Technical Information

Part of Wienerberger

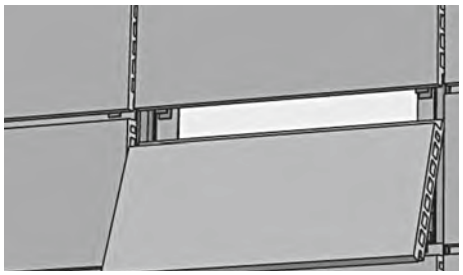
Argeton

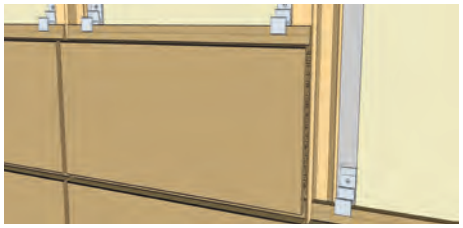
Argeton was developed as a ceramic panel element for rear-ventilated curtain façades at the beginning of the 1980s. The objective was to create a timeless, modern façade with the distinctive character of clay as a natural product.

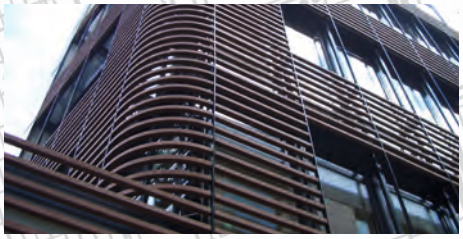
Today, the name Argeton stands for quality, aesthetics and creativity. This success story is based on professional and forward-thinking product development, service-oriented sales and consistent quality assurance.

The Argeton façade crowns new, modern buildings and adds a contemporary character to restored property. In combination with steel, glass or wood the Argeton façade impresses with its timeless perfection, elegance and naturalness. The aesthetics of the Argeton façade remain intact over many decades:

- A sophisticated water drainage prevents contamination.
- The ceramic colours remain resistant and strong, even when exposed to the toughest weather conditions.
- The façade is considered to be particularly fire proof.
- The joint profile protects the façade from the lateral movement of the tiles, the penetration of rain and the clatter of tiles in the wind.







Technical Information

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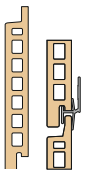
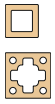
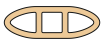
Argeton

Product Matrix

	Tampa	Terzo				Lineo		Danza	Barro	Ecke
										
Centre to centre distance	**Tampa**	**Terzo**	**Terzo 1**	**Terzo 2**	**Terzo 3**	**Lineo 4**	**Lineo 9**	**Danza**	**Ø 50/50 mm or 69/69 mm, max. L=1.700 mm**	**90/90 mm or 120/120 mm, max. L=600 mm**
Format 150 mm	max. L=1.200 mm		max. L=1.200 mm						 150x50 mm max. L=1.700 mm	
Format 175 mm	max. L=1.200 mm									
Format 187,5 mm	max. L=1.200 mm								 100x50 mm max. L=1.700 mm	
Format 200 mm	max. L=1.500 mm	max. L=1.500 mm				max. L=1.500 mm		max. L=1.500 mm		
Format 212,5 mm	max. L=1.500 mm									
Format 225 mm	max. L=1.500 mm	max. L=1.500 mm		max. L=1.500 mm	max. L=1.500 mm					
Format 237,5 mm	max. L=1.500 mm									
Format 243,5 mm	max. L=1.500 mm	max. L=1.500 mm								
Format 250 mm	max. L=1.500 mm				max. L=1.500 mm		max. L=1.500 mm			
Format 257 mm						max. L=1.500 mm				
Format 275 mm	max. L=1.500 mm									
Format 300 mm	max. L=1.500 mm									
Format 400 mm	max. L=1.500 mm									
Format 500 mm	max. L=1.500 mm D=35 mm									

Standard Colours

Salmon/pastel red
Tuscan red
Natural red
Tizian red
Burgundy
Light brown
Coffee
Red brown
Chocolate
Bright grey
Silver grey
Light grey
Platinum Grey
Granite grey
Iron grey
Ferro grey
Basalt
Volcano grey
Volcano black
Glacier blue
Pearl white
Cream
Carrara white
Apricot beige
Sand
Sahara yellow

Technical Benefits of an Argeton Façade

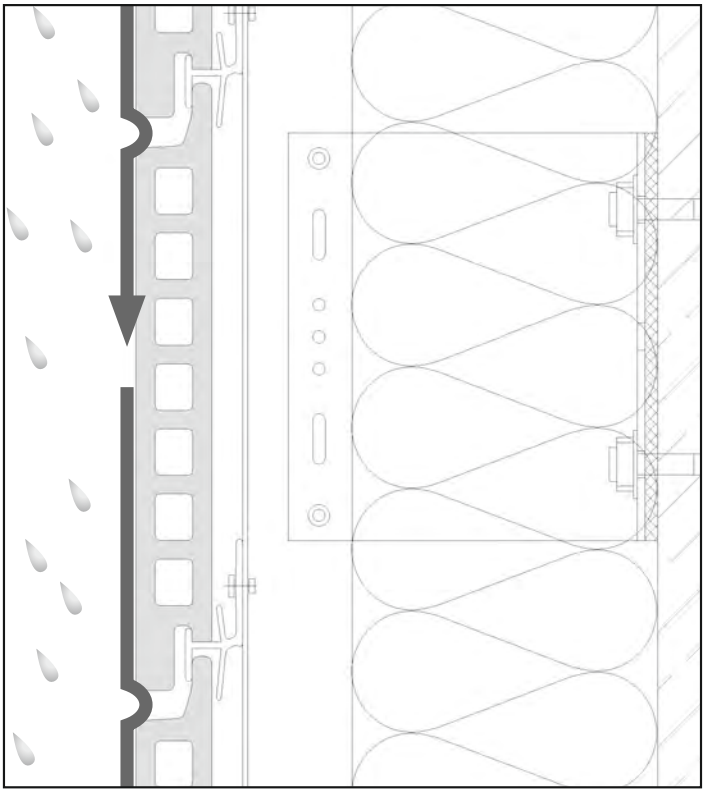
- Sustainability: Lifetime 50–60 years
- Free choice of insulation thickness
- Improvement of sound protection by approx. 9 dB
- Frost-proof
- Non-flammable (material class A1)
- Ball-proof
- Great durability against impact
- Virtually maintenance-free
- Resistant to graffiti

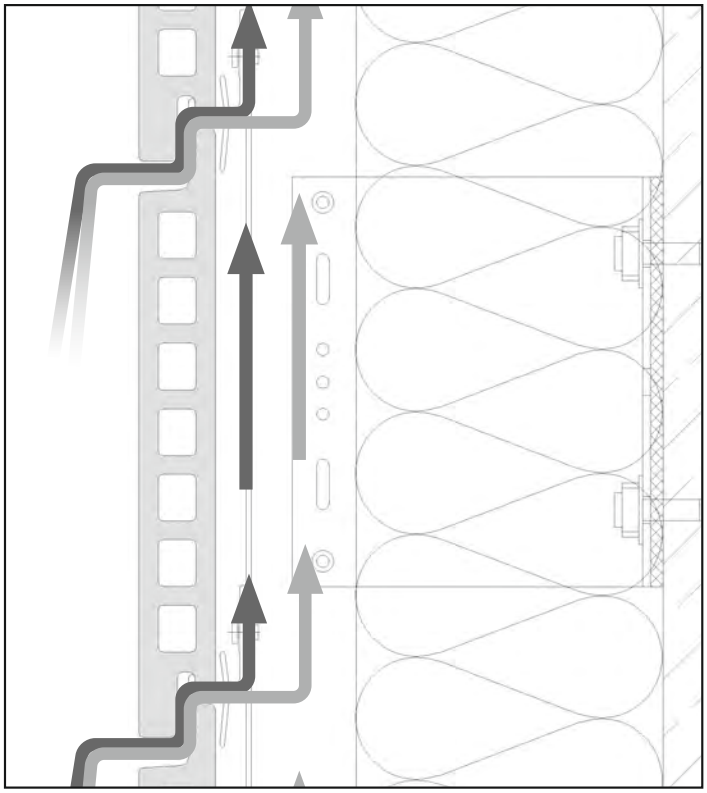
Design Benefits of an Argeton Façade

- Variety of formats: see product matrix, costum-made shapes possible
- Diverse colours: in addition to the standard colours, practically any colour can be produced with engobes or glazes
- Different tile surfaces: nature, glazed, engobed, grooved or structured
- Perfect for combination with traditional construction materials: ideal for building renovation

Features of the Rear Ventilated Façade

- Weather protection
- Moisture control
- Thermal insulation
- Preventing heat accumulation
- Sound protection
- Fire protection





Argeton

Product Data Sheet – General Technical Description

1. Field of Application

This product data sheet is valid for Argeton façade tiles according to EN 14411. The general technical approval (Z-10.3-784) is available on the website as download.

2. Materials/Concepts

Argeton façade tiles
Argeton tiles are extruded ceramic façade elements. After the burning process, they are cut to length in the pulling direction. Ceramic tiles are non-flammable according to DIN 4102-4 (material class A1). Argeton tiles have high static qualities and are resistant to water and frost.

Substructure
The substructure consists of aluminium profiles according to DIN 4113-1 (alloy EN AW 6063-T66).

A distinction is made between:

- vertical substructure (consisting of wall brackets and vertical T profiles). The tiles are fixed with aluminium clips onto „T“ profiles.
- horizontal substructure (consisting of wall brackets, vertical profiles and horizontal rails). The tiles are fixed with clamps to the horizontal rail.

The brackets are anchored in the load-bearing wall using approved anchoring elements, the substructure is interconnected using appropriately approved fasteners (rivets or screws).

Façade system
The schematics in Figure 1 (vertical substructure) and 2 (horizontal substructure) display the structure and the elements of the rear ventilated Argeton façade systems.

3. Manufacturing

The manufacture of the tiles starts with the extraction of natural resources whose collection area is recultivated according to ecological criteria. After careful processing of the clay, forming is carried out using a die in the so-called extrusion procedure. The drying phase follows the forming. The subsequent burning process (in a roller furnace designed specially for this purpose at 1080 °C up to 1280 °C) is performed under more efficient utilisation of energy, whose rejected heat is used for the drying process.

There are currently 26 natural colours available. In addition, other colours can be created by glazing, engobing and steaming. Different versions of the surface are possible (grooved or textured). State of the art laser-guided conveyor technology and production logistics guarantee cost-effective and flexible production.

