

D19 Knauf Ceiling Design

D191 – Knauf Mitring Technology

D192 – Knauf Moulding Technology

D193 – Knauf Domes

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.

Knauf Design Elements Bent Knauf Profiles

Details

The shown details are examples for the design options. Deviating substructures and anchorings can be necessary, depending on the type and layout of the design elements.

The specifications of the Knauf Technical Data Sheets D11 / D12 / D15 are to be observed.

On request, Knauf Design Elements are available in many variants and layouts according to the design requirements.

Knauf Domes


Cantilevers

Knauf Accessories



General

D191 Knauf Mitrering Technology	
Design elements: Knauf Boards with mitring / Design Element Units	3
D192 Knauf Moulding Technology	
Design elements: Knauf Arch Elements	5
Moulded Knauf Boards (on site)	6
Bent Knauf Profiles CD / UA (factory bent)	7
Recessed lighting	8
Fin ceilings	12
Module ceilings	13
Protrudings	14
Recesses	15
Saw tooth ceilings	16
Waved ceilings	17
Vaulted ceiling	18
Barrel vault ceiling	19
Cornices	21
Split-level ceiling	22
D193 Knauf Domes	
Flat domes / special domes and vaults	24
Examples for cantilevers	26
Multi Connector	28
Angle Connector 90°	28
Universal Connector	29
Daisy Chain Clip	29
Tender specifications	30
Construction, application	32

Associated Technical Data Sheets

-  D11 Knauf Board Ceilings
-  D12 Knauf Cleaneo® Acoustic Ceilings
-  D15 Knauf Wood Joist Ceiling Systems

Further information

-  Brochure D10 Knauf Ceiling Competence - Room for Ideas
-  www.knauf-formbar.de

D191 Knauf Mitring Technology

Design elements: Knauf Boards with mitring / Knauf Design Element Units



30° to 150° mitres

Schemazeichnungen

Mitring from

30° mitring



to

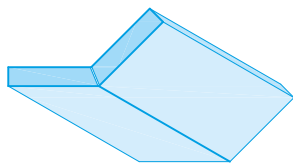
all angles are possible

150° mitring

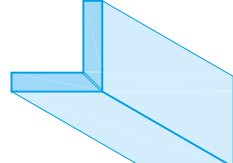


Example: L angle (for more examples see page 4 + detail pages)

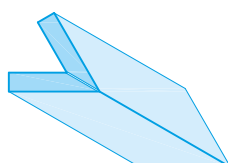
■ 45° mitring



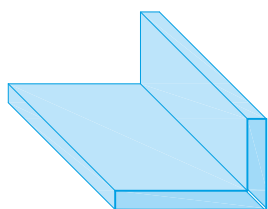
■ 90° mitring



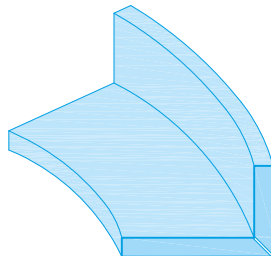
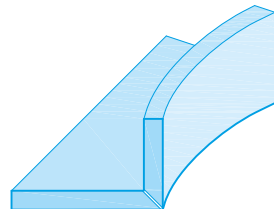
■ 120° mitring



■ Straight



■ Moulded e.g. upstands



■ Board thicknesses 6.5 mm to 25 mm

■ Board types

- Knauf GKB / GKBI
- Knauf GKF / GKFI
- Diamant
- Techniform
- Thermoboard
- Other types on request

■ Options for mitred design elements

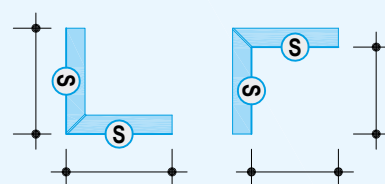
- Glued / partially glued / non-glued
- Straight / moulded

■ Glueing of non-glued boards:

Prime mitring with Knauf Tiefengrund and glue with PVA glue.

■ Information required for ordering:

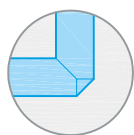
- Dimensions
- Marking of the face side **(S)**



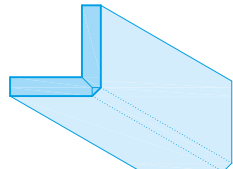
www.knauf-formbar.de

Bevelled mitring

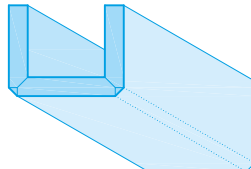
Bevelled mitring 90°



■ Bevelled L angle



■ Bevelled U section



■ Board thickness 12.5 mm

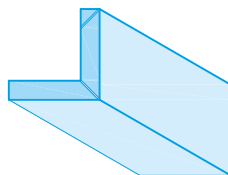
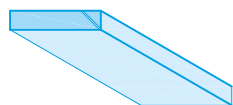
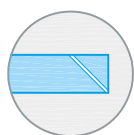
■ Board types

- Knauf GKB / GKBI
- Knauf GKF / GKFI
- Diamant

■ Factory glued

Mitring as glued edge

Mitring as glued edge 90°



■ Board thicknesses 6.5 mm to 25 mm

■ Board types

- Knauf GKB / GKBI
- Knauf GKF / GKFI
- Diamant
- Techniform
- Thermoboard
- Other types on request

■ Factory-glued

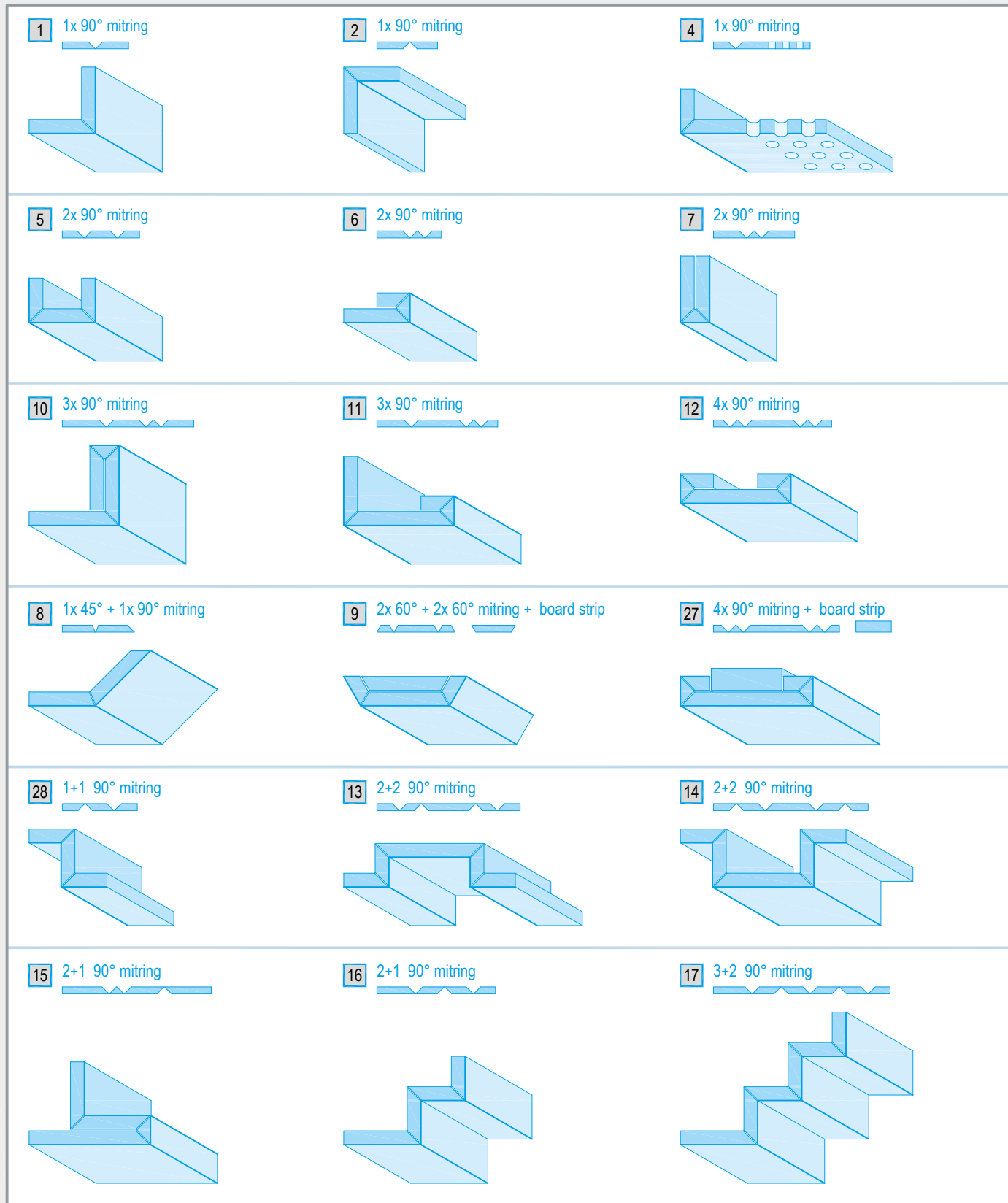
D191 Knauf Mitring Technology

Design elements: Knauf Boards with mitring/ Knauf Design Element Units

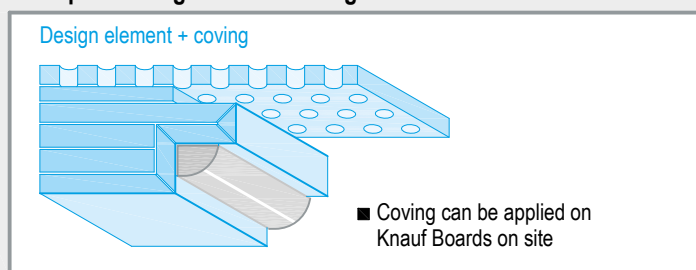


Examples: Mitring Technology

Scheme drawings



Example: Mitring + on-site coving



Note

Design elements:

- **Knauf Boards with mitring**
boards with V mitring
- **Knauf Design Element Units**
consist of several boards with or without mitring
- **Knauf Arch Elements**
consist of several moulded Knauf Boards

Arch elements

Scheme drawings

■ Concave inside arches

90° quarter shell 120° shell 180° half shell

■ Convex outside arch

90° quarter shell 120° shell 180° half shell

■ Element thicknesses -t-

- 12 mm (2x 6 mm)
- 18 mm (3x 6 mm)
- 24 mm (4x 6 mm)
- Other on request

■ Radius $r \geq 70$ mm

■ Angle $\leq 180^\circ$

■ Element length
max. 3480 mm
(depending on radius and angle)

■ Moulded design elements are:

- Factory glued
- straight or round, depending on type

www.knauf-formbar.de

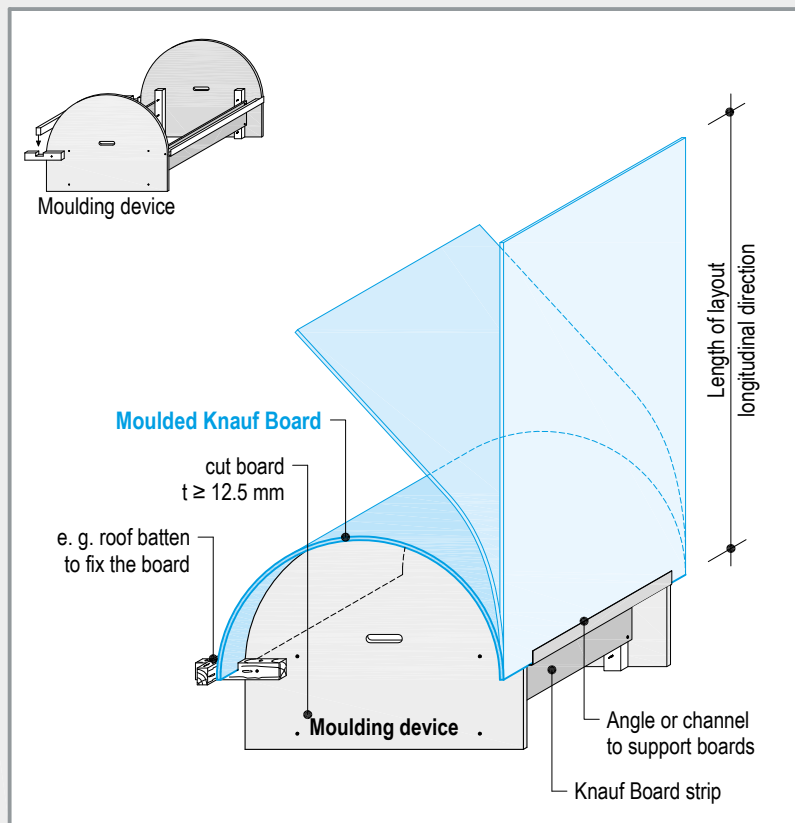
Examples: Moulding technology

For more examples see detail pages

<p>18 Quarter shell 90°, concave</p> <p>face side</p>	<p>19 Shell 120°, concave</p> <p>face side</p>	<p>20 Half shell 180°, concave</p> <p>face side</p>
<p>29 Quarter shell 90°, convex</p> <p>face side</p>	<p>30 Shell 120°, convex</p> <p>face side</p>	<p>31 Half shell 180°, convex</p> <p>face side</p>
<p>23 Quarter shell 90°, convex with straight extension</p> <p>face side</p>	<p>24 Quarter shell 90°, concave with straight extension</p> <p>face side</p>	<p>32 Half shell 180°, concave with straight extensions</p> <p>face side</p>
<p>21 S arch</p> <p>face side</p>	<p>33 S arch with straight extensions</p> <p>face side</p>	

Moulded Knauf Boards

Scheme drawings



■ Cleaneo® Acoustic Boards

For perforation patterns, bending process, bending radii and axial spacings of furring channels, see Knauf Technical Data Sheet K761 Cleaneo® Acoustic

■ Concave



■ Convex



■ Bending only in longitudinal direction

■ Dry bending

1. Bend Knauf Boards slowly, laterally over substructure. Pre-bending on moulding device is recommended.
2. Fasten board with Drywall Screws along the curvature.

■ Wet bending

1. Put the cut-to-length Knauf Boards on a grid made of channels or similar materials **with the side to be compressed** on top and exceeding the grid on the perimeters (so excess water can drip off).
2. Perforate the board laterally and longitudinally with the Spike Roller.
3. Moisten the board by spraying or with a lambskin roller and let settle for a few minutes. Repeat process until excessive water drains.
4. Lay board on precast moulding device, fix with tape and allow to dry.

Board thickness t mm	Bending radius r	
	Dry bending mm	Wet bending mm
6.5 Techniform	≥ 1000	≥ 300
9.5 GKB	≥ 2000	≥ 500
12.5 GKB / GKF	≥ 2750	≥ 1000
12.5 Diamant	≥ 2750	≥ 1000

■ Other Knauf Boards or bending radii on request

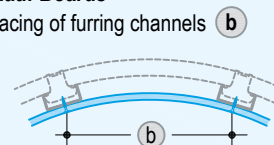
■ Fastening of moulded Knauf Boards

Radius r
mm

300 to 2500
> 2500

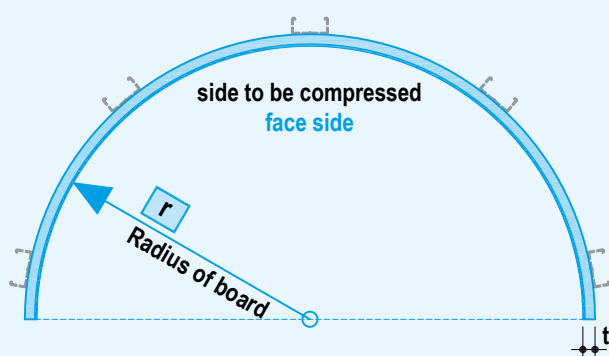
Axial spacing of furring channels b
mm

≤ 300
 ≤ 400

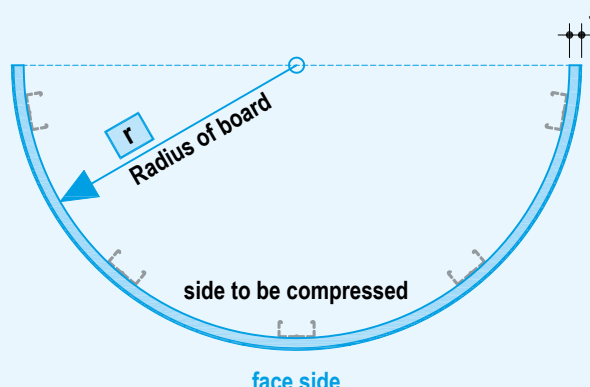


Examples

■ Concave inside arch



■ Convex outside arch



D192 Knauf Moulding Technology

Factory-bent Knauf CD Channels and UA Profiles

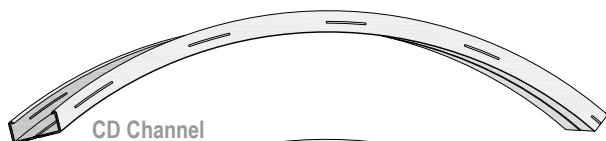


Bent Knauf CD and UA Profiles

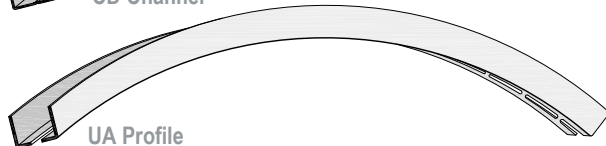
Scheme drawings

■ Concave

min. bending radius **r1** 500 mm



CD Channel



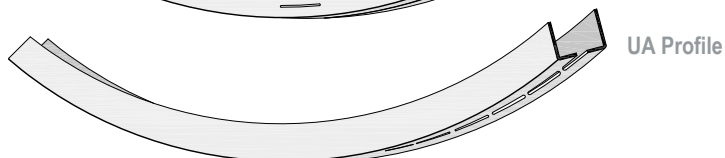
UA Profile

■ Convex

min. bending radius **r1** 1000 mm



CD Channel



UA Profile

■ Knauf CD Channels:

- CD 60x27x0.6

■ Knauf UA Profiles:

- UA 50x40x2
- UA 75x40x2
- UA 100x40x2

■ Profile lengths on request

- There is always a production-related straight (non-bent) front and end of **150 mm** length each.
Other designs (as pre-cut) on request

■ Axial spacings of substructure components

Max. spacing suspenders

a

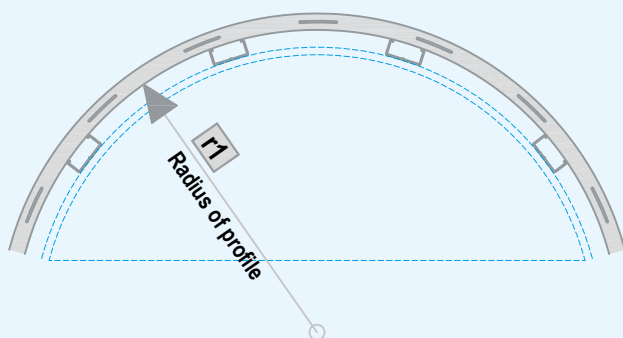
Max. axial spacing of carrying channels

c

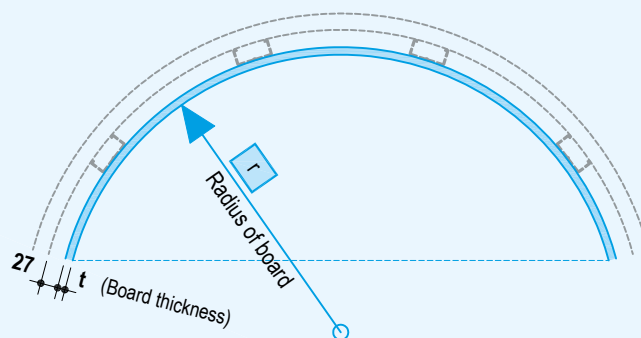
of the ceiling system according to the respective
Knauf Technical Data Sheet, e. g. D11

