EMEA REGION

Metric Data Sheet Information

Tate Grid+ **LEC**

EPD
EN 15804:2012 + A2:2019

EN 13501-1:2018 Class A1

EN ISO 10140-2:2010

EN 12114:2000

Always refer to the latest version available on our website.

LEC CO_2 LOWER EMBODIED CARBON

Please ensure you use the most up-to-date version of the data sheet available on our website. This data sheet provides information specific to Tate Grid+ LEC in the EMEA region. Tate Grid+ LEC information may vary in other regions.

Main Characteristics

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

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

Factor of Safety - 2

System weight - 2.9kg/m²

Grid configuration - 600mm x 1200mm

*based on 1.2m x 1.2m hanger configuration

Maximum torque for top slot - 7Nm

Maximum torque for bottom slot - 4Nm

Colour - RAL 9003

Bottom slot - M10 – 1.5

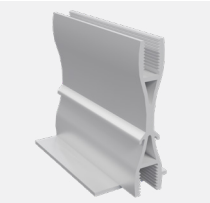
Fire classification EN 13501-1 - A1**

**EN 13501-1 - A1 is for ceiling grid system with metal pan tiles

Suspended load data has been independently tested and certified by a third party accredited certification company

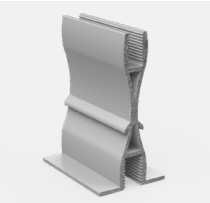
Tate®

Components



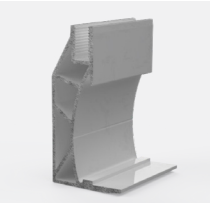
Coped structural tee 1.2m

Coped standard cross tee.



Main runner 3.6m

Standard main runner.



Perimeter profile

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

Field connector

Field connector

XL connector

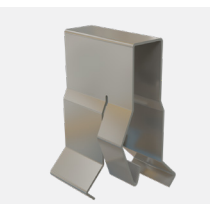
Heavy duty connector that is used to splice main runners.

Corner connector

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.

Perimeter connector

The connector is used for 3-ways connections as the ending element of the system.



Double spring clip for metal tiles

Double Spring clips for a standard Tate ceiling tile (1180x580x12). Allows access by pushing up the tile. Can be used multiple times.

Fire rated gasket

3x10mm, class B2 (DIN 4102-1).

Security clip for metal tiles

Security clip for restricted metal tiles.