4. Requirements

General

The applicability of Argeton façade systems is regulated in various country-specific technical approvals.

Special requirements

Calculation of specific mass or density is performed in accordance with EN 10545-3. Argeton tiles meet the requirements for frost resistance according to EN 14411. In addition, tests according to EN 10545 are carried out regularly in the course of internal and external monitoring, e.g. to determine

- the mass, evenness and surface qualities
- the water absorption
- the bending strength and breaking load
- the impact resistance
- the thermal expansion
- the thermal shock resistance
- the moisture expansion
- the chemical resistance
- the resistance to staining

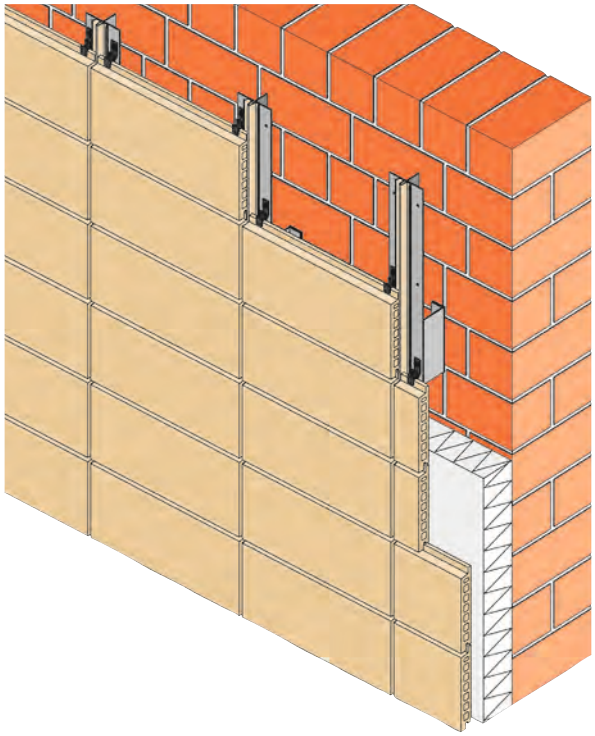


Figure 1 – Vertical substructure

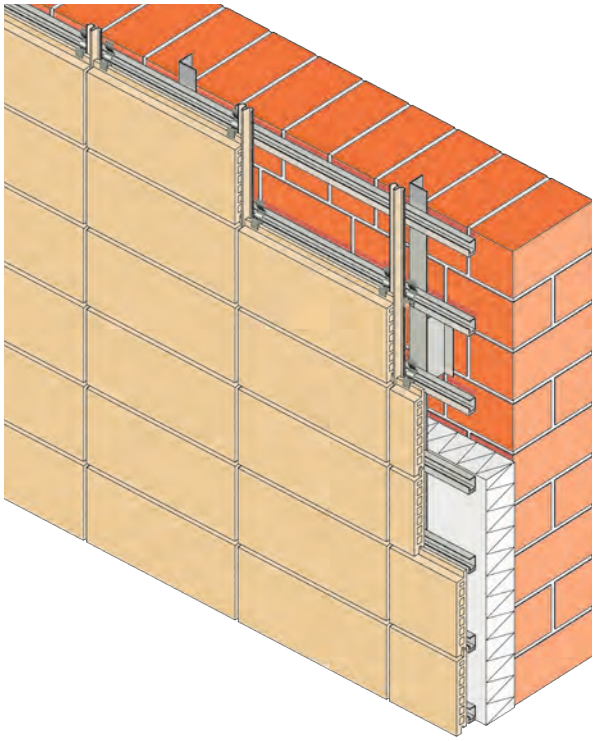


Figure 2 – Horizontal substructure

Technical Data

Dimensions:	**Length:**	max. l = 1200 mm (tile height of 150 mm to 200 mm) max. l = 1500 mm (tile height of 212.5 mm to 500 mm) tolerance ± 1.0 mm
	Height:	tile height ≤ 300 mm, tolerance ± 2.0 mm tile height > 300 mm, tolerance ± 2.0 mm
	Thickness:	30 mm (height = 500 mm: thickness = 35 mm) tolerance ± 1.0 mm

Form:	**Wingity:**	(out of plane)	±0.25 % of the diagonal
	Straightness:	(in the plane)	±0.25 % of the length/height
	Evenness:	(out of plane)	±0.25 % of the length
		(out of plane)	±0.70 % of the height
	Angularity:	(in the plane)	tile height ≤ 300 mm ± 1.0 mm
		(in the plane)	tile height > 300 mm ± 1.5 mm

Weight (dry): approx. 42 kg/m² (= 35 mm thickness: approx. 59 kg/m²)

Body density: ≥ 2.0 g/cm³

Bending strength: 12–20 N/mm²

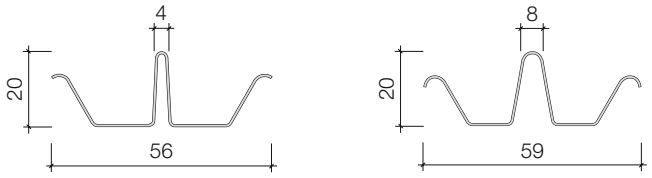
Water absorption: ≤ 9,0 %
acc. to test reports of Güteschutz Ziegel e. V. between 3 and 8 %

Frost resistance: acc. to test reports of Güteschutz Ziegel e. V.

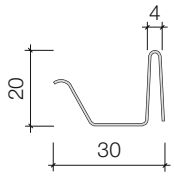
External control and test reports:
- IFBT GmbH – Institut für Fassaden- und Befestigungstechnik Leipzig
- Güteschutz Ziegel e. V.

Accessories

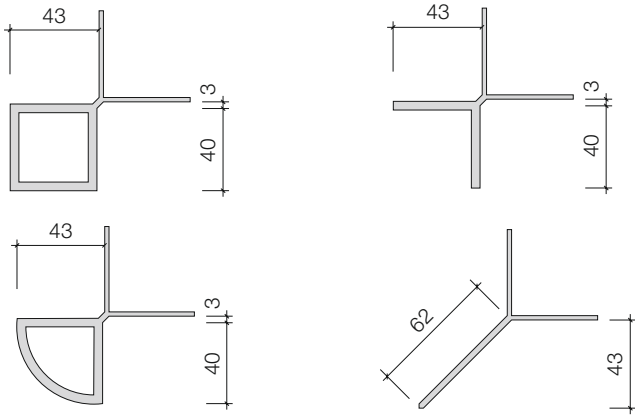
Joint profiles
Aluminium joint profiles are available either for 8 mm or 4 mm wide vertical joints in a length of 3 m. They can be supplied in the colours RAL 1015 light ivory, RAL 7005 mouse grey, RAL 7015 slate grey and RAL 8004 copper brown.



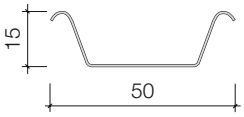
Joint abutment profile
Abutment joints are designed with a joint width of 4 mm.



Corner profile
Aluminium corner profiles are blank depending on the request, anodised or coloured according to available RAL colours.

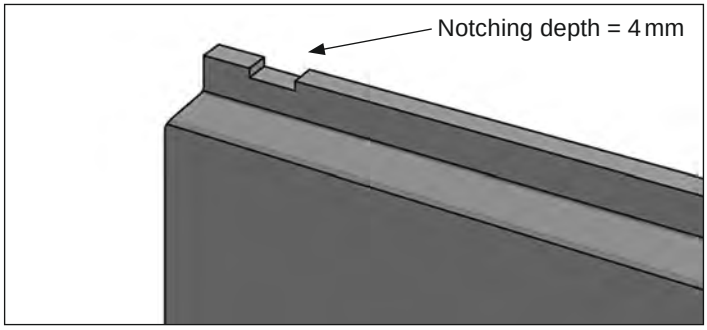


Spring profile
Spring profiles are to be provided for connections (e.g. building corners with a miter cut) where no joint profiles are possible. They ensure that the tiles are firmly pressed into the clips or clamps.

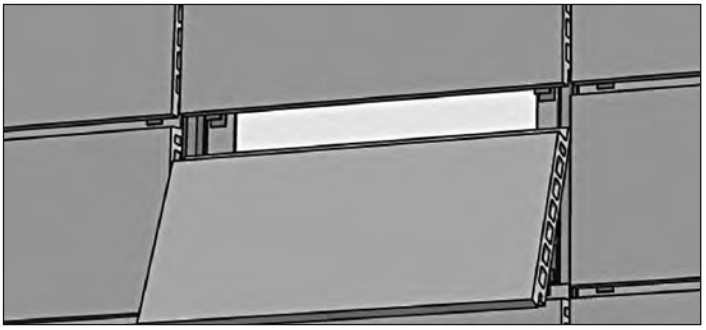


Tile Exchange

Subsequent installation of tiles (horizontal + vertical UK):



Shorten tile lip in the area of the clip


Install new tile

Argeton

Vertical Substructure

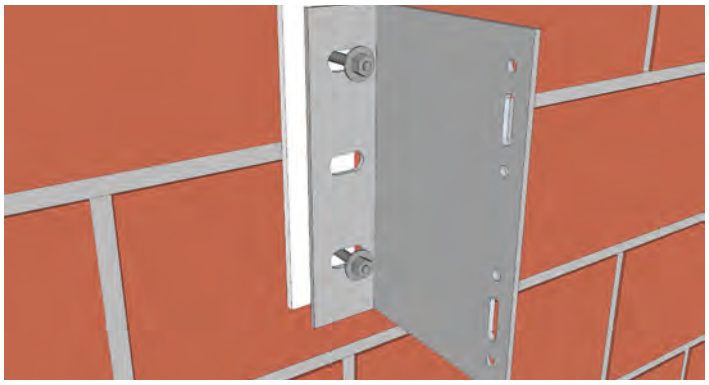
Basic concept
The substructure consists of vertical T-profiles, anchored to the building with wall brackets. The Argeton tiles are to be fixed by aluminium clips in the vertical T-profiles. Joint profiles have to be placed in the vertical joints. This prevents lateral movement of the façade tiles and makes sure that the tiles sit securely in the clips. Also, water is prevented from penetrating the vertical joints.

Substructure and insulation
For the vertical basic substructure aluminium wall brackets are anchored in statically required intervals on the building wall. Afterwards, thermal insulation is applied to the previously cleaned surface of the wall. The choice of insulation material in each individual case depends on the property and its particular requirements. The T-profiles are aligned with the consoles and fastened with approved fasteners such as rivets or screws.

