TCS SISTEMA PRO

The evolution of the envelope system

ETA n. 17/1029

TCS PASSIONE MATERICA

SISTEMA PRO PREPARATION AND INSTALLATION MANUAL

02 | 2020

"We think of the future with the warmth of tradition"

INTRODUCTION

The NATURAL evolution of panel systems for the thermal insulation of buildings, certified by ETA n. 17/1029. For totally natural, breathable and energy saving interventions, guaranteeing high standards of living.

By utilizing the **TCS SISTEMA PRO** system, the building will be able to guarantee high standards of water vapor diffusion, avoiding the formation of harmful mold and condensation, thus maintaining healthy and sanitary environments.

ADVANTAGES

- Totally Natural;
- Certified by ETAG 04;
- Highly Insulating;
- Sound-absorbing;
- High adaptability to summer weather;
- Non flammable;
- Totally recyclable;
- Easy and Quick installation;
- Ideal for all substrates, both in existing and in new buildings;
- High dimensional stability with varying external temperatures

TCS SISTEMA PRO

THE EVOLUTION OF THE ENVELOPE SYSTEM

Composite system for external and internal thermal insulation of buildings with Flumroc Compact Pro panels made of Rock Wool MW.

Combining innovation with tradition, the **SISTEMA PRO** is the evolution of envelope systems for thermal insulation, sound absorption and the energy saving. Highly breathable and completely natural for comfort and habitability.

With the **SISTEMA PRO**, the building is able to guarantee excellent water vapor diffusion management, avoiding the formation of harmful mold and condensation, thus guaranteeing healthy environments. All this is possible thanks to the rock wool panel with three-dimensional oriented fibers, which is breathable and water-repellent, and to the special ADE RAS smoothing adhesive, composed only of NHL 5 Pure Natural Hydraulic Lime.

The thick finishes, composed of slaked like of long maturity, or the Potassium Silicate of the TCS line, are the completion of a cycle that guarantees a high duration of the intervention while preserving the characteristics of breathability and permeability.

Since natural hydraulic lime is an excellent regulator of humidity, it manages the excess internal or external humidity in a totally natural way, and offers a high resistance to bacterial proliferation and mold.

The three-dimensional fibers of the panel ensure greater protection from external noise. The stability of the rock wool panel and the ADE RAS skim coat guarantees a solid and durable facade, even when coated with dark colors.

The **SISTEMA PRO** ensures total compatibility with the requirements of the Fire Brigade Guidelines contained in "Requisiti di sicurezza antincendio delle facciate negli edifici civili (Fire safety requirements of facades in civil buildings)", due to its totally mineral nature and its containing no products derivative of oil.

COMPOSITION OF THE SYSTEM

ADE RAS COLLANTE RASANTE

ADE RAS is an adhesive smoothing biocompatible render, prepackaged in powder form for internal and external applications, compatible with the standard UNI EN 998-1.

ADE RAS is totally free of cement and compounds belonging to the clinker group.

It consists of a mixture of pure silicate calcareous sands, screened with a continuous granulometric arc from 0 to 0.6 mm. The only binder present is the Pure Natural Hydraulic Lime NHL 5 from SAINT-ASTIER, in compliance with the UNI EN 459-1 standard.

The NHL 5 lime, white in color, is produced by firing siliceous limestones at temperatures lower than 1250°C and is reduced to powder form solely through the breakdown of calcium oxide, without the addition of pozzolanic materials or hydraulic binders of any kind.

Natural additives give the product excellent spreadability, smoothability and adhesion to the support.

COMPACT PRO ROCK WOOL PANEL

The **COMPACT PRO** rock wool panels are obtained from the fusion of rock materials which, despite the various steps of the transformation processes, retain most of their original properties. Crushed and ground, they are compressed into brick form and melted in the right proportions at a temperature of about 1500°C in the so-called cupola furnace.

The molten rock is transformed into fibers and impregnated with water repellent substances. By the addition of specific binders, a mat of "endless" fibers is created, which are derived from various insulating products (which differ in the structure of their fibers, their weight specific and the insulating thickness). The rock wool is then cured at about 270°C and cut to measure in panels.

The panel thus obtained is highly breathable and maintains its main insulation characteristics unaltered, namely its permeability, breathability, non-deformability, dimensional stability and fire protection for the entire life cycle of the element on which is applied.

ADE RAS RENDER

- PACKAGING
  25 kg/bag
  56 bags/pallet
- COVERAGE
  1,4 kg/m²/mm

ROCK WOOL PANEL

- THICKNESS
  from 50 to 220 mm
- DIMENSION
  1000x600 mm

STORICAL TONACHINO 1.1

- PACKAGING
  25 kg/bucket
  33 buckets/pallet
- COVERAGE 4 kg/m^2
  (two coats on a new support)
- AVAILABLE COLORS
  White or from the TCS catalogue

KAPPASIL TONACHINO 1.1

- PACKAGING
  25 kg/bucket
  33 buckets/pallet
- COVERAGE 2 kg/m^2
  (two coats on a new support)
- AVAILABLE COLORS
  White or from the TCS catalogue

FINISHES

STORICAL TONACHINO 1.1

STORICAL TONACHINO 1.1 is a biocompatible mineral paint, in ready-to-use paste form. Composed of a mixture of pure carbonate sands, selected with a continuous granulometric arc from 0 to 1.1 mm, and lime putty obtained by cooking pure limestones in vertical ovens at temperatures below 900°C, classified with the initials CL 90-S PL in compliance with the UNI EN 459-1 standard.

STORICAL TONACHINO 1.1 can be used in its natural white color, or mass colored with natural inorganic light-resistant pigments, suitable for the execution coatings in internal and external applications.

STORICAL TONACHINO 1.1 is composed of selected carbonate sands and, as the only binder, lime putty CL 90-S PL, matured for a long time and completely hydrated. This composition makes the finish ecological, biocompatible and reversible. The absence of volatile organic compounds (VOC) guarantees purity, while the total lack of petrochemical-derived products guarantees its compatibility, with full respect towards man and the environment by eliminating sick building syndrome.

The totally mineral nature of **STORICAL TONACHINO 1.1** results in a pH which is strongly alkaline, constituting an excellent natural defense against bacterial proliferation and the formation of surface mold, avoiding the formation of dangerous condensates, by adjusting the ambient humidity and the carbon dioxide content of the environments.

KAPPASIL TONACHINO 1.1

KAPPASIL TONACHINO 1.1 is a mineral biocompatible plaster. It is composed of a mixture of selected carbonate sands, with a continuous granulometric arc between 0 and 1.1 mm, and modified Potassium silicate, according to DIN 18363. Mass-colored with natural inorganic light-resistant pigments, suitable for the execution coatings in internal and external applications.

KAPPASIL TONACHINO 1.1 is composed of selected carbonate sands and Silicate Potassium obtained by melting quartz sand SiO_2 and potassium carbonate K_2CO_3 at 1300°C.

This composition confers to the plaster characteristics typical of glassy materials: it is in fact particularly resistant to atmospheric agents, acid and the penetration of water.

The nature of the binder also protects the finish from bacterial attacks and mold, from delamination and flaking, and ensures a high adhesion to the mineral substrate by reacting with it and creating natural bonds. The nature of the mineral, which is not electrostatic, also tends to not retain dust.

COMPLEMENTARY PRODUCTS

TCS GLASS CK 155 MESH

TCS GLASS CK 155 is a fiberglass mesh with anti-alkali treatment. The mesh guarantees excellent stability during laying and on-site workability, maintaining perfect fiber alignment. **TCS GLASS CK 155** is combined with the inorganic mortar consisting of NHL 5 or Natural Hydraulic Lime, for the realization of reinforced skim coatings in cladding systems.

The **GLASS CK TCS 155** mesh is ideal for the realization of reinforced smoothing plasters, in conjunction with the biocompatible adhesive ADE RAS, for the reinforcement of the plaster in the smoothing and finishing layers, and for the minimization of cracking.

The **TCS GLASS CK 155** mesh, in combination with smoothing plasters of the TCS Green Building & Restoration product line, allow great deformation values without the formation of surface microcracks, thanks to the use of Natural Hydraulic Lime NHL 5 as the sole binder, which possesses a low modulus of elasticity.

The mesh has a red band at one end for the correct evaluation of the minimum required overlap.

TASSELLI TCV

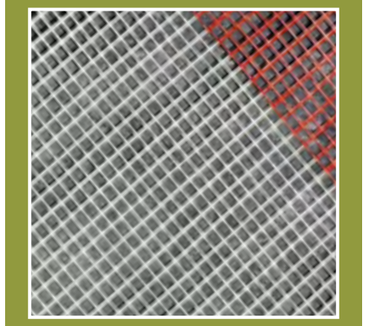
Specially designed plugs for mechanical anchoring of the panel and for ensuring maximum resistance to tearing.
The **TASSELLO TCV** plug consists of a polypropylene body and a steel screw with a thermal break head, which guarantees the prevention of thermal bridges in the anchor point.

It comes with a sealing disc 60 mm wide to guarantee high resistance and ensure an unparalleled tightness of the panel even under the worst possible stresses.

ACCESSORIES

- PVC corner guards with fiberglass mesh R151
- Aluminum starting profiles for panels from 60 to 200 mm
- Expanding NC tape with thicknesses from 1.5 to 14 mm

DETAIL OF TCS GLASS CK 155 MESH



- DIMENSIONS (roll)
  H 100 cm x Length 50 m
- GRAMMAGE
  155 gr/m^2

TASSELLO TCV

- DIMENSIONS
  Length from 100 to 300 mm
- DIAMETER ø 8 mm

SUBSTRATES

It can be applied on horizontal (interior) or vertical surfaces made of masonry of solid bricks, load-bearing perforated bricks, light perforated bricks, mixed bricks, stones, tuff, compact or poorly absorbent surfaces such as solid or perforated cement blocks, conglomerates made of expanding clay, blocks of cellular conglomerate, lime or cement-based substrates, RC structures, magnesium wood, rough or smooth plastered surfaces, as long as they are flat and have no parts to needing consolidation.

* Details available in the section diagrams and in the construction details.

** Details and construction details in DWG format available on request.

INSTALLATION OF THE SISTEMA PRO

- After placing the aluminum starting profiles, of the appropriate thickness, the rock wool panels can be laid by means of adhesion, plugging, or, in the case of walls made of wood, screwing. The laying of the panels must be carried out with the ADE RAS adhesive compound, with either the full surface or the closed perimeter method (*).
  The ADE RAS adhesive plaster should only be mixed with water at a ratio of approximately 6 to 6.5 L per bag, depending on the desired consistency. Mixing can be done either manually or mechanically. Letting the mix rest for 10 minutes will improve the spreadability of the product. ADE RAS can be applied manually or with a screw pump plastering machine (stator / rotor D6-3 PFT).

