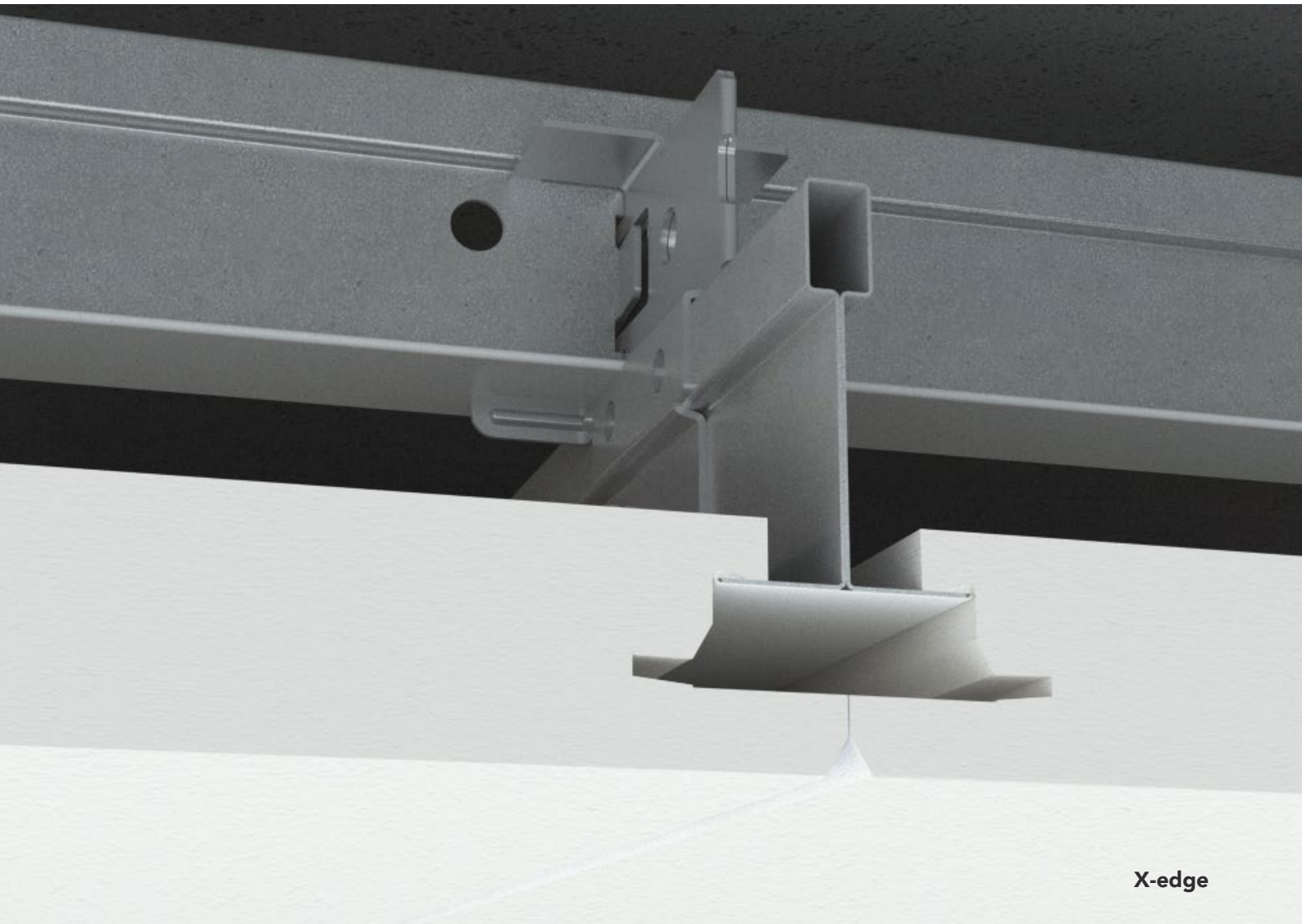
Rockfon

INSTALLATION GUIDE

Rockfon® System T24 X DLC



X-edge

Concealed ceiling system
Unbroken look

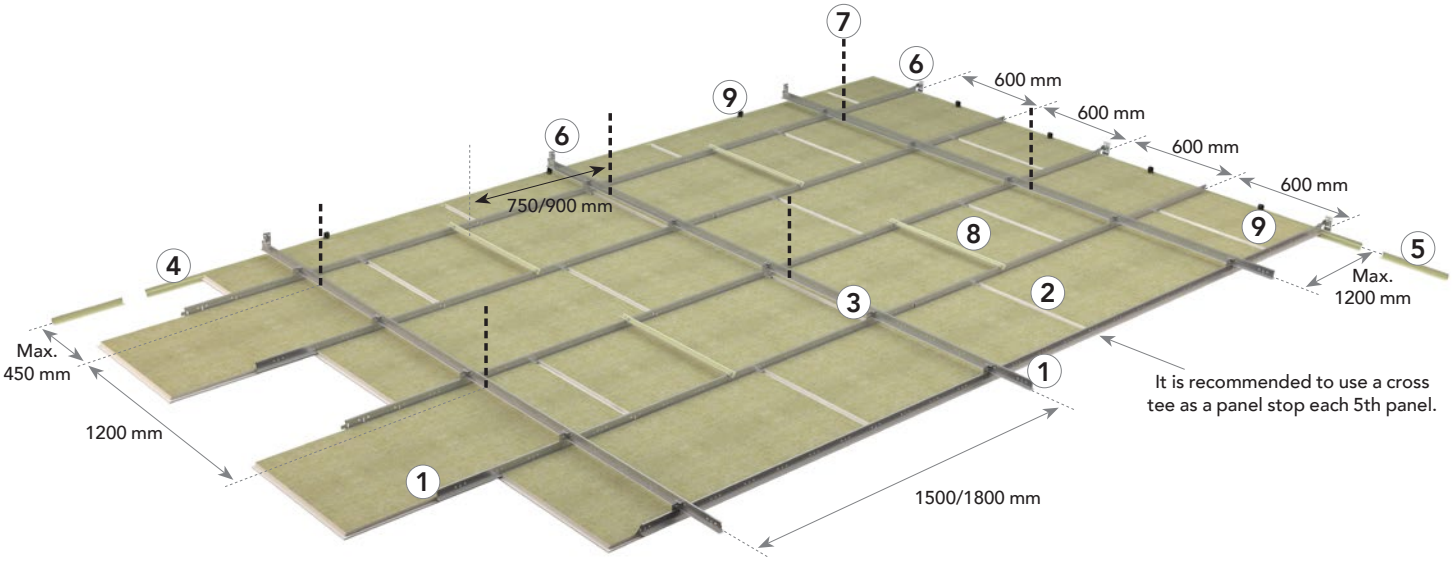
- Elegant, continuous ceiling expression
- Ideal concealed ceiling system for large rooms
- Low installation height and full demountability
- Easy installation of large format ceiling tiles

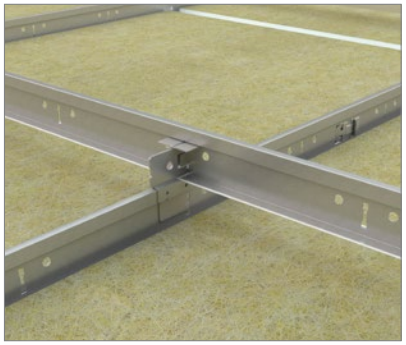
Sounds Beautiful

Description

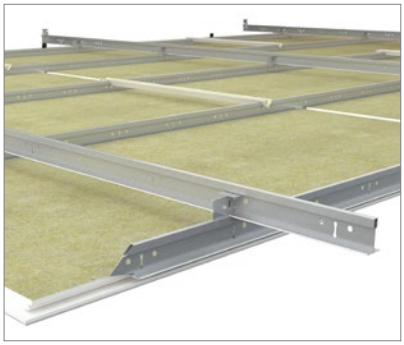
Rockfon System T24 X DLC is a concealed ceiling system that provides an elegant, unbroken ceiling expression and is used with X-edge tiles. The system consists of a double layer grid layout, connecting the upper and lower grid layers with a specially designed clip (DLC), providing extra stability and easy installation of bigger ceiling tiles. It is ideal for large rooms and can even be installed in brick pattern. It can either be installed as suspended ceiling at the desired height using the **Chicago Metallic T24 Click 2890** or mounted directly on the soffit by using direct fixing brackets. In Rockfon System T24 X DLC the Chicago Metallic T24 Click 2890 grid comes with a