



■ OWAconstruct ■ OWAconsult ■ OWAlifetime

Fire protection manual

for suspended ceilings in accordance with EN 13501

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INTRODUCTION

Fire protection in building construction in Germany has the highest safety level worldwide. This is expressed by a multitude of legal regulations, ordinances and technical standards. Suspended ceilings make a significant contribution to this.

This manual provides an overview of the different suspended ceiling systems in the OWAlifetime collection that are suitable for fire protection applications.

The clear tables allow you to quickly find the right solution, depending on the type of load-bearing construction. The essential boundary conditions are presented briefly and concisely. Details are illustrated with the aid of sketches and explanations.

The construction site conditions often differ from the pure test configuration in the fire tests. In addition to our technical field service, our competence team of acoustic consultants, designers and engineers can offer you support here. We can draw on a large number of fire protection expert opinions that cover almost all installation situations.

Please contact your local OWA team for any questions: www.owa.de/en/company/locations/

All system brochures, OWA installation instructions and safety data sheets (SIDA) must be observed for the OWA suspended ceiling systems described in this brochure!

IMPORTANT LEGAL INFORMATION

Mixing the components of the suspended ceiling with products from other manufacturers is not permitted! For suspended ceilings with fire resistance requirements, a CE KIT mark and the associated declaration of performance for the entire kit (ceiling tile + substructure) on the basis of EN 13964 Annex ZA Table 1.1 (see page 12) is always required. The use in particular of the declaration of performance for the ceiling tile only (DoP - OWA - 00002.1) is not sufficient for suspended ceilings with fire resistance requirements! (See also section reaction to fire, page 5, Table ZA 1.4 EN 13964)

The declaration of performance for the kit also includes the declaration of constancy of performance (see conformity assessment according to the normative requirements in chapter 6 EN 13964, incl. production control) for the fire resistance application!

In practice, the difference in the “suspended ceiling world” is often not taken into account, namely that e.g. monolithic suspended ceilings made of plasterboard is not **regulated according to EN 13964** and are therefore verified as a type of construction with fire resistance requirements nationally, i.e. on the basis of a general building inspection test certificate (AbP) or e.g. via EN 4102-4 (as a “normative construction type”). This is due to the fact that at European level, plasterboard are only regulated by European product standards. For these types of construction, the general building inspection test certificate and the CE marking together with their declarations of performance as individual components would be sufficient. **Suspended ceilings in accordance with EN 13964 are a type of construction in the sense of building regulations that, in the case of fire resistance requirements, always require a declaration of performance for the entire kit (see page 12, Table ZA 1.1 EN 13964) and a corresponding test certificate!**

According to German building law, both the national F classifications and the European REI classifications are equally applicable!

We recommend that all users of suspended ceilings with fire resistance requirements download [leaflet 01/2017 “Verwendbarkeitsnachweise und Kennzeichnungen im Trockenbau”](#) (Certificates of suitability and marking in dry-wall construction) and leaflet 04 “Umgang mit Abweichungen von Verwendbarkeitsnachweisen im Trockenbau” (Dealing with deviations from certificates of suitability in dry-wall construction) in the download section of the RAL Gütegemeinschaft Trockenbau homepage (www.trockenbau-ral.de/informationen). The new legal provisions are explained in these leaflets.

DEVIATIONS FROM THE TEST CERTIFICATES

Not every installation situation in dry-wall construction can be verified by a test certificate. The work required for this, e.g. in the application area of fire resistance, is too great, as the construction types/kits (KIT) usually involve large-scale tests, which, depending on the type of installation, involve considerable work and costs. In addition, this is not feasible in practice in terms of testing technology due to the diversity of variants and possible combinations of system designs. In other technical disciplines, too, extrapolations are carried out by experts (architects, engineers, master craftsmen) without any negative impact on the safety level.

OWA supports both the planner and the specialist contractor through its own consulting department, **OWAconsult**. Qualified experts offer solutions for many installation situations.

OWA has offered a wide range of applications for over 50 years due to the large number of national and European test certificates. The consulting department **OWAconsult** is also available to the planner and specialist contractor in case of “deviations” from the “test certificate world”. The most diverse applications are continuously being expanded in terms of testing technology.

Fire protection

REACTION TO FIRE

OWAcoustic tiles as construction material

In accordance with EN 13501-1 and DIN 4102 Part 1, construction materials are divided into the following classes according to their fire behaviour:

Building authority designation	Additional requirement		European classes in accordance with EN 13501-1	Construction material class in accordance with DIN 4102
	No fumes	No burning droplets/particles		
Non-flammable	✓	✓	A1	A1
	✓	✓	A2-s1,d0	A2
Flame resistant	✓	✓	B-s1,d0	B1
	✓	✓	C-s1,d0	B1
		✓	A2-s2,d0	B1
		✓	A2-s3,d0	B1
		✓	B, C-s2,d0	B1
		✓	B, C-s3,d0	B1
	✓		A2-s1,d1	B1
	✓		A2-s1,d2	B1
	✓		B, C-s1,d1	B1
	✓		B, C-s1,d2	B1
			A2-s3,d2	B1
			B-s3,d2	B1
Normally flammable	✓	✓	D-s1,d0	B2
		✓	D-s2,d0	B2
		✓	D-s3,d0	B2
	✓		D-s1,d2	B2
			D-s2,d2	B2
			D-s3,d2	B2
			E	B2
Easily flammable			E-d2	B2
			F	B3

The additional designations mean:

s1, s2, s3 = level of smoke behaviour

s1 = no or minor smoke development

s3 = extreme smoke development

d0, d1, d2 = level of burning droplets/particles released

d0 = no burning droplet within 600 seconds

Copies of the corresponding test certificates will be provided on request.

OWAcoustic tiles are available with the construction material class **A2-s1,d0**.

Country	Test standard	Classification
Germany	DIN EN 13501-1	A2-s1,d0, B-s1,d0
EU member states	EN 13501-1	A2-s1,d0, B-s1,d0
Switzerland	Fire protection regulations BSV 2105	RF1 = no contribution to a fire
USA	ASTM E 84a/ASTM E 1264	class A
UK	BS EN 13501-1	A2-s1,d0, B-s1,d0

Fire protection

According to the state building regulations and implementation regulations, the “building authority designations” such as “non-flammable” are decisive.

Since 1 January 2005, OWAcoustic tiles (mineral tiles) have borne the CE mark on the basis of EN 13964. As proof of usability in the sense of an individual construction product, the CE mark and the corresponding declaration of performance are to be used in accordance with EN 13964 Annex ZA Table ZA 1.4. The declaration of performance contains the information on the fire behaviour and the conformity with regard to constancy of performance.

Note: The declarations of performance (DoP-OWA 00002.1) for the OWAcoustic tiles cannot be used for suspended ceilings with fire resistance requirements in combination with third-party products! For this, separate declarations of performance for the entire kit (KIT) are required in accordance with EN 13964. Table ZA 1.1, see page 12.

Table ZA 1.4, EN 13964:

Relevant sections for suspended ceiling surface layers

Construction product: suspended ceiling surface layers

Intended use: inside buildings, for the construction of installed suspended ceilings

Main properties	Sections containing requirements in this standard	Levels and/or classes	Remarks
Reaction to fire	4.4.2.2	Classes A1 to F	In accordance with EN 13501-1
Release of asbestos (content), where applicable	4.5.1	–	Content and/or release
Release of formaldehyde, where applicable	4.5.2	–	Classes E1 and E2
Release and/or content of other hazardous substances, where applicable	4.5.3	–	Content and/or release
Susceptibility to growth of micro-organisms hazardous to health, such as moisture	4.5.4	–	Levels
Susceptibility to growth of micro-organisms hazardous to health due to thermal insulation	4.5.4	–	Levels
Fracture properties (safe breakage), such as impact resistance	4.3.6	–	Classes
Fracture properties (safe breakage), such as fracture characteristics	4.6.1	–	Classes
Flexural strength	4.6.2	–	Classes
Bonding strength/adhesion, such as resistance to fastening	4.3.4	–	Declaration of performance
Sound absorption	4.7.2	–	Declaration of performance
Heat transfer resistance (e.g. density), such as thermal conductivity	4.10	–	Declaration of performance
Durability	4.8	–	Classes

Fire protection

FIRE RESISTANCE

If an incipient fire is not extinguished in time and finds enough combustible materials to feed on, it will quickly spread throughout the room where it started. Then the only thing that can be done is to prevent the fire from spreading to neighbouring rooms or at least to delay it to a sufficient extent. This is done by the building components (ceilings, roofs, walls) that surround and enclose the room. The prerequisite for this is that these building components belong to at least the same fire resistance class.

Structural fire protection serves to contain the spread of fire, ensure personal safety and guarantee the functionality of escape and rescue routes. OWA meets these requirements by applying the European testing and classification procedures relevant under building regulations. OWA fire protection ceiling systems are not assessed in accordance with DIN 4102-2, but in accordance with DIN EN 13501-2. These procedures define higher thermal and mechanical test loads, including:

- higher initial fire compartment temperatures
- increased fire compartment overpressures,
- testing of the criteria R (load-bearing capacity), E (compartment integrity) and I (thermal insulation) under defined installation conditions.

Suspended ceiling systems that are classified as fire-resistant in accordance with DIN EN 13501-2 have a legally compliant certificate of performance and meet the building regulations' requirements for structural fire protection at an enhanced level of safety.

FIRE RESISTANCE CLASSES

With few exceptions, components in the sense of DIN 4102 or EN 13501-2 are not the suspended ceiling alone, but the entire construction, consisting for example of a load-bearing ceiling + suspended ceiling or roof + suspended ceiling. These overall constructions should prevent the spread of the fire for as long as possible. The period during which they perform this task is the fire resistance duration. Depending on their fire resistance duration, all building components are divided into fire resistance classes according to the following table:

Building authority designation	Fire resistance class		Fire resistance test in minutes
	EN 13501-2	DIN 4102	
Fire retardant	REI 30	F 30	≥ 30
Highly fire retardant	REI 60	F 60	≥ 60
Fire resistant	REI 90	F 90	≥ 90
Fire resistant	REI 120	F 120	≥ 120
Highly fire resistant	REI 180	F 180	≥ 180

Letters behind the fire resistance class in accordance with DIN 4102 provide information on the building material class of the materials used for the component.

PRINCIPLES

The fire resistance class of building components can be verified in two ways:

1. For conventional building components, for example masonry walls or solid ceilings, the F class can be taken from DIN 4102 Part 4. All the building components are listed there that do not require separate fire protection verification.
2. For all other building components, in particular for most supporting constructions with suspended ceilings, the fire resistance class must be verified by means of test certificates.

With the variety of load-bearing ceiling constructions found in practice, however, it is impossible to test each of these constructions with every type of suspended ceiling. For this reason, DIN 4102 defines certain supporting constructions that are particularly susceptible to fire as test ceilings.

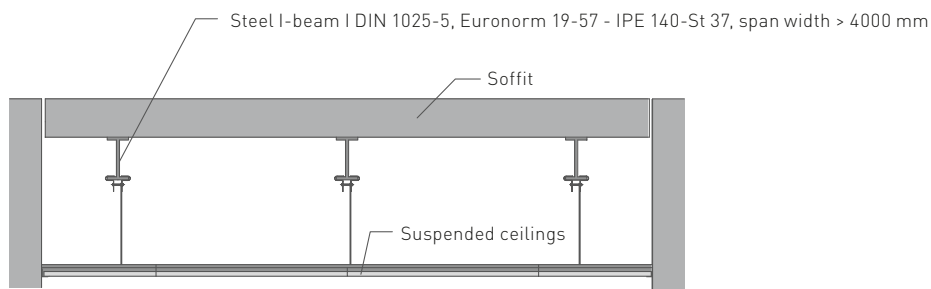


Fig. 1: Standard steel beam floor

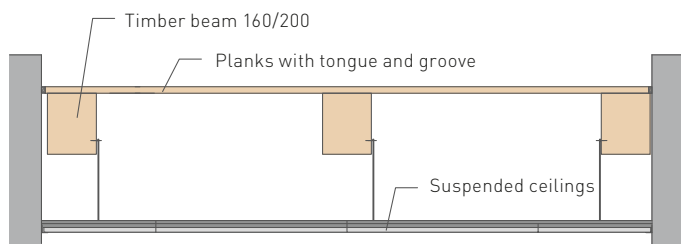


Fig. 2: Standard timber beam floor

Tests on the standard ceilings in Figs. 1 and 2 cannot be transferred to all practical applications. If the existing or planned supporting construction deviates too much from the standard construction, separate tests with this construction are necessary. This is the case, for example, with trapezoidal sheet roofs and lightweight roofs.

Fire protection

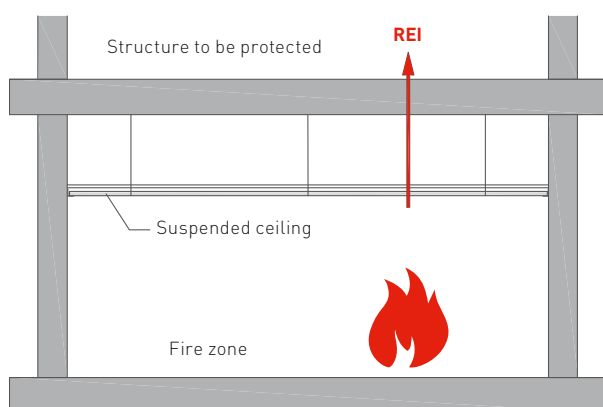
FIRE TESTS

During the fire tests, continuous checks are performed to determine whether the following conditions **(REI)** are satisfied:

1. The building components must correctly and clearly prevent the passage of fire **(E)**.
2. The building components must not bend impermissibly or collapse under their calculated maximum permissible load **(R)**.
3. The surface temperature on the side facing away from the fire must not rise by more than 140 K in general and by not more than 180 K at any point **(I)**.

A test is deemed to have ended as soon as any of the specified conditions are breached. The fire resistance duration achieved up to the point at which the relevant criterion is exceeded is decisive for classifying the tested ceiling or roof structure into the appropriate fire resistance class.

Fire test in conjunction with the suspended ceiling:



Protective function:

- Extension of the fire resistant properties of the exposed slab.
- Prevention of fire spreading to upper floors

TESTED CONSTRUCTIONS

All commonly used ceiling and roof constructions are tested in combination with OWAacoustic ceilings according to EN 13501-2. The results can be seen in the following tables. They show that fire resistance classifications up to REI 180 are achieved.



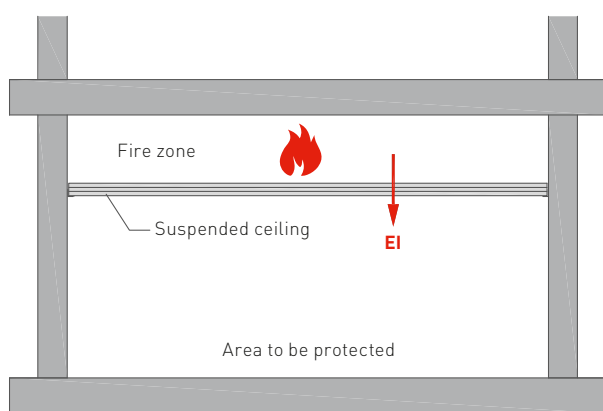
We should point out that OWA fire protection test certificates and the functionality warranted by us are only valid when both the OWAacoustic mineral tiles and the OWAconstruct substructure have been purchased by us. We can only send you our test certificates if our materials are used and the corresponding proof is provided.

