

ISO FLEX-GRID

BERGVIK STRUCTURAL CEILING SYSTEM - ISO FLEX-GRID

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TECHNICAL SPECIFICATION

1. FEATURES

Bergvik Iso Flex-Grid is an engineered ceiling system that provides an overhead structure to support technical infrastructure in information technology, educational, healthcare, industrial, retail and other sectors.

The Iso Flex-Grid ceiling system can be tailored to meet project specific requirements in relation to colour and finish, grid size, ceiling plenum height, ceiling tile material and load capacities.

1.1 Key features

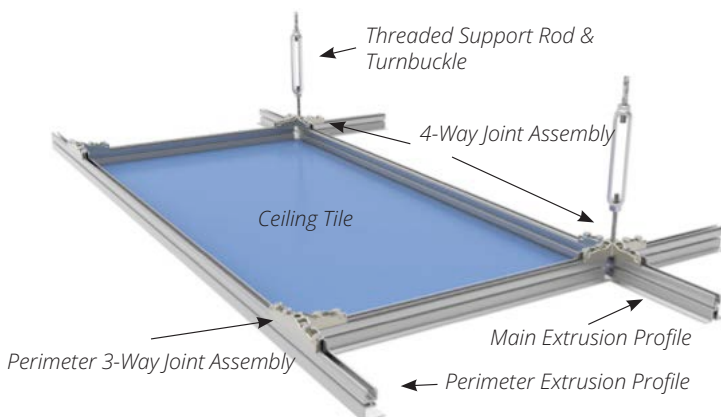
- Continuous M10 threaded interface for infrastructure support
- Designed for optimum stiffness
- Variable ceiling grid
- Natural anodised aluminium finish as standard, with optional powder coating finishes to client specifications

1.2 Key benefits

- Dual purpose system
- Cost effective
- Highly flexible
- Provides a platform for future installations/changes
- Support structure for hot/cold aisle containments

A typical Iso Flex-Grid ceiling system comprises perimeter and main extrusions, joint connector assemblies and hanging rods with turnbuckles for in-situ height and levelling adjustment. Ceiling tiles are laid into the ceiling and supported by the extrusion profiles.

The Iso Flex-Grid system is designed to create varying ceiling grid patterns. Industry standard patterns include: 600x600 mm, 1200x600 mm, 1200x1200 mm or 1220x620 mm grid layouts but custom layouts are regularly provided to suit specific project requirements.



2. PROFILE SPECIFICATION

2.1 Profile connection options



2-way connector

Joins two lengths of main or perimeter extrusions. Provides additional hanging points for improved hanging strength or reduced deflection.



3-way connector

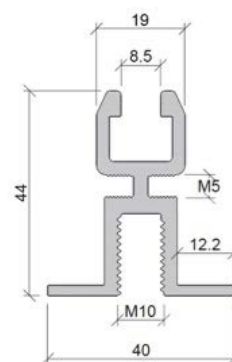
Joins main extrusion to perimeter extrusion. Provides hanging points to wall extrusion for improved hanging strength or reduced deflection.



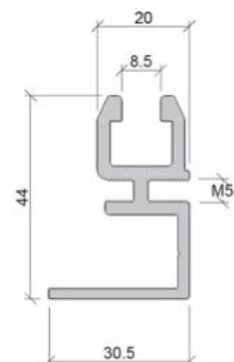
4-way connector

Joins two lengths of main extrusions. Provides additional hanging points for improved hanging strength or reduced deflection.

