



GT LID



TECHNICAL DATA SHEETS



www.guardtech.com



0330 113 0303



sales@guardtech.com



Unit C The Brocks Business Park, Homefield Road, Haverhill, Suffolk, CB9 8QP



DIRECTORY



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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

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



LID PLUS

A T50 click-fix connector ceiling grid 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.



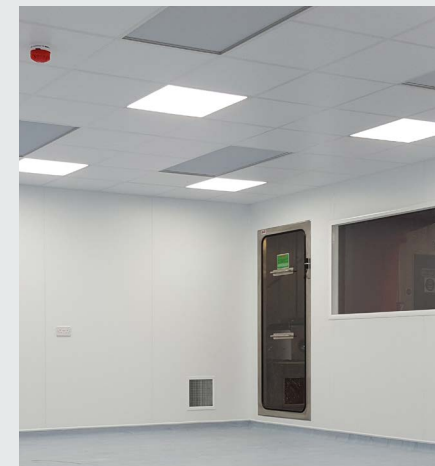
LID LITE

GT Lid Lite is Guardtech's entry-level cleanroom ceiling solution – an aluminium suspension ceiling tile system designed to offer maximum air flow management, load-carrying capacity and adaptability.



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

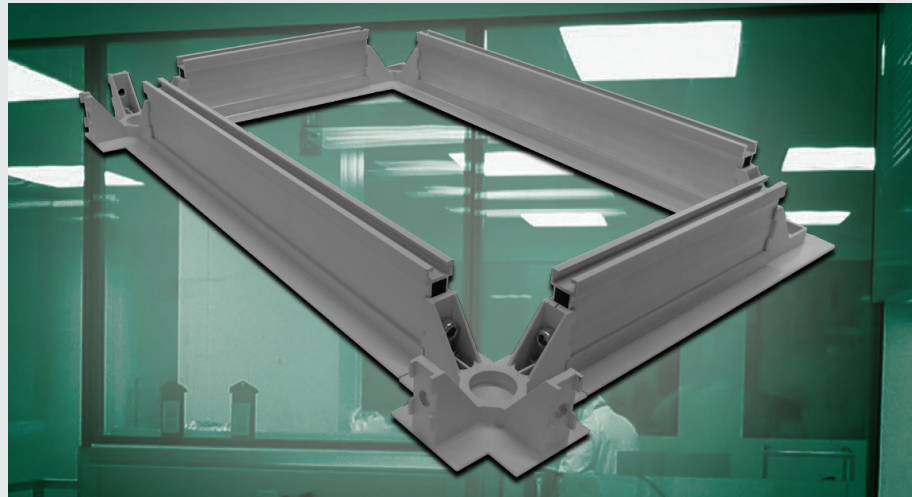
GT Lid Max is Guardtech's elite-level ceiling option – a T56N die-cast nodal grid system. This walk-on aluminium frame construction features high deflection strength and supports powder-coated PIR 50mm panels.

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/m² on the ceiling panel. Point load of 110kg on the ceiling panel for the applied load during maintenance.

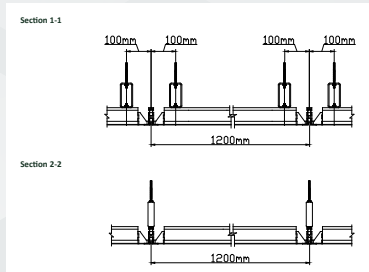
TECHNICAL FEATURES

Specification

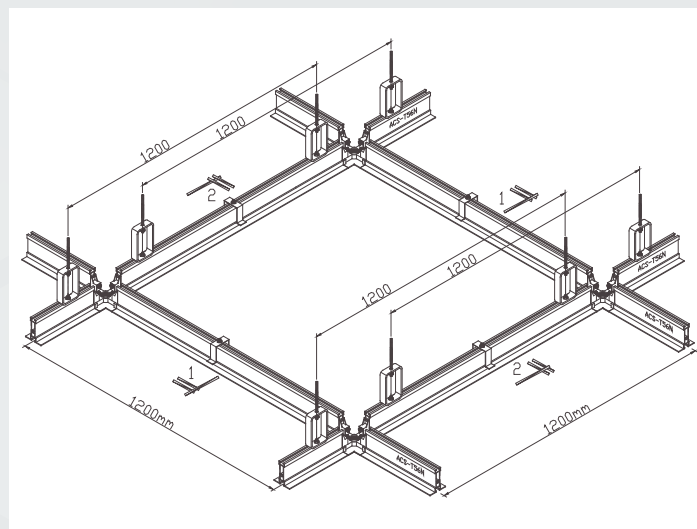
- Lightweight and strong aluminium grid systems
- Simple and flexible installation
- Precision die-cast connectors
- Provides tight seal and alignment
- Sprinkler drop connection
- Anodised finish and powder-coated options
- Reusable and relocatable system
- Compatible FFUs and lighting available

