Autex Acoustics®

Frontier Installation Instructions

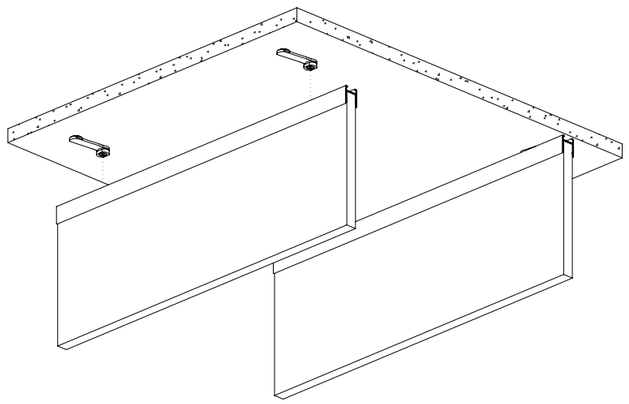
Install Instructions | Ceiling Fixing Method

US Patent 10,113,312

THE FIRST CONSIDERATION TO MAKE WHEN SPECIFYING A FRONTIER SYSTEM IS THE INSTALLATION METHOD.

1. DIRECT FIXED TO CEILING

SEE PAGE 2

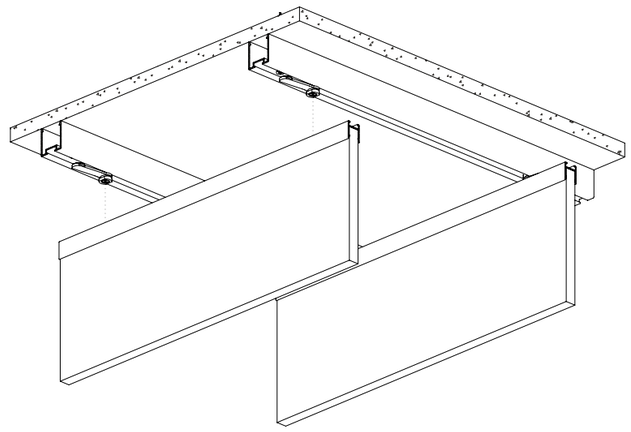


PACK INCLUDES
Autex Mounting Clips
Autex Frontier Extrusions
Autex Frontier Fins/Rafts

NOT SUPPLIED
Fasteners (to substrate)

2. DIRECT FIXED TO RAILS

SEE PAGE 3



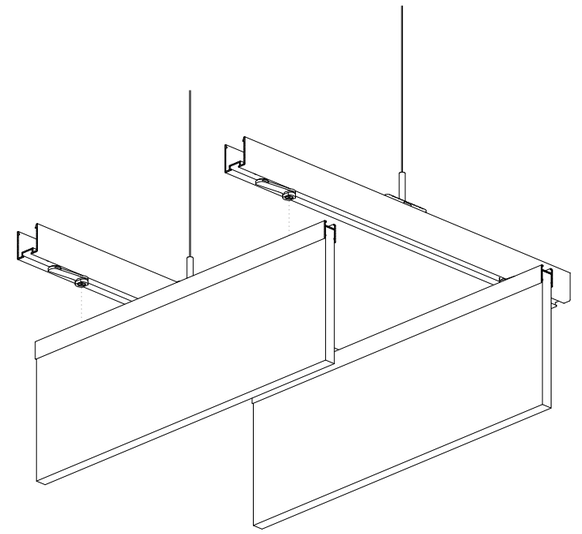
PACK INCLUDES
Autex Mounting Clips
Autex Frontier Extrusions
Autex Frontier Fins/Rafts

ADDITIONAL COMPONENTS REQUIRED
Autex Frontier Cross Rails x2

NOT SUPPLIED
Fasteners (to substrate)

3. SUSPENDED RAILS

SEE PAGE 5



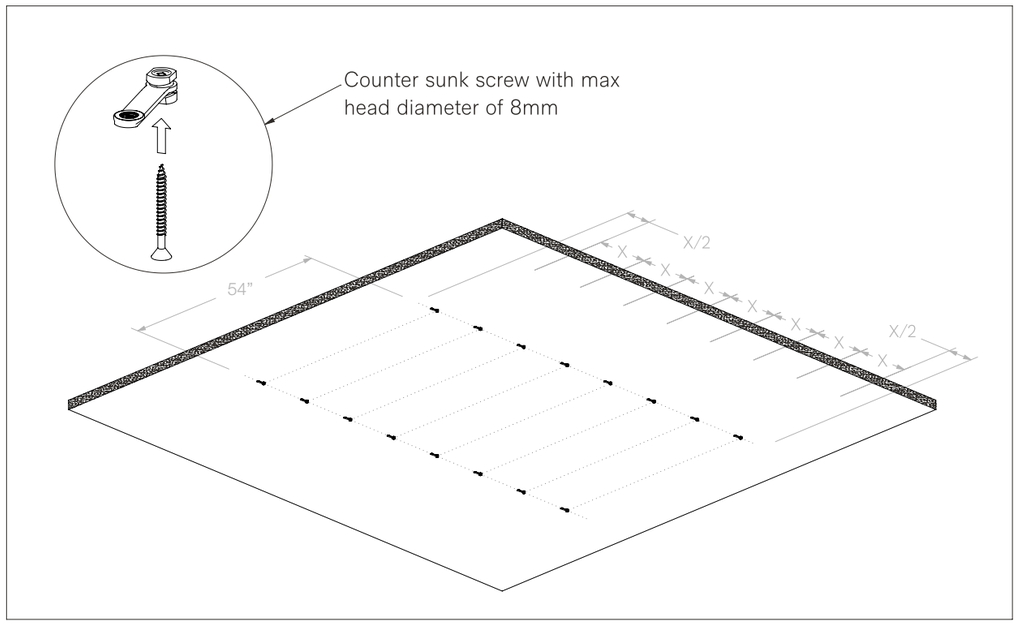
PACK INCLUDES
Autex Mounting Clips
Autex Frontier Extrusions
Autex Frontier Fins/Rafts

ADDITIONAL COMPONENTS REQUIRED
Autex Frontier Cross Rails x2
Autex W-Clips

NOT SUPPLIED
Fasteners (to substrate)
Wire or Threaded Rod

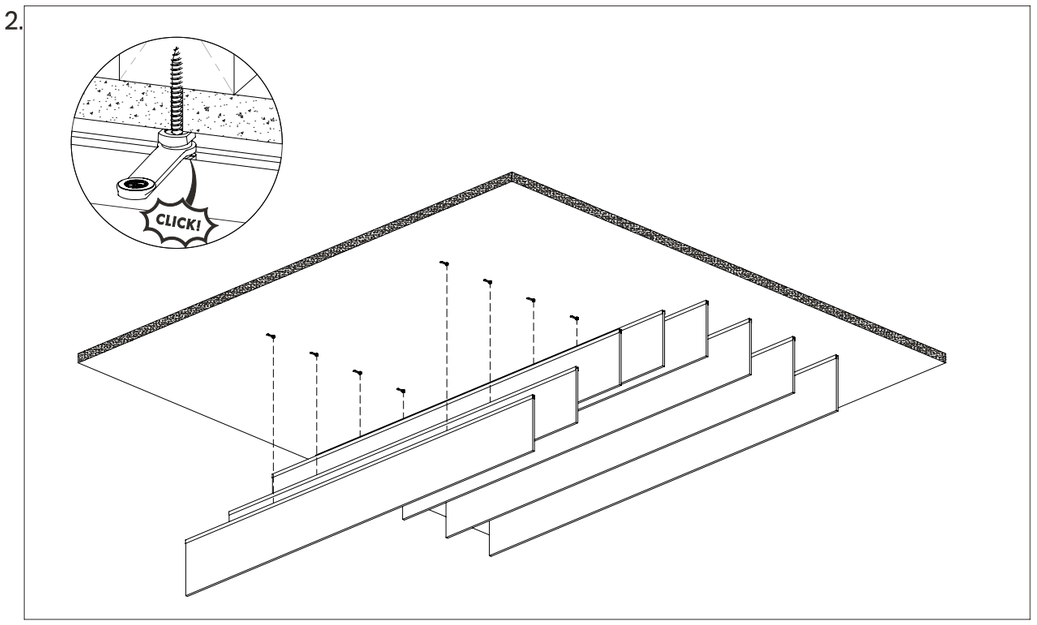
For suspended installations it is strongly recommended to consult a building engineer for seismic considerations. See Page 8 for suggested details.
For all installations in sprinklered buildings, consult a fire engineer to ensure the intended position of the Frontier Fins/Rafts meet sprinkler and alarm standards.
Further detail on the fire standards can be found in the supplemental document "Fire Considerations for Autex Frontier Acoustic Fins".

1.



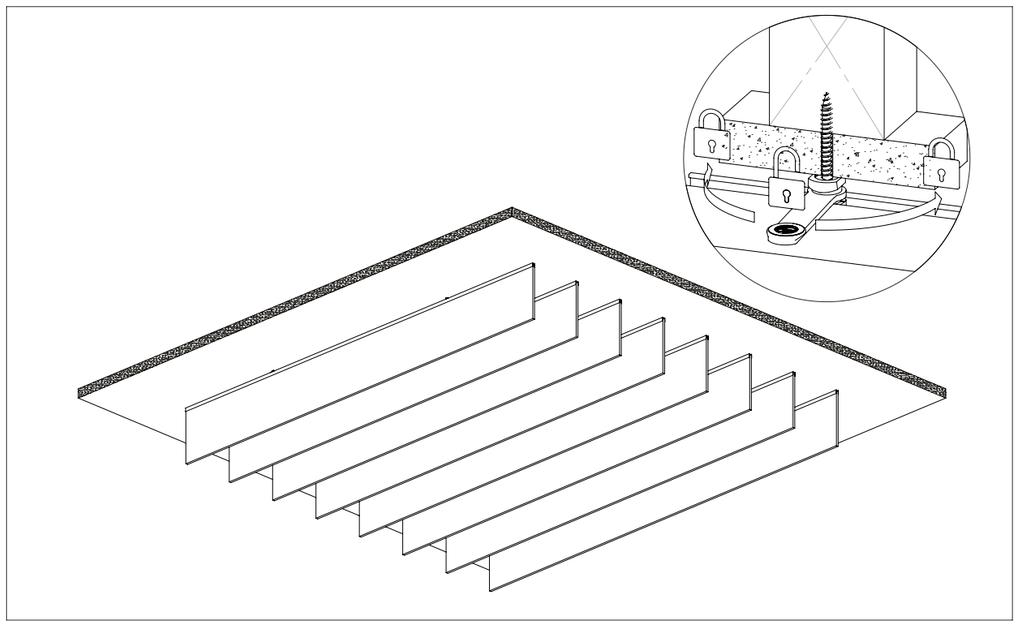
Mark out your ceiling at the recommended spacing for your chosen product (refer to table on page 21 for details). Screw the Autex Mounting Clips into the ceiling using screws suitable for the substrate (not supplied).

2.

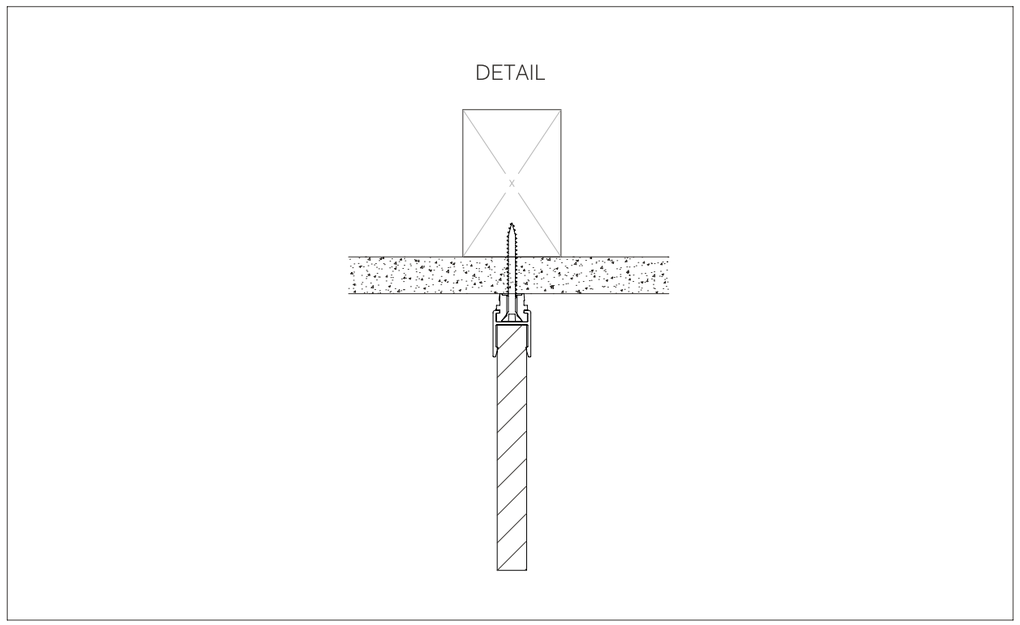


Lift the assembled Fins/Rafts into place and click them onto the Autex Mounting Clips. Turn the clips 45 Deg to temporarily hold the Fin/Raft in place while allowing adjustment along the length.

3.

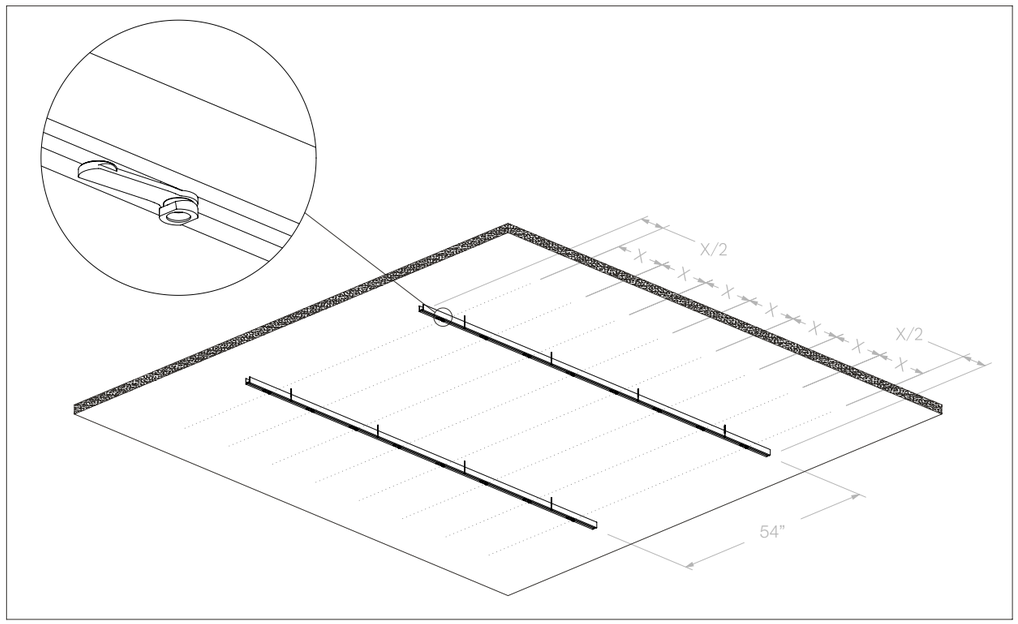


When you are satisfied with the alignment of the Fins/Rafts turn the clips 90 degrees so they clip into the channel and lock in place.