- The installation of the COMPACT PRO panels should be carried out by making sure that the panels are perfectly matched and leveled, in order to avoid thermal bridges and cutting horizontally or vertically, and by offsetting the various horizontally arranged panels by 30 cm, following the attached diagram (*), depending on the support and laying method chosen. The COMPACT PRO Rock Wool panel does not require expansion joints, other than the structural ones present in the building.

- The installation of the TASSELLI TCV plugs can be carried after the span of 1-2 days of laying the adhesive, or once it has started hardening, according to the chosen tiling scheme (*).
  The length of the TASSELLI TCV plugs must be such as to guarantee the minimum anchorage depth of 40 mm to the substrate, and must necessarily take into consideration the presence of pre-existing plaster and the ADE RAS adhesive.
  The number of TASSELLI may vary according to the wind speed in the specific location, which must be verified in advance either by the company in charge of the installation, or according to the indications of the DD.LL (Direttore dei lavori).

- After placing the panels, in case the surface is not flat, it will be necessary to proceed with the laying of one or more coats of ADE RAS render. The reinforced smoothing render on the surface will be carried out with ADE RAS and TCS GLASS CK 155 fiber mesh, with a notched trowel of minimum dimension 8 mm. The mesh must remain behind the outer 2/3 of the total thickness of the smoothing render. The realization of the reinforced smoothing render should begin with the laying of a first layer (min. 4-4,5 mm first layer) of ADE RAS render equal to two thirds of the total render thickness, finished with an 8 mm notched American trowel, and then plastered with a fresh smoothing render which will include the TCS GLASS CK 155 mesh with alkali-resistant fibers.
  The mesh must be submerged, but visible in the smoothing layer, in order to contain any movement of the panels due to thermal expansion or settlement of the structure. The laying of the mesh will proceed from top to bottom, taking care to overlap the layers by at least 10 cm, following the marking printed on them, and avoiding the formation of bubbles or ripples.
  When the substrate is dry (min. 24 hours, depending on weather conditions) the second layer of ADE RAS smoothing render will be laid with a flat trowel for the remaining one-third of thickness (min. 2-2,5 mm) making the surface completely level, ready to receive the colored finish.

- Once the substrate has matured, depending on the climatic conditions and temperature, the finish can be carried out in a thick coating with a grain size equal to 1.1 mm, either using plasters of the TCS line and consisting Lime CL 90 SP-L, or with Potassium Silicate mixtures in accordance with DIN 18363, colored according to the fan guide color selection

- The substrate must be dry and, in the case of finishing with KAPPASIL TONACHINO 1.1, it must have been previously treated with KAPPASIL FONDO. KAPPASIL FONDO can be diluted with water in a variable ratio, depending on the absorptivity of the support, ranging from 20 to 50%, and applied manually with a brush, roller or airless machine. Once the KAPPASIL FONDO has dried, after approximately 12/24 h, we will proceed with the application of one coat of KAPPASIL TONACHINO 1.1.

- The KAPPASIL TONACHINO 1.1 colored finish is ready to use and does not require any additives. If the material is compact, one may proceed with mixing it using either a hand-held mixer or a mortar mixer, until a soft and homogeneous paste is obtained. The application of KAPPASIL TONACHINO 1.1 can be carried out with either a metal or a plastic spatula, always taking care to spread the material evenly over the entire surface. The surface treatment of KAPPASIL TONACHINO 1.1 can be completed with either a sponge or plastic float depending on the desired effect.

- The STORICAL TONACHINO 1.1 colored finish is ready to use and does not require any additives. If the material is compact, one may proceed to mixing it using either a hand-held mixer or a mortar mixer, until a soft and homogeneous paste is obtained.
  The application of STORICAL TONACHINO 1.1 can be carried out with either a metal or a plastic spatula, always taking care to spread the material evenly over the entire surface.
  The surface treatment of STORICAL TONACHINO 1.1 can be completed with either a sponge or plastic float depending on the desired effect.

- The installation of the corner protectors, as well as the rendering of all the protruding or reentrant corners (*) or the placement of drips, must be carried out before laying the TCS GLASS CK 155 mesh, and must be 2/3 the thickness of the finished render.

- To ensure the airtightness of the SISTEMA PRO, it is necessary to place, wherever necessary, the NC EXPANDING TAPE (*) of the appropriate thickness, always necessarily taking into account the total thickness of the smoothing render and the colored finish.

PREPARATION OF THE SUBSTRATE

New masonry (regardless of type): check the flatness of the surface and the amount of humidity present (it must not be wet).

Existing plastered masonry: check the consistency and stratigraphy of the plaster, with careful verification of its integrity. In the case of deteriorated plaster, proceed with removal and localized consolidation.

Surfaces consisting of coatings or colored finishes must be stable and perfectly attached to the substrate, otherwise they must be removed.

The support to which the panels will be glued must be stable, dry, cohesive, as flat as possible, regular and homogeneous, free of dust, saline efflorescence or mold. The support must be completely free of organic material or material in the process of detachment, which may hinder or be unable to support the adhesion of the panels.

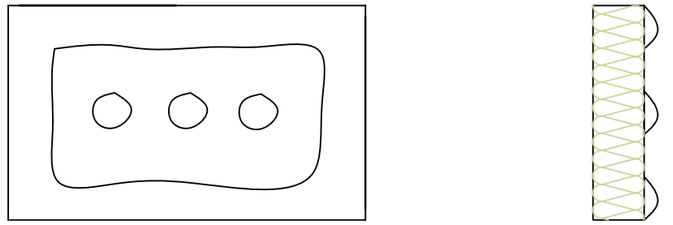
Substrates affected by deterioration pathologies must first be appropriately restored with the products of the TCS Recovery and Dehumidification Line.

SCHEMI E PARTICOLARI COSTRUTTIVI

1. ADHESION DIAGRAM

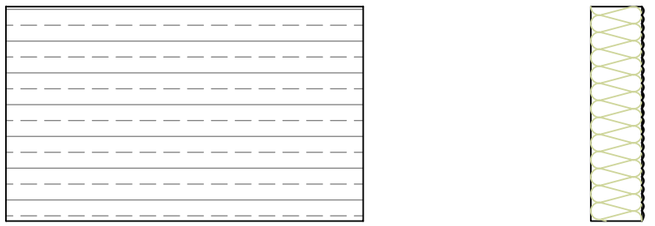
WITH PERIMETER BAND AND CENTRAL POINTS

surface to be covered min. 40% of the panel's area

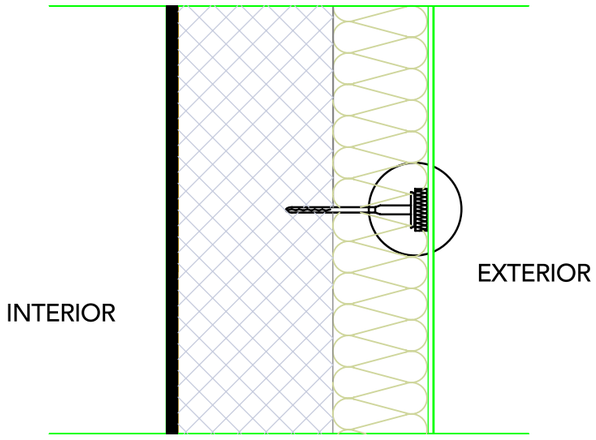


FULL SURFACE

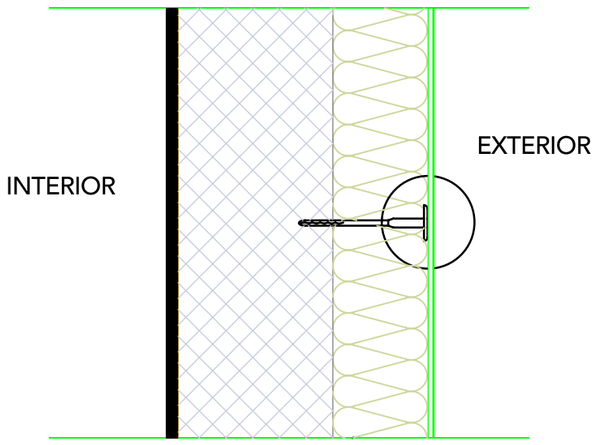
surface to be covered 100% of the panel's area



