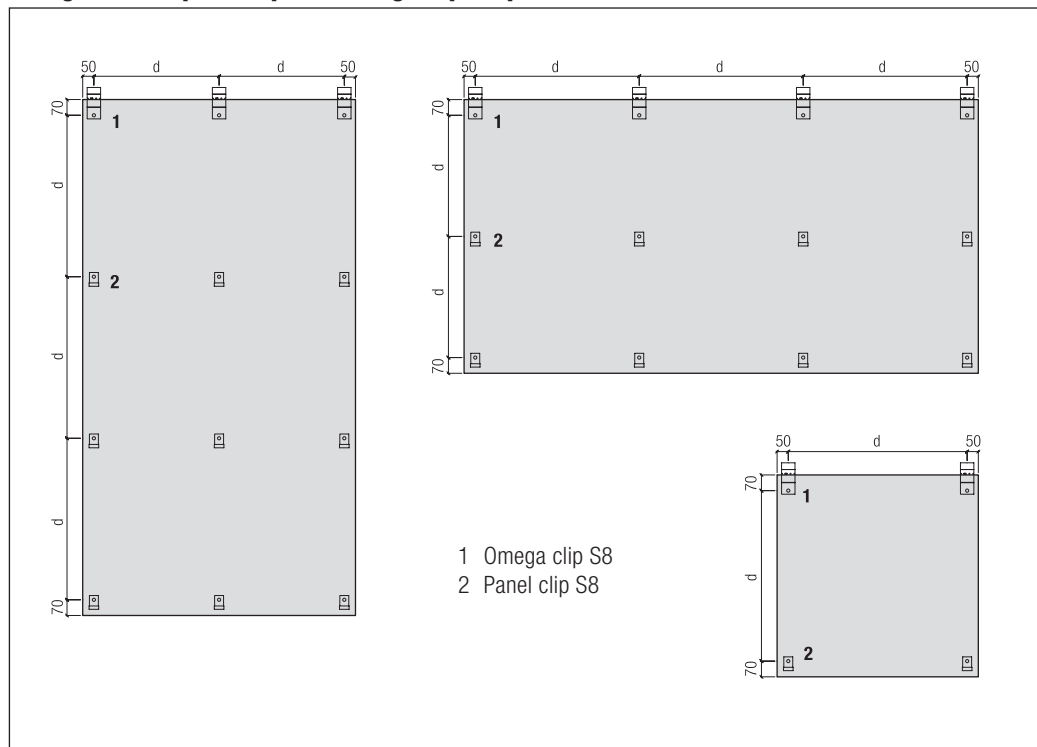
Top of cladding



Under sill or slab

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Configuration of panel clips and Omega clips to panel back



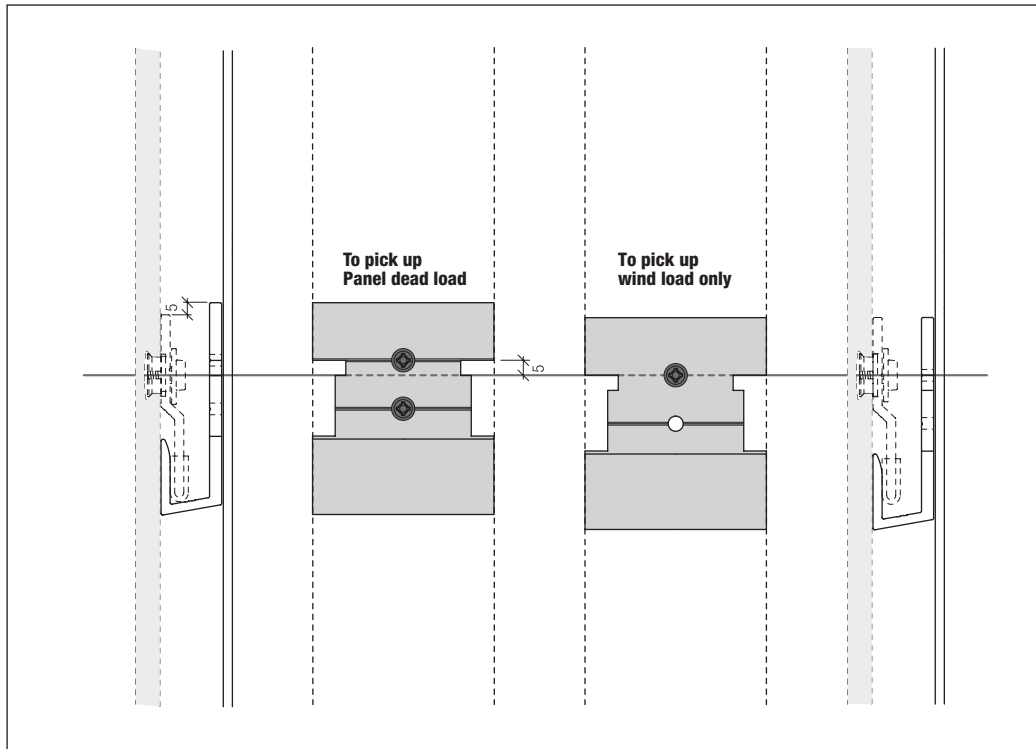
On the top row Omega clips S8 are anchored into the panel backside, rows below are all panel clips S8. The Omega clips pick up the panel dead load, the panel clips S8 take up wind load only.

Distance anchor to panel edge

The distances center point of anchors to panel edge are as follows :

Horizontally	50 mm
Vertically	70 mm

Fastening of U clips S8 for top panels



The U clips S8 to pick up wind load are fastened with one screw. In order to pick up the panel dead load, two U clips per panel need to be installed 5 mm higher. These 2 U clips are to be located on both panel ends within the upper part of the panel as per diagram next page. These two U clips are to be fastened by 2 screws.

Fastening details

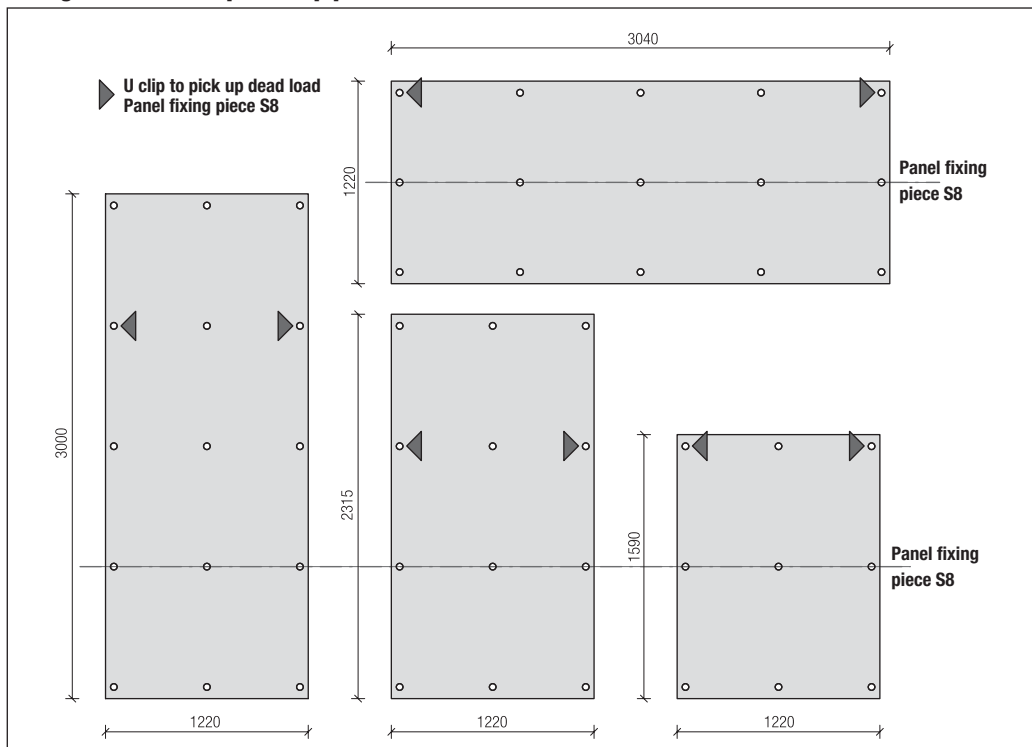
U clip to pick up wind load only :
1 screw SR2 S8 4.8 x 30 mm

U clip to pick up dead load :
2 screws SR2 S8 4.8 x 30 mm

Metal sub frames :
All U clips to be fastened
with 2 rivets S8 4.8 x 12-9.5 mm

SIGMA 8 Façade System

Configuration of U clips for top panels

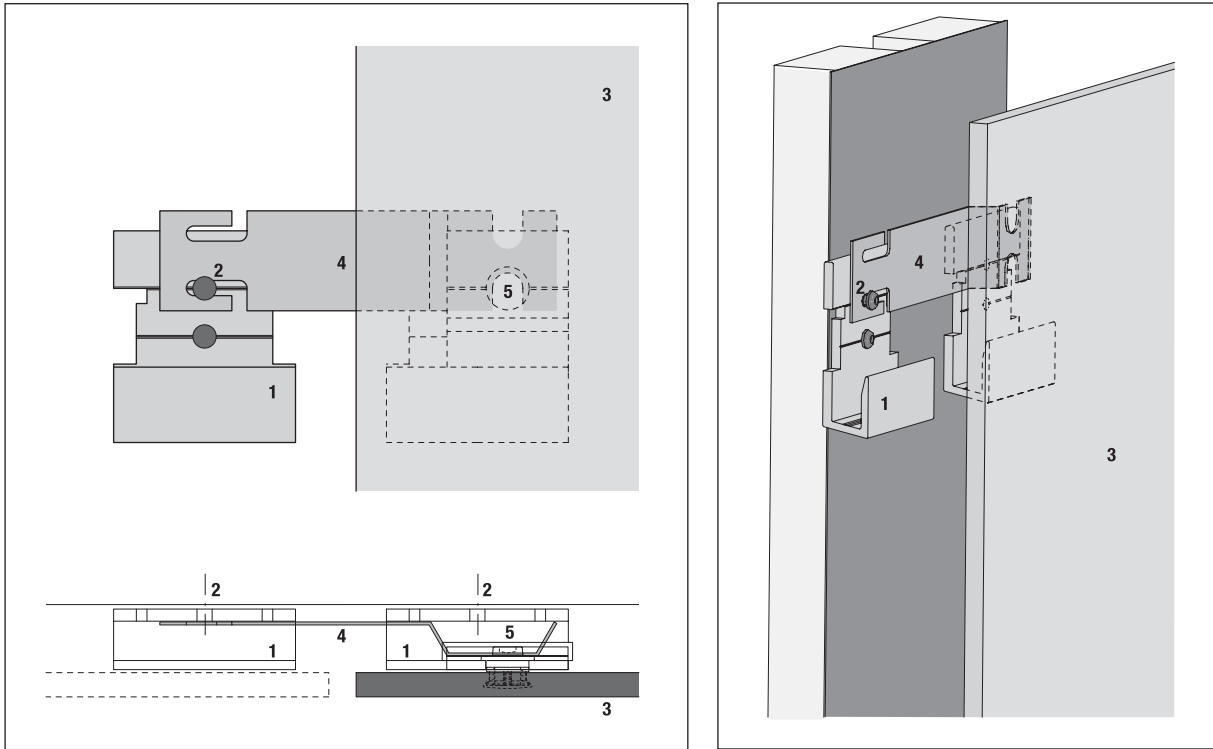


Panel fixing piece

In most cases the Omega clip fastened into the sub frame keeps the panel in position. For top panels under coping, window sills, etc. a special fixing piece is needed to keep the panel in firm position. Install on the second lowest row of fastening 1 fixing piece S8 per panel. To be located on right or left hand side depending on what direction the installation proceeds. The last fixing piece must be glued to sub frame.

Examples of top panel configurations. Two outer U clips in the upper panel zone have to be installed 5 mm higher. These two U clips pick up the panel dead load.

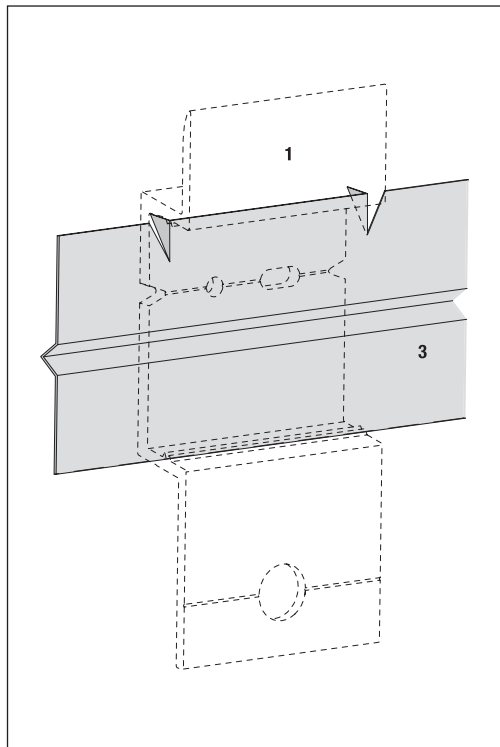
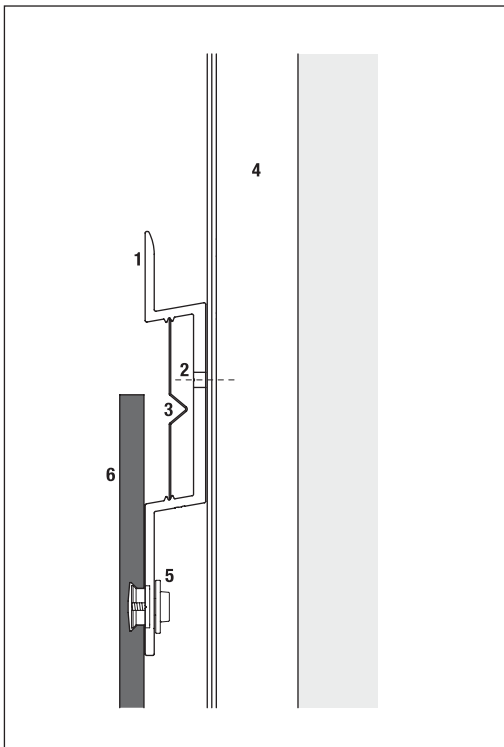
Installation of panel fixing piece S8