FIRE LOAD IN THE SUSPENDED CEILING CAVITY

Information on limiting fire loads in the ceiling cavity can be found in DIN 4102-4:2016 (chapter 10.10.1, paragraph 11). Fire loads [e.g. cable insulation] in the space between the suspended ceiling and the ceiling slab should be distributed as evenly as possible and their fire load should be $\leq 7 \text{ kWh/m}^2$. (In the case of fire loads in the ceiling cavity exceeding 7 kWh/m^2 ceiling area, EI classified ceilings may be prescribed as [self-contained fire protection](#). 7 kWh/m^2 fire load corresponds to approx. 8.75 metres of NYM cable, 3 x 1.5 mm cross section.)

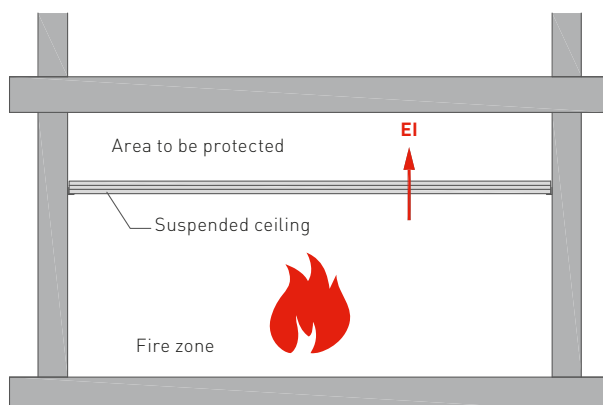
Installations with flammable materials are often installed below the ceiling slab in escape and rescue routes. For this reason, we recommend that self-contained fire protection is employed there. These suspended ceilings ensure that in the event of a fire attack from below, the supply lines in the ceiling cavity remain functional for a certain period of time. In the event of a fire in the ceiling cavity (fire attack from above), these ceilings protect the **escape routes** below from fire and smoke for over **30 minutes**.

Fire testing as a standalone component:



Protective function:

- Containment of fire loads in the event of a fire in the ceiling cavity (from above)



Protective function:

- Protection of service pipes in the event of a fire in the room below (from below)

THE EUROPEAN STANDARDS

The new European classification is one of the many organisational prerequisites for making the European economic area as a whole flexible and functional. This imposes new obligations on all companies that manufacture products in or for Europe: the European standards and regulations must be complied with and are binding.

CERTIFICATES OF USABILITY

OWA is a system provider of suspended ceilings according to EN 13964 (e.g. mineral and metal tiles). **For fire resistance requirements, EN 13964 also regulates the entire kit (construction type).** When installed, the kit becomes a **type of construction** for the purposes of building supervision, which is verified by the CE marking, declaration of performance (KIT) and European test report on the basis of EN 13964 Annex ZA Table 1.1.

OWA's strategy is clearly aligned with the European approach, as all of our suspended ceiling systems are regulated at European level via EN 13964. For this reason, all suspended ceiling systems for the most diverse types of construction have been tested exclusively at the European level on the basis of EN 13501-2 since 2002. European verification will increase in the future.

Relevant sections for suspended ceiling kits Table ZA 1.1 EN 13964:

Construction product: suspended ceiling kits

Intended use: inside buildings, for the construction of installed suspended ceilings

Main properties	Sections containing requirements in this standard	Levels and/or classes	Remarks
Reaction to fire	4.4.2.1 and 4.4.2.4	Classes A1 to F	In accordance with EN 13501-1
Fire resistance	4.4.1	See EN 13501-2	In accordance with EN 13501-2
Release of asbestos (content), where applicable	4.5.1	–	Content and/or release
Release of formaldehyde, where applicable	4.5.2	–	Classes E1 and E2
Release and/or content of other hazardous substances, where applicable	4.5.3	–	Content and/or release
Susceptibility to growth of micro-organisms hazardous to health, such as moisture	4.5.4	–	Levels
Susceptibility to growth of micro-organisms hazardous to health due to thermal insulation	4.5.4	–	Levels
Fracture properties (safe breakage), such as impact resistance	4.3.6	–	Classes
Fracture properties (safe breakage), such as fracture characteristics	4.6.1	–	Classes
Flexural strength	4.6.2	–	Classes
Load-bearing capacity: – substructure	4.3.2	–	Classes
– hangers and fixings	4.3.3	–	Declaration of performance
– upper bracket of hangers and fixings for the edge profile	4.3.4	–	Declaration of performance
– dimensions and limits	4.2	–	Declaration of performance
Resistance to fixings	4.3.4		Declaration of performance
Electrical safety	4.6.4	–	Declaration of conformity
Direct airborne sound insulation	4.7.3	–	Declaration of performance
Sound absorption	4.7.2	–	Declaration of performance
Thermal properties, such as thermal conductivity	4.10	–	Declaration of performance

Overview of European fire resistance classifications for suspended ceilings in

Applicability of the tile designs depends on Table 1, 2 and 3 (page 18/19)

Supporting structure				Construction of the suspended ceiling	
	Kit no. (KIT)	Minimum ceiling thickness (d)	Minimum suspension depth (a)	OWAconstruct premium systems	
	Steel beam floor KIT-16.1-01/2012 - S 3 KIT-16.1-01/2012 - S 3a	≥ 120 mm	≥ 200 mm	S 3	
	Steel beam floor KIT-11.1-01/2008 - S 3 KIT-11.1-01/2008 - S 3a	≥ 90 mm	≥ 250 mm ≥ 150 mm ≥ 120 mm		
	Steel beam floor KIT-27.1-01/2011 - S 3 KIT-27.1-01/2011 - S 3a	≥ 100 mm	≥ 200 mm	S 3a	
	Steel beam floor KIT-28.1-01/2015 - S 3	≥ 90 mm	≥ 250 mm	S 3	
	Steel beam floor KIT-29.1-01/2018 - S 3	≥ 90 mm	≥ 250 mm	S 3	
	Steel beam floor KIT-24.1-01/2014 - S 3	≥ 90 mm	≥ 250 mm	S 3 with mineral wool	
	Steel beam floor KIT-17.1-01/2013 - S 15 cliq KIT-18.1-01/2011 - S 15a cliq	≥ 100 mm	≥ 200 mm	S 15 cliq S 15a cliq	
	Steel beam floor KIT-19.1-01/2011 - S 18p/6a	≥ 100 mm	≥ 200 mm	S 18p/S 6a = binders	
	Steel beam floor KIT-30.1-01/2016 - OWAplan	≥ 90 mm	≥ 250 mm	CD profile	
	Steel beam floor KIT-25.1-01/2014 - S 15b	≥ 90 mm	≥ 250 mm	S 15b	

Important note:

The kits listed in the following tables cannot be combined with all OWAacoustic tile patterns.

Tables 1, 2 and 3 on pages 18 and 19 must be observed in connection with load-bearing structures types I–IV and fire-resistance durations (REI 30–REI 180).

Type I
Steel beam floor with aerated concrete slabs

Type II
Steel beam floor with reinforced concrete slabs

Type III
Type of reinforced and prestressed concrete constructions

Type IV
Timber structures

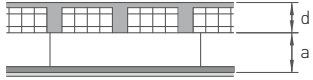
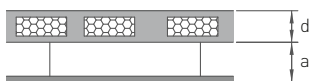
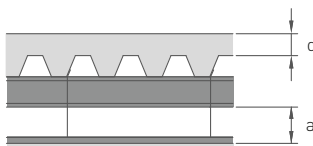
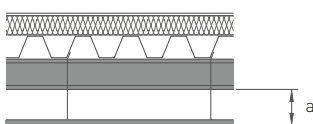
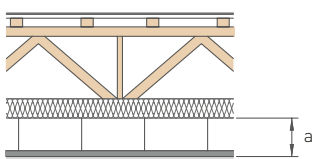
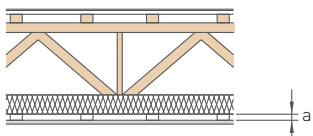
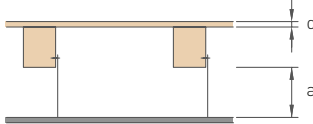
Please note that only the currently available test certificates are available in the following tables. Expired documents and systems that are not listed are no longer available.

¹ Delivery conditions according to the [OWAlifetime price list](#) must be observed.

	OWAacoustic tiles			Fire resistance		Tested suspension (max. spacings)			
	Module	Thickness	Product surfaces	Classifi- cation	Test report	Support or main profiles	Suspen- sion points	Type of suspension / special features	
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 1 (page 18)	REI 120	No. 297270/7130/ CPD ... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm	Onsite tie wire 2.0 mm or no. 12/.../... double adjustable hangers or no. 17/45 Nonius hanger	
				REI 90	PB III/08-191-Ä				
				REI 60					
				REI 30					
	1250 x 625 mm 1200 x 600 mm		REI 60	No. 282291/6095/ CPD ... and further certificates	625 mm	1250 mm			
	625 x 625 mm 600 x 600 mm	15 mm nom. 20 mm nom.	Product surfaces from Table 3 (page 19) except Sinfonia Silencia, Humancare Pro, Brillianto100	REI 60	PB 3.2/14-338-1, PB 3.2/15-411-1 ... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm		
	625 x 625 mm 600 x 600 mm	15 mm nom. 20 mm nom.	Product surfaces from Table 3 (page 19)	REI 45	PB 3.2/17-345-1, PB 3.2/23-108- 1... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm		
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 2 (page 18)	REI 120	PB 3.2/13-320-1 ... and further certificates	625 mm	750 mm		No. 79/100 Nonius hanger
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 1 (page 18)	REI 90	No. 285878/6379/ CPD ... and further certificates	625 mm 600 mm	1250 mm 1200 mm		Onsite tie wire 2.0 mm or no. 12/.../... double adjustable hangers or no. 17/45 Nonius hanger
	≤ 2050 (tile length) x 312.5 mm	15 mm nom.	Cosmos/N Constellation Sinfonia Privacy ¹	REI 90	No. 285879/6380/ CPD ... and further certificates	≤ 2130 mm	750 mm		No. 79/100 Nonius hanger Special features: – Bandraster profile no. 80/100 – C profile no. 36/70 – only in combination with surface- mounted luminaires
	2400 x 1200 mm	25 mm nom.	OWAplan ⁹⁰ including plaster	REI 60	PB 3.2/15-411-2 ... and further certificates	1000 mm	1000 mm	OWAplan Installation Guidelines, Section 6 Publication 1031 e	
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 2 (page 18)*	REI 30	PB 3.2/13-322-1 ... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm	Onsite tie wire 2.0mm or no. 12/.../... Double adjustable hangers or no. 17/45 Nonius hanger	

Overview of European fire resistance classifications for suspended ceilings in

Applicability of the tile designs depends on Table 1, 2 and 3 (page 18/19)

Supporting structure				Construction of the suspended ceiling	
	Kit no. (KIT)	Minimum ceiling thickness (d)	Minimum suspension depth (a)	OWAconstruct premium systems	
	Solid ceiling with intermediate element KIT-21.1-01/2013 - S 3 KIT-21.1-01/2013 - S 3a	≥ 200 mm	≥ 250 mm	 S 3  S 3a	
	Hollow core concrete slab ceiling KIT-10.1-01/2007 - S 3 KIT-10.1-01/2007 - S 3a	≥ 250 mm	≥ 250 mm	 S 3  S 3a	
	Trapezoidal sheet roof with concrete surface layer KIT-22.1-01/2009 - S 3 KIT-22.1-01/2009 - S 3a	≥ 70 mm	≥ 200 mm	 S 3  S 3a	
	Steel roof construction with trapezoidal sheet steel + mineral wool KIT-23.1-01/2014 - S 3	-	≥ 600 mm	 S 3	
	Timber roof construction KIT 31.1-01/2020 - S 3 KIT 31.1-01/2020 - S 3a	-	≥ 250 mm	 S 3  S 3a	
	Timber roof construction KIT 14.1-01/2008	-	≥ 38 mm	With KIT 14.1-01/2008: further OWA systems possible on request	
	Timber floor KIT-07.1-01/2008 - S 3	Timber beams 18 mm fibreboard + 12.5 cm plasterboard fire protection panel alternatively screed construction	≥ 245 mm	 S 3	

	OWAacoustic tiles			Fire resistance		Tested suspension (max. spacings)		
	Module	Thickness	Product surfaces	Classifi- cation	Test report	Support or main profiles	Suspen- sion points	Type of suspension / special features
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 2 (page 18)	REI 120	No. 311867/8160/ CPR ... and further certificates	1250 mm 1200 mm	900 mm	Onsite tie wire 2.0 mm or no. 12/.../... double adjustable hangers or no. 17/45 Nonius hanger
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 1 (page 18)	REI 180	No. 234562/2488/ CPD ... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm	
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 2 (page 18)	REI 120	No. 281196/6048/ CPD ... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm	
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 2 (page 18)	REI 30	PB 3.2/14-140-1	625 mm 600 mm	1250 mm 1200 mm	No. 17/45 Nonius hanger Special features: Fixings accessories for trapezoidal sheet metal: no. 97/30 no. 97/32 see from page 22
	625 x 625 mm 600 x 600 mm	15 mm nom.	Product surfaces from Table 1 (page 18)	REI 30	PB 3.2/18-432-1 PB 3.2/18-432-2 ... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm	No. 17/45 Nonius hanger Special features: detailed description of the construction see from page 24
	2400 x 1200 mm	21 mm nom.	MINOWA BSK fire protection tile	REI 30	PB III/08-254	Distance between bearing battens: 400 mm	Screw spacing: 300 mm	MINOWA BSK fire protection tile d = 21 mm: 2400 x 1200 mm part no. 00082675 Special features: detailed description of the construction see from page 26
	2400 x 1200 mm	15 mm nom.	Product surfaces from Table 2 (page 18)	REI 30	2007 - Efectis RO 574 (E) ... and further certificates	1250 mm 1200 mm	1250 mm 1200 mm	No. 17/45 Nonius hanger Special features: detailed description of the construction see from page 28

Tables: fire resistance duration of individual OWAlifetime products

TABLE 1

Product surfaces	Thickness in mm	Reinforced concrete/steel beam floors: fire resistance classification REI in accordance with EN 13501-2 to ¹	Gang nail trusses: fire resistance classification REI in accordance with EN 13501-2
Cosmos	15	180	30
Finetta	15	180	30
Harmony	15	180	30
Janus (Cosmos, Constellation)	33	180	30
NEW Sandila	15	180	30
Plain	15	180	30
Sinfonia FR	15	180	30
Sinfonia Privacy	20	180	30
Sanitas 02 Plain	15	180	30
Constellation	15/20	180	30

TABLE 2

Product surfaces	Thickness in mm	Reinforced concrete/steel beam floors: fire resistance classification REI in accordance with EN 13501-2 to ¹	Timber beam floor/lightweight roofs: fire resistance classification REI in accordance with EN 13501-2
Sinfonia FR	15	180	30
Sinfonia Privacy	20	180	30

¹ Depending on system, tile dimensions and design

Tables: fire resistance duration of individual OWAlifetime products

TABLE 3

Product surfaces	Thickness in mm	Reinforced concrete/steel beam floors: fire resistance classification REI in accordance with EN 13501-2 to ¹	Timber beam floor/gang nail trusses/ lightweight roofs: fire resistance classification REI in accordance with EN 13501-2
Bolero	15	60	–
Brillianto100 ²	15	45	–
OWAcolor ²	15	45	–
Ocean	20	60	–
OWAlux	15	60	–
OWAplan ⁹⁰ ³	20/25	60	–
Sinfonia	15	60	–
Sinfonia Humancare	15	60	–
Humancare Plus	20	60	–
Humancare Lab	20	60	–
Humancare Pro ²	20	45	–
Sinfonia Silencia ²	20	45	–

¹ Depending on system, tile dimensions and design

² Applies only to KIT-29.1-01/2018

³ Applies only to KIT-30.1-01/2016

Important information regarding supporting documents

If OWAcooustic ceilings have to meet fire protection requirements, we recommend that the design for the corresponding requirement is clarified before ordering or installing the ceilings.