2. PLUG INSERTION DIAGRAM
COUNTERBORED ANCHORAGE SYSTEM



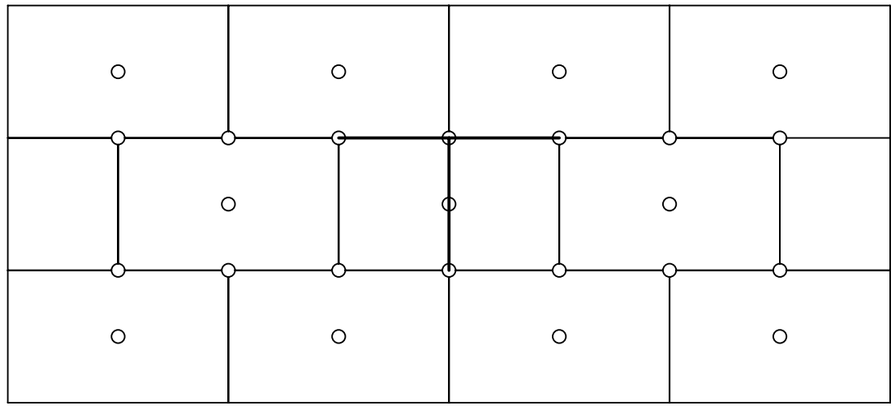
FLUSH ANCHORAGE SYSTEM



3. T-SHAPED TILING DIAGRAM

Number of plugs - surface 5/m²
T-shaped diagram

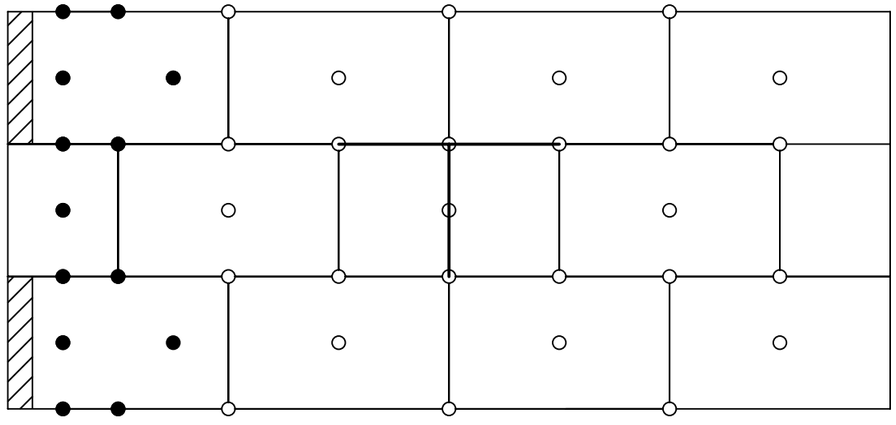
Panel dimensions 60x100 cm



T-SHAPED TILING DIAGRAM

Number of plugs - surface 7/m², perimetral tiling

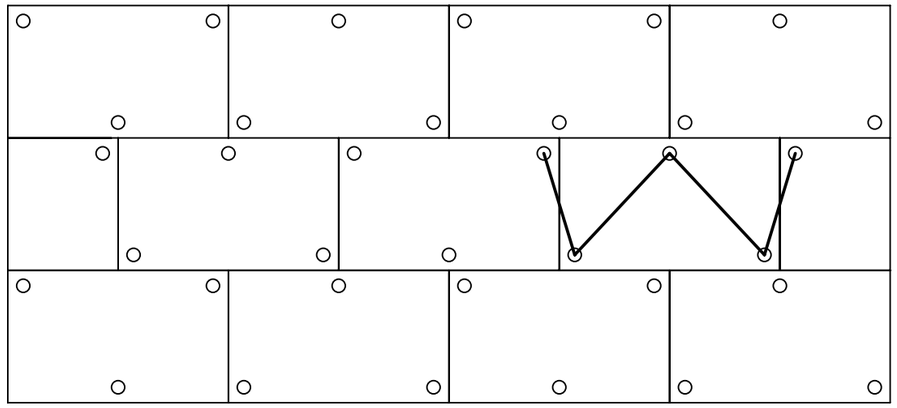
Panel dimensions 60x100 cm



4. W-SHAPED TILING DIAGRAM

Number of plugs - surface 5/m²
W-shaped diagram

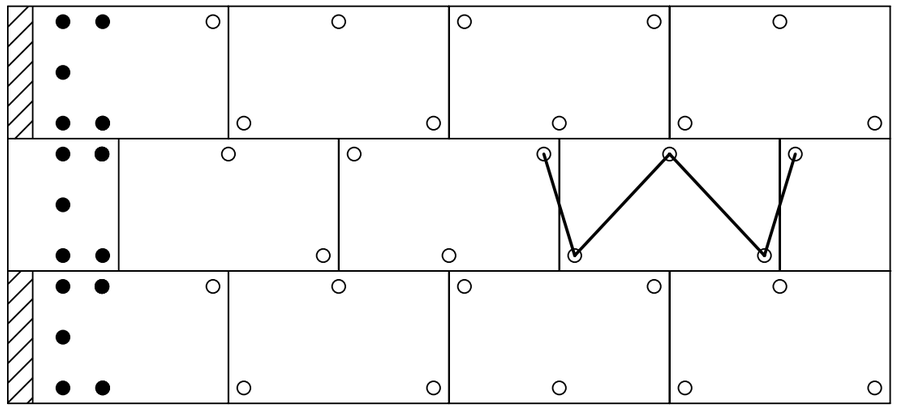
Panel dimensions 60x100 cm



W-SHAPED TILING DIAGRAM

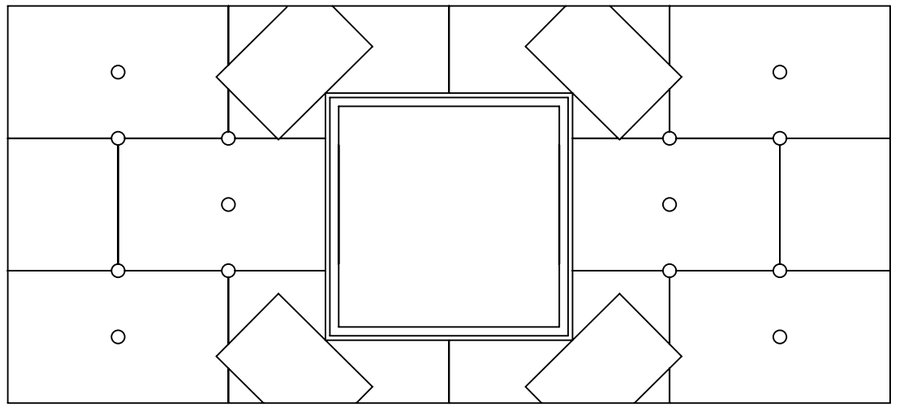
Number of plugs - surface 7/m², perimetral tiling

Panel dimensions 60x100 cm

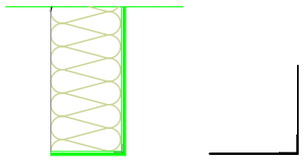


5. DIAGONAL MESH REINFORCEMENT INSTALLATION OPENINGS

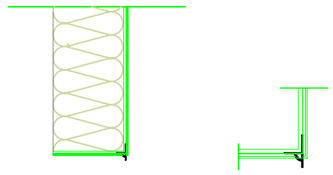
Panel dimensions 60x100 cm
Patch dimensions 20x30 cm



6. REALIZATION OF EDGES, EXTERNAL CORNERS AND DRIPS

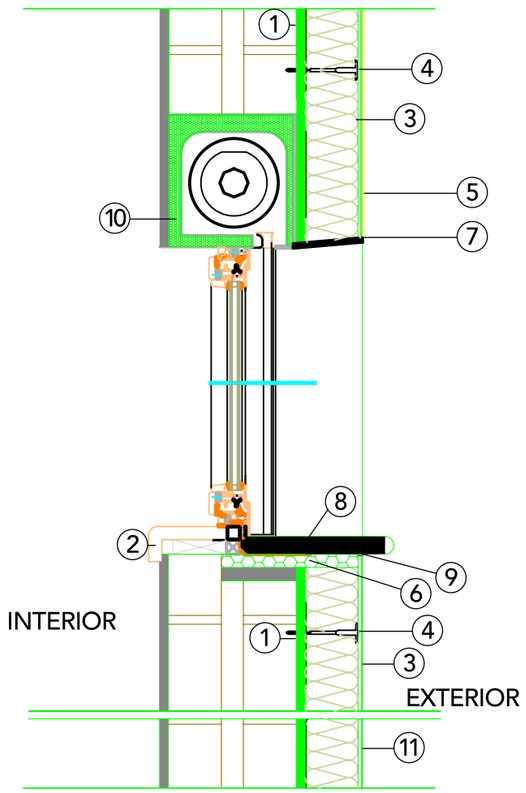


Corner protector



Corner protector with drip

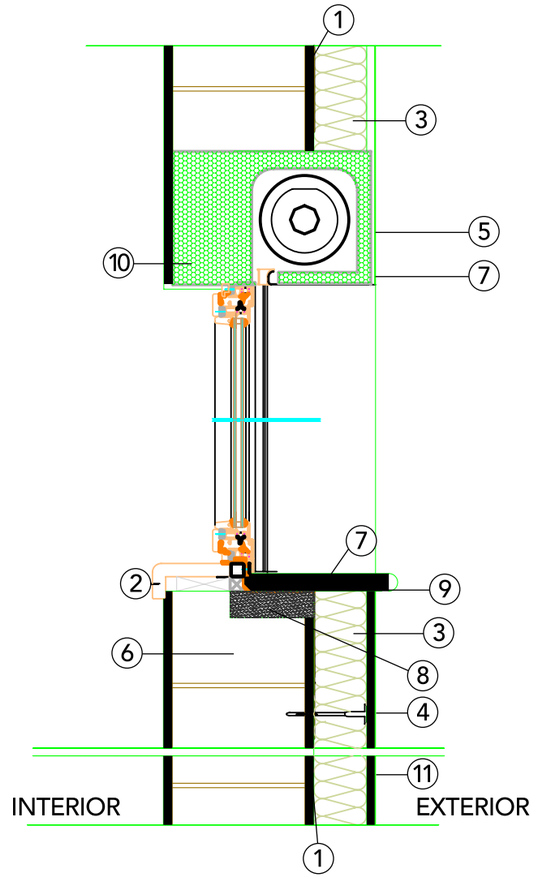
7. IN-BUILT ROLLER SHUTTER BOX WITH EXTERNAL COATING SECTION SHOWING THE CONNECTION BETWEEN WINDOW AND BOX



LEGEND

1. ADE RAS adhesive render
2. Internal sill
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. Insulating material 5 cm xps, with removal of about 3 cm and perimetral restoration
7. Corner with mesh reinforcement
8. External marble sill
9. Expanding prestressed tape
10. Insulated box
11. TCS silicate finish

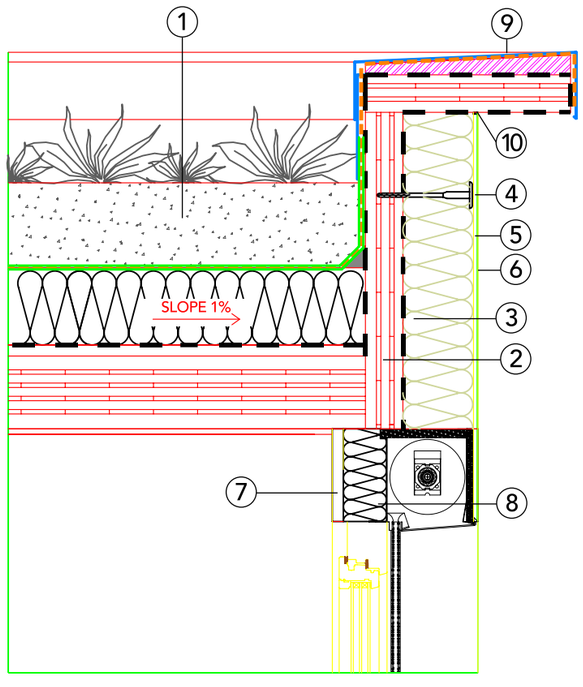
8. ROLLER SHUTTER BOX WITH EXTERNAL COATING SECTION SHOWING THE CONNECTION BETWEEN WINDOW AND BOX WITH INTEGRATED INSULATION



LEGEND

1. ADE RAS adhesive render
2. Internal wooden sill
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. Masonry made of blocks
7. External stone sill
8. Load-bearing thermal break
9. Expanding prestressed tape
10. Insulated box
11. TCS silicate finish

