



Nexus

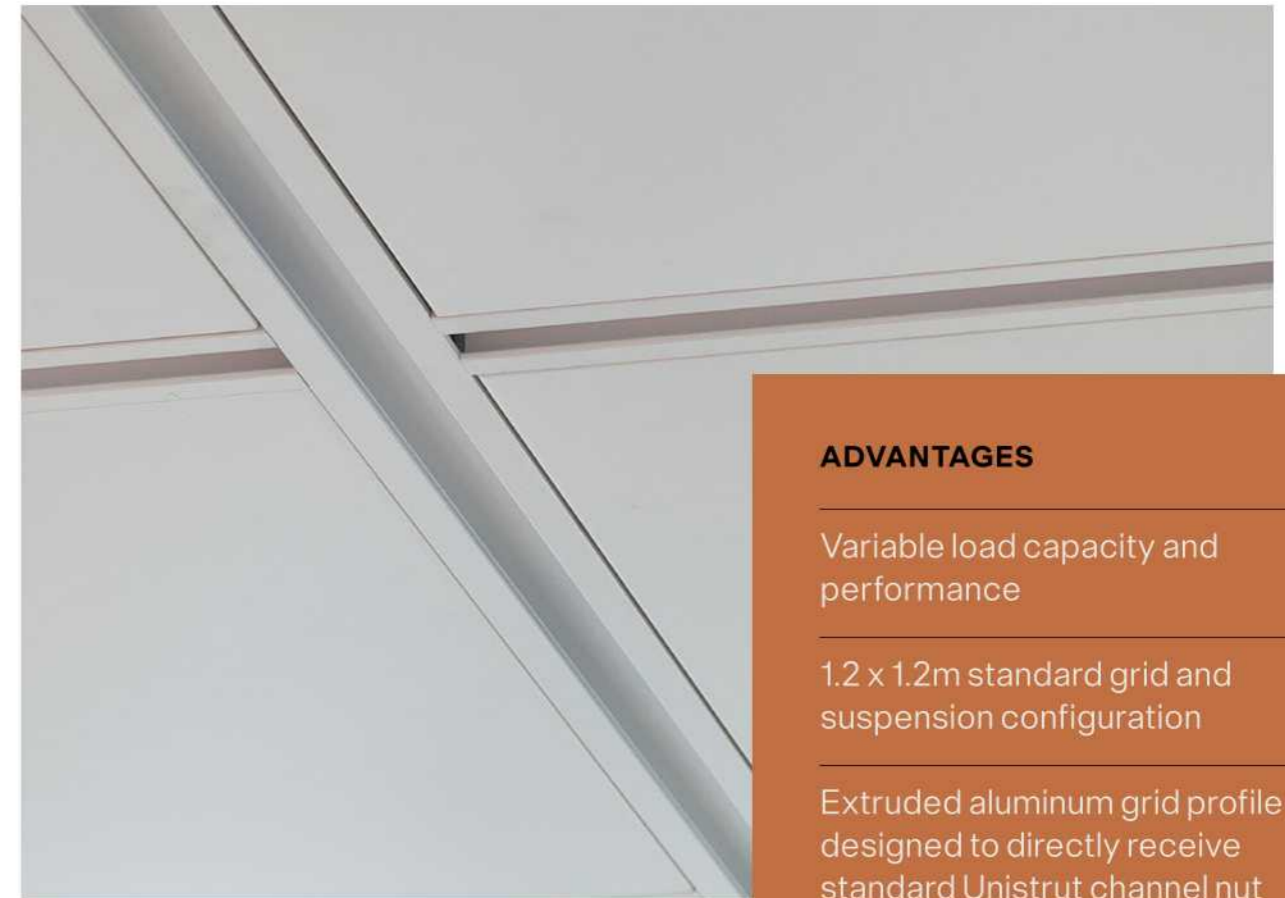
Structural Grid Ceiling
Solution for Data Centres

Introduction

Nexus is an exposed grid suspended ceiling system for dual layer or varying load requirements. The primary support structure is ideal for service integration, capable of supporting cable trays and lights directly from the grid.