click system providing easy and fast mounting and demounting. The T profiles have a width of 24 mm, and all components are made of galvanised steel with a smooth, white surface hidden by Rockfon X-edge tiles.

The system includes main runners, cross tees, hangers and other necessary components. The main runners and cross tees have a uniform height of 38 mm, ensuring stability and easier integration of services. The system provides full demountability of the mounted tiles. The system is characterized in that, during mounting or de-mounting, the tiles never come over the grid system where there is often installations. Rockfon X-edge tiles are available in different module sizes (see overview on page 3). The grid layout to be used depends on the choice of the module size (see layout possibilities on page 5).

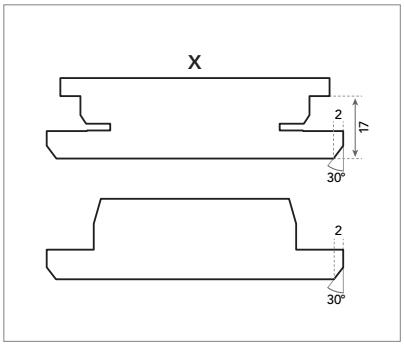




Connection between upper and lower grid profiles with DLC clip ensuring stability and easy installation.



2-layer grid system ensuring easy installation of perimeter tiles.



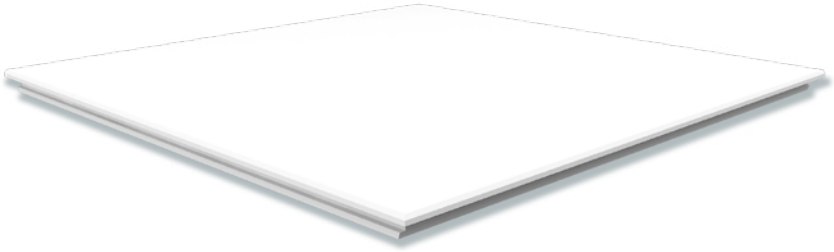
Concealed grid system with the symmetric X edge ensuring fast mounting in both direction.

