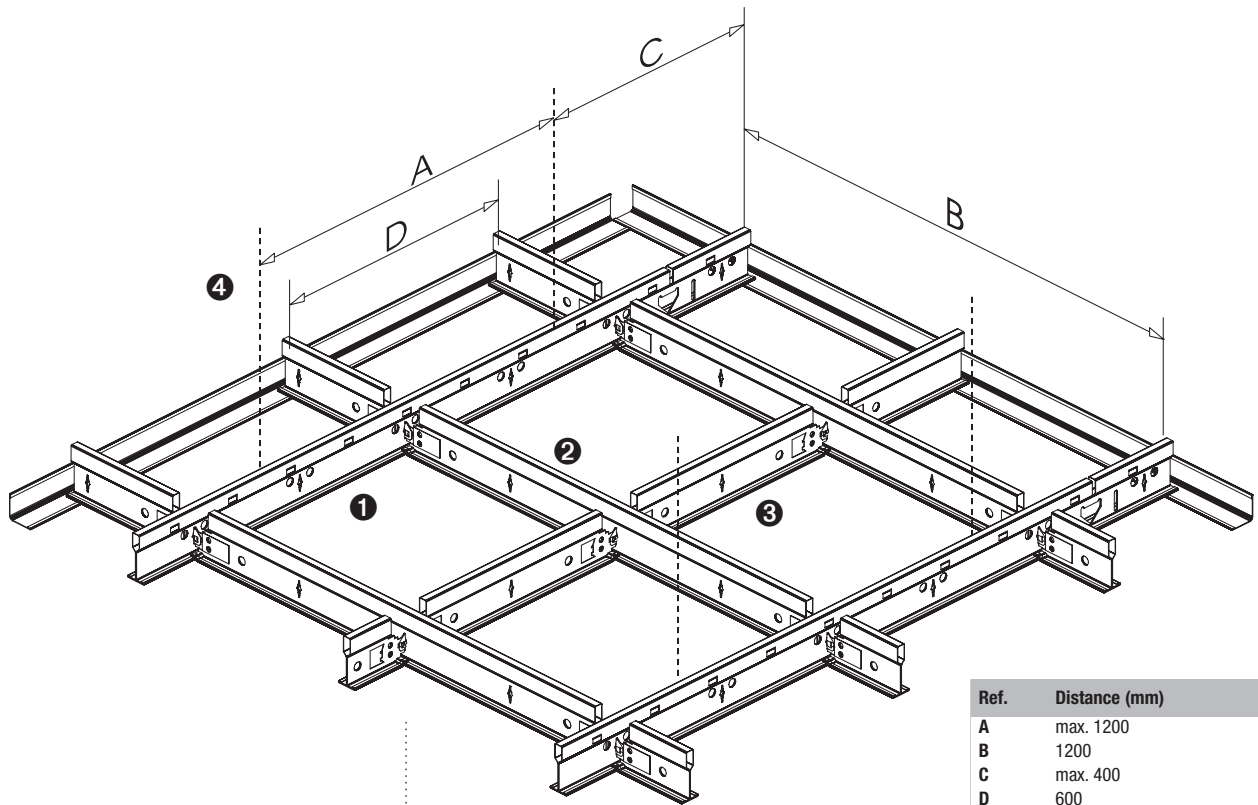


DONN® DX15



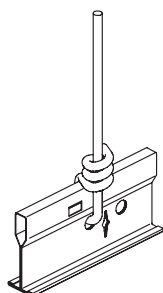
Ref.	Distance (mm)
A	max. 1200
B	1200
C	max. 400
D	600

System characteristics:

