Rockfon® Concealed Acoustical Ceiling Systems (CDX and SCD)

Installation Guide

Frameless wall system

- Enhanced design freedom using different shapes, angles and wall distances
- Perfect solution for room acoustic improvements
- A complete acoustic offering for open office solutions with standard Rockfon® Island™ panels
- Easy and quick installation

PRODUCT · WARRANTY · LIMITED
30 YEARS

System Overview

Description

Rockfon® CDX edge tile is a fully concealed system that provides an elegant, seamless ceiling. Rockfon SCD edge tile is a semi-concealed system that provides a more monolithic-looking ceiling than traditional reveal tiles, leaving a 1/4" reveal between tiles. Both systems provide 100% downward accessibility (unless penetrations exist). Rockfon CDX and SCD edges are available in white and Rockfon® Color-all™ options. Both tile options install in Chicago Metallic® 15/16" suspension systems.

Technical Data

Weight and Depth

Rockfon CDX and SCD tiles can be installed with a suspension minimum depth of 2.5".

Compatible Suspension Systems

Chicago Metallic® 200 15/16"
Chicago Metallic® 1200 15/16"

System Load-bearing Capacity

ALLOWABLE LOAD■ SIMPLE SPAN-lb/ft										
Hanger Spacing										
Main Tee	Length						4'	5'	6'	
216	10'						ID	6.0	4.0	
299	10'						ID	6.0	4.0	
211	12'						ID	6.0	4.0	
200	12'						HD	8.9	5.6	
250	12'						ID	6.0	4.0	
270	12'						HD	8.9	5.6	
200 HRC	12'						HD	8.9	5.6	
Cross Tee	Length	1'	20"	2'	30"	3'	4'	5'	6'	8'
251	1'	–								
257	20"		90.0▲							
229	2'			32.5▲						
252	2'			41.0▲						
1202	2'			22.8G▲						
1252	2'			40.5▲						
1252 HRC	2'			40.5▲						
258	30"				57.4					
253	3'					34.7				
254	4'						14.1			
209	4'						9.1			
1210	4'						9.3			
1214	4'						14.0			
1214SST	4'						14.0			
1254	4'						14.0			
1274	4'						17.0			
1280	4'						6.9			
1214 HRC	4'						14.0			
207	5'							8.5		
1207	5'							8.5		
1296	5'							7.0		
1236	6'								–	
278	8'									2.1
1278	8'									1.8

■ To convert data into lb/ft², divide on center spacing of component into lb/ft.
▲ Limited by safety factor of 2.
* Hanger wire required at midpoint of tee.

Installation Conditions

Temperature and Humidity

Rockfon ceiling tiles are non-hygroscopic and dimensionally stable, even at humidity levels of up to 100% RH. Since the humidity inside a building has no influence on Rockfon ceiling tiles, the ceiling can be installed at all temperatures ranging from 32°F to 104°F.

This also means that no acclimatisation is necessary and that it is possible to install Rockfon ceiling tiles during the very early stage of the build (when windows are not fully sealed) without risk of tile deflection.

Handling

It is recommended to use clean gloves with a non-marking rubber/latex coating or polyethylene gloves when handling Rockfon tiles to avoid contamination. For tiles larger than 4', it is recommended that two installers handle the tiles when moving or installing into the ceiling plane. A single installer may lift the panel unevenly and cause damage. The tiles are easy to cut with a sharp knife.
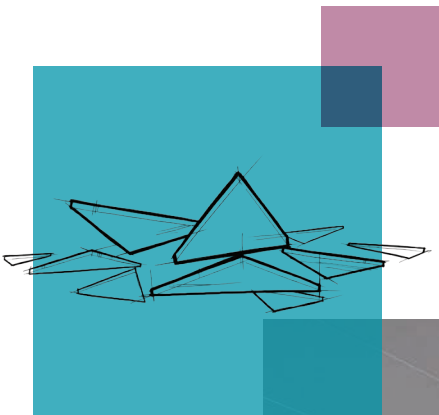
Project – Københavns University Amager in Copenhagen, Denmark
Product – Rockfon Sonar® CDX

1. Suspension System Installation

All suspension must be installed per ASTM C636 and special attention should be given to the squareness of the system. Unlike lay-in ceiling tiles, concealed tiles are more sensitive to a system being out of square. It is recommended that a system be square within 1/16" over an 8' diagonal. Failure to have a square system will create a poor aesthetic with misalignment in the corners and difficulty in fitting the tiles. It is also recommended that small perimeter tiles less than 1/3 of a tile's width be avoided. This becomes more problematic for large tiles over 4' in length. For 2' x 2' and 2' x 4' installations, main runners are spaced at the industry standard of 4'; however, for plank tiles (20" x 5', 2' x 5', 2' x 6' and 2' x 8'), main runners are spaced at the distance of the long edge of the tiles. Hanger wires at the midpoint of the 5', 6', 8' cross tees along with spacer bars are required for seismic installations and are recommended for non-seismic.

Grid

— 200: Main Runners

— 1210: 4' Cross Tees

— 1202: 2' Cross Tee

O Hanger Wires

2' x 4' Layout   2' x 2' Layout

4'
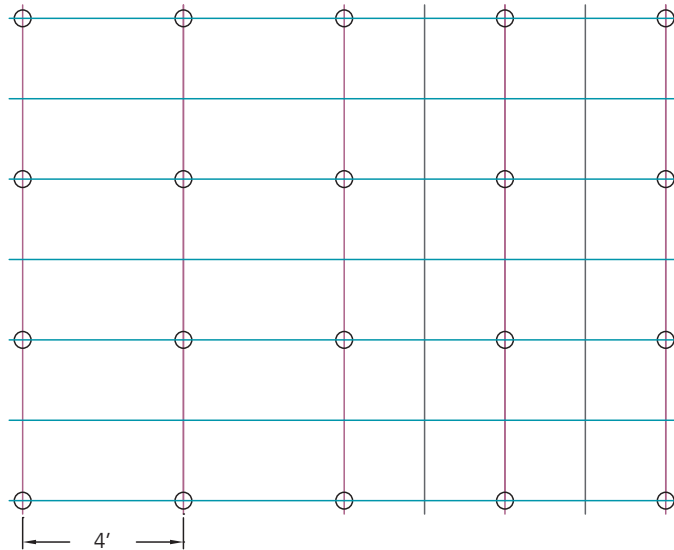
Grid

— 200: Main Runners

— Cross Tees:

   1278: 8' Cross Tee

   1236: 6' Cross Tee

   1296: 5' Cross Tee

— 824.00H Spacer Bar

O Hanger Wires

Long Panel Edge
(8' Module Shown)
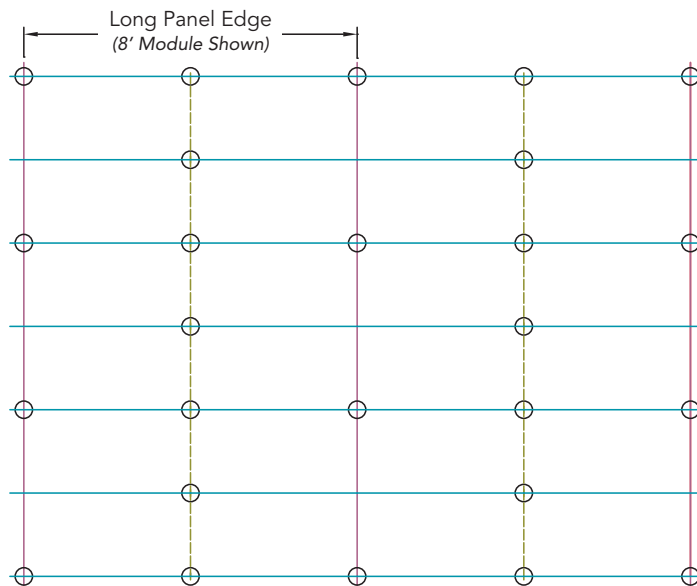
2. Tile Edge Orientation

Rockfon concealed tiles have a patented construction that makes them like no other tile in the industry, with two supporting edges and two non-supporting edges. The supporting edges are always the longer sides of the tiles.

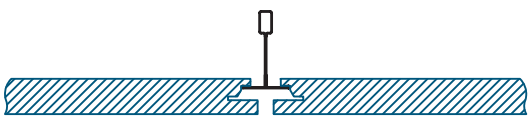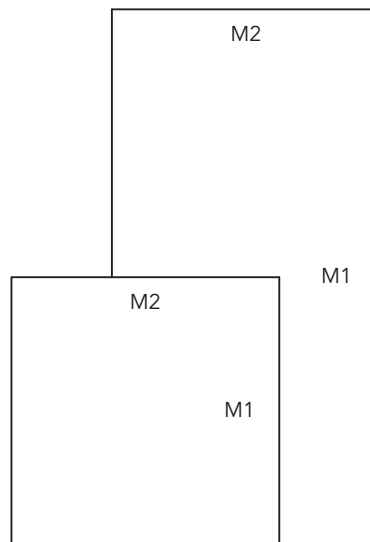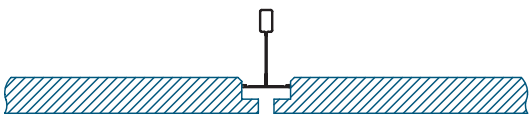## CDX Fully Concealed

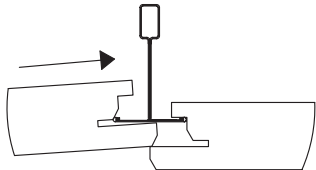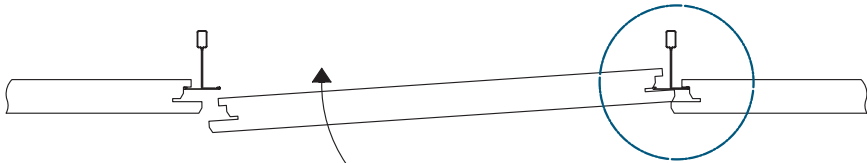X1: Supporting Edge
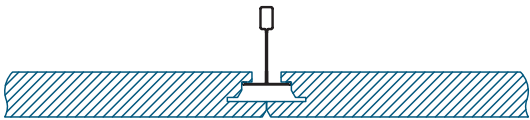
X2: Non-supporting Edge
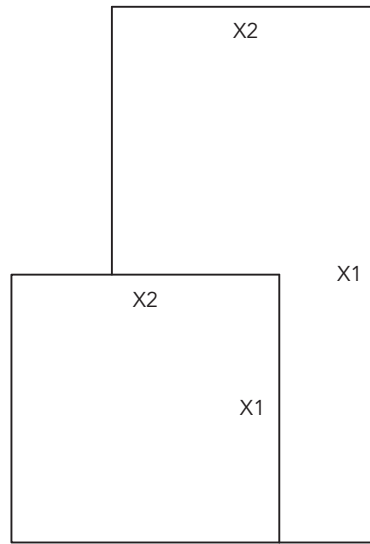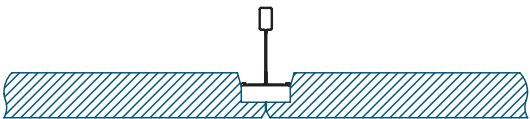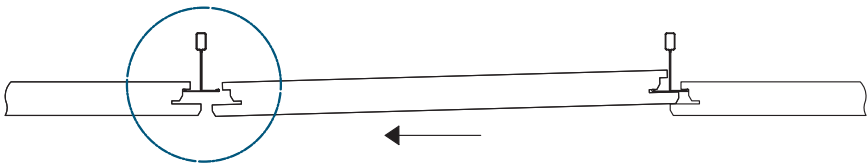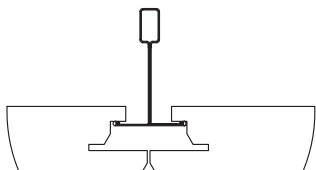
SCD Semi-concealed

M1: Supporting Edge
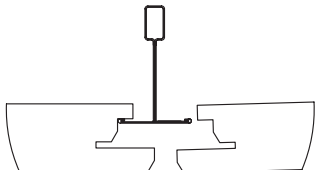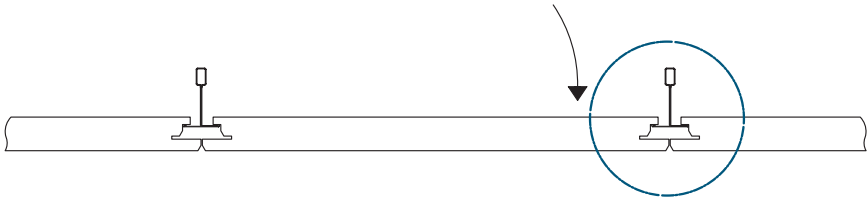
M2: Non-supporting Edge

