

RAY CONCEPT

ACOUSTIC CEILING SYSTEM





McDonald's Illertissen (Germany)



Detailed view

ACOUSTIC CEILING PANELS

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

Our products prove themselves wherever uncompromising functionality, perfect acoustics, high-end aesthetics, 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 system supplier.

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

IN HARMONY WITH ACOUSTICS -
PERFECT SOUND FOR OUTSTANDING SPACES



McDonald's London (Great Britain)



McDonald's Illertissen (Germany)

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CEILING SYSTEM F70 FR MIRROR

Specification RAY concept, ceiling system F 70 FR

General information

The ceiling system is a suspended grid ceiling, formed in grid dimensions 1200 x 600 mm

System components

- panels, compliant to the design specifications F 70
- subconstruction

Loading table (max. permitted weight in kg per m² ceiling area)
See loading table of the installation instructions

For suspending objects in the grid, we recommend a CD-profile to be fastened on the back, which rests on the T-main profile. The maximum additional load is 10 kg / m².

Interface to the ceiling

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

Fire protection

F 70 FR - Top layer Fire class B-s1, d0 flame-retardant according to EN 13501-1, in UK Class 0


Recommended documents

- Subconstruction: Knauf AMF: „System C - Exposed System“
- DWG-Files for the subconstruction on request

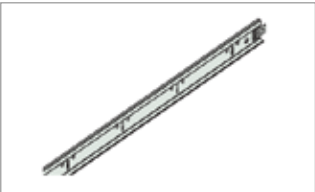
Technical specifications

Article	Components	Dimensions in mm (L / W / H)
	100 m²	
Board		
Designboard	140 pieces	1200,0 / 595,0 / 3,0
Subconstruction		
KDBF T-Main runner 24/38 F F 70	50 pieces	3600,0 / 24,0 / 38,0
KDBF edge angle 24/24 F F 70	40 pieces	3000,0 / 24,0 / 24,0
Spacer bar Ventatec for T-profiles grid 600/625 mm	140 pieces	625,0 / 21,0 / 22,0

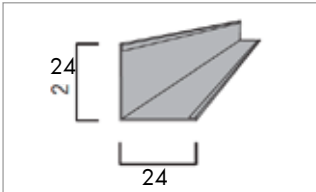
* Profiles are delivered with a defined mirror look



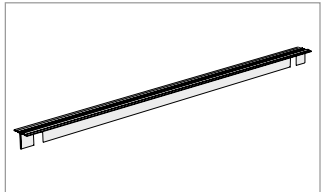
Designboard



KDBF T-Main runner 24/38 F F 70



KDBF edge angle 24/24 F F 70



Spacer bar Ventatec

Note
Project specific technical adjustments are not applicable



CEILING SYSTEM F 75 A2 WOOD LOOK

Specification RAY concept, ceiling system F 75 A2

General information

The ceiling system is a suspended grid ceiling, formed in grid dimensions 1200 x 600 mm.

System components

- panels, compliant to the design specifications F 75
- subconstruction

Loading table (max. permitted weight in kg per m² ceiling area)
See loading table of the installation instructions.

For suspending objects in the grid, we recommend a CD profile to be fastened on the back, which rests on the T main profile. The maximum additional load is 10 kg / m².

Interface to the ceiling

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

Reaction to fire

F 75 A2 - Reaction to fire A2-s1, d0 non-combustible according to EN 13501-1

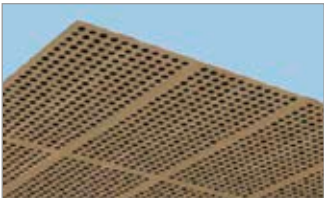
Recommended documents

- Subconstruction: Knauf AMF, „System C - Exposed System“
- DWG-Files for the subconstruction on request

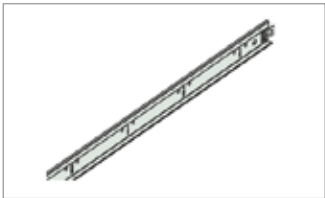
Technical specifications

Article	Components	Dimensions in mm (L / W / H)
	100 m²	
Board		
Designboard	140 pieces	1 195,0 / 595,0 / 1,5
Subconstruction		
KDBF T-Main runner 24/38 D F 75	50 pieces	3600,0 / 24,0 / 38,0
KDBF edge angle 24/24 D F 75	20 pieces	3000,0 / 24,0 / 24,0
KDBF edge angle 24/24 D F 75 Q	20 pieces	3000,0 / 24,0 / 24,0
KDBF T-Cross profile 24/38 D F 75 Q	140 pieces	600,0 / 24,0 / 38,0