System components and consumption guide

Tile		Chicago Metallic T24 Click 2890					Wall angles		Accessories				
		1		2		3	4	5	6	7	8	9	10
-		Primary main runner T24 Click/Hook 3600	Secondary main runner T24 Click/ Hook 3600	Cross tee T24 Click 600	Cross tee T24 Click 900	DLC Clip	W 10 x 15 Shadow moulding wall angle	Perimeter wall angle trim	Wall & bridging bracket	Hanger	Spacer Bar	Wall clip	Stiffening profile
Dimensions (mm)	**Consumption/m²**												
600 x 600	2,78 pcs/m²	0,67 lm/m²	1,66 lm/m²	0,33 lm/m²	-	1,11 pcs/m²	1)	1)	1) 3)	0,56 pcs/m²	1) 4)	1) 2)	-
900 x 900	1,23 pcs/m²	0,67 lm/m²	1,11 lm/m²	-	0,27 lm/m³	0,74 pcs/m²	1)	1)	1) 3)	0,56 pcs/m²	1) 4)	1) 2)	2,22 lm/m²
1200 x 600	1,39 pcs/m²	0,67 lm/m²	1,66 lm/m²	0,27 lm/m²	-	1,11 pcs/m²	1)	1)	1) 3)	0,56 pcs/m²	1) 4)	1) 2)	-
1800 x 600	0,93 pcs/m²	0,67 lm/m²	1,66 lm/m²	0,27 lm/m²	-	1,11 pcs/m²	1)	1)	1) 3)	0,56 pcs/m²	1) 4)	1) 2)	-
2100 x 600	0,79 pcs/m²	0,67 lm/m²	1,66 lm/m²	0,23 lm/m²	-	1,11 pcs/m²	1)	1)	1) 3)	0,56 pcs/m²	1) 4)	1) 2)	-
2400 x 600	0,70 pcs/m²	0,67 lm/m²	1,66 lm/m²	0,21 lm/m²	-	1,11 pcs/m²	1)	1)	1) 3)	0,56 pcs/m²	1) 4)	1) 2)	-

Calculations are based on a primary main runner A/A distance of 1500 mm.
1) Consumption depends on room size.
2) The wall clip is used to block the tile against the wall. When edge springs are used, make sure there is enough space between the tile and the wall to insert the spring. Use one spring per tile.
3) For better stability we recommend to fix the upper main runners (each second) and lower main runners (each one) to the wall.
4) The use of a spacer bar is recommended.

Tile - X Edge



Chicago Metallic T24 Click 2890

1. Primary & Secondary Main runner T24 Click/Hook 3600



2. Cross tee T24 Click 600-900



3. DLC Clip



Wall angles

4. W 10 x 15 Shadow moulding wall angle



5. Perimeter wall angle trim



Accessories

6. Wall & bridging bracket



7. Hanger



8. Spacer Bar



9. Wall clip



10. Stiffening profile



Performance

System load bearing capacity

-			Max. Load (kg/m²)	
Distance between primary/ secondary main runners (mm)	Hanger distance (mm)	Dimensions (mm)	Max. 2,5 mm deflection	Max. 4,0 mm deflection
1500/600 (900)	1200	600 x 600	6,3	10,5
		900 x 900	4,8	8,0
		1200 x 600	6,3	10,5
		1800 x 600	6,3	10,5
		2100 x 600	6,3	10,5
		2400 x 600	6,3	10,5
1800/600 (900)	1200	600 x 600	-	5,7
		900 x 900	-	4,1
		1200 x 600	-	5,7
		1800 x 600	-	5,7
		2100 x 600	-	5,7
		2400 x 600	-	5,7

The system´s load capacity is determined from a max. deflection of the individual components corresponding to 1/500 of the span or the cumulative deflection of all structural components which does not exceed 2,5 or 4,0 mm. The load bearing capacity is given as regularly distributed load in kg/m² – it is the weight of the tile plus any additional items.

Corrosion resistance

Class B (EN13964)

Demountability

Tiles mounted in Rockfon System T24 X DLC are fully demountable.

Fire resistance

Some Rockfon ceiling systems have been tested and classified in accordance with European norm EN 13501-2 and/or national norms. Please contact Rockfon.

