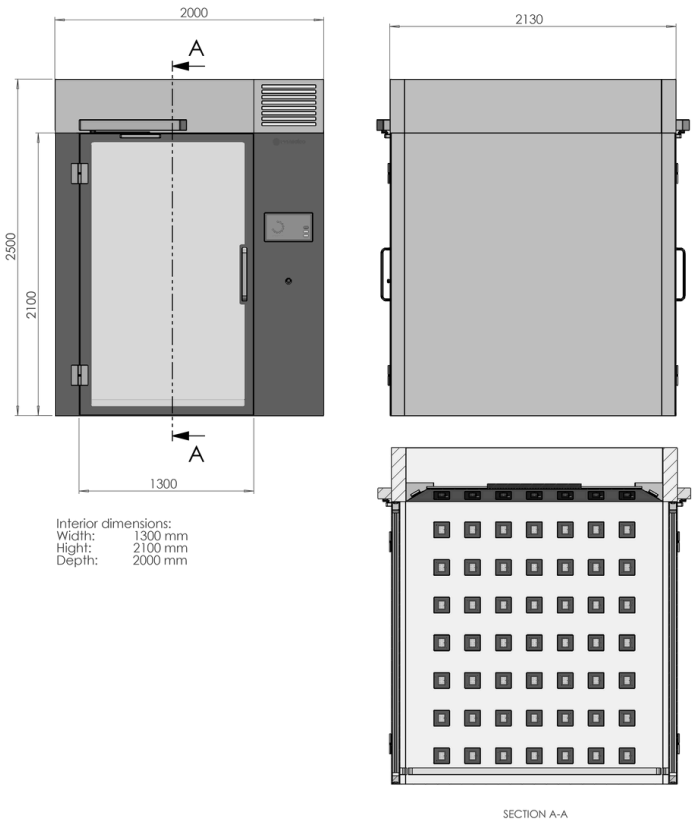
UV222 Material Airlock

Application

The UV222 Material Airlock is a high-performance Far-UVC chamber designed for microbial decontamination of equipment during transfer between cleanroom zones. With its robust 316L stainless steel construction and 222 nm technology, it delivers high-dose disinfection without chemicals—supporting strict hygiene standards in GMP-regulated environments. Engineered for efficiency, the airlock delivers 225 mJ/cm² in just 15 minutes at center point, ensuring effective decontamination of even large items while maintaining workflow integrity. The programmable duty cycle allows automated operation or manual control, adapting to cleanroom protocols with minimal user intervention.

Built for long-term reliability, the UV222 Material Airlock is compliant with ISO 15858 and IEC 62471 safety standards—making it a trusted solution for contamination control in critical cleanroom settings.



General product specifications

Light source	Krypton Chloride Excimer Lamp
Wavelength	222 nm
Average irradiance (at center)	250 µW/cm² *
Dose in 15 min. (at center)	225 mJ/cm² *
Input voltage	85-305 V AC, 50/60 Hz
Mode (programmable)	15 min. duty cycle or until stopped by user *
Max power consumption	2.1 kW
Inside dimensions	L150 x W120 x H80 cm (5.9 x 3.9 x 2.8 ft) *
Outside dimensions	L220 x W150 x H110 cm (7.2 x 5.9 x 3.6 ft) *
Operating temperature	0° to + 50° C (32° to 122° F)
Materials	316L stainless steel

* Preliminary values for a standard UV222 Material Airlock
The product can be customized upon request.

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Key Features and Benefits

The UV222 Material Airlock utilizes advanced Far-UVC technology at 222 nm, delivering high-dose, chemical-free decontamination that is safe for use around sensitive materials. Its enclosed stainless steel chamber ensures uniform exposure to surfaces, making it ideal for preparing equipment for transfer between cleanroom zones. With a programmable 15-minute cycle, the system provides reliable and consistent microbial inactivation. The energy-efficient design supports continuous operation with minimal running costs, offering an effective and economical solution for maintaining contamination control in regulated environments.

Advanced Control Systems

The UV222 Material Airlock features a built-in control interface that allows for easy operation and integration into standard cleanroom procedures. Users can initiate preset duty cycles or manually control the system as needed, ensuring flexibility in day-to-day use. The intuitive design supports automated disinfection routines, helping facilities streamline processes while maintaining high hygiene standards. The system can be tailored to specific protocols, making it a practical and adaptable component in any contamination control strategy.

Facts about UV222

Safety	UV222 is 100% safe for use in the presence of humans and animals, and fully complies with international UV radiation standards.
Efficacy	Far-UVC light at 222 nm is a proven and effective decontamination method. Research from around the world has demonstrated its germicidal effectiveness.
Knowledge	UV222 has been developed and engineered in cooperation with several universities. It is thoroughly tested and well-documented. Note: UV222TM installations must be performed by authorized installers only.
Ecological	UV222 is mercury-free. It offers decontamination without the use of chemicals or leaving any residue.
IOT	Built-in Internet of Things (IoT) technology for advanced connectivity and monitoring.

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Installation and Integration
The UV222 Material Airlock is designed for straightforward installation between cleanroom zones. Its self-contained stainless steel chamber integrates easily into existing workflows without structural modifications. With a plug-and-play setup and programmable cycle control, facilities can quickly implement reliable material decontamination with minimal disruption to operations or personnel.

Maintenance & Serviceability
Built from durable 316L stainless steel and long-life UV components, the UV222 Material Airlock requires minimal maintenance. Performance checks are simple to perform, and the system's robust construction ensures long-term reliability.

Environmental Impact
The UV222 Material Airlock provides high-level disinfection without the use of chemicals, sprays, or wipes—eliminating residue and reducing waste. Its energy-efficient Far-UVC lamps contribute to lower operational costs and align with sustainability goals in regulated cleanroom environments.

Regulatory Compliance
Fully compliant with ISO 15858, IEC 62471, and ACGIH® exposure guidelines, the UV222 Material Airlock meets international safety and performance standards for Far-UVC systems. Its design ensures safe, validated decontamination of materials and equipment in environments where hygiene and compliance are critical.

The UV222 Material Airlock complies with the following regulatory standards:

International Standards

ISO 15858	UV-C Devices – Safety information – permissible human exposure.
IEC 62471	Photobiological safety of lamps and lamp systems.
IEC PAS 63313 ED1	Position statement on germicidal UV-C irradiation - UV-C safety guidelines (see Global Lighting Association).

International Guidelines

ACGIH® (American Conference of Governmental Hygienists)	2021 and 2022 TLV (Threshold Limit Values) & BEI (Biological Exposure Indices) for chemical substances and physical agents.