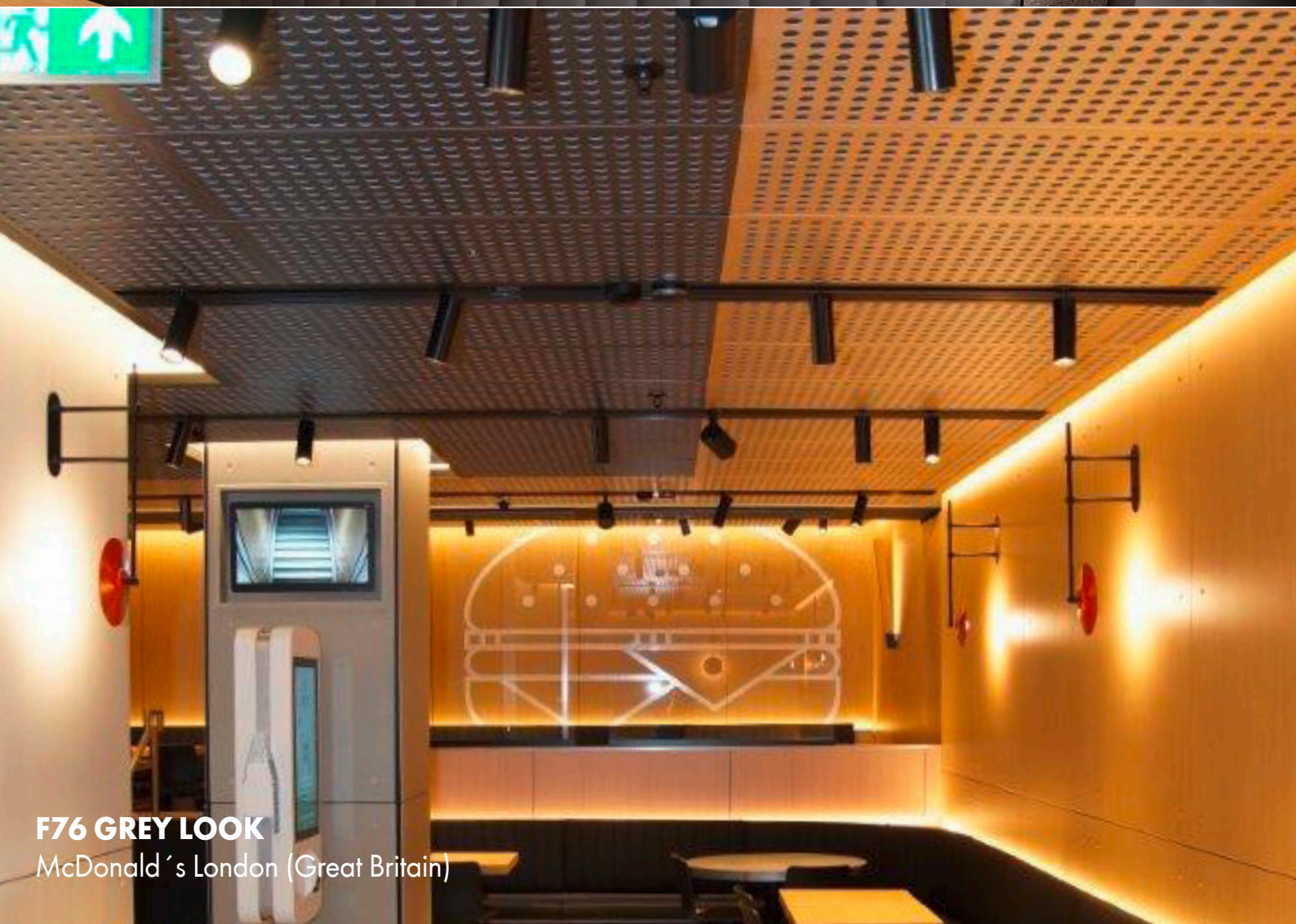
KNAUF DESIGN

McDonald's RAY

ACOUSTIC CEILING SYSTEM

F70 MIRROR LOOK
McDonald´s Illertissen (Germany)

F75 WOOD LOOK
McDonald´s Illertissen (Germany)



F76 GREY LOOK
McDonald´s London (Great Britain)

ACOUSTIC CEILING PANELS

KNAUF DESIGN is well known for its groundbreaking and creative ideas for finishing surfaces from a wide range of materials. We specialize in wall and ceiling claddings for lar-gely design-oriented room concepts and spaces including McDonald's restaurants.