Compatible Tiles Overview

Rockfon System T24 X DLC is available with the following Rockfon tiles:

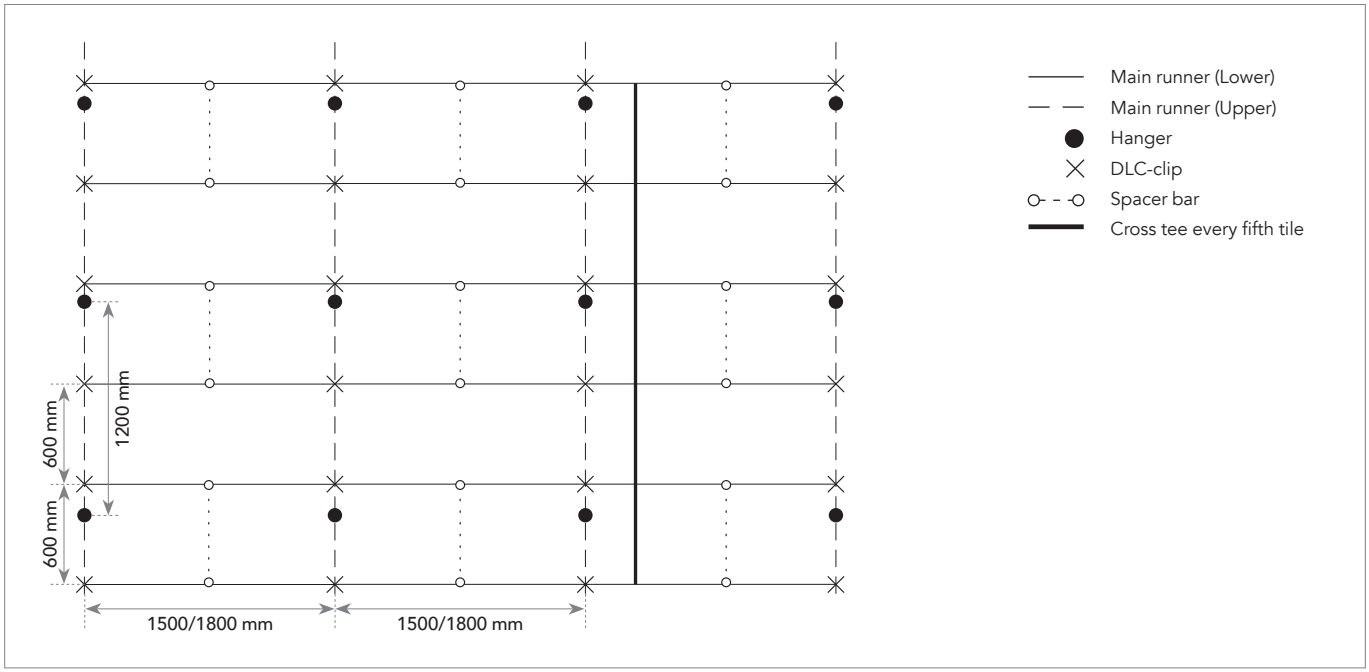
-		Dimensions (mm)					
Tiles	Thickness (mm)	600 x 600	900 x 900	1200 x 600	1800 x 600	2100 x 600	2400 x 600
Rockfon Blanka®	22	•		•	•		
	25		•			•	•
Rockfon Sonar®	22	•		•	•		
	25		•				•
Rockfon MediCare® Plus	22	•					
Rockfon Color-all®	22	•		•	•		
Rockfon Color-all® Special	22	•					
Rockfon Krios®+	22	•		•	•		
	25		•				

Other dimensions can be installed in Rockfon System T24 X DLC. Please contact Rockfon.

Grid Installation

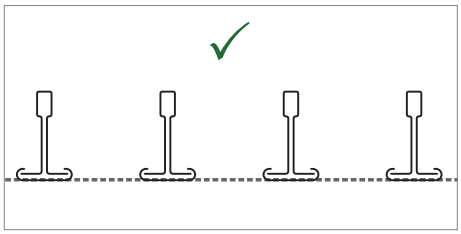
Grid layout and hanger location

Rockfon X-edge tiles can be installed in Rockfon System T24 X DLC.
Some layout options are shown below depending on the size of the tile.

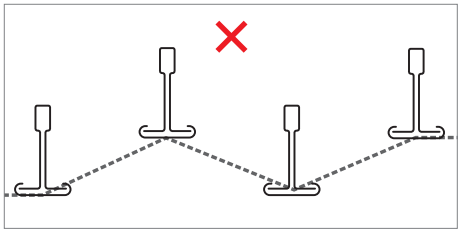


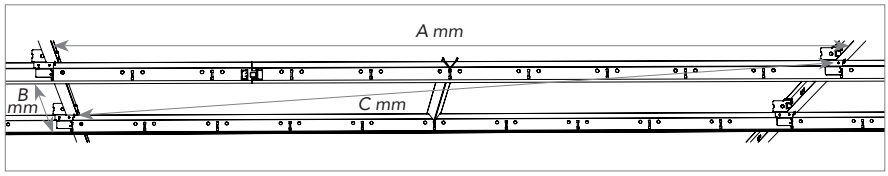
Installation requirements

During and after the grid installation, it is important to check that the T profiles are perfectly aligned horizontally. A maximum level difference of +/- 1,0 mm is recommended between the profiles. This tolerance is valid for all directions.



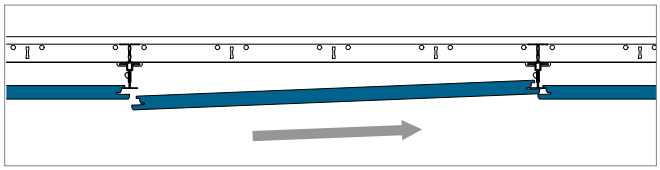
It is also important to check the squareness of the angles between the main runners and cross tees. This can be done easily by comparing the measurements of the two diagonals. See recommended tolerances on the drawing below.



