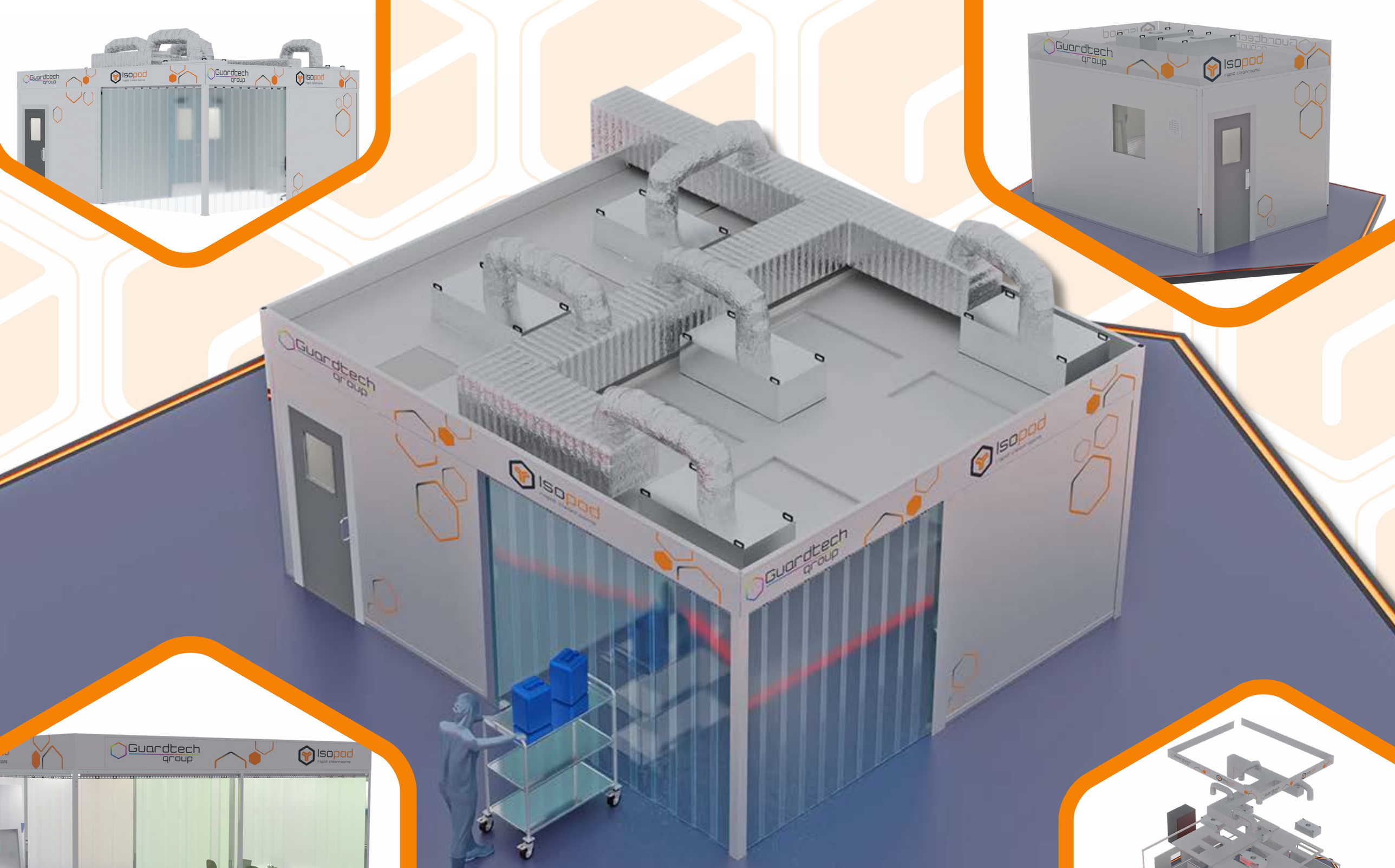
Isopod

rapid cleanrooms

www.iso-pod.co.uk

Guardtech group

Guardtech group
Isopod rapid cleanrooms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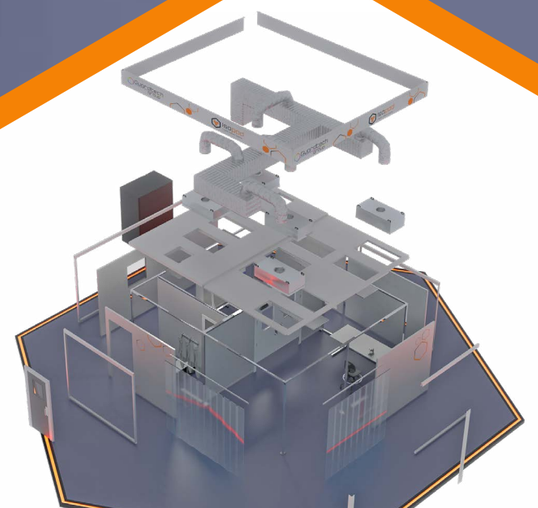

ENQUIRY FORM

Name: **Company:** **Position:**
Location: **Telephone:** **Email address:**

Site address	
Project target completion date	
Quotation required by date	
Process Pod 1 size	Length (m): Width (m):
Process Pod 2 size	Length (m): Width (m): Not required:
Process Pod 3 size	Length (m): Width (m): Not required:
Pod height	2.4m standard height: Other height (m):
Personnel Airlock (PAL) size	Length (m): Width (m):
Materials Airlock (MAL) size	Length (m): Width (m):
Walls	Shell – composite panels: Flexi – PVC Curtain: Flexi – ESD Curtain: Hybrid – panel & PVC:
Windows required	800mm x 800mm: 800mm x 1500mm: Quantity:
Doors required	Strip curtain: Steel doors: Quantity:
Vinyl tile flooring	Yes: No:
Classification	ISO8: ISO7: ISO6: ISO5: Not Classified (CNC):
Temperature control	N/A: Yes – temperature: °C +/- °C
Lighting (lux level)	500 – standard: 1000 – inspection:
13-amp double sockets	N/A: Yes – quantity:
Castors/feet	Castors: Levelling castors: Levelling legs: Feet:
Assembly	Self-assembly: Guardtech installation:
Furniture (quantity)	Stepover Bench: Trespa Work Bench: Ergonomic Chairs: Storage Cabinet: Sink: Garment Rail: Coat Hooks: Bin:
Equipment (quantity)	Laminar Flow Unit: Biological Safety Cabinet: Transfer Hatch: Trolley Hatch:
Host room information	
Other important information	

CLICK HERE to submit your enquiry via our online form

- QUICK-ASSEMBLY
- SHIPPED WORLDWIDE
- WIDE RANGE OF CONFIGURATIONS AVAILABLE
- CAN BE ‘POPPED UP’ IN ANY HOST ROOM

Press play for video content

ISOPOD RAPID CLEANROOMS

ISOPOD is a revolutionary concept in modular cleanroom design & build. Isopods are high-performance controlled environments which can be rapidly self-assembled and are fully customisable to best utilise the host room they are installed within.

