

Tate Grid+ LEC



EN 15804:2012
+ A2:2020 & ISO
14025:2006



EN 13501-1:2019



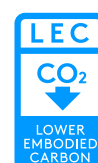
EN ISO 10140-2:2010



EN 12114:2000 - Clause 7.2



Always refer to the latest version available on our website.



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

Max safe working linear load - 3.67 kN/m / 373kg/m

Factor of Safety - 2

System weight* - 3.1kg/m²

Grid configuration - 600mm x 1200mm

Maximum torque for top slot - 7Nm

Maximum torque for bottom slot - 4Nm

Colour - RAL 9003 White

Bottom slot - M10 – 1.5

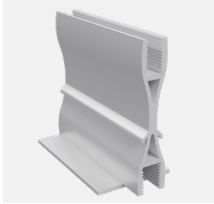
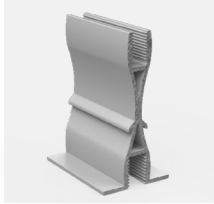
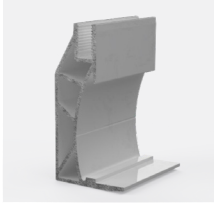
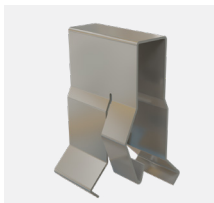
Fire classification* EN 13501-1:2019 - A1

*Based on a standard configuration - metal tile, 2 clips per Structural Tee

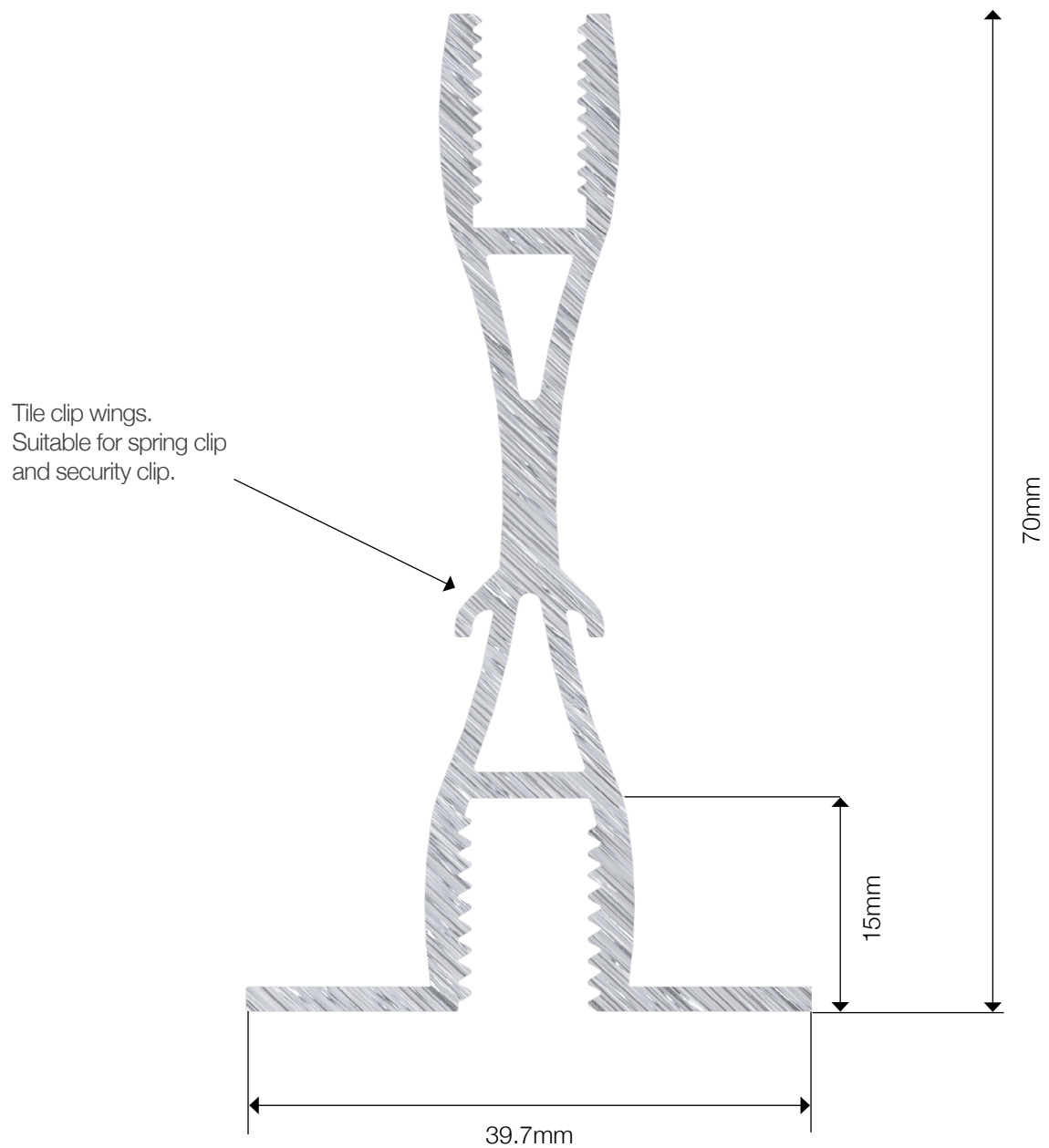
Suspended load data has been independently tested and certified by a third party accredited company