Example

■ Concave bent profile



r1
Radius of profile

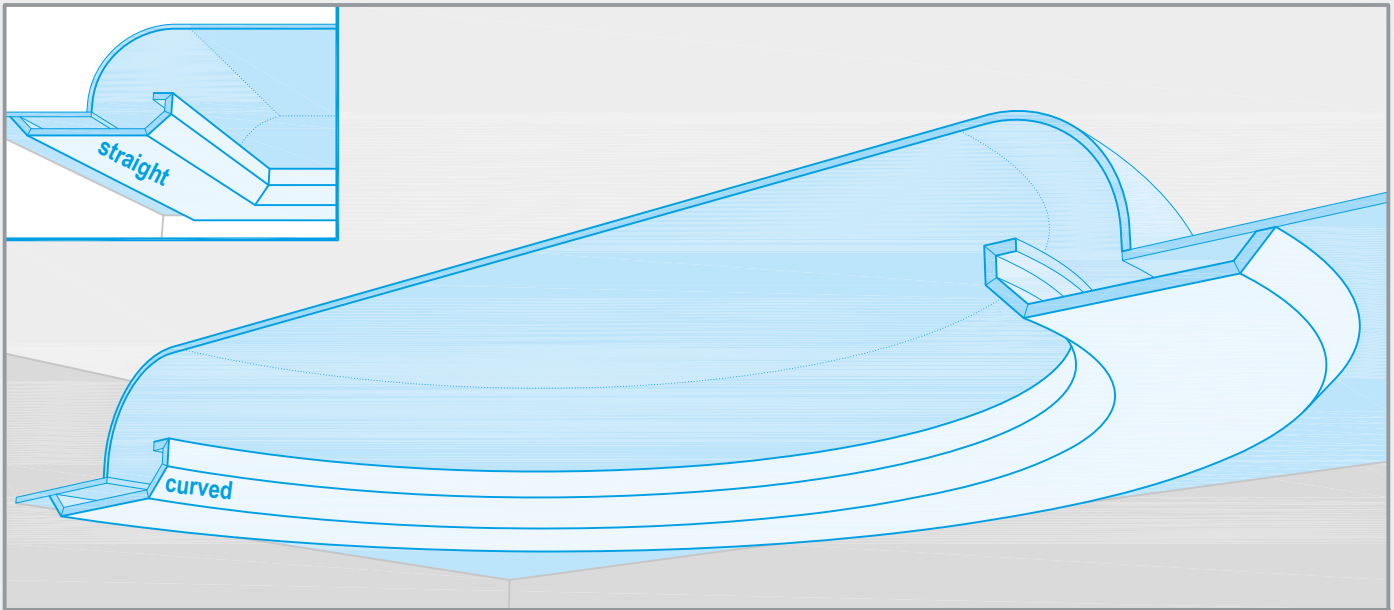


r
Radius of board

27
t (Board thickness)

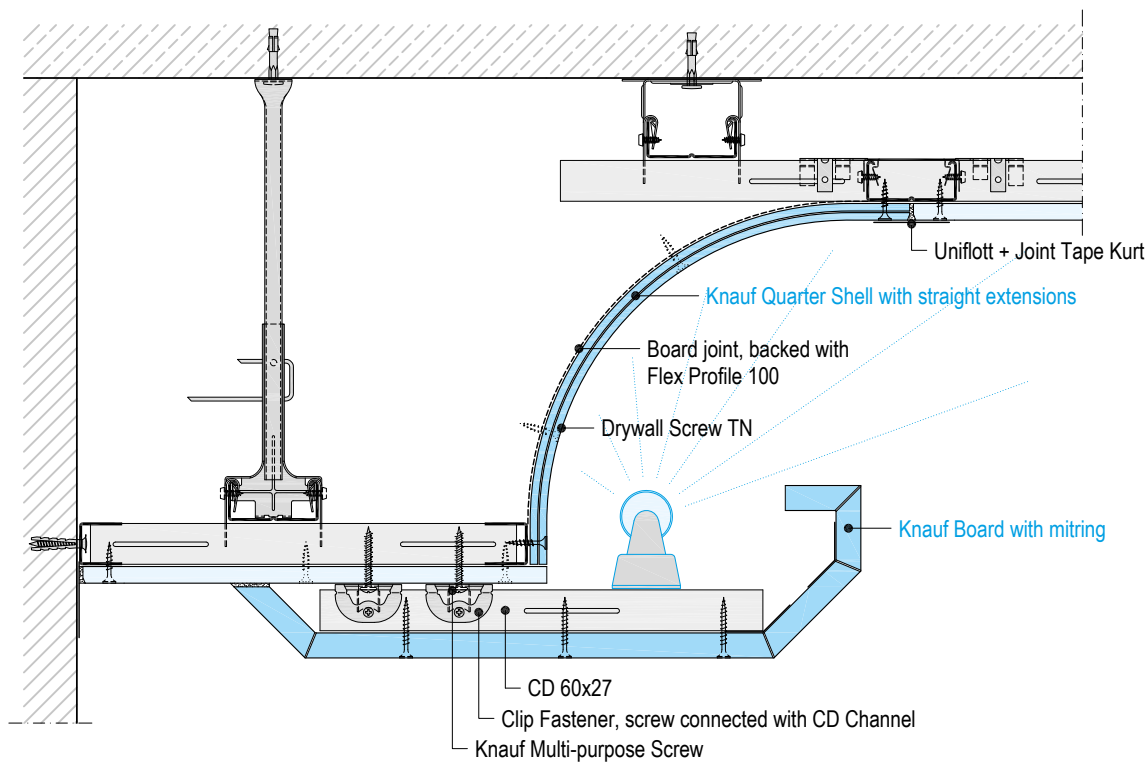
Examples

Scheme drawings



Detail, scale 1:5

D192-S6 Recessed lighting at split level ceiling

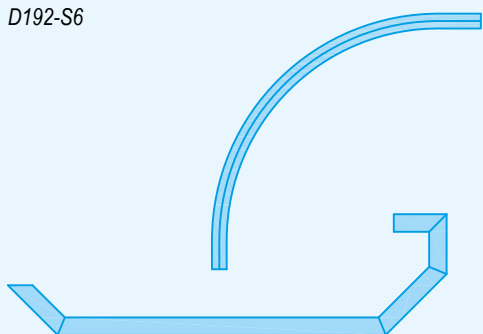


Flex Profile



- In case of curved layout, a substructure made of ribs with a ring can be necessary
- Max. cantilever length and lighting weight on request

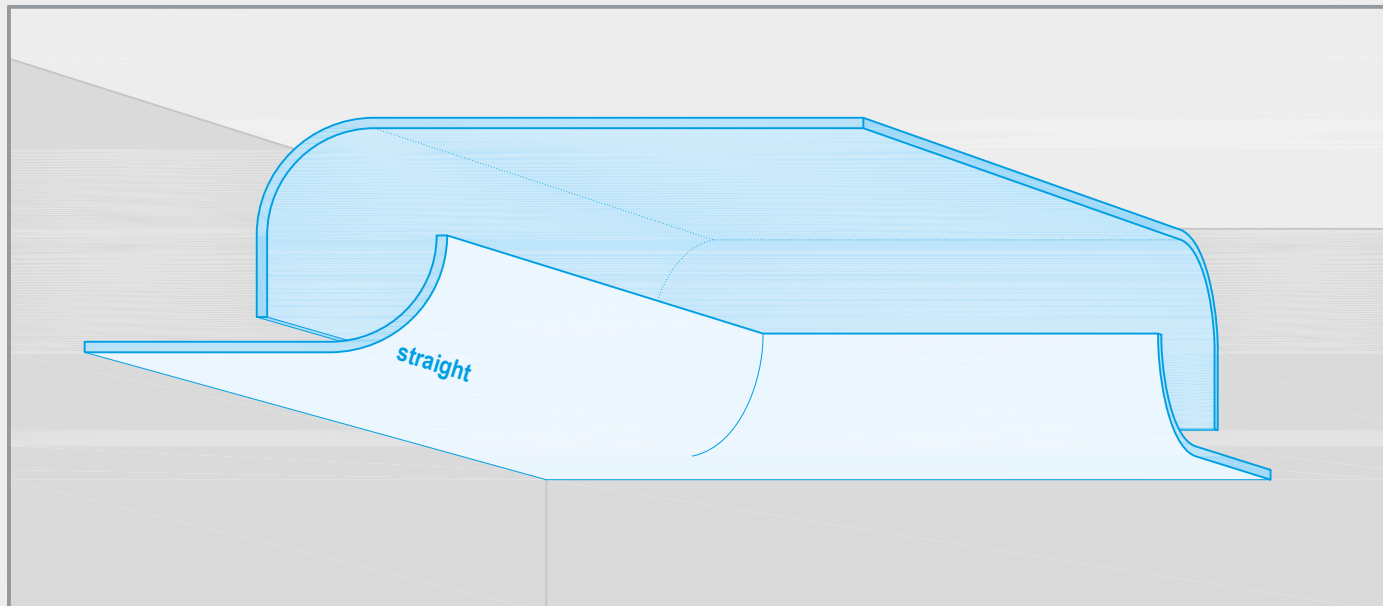
D192-S6



- Knauf Quarter Shell 90°, concave with straight extensions
- +
- Knauf Board with 45° + 90° mitring

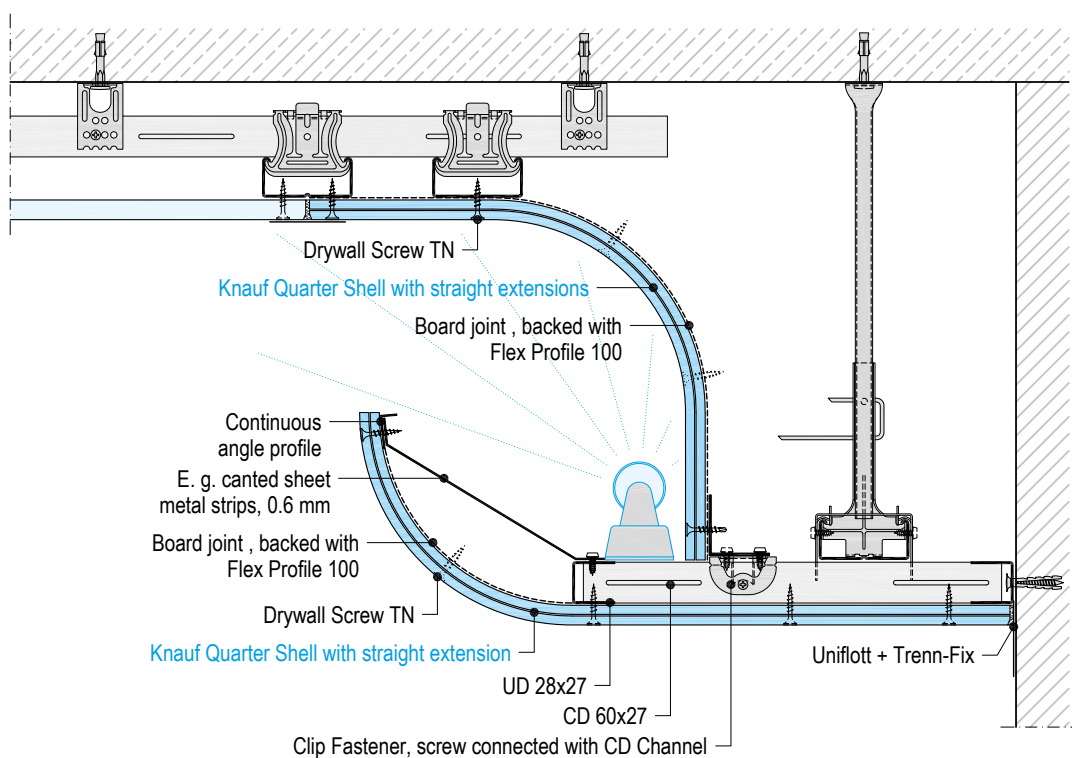
Examples

Scheme drawings



Detail, scale 1:5

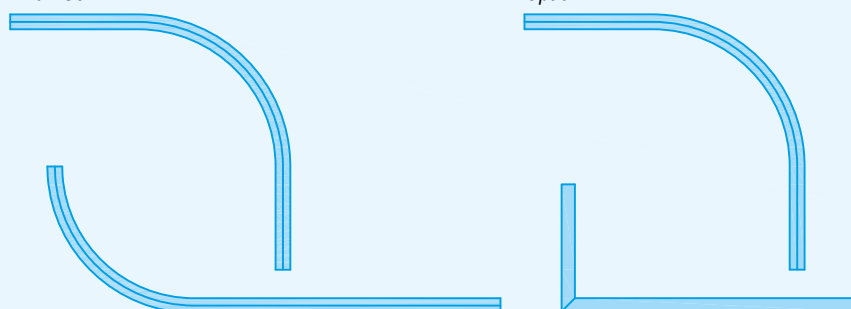
D192-S3 Recessed lighting with 90° arches



■ Max. cantilever length and lighting weight on request

D192-S3

Option



- Knauf Quarter Shell 90°, concave with straight extensions
- +
- Knauf Quarter Shell 90°, convex with straight extension
- or
- Knauf Board with 90° mitring

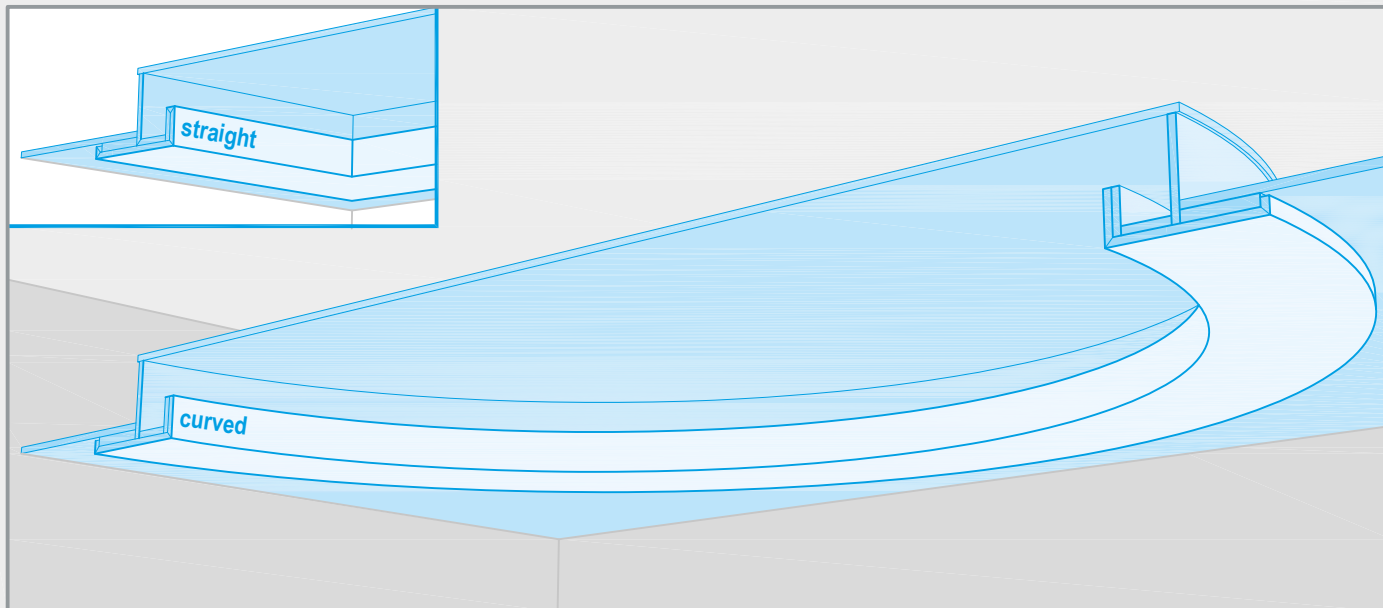
D19 Recessed lighting

Knauf Mitring Technology



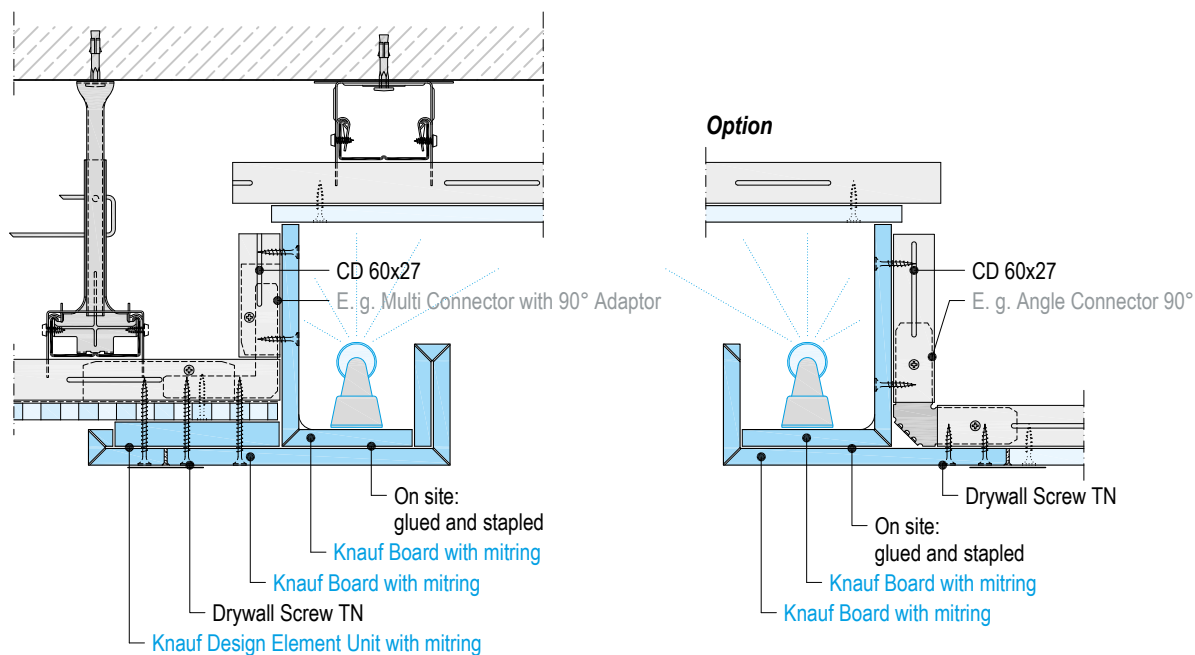
Examples

Scheme drawings



Details, scale 1:5

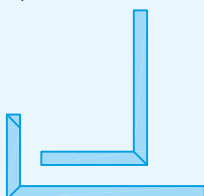
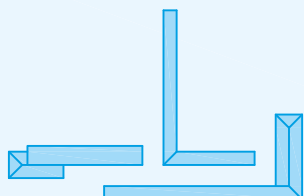
D191-S13 Recessed lighting at split level ceiling



■ Max. cantilever length and lighting weight on request

D191-S13

Option



- Knauf Board with 90° mitring
- +
- Knauf Board with 90° mitring
- +
- Knauf Design Element Unit (90° mitring)

- Knauf Board with 90° mitring
- +
- Knauf Board with 90° mitring (glued edge)