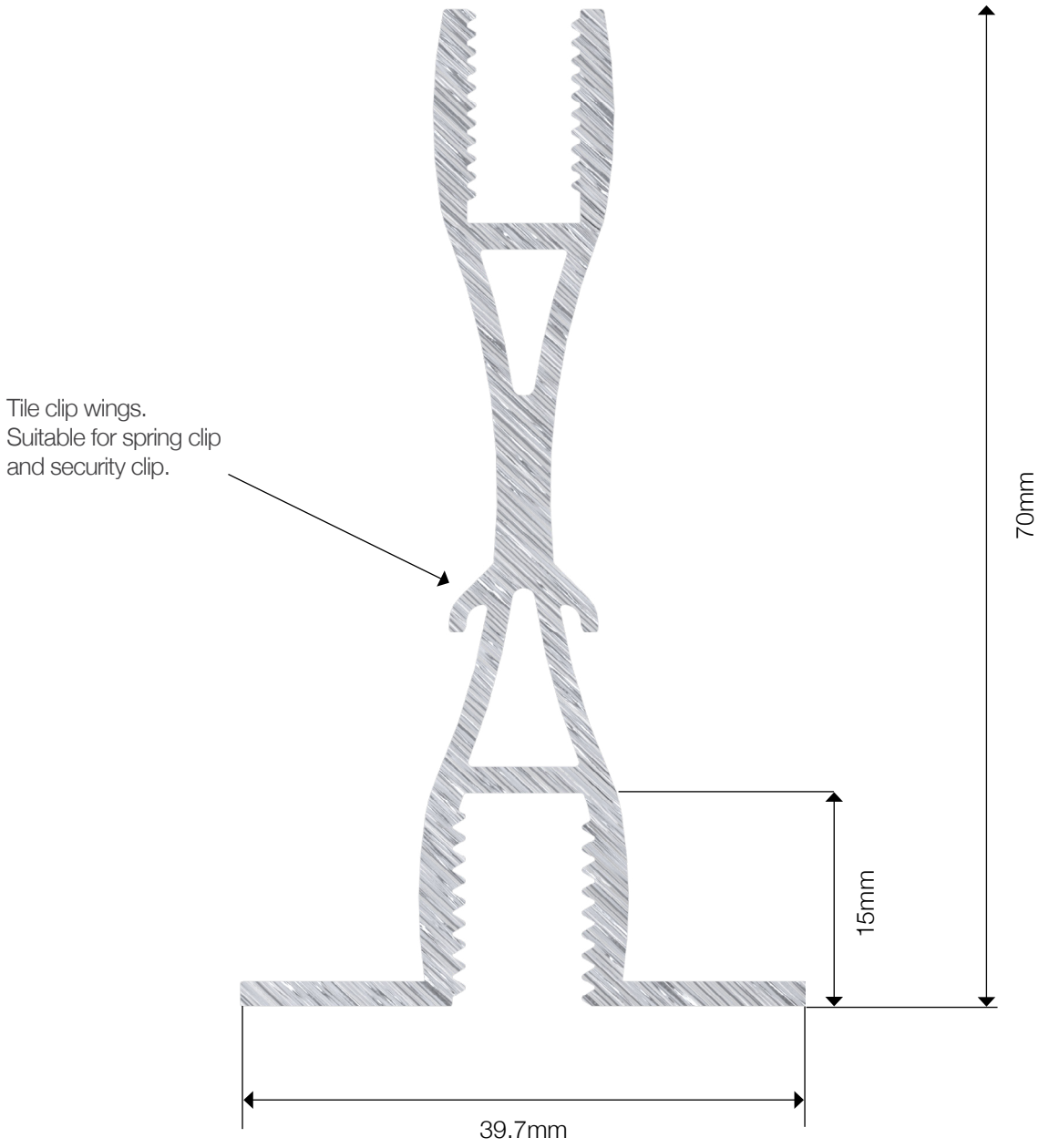
M8-35 Bolt (DIN 6921)

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

Light Infill

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

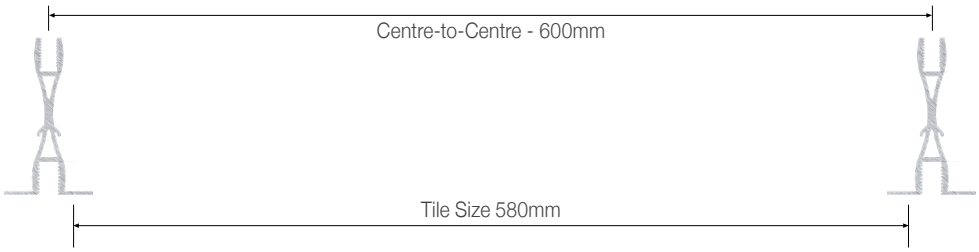
Cross Section



Type of Connection

Continuous threaded M8 top slot
Continuous threaded M10-1.5 bottom slot
Utilises standard hardware connectors and features of Tate Grid+ LEC

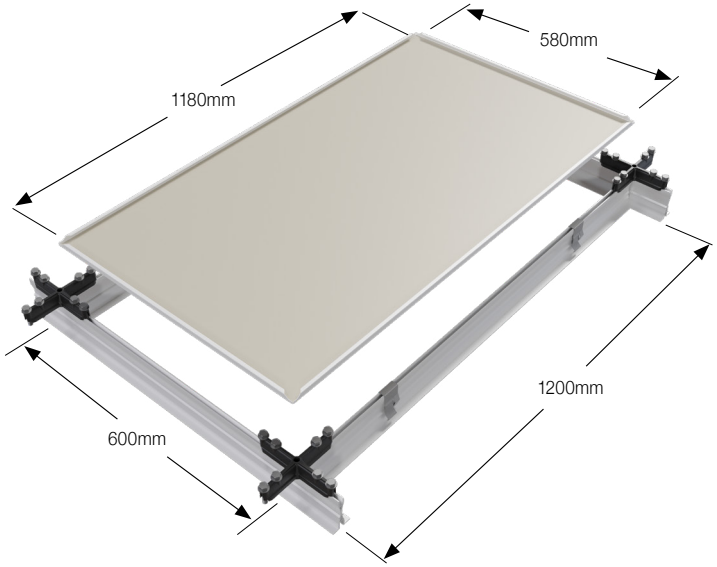
Grid Spacing and Tile Sizing



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.