In the event of an order, please request the fire protection certificates for planning (test report, DOP, KIT) in advance via your dealer using the completed checklist (<https://www.owa.de/en/media/general-brochures/>). This is necessary in order to be able to provide you with the correct documents from the extensive range in the interests of your safety with regard to the documentation and the technically correct execution.

Fire protection documents from OWA are only valid if OWAcooustic tiles and original OWAconstruct construction parts (as tested) are used.

Please also note that due to the large number of variants, not every detail can be documented in terms of testing. The declarations of performance for some details are therefore supplemented in the form of expert opinions.

Expert opinions are not general certificates of usability in the German building supervisory procedure; they serve only as a basis for a technical assessment of suitability.

Test reports and expert opinions are used for submission to or coordination with the planners and building supervisory authorities. The suitability of the documents must generally be checked by the customer (planner, specialist planner, specialist contractor, etc.).

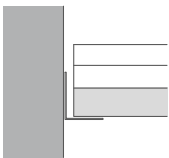
Accessories for fire-resistant ceilings in conjunction with the structural ceiling in accordance with DIN EN 13501

CEILING FIXINGS

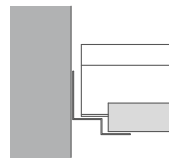
An appropriate fire rated ceiling fixing must be used for the respective substrate. (European Technical Approval ETA or general building inspectorate approval). You can find some approved fixings in our [OWAlifetime collection price list 9001 e.](#) For additional options, please consult a fixings manufacturer.

WALL TRIM

When installing, ensure that all adjacent supporting components, to which connections are made, have at least the same fire resistance. For fire rated ceilings, the wall trim fixing centres must be according to the specifications of the corresponding test report. As a rule, a reduced fixing centre ≤ 250 mm must be observed for solid walls and ≤ 210 mm for plasterboard walls, with every 3rd screw being positioned in the upright profile. Cut tiles should be installed as close as possible, covering at least 4/5 of the support surface. Only approved wall profiles should be used.



Standard wall profiles for all standard ceiling systems

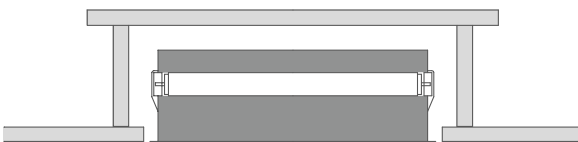


Wall profiles for ceiling systems S 3a, S 3a cliq and S 15a cliq

LIGHTING

When installing integrated lighting in OWAacoustic ceilings for fire protection, an OWAacoustic fire box must be installed to ensure fire resistance. Pay attention that the performance characteristics of the fire box correspond to those of the installed OWAacoustic ceiling system. In any case, an additional hanger must be installed to bear the load. Further information can be found in the corresponding system description as well as in the overview of fire boxes from page 30 onwards.

Integrated lighting



Thickness of the OWAacoustic tile: 15 mm
Thickness of the fire box: 15 mm, 21 mm (Downlight)

SURFACE-MOUNTED COMPONENTS

Surface-mounted components (e.g. smoke detectors, motion detectors etc.) can be fixed to the ceiling according to [installation instructions 9801 e.](#)

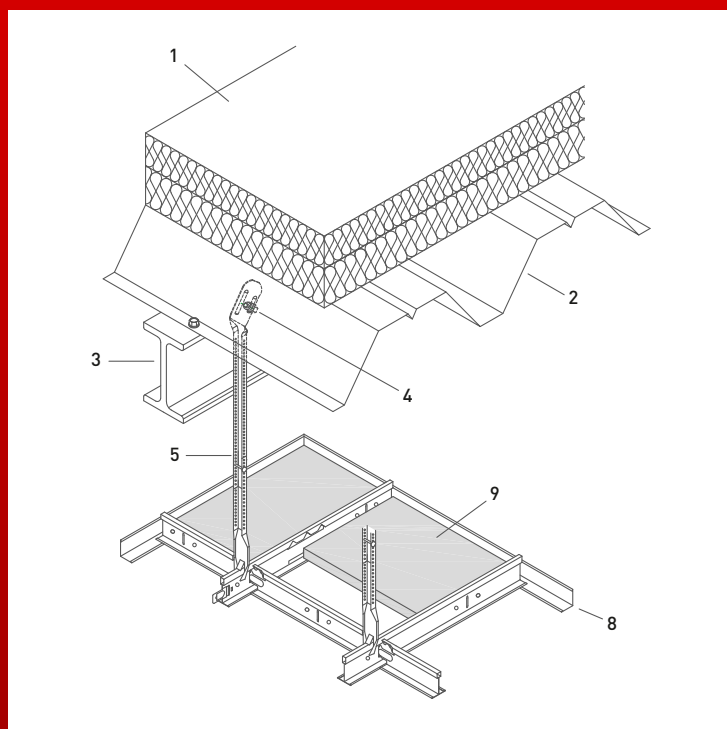
Suspended ceiling in combination with the ceiling slab

REI 30 TRAPEZOIDAL SHEET ROOF - WARM ROOF - KIT 23.1-01/2014

S 3 AND S 3 cliq – EXPOSED, REMOVABLE

COMPATIBLE WITH EDGE 3 TILES

3



- 1 Mineral wool roof insulation panels, ≥ 140 mm thick
- 2 Trapezoidal sheet profile
- 3 Steel beam
- 4 Riveting nut no. 97/30, self-locking screw no. 97/32 and riveting nut setting tool no. 89/6 (The suitability depends on the material thickness of the trapezoidal sheet and must be checked in advance.)
- 5 Nonius hanger no. 17/45, spacing ≤ 1250 mm
- 6 Support profile, spacing 600 mm or 625 mm
- 7 Cross tee, short
- 8 Wall profile no. 50G
- 9 OWAacoustic tile [see Table 2, page 18]

Dimensions: 600 x 600 mm, 625 x 625 mm

Designs: Product surfaces in accordance with Table 2, page 18 only

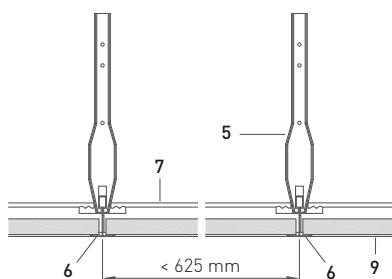
Tile thickness: 15 mm nom. [OWAacoustic premium]

Reaction to Fire: A2-s1,d0 according to EN 13501-1

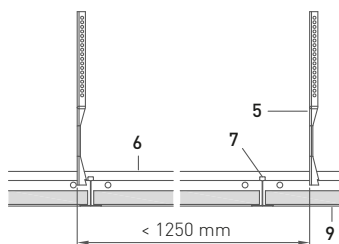
Minimum suspension depth: From lower edge of steel beam to upper edge of OWAacoustic ceiling ≥ 600 mm

Metal system: All metal parts galvanised or coated white, further details and colours can be found in the OWAlifetime collection price list

CROSS SECTION:

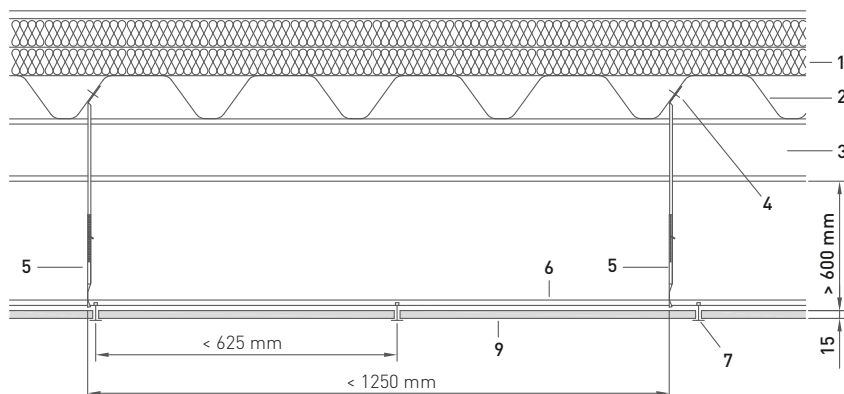


LONGITUDINAL SECTION:



Suspended ceiling in combination with the ceiling slab

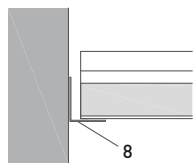
CROSS SECTION THROUGH THE ROOF CONSTRUCTION:



WALL TRIM:

Please refer to page 21 of the respective test report for guidelines on the installation of wall fixings for suspended ceilings with fire resistance properties. For further installation details, see [system sheet S 3 e](#) or [installation instructions 9801 e](#).

Fixing centres in solid wall ≤ 250 mm
Fixing centres in plasterboard wall ≤ 210 mm



INTEGRATED LIGHTING:

OWA supplies suitable integrated lighting for this system. An overview of all luminaire types can be found in [leaflet 9630 e](#).

Integrated lighting must always be suspended, either directly or the supporting construction additionally in the corner areas of the luminaires. They must be housed in a suitable OWA fire box (see pages 30).

MATERIAL NEEDED PER M² (INDICATIVE VALUE):

No.	Construction Element	600 x 600 mm	625 x 625 mm
17/45	Hanger	1.3 pcs	1.3 pcs
45 or cliq-24-MR	Main tee	1.66 m	1.6 m
46 or cliq-24-CT short	Cross tee	1.66 m	1.6 m
50G	Wall profile	Depending on room size and shape	

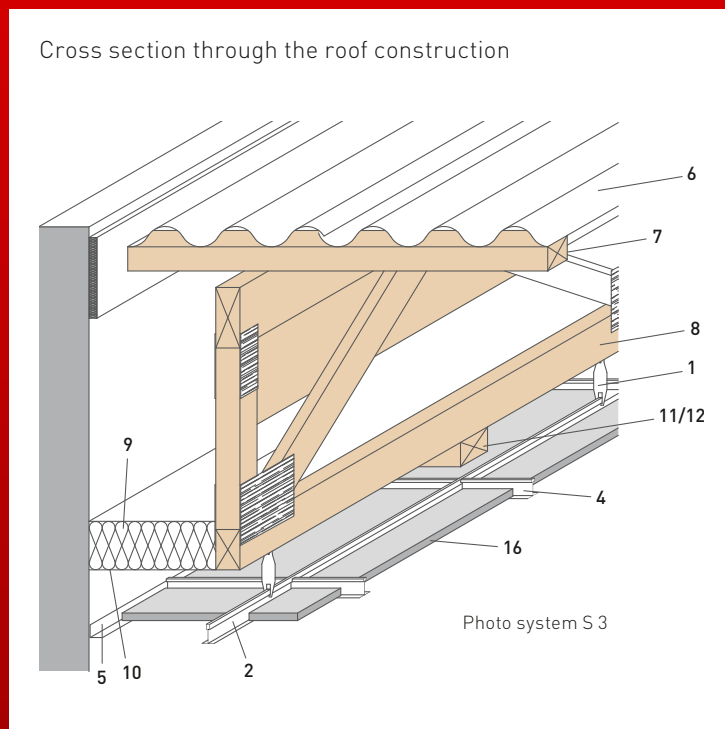
Weight per m ²			
Construction approx.		1.25 kg/m ²	1.20 kg/m ²
Tile 15 mm, approx.		4.5 kg/m ²	4.5 kg/m ²

Suspended ceiling in combination with the ceiling slab

REI 30 GANG NAIL TRUSS - COLD ROOF - KIT 31.1-01/2020 - S 3, S 3A

S 3, S 3 CLIQ, S 3A CONTURA AND S 3A CLIQ CONTURA - EXPOSED, REMOVABLE

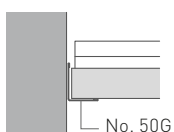
COMPATIBLE WITH EDGE 3 TILES 3 OR EDGE 6 TILES 6



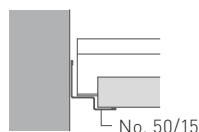
- 1 Nonius hanger no. 17/45
 - 2 Support profile no. 45 or cliq-24-MR, spacing ≤ 1250 mm
 - 3 Cross tee no. 46 or cliq-24-CT short
 - 4 Cross tee no. 47 or cliq-24-CT long
 - 5 Wall profile no. 50G or no. 50/15 for edge 6
 - 6 Corrugated fibre cement panels | Tiles | Metal roofing, lapped boards, $d \geq 19.5$ mm or chipboard $d \geq 19.0$ mm
 - 7 Purlin
 - 8 Gang nail truss
 - 9 Mineral wool insulating layer ≥ 140 mm thick between the trusses: Superglass KF2 035 | FLEXIROCK, Rockwool | Rockwool insulating wedges | Integra ZKF1-035 or -040, Isover | Metac UF, Isover
 - 10 Polyethylene film, alternatively an Integra ZRF Rollisol, Isover aluminium-laminated mineral wool insulation layer can be used when using OWAcoustic premium tiles
 - 11 Batten 24×48 mm
 - 12 Batten $\geq 38 \times 58$ mm
 - 13 Spax screw 5.0×50 mm or half-round head screw 5.0×50 mm, fastened laterally in the centre of the battens
 - 14 *Grooved nail 4.0×60 mm or Spax screw 4.5×60 mm
 - 15 *Grooved nail 3.1×60 mm or Spax screw 6.0×100 mm
 - 16 OWAcoustic tile (see Table 1, page 18)
- * According to classification certificate special nail 3/C (DIN 1052: 2008-08, section 12.8.1 Table 14)

Dimensions:	600 x 600 mm, 625 x 625 mm
Designs:	Product surfaces in accordance with Table 1, page 18 only
Tile thickness:	15 mm nom. (OWAcoustic premium)
Reaction to Fire:	A2-s1,d0 according to EN 13501-1
Suspension depth:	From rear side of OWAcoustic tile to lower edge of gang nail truss ≥ 250 mm
Metal system:	All metal parts galvanised or coated white, further details and colours can be found in the OWAlifetime collection price list

