



GRID FOR ACOUSTIC TILES

System Barriere B



■ OWAconstruct

Self-contained fire protection unit

EI 30 (a ↔ b)



GRID FOR ACOUSTIC TILES

Barriere B



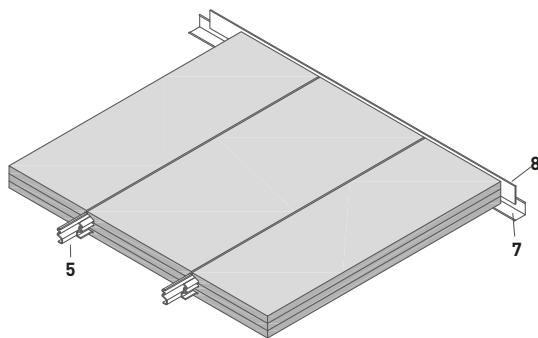
SEMI-CONCEALED – CONCEALED, REMOVABLE

EI 30 (A ↔ B)

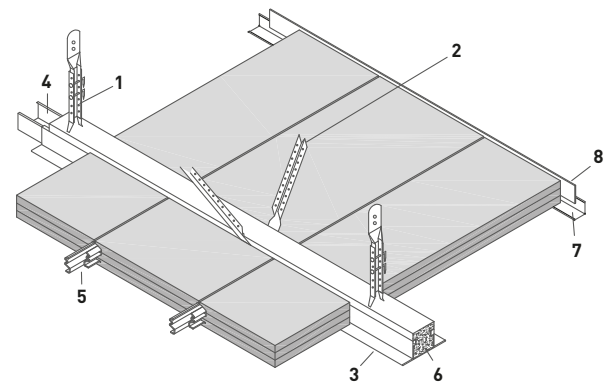
FIRE EXPOSURE FROM ABOVE AND BELOW – SMOKE-CONTAINMENT

IDEAL FOR PANELS WITH A LONG EDGE 1b  AND SHORT EDGE 3 

Wall-to-wall installation



Installation using a bandraster profile

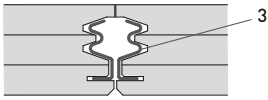


- 1 Nonius hanger no. 79/75, spacing ≤ 625 mm
- 2 Nonius triangular bracing no. 17/80; for strip grid profile lengths of > 2500 mm, diagonal bracing is required on both sides, spacing max. 1250 mm
- 3 Bandraster profile no. 8025/100
- 4 Coupling no. 82/8025G
- 5 Barrier profile no. 37/25, thickness 2.0 mm
- 6 Plasterboard adhesive, H = 50 mm (channel profile height approx. 35 mm + 15 mm); the channel profile must be completely filled in on site and raised by 15 mm
- 7 Wall profile no. 51/25, 25/25 – 1 mm
- 8 Intumescent strip no. 4439, thickness 2.0 mm, width 36 mm

Dimension:	2250 x 312.5 mm
Pattern:	Barriere B Constellation
Sound absorption:	up to $\alpha_w = 0.50$
Tile thickness:	approx. 44 mm
System weight:	approx. 18.5 kg/m ²
Fire performance:	A2-s1,d0 (EN 13501-1)
Metal system:	All metal parts are galvanised or powder coated white.

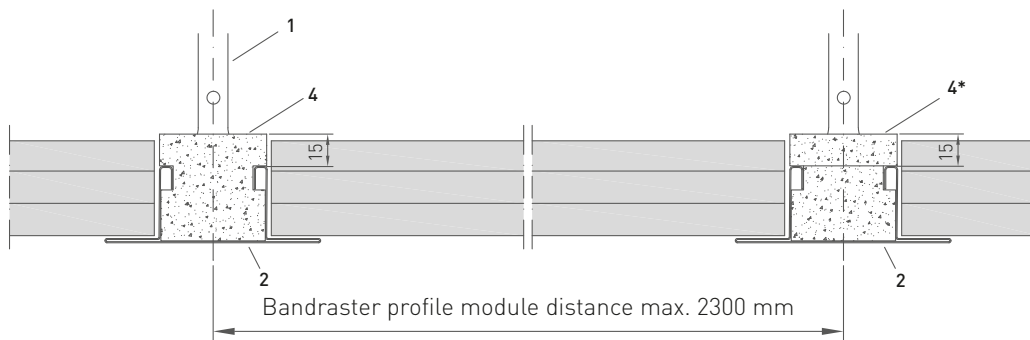
Self-contained fire protection unit Barriere B

CROSS-SECTION:

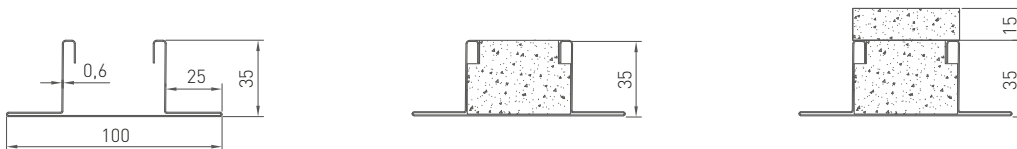


- 1 Nonius-hanger no. 79/75, distance ≤ 625 mm
- 2 Bandraster profile no. 8025/100
- 3 Barrier profile no. 37/25, thickness 2.0 mm
- 4 Plasterboard adhesive, H = 50 mm [Bandraster profile height approx. 35 mm + 15 mm], the bandraster profile must be completely filled in on site and raised by 15 mm.

LONGITUDINAL SECTION:



Support on both sides of the bandraster: 25 mm



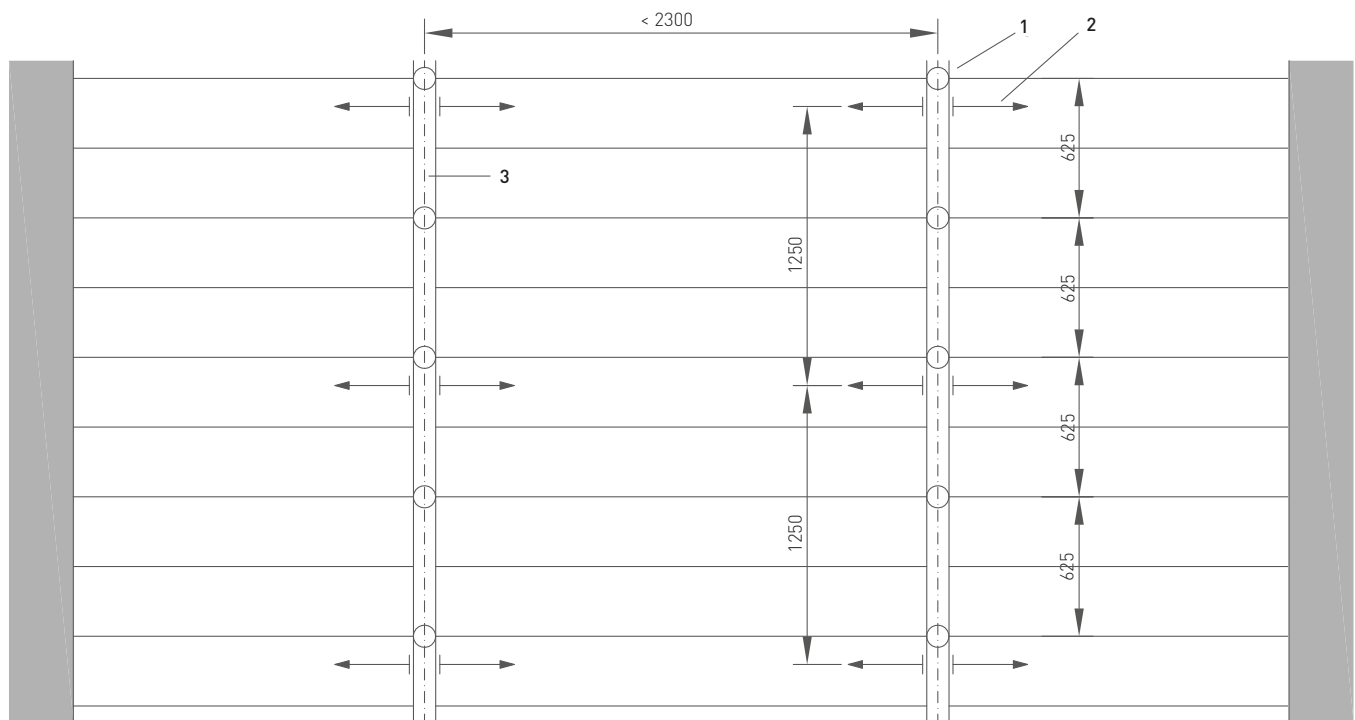
* Alternatively, instead of applying a 15 mm-thick layer of plasterboard adhesive, a strip of plasterboard provided by the client, 50 x ≥ 15 mm, can be fitted.

STEPS:

1. Completely fill the bandraster profile with plasterboard adhesive
2. After a setting time of at least 24 hours, additional plasterboard adhesive must be added to the bandraster to account for shrinkage.
3. NB. The strip of plasterboard should be applied while the filler is still fresh

Installation

INSTALLATION DIAGRAM:



- 1 Nonius-hanger no. 79/75, distance ≤ 625 mm
- 2 Nonius triangular stiffener no. 17/80;
from a bandraster profile length of > 2500 mm diagonal bracing is required on both sides; max. distance max. 1250 mm
- 3 Bandraster profile no. 8025/100

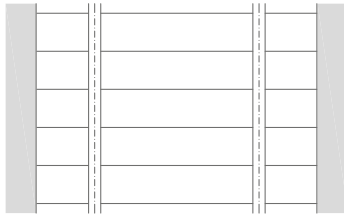
Installation

INSTALLATION EXAMPLES

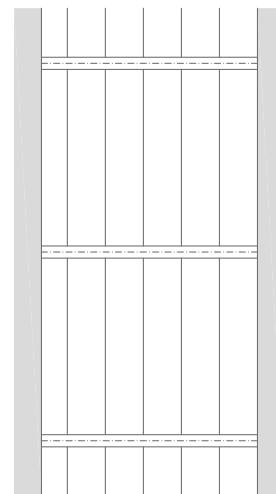
Installation examples in hallways:



clear spanning from wall to wall

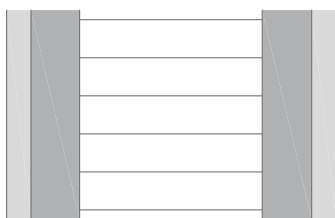


bandraster in longitudinal direction

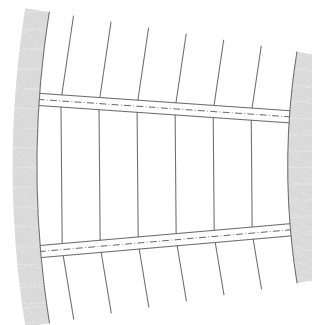


bandraster in the transverse direction

Component of the supplementary German certificate no. GA-2016/041c-Ap:

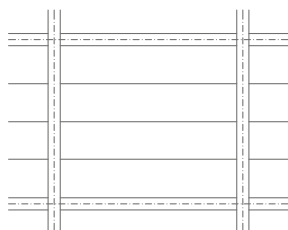


clear spanning with plasterboard margin on both sides

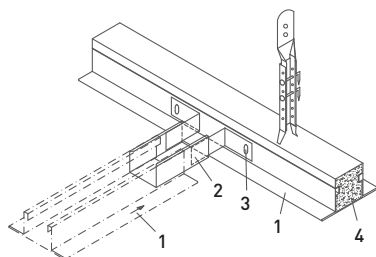


transverse banding profile in circular structures

Cross-grid installation:

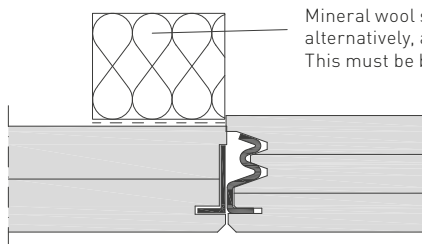


cross-grid



- 1 Bandraster profile no. 8025/100
- 2 Wall anchor no. 75/76
- 3 Quick-fit screw 4.2 x 19 mm
- 4 Gypsum adhesive

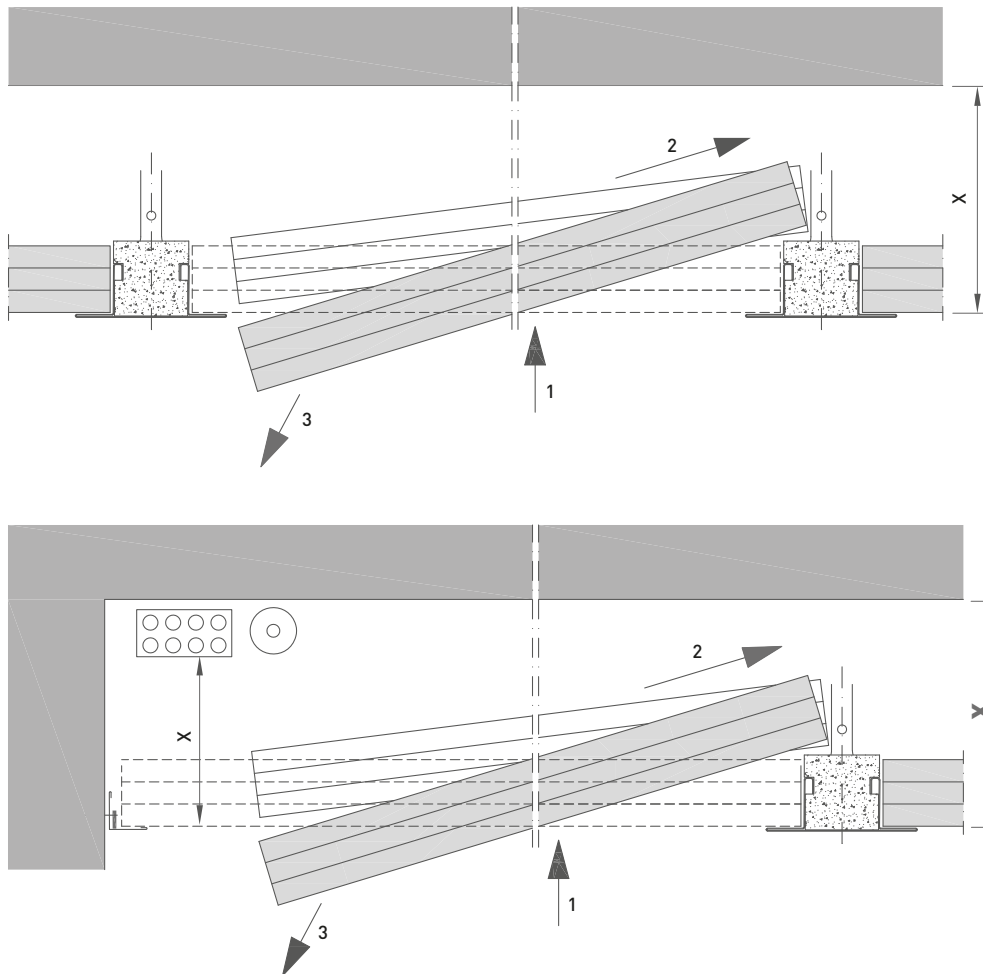
Attention: when combining the different Barriere products, the detail shown below must be used.