Technical Data

- T56N Grid:
- Aluminium extrusion 6063-T5
- Point load 110kg
- Uniform distributed load 200kg/m²
- Tested to BS 5950

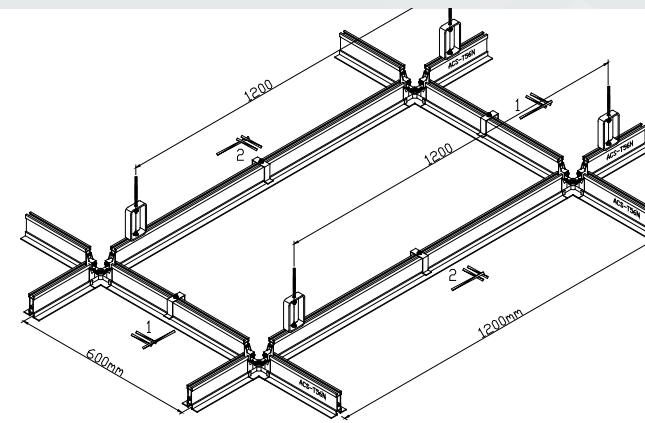


ISOMETRIC VIEW 1200MM X 1200MM

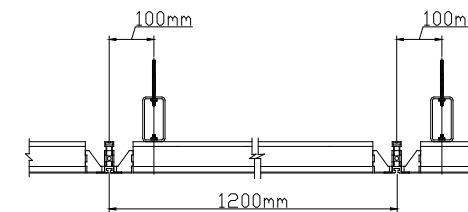


TECHNICAL DRAWINGS

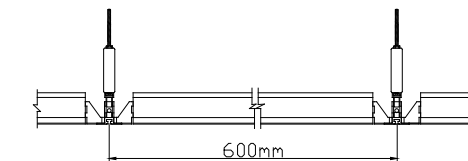
ISOMETRIC VIEW 600MM X 1200MM



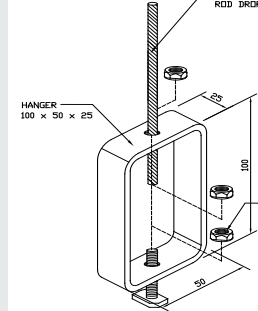
Section 1-1



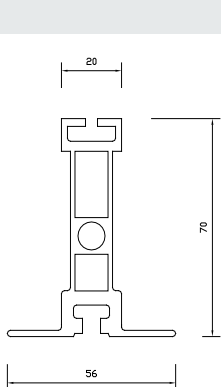
Section 2-2



HANGER ASSEMBLY



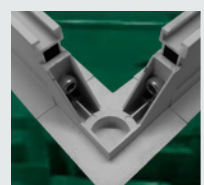
T56N GRID SECTION



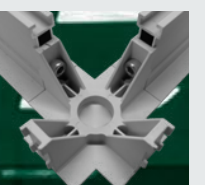
TEE CONNECTOR



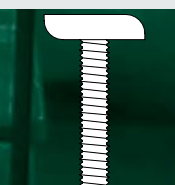
CORNER CONNECTOR



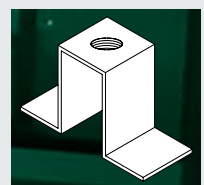
CORNER CONNECTOR



HAMMER BOLT



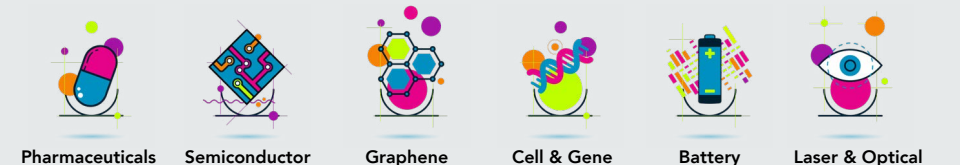
TILE CLIP



HANGER



APPLICATIONS



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

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 Pro 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 ² K)	0.38	0.31	0.23	0.18	0.15	0.12	0.10	0.09	0.08
R-Value (m ² K/W)	2.63	3.23	4.35	5.560	6.67	8.33	10.00	11.11	12.50