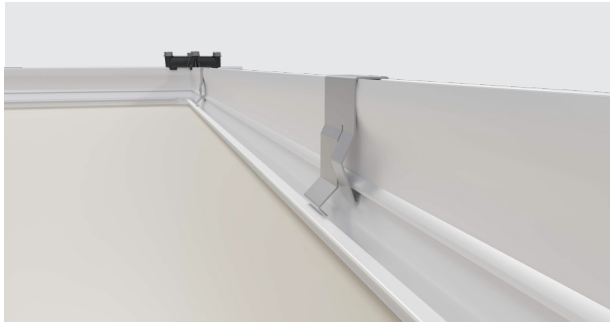
Grid Profile	Grid Spacing (L x W)	Tile Size (L x W)
Tate Grid+ LEC	1200mm x 600mm	1180mm x 580mm +/- 3mm (see example below)

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.

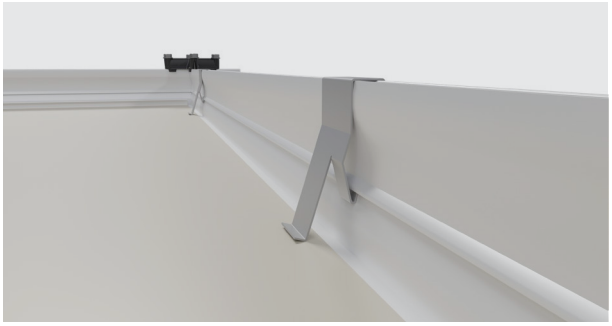


Note: Image for reference only. For specific data centre air pressures, contact the Tate technical team for clip configuration.

Sizing Based on 600mm x 1200mm Grid Spacing



Spring clips must be installed before the tile, ensuring the spring is aligned with the tile edge. This clip allows for easy access above the ceiling.