- 1 U clip S8
- 2 Fastening
- 3 8 mm panel
- 4 Panel fixing piece
- 5 Anchor S8

SIGMA 8 Façade System

Closure sheets for horizontal panel joints (optional)



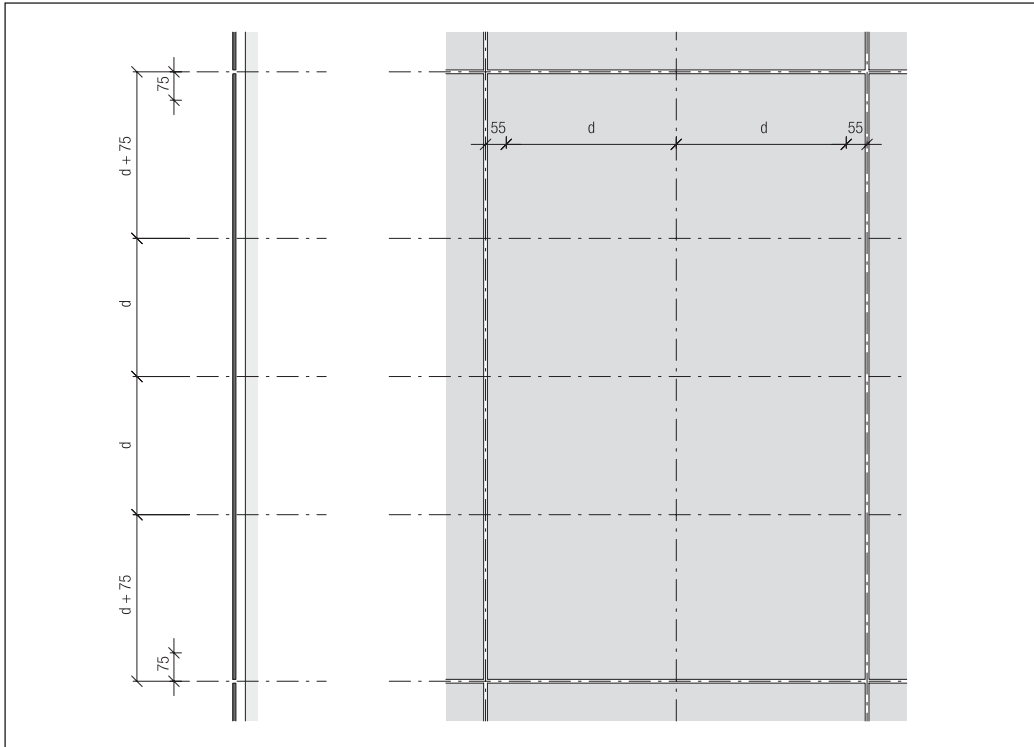
The horizontal closure sheet is made out of 0.5 mm thick aluminium, powder coated black. It is cut to length and latched into the fine grooves on the Omega clip.

- 1 Omega clip S8
- 2 Fastening
- 3 Horizontal joint closure sheet
- 4 Sub frame
- 5 Anchor S8
- 6 8 mm panel

Closure sheet can be provided on request (not standard).

Cut and bend back closure sheet to keep it in place.

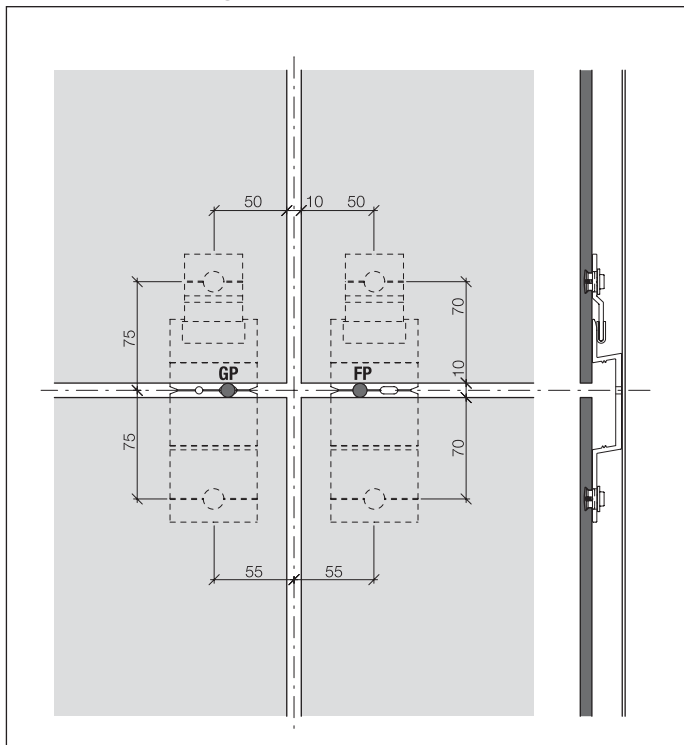
Determination of centre lines



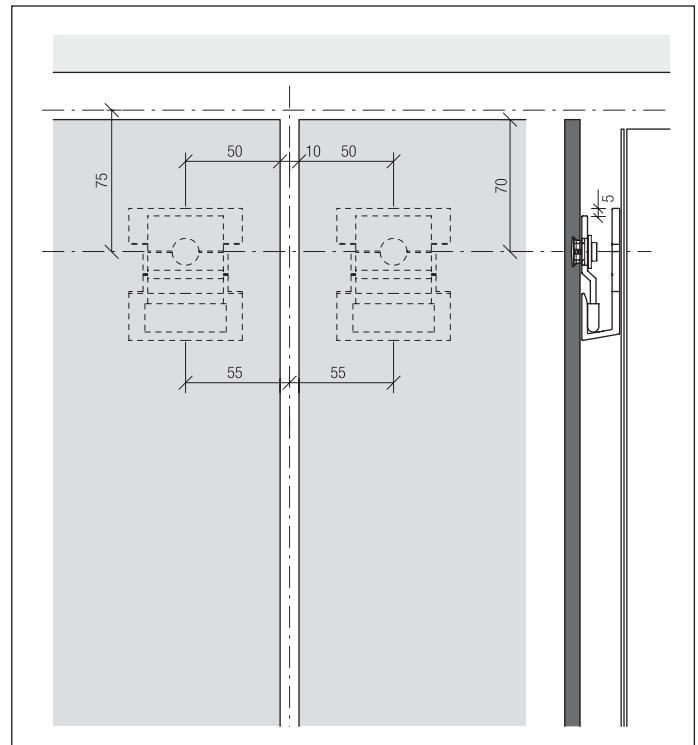
To determine the vertical and horizontal centre lines refer to table „Guideline for max. distances between anchors“. Provide 10 mm nominal joint width.

Centre lines of panel joints and anchors

Centre lines at cross joint



Centre lines at top panel



Wind load

Applicable wind loads to be determined by architect / engineer for different zones (mid field / fringe zone) and building height and recorded in writing.

Actual panel dimensions

Contractor to define on building site all relevant centre and level lines namely for :

- sub frame centre lines of support profiles
- distance external wall to cladding face
- positions of windows jambs
- positions of window and door heads and sills
- positions of cladding ends, top and bottom
- any other relevant marks

In accordance to above contractor to fill out SWISSPEARL SIGMA 8 standard list of panels.

Contractor shall provide to the authorized SWISSPEARL distributor job specific standard list of panels SIGMA 8.

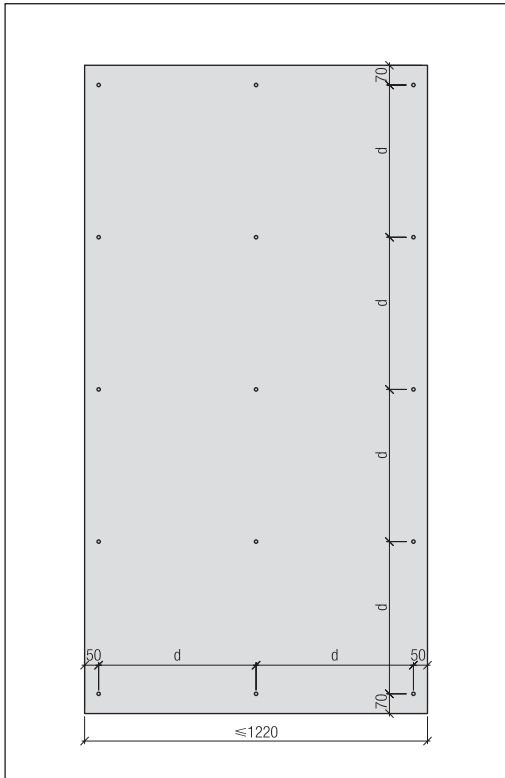
SIGMA 8 Façade System

Reference values for guideline for maximum distances between anchors for multi span panels

Wind load kN/m ² Wind velocity km/h		0.9 kN/m ² - 138 km/h				1.1 kN/m ² - 152 km/h				1.3 kN/m ² - 165 km/h			
Building height up to (m)		≤ 8	≤ 15	≤ 25	≤ 50	≤ 8	≤ 15	≤ 25	≤ 50	≤ 8	≤ 15	≤ 25	≤ 50
Landscape type	Distance between anchors (d)												
City	Mid field zone	725	650	600	550	650	600	570	530	600	570	530	480
	Fringe zone	650	600	570	530	600	570	530	480	570	530	510	430
Town	Mid field zone	725	650	600	550	600	570	530	500	570	530	500	470
	Fringe zone	650	600	570	530	570	530	510	480	530	500	480	420
Wide plane	Mid field zone	650	600	570	540	600	530	510	490	530	510	460	440
	Fringe zone	600	570	530	500	530	510	480	450	510	460	430	410
Coast line	Mid field zone	600	570	530	500	550	510	460	430	460	430	410	400
	Fringe zone	570	530	480	450	510	460	430	420	430	410	380	350

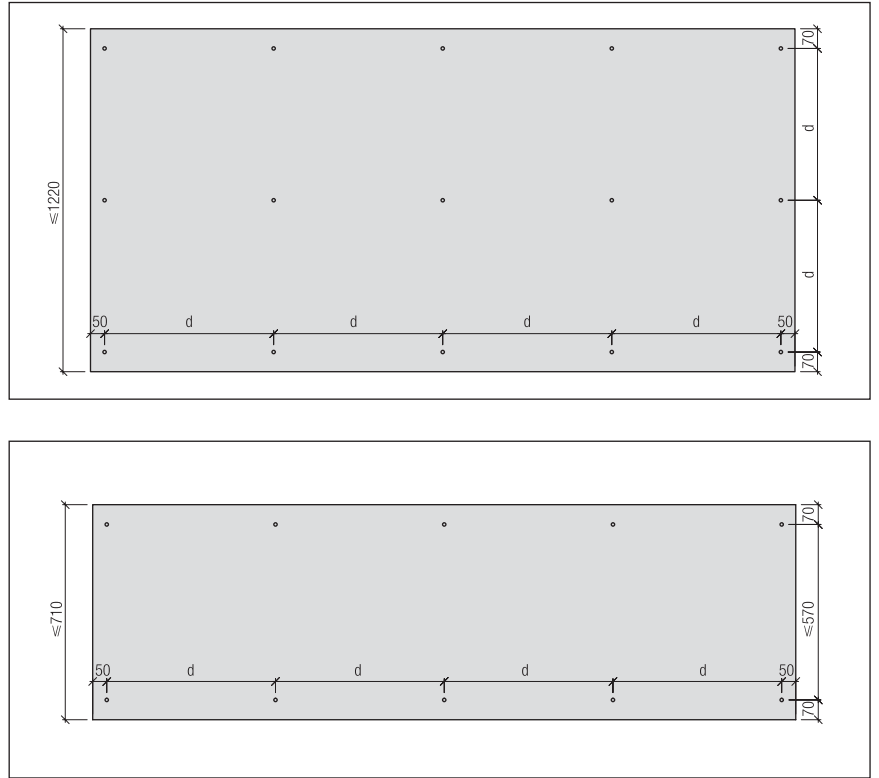
For project with higher wind loads such as hurricane zones or high rises, contact local SWISSPEARL distributor or Swiss technical advisor to verify required maximum distances.

S8 vertical panel



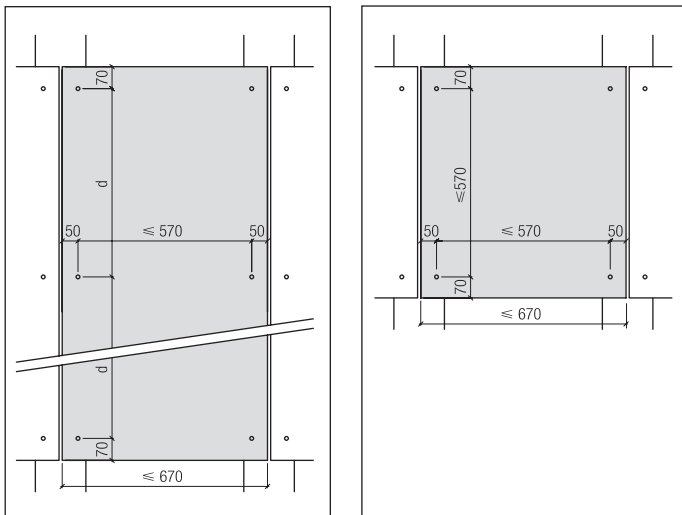
Maximum distances between anchors (d) as per guideline

S8 horizontal panel



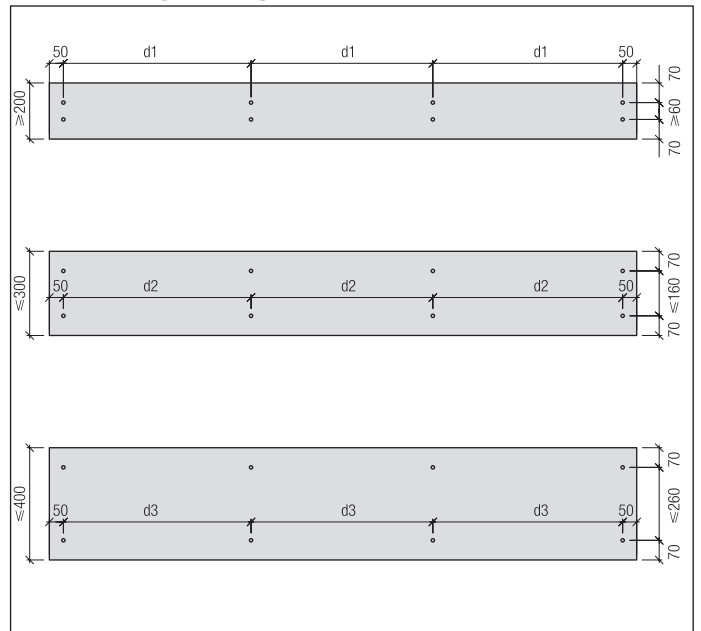
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S8 Single span panel



