



# GT LID



## TECHNICAL DATA SHEETS



[www.guardtech.com](http://www.guardtech.com)



0330 113 0303



[sales@guardtech.com](mailto:sales@guardtech.com)



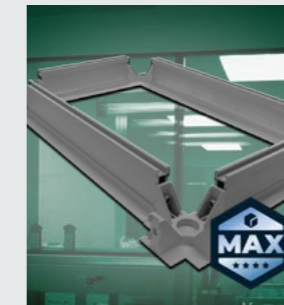
Guardtech House, Unit 1A Homefield Road, Haverhill, Suffolk, CB9 8QP



# DIRECTORY



Introduction **pg 4**



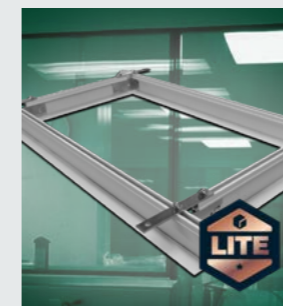
GT Lid Max **pg 6**



GT Lid Pro **pg 8**



GT Lid Plus **pg 10**



GT Lid Lite **pg 12**



Comparisons **pg 14**



# GT LID CLEANROOM CEILINGS



Guardtech offer a range of ceiling solutions to best suit the needs of your application. Whether it's budget, lead time or performance that matters most, Guardtech provide a comprehensive choice of ceiling options to ensure your process requirements are achieved.

Whether it's a more economical ceiling tile and grid layout you prefer, a panel system or a heavy duty walk-on die-cast nodal grid, the Guardtech Group's Directors, Design Engineers and Installation team have worked together to carefully select four industry-leading ceiling options for your consideration.

Read on to discover the benefits and compromises of the different choices we have, then use this guide to make the most informed flooring choice possible.

Let Guardtech take your operation to the next level.



## LID MAX

GT Lid Max is Guardtech's elite-level ceiling option – a T56N die-cast nodal grid system. This walk-on aluminium frame construction features high deflection strength and supports powder-coated PIR 50mm panels.



## LID PRO

GT Lid Pro is a high-spec, customisable, modular, fully flush controlled environment panel system featuring an intelligently engineered demountable joint with an aluminium extrusion to all sides.



## LID PLUS

An intelligent insulated ceiling panel system featuring a unique castellated and symmetrical tongue-and-groove joint which achieves high thermal and structural performance.



## LID LITE

T50 click-fix connector grid and aluminium tiles, designed as a non-walk-on frame construction with high deflection strength, consisting of 50mm wide aluminium extrusion main and cross runners of identical shape.



## LID FIRE

This product range does not currently include a Fire Rated solution. Please consult a Guardtech rep for more information on your fire safety options.





# GT LID MAX



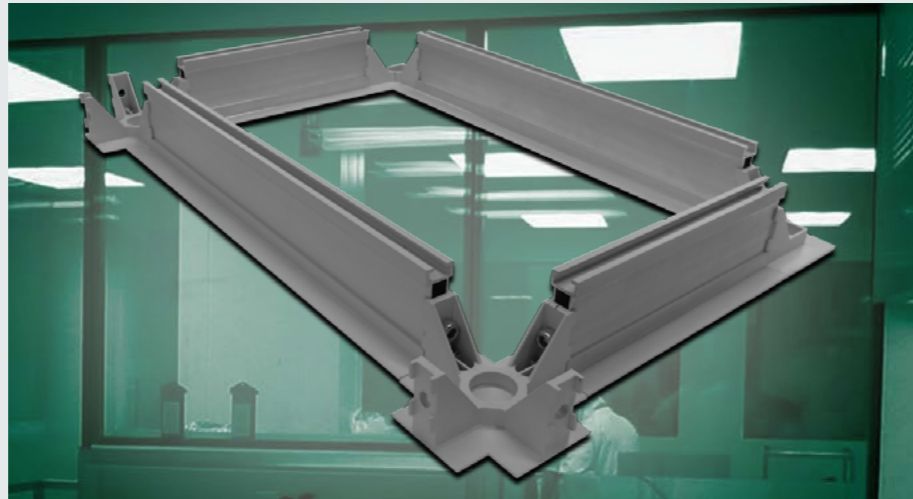
GT Lid Max is Guardtech's elite-level ceiling option – a T56N die-cast nodal grid system. This walk-on aluminium frame construction features high deflection strength and supports powder-coated PIR 50mm panels.