3. Tile Installation

Follow the steps below to install Rockfon concealed tiles.
Shown with a fully concealed CDX tile, the procedure is the same
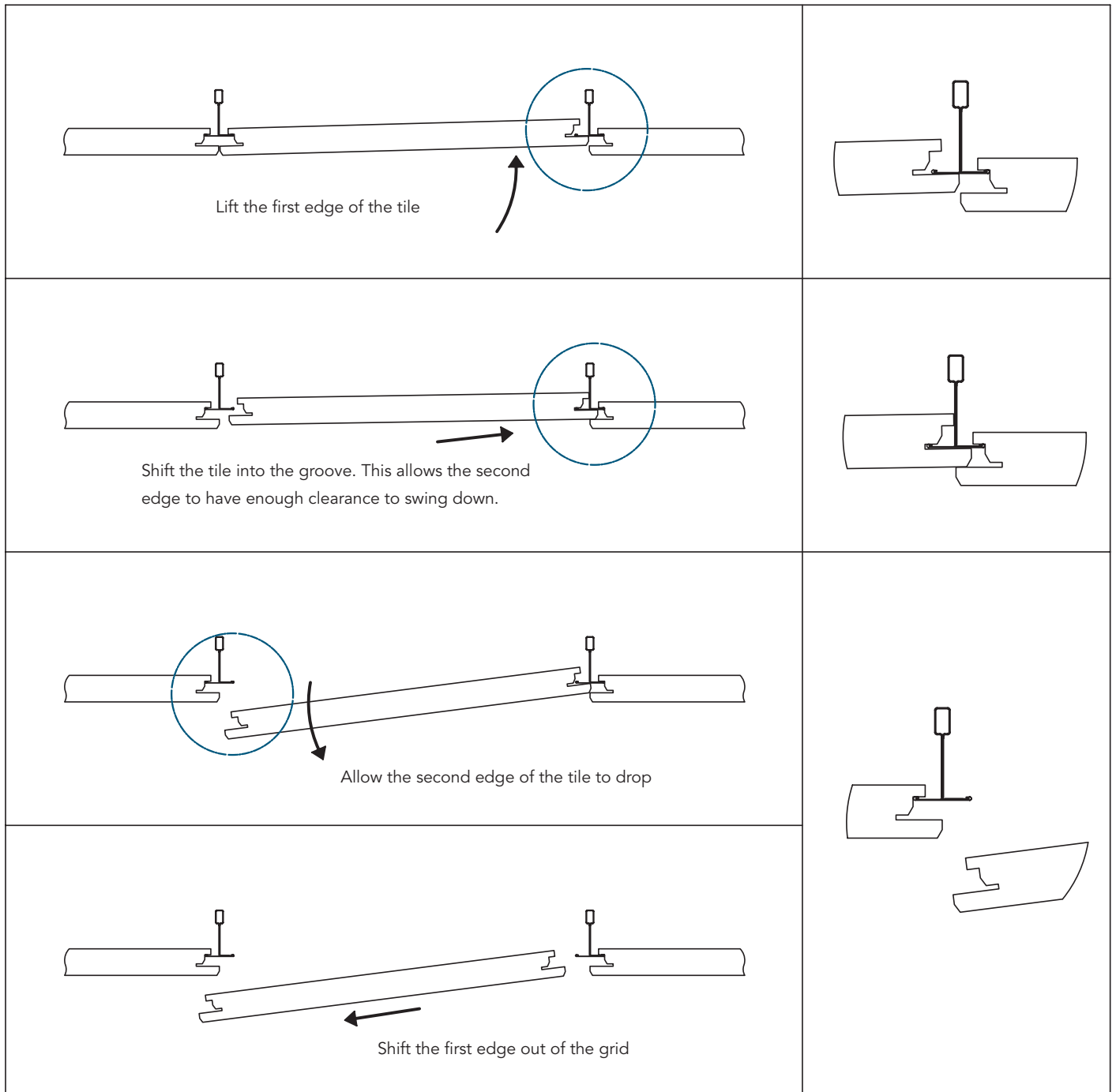for the semi-concealed SCD tile option.

Image Details

Insert the lower edge of the tile into the gap below the grid. Ensure this edge is fully above the tile edge already installed in the ceiling. Shift the tile toward the grid.

Lift the second edge of the tile into the ceiling plane

Shift the tile towards the second edge

The tile will drop, concealing both grid members.

4. Tile Removal

Follow the steps below to remove a concealed
Rockfon tile.

Image Details

Lift the first edge of the tile

Shift the tile into the groove. This allows the second
edge to have enough clearance to swing down.

Allow the second edge of the tile to drop
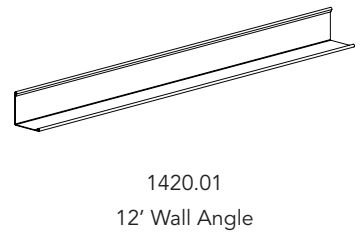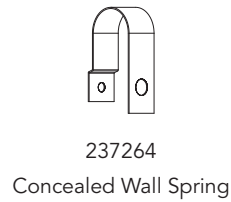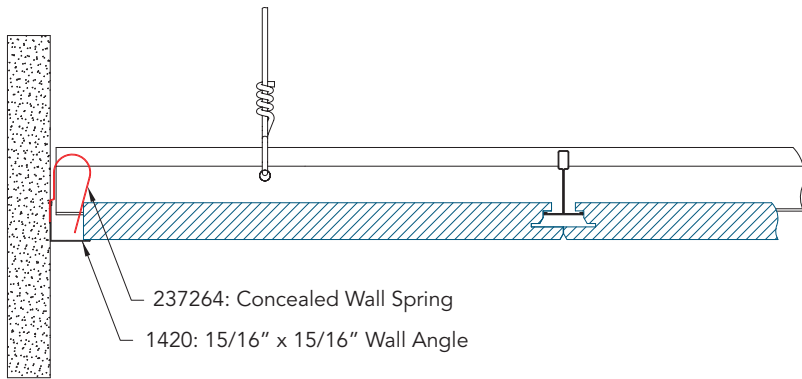
Shift the first edge out of the grid

