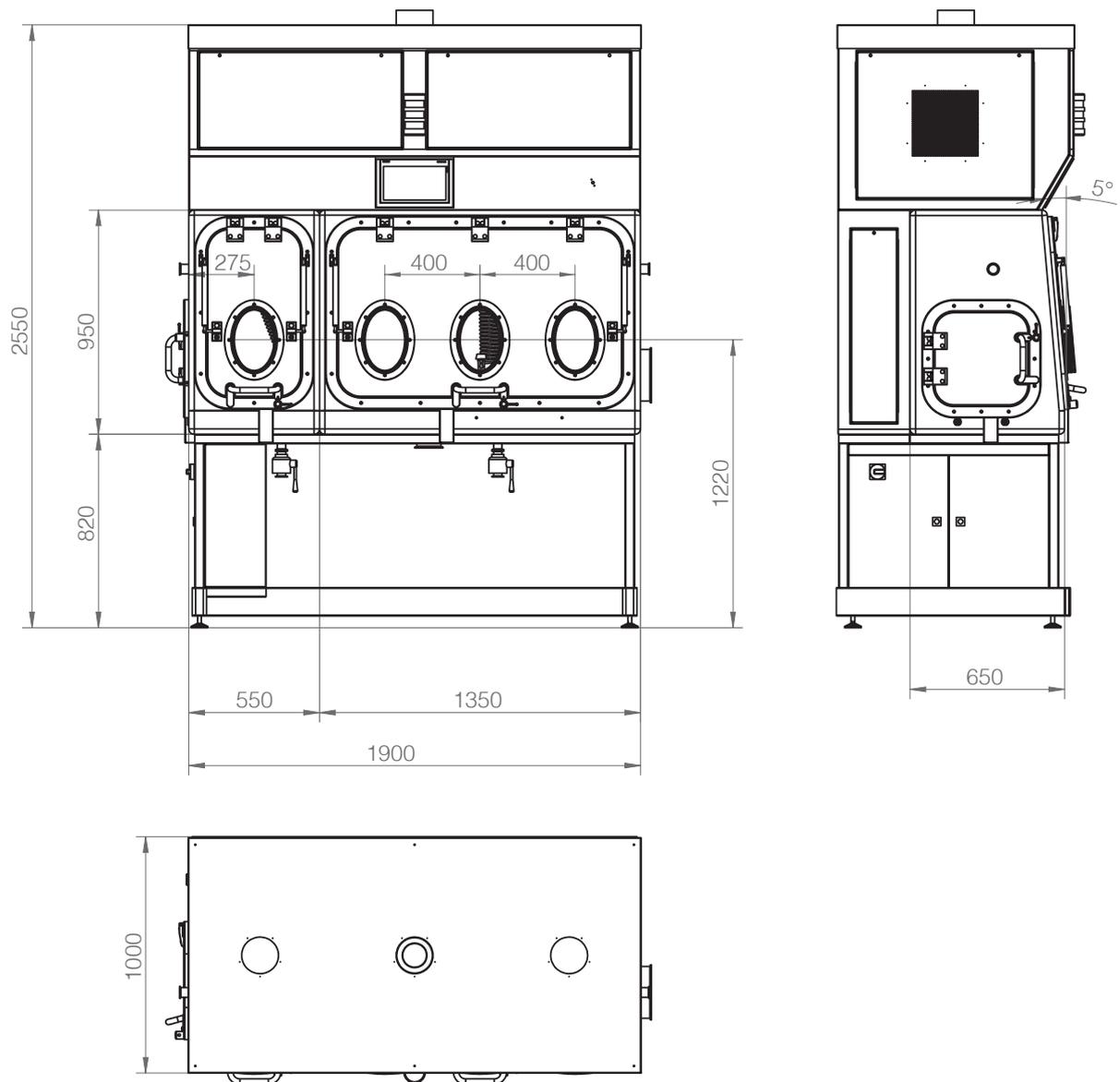


Weighing Isolator

Suitable for work with API / HAPI and for personnel protection.



Dimensions Weighing Isolator



Weighing Isolator

Dimensions in mm - Weighing isolator

Width	1900
Height	2550
Front height	1770
Depth	1000
Working plate height	820
Gloves position*	1220*
Usable depth space	650

Dimensions in mm - Working chamber

Width	1350
Depth	650
Height	950
Working chamber total volume	0,83 m ³

Dimensions in mm - Airlock

Width	550
Depth	650
Height	950
Airlock total volume	0,34 m ³

*Option to alter on request

Description

This isolator is designed for work with hazardous materials and is used for personnel protection. The main utilisations of the isolator are for weighing, sampling and handling hazardous materials.