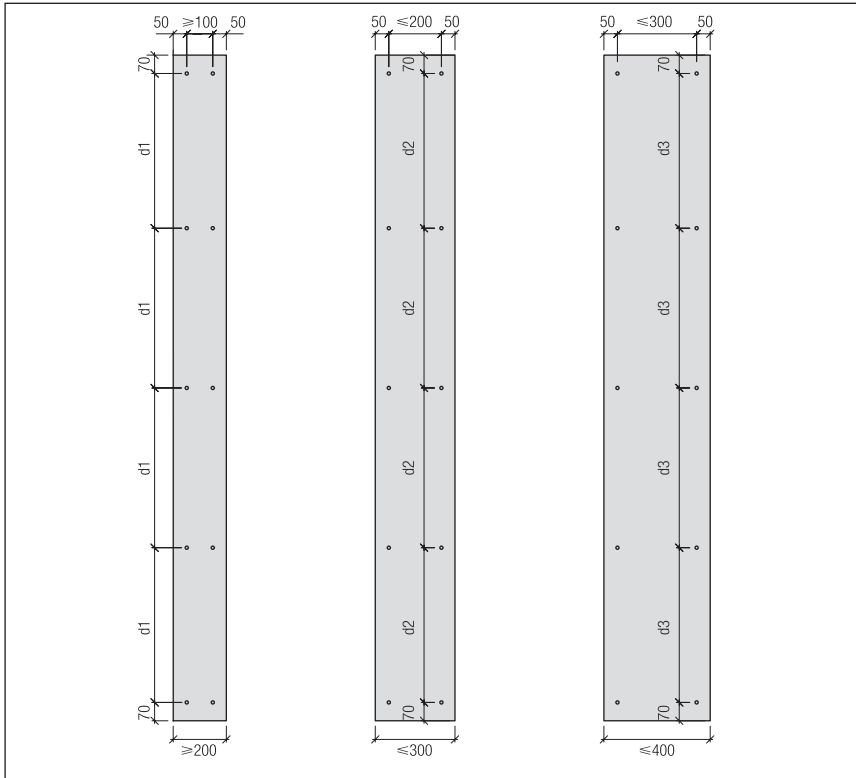
Maximum distance between anchors for single span panels is 570 mm, unless the guideline calls for a smaller figure due to wind load, building height, landscape type.

S8 Horizontal panel strips



Due to the system design, minimum panel height is 200 mm.

S8 Vertical panel strips



Due to the system design, minimum panel width is 200 mm.

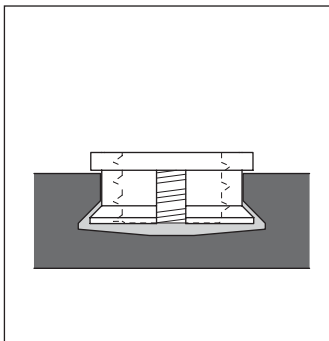
Max. distances between anchors for strips [d1-d3]

Wind load kN/m ² Wind velocity km/h	0.9 kN/m ² - 138 km/h		
Building height up to (m)	≤ 8	≤ 15	≤ 25
Strip width ≥ 200 [d1]	500	500	500
Strip width ≤ 300 [d2]	650	620	600
Strip width ≤ 400 [d3]	600	580	550

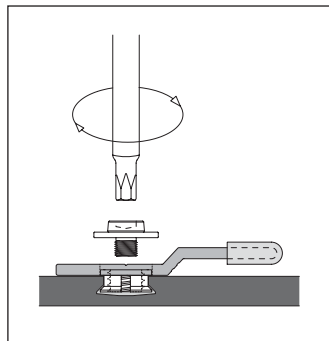
Max. distances between anchors for horizontal and vertical strips.

SIGMA 8 Façade System

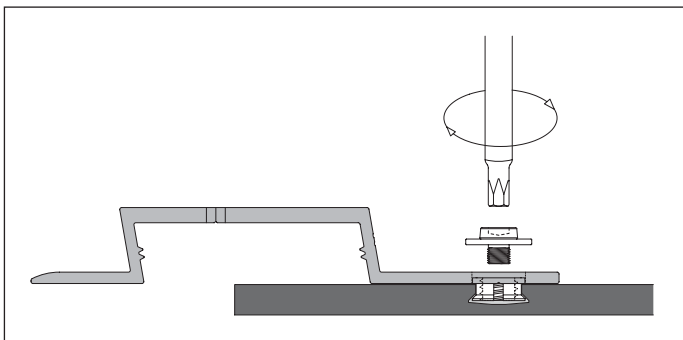
Remarks regarding cladding installation



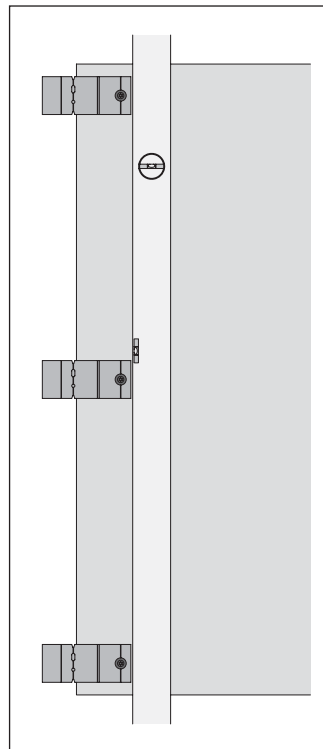
The anchors are inserted at the factory.



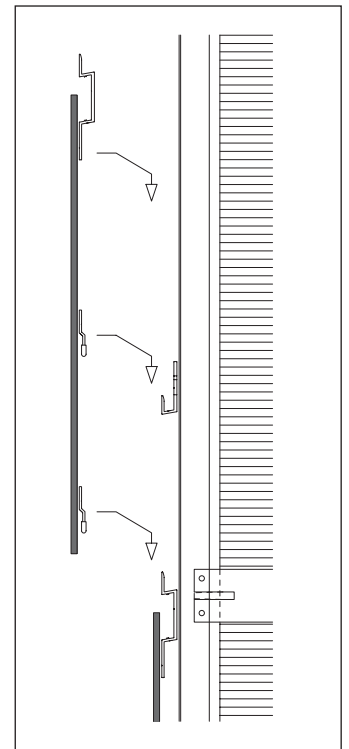
Screw and attached washer to install panel clip.



Screw and attached washer to install Omega clip.

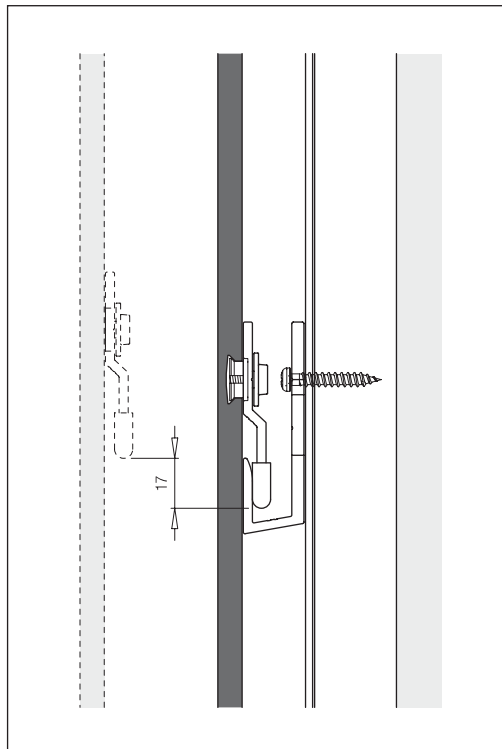


Straighten out clips using a guide or level and tighten with torque screw driver using a force of 3.5 – 4 Nm.

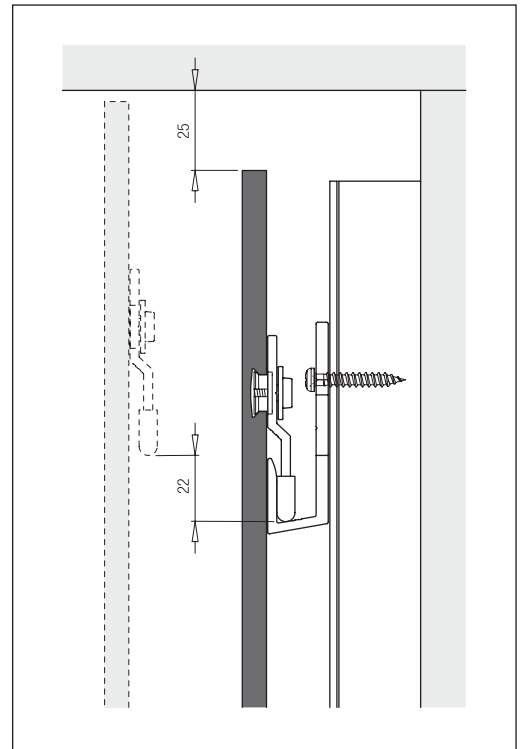


Hang and attach the panel. Install S8 cladding from bottom to top.

Minimum space required above panel



17 mm space required to hang the panel , nominally 20 mm



22 mm space required to hang the top panel, nominally 25 mm

Vertical battens

All battens are 60 x 27 mm in size thickness gauged to one side.
Timber specification as per local standards and regulations.

Fastening of battens

Engineer / contractor to verify and determine all batten fastening details.

EPDM band

All battens to be covered by EPDM bands.

Fastening of U clips

Screw S8, 4.8 x 30 mm, SR2 drive, stainless steel, head Ø 8 mm, powder coated black

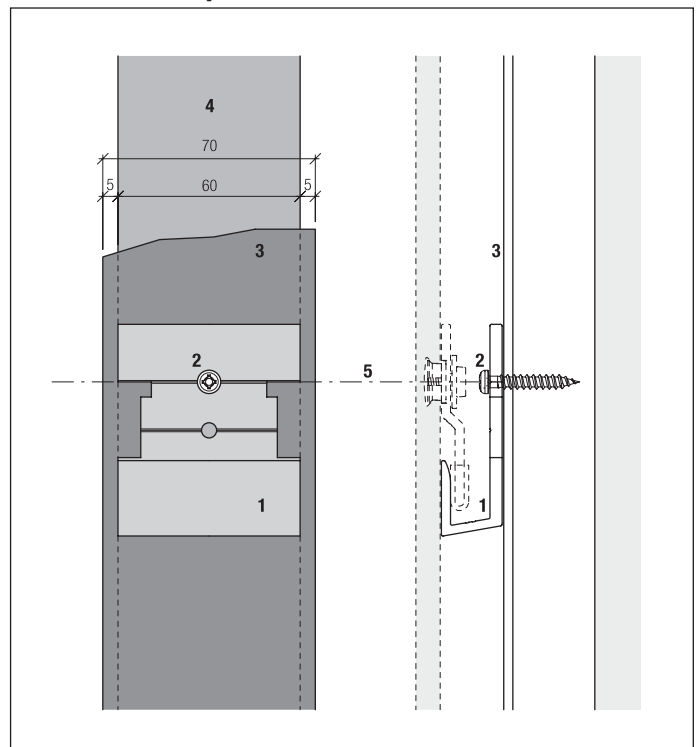
Use 1 screw for U clip picking up wind load

Use 2 screws for U clip picking up dead load

- 1 U clip S8
- 2 Screw S8, SR2, 4.8 x 30 mm
- 3 EPDM band 70 mm wide
- 4 Batten 27 x 60 mm
- 5 Centre line of anchor