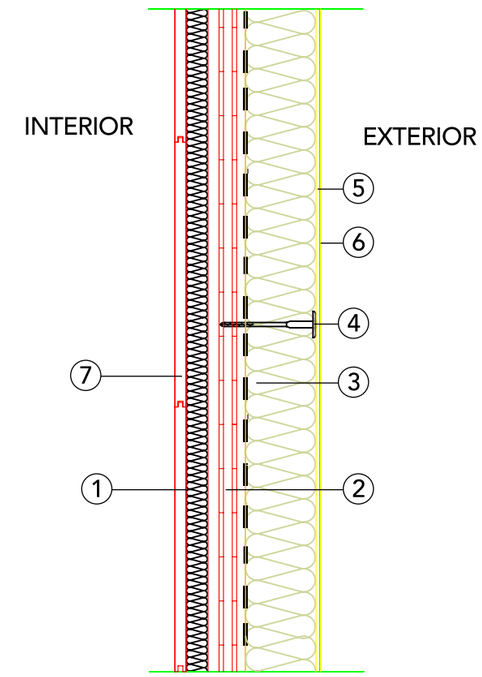
9. INSULATED WOODEN FLAT ROOF PARAPET STRUCTURE



LEGEND

1. Green roof
2. Xlam multilayered panel
3. COMPACT PRO panel
4. TFL plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Reinforced plasterboard
8. Insulated box
9. PVC sheet
10. Expanding tape

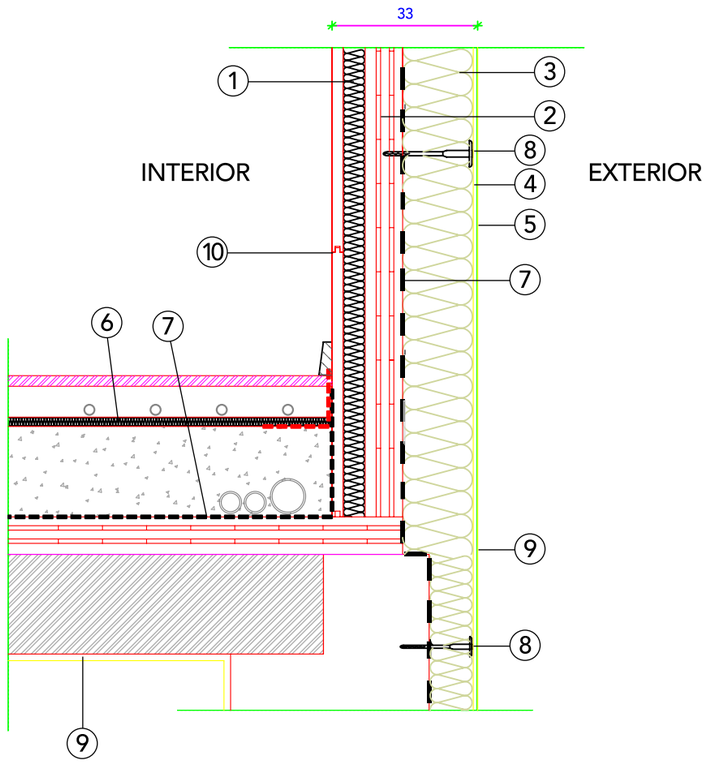
10. CLADDING MADE OF XLAM PANELS EXTERNAL INSULATION



LEGEND

1. Rock wool panel
2. Xlam multilayer panel
3. COMPACT PRO panel
4. TFL plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Reinforced plasterboard

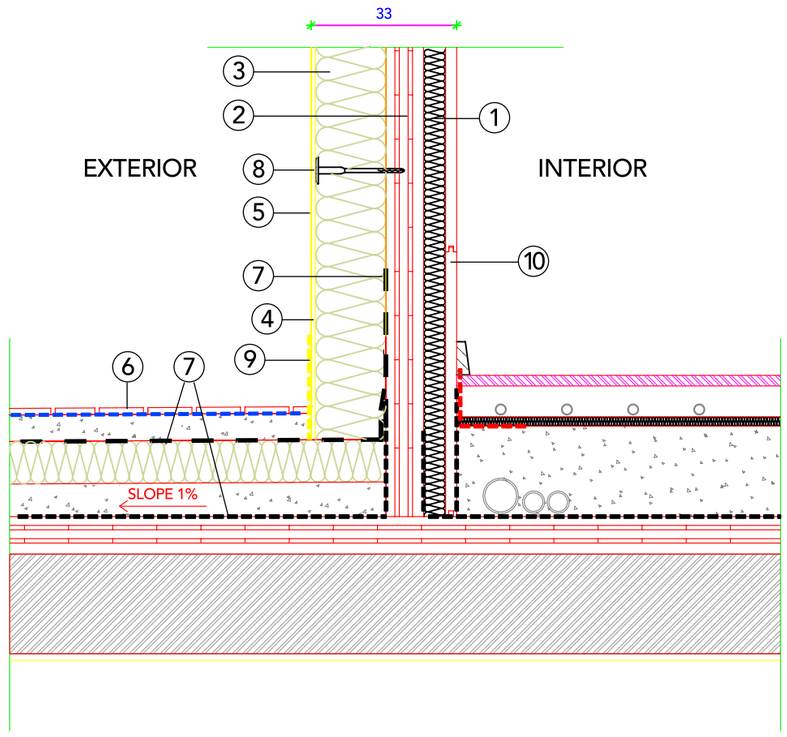
11. FLOOR - WALL JUNCTION WITH THERMAL INSULATION ON EXISTING WALLS MADE OF XLAM PANELS



LEGEND

1. Internal wall
2. Xlam masonry
3. COMPACT PRO panel
4. ADE RAS reinforced smoothing render
5. TCS silicate finish
6. Acoustic insulation
7. Waterproofing
8. TFL plug
9. Hydrophobic TI 10
10. Reinforced plasterboard

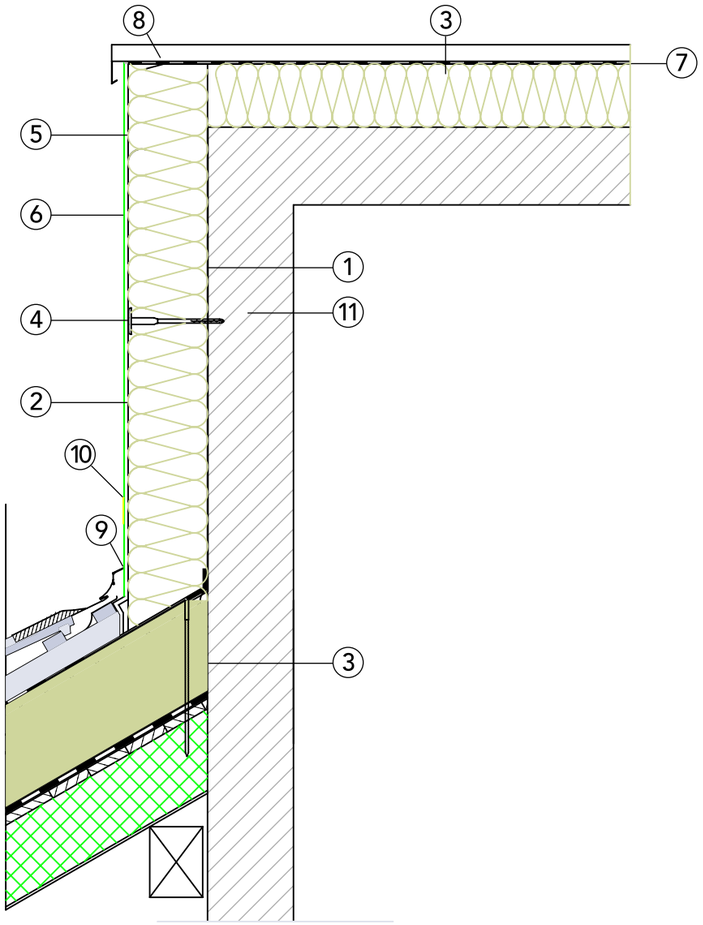
12. BALCONY - WALL JUNCTION WITH THERMAL INSULATION ON WALLS MADE OF XLAM PANELS



LEGEND

1. Internal wall
2. Xlam masonry
3. PCOMPACT PRO panel
4. ADE RAS reinforced smoothing render
5. TCS silicate finish
6. Outdoor pavement
7. Waterproofing
8. TFL plug
9. Hydrophobic TI 10
10. Reinforced plasterboard

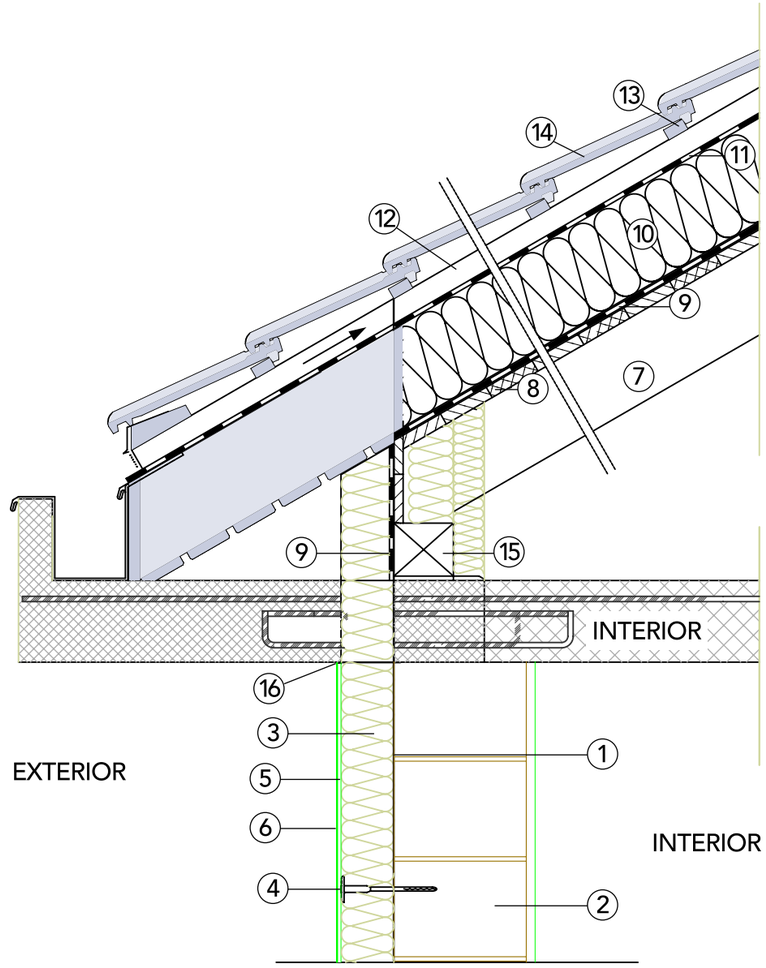
13. COATING AND COVERING FOR THE TECHNICAL ROOM VERTICAL SECTION



LEGEND

1. ADE RAS adhesive render
2. COMPACT PRO panel
3. Rock wool insulation
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Breathable membrane
8. Galvanized sheet metal covering 0,6 mm
9. Vertical sheet metal wall cladding 0,6 mm
10. Hydrophobic TI 10
11. Concrete masonry