Our products prove themselves wherever uncompromising functionality, perfect acoustics, high-end esthetics, consistent appearance and installation systems are required.

As a long-standing partner for construction industry professionals such as architects, interior designers, contractors, stakeholders and consultants, Knauf Design is a reliable wall and ceiling systems supplier.

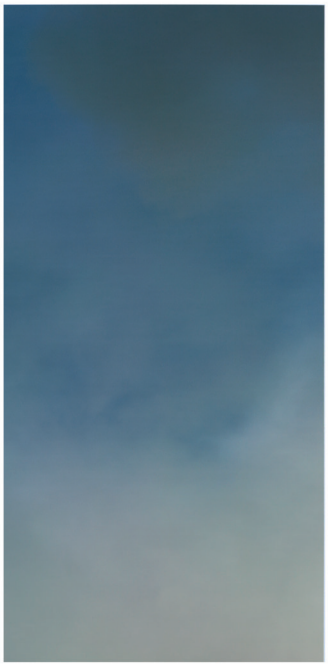
We ensure maximum safety with regard to required quality, approval and feasibility.

IN HARMONY WITH ACOUSTICS -
PERFECT SOUND FOR OUTSTANDING SPACES

CONTENT

CEILING SYSTEM F70 (FR) MIRROR LOOK

SPECIFICATION FOR McDONALD'S RAY CEILING SYSTEM F70 (FR)



General information
The ceiling system is a suspended grid ceiling, formed in grid dimension 1200 x 600 mm.

System components
- Panels complying with the technical specification F70.
- Sub-construction (according to the standard technical specification or as per the project ceiling plan/drawing).

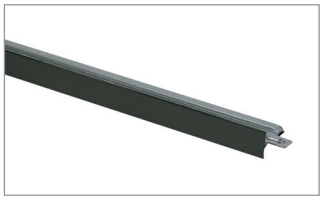
Interface to the ceiling
The project-specific connection to the ceiling and wall must be carried out by the planner/architect.

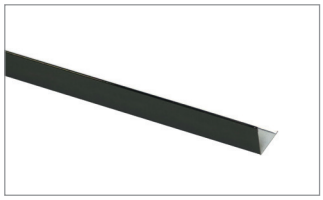
Fire protection
F70 (FR) - Top layer fire class B-s1, d0 flame-retardant according to EN 13501-1, in the United Kingdom - fire class 0.

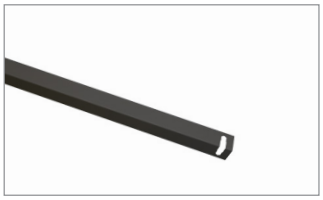
TECHNICAL SPECIFICATION

Article	Components according to the grid dimensions 100,80 m²	Dimensions, mm (L / W / H)
Board		
F70 (FR) Mirror look (Charcoal)	140 pieces	1200 / 595 / 3
Subconstruction		
KDBF T-Main runner 24/38 F F70	50 pieces	3600 / 24 / 38
KDBF Edge angle 24/24 F F70	40 pieces	3000 / 24 / 24
Spacer bar Ventatec for grid 600/625 mm	140 pieces	625 / 21 / 22