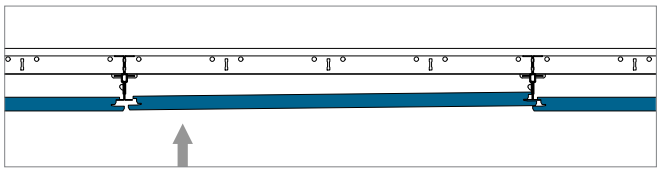


Dimensions (A x B)	Diagonal (C)	Tolerance
	mm	
900 x 900	1238,85	+/- 1,0
1500 x 600	1584,41	
1800 x 600	1867,07	

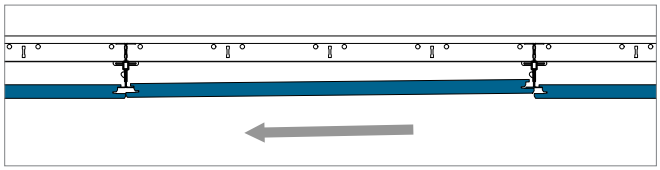
Tile Installation



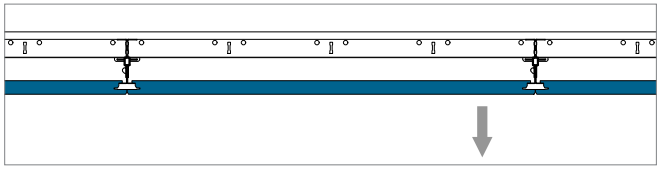
Slide the X1 edge of the tile into the secondary main runner.



Lift the upper side of the opposite X1 edge of the tile above the secondary main runner.



Pull the tile back.



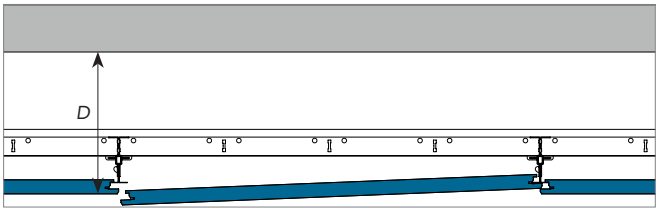
Drop the tile carefully into position.

Minimum installation depth (mm)

Tiles mounted in Rockfon System T24 X DLC give full demountability. The system is characterized in that, during mounting or de-mounting, the tiles never come over the grid system where there is often installations.

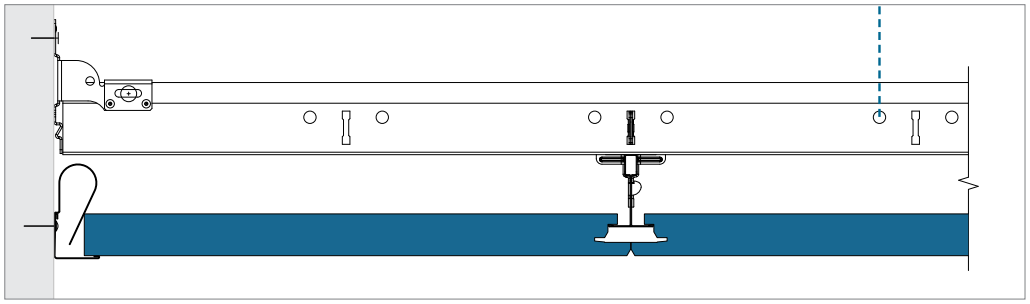
The installation depth is defined as the distance from the underside of the tile to the underside of the substrate, where the hangers are fixed. D represents the minimum installation depth that allows for easy tile installation and demounting.

Mounting method	D = Minimum installation depth
Direct fixing bracket 50	104 mm
Direct fixing bracket 80	134 mm
Direct fixing bracket 100	154 mm
Adjustable fixing bracket 70-110	124 mm
With hangers	169 mm
Construction high for tiles incl. 2-layer runners	92 mm