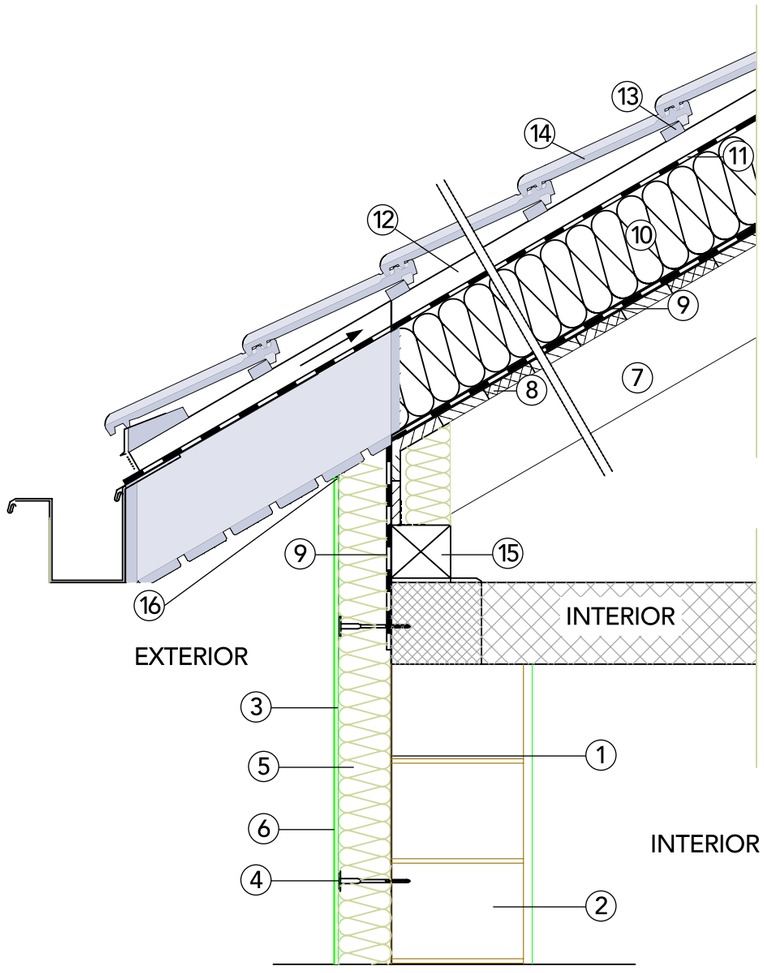
14. WOODEN ROOF - EAVES SECTION WITH THERMAL BREAK AND COATING (NC EXPANDING TAPE)



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Main beam
8. Sheathing boards. 25 mm
9. Vapor barrier
10. Thick rock wool insulation 160-240 mm
11. Breathable membrane
12. Timber battens (60x50) mm^2
13. Timber counter-battens (40x40) mm^2
14. Roof tiles
15. TEdge beam
16. NC EXPANDING tape

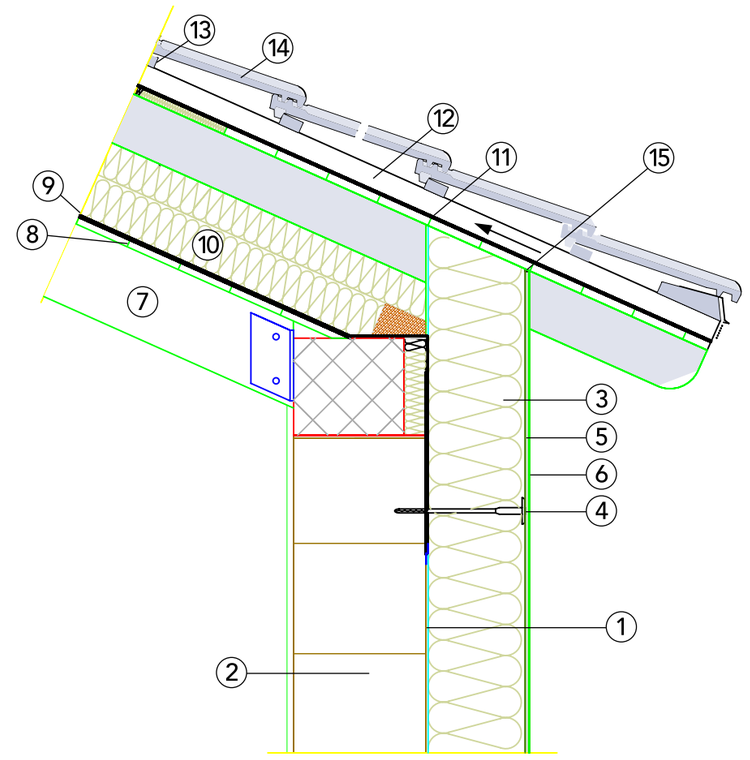
15. WOODEN ROOF
SECTION BETWEEN EAVES AND COATING (NC EXPANDING TAPE)



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Main beam
8. Sheathing boards. 25 mm
9. Vapor Barrier
10. Thick rock wool insulation 160-240 mm
11. Breathable membrane
12. Timber battens (60x50) mm^2
13. Timber counter-battens (40x40) mm^2
14. Roof tiles
15. Edge beam
16. NC EXPANDING tape

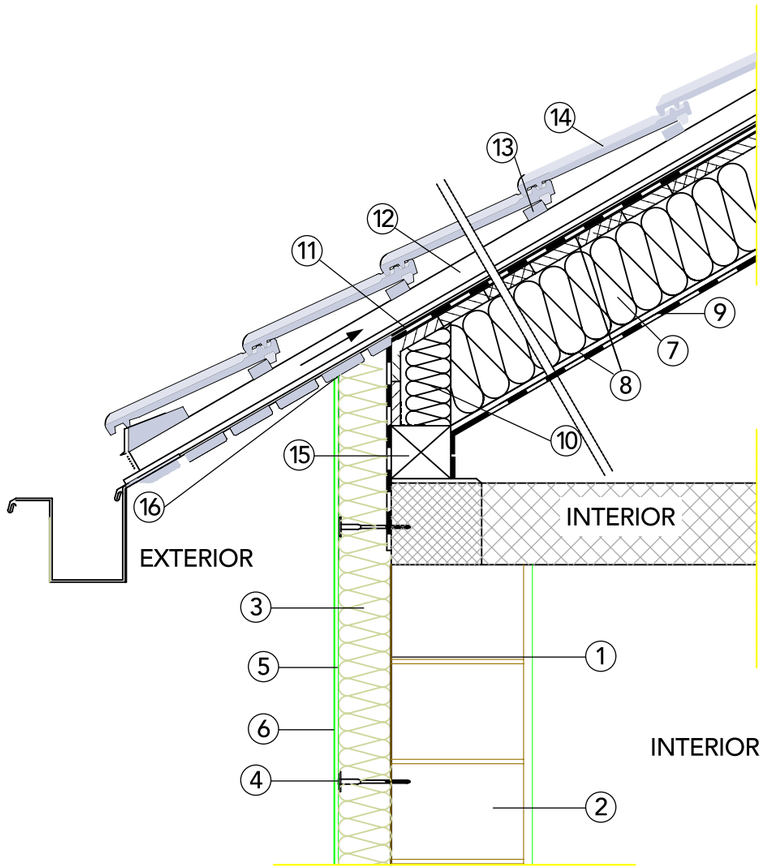
16. WOODEN ROOF WITH CONTINUOUS COATING
(NC EXPANDING TAPE)



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Main beam
8. Sheathing boards. 25 mm
9. Vapor barrier
10. Thick rock wool insulation 160-240 mm
11. Breathable membrane
12. Timber battens (60x50) mm^2
13. Timber counter-battens (40x40) mm^2
14. Roof tiles
15. NC EXPANDING tape

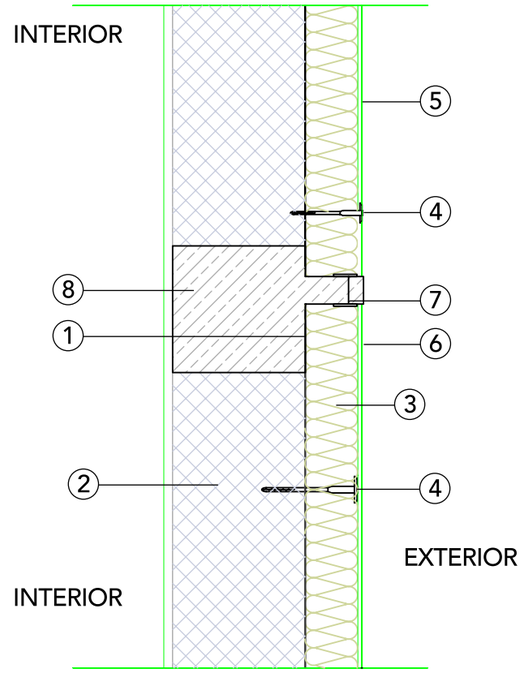
17. WOODEN ROOF
SECTION BETWEEN EAVES AND COATING (NC EXPANDING TAPE)



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Main beam
8. Sheathing boards. 25 mm
9. Vapor barrier
10. Thick rock wool insulation 160-240 mm
11. Breathable membrane
12. Timber battens (60x50) mm^2
13. Timber counter-battens (40x40) mm^2
14. Roof tiles
15. Edge beam
16. NC EXPANDING tape

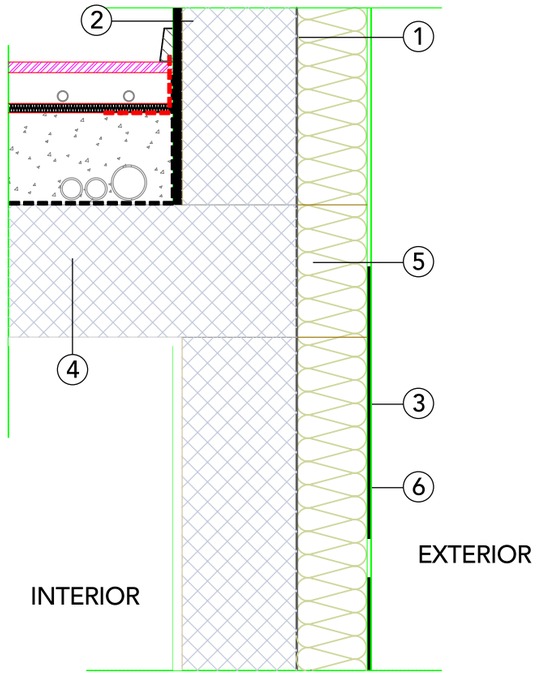
18. EXISTING/NEW MASONRY WITH EXTERNAL COAT
DETAIL OF THE AIR VENT



LEGEND

1. ADE RAS adhesive render
2. Existing masonry
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Expansion joint
8. Air vent