SYSTEM S 3 / S 3 cliq



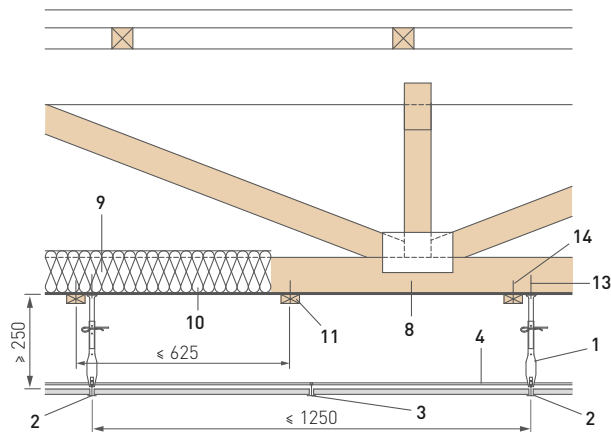
SYSTEM S 3a / S 3a cliq



Suspended ceiling in combination with the ceiling slab

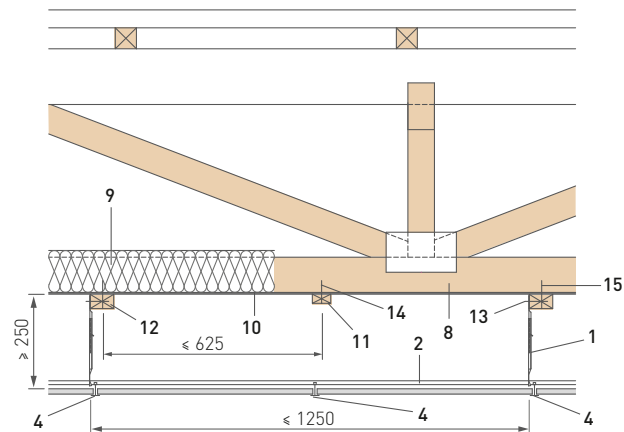
1. Support profiles at right angles to the truss at a distance of 1250 mm

Attachment of hangers and positioning of battens: Hanger attachment to underside of trusses, hanger spacing ≤ 1250 mm, battens $\geq 24 \times 48$ mm to support the mineral wool insulation, batten spacing ≤ 625 mm



2. Support profiles at right angles to the truss at a distance of 1250 mm

Attachment of hangers and positioning of battens: Hanger attachment laterally to battens $\geq 38 \times 58$ mm, hanger and batten spacing ≤ 1250 mm, additional central battens $\geq 24 \times 48$ mm to support the mineral wool insulation



WALL TRIM:

Please refer to page 21 of the respective test report for guidelines on the installation of wall fixings for suspended ceilings with fire resistance properties. For further installation details, see [system sheet S 3 e](#), [system sheet S 3a e](#) or [installation instructions 9801 e](#).

Fixing centres in solid wall ≤ 250 mm
Fixing centres in plasterboard wall ≤ 210 mm

INTEGRATED LIGHTING:

OWA supplies suitable integrated lighting for this system. An overview of all luminaire types can be found in [leaflet 9630 e](#).

Integrated lighting must always be suspended, either directly or the supporting construction additionally in the corner areas of the luminaires. They must be housed in a suitable OWA fire box (see pages 30).

MATERIAL NEEDED PER M² (INDICATIVE VALUE):

See also system sheet [S 3](#), [S 3 cliq](#), [S 3a](#) and [S 3a cliq](#)

No.	Construction Element	600 x 600 mm	625 x 625 mm
17/45	Nonius hanger	0.7 pcs	0.7 pcs
45 bzw. cliq-24-MR	Main tee	0.83 m	0.8 m
46 bzw. cliq-24-CT short	Cross tee	0.83 m	0.8 m
47 bzw. cliq-24-CT long	Cross tee	1.66 m	1.6 m
50G bzw. 50/15G K6	Wall profile	Depending on room size and shape	
42/24 (only for K6)	Contura block	Depending on room size and shape	

Weight per m ²			
Construction approx.		1.25 kg/m ²	1.20 kg/m ²
Tile 15 mm, approx.		4.5 kg/m ²	4.5 kg/m ²

Attention: Fasteners are not included in the scope of delivery!

Suspended ceiling in combination with the ceiling slab

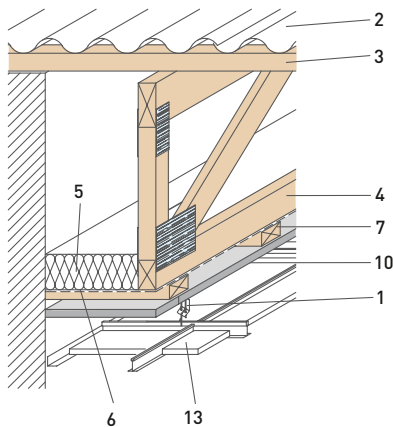
REI 30 GANG NAIL TRUSS - COLD ROOF - KIT 14.1-01/2008

DIRECT MOUNTING WITH MINOWA® BSK FIRE PROTECTION TILES

COMPATIBLE WITH EDGE 3 TILES

3

Cross section through the roof construction

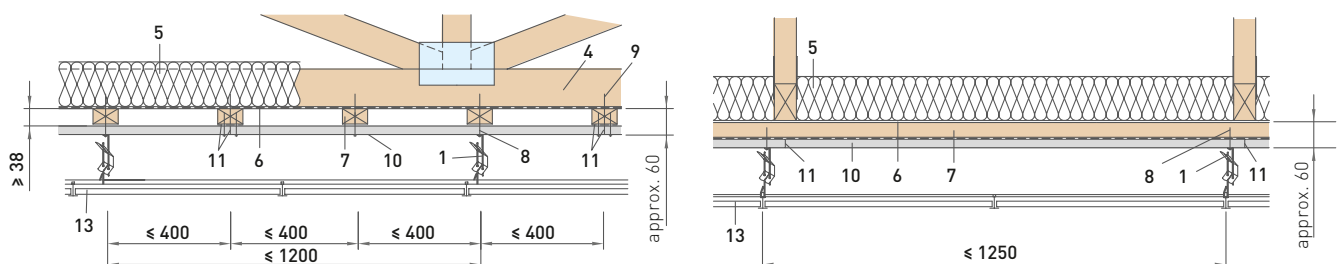


- 1 Hanger
- 2 Corrugated fibre cement panel or tile
- 3 Purlin
- 4 Gang nail truss, $a \leq 1250$ mm
- 5 Mineral wool insulating layer ≥ 200 mm thick between the trusses:
 - FLEXIROCK, Rockwool
 - Rockwool insulating wedges
 - Metac UF, Isover
 - Integra ZKF1- 035 or - 040, Isover
- 6 Polyethylene film, alternatively Integra ZRF Rollisol, Isover aluminium-laminated mineral wool insulation layer
- 7 Batten $\geq 38 \times 58$ mm
- 8 Half-round head screw 5.0×60 mm, screwed from below through the MINOWA BSK fire protection tile into batten (for hanger)
- 9 Spax screw 6.0×100 mm (for batten)
- 10 MINOWA BSK fire protection tile 2400×1200 mm - part no. 00082675, 21 mm, fastened to batten using countersunk-head screws 5.0×60 mm, every ≤ 300 mm
- 11 OWA adhesive no. 99/24
- 12 MINOWA BSK fire protection tile edge strips, 21×150 mm, attached using OWA adhesive paste no. 99/24
- 13 System S 3 or any other OWAcoustic ceiling system

Dimensions:	2400 x 1200 mm
Design:	MINOWA® BSK fire protection tile
Tile thickness:	Approx. 21 mm (OWAcoustic premium)
Reaction to Fire:	A2-s1,d0 according to EN 13501-1
Suspension depth:	From rear side of MINOWA® BSK tile to lower edge of gang nail truss ≥ 38 mm

SUPPORT PROFILES AT RIGHT ANGLES TO THE BATTEN

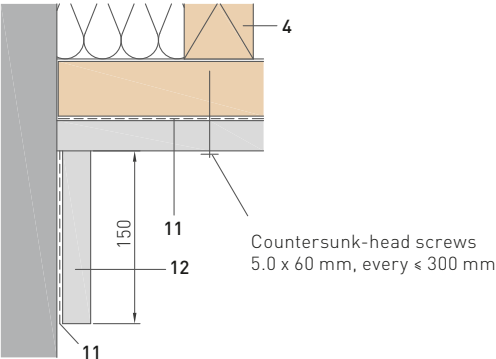
Attachment of hangers and positioning of battens: Attachment of the hangers from below through the MINOWA® BSK fire protection tiles to battens $\geq 38 \times 58$ mm, hanger spacing ≤ 1200 mm and batten spacing ≤ 400 mm



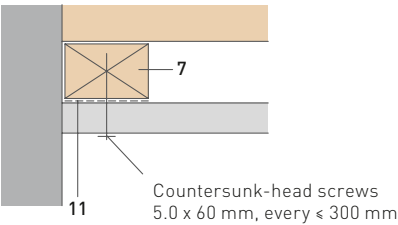
Suspended ceiling in combination with the ceiling slab

GANG NAIL TRUSS IS PARALLEL TO THE WALL:

The MINOWA® BSK fire protection edge strips are only required when the truss runs parallel to the wall.

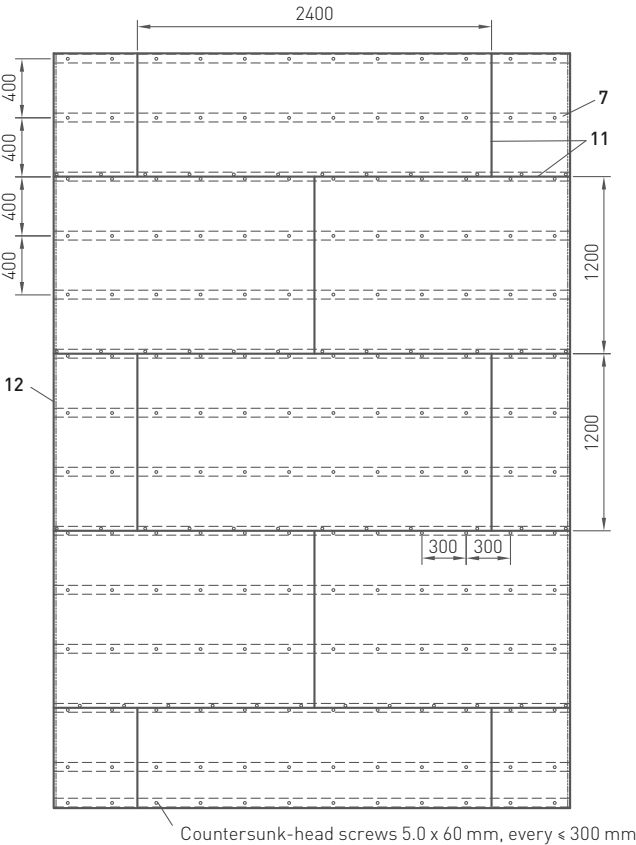


GANG NAIL TRUSS IS PERPENDICULAR TO THE WALL:



INSTALLATION EXAMPLE - VIEW FROM BELOW:

Note on gluing with OWA adhesive no. 99/24:
Apply adhesive to all longitudinal and transverse tile joints, and to the whole surface of every 3rd batten in the joint area.



MATERIAL NEEDED PER M² (INDICATIVE VALUE):

Description	Part no. 00082675 2400 x 1200 mm
MINOWA BSK fire protection tile	1.05 m²
Countersunk-head screws 5.0 x 60 mm	11.1 pcs
OWA adhesive paste no. 99/24	50 ml/m²

Weights per m²:	
MINOWA BSK fire protection tile approx. 21 mm	6.3 kg/m²

Attention: Fasteners are not included in the scope of delivery!

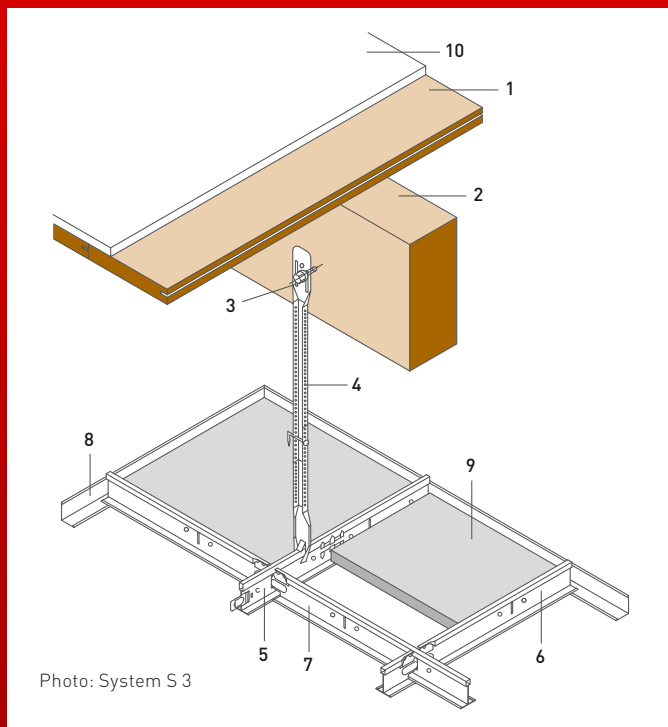
Suspended ceiling in combination with the ceiling slab

REI 30 TIMBER BEAM FLOORS - KIT 07.1-01/2008 - S 3

S 3 AND S 3 cliq – EXPOSED, REMOVABLE

COMPATIBLE WITH EDGE 3 TILES

3



- 1 Plank, 21 mm or chipboard (tongue and groove), 19 mm
- 2 Timber beam
- 3 Wood screw 5 x 50 mm
- 4 Nonius hanger no. 17/45, spacing ≤ 1220 mm
- 5 Support profile, spacing ≤ 1200 mm
- 6 Cross tee, short
- 7 Cross tee, long
- 8 Wall profile no. 50G
- 9 OWAcoustic premium tile, thickness 15 mm (product surfaces in accordance with Table 2, page 18 only)
- 10 Fermacell, thickness: 12.5 mm / alternatively screed construction

Dimensions:	600 x 600 mm, 625 x 625 mm
Design:	Product surfaces in accordance with Table 2, page 18 only
Tile thickness:	15 mm nom. (OWAcoustic premium)
Reaction to Fire:	A2-s1,d0 according to EN 13501-1
Suspension depth:	From rear side of OWAcoustic tile to lower edge of timber beam ≥ 245 mm
Metal system:	All metal parts galvanised or coated white, further details and colours can be found in the OWAlifetime collection price list

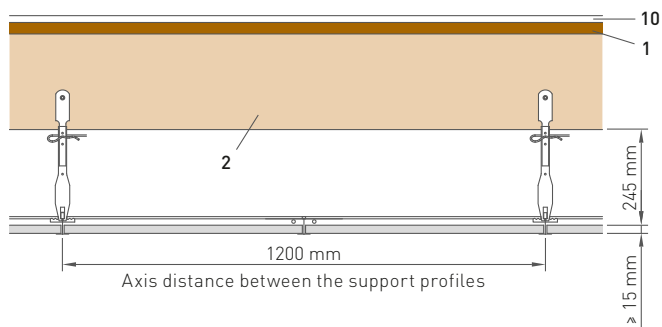
IMPORTANT NOTES:

Hangers:

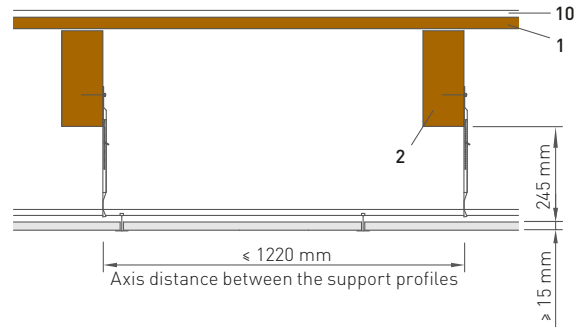
According to the test certificate, the hangers may also be fixed to the underside of the timber beams with wood screws 6 x 70 mm and washers dia. 18 mm. Only nonius hangers no. 17/45 may be used as hangers.