In any application where non-standard ancillary items need to be suspended within a building, Nexus is the ideal solution. In addition to being cost-effective and easy to install, structural ceilings give you the opportunity to design and specify the support solution in advance.

With SAS' innovative data centre product, the combination of structural grid and durable ceiling tiles creates a strong yet simple assembly lasting for decades of use.



ADVANTAGES

Variable load capacity and performance

1.2 x 1.2m standard grid and suspension configuration

Extruded aluminum grid profile designed to directly receive standard Unistrut channel nut connections for both suspension hangers and services support

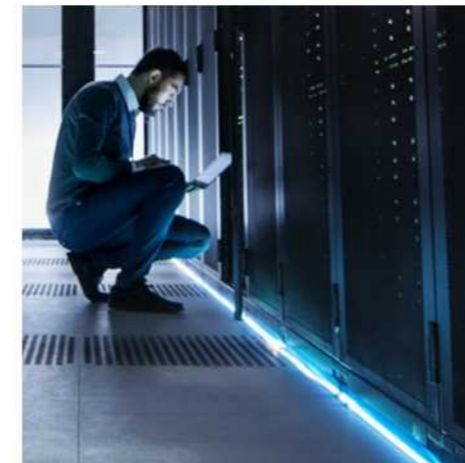
Exposed linear or tartan grid layout. Also suitable for use as an open grid system

Continuous profile provides positional flexibility for suspension and services support

Services can be both suspended below or supported above ceiling grid level

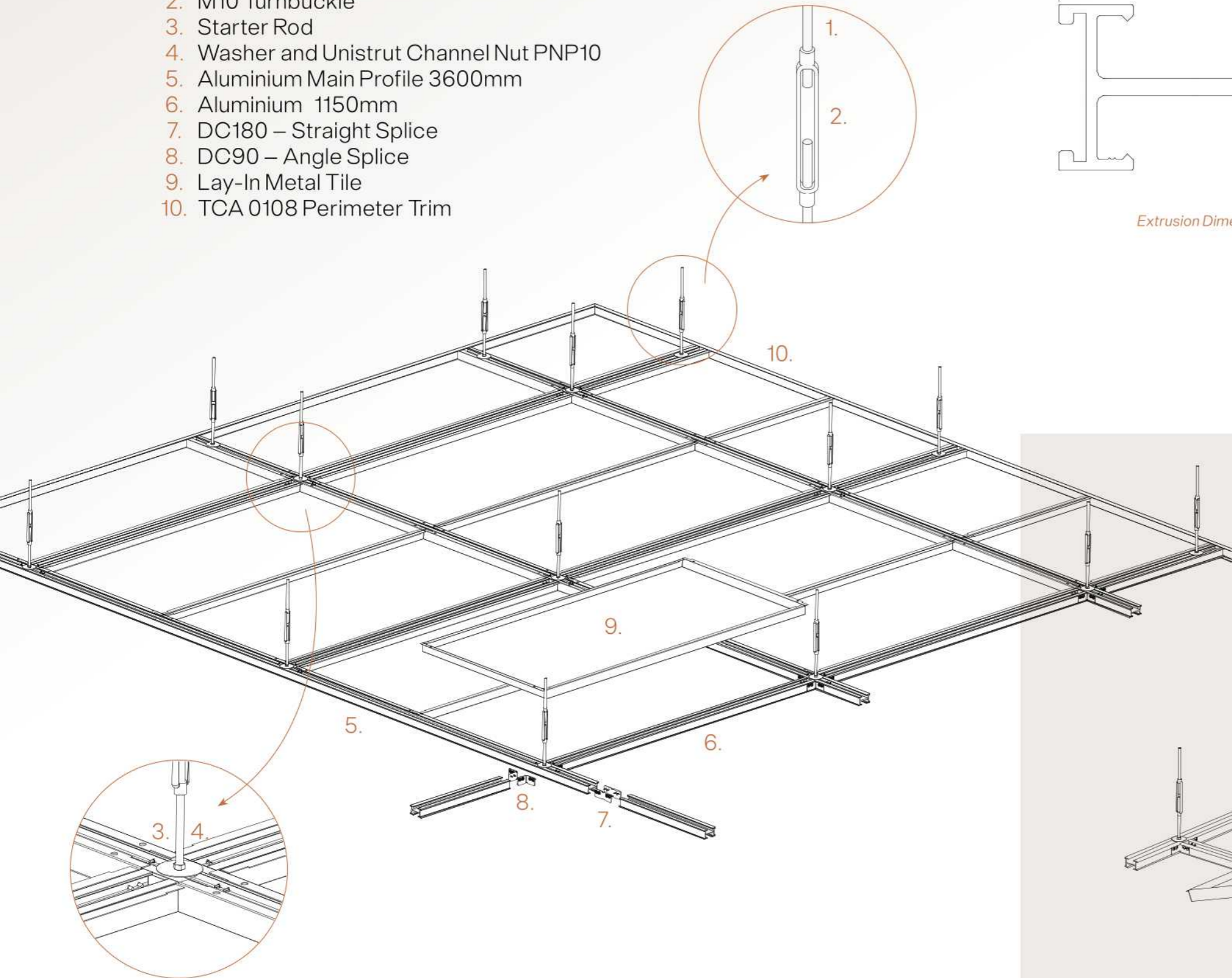
Additional and ready-to-install cross noggins available for future service upgrades

