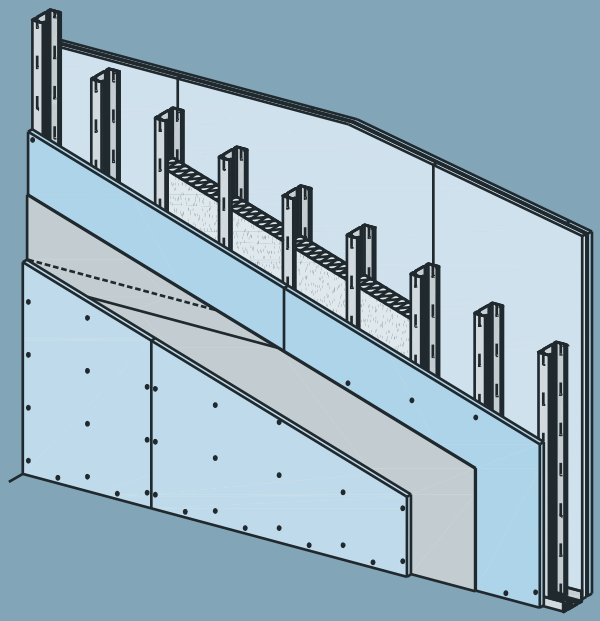


W13.de

New from 01.02.2015:
Fire-resistant board Knauf Piano GKF/GKFI 12.5 replaces the
Knauf Feuerschutzplatte GKF/GKFI 12.5

Drywall and Flooring Systems | 2014-05

W13.de **Knauf Fire Walls**

W131.de – Knauf Fire Wall - Single metal stud frame
two or three layer cladding with sheet metal insert

W135.de – Knauf Metal Stud Partition EI 60-M - Single metal stud partition
two layer cladding with sheet metal insert

Note on English translation / Hinweise zur englischen Fassung

**This is a translation of the system catalogue 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.**

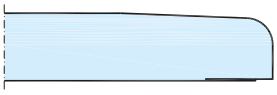
**Dies ist eine Übersetzung des in Deutschland gültigen Detailblattes. Alle angegebenen Werte und Eigenschaften entsprechen den in Deutschland gültigen Normen und bauaufsichtlichen Regelungen. Sie gelten nur bei Verwendung der angegebenen Produkte, Systemkomponenten, Anwendungsregeln und Konstruktionsdetails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

W13.de Knauf Fire Walls

Knauf boards / cantilever loads

Knauf boards

Extract from Knauf product range

Board type		Dimensions in mm Thickness	Width	Short designation DIN	DIN EN	Board edge Long edge
Gypsum boards acc. to DIN 18180 and DIN EN 520						**Reaction to fire A2-s1,d0 (B)**
Knauf Feuerschutzplatte	GKF	12.5	1250	GKF	DF	HRAK 
		15.0	1250			
	GKFI	12.5	1250	GKFI	DFH2	
		15.0	1250			
Diamant	GKFI	12.5	1250	GKFI	DFH2IR	HRAK 
		15.0	1250			
Massivbauplatte	GKF	20.0	625	GKF	DF	HRAK 
	GKFI	20.0	625	GKFI	DFH2	
Gypsum boards acc. to DIN EN 15283-1						**Reaction to fire A1**
Fireboard	GM-F	12.5	1250	–	GM-F	VK 

GKFI: Gypsum core with additional special impregnation against moisture absorption

Slim construction

Non-combustible, A1

Best sound insulation

Premium, robust surface

Fastening of the cladding to the grid with Knauf screws

Cladding Thickness in mm	Metal grid (penetration ≥ 10 mm) Metal gauge **s ≤ 0.7 mm** Drywall Screws **TN**	Diamant Screws **XTN** / **HGP**	Metal gauge **0.7 mm < s ≤ 2.25 mm** Drywall Screws **TB**	Diamant Screws **HGP-TB**
2x 12.5	TN 3.5x25 + 3.5x45 mm	XTN 3.9x23 + 3.9x38 mm	TB 3.5x25 + 3.5x45 mm	HGP-TB 3.9x35 + 3.9x55 mm
2x 15	TN 3.5x35 + 3.5x45 mm	XTN 3.9x33 + HGP 3.9x55 mm	TB 3.5x35 + 3.5x45 mm	HGP-TB 3.9x35 + 3.9x55 mm
20 + 12.5	TN 3.5x35 + 3.5x45 mm	-	TB 3.5x35 + 3.5x45 mm	-
3x 12.5	TN 3.5x25 + 3.5x35 + 3.5x55 mm	XTN 3.9x23 + 3.9x38 + HGP 3.9x55 mm	TB 3.5x25 + 3.5x45 + 3.5x55 mm	HGP-TB 3.9x35 + 3.9x55 + 3.9x55 mm

■ Always use Diamant Screws when cladding using Diamant

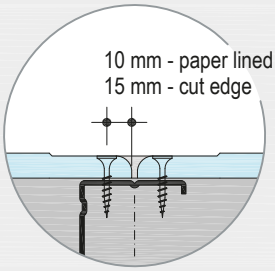
Max. fastener spacings

Dimensions in mm

Cladding	1st layer Board width 1250	1st layer Board width 625	2nd layer Board width 1250	3rd layer Board width 1250
2 layer	**750**	**600** [1]	**250**	**-**
3 layer	**750**	**-**	**500**	**250**

1) Min. 2 screws per board width and stud

Arrangement of the screws for optimum sound protection



Note

Constructional solutions marked with plus are not an integral part of the corresponding National Technical Test Certificate (ABP), but are evaluated by Knauf as a non-significant divergence thereof. The documents (e.g. surveyors reports, technical assessments) on which this evaluation is based are included in the ABP. The construction type must be coordinated and authorised in advance in consultation between the persons responsible for fire protection and / or the relevant authorities.

W131.de Knauf Fire Wall

Technical data / Fire protection / Sound installation

Technical and physical building data

Knauf System	Fire rating	Cladding per partition side: Knauf Feuerschutzplatte	Massivbauplatte	Diamant	Fireboard	Min. thickness t mm	Weight: Without insulation layer approx. kg/m²	Wall thickness D mm	Profile: Cavity h mm	Sound insulation $R_{w,R}$ 1): Insulation layer plus Nominal thickness mm	Knauf CW Profile dB	Knauf Premium Drywalling
Dimensions in mm												
W131.de Knauf Fire Wall		Single metal stud frame - multi-layer cladding + sheet metal insert										
Stud spacing 312.5 312.5	**EI 90-M** 2)				●	**2x 15** + 0.5 mm sheet metal insert	63	111	**50**	40	***52***	A1
								136	**75**	60	***54***	
								161	**100**	80	**55**	
				●		**2x 15** + 0.5 mm sheet metal insert	80	111	**50**	40	***62***	
								136	**75**	60	***64***	
								161	**100**	80	***66***	
Stud spacing 312.5 312.5	**EI 90-M** 2)	●	●			**20 + 12.5** + 0.5 mm sheet metal insert	70	116	**50**	40	***55***	
								141	**75**	60	***55***	
								166	**100**	80	***55***	
Stud spacing 312.5 312.5	**EI 90-M** 2)	●				**3x 12.5** + 0.5 mm sheet metal insert	76	126	**50**	40	**≥ *59***	
								151	**75**	60	**≥ *59***	
								176	**100**	80	**≥ *62***	
				●		**3x 12.5** + 0.5 mm sheet metal insert	91	126	**50**	40	***≥ 62***	
								151	**75**	60	***≥ 64***	
								176	**100**	80	***≥ 66***	

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

1) $R_{w,R}$ = calculation value of the weighted apparent sound reduction index of the separating component acc. to DIN 4109, without longitudinal sound transmission via flanking constructional components

2) Insulation layer G acc. to EN 13162; length related flow resistance acc. to DIN EN 29053: r ≥ 5 kPa • s/m² (e.g. Knauf Insulation Thermolan TI 140 T or Thermolan TP 115 or Heralan TW)
See the Fire protection folder for explanation (German only)→ Fire protection fundamentals (G-20-9 and G-20-11) (German only)

plus **Coordination with building supervisory authority necessary** (see user instructions)
■ When insulation is used G (mineral wool insulation layer acc. to DIN EN 13162, building material class A; e.g. of Knauf Insulation), e.g. for cavity sound-proofing (sound insulation)