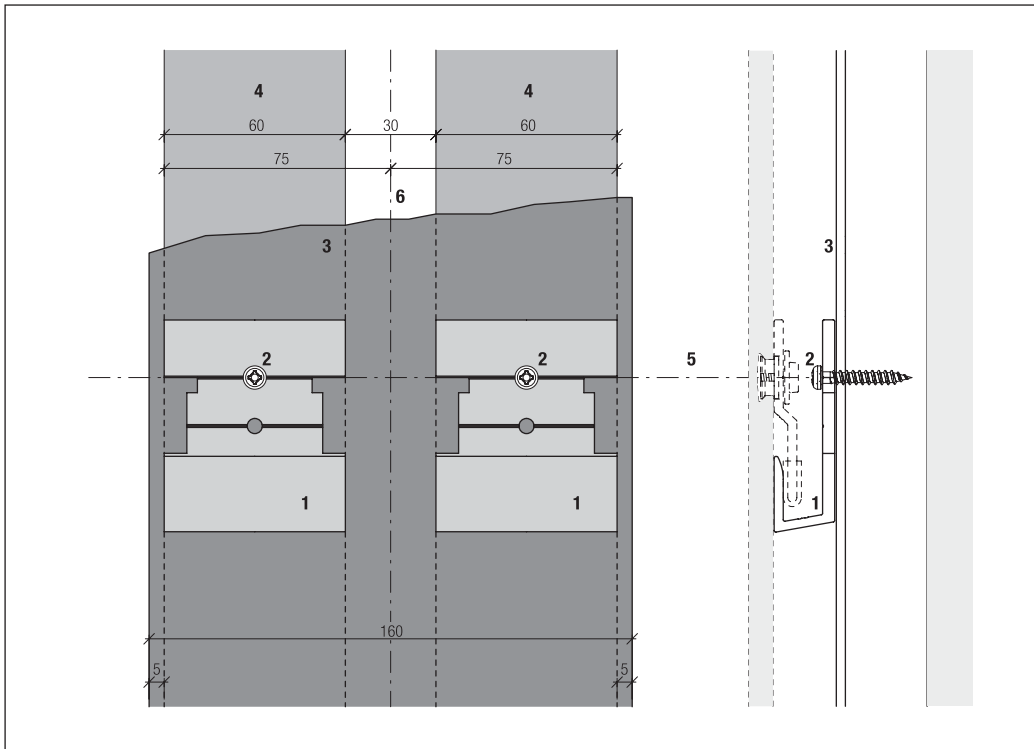
SIGMA 8 Façade System

Installation of U clip S8 to intermediate batten



1 screw S8 SR2 per U clip

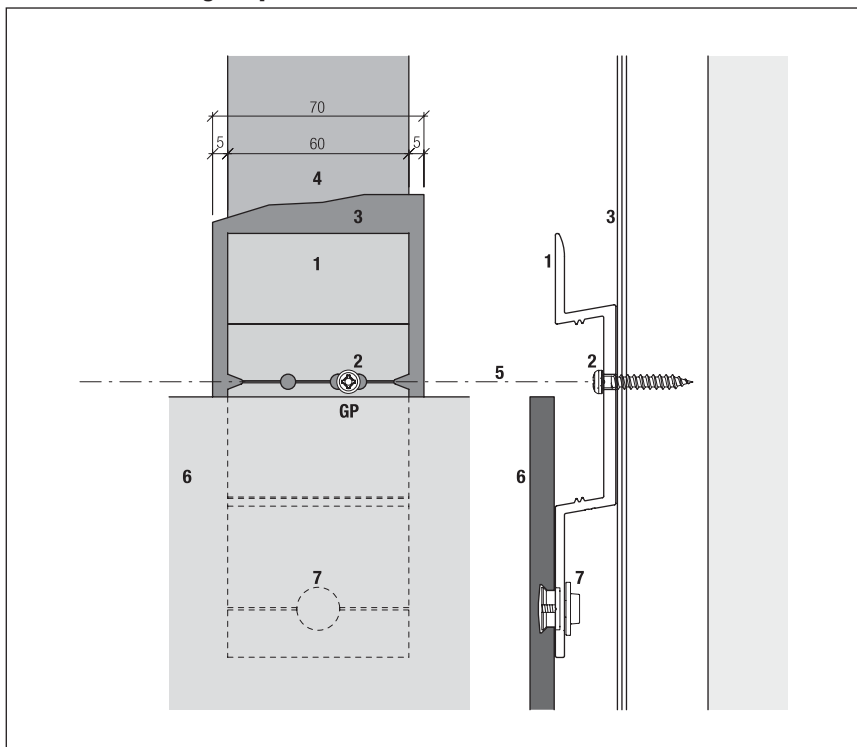
Installation of U clip S8 at panel joint



- 1 U clip S8
- 2 Screw S8, SR2, 4.8 x 30 mm
- 3 EPDM band 160 mm wide
- 4 Batten 27 x 60 mm
- 5 Centre line of anchor
- 6 Centre line of panel joint

1 screw S8 SR2 per U clip

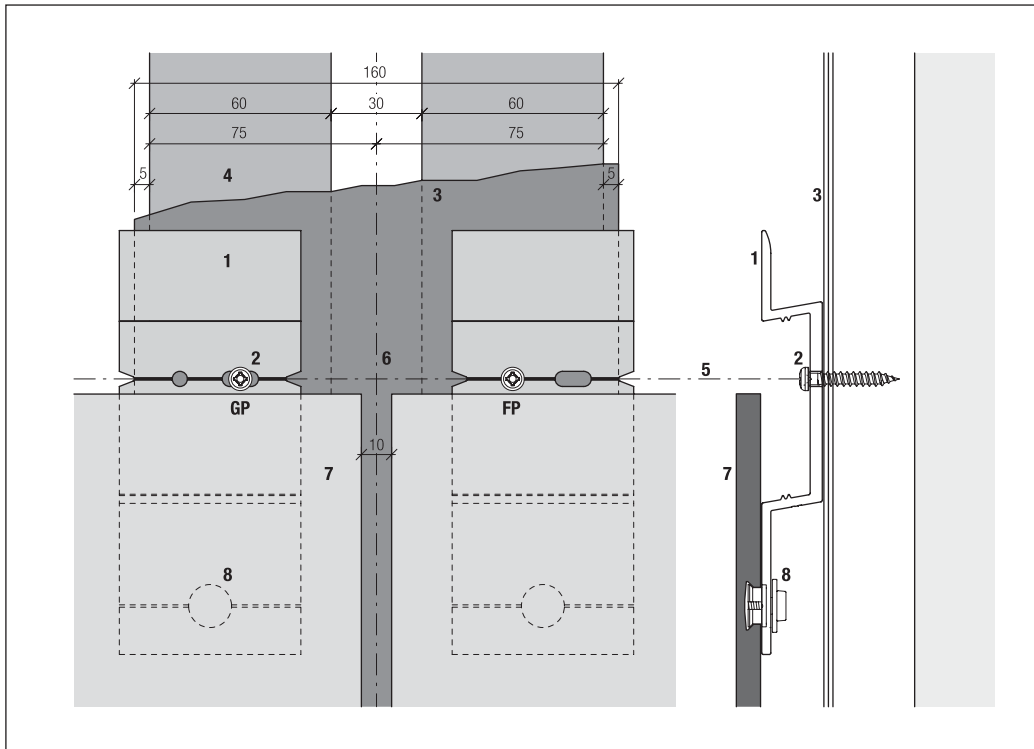
Installation of Omega clip S8 to intermediate batten



- 1 U clip S8
- 2 Screw S8, SR2, 4.8 x 30 mm
- 3 EPDM band 70 mm wide
- 4 Batten 27 x 60 mm
- 5 Centre line of panel joint
- 6 8 mm panel
- 7 Anchor S8

1 Screw to slotted hole (GP)

Installation of Omega clip at panel joint

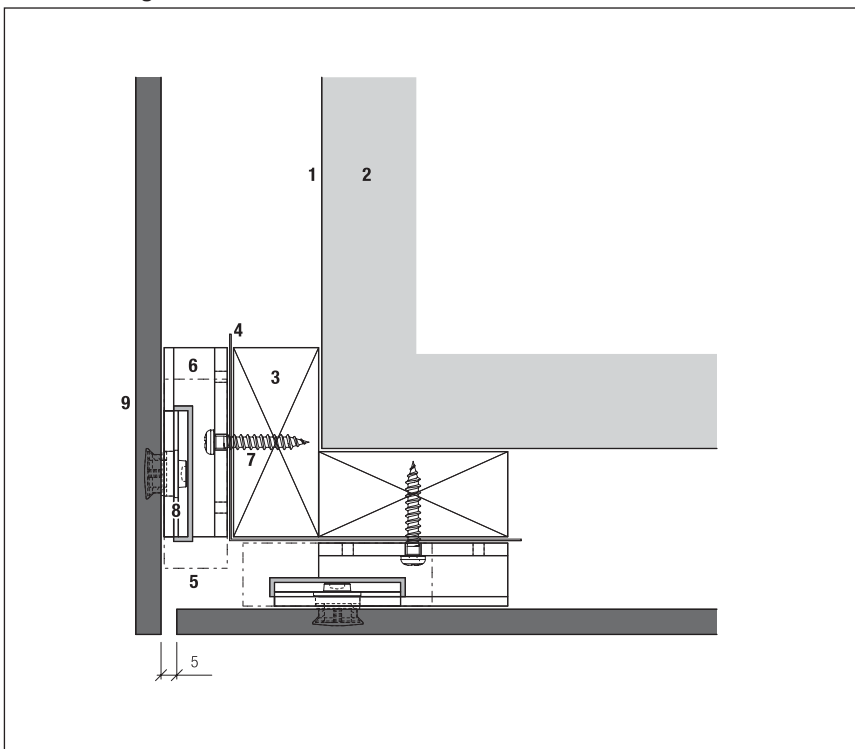


- 1 Omega clip S8
- 2 Screw S8, SR2, 4.8 x 30 mm
- 3 EPDM band S8, 160 mm wide
- 4 Batten 27 x 60 mm
- 5 Centre line of anchor
- 6 Centre line of panel joint
- 7 8 mm panel
- 8 Anchor S8

Each clip 1 screw S8, SR2, 4.8 x 30 mm, one to long hole (GP gliding point) and one to round hole (FP fixed point)

SIGMA 8 Façade System

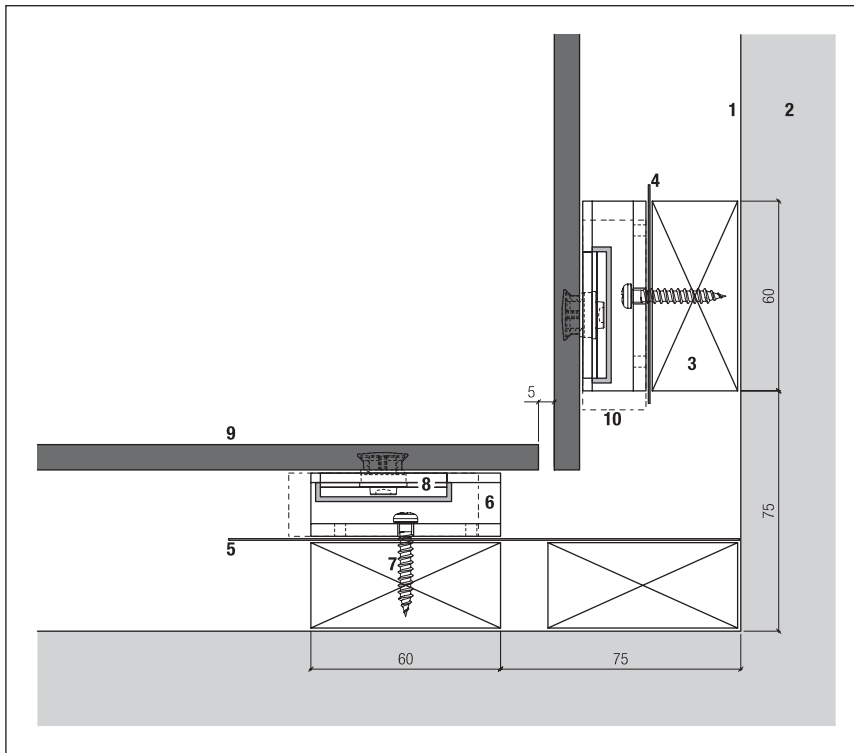
Outer building corner



- 1 Sub frame
- 2 Thermal insulation
- 3 Batten 27 x 60 mm
- 4 EPDM band S8, 160 mm wide
- 5 Position of Omega clip S8
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel

U clips S8 each fastened with 1 screw S8, SR2, 4.8 x 30 mm

Inner building corner

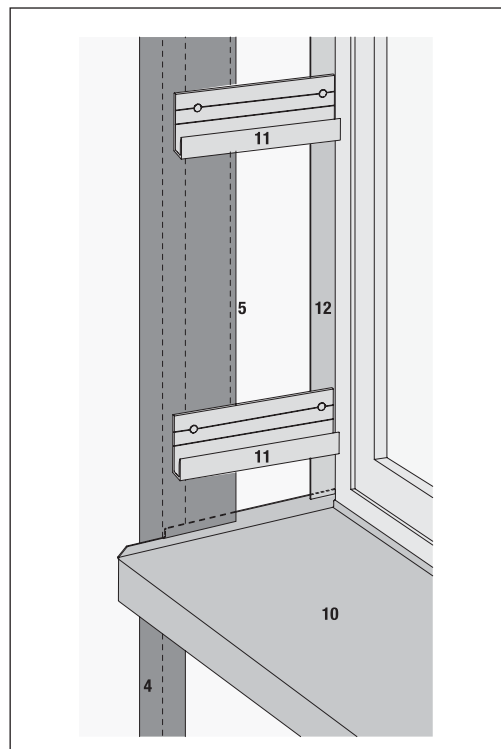
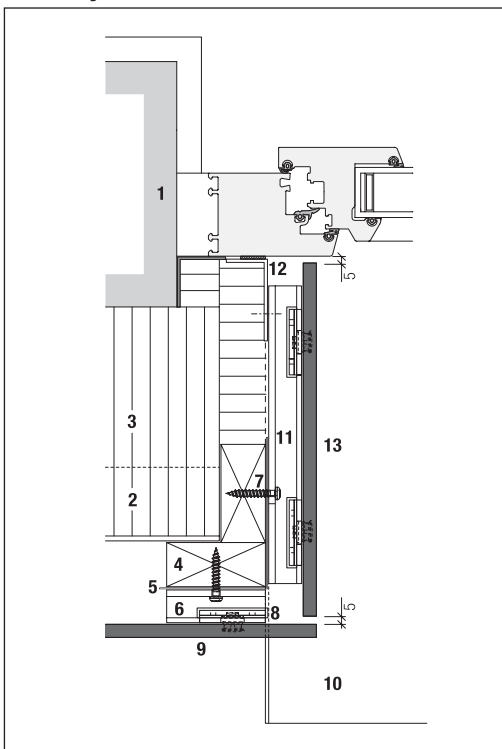


- 1 Sub frame
- 2 Thermal insulation
- 3 Batten 27 x 60 mm
- 4 EPDM band S8, 70 mm wide
- 5 EPDM band S8, 160 mm wide
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Position of Omega clip S8

U clips S8 each fastened with 1 screw S8, SR2
Install additional batten in corner

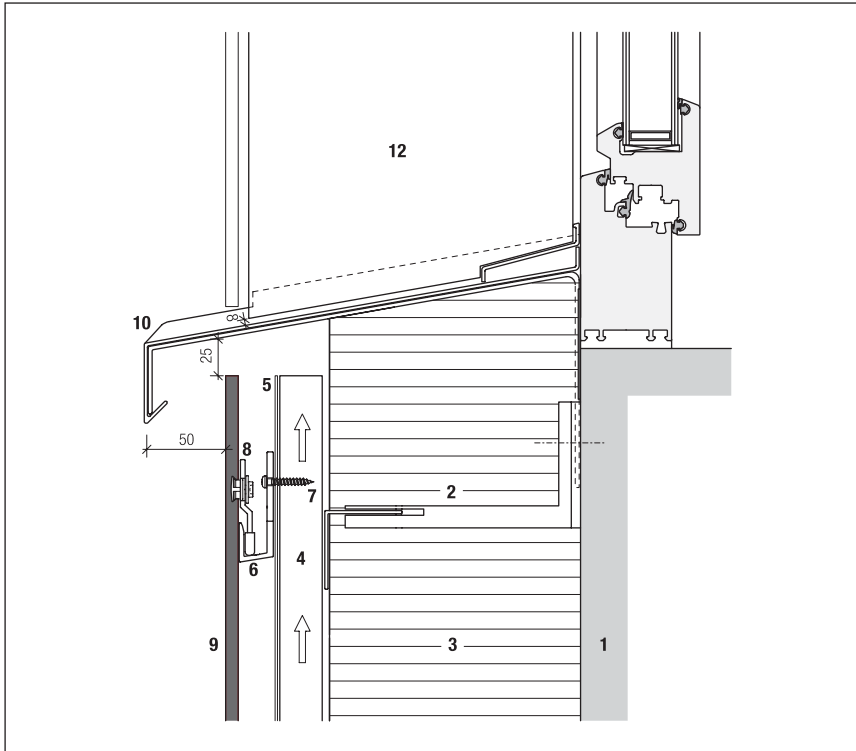
SIGMA 8 Façade System

Window jamb



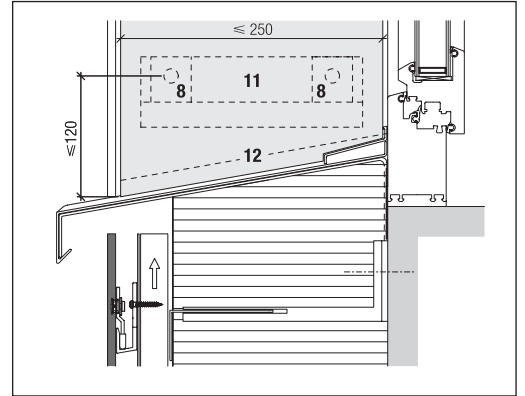
- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Batten 27 x 60 mm
- 5 EPDM band S8, 180 mm wide
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Window sill
- 11 Continuous U profile S8
- 12 Aluminium angle 60 x 20 x 2 mm
- 13 8 mm jamb panel

Window sill



25 mm of free space required on top of panel for installation.
Joint between sill and reveal panel to be 8 mm.