Combining high-quality construction materials with state-of-the-art cleanroom technology, Isopods are the perfect solution to upgrading Production environments, R&D applications, Education or Healthcare facilities in a sustainable, practical and cost-effective way.

Isopods can be reconfigured, relocated, extended and upgraded – growing alongside your business, evolving with your needs. Shipped worldwide ready for quick and simple self-assembly, supported by full installation instructions and demo videos.

Alternatively these can be delivered & installed quickly by Guardtech’s experienced Isopod engineers.

- Ships worldwide for self-assembly
- Can be reconfigured, relocated and extended
- Available as Hardwall, Softwall or Hybrid cleanroom
- Changing room/materials interlock modules
- Can be static or mobile on castors
- Can be upgraded or modified as your business grows
- Energy efficient – only control the area that requires it
- Can be branded in corporate colours, logo, graphics
- Removable panels for equipment transfer
- Glazing can be added to hardwall

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PAGE 18-19 – Mechanical & Electrical
PAGE 20-21 – Furniture & Equipment
PAGE 22-23 – Isopod Configurator
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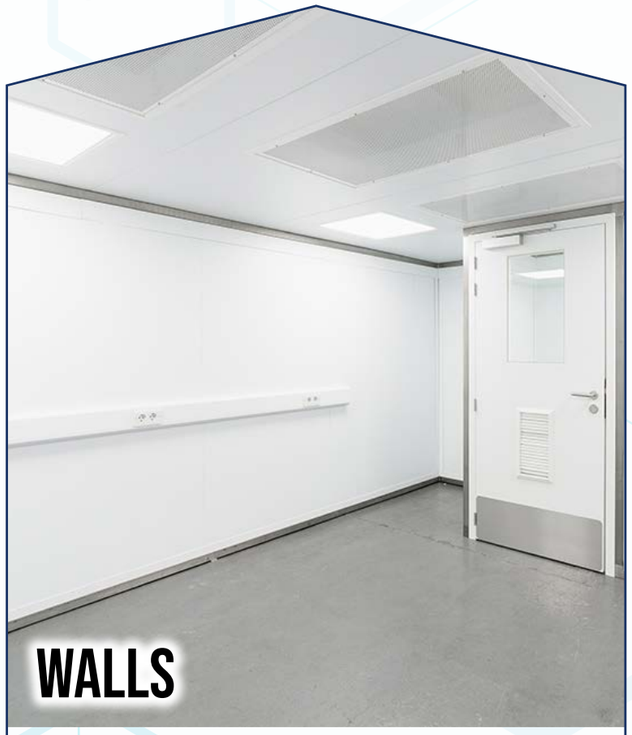
STRUCTURAL

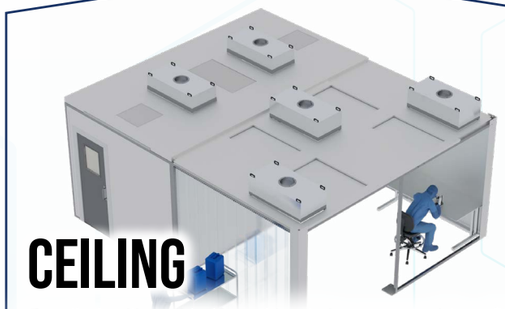


WALLS

Powder-coated CR4 mild steel panels with polyisocyanurate (PIR) insulated core and interlocking joints. The panels feature a 50mm thickness to form walls and ceiling. Highly durable, cleanable and chemically resistant, the walls are silicon sealed.

DOORS

GT Access Plus single semi-flush with pressure relief valve and push-pull handles. Bespoke lever and latch handle versions are also available. 300x600m glazing panels are included as standard – with other options available bespoke. Rapid rise doors are also available as a bespoke option.



CEILING

Panelled ceiling with thermal insulation core provides a flush surface. Lighting and filtration modules are recessed into apertures or surface mounted for laboratory applications.

GLAZING

Isopod glazing panels are available in a standard 800mm x 800mm size for the Hardwall and Hybrid models. A bespoke 800x1500mm arrangement may be possible – please speak to a member of the Isopod team about your requirements so we can help find the best solution.

Isopod

SHELL

Press play for video content

FRAME

Isopod Shell, Flexi and Hybrid units come with a Grade 304 stainless steel framework as standard. There is an option to upgrade to either Grade 316 stainless or a lighter aluminium framework with bespoke models. Consult a member of the Isopod sales team for information on your preferred solution.

CONNECTORS

The Guardtech Group have specially engineered connectors from Grade 304 stainless steel to connect the stainless steel or aluminium framework, ensuring a robust and reliable support structure that is easy to clean.

FLOORING

Isopods do not feature a flooring solution as standard. If you'd like to incorporate one in your bespoke pod, the Guardtech Group now provide our GT Deck Lite vinyl flooring tile jigsaw system. Ask your rep for more details.

SHELL CONFIGURATIONS

STANDARD LAYOUTS

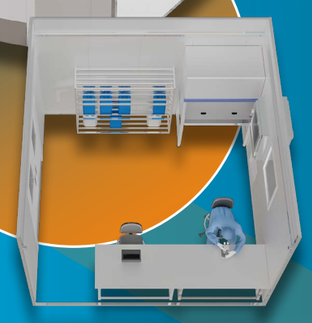
ISOPOD SHELL modules come in five standard sizes.
How you decide to arrange them is up to you and the particular needs of your process/application.
Our Isopod Design Engineers are on hand to help you figure out the ideal multi-pod layout to best serve the need of your business.

2x3m
300mm
200mm

3x4m
300mm
400mm

3x3m
300mm
300mm

3x5m
300mm
500mm

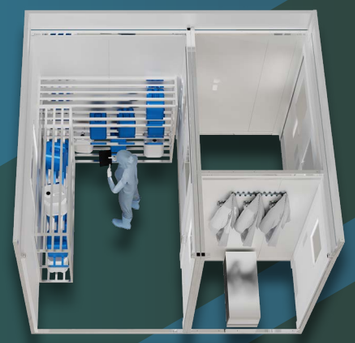


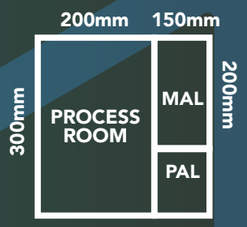
4x4m
400mm
400mm

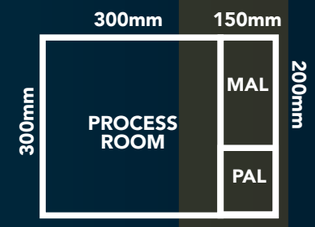
STANDARD CONFIGURATIONS

NOT SURE which Isopod Rapid Cleanrooms configuration best suits the needs of your business?
Why not select one of our standard configurations, specially tailored to meet the most common needs of our clients. Most ISO 14644 controlled environments require a Personnel Airlock/change area (PAL) while many also utilise a Materials Airlock (MAL).
The configurations below are a quick and efficient way for you to get the solution need as hastily as possible. But if you'd prefer to craft your own bespoke multi-pod configuration, speak to a member of the Isopod team and we'll bring your ideas to life.