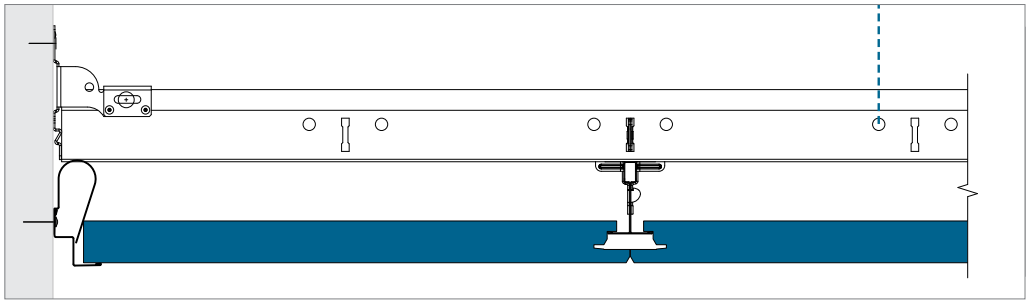


Perimeter Finish Options

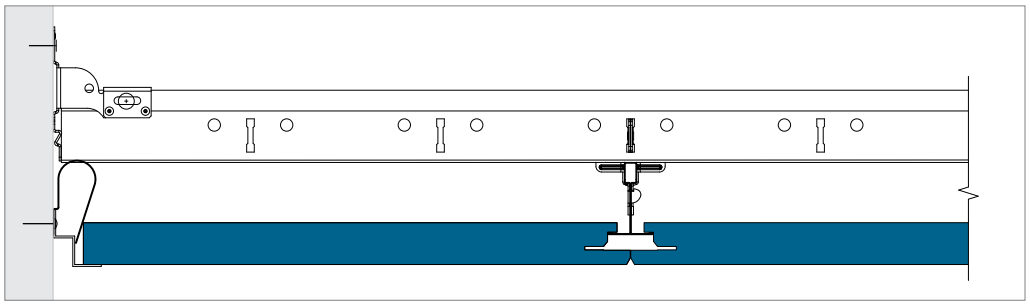
Below are examples of perimeter finishing. Further details can be found on **cee.rockfon.international**



Perimeter finish with wall angle trim.



Perimeter finish with W shadow moulding wall angle.



Perimeter finish with aluminium W shadow moulding wall angle.

Service integration

Rockfon ceiling tiles are easy to cut and therefor it is very easy to integrate service installations in our ceiling tiles. The cut-outs can be made with a simple utility knife.

When the system is installed to bear a load, we recommend using a yoke or extra support arms that spreads the weight of the service installation. The size of the yoke should not be bigger than the module size 600 x 600 and the use of extra hangers to overcome deflection in the ceiling system is strongly recommended. When using support arms to spread the weight of the installation, we recommend spanning a maximum 600 mm and the use of extra hangers to overcome deflection in the ceiling system.

When installing a modular lighting fixture in Rockfon System T24 X DLC please be aware of the special edge design and module size of this solution. Because of the ceiling tile design, a special type of luminaire should be chosen in order to create an esthetically pleasing and well leveled ceiling surface. The actual size of the ceiling tile is nearly its module size and the front surface of the ceiling tile sits approx. 16 mm below the front of the T-grid.

Planning

A thorough planning and installation scheduling of the project site will result in less re-work and less ceiling tile damages. We recommend discussing the installation planning thoroughly and well in advance with other installers that have to work in or near the suspended ceiling. By doing so, damaged ceiling tiles and dirty spots on the finished ceiling surface can be avoided, which reduces project costs.

Overview load bearing capacity

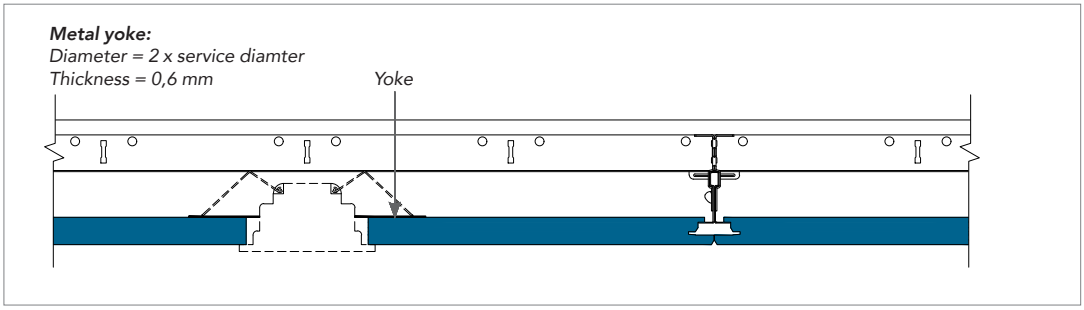
-	Weight of installations		
-	< 0,25 kg/pcs	0,25 ≥ 3,0 kg/pcs	> 3,0 kg/pcs
Small service integration; Spot- or downlight, speaker, ventilation etc.	Drawing A	Drawing B	Suspend separately
Big service integration; Downlight, speaker, ventilation, etc.	Drawing A	Drawing B	Suspend separately
Modular lighting- or ventilation fixture	Drawing C; System load bearing capacity (if evenly distributed over grid in kg/m^2)		

When installing services in Rockfon System T24 X DLC you should always follow the local building regulations. If the constraints are stricter than the load-bearing capacity, please find our recommendations in the above table.

Contact your local Rockfon customer service for more information on suitable lighting fixtures, accessories and the availability of CAD drawings for the different services integrated in Rockfon System T24 X DLC. Special solutions with integrated services are, if available, shown on page 12 of this document; 'Tools'.

