

Tate Grid+ LEC



EN 12114



AS5637.1



EN 15804+A2



Main Characteristics

Maximum safe working point load - 2.2kN / 224kg*

Maximum safe uniform load - 3.0kN/m²/ 305kg/m²*

Factor of Safety - 2

System weight - 9.2kg/m²

Grid configuration - 600mm x 1200mm**

*based on 1.2 x 1.2 hanger configuration

**Optional grid configuration - 600mm x 600mm
(as per specific regional requirements)

Maximum torque for top slot - 7Nm

Maximum torque for bottom slot - 4Nm

Colour - RAL 9016 20% Gloss

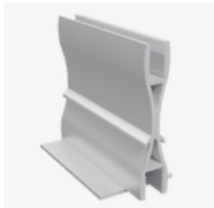
Bottom slot - M10 – 1.5

System achieves AS5637.1 Class 1
reaction to fire

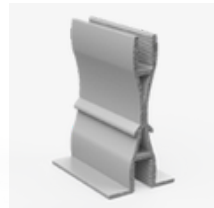
Tate Grid+ LEC ceiling system contributes to meeting this target by reducing the embodied carbon compared to our standard product by 56% across modules A-C and 62% across modules A1-A3. This is based on third-party verified Environmental Product Declarations following the EN 15804+ A2:2019 standard and ISO 14025.

Tate®

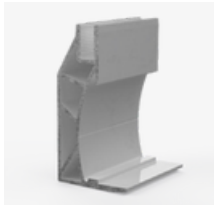
Components



Coped structural tee 1.2m
Coped standard cross tee.



Main runner 3.6m
Standard main runner.



Perimeter profile
A perimeter profile can be used at the data hall perimeter or around obstructions.



Field connector
Standard connector for in grid junction. Used in 600 x 600 Grid configuration only.



Field XL connector
Heavy duty connector that is used to splice main runners. Connector has a pin on the bottom surface to match the notches on the main runner.



Corner connector perimeter
The connector is used in corners and does not have bottom ribs for greater flexibility during installation. Allowable joint angles 88-92°. Two threaded holes for drop rods.



Offset perimeter connector
The connector is used for 3-way connections as the ending element of the system.



Screw down clip
Accessibility clip for easy removal of tile to gain access above the ceiling.

