BLOCK® Isolator technology.
Our solution for your protection.
We improve your possibilities and we think of your safety.
Isolator types
Flexible and individually configurable

Isolator provides a high degree of protection for the personnel working with hazardous materials or/and protection of materials. Isolators are a core component to the pharmaceutical industry and healthcare.

We have developed a standard range of isolators which allow the flexible and safe handling of materials. Our isolator technology offers a user-friendly environment that makes work processes easier and thus even safer.

BLOCK® offers both standard isolators and customized solutions - according to the specific requirements needed.

Complete product range
- isolators for any kind of application

Made of Steel
- durable goods with high quality

High degree of safety
- certified by independent institutes

Ergonomic design
- to improve workflows and material handling

Cost saving
- low operating costs, easily maintained

Fully automated system
- managed by PLC Siemens

BSC III - Biological safety cabinet class III
Laboratory isolator suitable for BSL 3, for personal and product protection

Weighing Isolator
Suitable for the work with API / HAPI and for protection of personnel

Sterility test isolator
Suitable for sterility testing and for material protection

Hydrogen peroxide vapour generator - Puriter
Surface sterilization ensured by own patented method of vaporization from hydrogen peroxide liquid

Glove tester
Device for glove integrity testing

Description
- Guaranteed leak tightness of the device
  - Leak tightness tests according to ISO 10648-2
  - Chambers are fully welded from high quality steel
  - Static or inflatable sealing is used

- High quality of the used components and materials
  - Siemens, Dräger, Rotronic, Camfil, Gea, Festo, etc.
  - Safety glass, high quality gloves (CSM, EPDM, neoprene, etc.)

- The used materials meet FDA requirements

- Documentation, certification and procedures according to GMP guidelines
  - URS -> DQ -> FAT-> SAT -> IQ -> OQ
  - Documentation is included in the scope of device delivery

- Clearly arranged control system
  - Siemens colour touch display
  - Fully automated system (controlling, current status display)
  - Various authorisation levels for operators
  - Monitoring of emergency statutes

- Data archiving

- Safe HEPA H14 filtration and safe exchange of filters

- Compatible with the BLOCK® Puriter device
  - Decontamination of the chamber with vaporized hydrogen peroxide

- Compliance with hygiene standards
  - Noise, lighting

- Ergonomically tested and optimized

- Designed in respect to easy cleaning of the device

- Stand-alone device
Isolator selection

BLOCK® isolators for every application

The isolators present a specific system of devices providing product integrity, operator’s safety, and environmental protection. The selection of a suitable isolator type depends on its intended use. A simply criterion is the choice of suitable protection. In such a case, we divide it by isolators for protection of personnel, protection of material or their combination. However deep knolidge of process is crucial for proper selection isolator’s parameters.

<table>
<thead>
<tr>
<th>Personal protection</th>
<th>Product protection</th>
<th>Negative pressure against surrounding</th>
<th>Positive pressure against surrounding</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

- **BSC III**
- **Weighing isolator**
- **Sterility test isolator**

<table>
<thead>
<tr>
<th>Personal protect</th>
<th>Material protect</th>
<th>Positive pressure</th>
<th>Negative pressure</th>
<th>Class of thickness according ISO 10648-2</th>
<th>Laminar air flow 0.45m/s</th>
<th>Turbulent air flow</th>
<th>Class of cleanliness according to GMP</th>
<th>Airlock</th>
<th>H₂O₂ decontamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X – aseptic area</td>
<td>X</td>
<td>X</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td>„A“</td>
<td>2</td>
<td>X</td>
</tr>
</tbody>
</table>

- **Hazardous material preparation in aseptic environment**
- **Cytostatics dilution**
- **Preparation of pharmaceuticals individually to patient**
- **VHP decontamination**

- **Product protection**
- **Work with hazardous materials**

- **Negative pressure against surrounding**
- **Work in aseptic environment**

- **Positive pressure against surrounding**
- **Work with hazardous materials**

- **Aseptic environment in cleanliness class “A”**
- **Products are protected under laminar air flow**

- **Sterility testing**
- **VHP decontamination**

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**BSC III - Biological safety cabinet class III**