5. Perimeter Options

When using Rockfon concealed and semi-concealed tiles, there are several different ways to finish the perimeter. The grid can be spaced above the perimeter trim with the suspension or by using the 478 perimeter clip. Or simply place the grid on the 1420 wall angle to create a reveal around the room, or choose the 1454 box molding for a flush finish. All details below are shown with CDX panels, but SCD panels integrate with these same perimeter details.
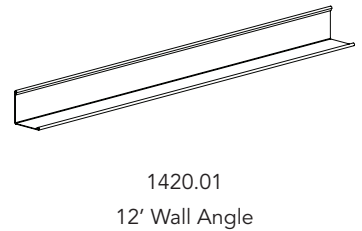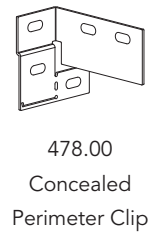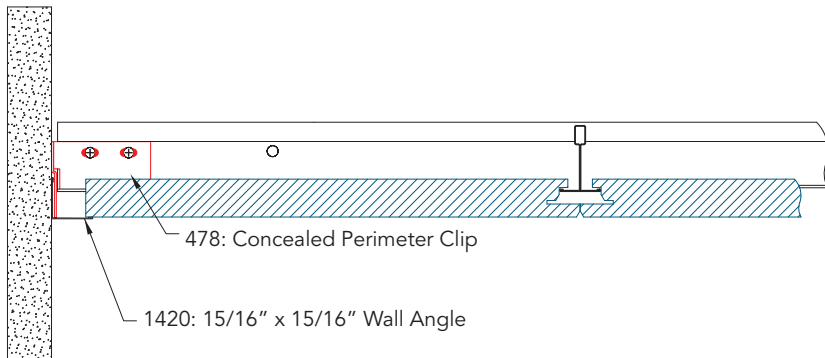
Detail A

Suspension spaced above the 1420 wall angle with the hanger wire controling the gap for the tiles. Shown with optional concealed perimeter spring.

237264: Concealed Wall Spring

1420: 15/16" x 15/16" Wall Angle

237264
Concealed Wall Spring

1420.01
12' Wall Angle

Detail B

Suspension spaced above the 1420 wall angle with the 478 concealed perimeter clip, also compatible with optional concealed perimeter spring.

478: Concealed Perimeter Clip

1420: 15/16" x 15/16" Wall Angle

478.00
Concealed
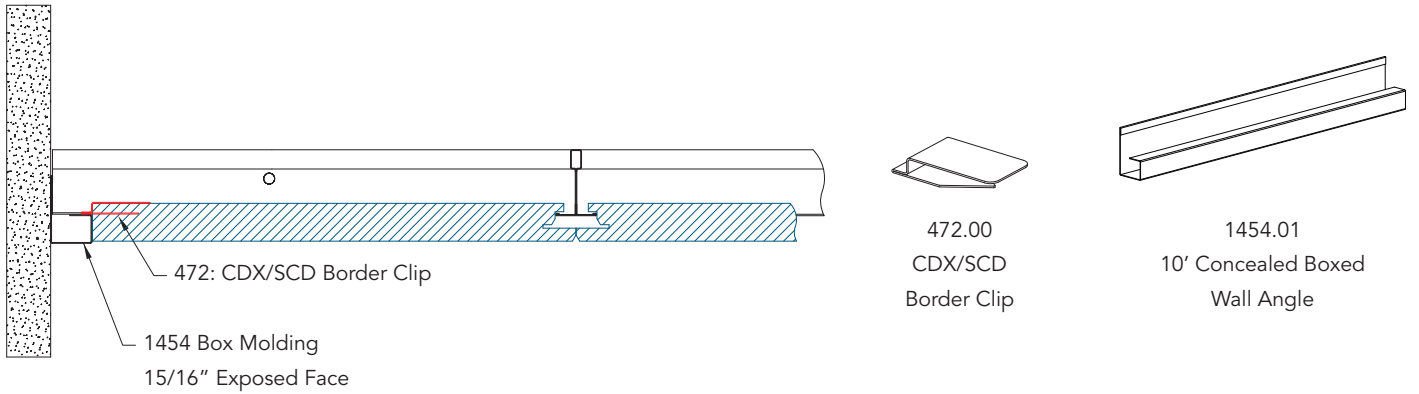Perimeter Clip

1420.01
12' Wall Angle

Detail C

Suspension installed onto the 1420 wall angle. Recreate the supporting edge of the tile with the 472 CDX/SCD border clip. Install one 472 CDX/SCD border clip per foot of tile edge. This installation creates a reveal around the edge of the room.

