FIXIT
Schweiz. Suisse. Svizzera.

Second layer with Aerogel insulating-paster

with detailed drawings

The advantages of a second layer with Aerogel insulating-plaster

Anchor bolt marks disappear

Aerogel insulating plaster completely covers over unsightly anchor bolt marks in the façade. Since the applied layer is only 3 cm thick (instead of 6 cm in the case of conventional insulation) the overall layer thicknesses is reduced.

Improved thermal insulation

Applying even a thin layer of Aerogel insulating plaster of the existing render results in a considerable improvement in thermal insulation, thus adding value to the building being renovated. The layer thickness can be calculated and applied in a carefully controlled manner to give exactly the required U-value.

No visible outlines of underlying panels

The application of aerogel insulating plaster results in a homogeneous layer through which traces of the underlying panel structure are not visible. The facade will not bow in or bulge out, as can occur with sheet insulation.

Use of anchor bolts not necessary

Buildings undergoing renovation and improvement work often remain inhabited during the work. Fitting anchor bolts to secure panels is a noisy process which is made unnecessary when Aerogel insulating plaster is applied over existing render. Using Fixit 222 Aerogel Insulating Plaster means no anchor bolts are necessary.

No surface condensation

The higher mass in weight as with conventional insulation and the absorbency properties of Aerogel insulating plaster reduce the humidity on the surface. This reduce the algaes and fungal infestation on the façade and the maintenance.

No hollow spaces between insulating layers

When applying render over existing insulating façades, adhesive must be applied to the whole of the joint surface, and hollow spaces cannot be entirely avoided. The dew point increases as a result of the application of additional insulation, but the capillary effect of the Aerogel insulating plaster transports humidity to the outdoors. The façade remains intact.

Preparation and evaluation of the situation

Substrate matrix			
Untergrund	**Layer thickness < 5 cm**	**Layer thickness < 7 cm**	**Layer thickness ≥ 7 cm**
EPS / Mineral wool	Fixit 439*	Fixit 439 + Welnet 3 cm	Fixit 439 + Welnet 5 cm
Embedded mesh	Fixit 462*	Welnet 3 cm	Welnet 5 cm
Finish coat	Fixit 462*	Welnet 3 cm	Welnet 5 cm

* = apply a 5 mm layer and roughen horizontally with a brush.

Fire block

Fire Safety Standard 1 – 15

Art. 2, §2 – Applicability

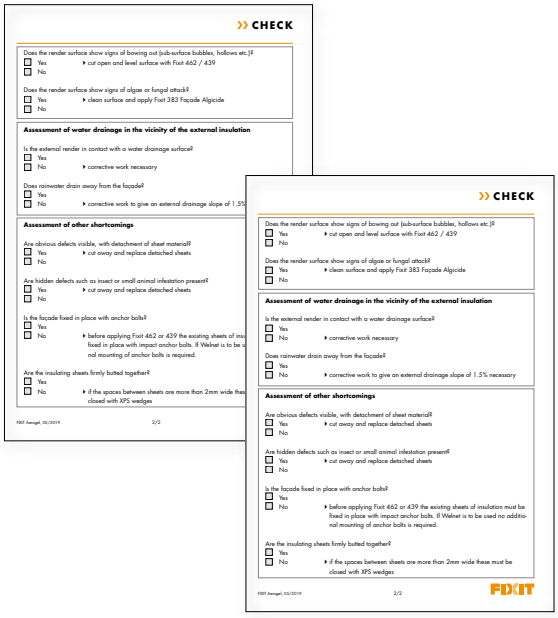
2 Existing buildings and structures must be modified appropriately to meet fire safety standards

a in the case of significant constructional or operational modifications, extensions or change of use.

b if the danger to persons is particularly high.

*The decision as to whether fire blocks must be implemented or not is **ALWAYS** and **SOLELY** the responsibility of the competent authority.*

Checklist for assessing substrate before applying a second layer with Fixit Aerogel insulating plaster



to the checklist

Preliminary clarifications on the construction site are accompanied by the responsible Fixit consultant.

U-value calculations using Fixit 222 Aerogel high-performance insulating plaster

Standing building with standard 17.5 cm brickwork, EPS insulated, not monitored

		New U-value after a second layer	
		0, 25 W/m²K	0, 20 W/m²K
Current insulation thickness	**Current U-value**	**Required second layer thickness of Fixit 222 Aerogel insulating plaster**	
EPS 6 cm	0,53 W/m²K	6,0 cm	8,5 cm
EPS 8 cm	0,43 W/m²K	4,5 cm	7,5 cm
EPS 10 cm	0,36 W/m²K	3,5 cm	6,5 cm
EPS 12 cm	0,31 W/m²K	3,0 cm	5,0 cm
EPS 14 cm	0,27 W/m²K	–	3,5 cm
EPS 16 cm	0,24 W/m²K	–	3,0 cm

Standing building with standard 17.5 cm brickwork, mineral wool insulated, not monitored

		New U-value after a second layer	
		0, 25 W/m²K	0, 20 W/m²K
Current insulation thickness	**Current U-value**	**Required second layer thickness of Fixit 222 Aerogel insulating plaster**	
SW 6 cm	0,60 W/m²K	6,5 cm	9,5 cm
SW 8 cm	0,50 W/m²K	5,5 cm	8,5 cm
SW 10 cm	0,42 W/m²K	4,5 cm	7,5 cm
SW 12 cm	0,36 W/m²K	3,5 cm	6,5 cm
SW 14 cm	0,30 W/m²K	3,0 cm	5,5 cm
SW 16 cm	0,28 W/m²K	–	4,5 cm

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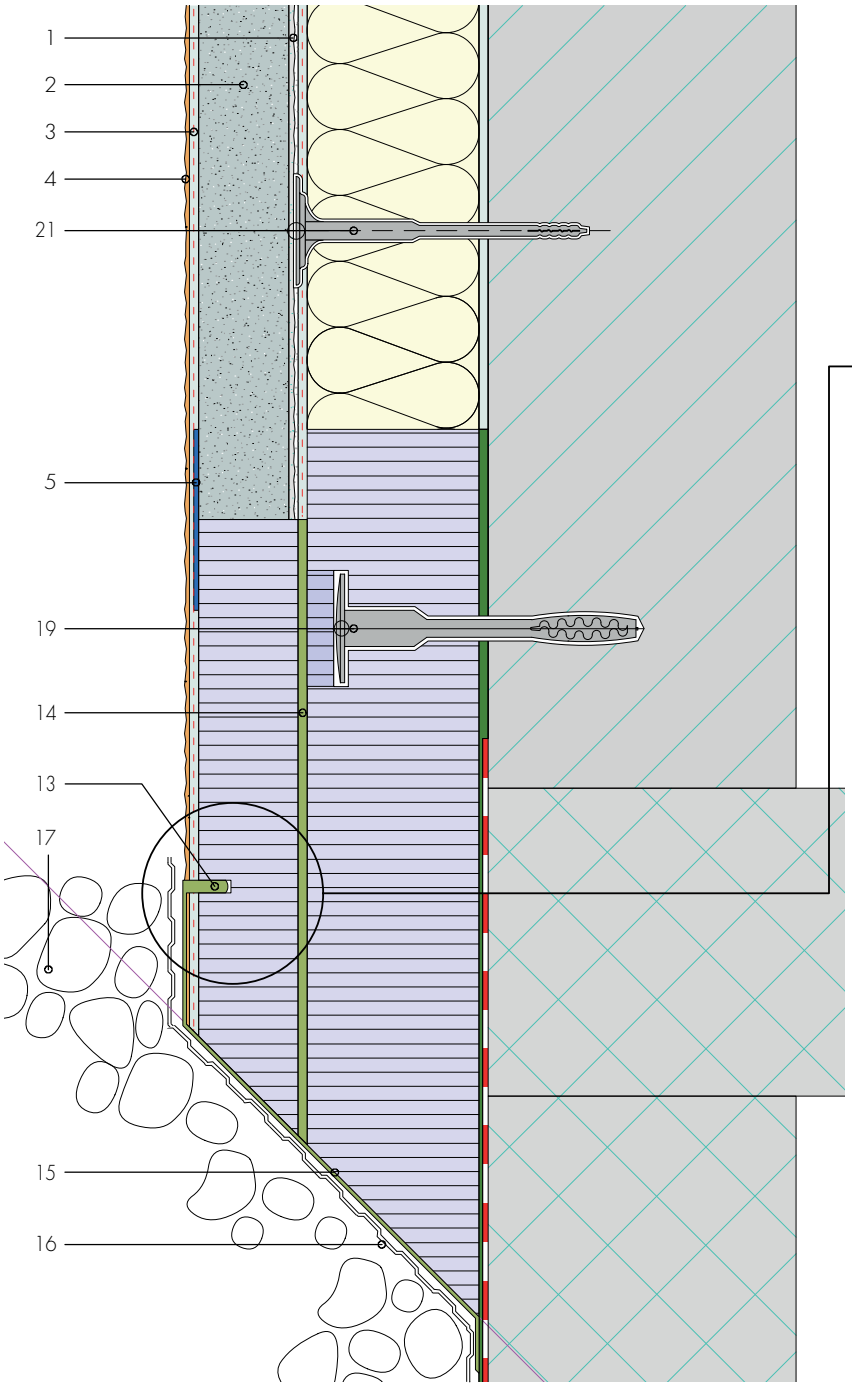
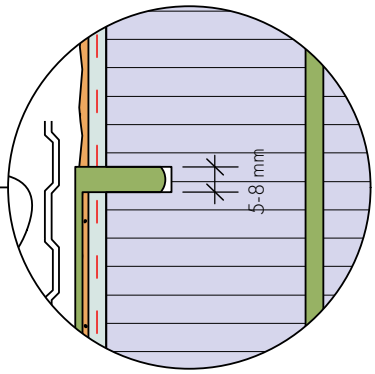
Base