**Weighing isolator**

**Sterility test isolator**
BSC III - Biological safety cabinet class III

Laboratory isolator suitable for BSL 3, for personal and product protection

**BSC III - Biological safety cabinet class III**

- **Dimensions in mm**
  - BSC III - Biological safety cabinet class III
    - Width: 2440
    - Height: 1950
    - Front height: 1450
    - Depth: 770
    - Working plate height of the Main chamber: 825
  - **Dimensions in mm - Main chamber**
    - Width: 1340
    - Depth: 600
    - Height: 695
    - Total volume of the Main chamber: 0.35 m³
  - **Dimensions in mm - Airlock 1, Airlock 2**
    - Width: 550
    - Depth: 460
    - Height: 895
    - Total volume of the Airlock: 0.17 m³

**Laminar flow**

It is used for class of cleanliness "A", where unidirectional airflow must be ensured in the vertical direction. A laminar frame is used to direct the flow; it comprises of a very finely perforated special fabric. The velocity of laminar flow with the isolator technology amounts to 0.45 m/s ±20%. HEPA filters H14 with an efficiency of 99.995% are used to filter incoming and outgoing air. This system is often coupled with air recirculation inside the chamber.

**Negative pressure**

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

Another level of protection for critical points of the process is the creation of a pressure cascade, so that the place where the dangerous substance is handled is in the location with the highest negative pressure. This minimizes the risk of contamination of other chambers or their surroundings.

In order to prevent damage to the equipment caused by too low pressure, is used pneumatic valve for the device protection. This protection function prevents the pressure from dropping even further, thus protecting the technology from damage.
Laboratory isolator suitable for BSL 3 provides a high degree of protection for the personnel working with any hazardous materials. However due to cleanliness class “A” and laminar airflow is ensured also product protection. Isolator can be used for in pharmacies or hospitals for preparation (dilution and dosing) of cytostatic as well as in laboratories for work with any dangerous and biological materials. 

- Working chamber and a pair of material airlocks
- Option of two or four gloves in the working chamber

Properties and benefits
- Tightness class 3 according to ISO 10648-2
- Cleanliness class “A” according to GMP standard
- Possible to disinfect by H2O2
- Electronic control system for automatic adjustment of the basic operating modes managed by Siemens PLC
- Controlled by colour touchscreen
- Visualization of the progress of each of the production steps and current parameters
- Jacket material: S355JR steel grade, powder coated surface
- Material inside the chambers: AISI 304 stainless steel, powder coated surface
- Work surface material: AISI 316L stainless steel, polished
- Negative pressure mode
- Laminar flow 0,45 m/s ±20%
- Inlet filtration HEPA H14 - Class of cleanliness “A”
- Safe filtration of exhaust air with a double HEPA H14 filters
- Easy-to-clean inner and outer surfaces
- Sliding shelves between mezi Airlocks and Main chamber for easy material transfer
- Oval flanges with gloves for easier material handling
- Compact dimensions – easy to be moved through the door in one piece

Description and Equipment Options
The isolator is equipped with a Siemens Simatic electronic control system. This system is used to control, manage and regulate all operating and emergency conditions. The system is controlled via a colour touch panel, which features all control buttons and displays all process data and fault messages. The control panel is placed in the upper structure above the chambers. The control system may transmit all operating data of the isolator to the master system where the data is archived. The control system is also used for data archiving and graphical display, and for trend evaluation. The data may be transmitted into a personal computer or master system for detailed data processing.

Standards
- Airlocks
- Main chamber
- Airlock 1
- Airlock 2
- Main switch
- HMI panel
- Visual and acoustic alarm
- Front window
- Flange and gloves
- Hinge with position control
- Switchboard
- Service panel
- Inlet

Airlocks
They serve for material transport in the working chamber (Airlock 1) and from the working chamber (Airlock 2).

Double doors protection
During the material transport, always only one door of the pass-through cabin is open, thereby the direct interconnection of the working chamber with the surroundings is prevented (double doors protection).

Visual and acoustic alarm
Beacon light providing a quick view of operating and failure states to the user as well as acoustic alarm.

Front window
Hinge with position control, safety glass fitted with flanges with sleeves. Sensors for monitoring safe closing of the window. Gas spring for easy opening is used.

Switchboard
Switchboard with protection IP44.

Overview of functions
- Logged user and automatic log-off countdown timer
- Control Socket icons
- Control Light icons
- Display measured physical values inside chamber
- Device Operation modes menu, Alarms and settings menu

The control system may transmit all operating data of the isolator to the master system where the data is archived. The control system is also used for data archiving and graphical display, and for trend evaluation. The data may be transmitted into a personal computer or master system for detailed data processing.
Standards

Rear built-in panel

The replaceable real panel enables to be built in accessories according to the customer requirement. Option to utilize a standard design of the real panel or a specific tailor-made design.

