

SOFTWALL BIOTECH ISOPOD

**Isopod**
rapid cleanrooms

THE CLIENT

Celltechna – a Biotechnology company specialising in advanced Bioprocessing and Life science innovation within the pharmaceutical and biotech sectors. Operating from Vilnius, Lithuania, the company required a compact, flexible cleanroom solution to support controlled environment operations within its existing facility footprint.

THE BRIEF

Celltechna required a small-scale ISO7 cleanroom incorporating both personnel and material airlocks to support segregation between clean and non-clean operations. The client specifically requested a softwall cleanroom solution to provide greater flexibility and a more economical alternative to traditional rigid modular construction. The cleanroom needed to be delivered, installed, validated and operational within a rapid project timeframe while still achieving the required particulate cleanliness performance.



Biotechnology

Temperature &
Humidity: CNC16m²
Vilnius, Lithuania

If you're based in the Nordics or Baltics and would like to discuss your Isopod enquiry, email sales@guardtech.com

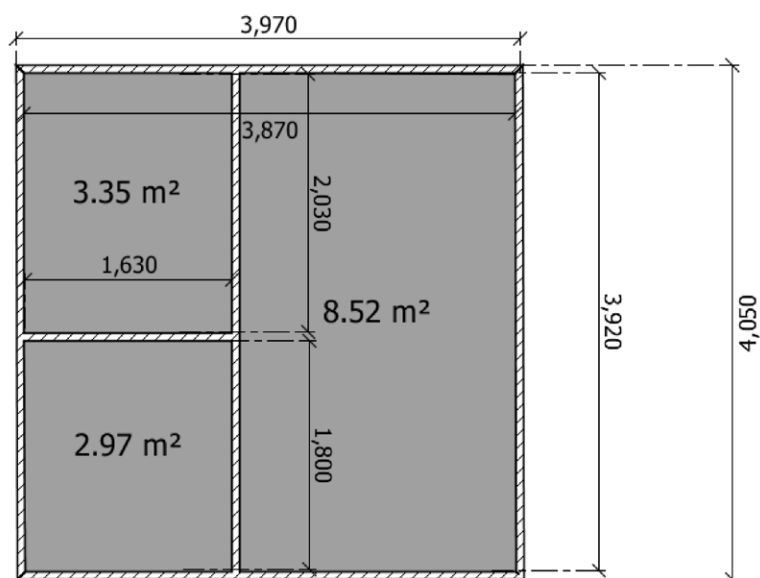
“Pushing the boundaries of what we're delivering...”

Guardtech Associate Manufacturing Director Michael Burton said: “This project is a fantastic example of what can be achieved when our design, manufacturing and installation teams work together to solve complex customer challenges. From developing a completely bespoke footprint and incorporating both personnel and material airlocks, to integrating power and data services and introducing a new floor fixing solution, there were several unique requirements that pushed the boundaries of what we'd previously delivered with an Isopod.”

Michael Burton
Guardtech Associate
Manufacturing Director

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THE TECH SPECS

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

◆ **Structural:** Grade 304 stainless steel and aluminium/GRP framework, GT Strip Max transparent PVC softwall curtain system, GT Shell Lite 50mm PIR insulated ceiling panel system with RAL9003 powder-coated finish.

◆ **Electrical:** GT Lux Lite 600 x 600mm LED lighting panels flush mounted within ceiling system achieving 500 lux illumination, emergency lighting throughout all zones levels achieved throughout facility, 4 x integrated 10amp schuko electrical outlets, 2 x CAT6A ethernet/data outlets integrated into perimeter containment trunking, 3-compartment PVC containment trunking system.

◆ **Mechanical:** GT Flow Plus H14 HEPA Fan Filter Units with G4 Pre Filters achieving up to 82 air change rates per hour.

THE CHALLENGES

Tailor-made fit: The client required an ISO7 cleanroom enclosure to be installed within a restricted production space, meaning a standard modular footprint simply wouldn't suffice. The Guardtech Nordic AB

team worked closely with the customer to develop a bespoke Isopod configuration measuring approximately 4.5m x 3.4m, carefully adapting the dimensions to maximise the available area whilst maintaining the cleanroom's operational performance and accessibility.

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Pressure under control: One of the key design considerations centred around airflow management. Because the enclosure was positioned close to the surrounding walls, there was a risk that positive pressure could force the softwall curtains against the building fabric, potentially restricting return airflow. The design was therefore refined to create sufficient clearance around the perimeter, ensuring the enclosure maintained stable airflow patterns and consistent cleanroom conditions.

Connected cleanroom: This project represented one of the first occasions where integrated power and data services were incorporated directly into a softwall Isopod solution. The installation featured Schuko power outlets and Cat6A data connections, providing the client with the utilities required to support their processes whilst maintaining the integrity and flexibility of the cleanroom environment.

Double airlock innovation: To support controlled personnel and material movement, the enclosure incorporated both a Personnel Airlock (PAL) and Materials Airlock (MAL) within

the same softwall structure. Integrating both transfer routes into a compact footprint required careful planning and represented a significant advancement in the versatility of the Isopod platform.

Removing obstacles: The installation also provided an opportunity to introduce an improved floor fixing system. Traditional support methods can create potential trip hazards around the perimeter of modular cleanrooms, so the team engineered a new fixing plate arrangement that eliminated floor-level obstructions whilst maintaining the structural integrity of the enclosure. The result was safer access for personnel and unrestricted movement of materials and equipment through the cleanroom.

Rapid deployment: Manufactured in the UK and installed on-site in Lithuania, the project demanded efficient co-ordination between manufacturing, logistics and installation teams. Despite the international delivery requirements, the Isopod was assembled and commissioned within a matter of days, demonstrating the speed and flexibility that have become hallmarks of the Guardtech Nordic AB modular cleanroom offering.

THE RESULT

Guardtech Associate Manufacturing Director Michael Burton said:
"This project is a fantastic example of what can be achieved when our design, manufacturing and installation teams work together to solve complex customer challenges."

"Pushing the boundaries of what we're delivering..."

"From developing a completely bespoke footprint and incorporating both personnel and material airlocks, to integrating power and data services and introducing a new floor fixing solution, there were several unique requirements that pushed the boundaries of what we'd previously delivered with an Isopod. The team's attention to detail, technical expertise and ability to co-ordinate an international installation programme ensured the client received a highly effective cleanroom solution delivered on time and to an exceptional standard."