Mineral wool strips $\geq 40 \text{ kg/m}^3$, melting point $\geq 1000^\circ\text{C}$, A1 (non-combustible), $50 \times 45 \text{ mm}$;
alternatively, a strip from the barrier panel may also be used.
This must be bonded to the barrier element along its entire length using adhesive no. 99/24.

Installation

DISMANTLING THE COMPONENTS



X = Lifting height

- 1 Lifting the panel elements in the direction of the arrow (lifting height depending on the installation method)
- 2 Move the element upwards to the side (until it can be removed)
- 3 Remove elements in the direction of the arrow

Required lift height X during installation:

- with bandrastrer profile including filler stripes: ≥ 130 mm
- wall to wall: ≥ 330 mm
- wall to wall, using strips of fibre-silicate board ≥ 140 mm
- with a suspended plasterboard frieze: ≥ 140 mm
- self-supporting concrete frieze: ≥ 200 mm

Please note: When installing fixtures in the ceiling cavity, the lift height X must be measured from the lower edge of the fixtures.

When laying the tiles, ensure that they are laid in the direction of the arrow (on the back of the tile) and are only lightly butted together. Check that the tiles can be removed during the laying process.

Wall connection details

WALL CONNECTION

The illustrated wall trim installations below can be mounted on the wall types specified. Additional combination options can be found in the supplementary German certificate no. GA-2016/041c-Ap.

Important:

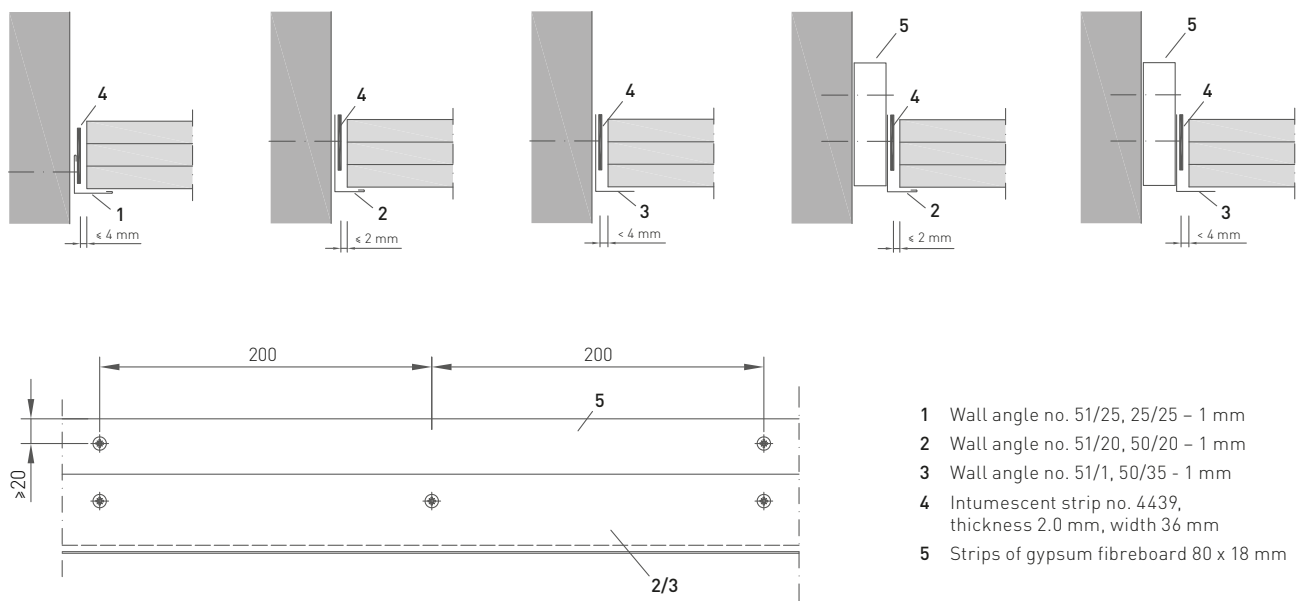
Application of intumescent strip no. 4439

- Wall angle no. 51/25 = ½ wall angle - ½ wall
- Wall angle no. 51/20 = Top edge wall angle flush
- Wall angle no. 51/1 = Top edge wall angle flush

SOLID WALLS WITH AT LEAST AN EQUIVALENT FIRE RESISTANCE CLASSIFICATION

Fixings for wall angles on solid walls:

Fixing must be carried out using fasteners approved by the building authorities for fire safety (ETA or ABZ, e.g. Fischer FNA II 6x30/5), depending on the existing substrate. Fixing spacing ≤ 200 mm.