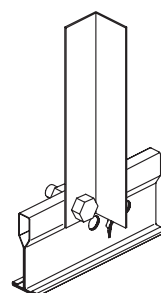
- Exposed 15mm system
- Narrow table grid for subtle visual effect
- Cross-tees with override-ends resist twisting and give professionally finished look with no exposed steel edges
- Patented QUICK-RELEASE™ clip design: easy to remove without tools
- Fast and simple to install and easily accessible
- Standard joggled (overriding) cross tee system
- Suitable for FLB edge and most "face cut design" ceiling tiles
- Designed for fire rated ceilings - see page 40
- Colour options available
- Alternative butt cut cross tee system available (DXB15 in RAL 9010 white) - the recommended system for metal tile applications

Material needed for DX15 grid construction (per m² ceiling)

Nr	Description	Item reference	Module	
			600 x 600	600 x 1200
1	Main Runner	DX15XH370	0.83 lin m	0.83 lin m
2	1200 Cross Tee	DX15TH120	1.67 lin m	1.67 lin m
3	600 Cross Tee	DX15TH60	0.83 lin m	
4	Hanger	DSW2	0.70 pieces	0.70 pieces



DX15 / Suspension wire - DSW2



DX15 / Angle section - DGA5

BS EN 13964:2004

Reaction to fire: A2-s1,d0

Corrosion class: Class B

For further information on EN 13964, see page 39.



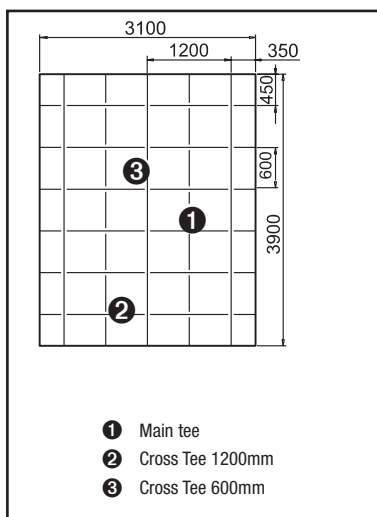
Installing a DONN[®] grid system

The appearance of a suspended acoustical ceiling is dependent both on the materials used and on the quality of the installation. USG manufactures components to meet BS 8290 & BS EN 13964, assuring that the material, structural and quality standards are as prescribed. Installation must meet BS8290, assuring proper level and secure attachment as prescribed. Good construction conditions are very important when successfully installing a suspended ceiling. It is recommended that the temperature and humidity range be 14 – 25°C and max. 75% relative humidity. Store materials in a protected area, store tiles on the job at least 3 days prior to installation.

Step 1

Measuring and planning are key first steps in the installation process.