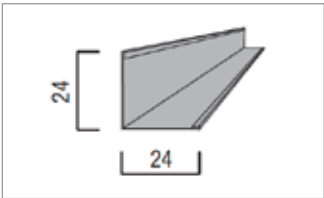
* Profiles are delivered with a defined wood look
** Depends on the requirements, profiles are delivered with a defined wood look in the longitudinal / transverse direction



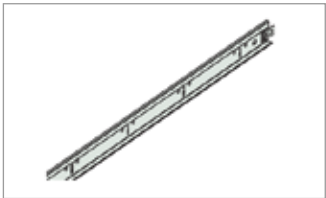
Designboard



KDBF T-Main runner 24/38 D F 75



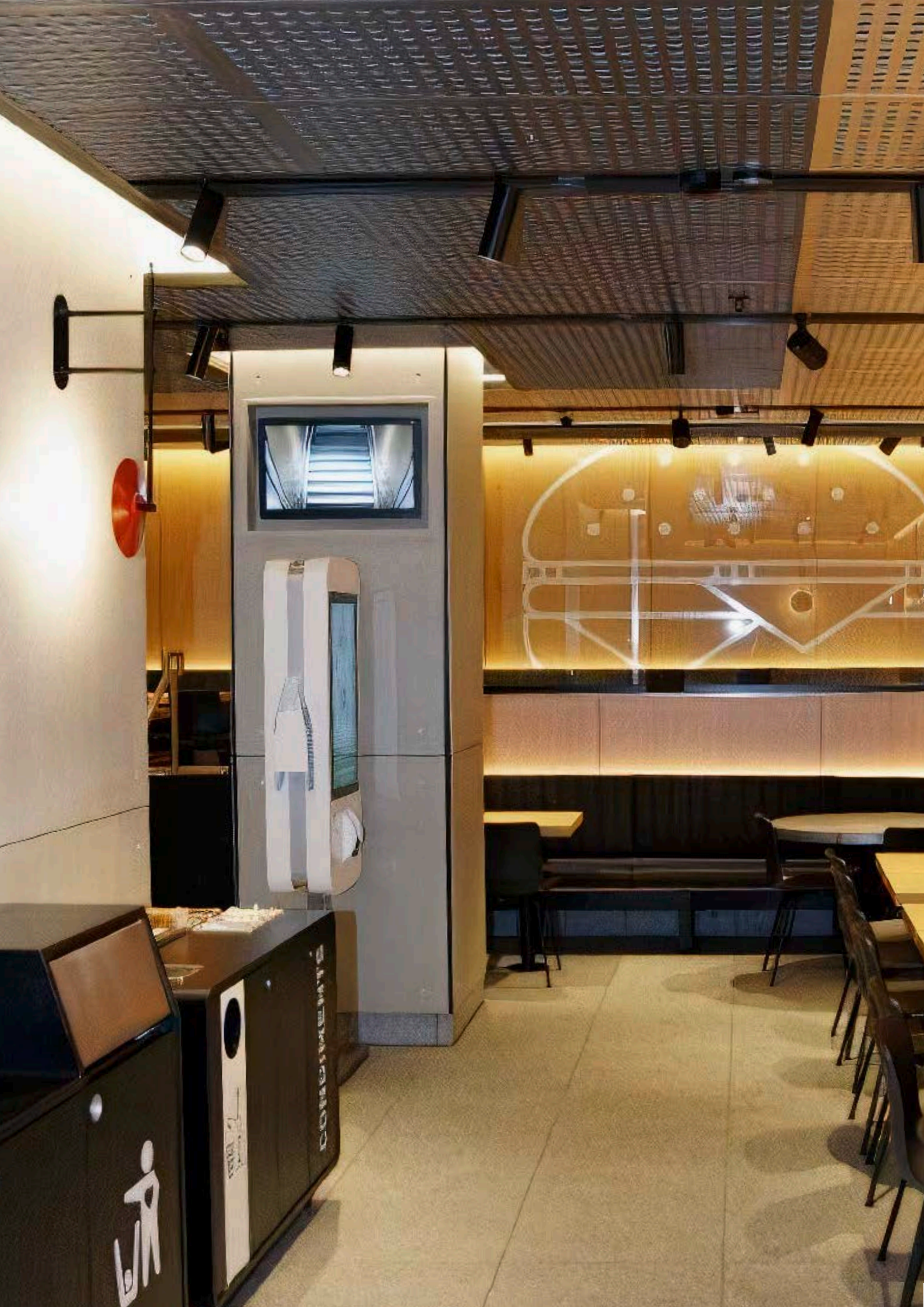
KDBF edge angle 24/24 D F 75
KDBF edge angle 24/24 D F 75 Q



KDBF T-Cross profile 24/38 D F 75 Q

Note

Project specific technical adjustments are not applicable



CEILING SYSTEM F 76 A2 GREY LOOK

Specification RAY concept, ceiling system F 76 A2

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

System components

- panels, compliant to the design specifications F 76
- subconstruction

Loading table (max. permitted weight in kg per m² ceiling area)
See loading table of the installation instructions

For suspending objects in the grid, we recommend a CD profile to be fastened on the back, which rests on the T main profile. The maximum additional load is 10 kg / m².