Installation of Argeton tiles
First, the bottom clips have to be fixed, always two per Argeton tile, onto the T-profiles with blind rivets or screws. In a next step the tiles can be installed onto the clips. The fixation of the tiles is carried out by installing the middle clips onto the T-profile. This procedure has to be repeated for every row up to the top of the façade. The top row is to be fixed by a special top clip. The joint profiles have to be placed between the tiles as soon as the first tile row has been completed.

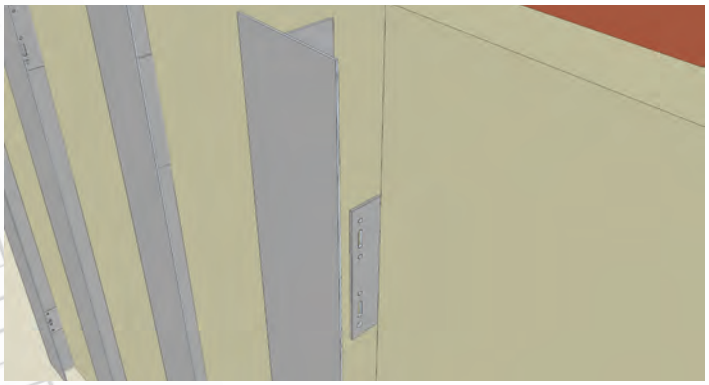
Vertical Substructure – Installation Instructions