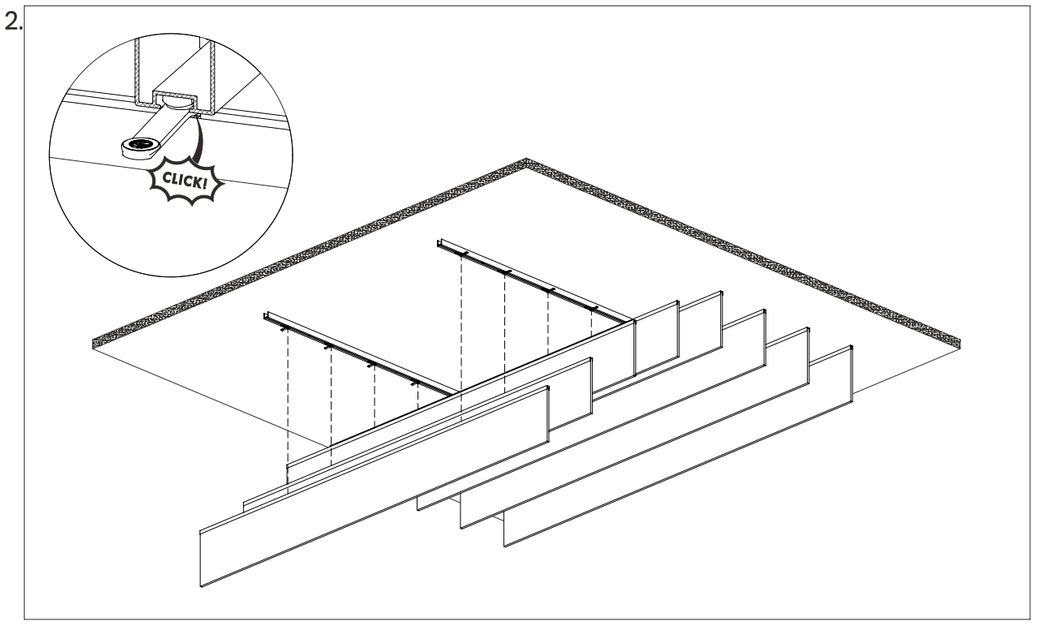
Ensure suitable fastener for the clip and substrate is used (not supplied).

1.



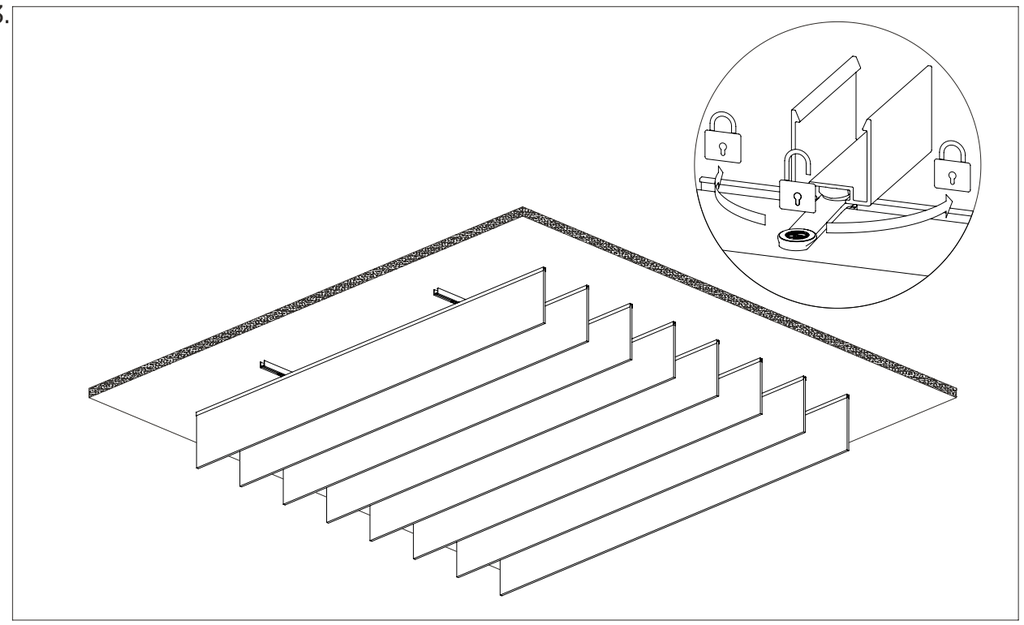
Mark out the ceiling and screw in 2x cross rails at 54” centres using screws suitable for the substrate (not supplied) at max centres of 24". Insert the Autex Mounting Clips at the desired fin spacing. Fin spacing can be marked on the cross rails prior to installation. (Refer to table on page 21 for details).

2.

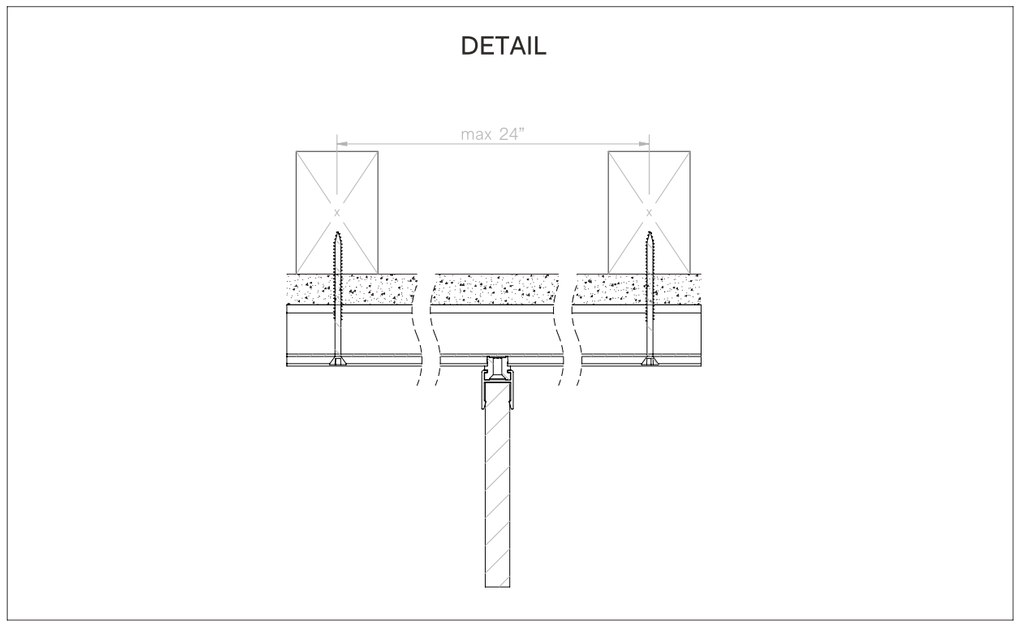


Lift the assembled Fins/Rafts into place and click them onto the Autex Mounting Clips. Turn the clips 45 Deg to temporarily hold the Fin/Raft in place while allowing adjustment along the length.

3.

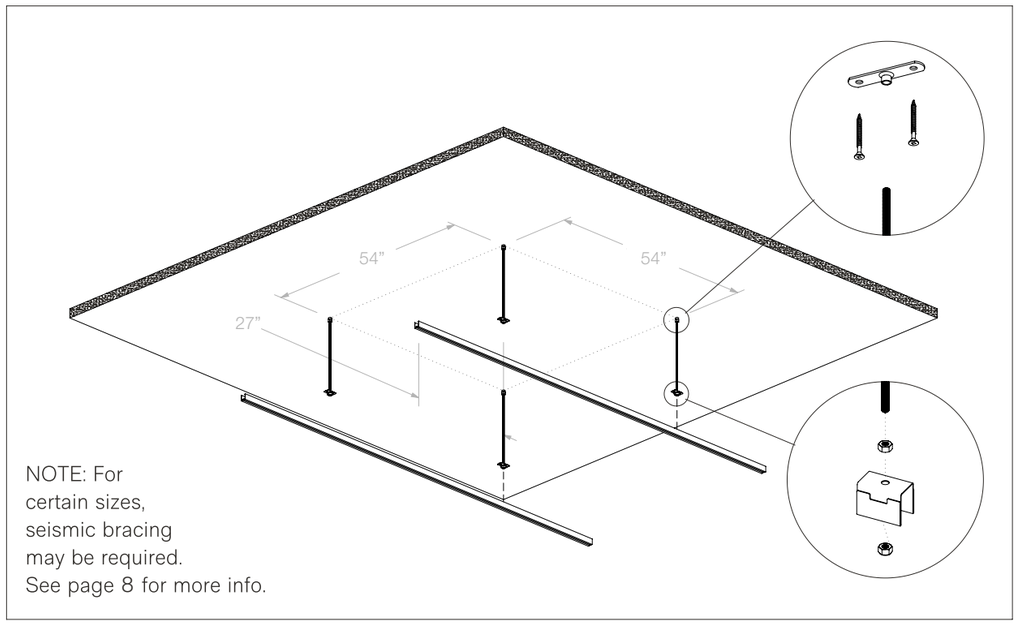


When you are satisfied with the alignment of the Fins/Rafts turn the clips 90 degrees so they clip into the channel and lock in place.



Ensure suitable fastener for the clip, rail and substrate is used. For additional security, the Autex Mounting Clips can be screwed into the cross rail.

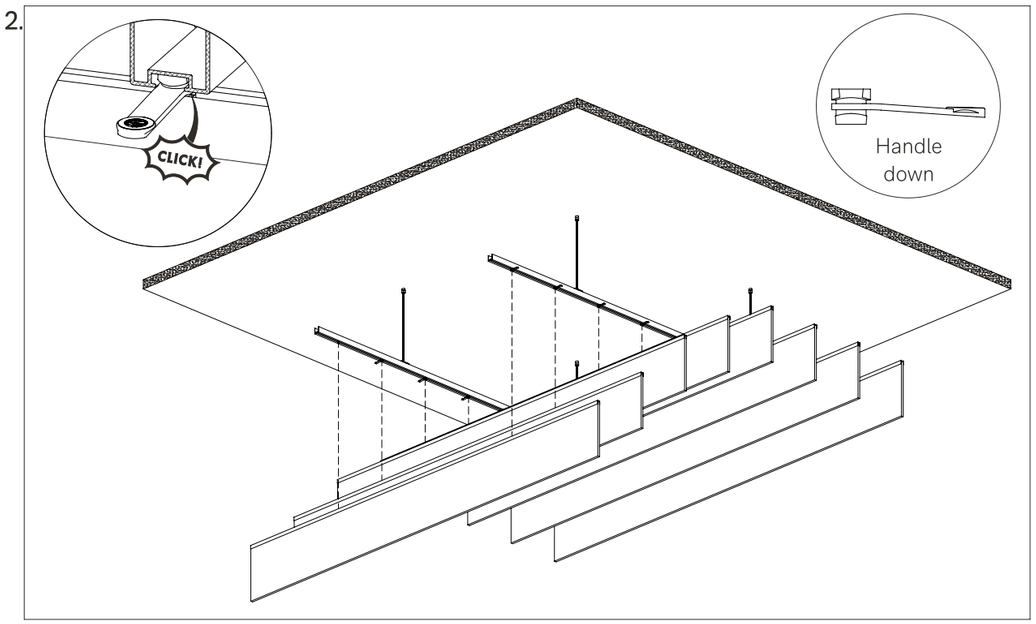
1.



NOTE: For certain sizes, seismic bracing may be required. See page 8 for more info.

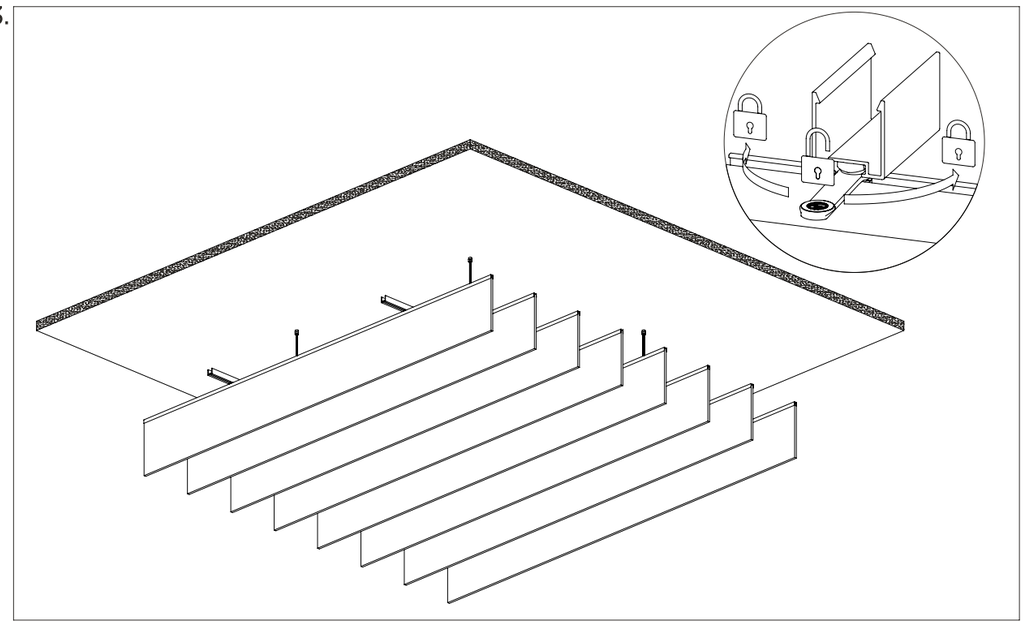
Mark out the ceiling and screw in 4x backing plates suitable for 6mm threaded rod in a 54” x 54” square using screws suitable for the substrate (not supplied). Fin spacing can be marked on the cross rails prior to being clipped onto the Removable W-Clips. (Refer to table on page 21 for details).

2.



Insert the Autex Mounting Clips at the desired fin spacing on the cross rails with the handle tilted towards the floor. Lift the assembled Fins/Rafts into place and click them onto the Autex Mounting Clips. Turn the clips 45 Deg to temporarily hold the Fin/Raft in place while allowing adjustment along the length.

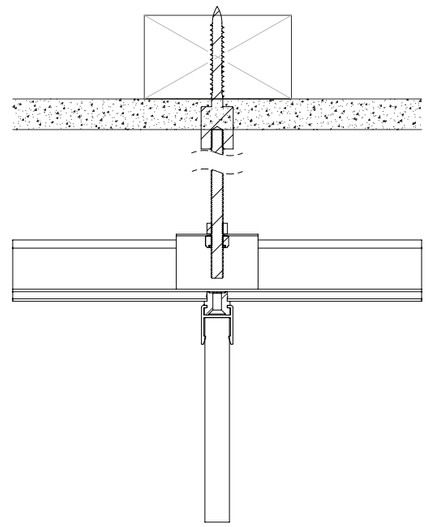
3.



When you are satisfied with the alignment of the Fins/Rafts turn the clips 90º so they clip into the channel and lock in place.

NOTE: In sprinklered buildings please check with local fire engineer for sprinkler layouts and hanging requirements.

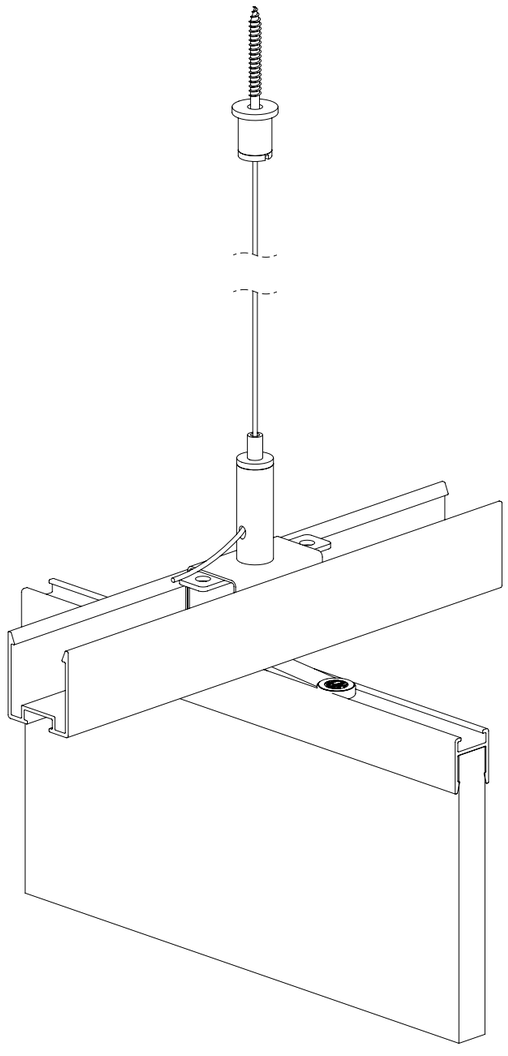
DETAIL



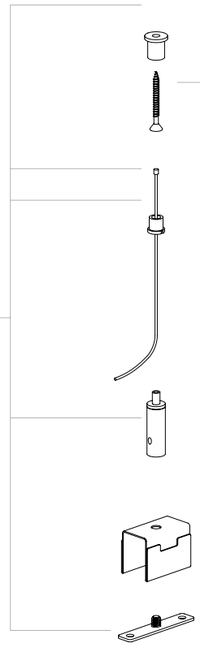
Ensure suitable fastener for the hanger and substrate is used.