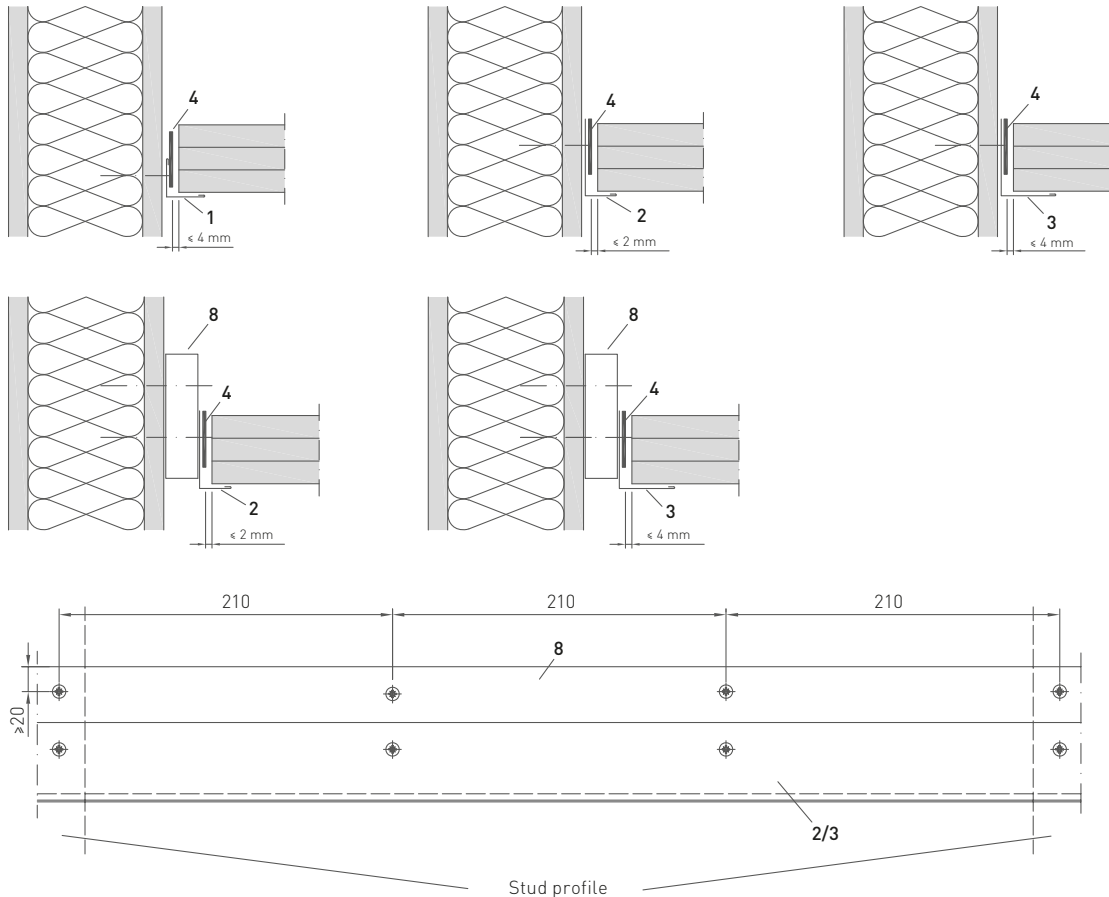


Wall connection details

DRYWALLS WITH AT LEAST AN EQUIVALENT FIRE RESISTANCE CLASSIFICATION

Fixing wall angles to plasterboard walls:

When installing lightweight, fire resistant partition walls and bulkheads, use drywall screws (flat head + double thread) $\geq 3.5 \times 35$ mm (depending on the thickness of the boards). Fixing spacing ≤ 210 mm. In doing so, fix every third screw into the respective stud profile of the lightweight partition walls.

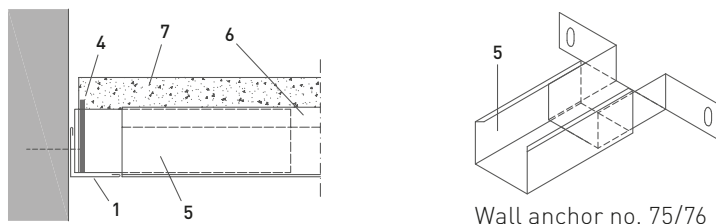


Not every wall that has been tested for fire resistance is suitable for connection to the OWAcoustic Barriere ceiling system. This must be checked in advance.

WALL CONNECTION BANDRASTER

Please note:

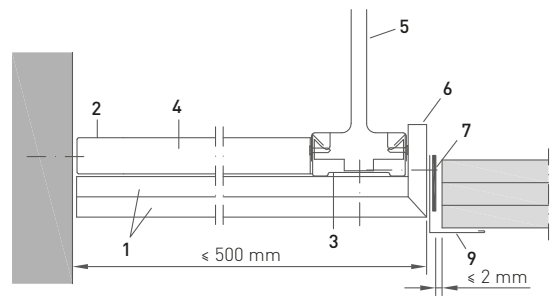
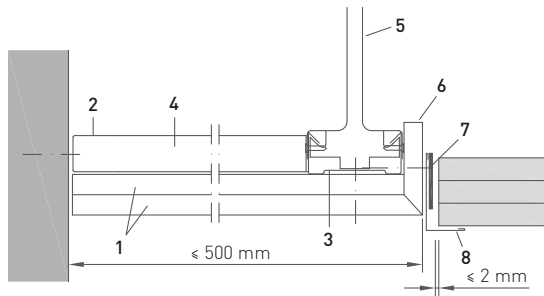
Overlapping of the incoming bandraster profiles is permitted. Lateral bracing is essential.



Margin installation variants (in accordance with supplementary German certificate No. GA-2016/041c-Ap)

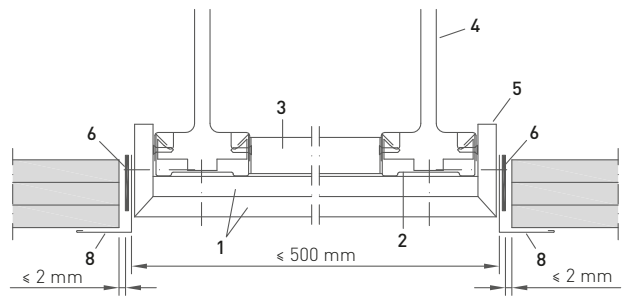
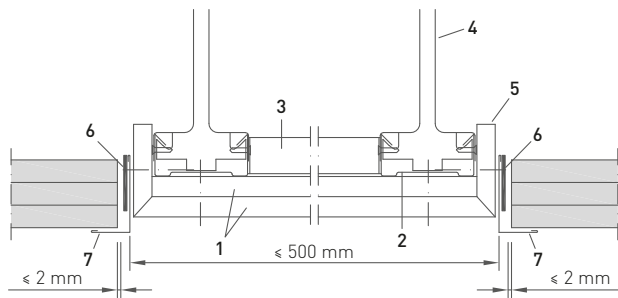
The optional illustrated details can be installed onto the specified structural wall. Additional combination options can be found in the supplementary German certificate no. GA-2016/041c-Ap.