Base cladding flush with perimeter insulation

Detail A1



Detail of capillary slot 5 to 8 mm wide.
Fill with Fixit 373 Multiflex

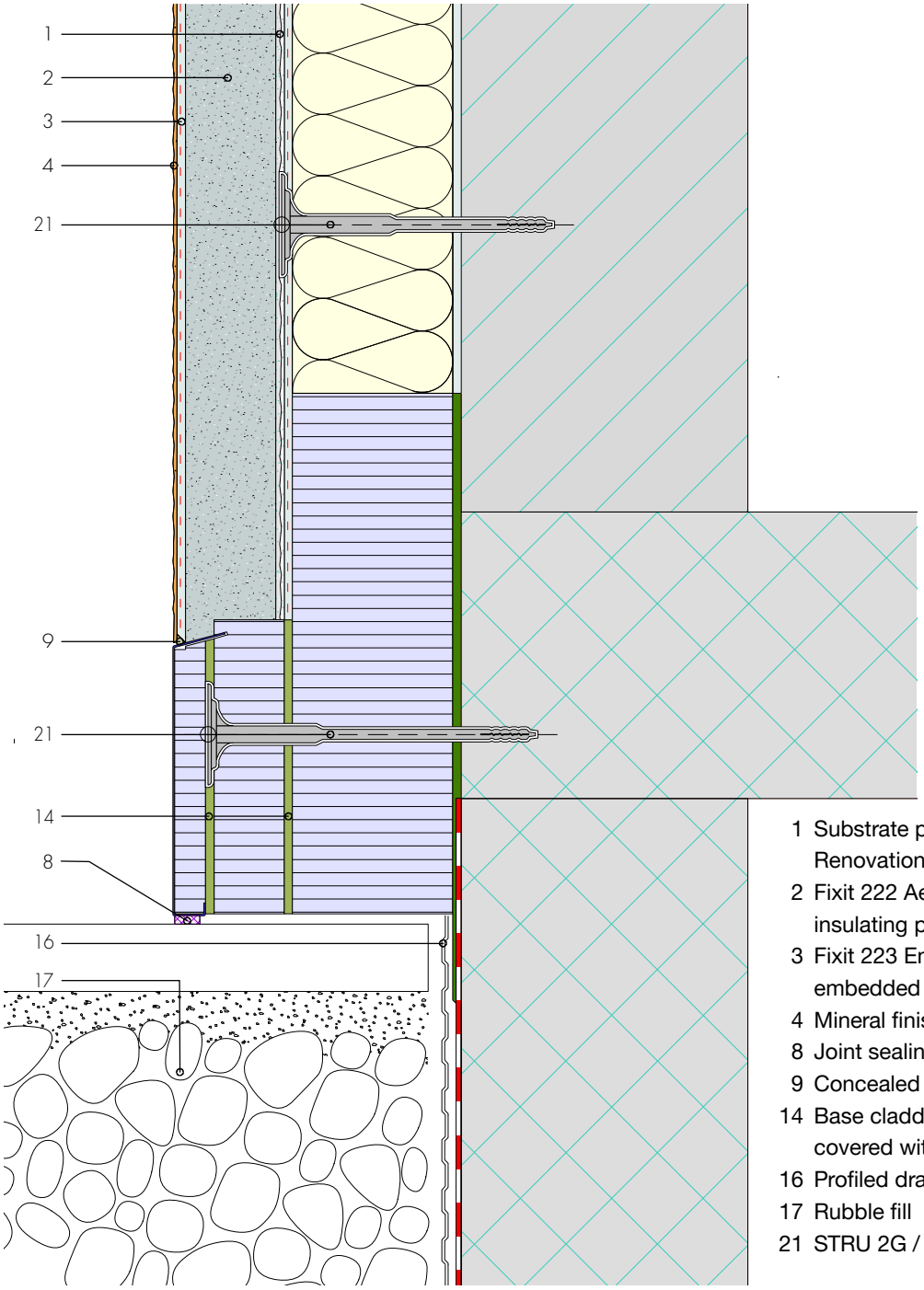


1 Substrate preparation
Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance inulationg plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
5 Barrier textile
13 Capillary slot
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
15 Apply a layer of Fixit 373 Multiflex
16 Profiled drainage sheet
17 Rubble fill
19 Mounting anchor bolt
21 STRU 2G / S1 short Screw anchors

Base

Base cladding of sheet metal over existing surface

Detail A2

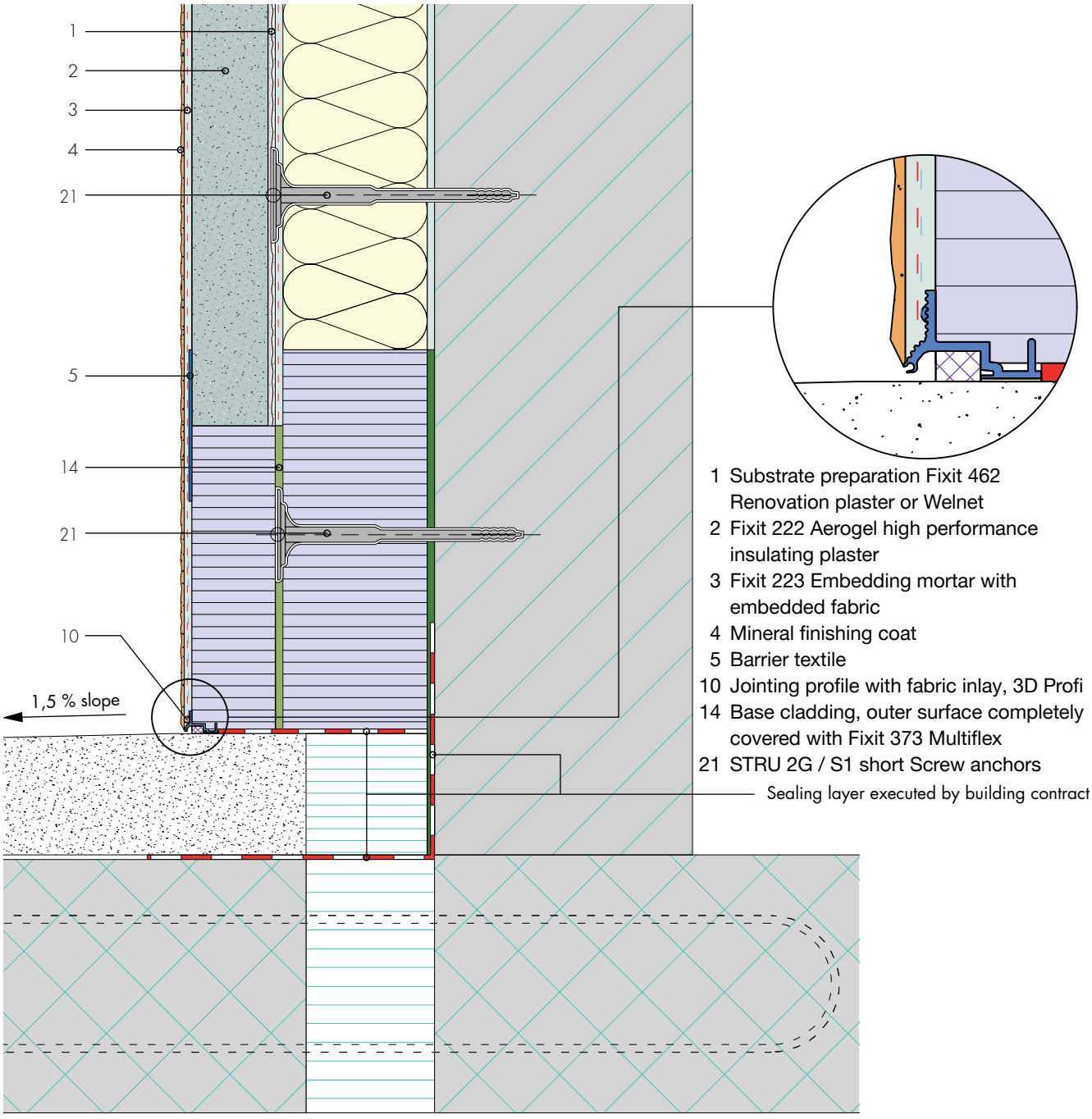


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
8 Joint sealing tape BG1
9 Concealed sealant joint
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
16 Profiled drainage sheet
17 Rubble fill
21 STRU 2G / S1 short Screw anchors