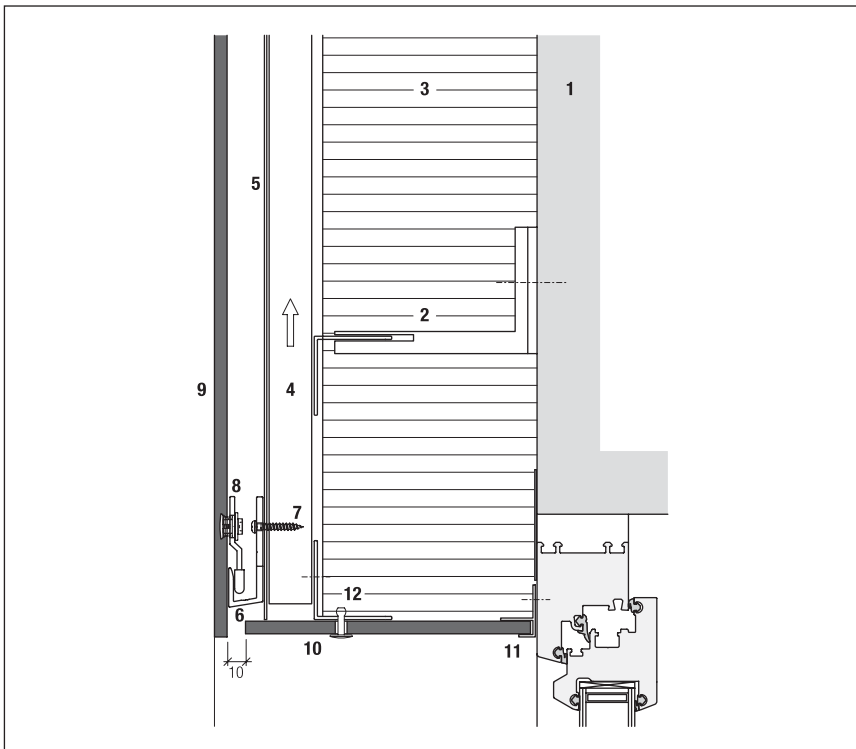
- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Batten 27 x 60 mm
- 5 EPDM band S8
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Window sill
- 11 U profile S8
- 12 8 mm jamb panel



The max. distance to panel edge (standard 70 mm) may be increased for reveal panels to 120 mm.

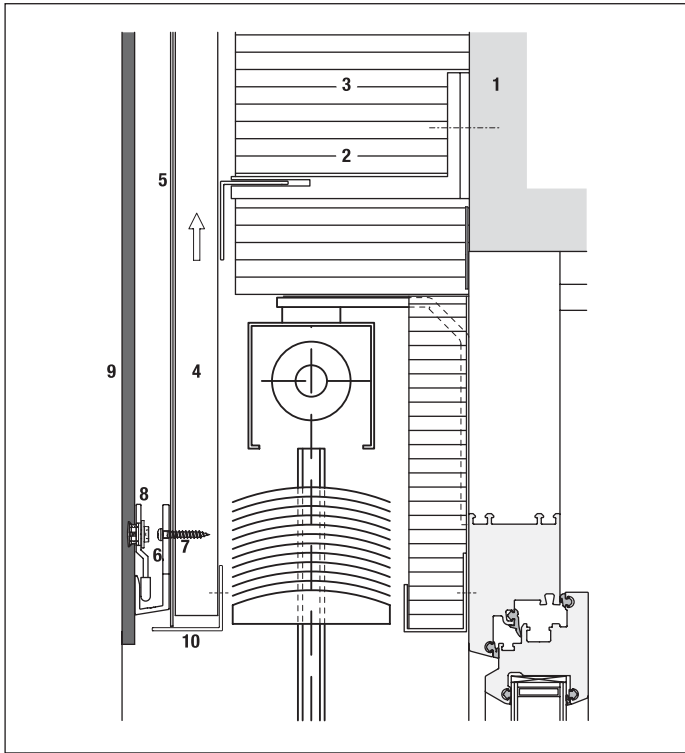
SIGMA 8 Façade System

Window head

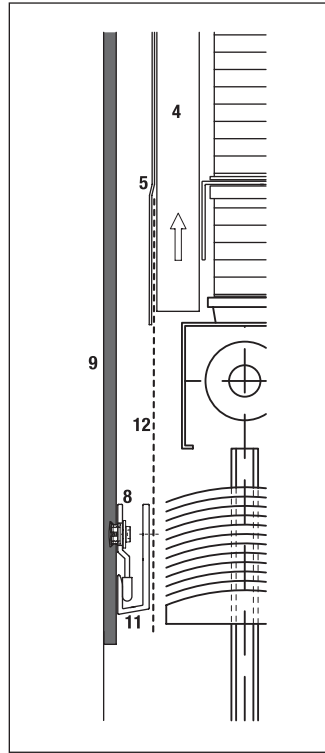


- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Batten 27 x 60 mm
- 5 EPDM band S8
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 8 mm soffit panel, fastened with rivets (fixed and slipping points)
- 11 Panel fastening profile
- 12 Angle, 60 x 60 mm

Window head with sun shutter box



Standard S8 parts installed onto battens

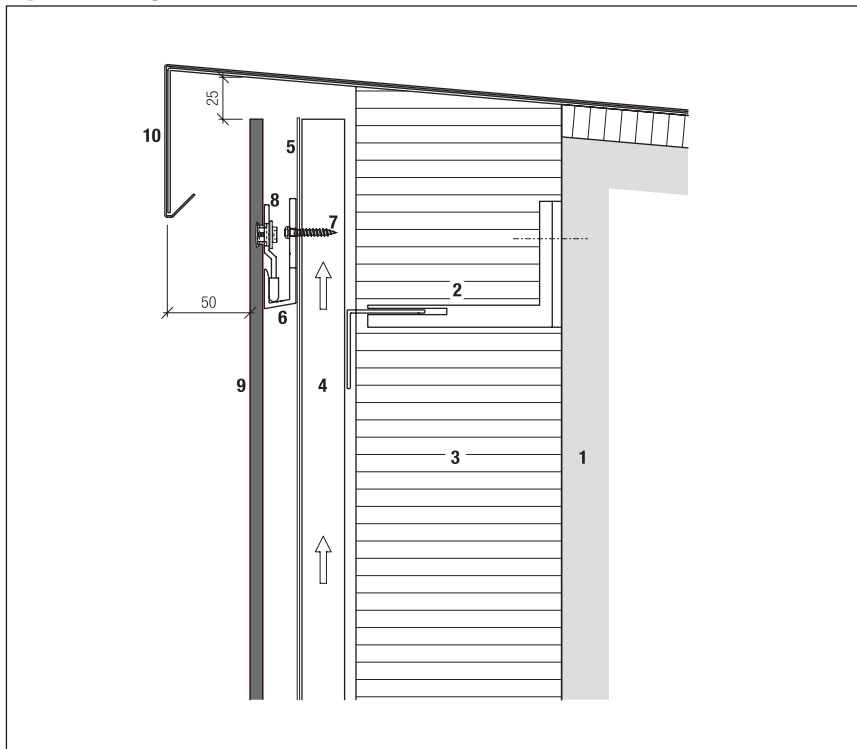


Continuous U-profile to save space for shutter

- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Batten 27 x 60 mm
- 5 EPDM band S8
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Angle profile
- 11 Continuous U profile S8
- 12 Sheet at vertical joints (by others)

In case of space shortage in the shutter box a continuous U profile can be used, length up to 1200 mm, if longer reinforcing straps required.

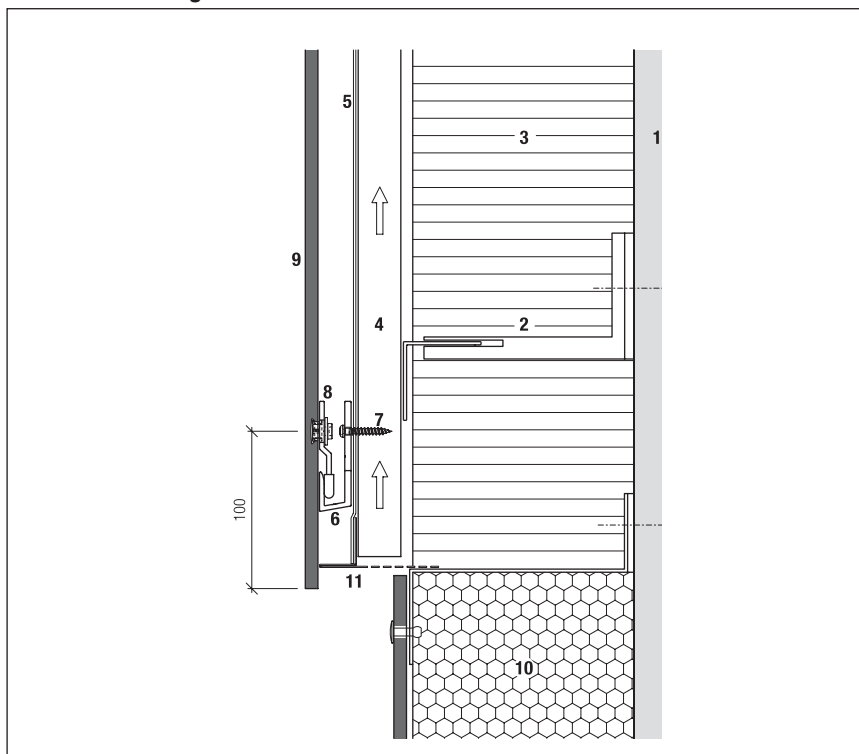
Top of cladding detail



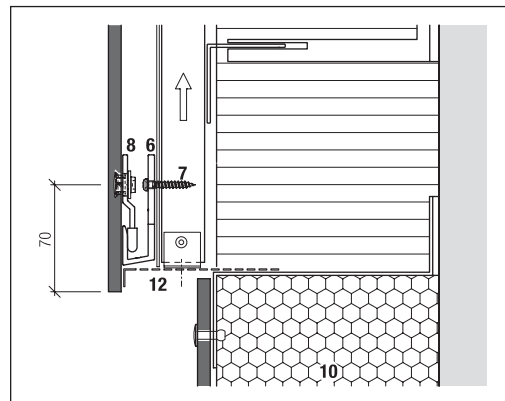
Leave 25 mm free space above panel to allow its installation.

- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Batten 27 x 60 mm
- 5 EPDM band S8
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Coping

Bottom of cladding detail



- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Batten 27 x 60 mm
- 5 EPDM band S8
- 6 U clip S8
- 7 Screw S8, SR2, 4.8 x 30 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Water resistant thermal insulation
- 11 Ventilation profile S8
- 12 Ventilation closure (by others)



Metal sub framing

Sub frame in aluminium

Aluminium profiles to be max. 3 m long. Profile thickness min. 2.0 mm (gauge 14)

Sub framing in steel

Profiles to be in galvanised steel or stainless steel.
Profiles to be max. 6 m long.
Profile thickness min. 1.5 mm (gauge 16)

Material compatibility

The parts S8 are anodized and may thus be used on aluminium or steel profiles, no material separation layer required.

Rivet to attach S8 parts

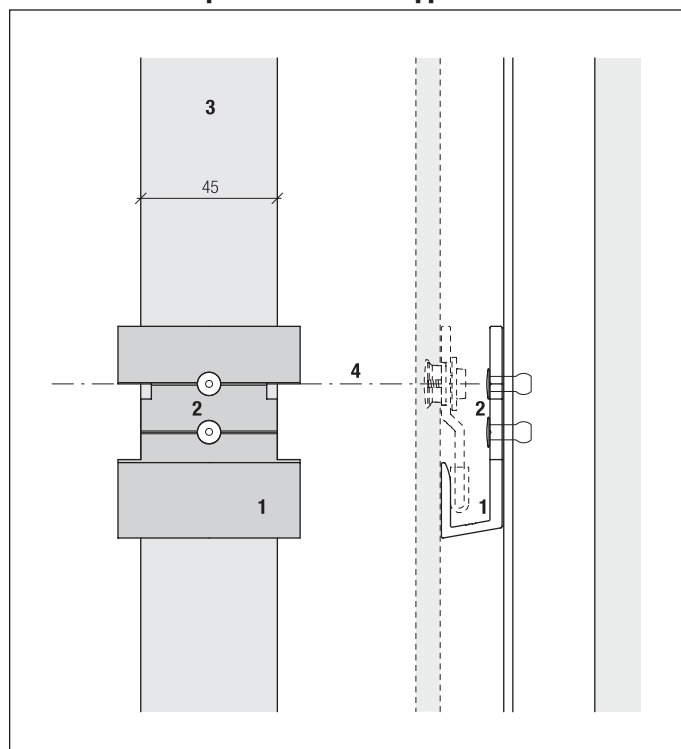
Stainless steel rivet, 4.8 x 12 mm, head Ø 9.5 mm, powder coated black, rivet grip range 5 - 7 mm.