INSTALLATION TO A PLASTERBOARD MARGIN



- 1 Fire resistant plasterboard, thickness 2 x 12.5 mm
- 2 U-shaped profile 27/28/27
- 3 Basic profile CD 60/27 – 0.6 mm
- 4 Cross-section CD 60/27 – 0.6 mm, distance 500 mm
- 5 Nonius hanger [0.4 kN] screwed to the CD profile, distance ≤ 500 mm
- 6 Fire resistant plasterboard, thickness 12.5 mm, height 60 mm
- 7 Intumescent strip no. 4439, thickness 2.0 mm, width 36 mm
- 8 Wall angle no. 51/20, 50/20 – 1 mm
- 9 Wall angle no. 51/1, 50/35 – 1 mm

INSTALLATION TO A CENTRAL PLASTERBOARD MARGIN

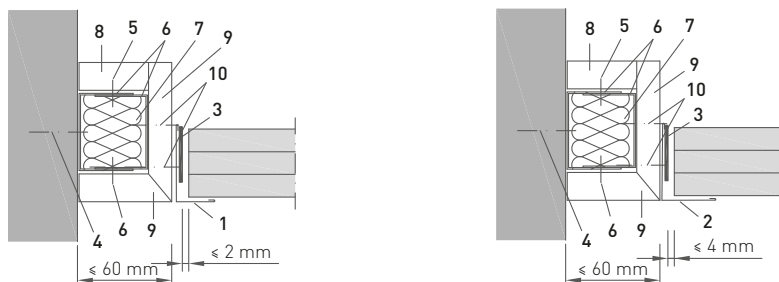


- 1 Fire resistant plasterboard, thickness 2 x 12.5 mm
- 2 Basic profile CD 60/27 – 0.6 mm
- 3 Cross-section CD 60/27 – 0.6 mm, distance 500 mm
- 4 Nonius hanger [0.4 kN] screwed to the CD profile, distance ≤ 500 mm
- 5 Fire resistant plasterboard, thickness 12.5 mm, height 60 mm
- 6 Intumescent strip no. 4439, thickness 2.0 mm, width 36 mm
- 7 Wall angle no. 51/20, 50/20 – 1 mm
- 8 Wall angle no. 51/1, 50/35 – 1 mm

Please note:

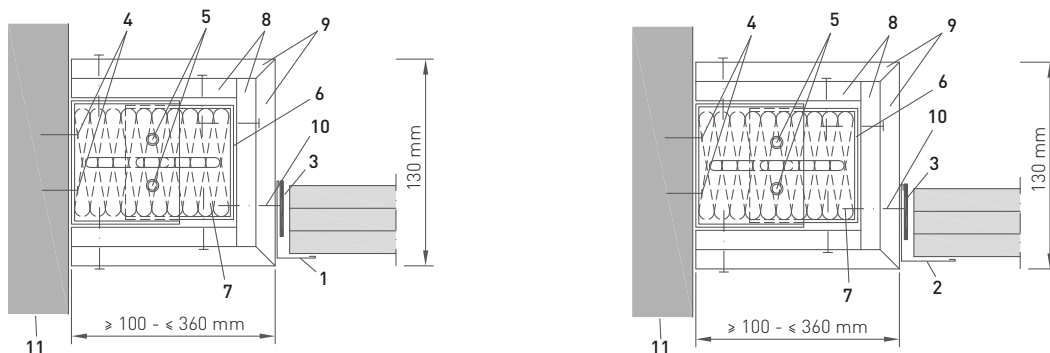
The wall profiles can be installed flush to the margins if preferred!

WALL CONNECTION WITH PLASTERBOARD MARGIN (WITHOUT SUSPENSION)



- 1 Wall angle no. 51/20, 50/20 – 1 mm
- 2 Wall angle no. 51/1, 50/35 – 1 mm
- 3 Intumescent strip no. 4439, thickness 2.0 mm, width 36 mm
- 4 For solid walls: metal plugs (on site), diameter 6 mm and screw, spacing ≤ 400 mm
For plasterboard walls: drywall screw 3.5 x 55 mm (on site) Centre-to-centre distance: all 210 mm, secure every third screw into the upright profile
- 5 Steel rivets (on-site), diameter 3.2 mm, distance ≤ 400 mm
- 6 Console ≤ 60 mm, consisting of: U-profile 35/50/35 mm no. 00062619 and U-profile 34/48/34 mm no. 00062621
- 7 Mineral wool (on-site) ≥ 40 kg/m³, 1000 °C, 50 x 45 mm
- 8 Fire resistant plasterboard or plasterboard folding panel (on-site), thickness 18 mm
- 9 Fire resistant plasterboard or plasterboard folding panel (on-site), thickness 18 mm, height 86 mm
- 10 Quick-fit screw (on-site) 3.5 x 55 mm

WALL CONNECTION WITH PLASTERBOARD MARGIN (WITHOUT SUSPENSION ON F90 WALL) ADJUSTABLE CONSOLE:

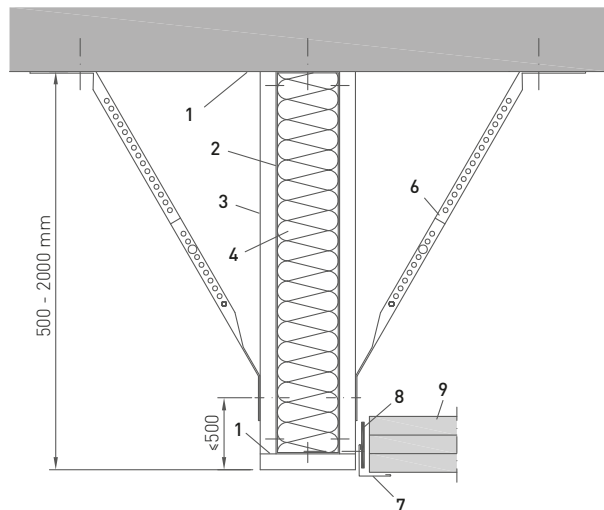


- 1 Wall angle no. 51/20, 50/20 – 1 mm
- 2 Wall angle no. 51/1, 50/35 – 1 mm
- 3 Intumescent strip no. 4439, thickness 2.0 mm, width 36 mm
- 4 For solid walls: metal plugs (on site), diameter 6 mm and screw, fixing spacing every 400 mm
on Plasterboard wall: metal cavity wall plugs (installed on site), fixing spacing every 312.5 mm one in every two cavity wall plugs HM 5 x 65 S (company Fischer or equivalent) into the vertical stud profile. The dowel size must be adjusted to suit the selected cladding thickness.
- 5 Steel rivets (on-site), diameter 4.0 mm
- 6 Mounting bracket
Adjustment range 75 - 115 mm, no. 00082491
Adjustment range 115 - 200 mm, no. 00082490
Adjustment range 200 - 340 mm, no. 00082489
Each set consists of two parts: a bolt, two washers and a lock nut.
- 7 Mineral wool (on-site) ≥ 40 kg/m³, 1000 °C, fill in completely
- 8 Fire resistant plasterboard or plasterboard folding panel (on-site), thickness 12.5 mm
- 9 Fire resistant plasterboard or plasterboard folding panel (on-site), thickness 12.5 mm, height 130 mm (8 and 9 can also be replaced by a fire resistant plasterboard or a 18 mm thick plasterboard folding panel)
- 10 Self-tapping screw (on site) 3.5 x 55 mm, fixing spacing ≤ 200 mm or ≤ 156.25 mm; with every second screw fixed in the fixing bracket of the frieze
- 11 Brickwork

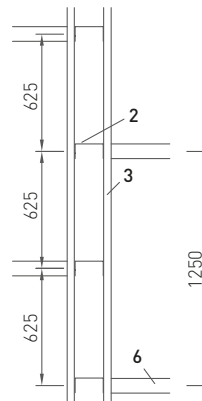
Plasterboard bulkhead

PLASTERBOARD BULKHEAD REINFORCED ON BOTH SIDES

Section:



Top view:

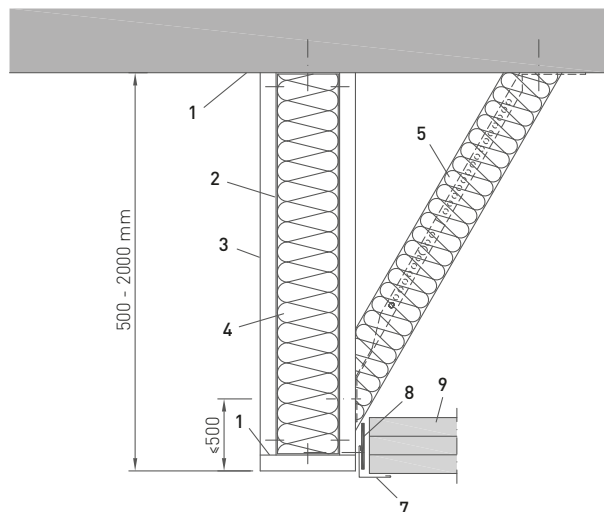


For plasterboard bulkheads with a height of ≤ 500 mm, diagonal bracing is not required.

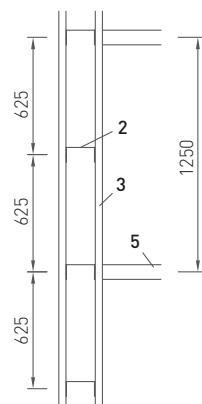
- 1 UW-profile 50 x 40 x 0.6 mm, Fixing using M8 wall plugs approved for building use, $a \leq 400$ mm
- 2 CW-profile 50 x 50 x 0.6 mm, $a \leq 625$ mm screwed to the UW profile using a 4.8 x 18 mm sheet metal screw
- 3 Plasterboard bulkhead panel 12.5 mm, Fixing with drywall screws 3.5 x 25 mm, $a \leq 200$ mm
- 4 Mineral wool $d = 40$ mm, A1 - 40 kg/m³
- 5 Diagonal brace comprising Nonius triangular brace no. 17/80 and Nonius extension no. 16/... covered with rock wool shells and secured with tying wire (6 loops per linear meter), $a = 1250$ mm
- 6 Diagonal brace comprising Nonius triangular brace no. 17/80 and Nonius extension no. 16/... covered without rock wool shells, $a = 1250$ mm
- 7 Wall angle no. 51/20, Fixing with drywall screws 3.5 x 35 mm, $a \leq 210$ mm, every third screw in the upright profile
- 8 Intumescent strip no. 4439
- 9 Barriere-element

PLASTERBOARD BULKHEAD SINGLE-SIDED BRACKET

Section:



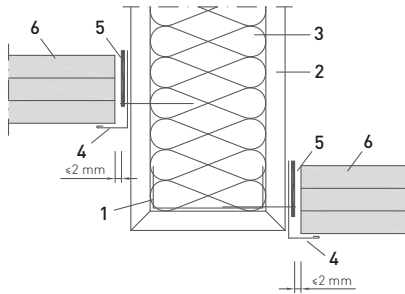
Top view:



For plasterboard bulkheads with a height of ≤ 500 mm, diagonal bracing is not required.

Plasterboard ceiling bulkhead

CEILING BULKHEAD

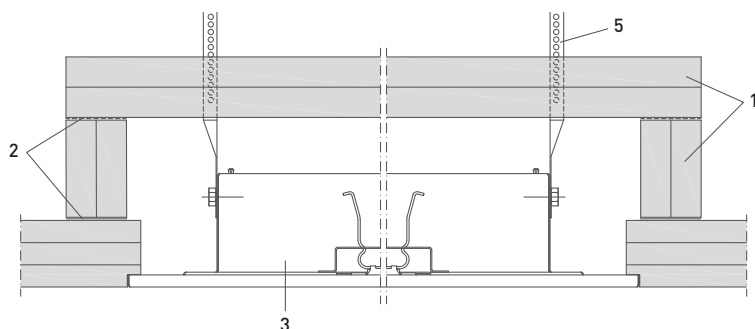


- 1 UW profile 50 x 40 x 0.6 mm, Fixing using M8 wall plugs approved for building use, a ≤ 400 mm
- 2 Plasterboard bulkhead panel 12.5 mm, Fixing with drywall screws 3.5 x 25 mm, a ≤ 200 mm
- 3 Mineral wool d = 40 mm, A1 - 40 kg/m³
- 4 Wall angle no. 51/20, Fixing with drywall screws (flat head + double thread) ≥ 3.5 x 35 mm, a ≤ 210 mm, every third screw in the upright profile
- 5 Intumescent strip no. 4439
- 6 Barriere-element

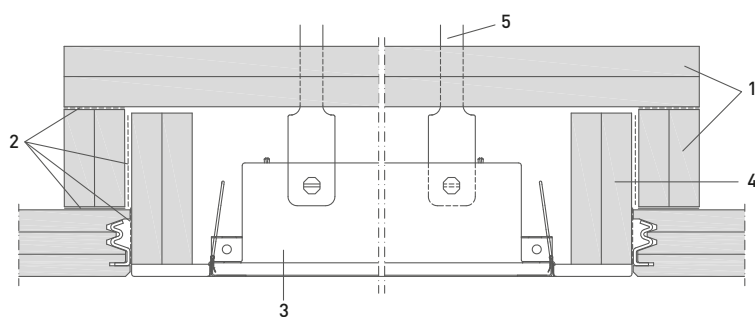
El 30 fire box for integrated lighting

INTEGRATED LIGHTING WITH FIRE BOX

Longitudinal section:



Cross section:



- 1 MINOWA BSK fire protection tile no. 00082674, thickness 40 mm, or MINOWA fire protection case no. 00082619 for 1250 x 312.5 mm grid
- 2 Bond the tiles in situ using adhesive no. 99/24
- 3 OWA-integrated lighting OWAlifetime LED, see brochure 9630 e
- 4 Barriere tile cutting, H = 100 mm
- 5 Nonius-hanger no. 17/81, extension no. 16/... +safety pin double-pronged; the open section must be filled with adhesive no. 99/24!

When using third-party lights, ensure there is a sufficient border all round to accommodate the Barriere panel cut-out (see diagram). We recommend using only our OWAlifetime LED lights.

Building material class: A2-s1,d0 according to EN 13501-1

Package size: 1 fire box per parcel

Fire box, part no. 00082619, for a grid of 1250 x 312.5 mm:

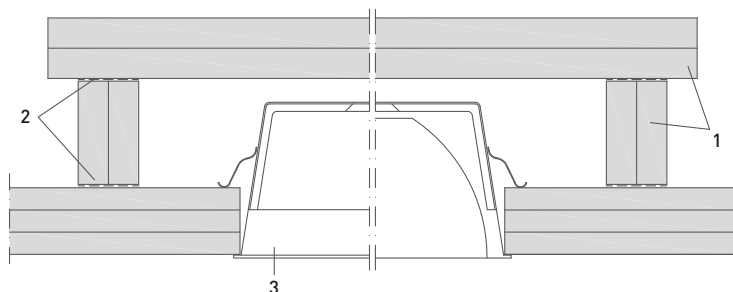
No.	Description	Dimension	Piece
1	Cover	1320 x 440 x 40 mm	1
2	Side stripes	1260 x 70 x 40 mm	2
2	Side stripes	355 x 70 x 40 mm	2
3	Nail	3.0 x 80	8
4	Adhesive	310 ml	4

Adhesive is not included in the fire box kit and must be ordered separately.