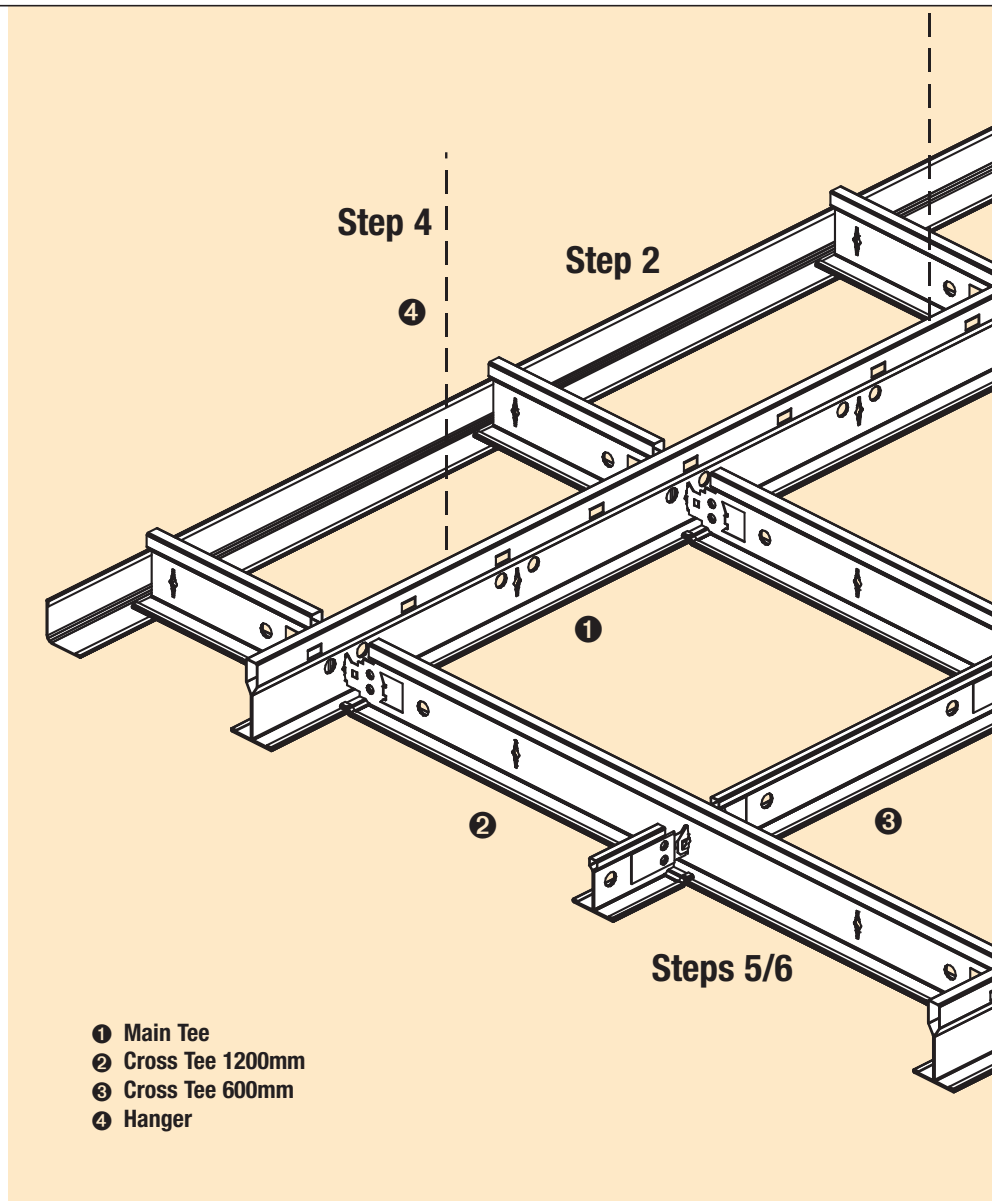
Measurement and placement of the tees will be on centre (o.c.), meaning from the centre of one to the centre of the next. Planning starts with a drawing of the room that shows all walls, including bays, alcoves beams and stairwells. Note which direction the joists (if any) are running, or if architectural drawings necessitate working in one direction or another. Determine the lines for main runners and cross tees in such a way that the tiles that abut the wall are at least half a tile (300mm).



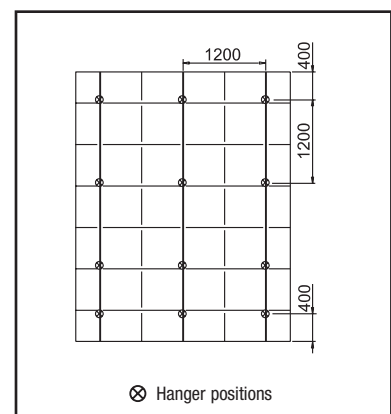
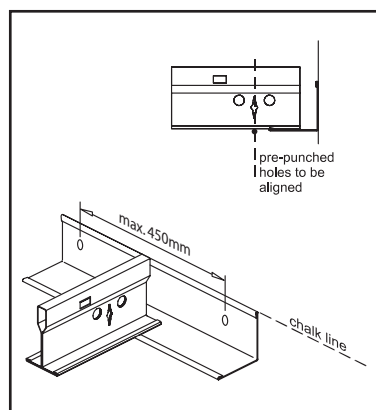
Step 2