F70 (FR) Mirror look


KDBF T-Main runner 24/38 F F70

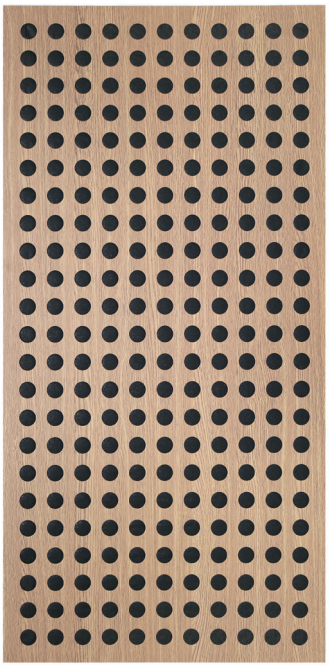

KDBF Edge angle 24/24 F F70


Spacer bar Ventatec

Note
Project specific technical adjustments are not applicable.

CEILING SYSTEM F75 (A2) WOOD LOOK

SPECIFICATION FOR McDONALD'S RAY CEILING SYSTEM F75 (A2)



General information
The ceiling system is a suspended grid ceiling, formed in grid dimension 1200 x 600 mm.

System components
- Panels complying with the technical specification F75.
- Sub-construction (according to the standard technical specification or as per the project ceiling plan/drawing).

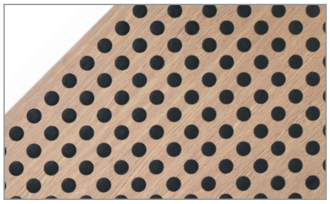
Interface to the ceiling
The project-specific connection to the ceiling and wall must be carried out by the planner/architect.

Reaction to fire
F75 (A2) - Reaction to fire class A2-s1, d0 non-conbustible according to EN 13501-1.

TECHNICAL SPECIFICATION

Article	Components according to grid dimensions 100,80 m²	Dimensions, mm (L / W / H)
Board		
F75 (A2) Wood look	140 pieces	1195 / 595 / 1,5
Subconstruction		
KDBF T-Main runner 24/38 D F75	50 pieces	3600 / 24 / 38
KDBF Edge angle 24/24 D F75	40 pieces	3000 / 24 / 24
KDBF T-Cross profile 24/38 D F75 Q*	140 pieces	600 / 24 / 38

*This profile is printed across the length.


F75 (A2) Wood look


KDBF T-Main runner 24/38 D F75

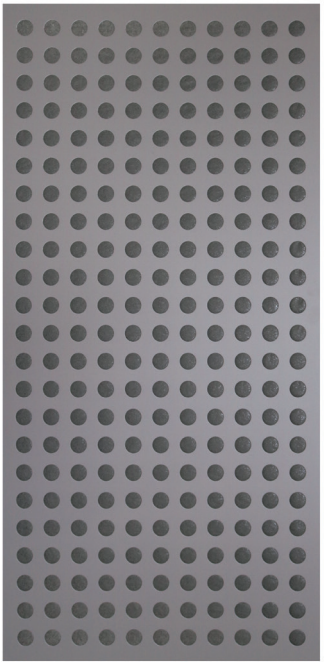

KDBF Edge angle 24/24 D F75


KDBF T-Cross profile 24/38 D F75 Q

Note
Project-specific technical adjustments are not applicable.

CEILING SYSTEM F76 (A2) GREY LOOK

SPECIFICATION FOR McDONALD'S CEILING RAY SYSTEM F76 (A2)



General information
The ceiling system is a suspended grid ceiling, formed in grid dimension 1200 x 600 mm.

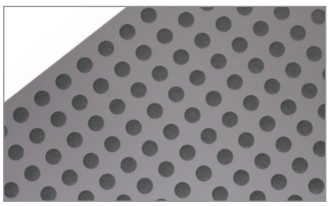
System components
- Panels complying with the technical specification F76.
- Sub-construction (according to the standard technical specification or as per the project ceiling plan/drawing).

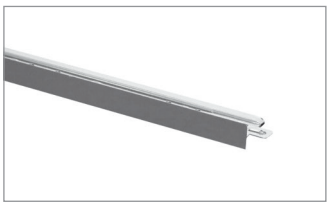
Interface to the ceiling
The project-specific connection to th e ceiling and wall must be carried out by the planner/architect.