1. Anchoring of wall consoles

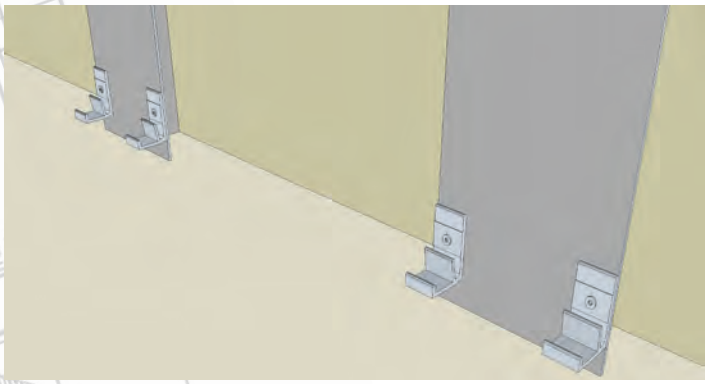


2. Installation of thermal insulation

3. Installation of aluminium T-profiles on wall consoles



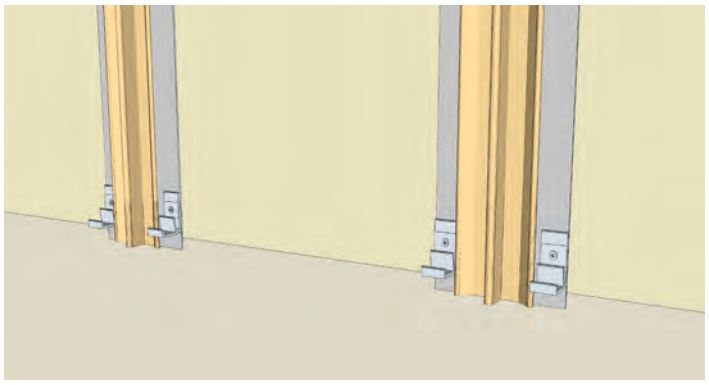
4. Fixing the bottom clips



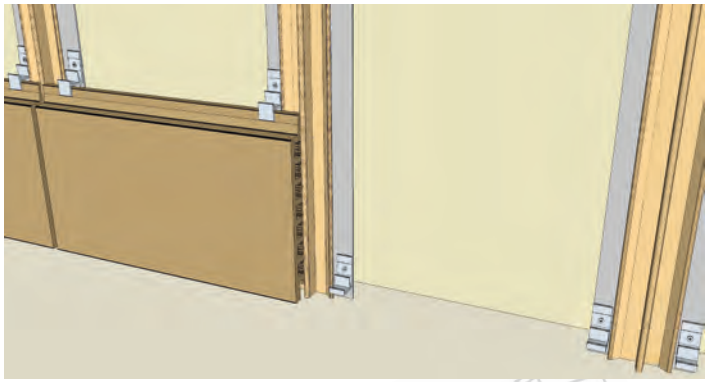
Argeton

Vertical Substructure – Installation Instructions

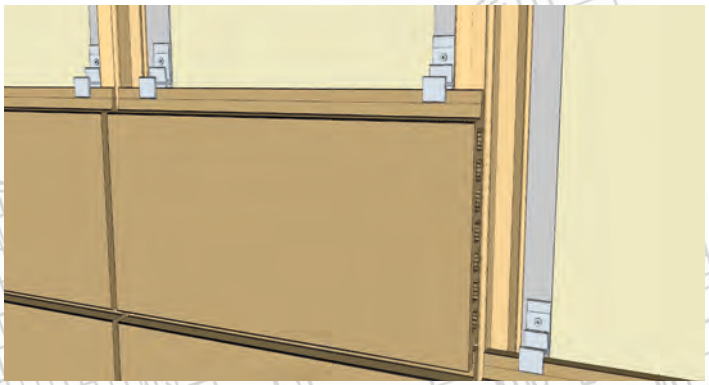
5. Fixing the joint profiles



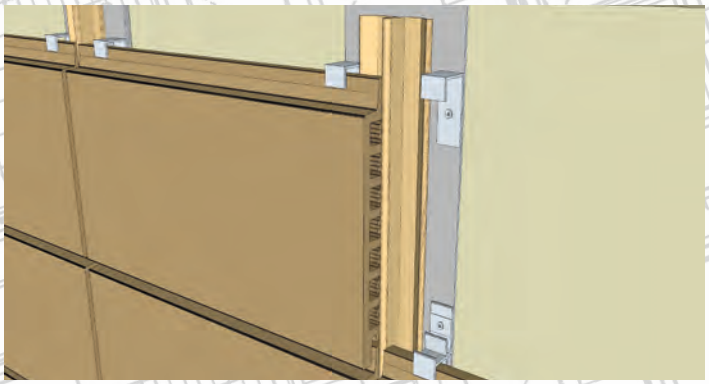
6. Installation of the bottom tile row



7. Installation of middle tile rows with middle clips

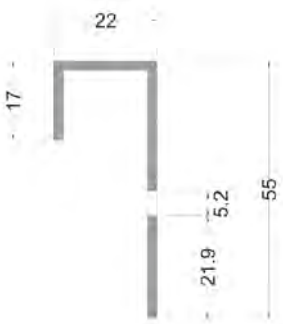


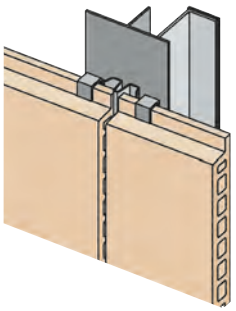
8. Installation of the top tile row



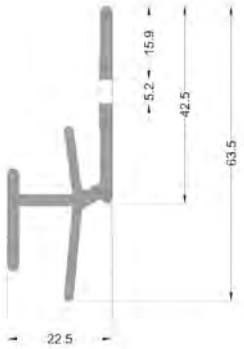
Vertical Substructure – Accessories

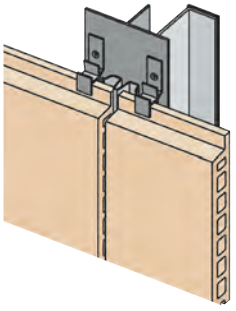
Top Clip



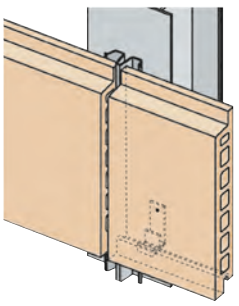


Middle Clip





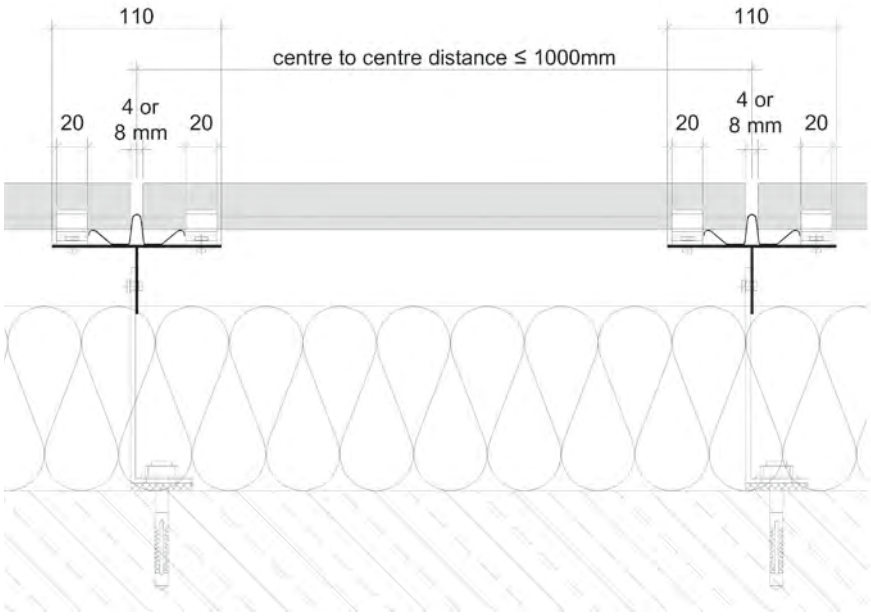
Bottom Clip



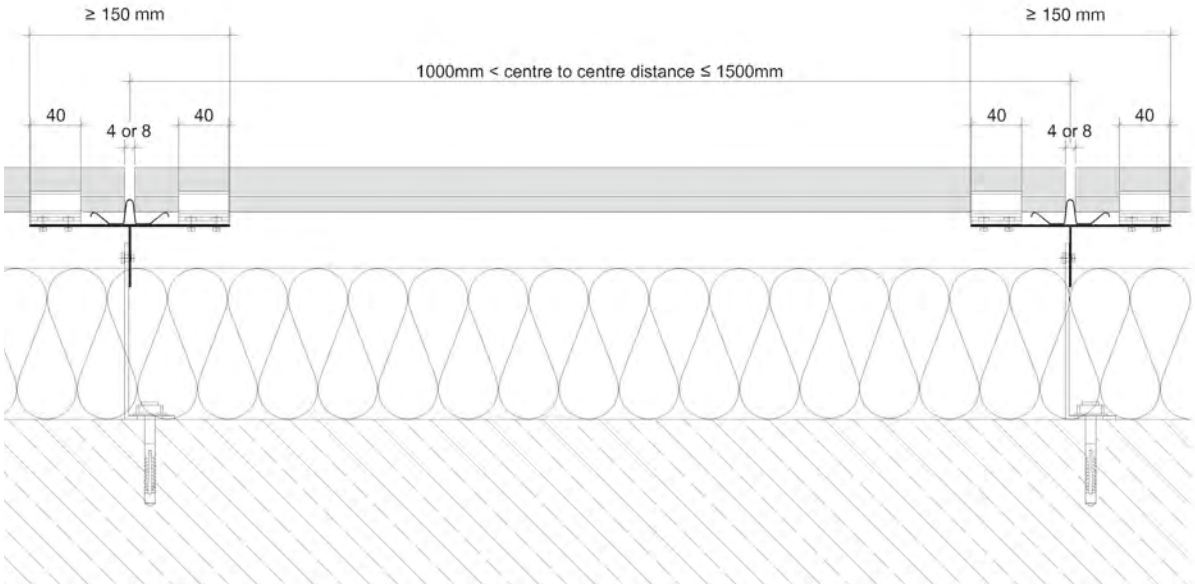
Argeton

Vertical Substructure – Installation Dimensions

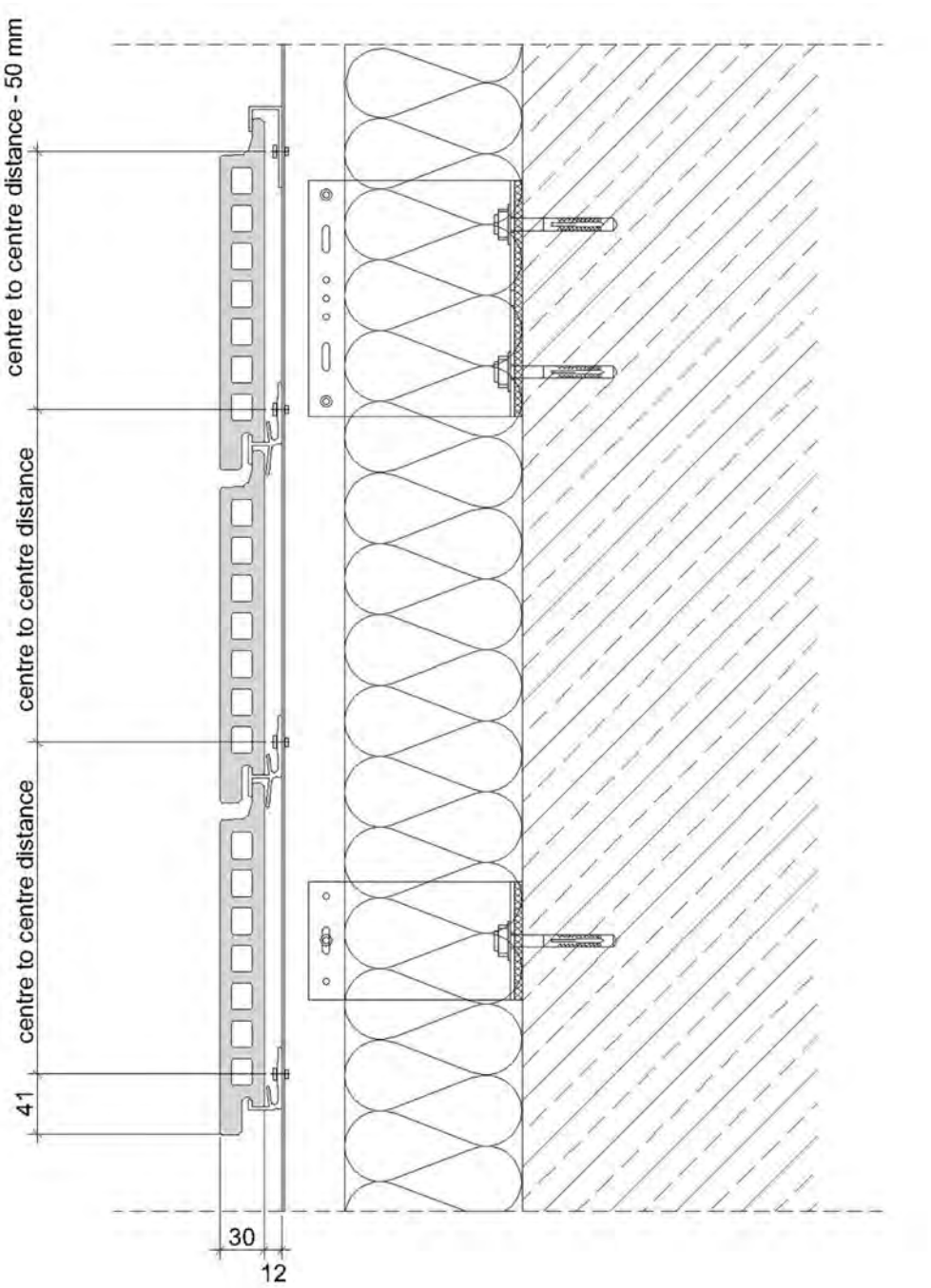
Tile length ≤ 1000 mm:
20 mm-clips on 110 T-profile



Tile length > 1000 mm:
40 mm-clip on 150 T-profile



Installation dimensions
(vertical substructure)



Argeton

Horizontal Substructure

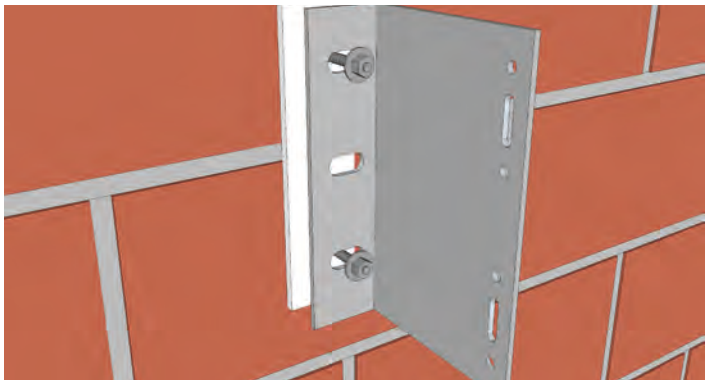
Basic concept
The substructure consists of vertical L-profiles anchored to the building with wall brackets. Horizontal aluminium rails are installed on the basic substructure. The distance depends on the height of the tiles which are fastened to the horizontal rails with aluminium clamps. Joint profiles are arranged in the vertical joints. This prevents lateral movement of the façade tiles and makes sure that the tiles sit securely in the clamps. In addition, water is prevented from penetrating the vertical joints.

Substructure and insulation
For the vertical, basic substructure aluminium wall brackets are anchored in statically required intervals on the building wall. The arrangement of the basic substructure is independent of the height of the façade tiles. Afterwards, thermal insulation is applied to the previously cleaned surface of the wall. The choice of insulation material in each individual case depends on the property and its particular requirements. Vertical L-profiles are aligned with the consoles and fastened with approved fasteners such as rivets or screws. The special horizontal Argeton support rails are fixed onto the vertical L-profiles.

Installation of Argeton tiles
First, bottom clamps have to be fixed, always two per Argeton tile, into the horizontal rails. In a next step the tiles can be installed onto the clamps. The fixation of the tiles is carried out by putting the middle clamps into the next horizontal rail. This procedure has to be repeated for every tile row up to the top of the façade. The top row is to be fixed by special top clamps. The joint profiles have to be placed between the tiles as soon as the first tile row has been completed.

Horizontal Substructure – Installation Instructions

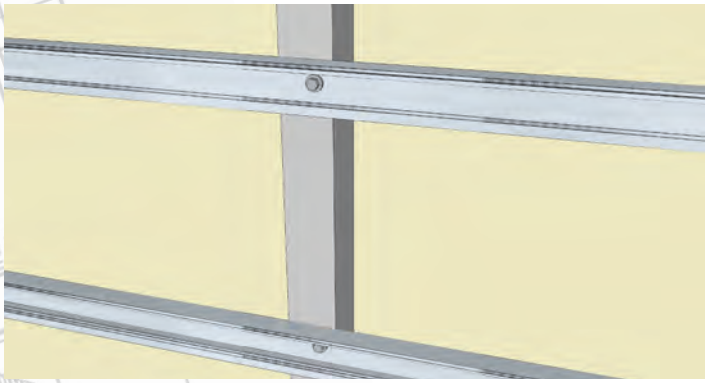
1. Anchoring the wall brackets



2. Installation of thermal insulation

3. Securing angular support profiles to the wall consoles

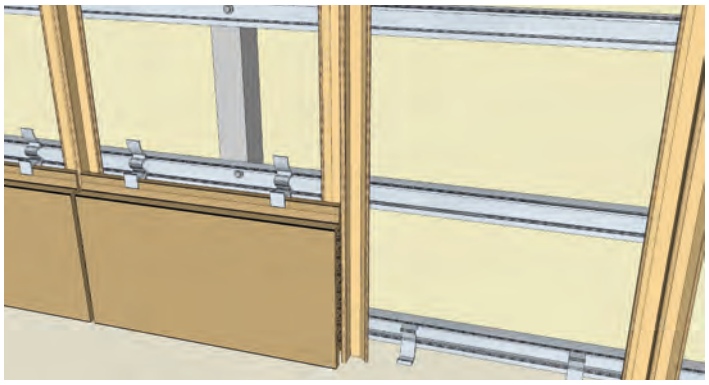
4. Installation of the horizontal profiles



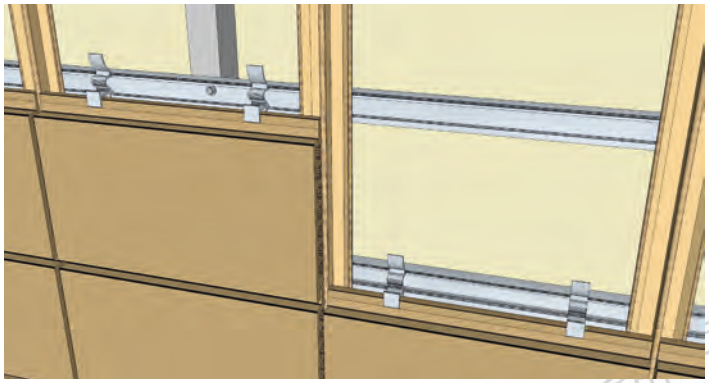
Argeton

Horizontal Substructure – Installation Instructions

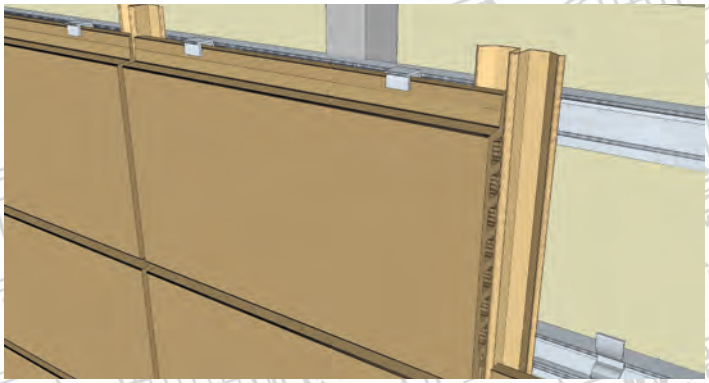
5. Installation of the first tile row with bottom clamps and fixing of joint profiles