Base

Junction to base with jointing profile

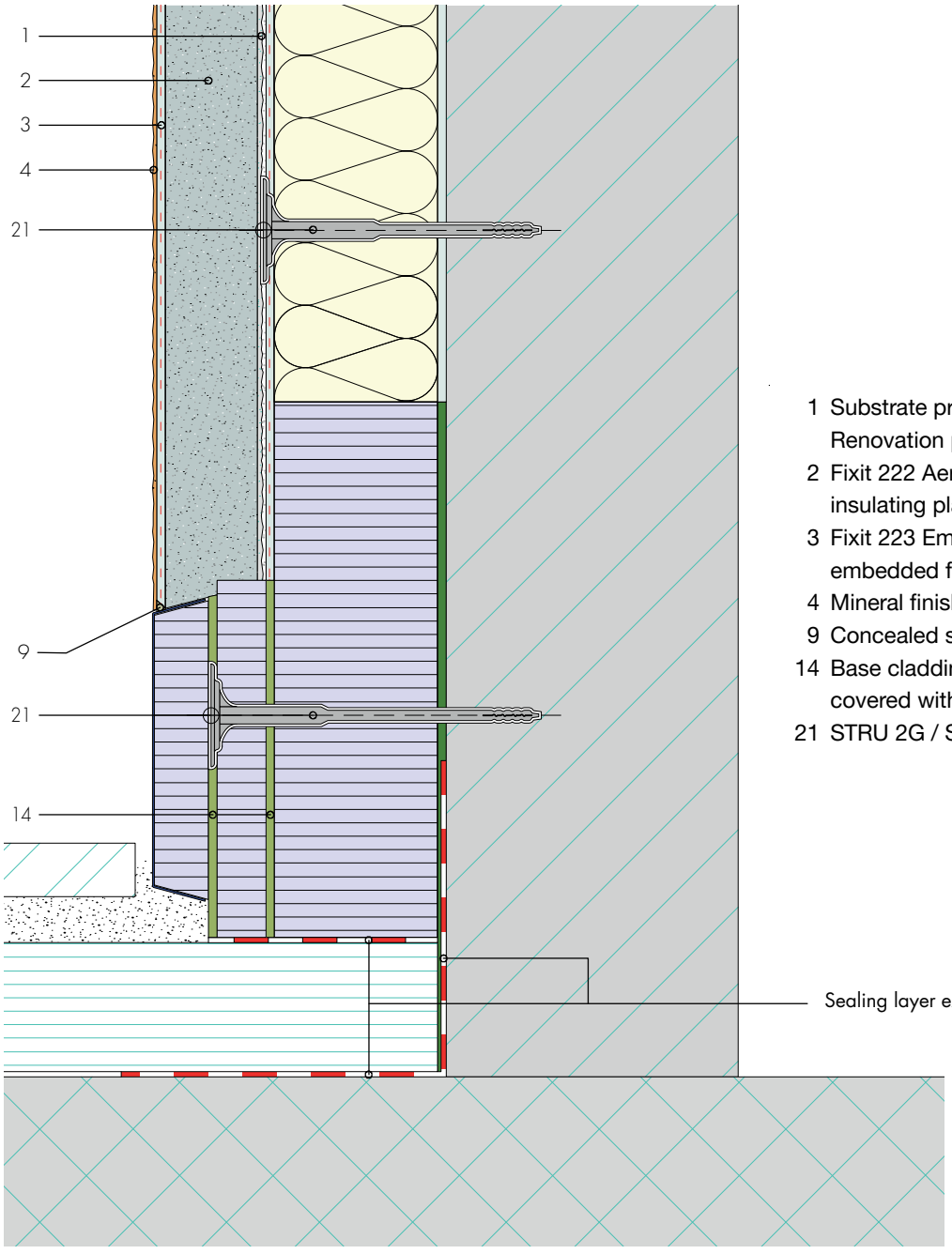
Detail A3



Base

Junction to base with insulated sheet metal base

Detail A4

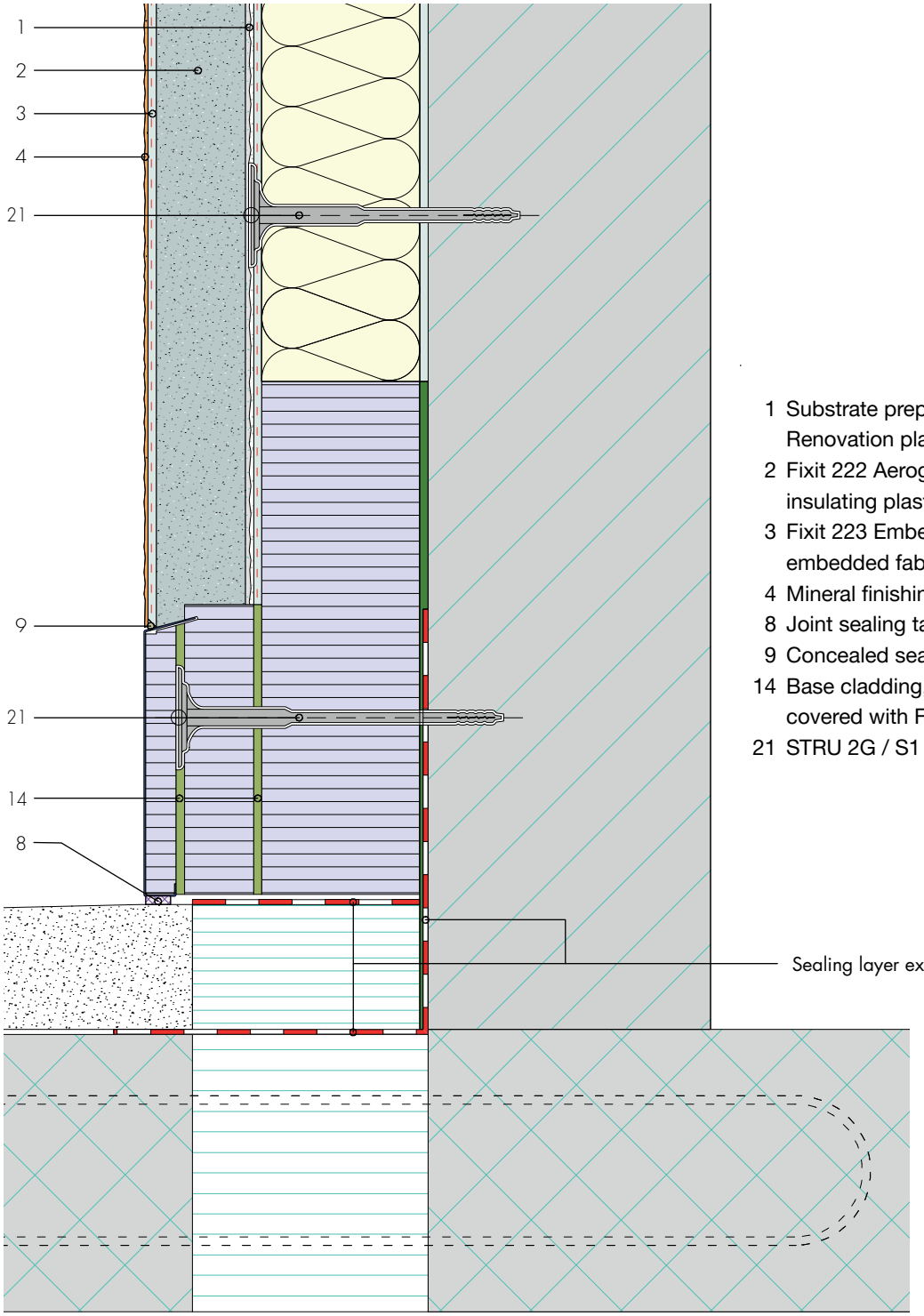


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
9 Concealed sealant joint
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
21 STRU 2G / S1 short Screw anchors