Suspended ceiling in combination with the ceiling slab

LONGITUDINAL SECTION:



CROSS SECTION:

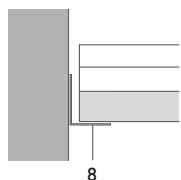


WALL TRIM:

Please refer to page 21 of the respective test report for guidelines on the installation of wall fixings for suspended ceilings with fire resistance properties. For further installation details, see [system sheet S 3 e](#) or [installation instructions 9801 e](#).

Fixing centres in solid wall ≤ 250 mm

Fixing centres in plasterboard wall ≤ 210 mm



INTEGRATED LIGHTING:

OWA supplies suitable integrated lighting for this system. An overview of all luminaire types can be found in [leaflet 9630 e](#).

Integrated lighting must always be suspended, either directly or the supporting construction additionally in the corner areas of the luminaires. They must be housed in a suitable OWA fire box (see pages 30).

MATERIAL NEEDED PER M² (INDICATIVE VALUE):

See also system sheet [S 3](#) and [S 3 cliq](#)

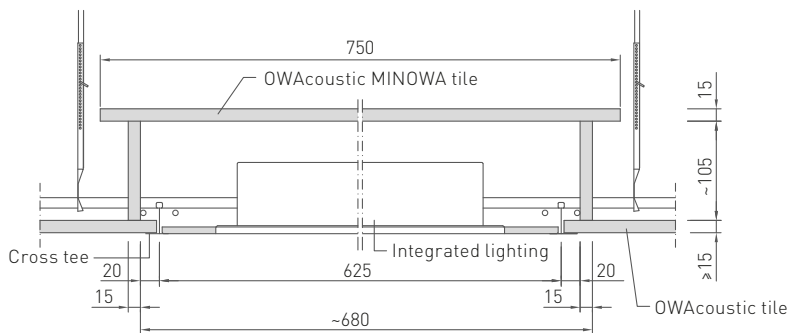
No.	Construction Element	600 x 600 mm	625 x 625 mm
17/45	Nonius hanger	0.7 pce	0.7 pce
45 or cliq-24-MR	Main tee	0.83 m	0.8 m
46 or cliq-24-CT short	Cross tee	0.8 m	0.8 m
47 or cliq-24-CT long	Cross tee	1.66 m	1.6 m
50G	Wall profile	Depending on room size and shape	
Weight per m²			
System approx.		1.25 kg/m²	1.20 kg/m²
Tile 15 mm, approx.		4.5 kg/m²	4.5 kg/m²

Fire protection boxes for recessed luminaires and other fixtures installed with

OWAcoustic FIRE BOX UP TO REI 180

OWAcoustic TILES ≥ 15 MM NOM.

Section:



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

Packaging unit: 4 fire boxes per carton

Fire box part no. 00009873
for 600 x 600 mm and 625 x 625 mm modules:

Item	Description	Dimensions	Units
1	Cover	750 x 750 mm	1
2	Side strips	680 x 105 mm	4
3	Nails	4.2 x 50 mm	8
4	Adhesive	310 ml	1

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

Fire box part no. 00009925
for 1200 x 300 mm und 1250 x 312.5 mm modules:

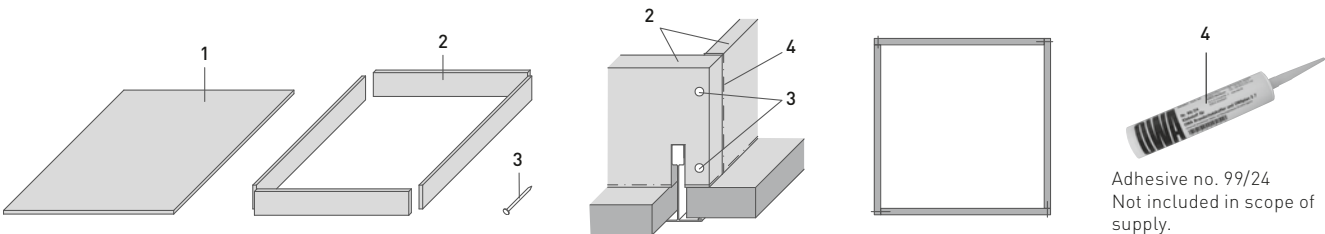
Item	Description	Dimensions	Units
1	Cover	1420 x 500 mm	1
2	Side strips	370 x 105 mm	2
2	Side strips	1320 x 105 mm	2
3	Nails	4.2 x 50 mm	8
4	Adhesive	310 ml	1

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

Installation:

The fire boxes are delivered in individual parts and must be assembled on site. At the corner points, the side parts are glued alternately and connected with 2 nails each. They are precisely notched in the area of the profile. Then the frame made of side parts is glued to the OWAcoustic ceiling. Finally, the cover is glued on.

All fittings that differ in size must be fitted with a fire box according to the drawing below. These are made of 16 mm thick MINOWA® BSK fire protection tiles, part no. 00082673, dimensions approx. 2500 x 1250 mm, as described above



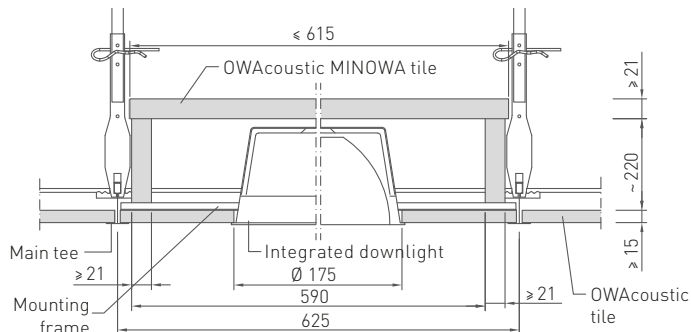
Adhesive no. 99/24
Not included in scope of supply.

When integrating luminaires and other additional loads, a separate load transfer must be calculated and reviewed in accordance with the test report.

OWAcoustic FIRE BOX FOR INTEGRATED DOWNLIGHTS UP TO REI 120

OWAcoustic TILES ≥ 15 MM NOM.

Sections:



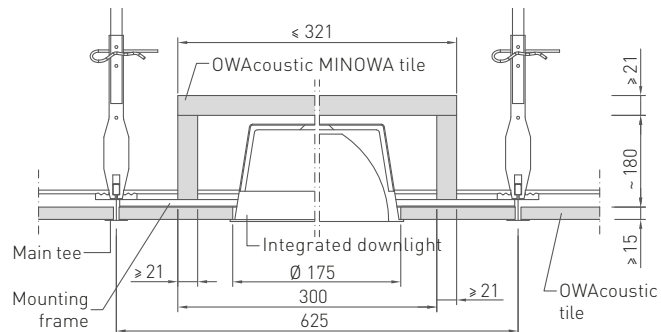
Building material class/reaction to fire:
A2-s1,d0 according to EN 13501-1

Packaging unit: 4 fire boxes per carton

Fire box part no. 00062859 for large downlight:

Item	Description	Dimensions	Units
1	Cover	615 x 615 x 21 mm	1
2	Side strips	590 x 220 x 21 mm	4
3	Nails	4.2 x 50 mm	8
4	Adhesive	310 ml	1

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



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

Packaging unit: 8 fire boxes per carton

Fire box part no. 00061237 for small downlight:

Item	Description	Dimensions	Units
1	Cover	321 x 321 x 21 mm	1
2	Side strips	300 x 180 x 21 mm	4
3	Nails	4.2 x 50 mm	8
4	Adhesive	310 ml	200 ml

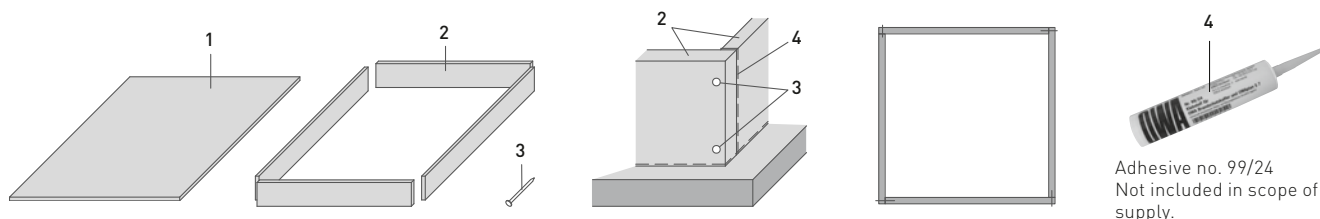
Adhesive is not included in the fire box set and must be ordered separately.

For integrated units weighing less than 3.5 kg, mounting frame no. 8069/1 or no. 8069/0 must be used for load transfer.

Installation:

The fire boxes are delivered in individual parts and must be assembled on site. At the corner points, the side parts are glued alternately and connected with 2 nails each. They are precisely notched in the area of the mounting frame. Then the frame made of side parts is glued to the OWAcoustic ceiling and the mounting frame. Finally, the cover is glued on.

All fittings that differ in size must be fitted with a fire box according to the drawing below. These are made of 21 mm thick MINOWA® BSK fire protection tiles, part no. 00082675, dimensions approx. 2400 x 1200 mm, as described above.



When integrating luminaires and other additional loads, a separate load transfer must be calculated and reviewed in accordance with the test report.

REI 30 tested cable glands

INSTALLATION OF TESTED CABLE GLANDS USING THE OWAconstruct FIRE RESISTANCE KIT NO. 99/28



Hole diameter for cable routing in the OWAacoustic tile
 $d \leq 40 \text{ mm}$



Cable bundles with a total diameter of $\leq 35 \text{ mm}$, whereby the individual cable diameter is limited to $\leq 19 \text{ mm}$.



The remaining hole cross section must be completely sealed with OWAconstruct fire protection kit no. 99/28, as shown in the figure.

Cable routing and penetration of the classified ceiling with individual electrical cables and cable bundles up to 40 mm can be carried out in accordance with PZ no. 3962_9026-CR. The principles of DIN 4102-4 and MLAR will also apply.

All deviating penetrations must be sealed separately and the suitability verified accordingly. If required, further expert design details can be requested from OWAconsult.

Penetration of room enclosing fire resistant components in accordance with DIN 4102-4

CONDUIT ROUTING AND PENETRATIONS IN ACCORDANCE WITH DIN 4102-4

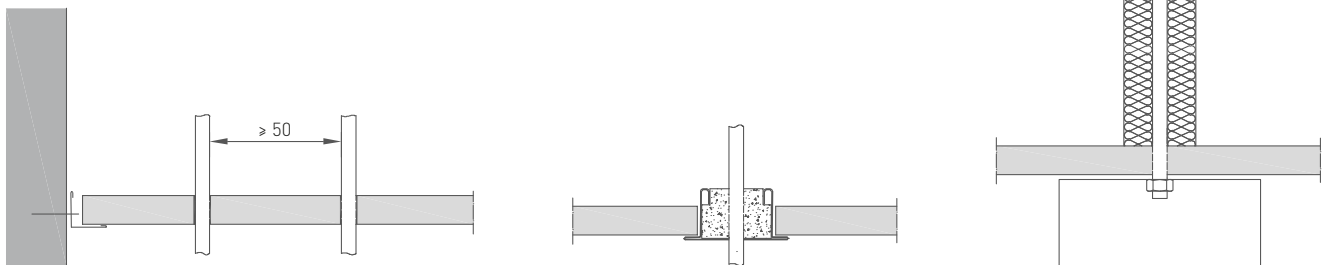
Installed fire loads in the ceiling cavity, such as cable insulation $\leq 7 \text{ kWh/m}^2$ (in accordance with DIN 4102-4) are regarded as low fire loads and considered negligible. If this heating value is exceeded, the cables must be sealed accordingly or protected by self-contained fire protection. [For more information on fire loads in the ceiling cavity, see page 11.](#)

The cables routed in the ceiling cavity are to be fastened to the ceiling slab using non-flammable fixing approved by the building authorities in such a way that an additional load is excluded during the required classification period of the suspended ceiling.

If the classified ceiling is penetrated with individual electrical cables, pipes for sprinklers, hangers (e.g. for lamps), the specifications of DIN 4102-4 (10.10) must be observed. The penetration cross sections must therefore be made insignificantly larger and the remaining annular gap must be sealed with fire protection kit no. 99/28 in full component thickness.

SINGLE PENETRATIONS IN ACCORDANCE WITH DIN 4102-4 THROUGH CLASSIFIED CEILINGS OR PARTS THEREOF

- individual electrical cables
- pipes for sprinklers
- hanger $\leq 20 \times 20 \text{ mm}$



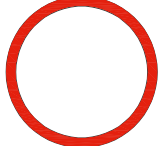
The gap between the conduit and the surrounding building component must be completely sealed with fire protection kit no. 99/28 or plaster mortar. See also "Working with fire protection kit", page 32.

Penetrating hangers $\leq 20 \times 20 \text{ mm}$ must be encased with mineral wool ($\geq 40 \text{ kg/m}^3$, $\geq 1000^\circ \text{C}$) for the full height of the space.

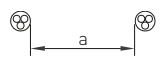
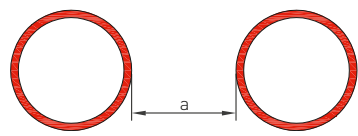
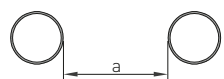
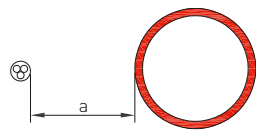
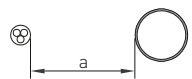
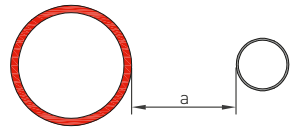
Further information on the possibilities of penetrations through space-enclosing fire-resistant ceilings can be found in the "Simplifications for individual ducts" in the MLAR under 4.3, see page 34.

In any case, the suitability of the selected penetration sealing measures must be checked by the planner, specialist planner, specialist contractor, etc. before execution and adapted in line with the required protection goals!