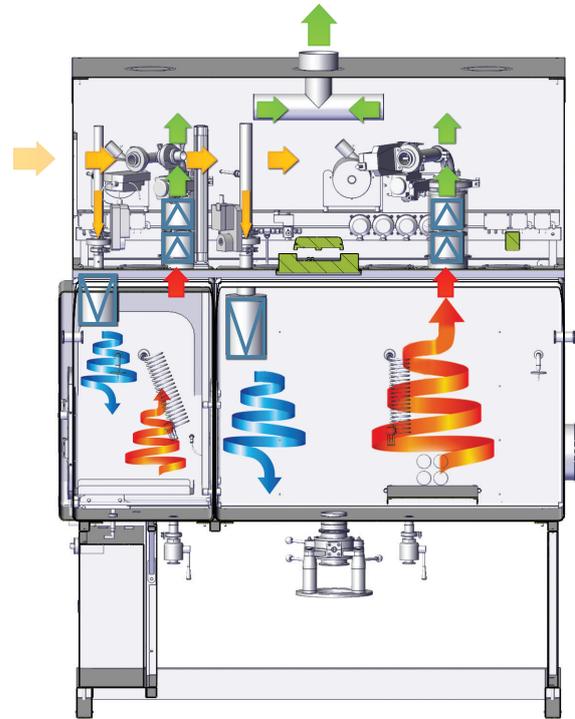
- Dual-chamber weighing isolator
- Airlock with one glove allowing for loading of material and instruments
- Working chamber with three gloves intended for work with hazardous materials
- Leak tightness class 3 according to ISO 10648-2
- "C" Class cleanliness according to EU GMP standard
- "Audit Trail" compliant
- Electronic control system for automatic adjustment of basic operating modes managed by Siemens PLC
- Colour touchscreen controls
- Jacket material: stainless steel AISI 304
- Isolator working chamber material – AISI 316L with a thickness of 3.00 mm
- Polished surface finish, $Ra < 0.6 \mu\text{m}$
- Negative pressure mode
- Turbulent flow
- Inlet filtration HEPA H14 - "C" Class cleanliness
- Safe filtration of exhaust air with double HEPA H14 filters
- Easy-to-clean inner and outer surfaces
- Sliding trays between chambers for easy material transfer
- Oval holes with gloves for improved material handling



Turbulent Flow

Commonly used for “C” and “D” classes of cleanliness where the direction of airflow is not clearly defined. The air flows in an irregular direction from the air supply inlet to the air outlet through cylindrical HEPA filters H14 at a filtering efficiency of 99.995%. The rate of air exchanges of clean air into the chamber usually ranges from 5 to 40 exchanges per hour.

- Fresh air
- G4 filtered air
- Hepa H14 filtered air
- Contaminated air
- Filtered exhaust air
- ▣ Hepa H14 filter



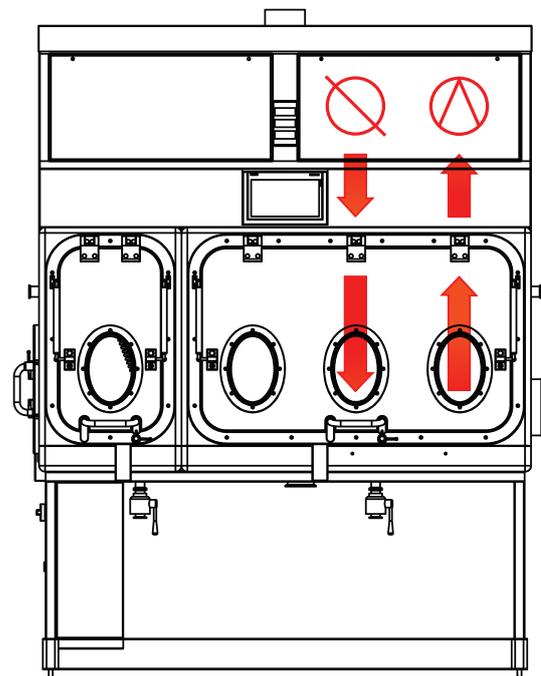
Negative Pressure

The HVAC system allows for the formation of negative pressure in the interior of the isolator. This function is mostly used in case of a failure – compromised leak-proofness - and helps to protect personnel.