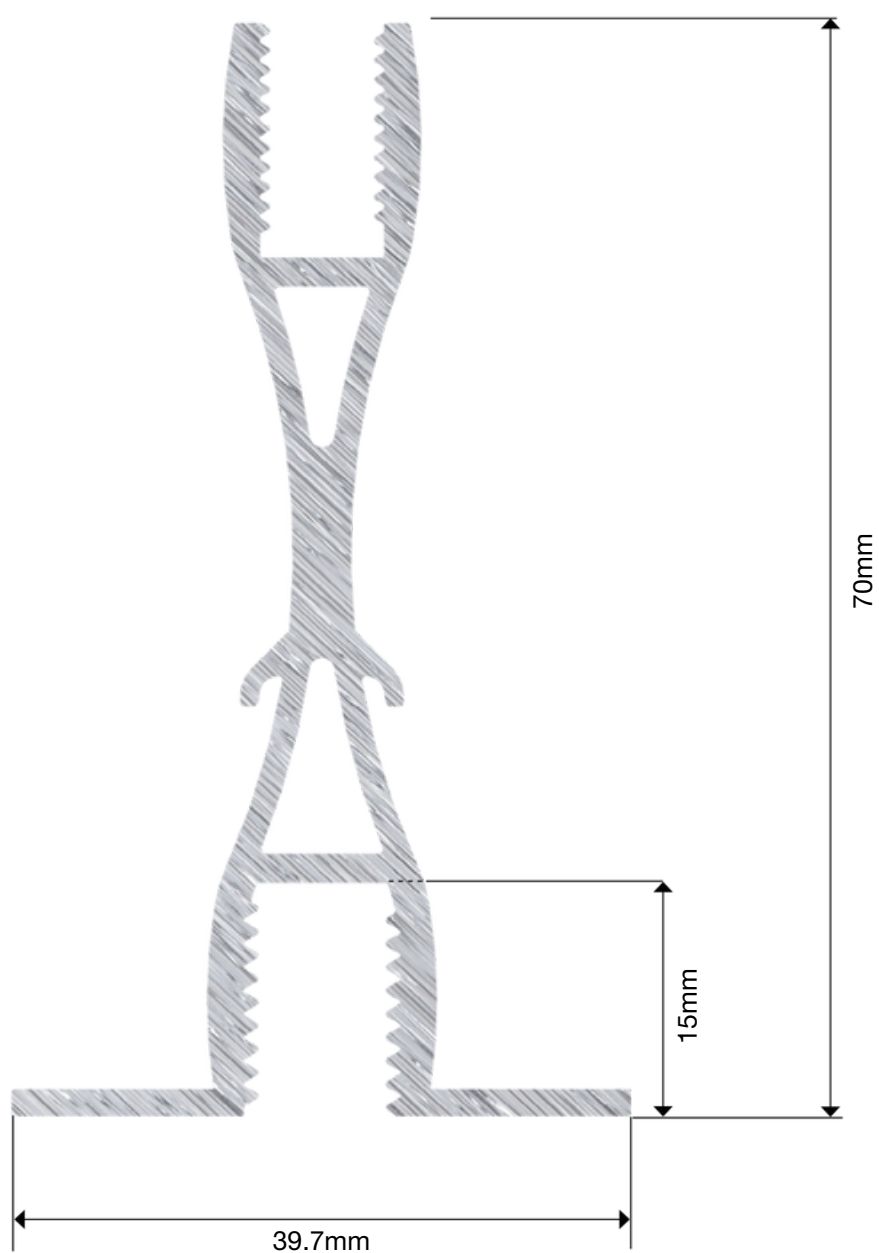


M8-35 DIN 6921
DIN 6921. Hex head screw with serrated flange. Used for all connectors.



Turnbuckle M10
M10 Turnbuckle with a starter rod is used to connect the structural ceiling with M10 suspension rods.

Cross section

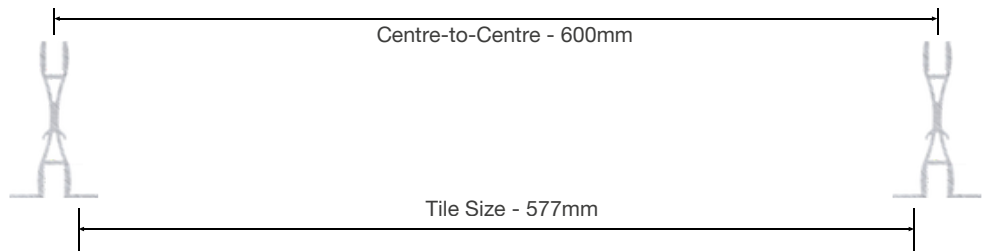


Continuous threaded M8 top slot

Continuous threaded M10-1.5 bottom slot

Utilises standard hardware connectors and features of Tate Grid+ LEC

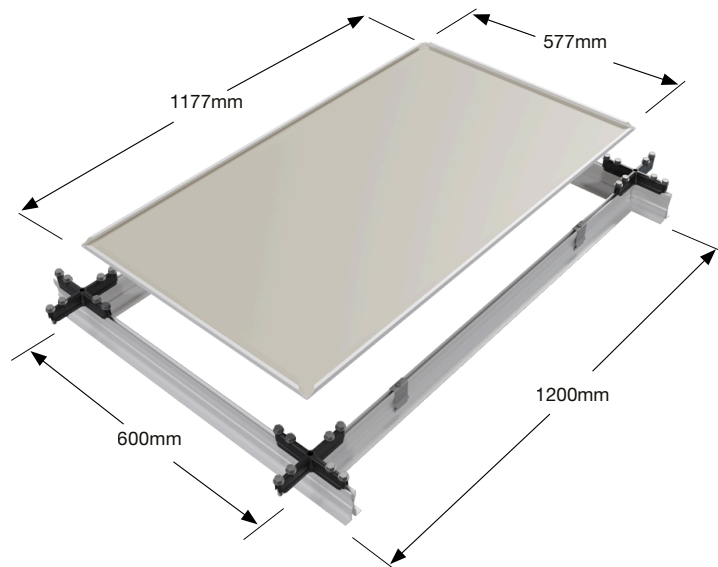
Grid Spacing and Tile Sizing



Grid spacing can be adjusted to fit standard 600mm x 1200mm nominal tile size, depending on customer's preference. Refer to the table below to determine tile size requirements.

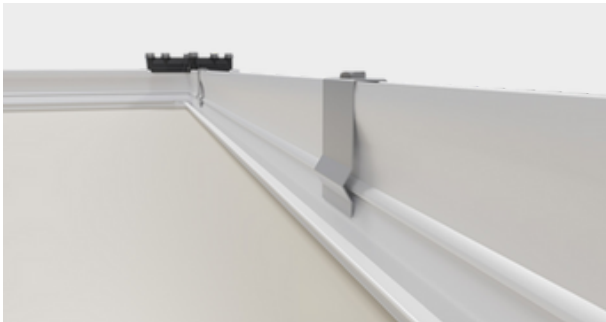
Typical Grid Profile	Grid Spacing (L x W)	Tile Size (L x W)
Tate Grid+ LEC	1200 x 600mm	1177 x 577mm +/- 3mm (see example below)

Note: Maximum Tile Size = Inside Grid Dimension minus 3mm. Minimum Tile Size is based on a minimum overlap on the extrusion flange of 3mm when the tile is shifted all the way to one side.