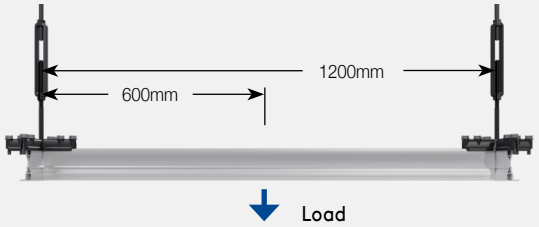


Security Clips

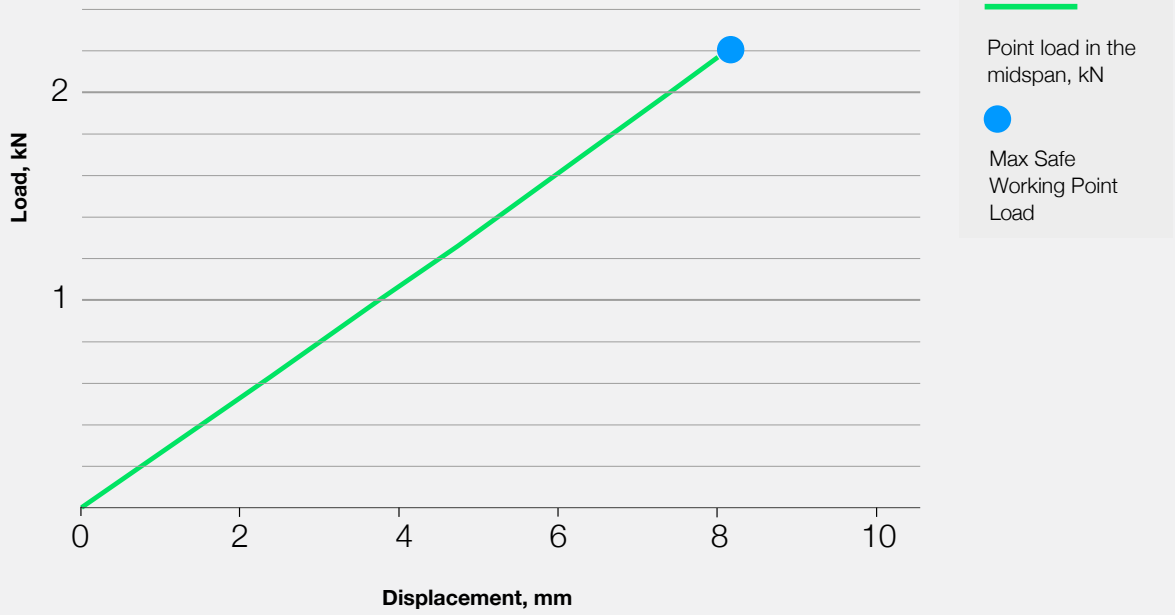
Performance criteria

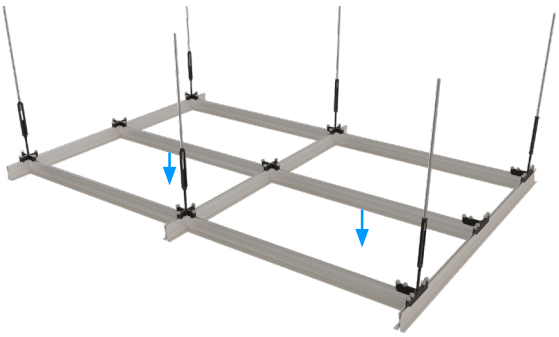
The bottom side of the structural grid is M10-1.5 continuous threaded slot for mounting items directly to the grid. Refer to the table below for load performance details on the grid and connections.

Structural Tee Deflection
(Midspan Beam)



Tested Load





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

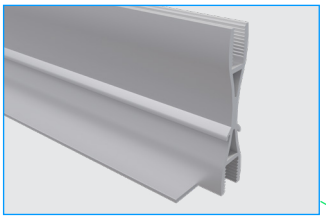
*Limited by the workload

Hanger Configuration	Max Safe Working Uniform Load (kN/m²)	Deflection at max load (mm)	Max Safe Working Point Load (kN)	Factor of Safety
1200mm x 1200mm	3.0	8.4*	2.2**	2

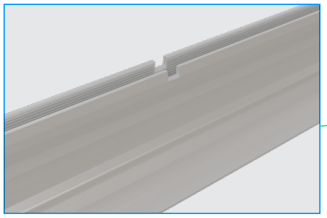
*Deflection is based on safe working load
** Max safe working point load no less than 1200mm in any direction

Suspended load data has been independently tested and certified by a third party accredited certification company