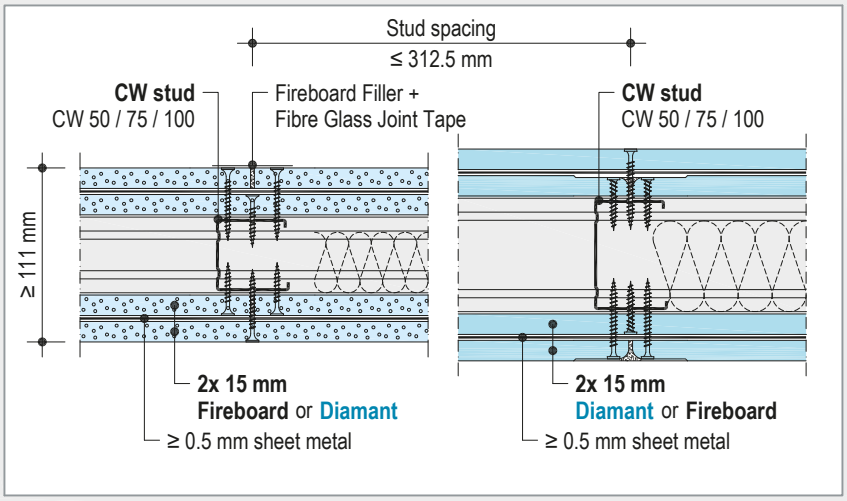
Proofs	**Fire protection:** ABP P-3391/170/08 **Sound insulation:** Knauf sound insulation proof L 015-04.14

W131.de Knauf Fire Wall

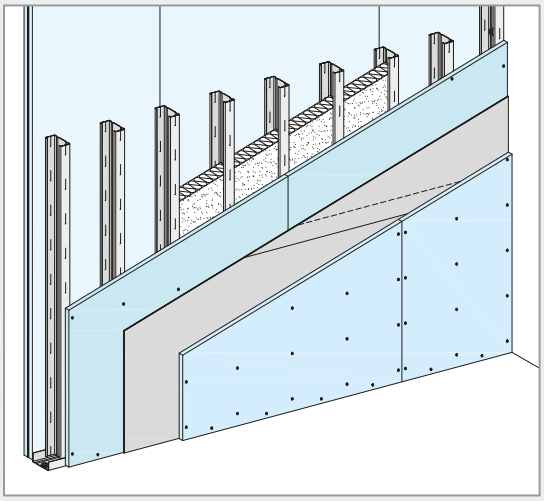
Details / Wall heights

Cladding 2x 15 mm + sheet metal insert ≥ 0.5 mm

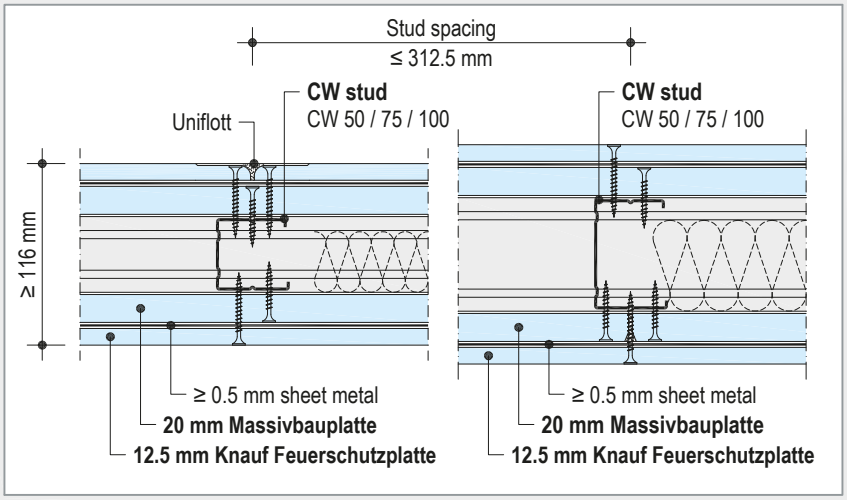
Horizontal section - examples



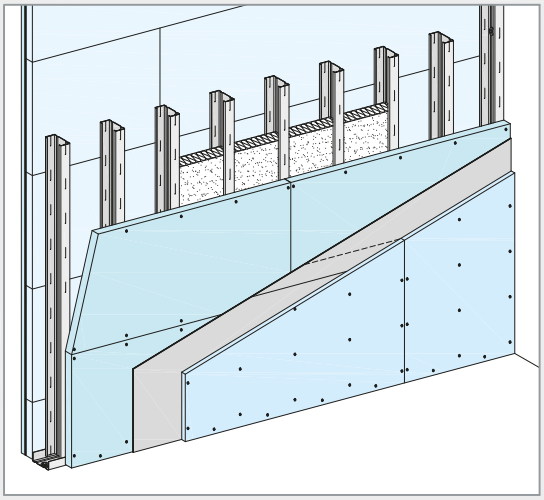
Vertical board layers



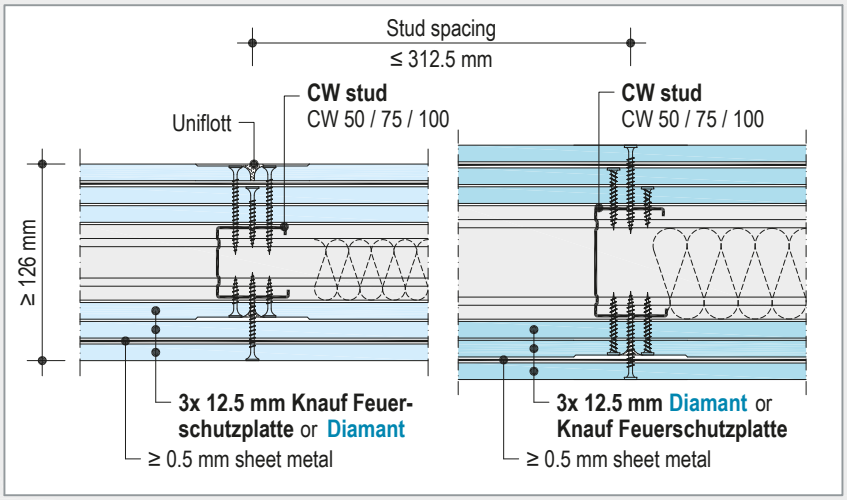
Cladding 20 + 12.5 mm + sheet metal insert ≥ 0.5 mm



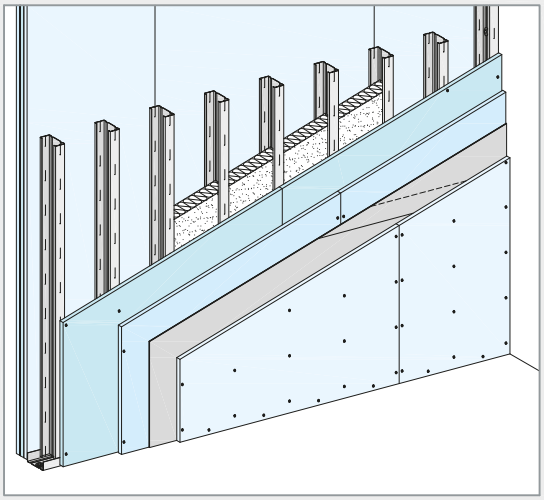
1st board layer horizontal / 2nd board layer vertical



Cladding 3x 12.5 mm + sheet metal insert ≥ 0.5 mm



Vertical board layers



Partition heights

Knauf Profile Metal gauge 0.6 mm	Stud spacing mm	Max. permissible wall heights m	plus m
CW 50	312.5	**4**	**5**
CW 75	312.5	**4**	**5**
CW 100	312.5	**4**	**7**

- Knauf Fire Walls are non-loadbearing fire-resistant partitions, that retain their structural stability when exposed to a fire and remain effective as a room enclosure, as they offer a high resistance to falling components
- Impact stress resistance of 3000 Nm after exposure to fire certified

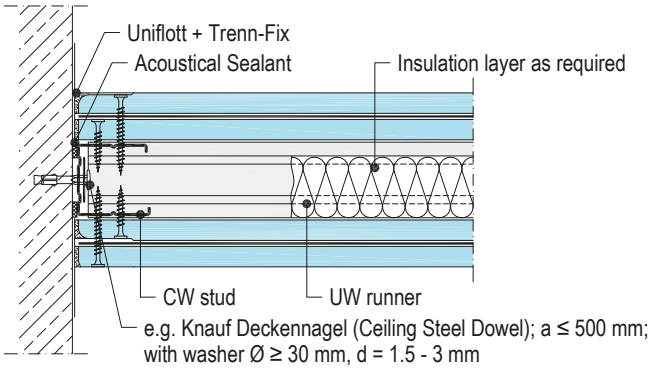
plus **Agreement of building supervisory authorities required** (see page 2) ■ With partition heights **more than 4 m**

Details, scale 1:5

Horizontal section - examples

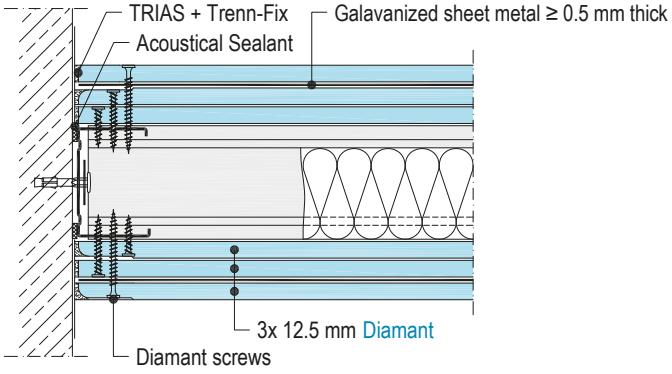
W131.de-A10 Connection to solid wall - 2x 15 mm