Weight (kg/m ²)	10.1	10.5	11.2	12.0	12.9	13.9	14.8	15.8	16.5

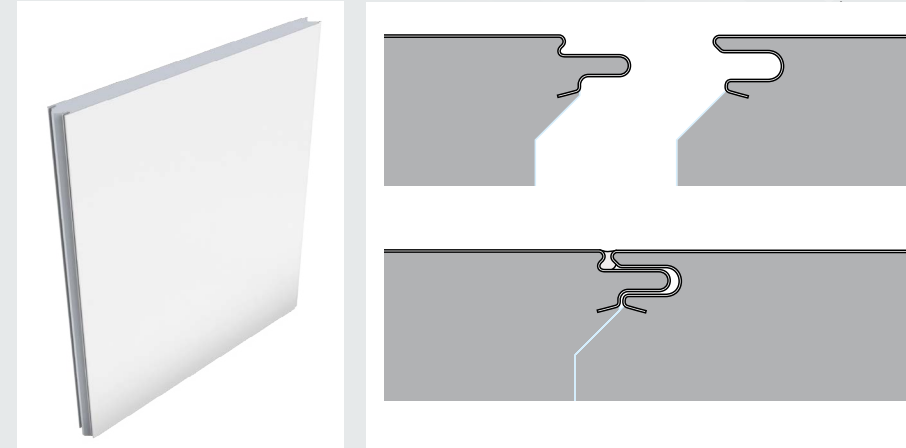
These values are in accordance with BS EN 14509, using Finite Element Analysis, and take into account any thermal bridging through the longitudinal joint.

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

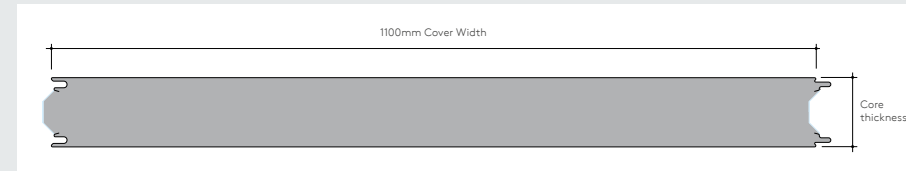


Ceiling panel joints achieve an air tightness of 0.02m³/h.m at 50Pa in accordance with BS EN 14509 with joint sealed using gun grade sealant.

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.



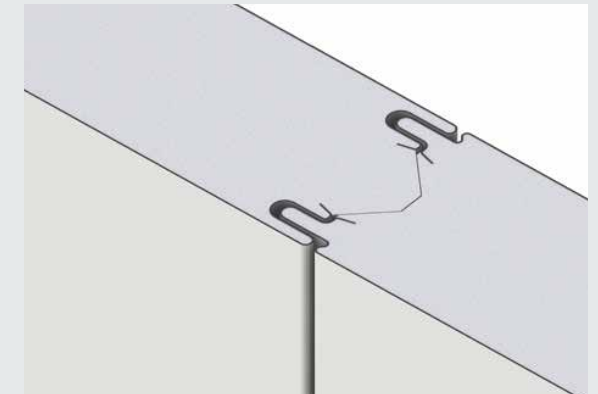
PRODUCT FEATURES

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 & COMPROMISES

Benefits

- Fully flush system – ideal for cGMP compliant environments
- More cost-effective than GT Lid Max
- High thermal and structural performance
- Intelligent interlocking panel system

Compromises

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

APPLICATIONS



Medical Device



Healthcare



Oil & Gas



Cell & Gene



Battery



Laser & Optical

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.