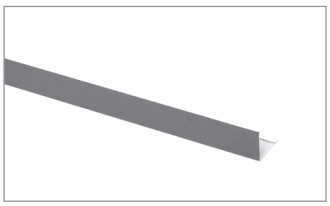
Fire protection
F 76 (A2) - Reaction to fire class A2-s1, d0 non-combustible according to EN 13501-1.

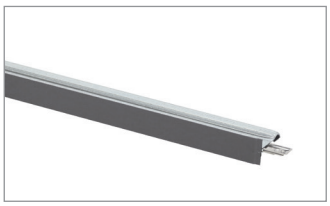
TECHNICAL SPECIFICATION

Article	Components according to the grid dimensions 100,80 m²	Dimensions, mm (L / W / H)
Board		
F76 (A2) Grey look	140 pieces	1195 / 595 / 1,5
Subconstruction		
KDBF T-Main runner 24/38 D F76	50 pieces	3600 / 24 / 38
KDBF Edge angle 24/24 D F76	40 pieces	3000 / 24 / 24
KDBF T-Cross profile 24/38 D F76	138 pieces	600 / 24 / 38


F76 (A2) Grey look


KDBF T-Main runner 24/38 D F76

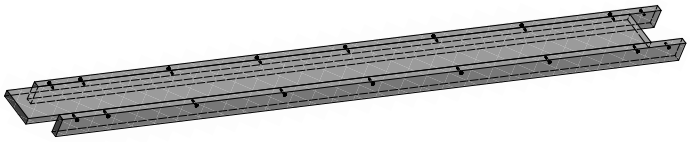
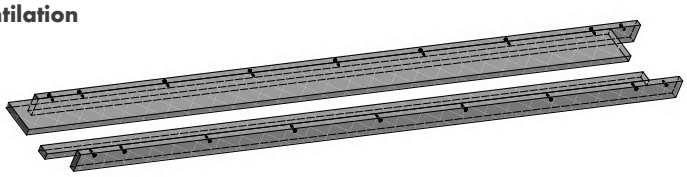
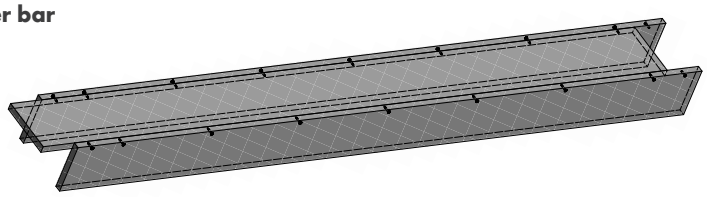
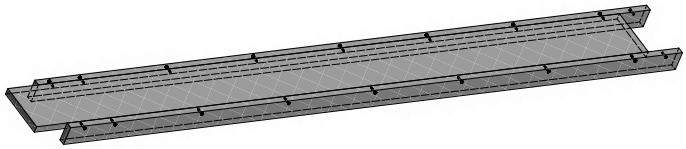
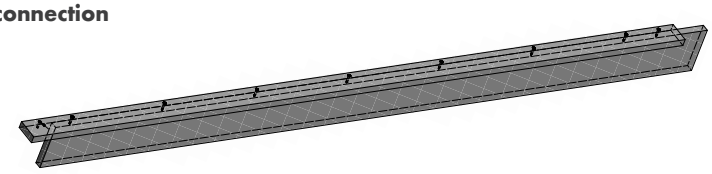
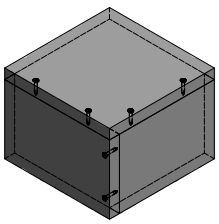

KDBF Edge angle 24/24 D F76


KDBF T-Cross profile 24/38 D F76

Note
Project-specific technical adjustments are not applicable.