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

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

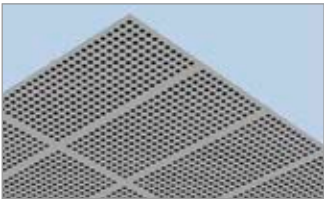
Recommended documents

- Subconstruction: Knauf AMF, „System C - Exposed System“
- DWG-Files for the subconstruction on request.

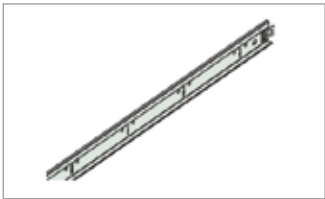
Technical specifications

Article	Components	Dimensions in mm (L / W / H)
	100 m²	
Board		
Designboard	140 pieces	1195,0 / 595,0 / 1,5
Subconstruction		
KDBF T-Main runner 24/38 D F 75	50 pieces	3600,0 / 24,0 / 38,0
KDBF edge angle 24/24 D F 75	20 pieces	3000,0 / 24,0 / 24,0
KDBF T-Cross profile 24/38 D F 75 Q	140 pieces	600,0 / 24,0 / 38,0

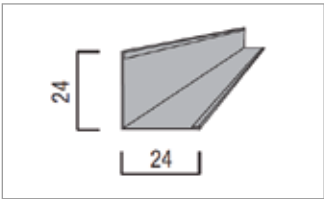
* Profiles are delivered with a defined grey look



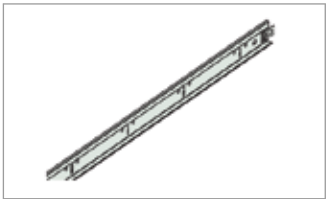
Designboard



KDBF T-Main runner 24/38 D F 76



KDBF edge angle 24/24 D F 76



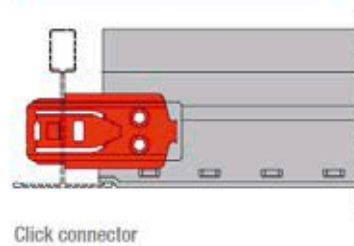
KDBF T-Cross profile 24/38 D F 76

Note
Project specific technical adjustments are not applicable

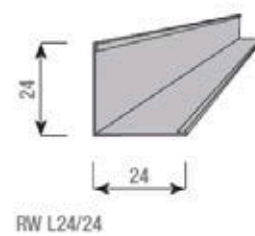
RAY CEILING INSTALLATION GUIDELINE



DETAILS



WALL TRIM



Hanger / Installation

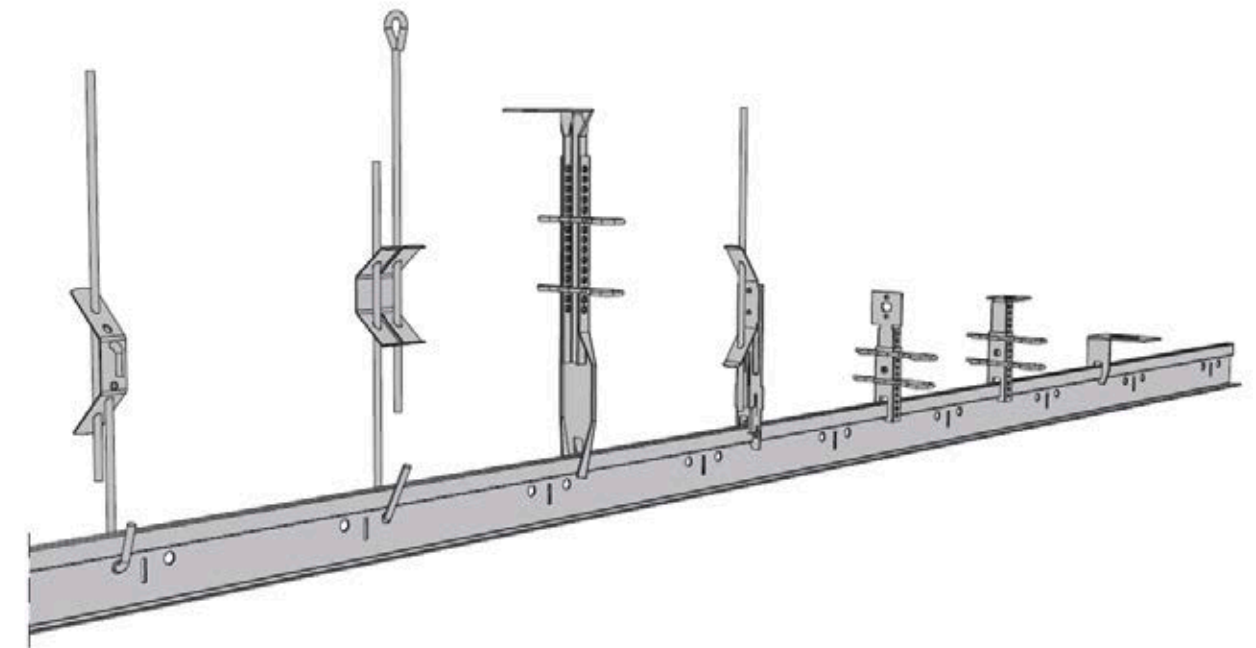
Hangers should be installed vertically. It is recommended to provide at least one hanger for every 1.5 m² ceiling area, whereby maximum hanger centres may not exceed 1.25 m (module 625 mm).