■ 2x 15 mm Diamant



W131.de-A1 Connection to solid wall - 3x 12.5 mm

■ 3x 12.5 mm Diamant

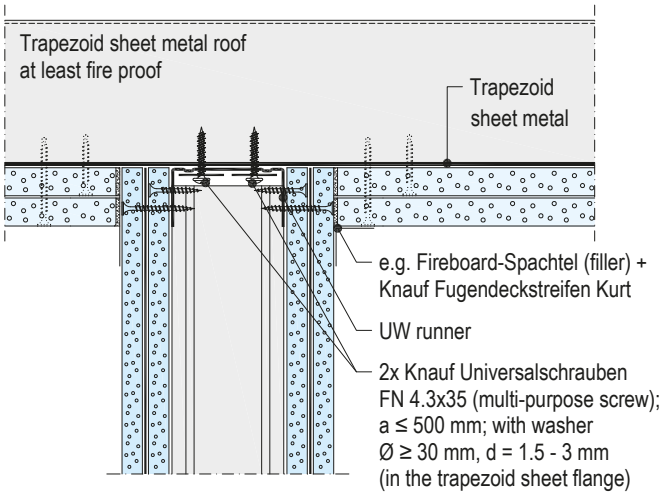


Vertical section - example

W131.de-VO12 Connection to trapezoid sheet metal roof

■ 2x 15 mm Fireboard

Non-continuous ceiling lining

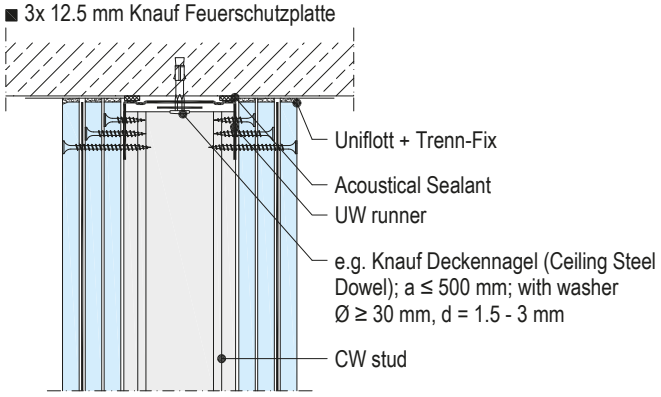


Application of other details analogue to system W135.de (see page 8 - 10), possible **after building supervision authority approval.** The necessary cladding type and thickness must be considered accordingly.

Vertical sections, examples

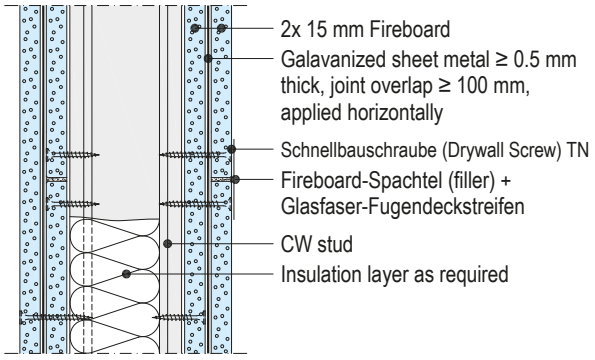
W131.de-VO1 Connection to basic ceiling

■ 3x 12.5 mm Knauf Feuerschutzplatte



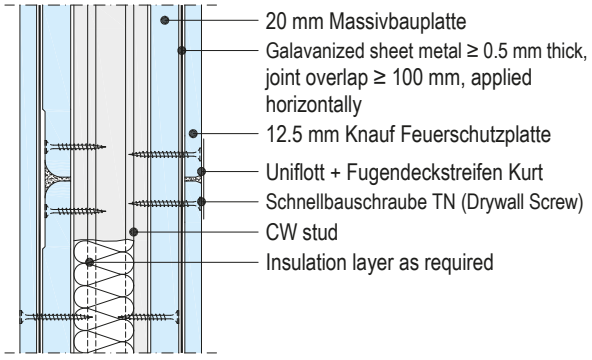
W131.de-VM10 Board joint

■ 2x 15 mm Fireboard



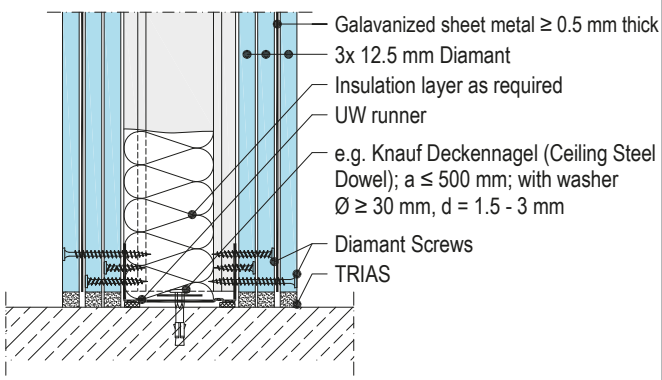
W131.de-VM3 Board joint

■ 20 mm Massivbauplatte + 12.5 mm Knauf Feuerschutzplatte



W131.de-VU1 Connection to basic floor

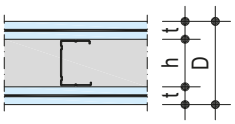
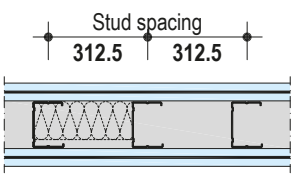
■ 3x 12.5 mm Diamant



W135.de Knauf Metal Stud Partition EI 60-M

Technical data / Fire protection / Sound installation

Technical and building physical data

Knauf System	Fire rating	Cladding per partition side: Knauf Feuerschutzplatte	Massivbauplatte	Diamant	Fireboard	Min. thickness t mm	Weight: Without insulation layer approx. kg/m²	Wall thickness D mm	Profile: Cavity h mm	Sound insulation $R_{w,R}$ [1]: Insulation layer Nominal thickness mm	Knauf CW stud dB	Knauf Premium Drywalling
 Dimensions in mm												
W135.de Knauf Metal Stud Partition		Single metal stud frame - double-layer cladding + sheet metal insert										
	EI 60 [2]	●				2x 12.5 + 0.5 mm sheet metal insert	55	101	**50**	40	***≥ 54***	
		●				2x 12.5 + 0.5 mm sheet metal insert	55	126	**75**	60	***≥ 55***	
		●				2x 12.5 + 0.5 mm sheet metal insert	55	151	**100**	80	***≥ 57***	
			●			2x 12.5 + 0.5 mm sheet metal insert	66	101	**50**	40	**62**	
			●			2x 12.5 + 0.5 mm sheet metal insert	66	126	**75**	60	***64***	
			●			2x 12.5 + 0.5 mm sheet metal insert	66	151	**100**	80	**66**	

- **Fire protection:** none or min. mineral wool **G** (mineral wool insulation layer acc. to DIN EN 13162; building material class A)
- ***Sound reduction index values in italics*** are derived values from measurements of divergent constructions.

1) $R_{w,R}$ = calculation value of the weighted apparent sound reduction index of the separating component acc. to DIN 4109, without longitudinal sound transmission via flanking constructional components
Insulation layer **G** acc. to EN 13162; length related flow resistance acc. to DIN EN 29053: r ≥ 5 kPa • s/m²
(e.g. Knauf Insulation Thermolan TI 140 T or Thermolan TP 115 or Heralan TW)

2) Additional mechanical stress resistance certified (-M)

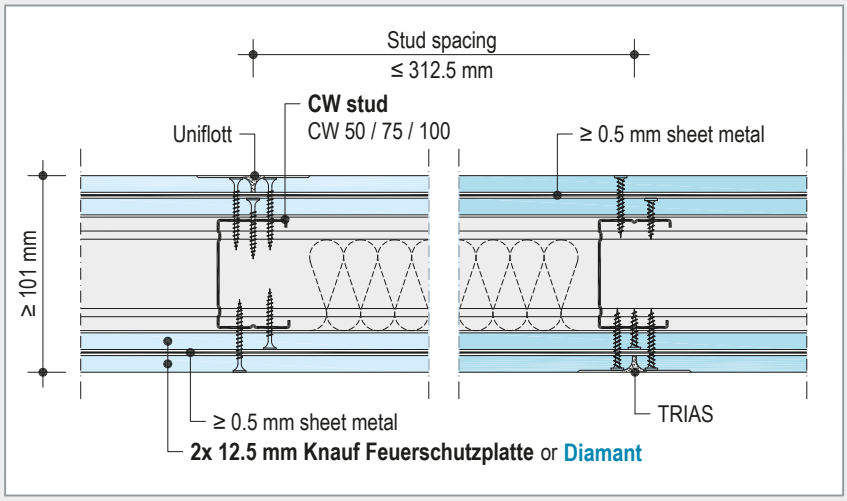
Proofs	**Fire protection:** ABP P-3056/312/11; expert survey 3704/889/12	**Sound insulation:** Knauf sound insulation proof L 035-04.14