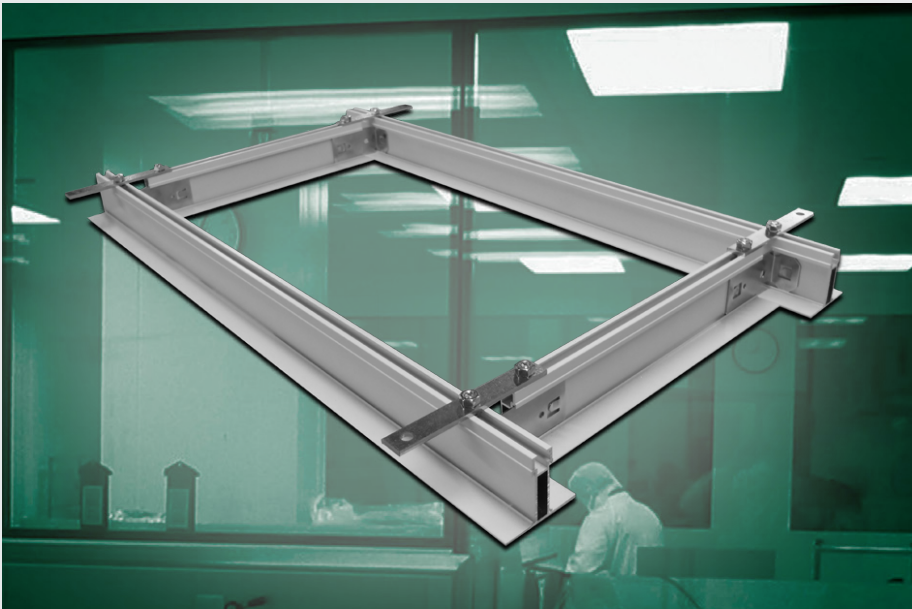
GT LID PLUS

A T50 click-fix connector ceiling grid 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 Plus is a T50 click-fix connector ceiling grid system developed to meet the exacting requirements of the cleanroom industry and is well suited to a wide range of industries, from Semiconductor and Aerospace to Optical and high technology applications.

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, the system utilises powder-coated aluminium ceiling tiles. Installation is both quick and simple, utilising Click-Fix connectors to keep the installation time to a minimum.

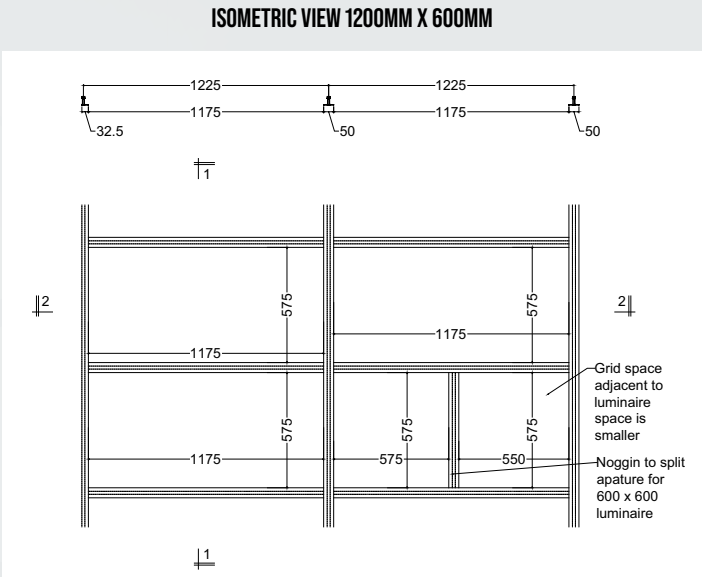
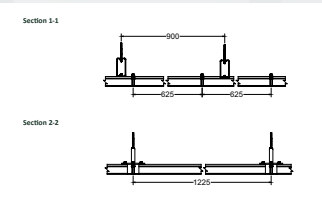
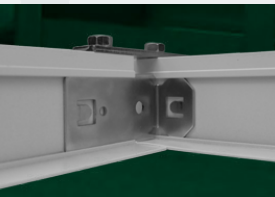
The aluminium extrusion comes with Ral 9010 powder-coated paint finish as standard. Other paint colours and anodised finishes are available on request. The frame construction allows for standard grid modules of 600 x 1200mm and