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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. 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.
	Gasket 3x10mm, foam gasket provides a seal between the tiles and profiles.		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.		M10 Turnbuckle & Starter Rod M10 Turnbuckle with a starter rod is used to connect the structural ceiling with M10 suspension rods.

Cross Section



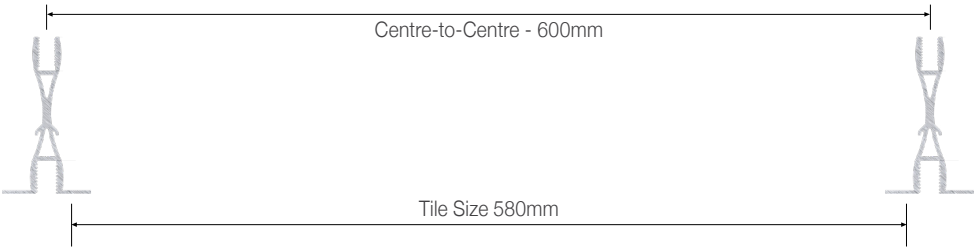
Type of Connection

Continuous threaded M8 top slot

Continuous threaded M10-1.5 bottom slot

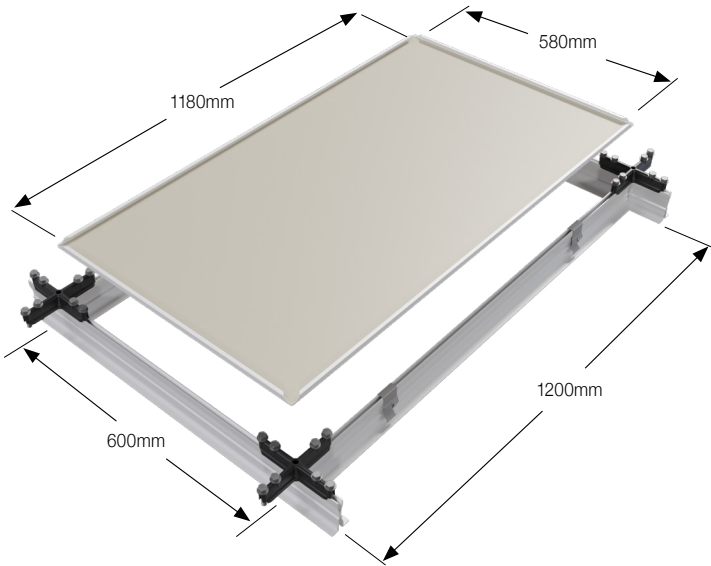
Utilises standard hardware connectors and features of Tate Grid+ LEC

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)

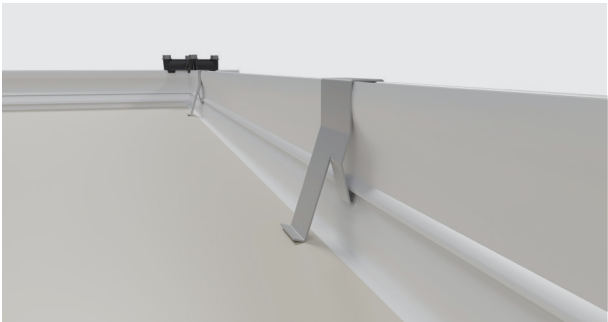


Note: Image for reference only. For specific data centre air pressures, contact the Tate technical team for clip configuration.