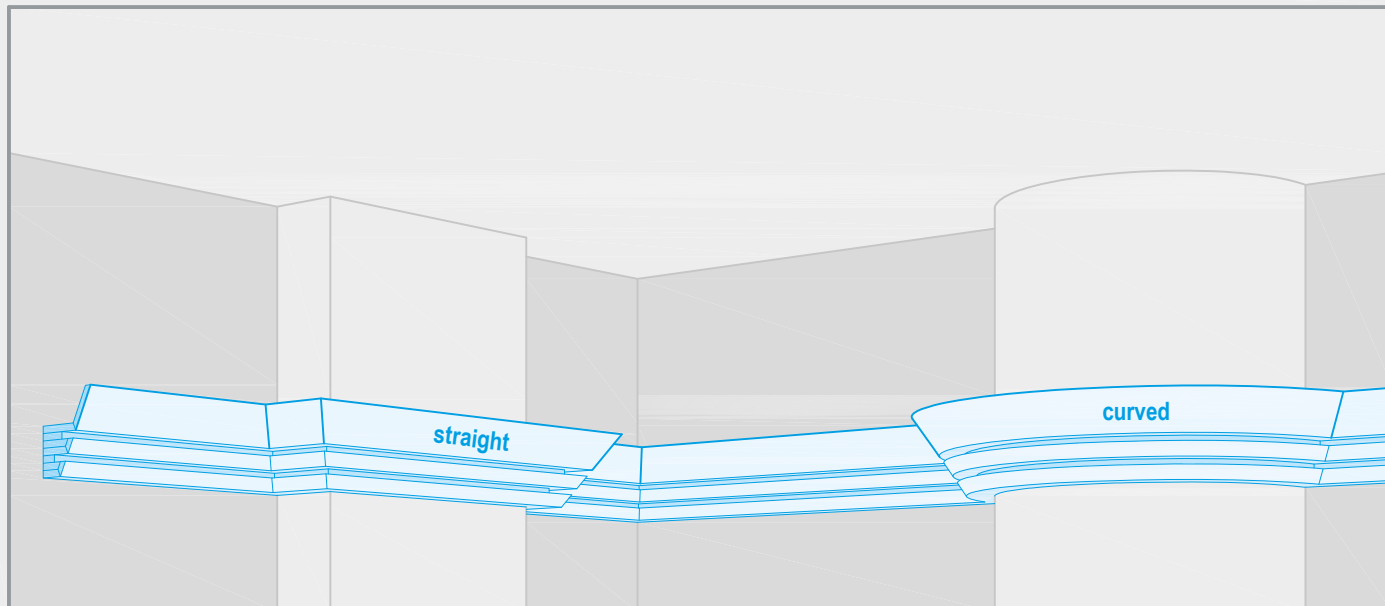
D19 Recessed lighting

Knauf Mitring Technology



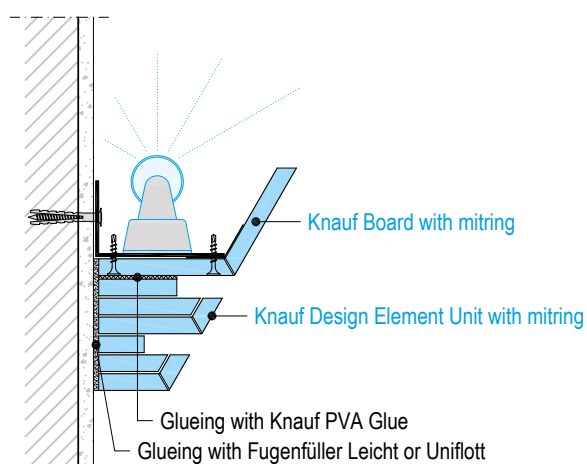
Examples

Scheme drawing

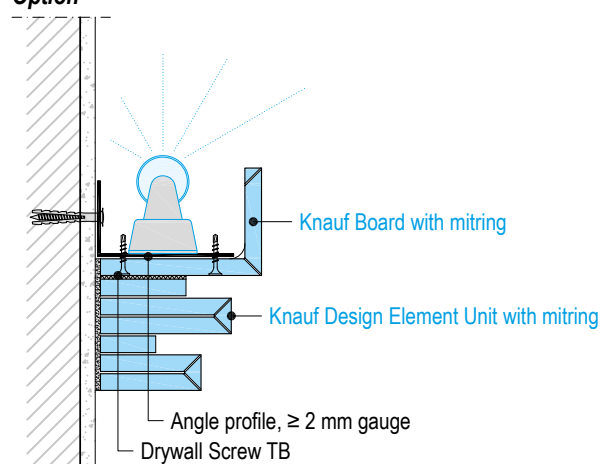


Details, scale 1:5

D191-S14 Recessed lighting at cornice

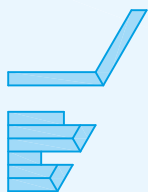


Option



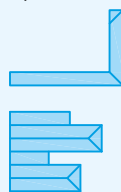
- Support is necessary until glue has set
- Max. cantilever length and lighting weight on request

D191-S14



- Knauf Board with 60° mitring
- +
- Knauf Design Element Unit (60° mitring)

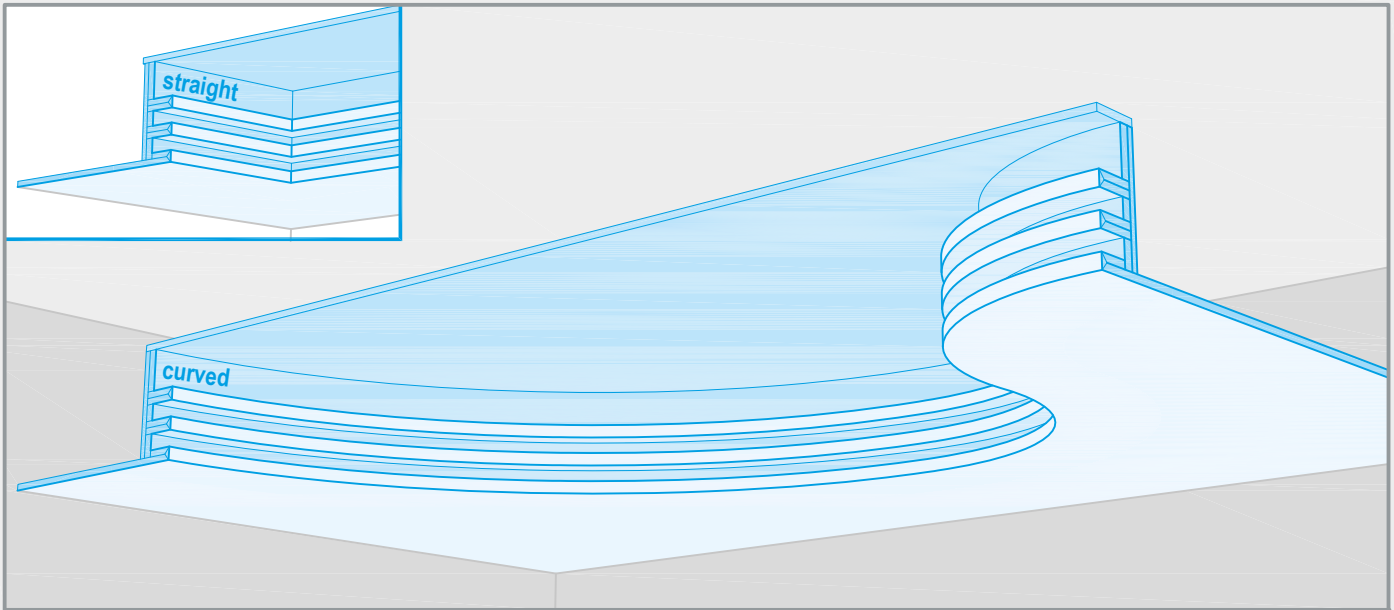
Option



- Knauf Board with 90° mitring (glued edge)
- +
- Knauf Design Element Unit (90° mitring)

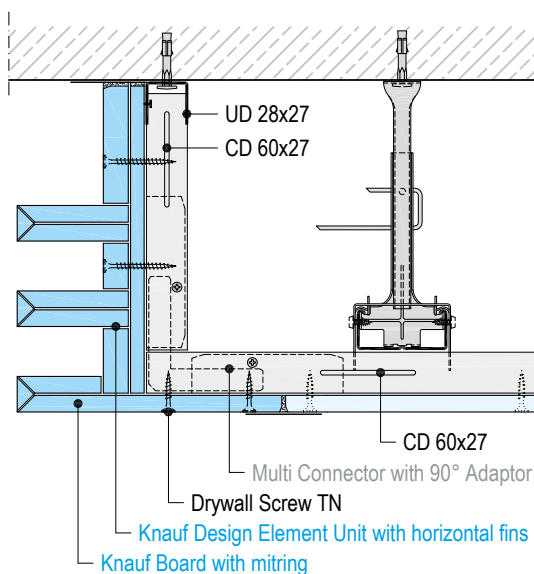
Examples

Scheme drawings



Details, scale 1:5

D191-S4 Horizontal fins



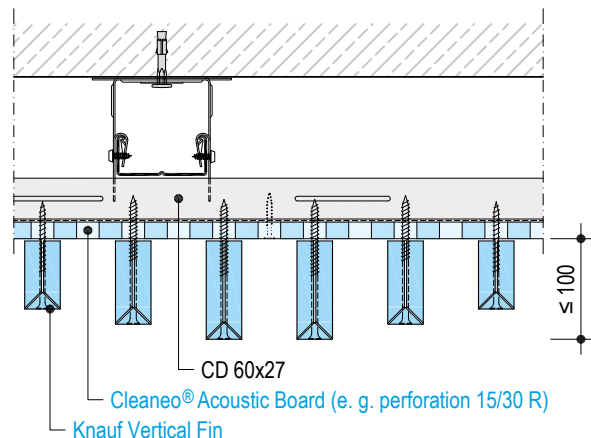
■ Max. cantilever length acc. to page 26

D191-S28 Vertical fins

with Daisy Chain Clip, see page 29

- Fins are applied laterally to furring channels CD 60x27
- Pre-drill on site and screw fasten on CD Channels
- Use Drywall Screws TN with a length according to the height of the fins:

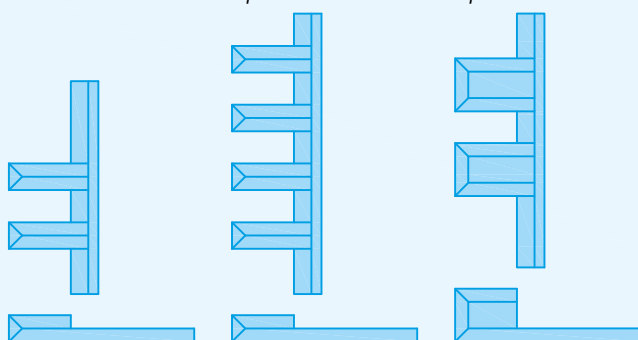
$$\text{Minimum screw length} = \begin{matrix} + & \text{Height of fin} \\ + & \text{Horizontal board layer} \\ + & \text{Min. penetration of CD Channel} \geq 10 \text{ mm} \end{matrix}$$



D191-S4

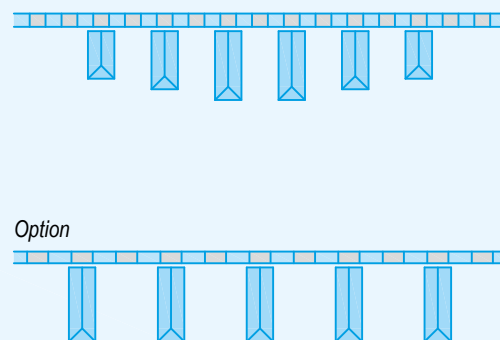
Option

Option



- Knauf Design Element Units with horizontal fins
width and height of fins are variable
- +
- Knauf Board with 90° mitring
- or
- Knauf Design Element Unit
(90° mitring)

D191-S28



Option

- Knauf Vertical Fins
width 25 mm / height of fins is variable
- +
- Cleaneo® Acoustic Boards
e. g. perforation 15/30 R or 20/42 R

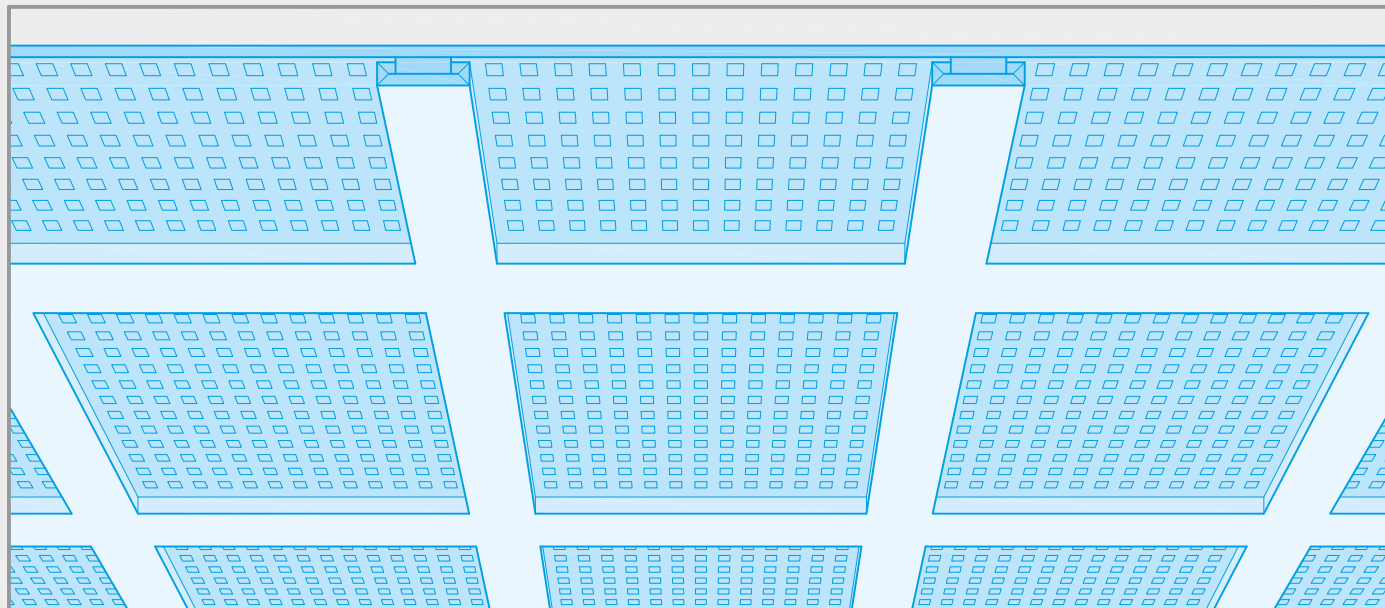
D19 Module ceilings

Knauf Mitring Technology



Examples

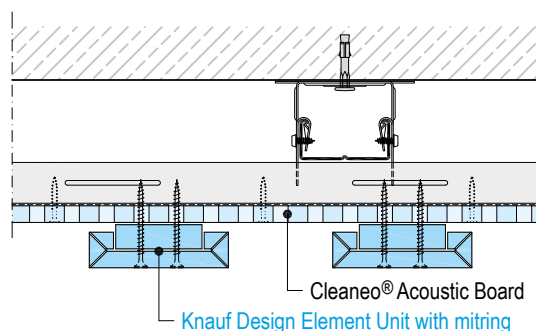
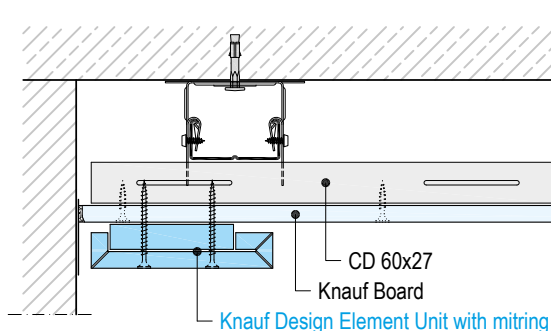
Scheme drawing



Details, scale 1:5

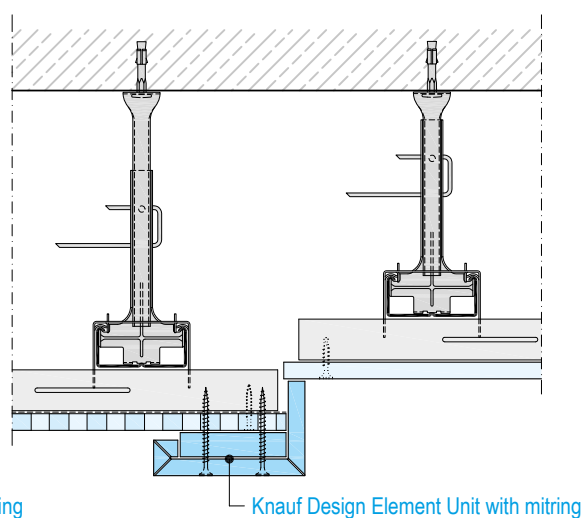
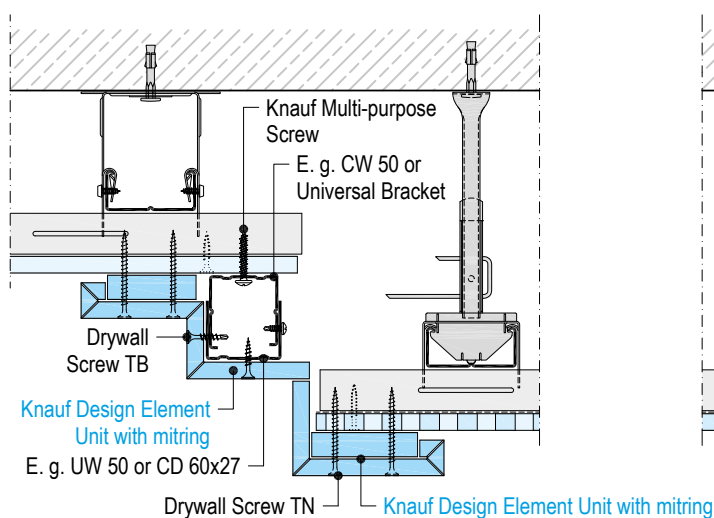
D191-S3 Module ceiling with crown frieze

D191-S9 Module ceiling



D191-S12 Module ceiling with stepped split level ceiling

D191-S11 Module ceiling split level ceiling with frieze



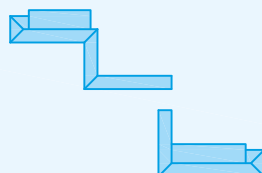
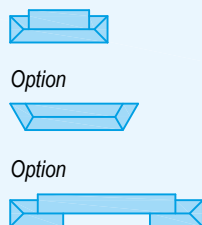
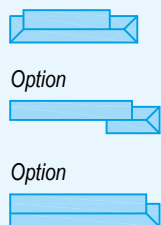
D191-S3

D191-S9

D191-S12

D191-S11

■ Knauf Design Element Units
(60° or 90° mitring)