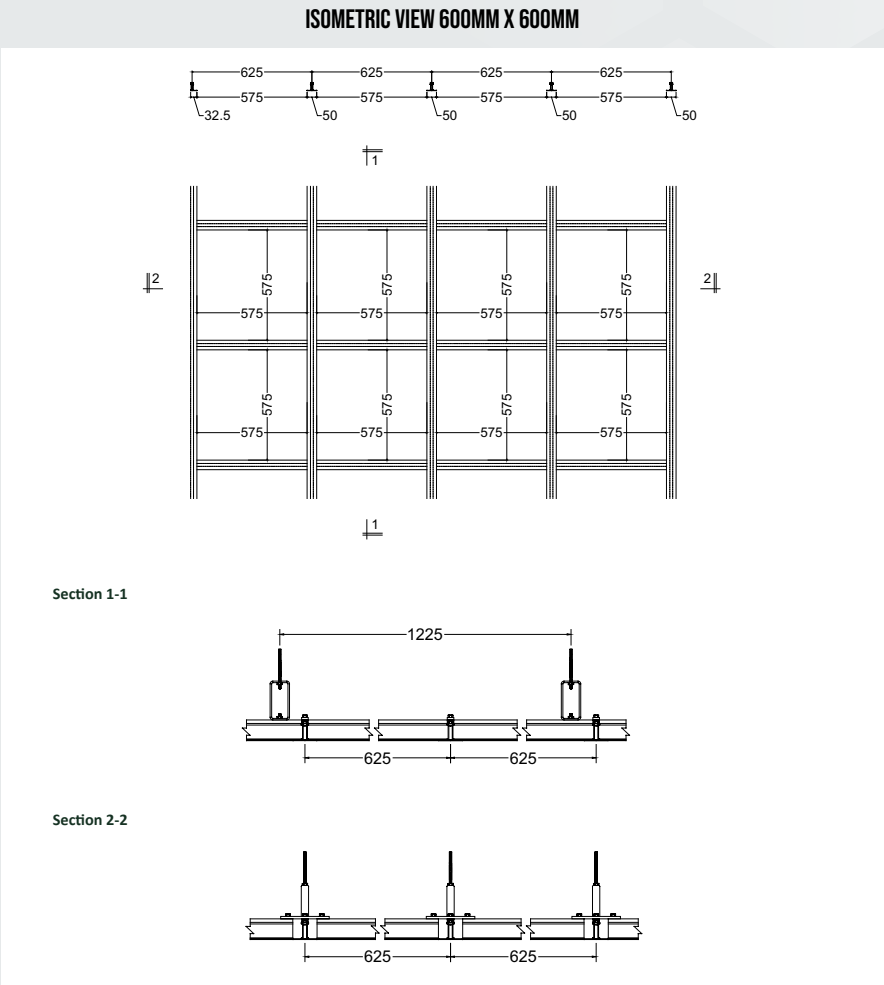
600 x 600mm, however other grid sizes can also be provided. The self weight of the grid system is 12kg/m² (including 5.0kg per 1.2m x 0.6m metal tile) with an ultimate uniformly distributed load of 45kg/m². All additional loads must be directly suspended to the secondary support structure.

TECHNICAL FEATURES

- Lightweight and strong aluminium grid systems
- Simple and flexible installation
- Click-fix cross connectors
- Uniform distributed load 45kg/m²
- 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



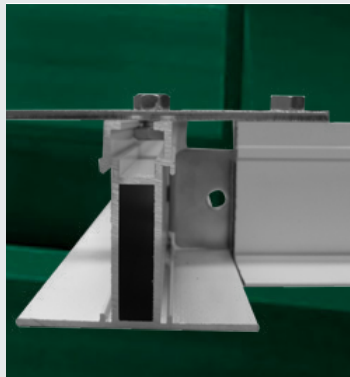
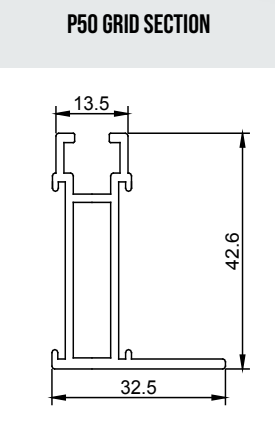
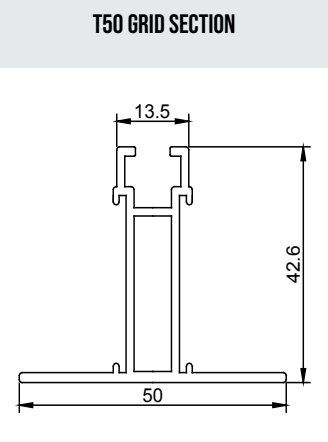
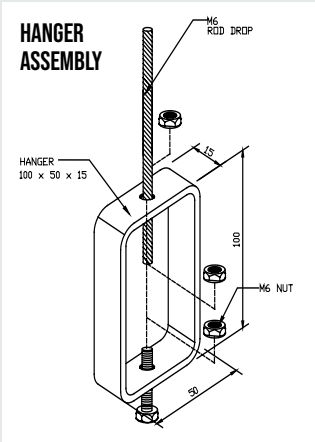
BENEFITS & COMPROMISES