2.2 Profile data

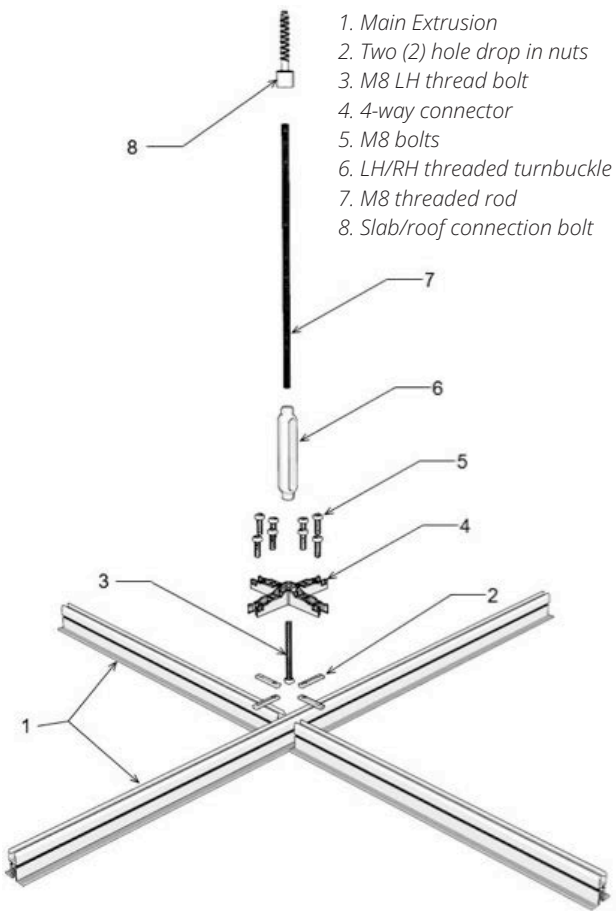


Main Extrusion Profile

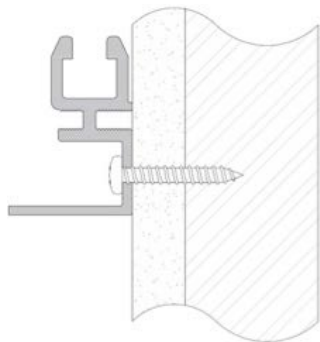


Perimeter Extrusion Profile

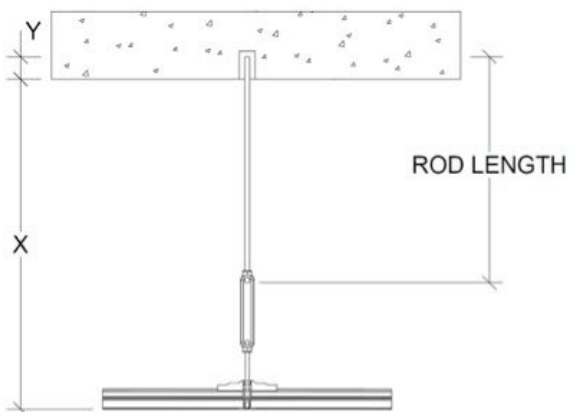
ISO FLEX-GRID SYSTEM



1. Main Extrusion
2. Two (2) hole drop in nuts
3. M8 LH thread bolt
4. 4-way connector
5. M8 bolts
6. LH/RH threaded turnbuckle
7. M8 threaded rod
8. Slab/roof connection bolt

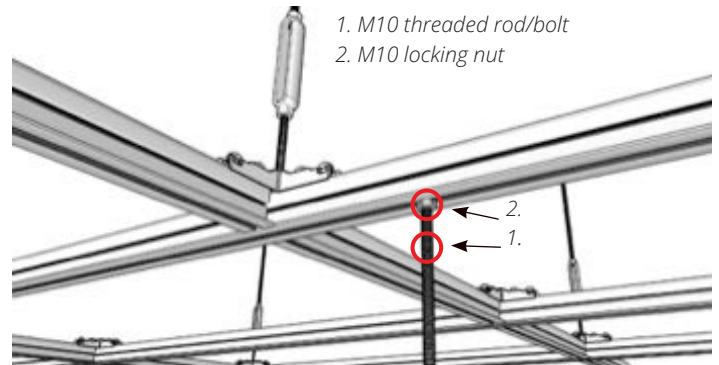


Fixing of perimeter extrusion.