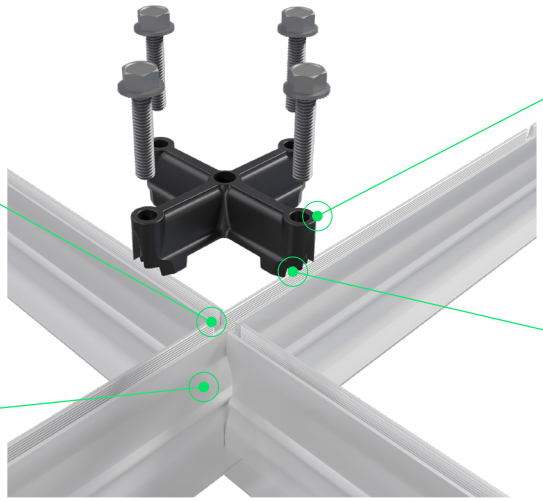
Field Connector

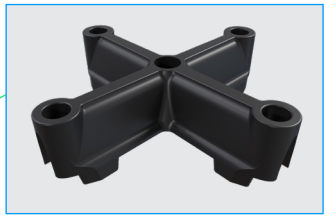


Structural Tee



Main runner notched for precision alignment

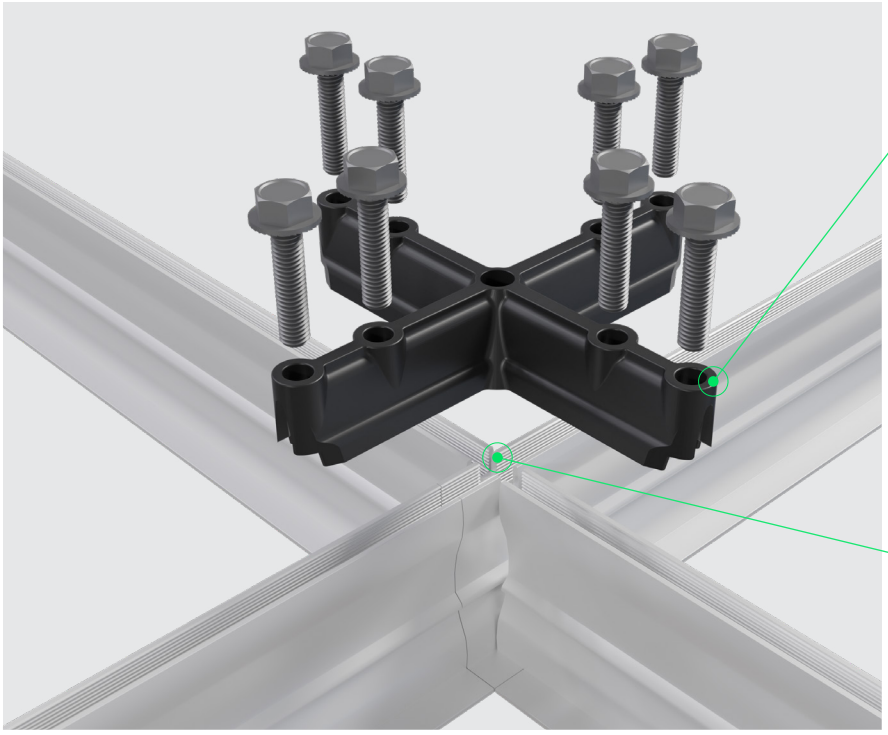




Field Connector

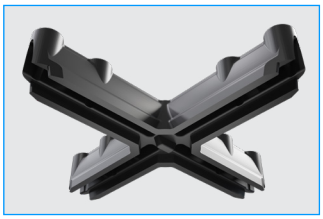
Ribs on Connector to align with grid

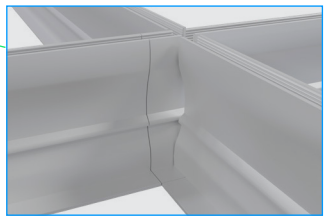
XL Connector



XL Connector is designed for additional support at the splice of each Main Runner.