Laminar frame

For the orientation of air-flow, a laminar frame is used that contains extra fine perforated steel sheet and special fabric.

230 V electric sockets, IP66 degree of protection

Inside the main chamber are SCAME sockets placed on the rear wall with a mechanically lockable safety door. The standard delivery consists of two IP66 sockets in the main chamber.

Sensors in chamber

Set of sensors located inside the main chamber. Controlling sensor for air velocity is placed 250 mm above the air inlet. For monitoring of temperature and relative humidity is used second sensor.

Worktop

The worktop is made of high polished AISI 316 stainless steel. For the optimum flow, the air is exhausted through a perforation on sides of the working surface.

Options

- Weighing scale
  - Option to integrate any kind of weighing scale and terminal.
- Barcode reader
  - Possibility to integrate a barcode reader.
- LCD screen
  - The rear wall of the working chamber can be equipped with a LCD screen and a software for dilution of cytostatics can be installed on in-built PC.
- \( \text{H}_2\text{O}_2 \) decontamination
  - The isolator can be sterilized with vaporized hydrogen peroxide. These vapours are generated by an additional external device – Puriter (the hydrogen peroxide vapour generator).
- Additional equipment and media connection
  - Exchangeable rear wall, possible to integrate additional equipment (incubators, LED screen, balance and weighing terminal, etc.) or provide media connection.
- Accessories
  - The rear panel can be fitted with wire shelves, hangers and other accessories made of AISI 304 stainless steel.
- Independent UPS power supply
  - An independent UPS power supply can be installed in the isolator. In the event of an interruption in the supply of electricity, short-term operation is provided by an isolator to secure the process and the environment.
- Holder for gloves
  - Holders for gloves are employed in isolators where sterilization with vaporized hydrogen peroxide is used.

Standards

- Sliding shelves between the Airlock and the Main chamber
  - For better ergonomics and easy transfer of material, the airlocks are equipped with a sliding shelf.
- Built-in LED lights
  - Built-in LED lights ensure lighting of at least of 500 lux.
- Rounded edges/corner inside the working chamber
  - Corner radiuses and high polished surfaces allow easy cleaning of the chamber.
  - The chambers are welded which guarantees their tightness.
- Safety features
  - Safety glass
    - Safety tempered glass for the front windows and for the ports is used. This glass has better mechanical properties and is durable. In case of damage, it forms small shards and thus reduces 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 the O-ring. This design provides the standard procedure for safe replacement of gloves.
  - Safe replacement of the main filter
  - Automatic tightness test

Safety features
It is commonly used for classes of cleanliness “C” and “D”, 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 with an efficiency of 99.995%. The number of exchanges of clean air in the chamber usually ranges from 5 to 40 exchanges per hour.

Turbulent flow

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

Another level of protection for critical points of the process is the creation of a pressure cascade, so that the place where the dangerous substance is handled is in the location with the highest negative pressure. This minimizes the risk of contamination of other chambers or their surroundings.

In order to prevent damage to the equipment caused by too low pressure, is used pneumatic valve for the device protection. This protection function prevents the pressure from dropping even further, thus protecting the technology from damage.

Dimensions Weighing Isolator

<table>
<thead>
<tr>
<th>Dimensions in mm - Weighing isolator</th>
<th>Dimensions in mm - working chamber K1</th>
<th>Dimensions in mm - working chamber K2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>1900</td>
<td>Width</td>
</tr>
<tr>
<td>Height</td>
<td>2550</td>
<td>Depth</td>
</tr>
<tr>
<td>Front height</td>
<td>1770</td>
<td>Height</td>
</tr>
<tr>
<td>Depth</td>
<td>1000</td>
<td>Total volume of the chamber K1</td>
</tr>
<tr>
<td>Working plate height</td>
<td>820</td>
<td>Total volume of the chamber K2</td>
</tr>
<tr>
<td>Gloves position*</td>
<td>1220*</td>
<td></td>
</tr>
<tr>
<td>Usable space depth</td>
<td>850</td>
<td></td>
</tr>
</tbody>
</table>

*Could be adapted on request

Negative pressure
The isolator is designed for work with hazardous materials and is used for personnel protection. The main objects of the isolator are weighing, sampling and handling of the material.