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.

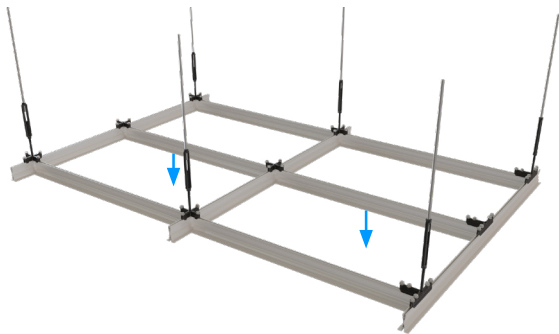
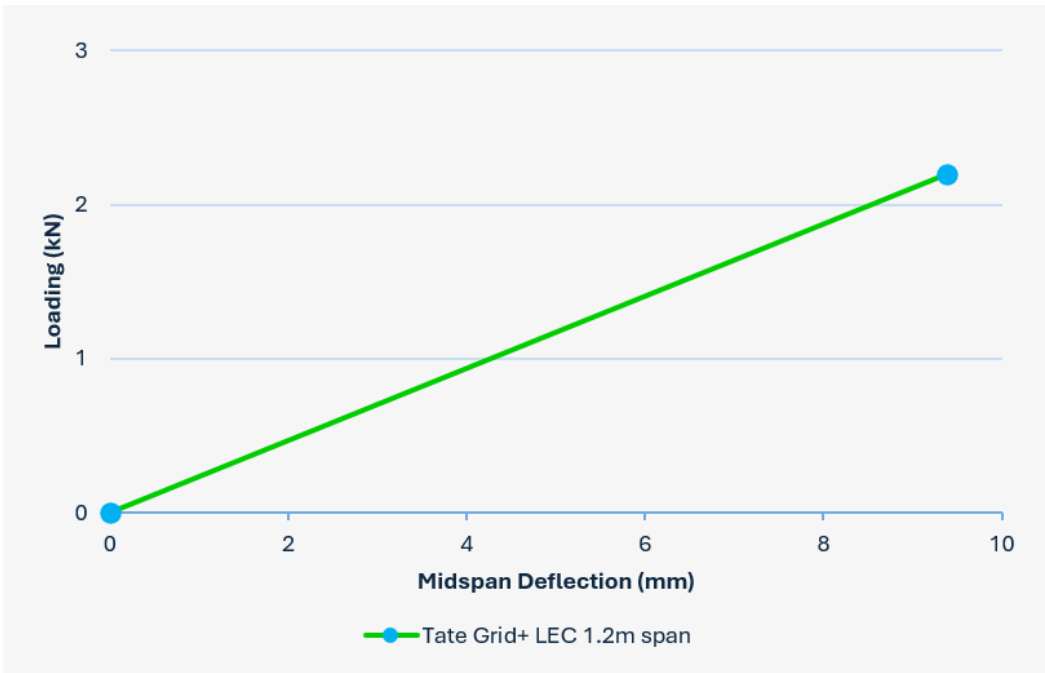
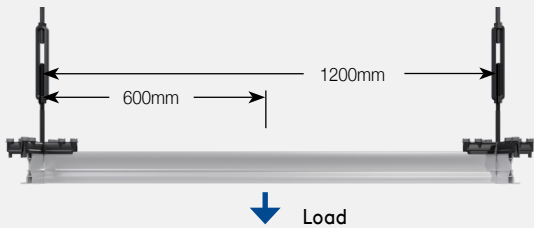


Security Clips

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)