6. Installation of middle tile rows with middle clamps

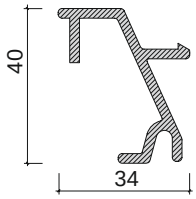


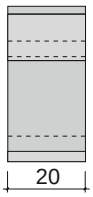
7. Installation of the top tile row

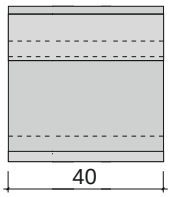


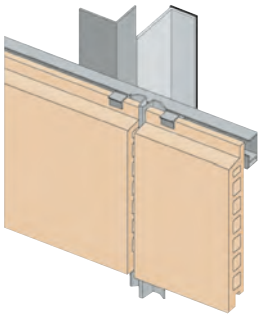
Horizontal Substructure – Accessories

Top Clamp

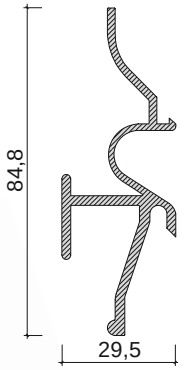


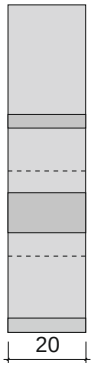


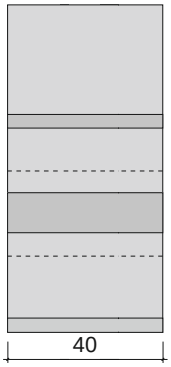


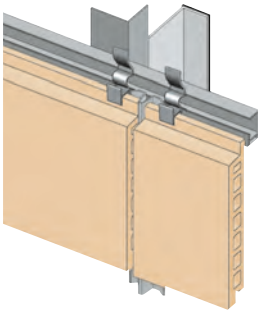


Middle Clamp

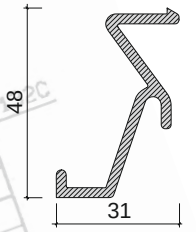


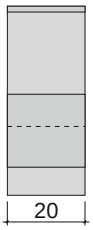


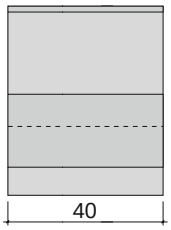


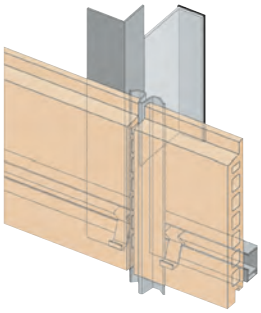


Bottom Clamp





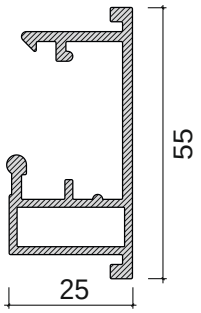


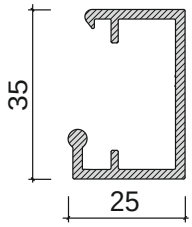


Horizontal Carrier Rails

Maximum span width:
Horizontal rail 25 x 35: 120 cm
Horizontal rail 25 x 55: 140 cm

Maximum protuding length:
Horizontal profile 25 x 35: 35 cm
Horizontal profile 25 x 55: 35 cm





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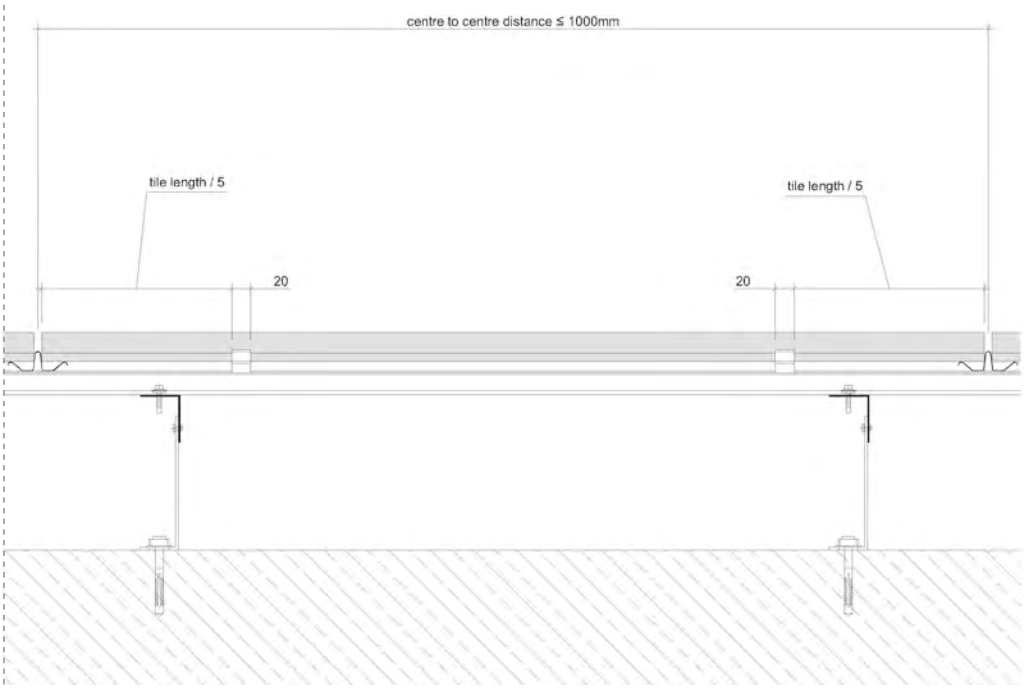
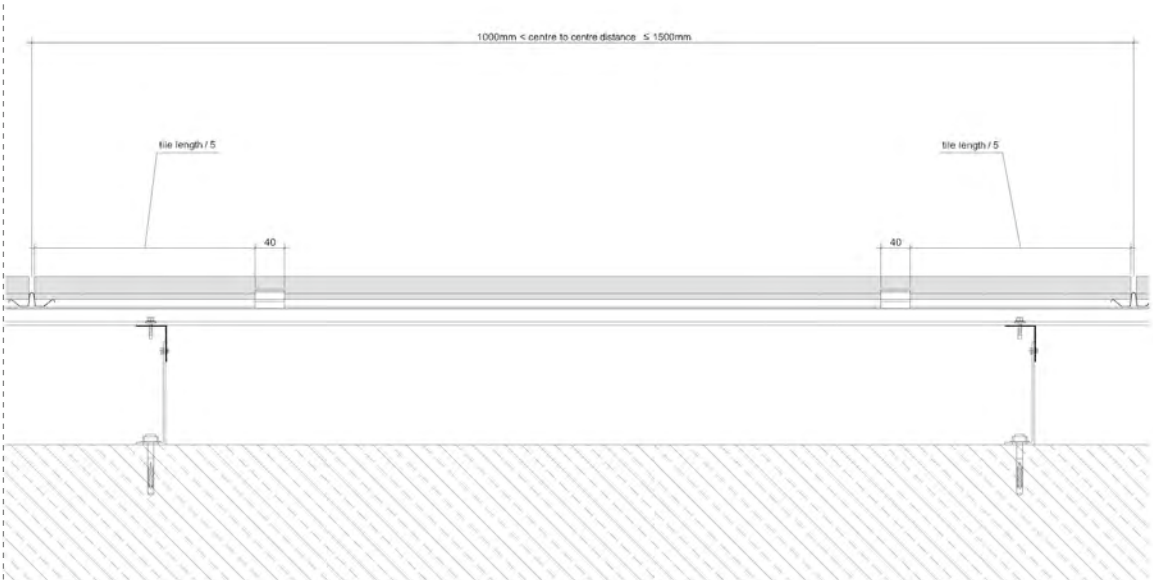
Horizontal Substructure – Installation Dimensions

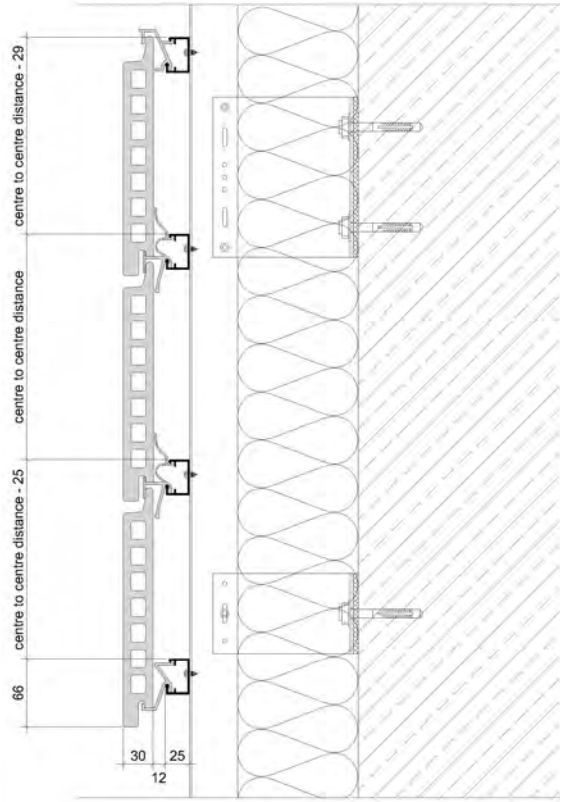
Tile length ≤1000 mm:
20 mm clamps



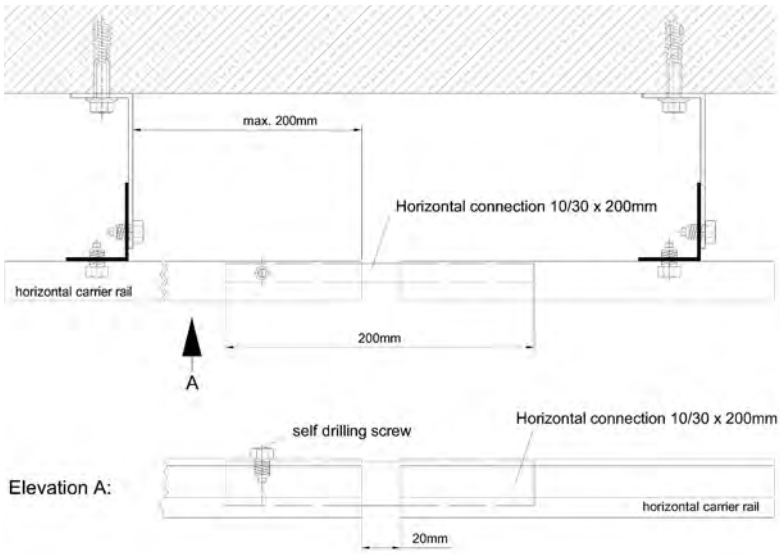
Tile length > 1000 mm:
40 mm clamps



Installation dimensions (horizontal substructure):