BS EN 13501-1 Fire Classification: A1 performance for plain tiles

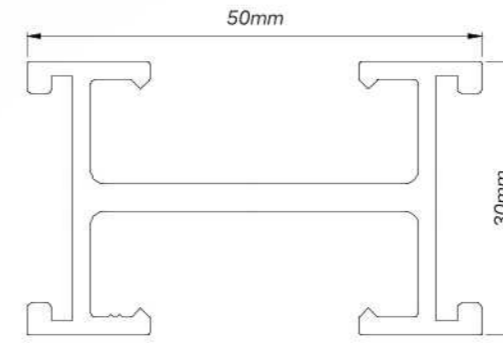


System Perspective View

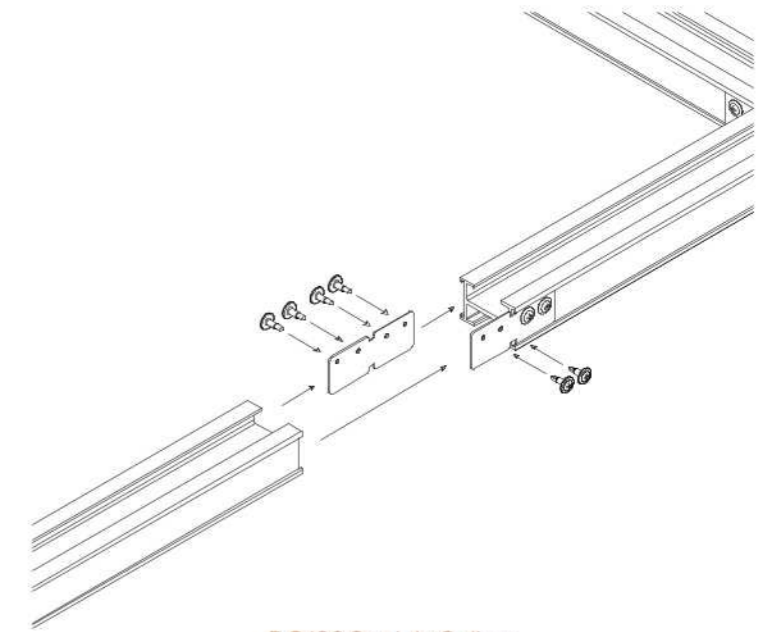
1. M10 Threaded Rod
2. M10 Turnbuckle
3. Starter Rod
4. Washer and Unistrut Channel Nut PNP10
5. Aluminium Main Profile 3600mm
6. Aluminium 1150mm
7. DC180 – Straight Splice
8. DC90 – Angle Splice
9. Lay-In Metal Tile
10. TCA 0108 Perimeter Trim