In addition, a hanger is required at every main runner join and additional loads such as lighting require a minimum of two hangers (see chapter Light fittings). It must be ensured that the first and last hangers are no more than 150 mm from the perimeter, otherwise additional hangers are required.

Angled hangers can significantly reduce the load bearing capacity and not all hangers are suitable for this. In most cases, additional measures (cross bracing, additional hangers etc.) are required.

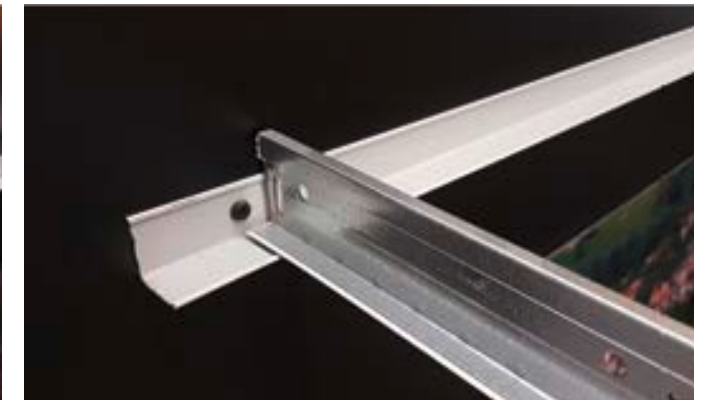
Suspension depths of up to 3.00 m can be carried out with quick hangers or wire hangers. For suspension depths over 3.00 m Nonius hangers are recommended.

A combination of multiple butterflies or extensions is not permitted.



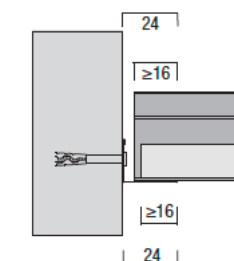
Module dimensions

- > T-main runner each 600 mm
- > Cross tee profile each 1200 mm for WOOD and GREY
- > Spacer bar each 1200 mm for MIRROR
- > Perimeter wall angle depending on the room dimensions



Installation

The KDBF wall angle 24/24 D F must be fixed at the desired height on the existing wall. Please ensure that the grain is aligned in the correct direction with a wood design look.



This applies both to tiles and cut tiles that lie on the perimeter trim.

The KDBF T-main runner 24/38 D F can be placed onto the wall angle. Fixing of the T24 main runner of the existing ceiling is undertaken on site.

WOOD & GREY ceiling system installation



The first 600 mm KDBF cross tee profile should apply as a spacing of 1200 mm on the front.



It must be pushed into the pre-punched openings for this purpose.



Now the first DESIGNBOARD can be inserted.



Continue with other KDBF cross tee profiles and ceiling systems.



MIRROR (mirror charcoal) ceiling system installation



Instead of a cross tee profile, mirror ceiling systems are inserted directly between the T-main runner (butt joined).