472: CDX/SCD Border Clip

1420: 15/16" x 15/16" Wall Angle

472.00
CDX/SCD
Border Clip

1420.01
12' Wall Angle
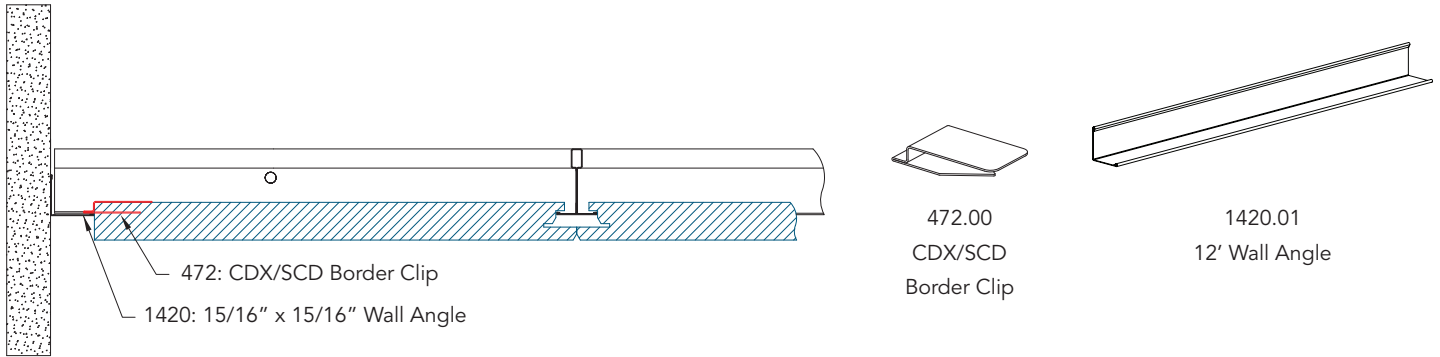
Detail D

Suspension installed onto the 1454 box molding. Recreate the supporting edge of the tile with the 472 CDX/SCD border clip. Install one 472 CDX/SCD border clip per foot of tile edge. This installation detail is similar to the look above but creates a smooth flush finish around the edge of the room.
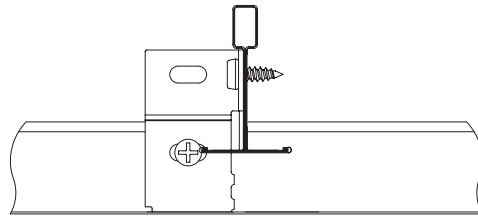

472: CDX/SCD Border Clip

1454 Box Molding
15/16" Exposed Face

472.00
CDX/SCD
Border Clip

1454.01
10' Concealed Boxed
Wall Angle

6. Accessories

478.00 Concealed Perimeter Clip

The 478 concealed perimeter clip is designed to work with both the fully-concealed CDX tiles as well as the semi-concealed SCD tiles.
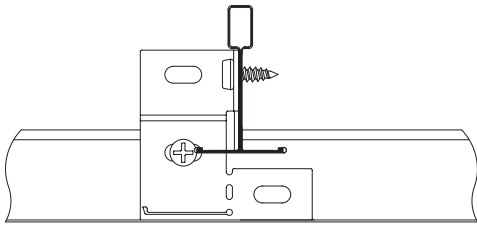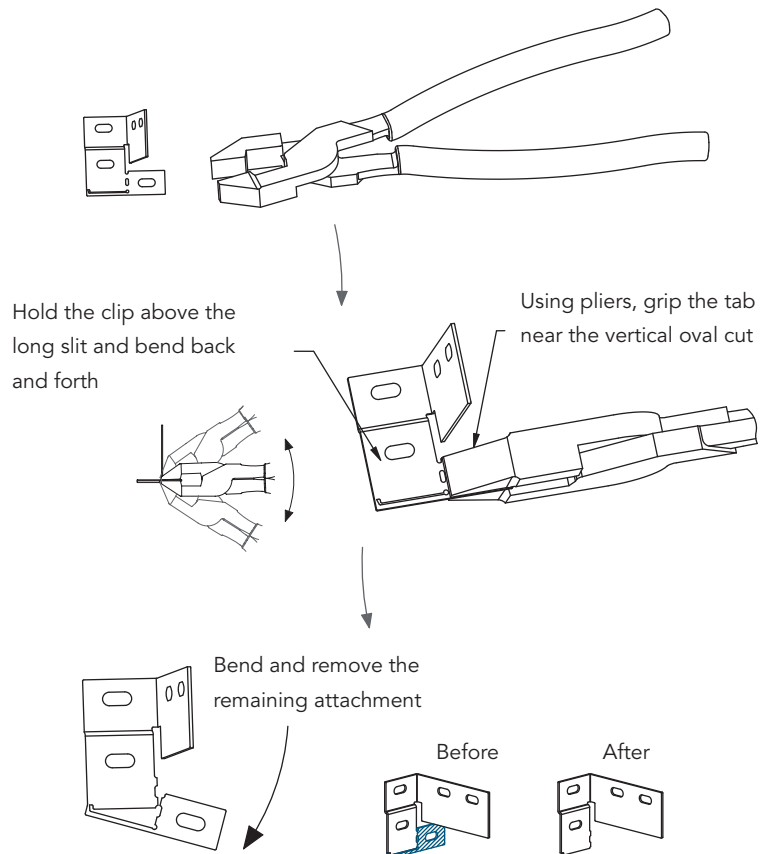
Use full clip for CDX installation

Break off tab for SCD installation

## 478 Concealed Perimeter Clip for Semi-concealed SCD Tiles

Follow the steps below to break the tab for SCD installation.

Hold the clip above the long slit and bend back and forth

Using pliers, grip the tab near the vertical oval cut

Bend and remove the remaining attachment

Before

After

Top surface

Piercing feature

472 CDX/SCD Border Clip

The 472 CDX/SCD border clip is used at the perimeter when the X1 or M1 supporting edge of the tile has been cut off, the border clip recreates this missing supporting feature.

The clip is designed with an upper blunt edge and a lower pointed portion for piercing the edge of the panels.

4"

4"