Base

Junction to base with base skirting of sheet metal

Detail A5

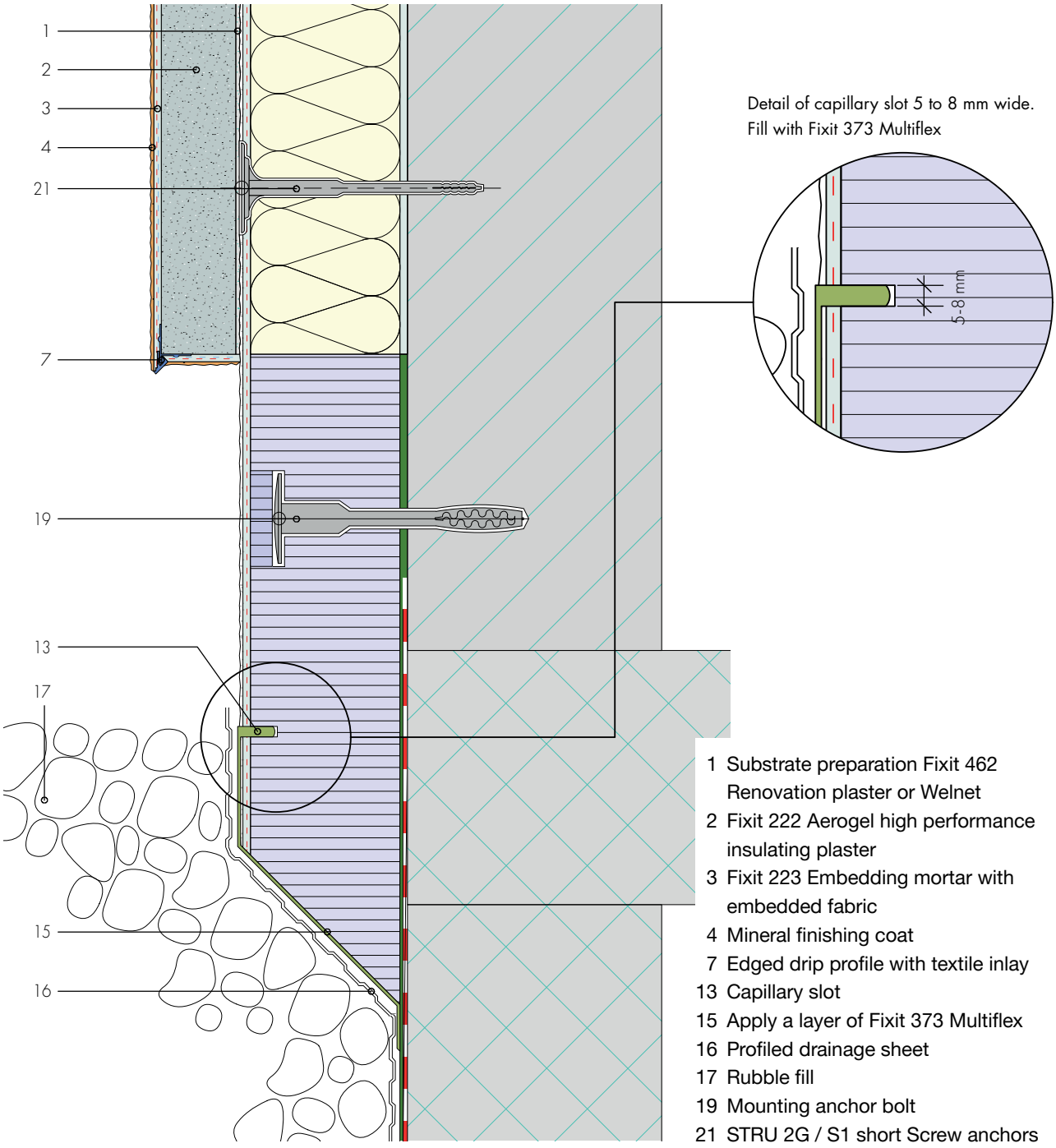


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
8 Joint sealing tape BG1
9 Concealed sealant joint
14 Base cladding, outer surface completely covered with Fixit 373 Multiflex
21 STRU 2G / S1 short Screw anchors

Base

Base cladding with perimeter insulation

Detail A6

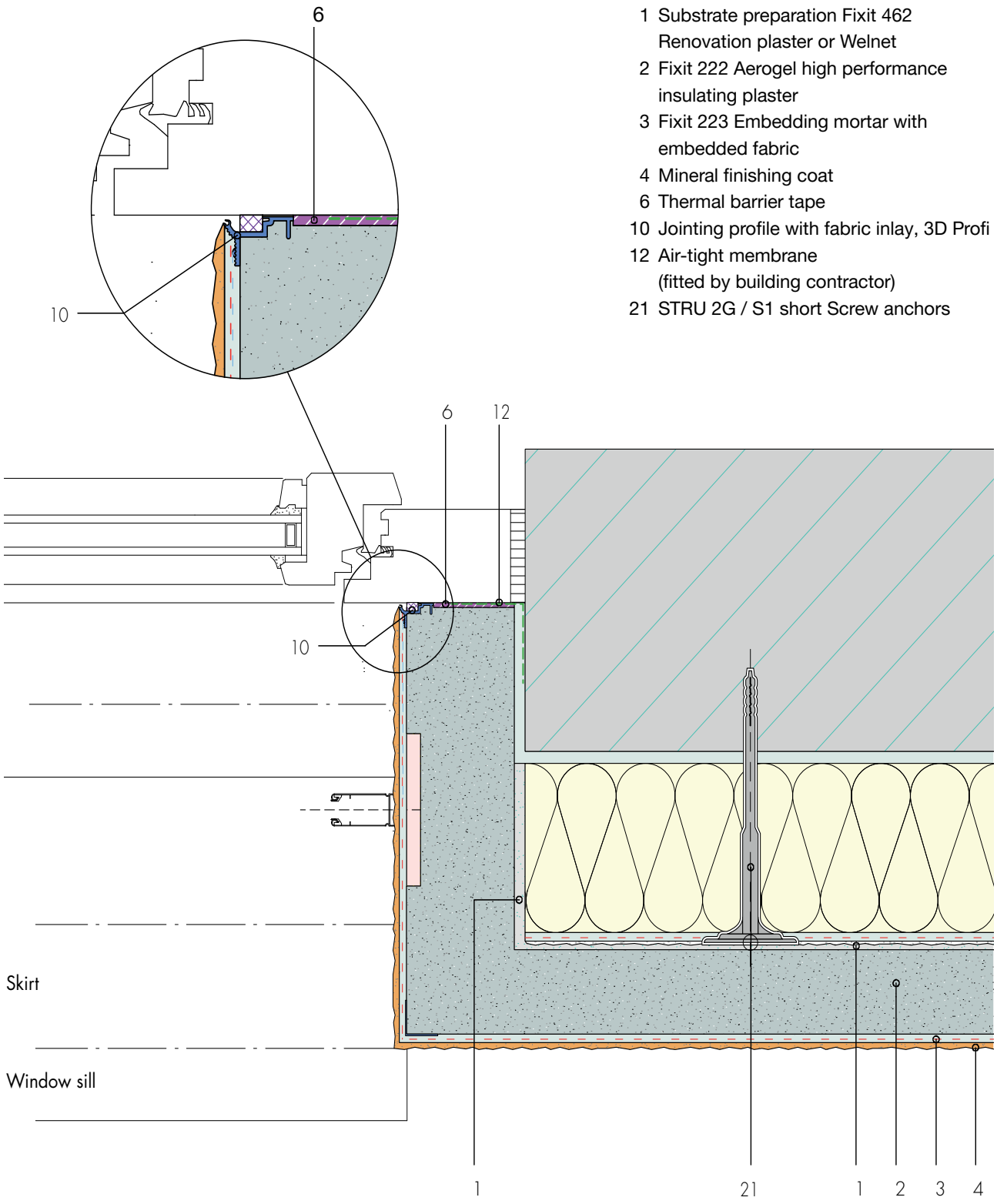


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
7 Edged drip profile with textile inlay
13 Capillary slot
15 Apply a layer of Fixit 373 Multiflex
16 Profiled drainage sheet
17 Rubble fill
19 Mounting anchor bolt
21 STRU 2G / S1 short Screw anchors

