



Knauf Attic Systems

D610.de – Knauf Attic System – without Frame

D611.de – Knauf Attic System – Timber Frame

D612.de – Knauf Attic System – Metal Grid with CD Channels

D613.de – Knauf Attic System – Metal Grid with Resilient Channels

Note on English translation / Hinweise zur englischen Fassung

This is a translation of the System Data Sheet valid in Germany.

All stated details and properties are in compliance with the regulations of the German standards and building regulations. They are only applicable for the specified products, system components, application rules, and construction details in connection with the specifications of the respective certificates and approvals.

Knauf Gips KG denies any liability for applications outside of Germany as this requires changes acc. to the respective national standards and building regulations.

Dies ist eine Übersetzung des in Deutschland gültigen Detailblattes. Alle angegebenen Werte und Eigenschaften entsprechen den in Deutschland gültigen Normen und bauaufsichtlichen Regelungen. Sie gelten nur bei Verwendung der angegebenen Produkte, Systemkomponenten, Anwendungsregeln und Konstruktionsdetails in Verbindung mit den Vorgaben der bauaufsichtlichen Nachweise.

Die Knauf Gips KG lehnt jegliche Haftung für Einsatz und Anwendung außerhalb Deutschlands ab, da in diesem Fall eine Anpassung an nationale Normen und bauaufsichtliche Regelungen notwendig ist.

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Notes on the document

Knauf system data sheets are the basis for planning and application for planners and professional installers when applying Knauf systems. The contained information and specifications, constructions, details and stated products are based, unless otherwise stated, on the Certificates of Usability (e.g. National Technical Test Certificate (e.g. abP) valid at the date they are published as well as on the applicable standards. Additionally, design and structural requirements and those relating to building physics (fire resistance and sound insulation) are considered.

The contained construction details are examples and can be used in a similar way for various cladding variants of the respective system. At the same time, the demands made on fire resistance and/or sound insulation as well as any necessary additional measures and/or limitations must be observed.

References to other documents

System data sheets

- [Knauf Board Ceiling D11.de](#)
- [Knauf Cleano Acoustic Board Ceilings D12.de](#)
- [Knauf Wood Joist Ceiling Systems D15.de](#)
- [Knauf Metal Stud Partitions W11.de](#)
- [Knauf Furring W61.de](#)
- [Knauf Installation Shaft Walls W62.de](#)

Folders

- [Fire resistance with Knauf BS1.de \(German only\)](#)
- [Sound insulation and room acoustics with Knauf \(only sections in English\)](#)

Product data sheets

- Observe the product data sheets of the Knauf system components.

Symbols in the system data sheet

The following symbols are used in this document:

Insulation layers

- Ⓔ Mineral wool insulation layer acc. to EN 13162
Non-combustible
(insulating material, e.g. from Knauf Insulation)

Spacings of ceiling grid

- Ⓐ Spacing of suspenders / anchors / rafters
- Ⓑ Axial spacing furring timber batten / furring channel / Resilient Channel (cladding span width)
- Ⓒ Axial spacing carrying timber batten / carrying channel (spacing furring timber batten/furring channel)

Legend symbols

- 1 Legend number that will be explained when used

Intended use of Knauf Systems

Please observe the following:

Caution

Knauf systems may only be used for the application cases specified in the Knauf documentation. In case third-party products or components are used, they must be recommended or approved by Knauf. Flawless application of products / systems assumes proper transport, storage, assembly, installation and maintenance.

General notes on Knauf systems

Term definitions

Knauf attic systems can be applied as ceiling linings or suspended ceilings. The following definition applied acc. to DIN 18168:

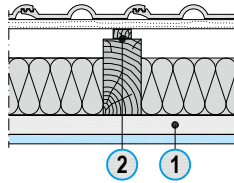
Ceiling linings and suspended ceilings are: "... ceilings of even or other design with smooth, perforated or jointed surface consisting of a substructure and a surface layer forming the area. In the case of ceiling linings, the substructure is anchored directly to the load-bearing building component; in the case of underceilings the substructure is suspended. ...".

Notes on fire resistance

Division of the partial construction elements with demands on the fire resistance

- 1 Lining or grid and cladding
- 2 Roof construction of solid timber including roofing:

- Hard roof:
Concrete roofing tile, tile, slate, cement hardboard
- No requirement:
e.g. sheet metal roof, reed roofs



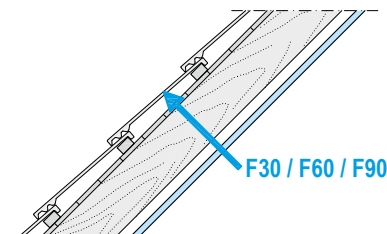
Fire resistance effect

The fire resistance effect of attic systems is classified for the support construction in conjunction with an under roof side ceiling lining / suspended ceiling. An infill insulation may be required for the classification depending on the respective construction. There may also be requirements depending on the type of roofing.

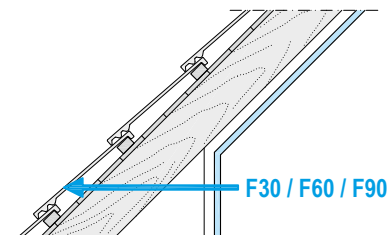
Note

The required fire resistance class from below can be provided alternatively by a separate suspended ceiling, see [system data sheet Knauf Board Ceiling D11.de](#). In this case there is no fire resistance related requirement on the roof construction. 2

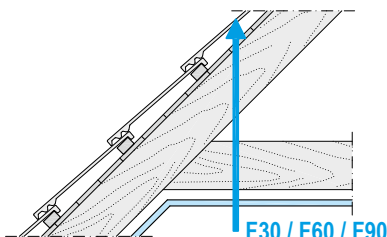
The necessary board and insulation layer thickness's of the fire protection constructions of the attic systems on pages 10 to 25 apply for the construction of:



Clad roof constructions made of solid timber
(nailed roof framing not permissible)



External wall below eaves (Jamb corners)
In conjunction with the roof constructions (not accessible) behind them



Collar beams
(Without upper covering) in conjunction with the with the roof constructions (not accessible) above them

Note

For accessibility to the spaces above collar beams or behind jamb walls, requirements and constructions as for wood joist ceilings (technical fire resistance classified wood joist ceilings with cover on top) or for partitions shall apply.

Cable and pipe penetrations

Individual electrical cables can be routed through classified ceilings if the remaining cross-section of the penetration is fully sealed with gypsum or similar.

For further specifications refer to [Fire Resistance with Knauf BS1.de \(German only\)](#) chapter "Cable and pipe penetrations".

Construction notes

Movement joints

Movement joints of the main structure are integrated into the construction of the cladding / suspended ceilings. Use control joints in the case of ceiling areas over approx. 15 m length, or for narrow ceiling spaces caused by a break of a wall.

Connections

Connections to constructional components that make contact with the outdoor air must be airtight.

Building physics information

- Observe the specifications for thermal and moisture protection e.g. from Knauf Insulation. When necessary, building physics specialized planning is required.
- The air tightness must be guaranteed by constructional measures (refer to DIN 4108-7).

Notes on sound insulation

Requirements for the insulation layer:

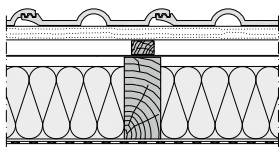
Mineral wool insulation layer acc. to EN 13162

(Insulation materials, e.g. from Knauf Insulation);

Length-related flow resistance of $5 \text{ kPa} \cdot \text{s/m}^2 \leq r \leq 50 \text{ kPa} \cdot \text{s/m}^2$ acc. to DIN 4109-33:2016-07

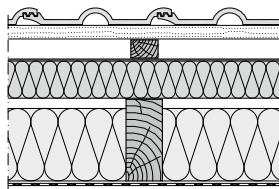
R_w = Weighted sound reduction index in dB without sound transmission via flanking building components

Test set-ups airborne sound insulation

Test set-up
without above rafter insulation

Pitched roof:

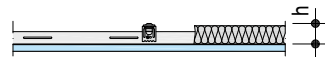
- Concrete roofing tiles
- Battens 50 x 30 mm and counter battens 50 x 30 mm
- Vapour permeable under roof sheet membrane
- Collar beams/rafters (structural timber) 80 x 180 mm, axial spacings 770 mm
- Mineral wool insulation layer 160 mm, pushed between the beams
- Vapour-inhibiting vapour retarder
- Roof pitch 80°

Test configuration
with above rafter insulation

Pitched roof:

- Concrete roofing tiles
- Battens 50 x 30 mm and counter battens 60 x 40 mm
- Vapour permeable under roof sheet membrane
- Above rafter insulation 80 mm pitched roof insulation board SDP-035-GF
- Collar beams/rafters (structural timber) 80 x 180 mm, axial spacings 770 mm
- Mineral wool insulation layer 160 mm, pushed between the beams
- Vapour-inhibiting vapour retarder
- Roof pitch 80°

or

Test configuration
Attic cladding

Suspended ceiling

suspended or directly anchored

- Damping Universal Bracket suspension height (h) about 55 mm or Resilient Channel
- Wood joist 50 x 30 mm or profile CD 60/27
- Without/with insulation below rafters
- Knauf boards

Proofs of Usability

Knauf System	Fire resistance	Sound insulation / Airborne sound (Knauf sound protection proofs)	
D610.de	AbP P-SAC02/III-726	With raftersqueeze insulation	L 054-09.18
D611.de		■ With raftersqueeze insulation ■ With above rafter and raftersqueeze insulation	
D612.de			
D613.de			

The stated constructional and structural properties, and characteristic building physics of Knauf systems can solely be ensured with the exclusive use of Knauf system components, or other products expressly recommended by Knauf. The validity and up-to-datedness of the stated proofs have to be considered.

Notes on fire resistance

The specifications marked with **plus** offer additional application options, which are not directly included in the Proof of Usability. On the basis of our technical assessments, we assume that these marked design solutions can be assessed as a non-significant divergence. On request, we can make the documentation on which this assessment is based, such as experts opinions or technical assessments, available to you together with the Certificate of Usability. We recommend that a non-significant divergence be coordinated and authorised in advance in consultation between the persons responsible for fire resistance and/or the relevant authorities.

plus Extension of the fire resistance Proof of Usability

Prior consultation with respect to fire resistance notes recommended.

Knauf System	System-related deviations	System-wide divergences
D610.de	<ul style="list-style-type: none"> ■ For application without grid 	<ul style="list-style-type: none"> ■ When using extended furring timber battens/profile spacings ■ When using extended supporting structure spacings ■ In case of divergence with the insulation thickness ■ In case of divergence with the requirement for roofing ■ When implementing connections to lightweight partitions ■ When carrying out cladding in the transition area between roof slope / collar beam / external wall below eaves ■ When implementing alternative connection backing
D611.de	<ul style="list-style-type: none"> ■ In case of application of suspended furring timber battens ■ In case of divergence with the furring timber batten cross-section 	
D612.de	<ul style="list-style-type: none"> ■ For variant with adjusting clip 	
D613.de	<ul style="list-style-type: none"> ■ For variant with Resilient Channel 	

Fundamentals for rating the ceiling weight

To read off the spacings required for the grid, to begin with it is necessary to determine the load class taking the self-weight of the selected system variant including any existing or planned additional loads into consideration.

Example: D612.de – Without fire resistance – Metal grid with CD Channels

Step 1:

Determination of the rated weight

The rated weight is used for determining the necessary frame and does not include any safety values. In dependence on the selected cladding thickness (system variants), the rated weight (cladding with frame) of the attic lining / subceiling lining can be read off from the table on pages 26 and 27.

Cladding	Thickness t mm	Nominal weight Without insulation layer kg/m ²	Furring channel Max. axial clearances (b) mm

D612.de Attic system with metal grid CD Channel

•	2x 12.5	28.3	500
•	2x 12.5	39.4	400

Note

Rated weight with larger board thicknesses and/or other board types on request.

Step 2:

Consideration of additional loads

Additional loads, e.g. consisting of fire resistance necessary and unnecessary insulation materials, as well as planned anchoring loads (see page 31) increase the total area weight of the attic lining / suspended ceiling and must be considered with the rating of the load class. (Rated weight + weight of additional loads = total area weight)

Example: Additional load 2 kg/m²

Step 3:

Determination of the load class

Based on the resulting total area load of the ceiling attic lining / suspended ceilings, the corresponding load class (kN/m²) can be determined from the load class diagram.

Load class kN/m ²	Rated weight + weight of additional loads kg/m ²
Up to 0.65	60
Up to 0.50	50
Up to 0.40	40
Up to 0.30	30
Up to 0.15	20
	10

Note

The load class up to 0.40 kN/m² is not listed for all system variants. For loads > 0.30 and ≤ 0.40 kN/m² the load class 0.50 kN/m² must be selected here.

The self-weight of the ceiling may not exceed 0.50 kN/m² (DIN 18168-1). The load class up to 0.65 kN/m² may only be used in combination with additional loads, e.g. lighting fixtures.

Step 4:

Dimensioning of the grid

Using the determined load class, the maximum permissible spacings of the suspenders / anchors / rafters (a) as well as the profiles / timber battens (b) can be read off (c) from the tables "System variants" and "Maximum grid spacings" depending on the fire resistance requirements and the selected grid/frame.

Dimensions in mm

Axial spacing of furring channel (b)	Spacings of suspenders/anchors Load class kN/m ² (a)			
	Up to 0.15	Up to 0.30	Up to 0.40	Up to 0.50
Universal Bracket 0.40 kN				
400	1475	1175	950	1000
500	1400	1100	975	925
625	1300	1025	925	850
800	1200	950	850	800

Notes

"Nominal weights attic systems" on pages 26 and 27.

Construction spacings to the external wall below eaves see [system data sheet Knauf Furring and Lining W61.de](#) or [system data sheet Knauf Installation Shaft Walls W62.de](#).

Knauf attic systems

Knauf attic systems are ceiling linings (directly fastened) for the lower side of the roof and suspended ceilings. In conjunction with the collar beams / rafter construction, roofing and insulation located above, they are evaluated together in terms of their fire resistance and sound insulation quality.

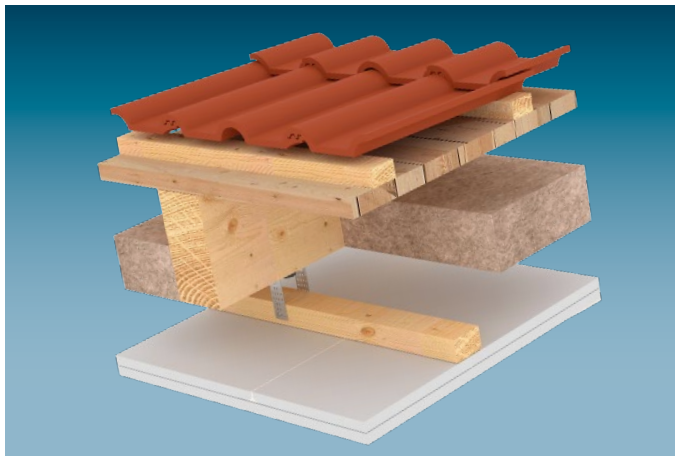
D610.de Without frame (direct lining)



D610.de Knauf boards are screwed directly onto the rafters / collar beams using Drywall Screws.

The attic system can be implemented both without as well as with fire resistance in various cladding qualities.

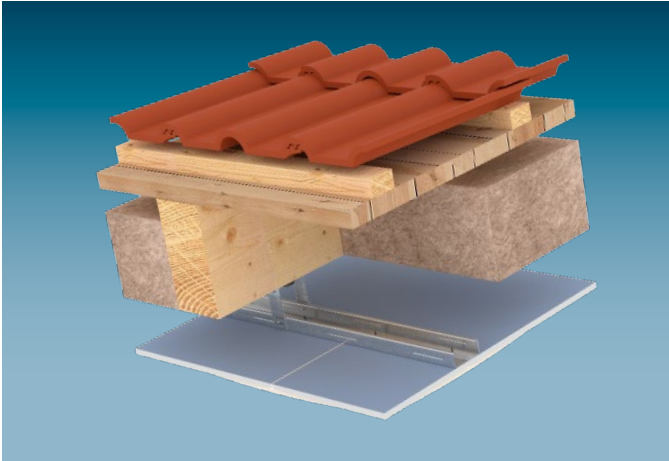
D611.de Wood frame



D611.de Knauf boards are screwed onto a wooden frame made of furring timber battens (single batten frame). The frame is either connected directly with Knauf Drywall Screws or connected using Universal Brackets / Damping Universal Brackets to the rafters / collar beams.

The attic system can be implemented both without as well as with fire resistance in various cladding qualities.

D612.de Metal grid with CD Channels



D612.de Knauf boards are attached to a frame made of sheet metal profiles CD 60/27 as a furring channel (single layer profile) or to a metal grid made of carrying and furring channels (double layer profile). The fastening of the frame should be with the anchoring clip, adjusting clip or Universal Bracket / Damping Universal Bracket to the rafters / collar beams. The attic system can be implemented both without as well as with fire resistance in various cladding qualities.

D613.de Metal grid with Resilient Channels

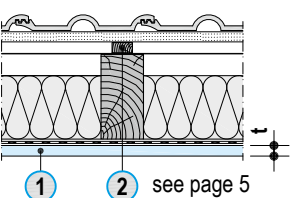
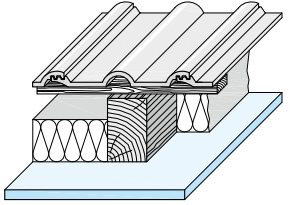


D613.de Knauf boards are fixed with screws to a metal grid of Resilient Channels. The frame is attached directly to the rafters / collar beams using Knauf Drywall Screws.

The attic system can be implemented both without as well as with fire resistance in various cladding qualities.

System variants

Without fire resistance

	1 Attic lining / suspended ceiling							Roofing Required for fire resistance ²⁾	Sound reduction index R_w ¹⁾ With raftersqueeze insulation			
Fire resistance class	Cladding (lateral application)					Rafters/ joists	Insulation layer Required for fire resistance in the cavities between the rafters / joists		Above rafter insulation			
	Knauf Wallboard	Knauf Piano fire-resistant board	Massivplatte Solid Board	Diamant	Silentboard	Mini- mum thick- ness t mm	Max. axial spac- ings b mm	Mini- mum thick- ness mm	Min. density kg/m ³	Without	With	
										Direct cladding dB	Direct cladding dB	
D610.de Knauf attic system – without frame (direct lining)												
	-		•			20	800 ³⁾	-		-	50	-
			•			25	800				50.5	-

1) Sound insulation: Test set-up see page 6

2) See page 5

3) In the area of the collar beam layer or for rafters up to 25° pitch it is recommended to apply backing to the long edge joints of the joists / rafters > 625 mm.

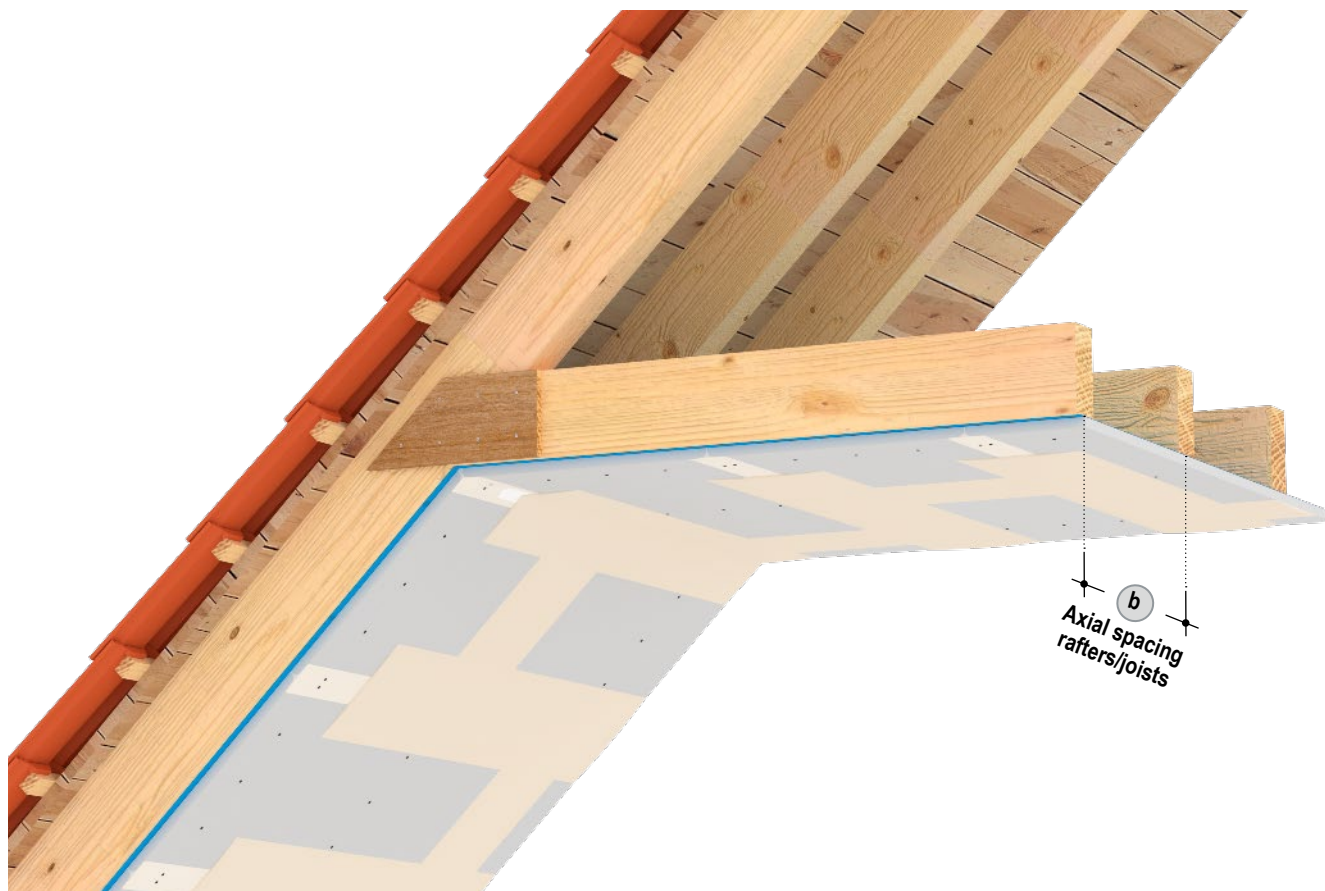
■ **Sound reduction index values represented in italics** are derived values from measurements on divergent constructions.

■ Additional above rafter insulation permissible for both designs

Note

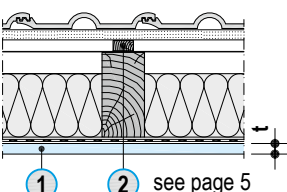
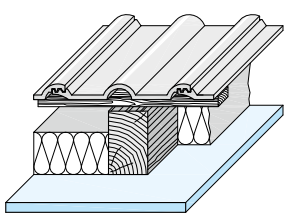
Observe the notes from page 4.