Span, mm	Loading at Deflection Limit, kN			
	L/360	L/240	L/180	L/120
1200	0.734	1.151	1.538	2.2*

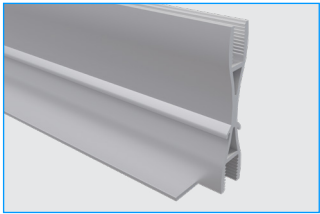
*Limited by the workload

Hanger Configuration	Max Safe Working Linear Load (kN/m)	Deflection at max load (mm)	Max Safe Working Point Load (kN)	Factor of Safety
1200mm x 1200mm	3.67	9.4	2.2	2

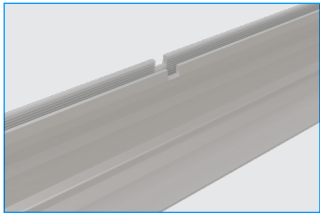
Suspended load data has been independently tested and certified by a third party accredited company



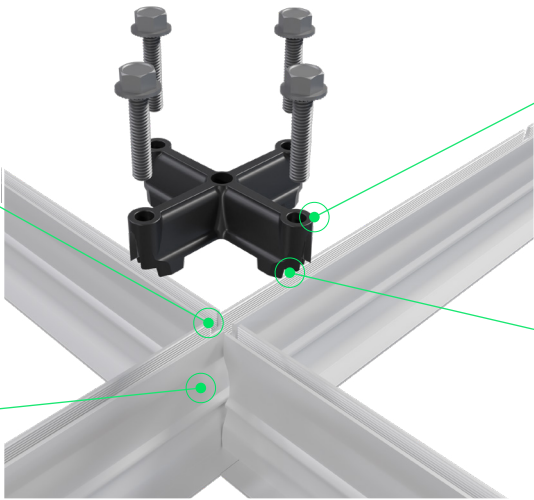
Field Connector



Structural Tee



Main runner notched for precision alignment

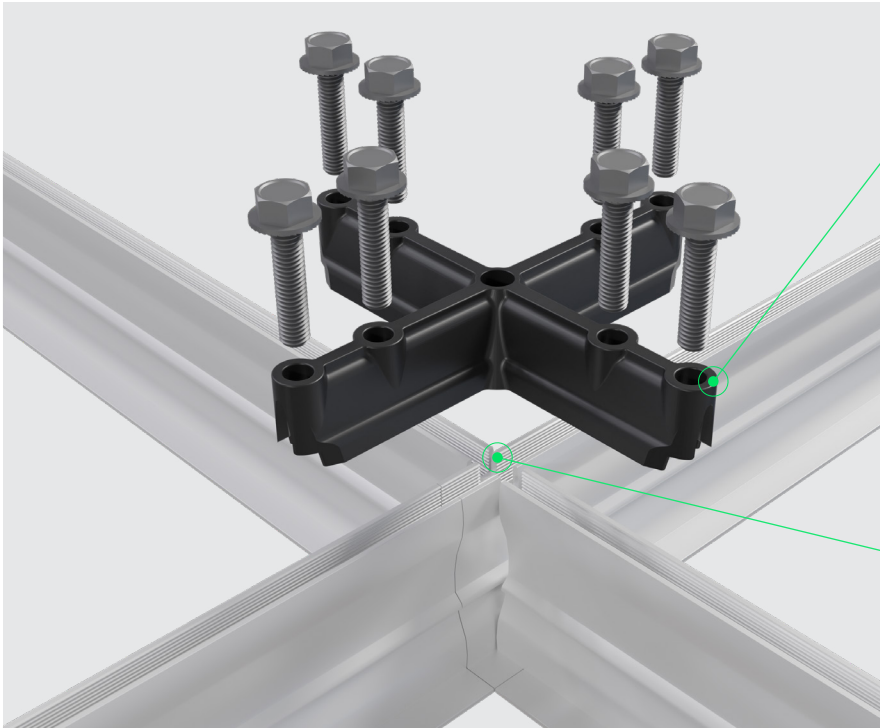


Field Connector



Ribs on Connector to align with grid

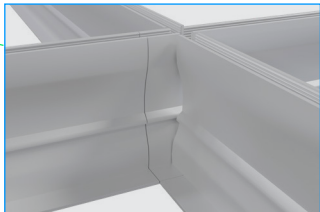
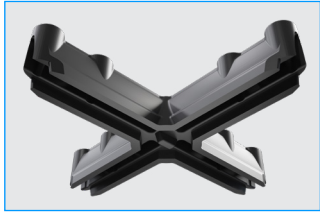
XL Connector