Another level of protection for critical points in the process is the creation of a pressure cascade so that the location of dangerous substance handling contains the highest level of negative pressure. This minimizes the risk of contaminating other chambers or the surroundings.

In order to prevent damage to the equipment caused by insufficient pressure a pneumatic valve is used. This protective function prevents the pressure from dropping further, thus protecting the technology from damage.

- ⊘ Damper flap
- ⊙ Fan



Standards



HMI panel ①

Working chamber ⑧

Airlock ⑨

F5 Pre-filter ⑩

Tri clamp equipped for a continuous liner ⑪

Main switch ⑫

Service panel ⑬

Sensors for monitoring safe closure of the window ⑭ ⑮

Cable glands

Cable glands are mounted in the isolator wall.

Sockets for additional equipment power supply

Sockets are placed on the isolator rear wall. Sockets are operable from the control display. Sockets available in all country variants.

Built-in LED lights

Built-in LED lights ensure illumination levels of at least of 500 lux.

Pressure fuse

The pressure fuse serves as a safety element indicating increased pressure in the chamber. In the event that the assigned pressure in the chamber is exceeded a pneumatic flap valve is opened and the pressure value is decreased without deterioration of internal atmosphere.

Safety glass

We use tempered safety glass for the front windows and ports of our equipment. This glass has improved mechanical properties and is durable. When damaged it forms small chunks which reduce the risk of injury from cuts.

Safe replacement of sleeves

Our glove / sleeve flanges have two grooves. The first for sealing the glove and the second for an o-ring. This design allows a standardised procedure for the safe replacement of gloves.

Safe replacement of the main filter

Standards

Hinged door 02



The door allows for material transfer from the chamber to the surroundings or from the chamber to other equipment (e.g. a fume hood). The hinged door is operated with the help of a door latching mechanism. The door is made from AISI 316L stainless steel, safety glass and silicone sealant.

Front window 03



Inflatable sealing, safety glass fitted with sleeved flanges. Sensors for monitoring safe window closure. A gas spring assists with easy opening.

Visual and acoustic alarm 04



A beacon light and an acoustic alarm providing a quick audible and visual assessment of operational and failure states for the user.

Valve for removing liquid waste from the chamber 05



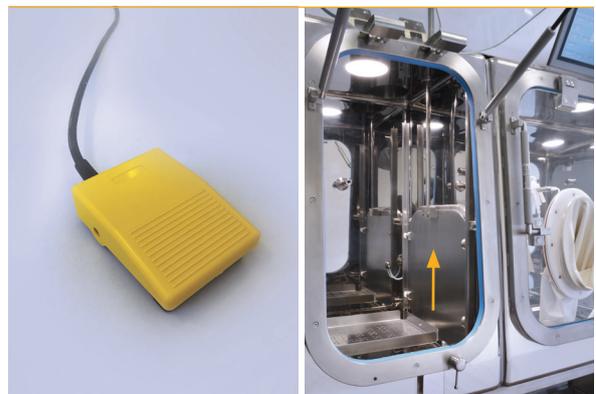
Tri-clamp connection for an optional connection to the building waste pipe system or to add a collecting container.

Tri-clamp validation port 06



This tri-clamp is necessary for validation and a periodic re-validation process. Can be used as an input for sensors or other devices.

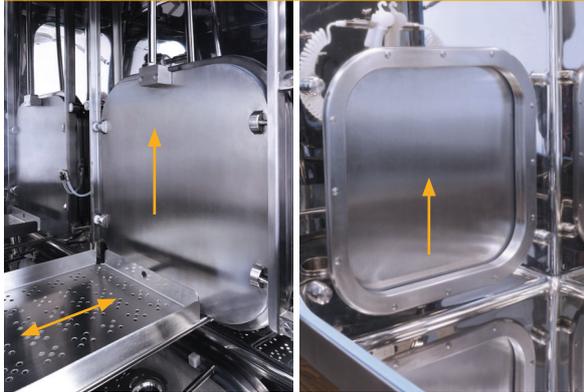
Foot-operated switch 07



The foot-operated switch acts to control a sliding port between chambers. After material-transfer the port can be closed with the foot switch and there is no need to remove hands from the sleeves.