Maximum frame spacings



System variants

Fire resistance in conjunction with roof construction


	1 Attic lining / suspended ceiling							Roofing Required for fire resistance ²⁾	Sound reduction index R_w¹⁾ With raftersqueeze insulation		
Fire resistance From below 1 + 2	Cladding (lateral application)		Rafters/ joists		Insulation layer Required for fire resistance in the cavities between the rafters / joists				Above rafter insulation		
	Knauf Piano fire-resistant board	Knauf Fire-Resistant Board	Massivbauplatte Solid Board	Diamant	Silentboard	Mini- mum thick- ness t mm	Max. axial spac- ings b mm	Mini- mum thick- ness mm	Min. density kg/m ³	Without Direct cladding dB	With Direct cladding dB
D610.de Knauf attic system without frame (direct lining)											
	F30	•				20	625	Mineral wool 100	G –	–	50 –

1) Sound insulation: Test set-up see page 6

2) See page 5

- Sound reduction index values represented in **italics** are derived values from measurements on divergent constructions.
- Additional above rafter insulation permissible

Notes

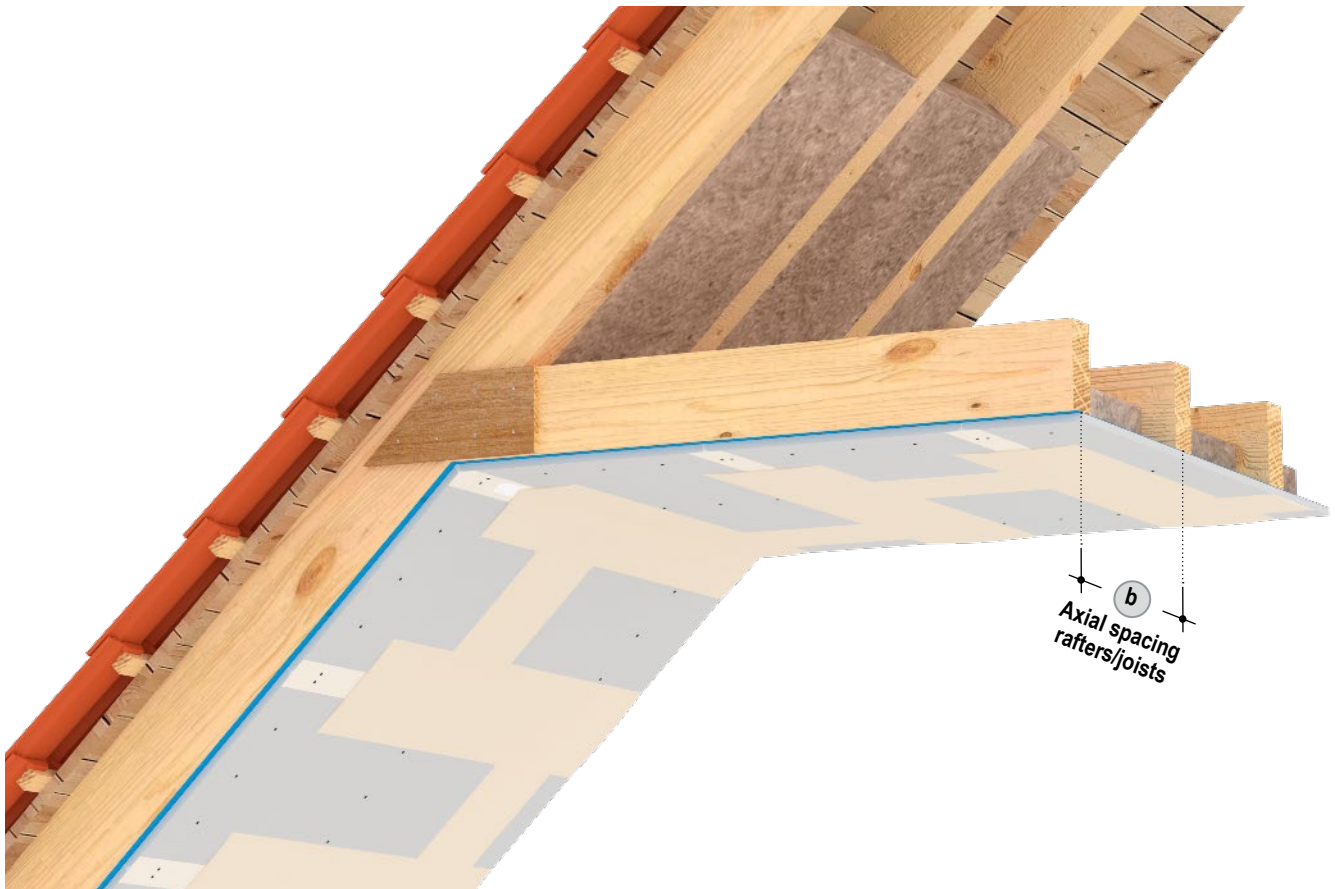
 Extension of the fire resistance Proof of Usability see page 6.

In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to [system data sheet Knauf Board Ceiling D11.de](#) can be achieved.

Observe the notes from page 4.

Maximum frame spacings

Dimensions in mm



With fire resistance – rafter cross-section $w \times h \geq 100 \times 200$ mm

Fire resistance class	Cladding	Rafters Minimum cross-section $w \times h$	Maximum Axial spacings b
F30	20	100 x 200	625

Notes

plus Extension of the fire resistance Proof of Usability see page 6.

In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to [system data sheet Knauf Board Ceiling D11.de](#) can be achieved.

System variants

Without fire resistance

	1 Attic lining / suspended ceiling		Roofing Required for fire resistance ²⁾		Sound reduction index $R_w^{1)}$ With raftersqueeze insulation	
	Cladding (lateral application)	Furring timber batten	Insulation layer Required for fire resistance in the cavities between the rafters / joists		Without insulation below rafters	
	Knauf Wallboard				Above rafter insulation	
	Knauf Piano fire-resistant board				Without	With
	Massivbauplatte Solid Board				Directly anchored	Damping Universal Bracket
	Diamant				Directly anchored	Damping Universal Bracket
	Silentboard					
	mm	Max. axial spacings b	Mini-mum thick-ness	Min. density	dB	dB
		mm	mm	kg/m ³		

D611.de Knauf attic system with wooden frame

	•			12.5	500			-	-	-	-
				12.5	500			48.8	-	52.6	-
	•			12.5	500			-	50.0	-	-
				20	800			-	> 50	-	-
	•			2x 12.5	500			-	56	-	-
				2x 12.5	500			-	57.2	-	-
	•			12.5 + 12.5	400			-	58.6	-	-

1) Sound insulation: Test set-up see page 6

2) See page 5

- Sound reduction index values represented in *italics* are derived values from measurements on divergent constructions.
- Additional above rafter insulation permissible for all designs
- Always use Diamant as a covering layer with combined cladding

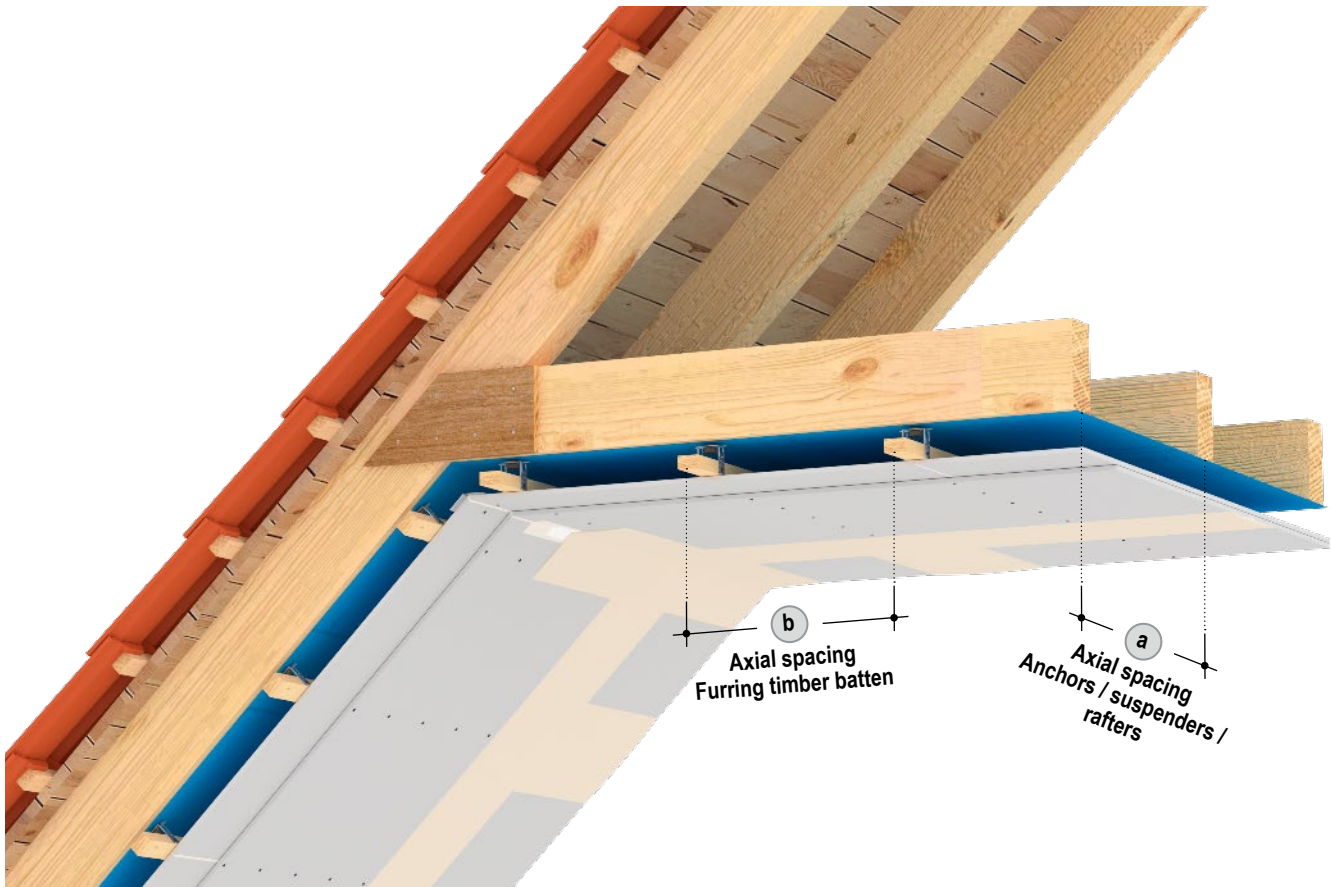
Notes

Observe the notes from page 4.

Please note "Nominal weights attic systems" on page 26.

Maximum grid spacings

Dimensions in mm



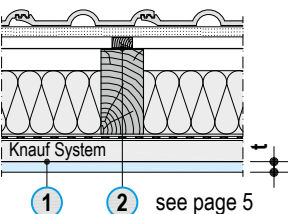
Without fire protection – Only furring timber batten $\geq 50 \times 30$ mm

Axial spacing furring timber batten b	Spacings Suspenders / anchors / rafters a Load class kN/m ²		
	Up to 0.15	Up to 0.30	Up to 0.50 ¹⁾
≤ 500	1200	950	800
625	–	900	750
800	–	800	700

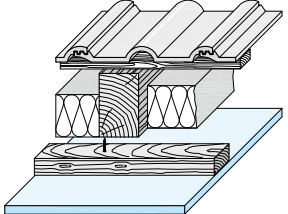
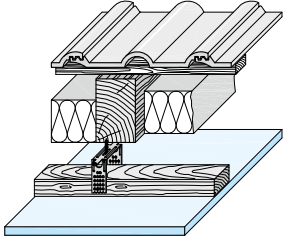
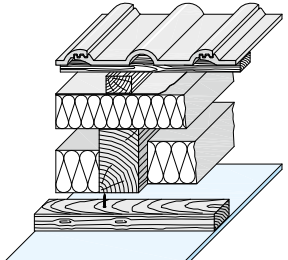
1) Use suspenders of load carrying capacity class 0.40 kN.

System variants

Fire resistance in conjunction with roof construction

	1 Attic lining / suspended ceiling		Roofing Required for fire resistance ²⁾		Sound reduction index R_w ¹⁾ With raftersqueeze insulation	
	Cladding (lateral application)	Furring timber batten	Insulation layer Required for fire resistance in the cavities between the rafters / joists		Without insulation below rafters	
Fire resistance From below 1 + 2	Fire resistance class	Minimum thickness t mm	Max. axial spacings b mm	Minimum thickness mm	Min. density kg/m ³	
	Knauf Piano fire-resistant board					Directly anchored dB
	Knauf Fire-Resistant Board					Damping Universal Bracket dB
	Massivbauplatte Solid Board					Directly anchored dB
	Diamant					Damping Universal Bracket dB
	Silentboard					

D611.de Knauf attic system with wooden frame

 <p>Furring timber batten directly anchored</p>	F30	•		12.5	500	Mineral wool G 160 –	Hard roof	48.8	–	52.6	–
			•	12.5				–	50.0	–	–
			•	12.5	400			–	> 50	–	–
 <p>Suspended furring timber batten</p>	F60	•		15	500	Mineral wool G 200 –	No requirement	48	–	52	–
			•	20	625			> 50	> 50	–	–
 <p>Above rafter insulation</p>	F90	•		25	500	Mineral wool G 100 –	Hard roof with roof decking ³⁾	> 50	> 50	–	–
		•		2x 18	500		Hard roof	–	57	–	63
		•	•	25 + 12.5			Hard roof	–	57	–	63


1) Sound insulation: Test set-up see page 6

2) See page 5

3) Chipboard N+F, $t \geq 19$ mm, density ≥ 600 kg/m³ or solid timber framework N+F, $t \geq 21$ mm■ Sound reduction index values represented in *italics* are derived values from measurements on divergent constructions.

■ Additional above rafter insulation permissible for all designs

Notes

 Extension of the fire resistance Proof of Usability see page 6.

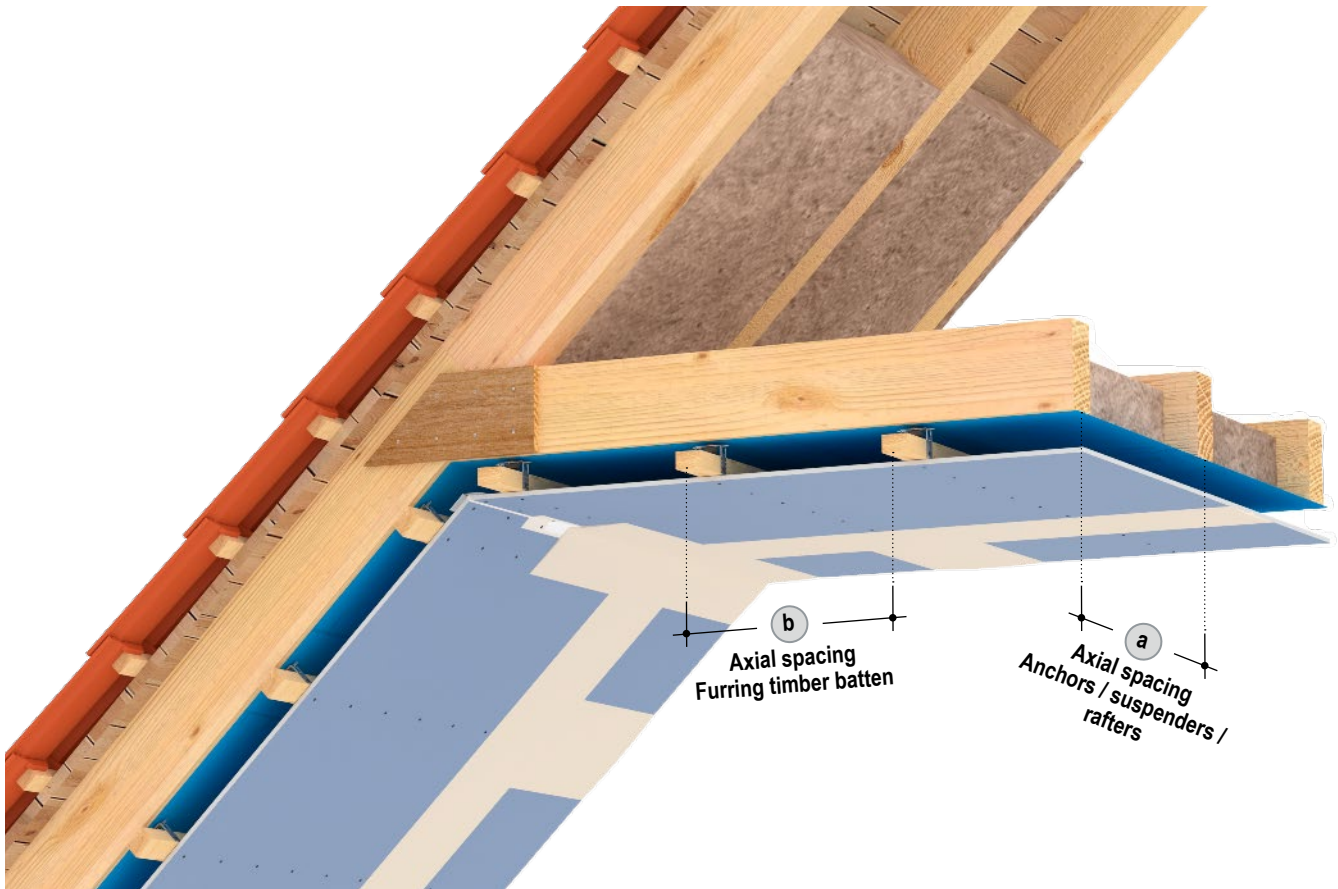
In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to [system data sheet Knauf Board Ceiling D11.de](#) can be achieved.

Observe the notes from page 4.

Please note "Nominal weights attic systems" on page 26.

Maximum grid spacings

Dimensions in mm



With fire resistance – rafter cross-section $w \times h \geq 100 \times 200$ mm, axial spacings

Only furring timber batten $\geq 50 \times 30$ mm

Axial spacing furring timber batten (b)	Spacings Suspenders / anchors / rafters Load class kN/m ² (a)		
	Up to 0.15	Up to 0.30	Up to 0.50 ¹⁾
300	900	700	600
400	850	625	550
500	750	600	500
625	700	550	450

Only furring timber batten $\geq 60 \times 40$ mm

Axial spacing furring timber batten (b)	Spacings Suspenders / anchors / rafters Load class kN/m ² (a)		
	Up to 0.15	Up to 0.30	Up to 0.50 ¹⁾
300	1000	1000	850
400	1000	950	800
500	1000	850	700
625	1000	800	650

1) Use suspenders of load carrying capacity class 0.40 kN

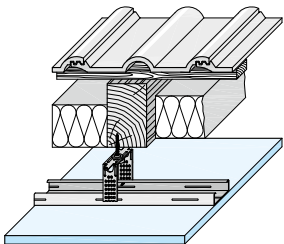
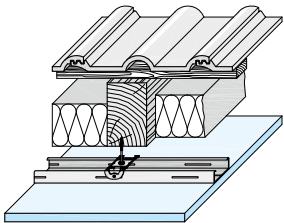
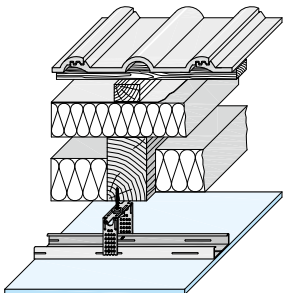
Notes	plus	Extension of the fire resistance Proof of Usability see page 6.
		In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to system data sheet Knauf Board Ceiling D11.de can be achieved.

System variants

Without fire resistance

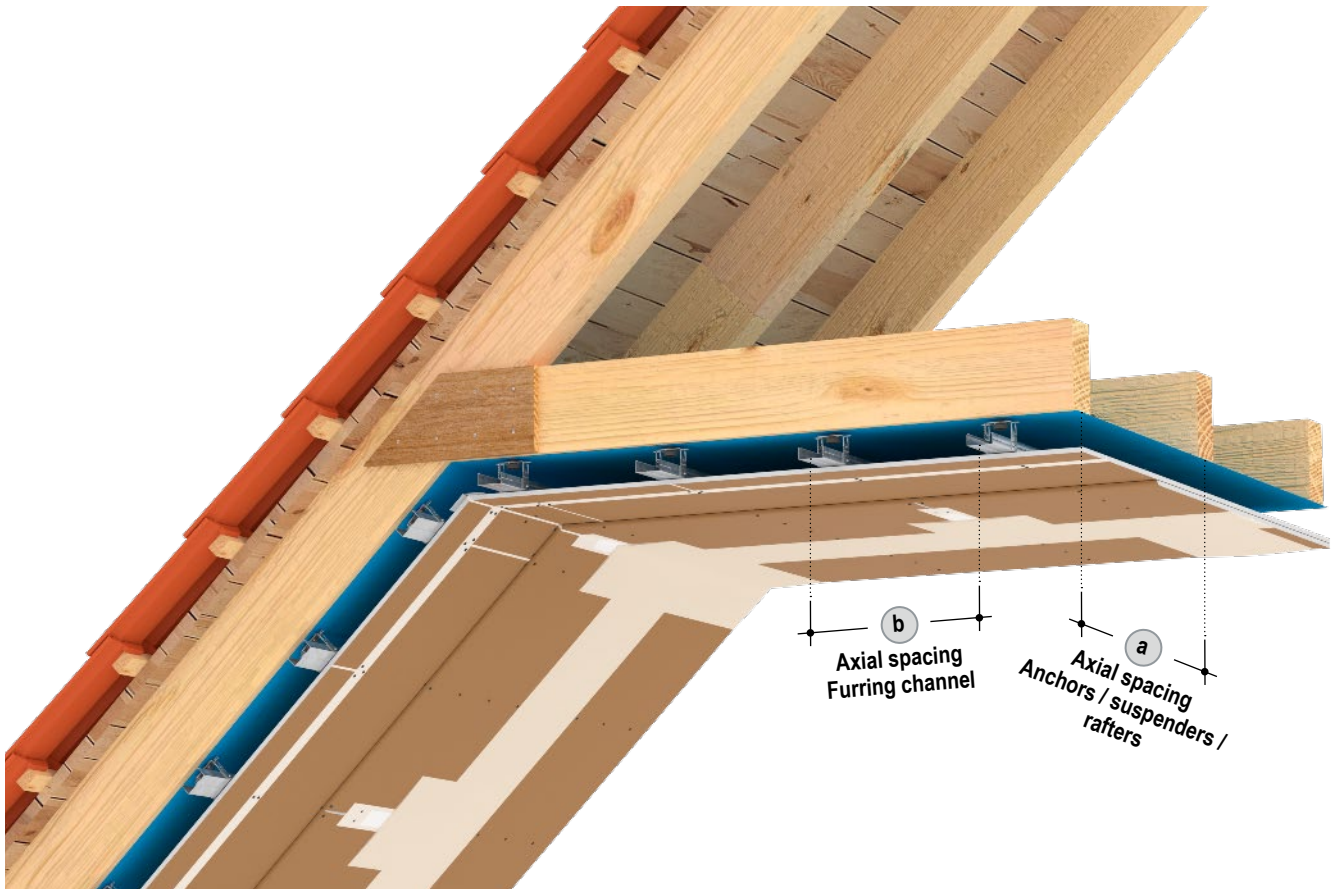
	1 Attic lining / suspended ceiling		Roofing Required for fire resistance ²⁾		Sound reduction index R_w ¹⁾ With raftersqueeze insulation	
	Cladding (lateral application)	Furring channel	Insulation layer Required for fire resistance in the cavities between the rafters / joists		Suspended with Damping Universal Bracket	
Fire resistance class	Knauf Wallboard	Minimum thickness t	Max. axial spacings b	Minimum thickness	Min. density	Above rafter insulation
	Knauf Piano fire-resistant board	mm	mm	mm	kg/m ³	Without
	Massivbauplatte Solid Board					With
	Diamant					Without insulation below rafters
	Silentboard					With insulation below rafters
						Without insulation below rafters
						With insulation below rafters
						Without insulation below rafters
						With insulation below rafters

D612.de Knauf attic system with metal frame CD Channel

	•			12.5	500				–	–	–	–
	•			12.5	500				51.4	53.4	56.9	–
		•		12.5	500				52.4	54.0	58.6	–
		•		12.5	400				–	57.4	61.7	–
		•		20	800				52	54	58	–
		•		25	800				55.5	58.5	–	–
	–	•		2x 12.5	500	–			–	–	–	–
		•		2x 12.5	500	57.7			60.0	63.1	–	
			•	12.5 + 12.5	400	58.8			61.4	64.4	–	
		•		2x 12.5	400	–			62.0	–	–	

Maximum grid spacings

Dimensions in mm

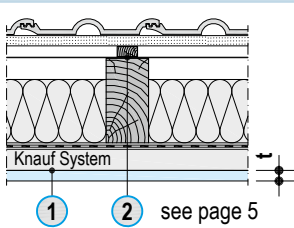


Without fire resistance – furring channel only

Axial spacing of furring channel b	Spacings of suspenders/anchors a Load class kN/m ²			
	Up to 0.15	Up to 0.30	Up to 0.40	Up to 0.50
Universal Brackets / Damping Universal Brackets 0.40 kN				
400	1475	1175	1050	1000
500	1400	1100	975	925
625	1300	1025	925	850
800	1200	950	850	800
Anchoring clip / Anchoring clip 0.15 kN				
400	1475	1175	925	750
500	1375	1000	750	600
625	1275	775	575	475
800	1175	625	450	375

System variants

Fire resistance in conjunction with roof construction



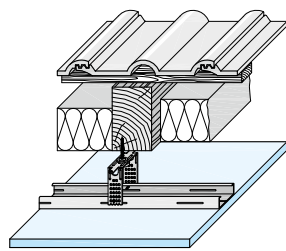
Fire resistance

From below

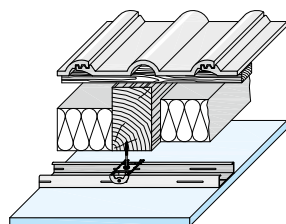
① + ②

Fire resistance class	1 Attic lining / suspended ceiling						Roofing Required for fire resistance ²⁾	Sound reduction index $R_w^{1)}$					
	Cladding (lateral application)			Furring channel	Insulation layer Required for fire resistance in the cavities between the rafters / joists			With raftersqueeze insulation					
	Knauf Piano fire-resistant board	Knauf Fire-Resistant Board	Massivbauplatte Solid Board		Diamant	Silentboard		Minimum thickness t	Max. axial spacings b	Suspended with Damping Universal Bracket			
										Above rafter insulation			
										Without		With	
										Without insulation below rafters	With insulation be- low rafters	Without insulation below rafters	With insulation be- low rafters
dB	dB	dB	dB										






D612.de Knauf attic system with metal frame CD Channel



Suspended furring channel



Furring channel with
adjusting clip

F30	●			12.5	500	Mineral wool 160 – 	Hard roof	51.4	53.4	56.9	–
			●	12.5				52.4	54.0	58.6	–
			●	12.5				400	–	57.4	61.7
	●			15	500	Mineral wool 200 – 	No requirement	51	53	56	–
		●		20	625			Mineral wool 100 – 	52	54	58
F60		●		25	500	Mineral wool 100 – 	Hard roof	55.5	58.5	–	–
F90		●		25	500	Mineral wool 100 – 	Hard roof with roof decking ³⁾	55.5	58.5	–	–
	●			2x 18			Hard roof	57	> 57	63	> 63
	●	●		25 + 12.5				57	> 57	63	> 63

1) *Sound insulation: Test set-up see page 6*

2) See page 5

3) Chipboard N+F, $t \geq 19$ mm, density ≥ 600 kg/m³ or solid timber framework N+F, $t \geq 21$ mm

■ **Sound reduction index values represented in *italics*** are derived values from measurements on divergent constructions.