Window reveal

Around reveals

Detail C1

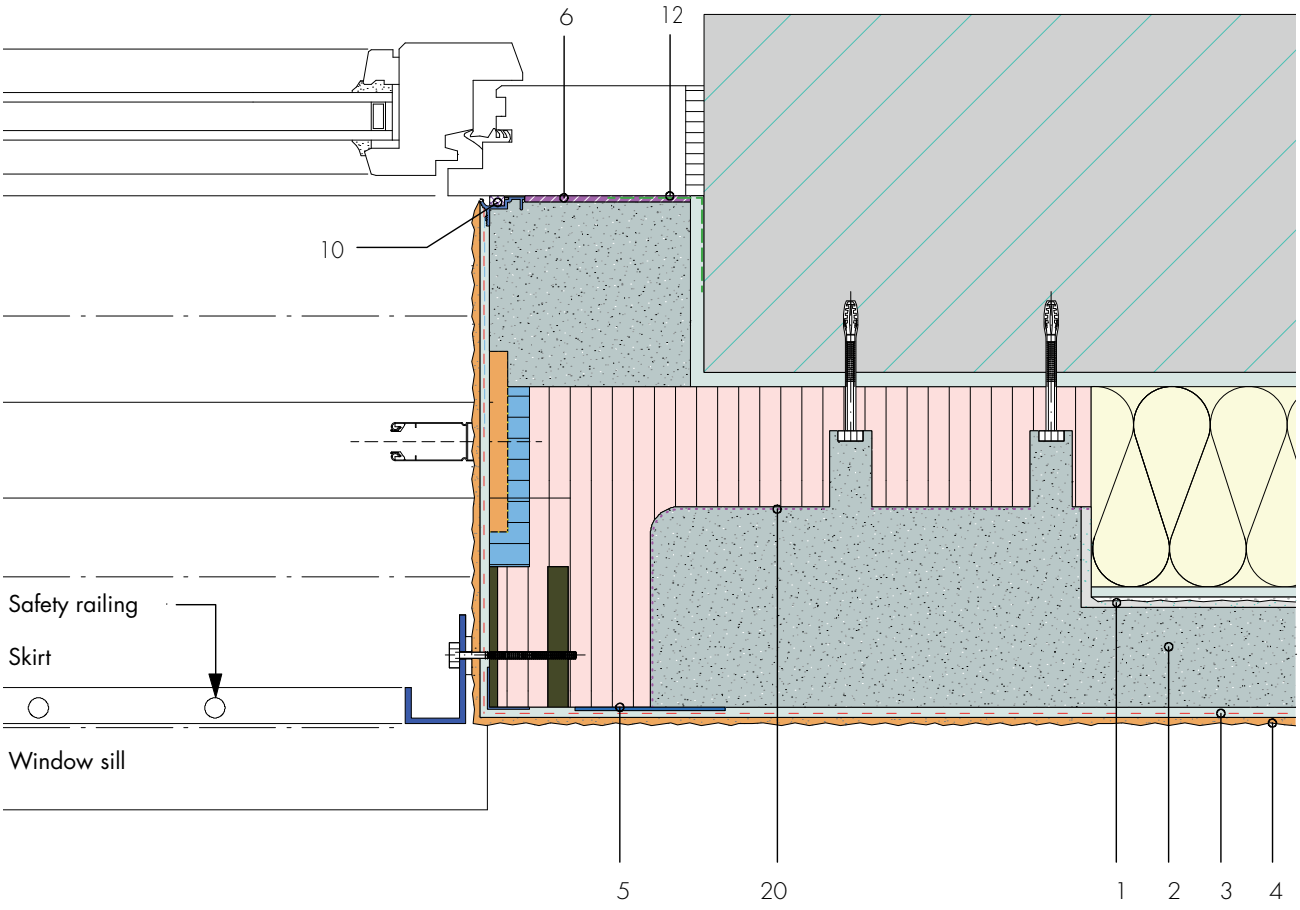


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
6 Thermal barrier tape
10 Jointing profile with fabric inlay, 3D Profi
12 Air-tight membrane (fitted by building contractor)
21 STRU 2G / S1 short Screw anchors

Window reveal

Double French balcony without thermal bridges

Detail C2

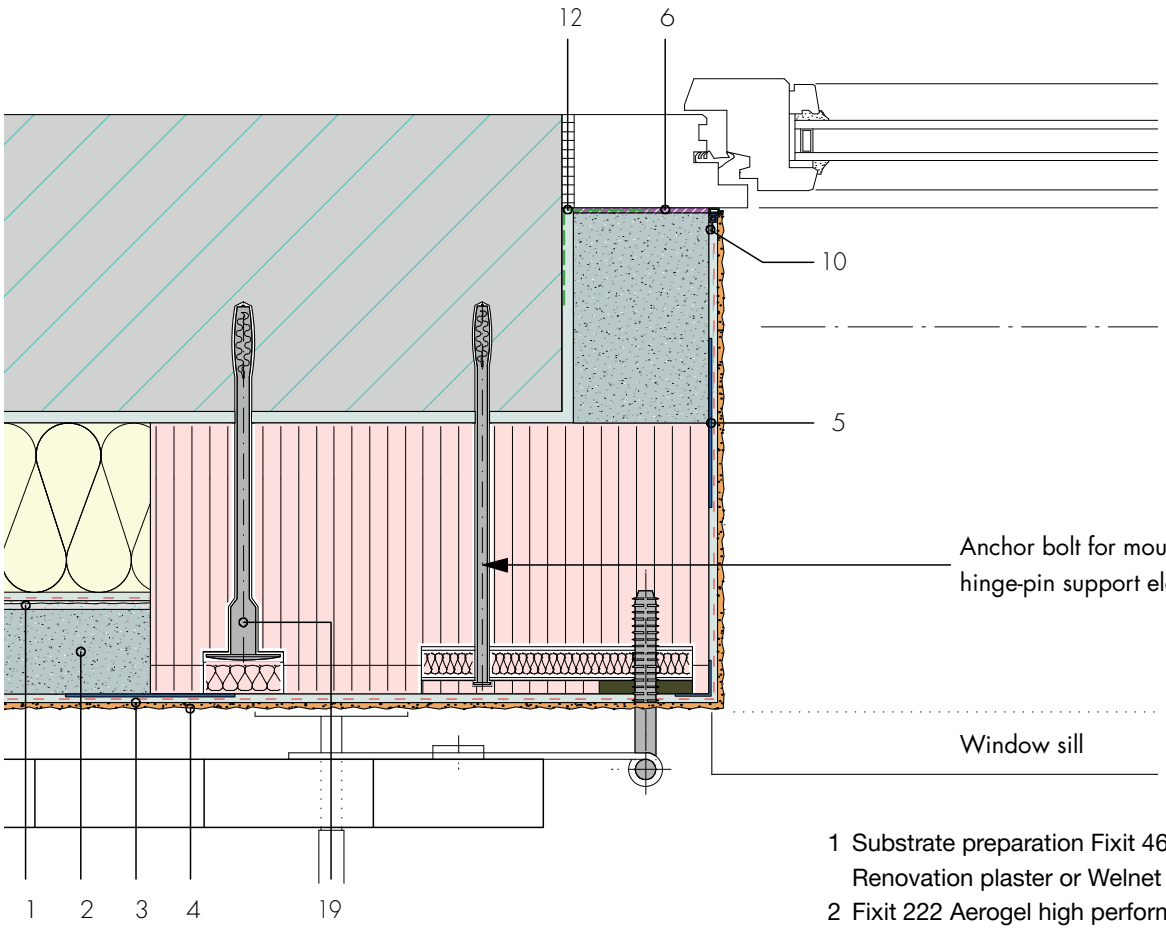


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
5 Barrier textile
6 Thermal barrier tape
10 Jointing profile with fabric inlay, 3D Profi
12 Air-tight membrane (fitted by building contractor)
20 Fixit 346 quartz special adhesive bridge