GT Lid Max is a T56N die-cast nodal grid system with powder-coated PIR 50mm panels.

Designed as a walk-on frame construction with high deflection strength, consisting of 56mm wide aluminium extrusion main and cross runners of identical shape, connected to die-cast joints with the provision for cable entry or sprinkler head.

The aluminium extrusion comes as standard with an anodised finish and with die-cast joints painted in a matching colour. Other paint finishes available on request.

The 56mm aluminium main and cross runners come with a sliding track at the cleanroom side to allow for suspended installation of teardrop lights, aprons



or partitions with a T-bolt. The frame construction allows for standard grid modules of 600 x 1200mm and 1200 x 1200mm – however other grid sizes can also be provided. The self weight of the ceiling panel (max 15.0kg per

panel 1.2m x 1.2m) supported by the ceiling grid with a ultimate uniformly distributed load of 200 kg/m<sup>2</sup> on the ceiling panel. Point load of 110kg on the ceiling panel for the applied load during maintenance.

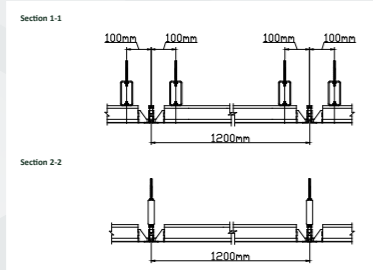
## TECHNICAL FEATURES

### Specification

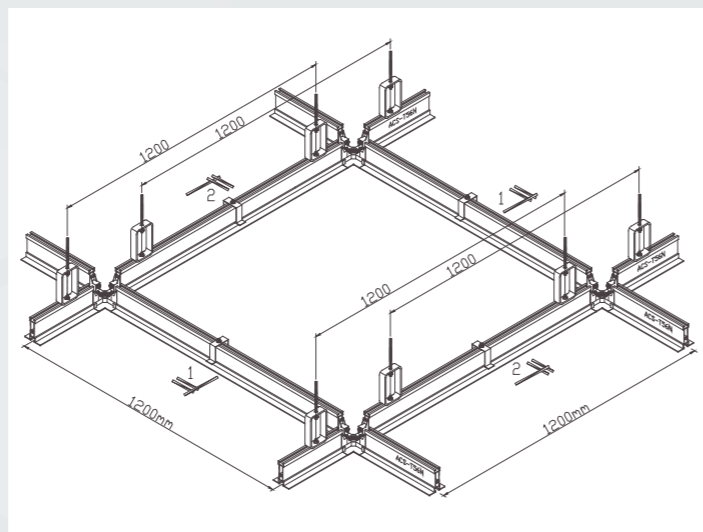
- Lightweight and strong aluminium grid systems
- Simple and flexible installation
- Precision die-cast connectors
- Provides tight seal and alignment
- Sprinkler drop connection
- Anodised finish and powder-coated options
- Reusable and relocatable system
- Compatible FFUs and lighting available

### Technical Data

- T56N Grid:
- Aluminium extrusion 6063-T5
- Point load 110kg
- Uniform distributed load 200kg/m<sup>2</sup>
- Tested to BS 5950