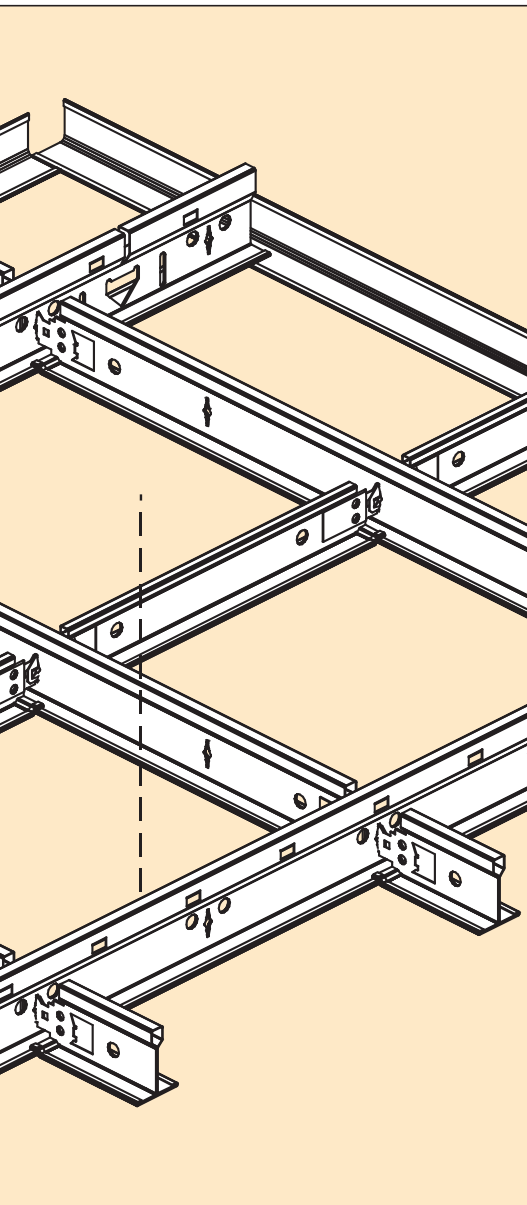
Mark the desired ceiling height (maintaining at least 70mm clearance below the lowest duct, pipe or beam.)

Measure and mark the walls at all corners above the installation level (=add the height of the wall angle to the desired ceiling height.) Snap a chalk line and test for level. Measuring down from joists or up from the floor is not recommended, since



neither may be level. Install wall angle with top edge of angle at the chalk line, spacing appropriate fixings 450mm o.c. or closer. Cut and mitre outside and inside angles at 45°, fitting them snugly together. Alternatively, simply butt angles at corner (as in system illustration).





Step 3

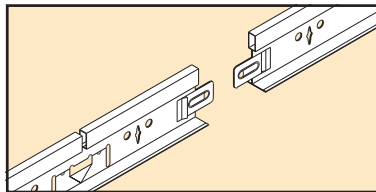
To confirm level, stretch a string until taut along the positions which the main tee will occupy.

Inserting a nail between the wall and the wall angle at marked locations serves as a good anchor for this purpose. Stretch another string across the room where the first row of cross tees will be located. This identifies where the first prepunched slots need to fall. Check to be sure the cross tee string is at 90° to the main tee string via the 3-4-5 method. Install the hangers at 1200mm o.c. above the lines of the main runners. Fix to the structure above using appropriate plugs, screws or other devices.

Step 4

Attach the main runners to the hangers.

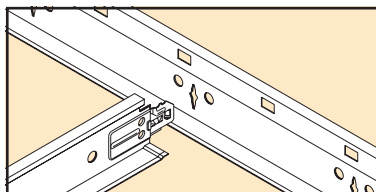
In each row, trim the main tee so that the cross-tee slot will line up with the cross-tee string. Mount main tees, resting the cut end of the main tee on the wall angle. The cut end of the main runner should be about 5mm away from the wall.