2x3m + PAL/MAL



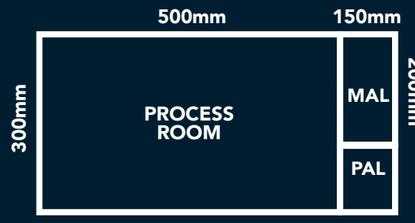




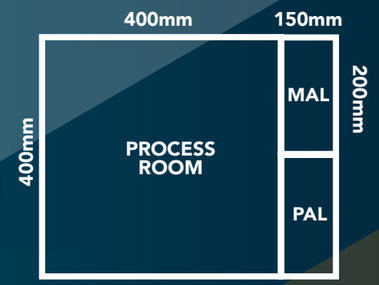
3x3m + PAL/MAL

3x4m + PAL/MAL

3x5m + PAL/MAL



4x4m + PAL/MAL



ISOPOD FLEXI

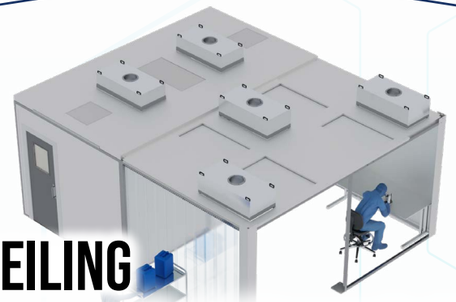
FRAME

Isopod Shell, Flexi and Hybrid units come with a Grade 304 stainless steel framework as standard. There is an option to upgrade to either Grade 316 stainless or a lighter aluminium framework with bespoke models. Consult a member of the Isopod sales team for information on your preferred solution.

CURTAIN SUSPENSION

GT Strip Max PVC curtain kits include either the premium range plastic bullet rails or stainless steel hook suspension rails. GT Strip Max suspension systems are simple to install, easy to clean and ensure safety for high and low traffic environments.

CEILING



Panelled ceiling with thermal insulation core provides a flush surface. Lighting and filtration modules are recessed into apertures or surface mounted for laboratory applications.

FLOORING

Isopods do not feature a flooring solution as standard. If you'd like to incorporate one in your bespoke pod, the Guardtech Group now provide our GT Deck Lite vinyl flooring tile jigsaw system. Ask your rep for more details.

Press play for video content

Isopod FLEXI

FEATURING:

GT STRIP MAX

TECHNOLOGY

STRIP CURTAIN

Guardtech's Flexi (Softwall) and Hybrid Isopods feature strip curtain sections, designed to overlap and create a flexible wall for cleanroom applications. This lightweight PVC curtain is suspended by a stainless steel plate and attached to a stainless steel hanging rail, Available in the following thicknesses and widths: 2mm thickness x 200mm width or 3mm thickness x 300mm width.

Click here to view the GT Strip Technical Data Sheet

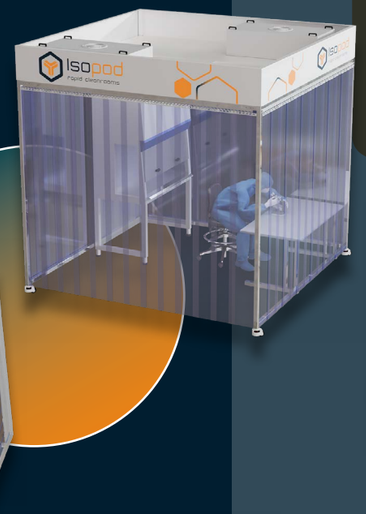
FLEXI CONFIGURATIONS

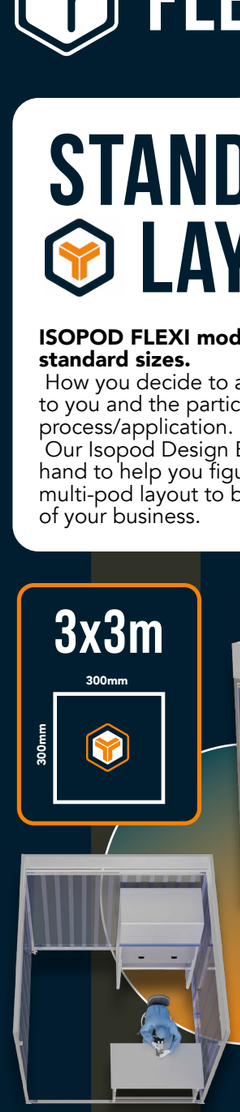
STANDARD LAYOUTS

ISOPOD FLEXI modules come in five standard sizes.
How you decide to arrange them is up to you and the particular needs of your process/application.
Our Isopod Design Engineers are on hand to help you figure out the ideal multi-pod layout to best serve the need of your business.

2x3m
300mm
200mm

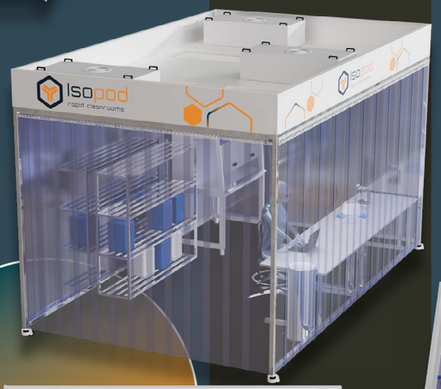
3x3m
300mm
300mm

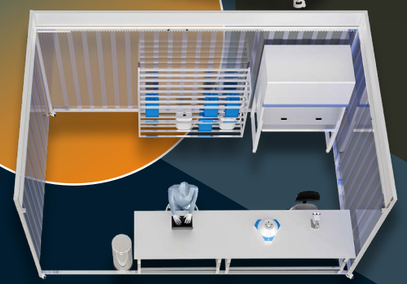




3x4m
300mm
400mm

3x5m
300mm
500mm





4x4m
400mm
400mm

STANDARD CONFIGURATIONS

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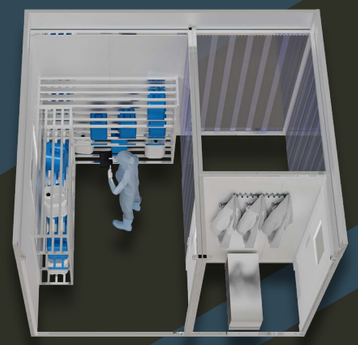
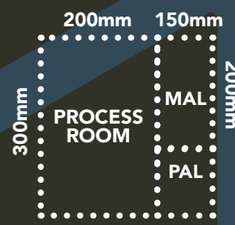
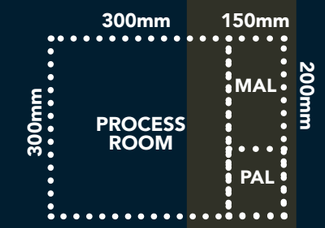
2x3m + PAL/MAL