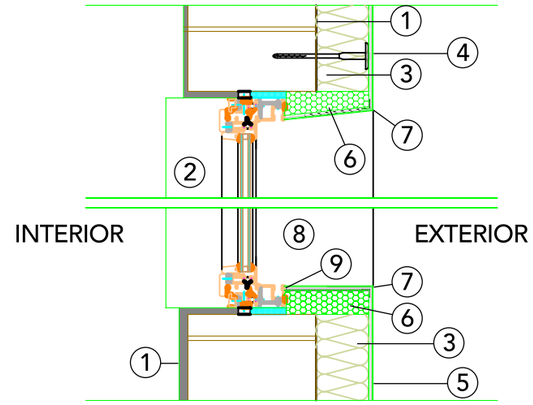
19. WALLS WITH HIGH THERMAL PERFORMANCE BREAKS COLUMN CONNECTION DETAIL

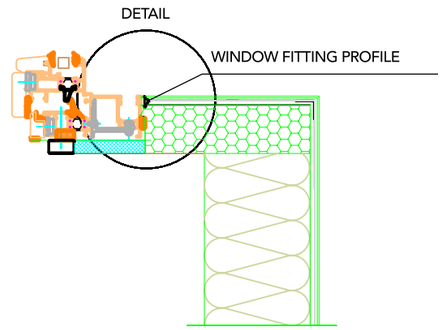


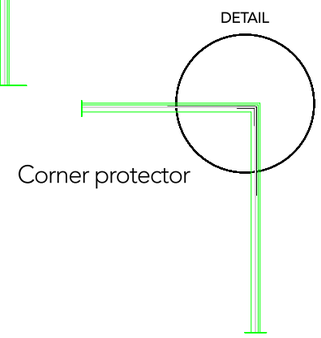
LEGEND

1. ADE RAS adhesive render
2. Column cast in R.C.
3. ADE RAS reinforced smoothing render
4. Slab
5. COMPACT PRO panel
6. TCS silicate finish

20. JUNCTION DETAIL FOR DOORS AND WINDOWS PLACED IN THE MIDDLE OF THE WALL



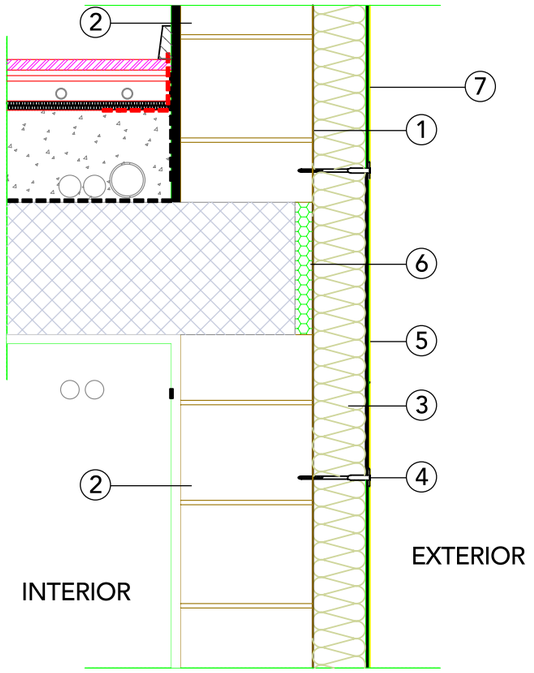




LEGEND

1. ADE RAS adhesive render
2. Internal sill
3. COMPACT PRO panel
4. ADE RAS reinforced smoothing render
5. Fiberglass mesh
6. Insulating material 5 cm xps, with removal of about 3 cm and perimetral restoration
7. Corner with mesh reinforcement
8. External marble sill
9. Window fitting profile

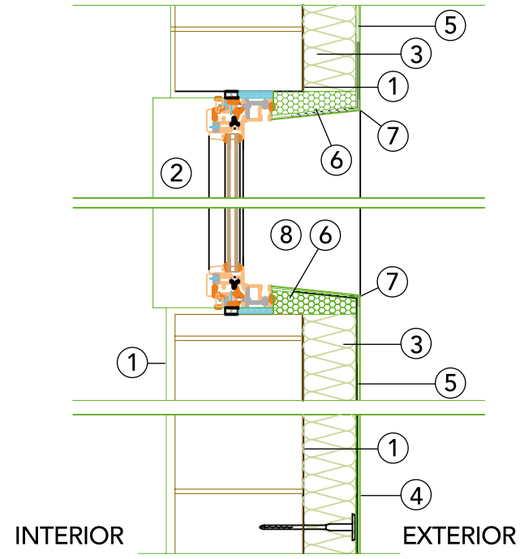
21. EXISTING/NEW MASONRY WITH EXTERNAL COATING FLOOR CONNECTION JOINT



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. Insulation panel resting on the floor, thickness 20-60 mm
7. TCS silicate finish

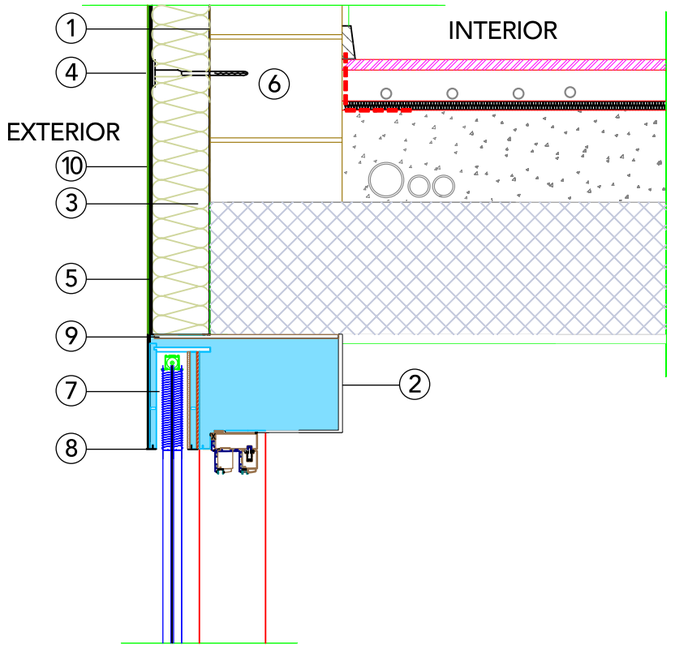
22. EXISTING WALL WITH EXTERNAL COATING AND INSULATED SHOULDERS - WINDOW AND SILL JUNCTION



LEGEND

1. ADE RAS adhesive render
2. Internal sill
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. Insulating material 5 cm xps, with removal of about 3 cm and perimetral restoration
7. Corner protector made pvc with resin
8. External marble sill

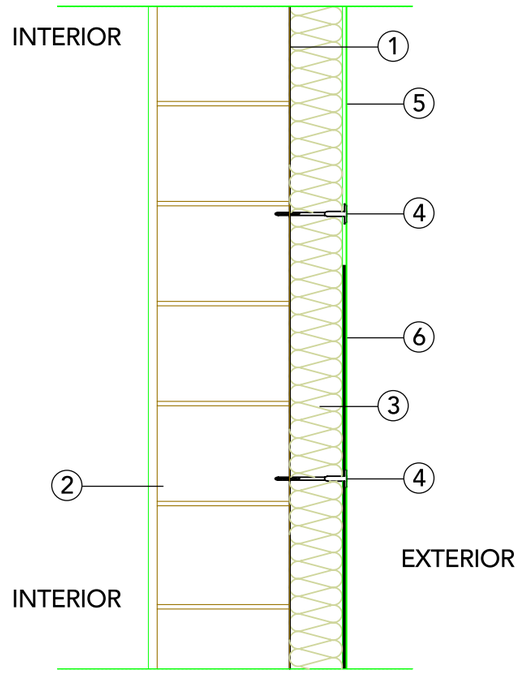
23. EXISTING WALL WITH EXTERNAL COATING WINDOW SECTION AND INSULATED BOX



LEGEND

1. ADE RAS adhesive render
2. Insulated box
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. Masonry made of blocks
7. Roller shutter system
8. Window fitting profile
9. Expanding prestressed tape
10. TCS silicate finish