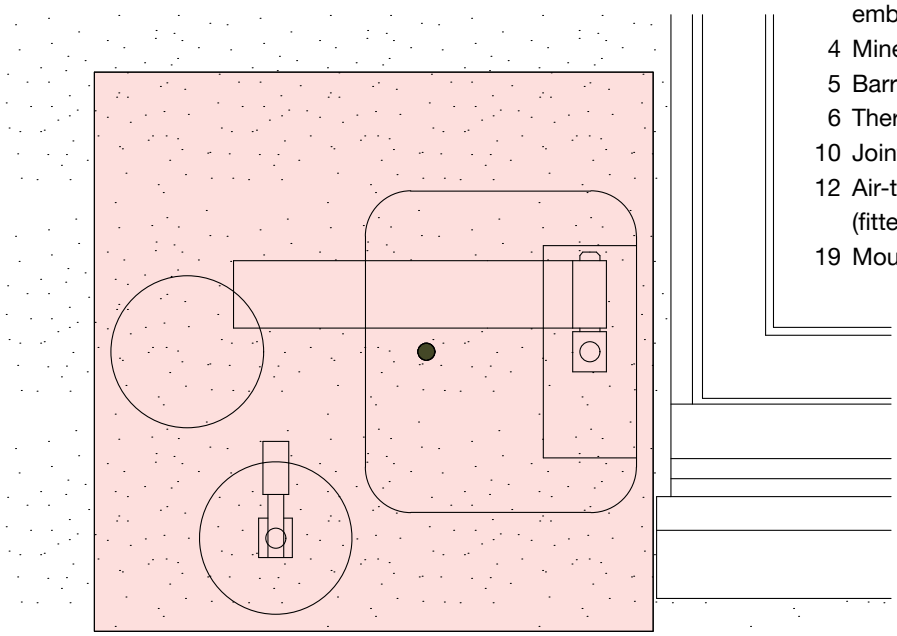
Window reveal

Around a hinge-pin support for swinging shutters

Detail C3



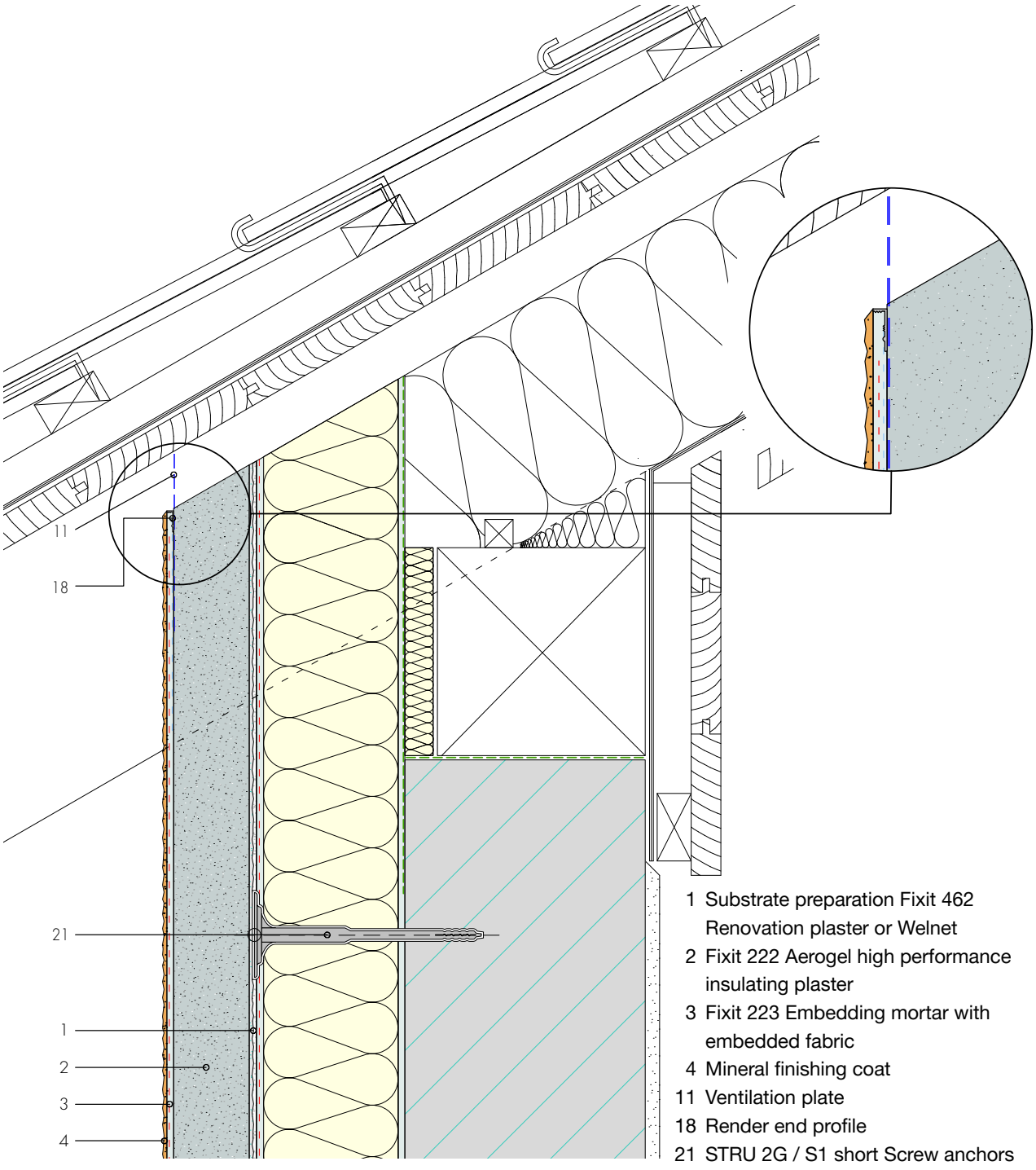
1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
5 Barrier textile
6 Thermal barrier tape
10 Jointing profile with fabric inlay, 3D Profi
12 Air-tight membrane (fitted by building contractor)
19 Mounting anchor bolt



Pitched roof

Twin-skin ventilated roof (cold roof)

Detail H1

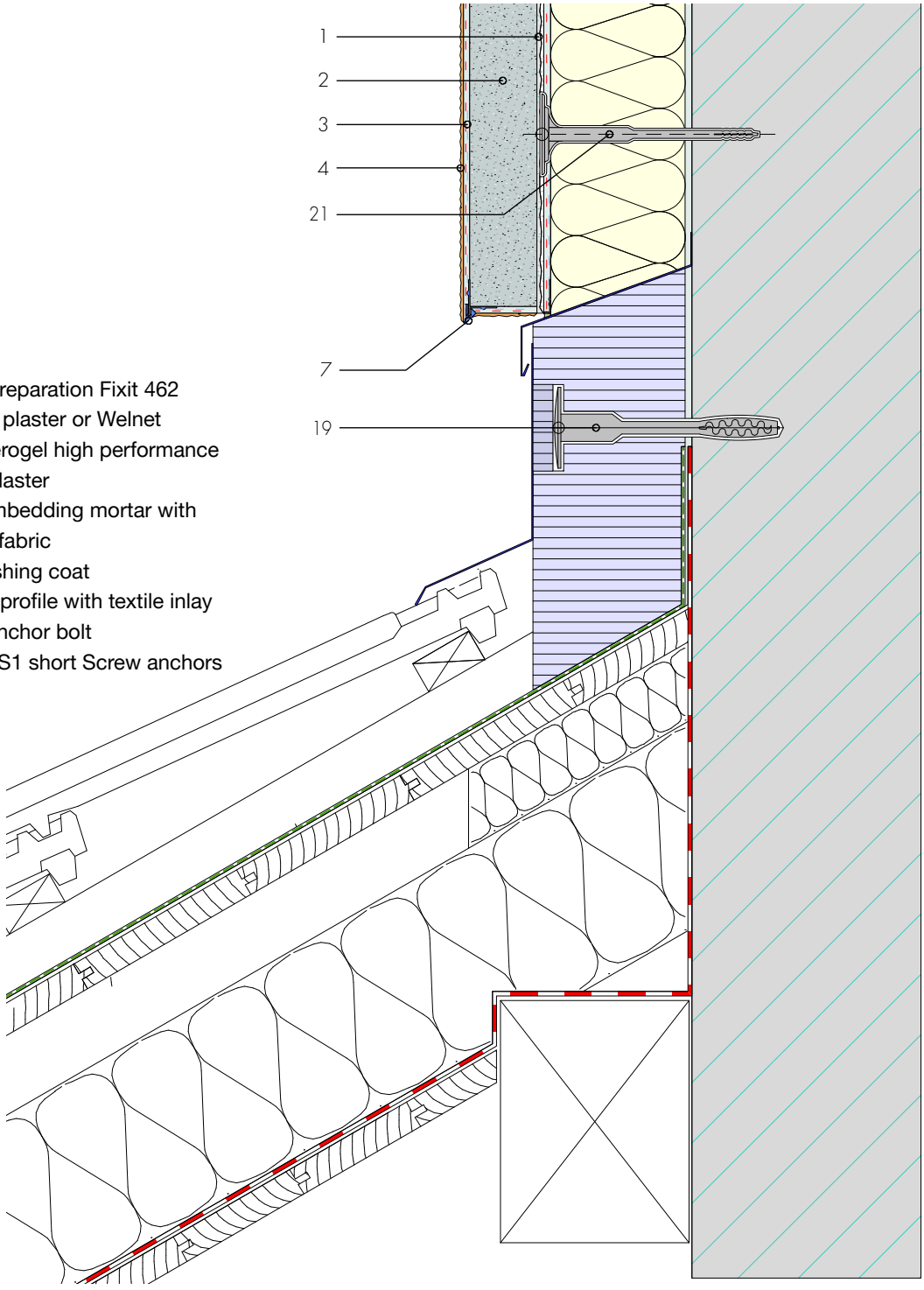


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
11 Ventilation plate
18 Render end profile
21 STRU 2G / S1 short Screw anchors