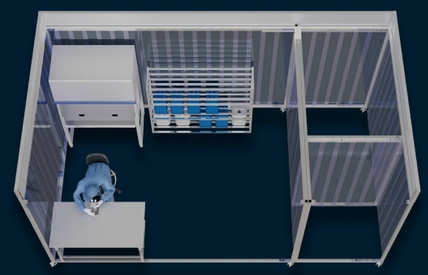


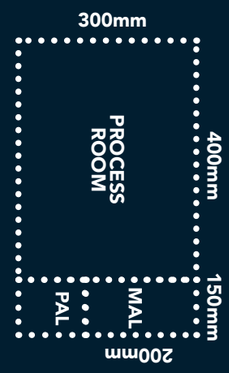


3x3m + PAL/MAL

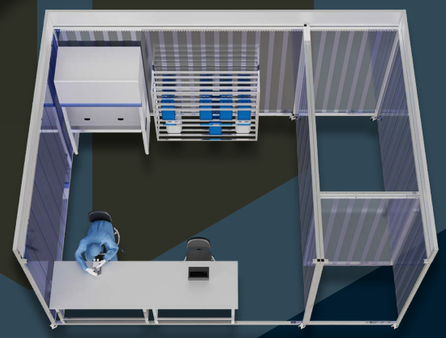


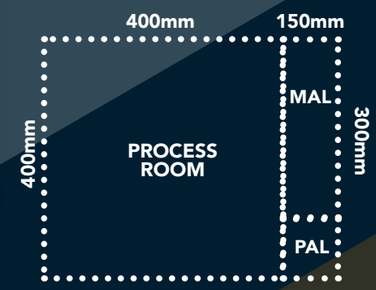
3x4m + PAL/MAL



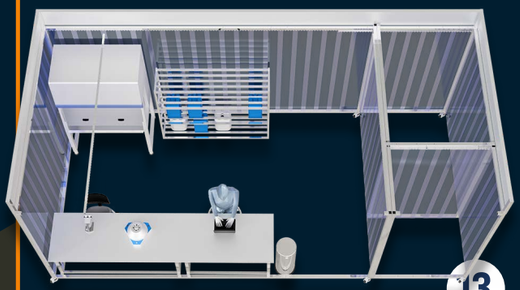


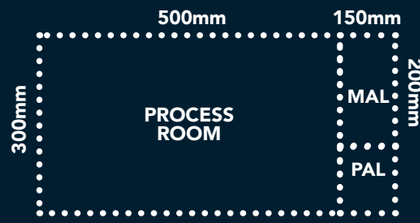
4x4m + PAL/MAL





3x5m + PAL/MAL





ISOPOD HYBRID

FRAME

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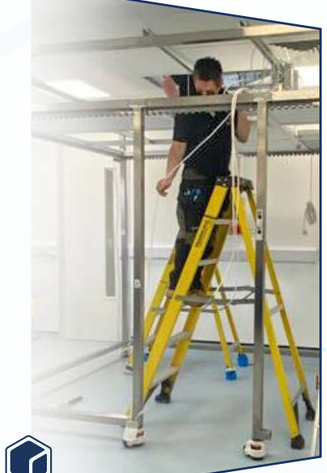
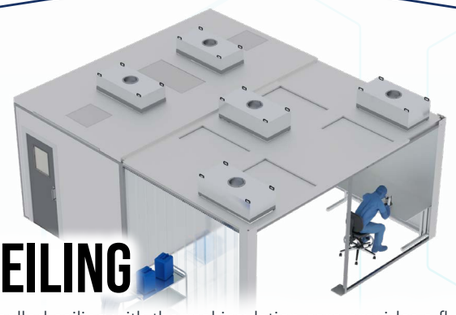


WALLS

Powder-coated CR4 mild steel panels with poly-isocyanurate (PIR) insulated core and interlocking joints. The panels feature a 50mm thickness to form walls and ceiling. Highly durable, cleanable and chemically resistant, the walls are silicon sealed.

CEILING



Panelled ceiling with thermal insulation core provides a flush surface. Lighting and filtration modules are recessed into apertures or surface mounted for laboratory applications.

FLOORING

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Press play for video content

Isopod HYBRID

FEATURING:

GT STRIP MAX

TECHNOLOGY

STRIP CURTAIN

Guardtech's Softwall and Hybrid Isopods feature a strip curtain, designed to overlap and create a flexible wall for cleanroom applications. This lightweight PVC curtain is suspended by a stainless steel plate and attached to a stainless steel hanging rail, Available in the following thicknesses and widths: 2mm thickness x 200mm width or 3mm thickness x 300mm width.

Click here to view the GT Strip Technical Data Sheet

HYBRID CONFIGURATIONS

STANDARD LAYOUTS

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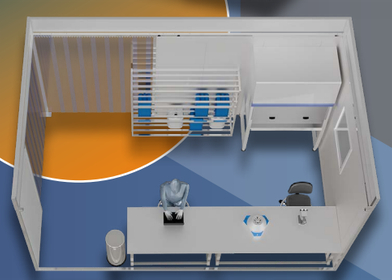

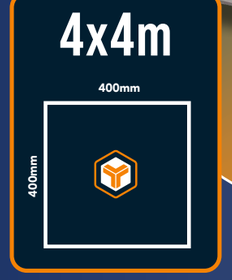

STANDARD CONFIGURATIONS

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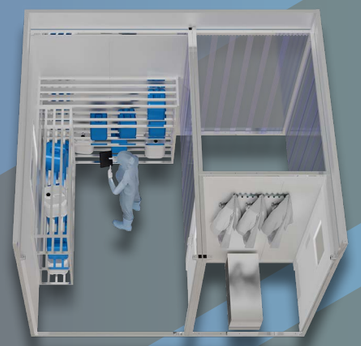
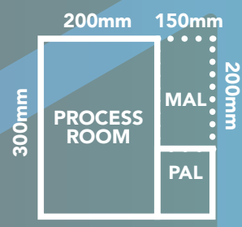
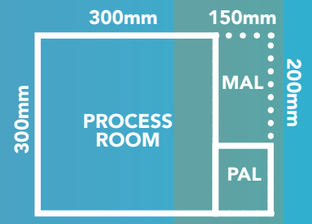
2x3m + PAL/MAL

