







Installation guideline RAW

OWAconsult collection

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1. Product data

Item no.	Dimensions (nom.) [mm]	PU	α_w	NRC	Absorption class	$D_{n,w}$	CAC	Humidity resistance	Cleanroom class	Washability	Scrubability	Mold and mildew	Resistance to fire ^o	Weight approx. [kg/m ²]	Recyclability	Share of renewable resources	Warranty (years)	
 <p>OWAconsult collection RAW concrete</p>																		
Edge  																		
00091102	2000 x 600 x 20		8*	0.70	0.70	C	33 dB	33 dB	95 % RH	-	✓	✓	✓	-	4.8	100 %	16 %	10

* Pieces per package

^o Dependent on system, soffit and other project specific factors**Material**Mineral tile
ASTM Type III, Form 2, Pattern D**Reaction to fire**

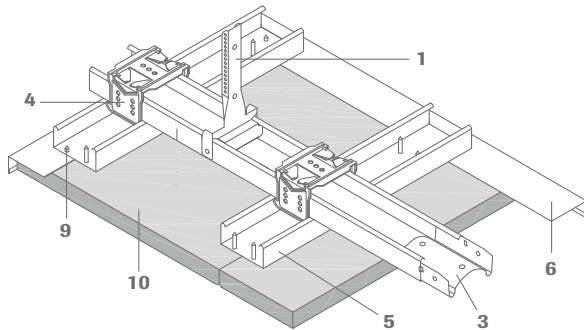
A2-s1,d0 (EN 13501-1)

DIN 18177

TVOC 1 / FH 1 / PM 1

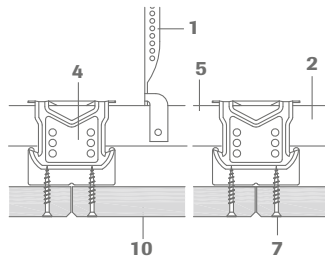
Release of formaldehydeOWAcoustic < 5 µg/m³ (ISO 16000)**LEED EQ credit „Low-emitting products“**TVOC limit acc. to CDPH < 50 µg/m³

Wall connection (shadow gap)

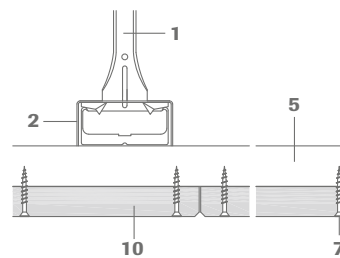


- 1 Nonius hanger for C profile 60/27 acc. to EN 13964, distance ≤ 1000 mm
- 2 Supporting grid C profile 60/27 acc. to EN 14195, distance ≤ 1000 mm
- 3 Profile connector acc. to EN 13964
- 4 Cross connector or equivalent acc. to EN 13964
- 5 Tile grid C profile 60/27 acc. to EN 14195, distance ≤ 400 mm
- 6 Angle profile no. 51/22
- 7 Tile screw no. 2025, colour natural grey, distance ≤ 300
- 8 Direct hangers acc. to EN 13964, distance ≤ 1000 mm
- 9 Self tapping screw no. 2024
- 10 RAW tile

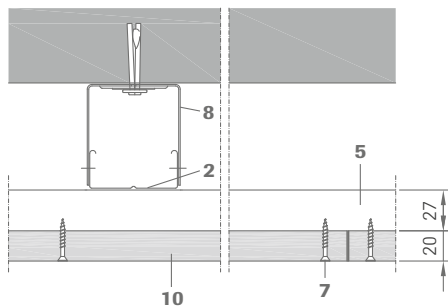
Longitudinal section:



Cross section:



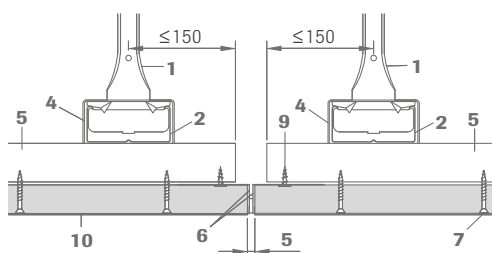
Direct mounting:



For execution without shadow gap (butt-jointed) the angle profile no. 51/22 can be omitted.

Expansion gaps:

Expansion joints in the RAW ceiling are only required in areas where building expansion joints already exist. Grids and RAW ceiling tiles are to be separated. The sliding expansion joint is to be made using two wall brackets no. 51/22 (6).



2. General information on workmanship

RAW is a special, high-quality ceiling system whose appearance depends significantly on the workmanship of the substructure.

Reaction to fire classification as a construction product

For the classification of fire behavior according to EN 13501-1, the construction product RAW has been awarded the classification A2-s1,d0 – non-combustible. The system components listed in the test report must therefore be strictly adhered to and used. If other, untested system components are used, the specified system-relevant properties of the RAW construction product cannot be guaranteed.

Labelling according to the Construction Products Regulation (EU-BauPV)

RAW has been tested and labelled in accordance with the Construction Products Regulation no. 305/2011. As a result, the associated, required issuance of a Declaration of Performance (DoP) is therefore ensured for the mineral tiles. The DoP number can be found on the respective packaging.