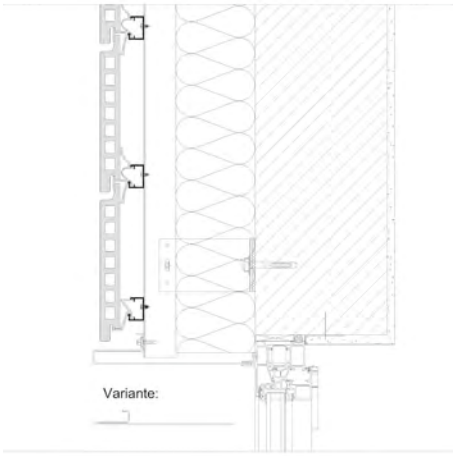
Joint connection between horizontal profiles:



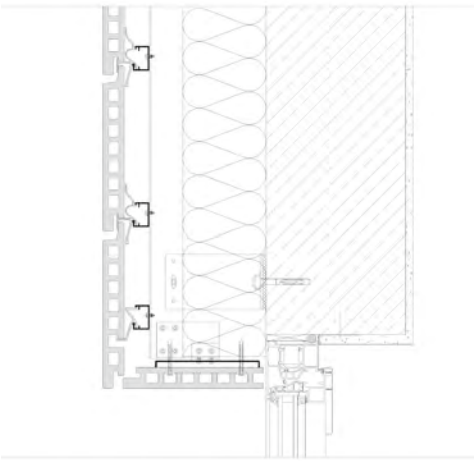
Argeton

Connection Details – Examples

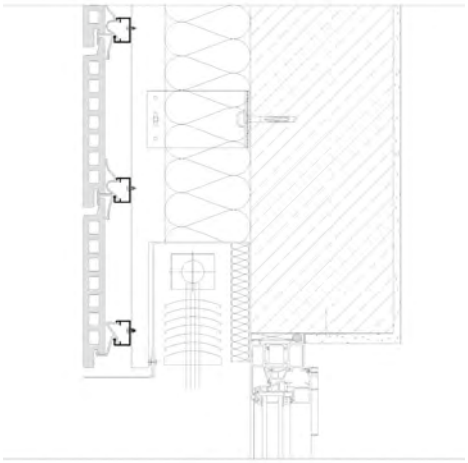
Lintel with aluminium sheet

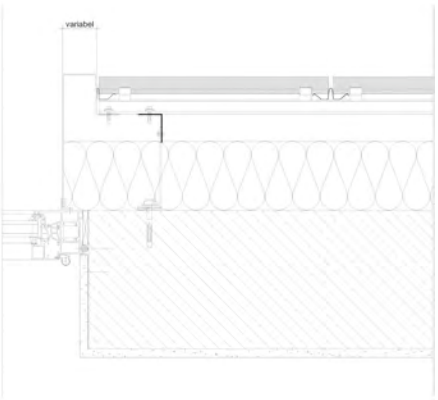


Lintel with tiles



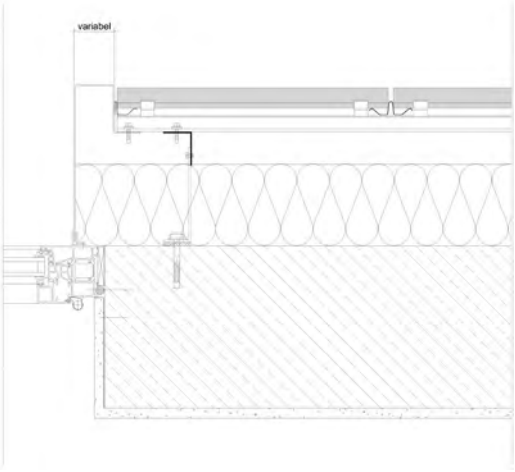
Lintel with sun protection



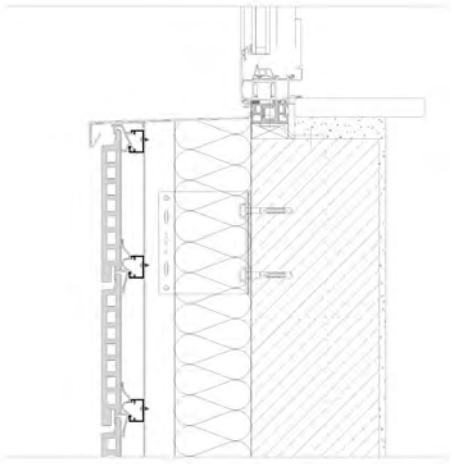


All standard details are available in PDF and DWG format in the Info & download area under www.wienerberger.de/argeton.