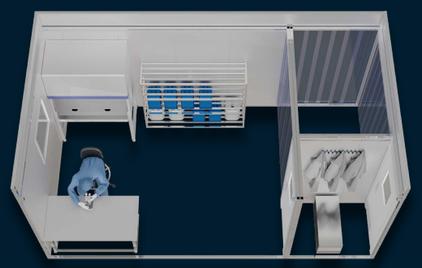




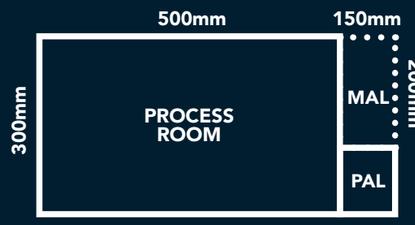


3x3m + PAL/MAL

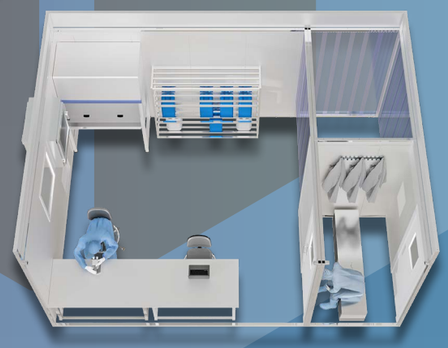
3x4m + PAL/MAL

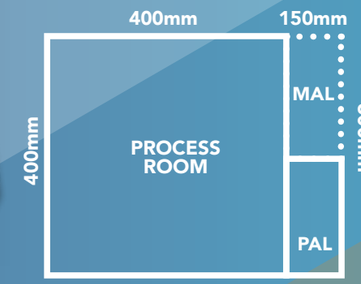


3x5m + PAL/MAL



4x4m + PAL/MAL





MECHANICAL & ELECTRICAL

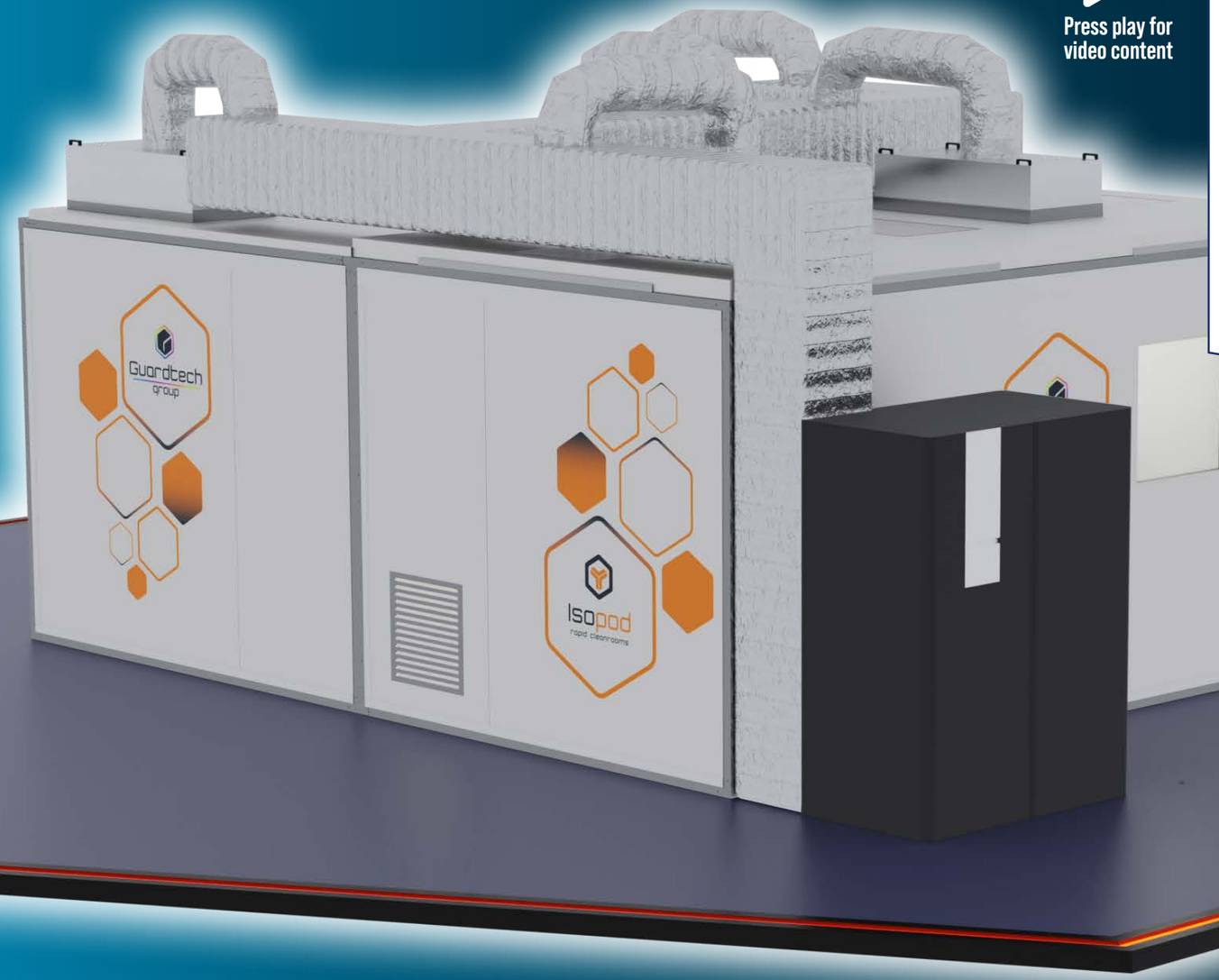
CONTROL PANEL

15.7" touchscreen HMI+PLC provides a full control and monitoring system for your Isopod Rapid Cleanroom. Environmental Monitoring System feeds back to give real time data on temperature, humidity and pressure. Fan speeds and HVAC systems can be controlled as well as other compatible equipment.

HVAC

Temperature control via VRF (variable refrigerant flow) split system. Humidity control also provided via upflow units or separate desiccant wheels. External condensers can be contained in attached plant rooms or mounted on Isopod exterior.

Press play for video content



FILTRATION

For ISO 14644 compliant environments, Fan Filter Units (FFU) with H14 HEPA filters and G4 pre-filters provide 1,000m³/hour of filtered air. For ceiling heights of 2.1m slimline FFUs are installed in the ceiling to provide vertical laminar flow. Depending on the specifications of your chosen model, Isopods can achieve a classification up to ISO5.

ENVIRONMENTAL MONITORING

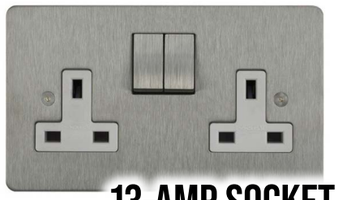
Guardtech provide a fully integrated Environmental Monitoring System that can also be 21CFR Part 11 compliant. With a range of high-performance multifunction sensors, temperature, humidity and pressure can all be monitored in real time and recorded for an audit trail. Fully flush or semi flush LED display gives in-room feedback

GAS

Compressed air and nitrogen via compressors and generators housed directly within the cleanroom or lab – or in an enclosed plantroom. Pipework, point of use fittings, regulators and hook-up connections can also be put in place.

EXTRACTION

Chemicals, airborne particulate and heat can all be extracted to a localised filtration unit for scrubbing. Safe change modules can also be placed on the exhaust system to mitigate the risk of cross-contamination.