PLEASE NOTE, the threaded rod and backing plate suspension method is the default option for large installations. As these parts are supplied by a third party, please see your account manager for preferred supplier in your territory. For smaller installations, adjustable cable hangers are available from Autex.

Suggested Ceiling Fixing Detail		
Substrate	Fixing	Minimum Embedment
Concrete	Hilti-HUS3-HR6	1 1/2"
Steel	Stainless Steel 8G Tek Screw	2 3/16"
Timber	Stainless Steel 8G Wood Screw	1 3/16"



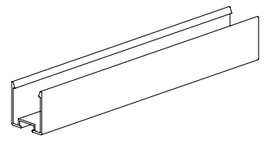
NOTE: This suspension method is suitable for small installations only.
For larger installations refer to pages 7-8



SCREW FIXING
Suitable for Substrate (NOT SUPPLIED)

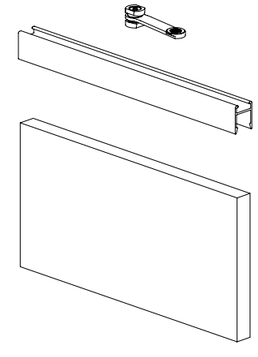
RAHVAS
Autex Adjustable
Suspension Set - Channel

RAFWCP
Autex Removable W-Clip



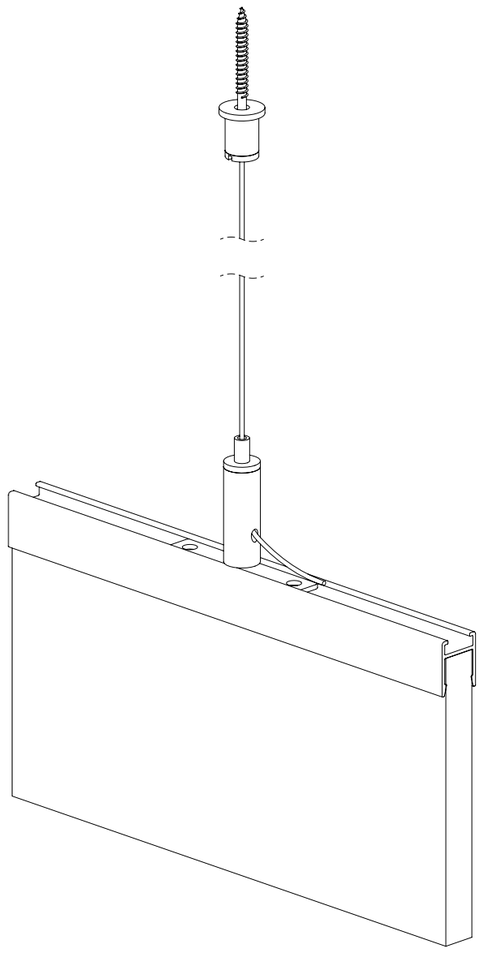
RAFNEX24
Autex Frontier 1"
Extrusion

RAFTCC
Autex Mounting Clip

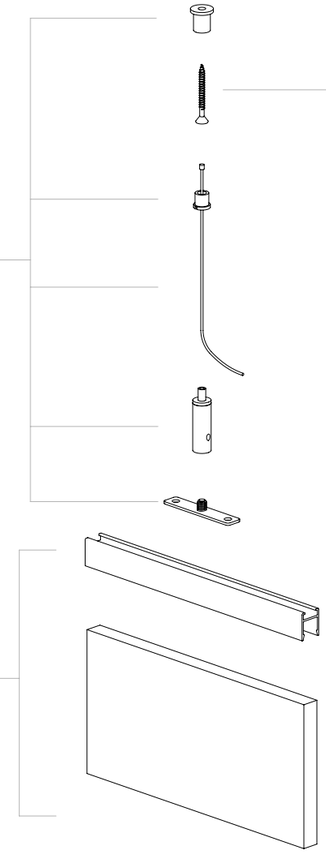


RAFNEX
Autex Frontier 1/2" Extrusion + Fin
- or -
RAFNEX24
Autex Frontier
1" Extrusion + Fin
- or -
RAFNEXRT
Autex Frontier Raft Extrusion + Raft

Suggested Ceiling Fixing Detail		
Substrate	Fixing	Minimum Embedment
Concrete	Hilti-HUS3-HR6	1 1/2"
Steel	Stainless Steel 8G Tek Screw	2 3/16"
Timber	Stainless Steel 8G Wood Screw	1 3/16"



NOTE: This suspension method is
suitable for individual fins only.
Requires 1x RAHVAS set per fin.
For larger installations refer to pages 7-8

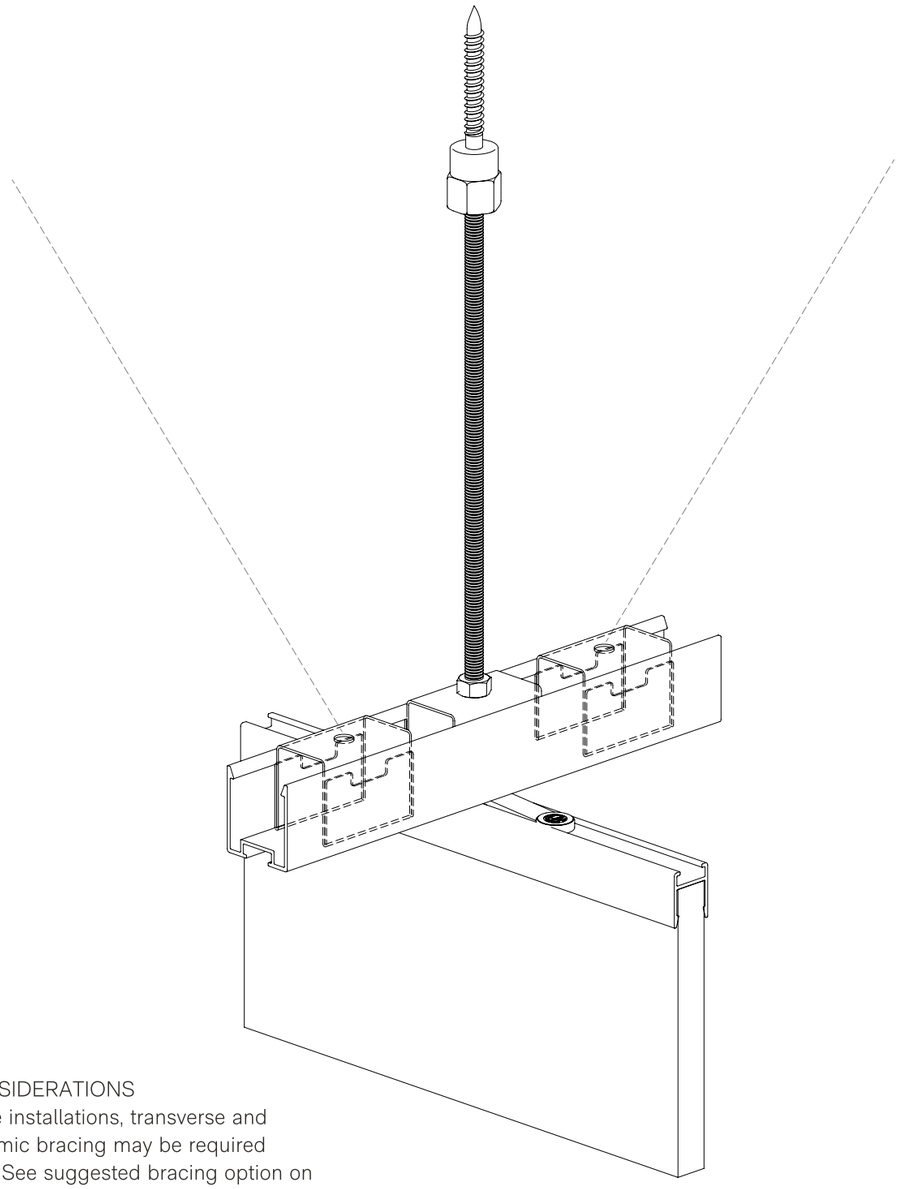


SCREW FIXING
Suitable for Substrate (NOT SUPPLIED)

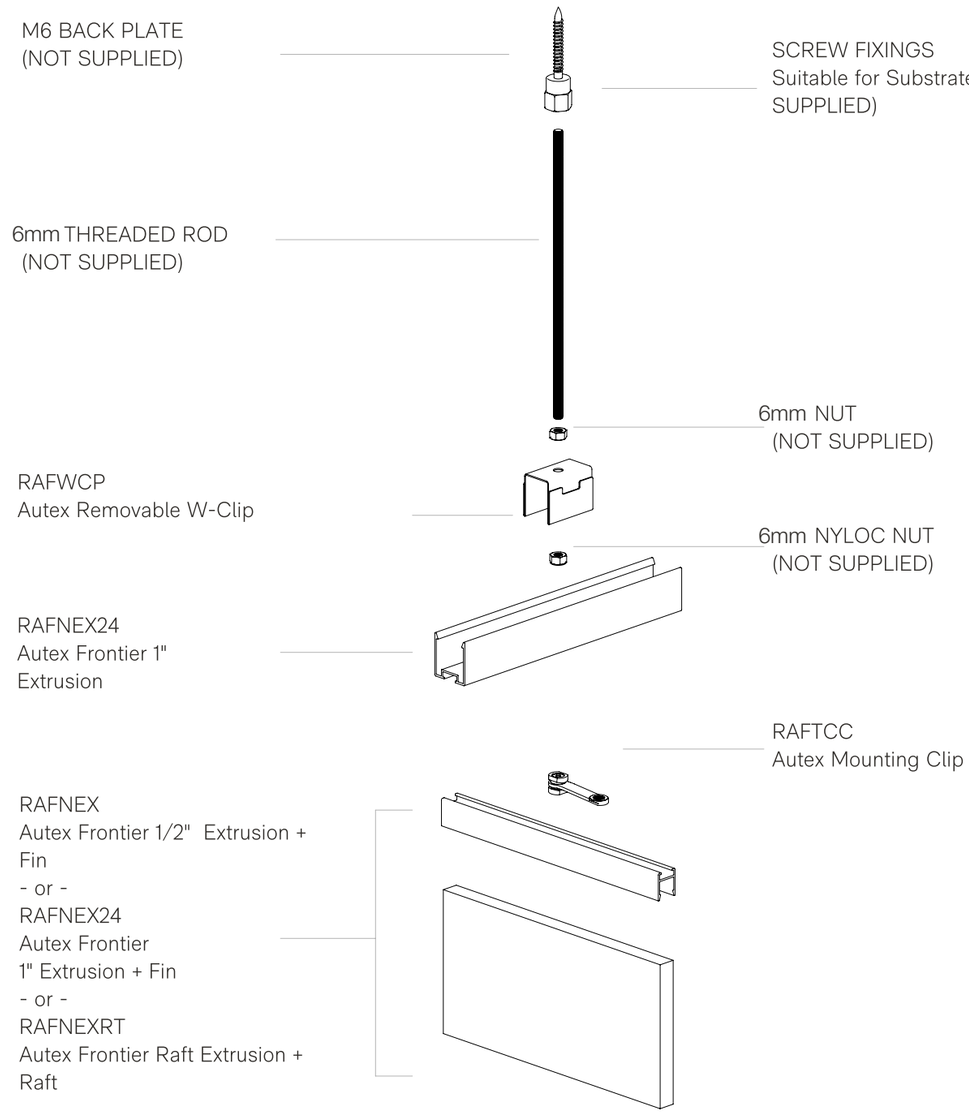
RAHVAS
Autex Adjustable
Suspension Set - Channel

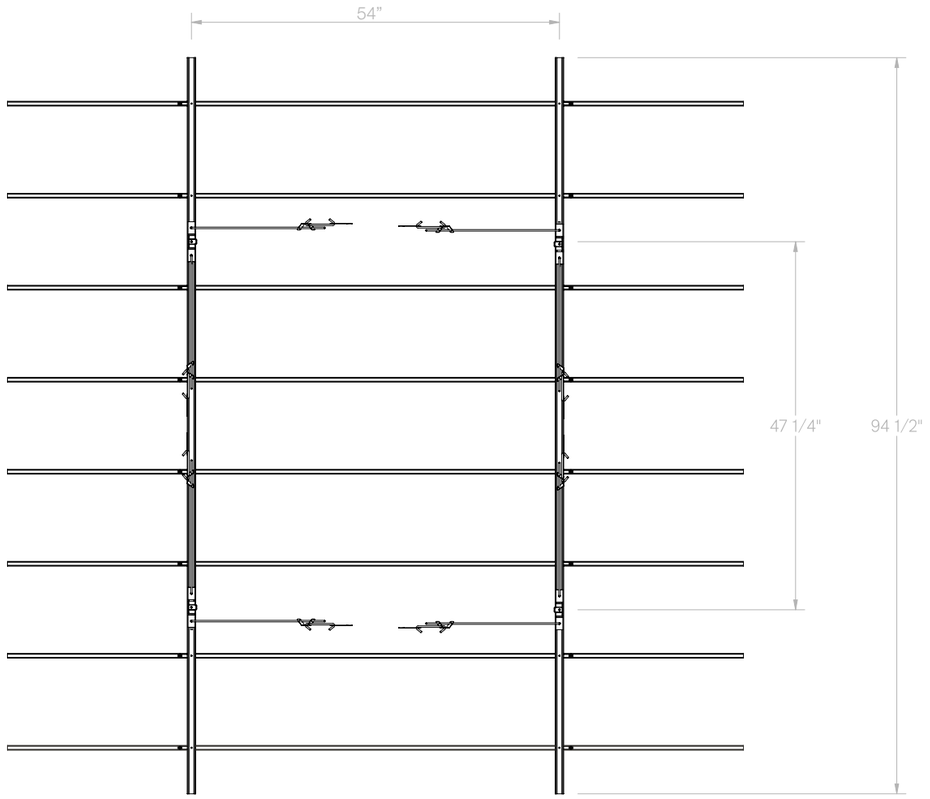
RAFNEX
Autex Frontier 1/2" Extrusion + Fin
- or -
RAFNEX24
Autex Frontier
1" Extrusion + Fin
- or -
RAFNEXRT
Autex Frontier Raft Extrusion + Raft

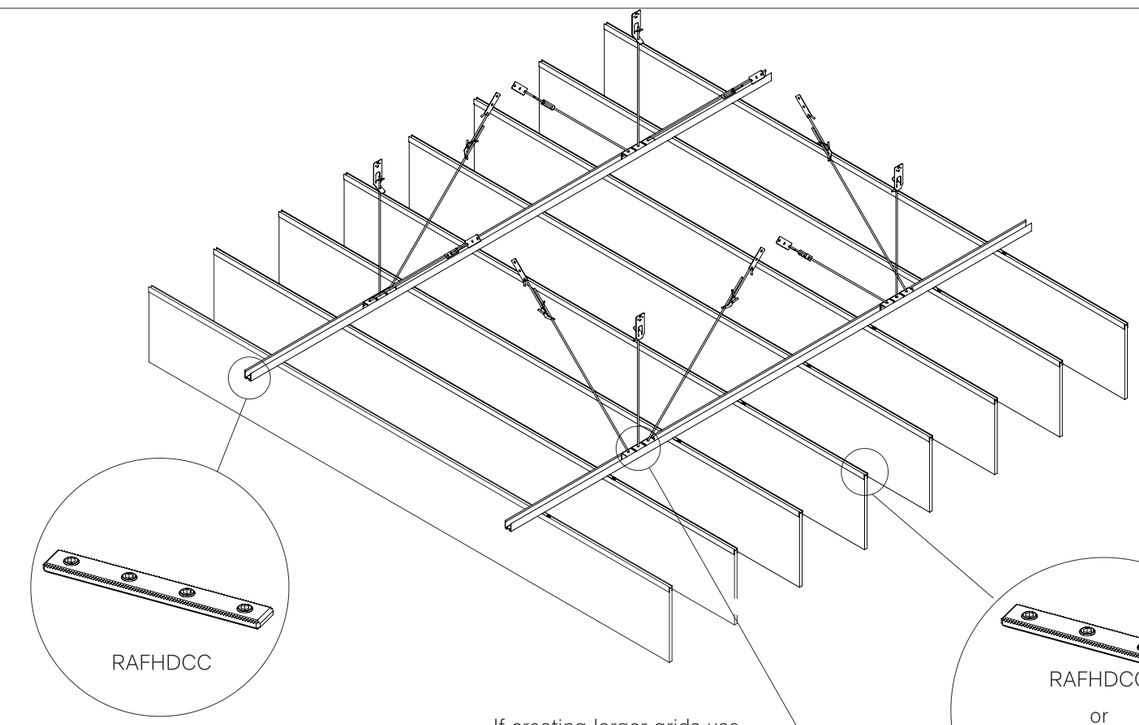
Suggested Ceiling Fixing Detail		
Substrate	Fixing	Minimum Embedment
Concrete	Hilti-HUS3-HR6	1 1/2"
Steel	Stainless Steel 8G Tek Screw	2 3/16"
Timber	Stainless Steel 8G Wood Screw	1 3/16"



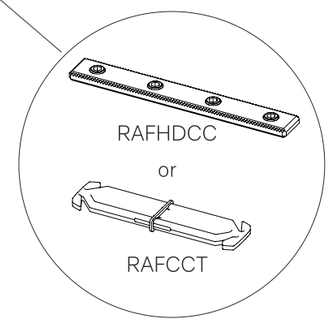
SEISMIC CONSIDERATIONS
For certain size installations, transverse and longitudal seismic bracing may be required (dashed lines). See suggested bracing option on page 8.