3. During the installation of the RAW ceiling, the following instructions must be observed:

- The installation area must be weatherproof, watertight and clean (no outdoor use).
 - During installation of the ceiling system, the relative humidity must be between 40 % and 70 % and the temperature should be 10 - 30 °C, preferably 18 °C.
 - Temperature and humidity should be kept as constant as possible. Significant and/or rapid fluctuations can lead to undesirable changes in shape.
 - System-compliant construction components in accordance with EN 13964, EN 14195 and EN 14566 must be used.
 - All installation plans for required fittings must be available before the commencement of work.
 - Existing building expansion gaps must be retained in the RAW ceiling.
 - All fittings that may be required must be installed before the installation of the RAW tiles. It is essential that coordination between the drywall construction, electrical and other trades involved should be proved (see section 1).
 - Artificial light (e.g. spotlights, indirect lighting) directed at the ceiling surface from below or from the side is to be avoided.
 - All fittings must also be suspended from the ceiling slab.
 - In the event that installation work should be hindered by external influences for which the company performing the work is not responsible, as well as in the case of deviations from the installation conditions specified in these installation instruction etc., it is essential that reservations should be expressed vis-à-vis the customer in writing (VOB/B [German Construction Contract Procedures] §6).
-

4. Substructure and RAW tiles

4.1 Substructure

Only the following profile construction parts may be used. The specified fixing centre must be observed. Deviations may adversely affect or change the subsequent appearance of the RAW ceiling.

- Nonius hanger for C profile 60/27 acc. to EN 13964 – max. fixing centre = 1000 mm + 2 safety pin acc. to EN 13964
- Supporting grid C profile 60/27 acc. to EN 14195, 60 x 27 x 0.6 mm – max. fixing centre = 1000 mm
- Tile grid C profile 60/27 acc. to EN 14195, 60 x 27 x 0.6 mm – max. fixing centre = 400 mm
- Cross connector or equivalent acc. to EN 13964
- tile screws no. 2026 max. fixing centre = 300 mm
- angle profile no. 51/22 as sliding wall connection (attachment to substructure)
- self tapping screw no. 2024 for angle profile no. 51/22 – max. fixing centre = 400 mm
- in the joint area of the RAW tiles, the angle profile must be additionally secured with 2 self tapping screws
- Nonius base for inclined installation acc. to EN 13964 – max. fixing centre = 1000 mm + 2 safety pins acc. to EN 13964

4.2 RAW tiles

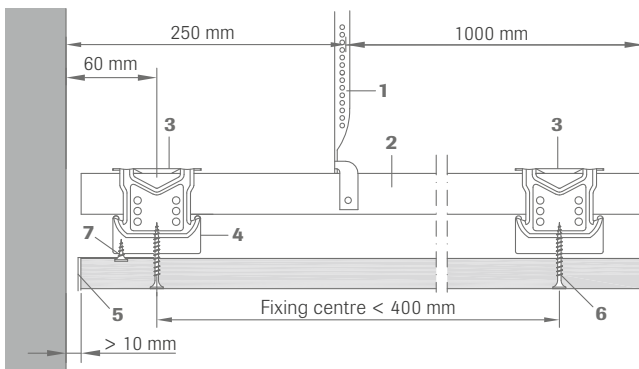
RAW is a highly individual ceiling board. Irregular appearance, material and colour differences in the tile surface are intentional. This is part of the natural aesthetic appearance of the design and does not constitute grounds for complaint. Prior to installation of the tiles, care should be taken to make sure that tiles from as many different packages as possible are installed to ensure sufficient mixing of the tile surfaces. Furthermore, all precautions must be taken on site to be able to safely install the large-format (2000 x 600 mm) RAW ceiling boards. Where applicable, the appearance of the ceiling should be discussed with the customer and/or planner. RAW ceiling tiles are mounted on the C profile structure using tile screw no. 2026. **The heads of the screws remain visible and contribute to the desired appearance of the ceiling.**

5. Installation instructions

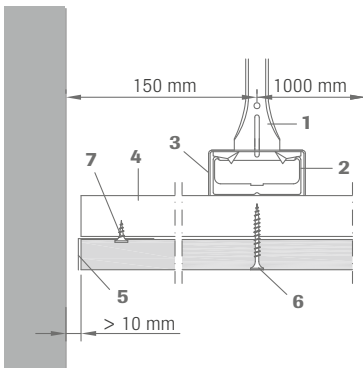
5.1 Installation of the 1st level (supporting grid)

Installation with C profiles acc. to EN 14195 and nonius hangers acc. to EN 13964 at a max. fixing centre from the C profiles of 1000 mm. The first and last C profile is to be fitted at an fixing centre of max. 150 mm from the wall. The entire construction is to be aligned so that it is level. The maximum fixing centre of the nonius hangers from the wall is max. 250 mm. Fixing centre of the nonius hangers below each other max. 1000 mm. The connection between the C profiles is effected with straight connector acc. to EN 13964.