13-AMP SOCKET

All standard Isopods include two plastic surface mounted 13-amp sockets. CAT6 data sockets and 16amp or 32amp three-phase outlets are also available, as well as flush stainless steel 13-amp sockets.

LIGHTING

Powder-coated steel light units, flush mounted into the ceiling panels with drop-down hinged diffuser. Also available as surface-mounted aluminium LED batten luminaires for laboratories. Activation by switch or PIR (passive infrared) sensor. Lights can be UV filtered for photo sensitive processes.

CONTAINMENT

Guardtech can install sockets and services flush to the panel system with containment embedded within the panel core, but most Isopod clients opt for three-compartment PVC trunking – a cost-effective solution providing flexibility on socket positioning.

FURNITURE & EQUIPMENT

Isopod
rapid cleanrooms

LAMINAR FLOW UNIT

Guardtech have partnered with Esco to bring you an extensive, exciting range of equipment solutions for your Isopod, with an array of models to meet your laminar flow clean bench needs. Esco's new generation Airstream® laminar flow units offer a wide range of options in terms of material specs, width and height.

ACCESSORIES

Guardtech can offer a number of controlled environment accessories with their range of Isopod Rapid Cleanrooms, including Dyson Airblade hand dryers, various dispensers and stainless steel coat hooks.

BIOSAFETY CABINET

Guardtech are delighted to offer the full range of Esco biosafety cabinets with all of our Isopod models. This includes delivery, fitting and commissioning – if required. Popular installations feature the Airstream Class II Biosafety Cabinet – AC2-4E8 4ft model, but we can adapt the layout to meet your operational requirements.

CHAIRS

Our MVMT Pro chairs are designed for critical environments, including static-sensitive and particle/microbe-controlled areas. The MVMT Pro offers weight-activated control, meaning an individual user's weight sets the tension, which alleviates resetting controls in multi-user shift workplaces.

Press play for video content

TRANSFER & TROLLEY HATCHES

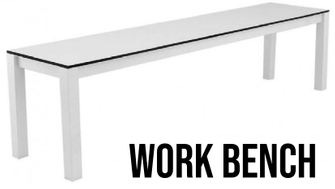
These hatches provide a controlled air-tight zone for the transfer of products on trolleys, eliminating unecessary traffic from the cleanroom, reducing particle ingress and decreasing the risk of cross-contamination.

SHELVING UNIT

Stainless steel shelving units available in a range of sizes and shelf configurations. These units are resistant to harsher cleaning products and are specially designed to be easy to clean, durable and functional.

SINK

Self-contained stainless steel sinks with container-fed hot & cold water supply and separate drainage vessel. Motion sensor-activated tap, soap & towel dispenser attached.



WORK BENCH

Whether it's chemical-resistant Trespa TopLab or simply a stainless steel surface you require, we can fit out your cleanroom with high quality workbenches to ensure the quality of what you do isn't compromised.

CABINET

Guardtech's high-quality cabinets are manufactured from either Trespa or grade 304/316L stainless steel. The units are available with a range of door and drawer configurations, stainless fixtures and fittings and can be arranged as mobile units on castors or static cabinets on solid levelling legs.

STEPOVER BENCH

Guardtech stepover benches come as standard seating benches on levelling legs or with storage compartments underneath for shoes, garments, PPE and consumables. Manufactured from Trespa or grade 304/316L stainless steel, Guardtech's stepover benches are durable and easy to clean.

ONLINE CONFIGURATOR

BUILD YOUR OWN Isopod

BUILD YOUR own cleanroom with the Guardtech Group's revolutionary online Isopod Configurator.

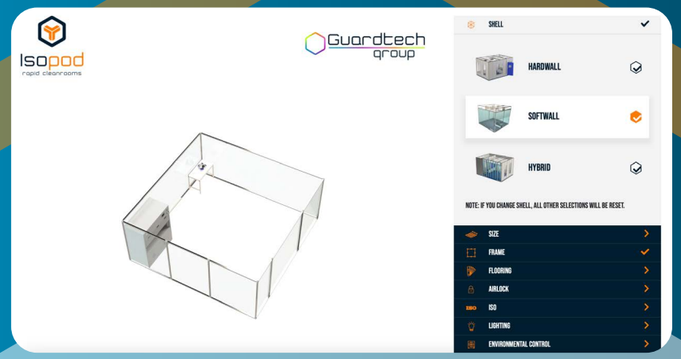
The innovative software allows users to select the different structural, mechanical and electrical components in their own bespoke Isopod Rapid Cleanroom.

After choosing between a Shell (Hardwall), Flexi (Softwall) or Hybrid base model, users can select the unit's size, frame material, flooring swatch and glazing, as well the ISO class, lighting level, environmental control and environmental monitoring set-up.

You can even fit out your Isopod with a range furniture & equipment options and both installation and validation through Guardtech's team of experienced Installation Engineers – all with just a few clicks of a mouse!

This innovative tool takes what can be a complicated and confusing process and streamlines it for Guardtech's contented customer base. You can access the Isopod Configurator directly via **www.isopodconfigurator.com** or by visiting **www.iso-pod.co.uk**.

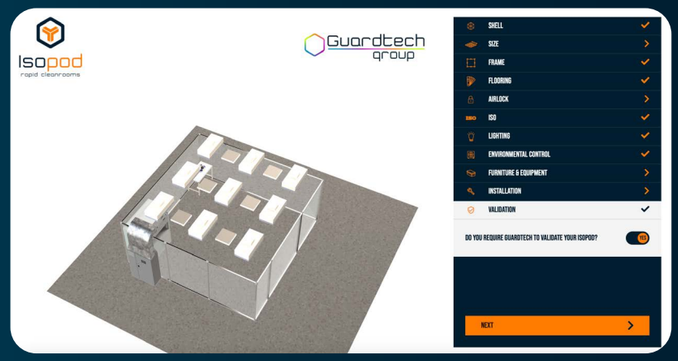
Alternatively, head over to Guardtech's home site **www.guardtechgroup.com** – a portal to Guardtech's other brands, including CleanCube, Guardtech Cleanrooms and Cleanroom Solutions.



Press play to build your own Isopod

The Guardtech Group have taken the cleanroom procurement customer journey to another level with their pioneering Isopod Configurator software – head to www.iso-pod.co.uk now to get started.

As well as selecting the different structural and mechanical & electrical components that make up your Isopod, you can also tell us what furniture & equipment you'll need to take your application to new heights.



Visit **www.iso-pod.co.uk** to build your own cleanroom now

Guardtech group

CLIENT CASE STUDY

ELECTRONICS ISOPOD

ISO Class 6

Budapest, Hungary

Guardtech group

International Case Study

THE CLIENT

BHE – a leading provider of RF and microwave solutions for mobile operators, government, Defence, Space, and Aeronautics organisations worldwide. With their innovative products and expertise, BHE are committed to connecting the world and enabling seamless communication for critical missions and everyday life.

THE BRIEF

The Guardtech Group were engaged to provide a rapid Isopod Shell hardwall controlled environment solution to support the client's cable assembly operations in Budapest, Hungary.