W135.de Knauf Metal Stud Partition EI 60-M

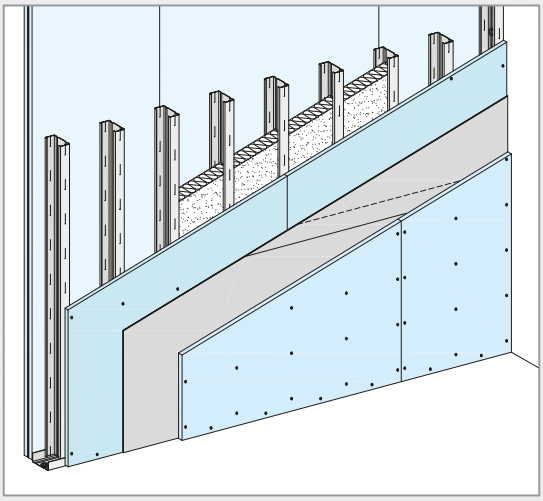
Details / Wall heights

Cladding 2x 12.5 mm + sheet metal insert ≥ 0.5 mm

Horizontal section - example



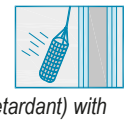
Vertical board layers



Partition heights

Knauf Profile Metal gauge 0.6 mm	Stud spacing mm	Max. permissible wall heights m	plus m
CW 50	312.5	**4**	**4.35**
CW 75	312.5	**4**	**6.50**
CW 100	312.5	**4**	**7**

- Highly-fire resistant Knauf Metal Stud Partitions with additional mechanical stress resistance (-M), when exposed to a fire and that retain their structural stability and remain effective as a room enclosure, as they offer a high resistance to falling components.
- Impact stress resistance of 3000 Nm after exposure to a fire certified



- *Construction as a Security Wall (burglar-retardant) with additional measures is possible, see brochure ST01.de Knauf Safety Engineering*

plus **Coordination with building supervisory authority necessary** (see page 2) ■ with wall heights **more than 4 m**

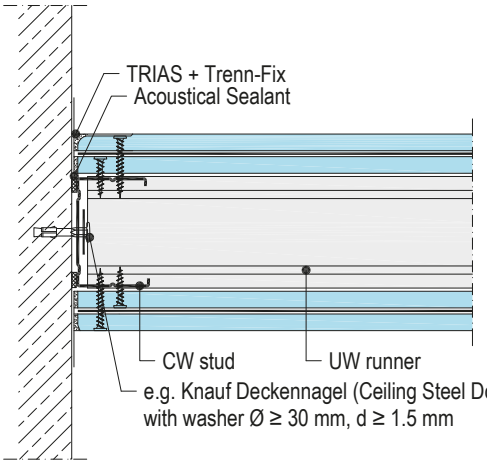
W135.de Knauf Metal Stud Partition EI 60-M

Details

Details, scale 1:5 Horizontal section - examples Vertical sections, examples

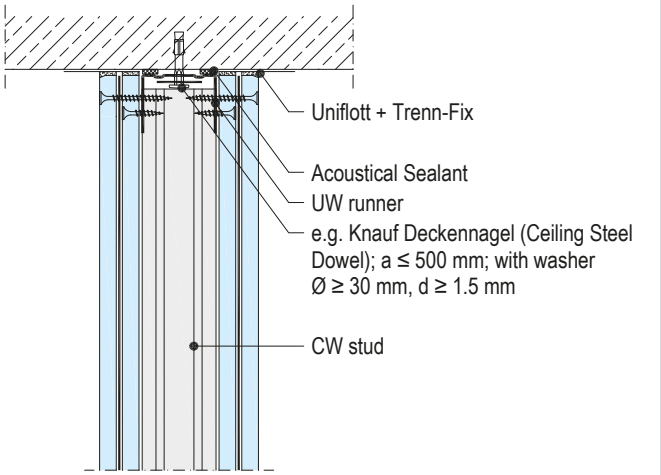
W135.de-A1 Connection to solid wall - CW stud