- Two-chamber weighing isolator
- Pass-through passage with one glove serving for loading of material and instruments
- Working chamber with three gloves intended for work with hazardous materials

**Description**

**Properties and benefits**

- Tightness class 3 according to ISO 10648-2
- Class of cleanliness “C” according to GMP standard
- Compliant with “Audit Trail”
- Electronic control system for automatic adjustment of the basic operating modes managed by Siemens PLC
- Controlled by color touchscreen
- Jacket material: stainless steel AISI 304
- Material of isolator working chambers – AISI 316L with a thickness of 3.00 mm
- Polished surface finish, Ra<0.6 µm
- Negative pressure mode
- Turbulent flow
- Inlet filtration HEPA H14 - Class of cleanliness “C”
- Safe filtration of exhaust air with a double HEPA H14 filters
- Easy-to-clean inner and outer surfaces
- Sliding shelves between the chambers for easy material transfer
- Oval holes with gloves for easier material handling

**Overview of functions**

- Logged user and automatic log-off countdown timer
- Control Light icons
- Display measured physical values inside chamber
- Control Socket icons
- Device Operation modes menu, Alarms and Settings menu
- Visual and acoustic alarm
- HMI panel
- Working chamber K1
- Working chamber K2
- Main switch
- Hinged door
- Tri-clamp validation port
- FS Pre-filter
- Valve of liquid waste from the chamber
- Tri-clamp preparation for the continuous liner
- Front window
- Foot-operated switch
- Service panel
- Sensors for monitoring safe closing of the window

**Standards**

- Visual and acoustic alarm
- Hinged door
- Beacon light providing a quick view of operating and failure statuses to the user as well as acoustic alarm.

**HMI panel**

The isolator control system is operated with a Siemens color touch screen. The Simatic control system from Siemens together with the foot operated switch creates an intuitive and user-friendly environment. The screen displays actual parameters of the environment and monitors emergency statuses. The system has a remote access as a customer service support. In case of production requirements, it is possible to implement a additional device for production data storage and export.

The isolator is equipped with a visual and acoustic alarm system. The alarm is activated in case of any failure or emergency status. The HMI panel includes a visual display for parameters monitoring and an acoustic alarm for immediate notification.

**Standards**

- Inflatable sealing, safety glass fitted with flanges with sleeves. Sensors for monitoring safe closing of the window. Gas spring for easy opening is used.
- Tri-clamp connection, it is possible to connect to the building waste pipe system or to add a collecting container.
- The foot-operated switch serves for control of a sliding port between the chambers. After material transfer, the port can be closed with this foot switch and there is no need to get the hands out from the sleeves.
The door serves for material transfer between the chambers. It is operated with a foot switch or with a control touch display. The door sliding is ensured with a pneumatic valve. The door is fitted with inflatable sealing.

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

Highly efficient H14 filters of particles in the air in the inlet and the outlet for capture of the ultra-fine impurities.

Corner radiuses and high polished surfaces allow easy cleaning of the chamber. The chambers are welded which guarantees their tightness.
Sterility test isolator

Suitable for sterility testing and for material protection

It is used for class of cleanliness “A”, where unidirectional airflow must be ensured in the vertical direction. A laminar frame is used to direct the flow; it comprises of a very finely perforated special fabric. The laminar flow velocity with the isolator technology amounts to 0.45 m/s ±20%. HEPA filters H14 with an efficiency of 99.995% are used to filter incoming and outgoing air. This system is often coupled with air recirculation inside the chamber.

The HVAC system allows for the formation of positive pressure inside the isolator. This function is mostly used in the case of failure - compromised leak-proofness - and it helps protect the products. In order to prevent damage to the equipment caused by too low pressure, is used pneumatic valve for the device protection. This protection function prevents the pressure from dropping even further, thus protecting the technology from damage.