Drill holes to sub frame

Drill bit Ø 4.9 mm
Type A for aluminium sub frames
Type S for steel sub frames

SIGMA 8 Façade System

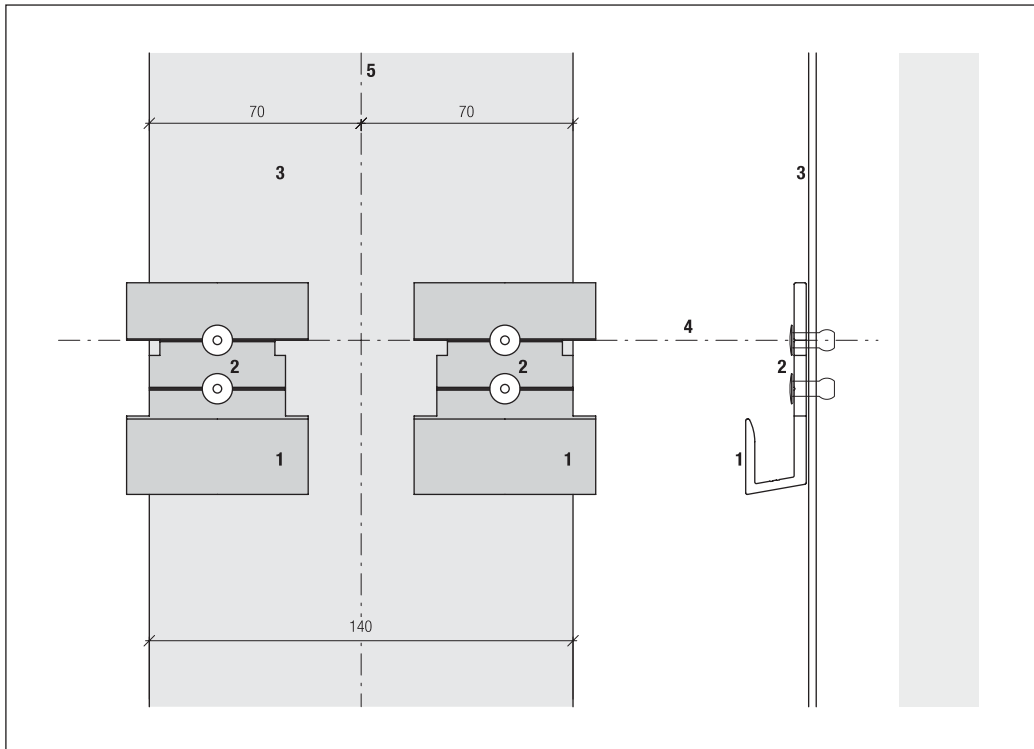
Installation of U clip to intermediate support



- 1 U clip S8
- 2 Rivet S8, 4.8 x 12 - 9.5 mm
- 3 Sub frame profile
- 4 Center line of anchor

U clip S8 attached with 2 rivets S8, 4.8 x 12 - 9.5 mm

Installation of U clip at panel joint

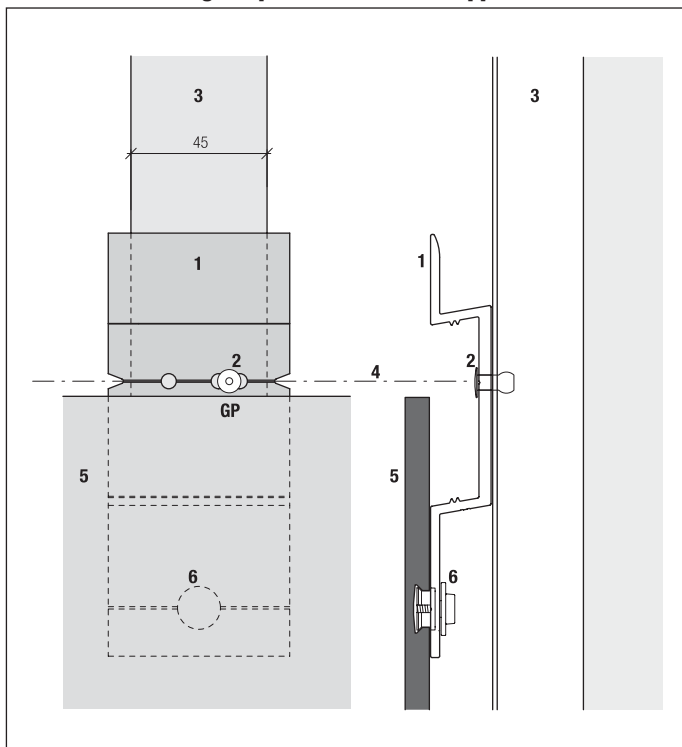


- 1 U clip S8
- 2 Rivet S8, 4.8 x 12 - 9.5 mm
- 3 Sub frame profile blackened where visible through joint
- 4 Centre line of anchor
- 5 Centre line of panel joint

Each U clip to be fastened with 2 rivets S8, 4.8 x 12 - 9.5 mm

SIGMA 8 Façade System

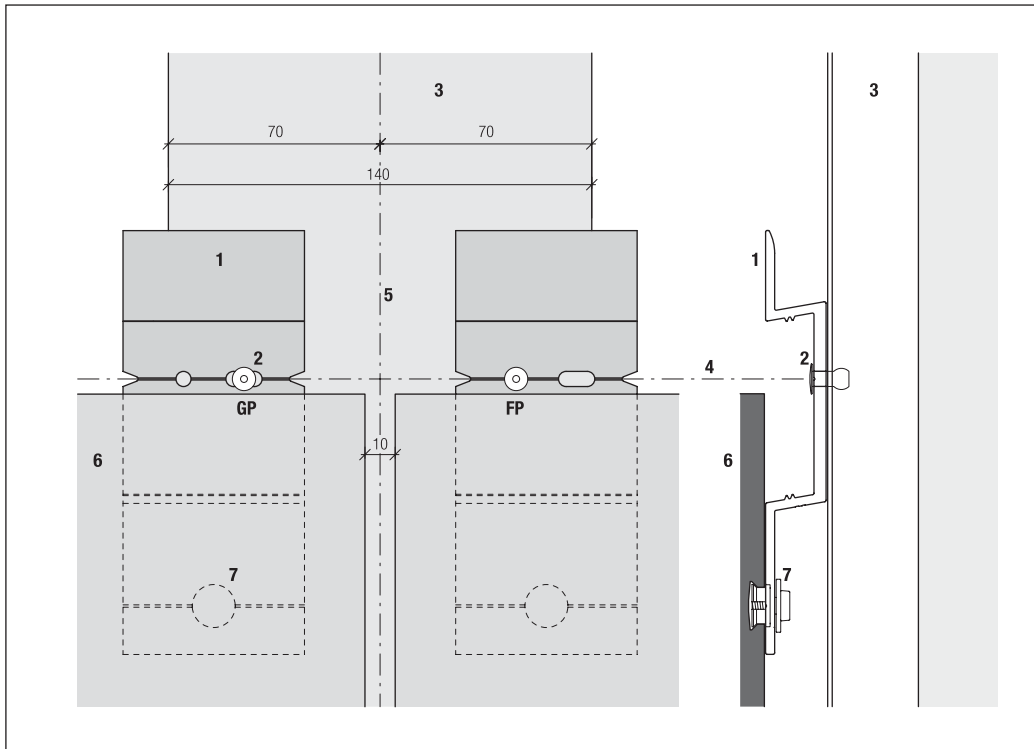
Installation of Omega clip to intermediate support



- 1 Omega clip S8
- 2 Rivet S8, 4.8 x 12 - 9.5 mm
- 3 Sub frame profile
- 4 Centre line of anchor
- 5 8 mm panel
- 6 Anchor S8

1 rivet S8, 4.8 x 12 - 9.5 mm to long hole GP (gliding point)

Installation of Omega clip at panel joint

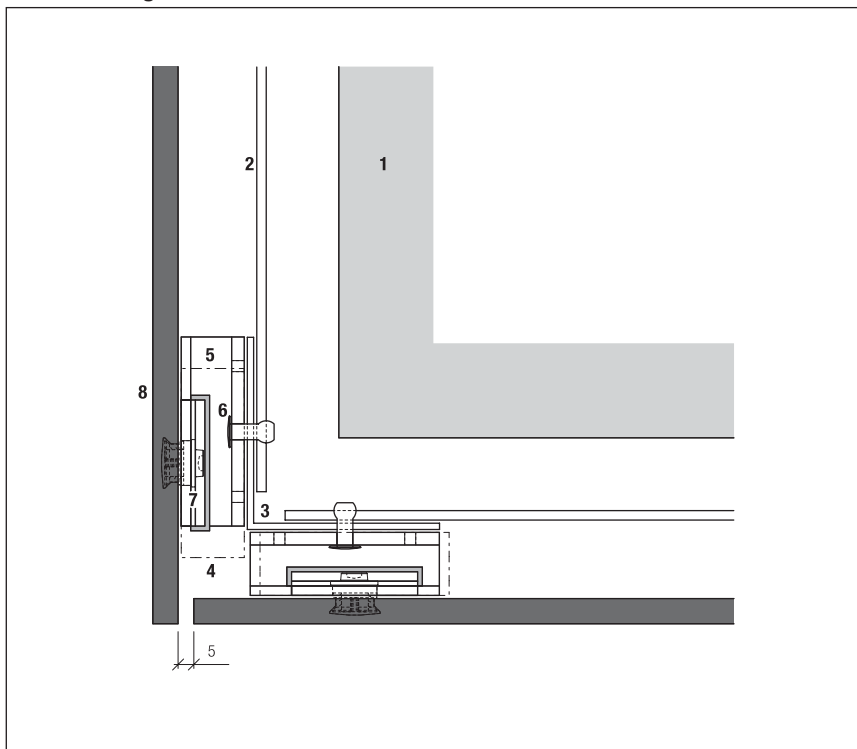


- 1 Omega clip S8
- 2 Rivet S8, 4.8 x 12 - 9.5 mm
- 3 Sub frame profile, blackened where visible through joint
- 4 Centre line of anchor
- 5 Centre line of panel joint
- 6 8 mm panel
- 7 Anchor S8

1 rivet S8, 4.8 x 12 - 9.5 mm each, 1 to long hole (GP) and 1 to round hole (FP)

SIGMA 8 Façade System

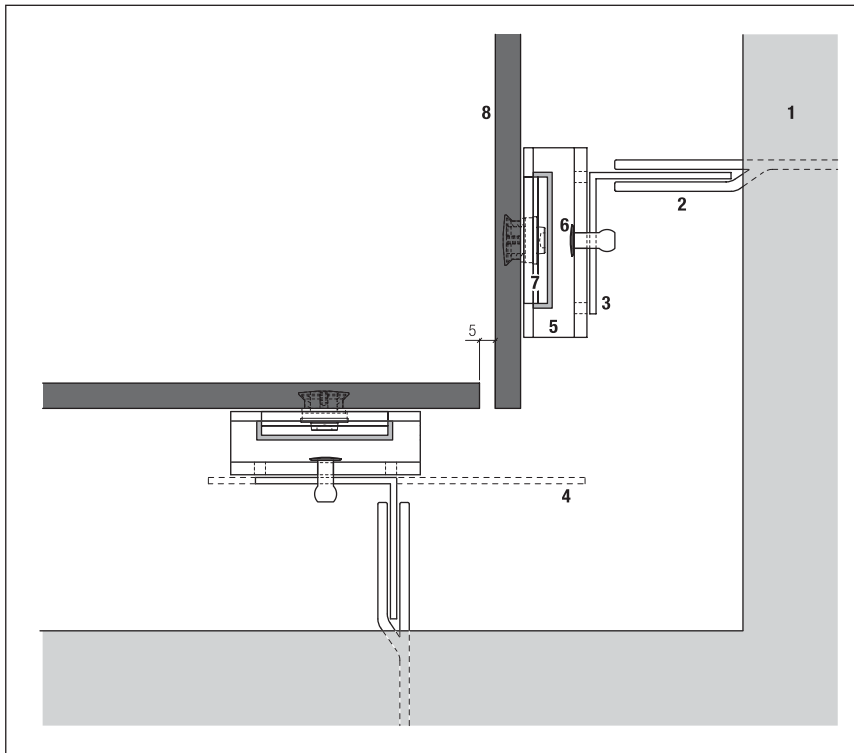
Outer building corner



- 1 Thermal insulation
- 2 Support profile for corner angle
- 3 Corner angle 60 x 60 x 2 mm
- 4 Position of Omega clip S8
- 5 U clip S8
- 6 Rivet S8, 4.8 x 12 - 9.5 mm
- 7 Panel clip S8
- 8 8 mm panel