■ 2x 12.5 mm Diamant



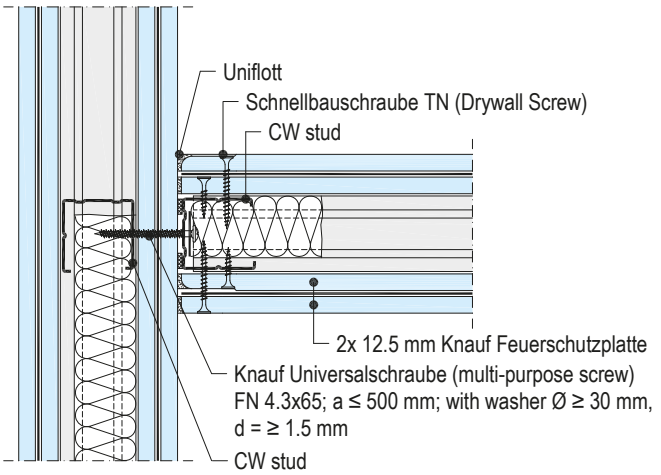
W135.de-VO1 Connection to basic ceiling

■ 2x 12.5 mm Knauf Feuerschutzplatte



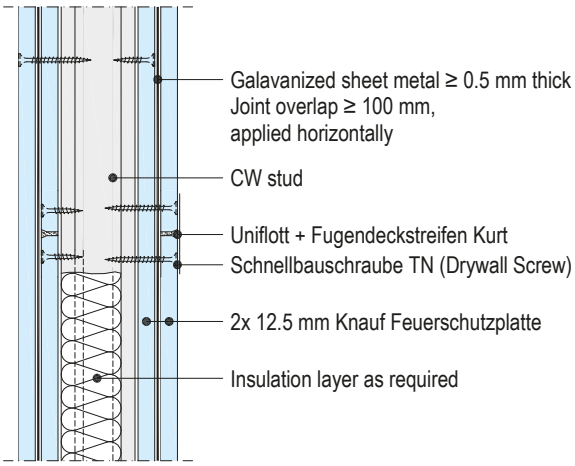
W135.de-C1 T junction

■ 2x 12.5 mm Knauf Feuerschutzplatte



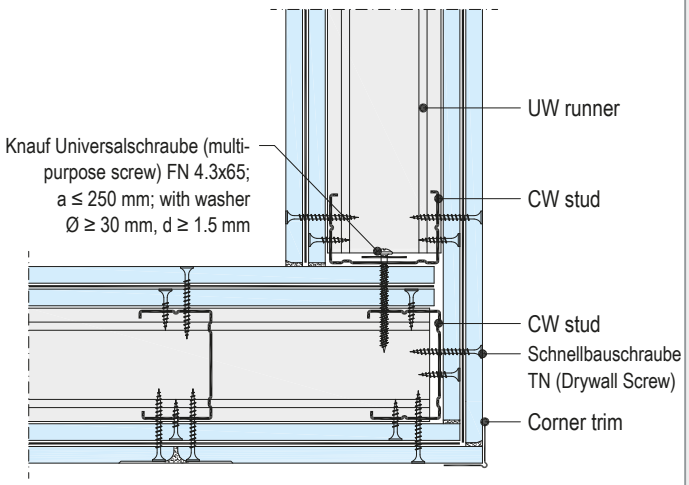
W135.de-VM1 Board joint

■ 2x 12.5 mm Knauf Feuerschutzplatte



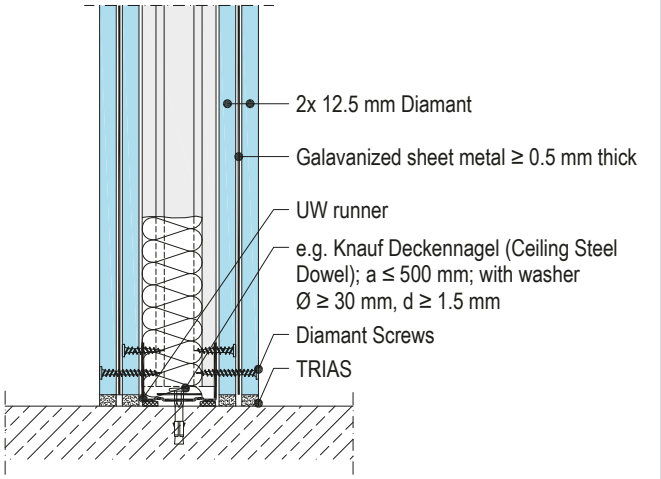
W135.de-D1 Corner

■ 2x 12.5 mm Knauf Feuerschutzplatte



W135.de-VU1 Connection to basic floor

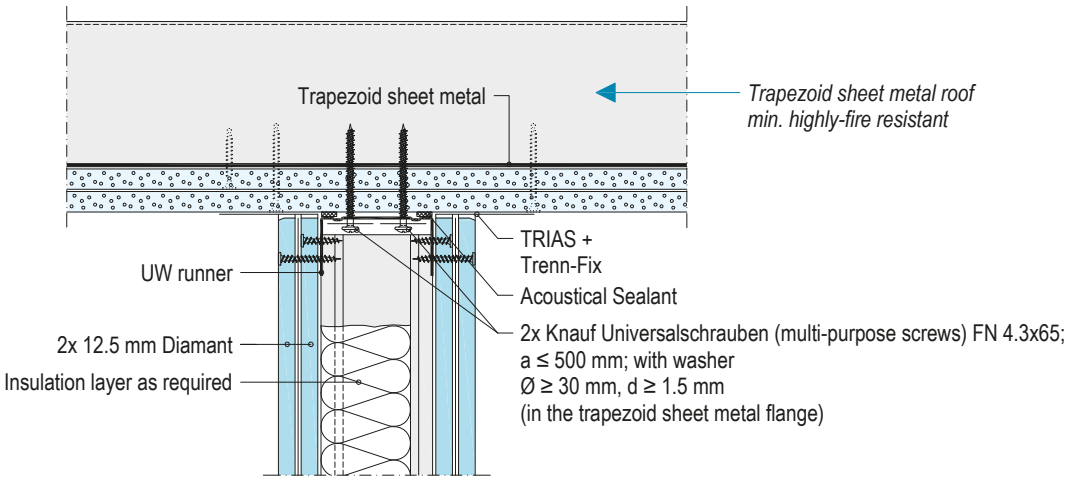
■ 2x 12.5 mm Diamant



Details, scale 1:5 — Vertical sections, examples

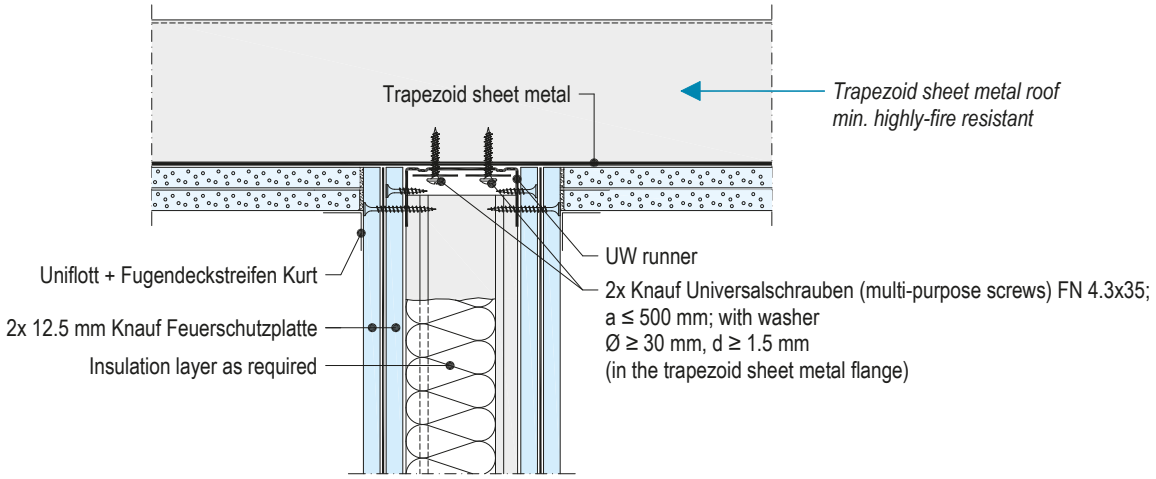
W135.de-VO2 Connection to trapezoid sheet metal roof

■ 2x 12.5 mm Diamant — Continuous ceiling lining



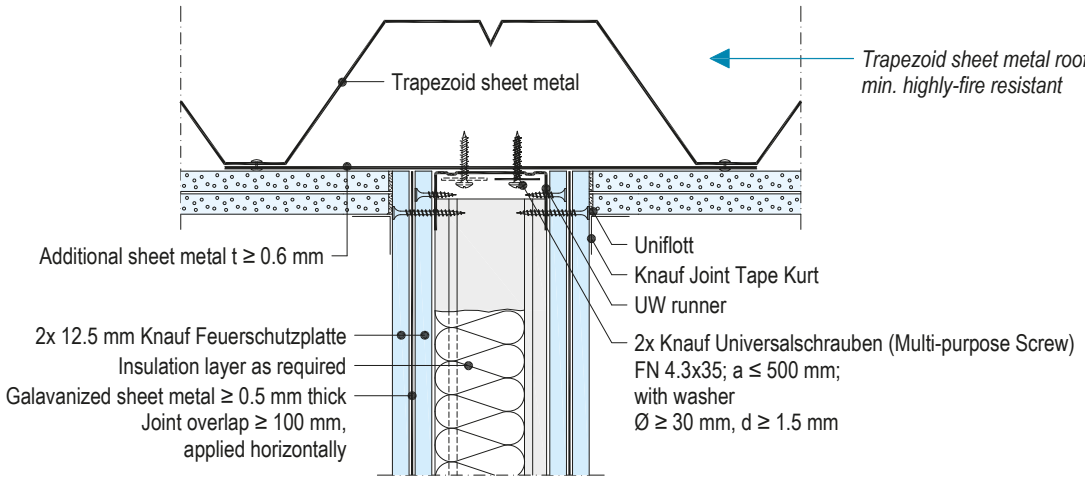
W135.de-VO3 Connection to trapezoid sheet metal roof

■ 2x 12.5 mm Knauf Feuerschutzplatte — Ceiling lining interrupted



W135.de-VO4 Connection to trapezoid sheet metal roof

■ 2x 12.5 mm Knauf Feuerschutzplatte — Ceiling lining interrupted



► Application acc. to System Data Sheet K217.de Knauf Trapezoid Sheet Metal Linings (German only)

W135.de Knauf Metal Stud Partition EI 60-M

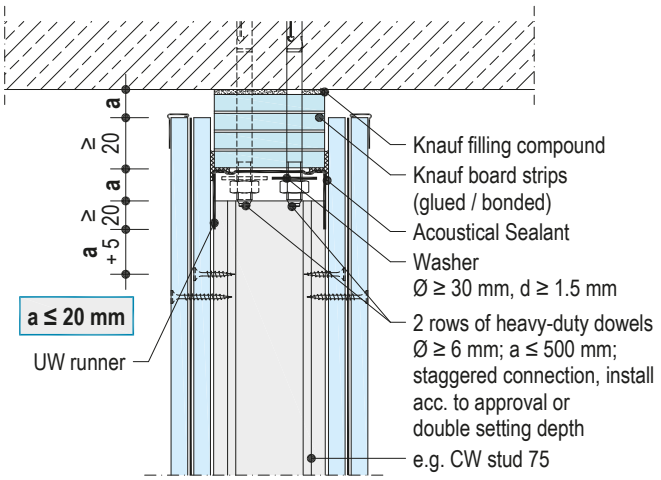
Details

Details, scale 1:5

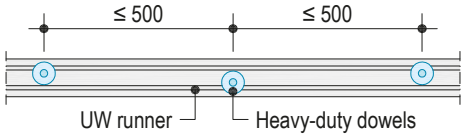
Vertical sections, examples - Dimensions in mm

W135.de-VO5 Deflection head

- 2x 12.5 mm Knauf Feuerschutzplatte

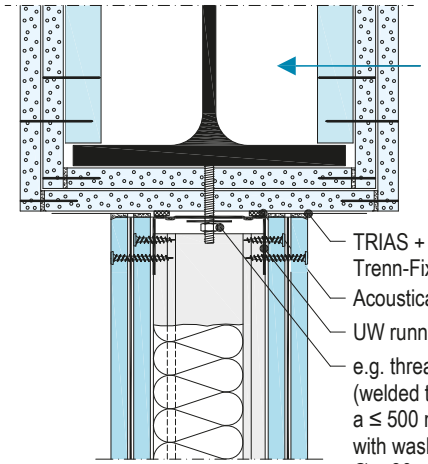


- Larger ceiling deflections on request
- Do not screw fasten Knauf boards to UW runners
- Arrangement of the dowels:



W135.de-VO6 Connection to steel beam encasement

- 2x 12.5 mm Diamant



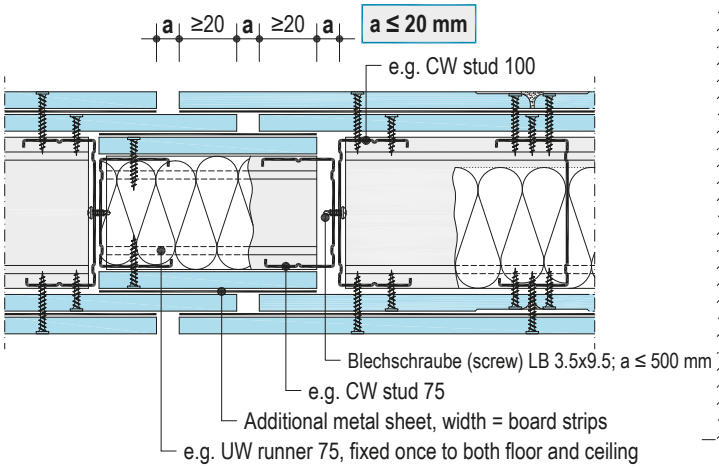
- Representation of steel beam encasement without frame
- Fireboard cladding ≥ 20 mm Fireboard
- Application system K252.de in acc. to Knauf System Data Sheet K25.de

plus **Coordination with building supervisory authority necessary** (see page 2)

Horizontal section - examples - dimensions in mm

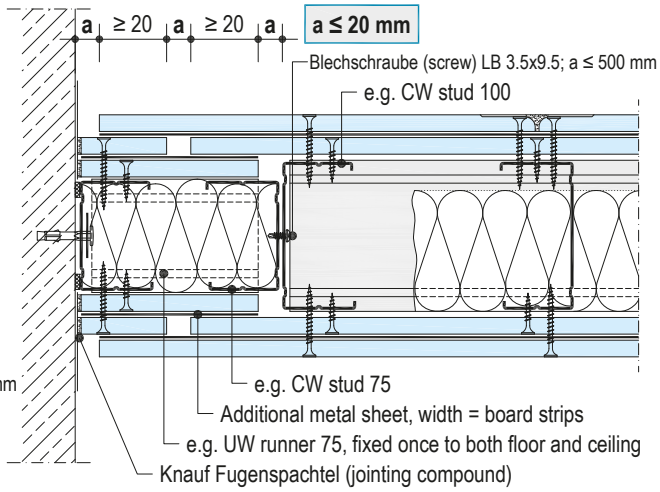
W135.de-BFU1 Movement joint

- 2x 12.5 mm Diamant



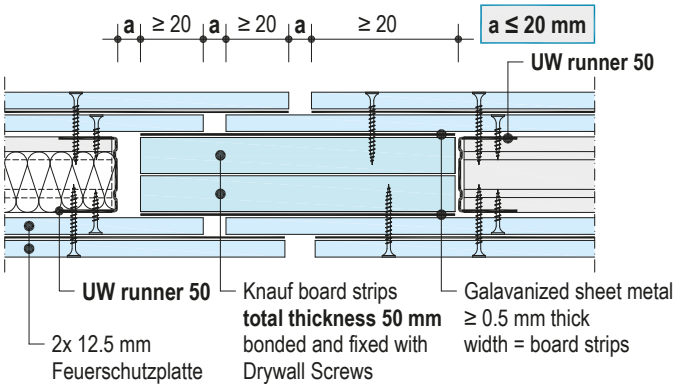
W135.de-A2 Connection to solid wall - sliding

- 2x 12.5 mm Knauf Feuerschutzplatte



W135.de-BFU2 Movement joint

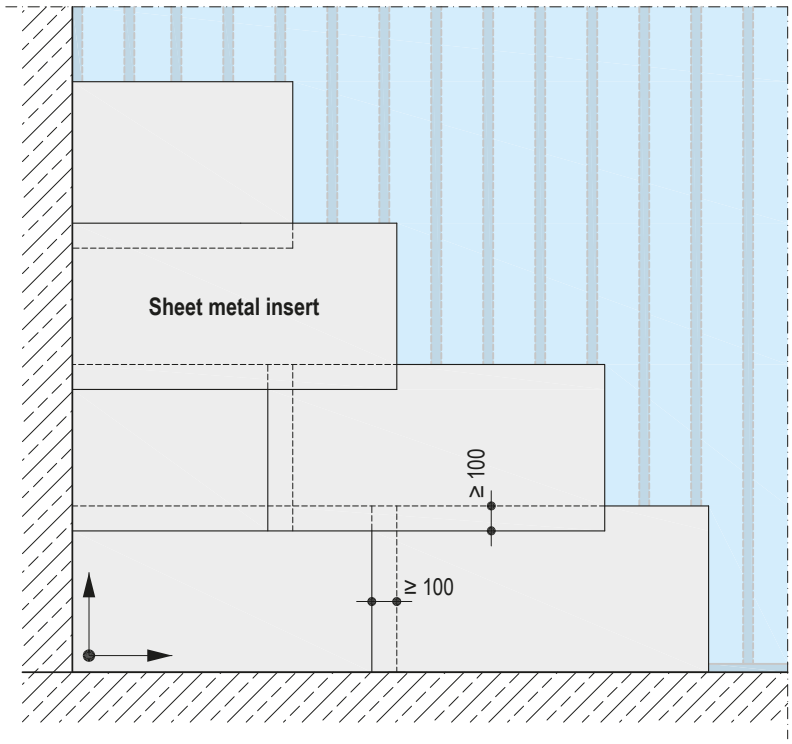
- 2x 12.5 mm Knauf Feuerschutzplatte



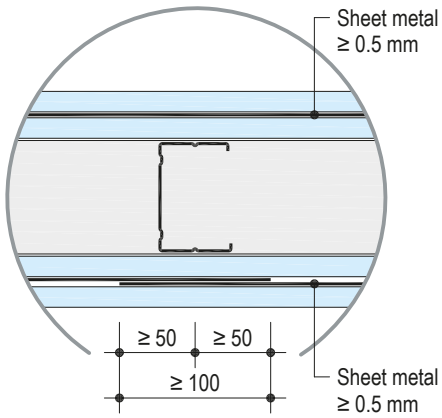
- Knauf recommendation with partition cavity 50 mm
- The rigid connection of the wall encasements leads to a local reduction of the sound insulation.

Application scheme - sheet metal insert

Scheme drawings - Dimensions in mm



Example



- Sheet metal layer per wall side
- Galavanized sheet metal ≥ 0.5 mm thick
  Joint overlay ≥ 100 mm (on studs)
  applied horizontally
- Screw fastening with Drywall Screws
  (only for fixing)

Cantilever loads

Sheet metal insert of the wall:	Max. permissible cantilever loads:
≥ 0.5 mm to < 0.7 mm ⟹	**0.7 kN/m wall length** without additional measures
≥ 0.5 mm to < 0.7 mm ⟹	**1.5 kN/m wall length** Additional sheet metal required as a traverse ■ ≥ 0.7 mm thick ■ approx. 300 mm high ■ Anchoring directly to the stud profile 3 anchoring points per profile (e.g. Metal Screw LB, metal blind rivets)
≥ 0.7 mm ⟹	**1.5 kN/m wall length** min. Knauf CW stud 75 ■ without additional measures

- Further cantilever load details
  refer to Knauf System Data Sheet e.g. W11.de

Installation of doors

- Door installation generally possible acc. to door manufacturer approval: e.g. Schörghuber, Hörmann. Observe any additional measures.

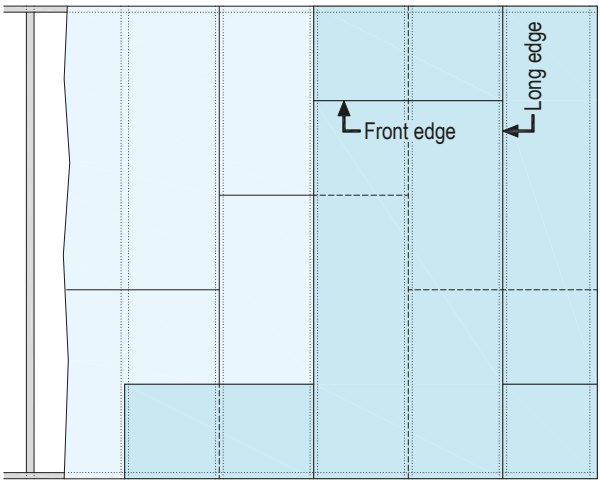
▶ see also System Data Sheet W11.de Knauf Metal Stud Partitions

W13.de Knauf Fire Walls

Laying the Knauf boards (Schematic drawing examples)

Board layers **vertical**

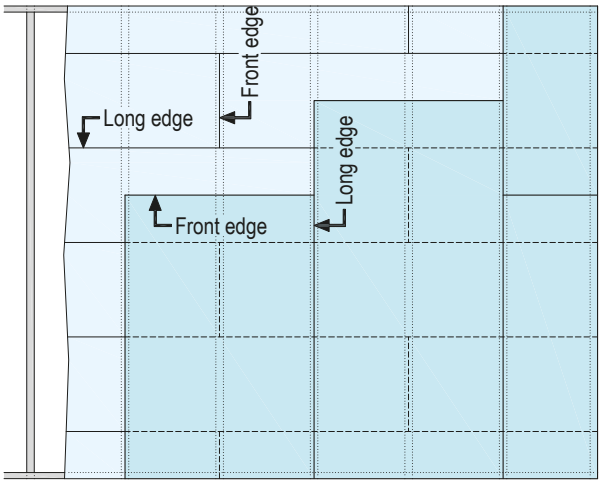
Board width: **1250 mm**
Stud spacing: 312.5 mm



- Long edge board joints must be staggered by at least one stud spacing.
- If floor-to-ceiling boards are not used, stagger the front edge joints by at least 400 mm.
- With multi-layer cladding, stagger the front edges between the board layers also.
- Front and long edge joints of cladding on opposing sides must also be staggered to one another.