Sizing Based on 600 x 1200mm Grid Spacing

*for 600mm X 600mm Configuration Spacing details, please contact our technical team
Speak to a member of our technical team about our metal pan ceiling tile options.



Screw Down Clip that allows for tile to be removed.

Main Characteristics

Dimensions - 1177 x 577 x 0.7mm

Weight - 3.91kg

Thickness - 0.7 mm

Material - Galvanised prepainted steel

Front Colour RAL 9016

Back Finish - Unpainted Treated Steel

Fire classification - AS5637.1

Security hold down clips optional

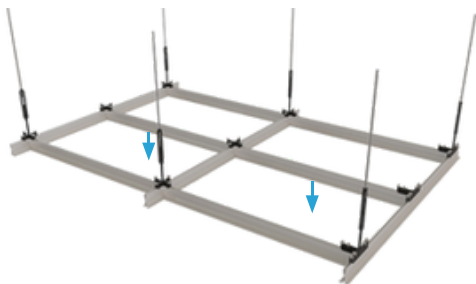
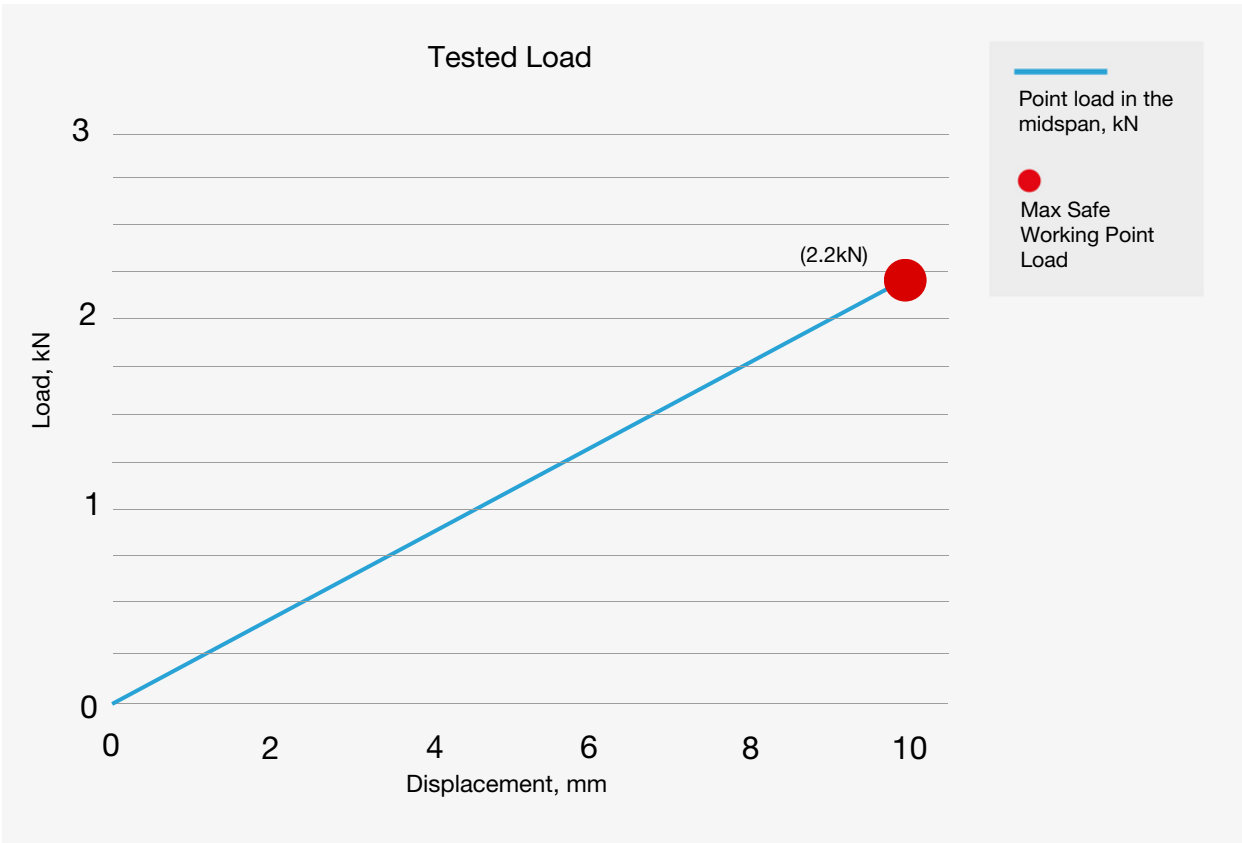
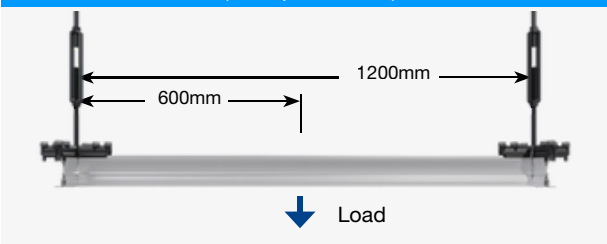
Factory applied gasket optional

