

BESPOKE DOWNFLOW BOOTH



Grade C



THE CLIENT

Ipsen – they strive to discover, innovate and bring to market pharmaceutical products that will make a difference in the lives of patients, their caregivers and healthcare professionals. With a focus on transformative medicines in oncology, rare disease and neuroscience, Ipsen's vision is to be a leading global mid-size Biopharmaceutical company.

THE BRIEF

The client wanted two standard-sized, bespoke UDAF cabinet-style units to support with their process. But they soon realised that they needed something bigger, with two Fan Filter Units (FFUs) in one system overhanging the top of the module as a downflow booth. The Isopod Design Team pushed back on the idea initially from a user safety perspective. From there, we collaborated with the client to design and construct a bespoke unit that



Medical Device



Temperature & Humidity: CNC



6m²

could slot neatly into an alcove the client has in the cleanroom process space for which this unit was designated.



The Guardtech Group also provided a Cleancube Mini+ 30sqm container cleanroom for the same client.

“Another fine example of the amazing work our Teams are capable of...”

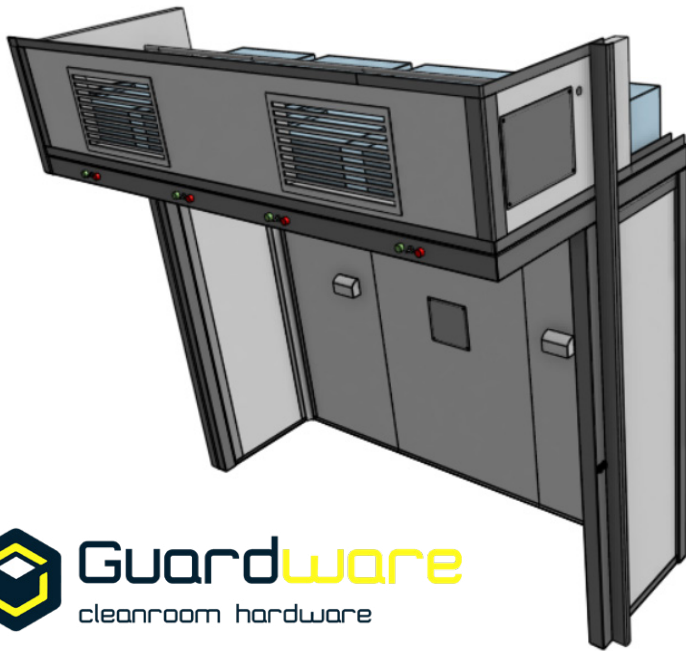
Michael Burton, Guardtech Group Associate Director of Manufacturing, said: “It’s always a pleasure to work with such an excellent client on new, bespoke innovations. This downflow booth is just another fine example of the amazing work our Design and Installation Teams are capable of when we work closely with a client to collaborate on a product – a great example of how teamwork and creativity blend to develop groundbreaking solutions.”

Michael Burton
Guardtech Group Associate
Director Manufacturing



Guardware
cleanroom hardware

DOWNFLOW BOOTH



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THE TECH SPECS

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

- ◆ **Structural:** GT Frame Max 80x80mm and 100x80mm grade 316 stainless steel box section frame – 3mm thick, GT Shell Pro Kingspan 60mm versatile panels.
- ◆ **Electrical:** GT Lux Extra Thin flush-mounted LED lighting panels achieving 500 lux, 13amp small power outlets in three-compartment PVC dado surface-mount trunking, bespoke pressure differential LED warning light system.
- ◆ **Mechanical:** 4 x GT Flow Pro Fan Filter Units (FFUs) with H14 HEPA and G4 Filters achieving up to 200 air changes per hour (ACPH).

THE CHALLENGES

Michael Burton, Guardtech Group Associate Director of Manufacturing, who runs the Isopod facility and led on the development of this



bespoke model, said: "I guess you might call it a half-Isopod, half-downflow booth. It boasts the specially engineered IP framework of a Guardtech Group Isopod Rapid Cleanroom whilst being open at the front. This allows operators to wheel their trolleys and large bits of equipment under it – but it's now been design to feature four FFUs, which means the level of cleanliness is incredible."

Safety first: The client initially wanted the unit to be situated on castors, but after a thorough

design review, the Isopod Design Team decided it was too risky – and so insisted the unit must be bolted to the floor. "There were many initial designs, including some with castors, and seven revisions later, we have this amazing, bespoke product," said Burton. "We'd also manufactured a Cleancube Mini+ 30sqm Grade D container facility for the client, as well as a bespoke HEPA hood to go over a piece of equipment – and, of course, the UDAF cabinets.

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Isopod
rapid cleanrooms

“Each FFU has a separate switch and warning light system – as the client needed to know immediately if one of them wasn’t working. We installed a pressure differential switch – which means a red light comes on if there’s no pressure coming into the filter. If they’re all working okay, the four lights all stay green. The client also has the option, with the correct parameters set, to have the same warning for the over-pressurisation of filters, which essentially notifies them that the filters are blocked.”

Over and above: “In some ways, it’s an over-spec’d unit,” added Burton, “but because of the harsh chemicals the client will be using to clean down the trolleys and ensure their product isn’t compromised, they’ve opted for premium grade 316 stainless steel throughout for that extra peace of mind. “The host room is already an ISO7 environment – but with the four FFUs in this downflow booth, the cleanliness that will be created, is immense. You’re hardly going to record any microns of debris whatsoever. The client clearly takes their process very seriously and are super-committed to the highest standards, so



that fits us and our business mantra perfectly.”

Design tweaks: “We’ve had to work intelligently to ensure the unit not only fit the space but made every available millimetre count. In initial designs, there were DOP testing ports on the underside of the unit – but we were concerned they’d clash with operators’ heads – so we moved those to the front fascia. “They also have a large panel in the host room with brake/stop buttons on it that they needed to access – so that formed part of the design process, too. We had to design the unit, so the legs were set far enough forward to counteract the weight of the unit. But it’s structurally so sound – in testing, we found it take more

than 200kgs on the front without lifting the back end.”

THE RESULT

Michael Burton, Guardtech Group Associate Director of Manufacturing, said: “It’s always a pleasure to work with such an excellent client on new, bespoke innovations. This downflow booth is just another fine example of the amazing work our Design and Installation Teams are capable of when we work closely with a client to collaborate on a product – a great example of how teamwork and creativity blend to develop groundbreaking cleanroom solutions.”