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

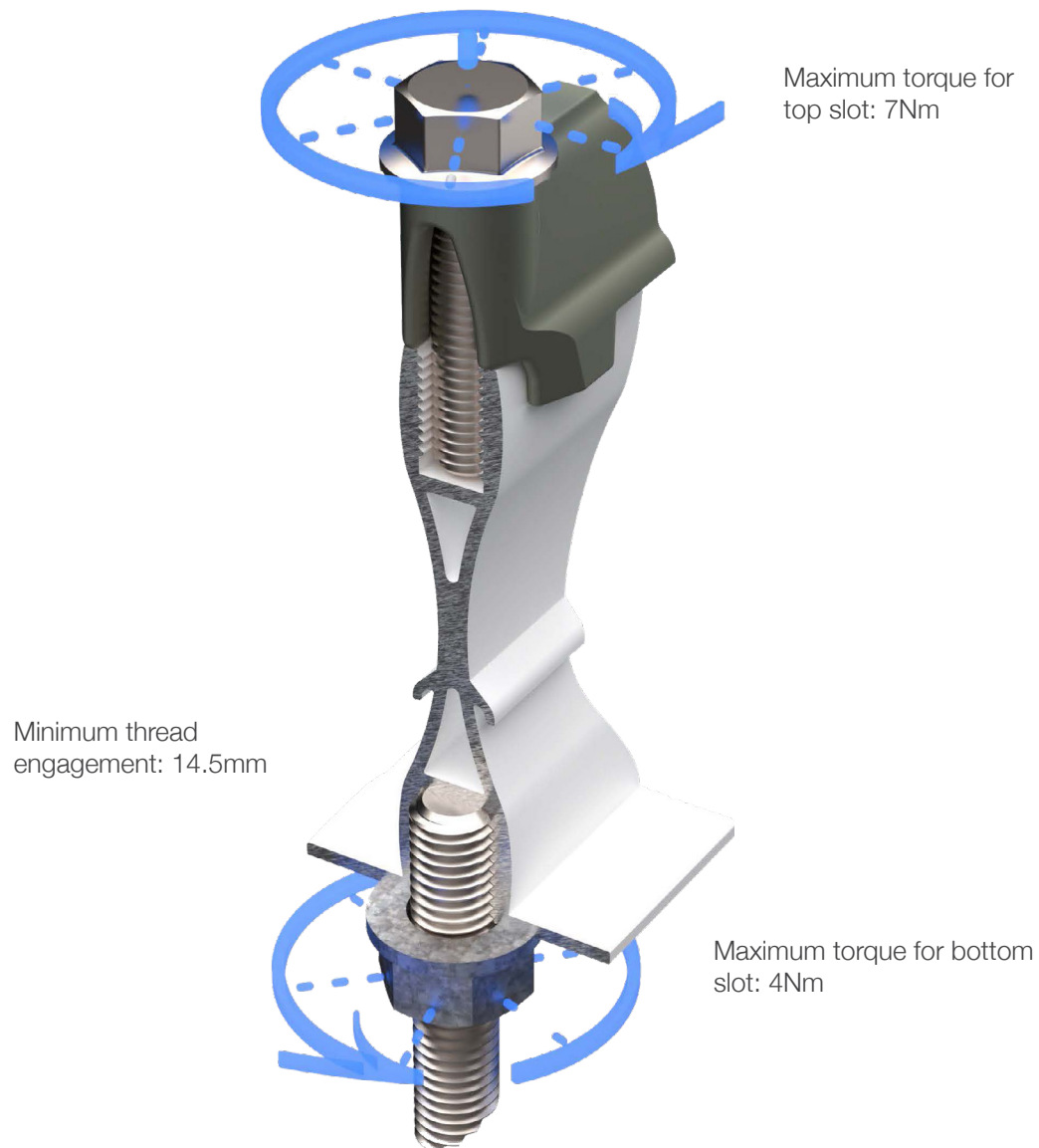


XL Connector

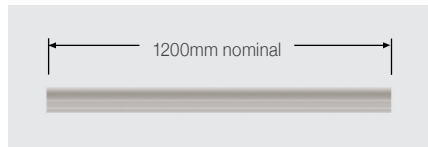


Main Runner Splice

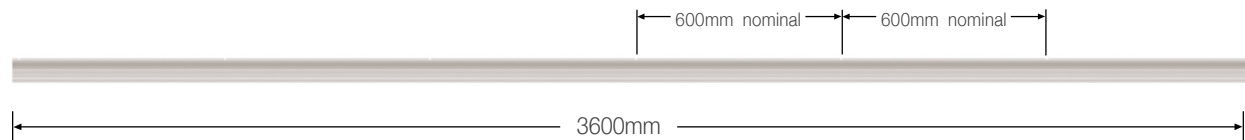