The metal pan ceiling tile is designed exclusively for the Tate Grid+ LEC structural ceiling systems. Suitable for data centre applications, the metal pan ceiling tile offers a clean finish to the structural ceiling systems:

Performance Criteria

The bottom side of the structural grid is M10-1.5 continuous threaded slot for mounting items directly to the grid. Refer to the table below for load performance details on the grid and connections.

Structural Tee Deflection
(Midspan Beam)



Span, mm	Loading at Deflection Limit, N			
	L/360	L/240	L/180	L/120
1200	0.823	1.274	1.725	*2.2

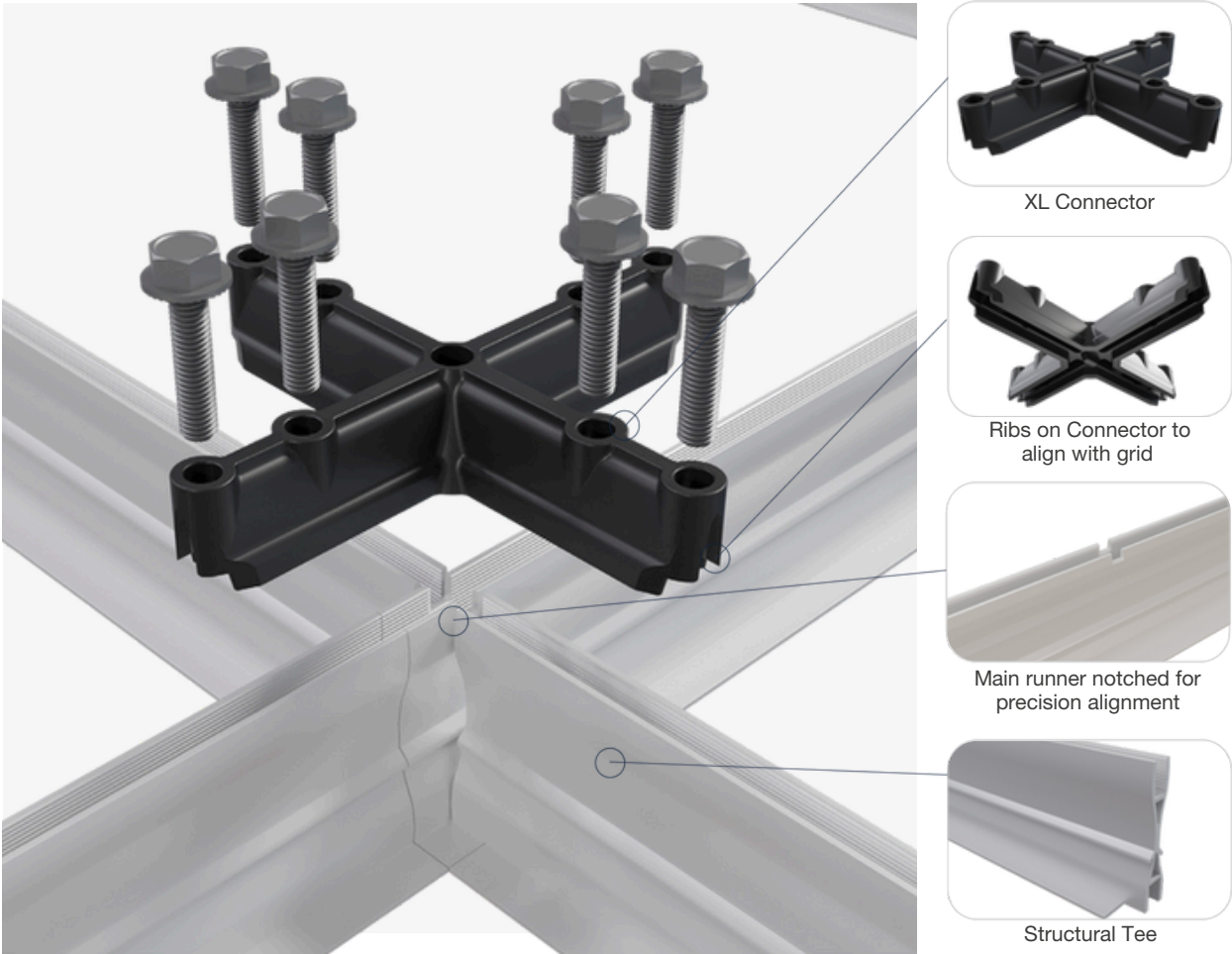
*Limited by the workload

Hanger Configuration	Max Safe Working Uniform Load (kN/m ²)	Deflection at Max Point Load (mm)	Max Safe Working Point Load (kN)	Factor of Safety
1200mm x 1200mm	3.0	10*	2.2**	2

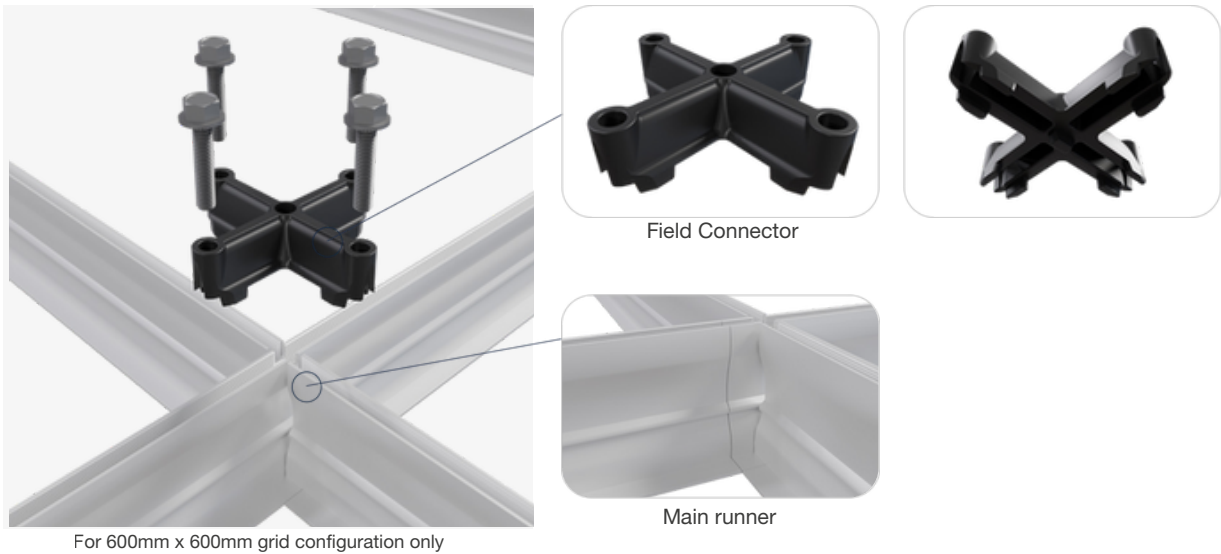
*deflection is based on max safe working point load