Sliding wall connection:



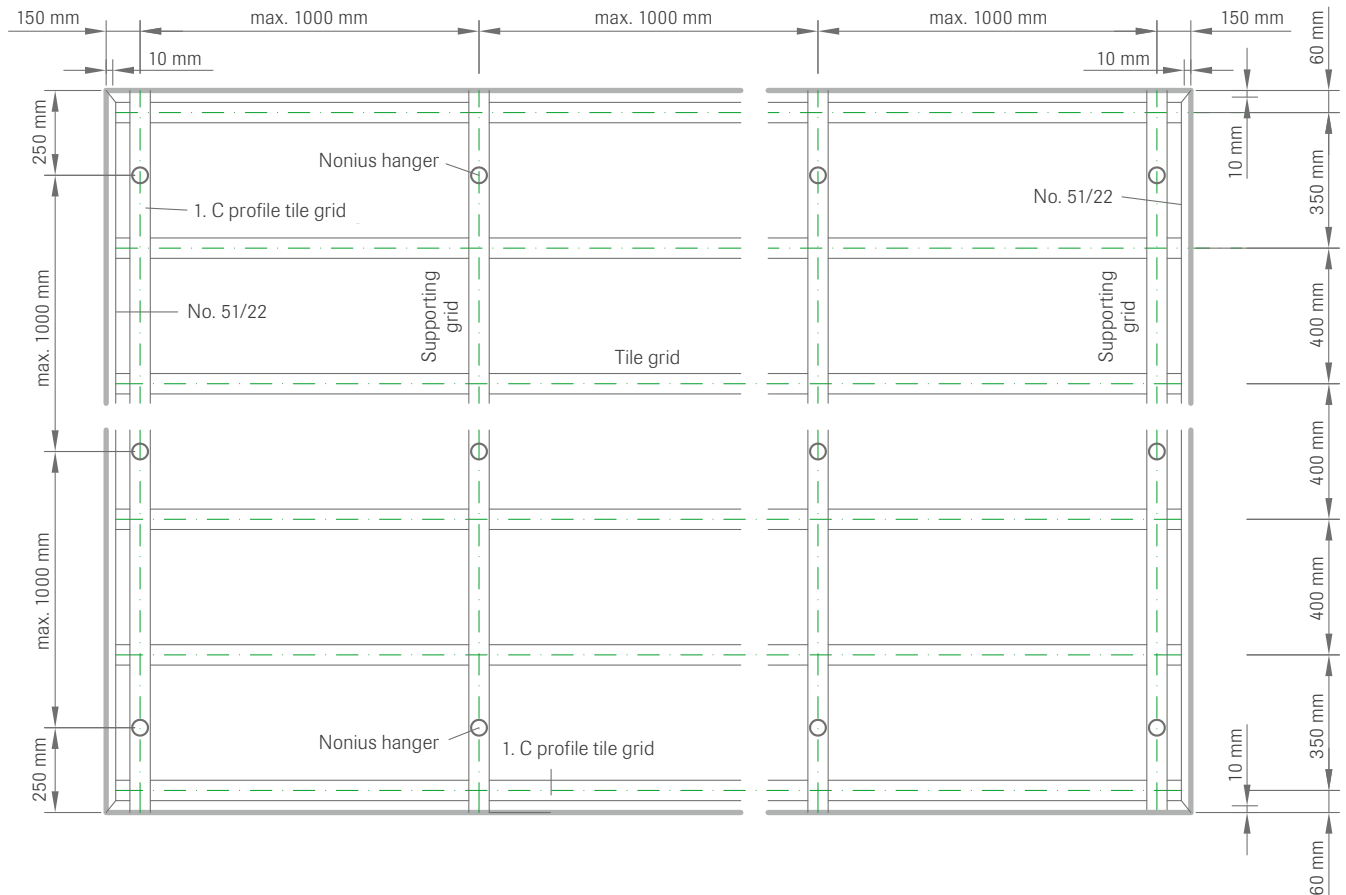
- 1 Nonius hanger for C profile 60/27 acc. to EN 13964
- 2 Supporting grid C profile 60/27 acc. to EN 14195
- 3 Cross connector acc. to EN 13964
- 4 Tile grid C profile 60/27 acc. to EN 14195
- 5 Angle profile no. 51/22
- 6 Tile screw no. 2026
- 7 Self-tapping screw no. 2024



5.2 Installation of the 2nd level (tile grid)

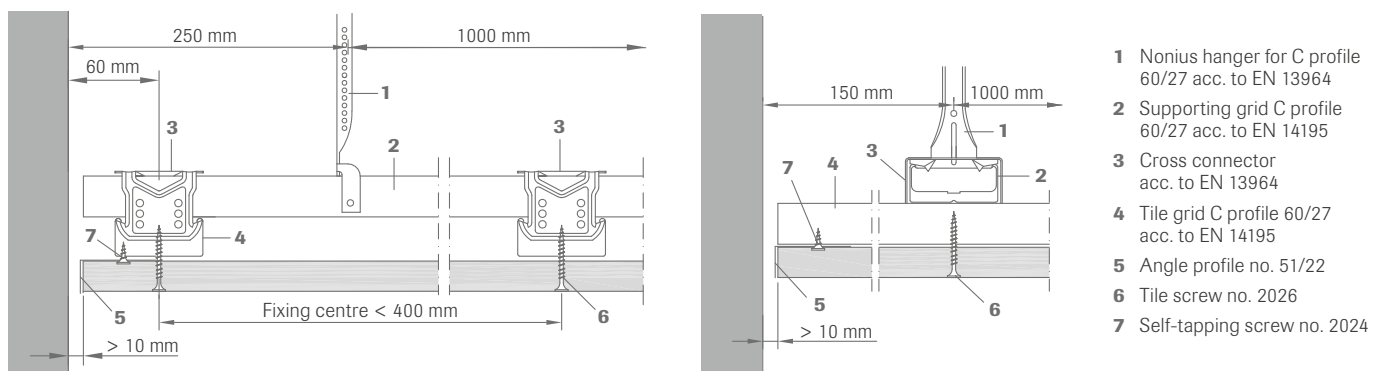
Installation with C profiles acc. to EN 14195 at a max. fixing centre of 400 mm. The first and last C profile is to be fitted at an fixing centre of max. 60 mm from the wall. Mounting on supporting grid with cross connector or equivalent acc. to EN 13964. The cross connector must first snap into the C profile on one side along the C profile, so that both lugs engage in the curved edge of the C profile. Only then should the connector snap into the opposite curved edge of the C profile. The connection of the C profiles to each other is effected with longitudinal profile connector acc. to EN 13964.