DIFFERENTIATION BETWEEN CONDUIT TYPES IN ACCORDANCE WITH MLAR 4.3

Type A		Electrical cables: – all types of cable with the exception of waveguide cables
Type B		Non-flammable conduits $d \leq 160$ mm: – flammable and non-flammable media, e.g. water – does not apply to aluminium and glass conduits – max. 2 mm flammable coating permitted
Type C		Inflammable conduits $d \leq 32$ mm: – non-flammable media, e.g. water – aluminium and glass conduits, conduits for cables

MINIMUM DISTANCE FROM PIPES WITHOUT INSULATION IN ACCORDANCE WITH MLAR 4.3.1

 	$a = 1 \times d$
	$a = 5 \times d$
	$a = 1 \times d$ (Type A or C)
	$a = 1 \times d$ (Type A) or $5 \times d$ (Type C)
	$a = 1 \times d$ (Type B) or $5 \times d$ (Type C)

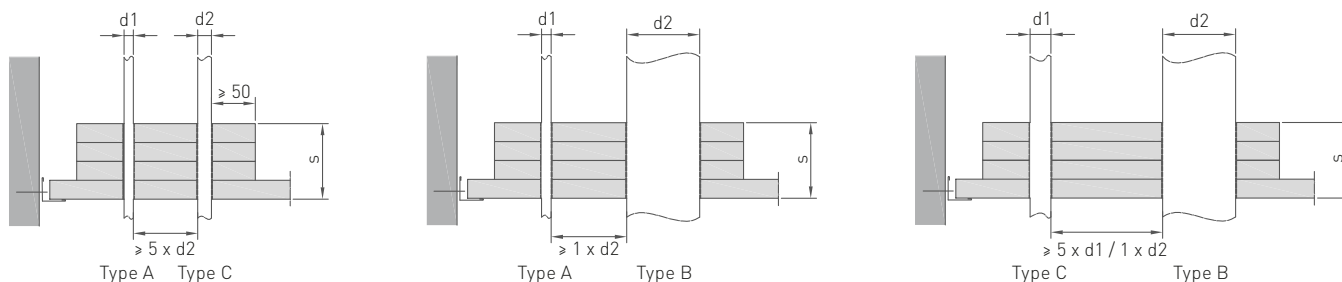
The largest distance determined must always be observed!

A precondition for this is observance of the required minimum component thicknesses **s** in the area of the gland:
 F 30 $\geq$ 60 mm F 60 $\geq$ 70 mm F 90 $\geq$ 80 mm

If there aren't any specifications for the minimum spacing between partitions, installation ducts or other components, a minimum space of ≥ 50 mm must be maintained.

EXAMPLES OF PENETRATIONS IN ACCORDANCE WITH MLAR

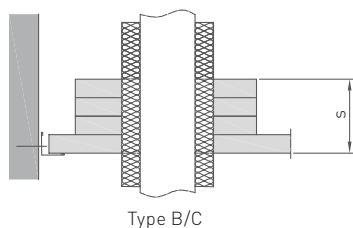
Examples of penetrations of several conduits without insulation in accordance with MLAR 4.3.1:



The gap between the conduit and the surrounding building component must be completely sealed with fire protection kit no. 99/28 or plaster mortar. See also "Working with fire protection kit", page 32.

The individual layers of the doubling to achieve the minimum component thickness s must be bonded using fire protection adhesive no. 99/24.

Example of an insulated single pipeline penetration according to MLAR 4.3.3:



Insulation is required in the bushing zone, as well as 500 mm above and below the component. It must be made of an inflammable material $\geq 1000^\circ \text{C}$ melting point.

In order to safely transfer the additional loads from the material reinforcement, the construction must be reinforced according to the specifications of [installation instructions 9801 e](#) under 5.5.

Important Note:

In practice, "facilitations" according to MLAR 4.3 are to simplify the documentation and verification. They do not need any rating plates and are not proved by fire tests. It is therefore essential to consult with the designer, specialist designer, specialist contractor, etc. before commencing work, and to check whether the MLAR has been adopted under building regulations in the relevant federal state and can be applied.

Please contact your local OWA team for your desired tender documents: www.owa.de/en/company/locations/

Self-contained fire protection unit Barriere B

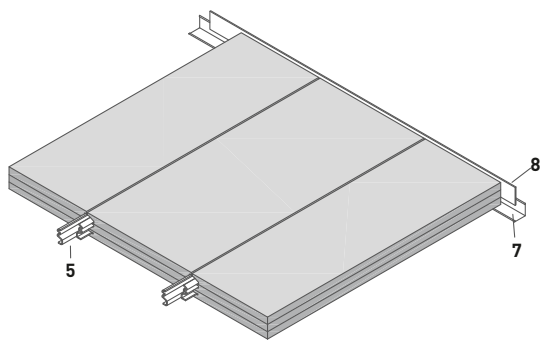
SEMI-CONCEALED – CONCEALED, REMOVABLE

EI 30 (A ↔ B)

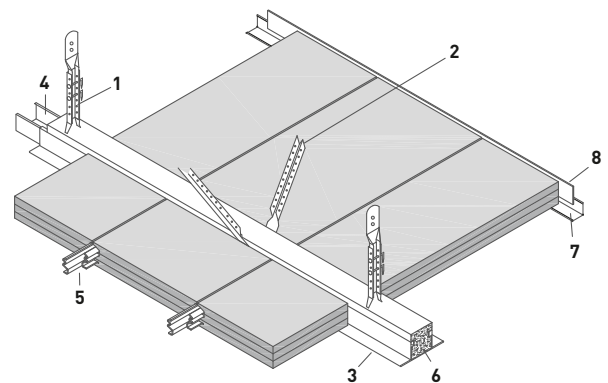
FIRE EXPOSURE FROM ABOVE AND BELOW – SMOKE-CONTAINMENT

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

Wall-to-wall installation



Installation using a bandraster profile

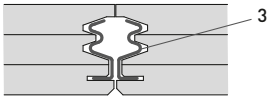


- 1 Nonius hanger no. 79/75, spacing < 625 mm
- 2 Nonius triangular bracing no. 17/80; for strip grid profile lengths of > 2500 mm, diagonal bracing is required on both sides, spacing max. 1250 mm
- 3 Bandraster profile no. 8025/100
- 4 Coupling no. 82/8025G
- 5 Barrier profile no. 37/25, thickness 2.0 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.

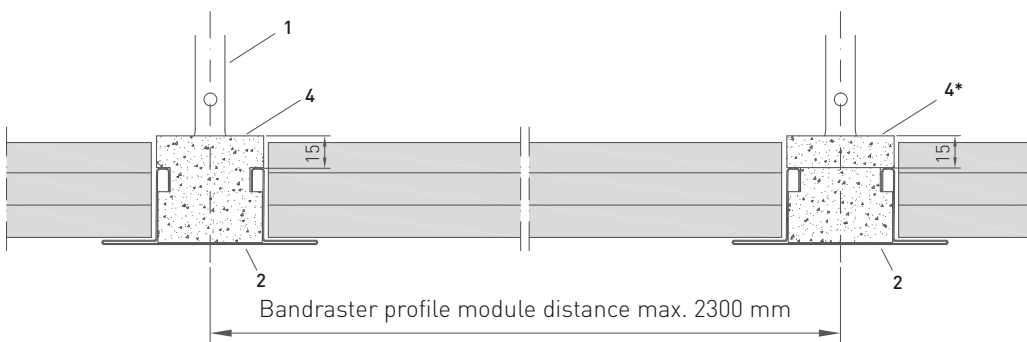
Self-contained fire protection unit Barriere B

CROSS-SECTION:

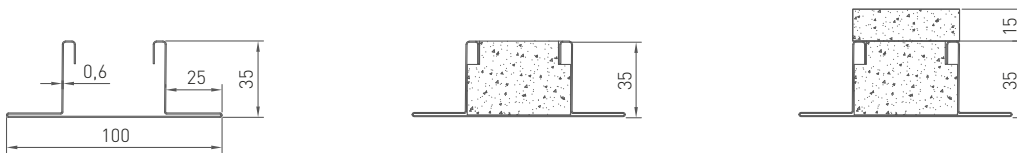


- 1 Nonius hanger no. 79/75, distance ≤ 625 mm
- 2 Bandraster profile no. 8025/100
- 3 Barrier profile no. 37/25, thickness 2.0 mm
- 4 Plasterboard adhesive, H = 50 mm (Bandraster profile height approx. 35 mm + 15 mm), the bandraster profile must be completely filled in on site and raised by 15 mm.

LONGITUDINAL SECTION:



Support on both sides of the bandraster: 25 mm



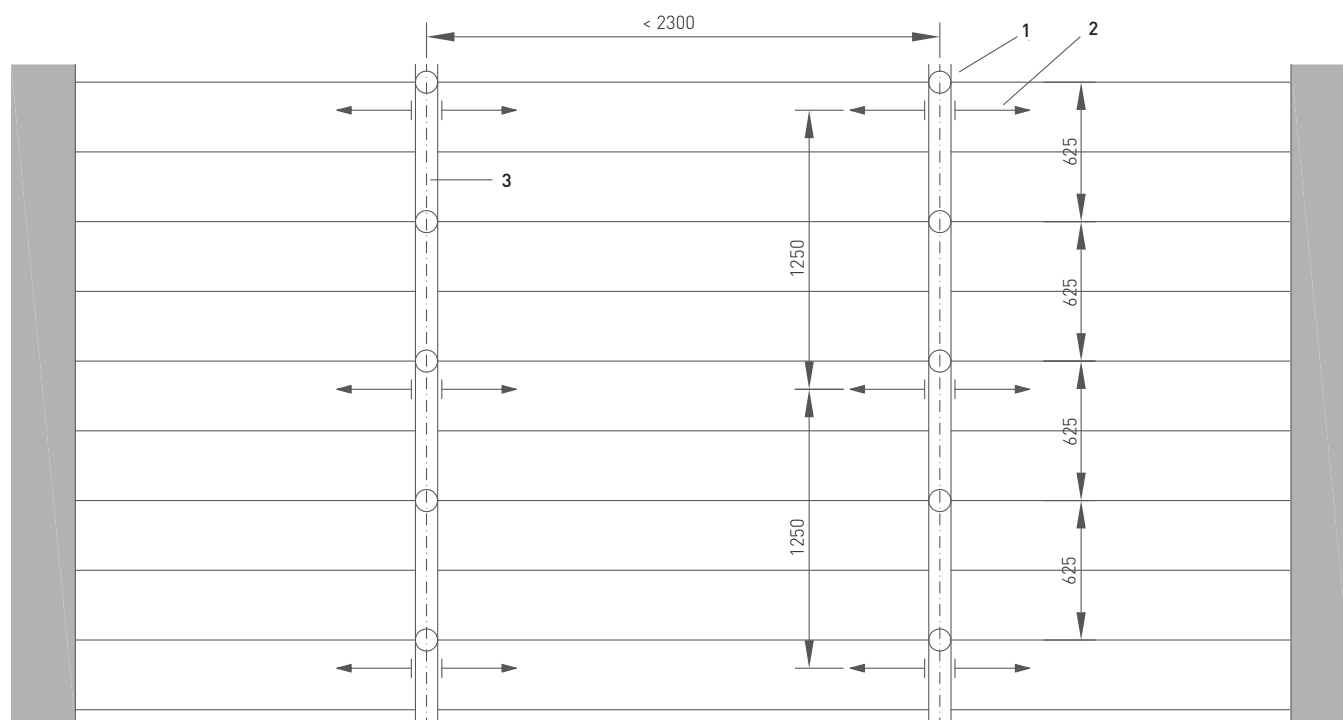
* Alternatively, instead of applying a 15 mm-thick layer of plasterboard adhesive, a strip of plasterboard provided by the client, 50 x 15 mm, can be fitted.

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:

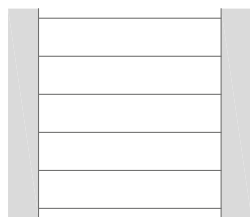


- 1 Nonius hanger no. 79/75, distance ≤ 625 mm
- 2 Nonius triangular stiffener no. 17/80;
from a bandraster profile length of > 2500 mm diagonal bracing is required on both sides; max. distance max. 1250 mm
- 3 Bandraster profile no. 8025/100

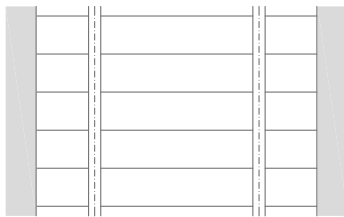
Installation

INSTALLATION EXAMPLES

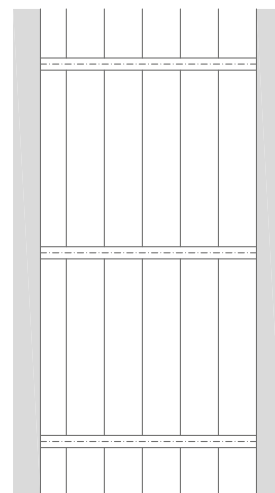
Installation examples in hallways:



clear spanning from wall to wall

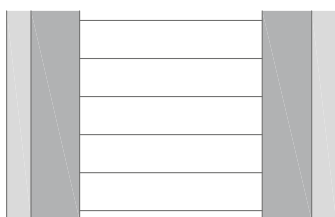


bandraster in longitudinal direction

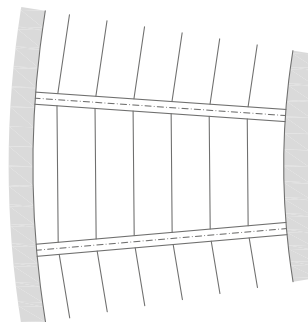


bandraster in the transverse direction

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

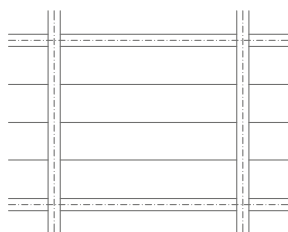


clear spanning with plasterboard margin on both sides

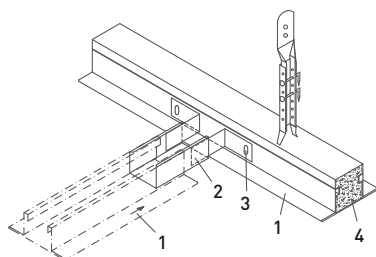


transverse banding profile in circular structures

Cross-grid installation:

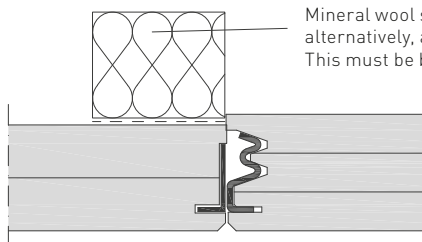


cross-grid



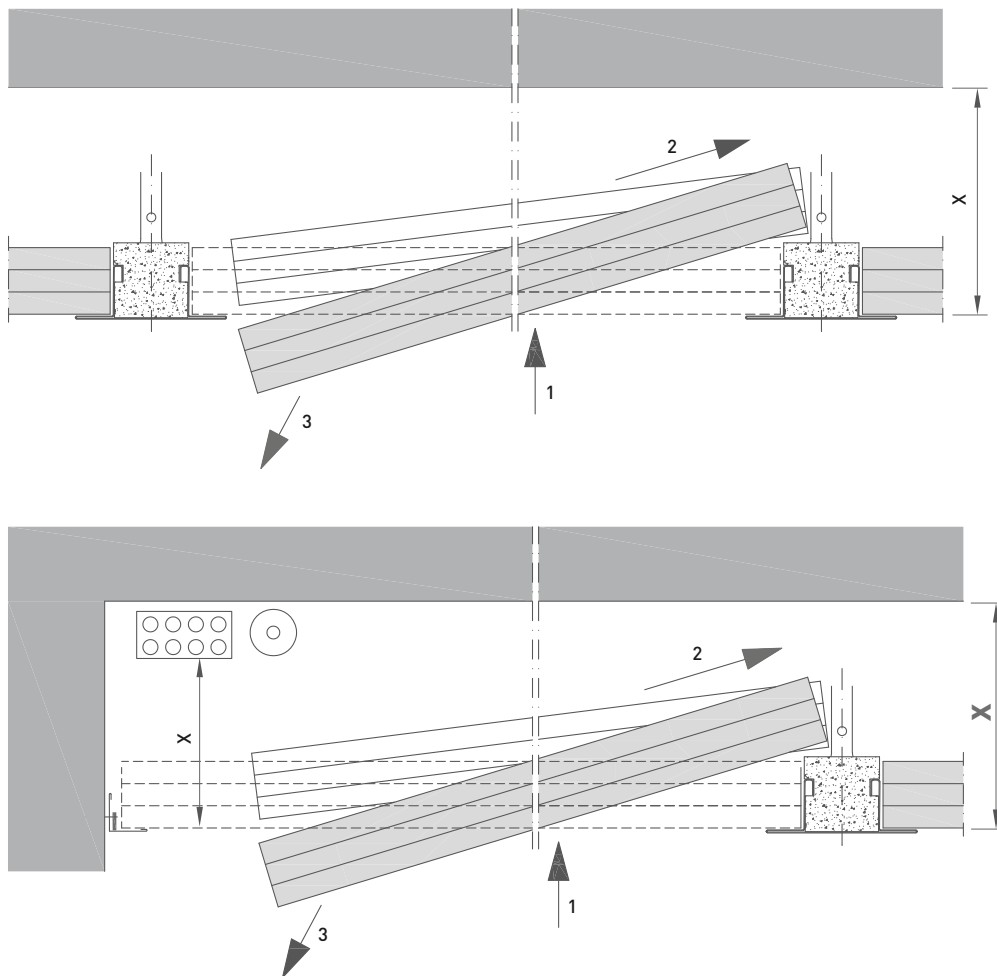
- 1 Bandraster profile no. 8025/100
- 2 Wall anchor no. 75/76
- 3 Quick-fit screw 4.2 x 19 mm
- 4 Plasterboard adhesive

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 x 45 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.