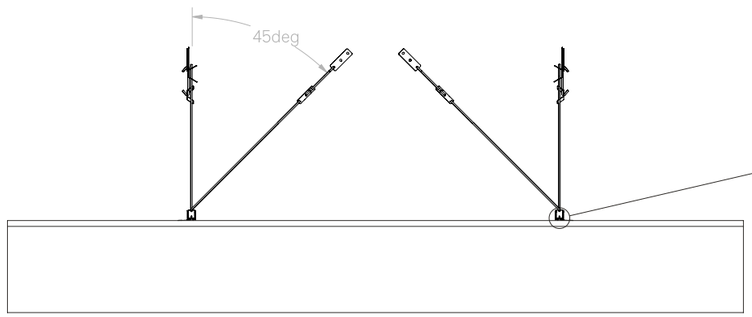


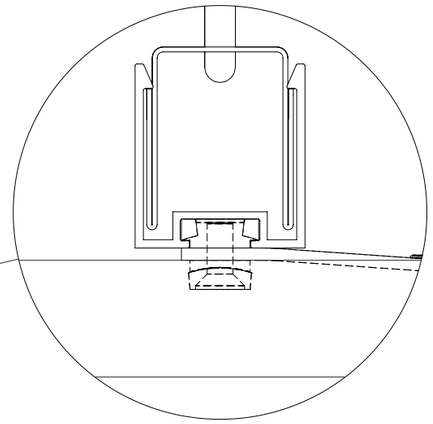




If creating larger grids use RAFHDCC/RAFCCT to join rails/cross rails





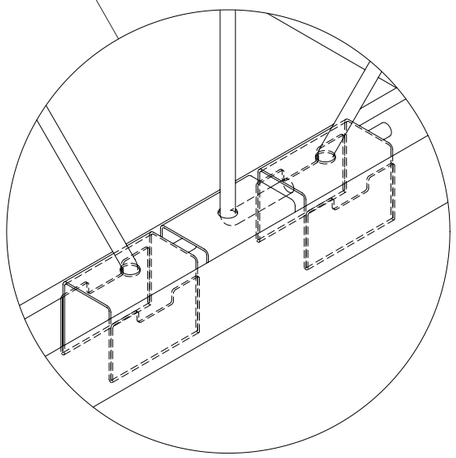


RAFWCP
Autex Removable W-Clip

RAFNEX24 (used as crossrail)
Autex Frontier 1" Extrusion

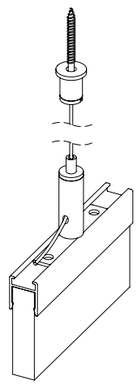
RAFTCC
Autex Mounting Clip

RAFNEX
Autex Frontier 1/2" Extrusion + Fin
- or -
RAFNEX24
Autex Frontier 1" Extrusion + Fin
- or -
RAFNEXRT
Autex Frontier Raft Extrusion + Raft

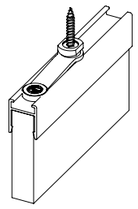


Additional Autex W Clips act as interface between bracing and channel

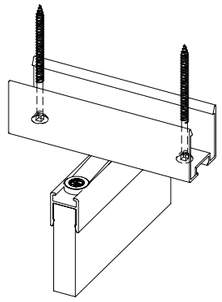
*This method is suitable for individual fins only



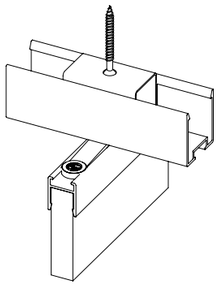
DIRECT TO CABLE SUSPENSION



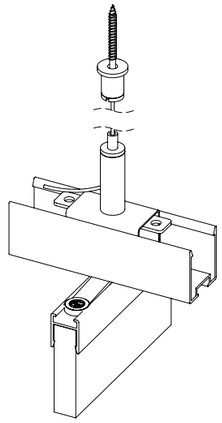
CAM CLIP SCREW FIX TO CEILING



CROSS RAIL SCREW FIX TO CEILING

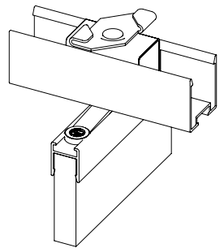


CROSS RAIL W-CLIP SCREW FIX TO CEILING

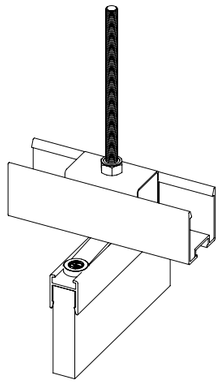


CROSS RAIL W-CLIP TO CABLE SUSPENSION

*This method may require re-enforcement of grid.

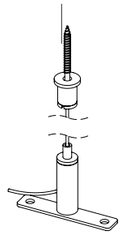


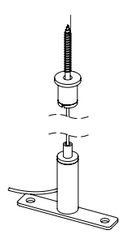
CROSS RAIL W-CLIP TO 1" CEILING GRID

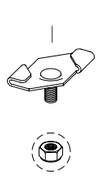


CROSS RAIL W-CLIP TO 6mm THREADED ROD

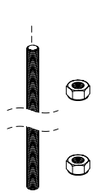
5. HANGING METHOD



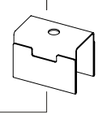




Nut not supplied by Autex

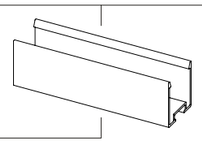


4. W-CLIP



RAFWCP
Autex Removable W-Clip

3. CROSS RAIL

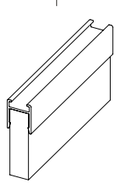


RAFNEX24
Frontier 1" Extrusion (used as cross rail)

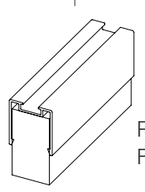
2. INTERFACE

RAFTCC
Autex Mounting Clip

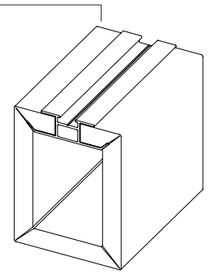
1. FIN TYPE



RAFNEX
Frontier 1/2" Extrusion



RAFNEX24
Frontier 1" Extrusion



RAFNEXRT
Frontier Raft Extrusion

GUIDE

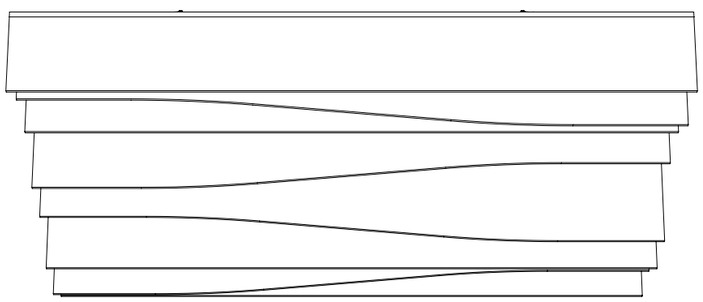
Starting with your predetermined Fin/Raft option (bottom), choose your installation path above which indicates components required.

———— Autex Component

- - - - - - - - - 3rd Party Component

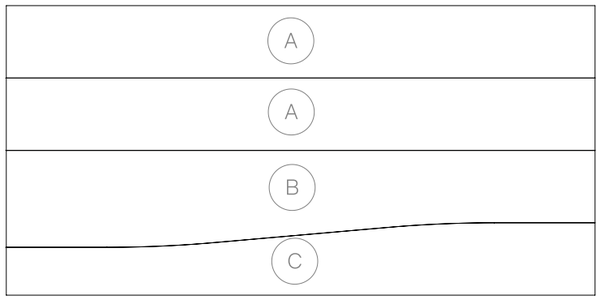
US Patent 10,113,312

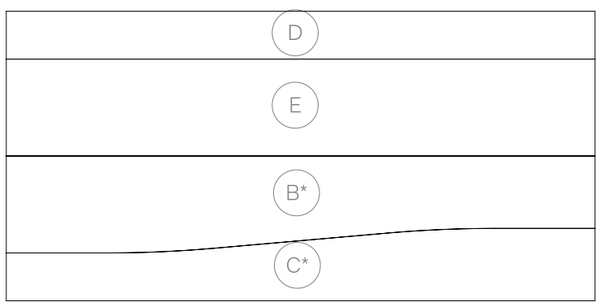
DUNE



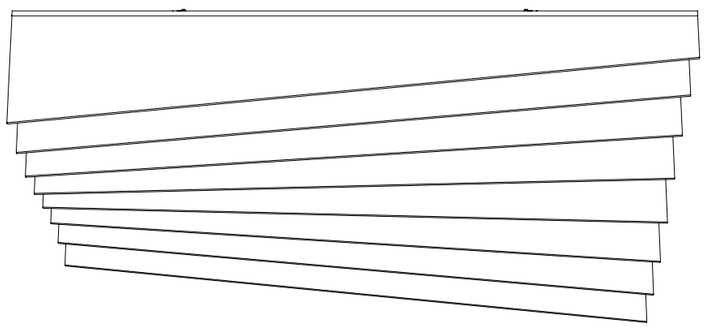
Install sequence pattern as shown above
A,C,D,C*,B,E,B*,A

Box layout as shown below.



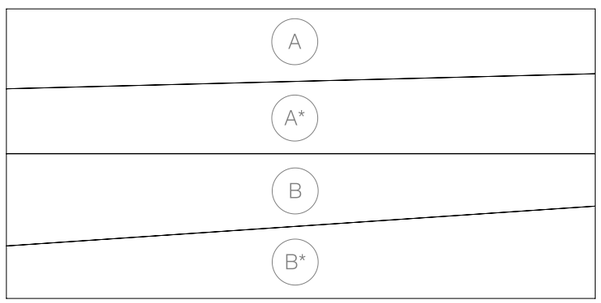


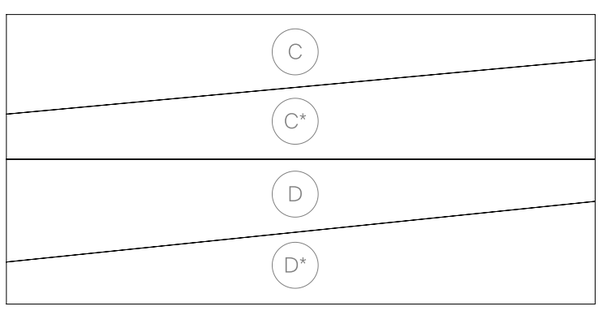
SIERRA



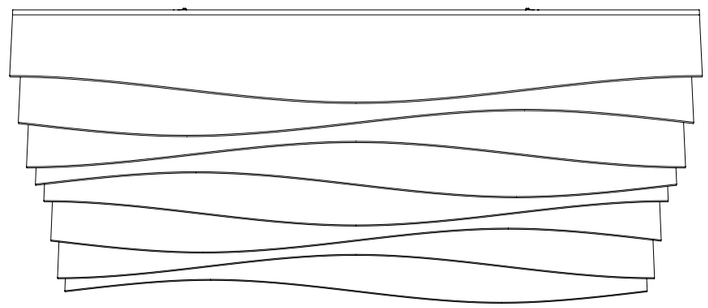
Installation sequence pattern as shown above
D,C,B,A,A*,B*,C*,D*...
To continue the pattern, the following set of 8 fins will be in the REVERSE order

Box layout as shown below.



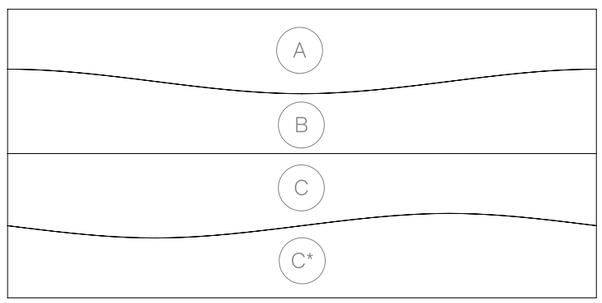


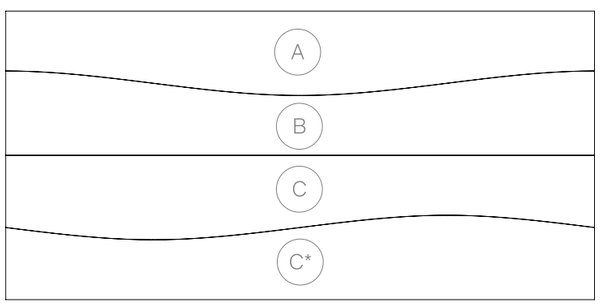
TALUS



Installation sequence pattern as shown above
A,C,B,C*,A,C,B,C*...

Box layout as shown below.



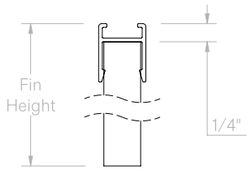


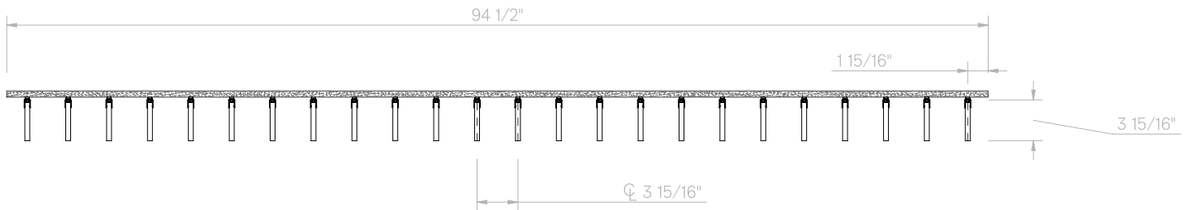
NOTES

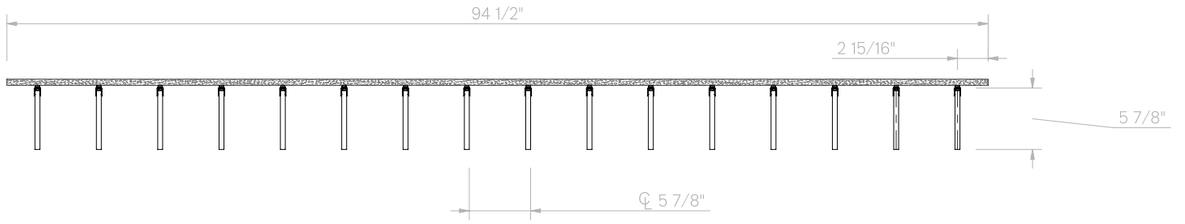
- Recommended guide for listed ceiling coverage is for the fin spacing to be equal to the fin height.