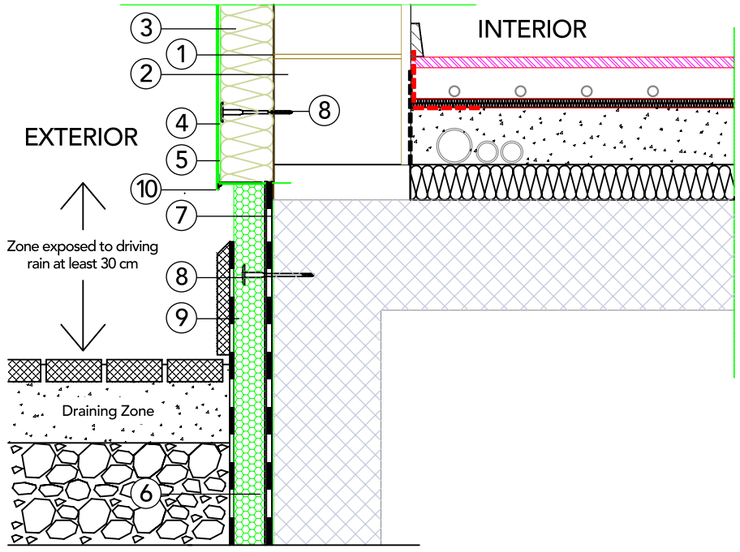
24. EXISTING/NEW MASONRY WITH EXTERNAL COATING CONTINUOUS WALL DETAIL



LEGEND

1. ADE RAS adhesive render
2. Existing masonry
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish

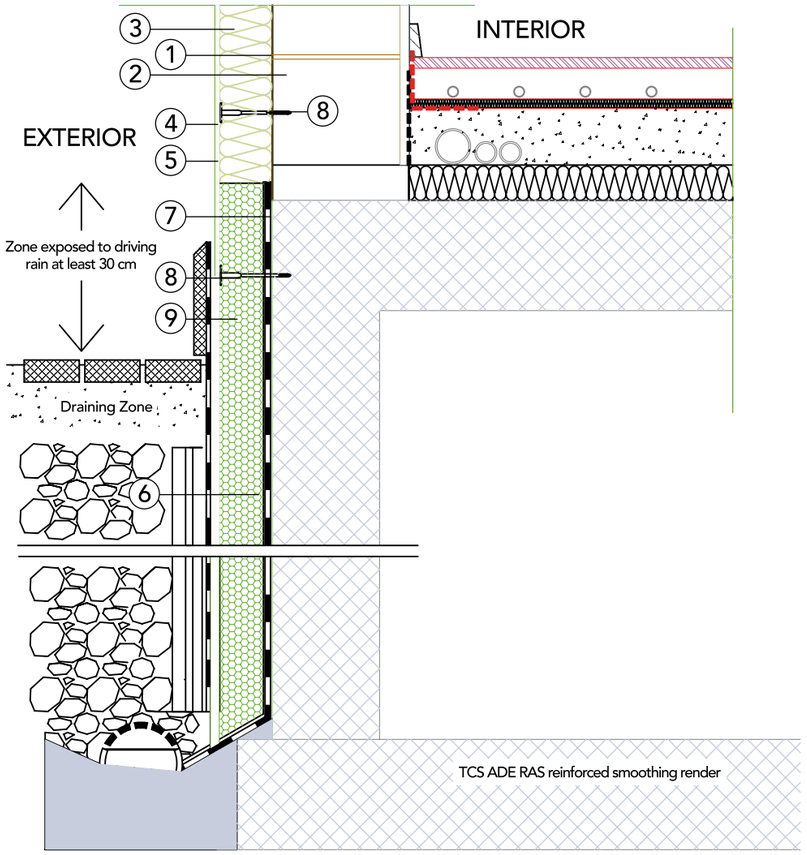
25. SHELTERED BASEBOARD WITH DRIP PROFILE



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks or concrete
3. COMPACT PRO panel
4. ADE RAS reinforced smoothing render
5. TCS silicate finish
6. Rough-faced xps
7. Waterproofing
8. TCV plug
9. Hydrophobic TI 10
10. Corner protector with drip

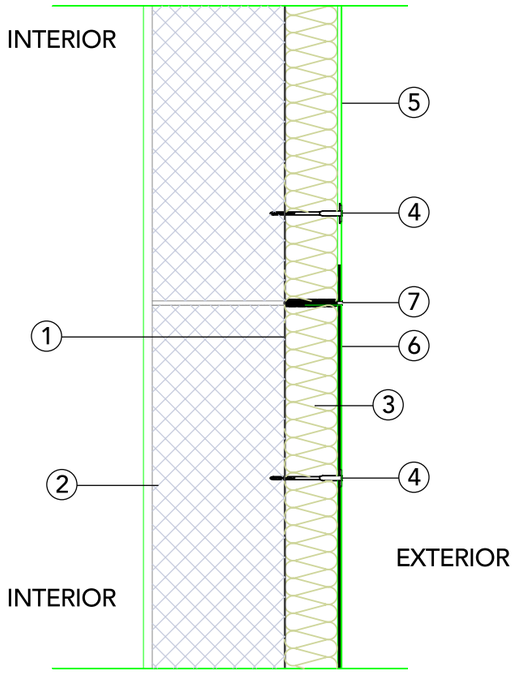
26. FLUSH BASEBOARD WITH PERIMETER INSULATION



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks or concrete
3. COMPACT PRO panel
4. ADE RAS reinforced smoothing render
5. TCS silicate finish
6. Rough-faced xps
7. Waterproofing
8. TCV plug
9. Hydrophobic TI 10

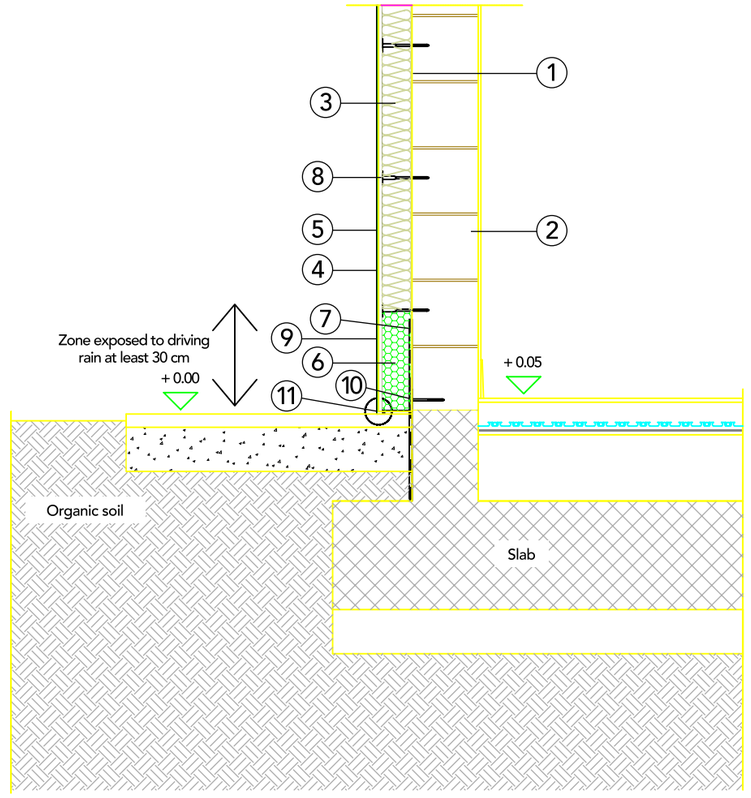
27. EXISTING/NEW MASONRY WITH EXTERNAL COATING JUNCTION DETAIL OF EXPANSION JOINT, VERTICAL/HORIZONTAL



LEGEND

1. Collante ADE RAS
2. Muratura esistente
3. Pannello COMPACT PRO
4. Tassello TCV
5. Rasatura armata ADE RAS
6. Finitura ai silicati TCS
7. Giunto di espansione

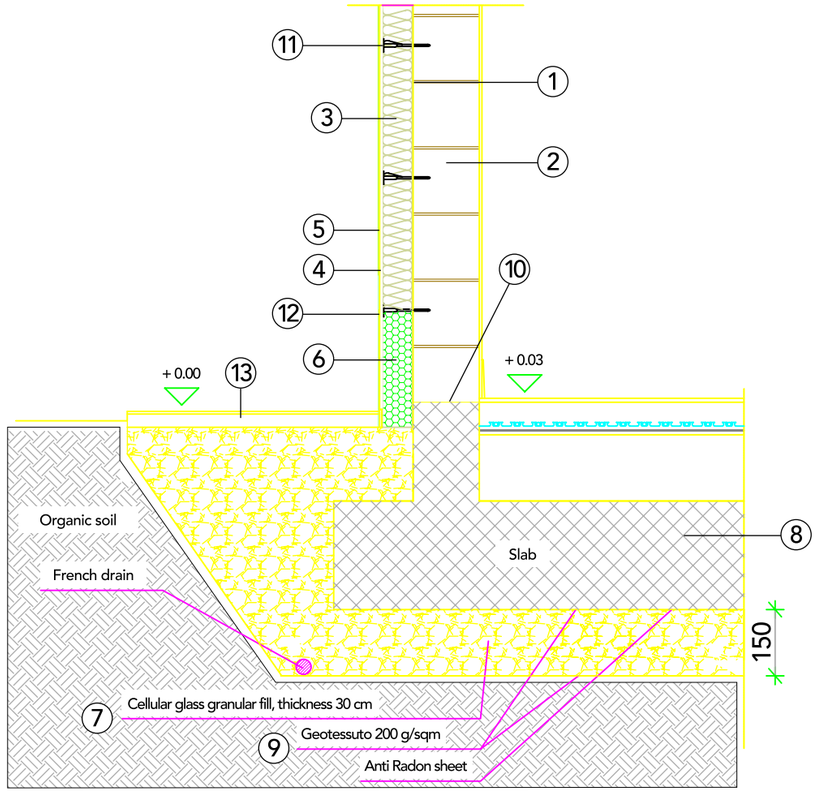
28. COATING STARTING FROM EXISTING FLOORING BASEBOARD PROFILE



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. ADE RAS reinforced smoothing render
5. TCS silicate finish
6. Rough-faced xps
7. Waterproofing
8. TCV plug
9. Hydrophobic TI 10
10. Starting profile
11. Expanding prestressed tape

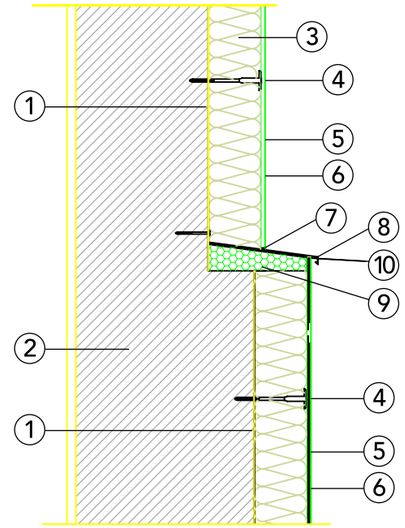
29. INSULATION OF THE FOUNDATION SLAB + ELEVATION WITH COATING



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. ADE RAS reinforced smoothing render
5. TCS silicate finish
6. Rough-faced xps
7. Insulation made of cellular glass grains
8. Foundation slab
9. Non-woven geofabric
10. Wall separating membrane
11. TCV plug
12. Hydrophobic TI 10
13. Screed and external pavement