■ Additional above rafter insulation permissible for all designs

Notes

plus Extension of the fire resistance Proof of Usability
see page 6.

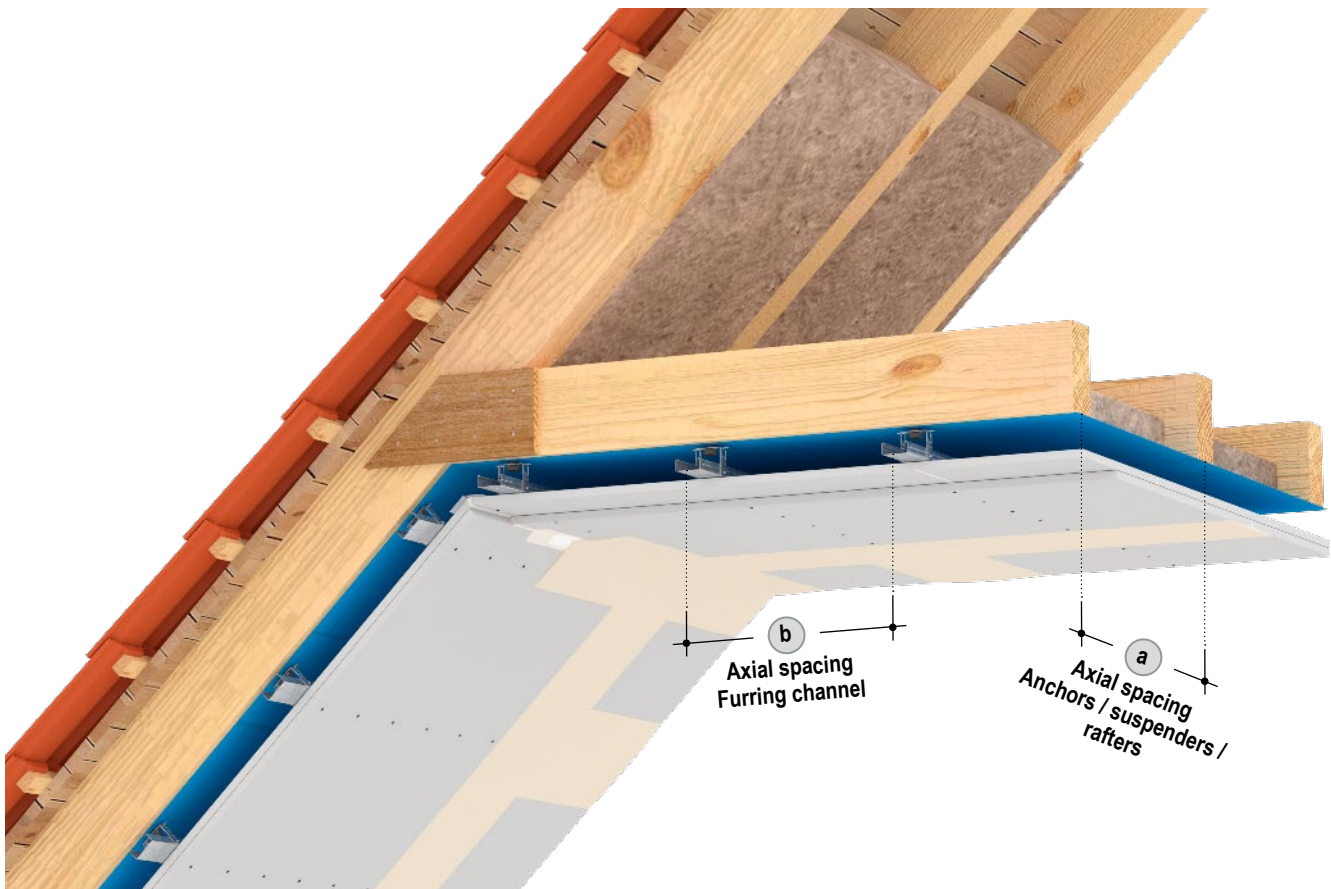
In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to [system data sheet Knauf Board Ceiling D11.de](#) can be achieved.

Observe the notes from page 4.

Please note "Nominal weights attic systems" on page 27.

Maximum grid spacings

Dimensions in mm



With fire resistance – rafter cross-section $w \times h \geq 100 \times 200$ mm, axial spacings
Furring channel only

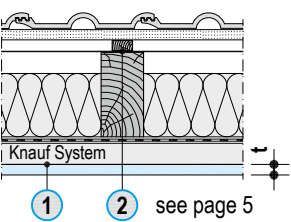
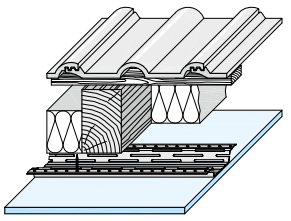
Axial spacing of furring channel b	Spacings Suspenders / anchors / rafters Load class kN/m ²			
	Up to 0.15	Up to 0.30	Up to 0.40 ¹⁾	Up to 0.50 ¹⁾
300	1000	1000	1000	1000
400	1000	1000	1000	1000
500	1000	1000	950	900
625	1000	1000 ¹⁾	900	850

1) Use suspenders of load carrying capacity class 0.40 kN.

Notes	plus Extension of the fire resistance Proof of Usability see page 6.
	In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to system data sheet Knauf Board Ceiling D11.de can be achieved.

System variants

Without fire resistance

	<div>Fire resistance class</div>	1 Attic lining / suspended ceiling				Roofing		Sound reduction index $R_w^{1)}$					
Cladding (lateral application)				Furring channel	Insulation layer Required for fire resistance in the cavities between the rafters / joists		Required for fire resistance ²⁾		With rafters squeeze insulation				
Knauf Wallboard		Knauf Piano fire-resistant board	Massivbauplatte Solid Board	Diamant	Silentboard	Minimum thickness t	Max. axial spacings b	Minimum thickness	Min. density	Above rafter insulation			
										Without insulation	With insulation below rafters ³⁾	Without insulation	With insulation below rafters
										Without insulation below rafters	With insulation below rafters	Without insulation below rafters	With insulation below rafters
D613.de Knauf attic system with Resilient Channel metal frame													
	-	•			12.5	500				-	-	-	-
		•			12.5	500				-	50	-	-
				•	12.5	500				-	51	-	-
			•		20	800				-	51	-	-
			•		25	800	-		-	-	54	-	-
		•			2x 12.5	500				-	55	-	-
				•	2x 12.5	500				-	56	-	-

1) Sound insulation: Test set-up see page 6

2) See page 5

3) Required for sound insulation reasons: 30 mm Knauf Insulation TP 120 A, length-related flow resistance 11 kPa·s/m²■ Sound reduction index values represented in **italics** are derived values from measurements on divergent constructions.

■ Additional above rafter insulation permissible for all designs

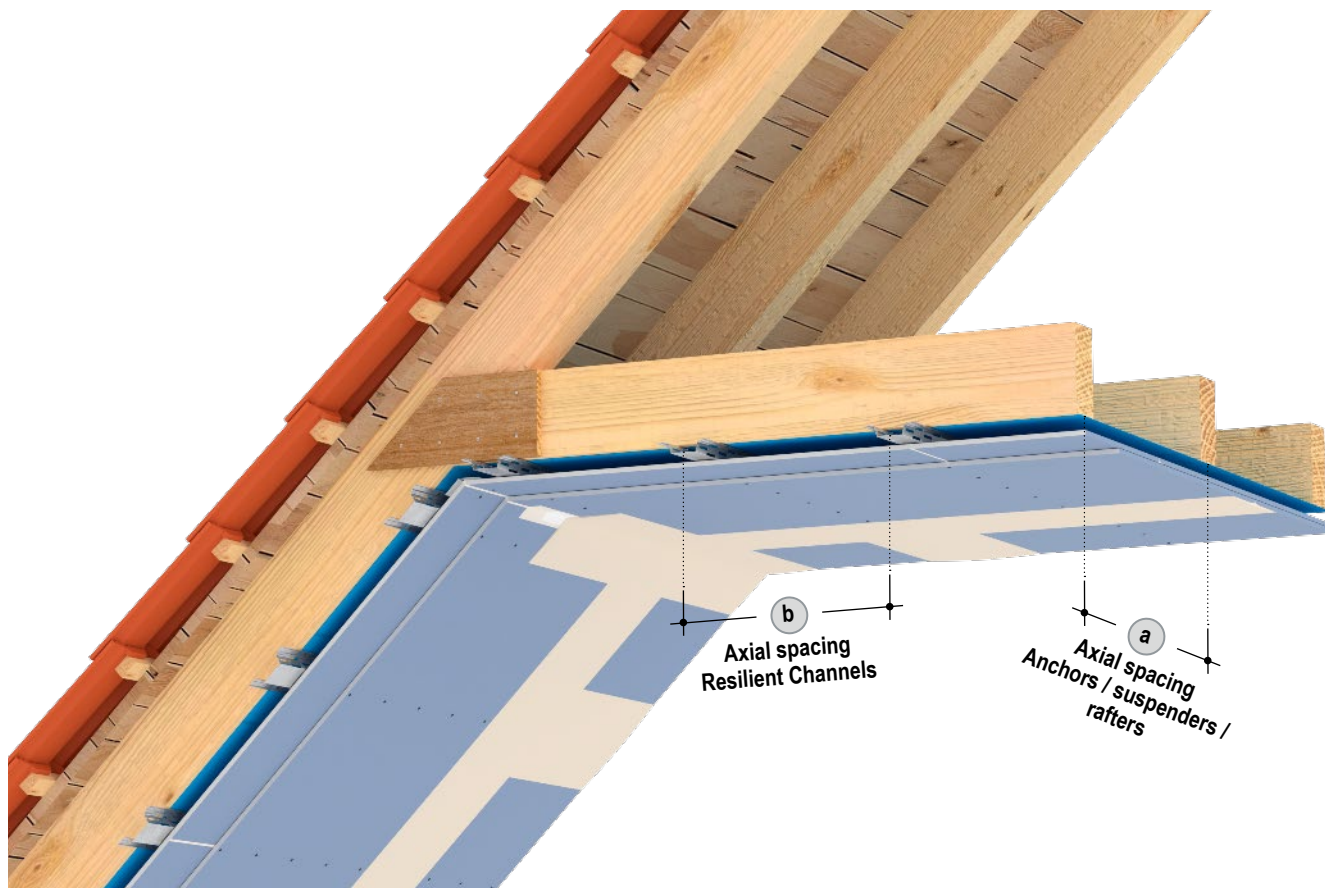
Notes

Observe the notes from page 4.

Please note "Nominal weights attic systems" on page 27.

Maximum grid spacings

Dimensions in mm

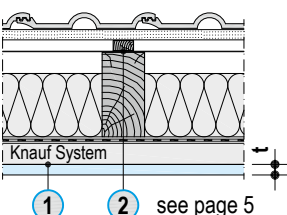
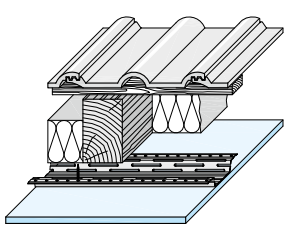


Without fire protection – Resilient Channel

Axial spacing Resilient Channel b	Spacings fasteners / rafters a Load class kN/m ²			
	Up to 0.15	Up to 0.30	Up to 0.40	Up to 0.50
≤ 500	1075	825	700	650
625	1000	725	625	600
800	925	625	550	500

System variants

Fire resistance in conjunction with roof construction

	1 Attic lining / suspended ceiling						Roofing Required for fire resistance ²⁾	Sound reduction index $R_w^{1)}$ With raftersqueeze insulation						
Cladding (lateral application)						Furring channel		Insulation layer Required for fire resistance in the cavities between the rafters / joists	Above rafter insulation					
Fire resistance class	Knauf Piano fire-resistant board	Knauf Fire-Resistant Board	Massivbauplatte Solid Board	Diamant	Silentboard		Minimum thickness t mm		Max. axial spacings b mm	Minimum thickness mm	Min. density kg/m ³	Without insulation below rafters dB	With insulation below rafters ³⁾ dB	Without insulation below rafters dB
	Fire resistance From below 1 + 2													
D613.de Knauf attic system with Resilient Channel metal frame														
	F30	•				12.5	500	Mineral wool	G	Hard roof	–	50	–	–
				•		12.5		160	–		–	51	–	–
		•				15	500	Mineral wool	G	No requirement	–	50	–	–
			•			20	625	Mineral wool	G		–	51	–	–
	F60		•				25	500	Mineral wool	G	Hard roof	–	54	–
F90		•				25	500	Mineral wool	G	Hard roof with roof decking ⁴⁾	–	54	–	–


1) Sound insulation: Test set-up see page 6

2) See page 5

3) Required for sound insulation reasons: 30 mm Knauf Insulation TP 120 A, length-related flow resistance 11 kPa·s/m²3) Chipboard N+F, $t \geq 19$ mm, density ≥ 600 kg/m³ or solid timber framework N+F, $t \geq 21$ mm■ Sound reduction index values represented in **italics** are derived values from measurements on divergent constructions.

■ Additional above rafter insulation permissible for all designs

Notes

 Extension of the fire resistance Proof of Usability see page 6.

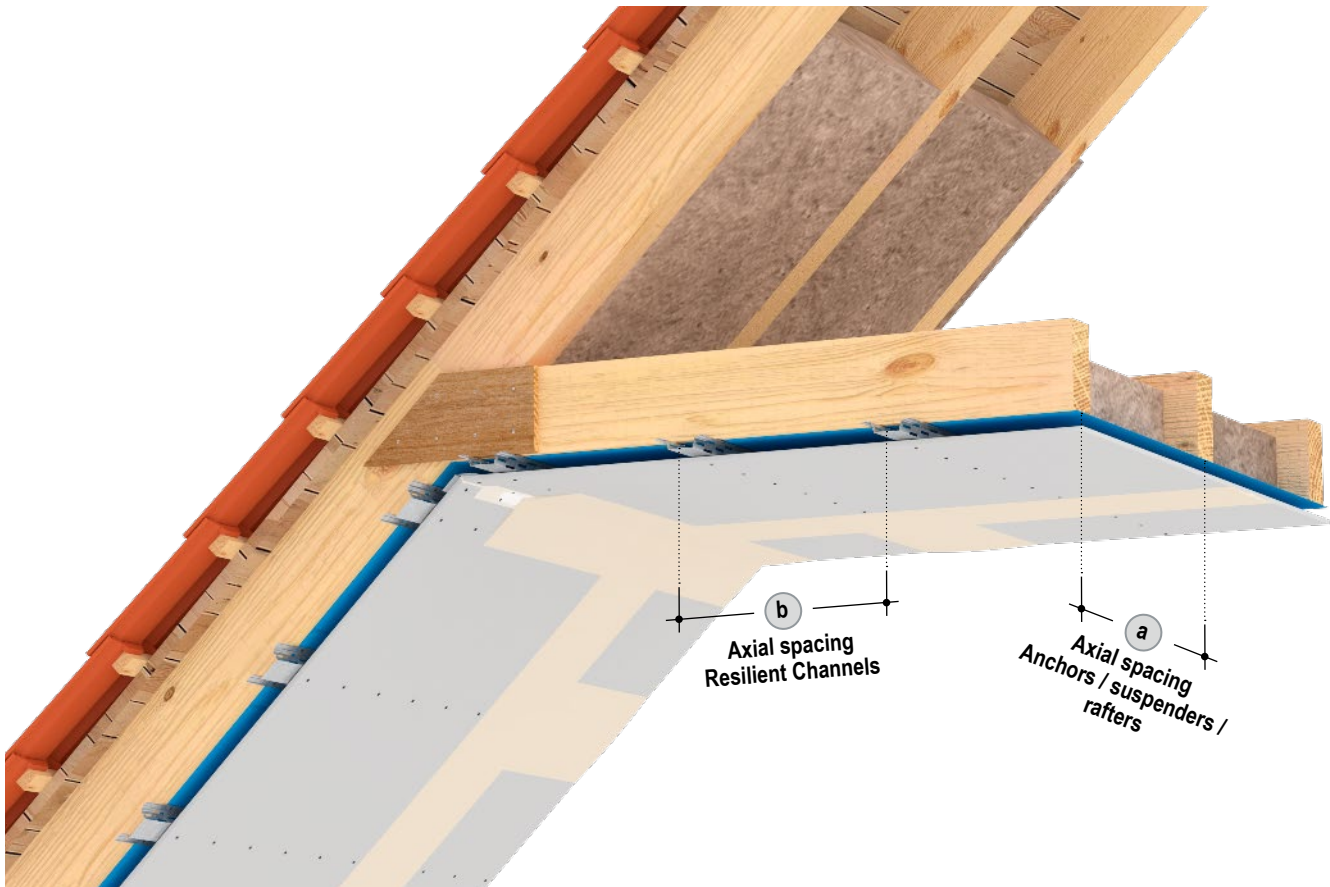
In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to [system data sheet Knauf Board Ceiling D11.de](#) can be achieved.

Observe the notes from page 4.

Please note "Nominal weights attic systems" on page 27.

Maximum grid spacings

Dimensions in mm



With fire resistance – rafter cross-section $w \times h \geq 100 \times 200$ mm, axial spacings
Resilient Channels

Axial spacing Resilient Channel (b)	Spacings Fasteners / rafters Load class kN/m ² (a)		
	Up to 0.15	Up to 0.30	Up to 0.50
300	950	900	750
400	900	800	700
500	850	750	650
625	750	700	600

Notes

plus Extension of the fire resistance Proof of Usability
see page 6.

In case of divergent roof constructions or joist dimensions to the specifications on this page, fire resistance requirements even with the systems acc. to [system data sheet Knauf Board Ceiling D11.de](#) can be achieved.

D611.de Attic system wooden frame

Without fire resistance

Cladding (lateral application)					Rated weight	Furring timber batten
Knauf Wallboard	Knauf Piano fire-resistant board	Massivbauplatte Solid Board	Diamant	Silentboard		
Thickness t mm					Without insulation layer kg/m²	Maximum Axial spacings <div>b</div> mm
D611.de Attic system with wooden frame						
•				12.5	10.6	500
	•			12.5	12.3	500
		•		12.5	14.3	500
		•		20	18.9	800
	•			2x 12.5	23.3	500
		•		2x 12.5	27.3	500
			•	12.5 +	33.0	400
			•	12.5		

Fire resistance in conjunction with roof construction

D611.de Attic system with wooden frame						
•				12.5	12.3	500
			•	12.5	14.3	500
			•	12.5	20.9	400
	•			15	15.2	500
		•		20	19.6	625
		•		25	24.0	500
	•			2x 18	33.7	500
		•		25 +	35.0	500
•				12.5		

Load class kN/m ²	Rated weight + weight of additional loads kg/m ²
Up to 0.65	60
Up to 0.50	50
Up to 0.40	40
Up to 0.30	30
Up to 0.30	20
Up to 0.15	10

Notes

Please note "Dimensioning principles" on page 7.
D611.de System tables see pages 14 to 17.

D612.de/D613.de Attic systems with metal frame

Without fire resistance

Cladding (lateral application)					Nominal weight	Furring channel
Knauf Wallboard	Knauf Piano fire-resistant board	Massivbauplatte Solid Board	Diamant	Silentboard		
Thickness t mm					Without insulation layer kg/m²	Maximum Axial spacings <div><div>b</div></div> mm
D612.de Attic system with metal grid CD Channel						
•				12.5	11.7	500
	•			12.5	12.2	500
		•		12.5	14.2	500
			•	12.5	19.9	400
		•		20	19.9	800
		•		25	24.3	800
	•			2x 12.5	24.3	500
		•		2x 12.5	28.3	500
			•	12.5 +	34.0	400
		•		12.5		
			•	2x 12.5	39.4	400
D613.de Attic System with Resilient Channel metal frame						
•				12.5	10.6	500
	•			12.5	12.2	500
		•		12.5	14.2	500
		•		20	18.8	800
		•		25	23.2	800
	•			2x 12.5	23.2	500
		•		2x 12.5	27.2	500

Fire resistance in conjunction with roof construction

Cladding (lateral application)					Rated weight	Furring channel
Knauf Piano fire-resistant board	Knauf Fire-Resistant Board	Massivbauplatte Solid Board	Diamant	Silentboard		
Thickness t mm					Without insulation layer kg/m²	Maximum Axial spacings <div>b</div> mm
D612.de Attic system with metal grid CD Channel						
●				12.5	12.2	500
			●	12.5	14.2	500
			●	12.5	19.9	400
	●			15	14.4	500
		●		20	18.8	625
		●		25	23.2	500
	●			2x 18	32.8	500
		●		25 +	34.2	500
●				12.5		
D613.de Attic system with metal frame Resilient Channel						
●				12.5	12.2	500
			●	12.5	14.2	500
	●			15	14.4	500
		●		20	18.8	625
		●		25	23.2	500

Load class kN/m ²	Rated weight + weight of additional loads kg/m ²
Up to 0.65	60
Up to 0.50	50
Up to 0.40	40
Up to 0.30	30
Up to 0.20	20
Up to 0.15	10

Notes

Please note "Dimensioning principles" on page 7.
System tables D612.de and D613.de see pages 18 to 25.

Permissible span widths (lateral application)

Spacings of the rafters/joists/furring timber battens/furring channels as well as the type of cladding see respective system. For external wall below eaves see page 30.

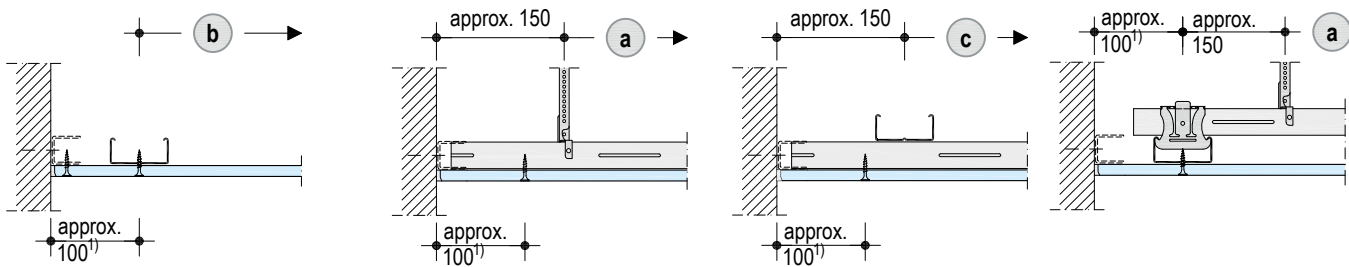
Perimeter spacings of the grid

Scheme drawings | Dimensions in mm

Alternative 1: Non-load bearing connection

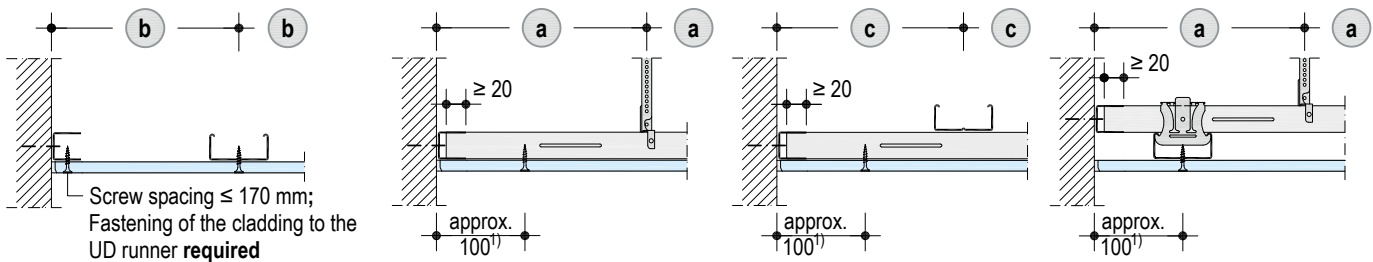
Connection is not used for load transfer of the ceiling.

- Without perimeter joint backing
- Backing with UD runner as installation aid, in case of fire resistance and sound protection, spacing of anchors of UD runner up to approx. 1 m



Alternative 2: Load-bearing connection

- The spacing of the UD Runners is reduced to ≤ 625 mm (for fire resistance too).
Use fasteners and anchors suited to the substrate.
- In load-bearing UD runners, the carrying / furring channels should be inserted by at least 20 mm.
- The maximum permissible spacings for suspenders, carrying / furring channels are given in the tables for the respective systems.