SAS Component Details



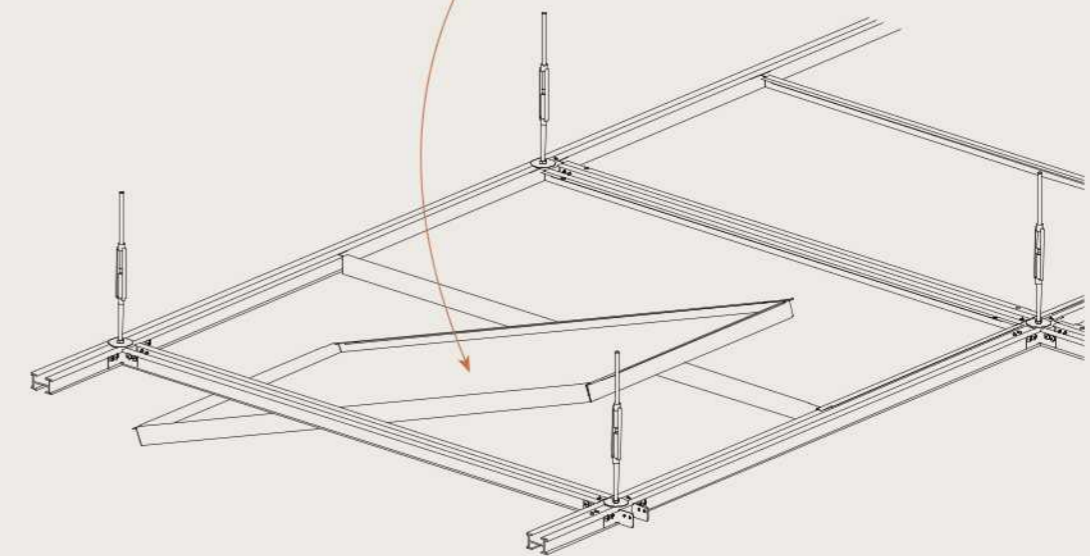
Extrusion Dimensions



DC180 Straight Splices

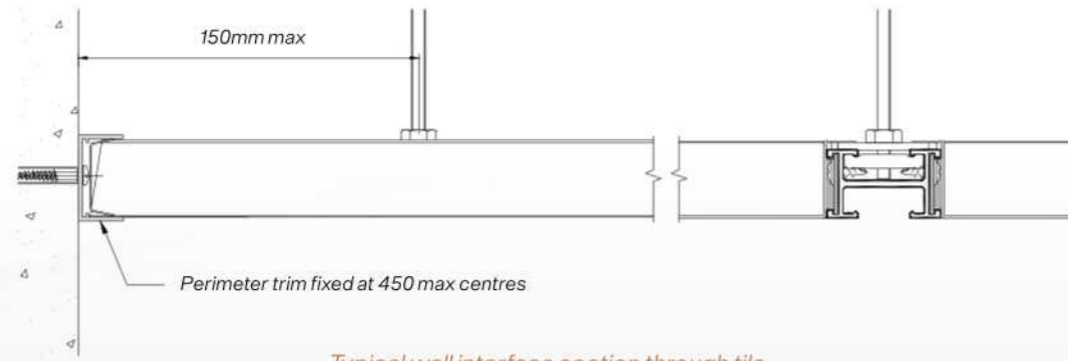
EASY TO INSTALL

- Flexible hanger location
- Easily positioned and mechanically fixed cross noggins
- Lay-in metal tiles
- No need to notch