** Max safe working point load no less than 1200mm in any direction

XL Connector

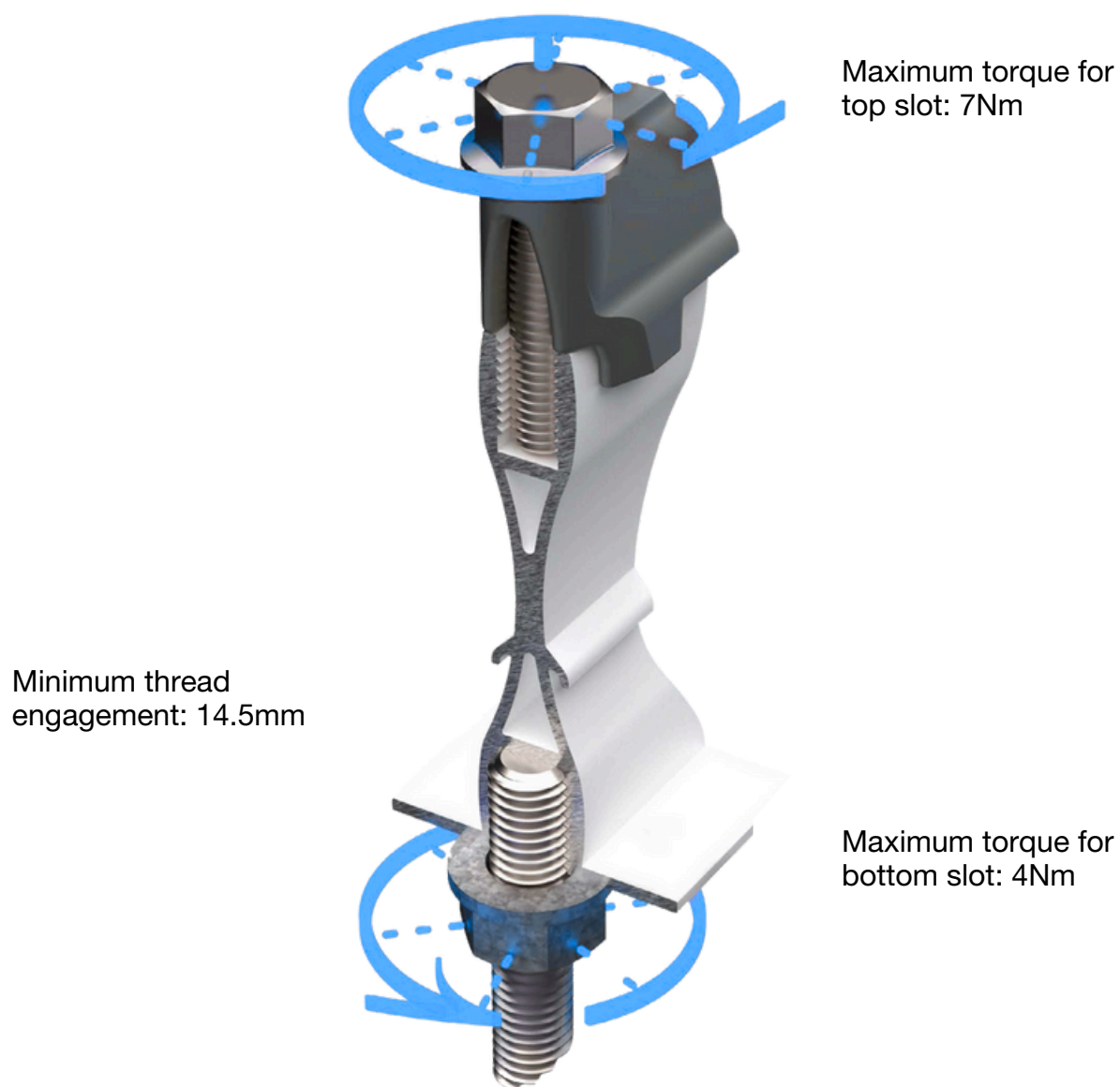


Field Connector (For 600mm x 600mm grid configuration)