XL Connector





Main Runner Splice

Torque Settings

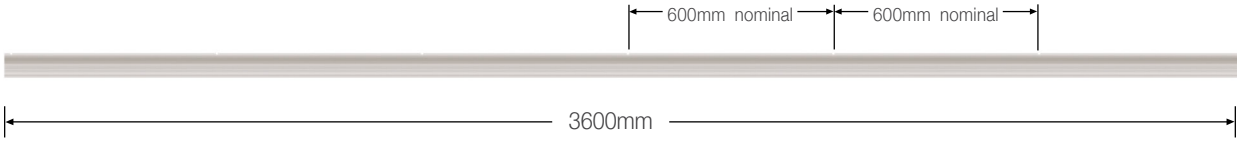
Maximum torque for top slot: 7Nm

Minimum thread engagement: 14.5mm

Maximum torque for bottom slot: 4Nm

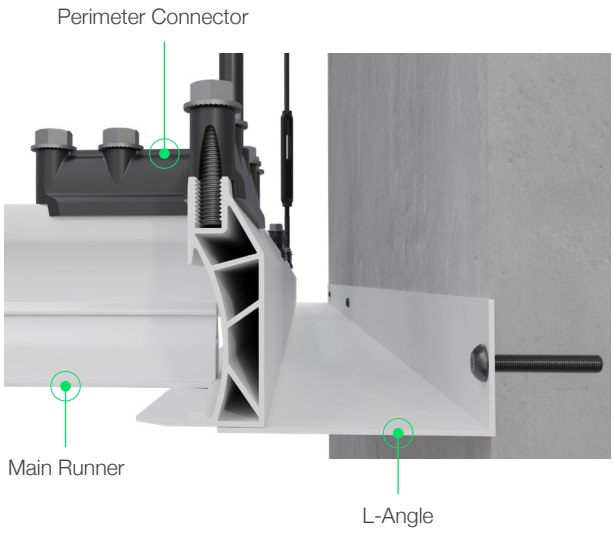
Main Runner and Structural Tees

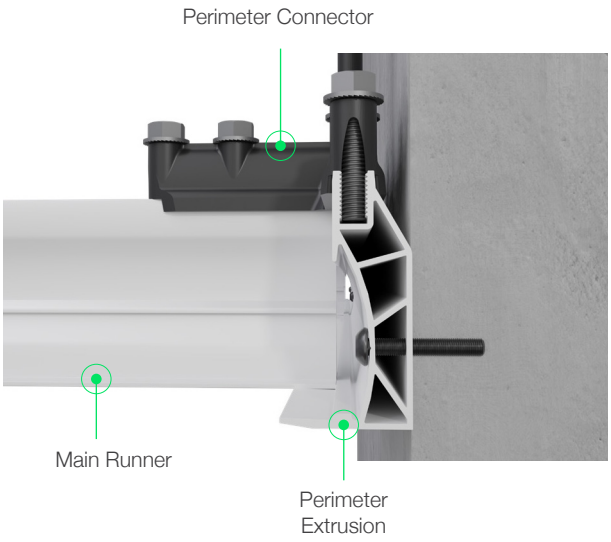
All Main Runners are notched every 600mm for proper alignment and spacing of the connectors.



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

Perimeter Details





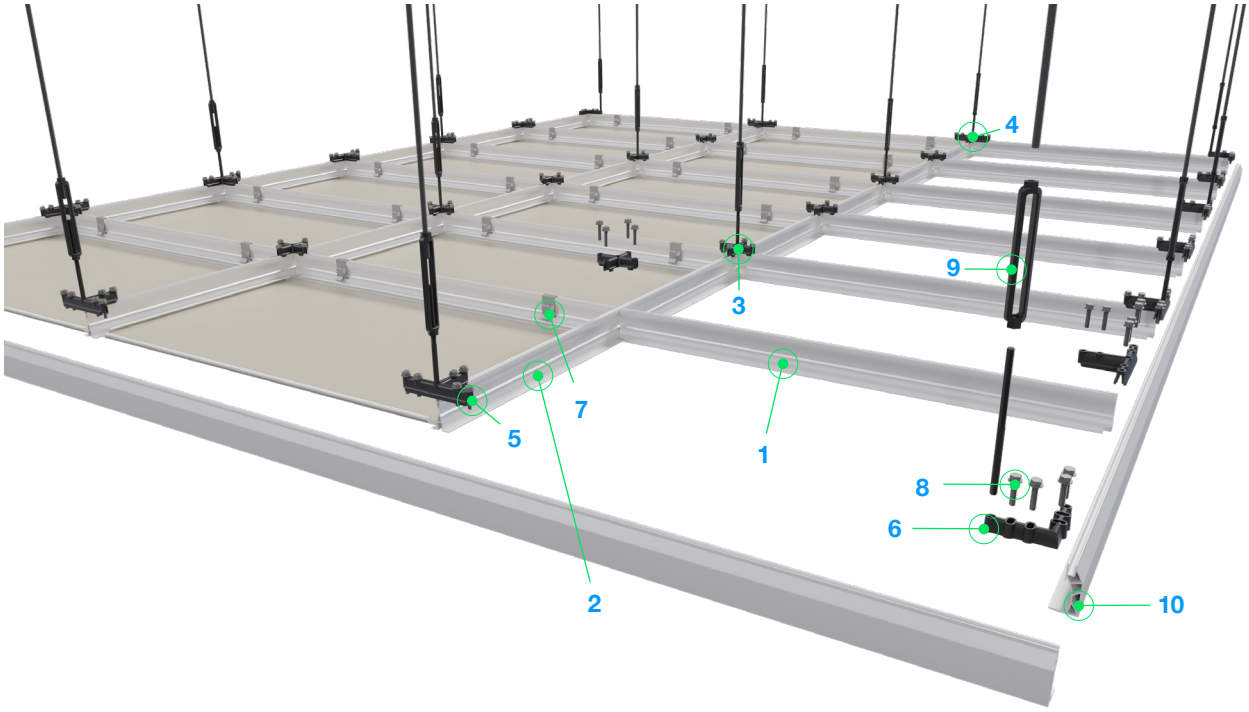
Floating Installation Detail

A floating perimeter installation uses the Perimeter profile in conjunction with the L angle. The L angles can be cut on site and bolted directly to the wall with appropriate fasteners (fasteners not supplied by Tate). The perimeter profile is supported by drop rods spaced at a maximum of 1.2m through turnbuckles and perimeter connectors.