Legend:

- (a) Spacing of suspenders
- (b) Axial spacing furring channel (cladding span width)
- (c) Axial spacing carrying channel (spacing furring channel)

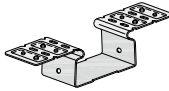
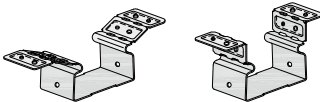
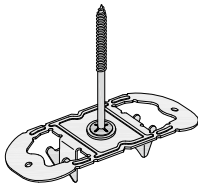
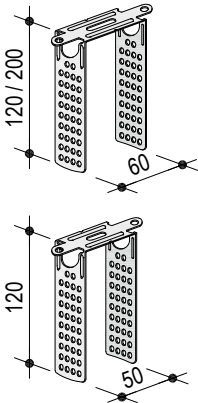
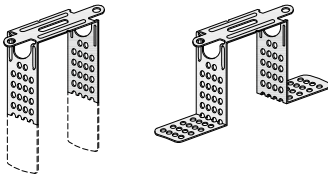
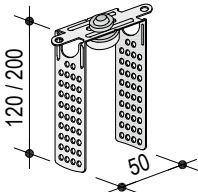
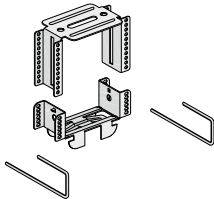
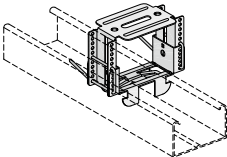
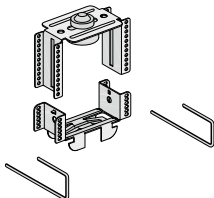
1) Maximum projection of the cladding

Collar beams / roof pitch / external wall below eaves

Collar beams / roof pitch Without Flex Profile	Collar beams / roof pitch With Flex Profile	Roof pitch / external wall below eaves With Flex Profile
Without fire resistance	With fire resistance requirements:	Back the joints between the collar beams / roof pitch or roof pitch / external wall below eaves with Flex Profiles

Suspenders

Dimensions in mm

Suspension	Drawing	Anchors	
0.15 kN (15 kg) load-carrying capacity class			
Anchoring clip For CD 60/27		 Thickness: 34 to 54 mm (Clip Fastener + CD 60/27) Tolerance compensation possible from 0 to 20 mm.	Anchoring to rafters / joists with 2x Knauf TN 3.5 x 35 or 2x Knauf TN 3.9 x 35 or 2x Knauf FN 4.3 x 35
Adjusting clip For CD 60/27		Bend side tabs, screw fix with roof pitch (2x metal screws LN 3.5 x 11).	Anchoring to rafters / joists with the integrated anchor Their length allows them to compensate for height differences. Screw length 90 mm, for minimum penetration depths and adjustment heights see page 50
0.40 kN (40 kg) load bearing capacity class			
Universal Bracket For CD 60/27 For timber batten 60 x 40 For timber batten 50 x 30		 Bend or cut the universal bracket/ damping universal bracket according to the required installation height or cut, screw fix to timber batten (2x Knauf TN 3.5 x 25) or CD 60/27 (2x metal screws LN 3.5 x 11).	Anchoring to rafters / joists with 2x Knauf TN 3.5 x 35 or 2x Knauf TN 3.9 x 35 in the tabs (sufficient rafter / joist width required) or 1x Knauf FN 4.3 x 35 at centre
Damping Universal Bracket For CD 60/27 For timber batten 60 x 40			Anchoring to rafters / joists with 1x Knauf FN 4.3 x 65 at centre (observe the anchoring length)
Adjustable Universal Bracket For CD 60/27 Not permissible with fire resistance requirement			Anchoring to rafters / joists with 2x Knauf TN 3.5 x 35 or 2x Knauf TN 3.9 x 35 in the circular holes or 1x Knauf FN 4.3 x 35 at centre
Adjustable damping universal bracket For CD 60/27 Not permissible with fire resistance requirement		Adjustable universal bracket/adjustable damping universal bracket to be adjusted to suit the required installation height. Connect the upper and lower section with 2x Nonius pins (secure against sliding out).	Anchoring to rafters / joists with 1x Knauf FN 4.3 x 65 at centre (observe the anchoring length)

D610.de

D611.de


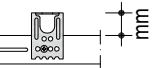
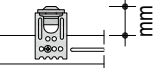

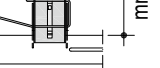
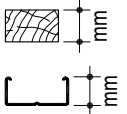
D612.de

D613.de

Total construction height

Dimensions in mm

The total construction height of the ceiling results from the sum of suspenders, height of the grid and cladding thickness.

System	Suspended with Anchoring clip	Universal bracket	Damping Universal Bracket	Adjustable Universal Bracket	Adjustable Damping Universal Bracket	Substructure Batten (w x h) Profile	Total metal grid height
							
D611.de	–	5 – 180	25 – 190	–	–	50 x 30	30
	–	5 – 180	25 – 190	–	–	60 x 40	40
D612.de	7 – 27	5 – 180	15 – 190	35 – 85	40 – 90	CD 60/27	27
	–	15 – 180	15 – 190	35 – 85	40 – 90	CD 60/27 + CD 60/27	54

System	Resilient Channels	Substructure profile	Total metal grid height
	Directly anchored to the rafters / joists.		
D613.de	–	Resilient Channel 60/27	27

■ Adjustable heights of adjusting clip, see page 50

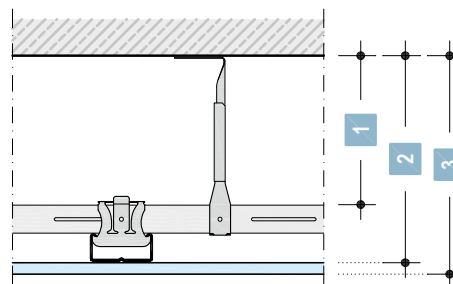
Calculation example – determination of total construction height

D612.de with Metal grid with CD Channel

Steps	Dimensions in mm
1 Upper grid level with Universal Bracket	100.0
2 Height of grid Furring channel CD	+ 27.0
3 Cladding thickness 12.5 mm	+ 12.5
4 Sum	= 139.5

Approx. 140 mm required total construction height of attic lining / suspended ceiling

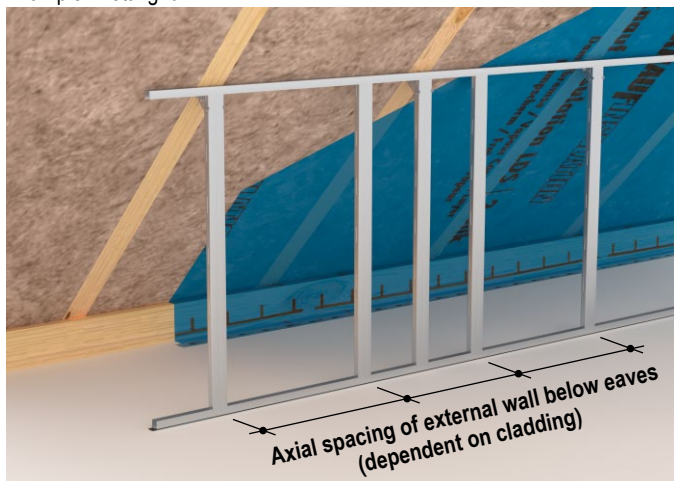
Term definition



- 1 Upper grid level (height of the hanger / installation height)
- 2 Suspended height (height to the plenum)
- 3 Total height (construction height / total height / construction depth)

External wall below eaves

Example: Metal grid



Maximum grid spacings

Dimensions in mm

Cladding Thickness	Axial spacings External wall below eaves grid	
	Without fire resistance	With fire resistance
12.5 Silentboard	625	625
12.5 / 2x 12.5 / 25 + 12.5	625	625
15	750	625
2x 18	900	625
20	1000	625
25	1000	625

With fire resistance requirements

- The fire resistant design of external wall below eaves is undertaken in accordance with the specifications for the respective attic system (pages 10 to 25).
- Back the joints between roof pitch / external wall below eaves with Flex Profiles.

Attachment of loads to Knauf attic systems

Additional loads, e.g. lighting fixtures, curtain rails and similar can be fixed to attic lining / suspended ceilings using universal dowels, spring toggle dowels or cavity dowels (e.g. Knauf Hartmut cavity dowels). Additional loads must be considered when determining the load class.

Note

Heavy loads must be anchored directly on load-bearing building elements (wood joist ceilings) or on auxiliary constructions.

Each load introduction surface of the attic lining / suspended ceiling may not exceed the weight threshold values with the fastened components:

Permissible weight per ceiling surface in kg/m²

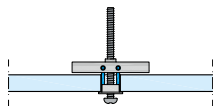
Without fire resistance	With fire resistance
15	6

Furthermore, the following conditions apply:

For every anchoring point the following weights of components attached to the attic lining / suspended ceiling may not be exceeded:

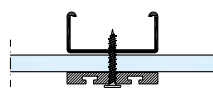
Fastening method	Permissible weight per anchoring point in kg	
	Without fire resistance	With fire resistance
Fastening in the cladding	6	0.5
Fastening to the grid	10	10

Fastening in the cladding



Knauf Hartmut Hohlraumdübel
cavity dowel
M5 screw

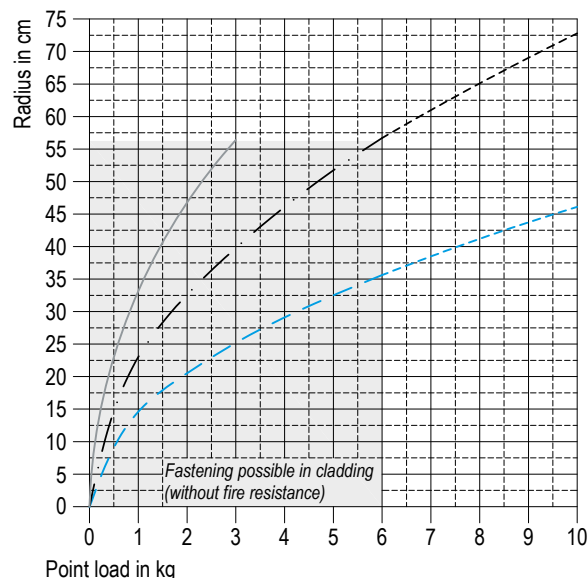
Fastening to the grid



Knauf Universalschraube FN
Multi-purpose screw
e.g. curtain rail

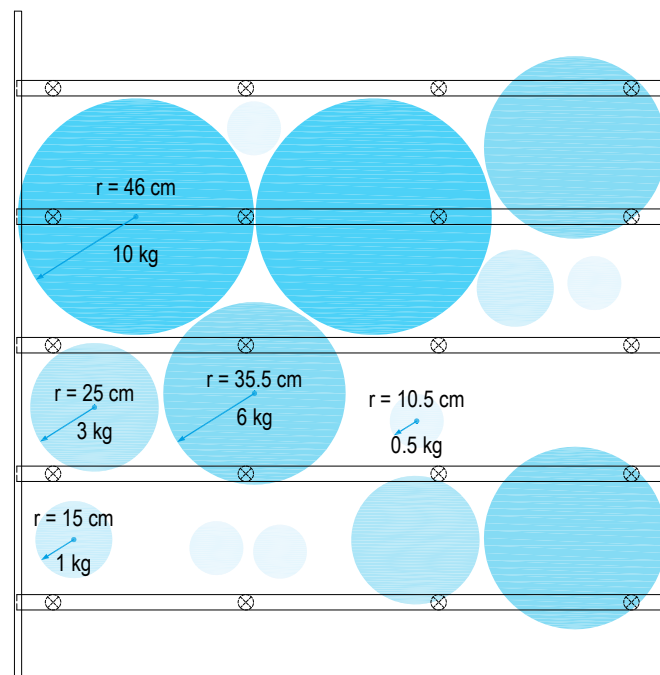
In order to avoid a local overload of the ceiling or the cladding, it is necessary to comply with the minimum spacings between the individual fastened loads. The minimum spacing between two anchoring points is dependent on both effective radii of the individual loads.

The effective radius of the individual load can be taken from the following diagram in dependence on the permissible weight per unit area for additional loads:



- 3 kg/m² permissible additional weight
- - 6 kg/m² permissible additional weight (with fire resistance)
- ... 15 kg/m² permissible additional weight (without fire resistance)

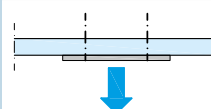
Example fastening scheme at 15 kg/m²



Note

Further details for planning and application see [Technical information Fastening of loads to Knauf Wall and Ceiling Systems VT03.de](#).

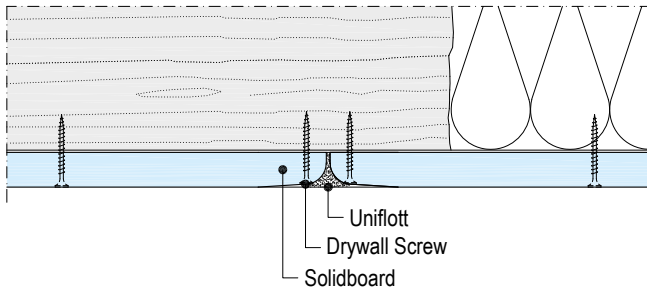
Note



The fastened loads can be transferred using several anchoring elements.

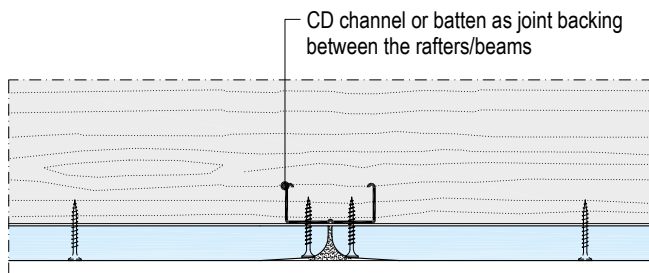
Details

D610.de-B1 Long edge



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

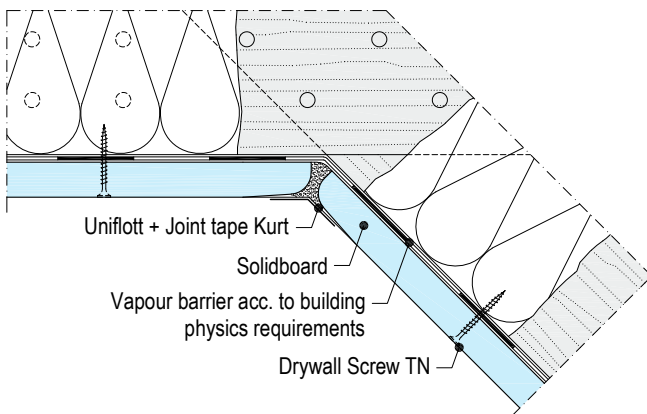
D610.de-B3 Long edge – Board joint with backing



In the area of the collar beam or in case of rafters up to a pitch of 25°, it is recommended that backing on the longitudinal edge is applied with CD channels or battens for axial spacings > 625 mm.

plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

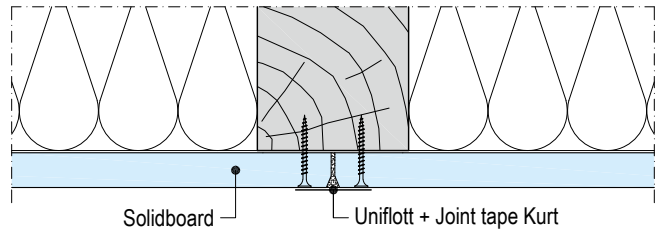
D610.de-KS1 Collar beams / roof pitch



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

Scale 1:5

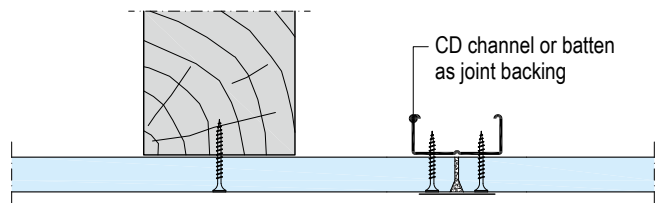
D610.de-C1 Front edge – Board joint on rafters / joists



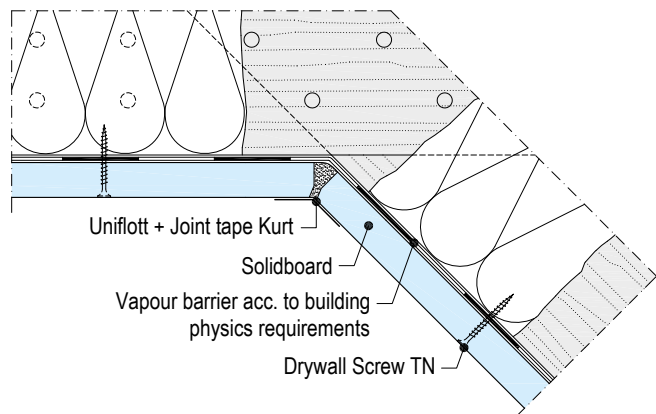
plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D610.de-C2 Front edge – Non-supported board joint

Without fire resistance



D610.de-KS3 Collar beams / roof pitch

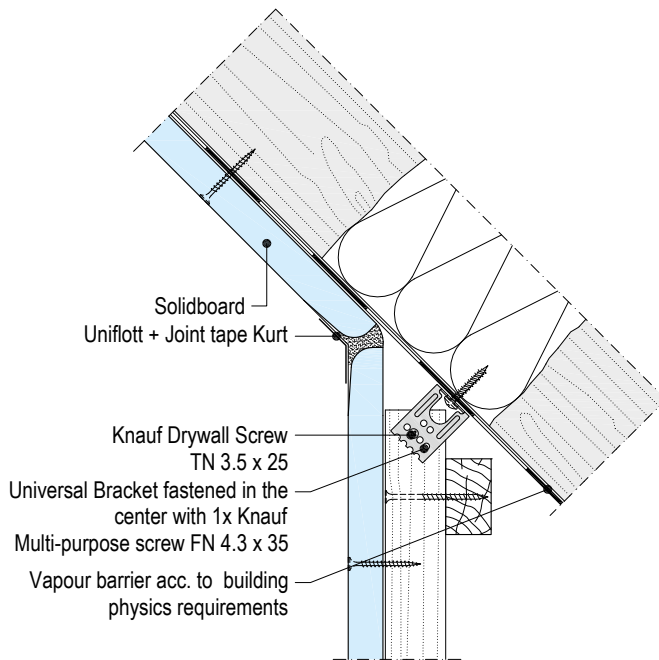


plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

Details

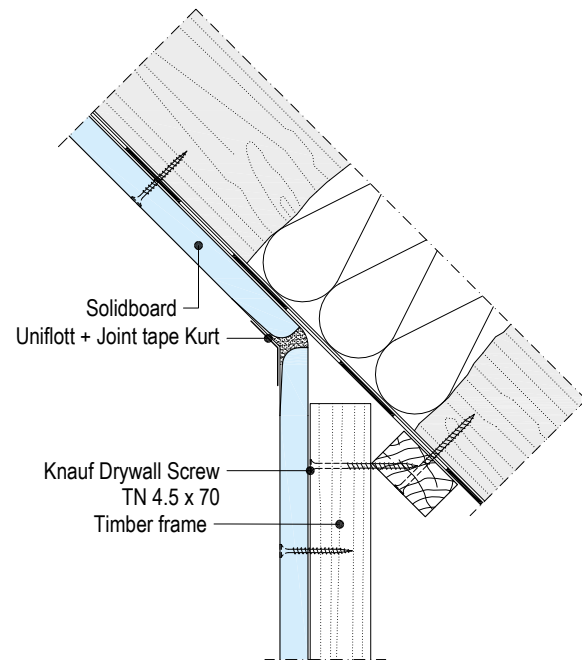
D610.de-SD1 Roof pitch / external wall below eaves

Without fire resistance



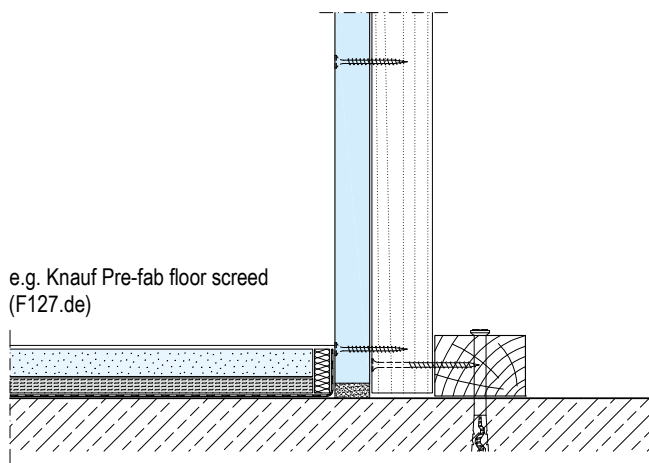
D610.de-SD2 Roof pitch / external wall below eaves

Without fire resistance



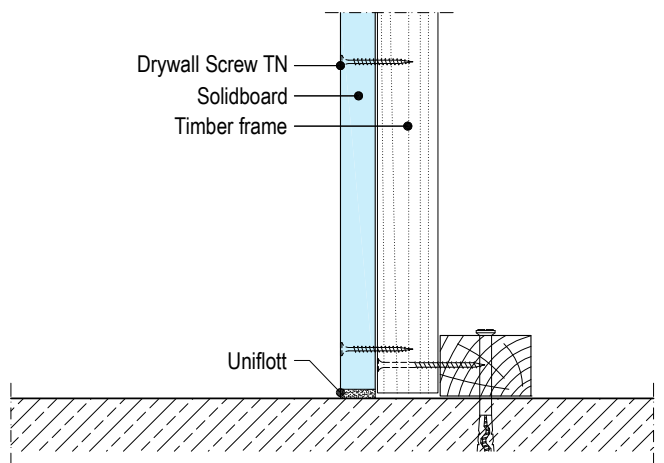
D610.de-FD1 External wall below eaves (base)

Without fire resistance



D610.de-FD2 External wall below eaves (base)

Without fire resistance



Scale 1:5

D610.de

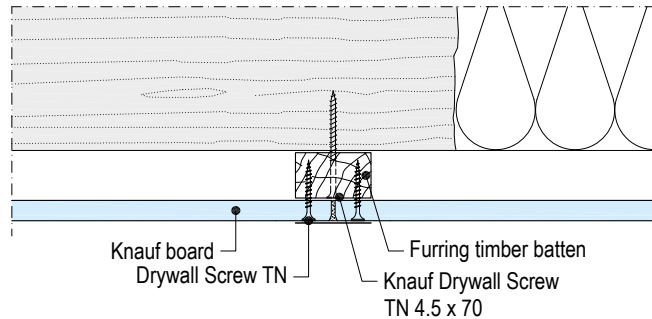
D611.de

D612.de

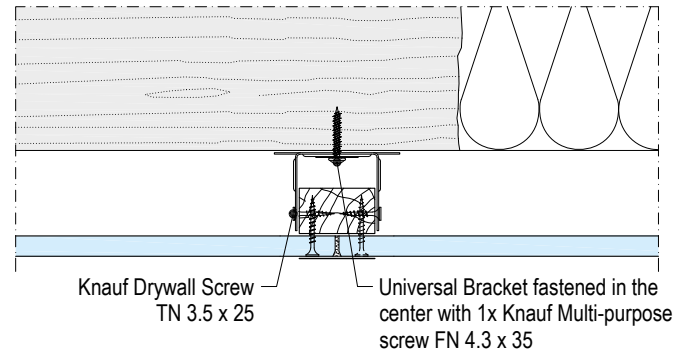
D613.de

Details

D611.de-C1 Front edge – Furring timber batten / directly anchored

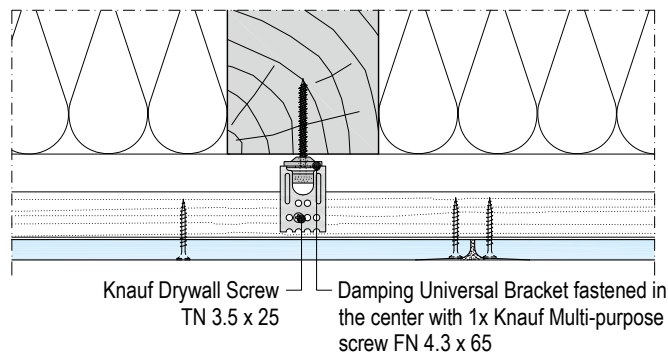


D611.de-C2 Front edge – Furring timber batten / Universal Bracket



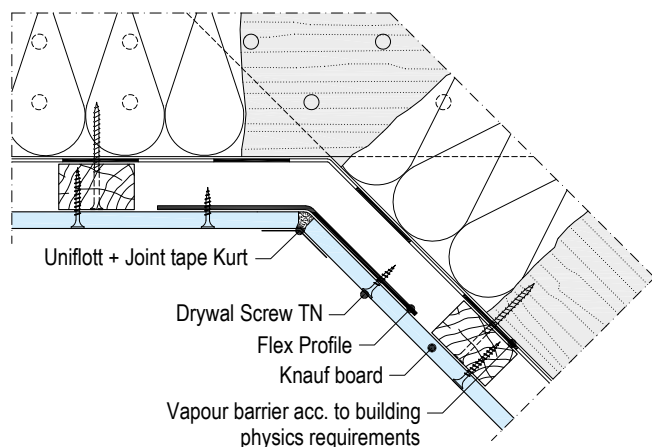
Scale 1:5

D611.de-B1 Long edge – Damping Universal Bracket



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

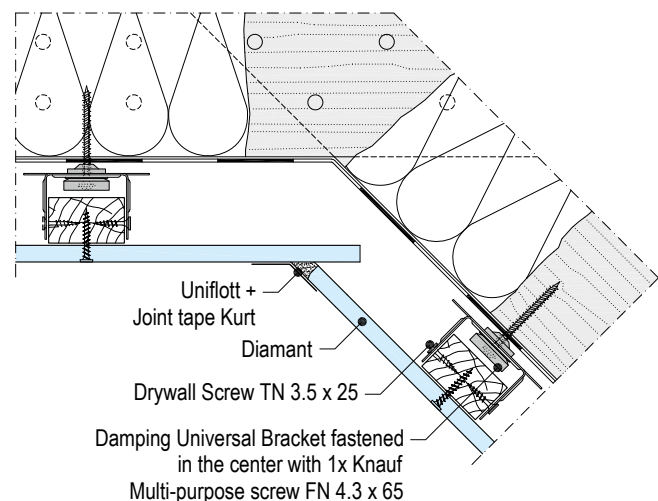
D611.de-KS3 Collar beams / roof pitch – directly anchored