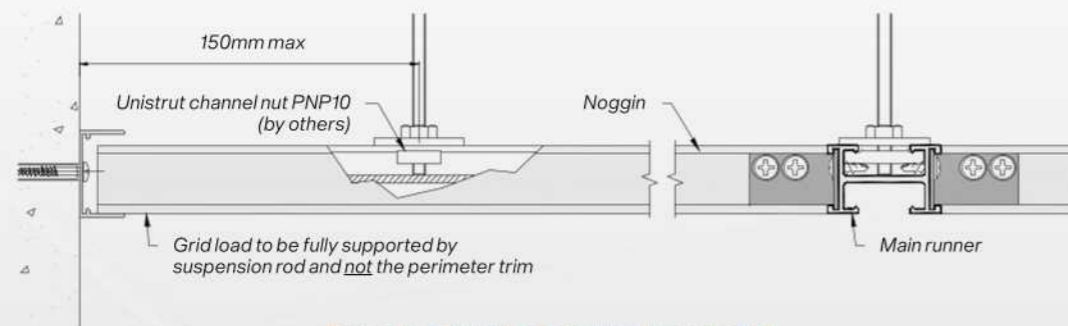


Perimeter Details

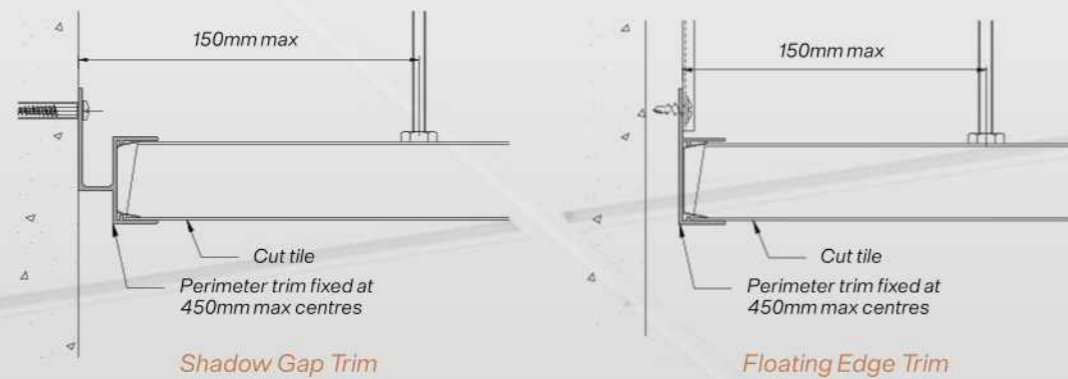
Nexus is typically wall-fixed using a TCA 0108 perimeter trim. This system can also be specified with a floating edge or shadow-gap trim. Please speak to us for recommendations.



Typical wall interface section through tile



Typical wall interface section through grid



STANDARD SYSTEM MODULE SIZES AND WEIGHTS

Weight (kg/m ²)	Size (mm)	Tile	Grid
3.5	1200 x 1200	no	no
6	1200 x 600	no	no
13.5	1200 x 1200	yes (steel)	yes
16	1200 x 600	yes (steel)	yes

Sustainability

CRADLE TO CRADLE CERTIFIED

Nexus is the first structural load grid system in the world that achieves full certification under the Bronze Level Cradle to Cradle certified Level 4 accreditation. The most advanced global sustainability certification for verifying materials and products that are safe, circular, and responsibly made.

For more information, please scan the QR code



SAS HORIZON

Nexus is now included in the SAS International Horizon project to reduce the embodied carbon of our products. Using renewable energy-powered electric arc furnaces, the embodied carbon of our standard system is lower by 58% and now contains over 90% recycled steel.

SAS Nexus
Lay-In Plain Steel Tile



Performance

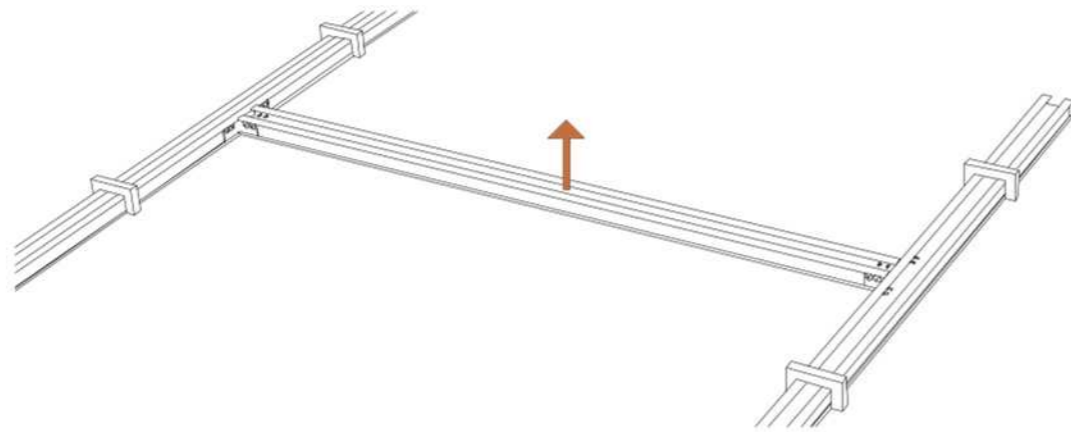
LOAD PERFORMANCE

Based on building connection spacing of 1.2m on centre, the load performance is:

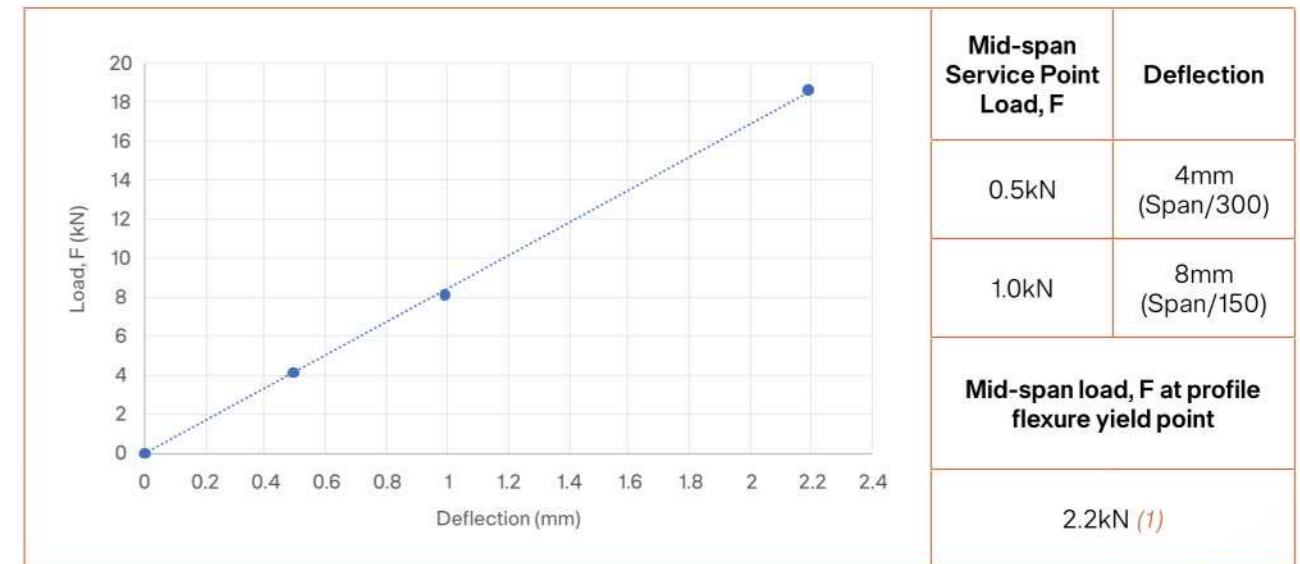
- Max grid point load at midspan of 2.2kN
- Max grid uniform load of 3.2 kN/m²

MID-SPAN POINT LOAD

Maximum mid-span point load for continuous main runner with adjacent 1.2m spans loaded.



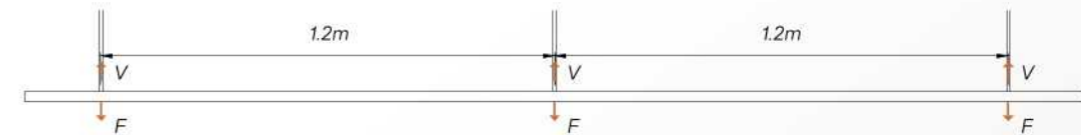
FORCE DEFLECTION CURVE



(1) Appropriate load and material safety factor to be applied to determine maximum working load

GRID SUSPENSION LOAD AND SERVICE LOAD LOCATED CLOSE TO SUPPORT POINT

Unistrut channel nut connection at grid suspension point and also Unistrut channel nut connection at applied service point load.