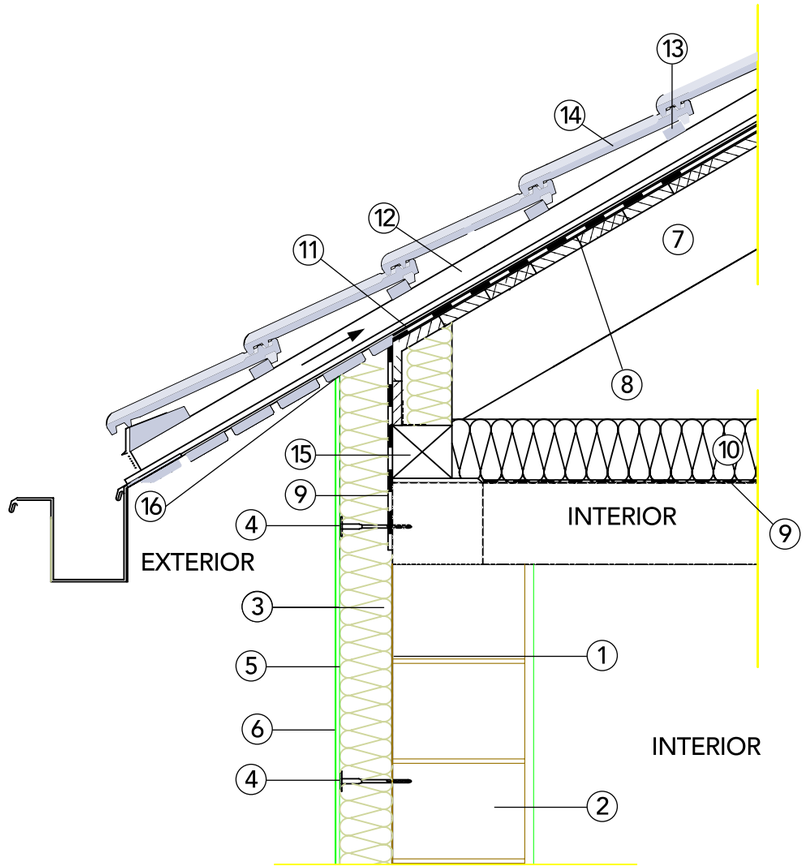
30. INSULATION OF MASONRY WITH PROJECTING ELEMENTS



LEGEND

1. ADE RAS adhesive render
2. Masonry
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Sealing tape
8. Galvanized sheet metal covering 0,6 mm
9. Waterproof insulating panel
10. Sound absorbing membrane

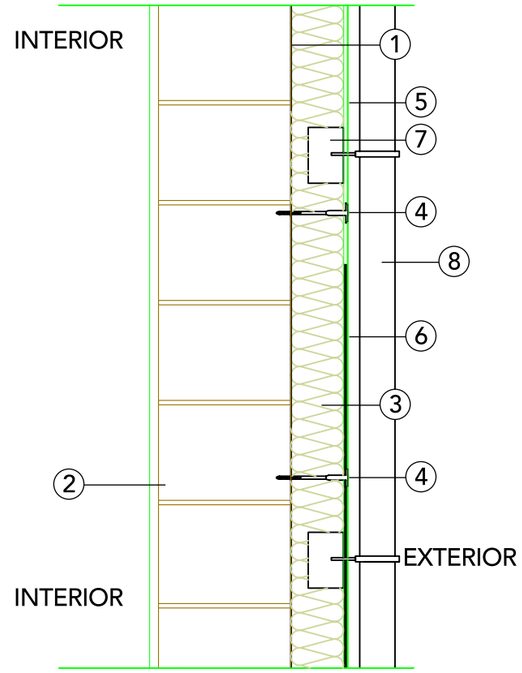
31. COLD WOODEN ROOF WITH INSULATION ON THE FLOOR SECTION BETWEEN EAVES AND COATING (NC EXPANDING TAPE)



LEGEND

1. ADE RAS adhesive render
2. Masonry made of blocks
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Main beam
8. Sheathing boards 25 mm
9. Vapor barrier
10. Thick rock wool insulation 160-240 mm
11. Breathable membrane
12. Timber battens (60x50) mm^2
13. Timber counter-battens (40x40) mm^2
14. Roof tiles
15. Edge beam
16. NC EXPANDING tape

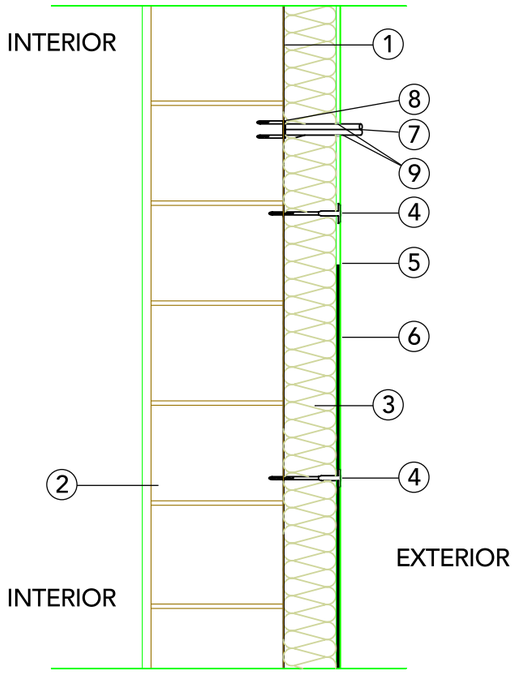
32. EXISTING/NEW MASONRY WITH EXTERNAL COAT DETAIL OF GUTTER WITH THERMAL BREAK



LEGEND

1. ADE RAS adhesive render
2. Existing masonry
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Thermal break for the gutter fixing system
8. Gutter

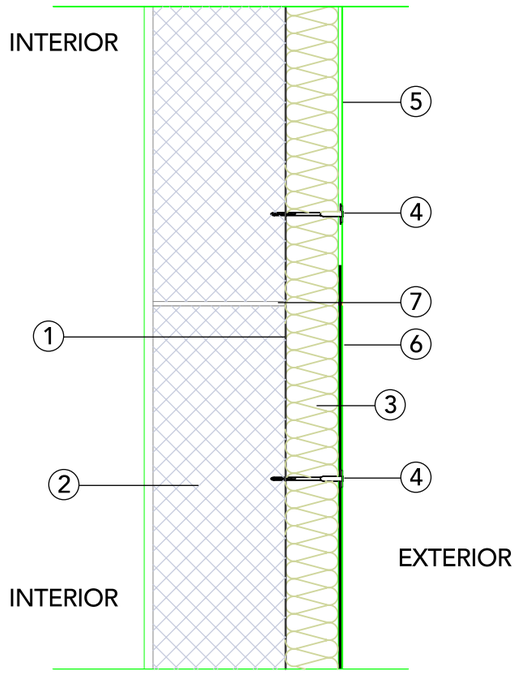
33. EXISTING/NEW MASONRY WITH EXTERNAL COATING DETAIL OF BALCONY RAILING JUNCTION



LEGEND

1. ADE RAS adhesive render
2. Existing masonry
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Railing
8. Installation system (connector)
9. Sealing tape

34. EXISTING/NEW MASONRY WITH EXTERNAL COATING DETAIL OF EXPANSION JOINT OF SUPPORT



LEGEND

1. ADE RAS adhesive render
2. Existing masonry
3. COMPACT PRO panel
4. TCV plug
5. ADE RAS reinforced smoothing render
6. TCS silicate finish
7. Plaster break

TECHNICAL DATA SISTEMA PRO

ADE RAS

PROPERTY	REF.	VALUE
Apparent density in pile	ETAG 04	1742 Kg/dm³
Fresh mortar apparent density	EN 1015	1550 Kg/dm³
Dried mortar apparent density	EN 1015	1400 Kg/dm³
Grain size curve	EN 1015	0-0,6 mm
Adhesion on concrete	ETAG 04	0,37 Mpa
Adhesion on brick	ETAG 04	0,48 Mpa
Adherence to insulation after 2d in H_2O 2h a 23°C 50% RH	ETAG 04	0,030 Mpa
Adherence to insulation after 2d in H_2O 7d a 23°C 50% RH	ETAG 04	0,020 Mpa
Setting time (at 20°C and 65% RH)	EN 1015	8 h
Mixture lifetime (at 20°C and 65% RH)	EN 1015	4 h
Dry extract at 105°C	ETAG 04	99,9%
Ash content at 450°C	ETAG 04	99,5%
Ash content at 900°C	ETAG 04	60,6%
Ph of the mixture	-	≥ 12,5
Coverage	-	1,4 Kg/m² mm
Application thickness as adhesive	-	1-3 cm per hand
Application thickness as a render	-	1-1,5 cm per hand
Mixing water	-	6-6,5 L bag

STORICAL TONACHINO 1.1

PROPERTY	REF.	VALUE
Ph	-	≥ 12,5
Density	ISO 2811	1774 Kg/m³
Dry extract at 105°C	ETAG 04	81,2%
Ash content at 450°C	ETAG 04	93,7%
Ash content at 900°C	ETAG 04	57,4%
Coverage - two hands on new substrate	-	4 Kg/m²

KAPPASIL FONDO

PROPERTY	REF.	VALUE
Viscosity DIN 4 a 20°C	ISO 2431	-
Density	ISO 2811	-
Coverage - two hands on new substrate	-	6-8 m²/L

KAPPASIL TONACHINO 1.1

PROPERTY	REF.	VALUE
Ph	-	≥ 12,5
Density	ISO 2811	1772 Kg/m³
Dry extract at 105°C	ETAG 04	81%
Ash content at 450°C	ETAG 04	93,9%
Ash content at 900°C	ETAG 04	57,6%
Coverage - one hand on new substrate	-	2 Kg/m²

TECHNICAL DATA SISTEMA PRO

TI 10

PROPERTY	REF.	VALUE
Density	-	800 Kg/m³
Coverage - one hand on new substrate	-	1 L/m²

COMPACT PRO INSULATION

PROPERTY	REF.	VALUE
Fire resistance class	EN 13501	A1
Thermal conductivity	EN 13162	0,034 W/(m.K)
Specific heat capacity	-	870 J/(kg.K)
Water vapor permeability	EN 12086	μ 1
Dimension: length	EN 822	1000 mm
Dimension: width	EN 822	600 mm
Dimension: thickness	EN 823	from 60 toa 320 mm
Density	EN 1602	80 Kg/m³
Compressive strength	EN 826	CS (10) ≥ 20 kPa
Perpendicular tensile strength	EN 1607	≥ 7,5 kPa
Short-term water absorption	EN 1609	≤ 1 kg/m²
Long-term water absorption	EN 12087	≤ 3 kg/m²
DIMENSIONAL STABILITY		
28 days at 23°C 50% UR	EN 1603	≤ 1%
7 days at 70°C	EN 1604	≤ 1%
48h at 70°C 90% UR	EN 1604	≤ 1%

TCS GLASS CK155

PROPERTY	REF.	VALUE
Mesh window dimensions	ETAG 04	4 x 4,5
Weight of treated fabric	ETAG 04	150 g/m²
Tensile strength at N/50 mm	ETAG 04	warp 42,64 N/mm
	-	weft 39,34 N/mm
Tensile strength after aging N/50 mm	ETAG 04	warp 30,02 N/mm
	-	weft 27,62 N/mm
Elongation at traction at N/50 mm	ETAG 04	warp 3,38%
	-	weft 3,53%
Elongation at traction after aging N/50 mm	ETAG 04	warp 2,61%
	-	weft 2,61%
Roll dimensions	-	50 m height 1m
Fire resistance class	-	F

TASSELLO TCV

PROPERTY	REF.	VALUE
Category conformity	ETA 08-0314	A-B-C-D
Plug length	-	from 100 to 300 mm
Disc threading	-	40 mm
Disc diameter	-	60 mm

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