Step 5

Install cross tees, assuring that they are adequately connected to main tees (they "click" in place when properly seated).

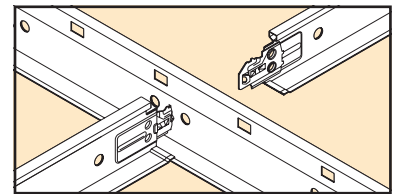
Where two cross tees intersect in the same slot, insert second cross-tee end to the left of the first. Where a cross-tee is installed without an opposing cross-tee, a nail should be slipped into the opening of the cross-tee clip to maintain the pull-out value for the cross-tee.



Step 6

Lay in panels, beginning at one corner and completing row by row.

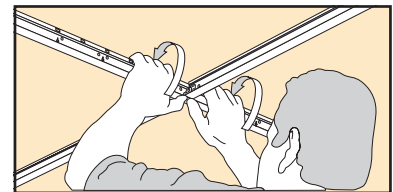
Tilt each panel up through the opening and lower it to rest squarely on all four tees.



Step 7

Removal as easy as installation.

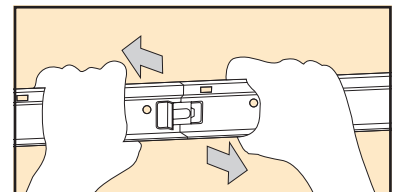
Just grasp the main tee with one thumb under the main tee-cross tee connection and, pushing up with the thumb, give the main tee a quick, short twist. That's all it takes – no tools needed. The strong clip means that the grid can be reinstalled straightaway with no tearing or bending of the clip.



Step 8

Main tee demounting

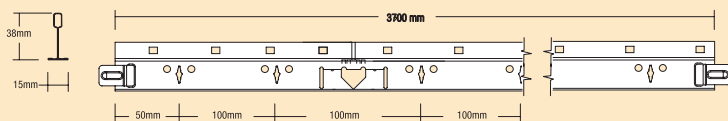
Using a straight shearing motion, push with your left hand and pull with your right hand to disconnect the main runner splice. Note: do not twist the splice during the removal procedure.



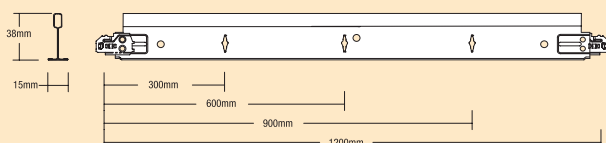
Other installation tips

- A** Cut tees with aviation snips, first the stem and then the flanges.
- B** Cut mineral fibre panels with utility knife and straight edge, cutting the face first. Cut panels should be at least 15mm larger than the opening.
- C** To install panels around obstructions, draw their exact locations on the panels and cut out. Then cut the panel in two parts through the largest section of the cut-out to enable fitting.
- D** To trim for Shadowline edge, use a utility knife to cut the panel, first at the face, then from the edge, to the same depth as Shadowline. If windows, stairwells, etc., extend above the ceiling plane, build suitable valances and attach wall angle.

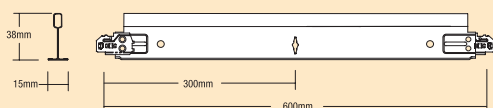
Main Runner DX15XH370



Long Cross Tee DX15TH120



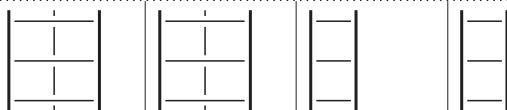
Short Cross Tee DX15TH60



Maximum allowed weight of tiles per m² of ceiling

▼ Hanger distance (mm)	Module			
	Main runner at 1200mm		Main runner at 600mm	
	600 x 600	600 x 1200	600 x 600	600 x 1200
800	24.0	24.2	-	-
1000	24.0	24.2	54.0	54.2
1200	12.4	12.5	25.5	25.7
1500	4.5	4.7	9.8	10.0

Note: The load per m² must be distributed uniformly (no point loads) over the ceiling area. After loading, the deflection of any grid component will remain within the maximum deflection per span as stated in BS: 8290: 1991, provided the grid layout is as presented in the sketch.