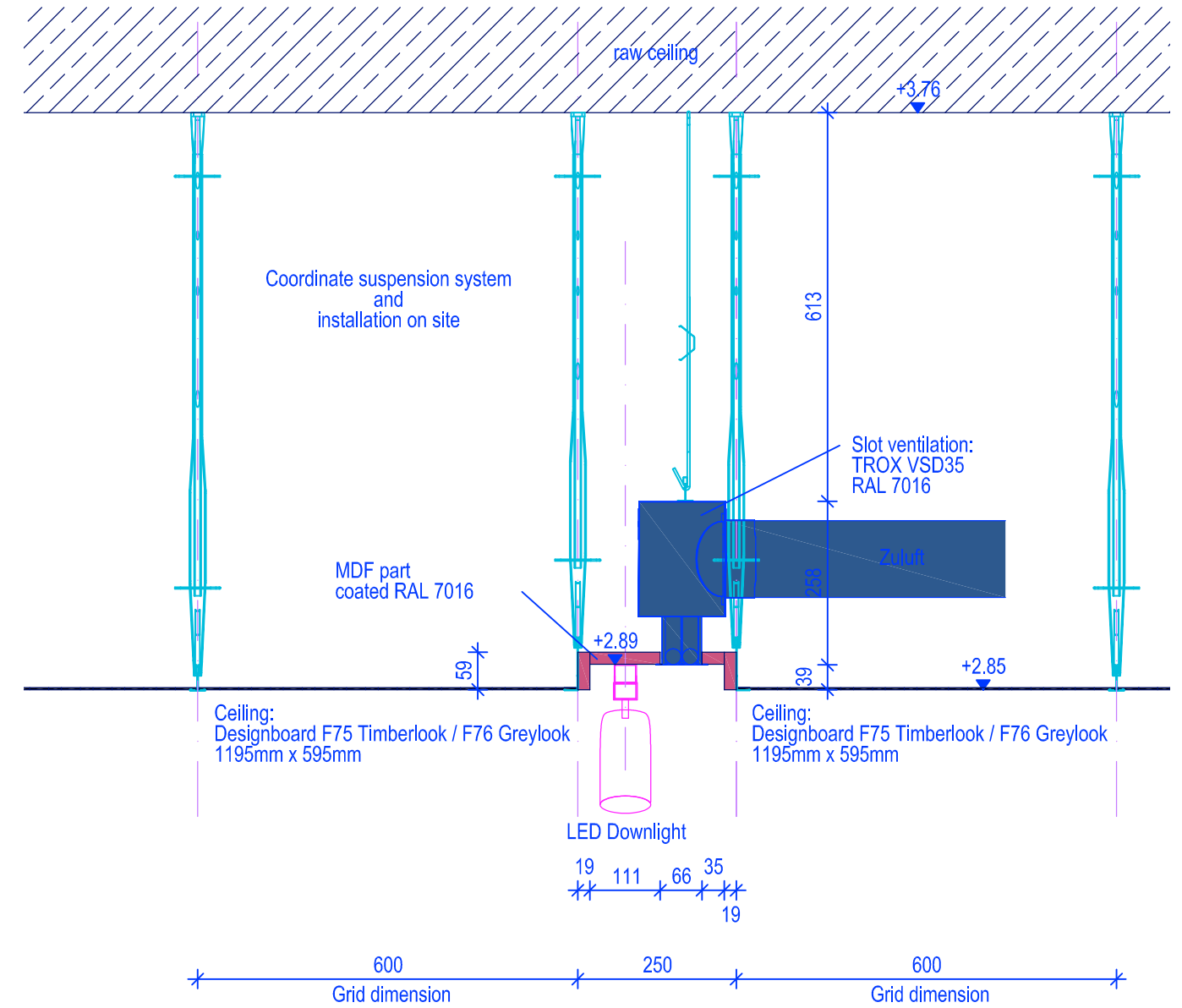


For bracing purposes, the T-main profiles are fixed on the rear with spacer bars.