Cut edge

Line up top edge of 472 with back surface of panel

Insert clip fully
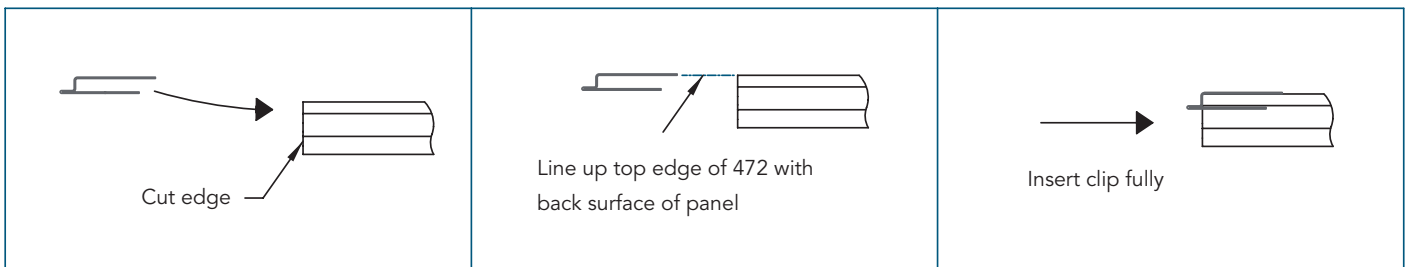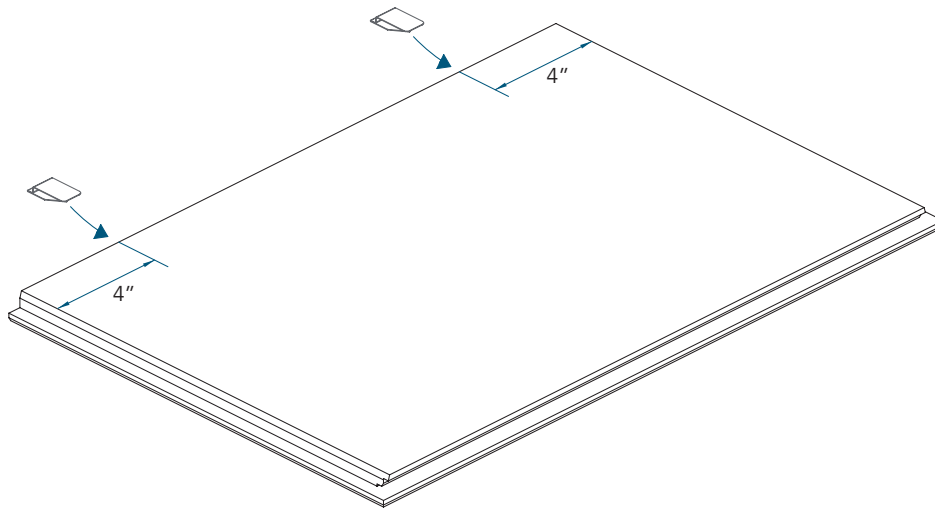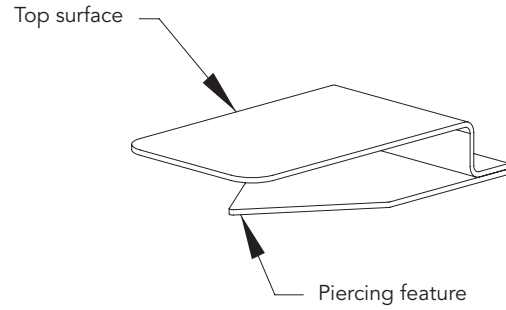
237264 Concealed Wall Spring

The concealed wall spring is a useful accessory when installing the tiles above the wall enclosure as shown in perimeter details on page 7 of this document. The wall spring is not required but if not utilized, shimming may be necessary. If installing details C or D where the 472 CDX/SCD border clips are utilized, neither the wall spring or shimming is necessary. The concealed wall spring installs one of two ways: either slip it behind the wall angle, or, for a more secure installation, screw attach it using a #7 sharp point through the holes provided to the wall. The detail shown in section 4 outlines the installation when the wall is parallel to the supporting edges of the tiles (X1). Follow the steps below to install tiles where the supporting edges are perpendicular to the wall. This detail is for fully-concealed CDX tiles only.
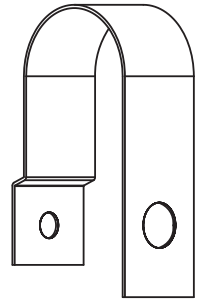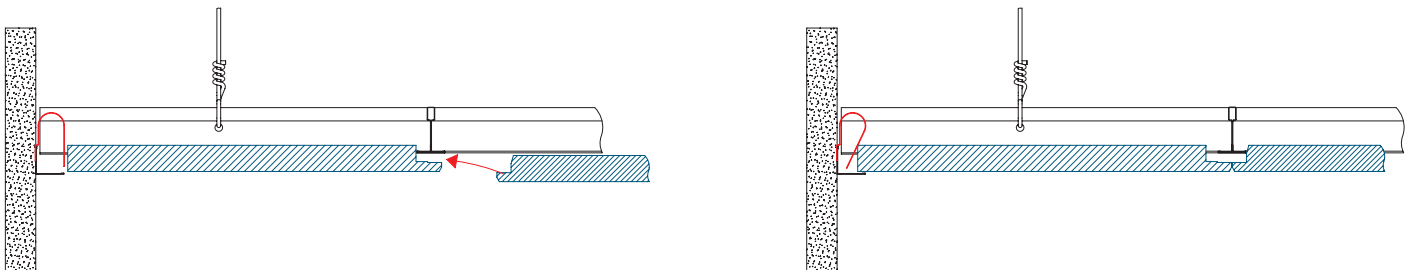
237264

Cut the perimeter tile 3/8" shorter than the dimension from the wall to the centerline of the grid. Reveal the back surface 3/8" as shown below. Install the tile as shown in section 3.

3/8"

1420: 15/16" x 15/16" Wall Angle
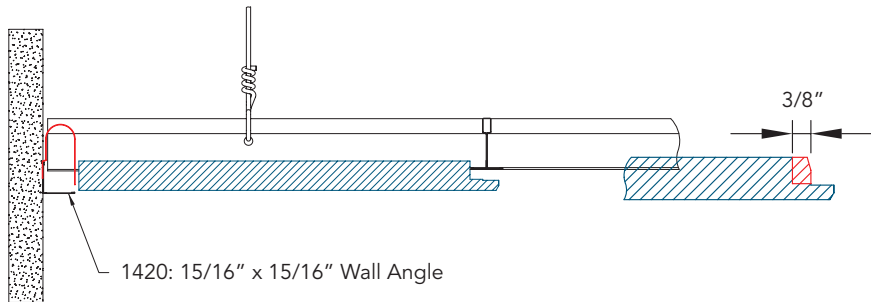
Install the field tile next to the perimeter tile, the edge of the field tile will push the perimeter tile toward the wall, creating a clean installation.

490 Hold Down Clip

Use of the 490 hold down clip does not limit accessibility of the system. Always install the hold down clips on cross tees and on the X1 or M1 supporting edge. Installing the 490 clips on the non-supporting edge will create panel lipping and poor aesthetics on the finished ceiling. The 490 hold down clips install quickly and easily by pushing the clips over the bulb of the grid.