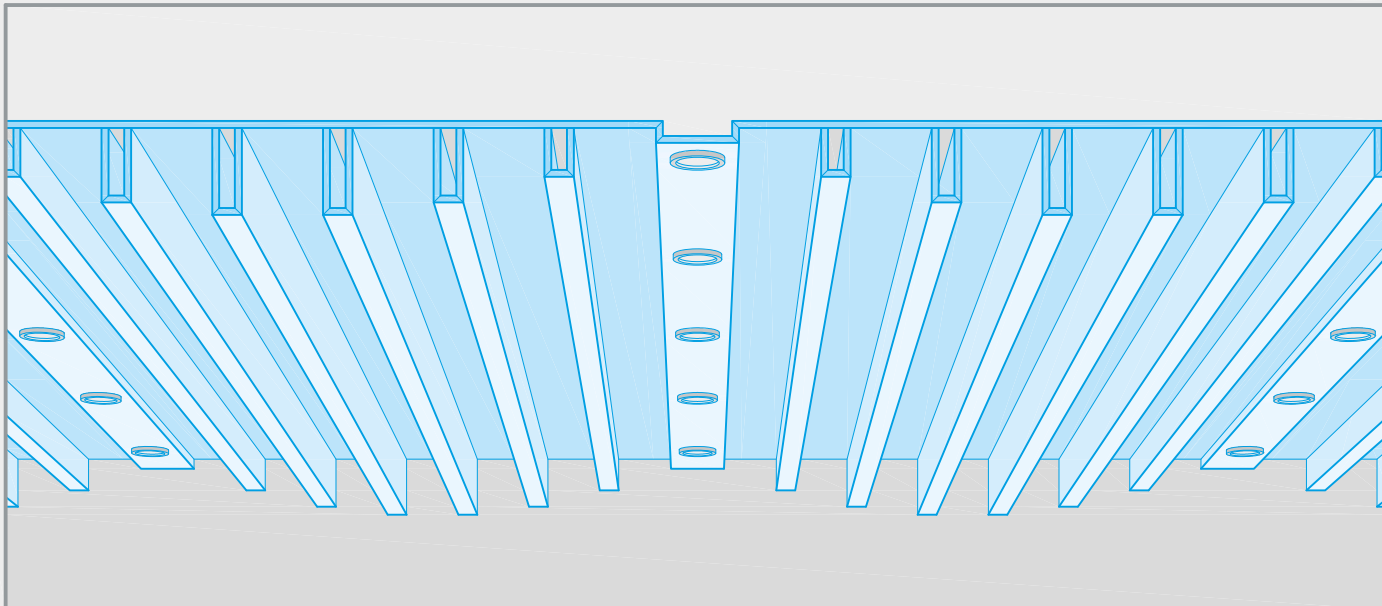
D19 Protrudings

Knauf Mitring Technology



Examples

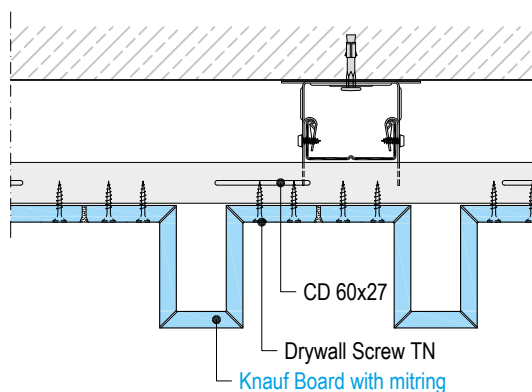
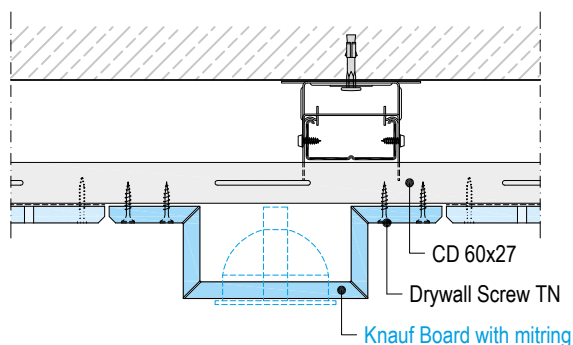
Scheme drawing



Details, scale 1:5

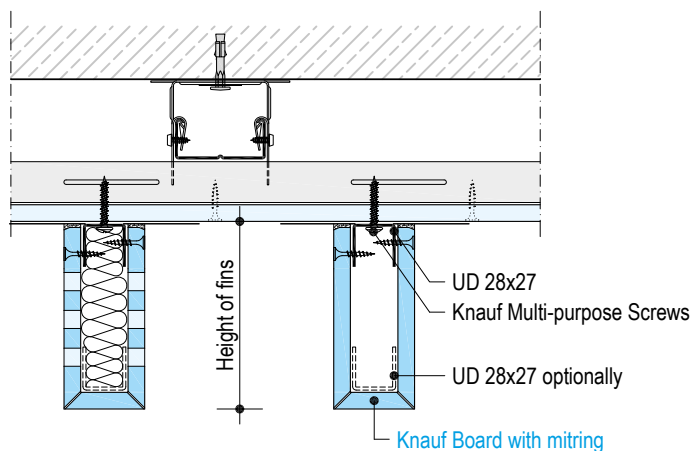
D191-S7 Protruding

D191-S29 Protruding



■ Anchor heavy lighting on the substructure or on the basic ceiling

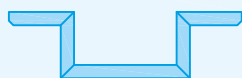
D191-S6 Protrudings as fins



■ Substructure depending on fin height:

- ≤ 150 mm: only upper UD Profile
- > 150 to 300 mm: upper + lower UD Profile
- > 300 to 600 mm: upper + lower UD Profile + vertical CD Channel

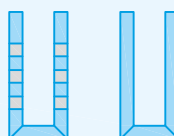
D191-S7



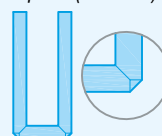
D191-S29



D191-S6



Option (bevelled)



■ Knauf Boards with 90° mitring

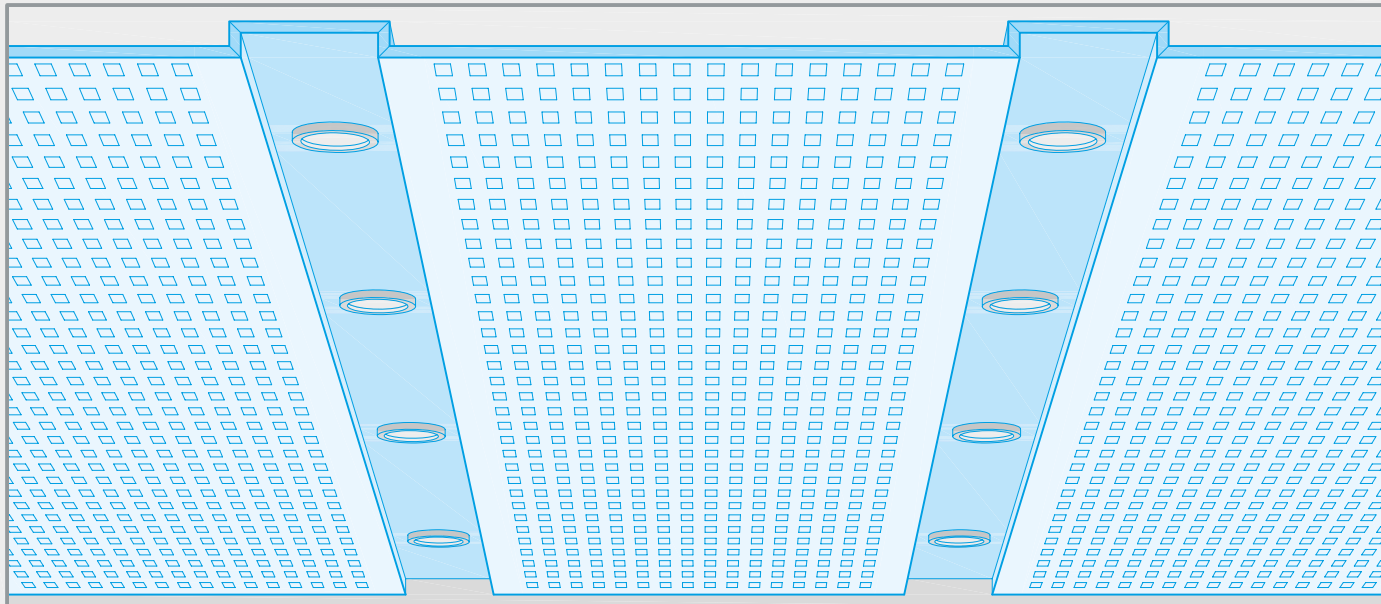
D19 Recesses

Knauf Mitring Technology



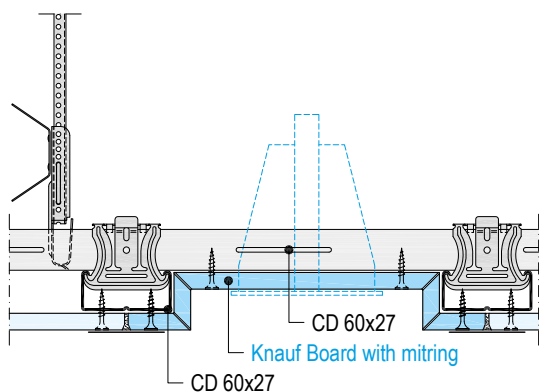
Examples

Scheme drawing



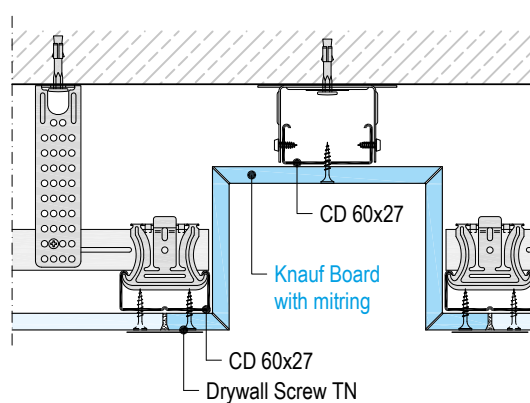
Details, scale 1:5

D191-S10 Recess

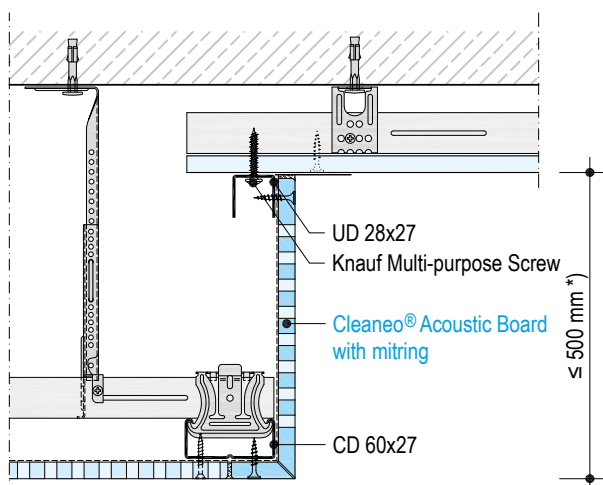


■ Anchor heavy lighting on the substructure or on the basic ceiling

D191-S30 Recess

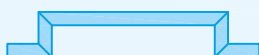


D191-S31 Recess as split level ceiling, perforated

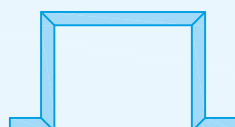


■ *) ≤ 500 mm if no displacement between the ceiling area sections is expected. Otherwise, reinforcements are necessary.

D191-S10



D191-S30



D191-S32



■ Knauf Boards with 90° mitring

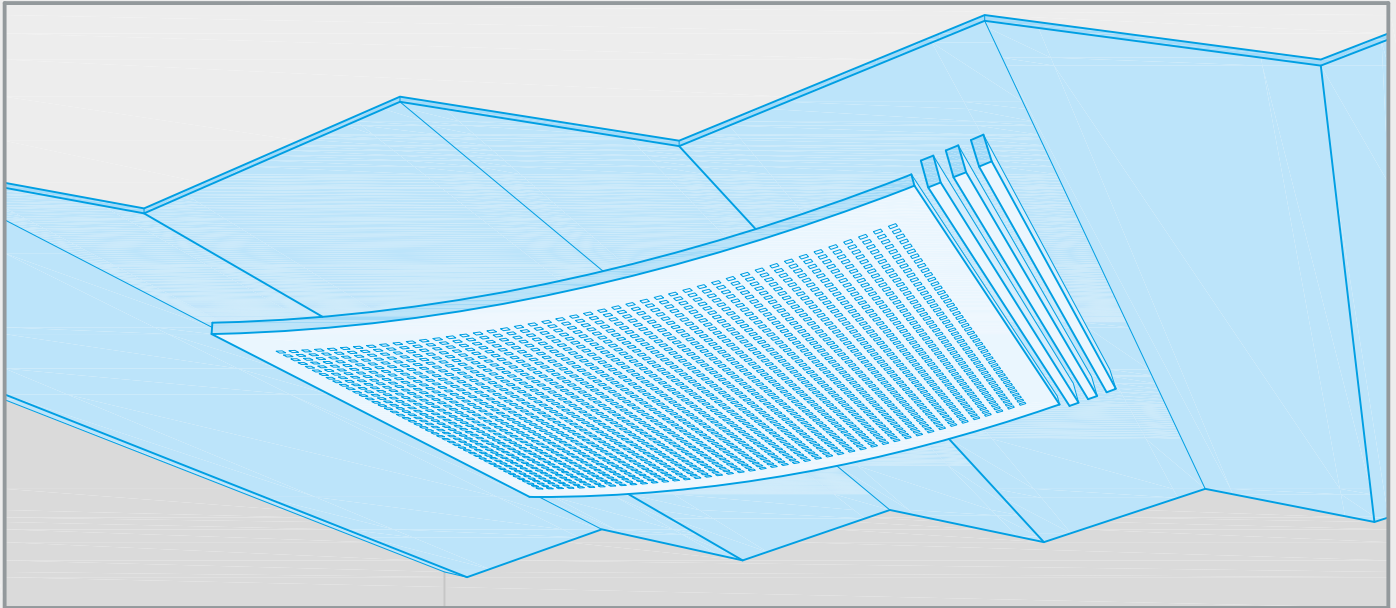
D19 Saw tooth ceiling

Knauf Mitring and Moulding Technology



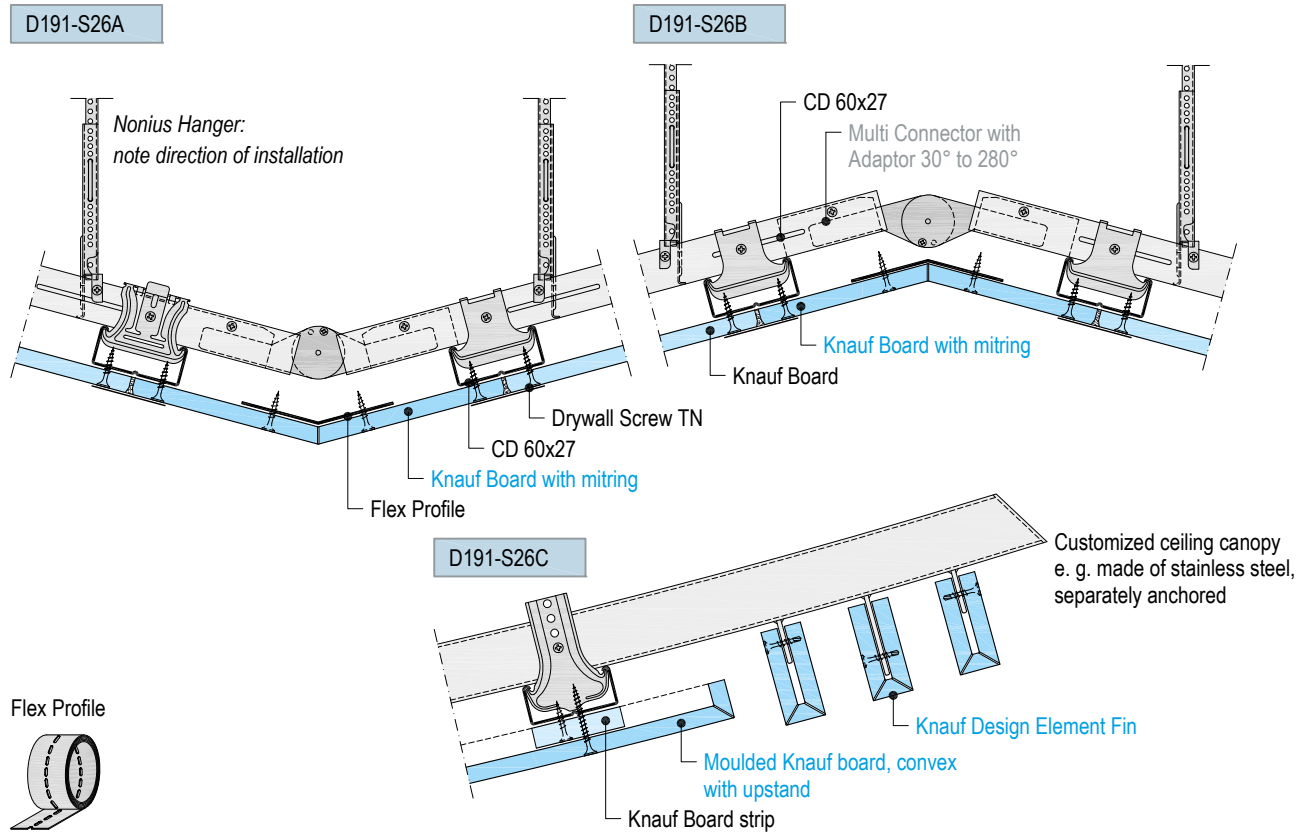
Examples

Scheme drawing

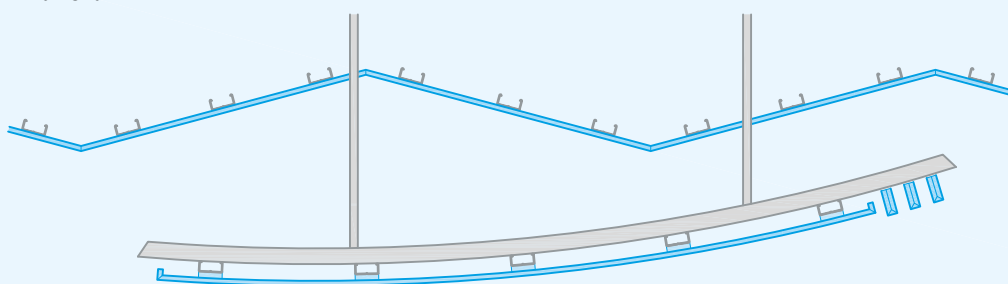


Details, scale 1:5

Saw tooth ceiling with ceiling canopy



D191-S26



- Knauf Boards with mitring
e. g. 30°
- +
- Moulded Knauf Boards, convex
with upstand
- +
- Knauf Design Element Fins