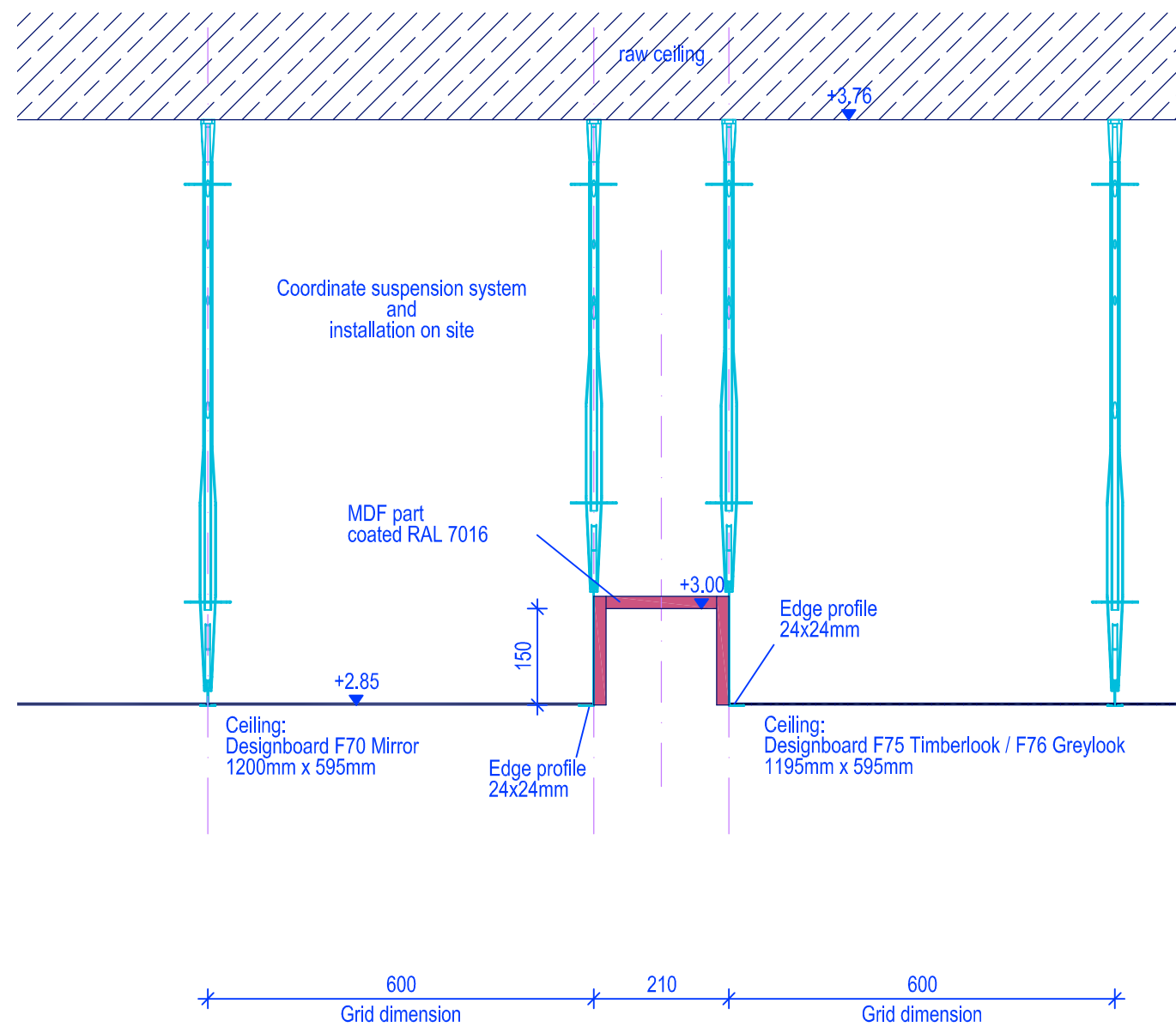
RAY CONCEPT LIGHT CHANNELS

Product	Sketch	Description
D1 U-Light channel		Core material: MDF Surface: black (0080FH) Format: 2000 x 59 x 188 mm Application: F75 Wood / F76 Grey
D2 L-Slot ventilation		Core material: MDF Surface: black (0080FH) Format 1: 2000 x 130 x 59 mm Format 2: 2000 x 54 x 59 mm Application: F75 Wood / F76 Grey
D3 U-Spacer bar		Core material: MDF Surface: black (0080FH) Format: 2000 x 210 x 150 mm Application: F75 Wood / F76 Grey / F70 Mirror
D4 U-Light channel		Core material: MDF Surface: black (0080FH) Format: 2000 x 59 x 193 mm Application: F70 Mirror
D5 L-Edge connection		Core material: MDF Surface: black (0080FH) Format: 2000 x 49 x 150 mm Application: F75 Wood / F76 Grey / F70 Mirror
D6 W-Edge angle		Core material: MDF Surface: black (0080FH) Format: 200 x 200 x 150 mm Application: F75 Wood / F76 Grey / F70 Mirror