Each U clip to be fastened with 2 rivets S8, 4.8 x 12 - 9.5 mm

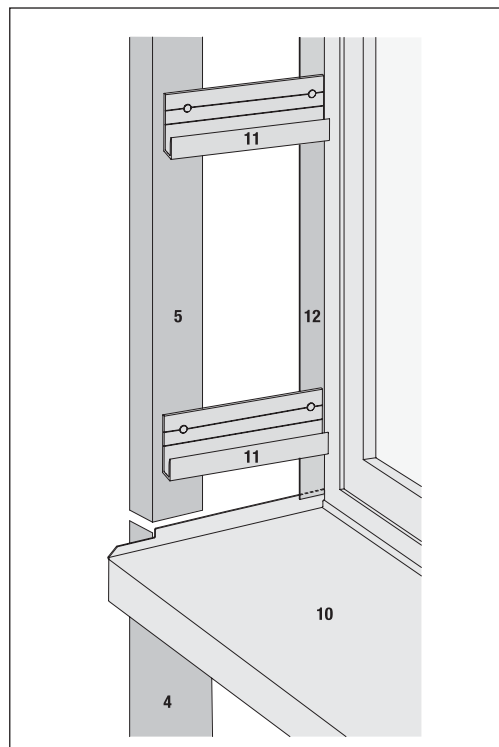
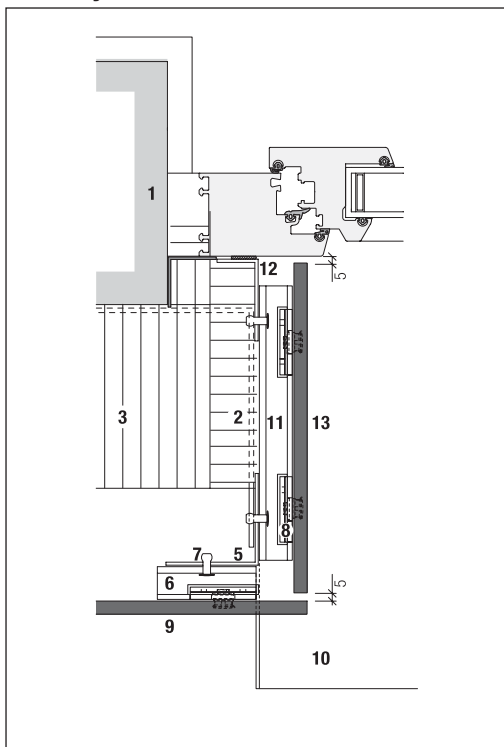
Inner building corner



- 1 Thermal insulation
- 2 Bracket
- 3 Angle 45 x 45 mm
- 4 Optional : T-profile painted black
- 5 U clip S8
- 6 Rivet S8, 4.8 x 12 - 9.5 mm
- 7 Panel clip S8
- 8 8 mm panel

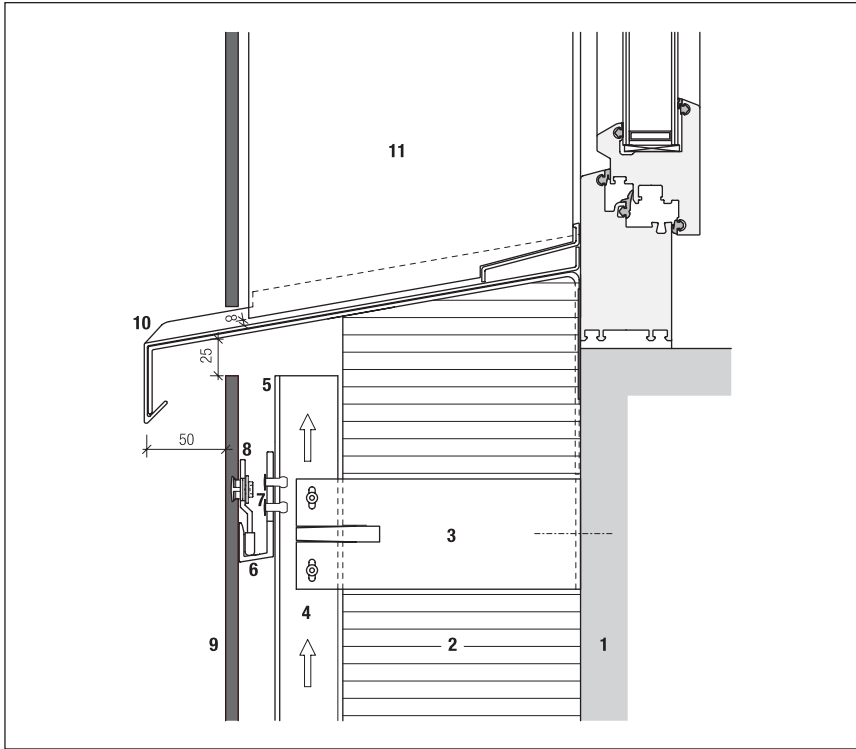
SIGMA 8 Façade System

Window jamb



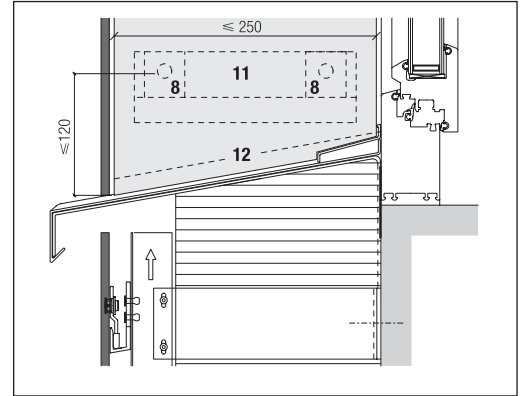
- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 T profile 140 x 45 mm
- 5 Angle 60 x 60 mm
- 6 U clip S8
- 7 Rivet S8, 4.8 x 12 - 9.5 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Window sill
- 11 Continuous U profile S8
- 12 Aluminium angle 60 x 20 x 2 mm
- 13 8 mm jamb panel

Window sill



25 mm of free space required on top of panel for installation.
Joint between sill and reveal panel to be 8 mm.

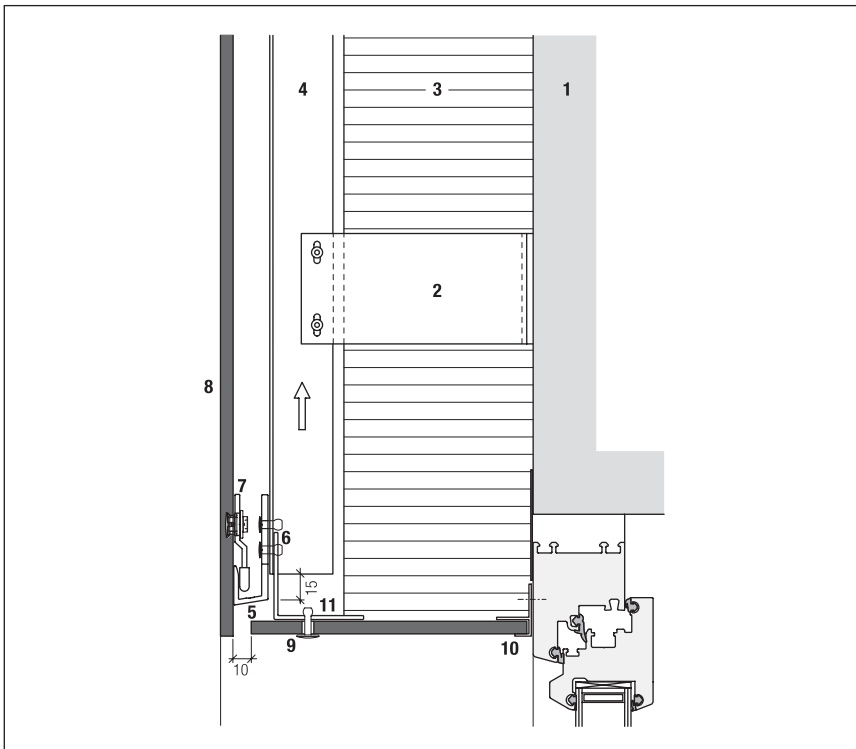
- 1 Wall
- 2 Thermal insulation
- 3 Bracket with PVC pads
- 4 Vertical sub frame profile
- 5 Angle 60 x 60 mm
- 6 U clip S8
- 7 Rivet S8, 4.8 x 12 - 9.5 mm
- 8 Panel clip S8
- 9 8 mm panel
- 10 Window sill
- 11 8 mm jamb panel



The max. distance to panel edge (standard 70 mm) may be increased for reveal panels to 120 mm.

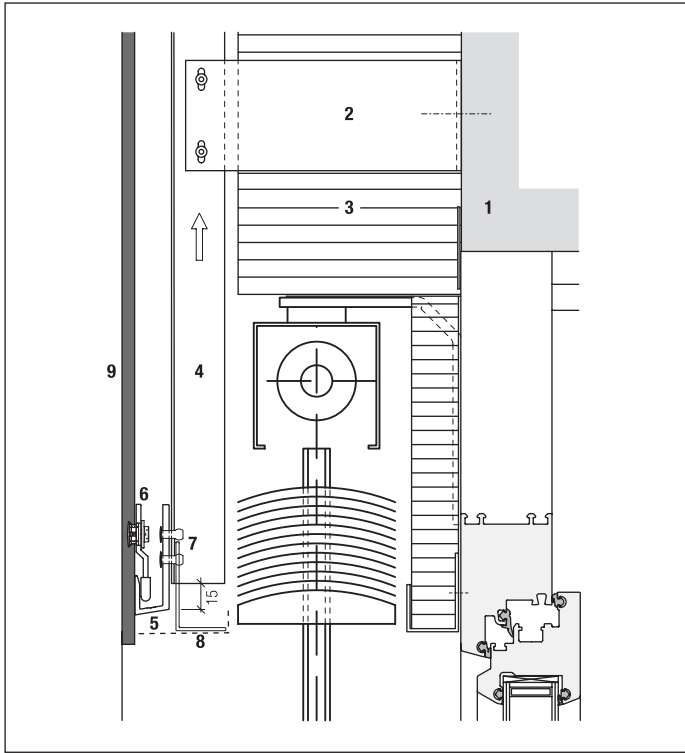
SIGMA 8 Façade System

Window head

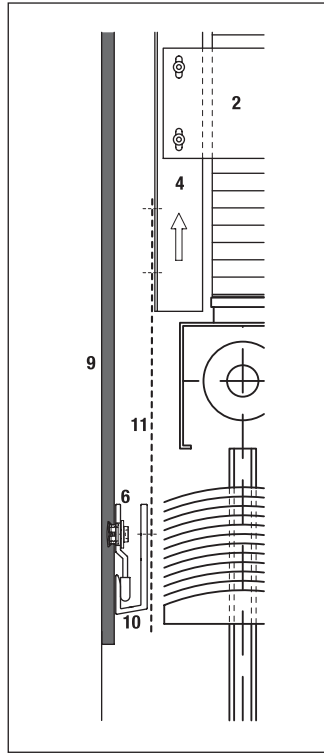


- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Sub frame profile
- 5 U clip S8
- 6 Rivet S8, 4.8 x 12 - 9.5 mm
- 7 Panel clip S8
- 8 8 mm panel
- 9 8 mm soffit panel, fastened with rivets
(fixed and slipping points)
- 10 Panel fastening profile
- 11 Angle, 60 x 60 mm

Window head with sun shutter box



Standard S8 parts installed onto sub frame profiles



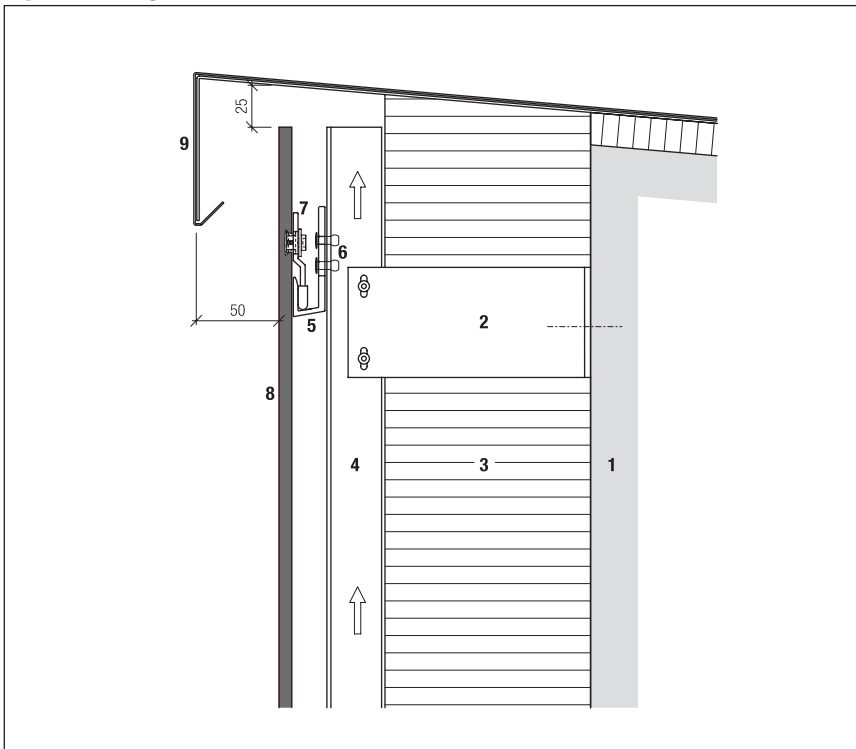
Continuous U-profile to save space for shutter

- 1 Wall
- 2 Bracket on PVC pad
- 3 Thermal insulation
- 4 Sub frame profile
- 5 U clip S8
- 6 Panel clip S8
- 7 Rivet S8, 4.8 x 12 - 9.5 mm
- 8 Reinforcing profile
- 9 8 mm panel
- 10 Continuous U profile S8
- 11 Sheet at vertical joints (by others)

In case of space shortage in the shutter box a continuous U profile can be used, length up to 1200 mm, if longer reinforcing straps required.

SIGMA 8 Façade System

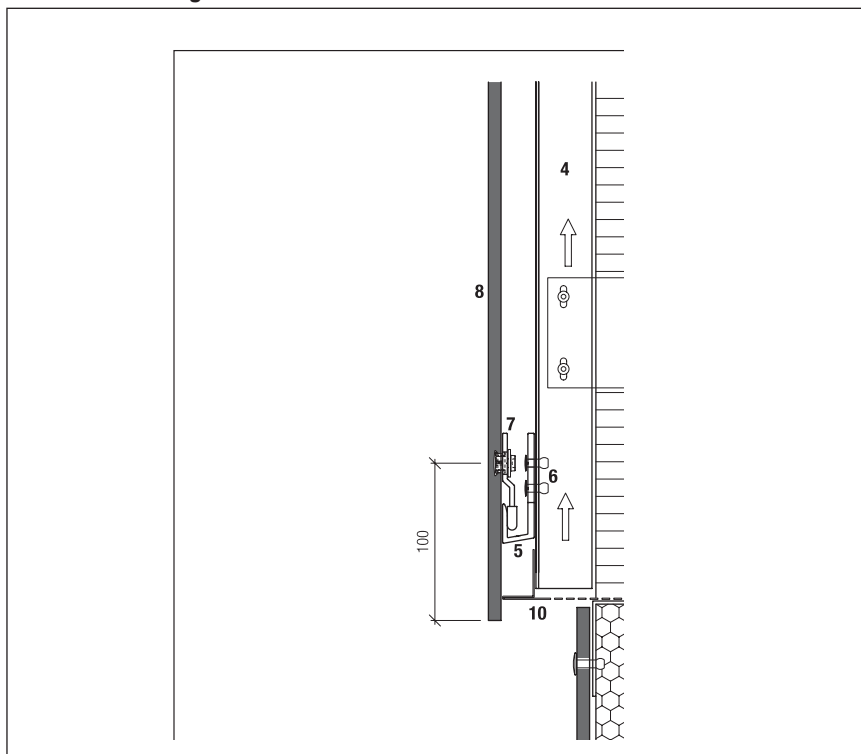
Top of cladding detail



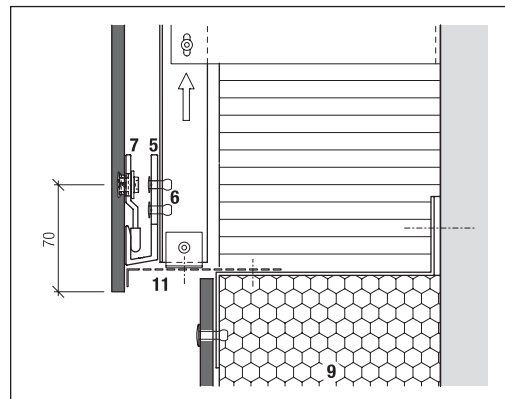
Leave 25 mm free space above panel to allow its installation.