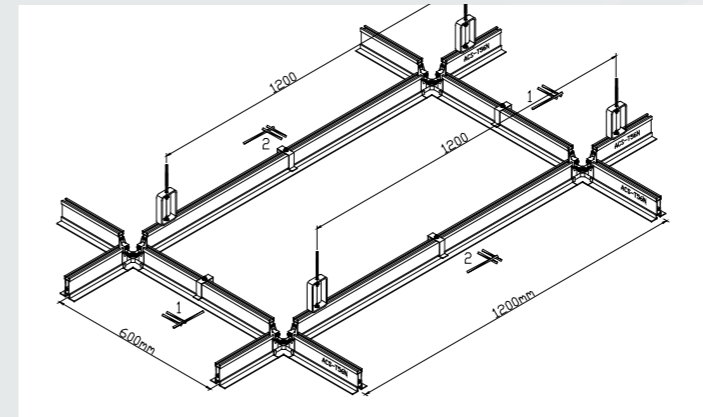


ISOMETRIC VIEW 1200MM X 1200MM

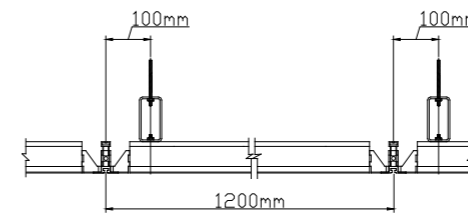


## TECHNICAL DRAWINGS

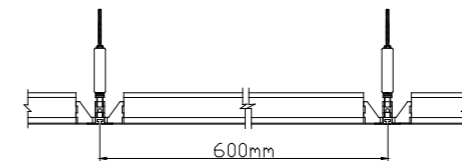
ISOMETRIC VIEW 600MM X 1200MM



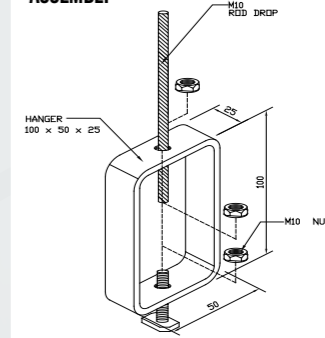
Section 1-1



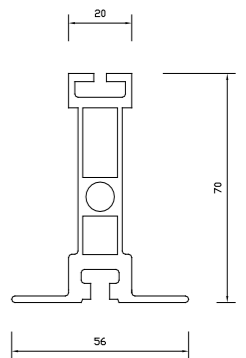
Section 2-2



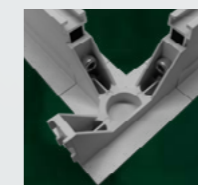
HANGER ASSEMBLY



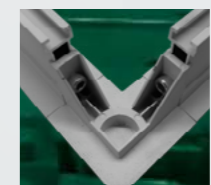
T56N GRID SECTION



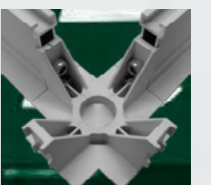
TEE CONNECTOR



CORNER CONNECTOR



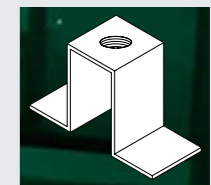
CORNER CONNECTOR



HAMMER BOLT



TILE CLIP



HANGER



### BENEFITS

- Heavy duty walk-on functionality
- High deflection strength
- Supports 50mm PIR panels
- Reusable and relocatable system
- Compatible FFUs and lighting available

### COMPROMISES

- More expensive option than GT Lid Pro, Plus and Lite
- Potentially longer lead times
- More reliant on specific componentry than GT Lid Pro and Plus options

### APPLICATIONS



Pharmaceuticals	Semiconductor	Graphene	Cell & Gene	Battery	Laser & Optical

GT Lid Max suits the most demanding of applications, typically where particulate needs to be controlled to extremely tight tolerances. This often includes cleanrooms with an ISO5 or 6 classification. This is solution is particularly effective for applications that require the walk-on capability with high deflection strength.



# GT LID PRO



GT Lid Pro is a high-spec, customisable, modular, fully flush controlled environment panel system featuring an intelligently engineered demountable joint with an aluminium extrusion to all sides.

GT Lid Pro is a customisable, modular fully flush cleanroom ceiling panel system that features a demountable joint with an aluminium extrusion to all sides.

It is suitable for specialist cleanroom applications that demand specific core performance, aiding compliance to EU GMP Annex 1, ISO 14644-1 and US FS209E.

This intelligently engineered fully flush modular system for specialist

cleanroom applications comes with a choice of three core options: QuadCore, Mineral Fibre Core and Aluminium Honeycomb.

Attention to utility integration is a key part of the GT Lid Pro/GT Shell Max panel system, with specially designed raceways and conduits that are embedded within the panel system to eliminate any surface mounted wiring or pipework and containment, also facilitating flush integrated sockets.