490 Hold down installed on X1 or M1: Supporting edges
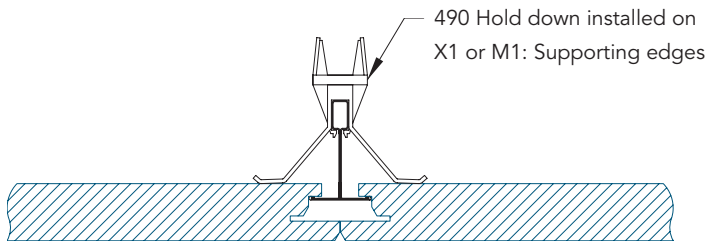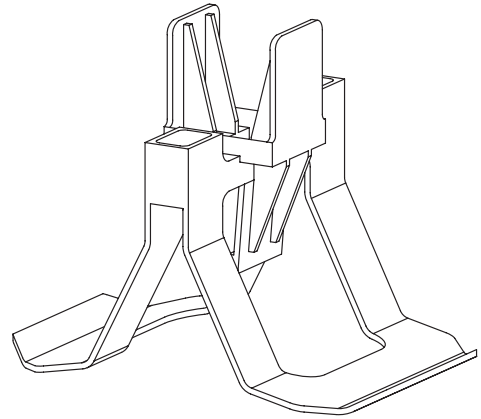
Hold Down Requirements

| Panel size	Location
2' x 2'	Centered on X1 or M1 edge
2' x 4'	Centered on X1 or M1 edge
20" x 5'	1' from X2 or M2 edge
2' x 5'	1' from X2 or M2 edge
2' x 6'	18" from X2 or M2 edge
2' x 8'	2' from X2 or M2 edge
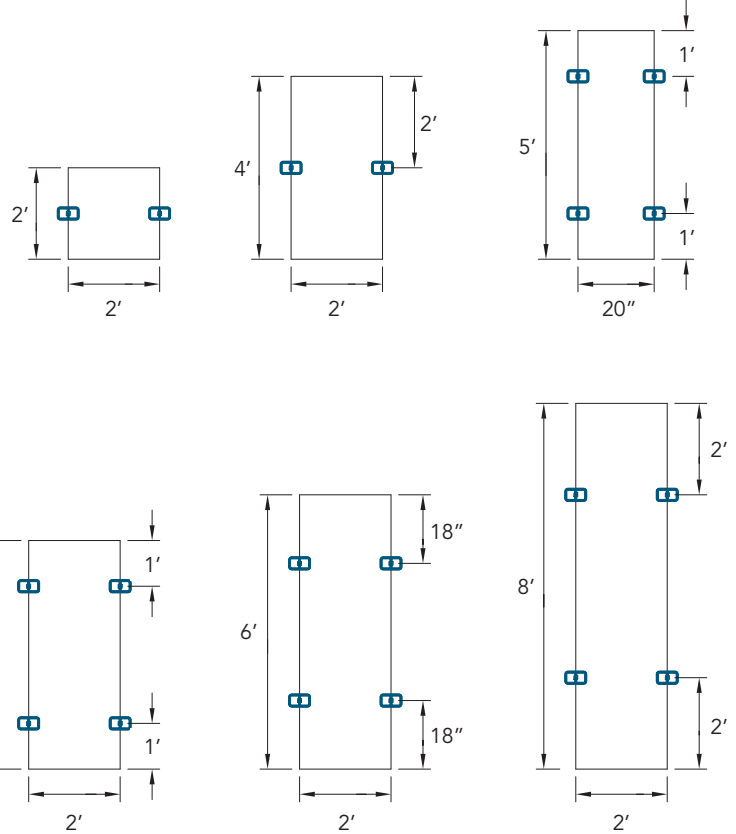
Rockfon® Infinity™ Trim

Concealed Infinity trim is available that integrates with either fully-concealed CDX or semi-concealed SCD. While laying out your ceiling or cloud, it is best practice to integrate full, uncut tiles with the Infinity trim. This also creates the best aesthetic. If the tiles need to be trimmed, use of the 472 CDX/SCD border clip will recreate the necessary supporting feature; however, the back surface of the tile may require a reverse reveal to achieve the desired look.
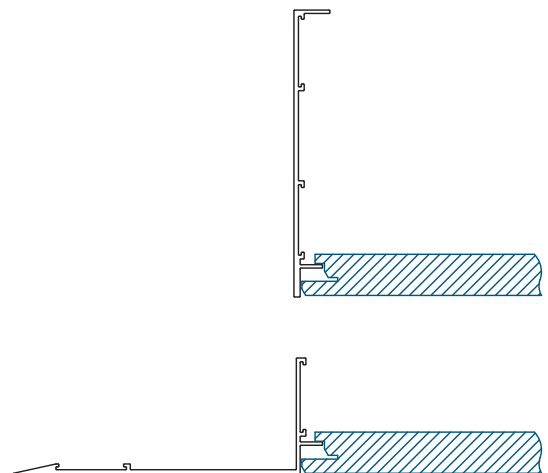
When installing full tiles with the concealed trims, the tiles are always installed toward the grid then shifted back toward the trim
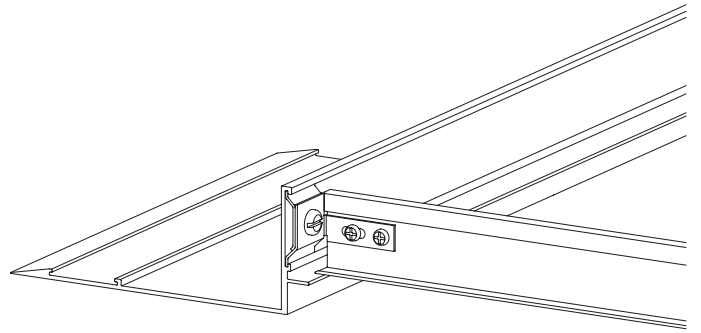
SCD Integration
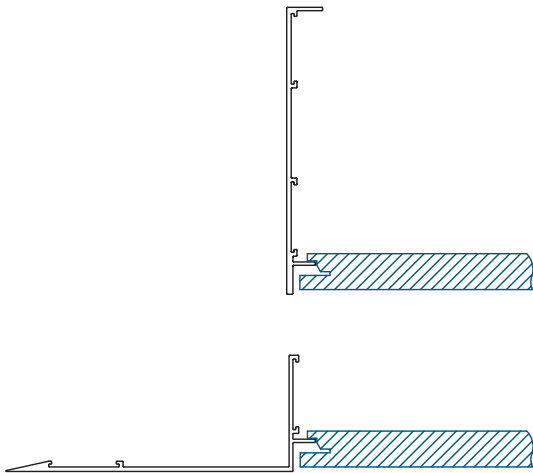
CDX Integration

7. Service Integration

The preferred lights for CDX and SCD lights are pendent lights, or flange style light fixtures, that can be independently supported from the above structure. If lights integrate within a tile, the tile will not be an accessible tile and careful planning should be taken. Contact Rockfon Technical Service at 800-323-7164 for support in light fixture integrations.