ADDITIONAL SERVICE

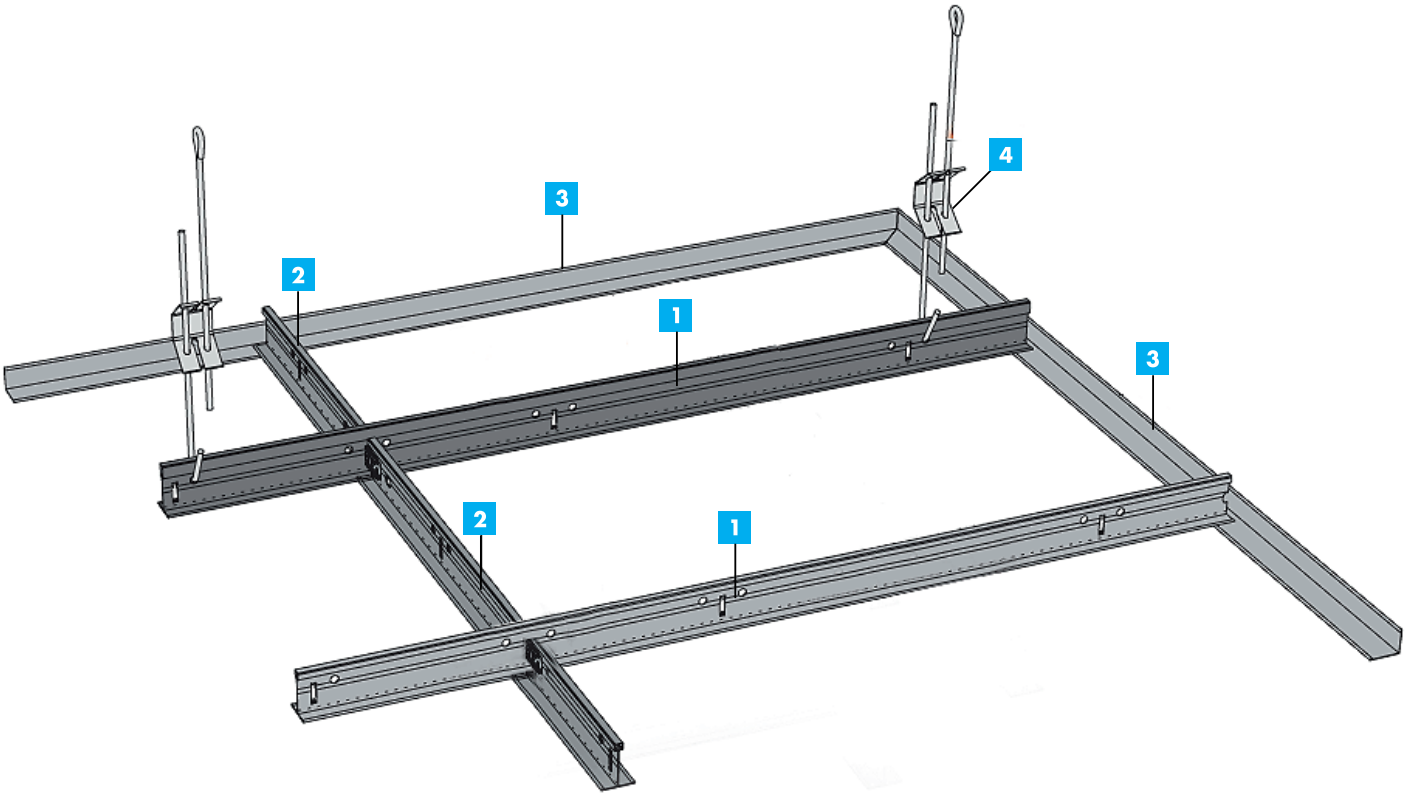
Light channels

D1 U-Light channel 	 Format: 2000 x 150 x 59 mm
D2 L-Slot ventilation 	 Format 1: 2000 x 131 x 59 mm Format 2: 2000 x 53 x 59 mm
D3 U-Spacer bar 	 Format: 2000 x 210 x 150 mm
D4 U-Light channel 	 Format: 2000 x 193 x 59 mm
D5 L-Edge connection 	 Format: 2000 x 59 x 150 mm
D6 W-Edge angle 	 Format: 200 x 200 x 150 mm