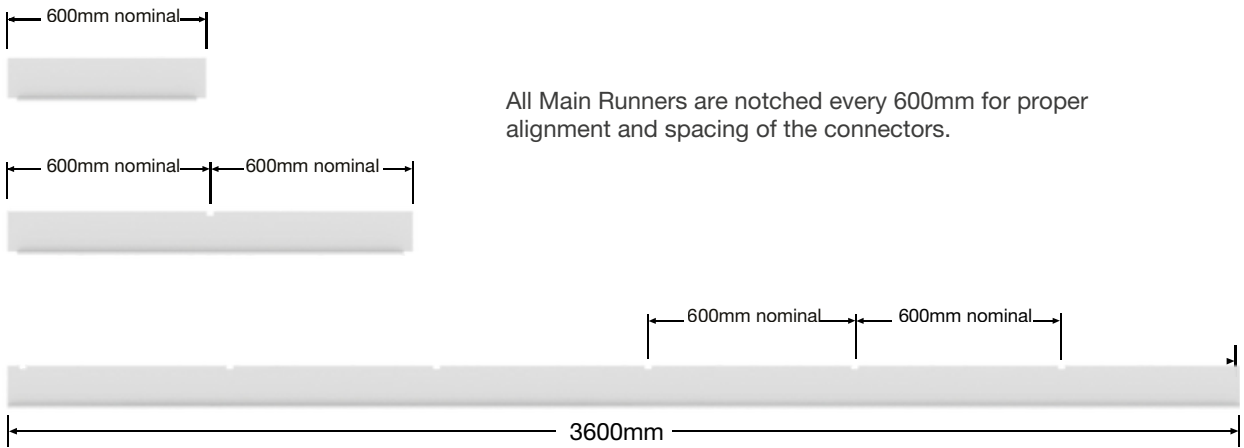


For 600mm x 600mm grid configuration only

Torque Settings

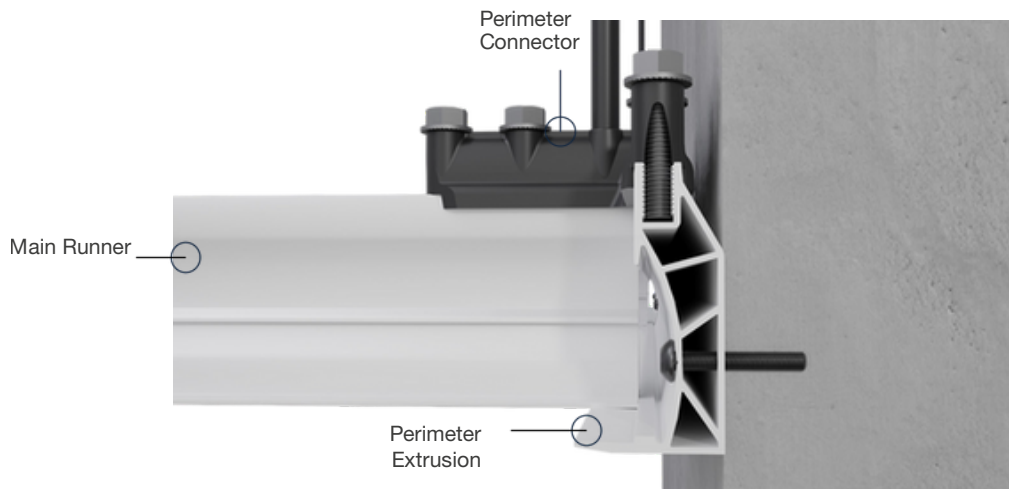


Main Runners and Structural Tees



Note: Structural Tee and Main Runner dimensions are nominal and are adjusted for custom-sized ceiling grid designs

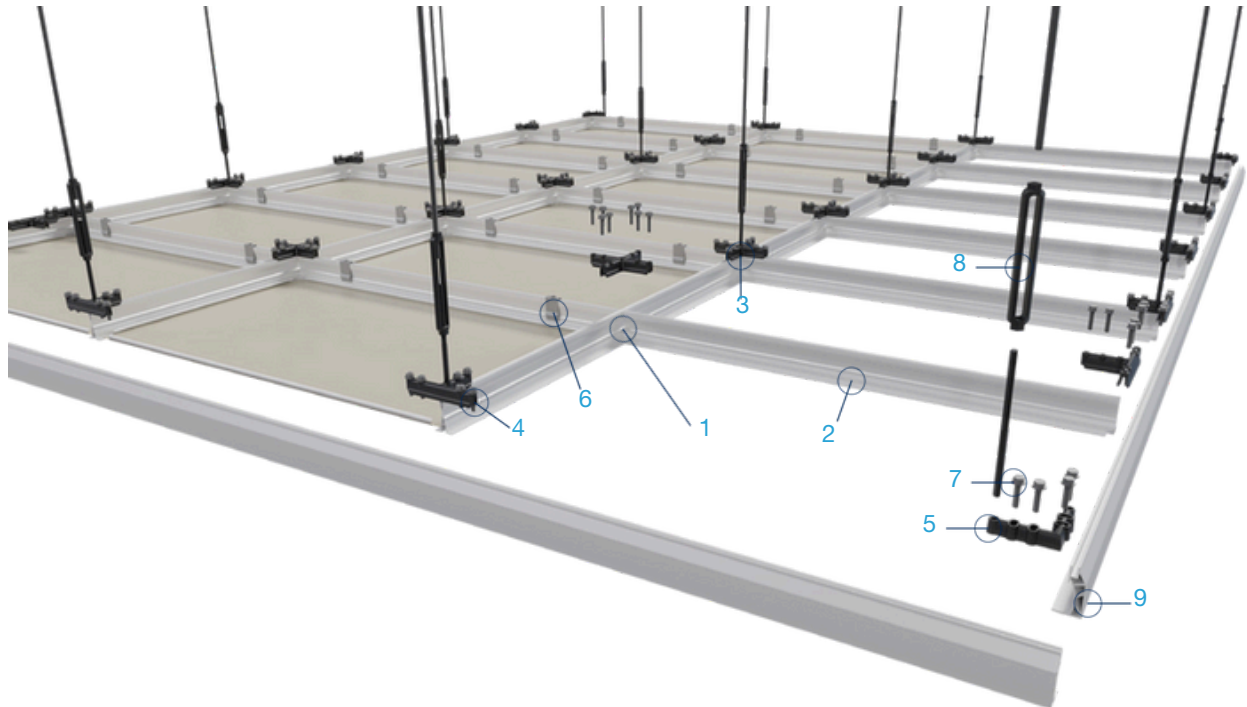
Perimeter Details



Fixed Installation Detail

Perimeter Extrusions with Main Runners or Structural Tees are utilized when installing a fixed perimeter along the perimeter wall. Perimeter Extrusions can be cut on site to desired length when assembled along perimeter walls. The Perimeter Extrusions are bolted directly to the wall with appropriate fasteners for wall type.