Reveal with aluminium sheet



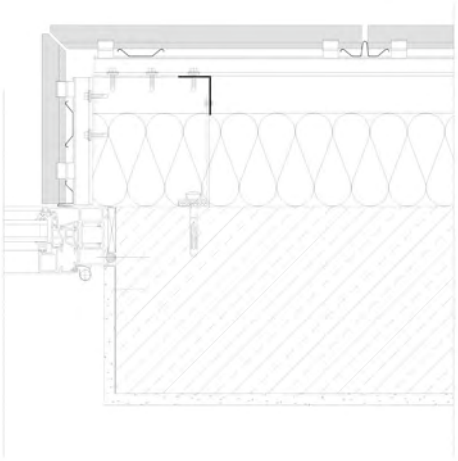
Window sill



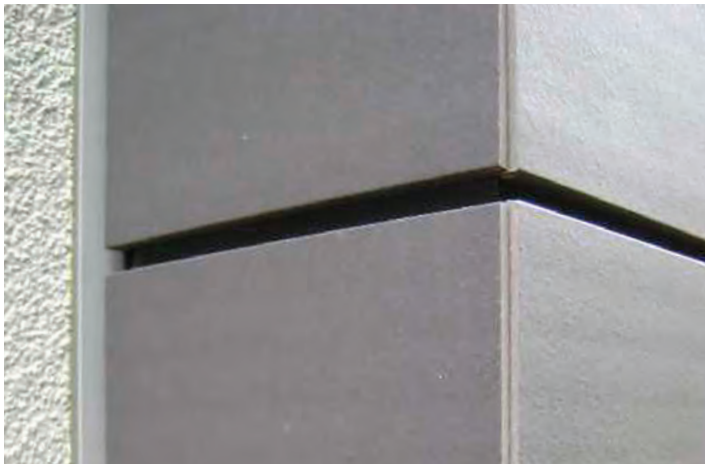
Window sill

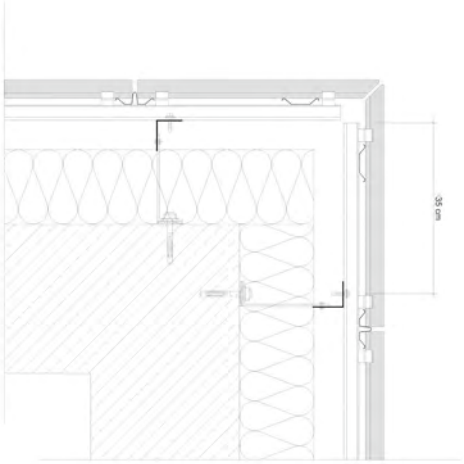
Connection Details – Examples

Reveal with tiles

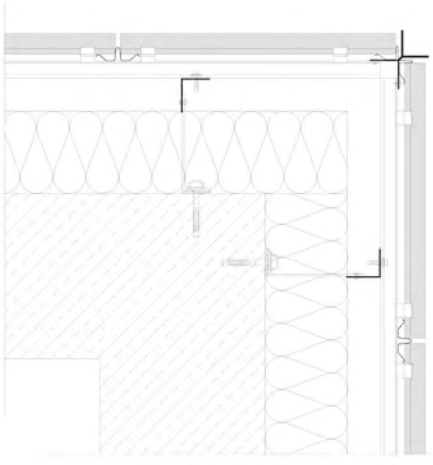


Corner with miter cut

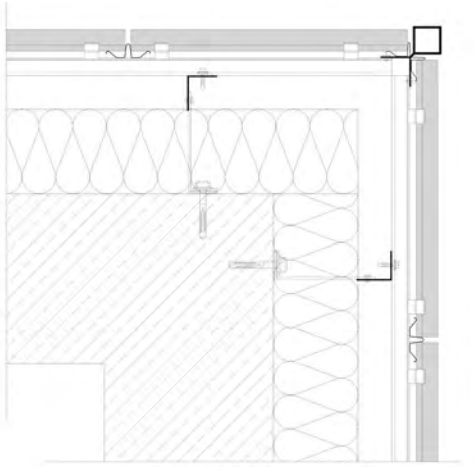




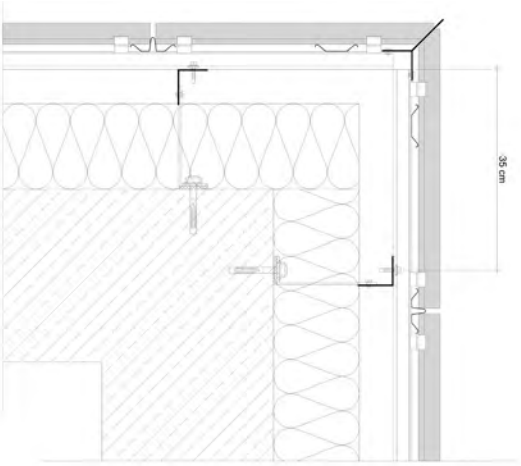
Corner with open aluminium profile



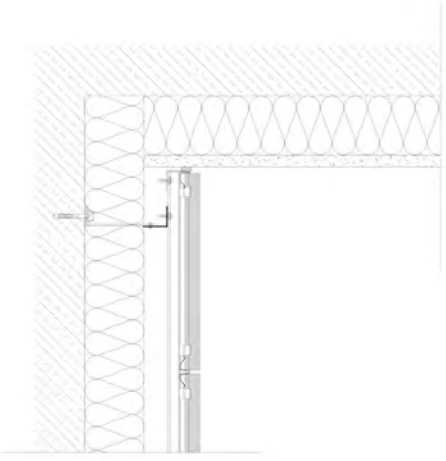
Corner with closed aluminium profile



Corner with Y-profile

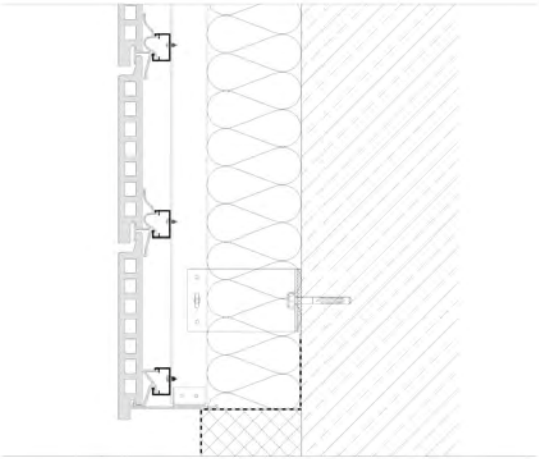


Inside corner Argeton / plaster

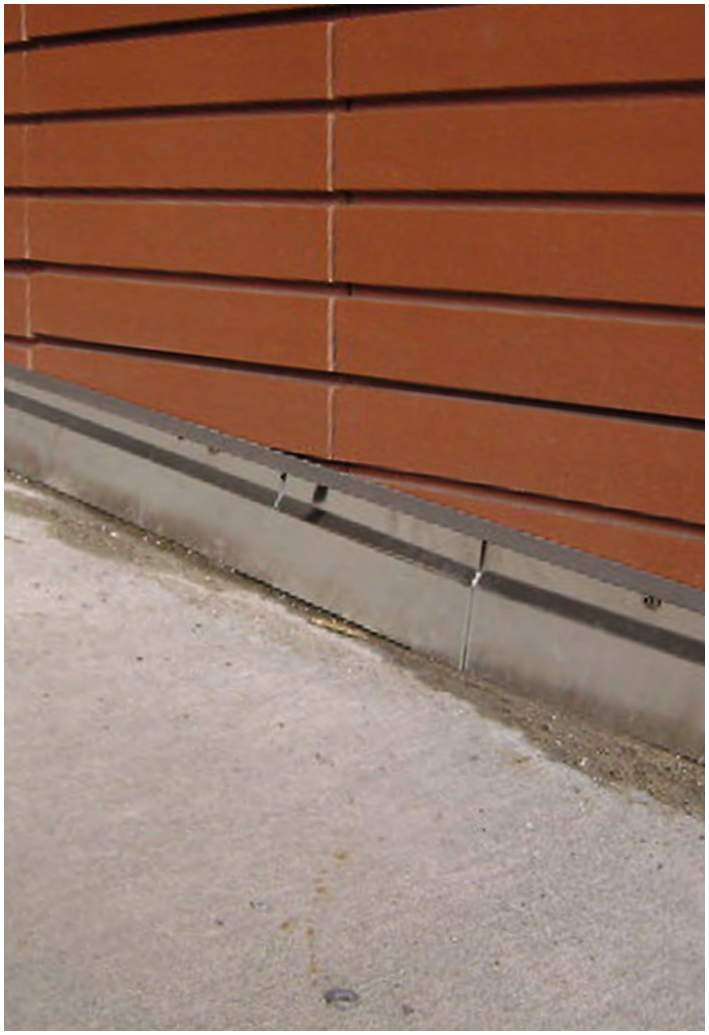


Connection Details – Examples

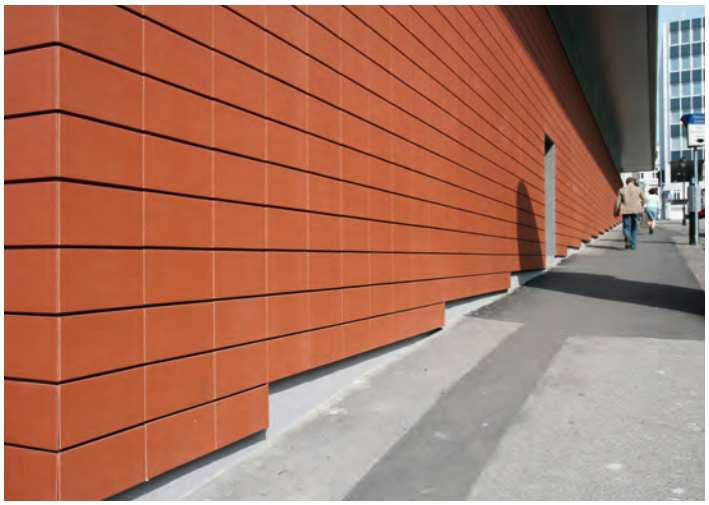
Lower finish



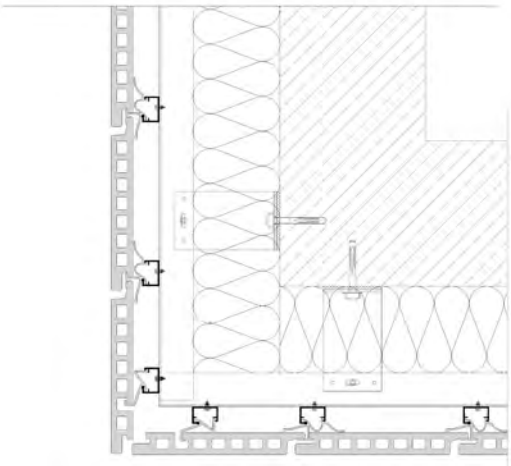
Lower finish with aluminium sheet



Lower finish with tiles

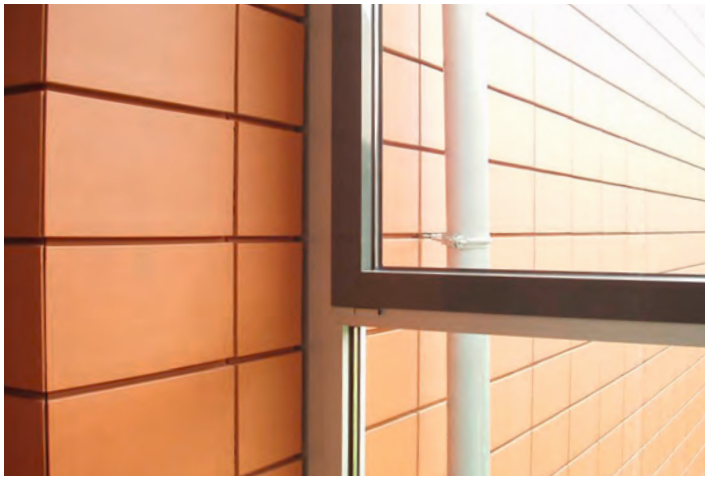


Connection wall / ceiling



Canopy

Argeton inside and outside

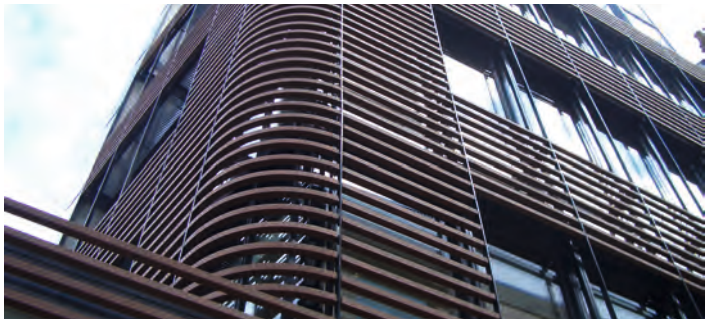


Curved tiles

Curved façade with flat tiles

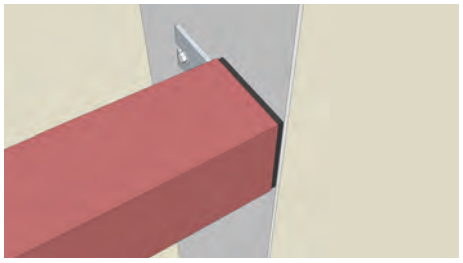
Argeton

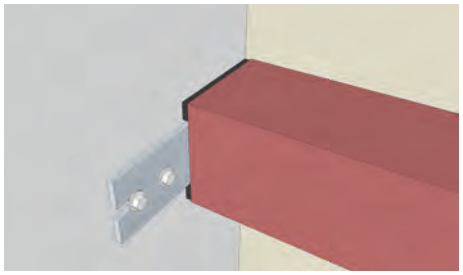
Barro – Façade Elements



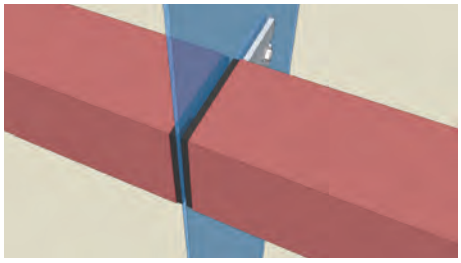
Barro – System

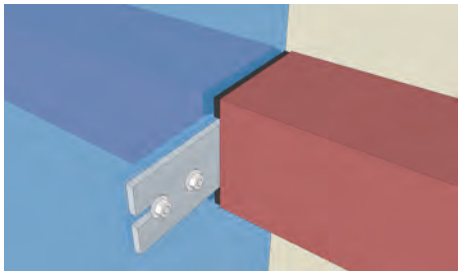
Single support:





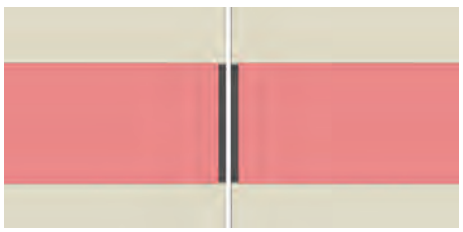
Double support:





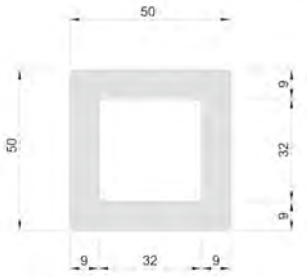
Double support (top view):

Double support (front view):