### Dimensions in mm - Sterility test isolator
- **Width**: 1800
- **Height**: 2730
- **Front height**: 1750
- **Depth**: 1090
- **Working plate height**: 940
- **Gloves position**: 725
- **Usable space depth**: 450

*Could be adapted on request

### Dimensions in mm - working chamber K1
- **Width**: 1800
- **Depth**: 650
- **Height**: 900
- **Total volume of the chamber K1**: 1.05 m³

### Dimensions in mm - pass-through chamber K2
- **Width**: 550
- **Depth**: 650
- **Height**: 900
- **Total volume of the chamber K2**: 0.3 m³

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**Positive pressure**

*Fresh air +
Circulating air
*Hepa H14 filtered air
*Contaminated air
*Exhaust air filtered
*Hepa filter

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**Laminar flow**

*Fresh air
Circulating air
Hepa H14 filtered air
Contaminated air
Exhaust air filtered
Hepa filter

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**Sterility test isolator**
The isolator provides high degree of product protection handled in aseptic conditions. The main activity is performed in the working chamber where sterility testing of final products is running.

- One-chamber isolator for sterility testing
- Pass-through cabinet for material loading with a possibility of sterilizing with H\textsubscript{2}O\textsubscript{2}
- Chamber with 4 sleeves for the work with sterile materials

**Description**

The isolator control system is operated with a Siemens color touch screen. The Simatic control system from Siemens together with the foot operated switch creates an intuitive and user-friendly environment. The screen displays actual parameters of the environment and monitors emergency statuses. The system has a remote access as a customer service support. In case of production requirements, it is possible to implement an additional device for production data storage and export.

**Properties and benefits**

- Tightness class 3 according to ISO 10648-2
- “A” purity class compliant with GMP
- Compliant with “Audit Trail”
- Possible to decontaminate by H\textsubscript{2}O\textsubscript{2}
- Electronic control system for automatic adjustment of the basic operating modes managed by Siemens PLC
- Controlled by colour touchscreen
- Jacket material: stainless steel AISI 304
- Material of chambers – AISI 316L with a thickness of 3.00 mm
- Polished surface finish, Ra<0.6 µm
- Positive pressure mode
- Laminar flow 0.45 m/s ±20%
- Inlet filtration HEPA H14 - Class of cleanliness “A”
- Easy-to-clean inner and outer surfaces
- Sliding shelves in Airlock for easy material transfer (applicable with airlock)
- Oval holes with gloves for easier material handling

**Standards**

- Visual and acoustic alarm
- HMI panel
- Working chamber
- Main switch
- FS Pre-filter
- Front window
- Clamp pro connection of a ball valve or waste piping
- Preparation for an RTP (rapid transfer port)
- Preparation for an airlock
- Panel for connection of an external H\textsubscript{2}O\textsubscript{2} generator (Puriter)
- Service panel
- Sensors for monitoring safe closing of the window

**Overview of functions**

- Logged user and automatic log-off countdown timer
- Control Light icons
- Display measured physical values inside chamber
- Device Operation modes menu, Alarms and Settings menu

**Description**

The isolator can be sterilized with hydrogen peroxide vapours. These vapours are generated by an additional external device – Puriter (the hydrogen peroxide vapour generator). Coupling clamps are located on the rear and bottom isolator side.

**Standards**

- Visual and acoustic alarm
- Front window
- Beacon light providing a quick view of operating and failure states to the user as well as acoustic alarm.
- For outlet of liquid waste originated at sterility testing. Connected to a collecting tank or central waste.

**Panel for connection of an external H\textsubscript{2}O\textsubscript{2} generator (Puriter)**

- For outlet of liquid waste originated at sterility testing. Connected to a collecting tank or central waste.

**Preparation for an Airlock**

- Sensors for monitoring safe closing of the window

**Standards**

- Visual and acoustic alarm
- Front window

**Clamp pro connection of a ball valve or waste piping**

- Panel for connection of an external H\textsubscript{2}O\textsubscript{2} generator (Puriter)

- Panel for connection of an external H\textsubscript{2}O\textsubscript{2} generator (Puriter)

- Service panel
- Sensors for monitoring safe closing of the window

**Standards**
Safety features

- **Pressure fuse**
  - Pressure fuse serving as a safety element indicating an increased pressure in the chamber. In case the set-up pressure in the chamber is exceeded, a pneumatic flap valve is opened and thereby the pressure value is decreased without deterioration of internal atmosphere.

- **Safety glass**
  - We use safety tempered glass for the front windows of our equipment and for the ports. This glass has better mechanical properties and is durable. In case of damage, it forms small shards and thus reduces 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 the o-ring. This design conforms to the standard procedure for safe replacement of gloves.

Standards

- **Humidity and temperature sensor - Rotronic**
  - Used for monitoring of critical parameters or/and to control decontamination process.
  - Rotronic is an accurate and high-quality product, resistant to hydrogen peroxide vapors.