## TECHNICAL FEATURES

### DIMENSIONS, WEIGHT & PERFORMANCE

OVERALL THICKNESS (MM)	60, 80	
STANDARD WIDTHS* (MM)	1200	
LENGTH (MM)	300-5700mm	
WEIGHT (0.63 / 0.63 STEEL)	14kg/m <sup>2</sup>	

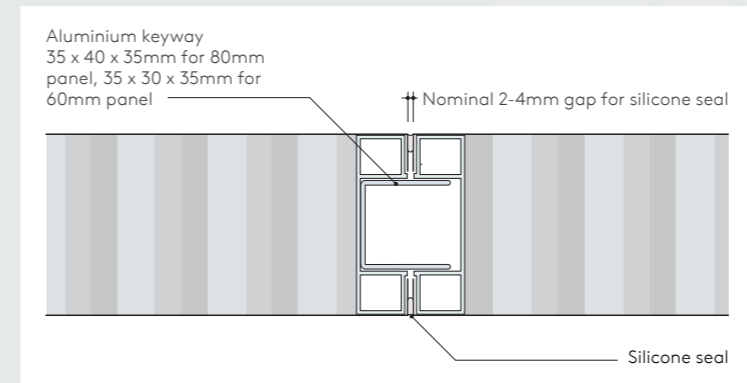
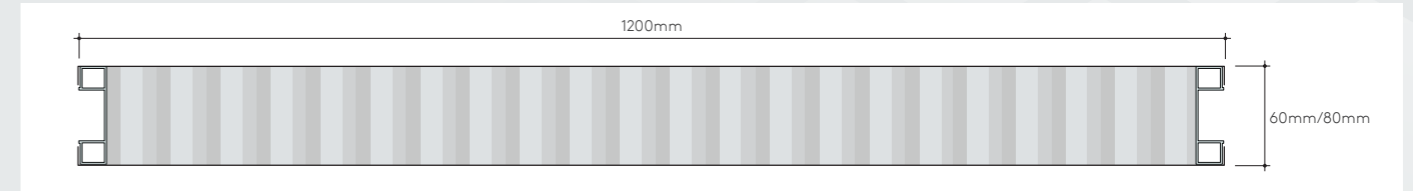
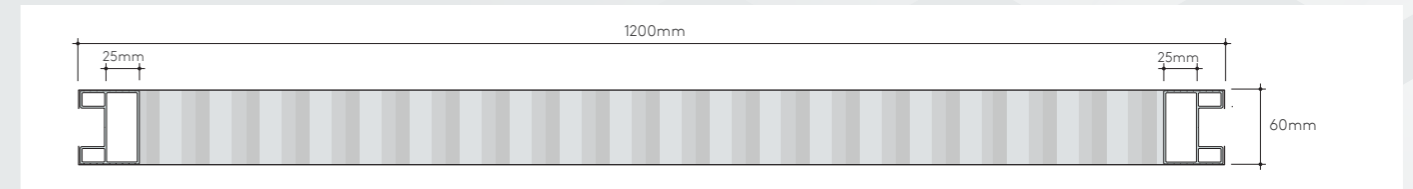
\*Variable widths available as non standard, in 10mm increments. Minimum width 150mm.

### PRODUCT TOLERANCES

LENGTH (MM)	+1.5	-1.5
WIDTH (MM)	+1.5	-1.5
THICKNESS (MM)	+2.0	-2.0
FLATNESS (PER METRE) (MM)	+1.0	-1.0
END SQUARENESS (MM)	+2.0	-2.0



## TECHNICAL DRAWINGS



GT Shell Max Aluminium Honeycomb panels achieve airtightness of less than 0.003m<sup>3</sup>/hr/m<sup>2</sup> at 50Pa in accordance with EN 14509.