Pitched roof

Joint with sloping roof

Detail H2

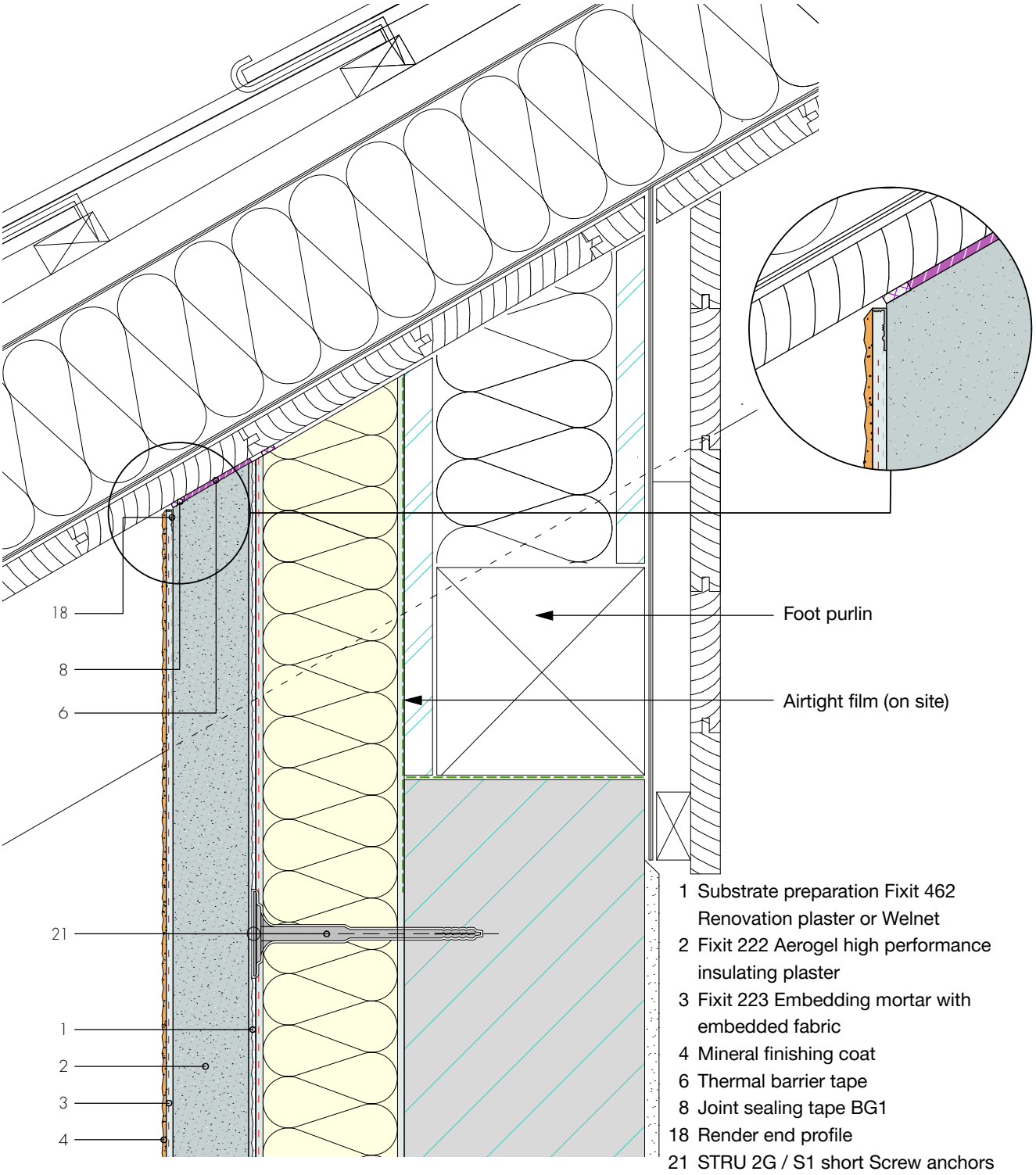


1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
7 Edged drip profile with textile inlay
19 Mounting anchor bolt
21 STRU 2G / S1 short Screw anchors

Pitched roof

Single-skin unventilated roof (warm roof)

Detail H3



1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
6 Thermal barrier tape
8 Joint sealing tape BG1
18 Render end profile
21 STRU 2G / S1 short Screw anchors

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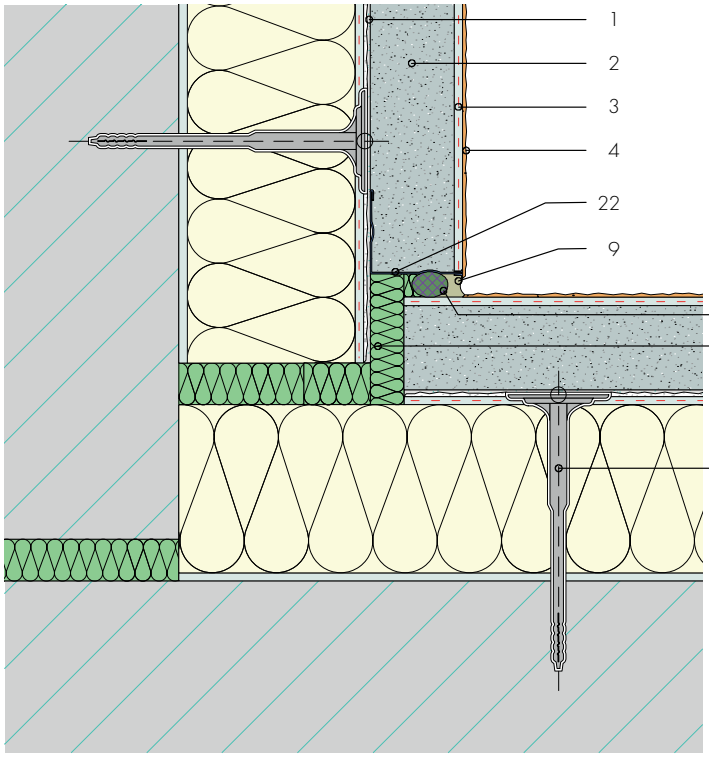
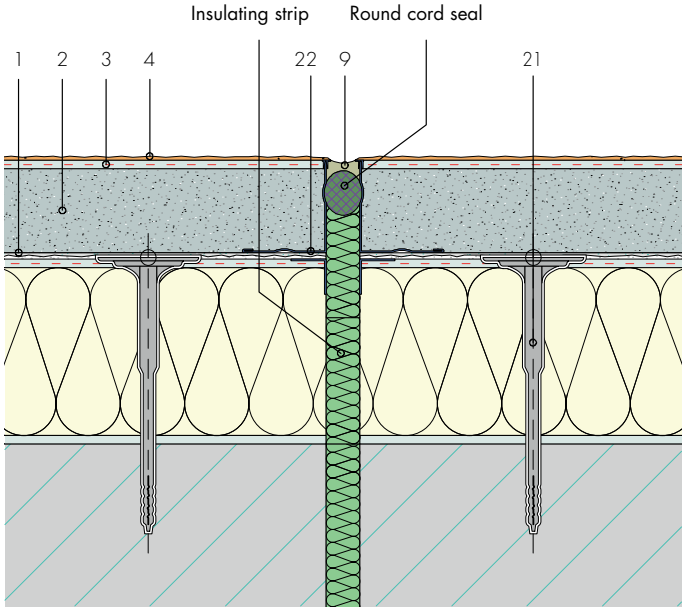
Joints and connections

Around expansion joints

Detail I1



1 Substrate preparation Fixit 462 Renovation plaster or Welnet
2 Fixit 222 Aerogel high performance insulating plaster
3 Fixit 223 Embedding mortar with embedded fabric
4 Mineral finishing coat
9 Concealed sealant joint
21 STRU 2G / S1 short Screw anchors
22 Insulating render end profil