Board layers **horizontal + vertical**

Board width: **625 mm** (lower layer horizontal)
Board width: **1250 mm** (upper layer vertical)
Stud spacing: 312.5 mm



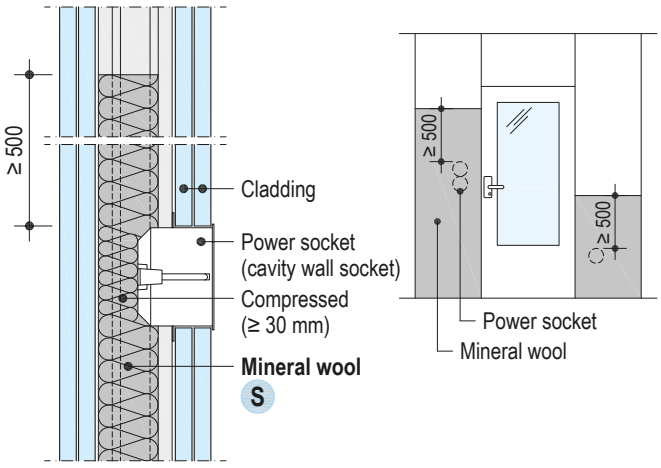
Lower layer:
- Front edge joints must be staggered by at least one stud spacing.

Upper layer:
- Long edge board joints must be staggered by at least one stud spacing.
- If floor-to-ceiling boards are not used, stagger the front edge joints by at least 400 mm.

Offset between lower and upper layer:
- Stagger the front edges of the upper layer by half a board width to the lower layer.
- Front and long edge joints of cladding on opposing sides must also be staggered to one another.

Installation of power sockets in Knauf Fire Walls

Scheme drawing, dimensions in mm



- Fill partition cavity with mineral wool secured against sliding.
- The mineral wool must fully cover the following area:
  Up to min. 500 mm above the highest power socket, down to the floor and laterally to the next studs on each side.
- The mineral wool area weight must be at least as follows:
  F60: ≥ 1.6 kg/m² *(e.g. 40 mm x 40 kg/m³)*
  F90: ≥ 2.4 kg/m² *(e.g. 60 mm x 40 kg/m³)*
- Compression of the mineral wool insulation layer up to a thickness of ≥ 30 mm is permissible.
- Mineral wool insulation layer acc. to DIN EN 13162;
  S Building material class A; melting point ≥ 1000 °C acc. to DIN 4102-17
  (e.g. Knauf Insulation Feuerschutz-Dämmplatte DPF)
- **W131.de:** With double-layer cladding, in addition to the mineral wool, a gypsum fill at the back is required.

- Power sockets, switch sockets, splitter sockets, etc. may be installed at any position with partitions, but not directly opposite one. With sound insulation demands, additional power sockets are to be installed staggered by one stud partition field.
- Solutions for partitions with sound insulation $R_w \geq 60$ dB on request
- The entry of single electrical cables is permissible. The remaining openings must be sealed with gypsum mortar.

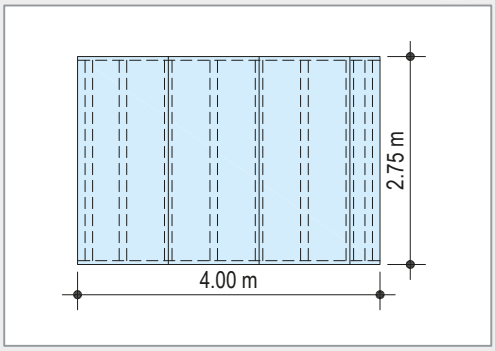
W13.de Knauf Fire Walls

Material requirement (for selected examples)

Material requirement per m² of partition

Without allowance for loss and waste

- The quantities relate to a partition area of:
  H = 2.75 m; L = 4.00 m; A = 11.00 m²
- as req. = as required
- Details without specific requirements on the building physics
- *Material not provided by Knauf = printed in italics*



Description	Unit	Amount as average value Board thickness in mm				
		2x 12.5 Diamant	2x 15 Fireboard	2x 15 Diamant	20 Knauf GKF + 12.5 Feuer-schutzplatte	3x 12.5 Knauf Feuer-schutzplatte
Stud frame						
alt. Knauf UW Runner 50x40x0.6; 4 m long alt. Knauf UW Runner 75x40x0.6; 4 m long Knauf UW Runner 100x40x0.6; 4 m long	m	0.7	0.7	0.7	0.7	0.7
alt. Knauf CW Stud 50x50x0.6 alt. Knauf CW Stud 75x50x0.6 Knauf CW Stud 100x50x0.6	m	3.5	3.5	3.5	3.5	3.5
or Knauf Knauf Trennwandkitt (Acoustical Sealant)	pcs	0.3	0.3	0.3	0.3	0.3
Knauf Dichtungsband (Sealing Tape) (50/3.2 mm; 70/3.2 mm; 95/3.2 mm)	m	1.2	1.2	1.2	1.2	1.2
with non-combustible anchors suited to the substrate e.g. Knauf Deckennagel (Ceiling Steel Dowels) with reinforced concrete	pcs	2.9	2.9	2.9	2.9	2.9
+ washer Ø ≥ 30 mm, d = 1.5 - 3 mm	pcs	2.9	2.9	2.9	2.9	2.9
Insulation layer ... mm thick (e.g. Knauf Insulation Thermolan TI 140 T, Thermolan TP 115 or Heralan TW) Observe fire protection / sound installation, see page 3 and 6	m²	as req.	as req.	as req.	as req.	as req.
Knauf boards						
Knauf Feuerschutzplatte 12.5 mm		-	-	-	2	6
Massivbauplatte GKF 20 mm		-	-	-	2	-
Diamant 12.5 mm	m²	4	-	-	-	-
Diamant 15 mm		-	-	4	-	-
Fireboard 15 mm		-	4	-	-	-
Galvanized sheet metal ≥ 0.5 mm thick, (joint overlap ≥ 100 mm)	m²	2.4	2.4	2.4	2.4	2.4
Screw fastening						
Fastening of Knauf Boards - Knauf Fasteners, see page 2						
1st layer		18	18	18	30	18
2nd layer	pcs	42	42	42	42	22
3rd layer		-	-	-	-	42
Stapling of the sheet metal - Knauf fasteners, see page 2	pcs	6	6	6	6	6
Joint filling						
or Uniflott; with hand filling TRIAS; with hand filling	kg	1.0	-	1.0	1.2	1.1
Knauf Joint Tape Kurt	m	as req.	-	as req.	as req.	as req.
Fireboard Filler	kg	-	0.10	-	-	-
Knauf Glasfaser-Fugendeckstreifen (Fibre Glass Joint Tape) (long and front edges)	m	-	2.2	-	-	-
Trenn-Fix, 65 mm wide, self-adhesive	m	1.8	1.8	1.8	1.8	1.8
Knauf Kantenschutzprofil (Edge Trim) 23/13; 2.75 m long Knauf Eckschutzschiene (Corner Trim) 31/31; 3 m long Alux-Kantenschutz (Edge Trim) 50 mm wide	m	as req.	as req.	as req.	as req.	as req.
Knauf Universalschrauben (multi-purpose screws) (FN 4.3x35 mm; FN 4.3x65 mm) *+ washer Ø ≥ 30 mm, d = 1.5 - 3 mm*	pcs	as req.	as req.	as req.	as req.	as req.

Requirements

Fire walls as fire barriers for the termination of buildings (building party walls) or for sectioning buildings into fire compartments (interior fire walls) must be sufficiently long to prevent the spread of fire to other buildings or fire compartments.
Firewalls must be fire-resistant even under additional mechanical impact stress and consist of non-combustible materials (fire resistance class EI 90-M and all materials must be material class A).
The resistance to additional mechanical impact stress (classification -M) during fire resistance testing by a defined pendulum impact stress test with a 200 kg sack containing lead shot induces 3000 Nm impact work on a surface of approx. 400 cm² to the side not subjected to the fire.