Wall connection:



5.3 Installation of the shadow wall angle (no. 51/22)

The angle profile no. 51/22 is mounted to the C profiles of the panel grid and forms a sliding wall connection. The angle profile is fastened to the C profiles with self-tapping screws no. 2024. Distance between angle profile and wall ≥ 10 mm.



5.4 Handling/Transport

Panels should only be transported horizontally by two people. To protect the panels, it is recommended to keep them in their packaging until installation. Acoustic elements and accessories must be protected from moisture and stored in a frost-free location inside the building. Improper storage and/or exposure to moisture may cause deformation of the elements, which could negatively affect the final result. The materials must be given time to acclimate before installation.

5.5 Installation of the RAW boards

Installation with panel screws no. 2026 at a maximum fastening distance of 300 mm on the tile grid. The tiles are installed with offset joint gaps at right angles to or along the C profiles of the tile grid. The tiles are always screwed to the C profiles from the tile centre outwards.

Attention: The longitudinal tile edges should always be installed in the direction of incident daylight (main direction of light)! During installation, care must be taken to ensure that edges and surfaces are not damaged. Due to their low weight, the boards are compressible. The use of a panel lifter is recommended. Otherwise, indentations, sanding marks and other damage will remain permanently visible. Subsequent treatment of the surface is not possible.

5.6 Comfort inspection hatch no. 8031/9 and no. 8031/10

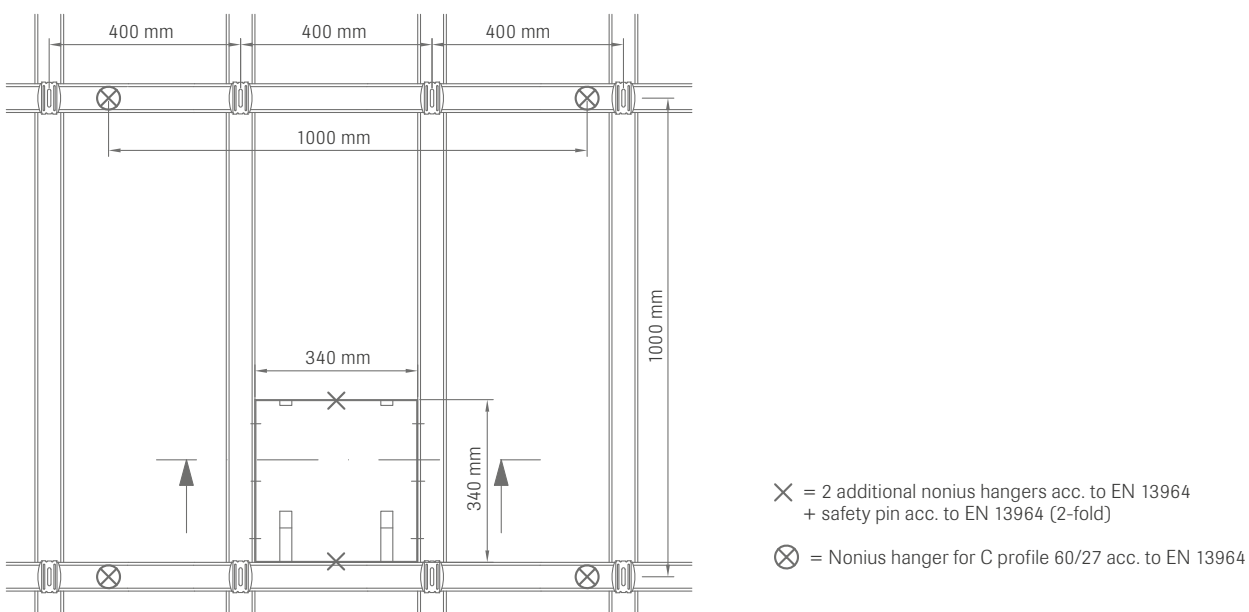
In the installation of the seamless RAW ceiling, inspection hatches often have to be installed.

- comfort inspection hatch no. 8031/9, dimensions 340 x 340 mm (tile insert for the inspection hatch must be cut out of a RAW board on site and glued in with adhesive no. 99/24)
- comfort inspection hatch no. 8031/10, dimensions 540 x 540 mm (tile insert for the inspection hatch must be cut out of a RAW board on site and glued in with adhesive no. 99/24)
- nonius hanger acc. to EN 13964 for comfort inspection hatch, 2 pieces each or 4 pieces per inspection hatch