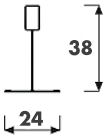
Core material: chipboard 19 mm
Color: black

McDONALD'S RAY CEILING GRID

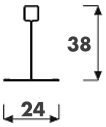
Ceiling grid



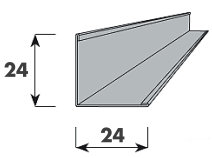
1 KDBF T-Main runner 24/38 D F75/F76



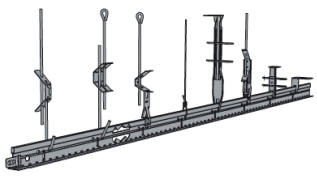
2 KDBF T-Cross profile 24/38 D F75Q/F76



3 KDBF Edge angle 24/24 D F75/F76



4 Hangers



INSTALLATION

Grid dimensions

1200 x 600 mm

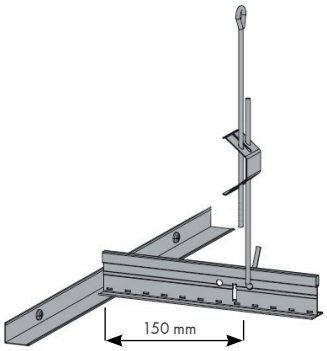
The distance between T-Main runners is 600 mm.
The distance between T-Cross profiles is 1200 mm (applicable for F75/F76).
The distance between Spacer bars is 1200 to 1250 mm (applicable for F70).

Hanger

The hangers must always be installed vertically. It is recommended to provide at least one hanger for a ceiling area of 1.5 m², whereby the maximum hanger distance should not exceed 1.25 m (625 mm grid).

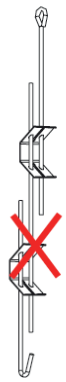
In addition, one hanger must be installed at each main rail joint, and at least two hangers - for additional loads/weights, such as lighting devices.

It must be ensured that the edge distance between the first and last hangers is no more than 150 mm, otherwise additional hangers are required.

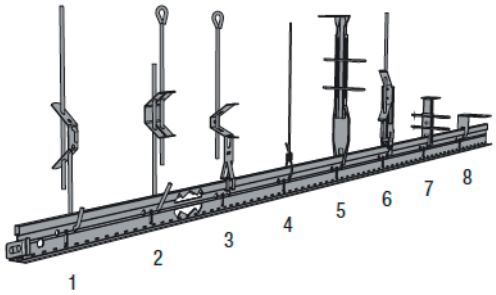


Hanger heights of up to 3 m can be achieved using quick hangers or suspension wires. For areas over 3 m, it is recommended to use nonius hangers.

A combination of several tension springs or extensions is not permitted.



Hanger types:

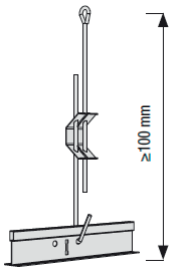


There are many options available for suspending a structure:

1: SHD	Spring hanger with fixed hook wire
2: SoS	Quick hanger with loop
3: Ventatec Clip	Clip-on spring hanger
4: Rödeldraht	Wire - Diameter min. 2 mm
5: Ano + Anu	Nonius hanger upper part / top + lower part / bottom
6: BS 10	Hanger Clickfix II
7 and 8:	Direct hangers (less suitable)

When choosing hangers, please pay attention to the narrow design in the area of the rail head.

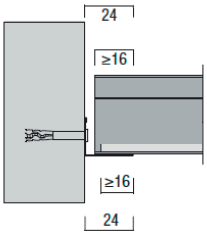
For easy installation of the panels, a hanger height of at least 100 mm is required. For this reason, direct hanger are not quite suitable.



Edge angle

All profiles must be cut to length so that the contact surface corresponds to at least 2/3 of the horizontal section of the edge angle. This applies to both T-Main runners and T-Cross profiles.