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D611.de-KS2 Collar beams / roof pitch – Damping Universal Bracket

Without fire resistance

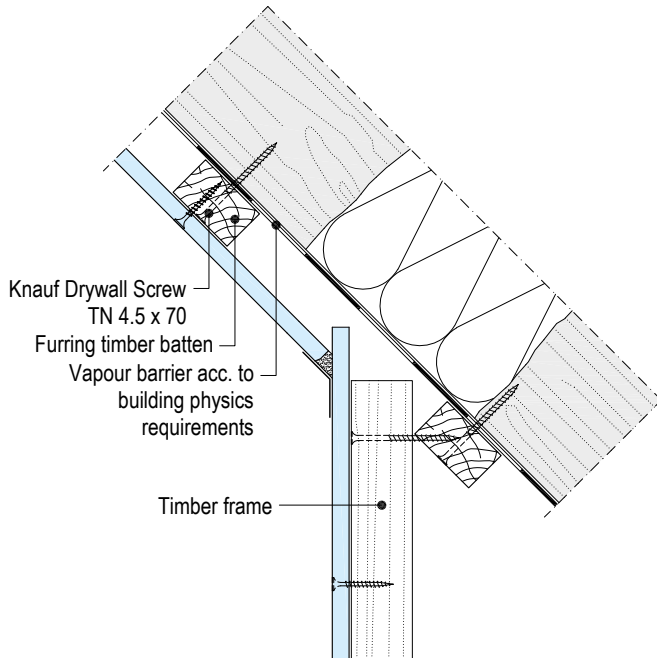


Details

Scale 1:5

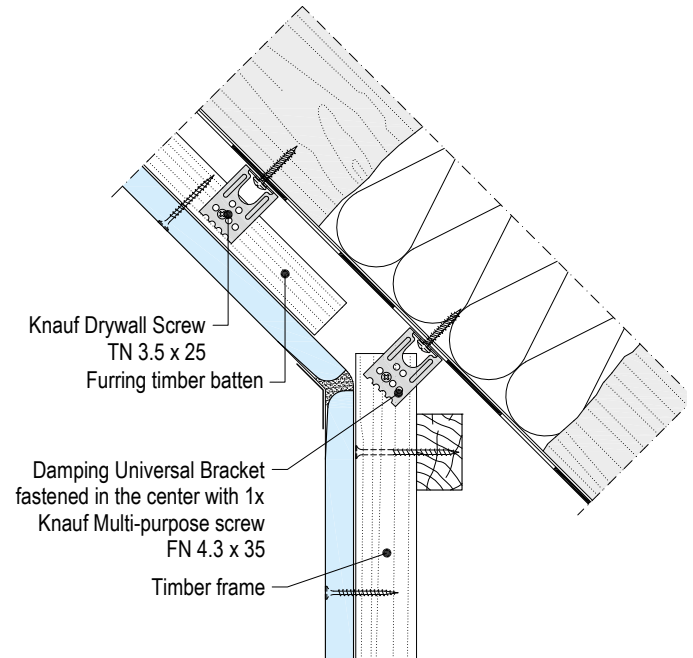
D611.de-SD1 Roof pitch / external wall below eaves – Furring timber batten / directly anchored

Without fire resistance



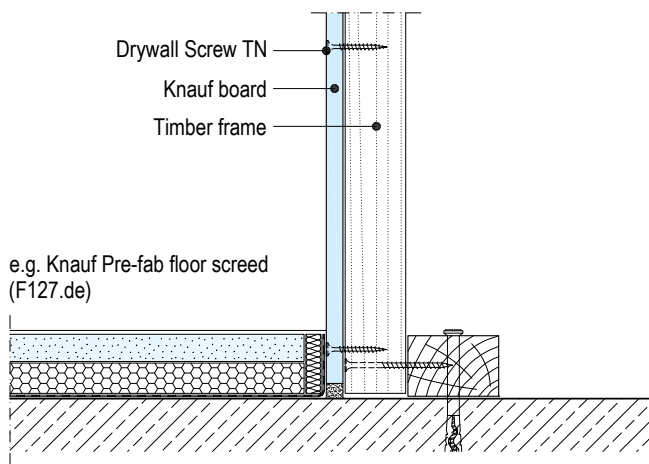
D611.de-SD2 Roof pitch / External wall below eaves – Furring timber batten / Universal Bracket

Without fire resistance



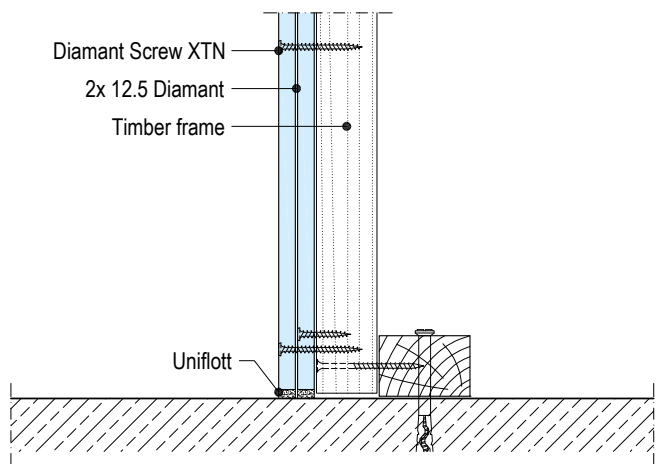
D611.de-FD1 External wall below eaves (base)

Without fire resistance



D611.de-FD2 External wall below eaves (base)

Without fire resistance



Note

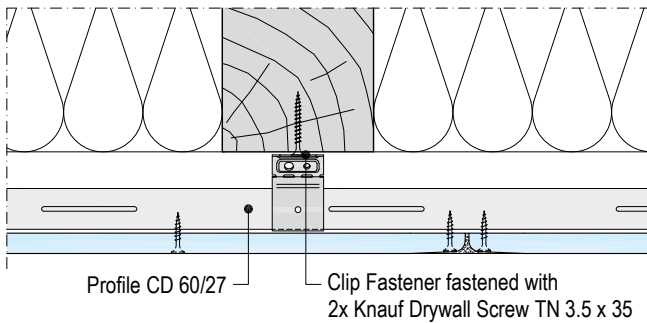
With fire resistance requirements:

Back the joints between the collar beams / roof pitch or roof pitch / external wall below eaves with Flex Profiles (see page 28).

Details

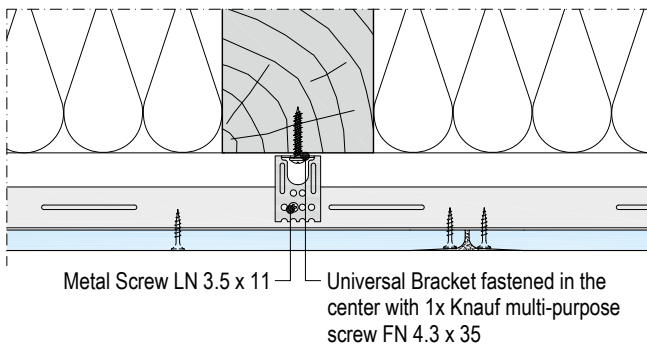
Scale 1:5

D612.de-B1 Longitudinal edge – Furring channel / anchoring clip



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

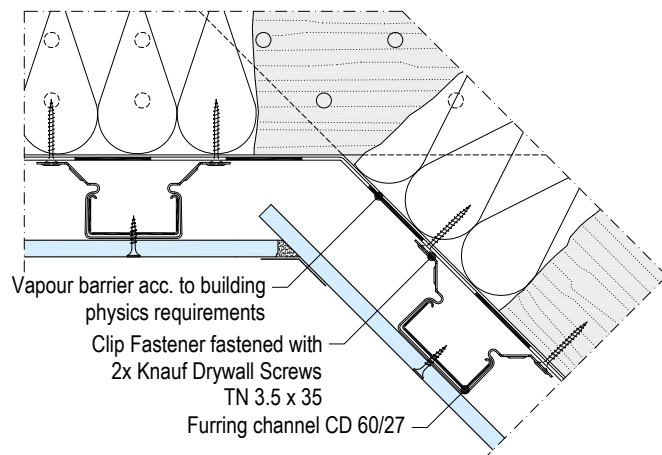
D612.de-B2 Longitudinal edge – Furring channel / Universal Bracket



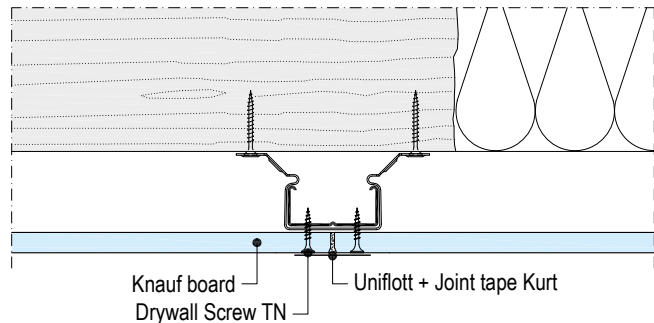
plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D612.de-KS1 Collar beams / roof pitch – Anchoring clip

Without fire resistance

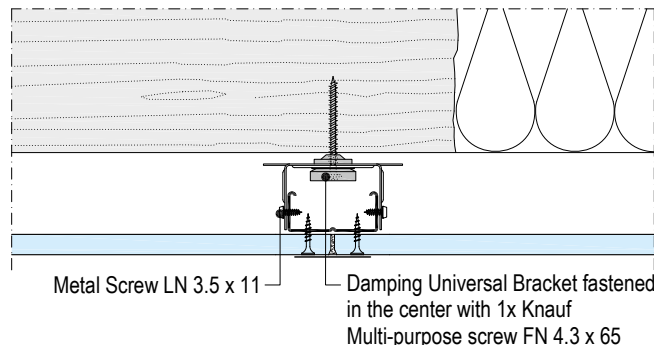


D612.de-C1 Front edge – Furring channel / anchoring clip



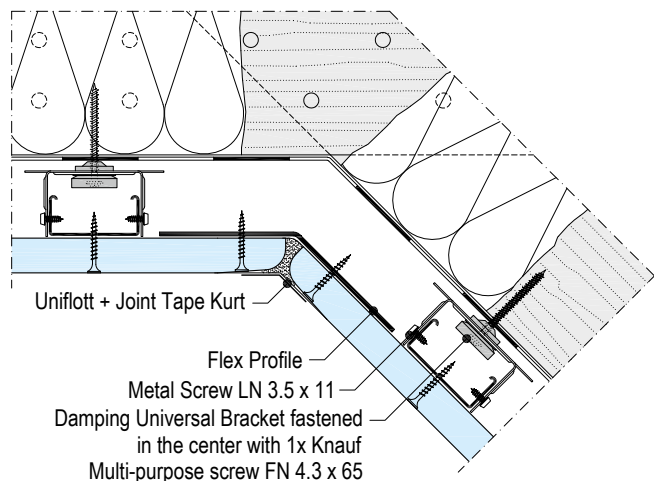
plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D612.de-C2 Front edge – Furring channel / Damping Universal Bracket



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D612.de-KS2 Collar beams / roof pitch – Damping Universal Bracket

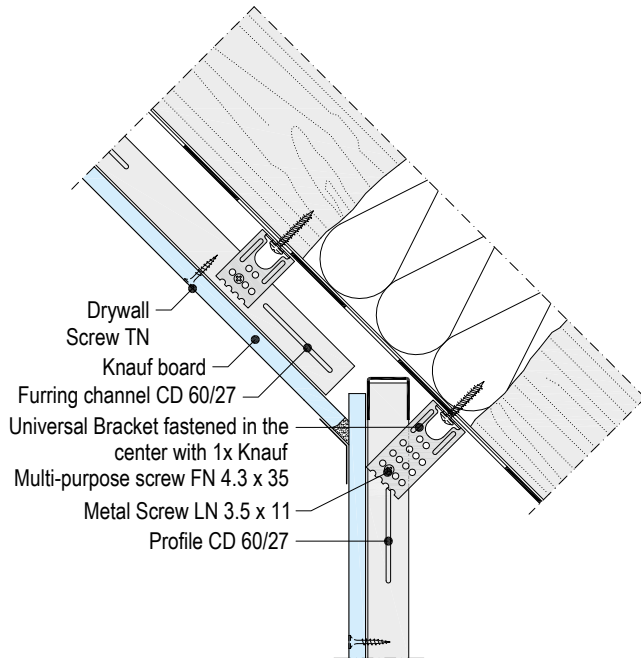


plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

Details

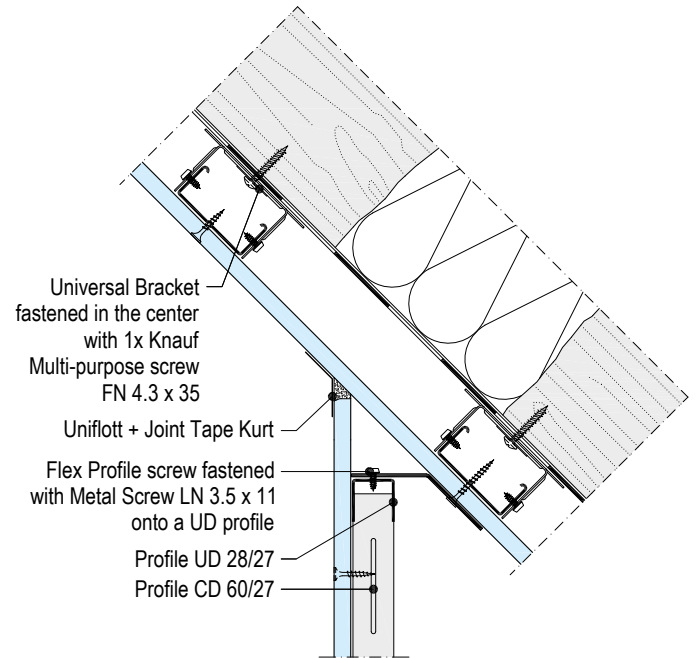
D612.de-SD3 Roof pitch / external wall below eaves – Furring channel / Universal Bracket

Without fire resistance



D612.de-SD5 Roof pitch / external wall below eaves – Furring channel / Universal Bracket

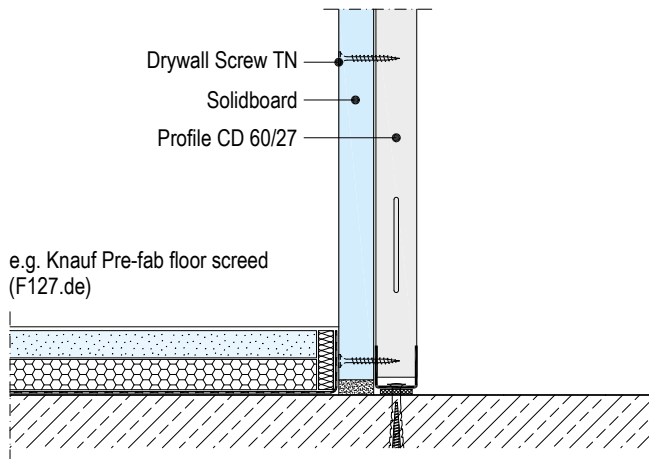
Scale 1:5



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

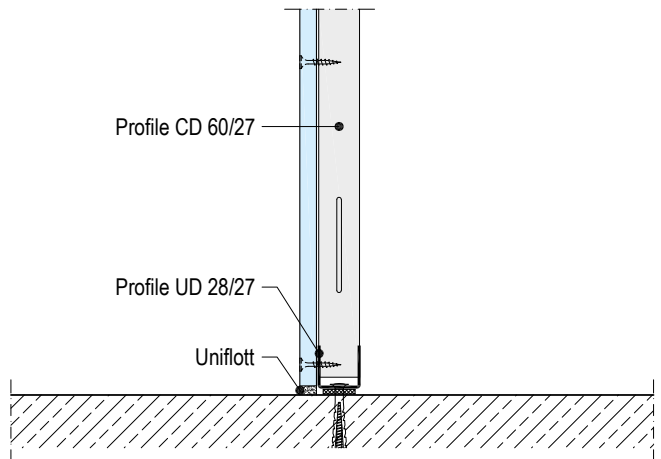
D612.de-FD1 External wall below eaves (base)

Without fire resistance



D612.de-FD2 External wall below eaves (base)

Without fire resistance



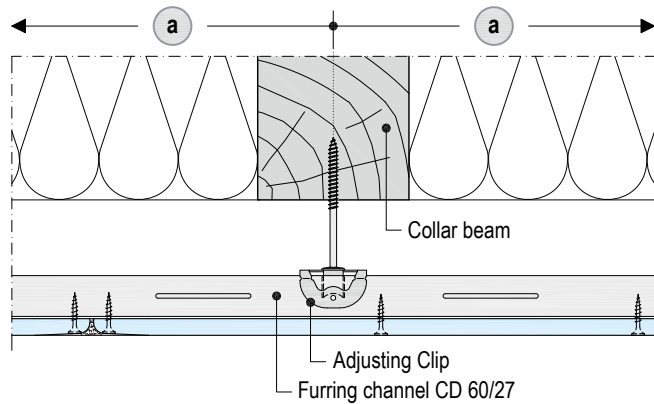
Note

With fire resistance requirements:

Back the joints between the collar beams / roof pitch or roof pitch / external wall below eaves with Flex Profiles (see page 28).

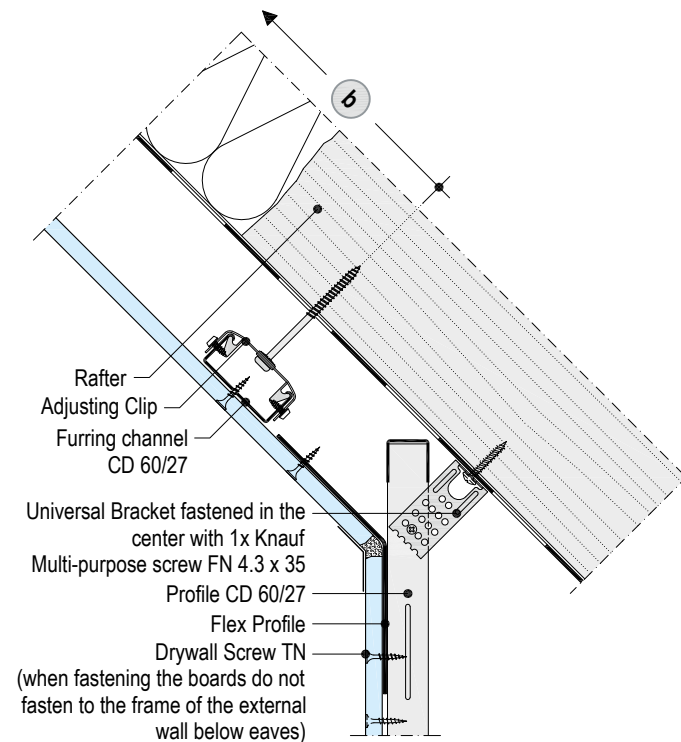
Details

D612.de-SO10 Collar beams – Adjusting clip / long edge



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

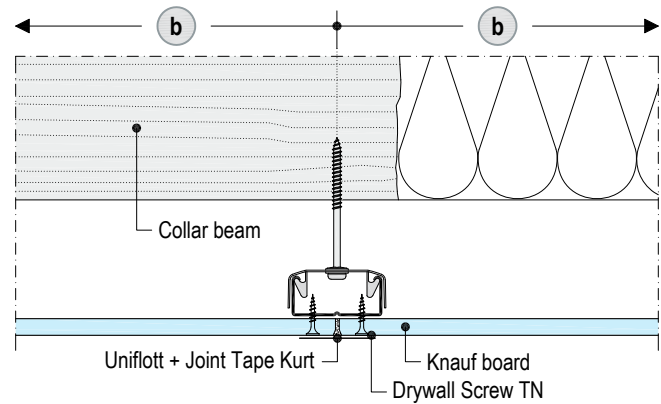
D612.de-SO12 Roof pitch / External wall below eaves – Adjusting clip



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

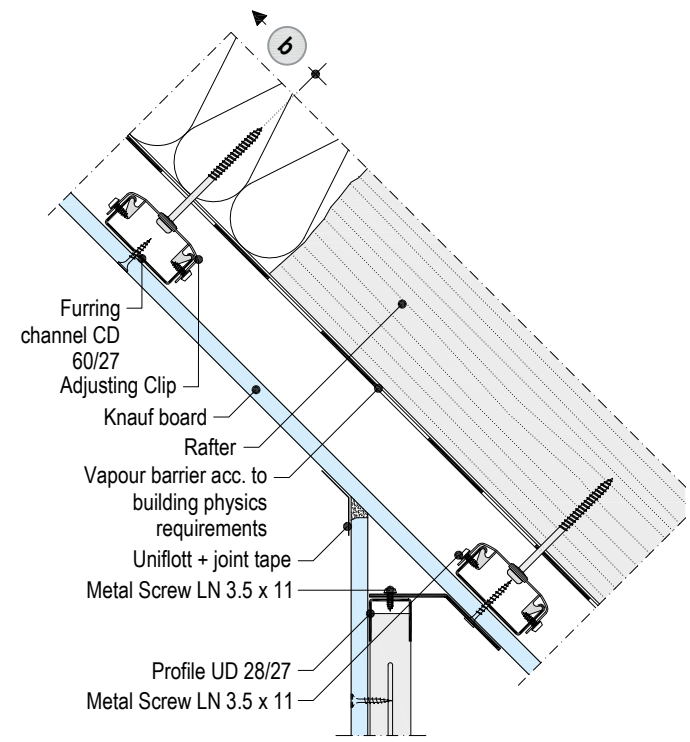
Scale 1:5

D612.de-SO11 Collar beams – Adjusting clip / front edge



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D612.de-SO13 Roof pitch / External wall below eaves – Adjusting clip



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

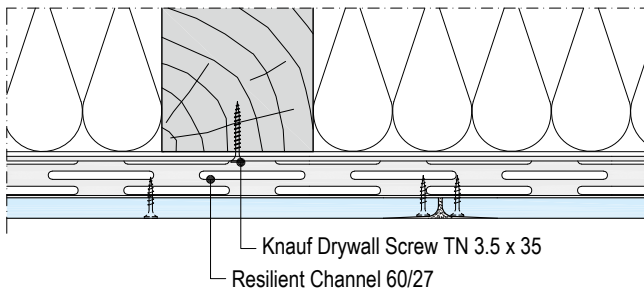
Note

With fire resistance requirements:

Back the joints between the collar beams / roof pitch or roof pitch / external wall below eaves with Flex Profiles (see also page 28).

Details

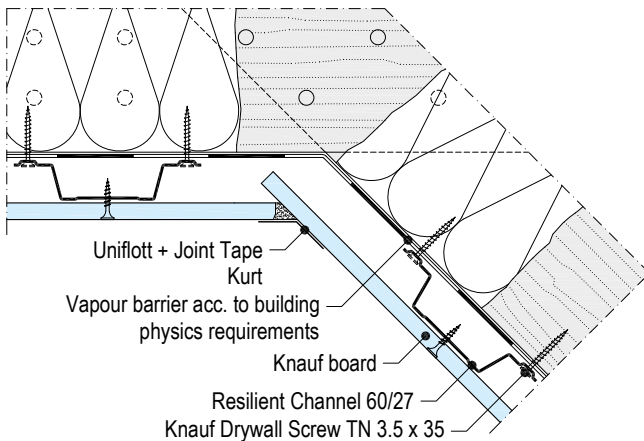
D613.de-B1 Long edge



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D613.de-KS1 Collar beams / roof pitch

Without fire resistance



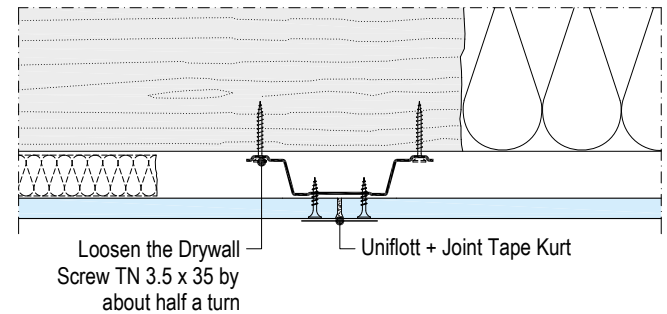
Note

With fire resistance requirements:

Back the joints between the collar beams / roof pitch or roof pitch / external wall below eaves with Flex Profiles (see also page 28).