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:

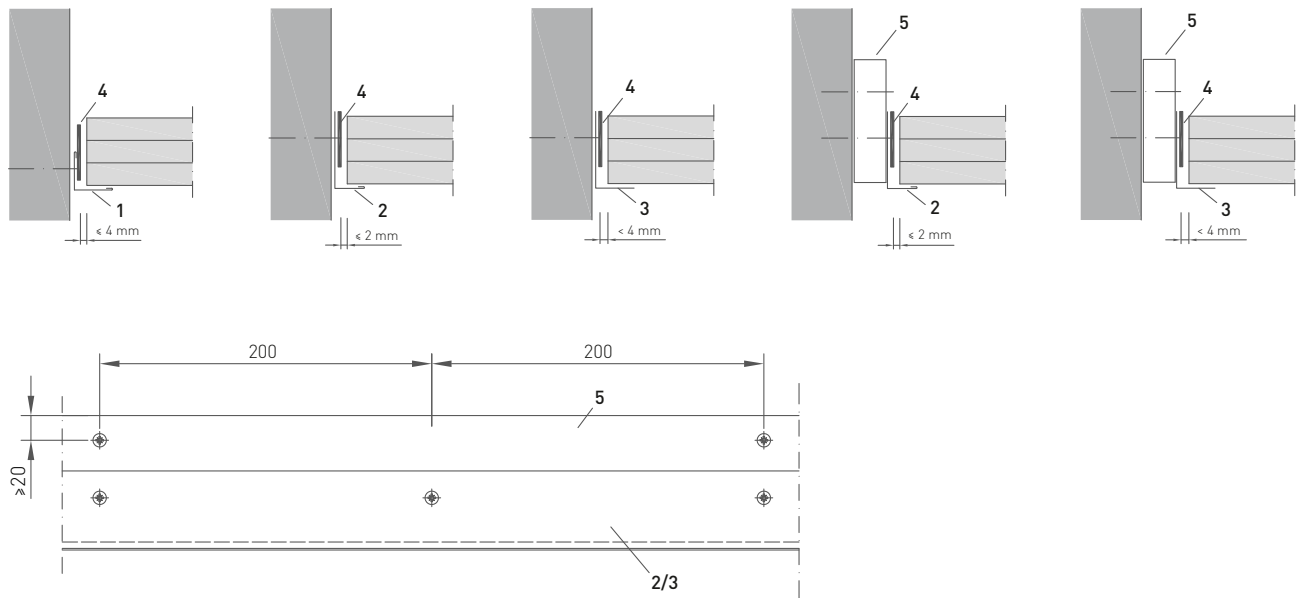
Application of intumescent strip no. 4439

- Wall angle no. 51/25 = 1/2 wall angle - 1/2 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.



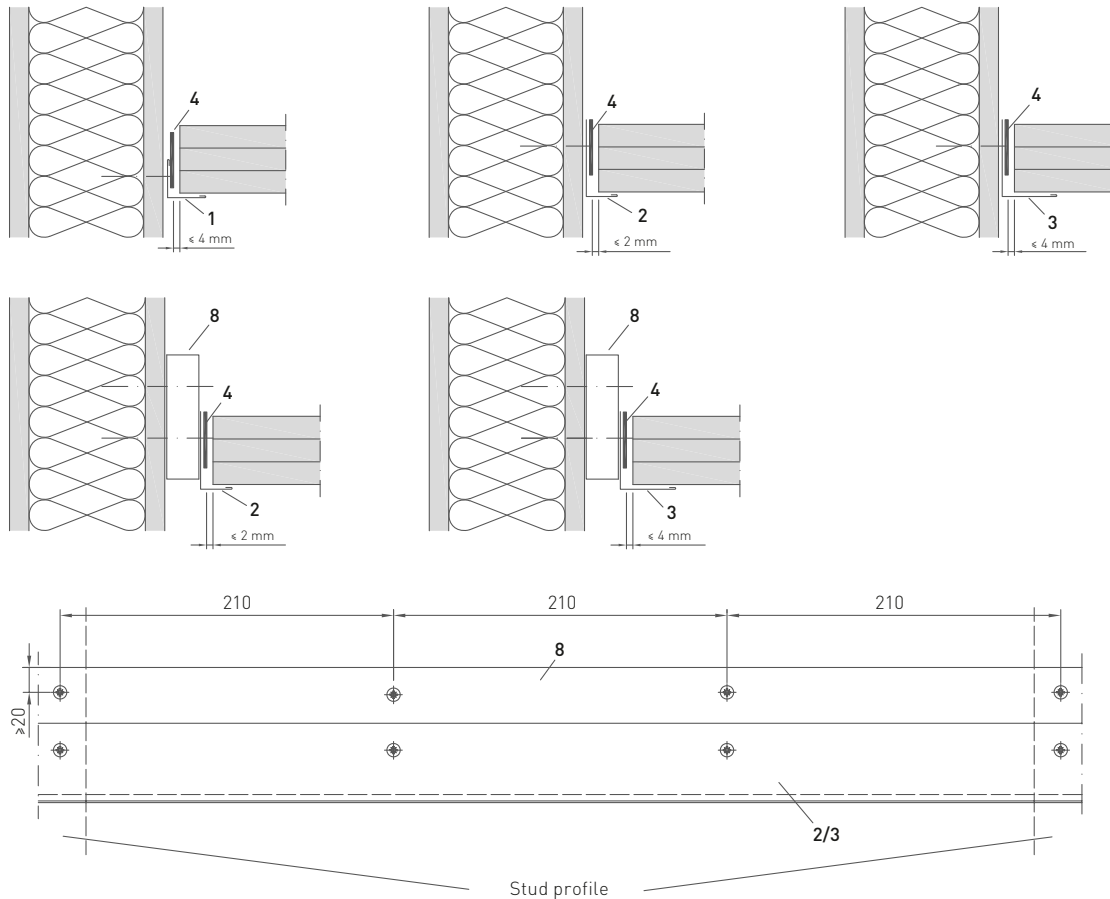
- 1 Wall angle no. 51/25, 25/25 - 1 mm
- 2 Wall angle no. 51/20, 50/20 - 1 mm
- 3 Wall angle no. 51/1, 50/35 - 1 mm
- 4 Intumescent strip no. 4439, thickness 2.0 mm, width 36 mm
- 5 Strips of plasterboard 80 x 18 mm

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.

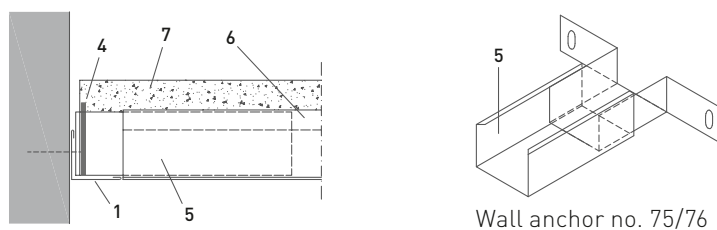


Not every wall that has been tested for fire resistance is suitable for connection to the OWAcoustic Barriere ceiling system. This must be checked in advance.

WALL CONNECTION BANDRASTER

Please note:

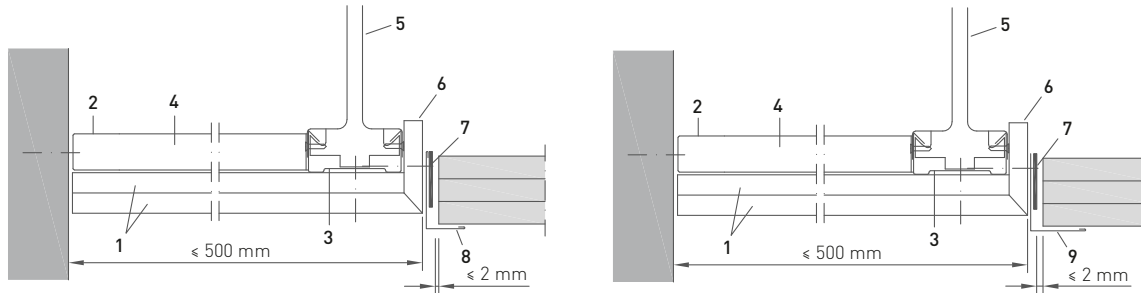
Overlapping of the incoming bandrafter profiles is permitted. Lateral bracing is essential.



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

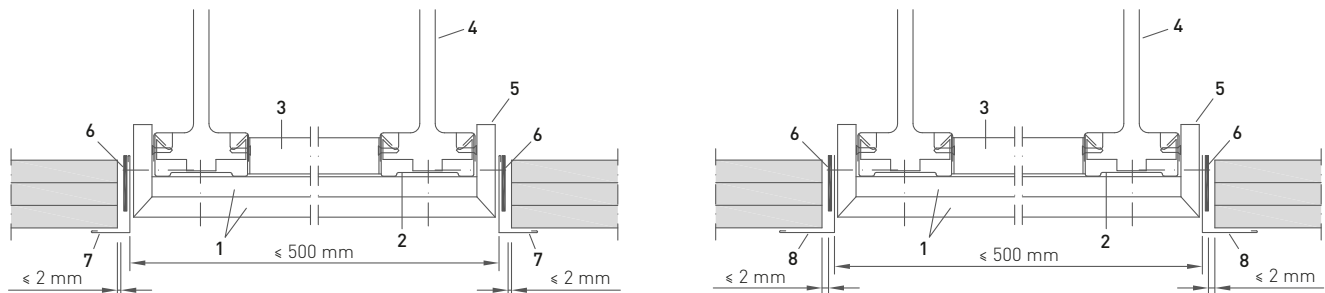
The optional illustrated details can be installed onto the specified structural wall. Additional combination options can be found in the supplementary German certificate no. GA-2016/041c-Ap.

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

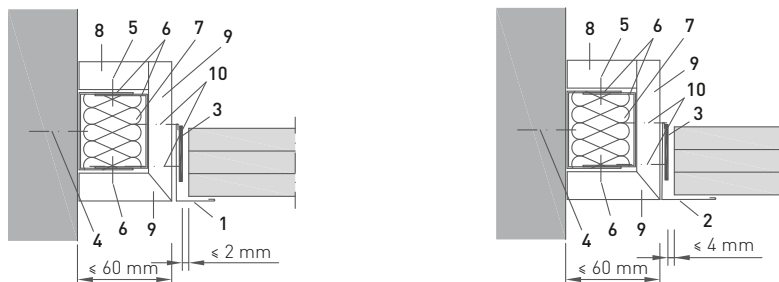


- 1 Fire resistant plasterboard, thickness 2 x 12.5 mm
- 2 Basic profile CD 60/27 - 0.6 mm
- 3 Cross-section CD 60/27 - 0.6 mm, distance 500 mm
- 4 Nonius hanger [0.4 kN] screwed to the CD profile, distance ≤ 500 mm
- 5 Fire resistant plasterboard, thickness 12.5 mm, height 60 mm
- 6 Intumescent strip 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!