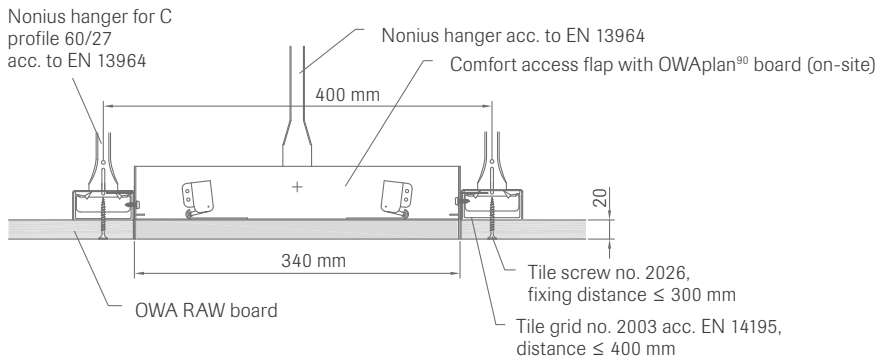
The following points must be observed:

- The exact location of the inspection hatches must correspond to the substructure of the false ceiling.
- The nonius hangers must be assigned to the appropriate region of the false ceiling, depending on the number and weight of the proposed inspection hatches (see top view of ceiling).
- The size of the opening in the ceiling must correspond to the outer dimensions of the inspection hatch to be installed.
- The inspection hatches must be fitted before the tiles are installed.
- When using inspection hatch no. 8031/10, the C profile in the region of the inspection hatch must be separated accordingly. In addition, two C profiles, length 1000 mm, must be fitted and suspended from the ceiling slab (see top view of ceiling 540 x 540 mm).

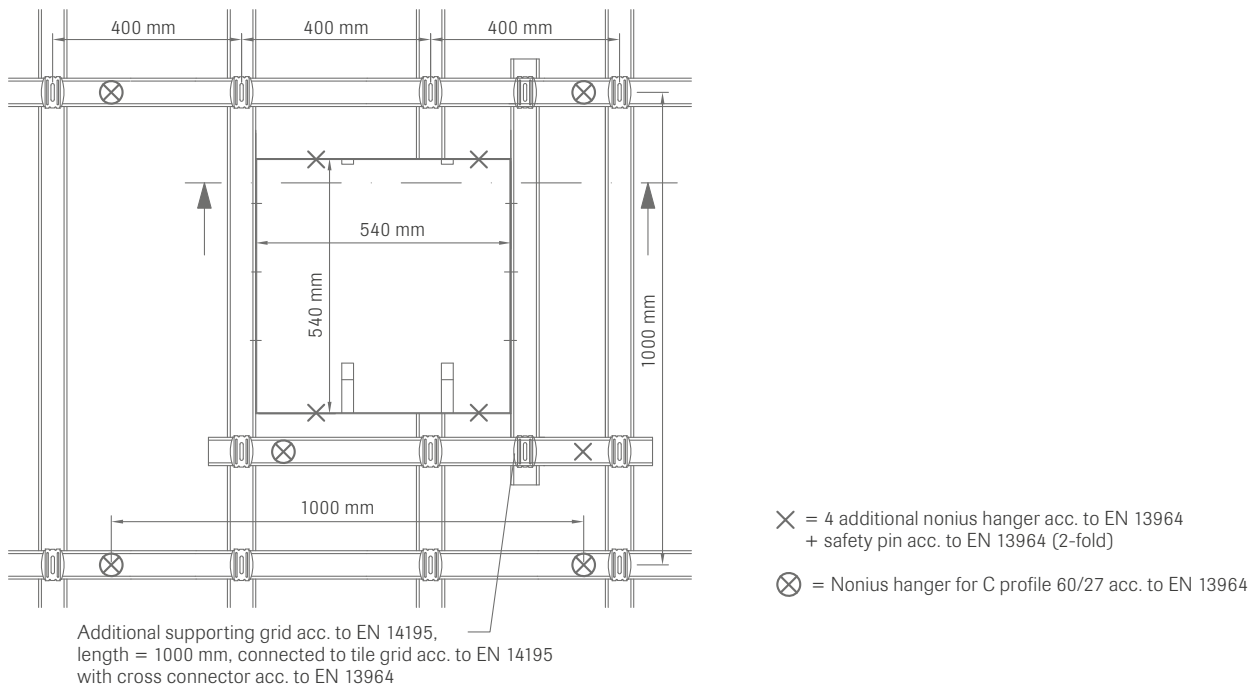
Ceiling top view of inspection hatch no. 8031/9 (340 x 340 mm):



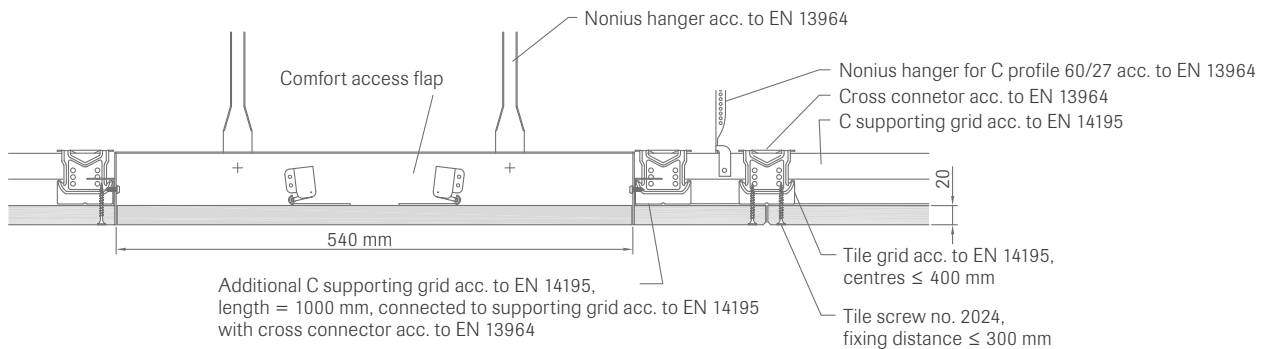
Cross-section through inspection hatch no. 8031/9:



Ceiling top view of inspection hatch no. 8031/10 (540 x 540 mm):



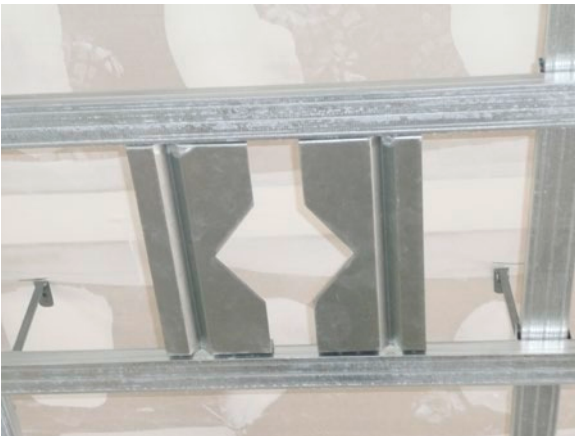
Cross-section through inspection hatch no. 8031/10:



The access flap is inserted sideways into the opening and then aligned and fixed in place onto the C profiles using six screws no. 2024. Fine adjustment is possible in the area of the hinge mountings and the locking mechanism by unscrewing the Phillips screws and moving the unit vertically in the region of the slots. The corresponding RAW tile must be fitted onto the inspection hatch onsite. It must be bonded using adhesive no. 99/24.

The hatch is opened by pushing the opening part on one side and lowering it again immediately. The inspection hatch is closed by pressing it gently. The closing mechanism can then be heard to engage. It is highly recommended that the hatch should only be opened and closed with clean mounting gloves.

5.7 Mounting frame no. 8069/6



The mounting frame no. 8069/6 (2-pieces) must be used when installing downlights. Each downlight requires one mounting frame kit. The frames are to be placed on the C profiles with the lateral edges upturned. The distance between the frames themselves must be chosen in accordance with the diameter of the downlights.

It is important here to ensure that the clamping device of the downlight subsequently rests on the frame and the mounting frames do not extend beyond the edge of the hole. The hole for the downlight can be created onsite using a holesaw. The size must be adjusted to the diameter of the downlight. Install it before fitting the tile!

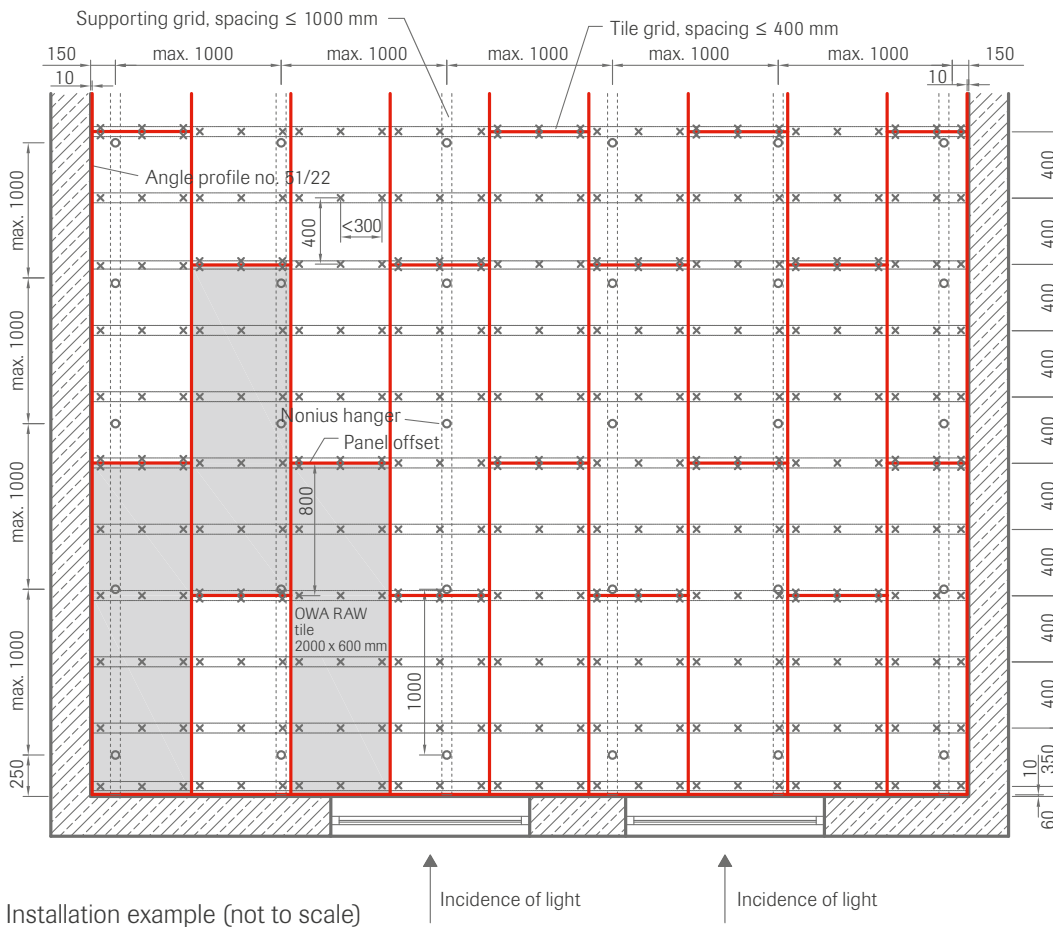
It is possible to use the mounting frame for rectangular or square installations. In this case, please use the straight contour of the two individual parts of the frame. Downlights each weighing 250 g - 2.5 kg require installation with a frame. Downlights weighing more than 2.5 kg each require additional suspension from the soffit.