The client required a high level of classification (ISO6) and by opting to utilise an Isopod Rapid Cleanroom in a tight host room, it would save them from having to undergo substantial redevelopment works on their existing premises.

The Isopod situated at the client's premises in Budapest.

"The Install team did a great job..."

Gabor Geczy, Project Manager for BHE Bonn Hungary Electronics Ltd, said: "I would like to thank the Guardtech team for the quick work and the flexibility during this Isopod cleanroom procurement, we appreciate that.
"The install team did a great job – we tried to help them in any way we could and they appreciated that, too. A great co-operation here in Budapest resulted in an Isopod Rapid Cleanroom which is now working great."

Gabor Geczy
BHE Bonn Hungary
Project Manager

Isopod
rapid cleanrooms

THE TECH SPECS

A controlled environment designed, installed, cleaned and commissioned by Guardtech built to the following specification:

- **Structural:** Grade 316 stainless steel 50 x 50mm Box Section frame with Grade 304 stainless steel connectors, GT Shell Plus QuadCore panels, GT Lid Plus panelled ceiling, GT Access Lite powder-coated steel doors, brush plates (for cable feeding).
- **Electrical:** GT Lux Plus surface-mounted LED lighting achieving 1000 lux in the ISO6 space and 500 lux in the ISO8 Personnel Airlock (PAL), European Schuko small power outlets in three-compartment PVC dado surface-mount trunking.
- **Mechanical:** 3 x GT Flow Plus Fan Filter Units (FFUs) with H14 HEPA and G4 Filters achieving up to 100 air changes per hour (ACPH).
- **Furniture & Equipment:** Grade 316 stainless steel transfer hatch.
- **Monitoring:** GT Scan Lite analogue environmental monitoring magnehelic gauge system reading temperature and pressure.

THE CHALLENGES

Not all plane sailing: Upon delivering and setting up the Isopod in the host room in Budapest, the team soon realised that one of the Fan Filter Units was faulty and required a new part to get it up and running again.

Isopod Installation Engineer Vinnie Burton flew back to the UK, retrieved the necessary part and return to Hungary, all within 24 hours, to ensure the client received the best possible service. A great example of how the Guardtech Group are always prepared to go the extra mile for our customers.

Share the load: Because this Isopod was slightly longer in length than our base models, Manufacturing Manager Michael Burton was concerned with potential sagging in the middle of the longer frame spans. He therefore added reinforcements in the middle of the steel beams to ensure the Isopod remained as robust as expected.

Grille deal: The Isopod needed to achieve ISO6 classification – quite a tall order for such a relatively small unit. As a result, Burton added extra return air grilles with dampers to the doors and wall panel system to ensure enough air could move around the space to meet the standard,

Brushing up: The client wanted to feed cabling into the unit and Burton had the bright idea of installing nifty brush plates in certain positions to allow easy access ports which wouldn't compromise the air change rates or process room cleanliness.

THE RESULT

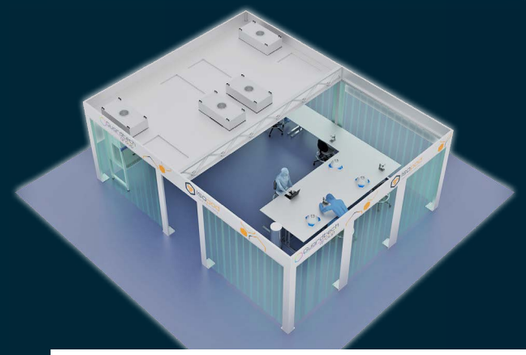
Gabor Geczy, Project Manager for BHE Bonn Hungary Electronics Ltd, said: "I would like to thank the Guardtech team for the quick work and the flexibility during this Isopod cleanroom procurement, we appreciate that.
"The install team did a great job – we tried to help them in any way we could and they appreciated that, too. A great co-operation here in Budapest resulted in an Isopod Rapid Cleanroom which is now working great."

Guardtech group

CLIENT CASE STUDY

ELECTRONICS ISOPODS

ISO Class 7



THE CLIENT

KLA – whether it's a driverless car, VR experience, or factory robotics, KLA help turn theory into possibility, helping to create technological devices and ideas that transform the future and shape our current life. KLA are often part of the most significant technological breakthroughs. Virtually no laptop, smartphone, wearable device, voice-controlled gadget, flexible screen, VR device or smart car would have made it into your hands without KLA's input.

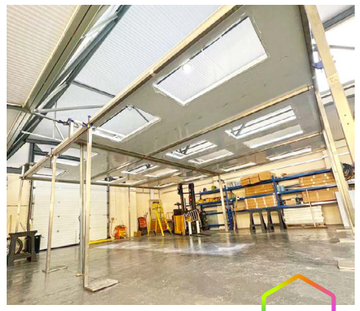
THE BRIEF

KLA originally requested a proposal for 2 x ISO7 Softwall cleanrooms for installation at one of their sites in Denmark. After further scrutiny of the brief and consultation, Guardtech proposed an upgraded solution that utilised more robust components to allow some pressurisation in the room, more in line with Isopod Hardwall modules.

Electronics

21+/-3

30m² & 45m²



"Full credit to the Design and Install teams..."

Isopod Rapid Cleanrooms Project Manager Elliott Pearce said: "It was such a pleasure to be involved in leading this fantastic project for a client conducting pioneering work in their field.

"Full credit must go to the Guardtech Group Design and Install teams for working so well together to firstly plan these amazing bespoke Isopods back at our Suffolk HQ before the installation in Denmark.

"We were really pleased with the way everything went and wish the client well with their future endeavours."

Elliott Pearce
Isopod Rapid Cleanrooms
Project Manager

KLA

Isopod rapid cleanrooms

THE TECH SPECS

A controlled environment designed, installed, cleaned and commissioned by Guardtech built to the following specification:

- **Structural:** GT Strip Max PVC strip curtain – 300mm wide/3mm gauge with an internal height of 2.5m, GT Lid Pro panelled ceiling, Aluminium 50 x 50 x 3mm Box Section frame with Grade 304 stainless steel connectors.
- **Mechanical:** GT Flow Plus Fan Filter Units (FFUs) with H14 HEPA and G4 Filters achieving 70 air changes per hour, GT Air Lite condenser-free wall-mounted HVAC unit.

THE CHALLENGES

The host room: One of the biggest challenges upon arriving at the premises in Denmark was attempting to maximise the Isopod size within the room.

Because the Isopods were so close to the walls of the host room, the Guardtech Group Installation team had to ensure all fixings could be accessed from inside the room.

Notch your usual ceiling: Because of the limitations of the tight host room and the restricted access to ceiling supports, the Guardtech Installation team had to be creative, implementing a 'notch' in some of the stainless steel to ensure the panelled ceiling construction was not compromised in any way.