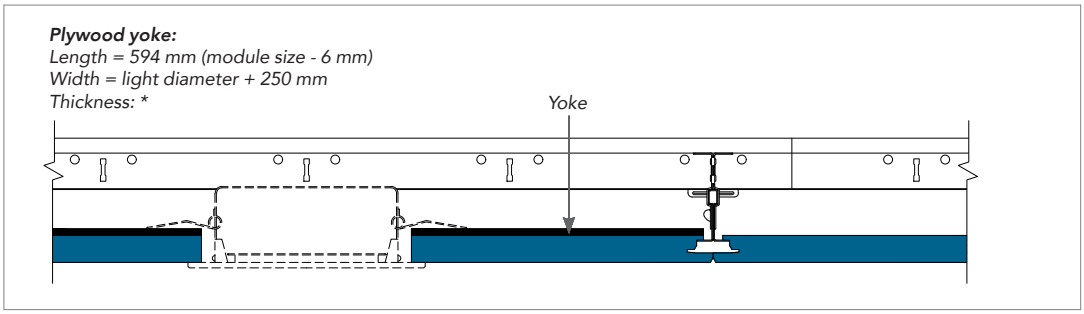
Drawing A

The integration of a spotlight, smoke detector, speaker, etc. (weighing < 0,25 kg/pcs).



Drawing B

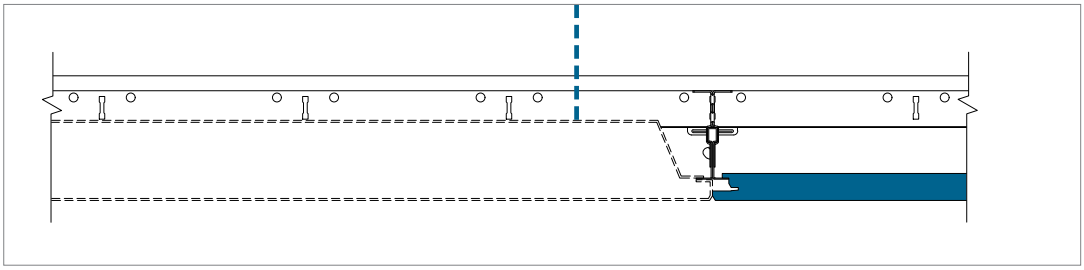
The integration of a down-, spotlight, smoke detector, loud speaker, etc. (weighing 0,25 ≥ 3,0 kg/pcs). Usage of a plywood yoke to spread the load on the back of the tile (as shown in the detail) or usage of support arms to spread the load to the grid system is strongly recommended. The use of extra hangers to avoid deflection is strongly recommended.



** The thickness of the plywood or metal yoke needs to be adapted in function of the weight, size and position of your service integration (e.g. downlight or speaker). The Plywood or metal yoke itself may not deflect after installing your service integration.*

Drawing C

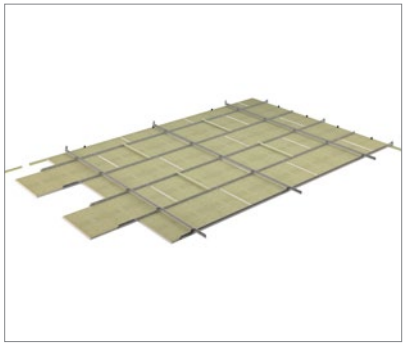
The integration of a modular lighting fixture or air vent (evenly distributed over grid), weighing > 3,0 kg/pcs, max. the system loading capacity. It is strongly recommended to suspend the service integrated surface separately with extra hangers.

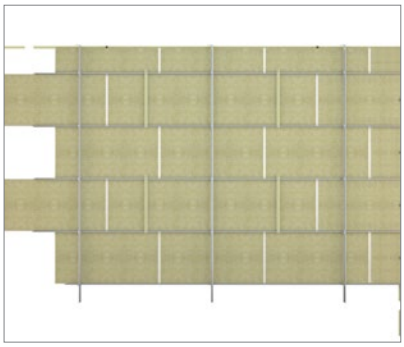


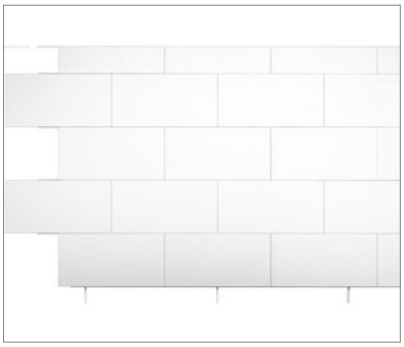
Specific Solutions

Brick pattern design

Rockfon System T24 X DLC makes it possible to create a brick pattern design in your ceiling, with only standard components.

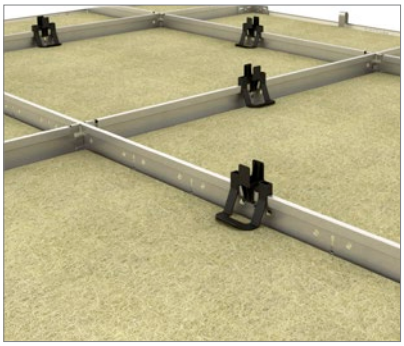






Hold down clip

For maintaining tiles in place, Rockfon offers a range of hold-on clips. In smaller rooms, hallways, stairwells, etc. which can be exposed to pressure differences between the ceiling void and the room below, it is recommended to ensure ceiling tiles with clip at the back. This is also recommended for cleaning purposes.



Light frame

Made exclusively for our Rockfon System T24 X DLC, the easy to mount light frame for our X-edge concealed ceiling tile securely fits into the grid, providing an aesthetic and practical finish. It allows for the easy installation of both a light frame and other important service integration without compromising the visual finish of the total ceiling, leaving no gaps between the light frame and the X-edge tile.