Torque Settings



Main Runner and Structural Tees

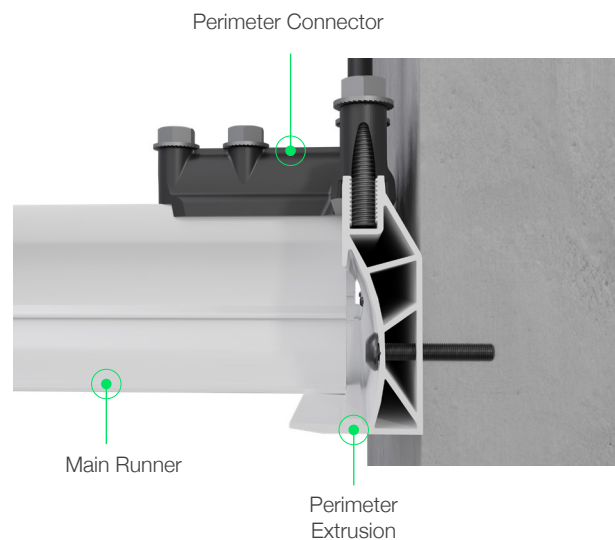
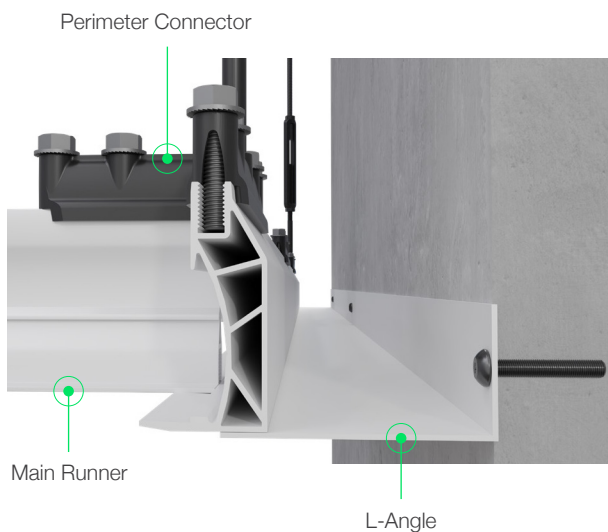


All Main Runners are notched every 600mm for proper alignment and spacing of the connectors.



