

**SECTION 09 54 00
SPECIALTY CEILINGS**

K40 Demountable suspended ceiling grids

To be read with Preliminaries/General conditions.

115 MODULAR SUSPENDED STRUCTURAL CEILING GRID - DATA HALLS REFER TO:

- Layout plan
- BIM Model

Product: Tate Forte LEC

Description: A proprietary pre-engineered & factory produced aluminium structural ceiling grid system, with continuously top threaded slot & continuous bottom channel. Consists of main runners and structural tees connected by precast metal XL connectors and telescopic extruded splice at main runner splice connections, with metal ceiling tiles & ceiling tile clips. Capable of supporting power modules, light fixtures, cable trays, ceiling supported hot aisle containment, liquid cooling pipework, and other critical data centre infrastructure components.

Manufacturer: Tate APAC

Submittal: Data Sheets, profile & connector samples to be submitted to Architect for approval

Product Type: Structural Ceiling Grid

- **Material:** Extruded Aluminium
- **Profile:** 85mm high x 67mm flanged profile
- **Top Slot:** Continuously threaded M8 top slot
- **Bottom Channel:** Continuous bottom channel.
- **Connection:** Universal Strut Channel Nut
- **System Weight:** System weight: 10.3kg/m² (With Tile's) and 5.1kg/m² (Without Tile's)

Finish as delivered

- **Coating:** Powder Coating to AS/NZS 3715:2002
- **Colour:** White RAL 9016

Grid Type

- **Grid Configuration:** Structural grid layout to be 1200mm x 600mm format
- **Main runner:** 3600mm Main Runner with location notches at 600mm centres, connected to supporting structure at 1200mm centres.
- **Structural Tee:** 1200mm Coped Structural Tee connected to main runners at 600mm centres.
- **Perimeter:** 3600mm Perimeter Profile with single flange to support main runners & structural tees along the perimeter.
- **XL Connectors:** High strength cast metal XL Connector with 8no stainless steel hex bolt fixings connecting structural tees to main runner at 600mm centres.
- **Splice Kit:** Telescopic extruded splice required at every main runner splice connection.
- **Perimeter Connector:** High Strength cast metal Perimeter Connector with 6no stainless steel hex bolt fixings connecting main runners & structural tee to the perimeter extrusion.
- **Corner Connector:** High Strength cast metal Corner Connector with 4no stainless steel hex bolt fixings connecting Perimeter Profiles.
- **Straight Connector:** High strength cast metal straight connector with 6no stainless steel hex bolt fixings connecting to mainrunner extrusions.
- **Ceiling Tiles:** 1153 x 553mm with single fold on all four sides
- **Ceiling Tile Clips:** Screw down clip.
- **Turnbuckle:** Starter rod & M10 turnbuckle connected to supporting structure via M10 suspension rods

Performance

- **Maximum safe working point load:** 4.4kN / 448kg
- **Factor of Safety:** 2
- **Max Deflection:** 10mm @ 4.4kN
- **Maximum safe uniform load:** 6.1kN/m² / 611kg/m²

Certification

- **Reaction to Fire:** AS/NZS5637.1
- **Air Permeability:** EN 12114

Sustainability

- Tate Forte LEC is a Lower Embodied Carbon structural ceiling solution made with lower-carbon raw materials. An Environmental Product Declaration (EPD) is in development and undergoing third-party verification. Contact Tate for more information.

Installation

- In accordance with Tate's installation instructions, please contact Tate Academy for further information.
- Structural Ceiling to be installed by accredited installation teams, please contact Tate Academy for further information.
- Structural Ceiling Safety Guidelines to be strictly adhered to by all stakeholders who interact with the Tate ceiling system, please contact Tate Academy for further information & safety workshops.
- Service Installers who connect critical infrastructure to the Tate ceiling system are required to undergo specific training or safety workshops. Please contact Tate Academy for further information.
- To contact Tate Academy, please visit <https://visit.tateinc.com/tateacademy> or refer to the contact details below.

Superstructure

- Connection to the superstructure to be designed & specified by building Designer & Structural Engineer
- Superstructure must be able to carry an Area Load of 6.25kN/m^2 *. The Turnbuckle connection must be capable of supporting a Point Load of 9.0kN * at the connection to the superstructure.
*The loads referenced above have a factor of safety included. The factor of safety must be decided by the building's designers and structural engineers.
- Building Designer & Structural Engineer to advise on seismic requirements, and to design & specify seismic bracing detail.
- 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.

Cleaning

- Inspect above and below installed ceiling system. Remove paint splatters and other spots, dirt, and debris. Touch-up scratches and marks of finish to match original finish.

Warranty

- Warranty terms are project-specific and aligned to meet required warranty periods. Coverage is subject to the structural ceiling being periodically inspected and maintained in accordance with the project's operation and maintenance manual.

END OF SECTION

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

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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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Tate.