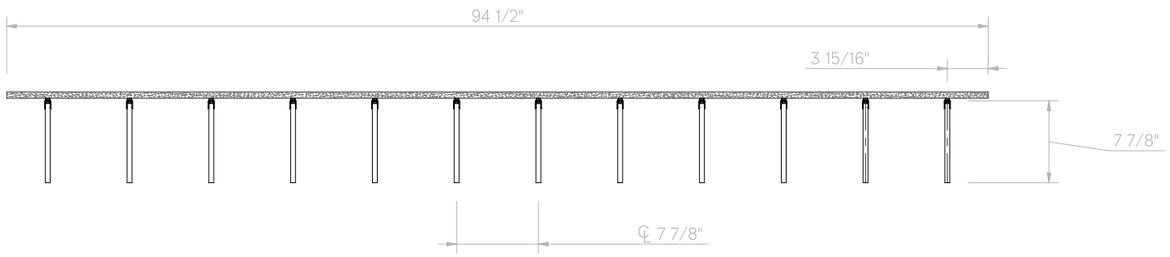
FIN SPACING = FIN HEIGHT

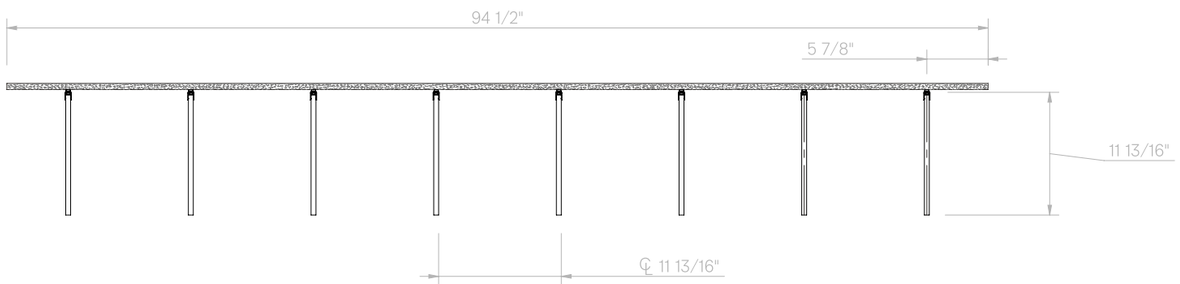
- Fin height is inclusive of the Autex Frontier Extrusion



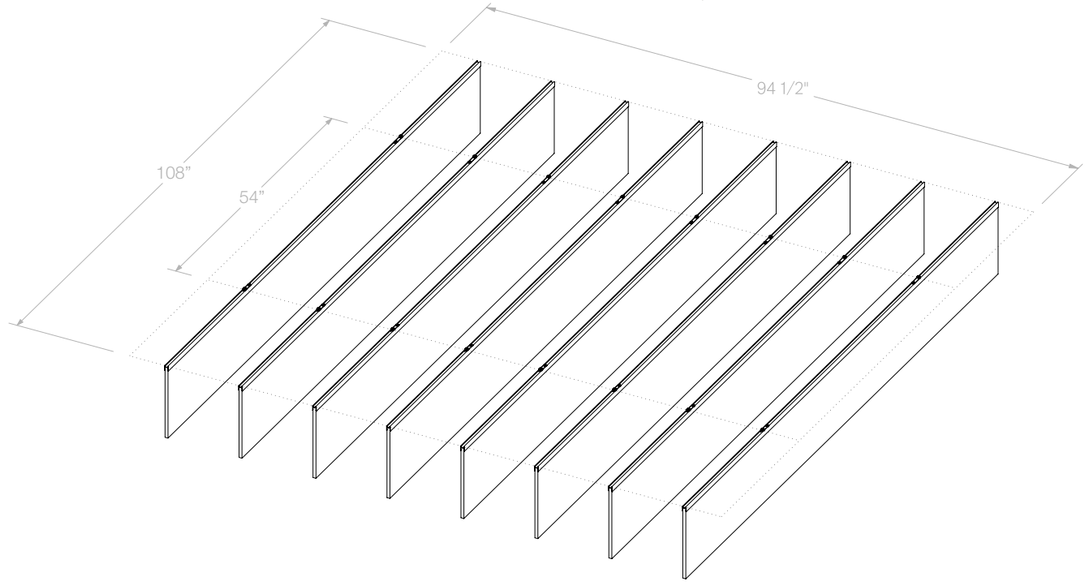




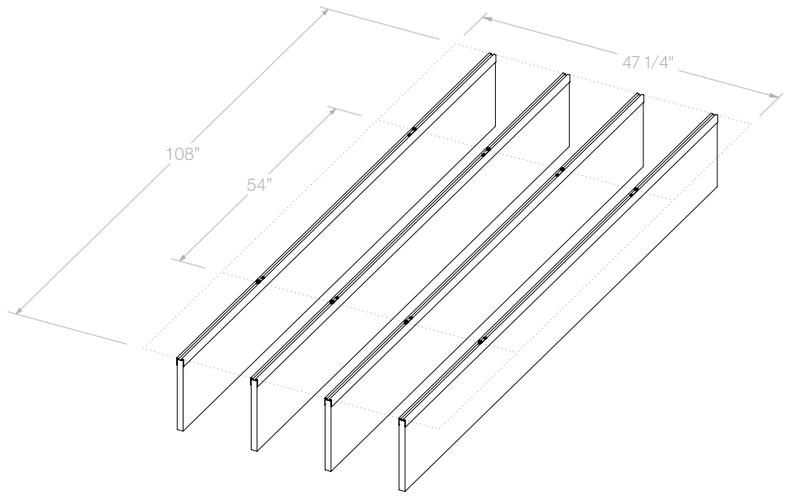




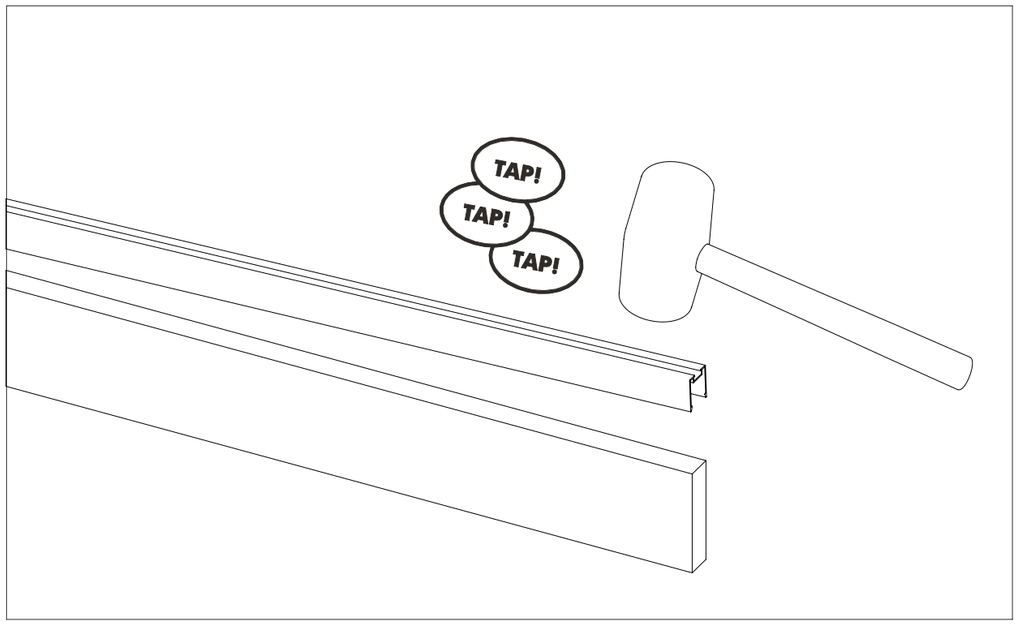
1x Pack of 1/2" Fins = 72 sqf



1x Pack of 1" Fins = 36sqf

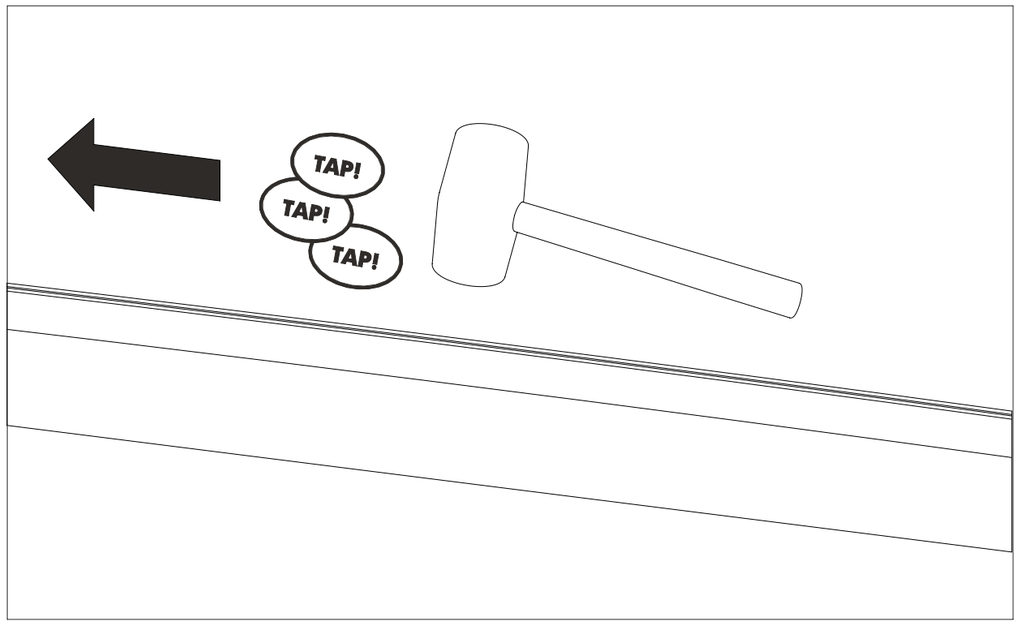


1.



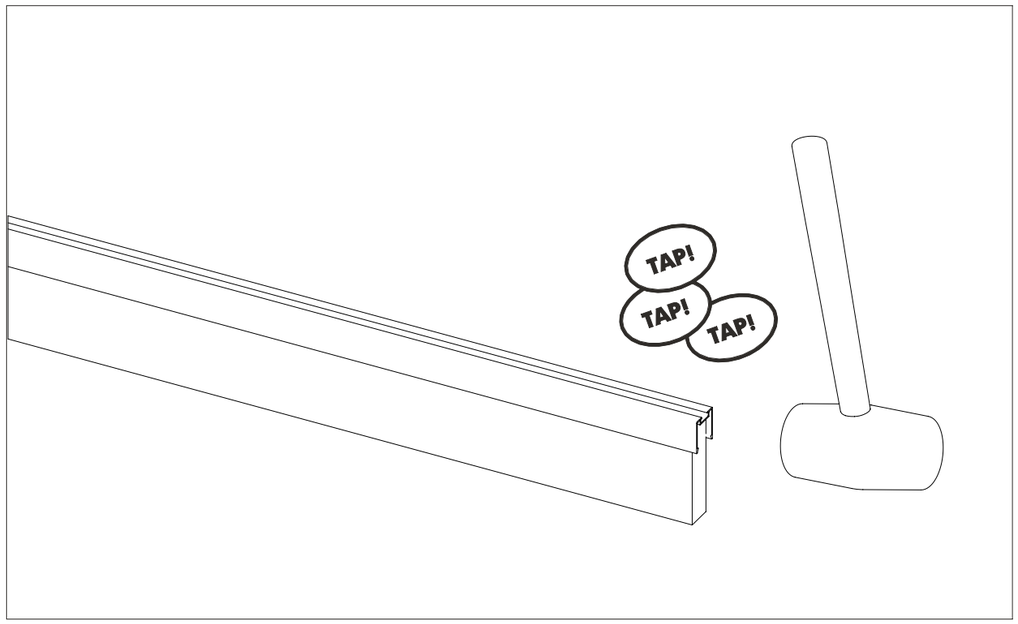
Using a rubber mallet, seat the channel onto the fin.

2.



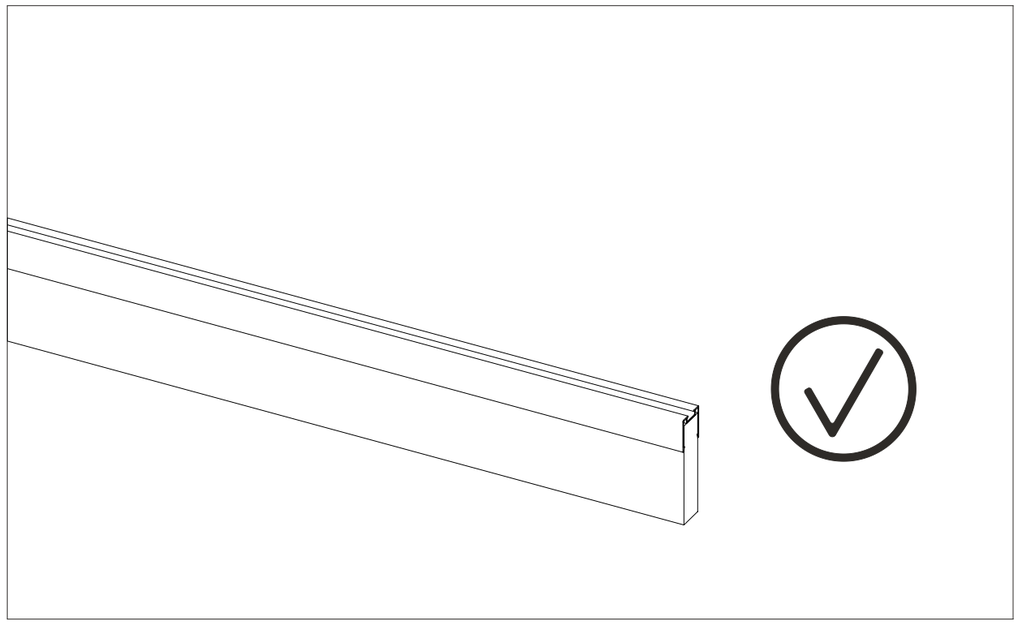
Starting at one end and using the mallet, tap along the length of the channel to ensure there is no bowing in the centre and the channel is seated correctly.

3.



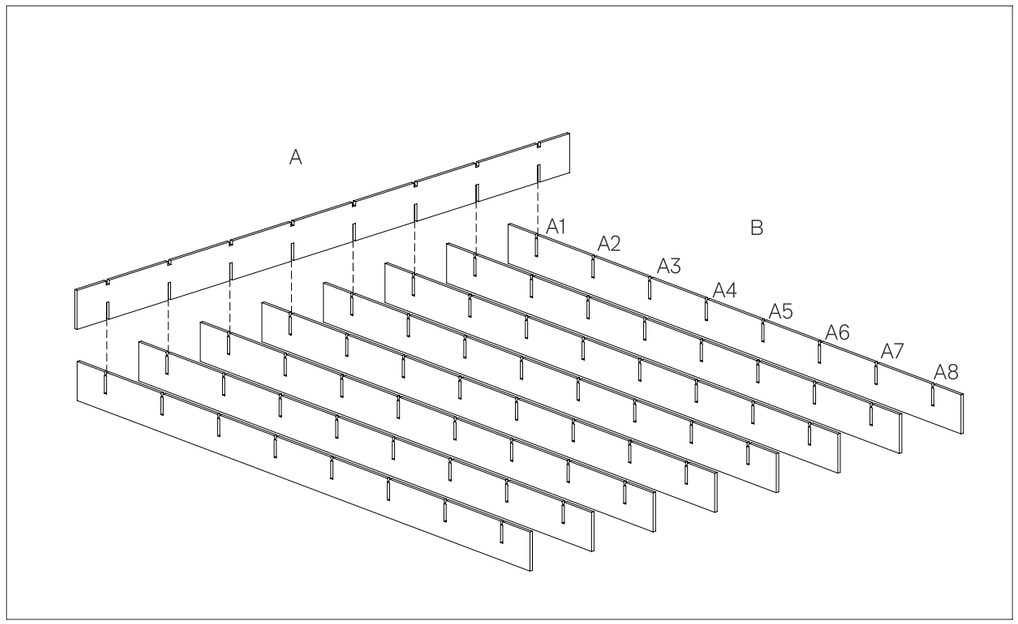
Ensure the end of the channel is aligned with the Frontier Fin by tapping the overhanging end of the extrusion.

4.