Scale 1:5 | Dimensions in mm

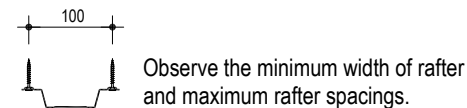
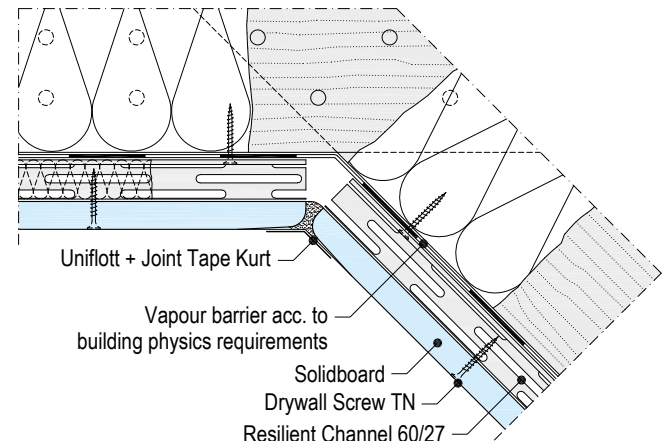
D613.de-C1 Front edge



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D613.de-KS2 Collar beams / roof pitch

Without fire resistance

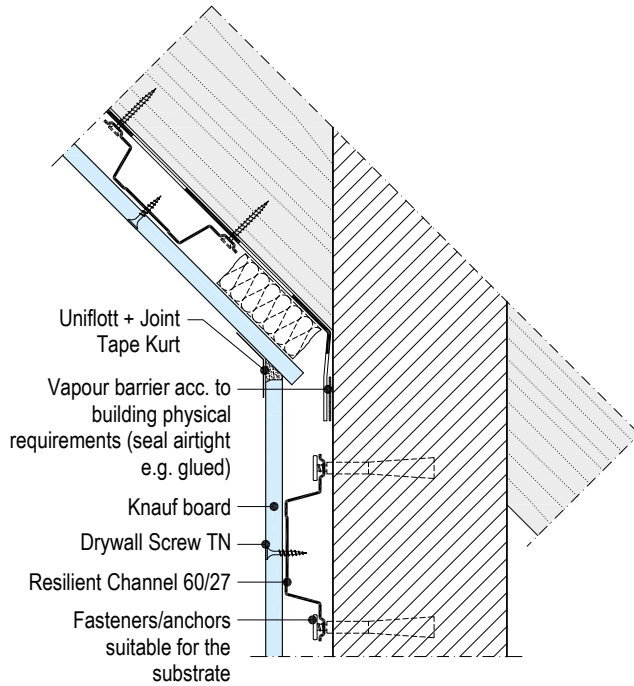


Details

Scale 1:5

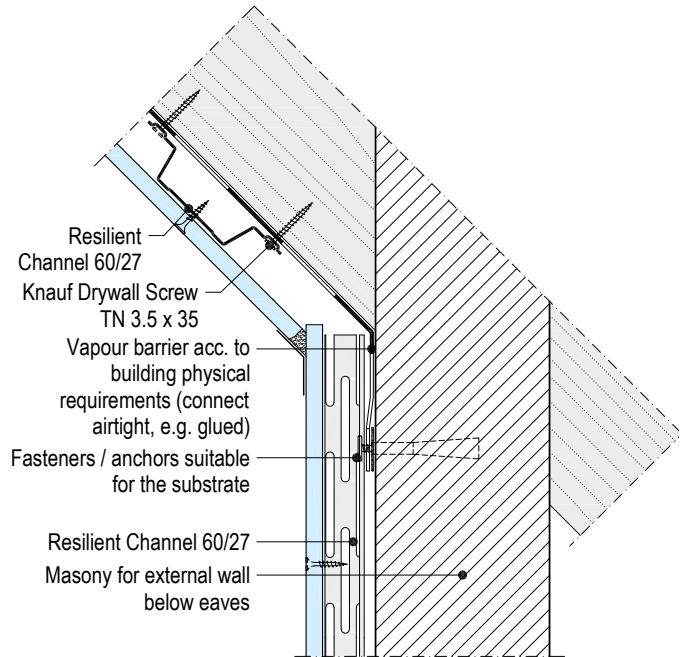
D613.de-SD1 Attic / External wall below eaves

Without fire resistance



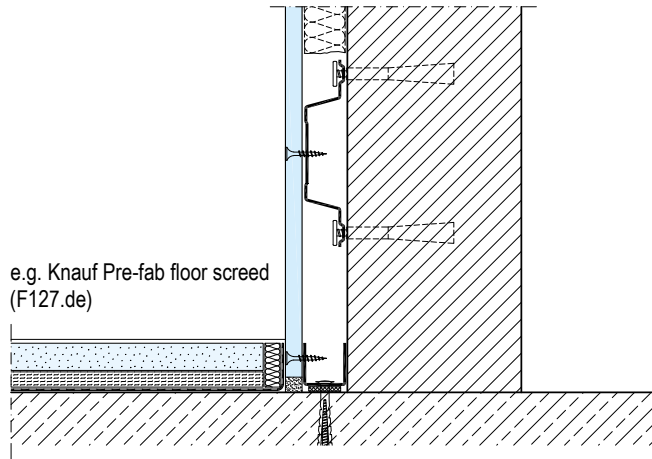
D613.de-SD2 Attic / External wall below eaves

Without fire resistance



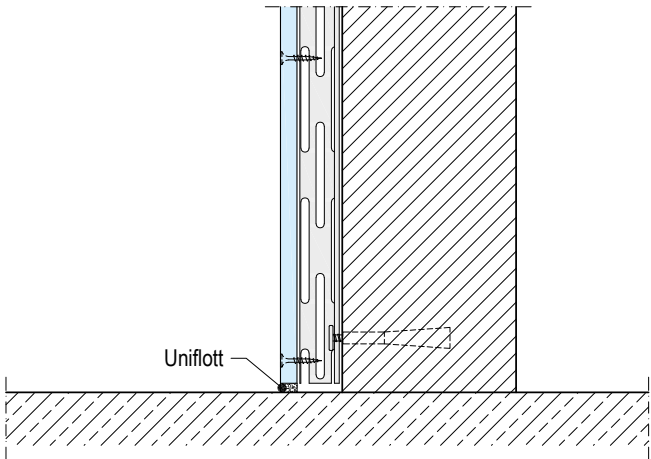
D613.de-FD1 External wall below eaves (base)

Without fire resistance



D613.de-FD2 External wall below eaves (base)

Without fire resistance



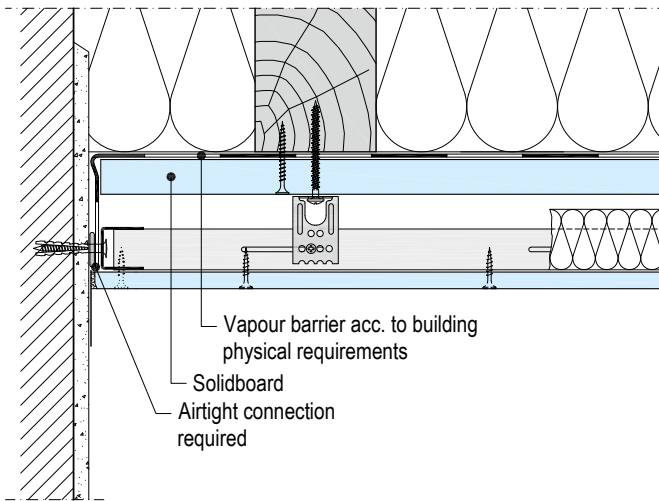
Note

With fire resistance requirements:

Back the joints between the collar beams / roof pitch or roof pitch / external wall below eaves with Flex Profiles (see also page 28).

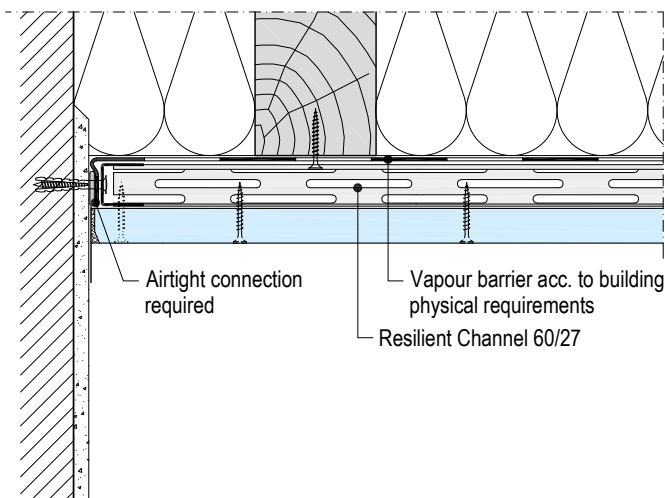
Connections to solid walls

D610.de-D1 Installation level – Connection to wall



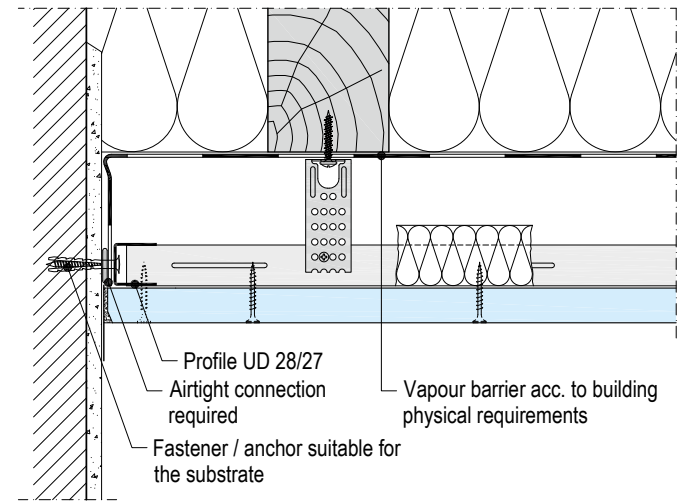
plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D613.de-D1 Connection to wall



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

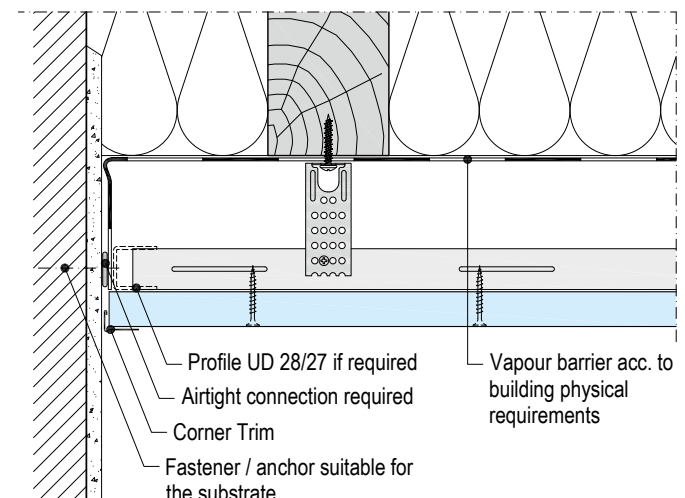
D612.de-D3 Connection to wall



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D612.de-D4 Connection to wall – Non-load bearing Design with Edge Trim

Without fire resistance



Notes

Observe the specifications for thermal and moisture protection e.g. from Knauf Insulation. If necessary building physics specialized planning is required.

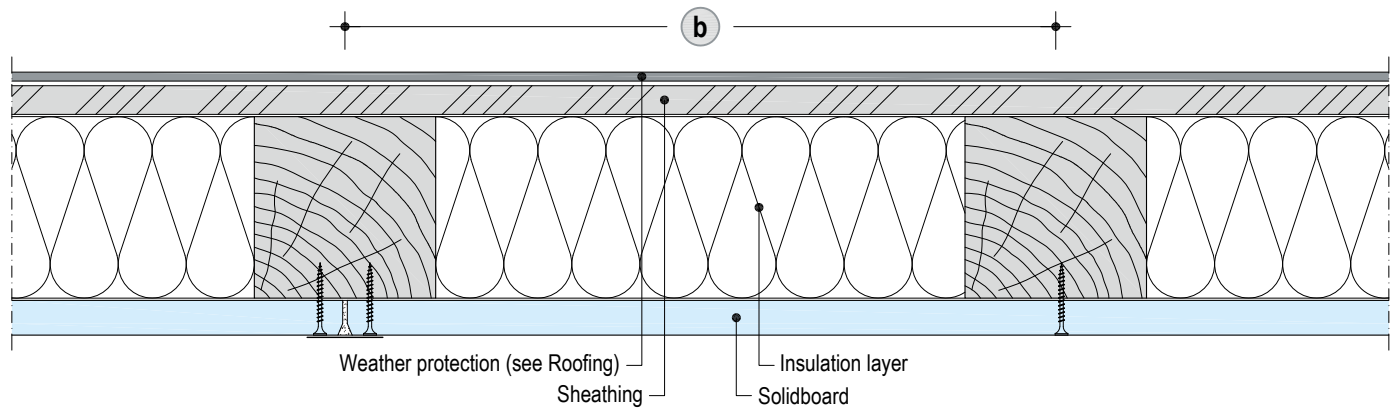
The air tightness must be guaranteed by constructional measures (refer to DIN 4108-7).

Dormer features

D610.de-SO6 Dormer

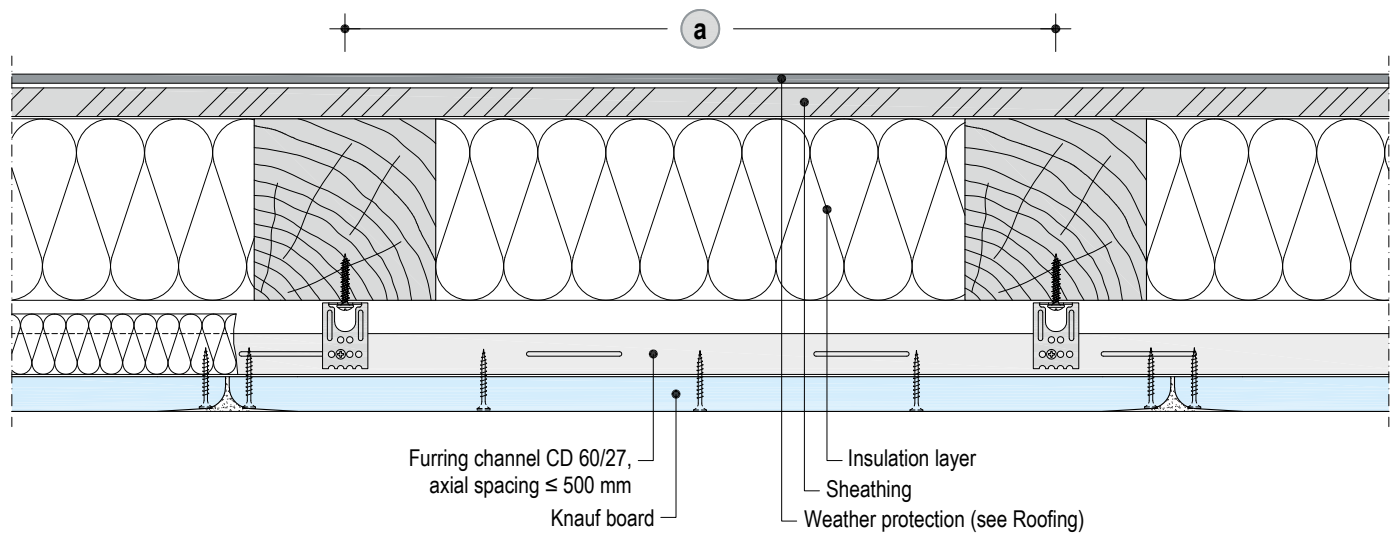
Without fire resistance

Scale 1:5



D612.de-SO6 Dormer

Without fire resistance



Note

With fire resistance requirements:

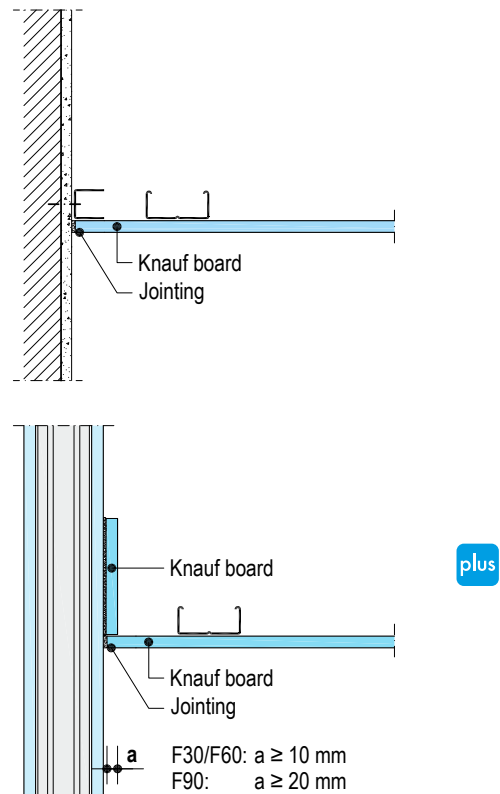
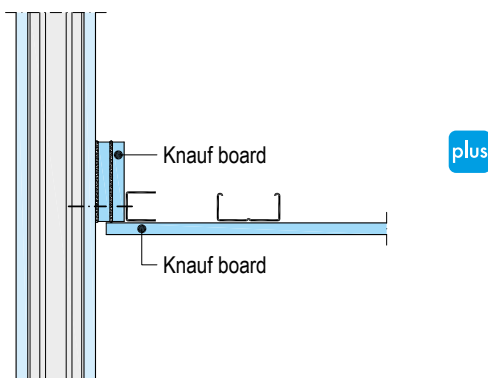
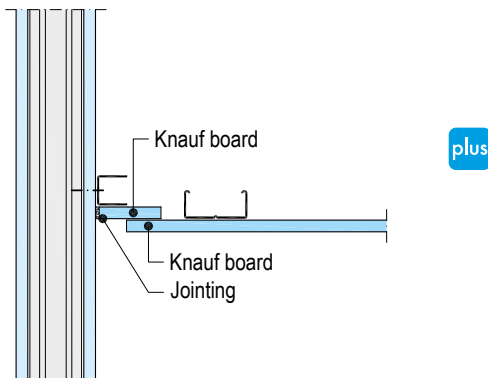
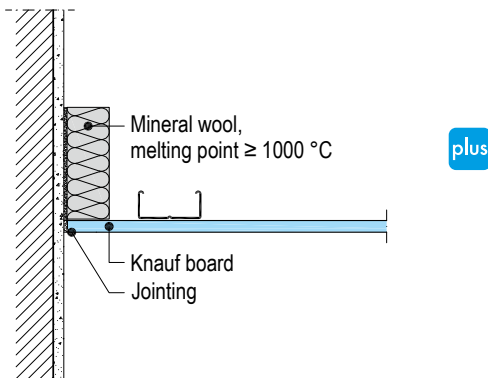
- The fire resistant design of dormers is undertaken in accordance with the specifications for the respective attic system.
- Should existing dormer style constructions diverge from the requirements acc. to the specifications of the tables on pages 12, 16, 20 and 24, the fire protection requirements can also be achieved with the systems acc. to the [system data sheet Knauf Installation Shaft Walls W62.de](#) in case of vertical constructional components and the [system data sheet Knauf Board Ceilings D11.de](#) with pitches or horizontal constructional components.

Lateral connection of technical fire resistance classified ceiling attic systems to technical fire resistance classified partitions

Attic systems that comply with fire resistance classes F30 to F90 can be connected to the partitions if they feature the same fire resistance class or better.

The partition substrate in the connection area must be even. If necessary, measures to level it will be required. The connection to the ceiling lining / suspended ceiling must be sealed and backed.

Scheme drawings



Note

plus Extension of the fire resistance Proof of Usability see page 6.

D610.de

D611.de

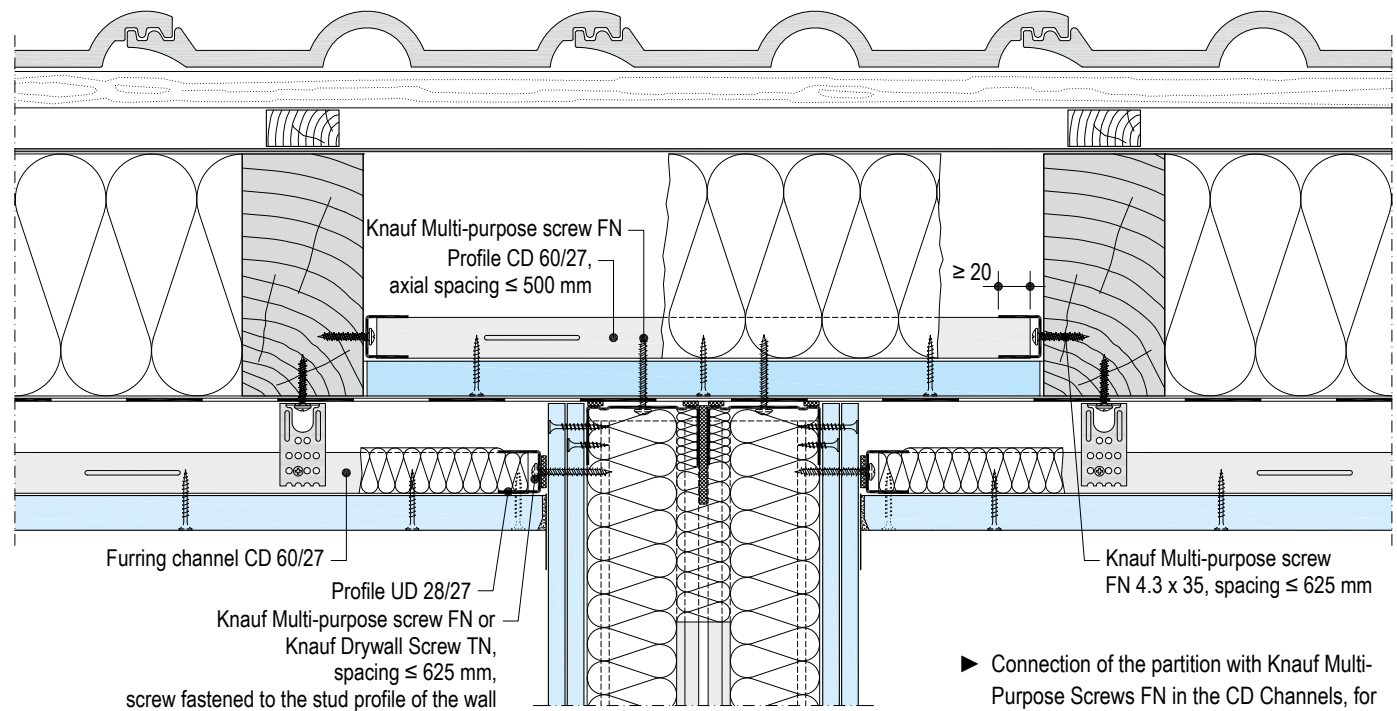
D612.de

D613.de

Details

Scale 1:5 | Dimensions in mm

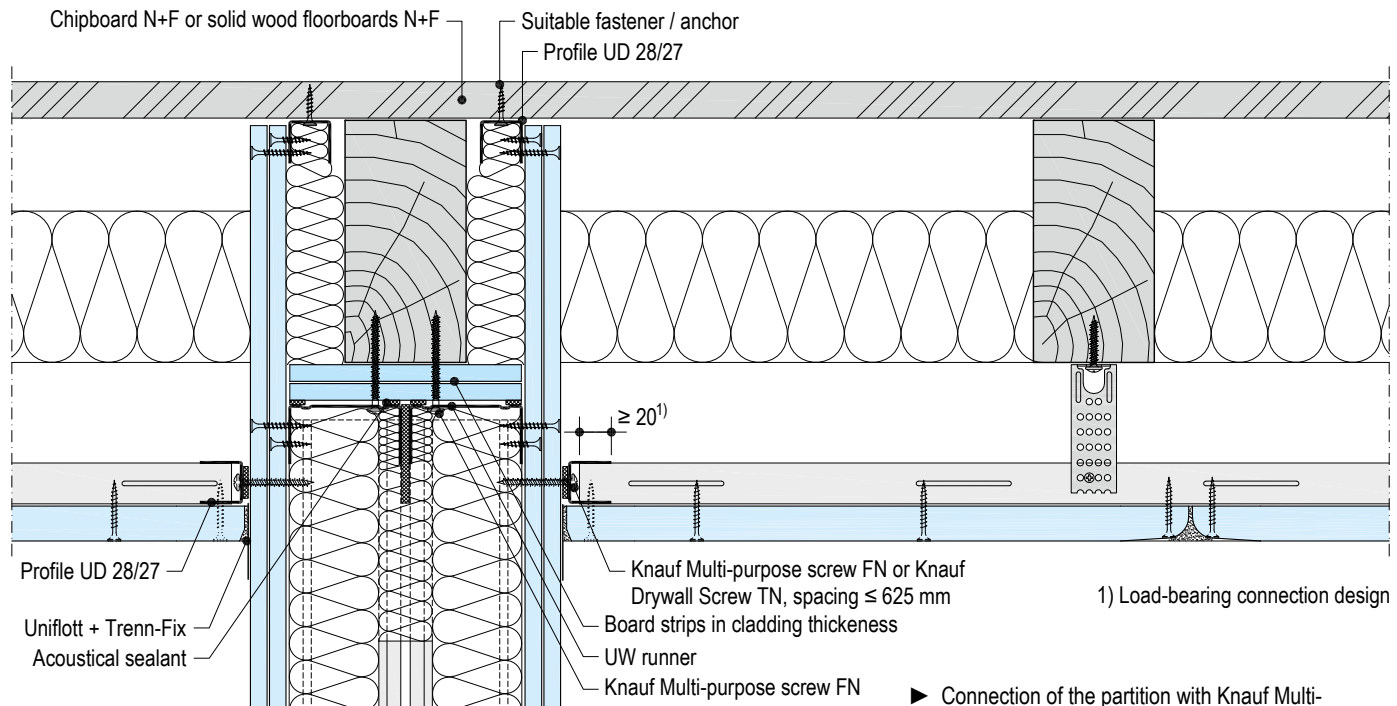
D612.de-SO17 Connection of partition to roof