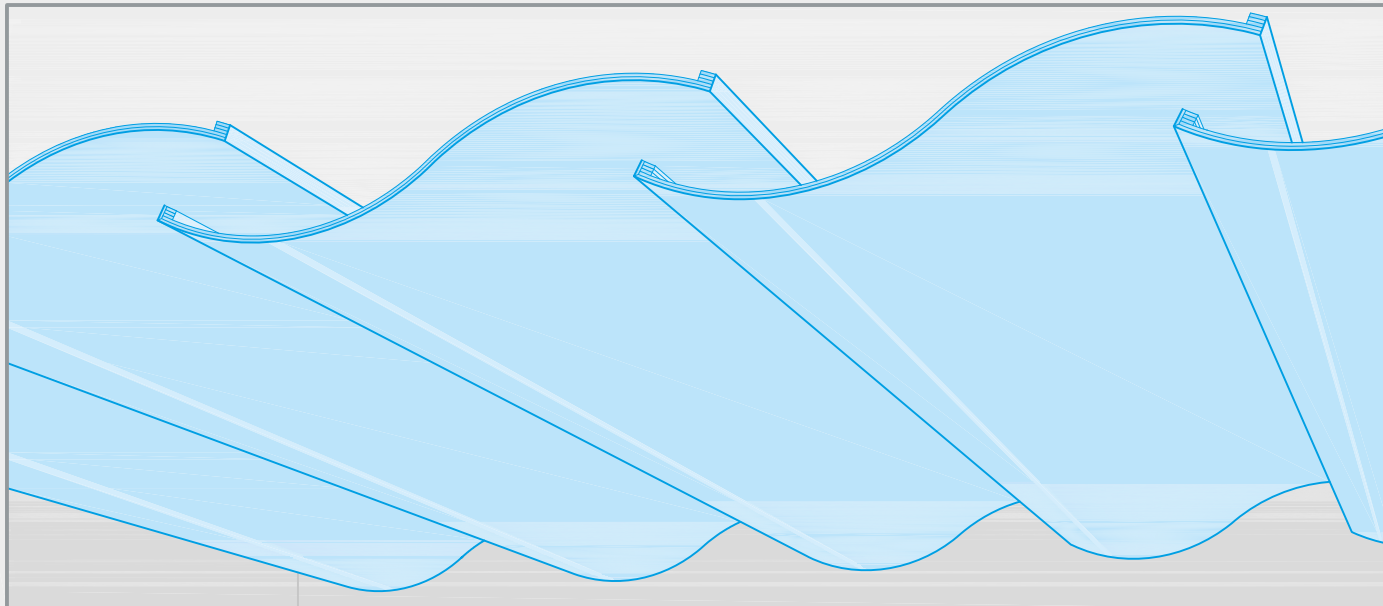
D19 Waved ceiling

Knauf Mitring and Moulding Technology



Examples

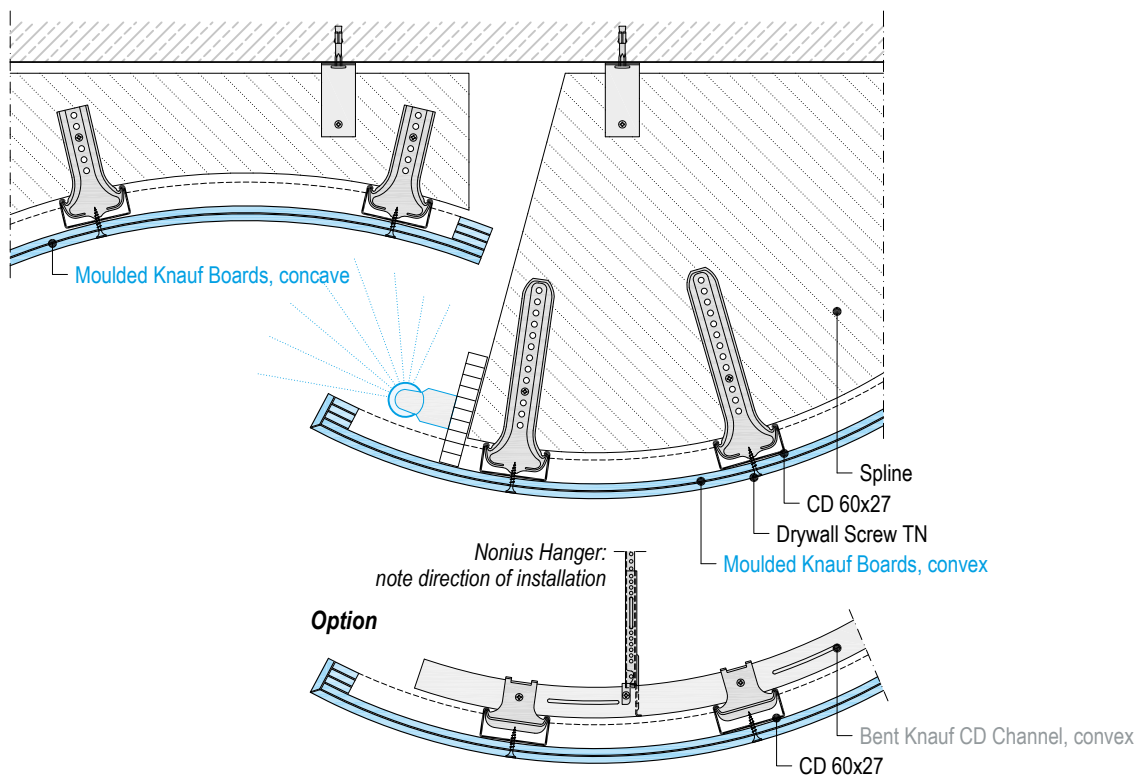
Scheme drawing



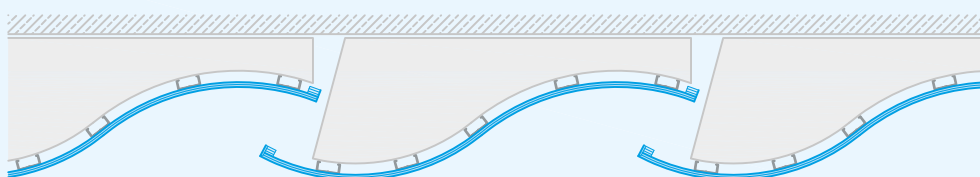
Details, non-scale

Waved Ceiling

D192-S10D



D192-S10



- Moulded Knauf Boards, convex with upstand + board strips
- +
- Moulded Knauf Boards, concave with board strips
- +
- Bent Knauf CD Channels, convex + concave
- or
- Spline construction

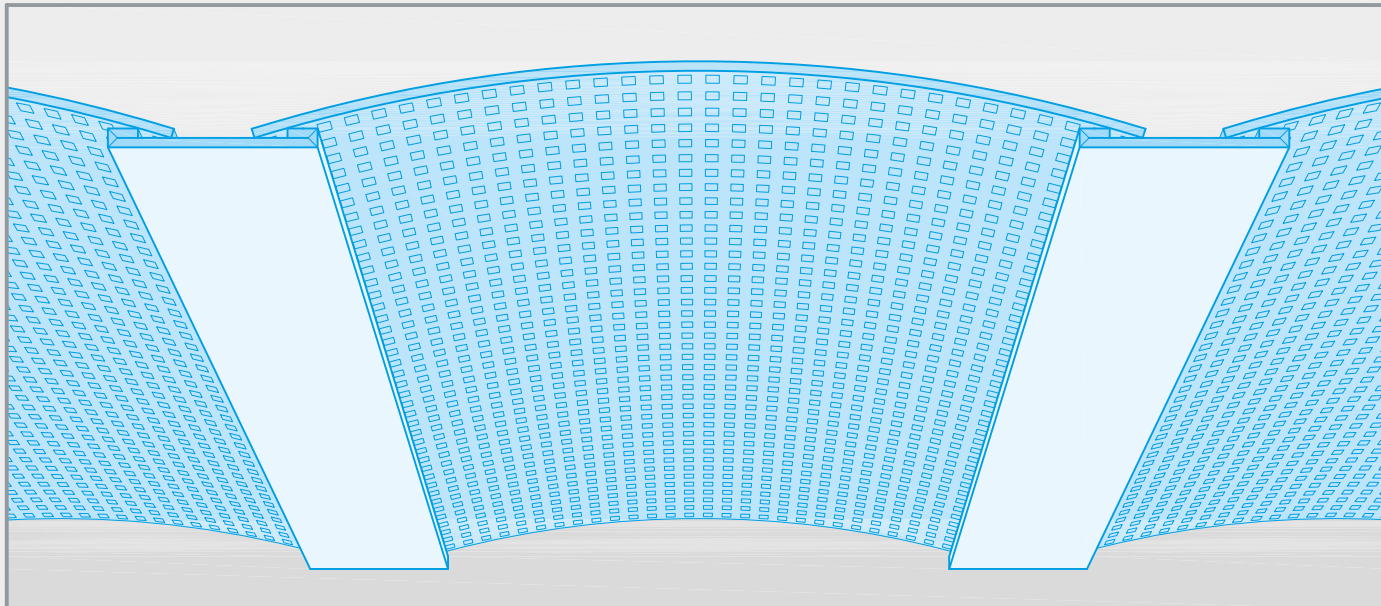
D19 Vaulted Ceiling

Knauf Mitring and Moulding Technology



Examples

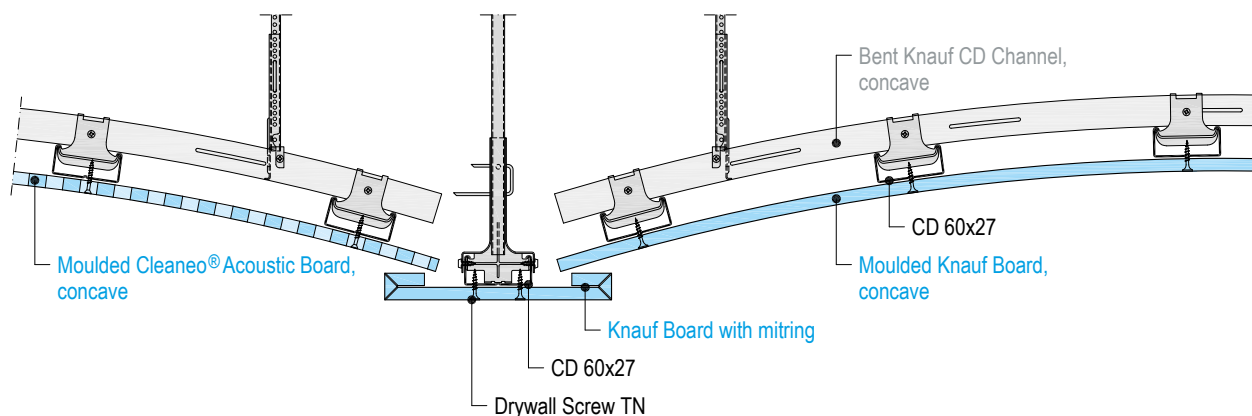
Scheme drawing



Detail, non-scale

D192-S11 Concave vaulted ceiling

Nonius Hanger:
note direction of installation

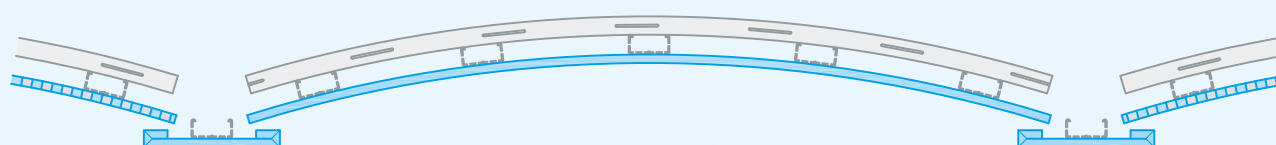


■ Cleaneo® Acoustic Boards:

For perforation patterns, bending process, bending radii and axial spacings of furring channels, see Knauf Technical Data Sheet K761 Cleaneo® Acoustic

■ Max. cantilever length acc. to page 26

D192-S11



- Moulded Knauf Boards, concave
- + Knauf Boards with 90° mitring
- + Bent Knauf CD Channels, concave

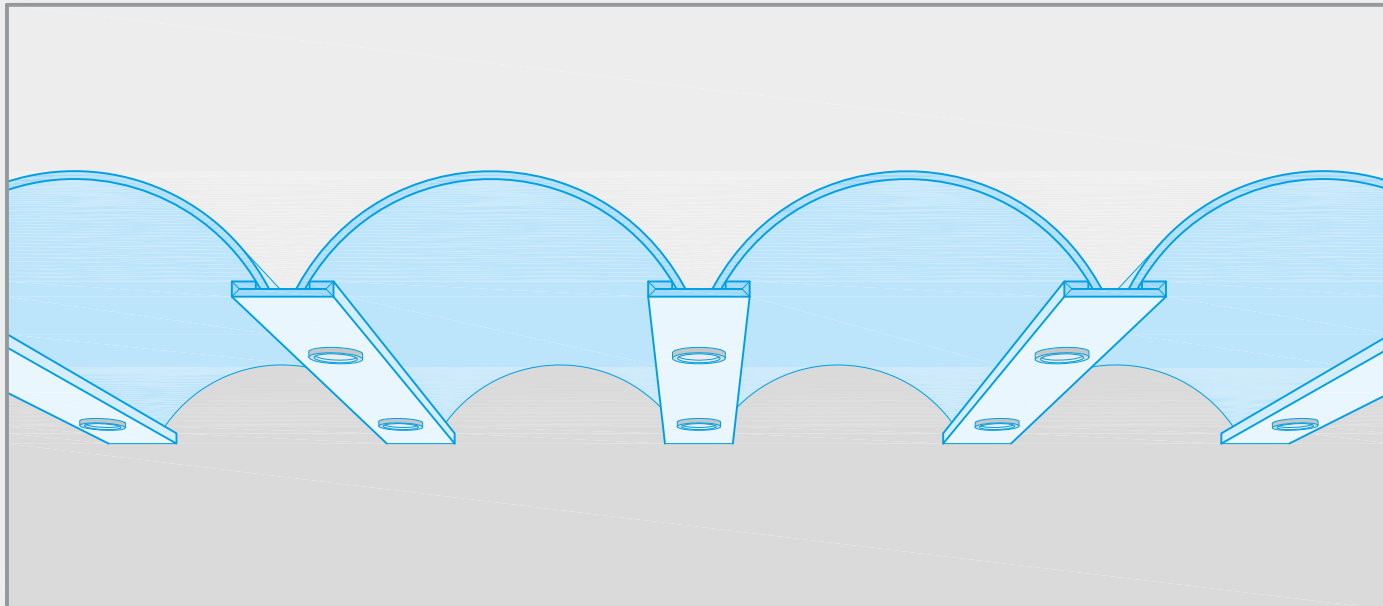
D19 Barrel vault ceiling

Knauf Mitring and Moulding Technology



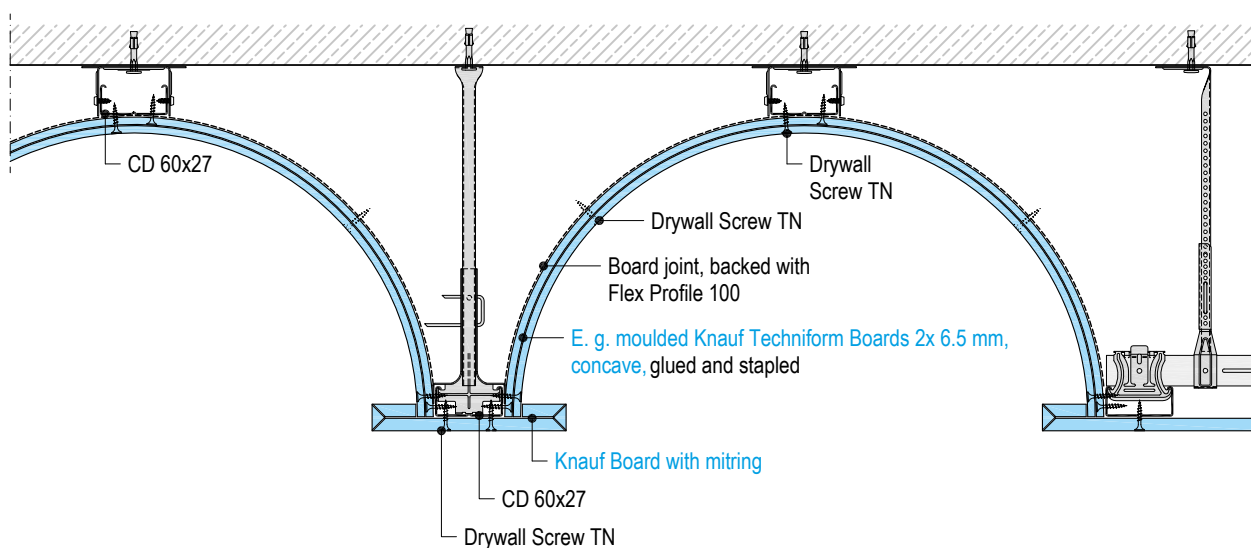
Examples

Scheme drawing

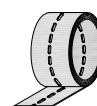


Detail, non-scale

D192-S1 Concave barrel vault ceilings with Techniform Boards

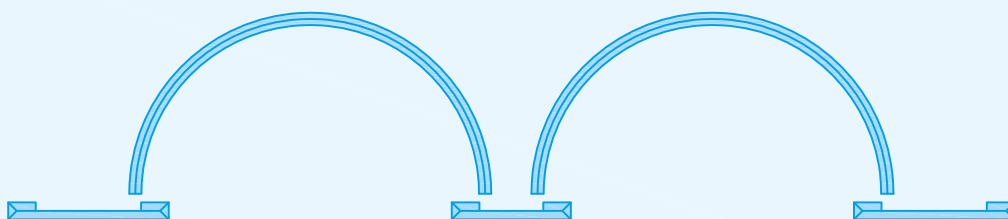


Flex Profile



■ Max. cantilever length acc. to page 26

D192-S1



- E. g. moulded Knauf Techniform Boards 2x 6.5 mm, concave
- or
- Knauf Half Shells 180°, concave
- +
- Knauf Boards with 90° mitring

D19 Barrel vault ceiling

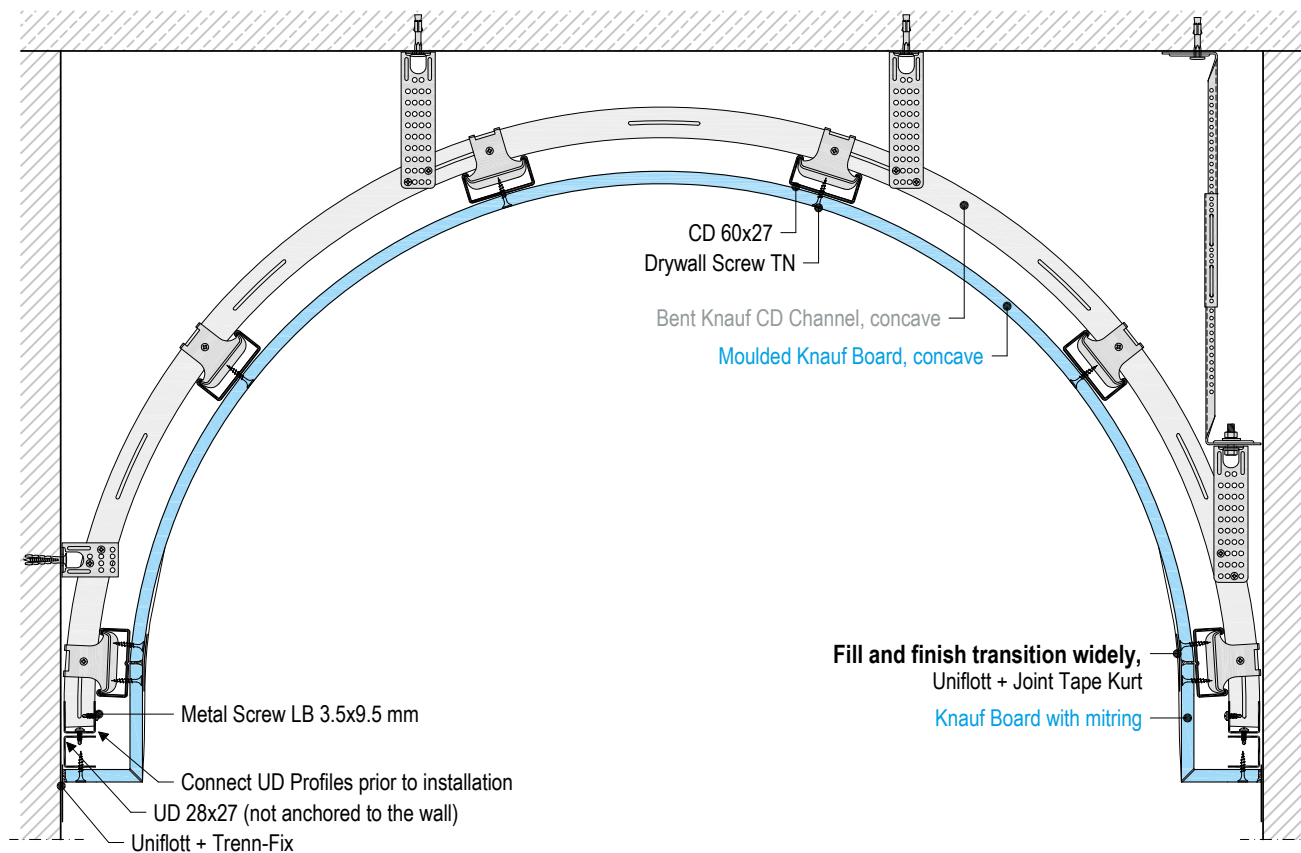
Knauf Mitring and Moulding Technology



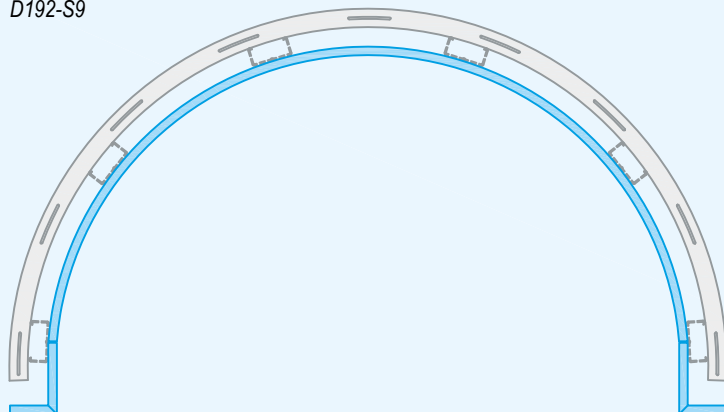
Examples

Detail, non-scale

D192-S9 Concave barrel vault ceiling



D192-S9

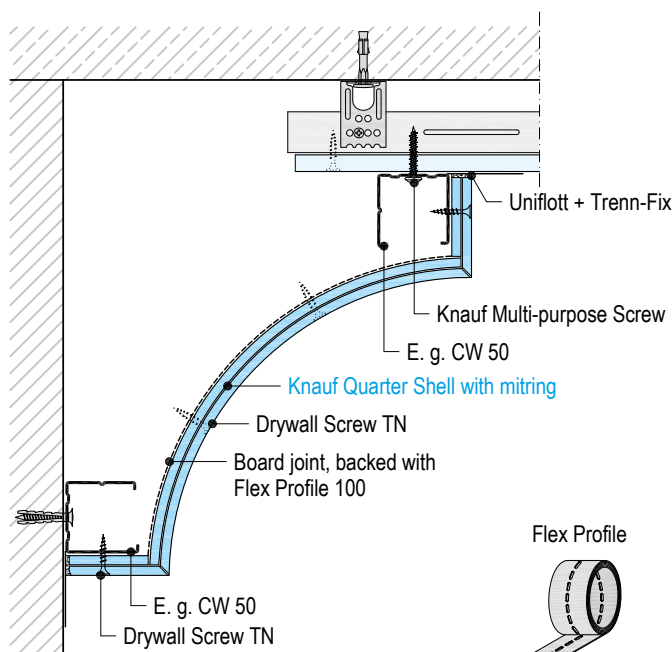


- Moulded Knauf Boards, concave
- + Knauf Boards with 90° mitring
- + Bent Knauf CD Channels, concave