1200mm X 1200mm Hanger Configuration and Fixed Perimeter



1



Coped structural tee 1.2m

2



Main runner 3.6m

3



XL Connector

4



Perimeter Connector

5



Corner Connector

6



Screw Down Clip

7



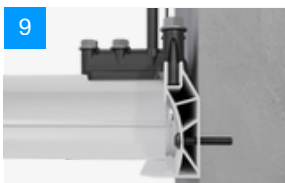
M8-35 screw

8



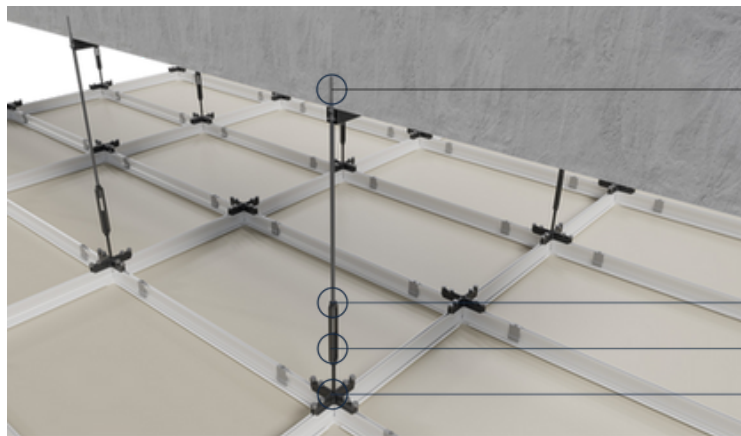
M10 Turnbuckle

9



Perimeter Profile

Fixing to Building Structure*

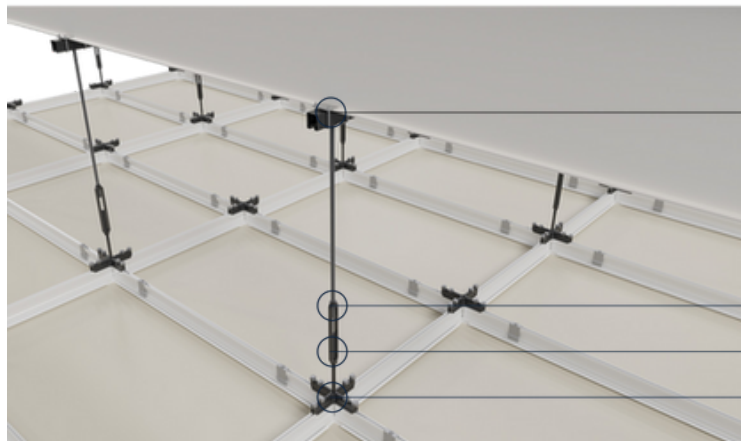


Internally Threaded Anchor or Clamp
(Supplied by others) Anchor to meet
project requirements

M10-1.5 LH/RH x 178mm Turnbuckle

M10-1.5 Threaded Starter Rod into Turnbuckle

M10-1.5 RH Threaded Connection to Connector



Connection to super structure
designed and specified by others

M10-1.5 LH/RH x 178mm Turnbuckle

M10-1.5 Threaded Starter Rod into Turnbuckle

M10-1.5 RH Threaded Connection to Connector

*Building structure must be able to carry a Design Area Load of 3.125 kN/m² (System Self-weight calculated with Tate Metal Tiles). This design load transmitted through the turnbuckle has no factor of safety included (outside Tate's scope). The factor of safety must be decided by the building's designers and structural engineers, as it may vary for different countries.

** Turnbuckle connection must be capable of supporting a Design Point Load of 4.5kN at the connection to the building structure. (System Self-weight calculated with Tate Metal Tiles). This design load transmitted by the turnbuckle has no factor of safety included (outside Tate's scope). The factor of safety must be decided by the building's designers and structural engineers, as it may vary for different countries. Contact Tate APAC technical support for typical connection details.

Lower Embodied Carbon structural ceiling solution made with lower carbon raw materials. The Tate Grid+ LEC Ceiling Grid meets LEED requirements for Environmental Product Declarations. Its EPD ([EPD number HUB-2130](#)) is independently verified and complies with EN 15804+A2:2019 and ISO 14025.

Contact our technical team for support: T: (02) 9612 2300, E: info@tateapac.com



Tate Asia - Pacific Pty Ltd
Level 12, 100 George Street, Parramatta NSW 2150
tateglobal.com

Please note we reserve the right to change specification or design and supply products which may differ from those described and illustrated without notice and without liability.
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