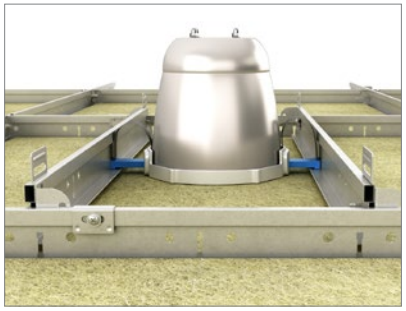
Bridging (Eliminate deflection)

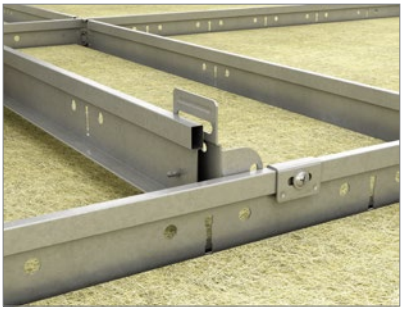
Perfectly optimized for our Rockfon Systems, the bridging bracket feature gives the means to secure your T profiles across a variety of panel thicknesses ranging anywhere from 0 mm (only relevant for our Chicago Metallic T24 Click 2890 or Chicago Metallic T24 Click 2790) to 20 mm.

Easy to install, the bracket is a versatile, non-combustible tool and can be used for service integrations with different dimensions without the need of a using a yoke.



To install the bridging function of the bracket, simply screw fasten the Wall & bridging bracket for T profiles to your main runners and cross tees, transferring the weight of your service integration to the grid. This ensures that no load rests on the tile, eliminating concerns of deflection.





General installation recommendations

Junction between ceiling and wall or other vertical surface

The perimeter trim should be fastened to vertical surfaces at the required level using appropriate fixings replace by every 300 mm centres. Ensure that butt joints between adjoining lengths of trim are neat and that the trim is free from kinks and remains true and level. For the best aesthetics, use as long a length of trim as possible. The minimum recommended cut length is 300 mm.

Timber trims, timber shadow battens and metal

Shadow mouldings should not be used with fire resisting/protecting ceilings.

Junction between ceiling and curved vertical surface

The use of a preformed curved perimeter trim is the most appropriate method. We can provide details of curved perimeter trims on request.

Corners

Perimeter trims should be neatly mitred at all corner joints. Overlap mitres are acceptable for metal trims on internal corner joints, unless specified otherwise.

Suspension grid

This system has to be installed in two levels. An upper and a lower level of main runners.

The hangers have to be secured to the upper mainrunners with a max. distance of 1200 mm and adjusted to the needed level. The upper mainrunners have to be mounted with a max. distance of 1800 mm to each other. The lower main runners will carry the load of the panels and have to be secured to the upper main runners with a DLC clip in every cross section between the lower and upper profiles. Panel with the X edge will be easy to install and they will be fully demountable in the system.

The upper main runners have to be secured to the wall with a suitable bracket. Every second lower main runner has to be secured to the wall as well. The distance profile has to be used for every second area as showed on the drawing on page 2.

To avoid the displacement of panels, a cross tee has to be used in the beginning and at the end of each row of panels. This cross tee has to be connected to the lower level of mainrunners. Furthermore, the cross tee has to be used for every fifth panel row. Each panel has to be secured by a wall spring for every 600 mm distance.

Tiles

It is recommended to use clean nitrile or PU coated gloves when mounting Rockfon tiles in order to avoid finger prints and pollution of the surface.

For an optimised work environment, we recommend installers always observe common work practices and follow the installation advice as shown on our packaging.

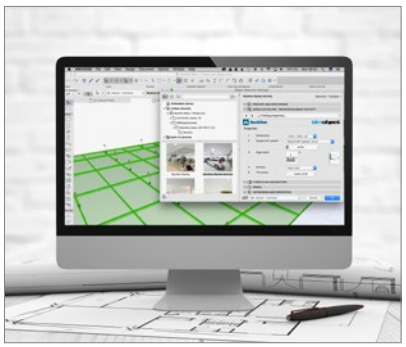
Cutting is made easily with a sharp knife. All offcuts and holes must be treated according to local Building Regulations.

The mounting of 1800 x 600 mm tiles is recommended to be done by two persons.

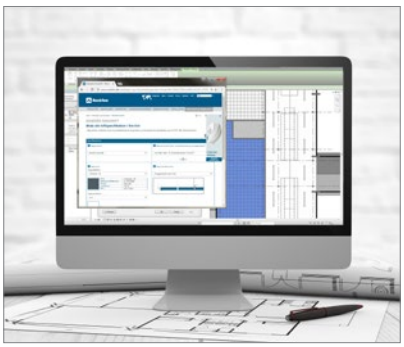
Note! Certain smooth matt surfaces are directional. To ensure consistency of the finished ceiling, it is important that all tiles are mounted in one direction, as indicated by the arrow printed on the back of each tile.

Tools

Rockfon has developed specific tools that are available on **cee.rockfon.international**



Visit our online CAD Library or BIM portal to assist you in your project design.



Generate specification texts for our products on our website.



Explore our vast library of reference projects on our website.

Sounds Beautiful

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