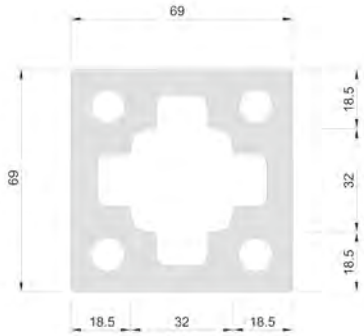


Barro – Shapes

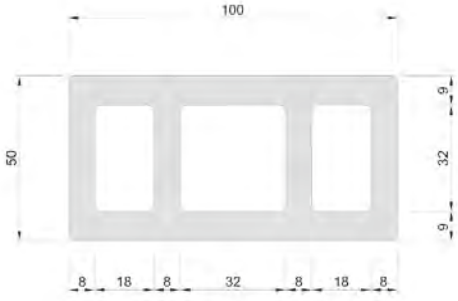
Barro 50 x 50 mm
max. length = 1.700 mm



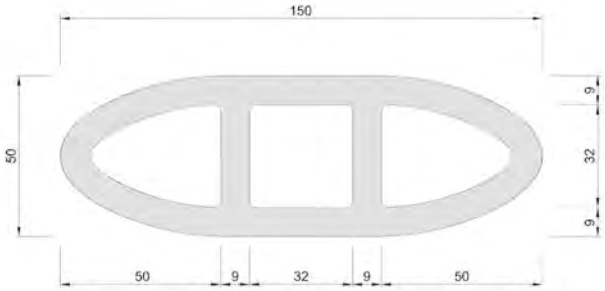
Barro 69 x 69 mm
max. length = 1.700 mm



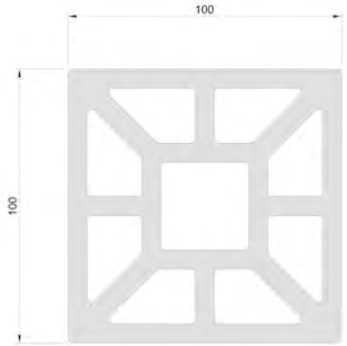
Barro 50 x 100 mm
max. length = 1.700 mm

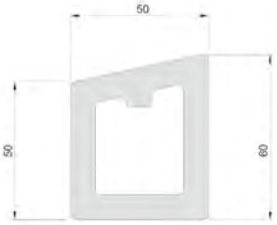


Barro Ellipse 50 x 150 mm
max. length = 1.700 mm



Individual designs (examples)





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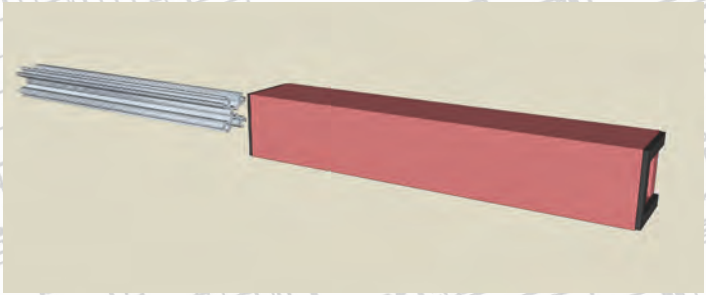
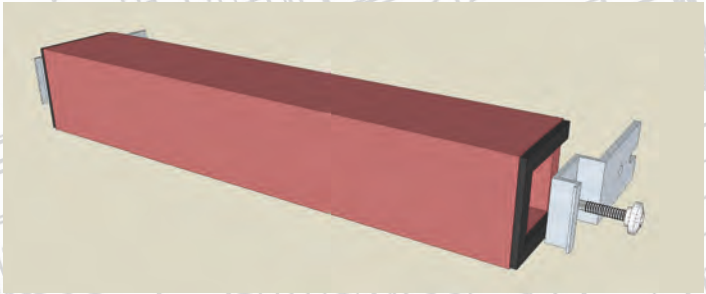
Barro – System – Installation Instructions

1. Gluing of EPDM pads (optionally)

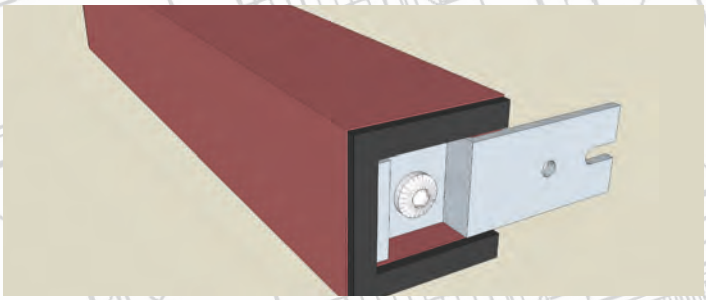
2. Inserting the X-profile



3. Securing the Barro support with one Barro screw

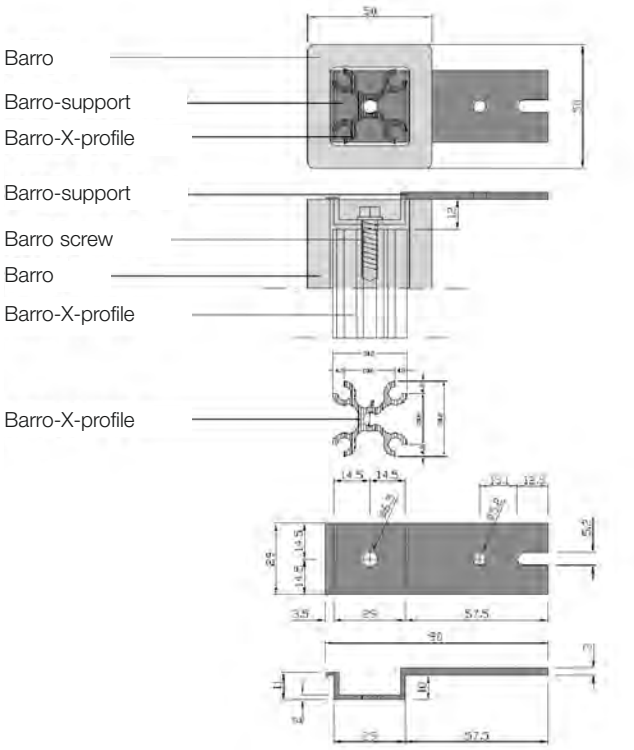


4. Installing the Barro on vertical base substructure

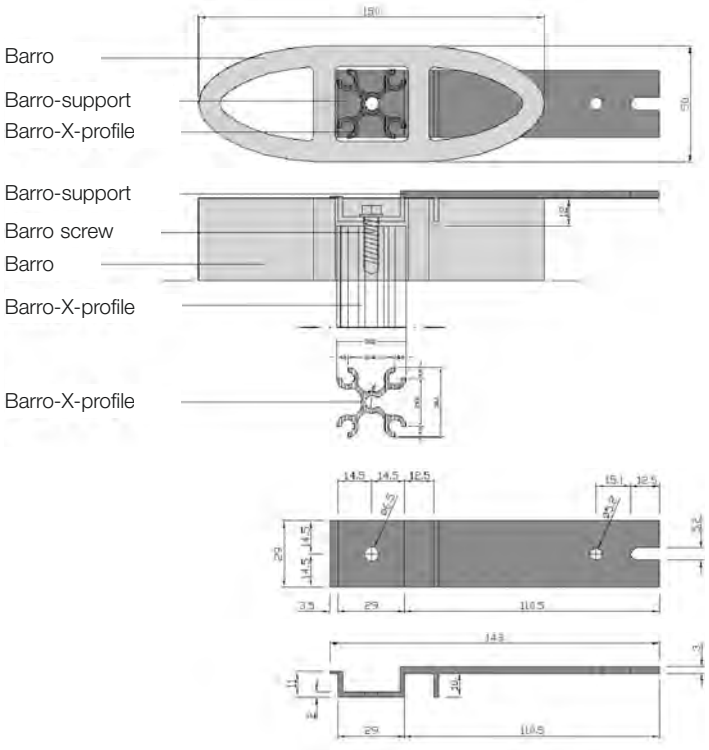


Barro – Accessories

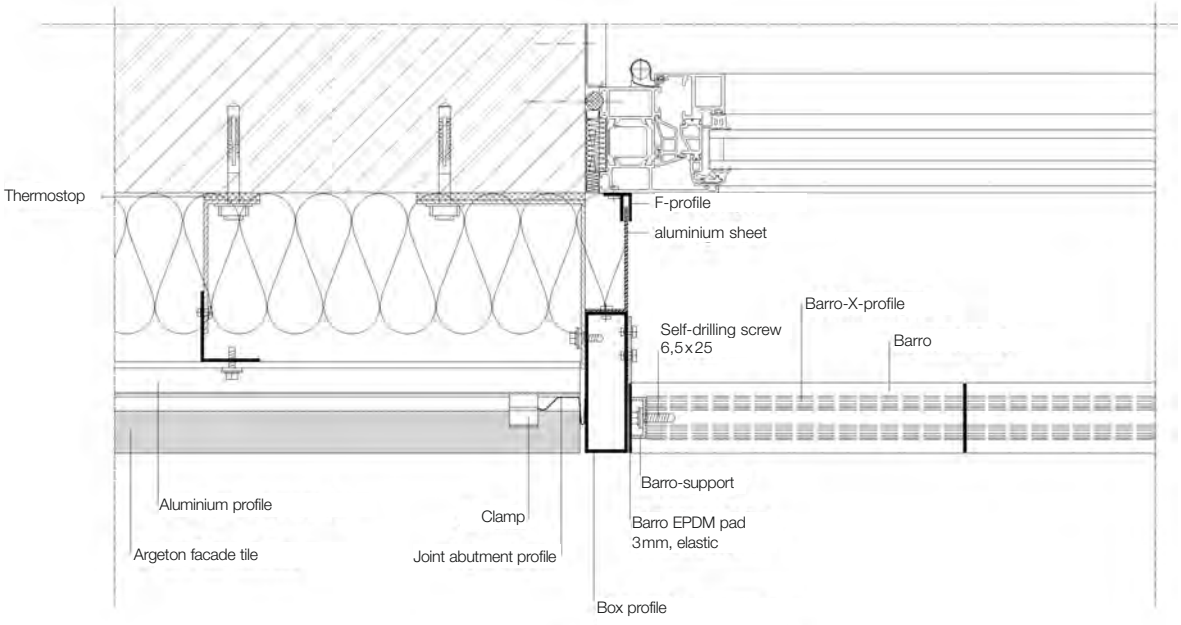
Barro support for Barro 50 x 50



Barro support for Barro 50 x 150



Barro as a sunscreen, detailed example



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