Please consult USG for other layouts, load or hanger distance.

Specification DONN DX15

Grid shall be DONN DX15 exposed grid system, hot dipped galvanised steel 'T' section with pre painted capping. Table width 15mm. To suit variable module sizes, most typically 600 x 600mm and 1200 x 600mm.

Main runners:

38 x 15mm, ref DX15XH370 shall be normally spaced at 1200mm centres and suspended from the structure or soffit using pre-straightened 2mm diameter HDG steel wire hangers, ref DSW2, at typically 1200mm centres. First hanger shall be no more than 450mm from the perimeter. Main runners joined end on by means of the integral splice. Splice connections shall be supported within 150mm with a hanger, and shall be staggered across the ceiling area.

Cross tees:

1200mm cross tees, 38 x 15mm ref DX15TH120, shall be installed perpendicular between the main runners at 600mm centres to form a 1200 x 600mm module. If applicable, 600mm cross tees, 38 x 15mm ref DX15TH60, shall be installed perpendicular between the 1200mm cross tees to form a 600 x 600mm module. All cross tees feature a 'joggled' end detail.

Perimeter trims:

29mm x 19mm painted HDG steel angle trim, ref MI 2919, fixed to perimeter wall using fixings

appropriate to the structure at maximum 450mm centres. Corners shall normally be finished with a lapped or butt joint.

Hangers:

Shall be from pre straightened 2mm diameter HDG steel wire, ref DSW2. Hangers shall be fixed through holes in stalk or bulb of main runner and wrapped around itself a minimum of 3 times. Alternatively, hangers can be formed from 25 x 25mm HDG steel angle section, ref DGA5, fixed to main runners using appropriate self drilling screws or nut and bolt fixings. Hangers shall be normally spaced at 1200mm centres although alternative spacings are acceptable provided maximum loadings stated above are not exceeded. Hangers to be fixed to structure or soffit using fixings appropriate to the structure or soffit.

Hold down clips:

Where applicable, these shall be non removable type clips, ref VB45. These generally will only be required in certain fire protecting assemblies or where there is a risk of tile uplift. Where fitted, these should be applied to all grid members at a rate of 1 clip per 600mm of tile edge.

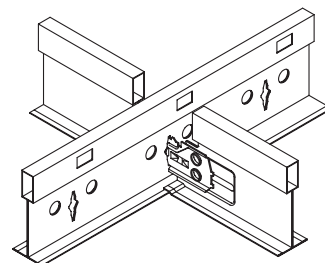
Tile edge supported



DX15 / FL

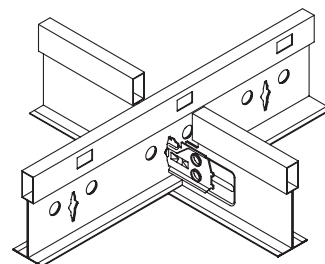
DX15 / FLB

Cross section (joggled)



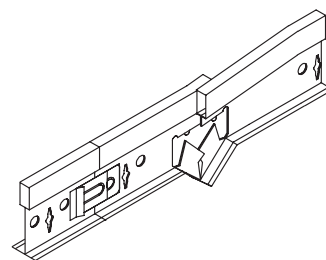
Main tee and cross tee connection.

Cross section (butt cut)



Main tee and cross tee connection.

Fire protection

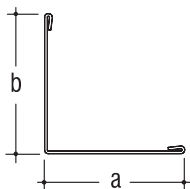


DX main tees are designed to expand at the fire lance in the event of a fire (shown here). This maintains the structural integrity of the ceiling and holds tiles in place.