### BENEFITS

- cGMP compliant ultra-airtight solution
- 60mm panel joint features an optional service cavity for incorporation of services
- Integrated envelope solution
- Choice of cores – QuadCore, Mineral Fibre core or Aluminium Honeycomb
- Available in both 60mm and 80mm thicknesses providing superior load bearing capacity and stability

### COMPROMISES

- A more expensive option than GT Lid Plus
- Panels require modifications for lighting and Fan Filter Units – unlike GT Lid grid systems
- Less flexibility than GT Lid Max and Lite in terms of individual panel vs tile repairs

### APPLICATIONS



GT Lid Pro ceiling solution suits a wide variety of applications in a diverse range of sectors. Whilst it may not boast the heavy duty walk-on appeal of GT Lid Max, this solution offers an attractive flush finish suitable for cGMP compliant environments such as those used in the Pharmaceutical sector.



# GT LID PLUS



An intelligent insulated ceiling panel system featuring a unique castellated and symmetrical tongue-and-groove joint which achieves high thermal and structural performance.

GT Lid Plus is an insulated, integrated ceiling and wall panel system designed for all internal controlled environments applications including new build and refurbishment projects.

The range offers flexible, high-performance, engineered cleanroom solutions that deliver both cost and operational benefits, minimising risk and maximising return on investment.

This revolutionary hybrid cleanroom system offers a high-performance solution at a more competitive cost base than traditional methods.

A factory-engineered detail allows the inclusive wall panel system it to sit on a recessed floor track to give a fully flush floor-to-wall detail, suitable for both vinyl and resin. Insertion of an interface profile in the panel joint to allow integration of fully flush windows, doors and service panels.



## TECHNICAL FEATURES

### DIMENSIONS, WEIGHT & THERMAL PERFORMANCE

CORE THICKNESS (MM)	50	60	80	100	125	150	175	200	220
U-Value (W/m <sup>2</sup> K)	0.38	0.31	0.23	0.18	0.15	0.12	0.10	0.09	0.08
R-Value (m <sup>2</sup> K/W)	2.63	3.23	4.35	5.560	6.67	8.33	10.00	11.11	12.50
Weight (kg/m <sup>2</sup> )	10.1	10.5	11.2	12.0	12.9	13.9	14.8	15.8	16.5

These values are in accordance with BS EN 14509, using Finite Element Analysis, and take into account any thermal bridging through the longitudinal joint.

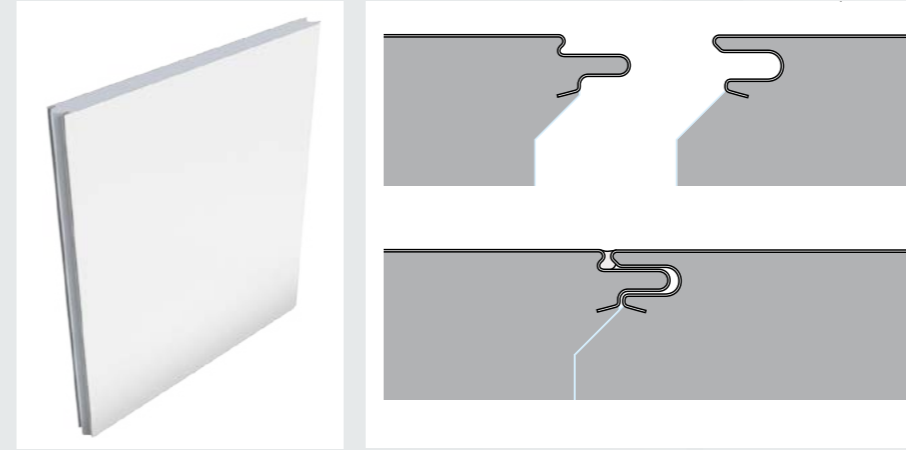
The U-Values have been calculated using an aged thermal conductivity value of 0.018W/mK.

### ACOUSTIC (SOUND REDUCTION INDEX)

FREQUENCY (HZ)	63	125	250	500	1000	2000	4000	8000
SRI (dB)	20	15	17	23	18	25	40	46



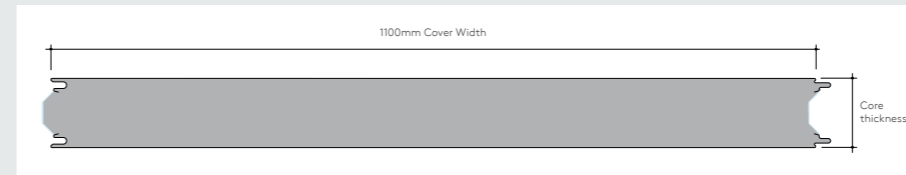
## TECHNICAL DRAWINGS



Ceiling panel joints achieve an air tightness of 0.02m<sup>3</sup>/h.m at 50Pa in accordance with BS EN 14509 with joint sealed using gun grade sealant.