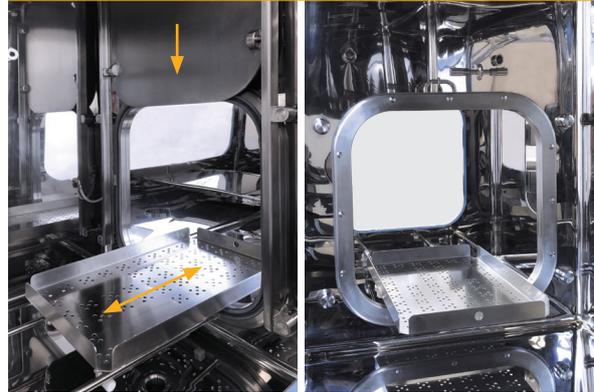
Standards

Sliding door



The door allows material transfer between chambers. It is operated with a foot switch or with a control touch display. Door action is performed by a pneumatic valve. The door is fitted with inflatable sealing.

Sliding trays



For improved ergonomics and easy transfer of material, the airlock is fitted with a sliding tray.

Rounded edges/corners inside the working chamber



Rounded corners and highly polished surfaces allow for easy cleaning of the chamber. The chambers are precision-welded which guarantees their leak tightness.

Shower



Easy cleaning of the isolator is made possible with an installed spray gun. It operates with two media and is controlled by a valve via the HMI panel. For washing, the chamber is connected to water piping and dried by switching over to compressed air.

HEPA filters



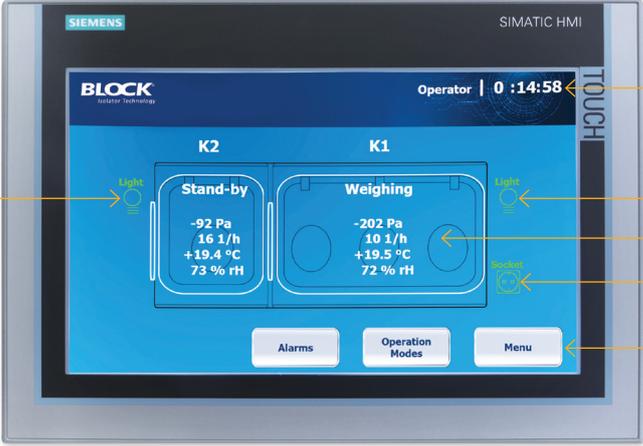
Highly efficient H14 filters remove ultra-fine impurities from the air in the inlet and the outlet.

Sensors for monitoring safe window closure 14 15



HMI Panel

This isolator control system is operated with a Siemens colour touch screen. The Simatic control system from Siemens together with a foot-operated switch creates an intuitive and user-friendly experience. The screen displays the actual parameters of the environment and monitors emergency statuses. The system includes remote access for customer service support. As required, it is possible to implement connection to an additional device for production data storage and export.



Overview of Functions

- 01 User Login and automatic log-off countdown timer
- 02 Illumination control icons
- 03 Chamber interior physical values measurement display
- 04 Socket control icons
- 05 Device Operation modes menu, Alarms and Settings menu

Options

Independent UPS power supply

An independent UPS (Uninterruptible Power Supply) can be installed inside the isolator. In the event of an interruption in the supply of electricity, short-term operation is maintained through a power supply in the isolator to allow the process and the environment to be secured.

Inert atmosphere

Possible to ensure inert atmosphere inside chambers (N₂, Ar).

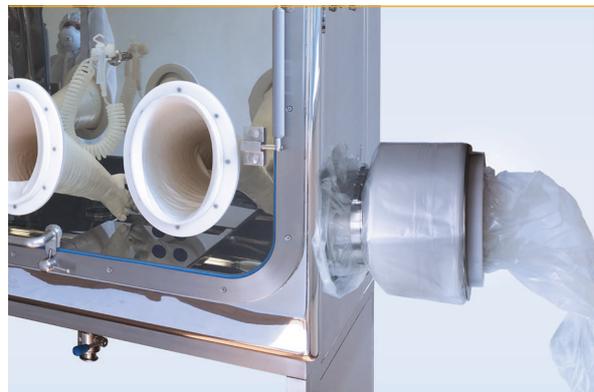
Weighing platform

Optional integration of a weighing platform in the isolator. A solid stable shelf made from thick sheet metal provides a base for installation of a weighing device.



Continuous liner

Optional mounting of a continuous liner for material removal. A continuous liner is used to transfer material out of the chamber without contaminating the operator. There is a swivel-closing mechanism inside the chamber. A tube projects outside the chamber protected by a tubular foil and is used for removal of material.



Wire trays & accessories

The rear panel can be fitted with wire trays and hangers made of AISI 316L stainless steel.