Metal Stud Partition EI 60-M: In accordance with § 30 section (3) point 1 of the German Model Building Code 2012, in buildings of building class 4, walls that are “highly-fire resistant” under additional mechanical loads, are permissible instead of Fire Walls.

Construction

Knauf Firewalls and Metal Stud Partitions EI 60-M consist of a metal substructure as a single metal stud frame and double or triple layer cladding made of Knauf boards screw fixed on both sides.
A sheet metal insert is arranged under the upper board layer.

Insulation materials with building physical requirements can be installed in partition cavities in conjunction with building supervision authority agreement (see page 3).
Ball impact safety is assured.

Movement joints of the main structure should be integrated into the construction of the Fire Walls. Movement joints are to be installed every 15 m on continuous partitions.
Cable and pipe penetrations must be implemented in accordance with Knauf Fire Protection folder BS1.de (German only).

Installation

Substructure

- Apply two strings of Trennwandkitt (acoustical sealant) or Dichtungsband (sealing tape) to rear side of runners for the connection to flanking constructional components. When sound insulation requirements are present, seal carefully with Trennwandkitt (acoustical sealant) in acc. to DIN 4109, supplement 1, section 5.2. Porous sealant strips such as Dichtungsband (sealing tape) are usually not suitable in this case.
- Anchor the edge profiles (UW runners to the floor and ceiling, CW profiles to the walls) using approved non-combustible fasteners and anchors suitable for the substrate (e.g. Knauf Deckennagel with reinforced concrete, application and assembly in acc. to ETA-07/0049) with washers ≥ Ø 30 mm, t = 1.5 to 3 mm. Max. fastening surrounding spacing 500 mm.
- Insert CW stud profiles at axial spacings of 312.5 mm into the UW runners and align them.

Cladding

- Screw-fasten the cladding in accordance with the table on page 2.
- Floor to ceiling Knauf boards are preferred for vertical cladding (Massivbauplatte horizontal).
- Stagger the front edge board joints by at least 400 mm.
- In case of multi-layer cladding stagger the long edge joints between the cladding layers by one stud spacing.
- Front and long edge joints of cladding on opposing sides must also be staggered to one another.
- Install galvanized sheet metal inserts as sheets or material on rolls, ≥ 0.5 mm thick, horizontally under the upper cladding layer, overlap all joints by at least 100 mm, arrange vertical joints on the partition studs. Screw fastening with Drywall Screws only for fastening.

Jointing

Surface quality

- Jointing of the boards in the required quality level Q1 to Q4 in accordance with Code of Practice no. 2 “Verspachtelung von Gipsplatten, Oberflächengüten” of the BVG (Bundesverband der Gipsindustrie e.V.).
- The overlaps of the sheet metal inserts can lead to unevenness in the gypsum board surfaces. These are levelled using a full surface coating.

Filling materials

Choose filling materials suitable for the type of boards and the desired quality:

- TRIAS: Hand filling without board tape; easy blending, very smooth application and easy to sand, with high strength and suitable for areas of high humidity, reduced absorption for surfaces with uniform appearance;
- Uniflott: Hand filling without joint tape strips;
- Fugenfüller Leicht:
  Hand filling with Knauf Fugendeckstreifen Kurt (joint tape)
- Fireboard Filler: Hand filling of Fireboard with Fibre Glass Joint Tape

Finishing filler to achieve the desired surface quality:

- Readygips: for Q3 and Q4
- Finish-Pastös: for Q2 and Q3
- Spezialgrund: for Q3 in conjunction with Finish-Pastös
- Multi-Finish/Multi-Finish M: for Q4

Gypsum board joints

- For multi-layer cladding, fill the lower layers with filler to quality level Q1, fill the joints of the visible layer to the quality level required. Filling the joints of covered cladding layers with multi-layer cladding is necessary to guarantee technical fire protection and sound insulation properties as well as the structural properties!
- Recommendation: Front edge and cut edge joints as well as mixed joints (e.g. HRAK + cut edge) of the visible cladding layers filled using Uniflott or TRIAS, will require the application of Knauf Joint Tape Kurt as well.
- Divergent from the specifications given in the Code of Practice no. 2, a coating on the entire surface with Fireboard Filler is required to achieve surface quality Q2 in conjunction with Fireboard.
- Fill in visible screw heads.
- Lightly sand visible surfaces after drying of the filler material, if required.

Connection joints

- Apply connections to the flanking drywall construction (ceiling/wall), dependent on the conditions and the demands on crack resistance with Trenn-Fix or Knauf Joint Tape Kurt.
- Observe Code of Practice no. 3 “Gipsplattenkonstruktionen - Fugen und Anschlüsse” of the BVG (IGG) (German only).
- Apply Trenn-Fix when filling joints to adjacent solid construction components.
- Seal the connection to the floor with joint filler

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 in board joints after screed has been applied.
- Observe code of practice no. 1 “Baustellenbedingungen” of the BVG (IGG).

Coatings and linings

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 Knauf Fire Walls.

Pre-treatment

Before further coatings or linings (wallpaper) are applied, the filled surface must be free of dust and the surface of the gypsum boards should always be pre-treated and primed, acc. to code of practice no. 6 of the BVG “Vorbehandlung von Trockenbauflächen aus Gipsplatten zur weitergehenden Oberflächenbeschichtung bzw. –bekleidung”.

The primer must suit the subsequent coating compound/linings.

In order to settle the different suction properties of the filled areas and the paper surface, primers such as Knauf Tiefengrund / Spezialgrund / Putzgrund are suitable. Where a wallpaper lining is used, a primer that facilitates easier removal of wallpaper for redecoration is recommended.

A sealing primer of Knauf Flächendicht is required for covering splash water areas with tiles.

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 Klebearbeiten” released by the Bundesausschuss Farbe und Sachwertschutz.
- Ceramic tiles
- Plasters
  Knauf textured plasters, Knauf interior plasters, thin plasters, full surface skimming plaster, for example, Knauf Readygips, Multi-Finish or Multi-Finish M.
  When applying plasters and thin plasters, the use of Fugendeckstreifen (joint tape) Kurt in the cut board edges is recommended when filling joints with Uniflott or TRIAS.
- Coats
  Resin dispersion paints, multicoloured (rainbow) emulsion, oil paint, matt finish lacquer, alkyd resin paint, polymer resin paint, PUR lacquer, or epoxy-based lacquer.
- Silicate-based emulsion paints may be used after referring to the manufacturer’s recommendations for priming.

Unsuitable are:

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

After wallpapering with paper or fibre glass wallpapers or after application of resin / cellulose plasters, quick drying must be ensured through adequate airing.

Note

Gypsum board surfaces that have constantly been exposed to light without any protection can cause yellowing after coating. 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.

W13.de Knauf Fire Walls

Information on the sustainability

Information on sustainability of Knauf Products and Fire Wall 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. The certification systems of the DGNB (Deutsches Gütesiegel Nachhaltiges Bauen), BNB (Bewertungssystem Nachhaltiges Bauen) and LEED (Leadership in Energy and Environmental Design) are of particular relevance in Germany.

Knauf products and Fire Wall systems can positively influence many of these criteria.

DGNB/BNB

Ecological quality

- Criterion: Risks for the local environment
  → The relevant environmental data are contained in the EPD for gypsum products

Economic quality

- Criterion: Building related life-cycle costs
  → Cost-effective Knauf Drywalling

Sociocultural and functional quality

- Criterion: Space efficiency
  → Slim, floor-space enhancing Knauf partition systems
- Criterion: Suitability for conversion
  → Flexible Knauf Drywalling

Technical quality

- Criterion: Fire protection
  → Comprehensive fire protection know-how
- Criterion: Sound insulation
  → Exceeding the demands of the standard with Knauf sound installation
- Criterion: Ease of dismantling and recycling,
  → Knauf Drywalling is fully compliant

LEED

Materials and resources

- Credit: Recycled Content
  → Recycled content in Knauf boards (e.g. FGD gypsum)
- Credit: Regional Materials
  → Short transport routes provided by the extensive network of Knauf manufacturing facilities

Detailed information on request and on the internet under:
www.knauf-blue.de

Special notes

Constructional solutions marked with plus are not an integral part of the corresponding National Technical Test Certificate (ABP), but are evaluated by Knauf as a non-significant divergence thereof. The documents (e.g. surveyors reports, technical assessments) on which this evaluation is based are included in the ABP. The construction type must be coordinated and authorised in advance in consultation between the persons responsible for fire protection and / or the relevant authorities.
All other constructions, details and stated products in the Technical Data Sheet **W13.de Knauf Fire Walls - edition 05/14** fully comply with the proofs acc. to German building legislation, valid at the time of issue. In addition, design and structural requirements and those regarding building physics (fire protection and sound insulation) are considered.

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.

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