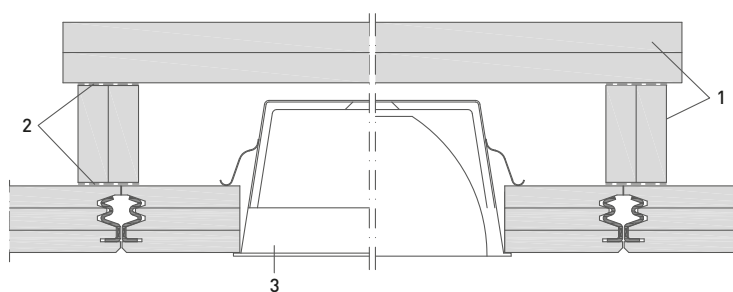
El 30 fire box for downlights

DOWNLIGHT WITH FIRE BOX

Longitudinal section:



Cross section:



- 1 MINOWA BSK fire protection tile no. 00082674, thickness 40 mm or MINOWA fire box no. 00083566
- 2 Bond the tiles in situ using adhesive no. 99/24
- 3 Downlight

It is possible to install downlights with a ceiling cut-out of $\varnothing \leq 175$ mm and a maximum weight of 3.0 kg. No additional suspension is required for this!

Building material class: A2-s1,d0 according to EN 13501-1

Package size: 2 fire boxes per parcel

Fire box, part no. 00083566 for downlights:

No.	Description	Dimension	Piece
1	Cover	550 x 370 x 40 mm	1
2	Side stripes	470 x 70 x 40 mm	2
2	Side stripes	310 x 70 x 40 mm	2
3	Nail	3.0 x 80	8
4	Adhesive	310 ml	1

Adhesive is not included in the fire box kit and must be ordered separately.

Fire box installation

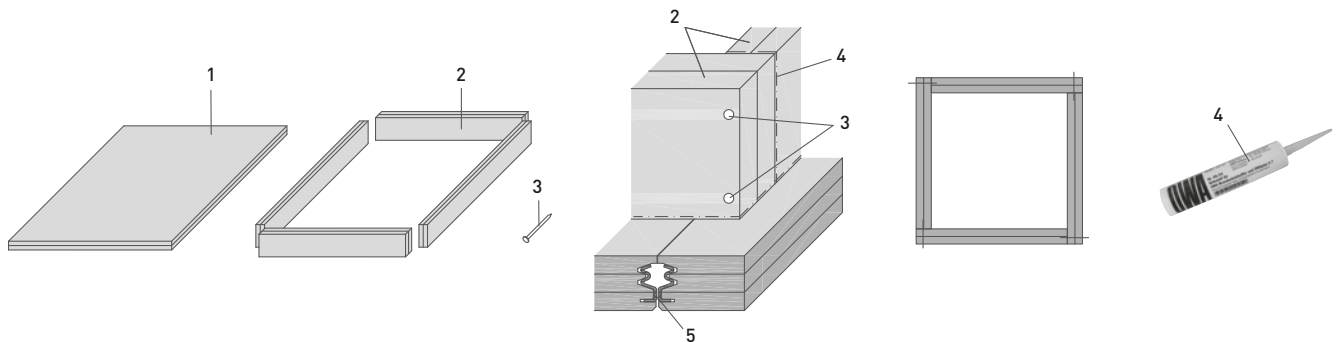
INSTALLING INTEGRATED LIGHTING WITH A FIRE BOX

The fire box is supplied in individual parts and must be assembled on site. At the corners, the side panels are glued together in an alternating pattern, secured with two nails each, and glued onto the Barriere elements to form a frame around the lighting. To protect the exposed Barriere profiles, install a 100 mm strip of material cut from excess boards and glue it to the inside face of the light box (see section on page 14, component no. 4). Finally, the cover is glued in place; the light suspension must be fed through the cover and sealed with fire-resistant adhesive

INSTALLING DOWNLIGHTS WITH A FIRE BOX

The fire box is supplied in separate parts and must be assembled on site. At the corners, the side panels are glued together on both sides, secured with two nails each, and glued onto the Barriere elements to form a frame around the downlight. Finally, the cover is glued into place.

- 1 Cover
- 2 Side stripes
- 3 Nail
- 4 Adhesive
- 5 Barriere-profile

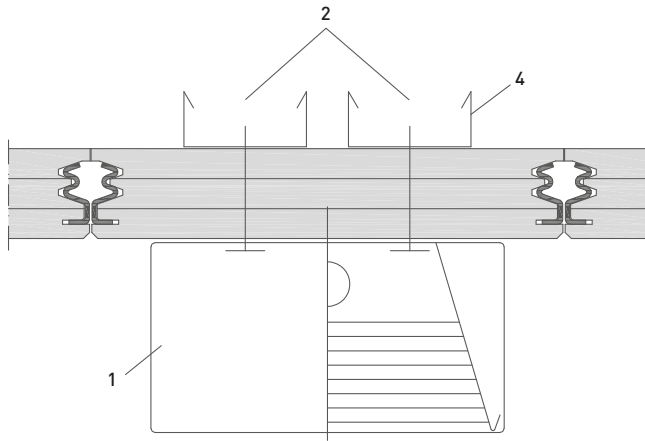


All non-standard-sized integrated lights must be fitted with a fire box in accordance with the drawing above. These are manufactured from 40 mm thick MINOWA® BSK fire protection tiles, part no. 00082674, dimensions approx. 2500 x 1250 mm, as described above.

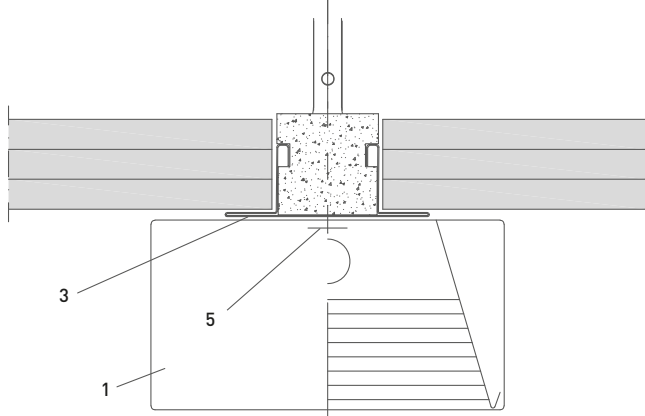
Components

COMPONENTS UP TO MAX. 6 KG

Installation using CD profiles fitted to the rear via the Barriere element:



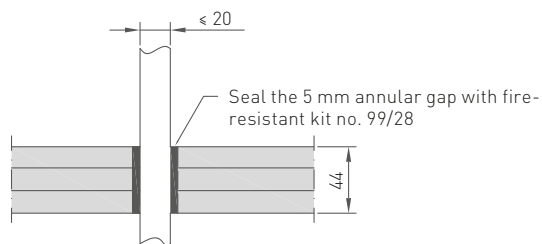
Installation to the bandraster profile



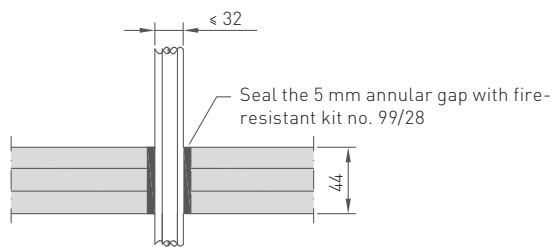
- 1 Superstructures
- 2 Secure each of the 3 CD profiles using a 6.0 x 80 mm drywall screw
- 3 Bandraster profile no. 8025/100 with connecting bracket
- 4 The CD profile must not be more than 5 mm shorter than the pattern elements. The load must be transferred to the wall profile or the bandraster profile. Depending on the surface-mounted luminaire or similar, one or two CD profiles must be fitted.
- 5 Quick-fit screw 3.5 x 55 mm (3 per superstructure)

Single penetrations (in accordance with supplementary German certificate No. GA-2016/041c-Ap)

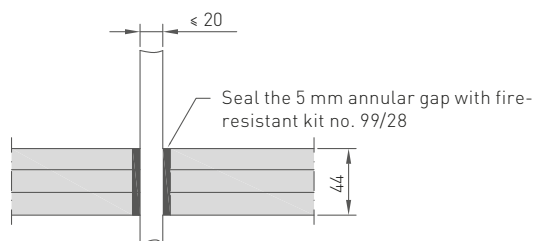
Single-cable penetration:



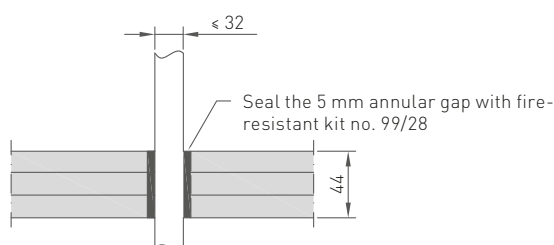
Cable bundle penetration:



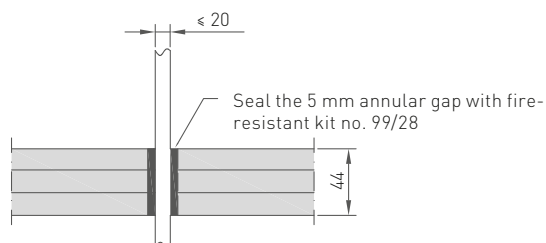
Hanger penetration (e.g. Nonius hanger):



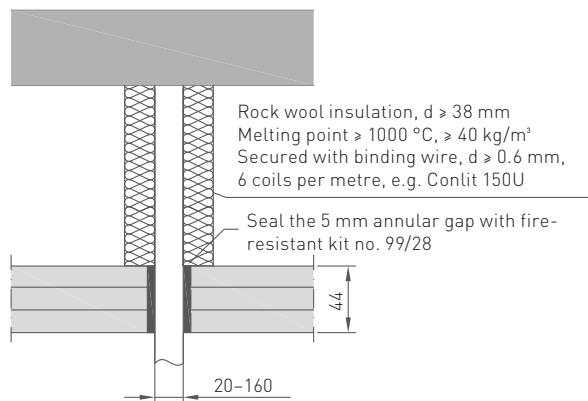
Combustible pipe penetration:



Non-combustible pipe penetration (e.g. sprinkler):



Non-combustible pipe penetration:



Material determination

MATERIAL REQUIREMENTS PER M²

Example of how to calculate standard dimensions

		Wall-to-wall	Centring grid of the bandraster profiles
			2300 x 312.5 mm
Manufacturing dimension		2250 x 312.5 mm	
Structural component			
79/75	Nonius-hanger	–	0.7 items
16/...	Hanger extension	–	0.7 items
76	Retaining pin	–	1.4 items
8025/100	Bandraster profile	–	0.43 m
82/8025G	Coupler	–	0.12 items
75/76	Wall anchor	–	depending on the room geometry
51/25	Wall profile	depending on the room geometry	
4439	Intumescent strip	depending on the room geometry	
37/25	Barriere-profile	is already included in the Barriere B panel	
17/80	Base section for triangular bracing	–	0.7 items
Weight per m ²			
Design approx.			5.58 kg/m ²
Tile 44 mm			18.5 kg/m ²

The amount of material required per square metre of ceiling depends on the floor plan and must be calculated on a case-by-case basis.

Barrier B self-contained fire protection unit

Quality requirements for mineral tiles:

OWAacoustic mineral tiles firmly bound with a primer coat on both sides. The tile is free from asbestos. No formaldehyde is added in the manufacturing process of the mineral tiles. The mineral wool used for the manufacture of the tile is bio-soluble. The criteria for non-classification as a carcinogenic substance in accordance with the Chemicals Prohibition Ordinance (Section 1 Appendix, Paragraph 23 biopersistent fibres) are met and guaranteed by the 'RAL seal of approval for mineral wool'. Verification of fitness for use according to EU CPR: CE marking and Declaration of Performance (DoP).

Mineral tiles in accordance with EN 13964 and DIN 18177:

Air permeability class	PM 1
Formaldehyde class	FH 1
Emission of VOC	TVOC 1

Design specifications in accordance with brochure 9915 e Barriere B and [OWA installation instructions 9801 e](#).

All components bear the CE mark.

Structural components:

OWAconstruct nonius hanger no. 79/75
OWAconstruct bandrafter profile no. 8025/100
OWAconstruct coupler no. 82/8025G
OWAconstruct wall anchor no. 75/76
OWAconstruct wall profile no. 51/20
OWAconstruct wall profile no. 51/1
OWAconstruct wall profile no. 51/25
OWAconstruct intumescent strip no. 4439
OWAconstruct Barriere profile no. 37/25

You can find the full tender documents at: www.owa-ceilings.com

Product warranties

The information provided in this leaflet is based on the standards and data available at the time of publication. Any performance, warranties or guarantees provided, expressed or implied, are subject to the exclusive use of OWA components and the installation of those components in accordance with our recommendations. Failure to adhere to these conditions will result in the invalidation of any performance claims, warranties or guarantees and rejection of any liability. OWA reserves the right to make any technical improvements to the products, systems or services without prior notice. All goods and services are supplied in accordance with our current Terms and Conditions of Sale. Subject to alterations!



Certified Management Systems

The information in this brochure is up-to-date at the time of publication. Subject to alterations. Please contact our OWAconsult team for specific advice. Our experts will be happy to answer your questions using the following contact details: tel: +49 9373 201-444 or e-mail: info@OWAconsult.de



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