A variety of service installations and lights can be easily integrated into this system.

Service installations should not be supported on the ceiling tile alone. Service loads should always be adequately spread on the back of the tile or transferred to the grid system using appropriate support arms or yokes. Alternatively, the service should be independently installed.

Integrated service installations may require additional support, depending on the unit weight, tile module size and the object's position in the grid system. Rockfon Technical Services can always be contacted for advice.

The yoke/patress should be the same length as the back of the Rockfon tile measured in the support direction and be minimum 3/4" x 6" wider than the hole required for the service installation. This applies to integrated service installations with diameters up to 13.5".
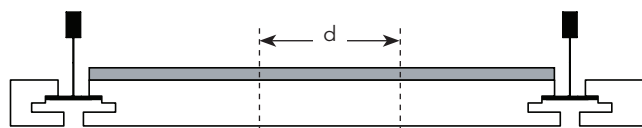
Tile Sizes 2' x 2' and 2' x 4'
For diameters greater than 13.5", the yoke should fill the entire back of the Rockfon tile.
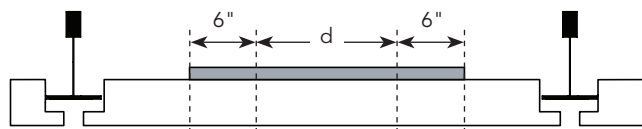
Total weight of tile, patress and service item should not exceed 13.2 lbs.
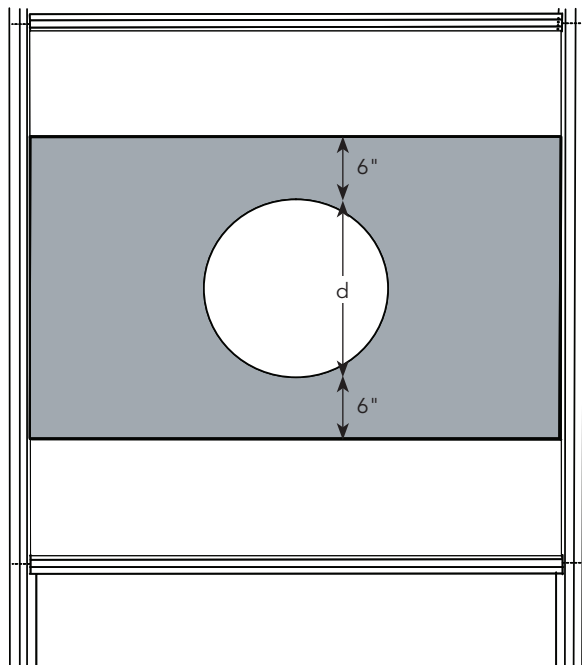
8. Trim Kits for Light Fixtures

The desired look is achieved when mechanical services are chosen to complement the high-end aesthetic of Rockfon CDX and Rockfon SCD concealed tiles. When a lay-in light fixture must be utilized, Rockfon supplies a light trim kit for CDX and SCD. Installation is easy and the open edges of the tiles are closed off, giving a clean, finished look. Trims are available in 2' and 4' pre-mitered lengths and straight cut 12' sections. For custom lengths, contact Technical Service.

Nema Type G
Lay-in fixture
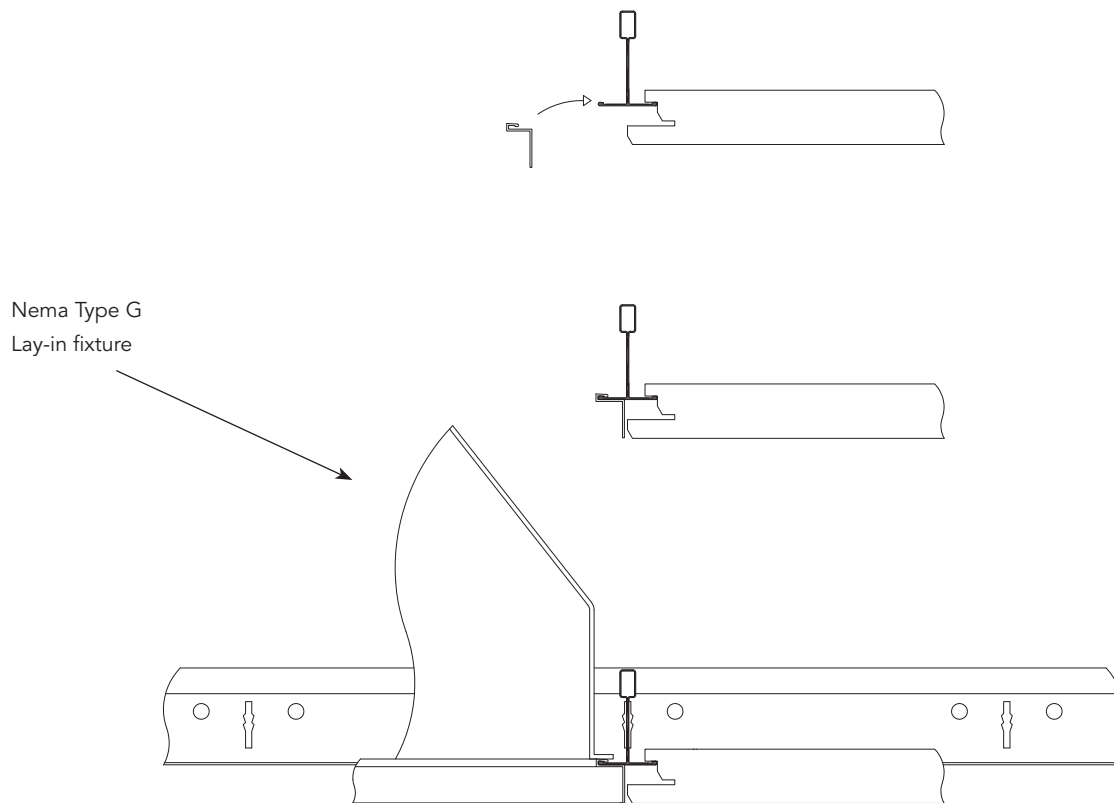
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