Maximum working load, V and F	5.0kN
Point load at profile pull-through yield point	10.0kN

NOTES

- Loads based on a 1.2 x 1.2m grid comprising continuous main runner and noggin with suspension points at each intersection.
- Loads are unfactored (unless otherwise stated).
- Information provided for general guidance only. The above table uses raw test data, we are expecting it to be interpreted for a real-world application. If necessary, please contact the Technical Department for advice.

SYSTEM PERFORMANCE CRITERIA

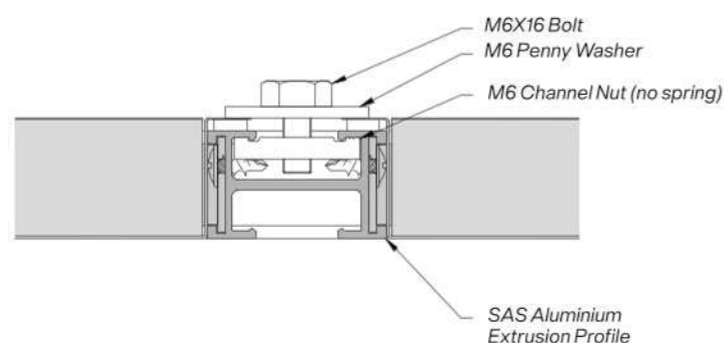
Hanging Method	Grid Load Performance (with structural connections and 1.2 x 1.2m centres)	Connection to bottom slot (3)	Connector to grid
Point Load (kN)	2.2kN (2)	5.0kN (2)	
Uniform Load (kN/m ²)	3.2kN/m ²	N/A	
Ultimate Point Load (kN)	5.0kN	10.0kN	

(2) Max load no less than 1200mm apart in any direction

(3) With a threaded rod connection directly above loading point

AIR LEAKAGE AND PRESSURE

Nexus can be supplied with gaskets to reduce air leakage and provide an air-tight dust free installation. Gasket is laid either side of the extrusion before the tile is placed on top. An M6 bolt, penny washer and channel nut is then applied to ensure the tile cannot lift and remains firmly against the gasket to maintain accessibility, a weighted tile is used every 10 tiles. This will allow access to the void whilst still reducing air leakage.



Optional hold-down solution

SERVICE INTEGRATION

Tiles can be formed with apertures during manufacturing and post-painted for integration with lights and other services. Due to the load bearing capacity of Nexus, lights can be suspended directly from the grid.

CUSTOM SOLUTIONS

Nexus is available in a wide range of grid configurations. Load capacity has been calculated based on the most popular grid configuration (1.2m x 1.2m). If you require a different configuration, please contact our technical team for assistance.

Nexus is only designed to support static loading. Lateral forces imposed on the ceiling grid during installation and also in service are required to be assessed by an appropriately qualified person and a suitable bracing arrangement incorporated.

TERMINOLOGY

Grid Suspension Point – Threaded rod hanger to structural soffit over with Unistrut channel nut connection to top of main runner profile on a maximum 1.2 x 1.2m suspension grid.

Service Point Load – Threaded rod with Unistrut channel nut connection to bottom of main runner profile to support service below grid level. Note service point load can also be applied above grid level to suit specific applications.

Working Load – Applied unfactored load.

WARRANTY & LIFECYCLE

SAS International metal ceiling products must be installed as a complete ceiling and not used in conjunction with any other manufacturer's products (unless specifically authorised by SAS International). SAS International metal ceiling products must be stored and handled in a manner which will have no detrimental effect on their finished installation. The completed ceiling must be maintained in accordance with SAS International recommended maintenance. As a tested load-bearing system, the specialist sub-contractor should ensure that the ceiling is installed in accordance with the Nexus technical briefing document. Should the above conditions be met, SAS International will warrant their products for 25 years.

Cradle to Cradle certified® Bronze, a disassembly and waste stream guide is also available for this product. Please contact our technical team for any assistance and advice related to installation, service integration, load support or maintenance.



INTERNATIONAL & UK sasint.co.uk / IRE sasint.ie /
FR sasint.fr / MENA sasint.me / AUS sasint.au.com /
USA sasint.us