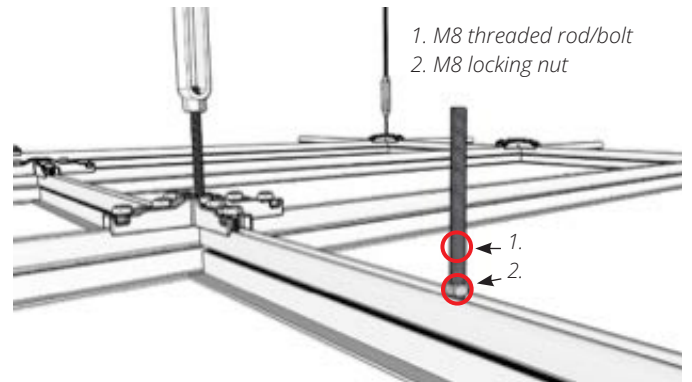
$$\text{M8 Threaded Rod Length (mm)} = X \text{ (mm)} + Y \text{ (mm)} - 280$$

WARNING: Before attaching any items to the top and/or bottom of the extrusion, determination must be made to ensure that the attached loads do not exceed the design limits of the installed system. The Iso Flex-Grid ceiling system allows equipment to be hung from below the main extrusion using an M10 (course pitch) threaded rod or bolt (see below).

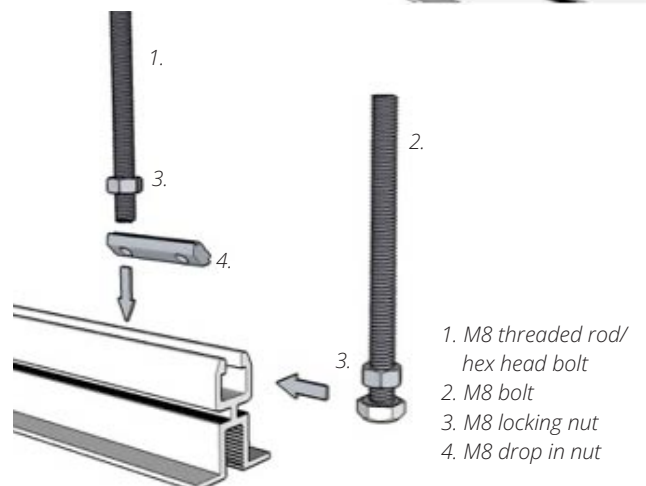


1. M10 threaded rod/bolt
2. M10 locking nut

It is also possible to attach items to the top of either the perimeter or main ceiling extrusion. Top attachment is achieved using either an M8 hex-head nut, threaded rod or bolt (with the nut or bolt head inserted into the end of the extrusion) or using a Bergvik M8 drop-in nut (refer to figure 4 below). Drop in nuts are available in either a 1-hole or 2-hole configuration.



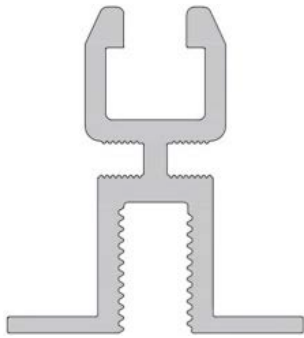
1. M8 threaded rod/bolt
2. M8 locking nut