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 panels
- More expensive price point than GT Lid Pro



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

GT Lid Lite is Guardtech’s entry-level cleanroom ceiling solution – an aluminium suspension ceiling tile system designed to offer maximum air flow management, load-carrying capacity and adaptability.

GT Lid Lite is a cleanroom ceiling suspension system designed to offer maximum air flow management, load-carrying capacity and adaptability.

The system, which comes with a choice of either metalworks lay in tiles or mineral fibre panels, supports single point loads for cable trays, busways, hot aisle containment and more.

Key attributes

- 24" x 24" and 24" x 48" suspension system supports point loads up to 300lbs. using 3/8" threaded rod and integrated hanging clipsto provide:

- Flexible and reconfigurable overhead cable tray and electrical distribution to meet client needs without a separate strut channel system.
- Eliminates unsightly threaded rod penetrations through the ceiling plane for improved access and aesthetics.
- Reduced ceiling penetrations help minimise unwanted air infiltration.
- Meets the most stringent industry sustainability compliance standards today.
- Suspension system meets ASTM C635, ASTM C636, ASTM E580, ICC-ES AC156
- 30-Year Limited System Warranty.



TECHNICAL FEATURES

TECHNICAL DATA			
PRODUCT DESCRIPTION	DIMENSIONS NOMINAL (INCHES)	MAX LOADING* LBS./LIN. FT. RESULTS [*SIMPLE SPAN]	
		2FT	4FT
12' HD Main Beam	144 x 15/16 x 2-7/16"	135.5	40.17
4' Cross Tee	48 x 15/16 x 2-7/16"	N/A	40.17
2' Cross Tee	24 x 15/16 x 2-7/16"	93.82	N/A
12' Structural Wall Angle	144 x 7/8 x 7/8"	N/A	N/A

CEILING TILE OPTIONS

METALWORKS LAY IN

An economical, durable metal ceiling solution with a range of perforation and acoustical options. Available in plain (non-perforated) for maximum cleanroom performance.