- **Velocity sensor for laminar flow - Schmidt**

- **Pressure sensor with analog output**

- **Cable glands**
  - Cable glands are mounted on the rear isolator wall.

- **Preparation for microbiological monitoring**
  - DN 1” clamp

- **Preparation for ISO kinetic sensing unit**
  - DN 10 clamp

- **Built-in LED lights**
  - Built-in LED lights ensure lighting of at least 500 lux on the workspace.

- **Cross-bar for hanging-up of wire accessories**

Options

- **Steritest Symbio ISL**
  - Placed on the right part of the chamber’s worktop.

- **H2O2 decontamination**
  - The isolator can be sterilized with vaporized hydrogen peroxide. These vapours are generated by an additional external device – Puriter (the hydrogen peroxide vapour generator).

- **Wire shelves & accessories**
  - The rear panel can be fitted with wire shelves and hangers from AISI 316L stainless steel

- **Holder for gloves**
  - For over-pressure isolators not in operation so that the gloves do not extrude so much into the space in front of the isolator.
  - For isolators where sterilization with a hydrogen peroxide vapour generator is used.

- **Sockets for power supply of additional equipment**
  - Sockets are placed on the isolator rear wall.
  - Sockets are switchable from the control display.
  - Sockets available in all country variants.

- **Pass-through chamber K2**
  - Sliding shelf
  - Connecting clamp for Puriter and H2O2 distribution nozzle
  - Humidity and temperature measuring sensor Rotronic
  - Schmidt speed sensor for laminar flow
  - Preparation for microbiological monitoring – DN 1” clamp
  - Preparation for ISO kinetic sensing unit – DN 10 clamp

The preparation for the RTP is placed on the right chamber’s wall. Option to integrate an RTP alpha port and beta container for sterile transfer of materials.
Hydrogen peroxide vapour generator - Puriter

Surface sterilization ensured by own patented method of vaporization from hydrogen peroxide liquid

<table>
<thead>
<tr>
<th>Dimensions Hydrogen peroxide vapour generator - Puriter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width: 860 mm</td>
</tr>
<tr>
<td>Height: 1200 mm</td>
</tr>
<tr>
<td>Depth: 543 mm</td>
</tr>
</tbody>
</table>

Operation readiness

For operation of the equipment, following must be ensured:

- Pressure air
- Electric power supply
Description

Puriter is designated for the sterilization of inside surfaces by means of liquid hydrogen peroxide. The whole process is performed by means of a BLOCK® patented technology.

- Application potentials
  - sanitation, disinfection under normal conditions
  - sterilization under compliance with sterilization conditions
  - inside surfaces of closed boxes (for example isolators and pass through cabins)
  - inside surfaces of rooms
- Hydrogen peroxide 30% is used

Properties and benefits

- Operation via a touch screen with program selection and with intuitive control
- Control system: A SIEMENS touch panel, TP700 Comfort
- Structural material: AISI 304 stainless steel, FIN8 grinded surface
- Method of compressed air supply
  - There must be a compressed air supply point available at the installation site
- The process runs under normal temperatures (around 25 to 30 °C) and normal pressure
- It does not leave any toxic residues as hydrogen peroxide decomposes to oxygen and water after the decontamination
- The device is mobile = surfaces in various places may be decontaminated
- It can be connected to more devices by means of a DN50 triclamp
- Possibility to integrate the device into an isolator or pass-through cabin

Overview of functions

- USB connector
- HMI panel
- Pump
- Main switch
- Main switch locking in the switched-off position
- Handle
- Window for easy replacement of a bottle with peroxide
- Connection to the compressed air
- Internet connection (monitoring network), connection of power supply and communication cable

Standards

Humidity measuring sensor Rotronic

This sensor is very important for control of process decontamination. Rotronic is an accurate and high-quality product, resistant to hydrogen peroxide vapors.

Remote control system

With the help of the Smart Client application, the remote control of Puriter via mobile phone is possible. Puriter has its own wi-fi which the user has to be connected to. After establishment of the connection, the same interface is seen on the mobile phone as on the Puriter Control panel which enables the full remote control of Puriter.

Standard decontamination cycle

Description

The Puriter control system is operated with a Siemens colour touch screen. The Simatic control system from Siemens creates an intuitive and user-friendly environment. The screen displays actual parameters of the environment and monitors emergency statuses. The system has a remote access as a customer service support.