Examples

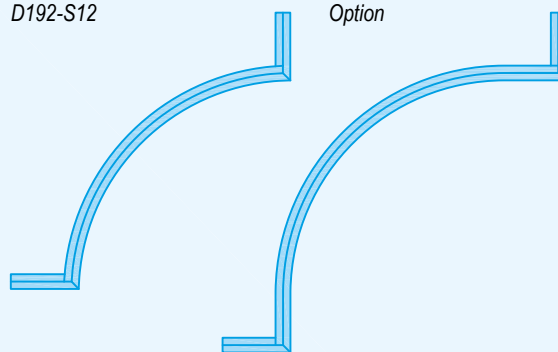
Details, scale 1:5

D192-S12 Cornice at connection to wall



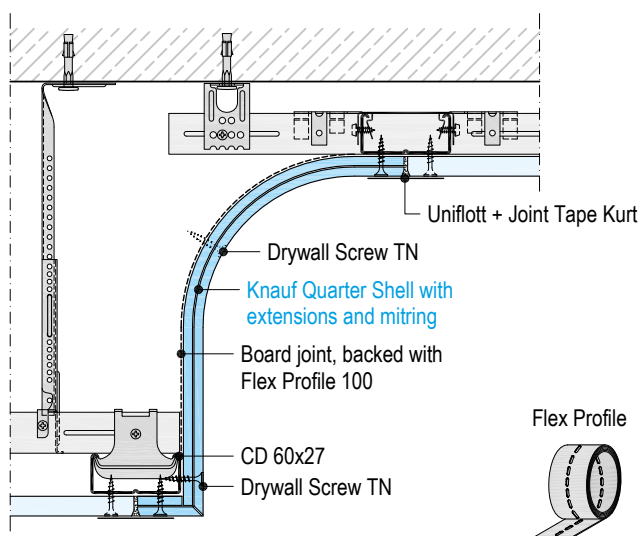
D192-S12

Option



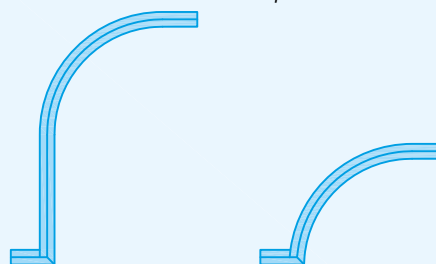
- **Knauf Quarter Shell 90°, concave**
 - with mitring
 - or
 - with straight extensions and mitring

D192-S13 Cornice at split level ceiling



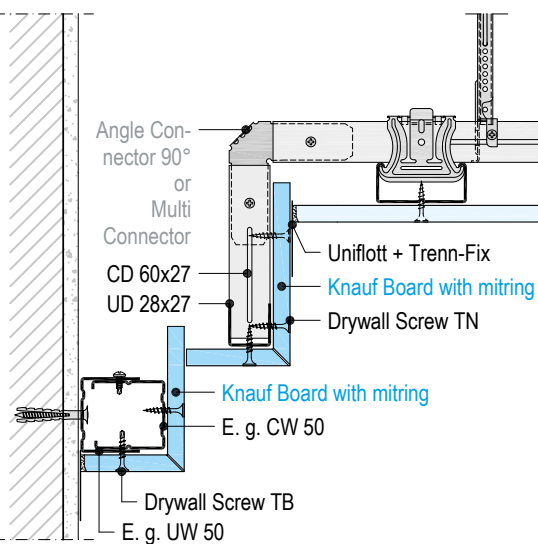
D192-S13

Option



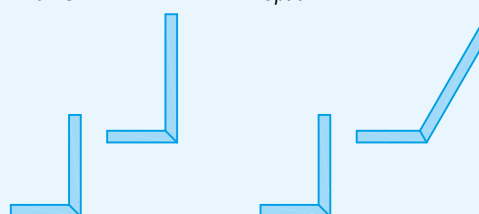
- **Knauf Quarter Shell 90°, concave**
 - with straight extensions and mitring
 - or
 - with straight extension and mitring

D191-S1 Cornice at connection to wall



D191-S1

Option



- **Knauf Boards with mitring**
 - 90°
 - or
 - 60° and 90°

D19 Split level ceilings

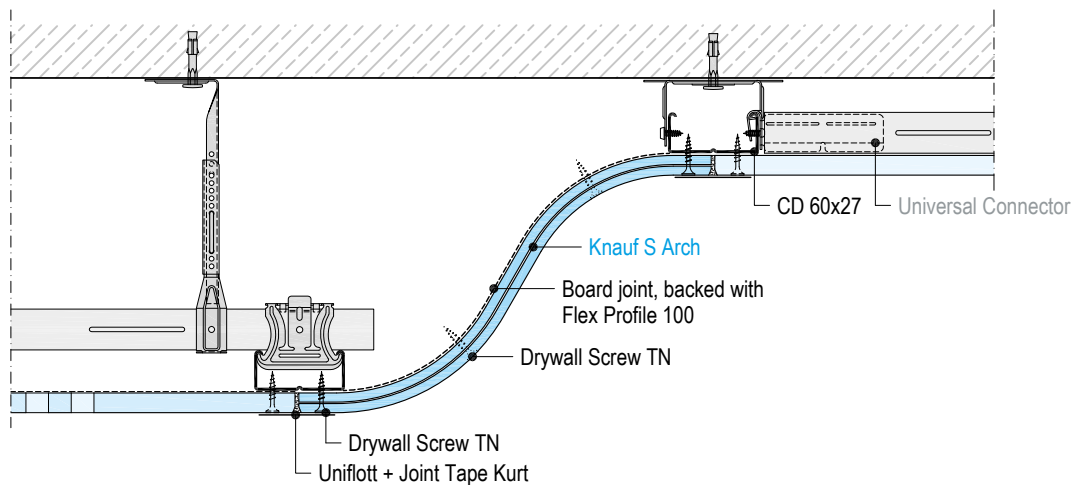
Knauf Moulding Technology



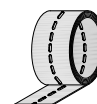
Examples

Details, scale 1:5

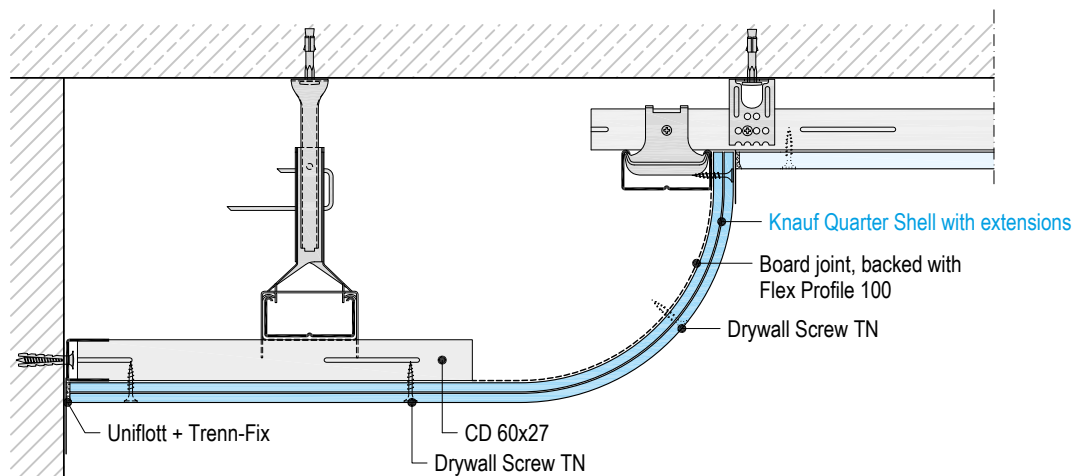
D192-S4 Split level ceiling with S arch



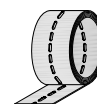
Flex Profile



D192-S2 Split level ceiling with convex 90° arch

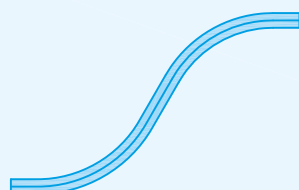


Flex Profile

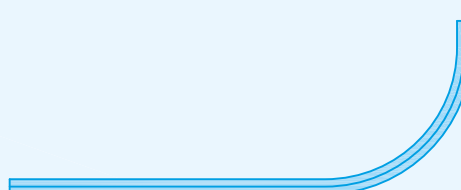


D192-S4

D192-S2



■ Knauf S Arch



■ Knauf 90° Quarter Shell, convex with straight extensions

D19 Split level ceilings

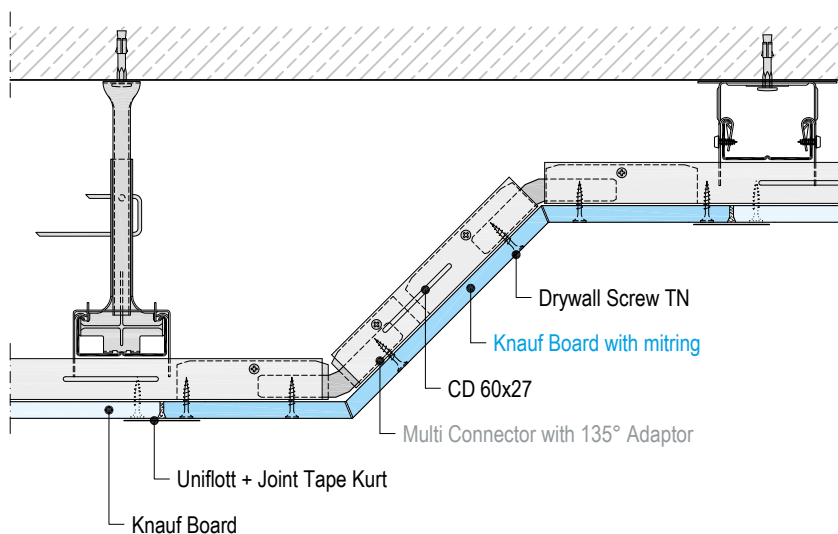
Knauf Mitring Technology



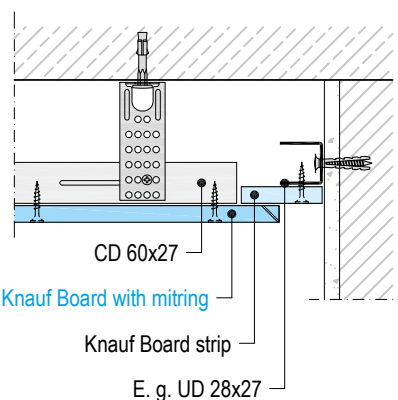
Examples

Details, scale 1:5

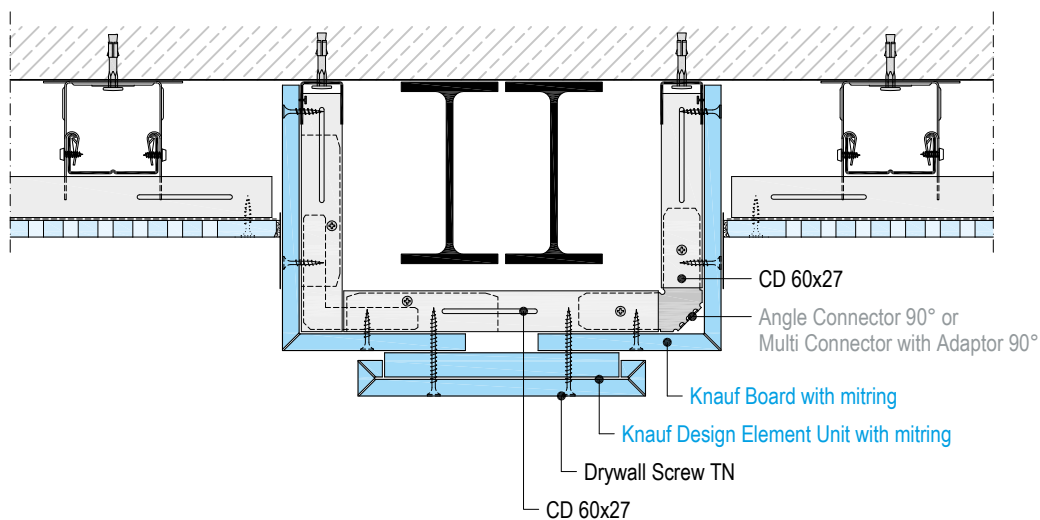
D191-S21 Split level ceiling 45°



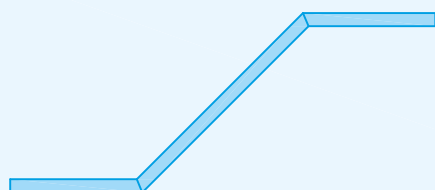
D191-S32 Shadow gap



D191-S33 Girder encasement as split level ceiling

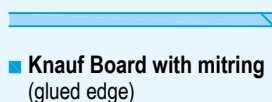


D191-S21



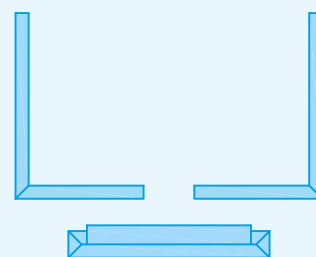
■ Knauf Board with mitring 45°

D191-S32



■ Knauf Board with mitring (glued edge)

D191-S33



■ Knauf Boards with 90° mitring
+
■ Knauf Design Element Unit (90° mitring)

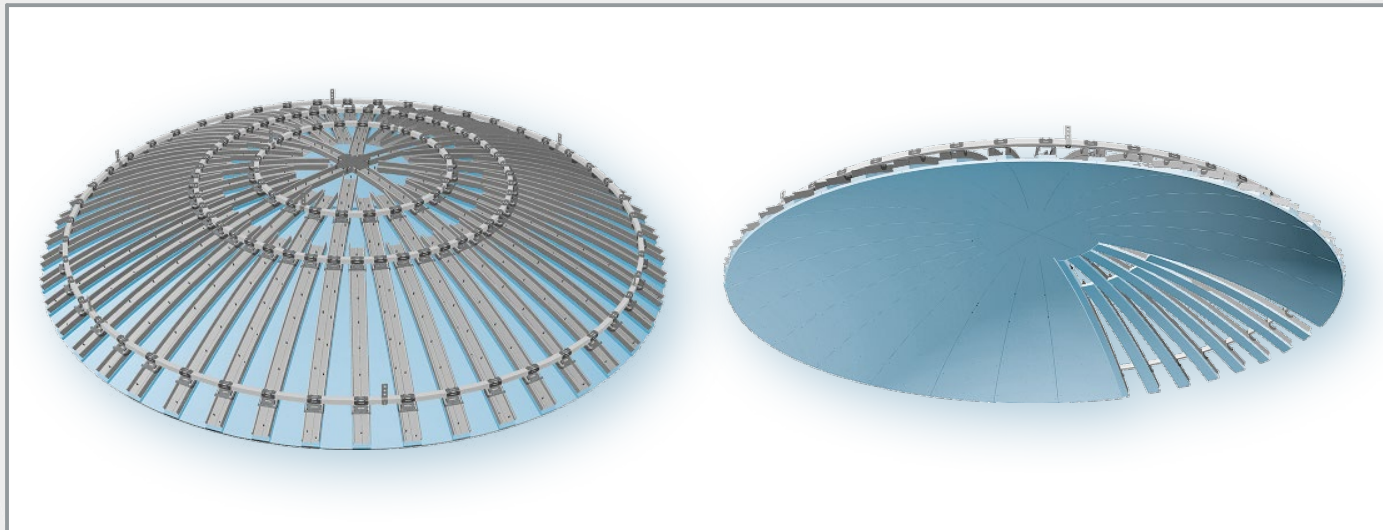
D193 Knauf Domes

Knauf Flat Domes

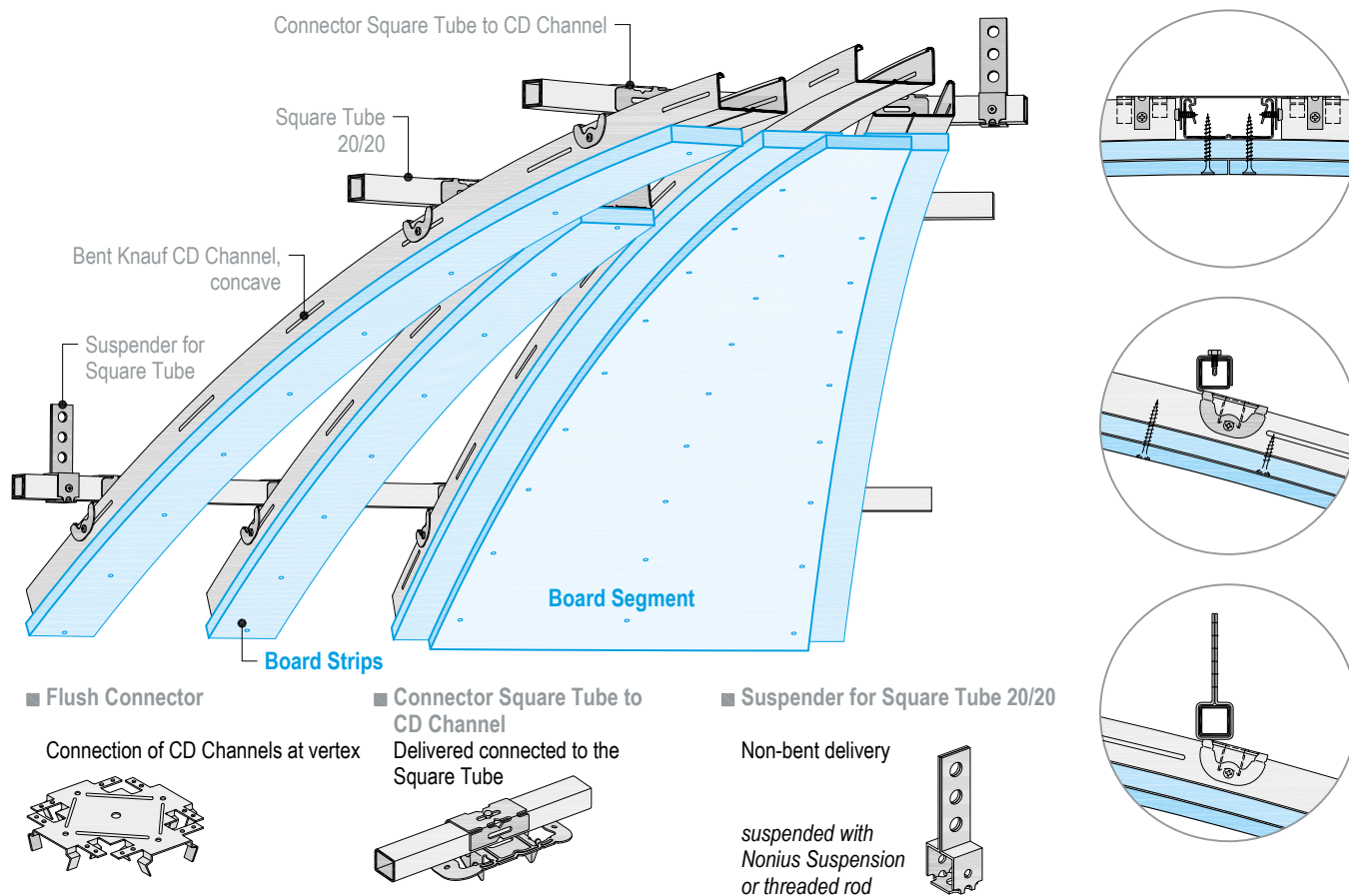


Examples

Scheme drawings



D193-P1 Section of flat dome



Scope of delivery of Flat Domes:

- **Complete substructure**
(except Nonius Suspension / threaded rods with required fasteners)
- + ■ **Complete cladding**
Knauf Board Strips 12.5 mm + Board Segments e. g. 9.5 mm
- + ■ **Installation plan**

■ **Special Domes** see page 25

Knauf Standard Flat Domes:

	Munich	Berlin
Rise:	358.5 mm	235 mm
Diameter:	2600 mm	2132 mm

D193 Knauf Domes

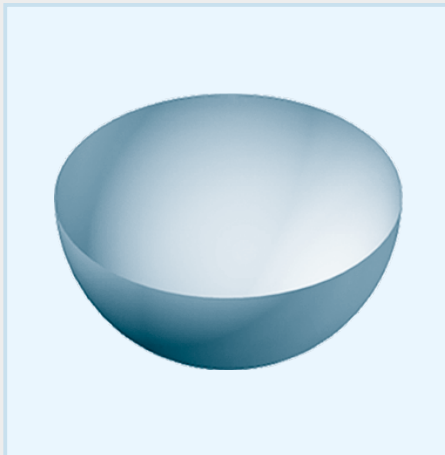
Knauf Special Domes and vaults



Concave dome



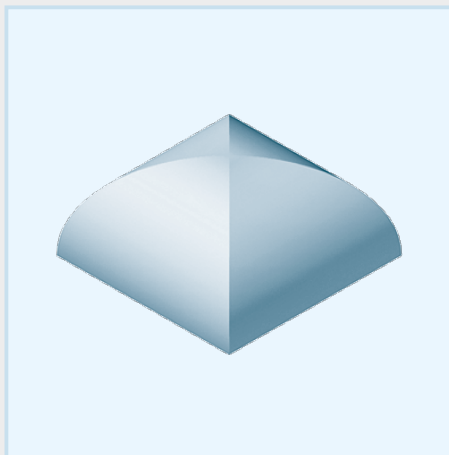
Convex dome



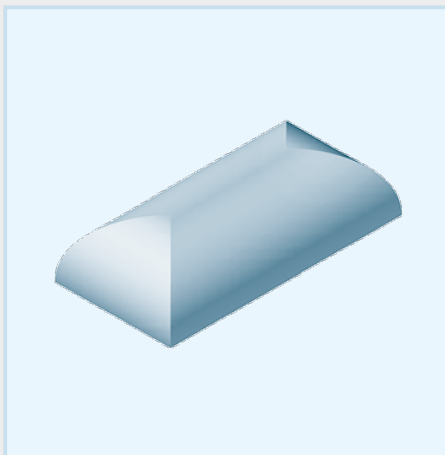
Umbrella dome



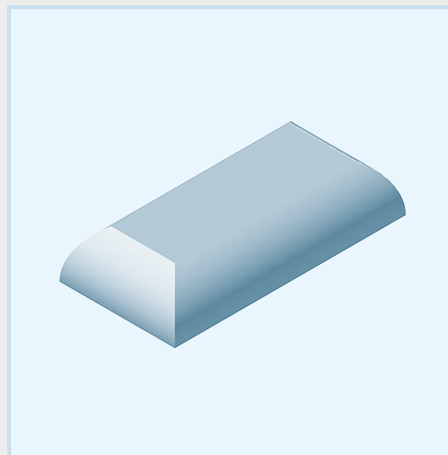
Cloister vault



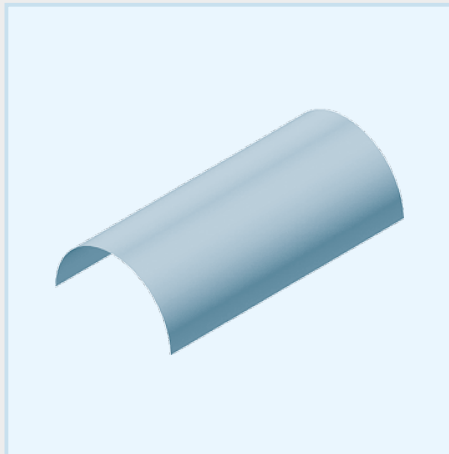
Tray vault



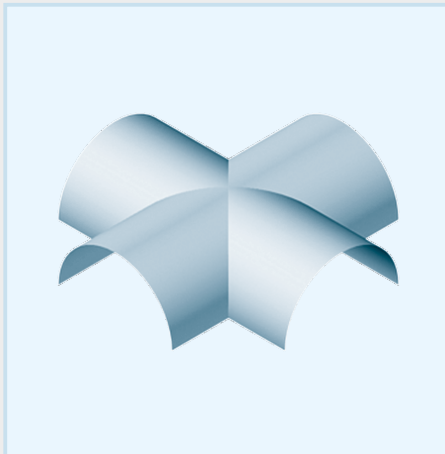
Mirror vault



Barrel vault



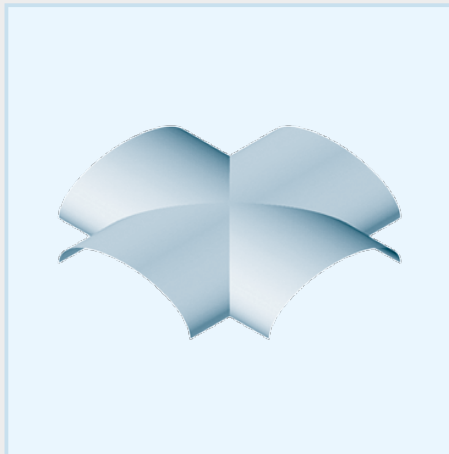
Cross vault



Ogive cross vault



Three-centre cross vault



■ The shown shapes are examples. More options on request.

D19 Cantilevers

Knauf Mitring and Moulding Technology



Examples

(Refer to notes on page 27)

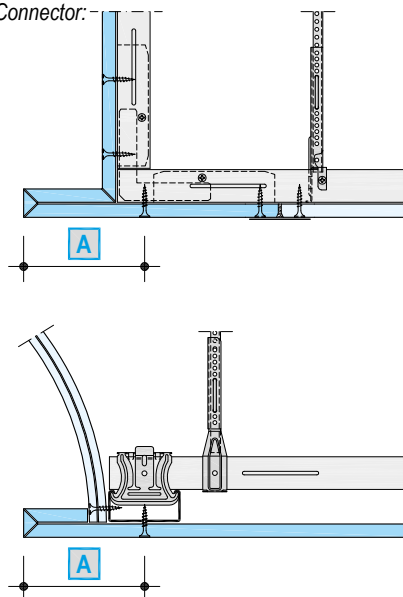
Scheme drawings, dimensions in mm

Gypsum board only

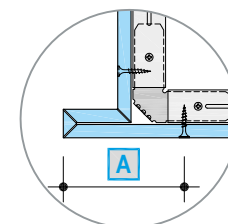
Max. cantilever length **A** ≤ 100 mm

- Board thickness: ≥ 12.5 mm
- Upstands at the cantilever end are not permissible
- No additional loads are permissible

Multi Connector:



Angle Connector 90°:



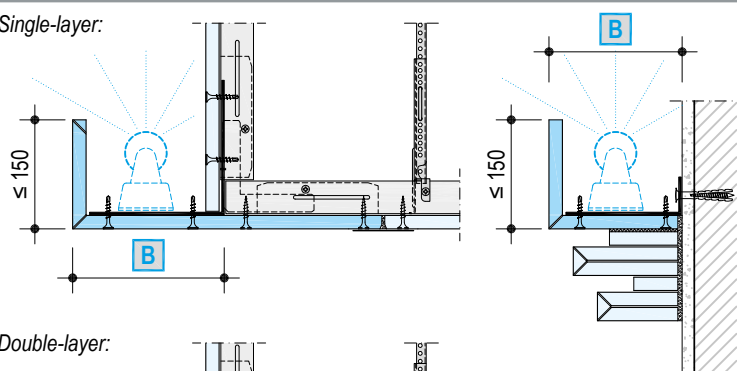
With sheet metal angle

Max. cantilever length **B**

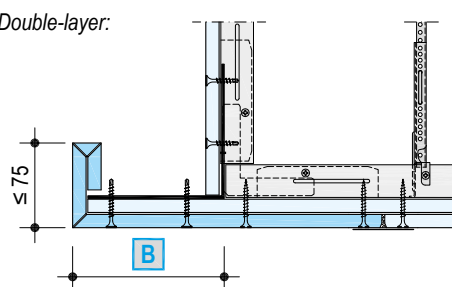
Load class of ceiling kN/m ²	Linear load in the cantilever centre (e. g. built-in lighting)		
	none	≤ 2 kg/m	≤ 5 kg/m
≤ 0.15	≤ 150 mm	≤ 150 mm	≤ 100 mm
≤ 0.30	≤ 150 mm	≤ 100 mm	-
≤ 0.50	≤ 100 mm	-	-

- Metal gauge: ≥ 2 mm
- Board thickness of upstand: ≤ 12.5 mm

Single-layer:



Double-layer:



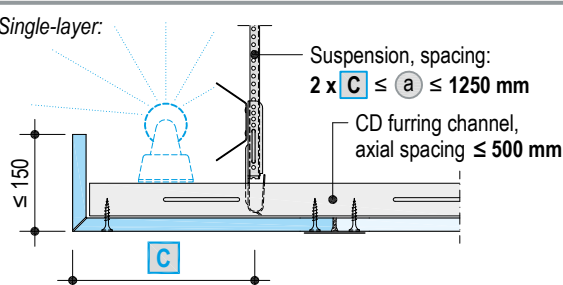
With CD Channel 60x27x0.6 as furring channel

Max. cantilever length **C**

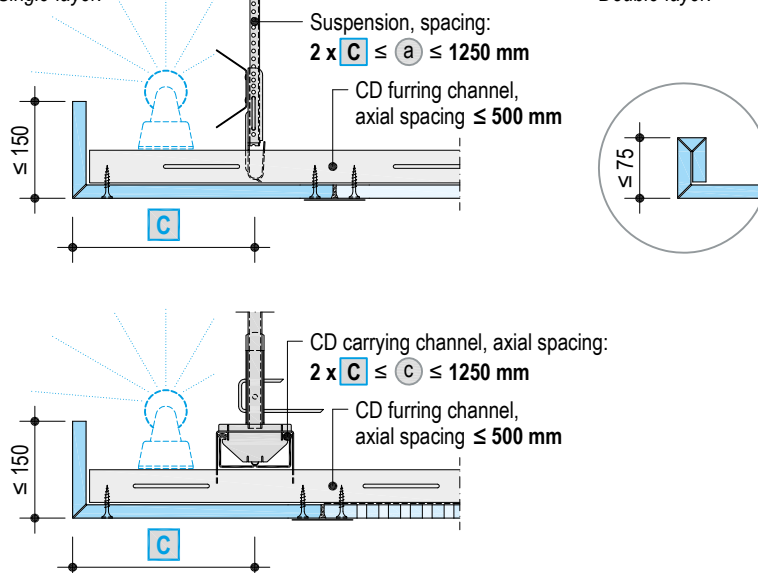
Load class of ceiling kN/m ²	Linear load in the cantilever centre (e. g. built-in lighting)		
	none	≤ 2 kg/m	≤ 5 kg/m
≤ 0.15	≤ 250 mm	≤ 200 mm	≤ 150 mm
≤ 0.30	≤ 200 mm	≤ 150 mm	≤ 100 mm
≤ 0.50	≤ 150 mm	≤ 100 mm	≤ 100 mm

- Specifications are only valid for cantilever CD furring Channels
- Board thickness of upstand: ≤ 12.5 mm
- No channel extension (joint) e. g. with Multi Connector is permissible within the span between the two suspenders (in case of single level substructure) or connectors (in case of double level substructure) next to the cantilever

Single-layer:



Double-layer:



D19 Cantilevers

Knauf Mitring and Moulding Technology



Examples

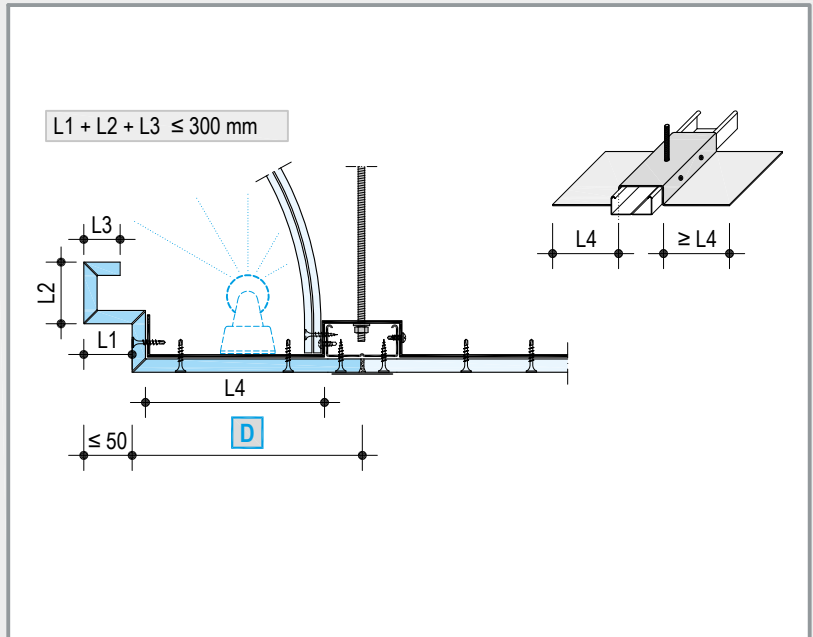
Scheme drawings, dimensions in mm

With sheet metal cantilever

Max. cantilever length D

Load class of ceiling kN/m ²	Linear load in the cantilever centre (e. g. built-in lighting)		
	none	≤ 2 kg/m	≤ 5 kg/m
≤ 0.15	≤ 200 mm	≤ 150 mm	≤ 150 mm
≤ 0.30	≤ 150 mm	≤ 150 mm	≤ 100 mm
≤ 0.50	≤ 150 mm	≤ 100 mm	≤ 100 mm

- Metal gauge: ≥ 2 mm
- Board thickness of upstand: ≤ 12.5 mm

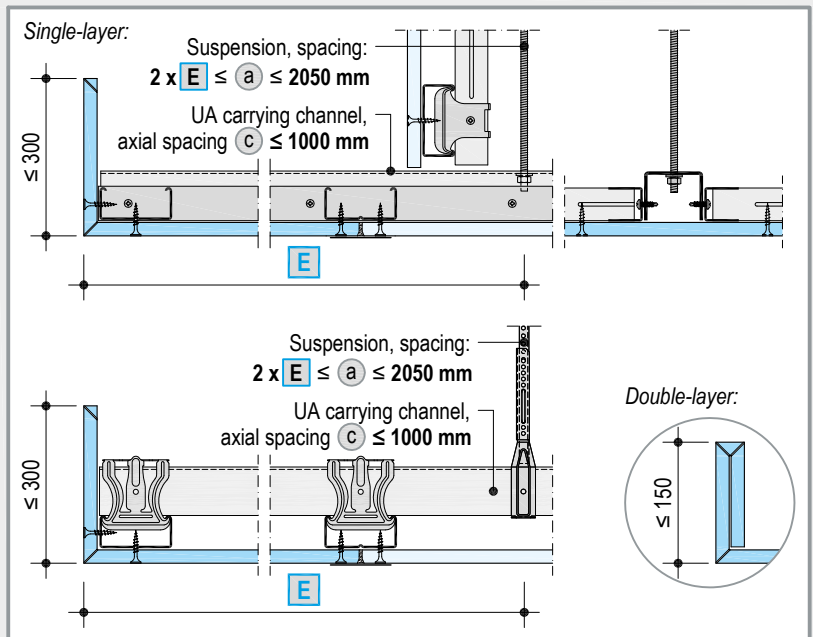


With UA Profile 50x40x2 as carrying channel

Max. cantilever length E

Load class of ceiling kN/m ²	Linear load in the cantilever centre (e. g. built-in lighting)		
	none	≤ 2 kg/m	≤ 5 kg/m
≤ 0.15	≤ 400 mm	≤ 350 mm	≤ 300 mm
≤ 0.30	≤ 350 mm	≤ 300 mm	≤ 300 mm
≤ 0.50	≤ 300 mm	≤ 300 mm	≤ 300 mm

- Specifications are only valid for cantilever UA carrying channels
- Board thickness of upstand: ≤ 12.5 mm
- No profile extension (joint) is permissible within the span between the two suspenders next to the cantilever



Notes

- Axial spacings of the substructure components: **Max. spacings of suspensions a / max. axial spacing of carrying channels c** of the respective ceiling system acc. to Knauf Technical Data Sheet, e. g. D11
- Beyond the specification stated here, the specifications of the respective ceiling system should be followed.
- Higher cantilever lengths, higher loads, other axial spacings require a more detailed design calculation and are available on request.
- Other solutions for individual cases on request.