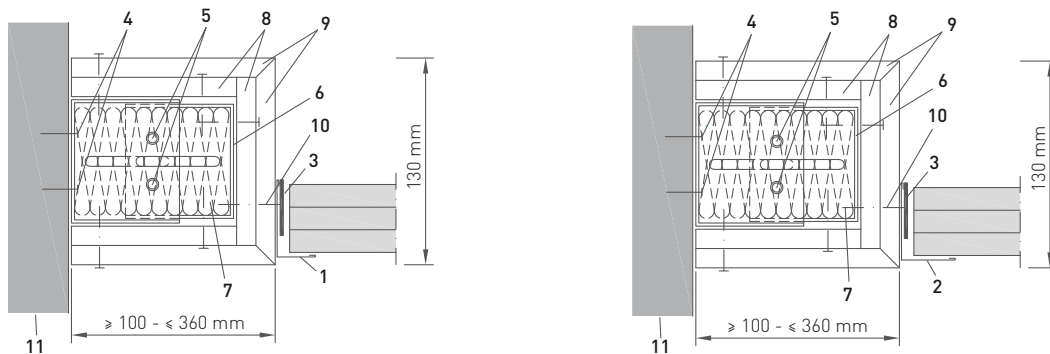
Margin installation variants (in accordance with supplementary German certificate no. GA-2016/041c-Ap)

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:

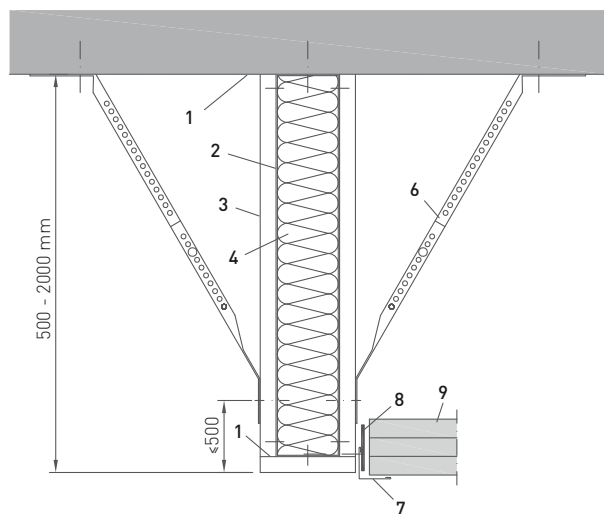


- 1 Wall angle no. 51/20, 50/20 – 1 mm
- 2 Wall angle no. 51/1, 50/35 – 1 mm
- 3 Intumescent strip no. 4439, thickness 2.0 mm, width 36 mm
- 4 For solid walls: metal plugs (on site), diameter 6 mm and screw, fixing spacing every 400 mm
on Plasterboard wall: metal cavity wall plugs (installed on site), 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

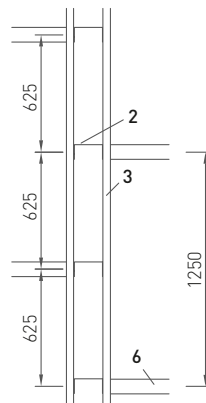
Plasterboard bulkhead

PLASTERBOARD BULKHEAD REINFORCED ON BOTH SIDES

Section:



Top view:

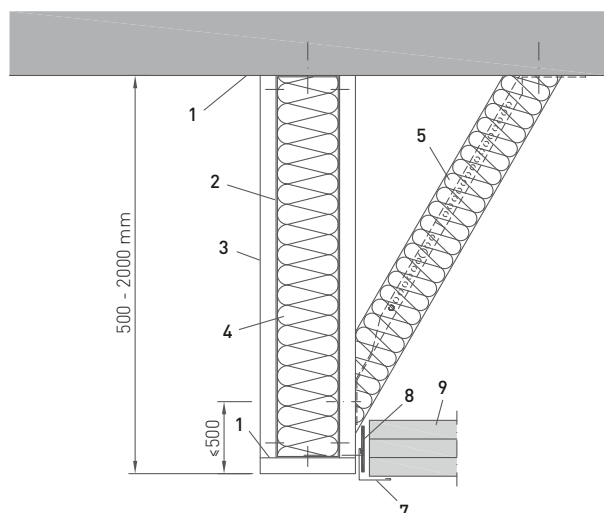


For plasterboard bulkheads with a height of ≤ 500 mm, diagonal bracing is not required.

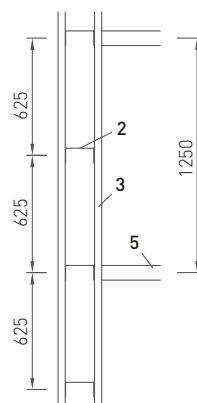
- 1 UW-profile 50 x 40 x 0.6 mm, Fixing using M8 wall plugs approved for building use, $a \leq 400$ mm
- 2 CW-profile 50 x 50 x 0.6 mm, $a \leq 625$ mm screwed to the UW profile using a 4.8 x 18 mm sheet metal screw
- 3 Plasterboard bulkhead panel 12.5 mm, Fixing with drywall screws 3.5 x 25 mm, $a \leq 200$ 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:



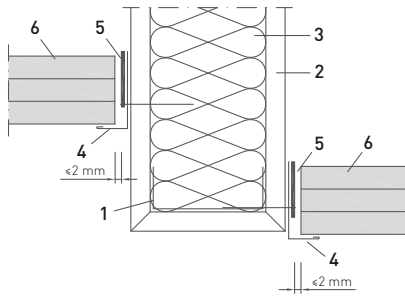
Top view:



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

Plasterboard ceiling bulkhead

CEILING BULKHEAD

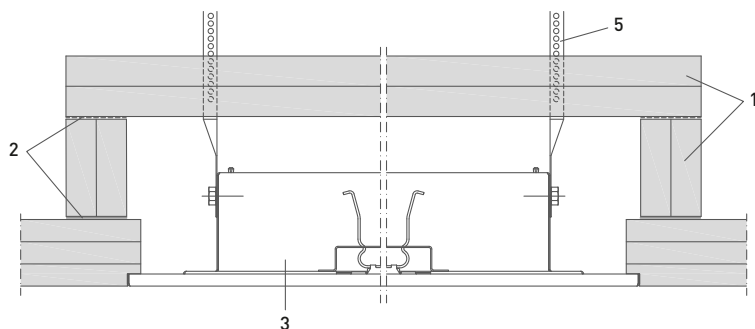


- 1 UW profile 50 x 40 x 0.6 mm, Fixing using M8 wall plugs approved for building use, $a \leq 400$ mm
- 2 Plasterboard bulkhead panel 12.5 mm, Fixing with drywall screws 3.5 x 25 mm, $a \leq 200$ mm
- 3 Mineral wool $d = 40$ mm, $A_1 - 40$ kg/m³
- 4 Wall angle no. 51/20, Fixing with drywall screws (flat head + double thread) ≥ 3.5 x 35 mm, $a \leq 210$ mm, every third screw in the upright profile
- 5 Intumescent strip no. 4439
- 6 Barriere-element

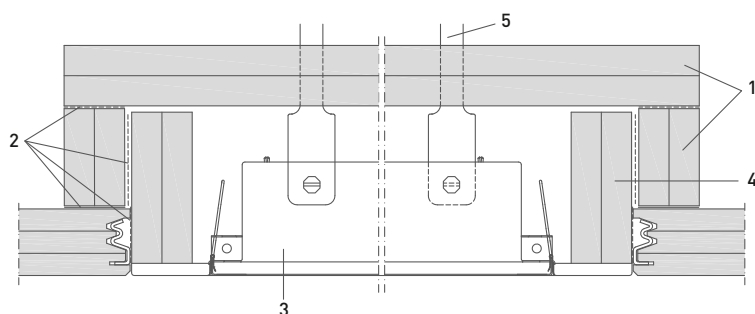
El 30 fire box for integrated lighting

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:

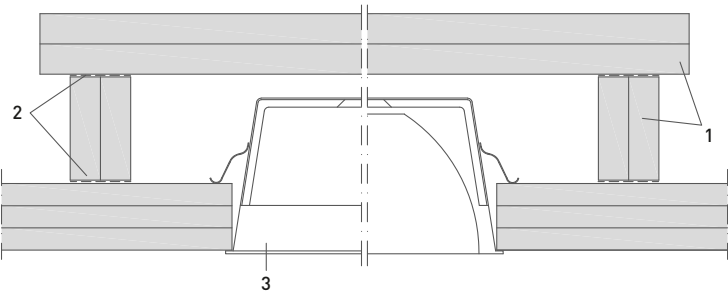
No.	Description	Dimension	Piece
1	Cover	1320 x 440 x 40 mm	1
2	Side stripes	1260 x 70 x 40 mm	2
2	Side stripes	355 x 70 x 40 mm	2
3	Nail	3.0 x 80	8
4	Adhesive	310 ml	4

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

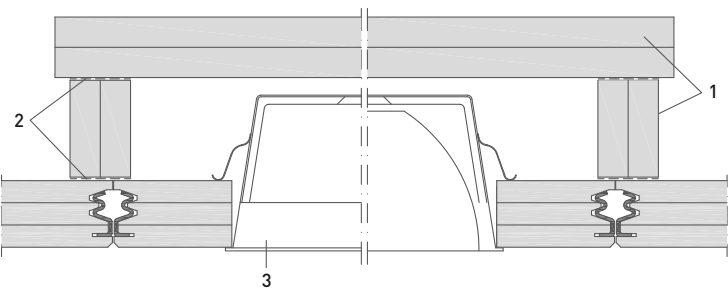
EI 30 fire box for downlights

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 Ø ≤ 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

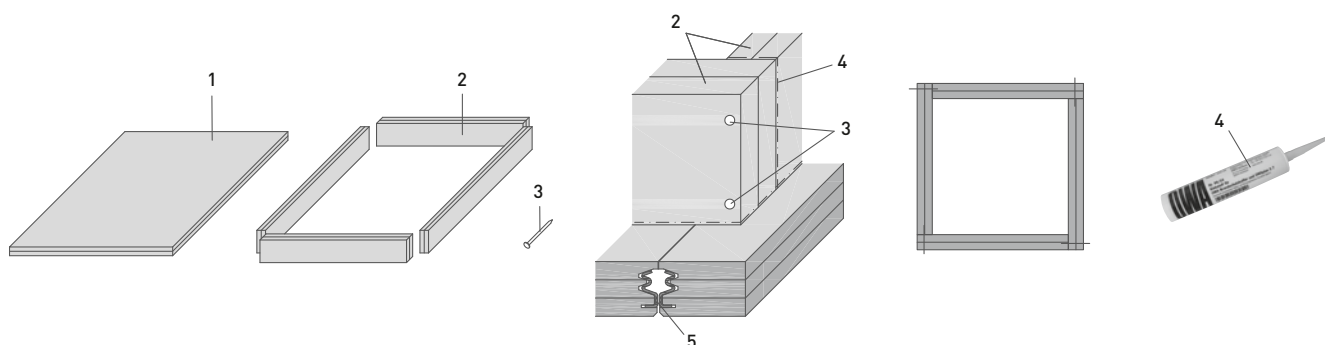
INSTALLING INTEGRATED LIGHTING WITH A FIRE BOX

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

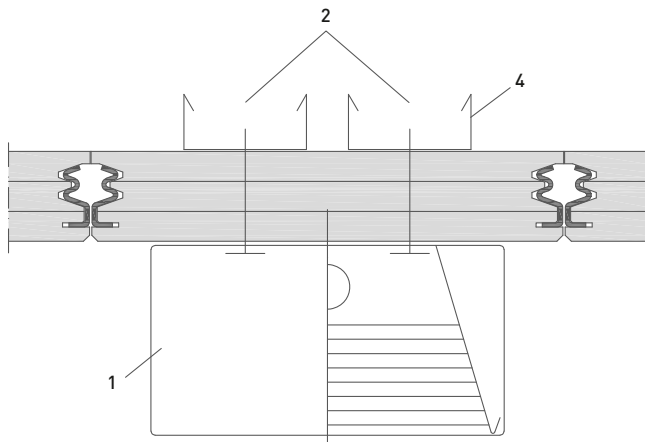


All non-standard-sized integrated lights must be fitted with a fire box in accordance with the drawing above. These are manufactured from 40 mm thick MINOWA® BSK fire protection tiles, part no. 00082674, dimensions approx. 2500 x 1250 mm, as described above.

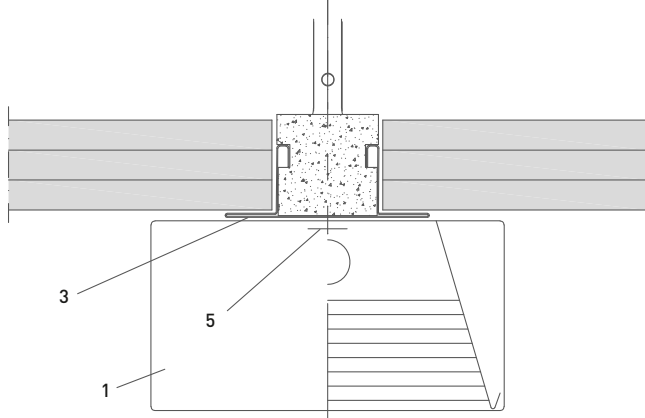
Components

COMPONENTS UP TO MAX. 6 KG

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



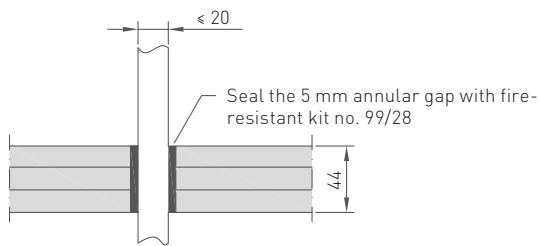
Installation to the bandraster profile



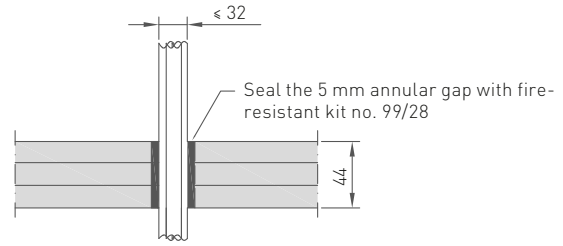
- 1 Superstructures
- 2 Secure each of the 3 CD profiles using a 6.0 x 80 mm drywall screw
- 3 Bandraster profile no. 8025/100 with connecting bracket
- 4 The CD profile must not be more than 5 mm shorter than the pattern elements. The load must be transferred to the wall profile or the bandraster profile. 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)

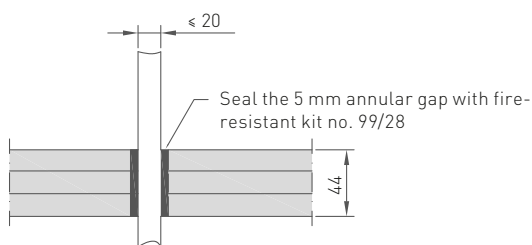
Single-cable penetration:



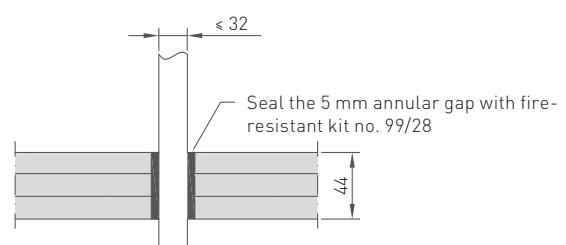
Cable bundle penetration:



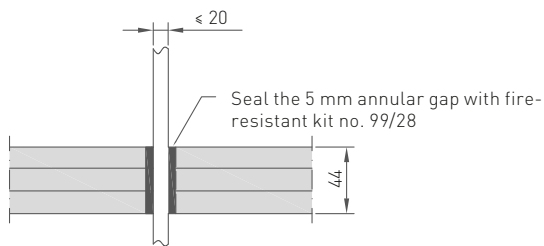
Hanger penetration (e.g. Nonius hanger):



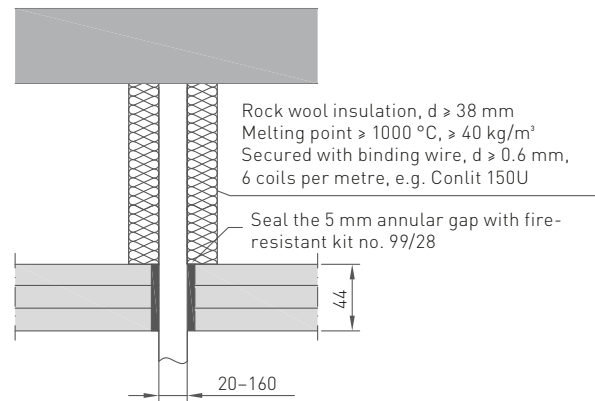
Combustible pipe penetration:



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.

Self-contained fire protection unit Barriere B

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

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Certified Management Systems

Technical consultation

This brochure provides a comprehensive overview of the possibilities of fire protection with OWAacoustic ceilings.

Our OWAconsult team provides planning support from the very beginning - from tenders to acoustic calculations, with installation plans and determination of material requirements. From advice on special tasks to support in the development of design concepts.

Please contact your local OWA team for any questions: www.owa.de/en/company/locations/

Product warranties

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Certified Management Systems

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