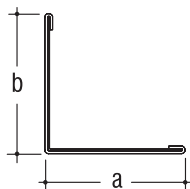
System components - perimeter trims

Perimeter options

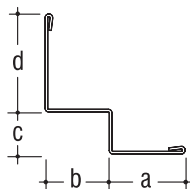
① MI



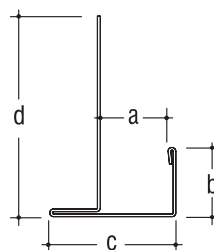
② MIA



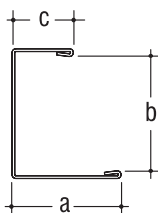
③ MS



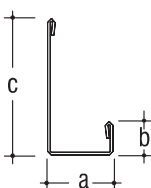
④ MF



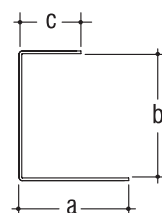
⑤ MUS



⑥ MJ



⑦ DCSF41X30X19



Dimensions in mm

Type	Item Ref	a	b	c	d	Thickness	Length	Colour*
①	MI1919	19	19	-	-	0.6	3000	Y
①	MI2020	20	20	-	-	0.5	3000	P
①	MI2919	29	19	-	-	0.6	3000	W, P, Y
①	MI5025	50	25	-	-	0.7	3000	W, Y
②	MIA3219	32	19	-	-	0.6	3000	L, A, M, Q, WK
③	MS11	19	9	9	19	0.6	3000	W, Y
③	MS12	20	12	20	20	0.7	3000	W
③	MS15	15	15	8	25	0.6	3000	Y
④	MF8	13	16	27	42	0.5	3000	W, Y
④	MF10	16	16	30	39	0.5	3000	W, Y
⑤	MUS22	38	19	19	-	0.5	3000	W, Y
⑤	MUS25	40	25	13	-	0.5	3000	Y
⑥	MJ14	14	7	29	-	0.5	3000	W, Y
⑦	DCSF41X30X19 ⁽¹⁾	30	41	19	-	0.5	3600	S

*Colour code: W = white; Y = 9010; A = aluminium; L = black; M = chrome; P = platinum; Q = bright gold; S = steel (no paint); WK = corrosion-protected.

⁽¹⁾ Measurements are nominal.

BS EN 13964:2004

Reaction to fire: A2-s1,d0

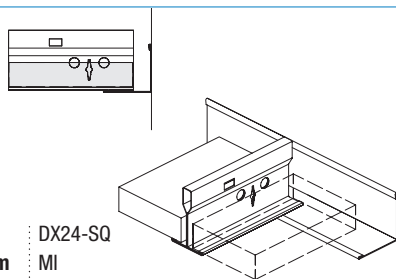
Corrosion class: Class B

For further information on EN 13964, see page 39.

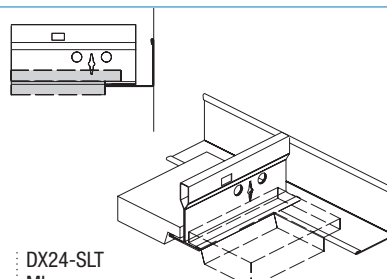


Perimeter application details

L-trim - typical applications of options ① ②

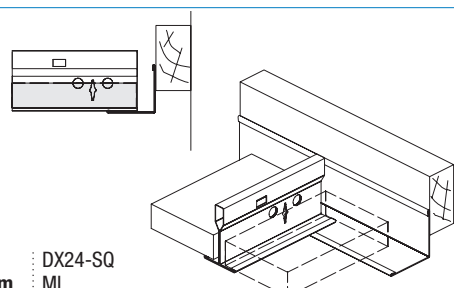


Grid-Edge DX24-SQ
Perimeter trim MI
Application L-trim Economic version
 Perimeter tile is square cut to sit into grid as per all other edges. L-trim Economic version before Perimeter

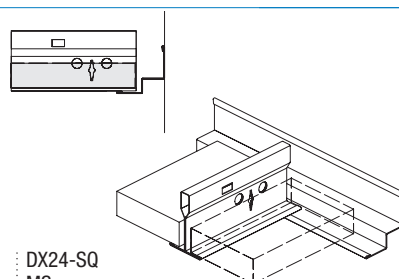


Grid-Edge DX24-SLT
Perimeter trim MI
Application L-trim Economic version
 Perimeter tile is cut with a rebated edge to offer full support on all 4 edges of the tile. Face of the tile will finish proud of the button face of the grid.