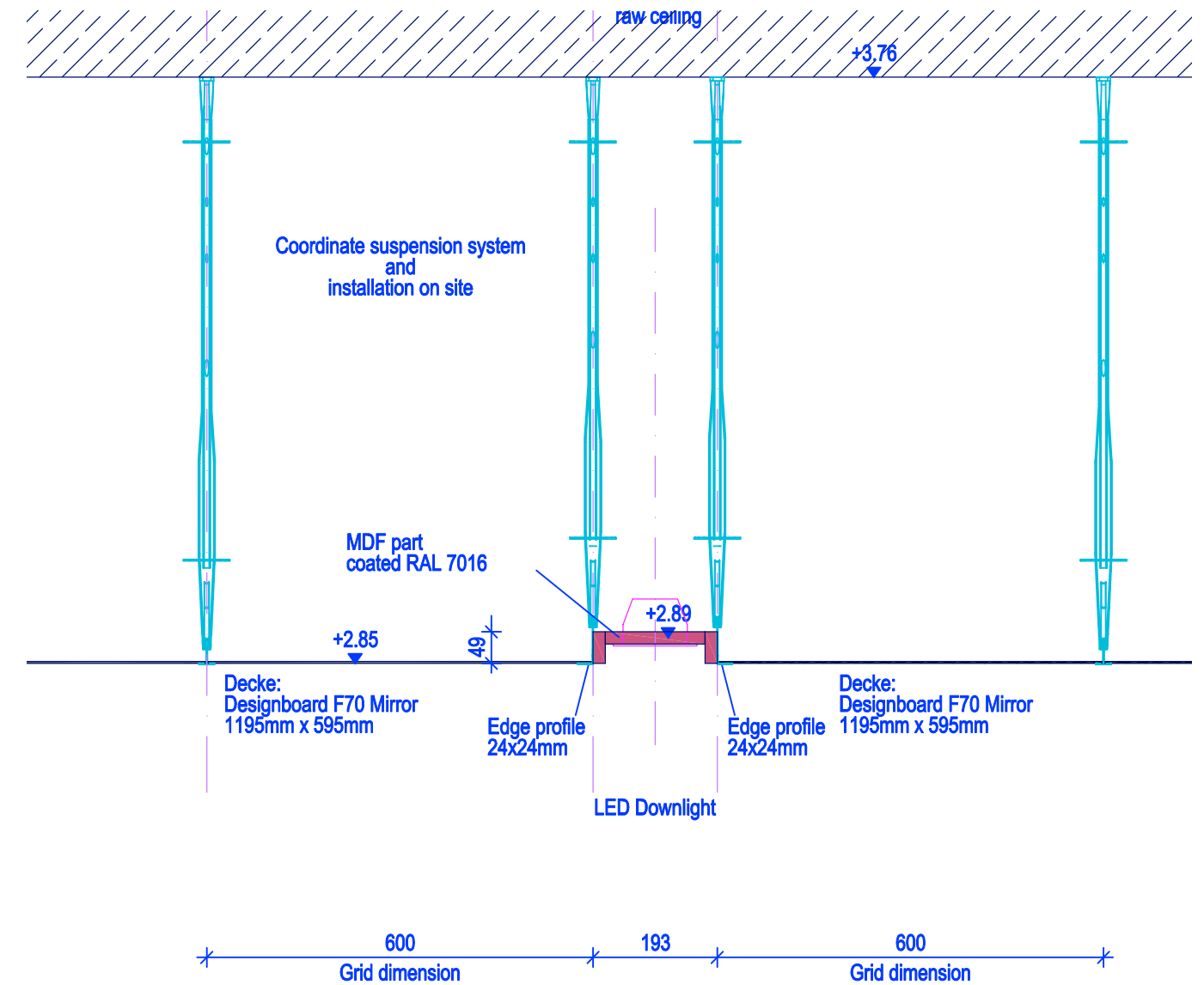
DETAIL D2 - L-SLOT VENTILATION



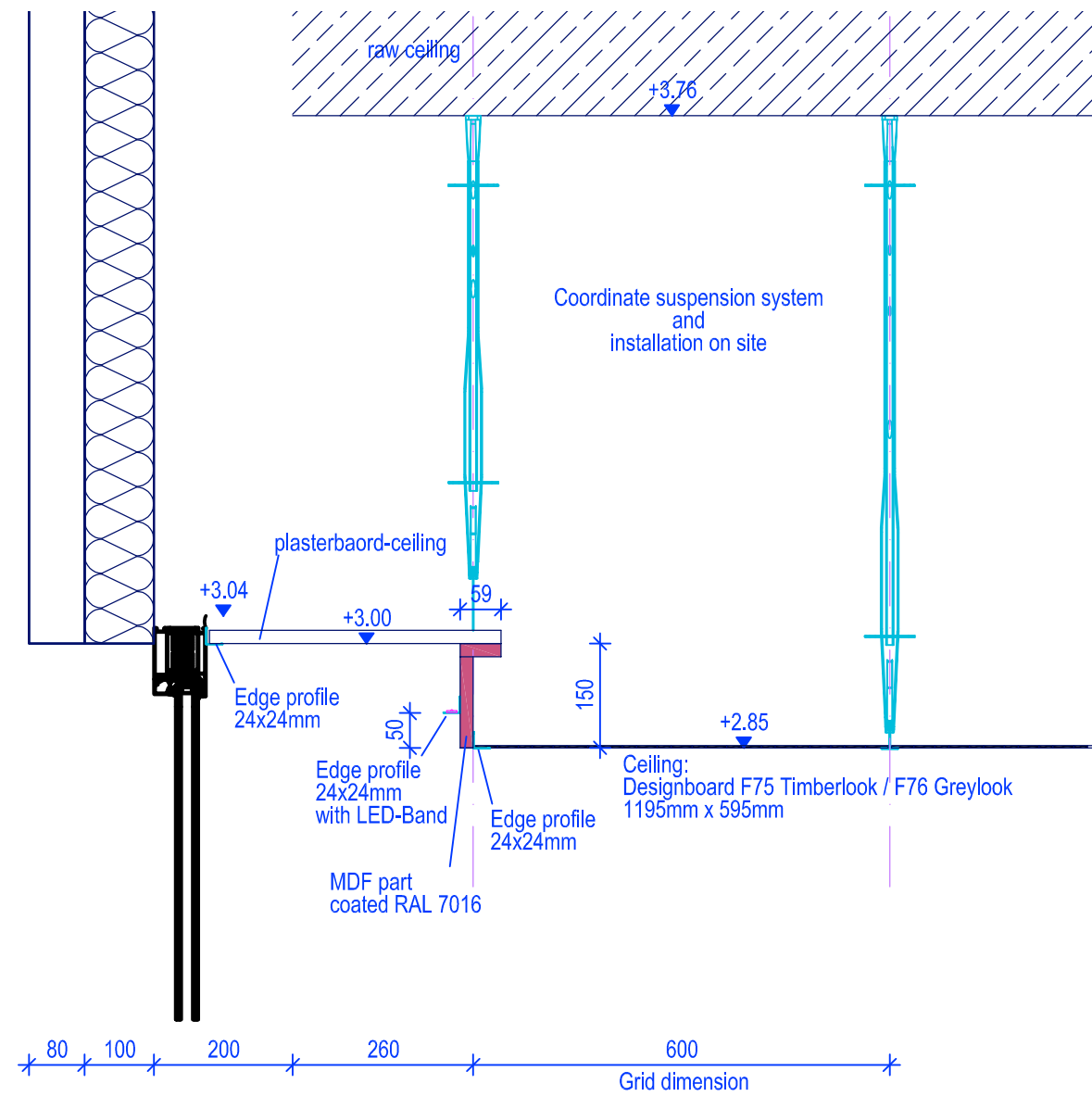
DETAIL D3 - U-SPACER BAR



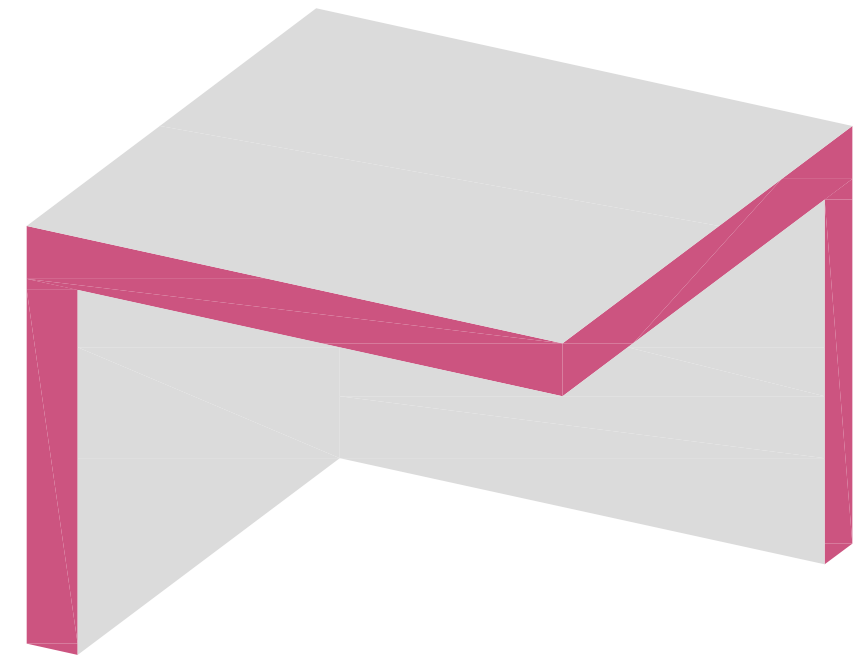
DETAIL D4 - U-LIGHT CHANNEL



DETAIL D5 - L-EDGE CONNECTION



DETAIL D6 - W-EDGE ANGLE





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