- Connection of the partition with Knauf Multi-Purpose Screws FN in the CD Channels, for connection spacings see [system data sheet Knauf Metal Stud Partitions W11.de](#)

plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

D612.de-SO19 Connection of partition to collar beam



1) Load-bearing connection design

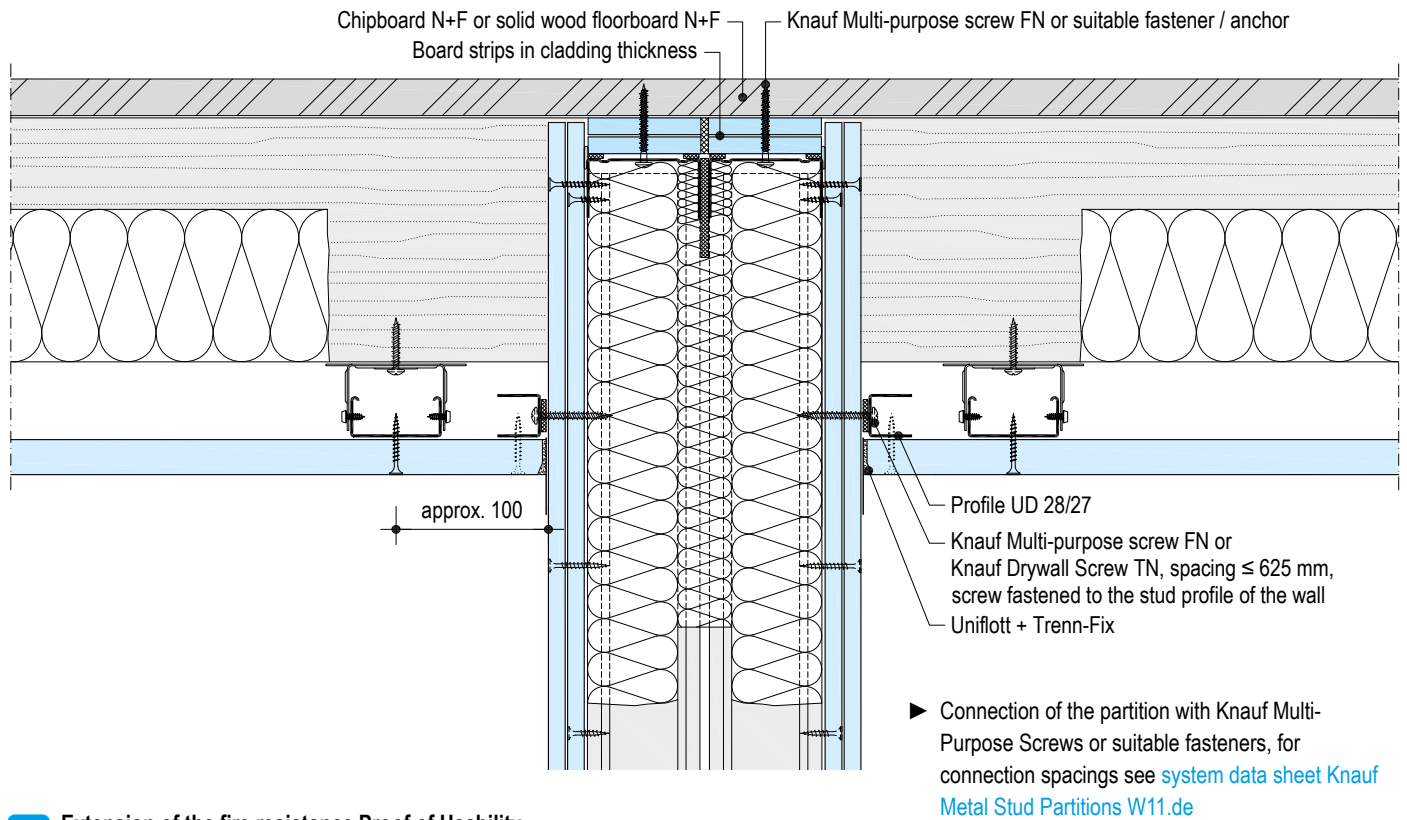
- Connection of the partition with Knauf Multi-Purpose screws FN, connection spacings see [system data sheet Knauf Metal Stud Partitions W11.de](#)

plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

Detail

Scale 1:5 | Dimensions in mm

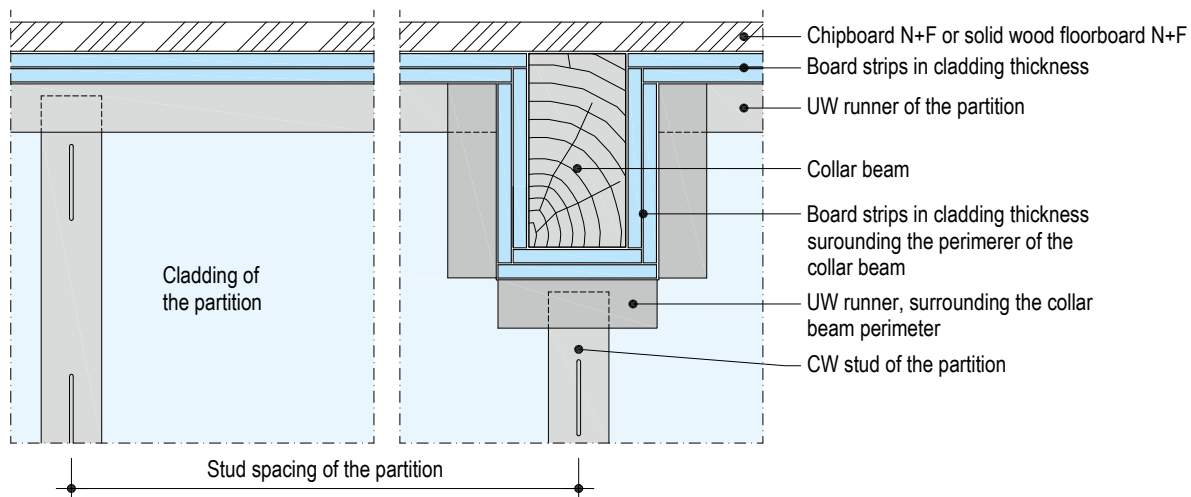
D612.de-SO18 Connection of partition to collar beams



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

Cut through collar beam

Scheme drawing



plus Extension of the fire resistance Proof of Usability
Prior consultation in acc. to page 6 recommended

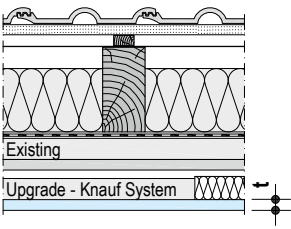
Notes

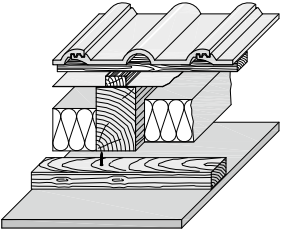
Connection components of the partition must feature at least the same fire resistance class.

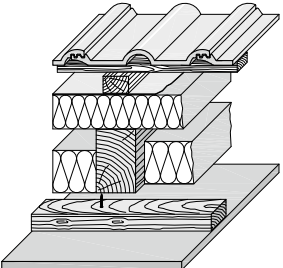
Observe the specifications for thermal and moisture protection e.g. from Knauf Insulation. If necessary, building physics specialized planning is required.

The air tightness must be guaranteed by constructional measures (refer to DIN 4108-7).

Sound insulation upgrade

	Fire resistance class	Cladding (lateral application)			Furring channel	Sound insulation Insulation layer			Sound reduction index $R_w^{1)}$ With Raftersqueeze insulation Suspension with Damping Universal Bracket and 30 mm mineral wool ²⁾ dB
Diamant		Silentboard	Mini- mum thick- ness t mm	Maximum Axial spacings b mm	Minimum thickness mm	Mineral wool	Above rafter insulation SDP		
Existing									
Upgrade - Knauf System									

Upgrading with D612.de Knauf Attic System (Grid with CD Profile 60/27)								
 Existing building	-	•	12.5	500				56.1
		•	2x 12.5	500	160	•	-	61.2
		•	12.5 + 12.5	400				62.7
Upgrading (D612.de)		•						

Upgrading with D612.de Knauf Attic System – With above rafter insulation (Grid with CD Profile 60/27)								
 Existing state with above rafter insulation	-	•	12.5	500	160 + 80	•		59.4
		•	12.5 + 12.5	400			•	65.5
		•						
Upgrading (D612.de)								

1) Test set-up see next page

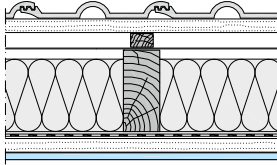
2) Required for sound insulation reasons: 30 mm Knauf Insulation TP 120 A, length-related flow resistance 11 kPa·s/m²

Notes

Check the stability of the existing construction.
Observe the notes from page 4.

Sound insulation upgrades test set-up

Test set-up for existing construction without above rafter insulation



Pitched roof

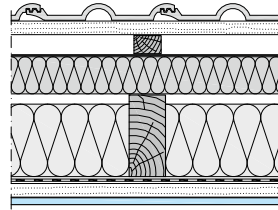
- Concrete roofing tiles
- Battens 50 x 30 mm and counter battens 50 x 30 mm
- Vapour permeable under roof sheet membrane
- Collar beams/rafters (structural timber) 80 x 180 mm, axial spacings 770 mm
- Mineral wool insulation layer 160 mm, pushed between the beams
- Vapour-inhibiting vapour retarder
- Roof pitch 80°

With existing suspended ceiling

- Timber batten 50 x 30 mm directly anchored
- Board GKF 12.5 mm

or

Test set-up for existing construction with above rafter insulation



Pitched roof

- Concrete roofing tiles
- Battens 50 x 30 mm and counter battens 60 x 40 mm
- Vapour permeable under roof sheet membrane
- Above rafter insulation 80 mm pitched roof insulation board SDP-035-GF
- Collar beams/rafters (structural timber) 80 x 180 mm, axial spacings 770 mm
- Mineral wool insulation layer 160 mm, pushed between the beams
- Vapour-inhibiting vapour retarder
- Roof pitch 80°

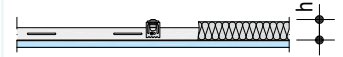
With existing suspended ceiling

- Timber batten 50 x 30 mm directly anchored
- Board GKF 12.5 mm



+

Test set-up for attic lining as upgrade



Upgrade with suspended ceiling
Suspended

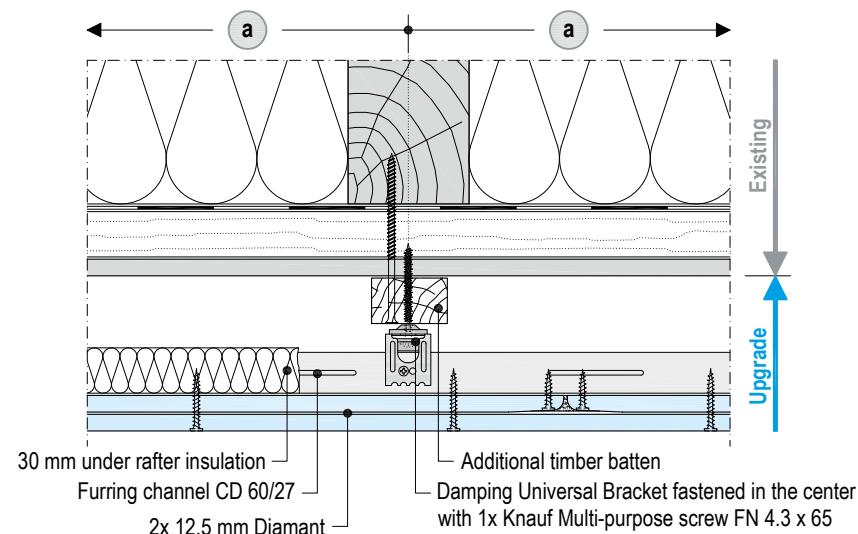
- Damping Universal Bracket suspension height (h) about 40 mm
- Profile CD 60/27
- With under rafter insulation 30 mm, flow resistance $\geq 11 \text{ kPa} \cdot \text{s/m}^2$
- Knauf boards

Without fire resistance

Scale 1:5 | Dimensions in mm

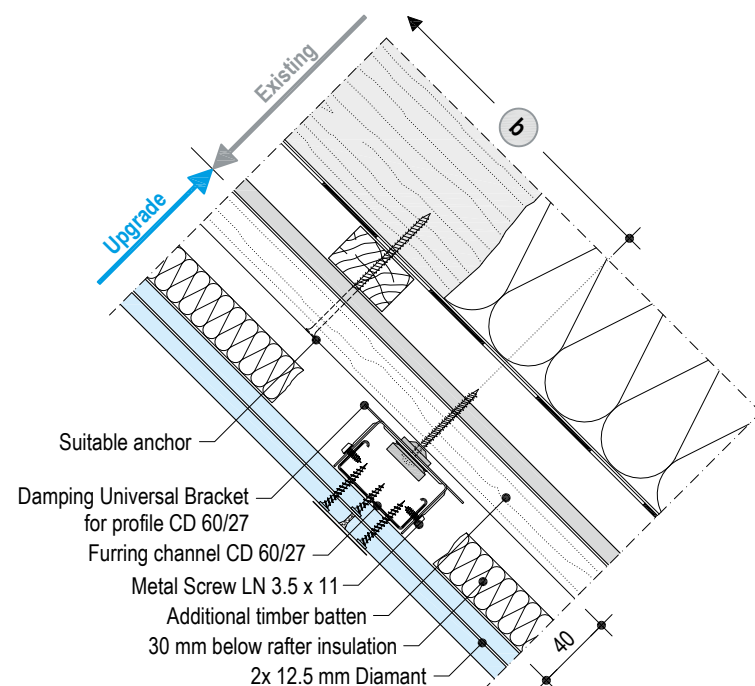
D612.de-SO15 Upgrade – collar beam (long edge)

Without fire resistance



D612.de-SO16 Upgrade – roof pitch (front edge)

Without fire resistance



Maximum grid spacings

- Furring channel only
- Suspended with Damping Universal Bracket

Axial spacings Furring channel b	Spacings of suspenders / anchors Load class kN/m ² a			
	Up to 0.15	Up to 0.30	Up to 0.40	Up to 0.50
400	–	1250	1200	1100
500	–	1200	1100	1000
625	–	1100	1000	950
800	–	1000	950	750

Maximum axial spacings of furring channel and type of cladding see pages 18 and 46.

Notes

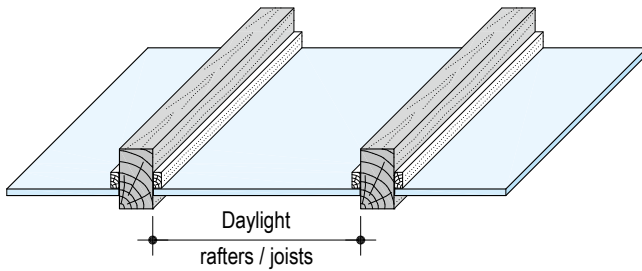
Check the stability of the existing constructions.

Observe the specifications for thermal and moisture protection e.g. from Knauf Insulation. If necessary, building physics specialized planning is required.

The air tightness must be guaranteed by constructional measures (refer to DIN 4108-7).

Without fire resistance

Wooden frame (lateral application)

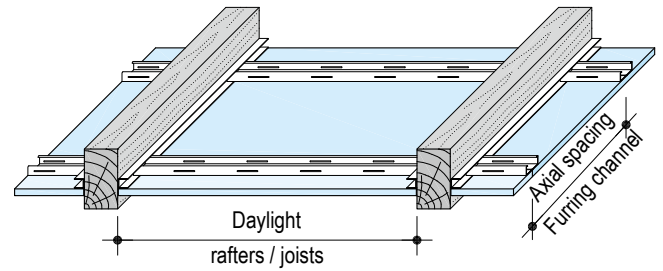


Maximum grid spacings

Dimensions in mm

Cladding thickness	Clearance rafter / beam spacings
12.5 Silentboard	400
12.5 / 2x 12.5 / 12.5 + 25	500
15 / 15 + 18	550
18 / 2x 18	625
20	625 (collar beam / rafter up to 25°)
	800 (rafter)
25	800

Metal frame (lateral application)



Maximum grid spacings

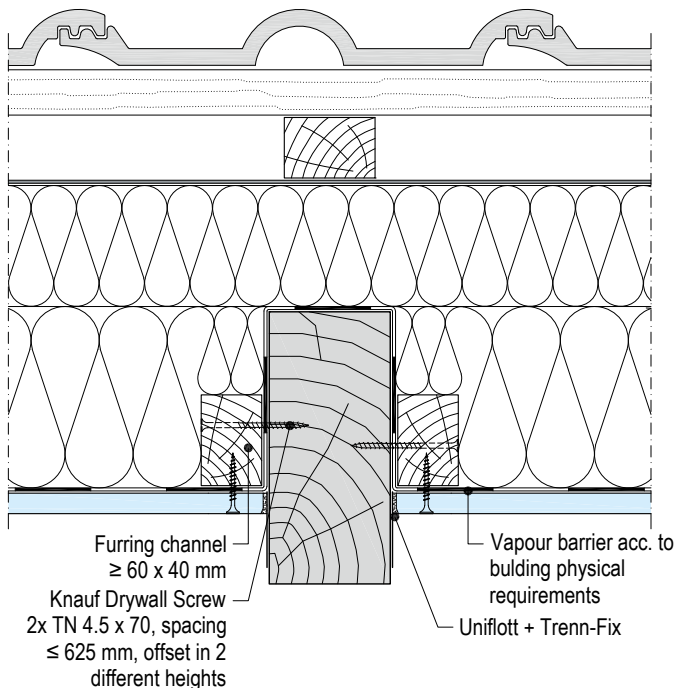
Dimensions in mm

Axial spacings Furring channel	Clearance rafter / beam spacings Load class kN/m ²		
	Up to 0.15	Up to 0.30	Up to 0.50
400	1600	1250	1100
500	1500	1200	1000
625	1400	1100	9500

Details

D611.de-SO10 Exposed rafters or beams (load-bearing connection)

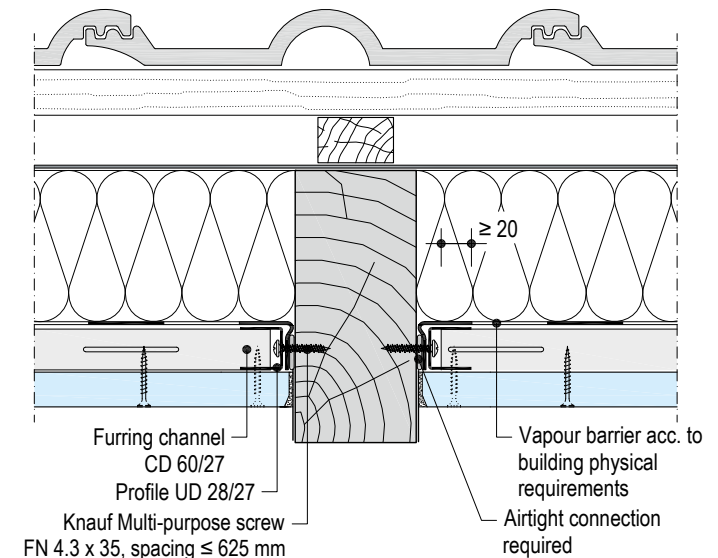
Without fire resistance



Scale 1:5 | Dimensions in mm

D612.de-SO14 Exposed rafters or beams (load-bearing connection)

Without fire resistance



Notes

Observe the specifications for thermal and moisture protection e.g. from Knauf Insulation. If necessary, building physics specialized planning is required.

The air tightness must be guaranteed by constructional measures (refer to DIN 4108-7).

Installation of the grid

Anchoring to rafters / collar beams

The anchoring of the suspenders to the rafters / collar beams is undertaken using Knauf Drywall Screws TN or Knauf Multi-purpose screw FN in accordance with page 29.

Note

The dampening rubbers may only be slightly compressed when the swing suspenders are anchored.

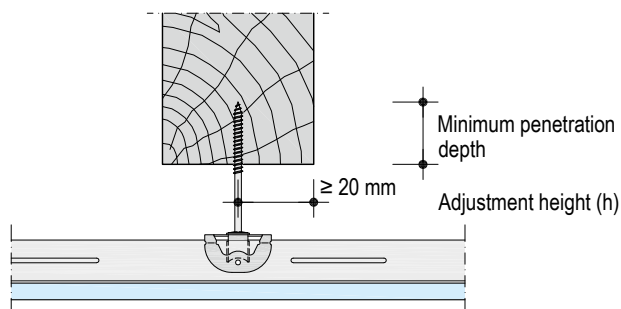
Suspension

Suspension of the furring timber battens or carrying or furring channels exclusively with suspenders acc. to page 29 (observe additional measures if necessary).

Refer to the system tables in the "Data for planning" section for the anchoring spacings on ceilings and timber battens / profiles.

■ Adjusting clip

- Screw the adjusting clip in case of roof pitches onto the CD Channels.
- Screw fixing is unnecessary in the profiles with collar beams
- Adjustment height and penetration depth:



Roof pitch	Adjustment height (h)	Minimum penetration depth
With collar beam lining		
–	≤ 60 mm	30 mm
With frictionally bonded connection to external wall below eaves		
–	≤ 60 mm	30 mm
Without frictionally bonded connection to external wall below eaves		
45°	≤ 40 mm	50 mm
60°	≤ 30 mm	60 mm

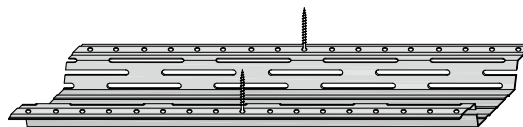
Timber battens / profiles

- Furring timber batten should be connected either with Knauf Drywall Screws TN 4.5 x 70 directly to the rafters / collar beams or with Universal Brackets and aligned flush at the required suspension height.
- Connect the carrying or furring channels with suspenders and align flush at the required suspension height.
- Stagger all timber batten or profile joints.

Resilient Channels (D613.de)

Fasten the Resilient Channels each with 2 Knauf Drywall Screws TN 3.5 x 35 or TN 3.9 x 35 to the rafters / collar beams.

Stagger all Resilient Channels

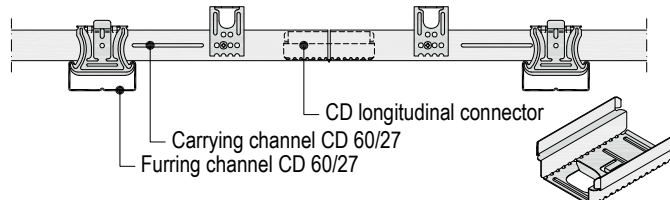


Note

For optimum effectiveness install the Resilient Channel with about 1 mm spacing. For this purpose, unscrew the screws by about half a turn after they have been screwed in flush, to ensure that the Resilient Channel is hanging by the screw heads. Between the Resilient Channels the cavity is to be filled with 30 mm mineral wool.