Transport trouble: The delivery of the two Softwall Isopods from Suffolk to Denmark was delayed a few days due to transport issues, meaning the Guardtech Installation Engineers had to work diligently to pull the schedule back in line with expectations.

THE RESULT

Isopod Rapid Cleanrooms Project Manager Elliott Pearce said: "It was such a pleasure to be involved in leading this fantastic project for a client conducting pioneering work in their field.

"Full credit must go to the Guardtech Group Design and Install teams for working so well together to firstly plan these amazing bespoke Isopods back at our Suffolk HQ before the installation in Denmark.

"We were really pleased with the way everything went and wish the client well with their future endeavours."

Guardtech group

CLIENT CASE STUDY

MEDICAL DEVICE ISOPODS

ISO Class 6

THE CLIENT

Oval Medical Technologies Ltd – a world class drug delivery business specialising in the development of autoinjector platforms with a strong patient focus. Oval designs, develops and industrialises autoinjectors that include integrated, customised primary drug containers. Oval's enabling autoinjector technology provides consistent delivery performance for a wide range of formulation viscosities.

Medical Device

No temperature control required

12m²

THE BRIEF

Oval were looking to enhance the capability of their development lab to incorporate a new upgraded part of their process, opting for two conjoined 6m² Softwall Isopods. Oval had specific challenges within the room that precluded them from opting for a standard Isopod, therefore we were charged with designing two bespoke connected units.

Truly patient centric autoinjector platforms

From About on www.ovalmedical.com

"Oval aims to bring truly patient-centric autoinjector platforms to market. Founded in 2009 by Matthew Young, Oval takes a different approach, designing from the outside in, ensuring that all patient needs are met. Our team has a wide range of expertise allowing us to deliver the best solutions to partners and patients."

OVAL MEDICAL TECHNOLOGIES
An SMC Ltd. Company

CAMBRIDGE PHARMA

Isopod
rapid cleanrooms

THE TECH SPECS

A controlled environment designed, installed, cleaned and commissioned by Guardtech built to the following specification:

- **Structural:** Grade 304 stainless steel frame with anti-static PVC strip curtain.
- **Electrical:** LED lighting panels to provide an average of 500 lux at bench level.
- **Mechanical:** Filtration provided by H14 HEPA filters powered by Fan Filter Units.
- **Monitoring:** Pressure monitoring from magnehelic gauges.

THE CHALLENGES

Internal ceiling height: Space may have been at a premium – but this wasn't a major obstacle for Guardtech. The team opted to use slimline Fan Filter Units in order to create the tallest internal ceiling that could be achieved for the Isopods.

Structural: The client wanted the units to be mobile, and so wheels were fitted. As a result, we needed to put structural reinforcement in place to reduce the risk of splay. Structural calculations were made to ensure the outward force was offset by adequate bracing.

Equipment transfer: The client needed to move equipment between the two Isopods, which meant the Installation team needed to incorporate a removable bar at the bottom of the Isopods. This enabled us to retain the structural bracing while accommodating the need for equipment transfer.

THE RESULT

Guardtech Commercial Director Mark Wheeler said: "The team enjoyed tackling the various challenges that this bespoke Isopod build presented.

"Many of the lessons we learned on this project, and the new ideas we implemented for these bespoke Isopod models, have been incorporated into our ongoing development plans for the standard product range. This should prove to be extremely valuable in helping us to develop the best possible product for the widest range of future users."

Guardtech group

CLIENT CASE STUDY

PACKAGING HYBRID ISOPOD

ISO Class 6

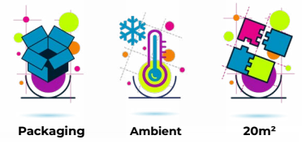
THE CLIENT

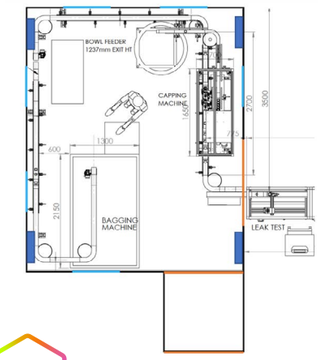
Oxford Packaging Solutions Ltd – packaging specialists based in Oxfordshire, built on a heritage of producing high-quality plastic containers for the Food & Drink, Personal Care, Household and Medical sectors. The company specialises in precision blow moulding and works in PET, RPET, PP and HDPE materials.

THE BRIEF

Guardtech were charged with providing a relatively small-sized modular cleanroom solution for use within a warehouse space. The controlled environment needed to be not just mobile, but easily moved. This led to the development of a bespoke Isopod Rapid Cleanroom on pump-action castors.

The Isopod would be used mainly for the client's injection moulding process, producing bottles to be used for liquid filling for food, medical use and beyond. The client required a rapid solution because of a spike in demand that they needed to capitalise on.





"We learned a lot about new effective practices with this project..."

Commercial Director Mark Wheeler said: "This was a challenging bespoke Isopod build which had to be put together in a busy facility for a client whose services were in high demand. "We learned a lot about new effective practices with this project, which will certainly stand us in good stead for future bespoke Isopod projects."

Mark Wheeler
Guardtech Group
Commercial Director

OPS OXFORD PACKAGING SOLUTIONS

Isopod rapid cleanrooms

THE TECH SPECS

A controlled environment designed, installed, cleaned and commissioned by Guardtech built to the following specification:

- **Structural:** GT Shell Plus PIR wall panels, GT Strip Lite PVC curtain, GT Lid Plus PIR suspended ceiling panel system, grade 304 stainless steel framework, 12 x jacking legs with castors, Melaphone speech panels.
- **Electrical:** GT Lux Lite LED lighting panels, 13amp plug sockets flush mounted.
- **Mechanical:** GT Flow Plus H14 HEPA Fan Filter Units with G4 pre-filters providing 200 air changes per hour.
- **Monitoring:** GT Scan Lite magnehelic gauge environmental monitoring system (EMS).

THE CHALLENGES

Bridging a gap: The Design team were tasked with developing a Hybrid Isopod featuring both cleanroom panels and a softwall section as the client needed the cleanroom to incorporate a conveyor to bridge the outside of the room with the inside of the Isopod. With this bespoke design, the Isopod needed to be designed with careful consideration regarding the equipment it would be serving.

Level best: The entire structure was built on 12 levelling castors to ensure the Isopod could be jacked up and down to move it around effectively. The Isopod team therefore needed to consider the impact that the moving parts would have on the design of the room.

Working warehouse: The Install team had to build the Isopod within the confines of a busy working environment – an operational warehouse with all the rigorous staff and safety precautions and expectations of a highly professional outfit. The Guardtech team had to be professional, diligent and understanding of the clients' process flow – with an extra consideration on being as tidy as possible in an operational production environment.

THE RESULTS

Commercial Director Mark Wheeler said: "This was a challenging bespoke Isopod build which had to be put together in a busy facility for a client whose services were in high demand. "We learned a lot about new effective practices with this project, which will certainly stand us in good stead for future bespoke Isopod projects."

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Guardtech group