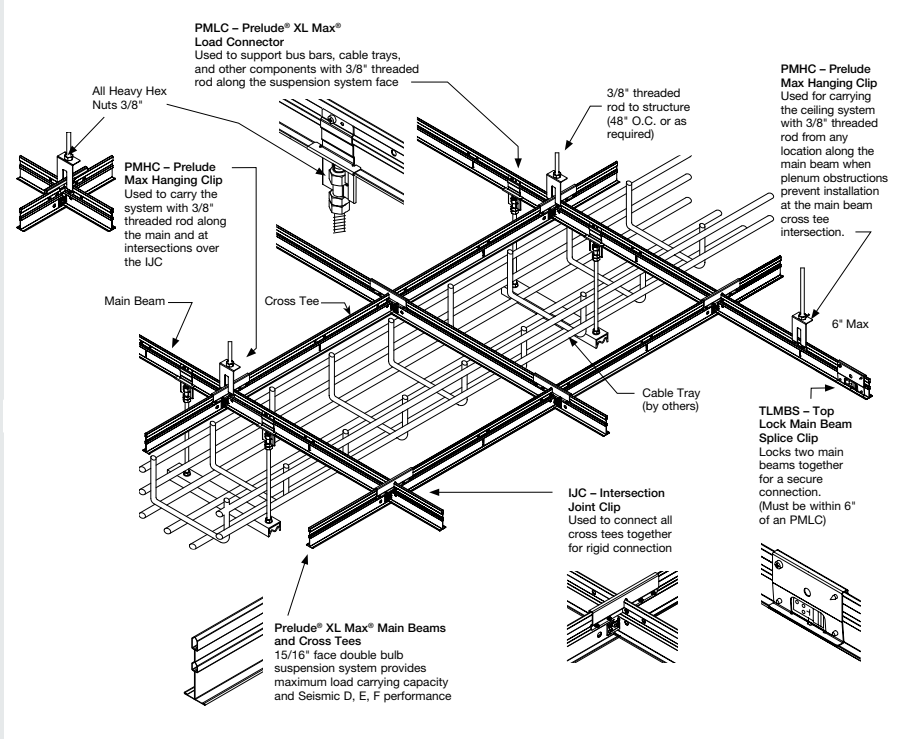


BIOGUARD ACOUSTIC

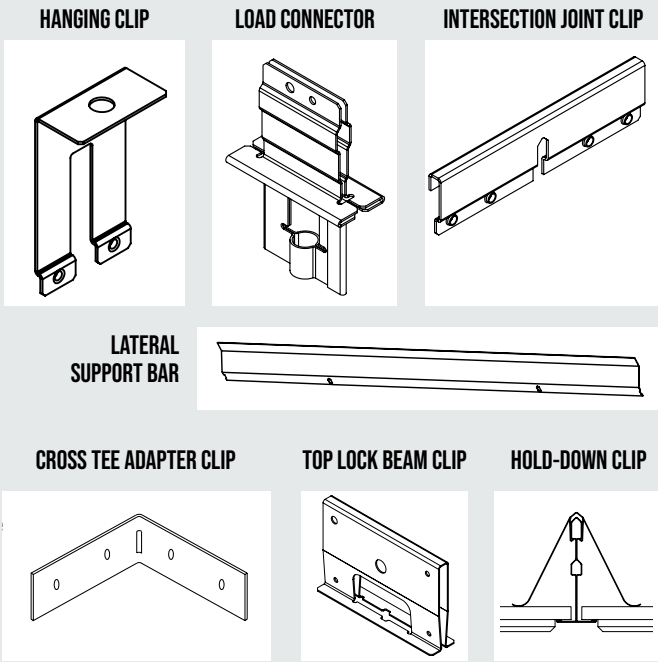
Mineral fibre ceiling panels features a smooth, water repellent, washable surface with excellent anti-microbial and ISO cleanroom performance, making it an ideal solution for controlled environments.



TECHNICAL DRAWINGS



ACCESSORIES



LEED® WELL LBC

50% RECYCLED CONTENT

ALUMINUM

Calculate sustainability with GreenGenie™ armstrongceilings.com/greengenie

energy management

construction waste mgmt

regional materials

design for flexibility

EPD

recyclable/extended producer resp.

biobased materials

recycled content

sourcing of raw materials

material ingredient reporting

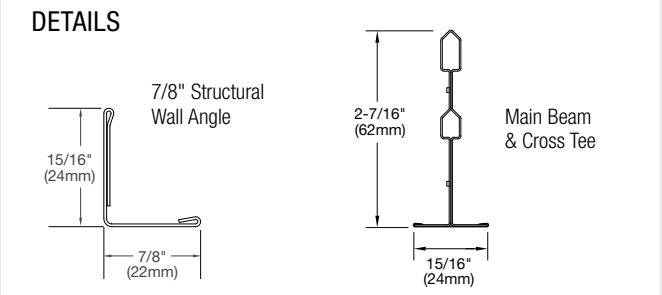
low emitting materials

lighting quality

acoustics

LOCATION DEPENDENT

Well Building Standard™ (WELL) Living Building Challenge® (LBC)




























APPLICATIONS



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



QUICK-LOOK COMPARISON GUIDE

FEATURES				
Nodal grid system				
Supports panels				
Incorporates ceiling tiles				
Walk-on functionality				
Aluminium construction				
Intelligent interlocking system				
Superior acoustic performance				
Fully flush				
Sprinkler drop connection				
Pre-designed Fan Filter Unit compatibility				
Superior air tightness				
				



Guardtech

group

www.guardtech.com

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