Fixed Installation Detail

A fixed perimeter installation uses the Perimeter profile which can be cut on site and bolted directly to the wall with appropriate fasteners (fasteners not supplied by Tate). The perimeter profile is supported by drop rods spaced at a maximum of 1.2m through turnbuckles and perimeter connectors.

1200mm X 1200mm Hanger Configuration and Fixed Perimeter



1

Coped structural tee 1.2m

2

Main runner 3.6m

3

Field Connector

4

XL Connector

5

Perimeter Connector

6

Corner Connector

7

Double spring clip
for metal tile

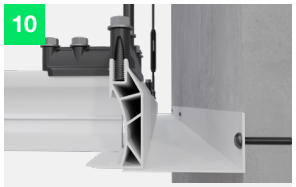
8

M8-35 screw

9

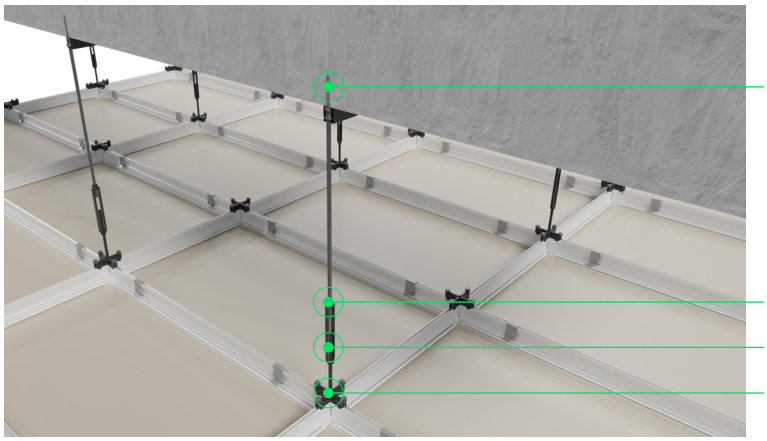
M10 Turnbuckle

10



Perimeter Profile

Fixing to Building Structure*

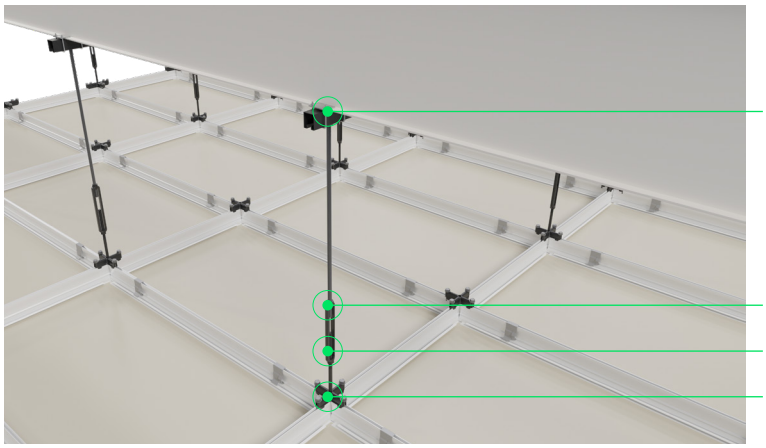


Internally Threaded Anchor or Clamp
(Supplied by others)

M10-1.5 LH/RH x 178mm Turnbuckle

M10-1.5 Threaded Starter Rod into Turnbuckle

M10-1.5 RH Threaded Connection to Connector



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 an Area Load of 3.125 kN/m2 (System Self-weight with full load capacity calculated with Tate Metal Tiles). This 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.

** Turnbuckle connection must be capable of supporting a Point Load of 4.5kN at the connection to the building structure.
(System Self-weight with full load capacity calculated with Tate Metal Tiles). This 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. Lower Embodied Carbon structural ceiling solution made with raw materials produced using renewable energy.

Lower Embodied Carbon structural ceiling solution made with raw materials produced using renewable energy. Environmental claims supported by a third-party verified EPD to the latest EN15804+A2 standard.

For technical enquiries and project support, contact us via email to **info@tateglobal.com**

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