Shadowline trim - typical applications of option ③

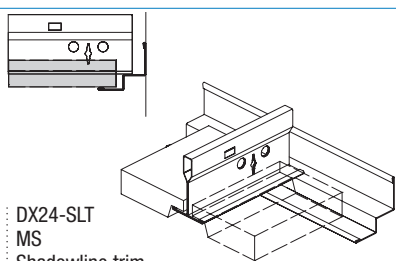


Grid-Edge DX24-SQ
Perimeter trim MI
Application L-trim Economic version
 Perimeter tile is square cut to sit into grid as per all other edges. Combination with a black painted wood lath. Look is nearly similar to a Shadowline trim.

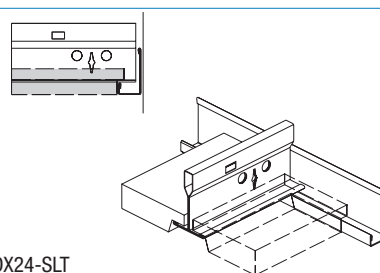


Grid-Edge DX24-SQ
Perimeter trim MS
Application Shadowline trim
 Perimeter tile is square cut to sit into grid as per all other edges. The grid and tile to be sited on the bottom flange of the Shadowline trim.

Shadowline trim - typical applications of option ④

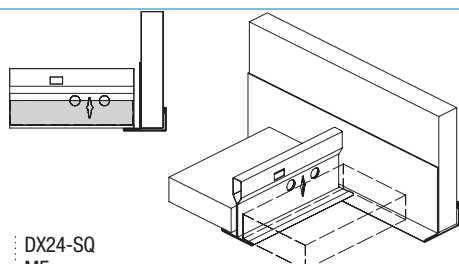


Grid-Edge DX24-SLT
Perimeter trim MS
Application Shadowline trim
 Perimeter tile is square cut. Cut edge to be sited on bottom flange of the Shadowline trim. Face of the tile will finish flush with the bottom face of the trim. The grid member will be sited on the upper horizontal flange of the Shadowline trim

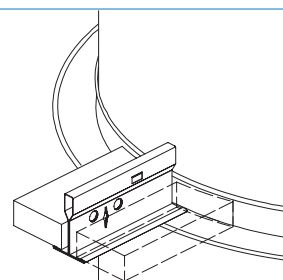


Grid-Edge DX24-SLT
Perimeter trim MJ
Application J-trim Economic version
 Perimeter tile is cut with a rebated edge as normal to offer a full support on all 4 edges. Face of the tile will finish level with the bottom face of the 'J' mould.

X-trim - typical applications of option ⑤



Grid-Edge DX24-SQ
Perimeter trim MF
Application Perimeter trim to create upstand trim section. Perimeter tile is square cut. Use plasterboard to do vertical ceiling. The grid and tile to be sited on the bottom flange of the trim.



Grid-Edge DX24-SQ
Perimeter trim Curved trim (not manufactured by USG)
Application Perimeter tile is square cut. The grid and tile to be sited on curved trim.

Application tips

- Perimeter trims must be fixed to the perimeter wall at max. 450mm centres.
- DX and tile must lay on 2/3 of perimeter trim
- Use thicker material (0.6mm to 1mm) if the wall is not levelled exactly.
- Use pan head screw to fix the perimeter trim - do not use gypsum screws.