- 1 Wall
- 2 Bracket on PVC pad
- 3 Thermal insulation
- 4 Sub frame profile
- 5 U clip S8
- 6 Rivet S8, 4.8 x 12 - 9.5 mm
- 7 Panel clip S8
- 8 8 mm panel
- 9 Coping

Bottom of cladding detail

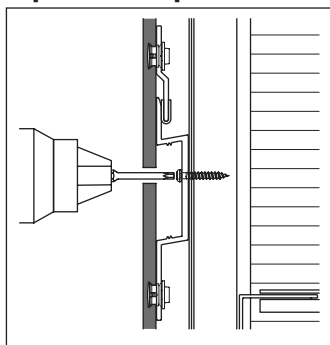


- 1 Wall
- 2 Sub frame
- 3 Thermal insulation
- 4 Sub frame profile
- 5 U clip S8
- 6 Rivet S8, 4.8 x 12 - 9.5 mm
- 7 Panel clip S8
- 8 8 mm panel
- 9 Water resistant thermal insulation
- 10 Ventilation profile S8
- 11 Ventilation closure (by others)

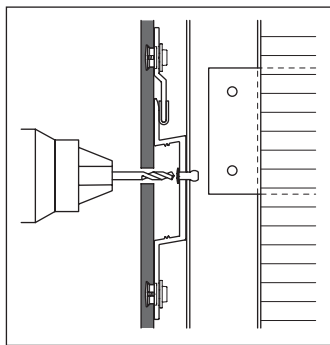


SIGMA 8 Façade System

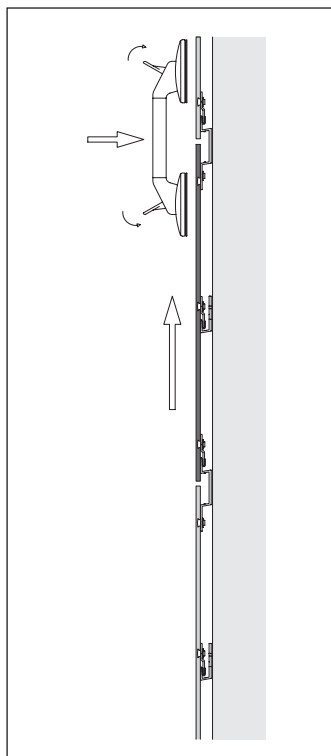
Replacement of panels



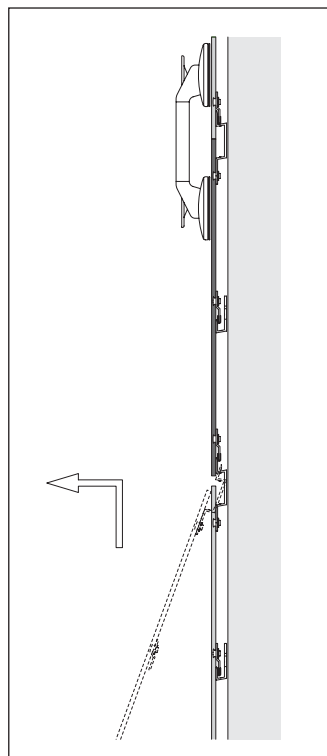
On timber : unfasten the screws



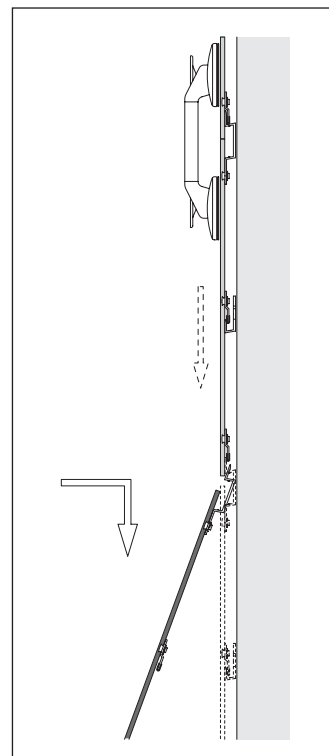
On metal : drill out the rivets



Lift panel above as much as possible and attach with vacuum handle

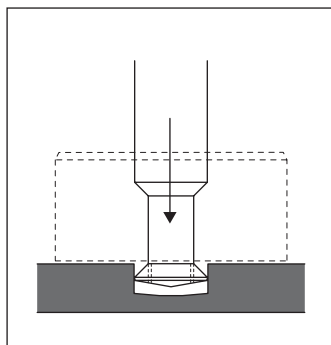


Lift up panel and hang out (17 mm space required mid field)

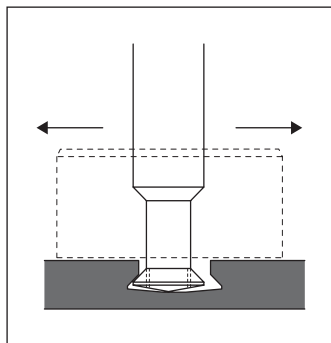


Hang new panel

Drill with router Concentric

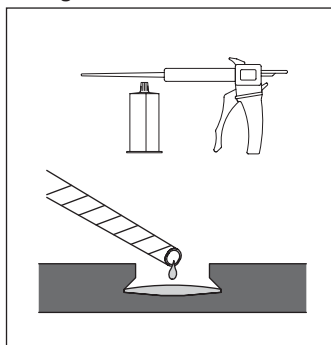


Perpendicular drilling, min. rev. 3'000/min

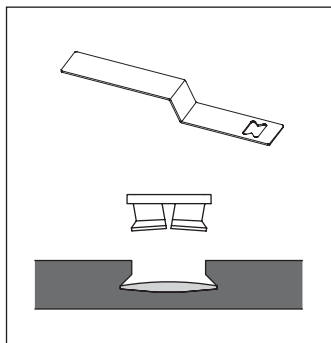


Undercut the hole with router (min. rev. 3000/min.) If a hole fails, the next try must be at least 15 mm away

Gluing

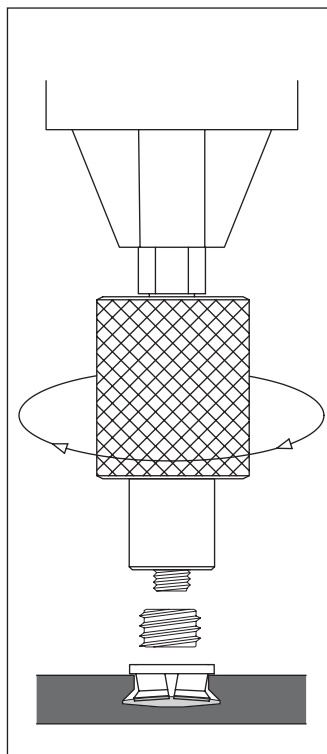


Use moderate quantity 0.2 - 0.3 mg



Put anchor into hole and hold with anchor installation key

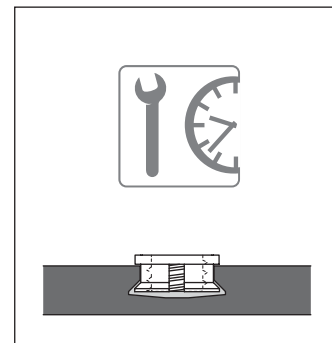
Installation of anchor



Install inner thread sleeve S8 with driver tool S8 immediately after applying the glue

Anchor installation in the field

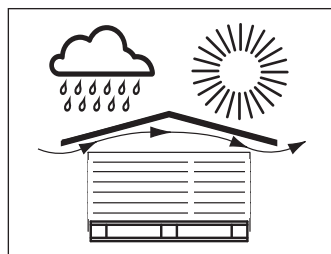
Installation of anchors in the field exceptionally only.
After drilling the undercut hole (max. depth 5.3 mm) stop the router before withdrawing it in order not to break the hole edge.
Blow out drill dust. Set anchor and remove excess glue.
Before start of works install 2 or 3 trial anchors on a sample panel.



Allow 2 hours to cure anchor glue

On site storage

For transportation and storage on site protect the pallets from weather under a roof. Where this is not possible store under tarpaulin.

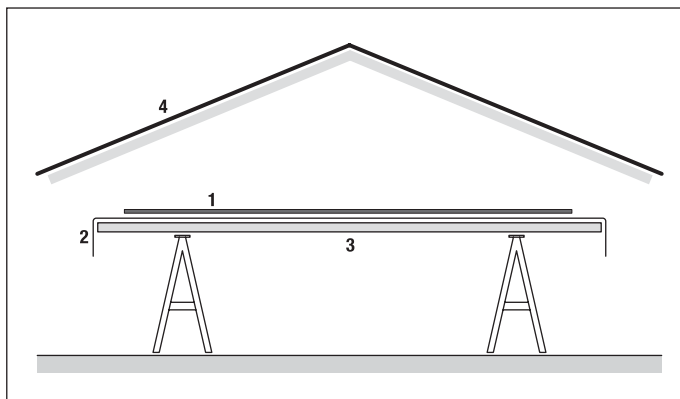


Safety regulations

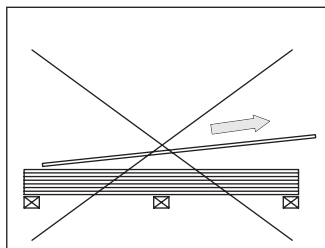
All local, state, federal and other applicable safety regulations must always be complied with.

SIGMA 8 Façade System

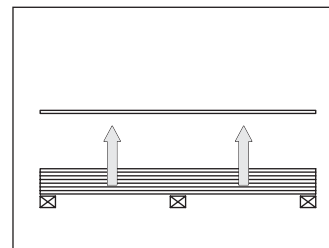
Work station



Provide a covered work station to install the metal parts.
Use a protection layer on the work table in order to protect the face of the panel from scratches and damage.

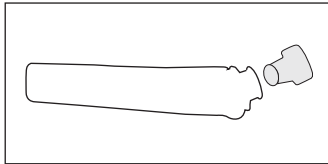


Do not drag...

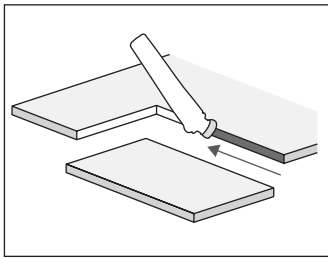


...but lift up vertically

Panel edge impregnation



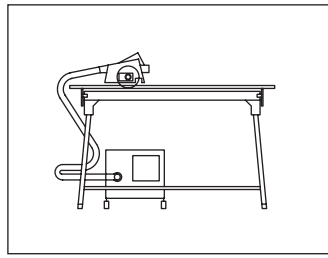
Impregnation liquid in hand applicators with replaceable sponges is supplied free of charge.



All cuts and cut outs must be impregnated.

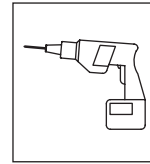
Panel cutting

For long straight cuts use circular hand saw FESTO or HILTI with carbide metal toothed blade or with diamond tipped blade. For cut outs use jig saw with carbide metal blade.

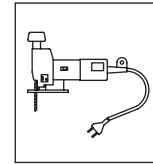


Cutting table consisting of circular hand saw, straight guide and dust extractor.

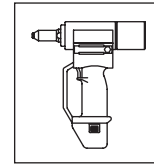
Tools



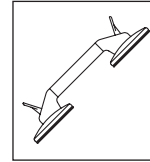
Drill



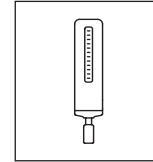
Scroll jig saw



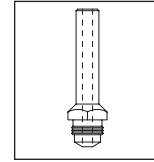
GESIPA Rivet gun



Vacuum handle



Torque driver



Nozzle S8 to rivet gun

Masking tape

It should be noted that most common masking tapes are not resistant to UV rays. Such tapes leave residues on panel surface that can not be removed without causing damage.

However the use of the following masking tapes is recommended :

- Temporary application (1 – 2 weeks): Masking tape Blue 3M 2090
- Several months application: Masking tape Gold 3M 244

Cleaning procedures

Remove dust immediately after cutting and drilling panels.

Dry dust

Remove with vacuum cleaner or with a dry, soft and clean brush or rag.

Wet dust

Wet dust will produce stains to panel surface. Therefore it must be removed immediately using plenty of water and a sponge or soft brush. If required use vinegar based cleaner.

SIGMA 8 Façade System

Cleaning of completed claddings

Non calcium based stains

Use pressure washer to thoroughly wash cladding with cold water at 40 – 80 bars.

To adjust pressure setting, do test on inconspicuous part of the cladding.

Calcium based stains

1. Apply a mist spray of a solution of 10% acetic acid in water
2. Allow to react a few minutes but do not let dry out
3. Use pressure washer to rinse cladding (see above)
4. Repeat steps 1 to 3 on obstinate stains

Do not use glass cleaning detergents.

Never wash warm cladding in direct sun light with alkaline or acid cleaners, as the detergent may cause irreversible stains.