**AVAILABLE LENGTHS**  
 Standard Lengths 2.0 – 11.9 m  
 Longer Lengths\* 11.9 – 19 m  
 Shorter Lengths\* <2.0 m

\* Non-standard lengths. Additional costs and transport restrictions may apply for non-standard lengths.



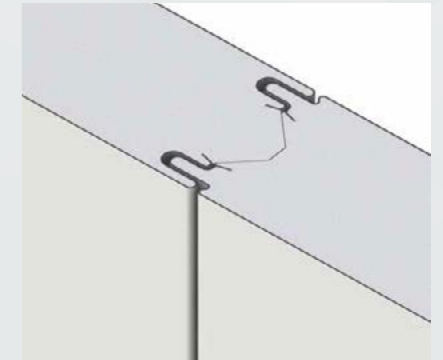
## PRODUCT FEATURES

**THICKNESS:**  
60mm or 80mm.

**PANEL CORE:**  
Quadcore® (ks1100 ut-f is approved to Fm 4882).

**PANEL COATINGS:**  
Cleansafe 25, 55, 120, Anti-static 25 & stainless 304 & 316l.

**PANEL LENGTH:**  
Up to 6.3m.



### BENEFITS

- More cost-effective than GT Lid Max and Pro solutions
- High thermal and structural performance
- Intelligent interlocking panel system

### COMPROMISES

- Considerably reduced capacity for walk-on weight compared to GT Lid Max and Pro
- Sealant required to finish panels after construction
- Panels require modifications for lighting and Fan Filter Units – unlike GT Lid grid systems

## APPLICATIONS



GT Lid Plus is a common cleanroom ceiling solution suitable for a significant number of different industries using controlled environments as part of their process. Whilst this grid system is quick to install and compatible with key components, it doesn't boast the walk-on capability and flush finish of Max and Pro.



# GT LID LITE

T50 click-fix connector grid and aluminium tiles, designed as a non-walk-on frame construction with high deflection strength, consisting of 50mm wide aluminium extrusion main and cross runners of identical shape.

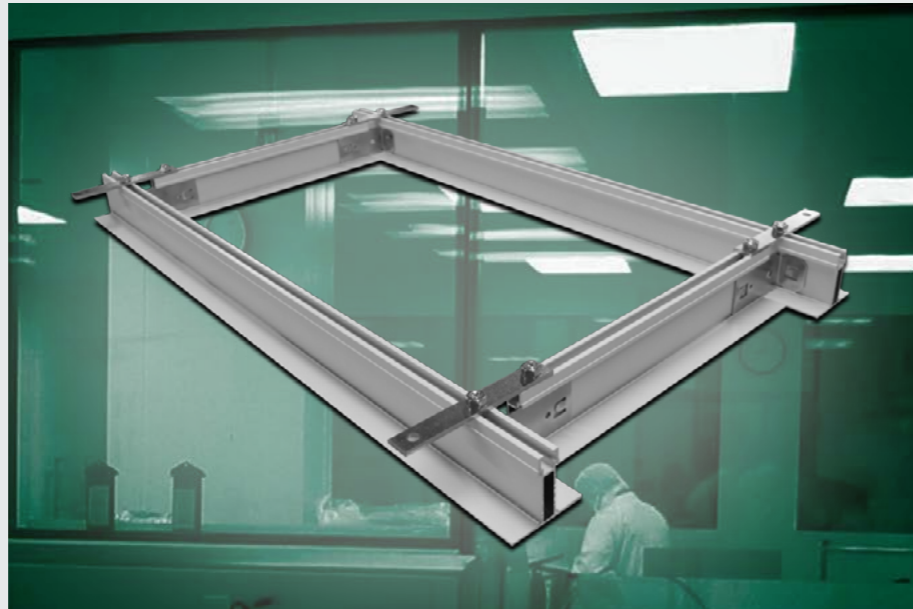


GT Lid Lite is a T50 click-fix connector ceiling grid system developed to meet the exacting requirements of the clean-room industry and is well suited to a wide range of industries.