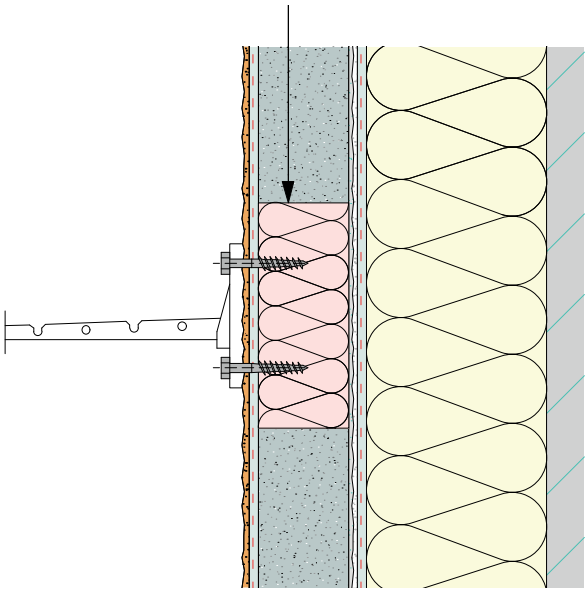
Joints and connections

External assembly EPS / Mineral wool

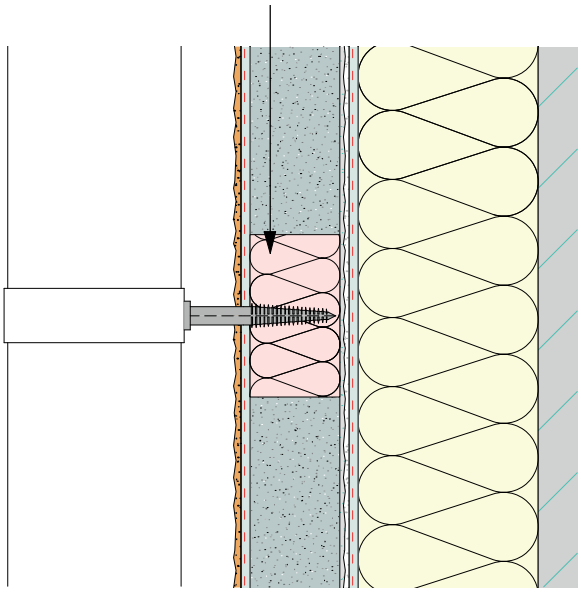
Detail I2

for EPS

Mounting cylinder VARIZ Ø 125 mm

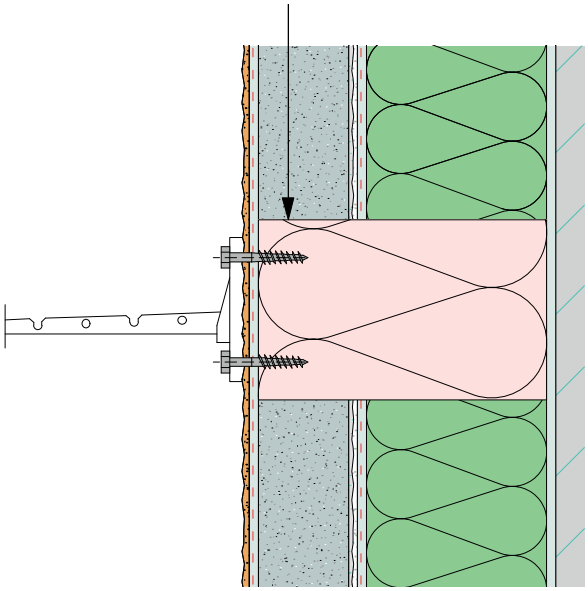


Mounting cylinder VARIZ Ø 90 mm

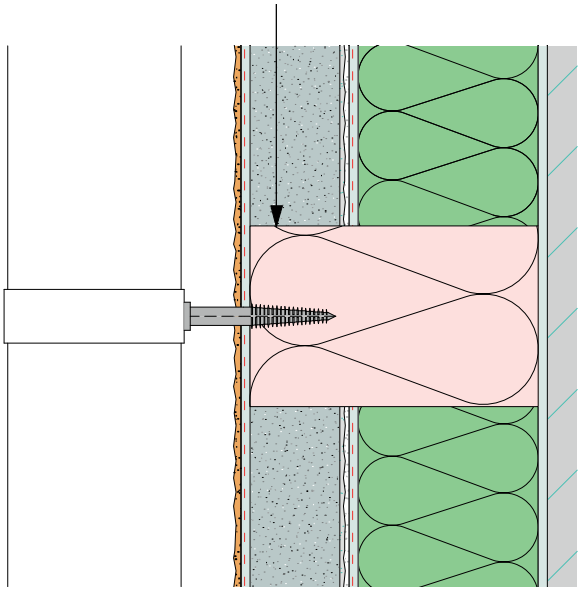


for mineral wool

Mounting block VARIR 100 x 150 mm



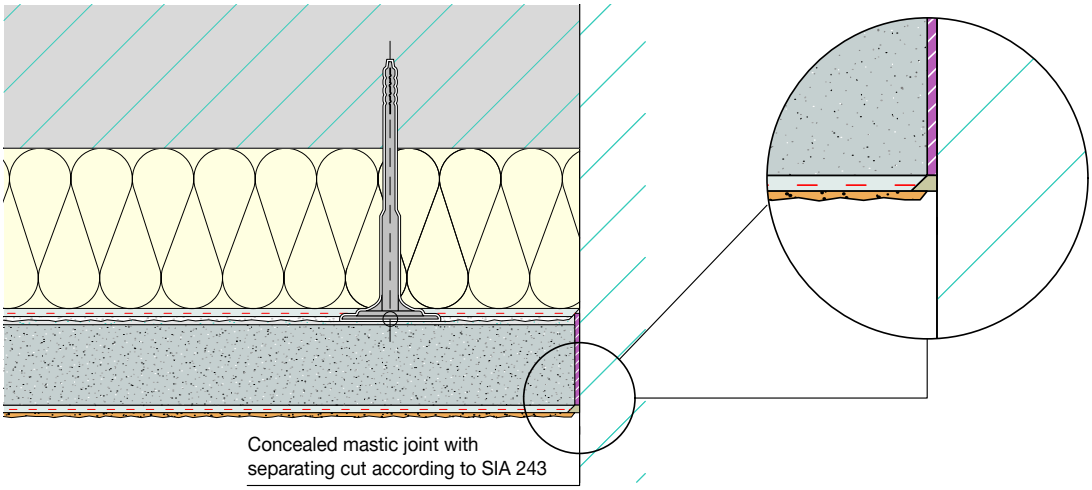
Mounting block VARIR 100 x 100 mm



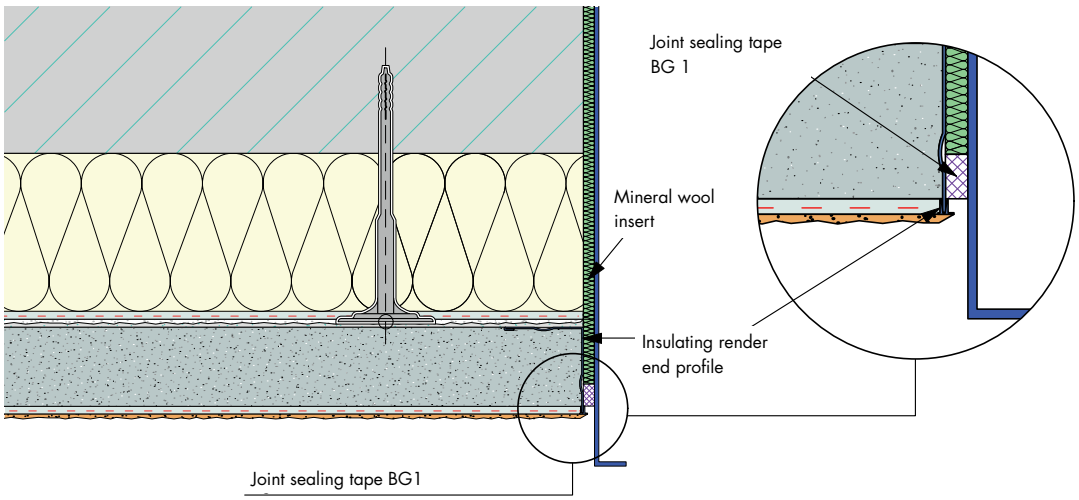
Joints and connections

External assembly

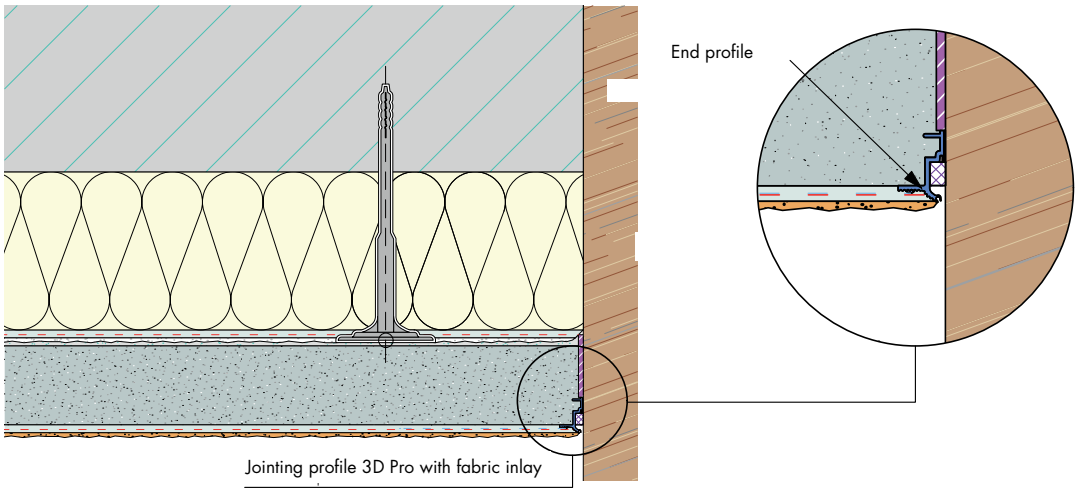
Detail I3



Separating cut with pre-compressed joint sealing tape (metal door-frame)



Joint with end profile (wood)



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