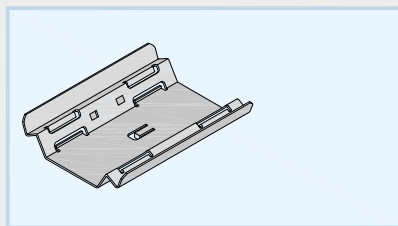
D19 Accessories

Knauf Multi Connector / Knauf Angle Connector 90°

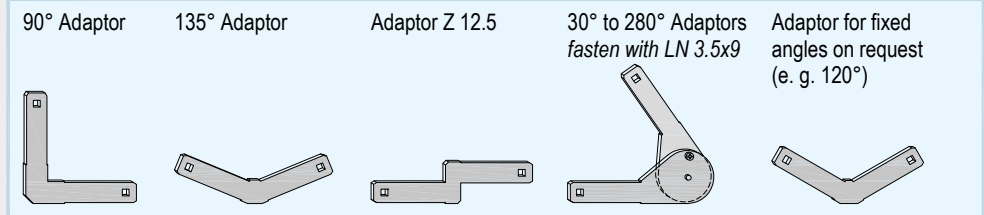


Knauf Multi Connector (with Adaptors) for CD 60x27

Multi Connector



Multi Connector Adaptors



Scheme drawings

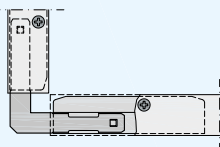
Assembly

■ Angled connections / shadow gaps

- Connect Multi Connector with Adaptors, **Adaptor should lock in place**, push angled connection into CD Channel and fasten with screw
- The Multi Connector can be shortened with a metal shear, if required

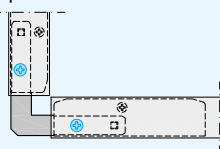


- Fasten Multi Connector with 2 Drywall Screws TN 3.5x25 to each CD Channel



■ Fire resistance from above

Fasten the entire angled connection (Adaptor, CD Channel, Multi Connector) with 2 Drywall Screws TN 3.5x25 per CD Channel



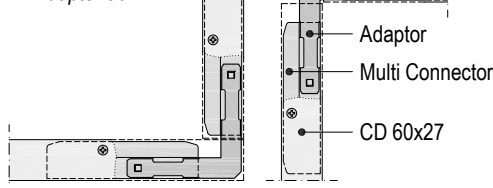
■ Length extension of 2 CD Channels

- Push Multi Connector into CD Channels up to stopper (shortening is not permissible)

Examples of use

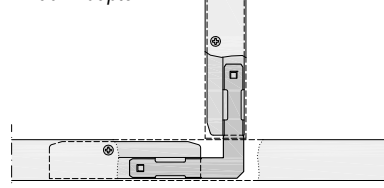
■ 90° angle

2x Multi Connector + 2x Adaptor 90°



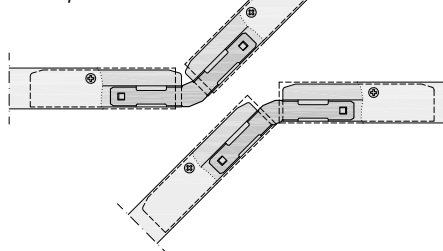
■ 90° Angle with cantilever

2x Multi Connector + 2x 90° Adaptor



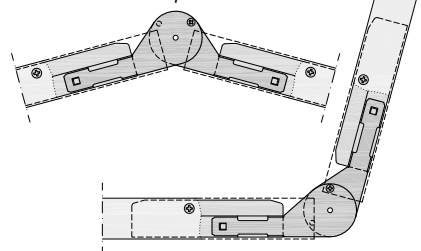
■ 45° or 135° angle

2x Multi Connector + 2x Adaptor 135°



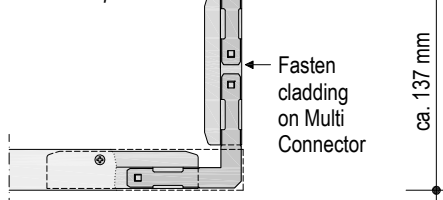
■ Angle adjustable from 30° to 280°

2x Multi Connector + 2x 30° to 280° Adaptor



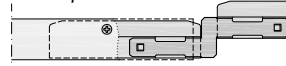
■ 90° split level ceiling

3x Multi Connector + 4x 90° Adaptor



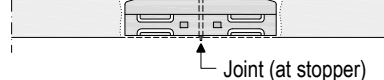
■ Shadow gap with 12.5 mm cladding

2x Multi Connector + 2x Adaptor Z 12.5



■ Length extension of 2 CD Channels

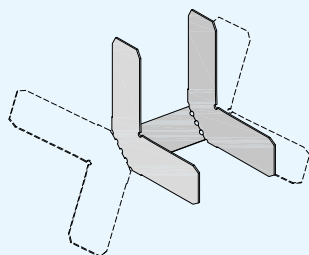
1x Multi Connector



Knauf Angle Connector 90° for CD 60x27

Assembly

- Delivery: non-bent **adjust during installation**

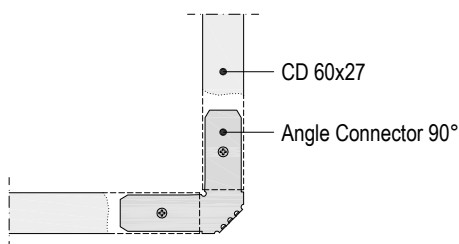


- Fasten Angle Connector with 2 Metal Screws LB 3.5x9,5 mm to each CD Channel
Recommendation:
In order to ease installation, crimp connect CD Channel and Angle Connector using a Stamp Plier prior to screw fastening

Examples of use

■ 90° angle

1x Angle Connector 90°



Knauf recommendation:

for a quick and reliable 90° connection

Scheme drawings

D19 Accessories

Knauf Universal Connector / Knauf Daisy Chain Clip

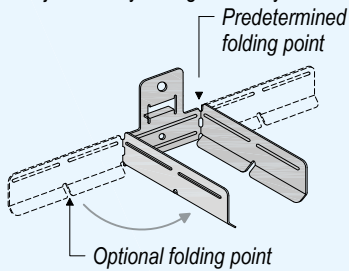


Knauf Universal Connector für CD 60x27

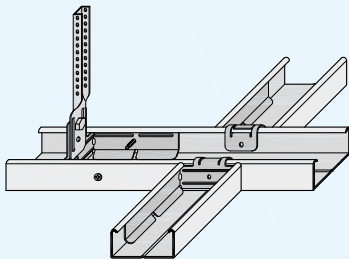
Assembly

- Delivery: non-bent

Adjust roughly depending on use
adjust exactly during assembly



- Used as connector and / or hanger



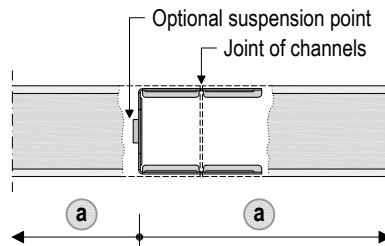
***) In case of required fire resistance for the ceiling:**

Connect Universal Connector and CD Channel 60x27 with Metal Screws LB 3.5x9.5 mm

Examples of use

Scheme drawings

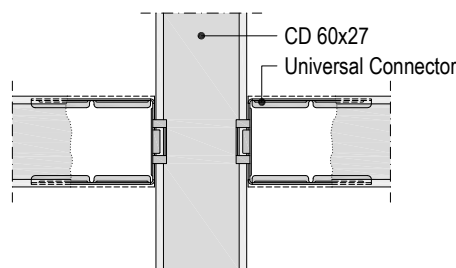
- Straight length extension



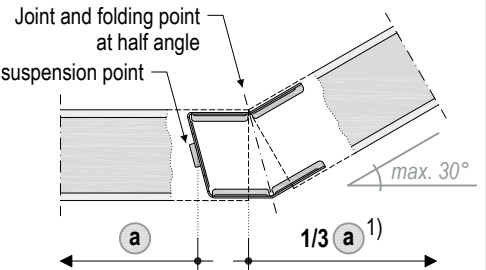
a = Spacing of suspensions acc. to the respective ceiling system (see Knauf Technical Data Sheet, e. g. D11)

- T or double T connection

no ceiling opening is permissible at T connections

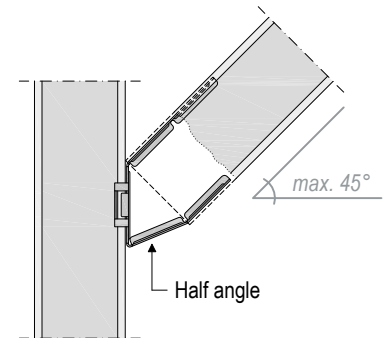


- Longitudinal connection up to 30° *)



1) If used as suspension

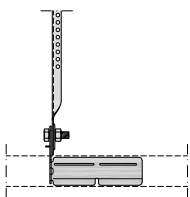
- T connection up to 45° *)



- Suspension options *)

Nonius Hanger Top

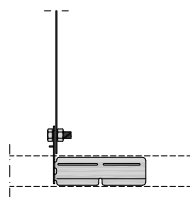
0.4 kN (40 kg)



Load capacity class acc. to DIN 18168-2

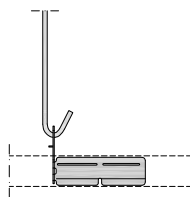
Slotted strip steel

0.4 kN (40 kg)



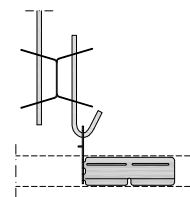
Wire (directly)

0.25 kN (25 kg)



Wire with Cleat

0.15 kN (15 kg)



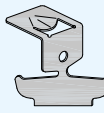
Knauf Daisy Chain Clip for CD 60x27

Assembly

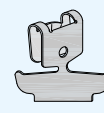
- CD Channel connection



- Delivery: non-twisted



- Prior to installation:
Adjust angle roughly
Adjust exactly to carrying and furring channel during installation



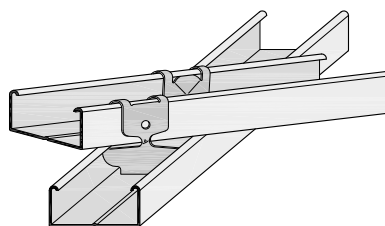
- Bend around carrying channel during installation
Connection with Metal Screw LN 3.5x9 mm with carrying channel is optional

Examples of use

Scheme drawings

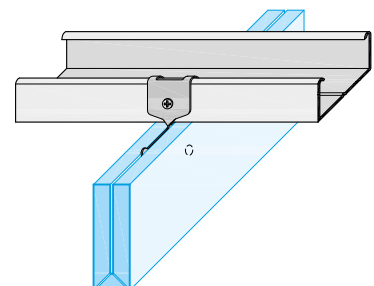
- Channel connection (CD Channels 60x27)

Daisy Chain Clip is not approved as channel connector in case of requirements for fire resistance



- Vertical fins

Pre-assembled in factory with Daisy Chain Clip and primed white
Twist Daisy Chain Clip and screw connect with CD Channel if required



D19 Knauf Ceiling Design

Tender specifications - Templates and selected examples



Item	Description	No. of units	Unit price	Total price
Text templates for the individual configuration of Knauf Ceiling Design solutions made of Knauf Design Elements				
	Ceiling design construction/ *			
.....	Ceiling design construction/ *, made of			
	■ L angles made of Knauf Boards with 1 mitring, side dimensions a = mm, b = mm, angle (a,b) = °,	*		
	■ U sections made of Knauf Boards with 2 bevelled* mitring, side dimensions a = mm, b = mm, c = mm, angle (a,b) = °, angle (b,c) = °,	*		
	■ Z angles made of Knauf Boards with 1 + 1 mitring, side dimensions a = mm, b = mm, c = mm, angle (a,b) = °, angle (b,c) = °,	*		
	■ Design elements shape 6/ 7/ 15/ * acc. to Knauf Technical Data Sheet D19/ acc. to drawing no., made of Knauf Boards with mitring,	*		
	■ Board strips, width b = mm, height of element: mm,*	*		
	■ Cut element with upstand with mitring, convex/ concave *, bent with a radius of mm, with straight/ parallel * front edge, side dimensions a = mm, b = mm, angle (a,b) = °,	*		
	■ Arch elements made of factory bent Knauf Boards/ on site bent Knauf Boards *, face side inside/ outside*, radius r = mm, angle °,	*		
	■ S arch elements acc. to drawing no.made of factory bent Knauf Boards,	*		
	board thickness mm, board type acc. to DIN 18180 GKB/.....*, glued, incl. additional substructure, installation acc. to drawing no.			
	Joining in accordance with Code of Practice no. 2 (BVG, December 2007) quality standard Q2 standard jointing.			
	Product/ System: Knauf Mitring and Moulding Technology	Unit €
Selected examples				
.....	Baffles			
	Baffles, made of			
	■ U sections made of Knauf Boards with 2 bevelled* mitring, side dimensions a = mm, b = mm, c = mm, angle (a,b) = °, angle (b,c) = °, board thickness mm, board type acc. to DIN 18180 GKB/*, glued, incl. additional substructure, installation acc. to drawing no. D191-S6/ *			
	Joining in accordance with Code of Practice no. 2 (BVG, December 2007) quality standard Q2 standard jointing.			
	Product/ System: Knauf Mitring Technology D191	m €
.....	Recessed lighting			
	Recessed lighting, with straight/ curved * layout, made of			
	■ Design elements acc. to drawing no. made of Knauf Boards with mitring, board thickness mm, board type acc. to DIN 18180/*, glued,			
	■ Arch elements with straight extensions made of factory bent Knauf Boards, face side inside, radius r = mm, angle 90° (quarter shell), board thickness mm, board type acc. to DIN 18180/*,			
	incl. additional substructure, installation acc. to drawing no. D192-S6/ *			
	Joining in accordance with Code of Practice no. 2 (BVG, December 2007) quality standard Q2 standard jointing.			
	Product/ System: Knauf Mitring and Moulding Technology	m €
				Sub-total
* Cancel not applicable items			 €

D19 Knauf Ceiling Design

Tender specifications - Selected examples



Item	Description	No. of units	Unit price	Total price	
Recessed lighting					
.....	Recessed lighting, with straight/ curved * layout, made of <ul style="list-style-type: none">■ Design element units acc. to drawing no., made of Knauf Boards with mitring and board strips, board thickness mm, board type acc. to DIN 18180 GKB/ GKB/.....*, glued,■ L angles made of Knauf Boards with mitring, side dimensions a = mm, b = mm, angle (a,b) =°, board thickness mm, board type acc. to DIN 18180 GKB/*, incl. additional substructure, installation acc. to drawing no. D191-S14/*. Jointing in accordance with Code of Practice no. 2 (BVG, December 2007) quality standard Q2 standard jointing. Product/ System: Knauf Mitring Technology D191	m € €
Fin ceilings					
.....	Fin ceiling, with straight/ curved * layout, made of <ul style="list-style-type: none">■ Design element units with horizontal fins acc. to drawing no. made of Knauf Boards with mitring, board thickness mm, board type acc. to DIN 18180 GKB/*, glued,■ Design elements shape 6 acc. to Knauf Technical Data Sheet D19 made of Knauf Boards with mitring, side dimensions a = mm, b = mm, c = mm, glued, board thickness mm, board type acc. to DIN 18180 GKB/*, incl. additional substructure, installation acc. to drawing no. D191-S4/*. Jointing in accordance with Code of Practice no. 2 (BVG, December 2007) quality standard Q2 standard jointing. Product/ System: Knauf Mitring Technology D191	m € €
Barrel vault ceiling					
.....	Barrel vault ceiling, made of <ul style="list-style-type: none">■ Arch elements made of factory bent Knauf Boards/ on site bent Knauf Boards *, face side inside/ outside*, radius r = mm, angle 180° (half shell),■ Design elements shape 12 acc. to Knauf Technical Data Sheet D19 made of Knauf Boards with mitring, side dimensions a = mm, b = mm, c = mm, board thickness mm, board type acc. to DIN 18180 GKB/*, glued, incl. additional substructure, installation acc. to drawing no. D192-S1/*. Jointing in accordance with Code of Practice no. 2 (BVG, December 2007) quality standard Q2 standard jointing. Product/ System: Knauf Mitring and Moulding Technology	m € €
Domes					
Dome ceiling					
.....	Dome ceiling made of Knauf board Segments, moulded on site, thickness: 12.5 mm, board strips and 12.5/ 9.5/ 2x 6.5 * mm thick cladding, radius of dome: 2536 mm/ mm *, diameter: 2132 mm (Berlin) / 2600 mm (München)/ mm (special dome) *, rise: 235 mm (Berlin) / 358.5 mm (München)/ mm (special dome) *, incl. substructure, Skim coating of the entire surface of the gypsum board segments in order to create a uniform and even surface. Installation acc. to installation plan no.*. Product/ System: Knauf Dome Berlin/ Munich/ special dome * D193	pcs € €
* Cancel not applicable items				Sub-total €	

Knauf Ceiling Design

The range of Knauf Ceiling Design includes all customized solutions for the individual design of ceilings with Knauf Mitring and Moulding Technology and Domes.

Aesthetic and functional room design elements are generated in combination with Knauf Board Ceilings or Cleaneo® Acoustic Ceilings

The solutions shown in this catalogue are proposals for independent and exceptional ideas.

Make use of our technical know-how. We accompany you right from the design conception up to the implementation.

Our Technical Advisory Service will gladly designate a consultant on site.

Knauf Direct Technical Advisory Service

Phone: +49 9001 31-1000 *

Fax: +49 1805 31-4000 **

A further tool for the planning of ceiling design solutions is the Knauf Formbar in the web:

www.knauf-formbar.de

Construction

Knauf Ceiling Design solutions consist of a substructure made of Knauf Profiles, suspensions, fasteners and connectors, Knauf Boards as design elements with mitring or moulding technology and filling and finishing in the required quality standard. In addition, the application of covering is possible.

Knauf Mitring Technology D191

The Knauf Mitring Technology includes design elements as design element units or gypsum boards with factory mitring. They are delivered glued, partially glued, or non-glued for the installation of Knauf Design Ceiling solutions.

With a V-shaped mitring, paper-lined edges can easily be created in order to achieve perfect surfaces. V-shaped mitring is possible at different angles.

Components such as friezes, fins, baffles, split level ceilings, cornices for recessed lighting, column and beam encasements and column capitals can be built.

New: Bevelled mitring

This new edge type is applied where sharp edges are undesirable.

Knauf Moulding Technology D192

The Knauf Moulding Technology consists of factory bent channels and design elements made of gypsum boards. The curved design elements for constructing Knauf Ceiling Design solutions are either factory-moulded or moulded on site.

Depending on the required radius, the boards are moulded dry or wet.

In this way, S arches, segment arches, outside or inside arches, arches with straight extensions and column encasements are produced.

For waved shells, specially cut board segments are required. These elements are suitably customized in the factory.

Knauf Domes D193

Knauf Domes are delivered as kits for substructure and cladding. The channels are factory-bent, the board strips and board segments are cut-to-size. The production is customized for the individual project according to the planning specs. The moulding of the board segments is done during fastening on site. The final skim coating of the entire surface provides the desired uniform curvature.

Accessories

A great variety of accessories is available for the construction of the substructure of Knauf Ceiling Design solutions.

Virtually every imaginable substructure can be constructed with Knauf Suspensions and Connectors.

Dimensioning of the substructure

The common spacings of the substructure (channels, connectors, suspensions) cannot easily be assumed for the individual Knauf Ceiling Design solutions. The ceiling weight can exceed the standard ceiling weight in single places.

Please contact our Technical Advisory Service for further assistance.

Basically, the following suspensions can be used for Knauf Ceiling Design solutions:

- Universal Bracket
- Ankerhanger
- Nonius Hanger Top with Nonius Hanger Bottom, Nonius Stirrup or Combo Hanger, optionally with Nonius Extension and Connector.

Application, filling and finishing, coats and linings

Fasten Knauf Boards and design elements on metal substructures with Drywall Screws TN (for metal gauge up to 0.7 mm) or TB (metal gauge from 0.7 to 2.25 mm) with a minimum metal penetration of 10 mm.

Your Knauf consultant will be glad to support you with his knowledge and experience for the application.

For information about the application and construction of standard ceiling areas, filling and specifications regarding coats and linings, see Technical Data Sheets D11 Knauf Board Ceilings, D12 Cleano® Acoustic Ceilings or D15 Knauf Wood Joist Ceiling Systems.

Knauf Direct

Technical Advisory Service:

▶ **Phone: +49 9001 31-1000 ***

▶ **Fax: +49 1805 31-4000 ****

▶ www.knauf.de

Knauf Drywall and Floor Systems Am Bahnhof 7, 97346 Iphofen, Germany

* A rate of 0.39 € per minute will be charged for calls from within the German landline network. Callers whose phone numbers are not registered in the address database of Knauf Gips KG, i.e. private builders or non-patrons, will be charged a rate of 1.69 € per minute. Calls from mobile phones will be charged acc. to net provider and call rate.

** 0,14 €/Min.

All technical changes reserved. Only the current printed instructions are valid. Our warranty is expressly limited to our products in flawless condition. All application quantities and delivery amounts are based on empirical data that are not easily transferable to other deviating areas. The stated information represents current state-of-the-art Knauf technology. The entire state of approved engineering rules, appropriate standards, guidelines, and rules of craftsmanship are not included herewith. These and all application instructions have to be adhered to separately by the installer. All rights reserved. All amendments, reprints and photocopies, including those of excerpts, require the express permission of Knauf Gips KG, Am Bahnhof 7, 97346 Iphofen, Germany. **Delivery** via professional building material distributors only, in accordance with our current business, delivery and payment terms.