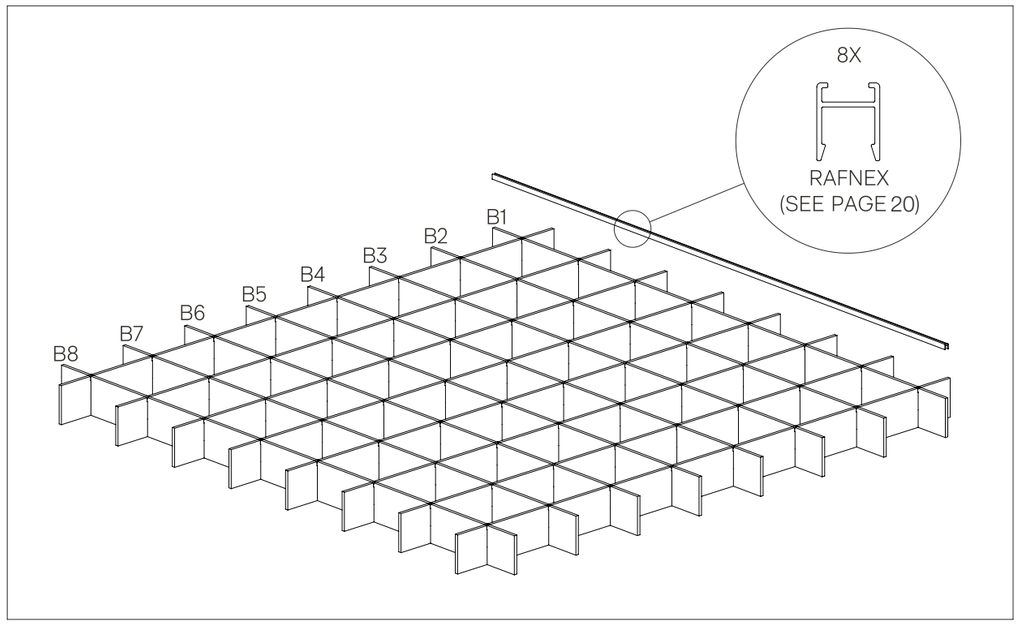
The Frontier Fin is now ready for installation to the ceiling.

1.



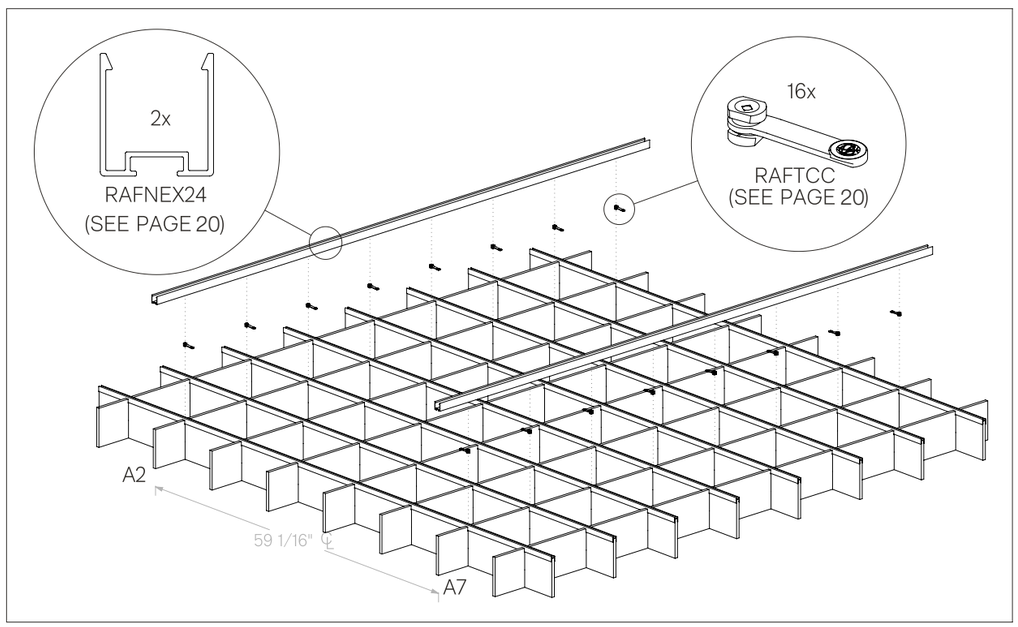
In the Frontier Axis pack there are two types of Fin (A & B). Part A has two notches and the small notch should be facing up when inserted into Part B.

2.



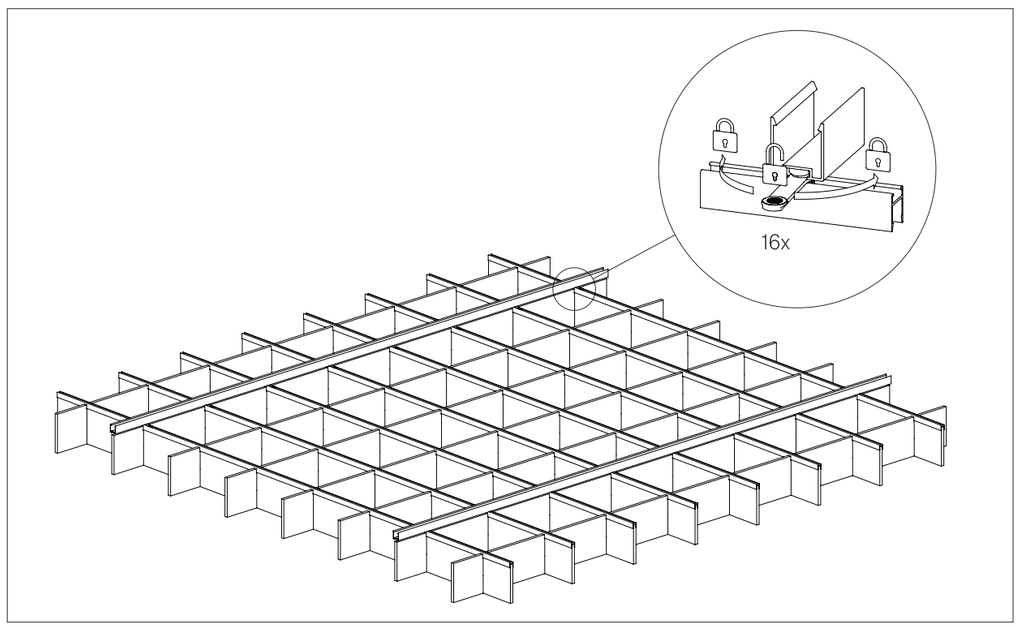
Using a rubber mallet, attach the 8x Rafnex channels along the lengths of the 'B' fins to lock the Axis Fins together in a grid.

3.



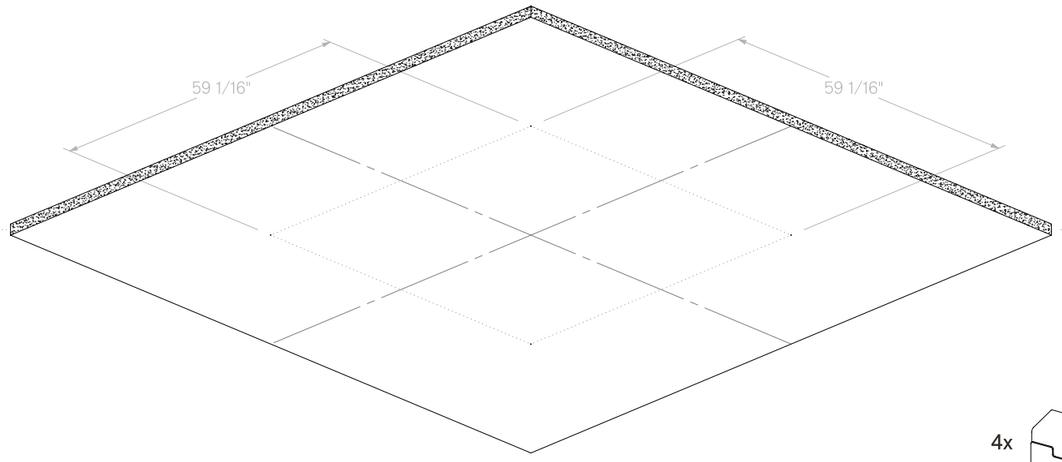
To attach the included 2x RAFNEX24 cross rails, first clip the 16x Autex Mounting Clips at the intersection points along the A2 & A7 Rails. Press the Crossrail onto the clips so they click into place.

4.



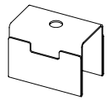
Twist the Autex Mounting Clips 90deg to lock them off. The Frontier Axis Grid is now ready for installation to the ceiling.

CEILING SETOUT



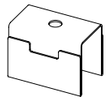
*Can be replaced by a rigid suspension set if required. See pages 7-8 for suggested details

4x



RAFWCP
(SEE PAGE 20)

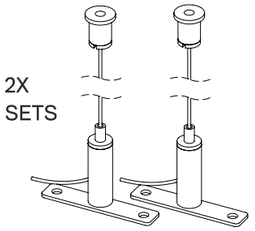
4x



RAFWCP
(SEE PAGE 20)

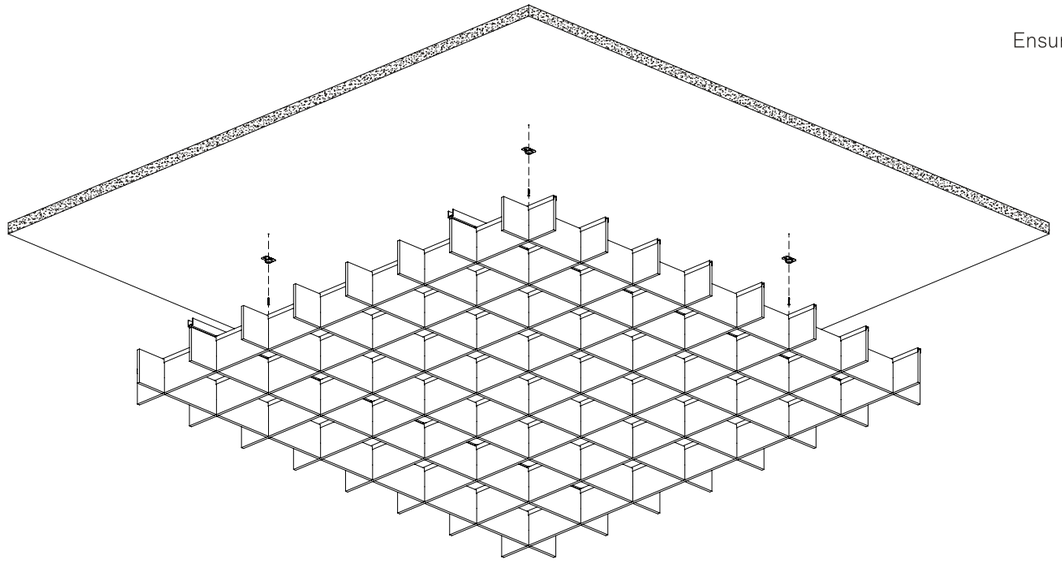
+

2X
SETS



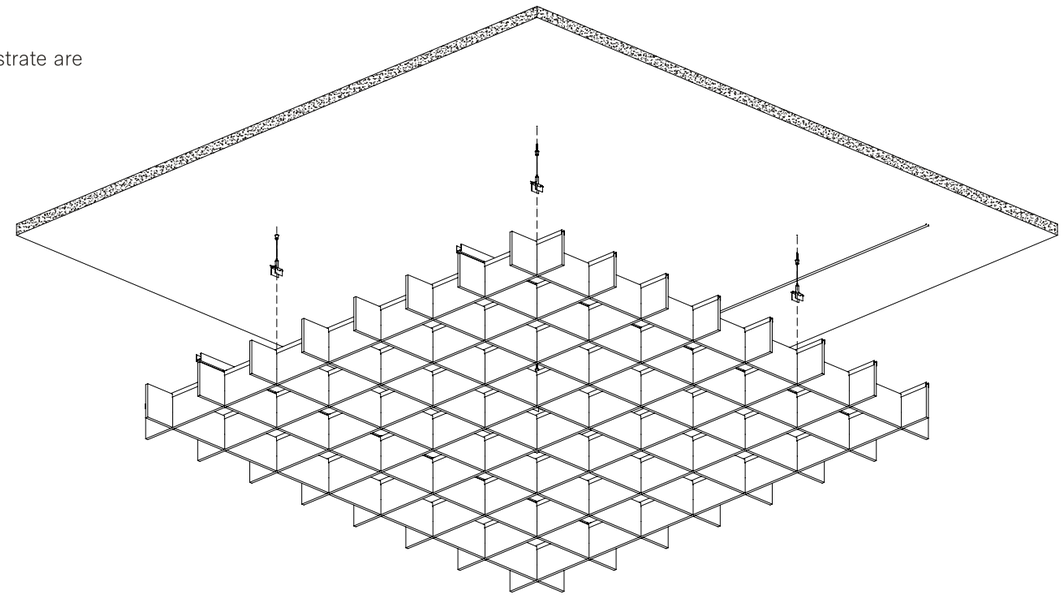
RAHVAS*
(SEE PAGE 20)

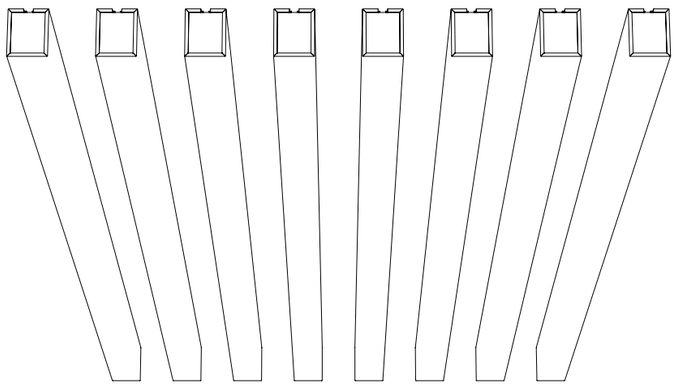
DIRECT FIX TO CEILING



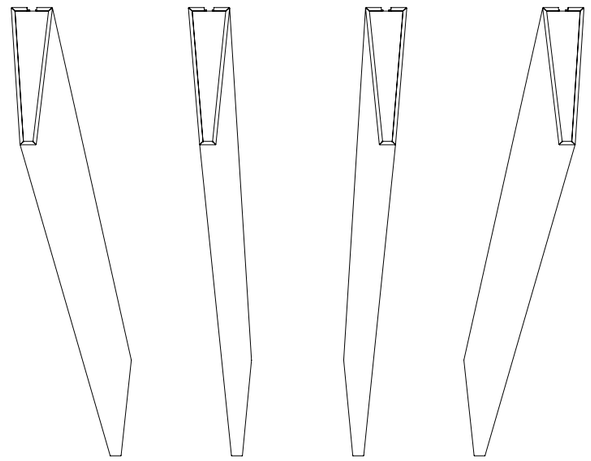
Ensure suitable fasteners for substrate are used
(NOT SUPPLIED)