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

Perimeter Details



Floating Installation Detail

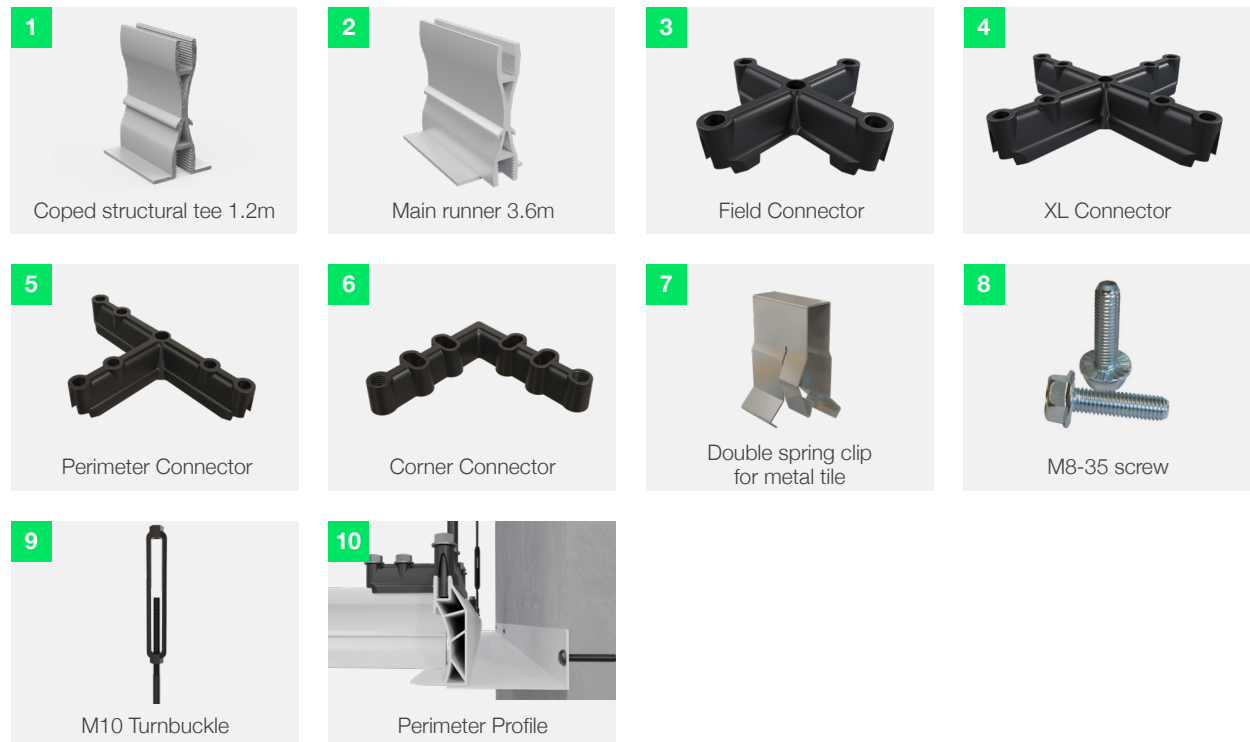
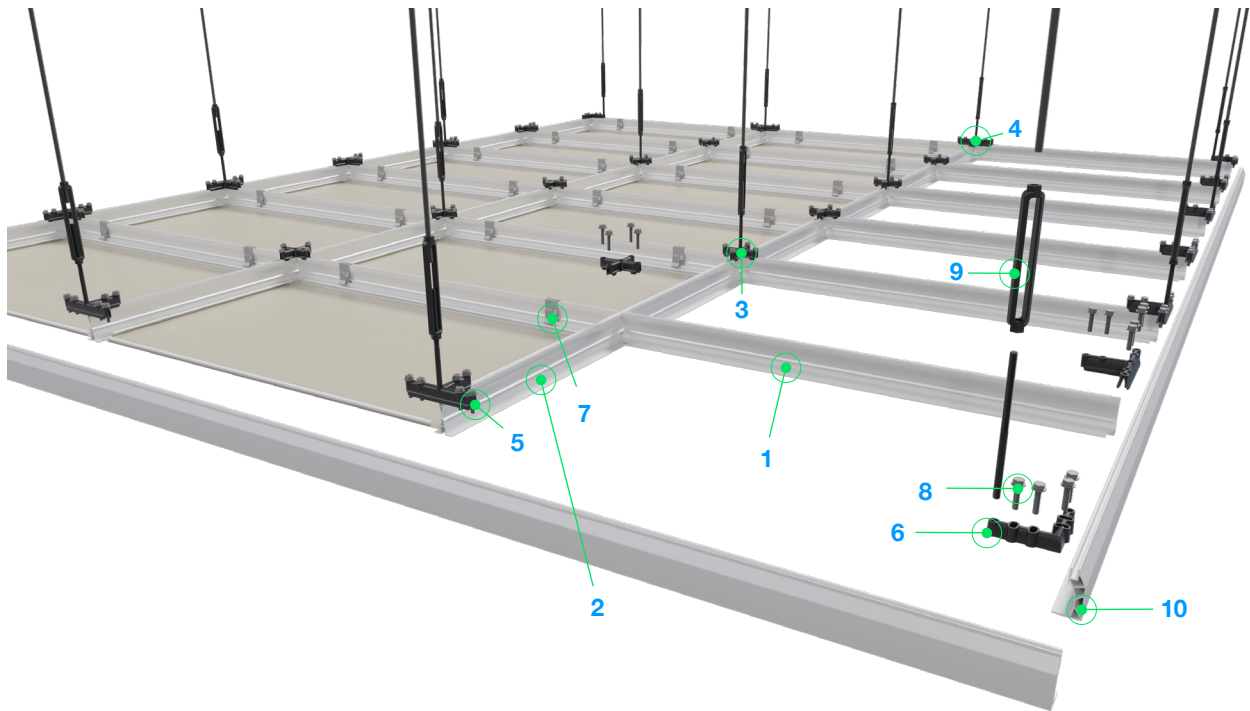
A floating perimeter installation uses the Perimeter profile in conjunction with the L angle. The L angles can be cut on site and bolted directly to the wall with appropriate fasteners (fasteners not supplied by Tate). The perimeter profile is supported by drop rods spaced at a maximum of 1.2m through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