Designed as a non-walk-on frame construction with high deflection strength, consisting of 50mm wide aluminium extrusion main and cross runners of identical shape, GT Lid Lite utilises powder-coated aluminium composite ceiling tiles.

Installation is both quick and simple, utilising click-fix connectors to keep the installation time to a minimum.

The aluminium extrusion comes with RAL 9010 powder-coated paint finish as standard. Other paint colours and anodised finishes are available on request. The frame construction allows for standard grid modules of 600 x 1200mm and

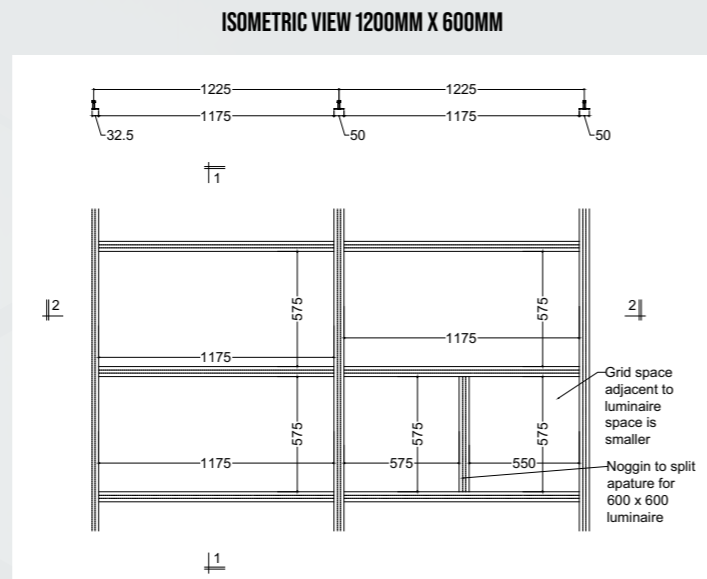
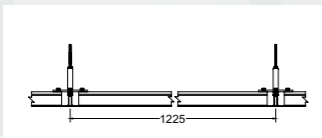
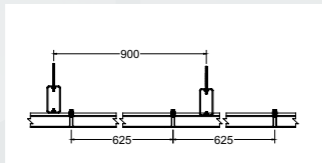


600 x 600mm, however other grid sizes (x 0.6m metal tile) with an ultimate uniformly distributed load of 45kg/m<sup>2</sup>. All additional loads must be directly suspended to the secondary support structure. The self weight of the grid system is 12kg/m<sup>2</sup> (including 5.0kg per 1.2m