Electrical wiring must be installed before the ceiling is closed. The cables should be sufficiently long. The correct functioning of the luminaire should be tested before installation, as subsequent alterations are no longer possible.

5.8 Type of installation

RAW tiles are OWAacoustic premium tiles in a 2000 x 600 mm format. The tiles are fixed to the C profiles of the tile grid with offset/parallel transverse joints using tile screws no. 2026.

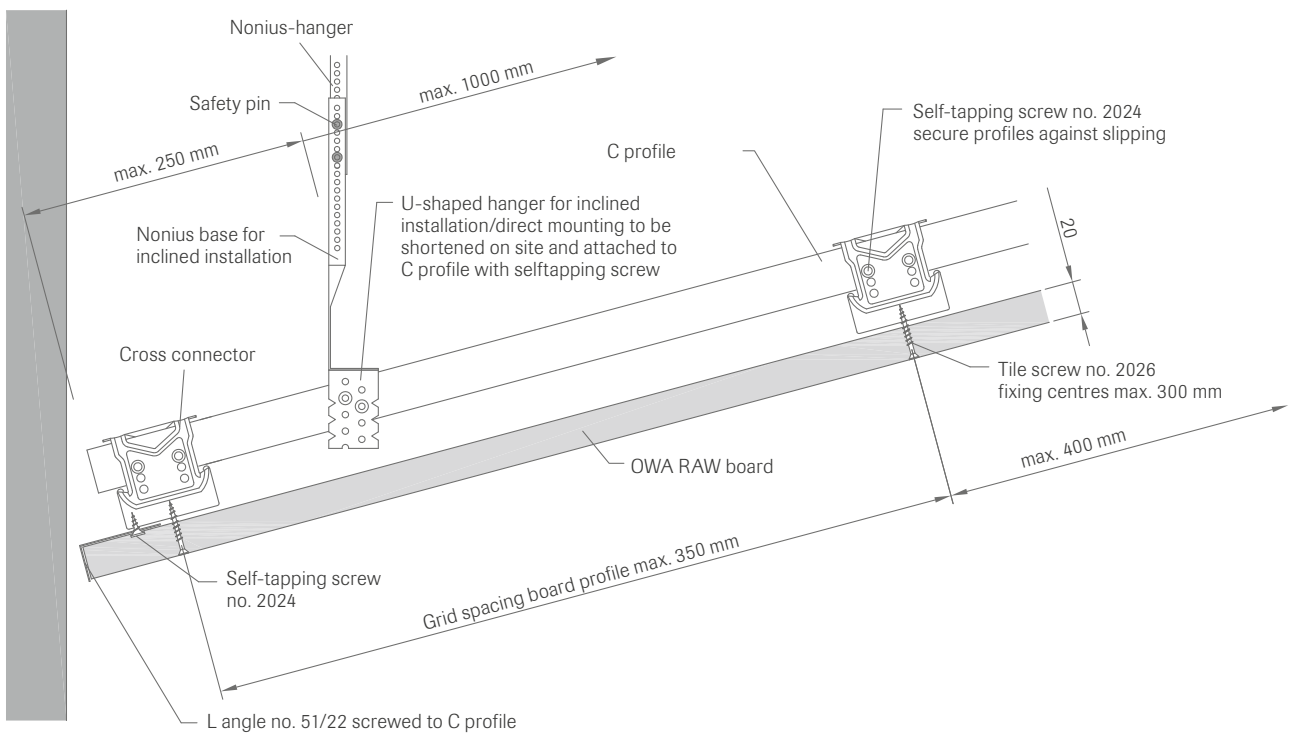
Installation is quick, accurate and problemfree. All openings for light fixtures, access flaps, curtain rails, sprinklers, spot lights and others can be incorporated in the ceiling design.



Installation example (not to scale)