Profile extension

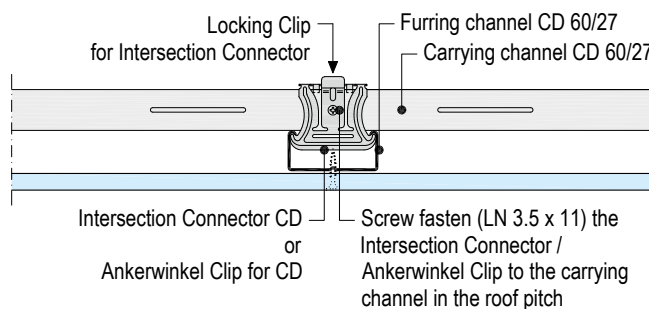
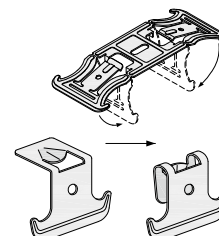
- Profile extensions of the carrying or furring channel CD with CD longitudinal connector – arranged alternately.



Profile connections

With a double layer profile grid, the connection of the carrying and furring channels as the intersections is undertaken with:

- Intersection connectors for CD 60/27:
Before the installation, bend to 90° and after installation close the clip lock to ensure a secure hold.
- 2x Ankerwinkel Clips for CD 60/27 (alternative):
Bend for installation.



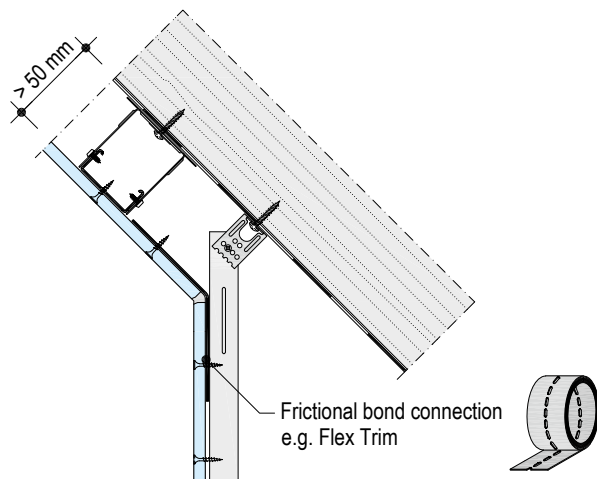
Installation of the grid (continuation)

Connection to wall

- Wall connections can be applied as an installation aid with timber battens (D611.de) or UD 28/27 profiles (D612.de / D613.de). Anchor to the substrate with suitable fasteners, for anchoring spacings see page 28.
- With a load-bearing connection and with sound insulation requirements, backing with profile UD 28/27 is necessary. Application according to page 28.
- For fire resistance requirements, backing in accordance with page 43, connections to partitions are necessary.
- In case of sound insulation requirements, seal carefully with Trennwandkitt acoustical sealant in acc. to DIN 4109, supplement 1, section 5.2. Porous sealing strips, such as sealing tape are usually not suitable in this case.

Connection to external wall below eaves

- With fire resistance requirements:
Back the joints between the roof pitch and external wall below eaves with Flex Profiles (see page 28).
- With suspension height > 50 mm a frictionally bonded external wall below eaves connection is **always** required (e.g. with Flex Profile).



Cladding installation

- Commence with the fixing of the boards in the board centre or on the board corner to avoid buckling.
- Every board layer should be pushed firmly onto the grid and attached as an independent layer.

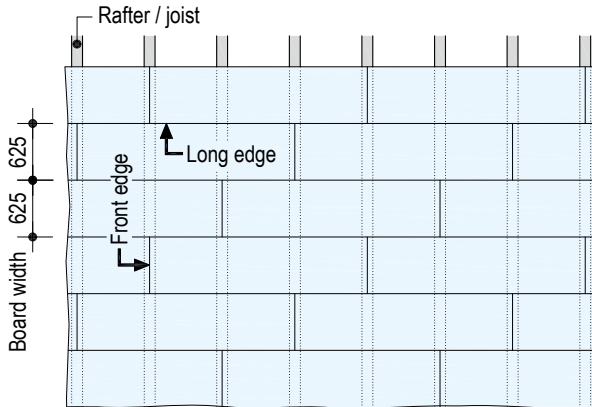
Installation schemes

Scheme drawings | Dimensions in mm

D610.de – lateral cladding

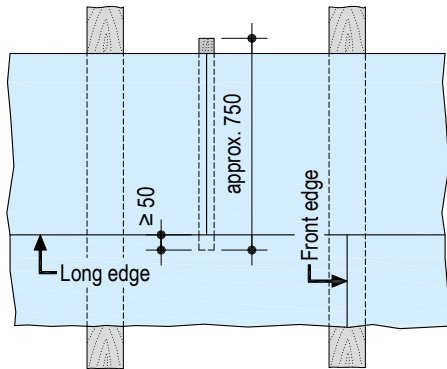
Board width

Single-layer: **625 mm** e.g. Solid Board



- Apply Knauf boards lateral to the rafters / joists.
- Arrange the board joints preferably on the rafters / joists (stagger by at least 400 mm).
- Back non-supported joints with CD Channel or battens (without fire resistance).

Non-supported board joint (without fire resistance)



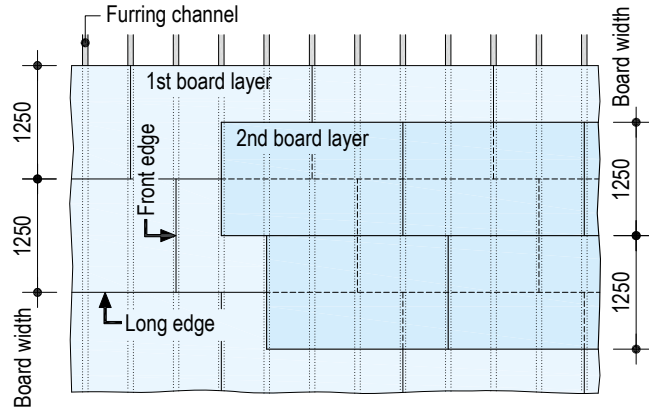
Back the non-supported joint with a timber batten or CD 60/27 profile. The backing is ≥ 50 mm behind the adjacent boards and will be screwed onto them as well.

D611.de/D612.de/D613.de – lateral cladding

Board width

1st layer: **1250 mm** e.g. Knauf Piano fire-resistant board

2nd layer: **1250 mm** e.g. Knauf Piano fire-resistant board

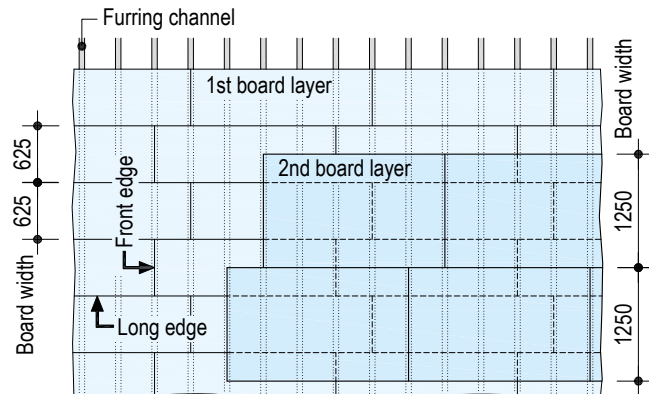


- Apply Knauf Boards lateral to the furring timber batten/furring channel.
- Arrange the board joints on the furring timber batten/furring channels (stagger by at least 400 mm).
- Stagger the front edge joints between board layers.
- Stagger the long joints between the board layers by at least half a board width.

Board width

1st layer: **625 mm** e.g. Solid Board

2nd layer: **1250 mm** e.g. Knauf Piano fire-resistant board



- Apply Knauf Boards lateral to the furring timber batten/furring channel.
- Arrange the board joints on the furring timber batten/furring channels (stagger by at least 400 mm).
- Stagger the front edge joints between board layers.
- Stagger the long joints between the board layers by at least half a board width to the 1st layer

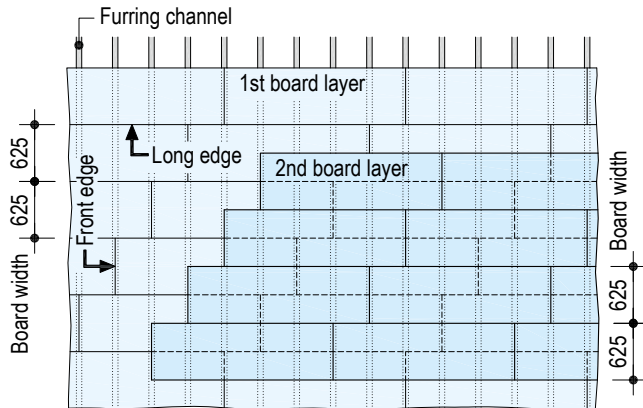
Installation schemes (continued)

Schemes I Dimensions in mm

Board width

1st layer: **625 mm** e.g. Silentboard

2nd layer: **625 mm** e.g. Silentboard



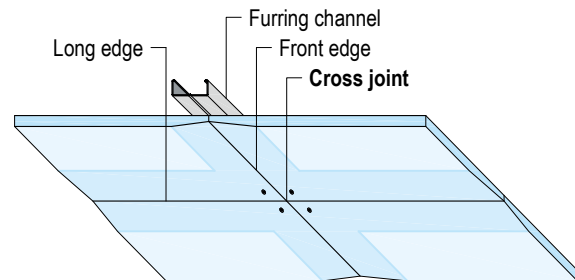
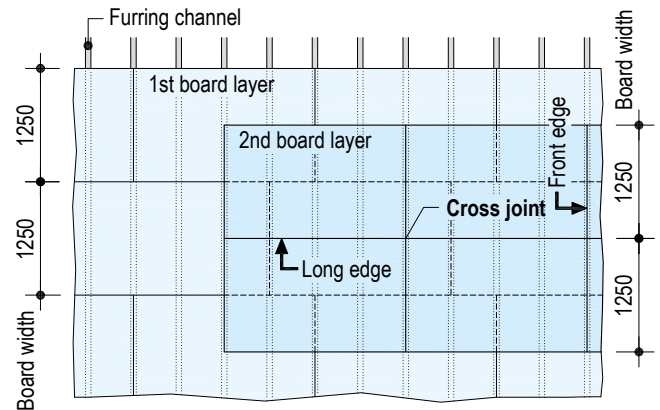
- Apply Knauf Boards lateral to the furring timber batten/furring channel.
- Arrange the board joints on the furring timber batten/furring channels (stagger by at least 400 mm).
- Stagger the front edge joints between board layers.
- Stagger the long joints between the board layers by at least half a board width.

Horizonboard – lateral application – cross joint plus

Board width

1st layer: **1250 mm** e.g. Knauf Wallboard

2nd layer: **1250 mm** Horizonboard



- Install Horizonboard lateral to the furring timber batten/furring channel.
- Arrange the board joints on the furring timber batten/furring channels (stagger by at least 400 mm).
- Stagger the front edge joints between board layers in case of multi-level cladding.
- Stagger the long joints between the board layers by at least half a board width.
- With double-layer cladding:
 - Only apply Knauf Horizonboard to the second layer.
 - Knauf boards of the first layer (boards application acc. to previous page) must have the same board format as the Horizonboard.

Fastening of the cladding

Dimensions in mm

Fasteners to be used

Cladding Thickness mm	Wood frame Penetration depth $\geq 5 d_n$		Metal grid (penetration ≥ 10 mm) Metal gauge $s \leq 0.7$ mm	
	Drywall screws TN	Diamant screws XTN	Drywall Screws TN	Diamant screws XTN
12.5	TN 3.5 x 35	XTN 3.9 x 33	TN 3.5 x 25	XTN 3.9 x 23
15	TN 3.5 x 35	XTN 3.9 x 38	TN 3.5 x 25	XTN 3.9 x 33
20	TN 3.5 x 45	–	TN 3.5 x 35	–
25	TN 3.5 x 45	–	TN 3.5 x 35	–
2x 12.5	TN 3.5 x 35 + TN 3.5 x 45	XTN 3.9 x 33 + XTN 3.9 x 55	TN 3.5 x 25 + TN 3.5 x 35	XTN 3.9 x 23 + XTN 3.9 x 38
2x 18	TN 3.5 x 45 + TN 3.5 x 55	–	TN 3.5 x 35 + TN 3.5 x 55	–
25 + 12.5	TN 3.5 x 45 + TN 3.5 x 55	–	TN 3.5 x 35 + TN 3.5 x 55	–
	TN 3.5 x 45	+ XTN 3.9 x 55 ¹⁾	TN 3.5 x 35	+ XTN 3.9 x 55 ¹⁾

1) Combined cladding (Knauf boards + Diamant)

■ d_n = nominal diameter (e.g. with Drywall Screw TN 3.5x35: 5x 3.5 mm $\rightarrow \geq 17.5$ mm penetration depth)

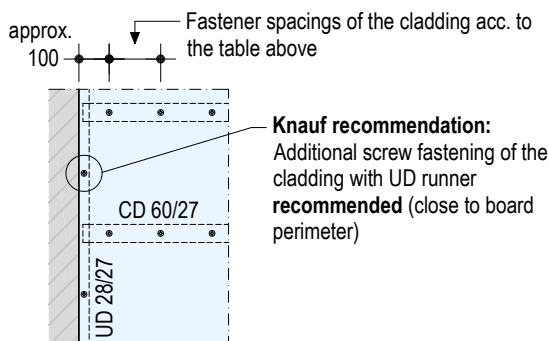
■ Always use Diamant Screws for Diamant or Silentboard cladding.

Maximum fastener spacings – Knauf board cladding

	Cladding	1st layer		2nd layer	
		Board width 1250	Board width 625	Board width 1250	Board width 625
Attic lining / suspended ceiling	1-layer	170	150	–	–
	2-layer ²⁾	500	300	170	150
External wall below eaves	1-layer	250	200	–	–
	2-layer	750	600	250	200

2) Fasten the second board layer within a working day, otherwise the spacing for fastening of single layer cladding must be used.

Additional screw fastening UD runner



Jointing

Jointing of the boards in the required quality level Q1 to Q4 in accordance with Code of Practice no. 2 "Verspachtelung von Gipsplatten, Oberflächengüten" ¹⁾.

Fill in visible screw heads.

Suitable jointing materials

- Uniflott
Hand filling without joint tape strips in the long joint edges
- Uniflott impregnated
Hand filling of impregnated boards without joint tape in the long edge joints, water-repellent, matching green colour
- Fugenfüller Leicht
Hand filling with joint tape, preferably with Knauf Fugendeckstreifen Kurt joint tape

Suitable finish filling compounds

- Q2, application by hand
Uniflott, Uniflott imprägniert, Fill & Finish Light, Super Finish
- Q3/Q4, application by hand
Super Finish, Fill & Finish Light
- Q3/Q4, machine application
Spritzspachtel Plus

Jointing of the gypsum board joints

For multi-layer cladding, fill the lower layers with filler; fill the joints of the visible layer. Filling the joints of covered cladding layers with multi-layer cladding is necessary to ensure technical fire protection and sound insulation properties as well as the structural properties.

Recommended

Front edge and cut edge joints as well as mixed joints (e.g. half-rounded tapered edge + cut edge) of the visible cladding layers filled using Uniflott with Fugendeckstreifen Kurt joint tape as well.

Joint filling of the connection joints

Apply Trenn-Fix or Fugendeckstreifen Kurt joint tape when filling joints to adjacent drywall constructions, taking into consideration the conditions and requirements for crack resistance.

Observe code of practice no. 3 "Gipsplattenkonstruktionen - Fugen und Anschlüsse" (German only) ¹⁾.

Apply Trenn-Fix when filling joints to adjacent solid or wooden construction components.

Sanding

Lightly sand visible surfaces after drying of the filler material, if required.

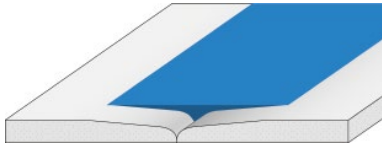
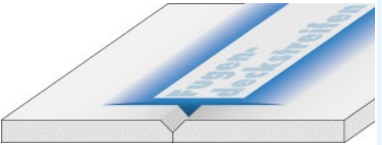
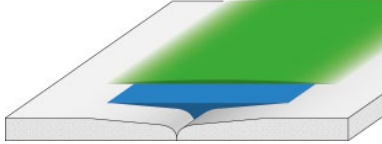





Application temperature / climate

Filling and covering of joints should only take place when no more longitudinal changes can be expected, i.e. expansion or contraction due to humidity or temperature changes.

Do not apply filling at room or substrate temperatures below approx. +10 °C. In case of mastic asphalt screed, cementitious screed and self-levelling screed, fill board joints only after screed has been applied.

Observe code of practice no. 1 "Baustellenbedingungen" ¹⁾.

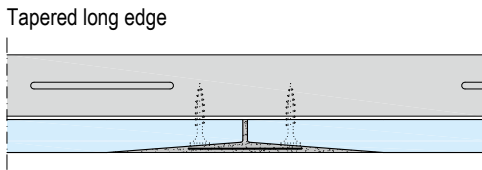
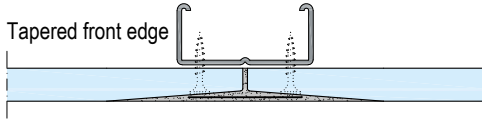
1) Issued by the German Bundesverband der Gipsindustrie e. V.

Quality levels	Joint implementation Long edges half-rounded tapered edge/ half-rounded edge	Joint implementation Front edge bevelled cut edge	Description Working steps
Q1			<ul style="list-style-type: none"> ■ Fill joints with Uniflott or Uniflott imprägniert ■ Fill the visible parts of the fastener
Q2			<ul style="list-style-type: none"> ■ Preliminary jointing in acc. with quality level Q1 ■ Finish (fine finish compound) to achieve a smooth transition to the board surface e.g. with Uniflott, Uniflott imprägniert, Spritzspachtel Plus, Fill & Finish Light or Super Finish <p>No application marks or ridges may remain visible. Sand off the areas concerned if necessary.</p>
Q3			<ul style="list-style-type: none"> ■ Jointing in acc. with quality level Q2 ■ Wide jointing of the joints as well as clean and accurate removal of the remaining board liner filling the pores, e.g. with Fill & Finish Light, Super Finish or Spritzspachtel Plus <p>If necessary, i.e. physical ridges and grooves are not acceptable and must be sanded.</p>
Q4			<ul style="list-style-type: none"> ■ Jointing in acc. with quality level Q2 ■ Complete surface covering of skim coat with a layer thickness of at least 1 mm, e.g. with Fill & Finish Light, Super Finish or Spritzspachtel Plus

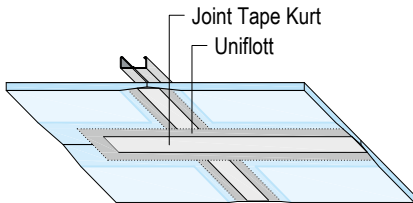
Jointing (continued)

Joint filling with Horizonboard

The four-sided edge type (tapered edge) is the prerequisite for jointing, resulting in a perfect surface with a high level of crack resistance. Knauf drywalling systems with Horizonboard cladding are thus the ideal system solution with premium visual appearance requirements.



- When joint filling with Uniflott and Fugendeckstreifen Kurt joint tape, in case of cross joint application, no offset for front edges is necessary
- Highest crack resistance in conjunction with Joint Tape Kurt
- **Quality level Q1** (first filling step front and long edge)
 - Fill the joints with Uniflott.
 - Fill the visible parts of the fastener.



- **Quality level Q2** (second filling step front and long edge)
 - Preliminary jointing in acc. with quality level Q1
 - Finish (fine finish compound) to achieve a smooth transition to the board surface e.g. with Spritzspachtel Plus, Fill & Finish Light or Super Finish
 - No application marks or ridges may remain visible. Sand off the areas concerned if necessary.
- **Quality level Q3**
 - Jointing in acc. with quality level Q2
 - Wide jointing of the joints as well as clean and accurate removal of the remaining board liner filling the pores, e.g. with Fill & Finish Light, Super Finish or Spritzspachtel Plus
 - If necessary, i.e. physical ridges and grooves are not acceptable and must be sanded.
- **Quality level Q4**
 - Jointing in acc. with quality level Q2
 - Complete surface covering of skim coat with a layer thickness of at least 1 mm, e.g. with Fill & Finish Light, Super Finish or Spritzspachtel Plus

Coatings and linings

Coating / lining	Recommended finish Gypsum boards EN 520 ¹⁾
Coarsely structured wallpaper (e.g. wood-chip wallpaper)	Q2
Finely structured wallpaper	Q3/Q4
Matt textured coats	Q3/Q4
Glossy, smooth coats	Q4
Plasters (grain size < 1 mm)	Q3/Q4
Plasters (grain size < 1 mm)	Q2

Pretreatment

Before a further coating or lining is applied, the filled surface must be free of dust. Prime acc. to code of practice no. 6 of the BVG "Vorbehandlung von Trockenbauflächen aus Gipsplatten zur weitergehenden Oberflächenbeschichtung bzw -bekleidung" ²⁾.

The primer must suit the subsequent coating compound/coatings/linings.

In order to compensate for the differences in absorption of surfaces, coatings of primer such as Knauf Tiefengrund primer is suitable.

Where a wallpaper lining is used, a primer that facilitates easier removal of wallpaper for redecoration is recommended.

Sealing primer Flächendicht is required for covering splash water areas with tiles. Observe the DIN 18534.

Note

Gypsum board surfaces that have constantly been exposed to light without any protection can result in yellowing. Therefore, a trial coat is recommended that will extend across several boards including all joints. Yellowing can, however, be successfully avoided only by using a special primer, e.g. Aton Sperrgrund for finishing plasters, Knauf Sperrgrund for coatings.

Suitable coatings and linings

The following coatings/linings can be applied to Knauf boards:

- Wallpapers
 - Paper, fleece, textile and synthetic wallpapers
 - Use only adhesives made of methyl cellulose according to Code of Practice no. 16 "Technische Richtlinien für Tapezier- und Spannarbeiten innen" ³⁾ released by the Bundesausschuss Farbe und Sachwertschutz.
- Plaster and filler materials
 - Top coats (e.g. Noblo, Raumklima Spritzputz spray plaster, Rotkalk Filz)
 - Full surface plaster (e.g. Spritzspachtel Plus).
 - Application of plaster layers only in conjunction with Fugendeckstreifen Kurt joint tape.
- Decorative coats
 - Dispersion paint (e.g. Intol E.L.F., Malerweiss E.L.F.)
 - Silicate-based emulsion paints with suitable primer.
 - Others on request

Unsuitable coatings and linings

- Alkaline coats such as lime, water glass paints and silicate-based paints.

Notes

After wallpapering or after application of plasters, quick drying must be ensured through adequate airing.

Other coatings or layers and vapour barriers up to about 0.5 mm thickness as well as claddings (with the exception of sheet steel), do not have any influence on the technical fire resistance classification of the Knauf Attic Systems.

- 1) In accordance with Code of Practice No. 2 "Verspachtelung von Gipsplatten, Oberflächengüten" (German only), Issued by the German Bundesverband der Gipsindustrie e. V.
- 2) Issued by the German Bundesverband der Gipsindustrie e. V.
- 3) Issued by the German Bundesausschuss Farbe und Sachwertschutz

Information on sustainability of Knauf ceiling systems

Building assessment systems ensure the sustainable quality of buildings and constructional structures by a detailed assessment of ecological, economic, social, functional and technical aspects.

In Germany, the following certification systems are of particular relevance:

- DGNB system
Deutsches Gütesiegel Nachhaltiges Bauen der DGNB (*German association for environmentally sustainable building*)
- BNB
Bewertungssystem Nachhaltiges Bauen - Quality rating system for environmentally sustainable building)
- LEED
Leadership in Energy and Environmental Design

Knauf products and Knauf Attic Systems can positively influence many of these criteria.

DGNB/BNB

Ecological quality

- Criterion: Ecological performance evaluation of the building
Relevant environmental data are contained in the EPD for gypsum boards and filler.
- Criterion: Risks for the local environment
Gypsum as an ecological material. Relevant environmental data are contained in the EPD for gypsum products

Economic quality

- Criterion: Building related life-cycle costs
Cost-effective Knauf Drywalling
- Criterion: Flexibility and suitability for conversion
Flexible Knauf Drywalling

Technical quality

- Criterion: Sound insulation
Exceeding the demands of the standard with Knauf sound protection
- Criteria: Ease of dismantling and recycling
The possibility with Knauf Drywalling

LEED

Materials and resources

- Building Life-Cycle Impact Reduction
Relevant ecological performance evaluation data are contained in the EPDs for gypsum boards and filler.
- Environmental Product Declarations
Relevant environmental data are contained in the EPD for gypsum boards and filler.
- Sourcing of Raw Materials
Recycling share in Knauf gypsum boards, e.g. board liner

Indoor Environmental Quality

- Low-Emitting Materials
Knauf products are regularly subject to VOC measurement.



Videos for Knauf systems and products can be found under the following link:
youtube.com/knauf



Find the right system for your requirements!
knauf.de/systemfinder



The Knauf Infothek App now provides all the current information and documents from Knauf Gips KG at any time and in every location in a clear and comfortable way.
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Knauf Direct

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The stated constructional and structural design specifications and characteristics of building physics of Knauf systems can only be ensured with the exclusive use of Knauf system components, or other products expressly recommended by Knauf.