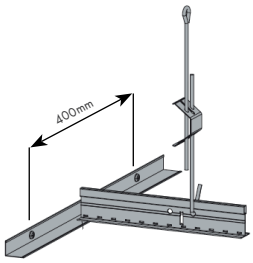
This requirement also applies to the panels or cut panels that rest on the edge angle.



Fastening should generally be done using approved anchors or screws. The maximum distance of 400 mm should not be exceeded on solid walls.

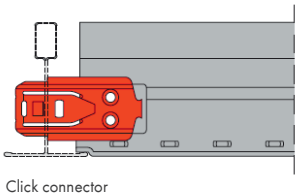
The connection to lightweight partition walls must be made with at least one screw in the area of the stud profiles (distances max. 625 mm) and with a coarse threaded screw in the gap between them.

Screws without a flat head are not suitable for fastening. Incorrect installation may result in deformation of the edge angle.

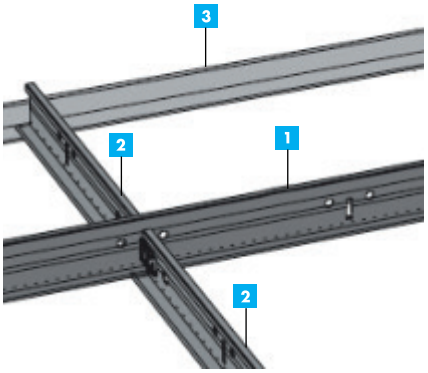


T-Main runner / T-Cross profile

T-Cross profile must be inserted into the holes provided on the T-Main runner. Once inserted, it snaps into into place.



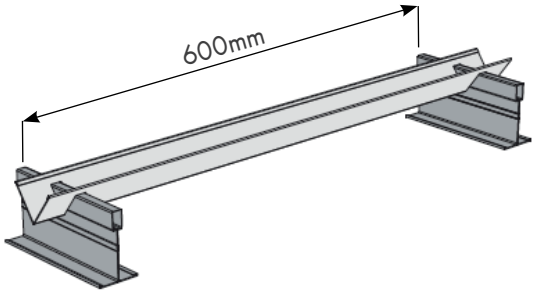
Click connector



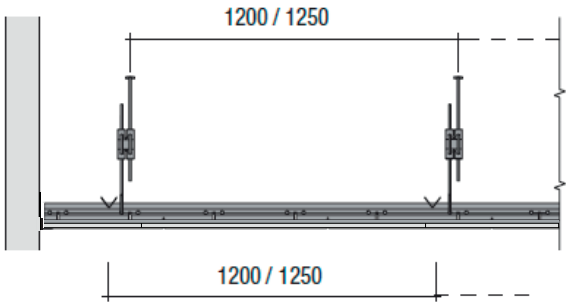
1 KDBF T-Main runner 24/38 D F75/F76
2 KDBF T-Cross profile 24/38 D F75Q/F76
3 KDBF Edge angle 24/24 D F75/F76

Spacer bar

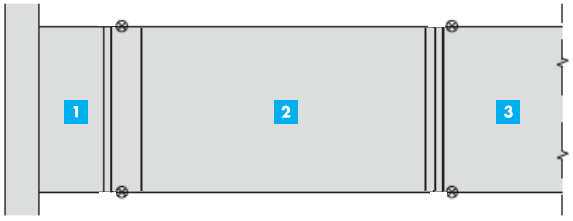
For Mirror look F70 ceiling system, the connection of the T-Main runner is made using a spacer bar on the back of the substructure (invisible). This keeps the T-Main runners in the grid (600 mm). For Wood look F75 & Grey look F76 ceiling systems, the T-Cross profile is used for connection of the T-Main runners (visible).



Spacer bars must always be placed directly next to the hangers. The hangers have a distance of 1200 or 1250 mm, which also applies to the spacer bars.



This ensures that only every second panel is occupied by hangers and spacer bars.



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