SUSPENDED FROM CEILING

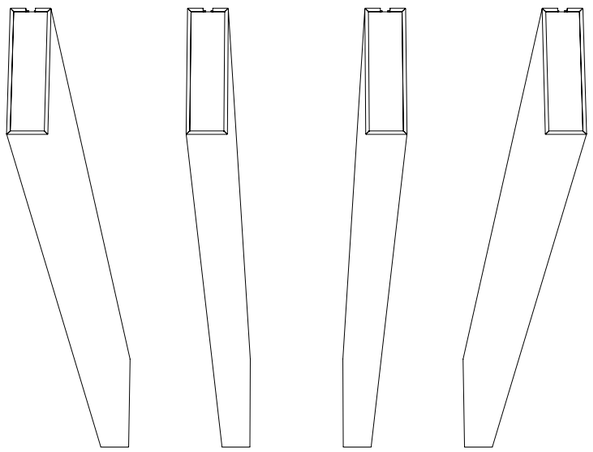




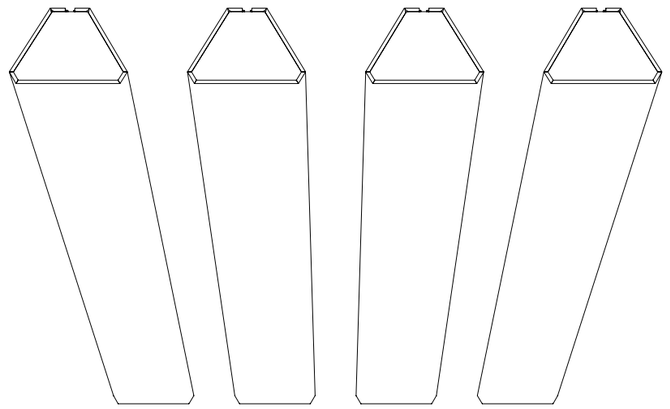
RAFT BEAM 100
1X PACK SHOWN



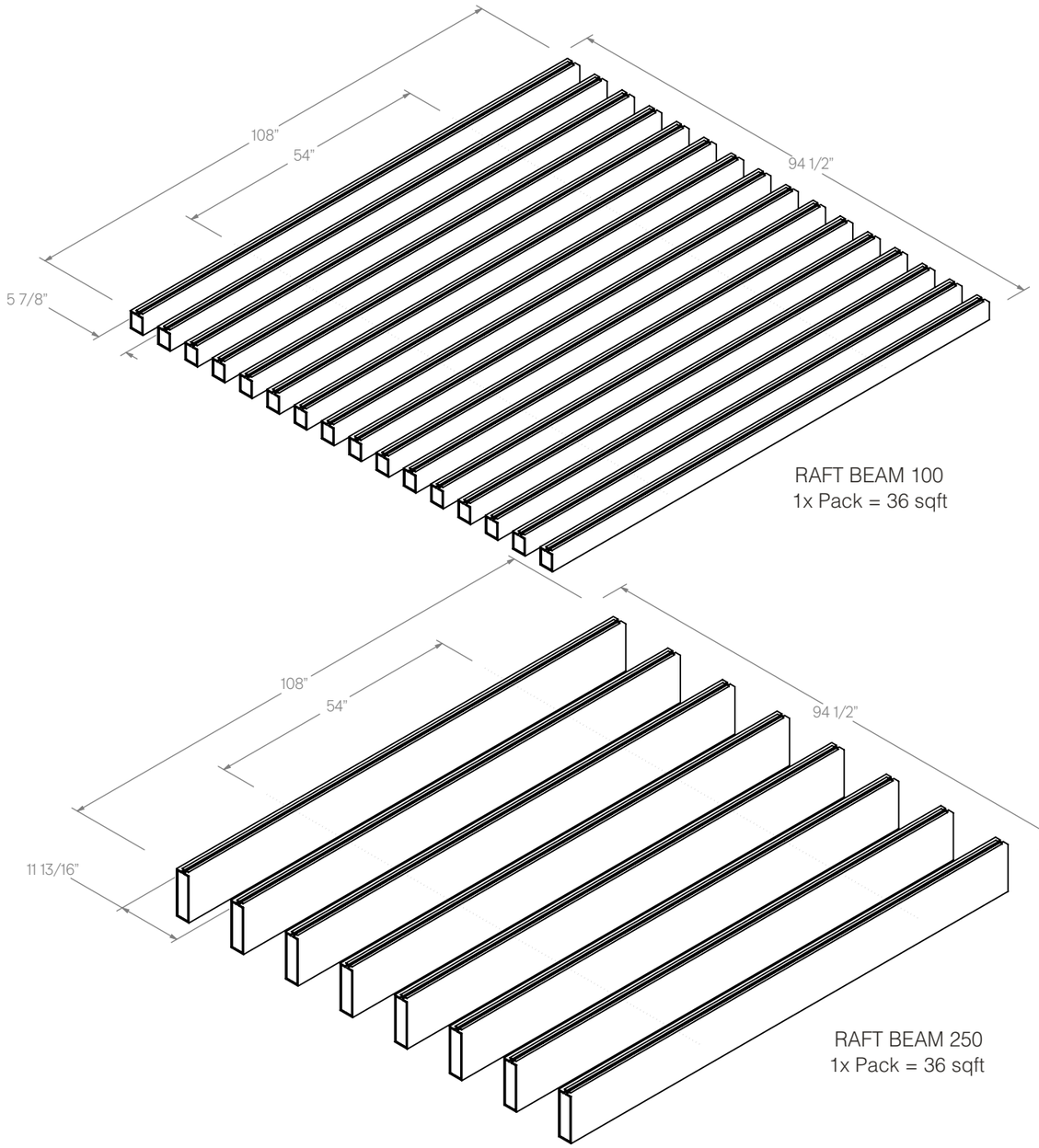
RAFT BLADE
1X PACK SHOWN



RAFT BEAM 250
1X PACK SHOWN

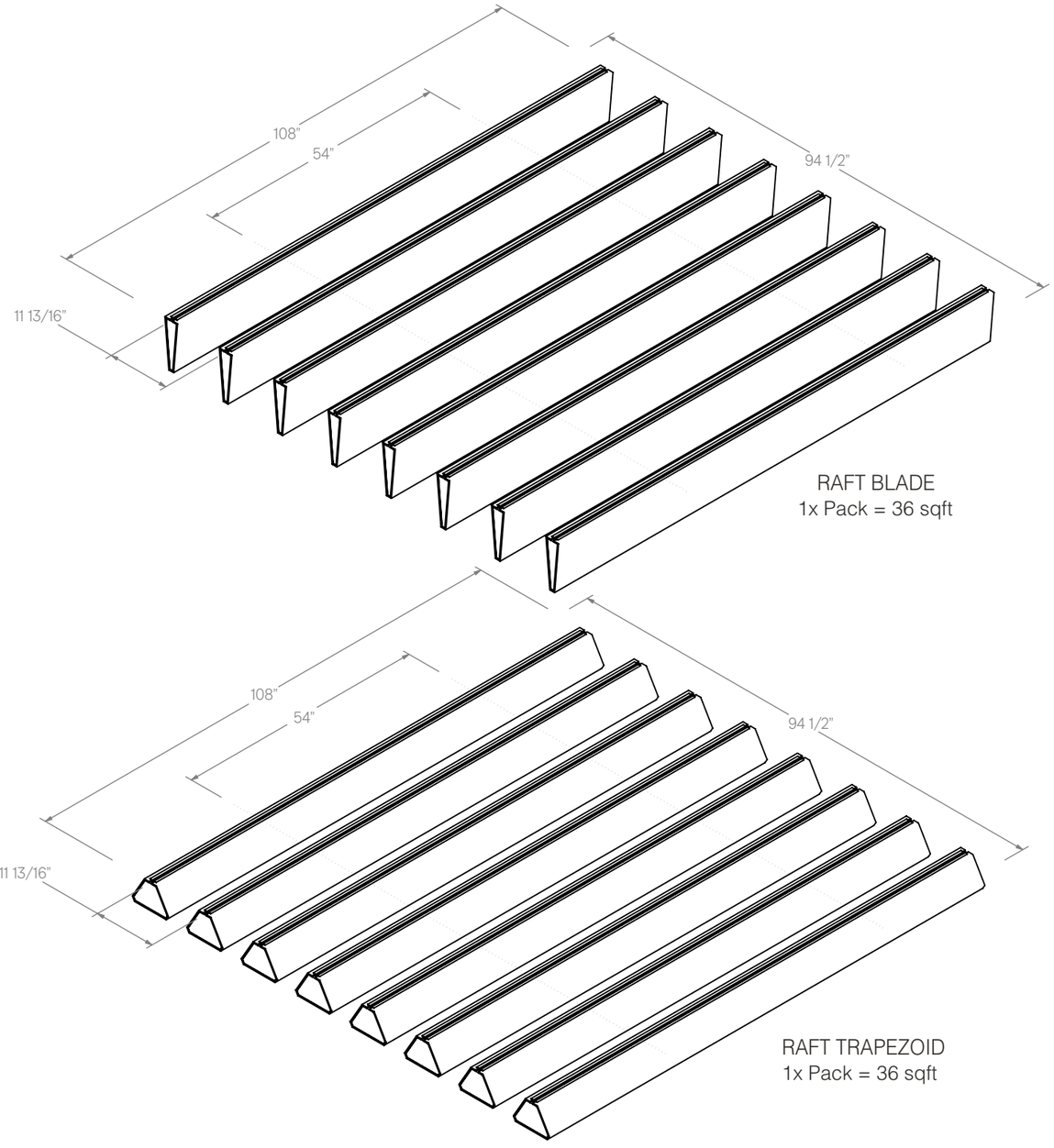


RAFT TRAPEZOID
1X PACK SHOWN



RAFT BEAM 100
1x Pack = 36 sqft

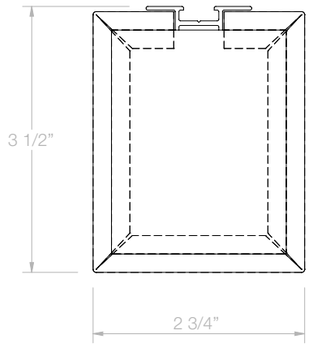
RAFT BEAM 250
1x Pack = 36 sqft



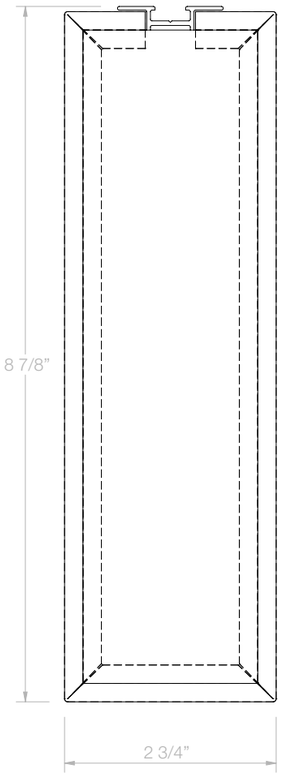
RAFT BLADE
1x Pack = 36 sqft

RAFT TRAPEZOID
1x Pack = 36 sqft

BEAM 100

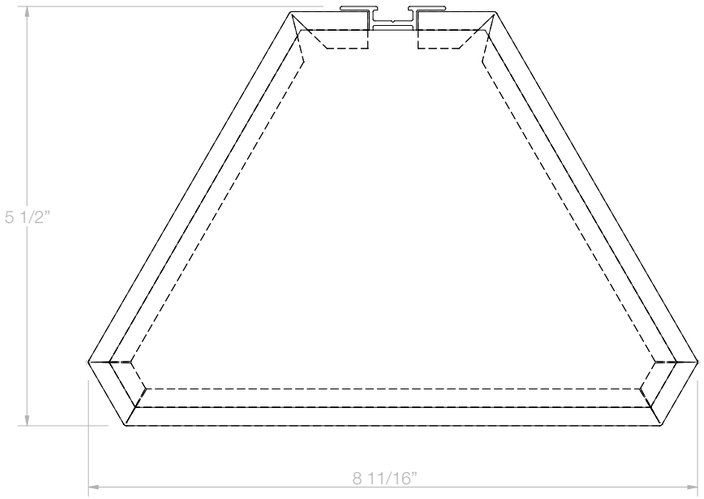


BEAM 250



BLADE

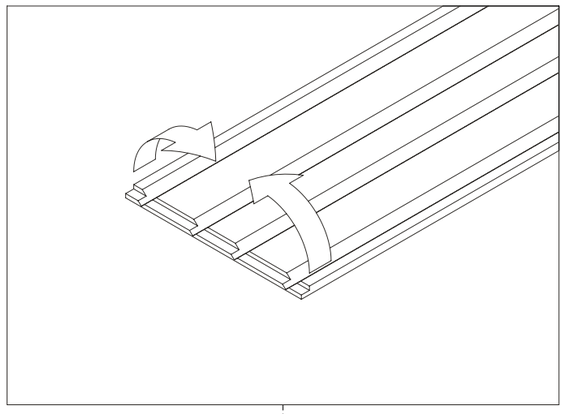
TRAPEZOID

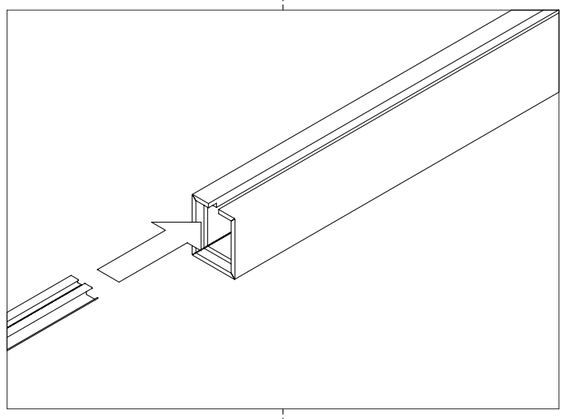


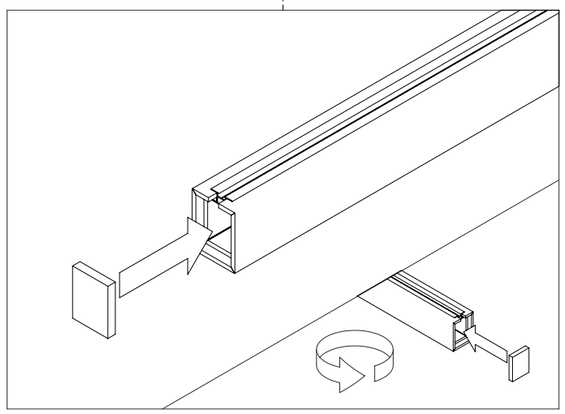
NOTES

- Raft height is inclusive of the Autex frontier Raft Extrusion
- Refer to page16 for recommended Raft spacing (X).