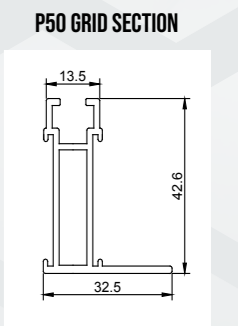
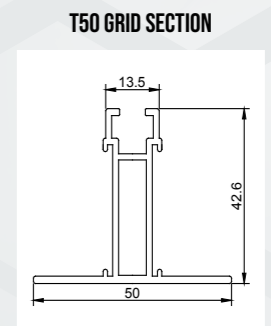
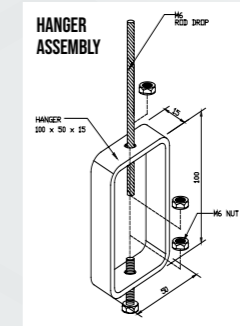
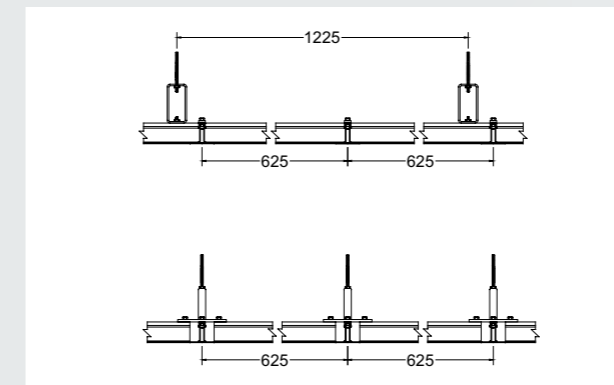
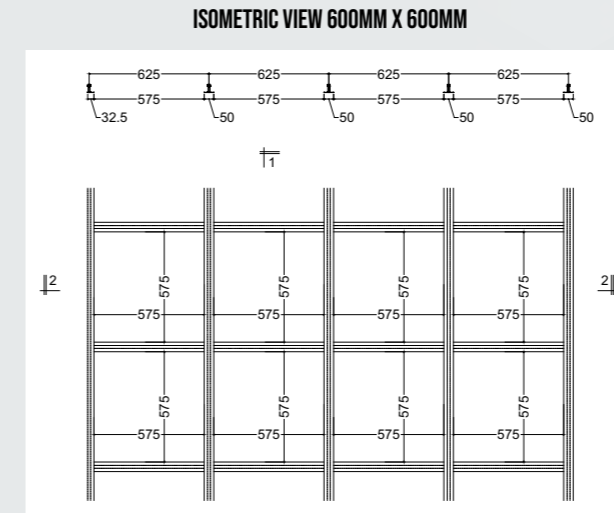
## TECHNICAL FEATURES

- Lightweight and strong aluminium grid systems
- Simple and flexible installation
- Click-fix cross connectors
- Uniform distributed load 45kg/m<sup>2</sup>
- Provides tight seal and alignment
- RAL 9010 Powder coated finish and anodised finish options available

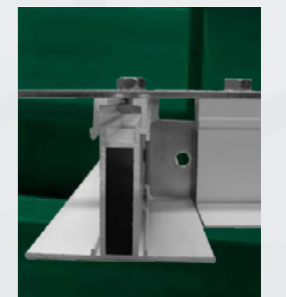
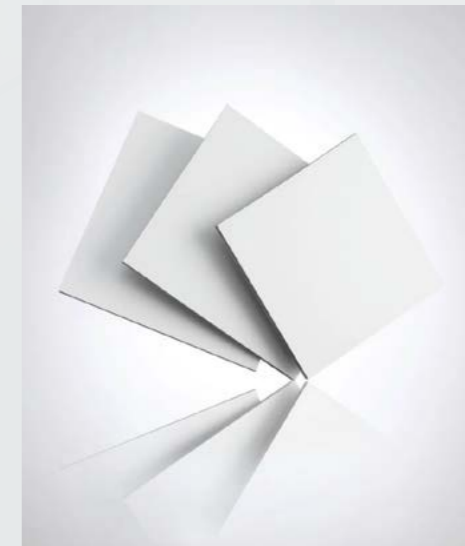
- Reusable and relocatable system
- Compatible FFUs and lighting available.



## TECHNICAL DRAWINGS



### ALUMINIUM COMPOSITE CEILING TILES



### BENEFITS

- High deflection strength
- Simple to install T50 click-fix connector technology
- Lower price point than GT Lid Max grid system
- Compatible with a range of Fan Filter Unit and lighting options

### COMPROMISES

- GT Lid Plus is not designed to allow walk-on capability
- Longer lead times than GT Lid Pro and Plus panel system solutions
- More complex installation arrangement than GT Lid Pro and Plus systems

### APPLICATIONS



GT Lid Lite suits the least demanding of applications – most commonly laboratories or non-classified controlled environments.



# QUICK-LOOK COMPARISON GUIDE

## FEATURES



FEATURES	MAX	PRO	PLUS	LITE
Nodal grid system	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supports panels	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Incorporates ceiling tiles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Superior walk-on functionality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aluminium construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Intelligent interlocking system	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Superior acoustic performance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fully flush	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sprinkler drop connection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pre-designed Fan Filter Unit compatibility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Superior air tightness	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>







Guardtech  

---

group

[www.guardtech.com](http://www.guardtech.com)

Guardtech House,  
Unit 1A Homefield Road,  
Haverhill, Suffolk,  
CB9 8QP