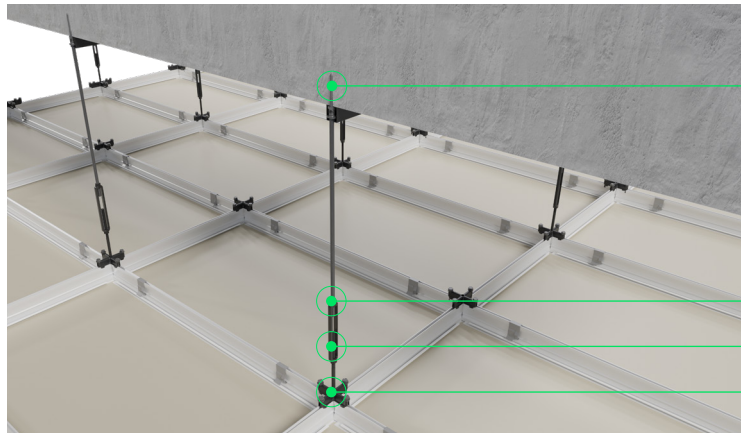
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1200mm X 1200mm Hanger Configuration and Fixed Perimeter



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Fixing to Building Structure

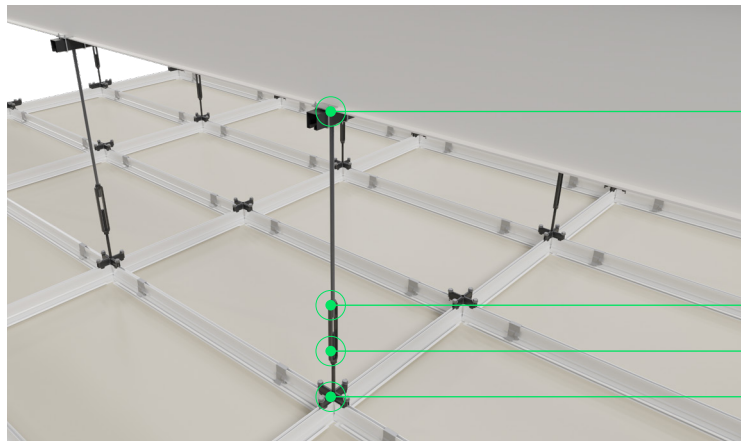


Internally Threaded Anchor or Clamp
(Supplied by others)

M10 Turnbuckle

M10 Starter Rod

M10 Connection to Connector



Connection to super structure
designed and specified by others

M10 Turnbuckle

M10 Starter Rod

M10 Connection to Connector

*Building structure must be able to carry an Area Load of 3.09 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 EN 15804:2012+A2:2020 & ISO 14025:2006

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