5.9 Inclined installation

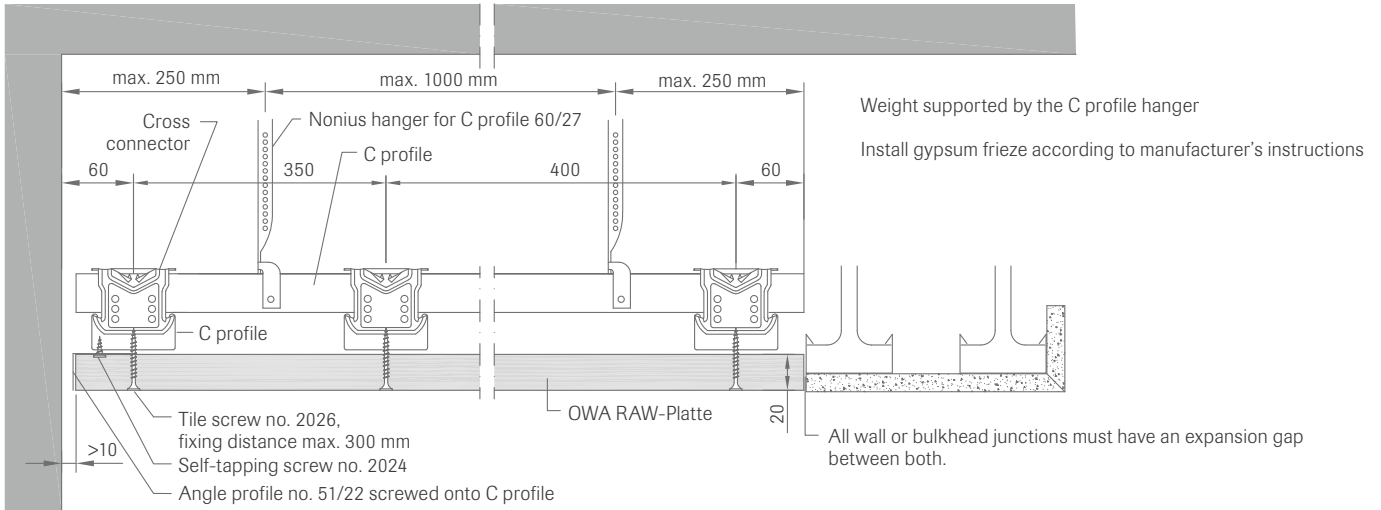
Longitudinal section for inclined installation:



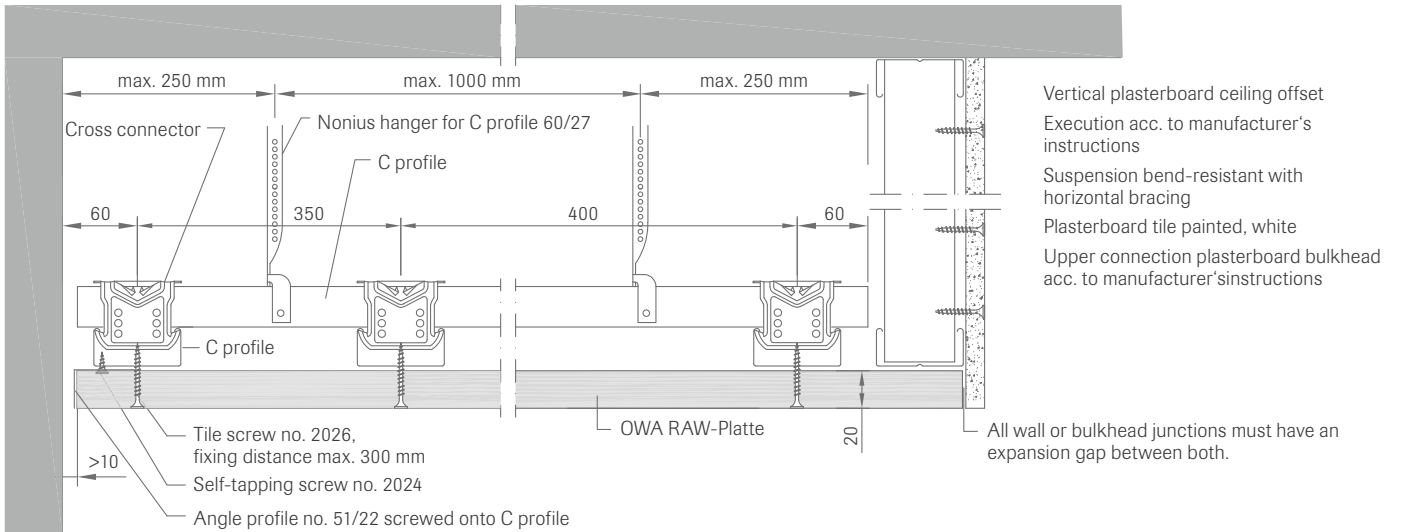
5.10 Connection to plasterboard friezes, bulkheads, folding tiles

Sliding connection:

Connection of RAW to plasterboard friezes



Connection of RAW to plasterboard bulkhead



6. Required materials substructure per m²

No.	Description	pro m ²
Purchase via specialised trade	Nonius hanger acc. to EN 13964 for C profile 60/27 (upper and lower part), maximum load: 0.40 kN	1 pce
	Safety pin	2 pcs
	U-shaped hanger acc. to EN 13964 for inclined /direct mounting	1 pce
	Nonius base acc. to EN 13964 for inclined Installation	1 pce
	C profile 60/27, 4000 x 60 x 27 x 0.6 mm acc. to EN 14195	3.5 m
	Cross connector or equivalent for C profile 60 x 27 mm acc. to EN 13964	2.5 pcs
	Profile connector for C profile 60 x 27 mm acc. to EN 13964	0.9 pcs
2026	Tile screw, colour natural grey	15 pcs
2024	Self tapping screw	8 pcs/m
51/22	Angle profile dependent on project	Dependent on project
51/22-O	Curved angle profile in m	Dependent on project
51/22-O	Angle profile column semi-circles up to $\varnothing = 1500$ mm, as a piece	Dependent on project
8069/6	Mounting frame	Dependent on project
8031/9	Access flap 340 x 340 mm + no. 17/81	Dependent on project
8031/10	Access flap 540 x 540 mm + no. 17/81	Dependent on project
99/24	Tile adhesive for inspection hatch	Dependent on project

Tile dimensions in mm, grid weight approx. 2.5 kg/m², approx. 5 kg/m² for RAW tiles



Certified Management Systems

Product warranties

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