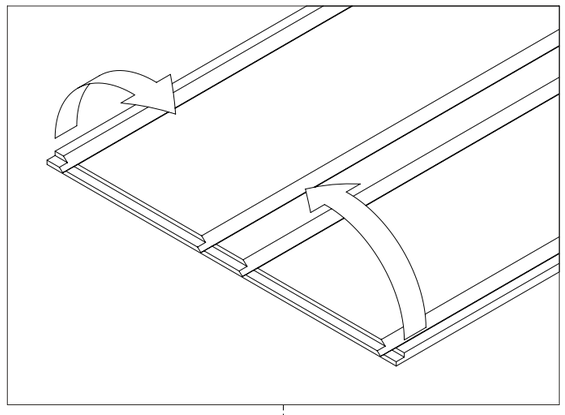
BEAM 100

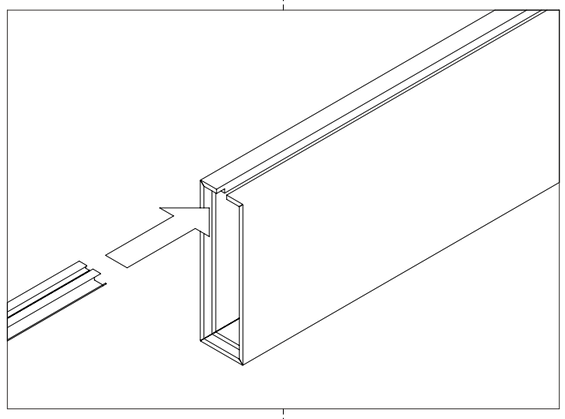


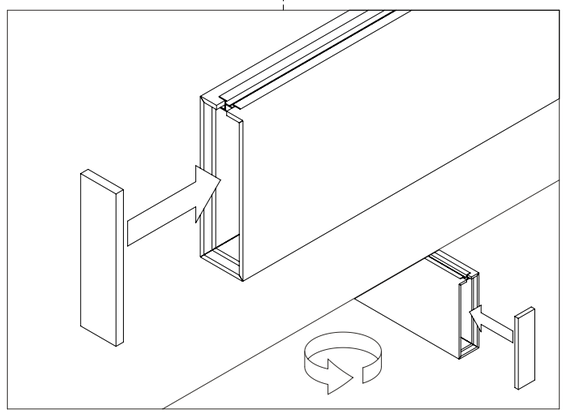




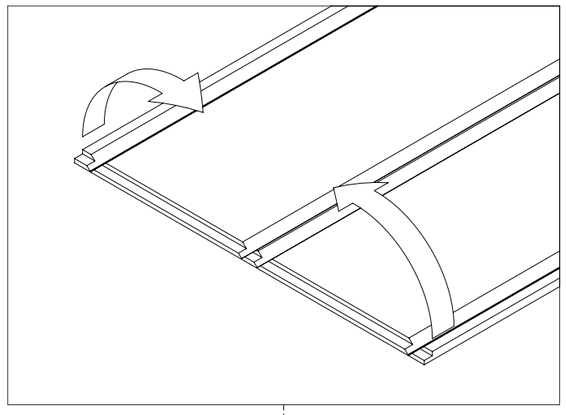
BEAM 250

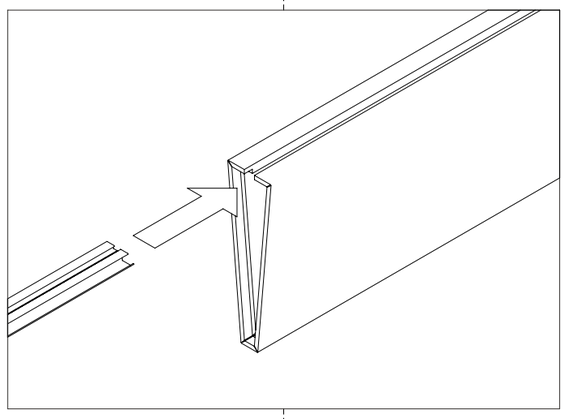


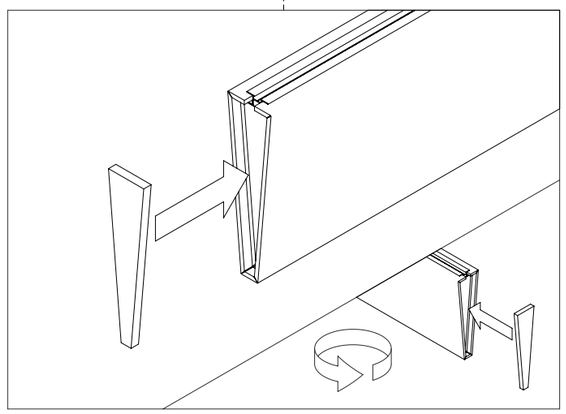




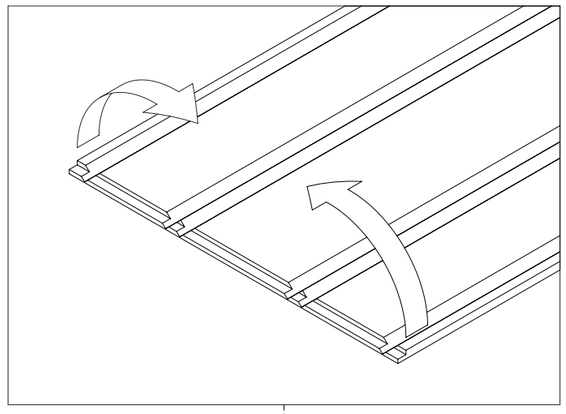
BLADE

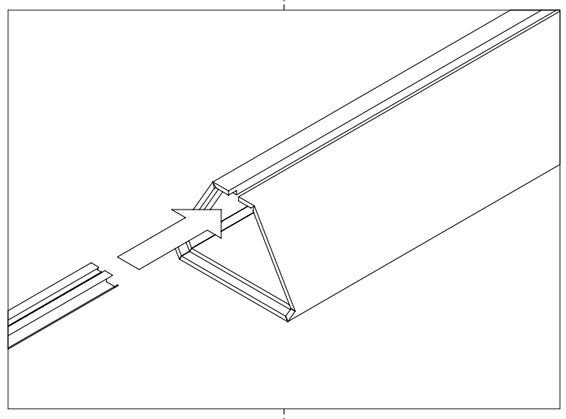


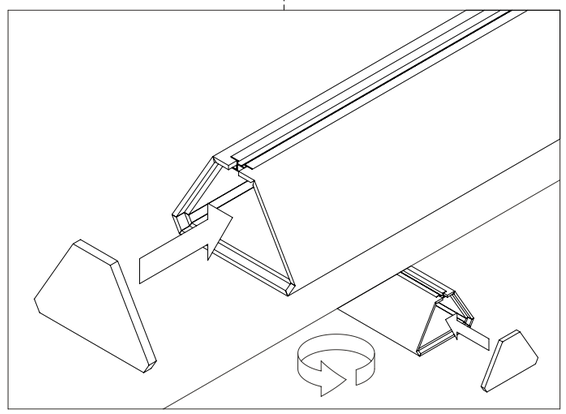




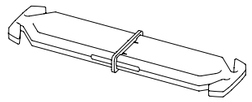
TRAPEZOID





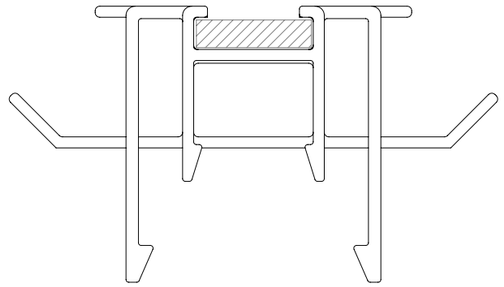


RAFCCT

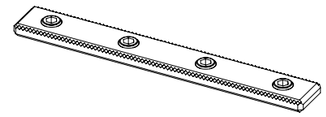


Light duty plastic connector used to join direct fixed rails.

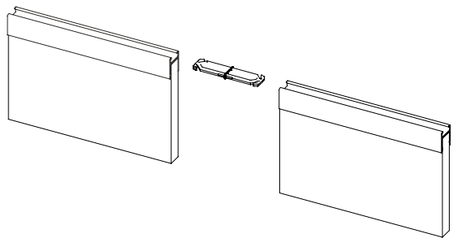
Both joiners are compatible with all extrusion sizes

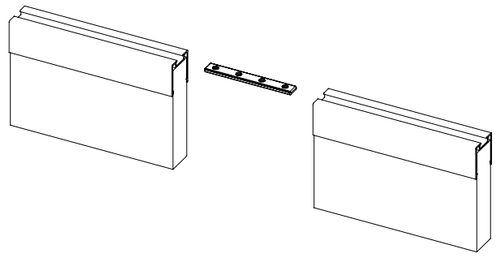


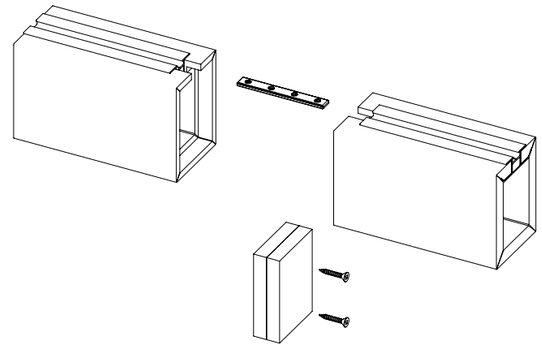
RAFHDCC



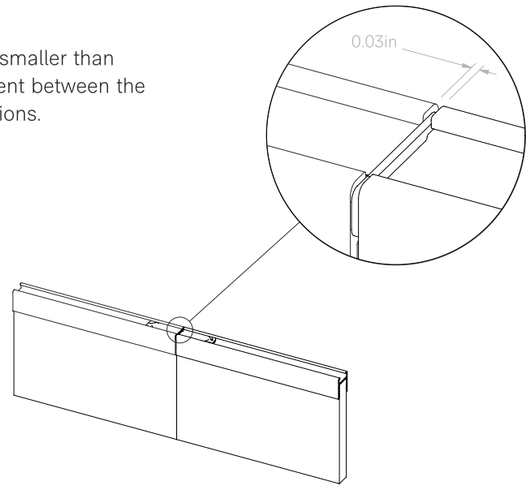
Heavy duty diecast connector with 4x grub screws used to join cross rails and/or suspended rails.



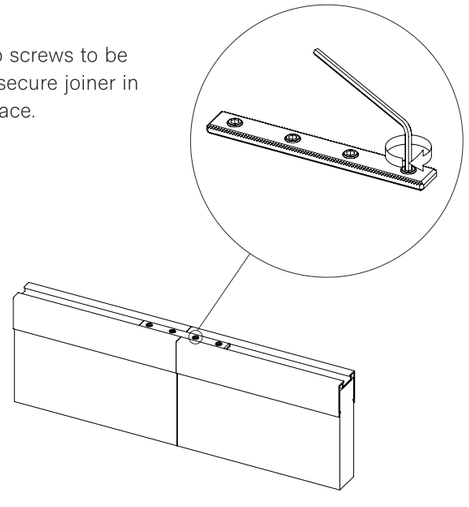




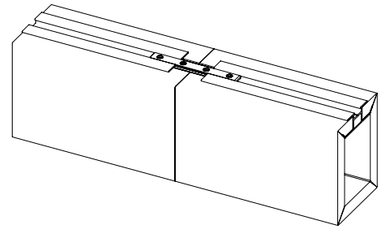
NOTE: A gap smaller than 1/16" will be present between the extrusions.

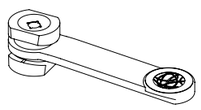


NOTE: Grub screws to be tightened to secure joiner in place.

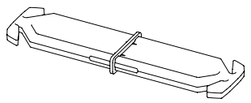


NOTE: In addition to joiner, screw the end caps together to create a cleaner join

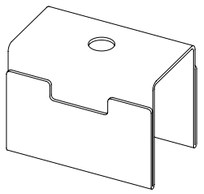




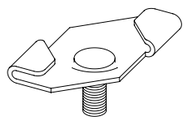
RAFTCC
Autex Mounting Clip



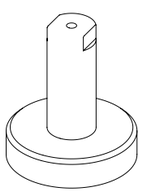
RAFCCT
Autex Frontier Channel Connector



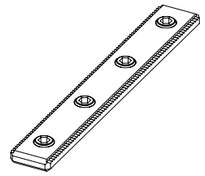
RAFWCP
Autex Removable W-Clip



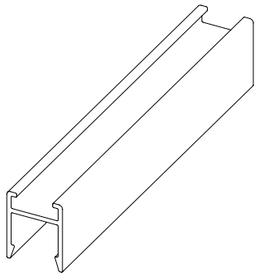
RAFM6GC
24mm Ceiling Grid Connector with
M6 Thread



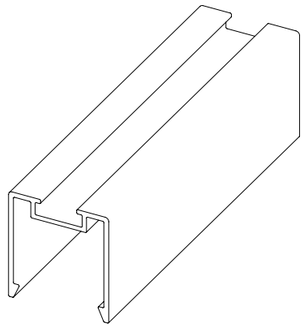
RAFM6MP
Magnet Pot with M6 Thread and Cable
Adaptor



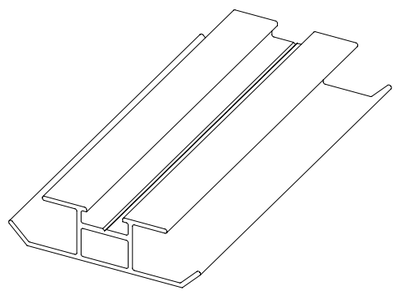
RAFHDCC
Autex Heavy Duty Frontier
Channel Connector with
4x M5 Grub Screws



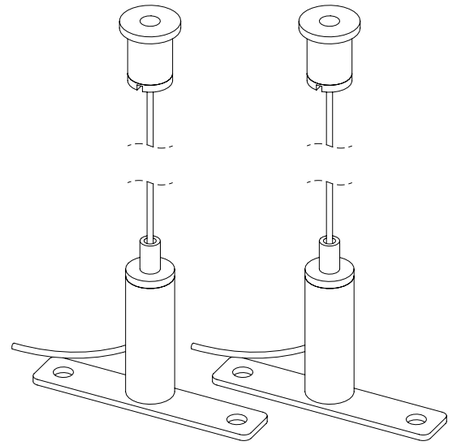
RAFNEX
Frontier 1/2" Extrusion



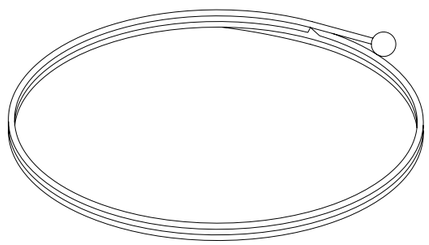
RAFNEX24
Frontier 1" Extrusion



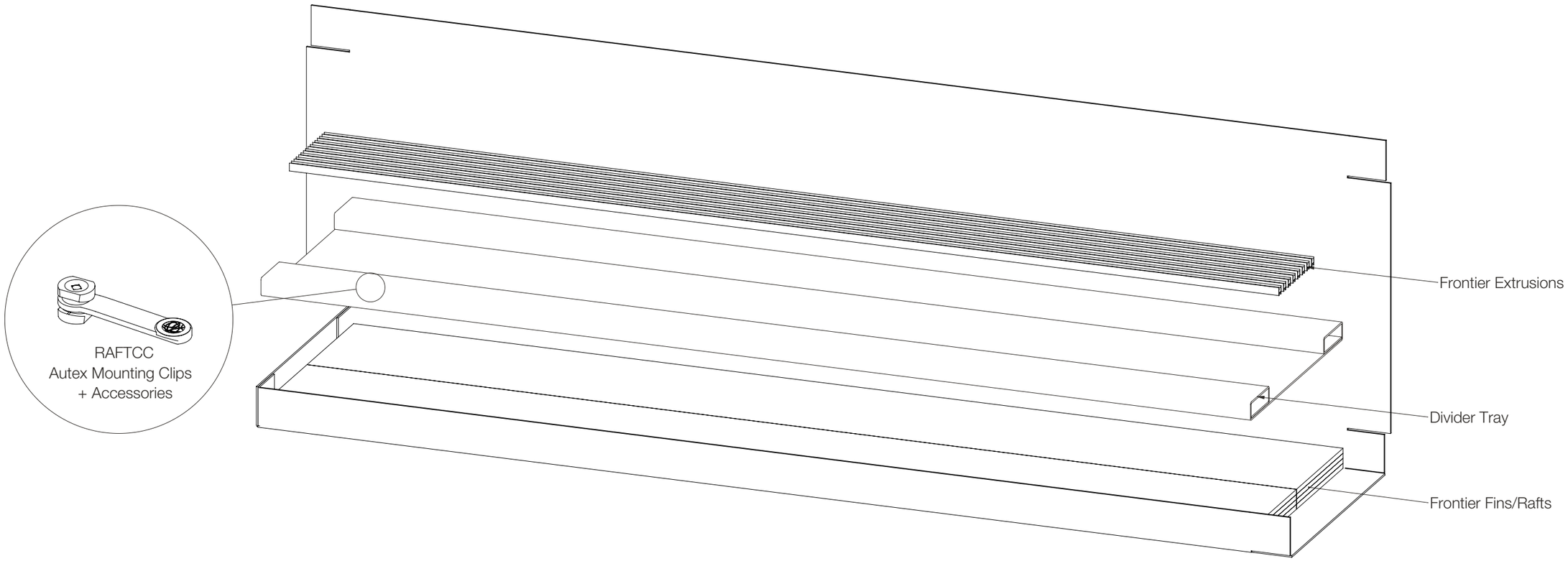
RAFNEXRT
Frontier Raft Extrusion



RAHVAS
Autex Adjustable
Suspension Set 78”cable -
Channel Connection



RAH3MBE
118" Steel Cable with
Ball End



STYLE	FIN LENGTH (IN)	FIN THICKNESS (IN)	FIN DEPTH**(IN)	FIN SPACING (IN)	FINS PER PACK	CHANNELS PER PACK	MOUNTING CLIPS	CONNECTOR TABS	AREA PER PACK (SQFT)
TUNDRA	108”	1/2"	4"	4"	24	24	48	24	72
	108”	1/2"	6"	6"	16	16	32	16	72
	108”	1/2"	8"	8"	12	12	24	12	72
	108”	1/2"	12"	12"	8	8	16	8	72
	108”	1"	4"	4"	12	12	24	12	36
	108”	1"	6"	6"	8	8	16	8	36
	108”	1"	8"	8"	6	6	12	6	36
	108”	1"	12"	12"	4	4	8	4	36
DUNE/ SIERRA/TALUS	108”	1/2"	12"*	12"	8	8	16	8	72
	108”	1"	12"*	12"	4	4	8	4	36
AXIS	94 1/2"	1/2"	6"	12"	16	8	16	N/A	62

RAFT STYLE	RAFT LENGTH (IN)	RAFT WIDTH (IN)	RAFT DEPTH** (IN)	RAFT SPACING (IN)	RAFTS PER PACK	CHANNELS PER PACK	MOUNTING CLIPS	CONNECTOR TABS	AREA PER PACK (SQFT)
BEAM 100	108”	2 3/4"	3 1/2"	6"	8	8	16	8	36
BEAM 250	108”	3 3/4"	8 7/8"	12"	4	4	8	4	36
BLADE	108”	4 3/4"	10 3/8"	12"	4	4	8	4	36
TRAPEZOID	108”	8 11/16"	5 1/2"	12"	4	4	8	4	36

*The Fin Depth of DUNE/SIERRA/TALUS fins vary but average out to 12"

**Fin Depth/Raft Depth is inclusive of extrusion