1. M8 threaded rod/hex head bolt
2. M8 bolt
3. M8 locking nut
4. M8 drop in nut

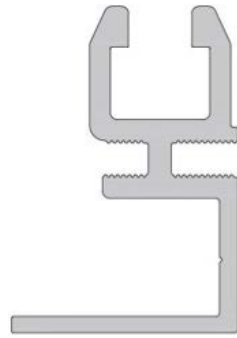
TECHNICAL SPECIFICATION

3. STRUCTURAL PERFORMANCE



Main Extrusion Profile

Weight: 1.056 kg/m
Area: 390 mm²

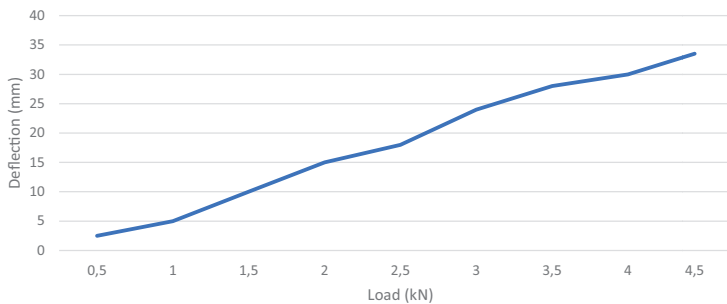


Perimeter Extrusion Profile

Weight: 0.905 kg/m
Area: 334 mm²

Material: Aluminium EN-AW-6063-T6
Young's Modulus: 69.5 GPa

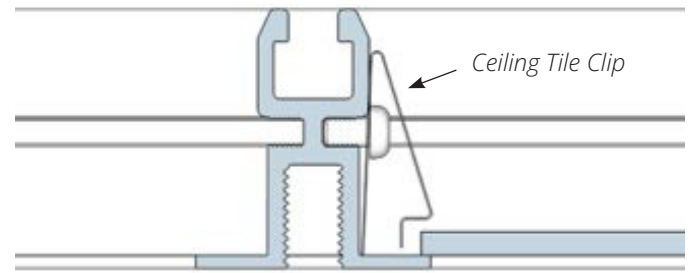
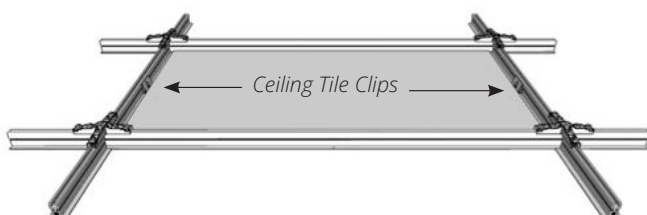
Loading curve Bergvik Iso Flex-Grid



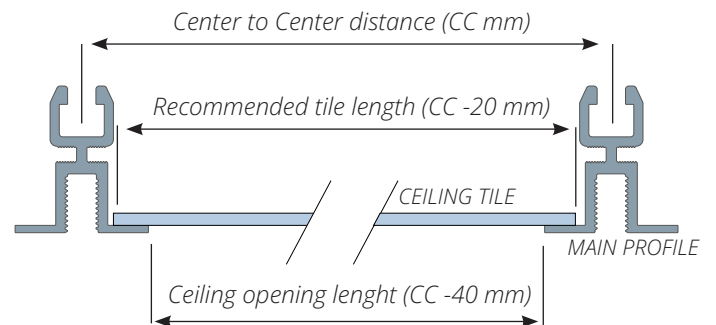
Main extrusion deflection vs load chart based on support at 1200 mm centres using 4-way connectors and single point load at centre of supports.

4. CEILING TILE

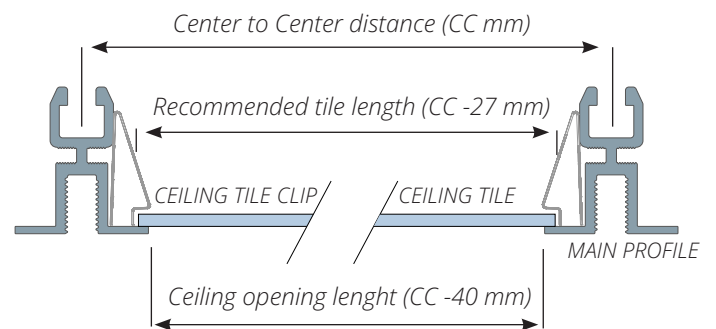
4.1 Ceiling tile clip option



4.2 Ceiling tile sizes (without clips)



4.3 Ceiling tile sizes (with clips)



The Bergvik Iso Flex-Grid ceiling system is able to accept a range of industry standard tile materials. The most commonly used materials include the following:

- Mineral fibre ceiling tiles, both commercial and clean room grade
- Steel panel tiles with powder coated finishes
- Aluminium composite ceiling tiles
- Polycarbonate panels