Gas concentration:

for room decontamination typically 150-700 ppm

Decontamination with H2O2 vapours
Glove tester

Device for glove integrity testing

**Dimensions Glove tester**

<table>
<thead>
<tr>
<th>Measurements</th>
<th>Width</th>
<th>Height</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>200</td>
<td>290</td>
<td>120</td>
</tr>
</tbody>
</table>

**Operation readiness**

For operation of the equipment, following must be ensured:
- Pressure air
- Electric power supply

**Display**

The tester measures pressured drop during time. If the pressure drops more than the set up limit, an alarm is displayed. The recording of displayed values is performed manually in the prepared protocol.

**Description**

The tester measures pressured drop during time. If the pressure drops more than the set up limit, an alarm is displayed. The recording of displayed values is performed manually in the prepared protocol.
The tester is used to test the leak tightness of gloves in oval flanges. The testing is particularly performed for isolators and microbiological boxes. The principle of the leak tightness test consists in testing the pneumatic tightness of gloves, pressurizing them at the set value, reading the pressure loss and evaluating the difference.

The mechanical glove tester consists of a base with an inflatable seal along its perimeter, an output of compressed air into the sleeve and an input for the digital pressure sensor. There is also a flange with two buttons for pressurizing and deflating of the seal and glove.

The tightness is tested by the pressure indicator, which indicates sufficient pressure in the seal.

The pressure in the sleeve and any leaks are measured by the digital pressure sensor with range 0-4000 Pa.

At the face of the tester, there is an ergonomic, antibacterial handle and a quick coupling for the compressed air supply through a hose either directly from the output of the isolator or an external source.

Properties and benefits

- It is technically simple, straightforward, ergonomically sophisticated and cost-effective equipment operating only with the use of compressed air.
- The shape of the tester corresponds with the basic dimensions of the sleeve flange and is designed to allow convenient insertion into the tested equipment without damaging the tested glove by sharp edges.
- The tester is designed to meet ergonomic requirements.
- The handle allows convenient handling.
- Insert the tester into the glove and press the seal pressurizing button with your thumb. Then you can let the handle go and press the other button for glove pressurizing.
- When removing the tester, grasp the handle again and press the seal button to release the seal.

Description

We provide complete solutions on the basis of analysis of your requirements and needs. Pricing, elaboration of our quotation, and subsequently processing of an order.

You order is passed to the design department. For an individual non-standard customer wish, we elaborate a 3D proposal or a mock-up model for control and the optimization of equipment ergonomics, if applicable.

We have our own isolator production in the Czech Republic. Thanks to the close cooperation of our production, design, and commercial teams, we are able to respond quickly and flexibly to meet your individual requirements.

A Factory Acceptance Test (FAT or shortly acceptance) is performed on the installation site in the presence of the customer after the isolator is fully fabricated. The customer may invite an independent expert to the FAT test. Possible changes arose during the test are incorporated.

For ensuring smooth function of your isolator, the BLOCK® service team performs all service and maintenance operation on your request. Consumable materials, e.g., gloves, hydrogen peroxide or other required components are supplied by us, as well.

Our expert team performs complete testing, control and other processes necessary for the validation of the installed equipment according to the internationally recognized rules and procedures. Our staff can provide periodical check-up and revalidation of your equipment.

The installation of your isolator is performed by our thoroughly trained employees or certified partners on the site of operation. According to the type of isolator and dimensions of building access openings, we transport either a completely assembled isolator or disassembled into smaller parts which are subsequently assembled.

A Factory Acceptance Test (FAT) or shortly acceptance is performed on the installation site in the presence of the customer after the isolator is fully fabricated. The customer may invite an independent expert to the FAT test. Possible changes arose during the test are incorporated.

Thanks to our own logistic department and co-operation with logistic and transport companies, we are able to deliver the products safely, reliably, and in time.

Specification consultancy (URS)

Optimization

Production

FAT test

Maintenance

SAT test, IQ, OQ, PQ validations

Installation

Logistics

Customized solution

Simultaneously, our type-specific isolator solutions are highly flexible and the BLOCK® type isolators can be adapted according to the customer requirements. Thanks to our own development and design department, we are able to adapt the type products according to your specific project requirements in a relatively short time. In addition, we offer individual, tailor-made solutions of isolators – these customized solutions are available on request.
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