



# High Containment Solutions

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**Innovation**



**Design**



**Quality**

The background of the page is a dark blue technical drawing of a door handle assembly. It features various dimensions and labels such as 182, 166, 146, 138, 74, R145, R137, R8, 155, 65, and M4. The drawing shows a cross-section of a door handle with a cylindrical grip and a mounting plate. The text 'Welcome' is overlaid on the right side of the image.

# Welcome

The safety and security of high containment and cleanroom facilities has never been more challenging. **PBSC** engineer and manufacture specialized Air Pressure Resistant Doors, Transfer Hatches, Vision Panels, Material Decontamination Chambers and Personnel Showers, meeting the wide spectrum of containment needs for state-of-the-art biohazard facilities and cleanroom environments, for both new build and retrofit projects.

As standards and regulations become more demanding, the technology to meet those requirements continue to evolve. **PBSC's** research and development programme ensures its products maintain their leading position in the market. Your facility may be small or large, but the fundamentals remain the same. **PBSC** provide tried and tested equipment to keep hazardous agents contained through bio-decontamination and the containment line. **PBSC** door sets allow control of human access to potential contaminants inside your critical containment area.

Functional and aesthetic requirements are changing faster than ever and **PBSC** stays ahead of the curve through rigorous testing, training, product innovation and strategic partnerships.

Every product you see in this brochure is based on a proven design that if required can be customized to meet the right balance between functionality, ease of use, aesthetics and cost.

We look forward to working together in the near future.

With warm regards,

**The PBSC Team**

# Material Air Lock (MAL) Decontamination Chamber MD-C

Safe, quick and easy decontamination

PBSC's high-level log6 surface disinfection chamber is a freestanding, modular unit ideal for material production and equipment loads in cleanroom and high containment environments up to BSL4. We provide decontamination solutions from market leading H2O2 (hydrogen peroxide) generator manufacturers ensuring regulatory compliance and consumable traceability. The chamber is designed to be intuitive allowing ease of use for facility operators.

PBSC also offer Formaldehyde decontamination chambers; please contact PBSC for details.

The decontamination cycle is initiated via colour touch screens from either side of the chamber, with these screens providing the operators with in-cycle data from the chamber and H2O2 generator.

Effective against a wide range of micro-organisms and viruses, the MAL chamber provides a low temperature decontamination solution for heat sensitive items such as electronics or biologic preparations. The decontamination chamber is a viable addition to a facilities process ethos for material transfer either into or out of the critical environment with repeatable log6 efficacy.

The chamber includes either a Siemens S7-1200 or S7-1500 PLC which controls, monitors and records all critical parameters of each cycle.

Various chamber sizes with pneumatic seal doors are available.

### Key Features

- Fast cycles from 45 minutes
- Safe, validated and reliable log6 decontamination
- Siemens S7-1200 or S7-1500 PLC, with either 7", 12" or 15" Comfort Touch Screens
- Data acquisition and management to allow for 21 CFR Part 11 and Annex 11 compliance
- Option for air handling system without connection to the building HVAC
- Various other air handling options – contact PBSC for details
- Flush door thresholds allowing easy wheeled access
- No floor pit required
- In built daily leak testing option
- Plug and play electrical spares for ease of maintenance





## Applications



The decontamination chamber with the mobile generator is ideal for various facility applications. Used globally in facilities to eradicate problematic bacteria, viruses and fungi on material loads of equipment entering/exiting controlled areas throughout the Pharmaceutical/Bio-Pharmaceutical, Containment and Biomedical sectors.

A mobile decontamination generator allows the generator to be used on other equipment and room decontamination.

## Commissioning Options

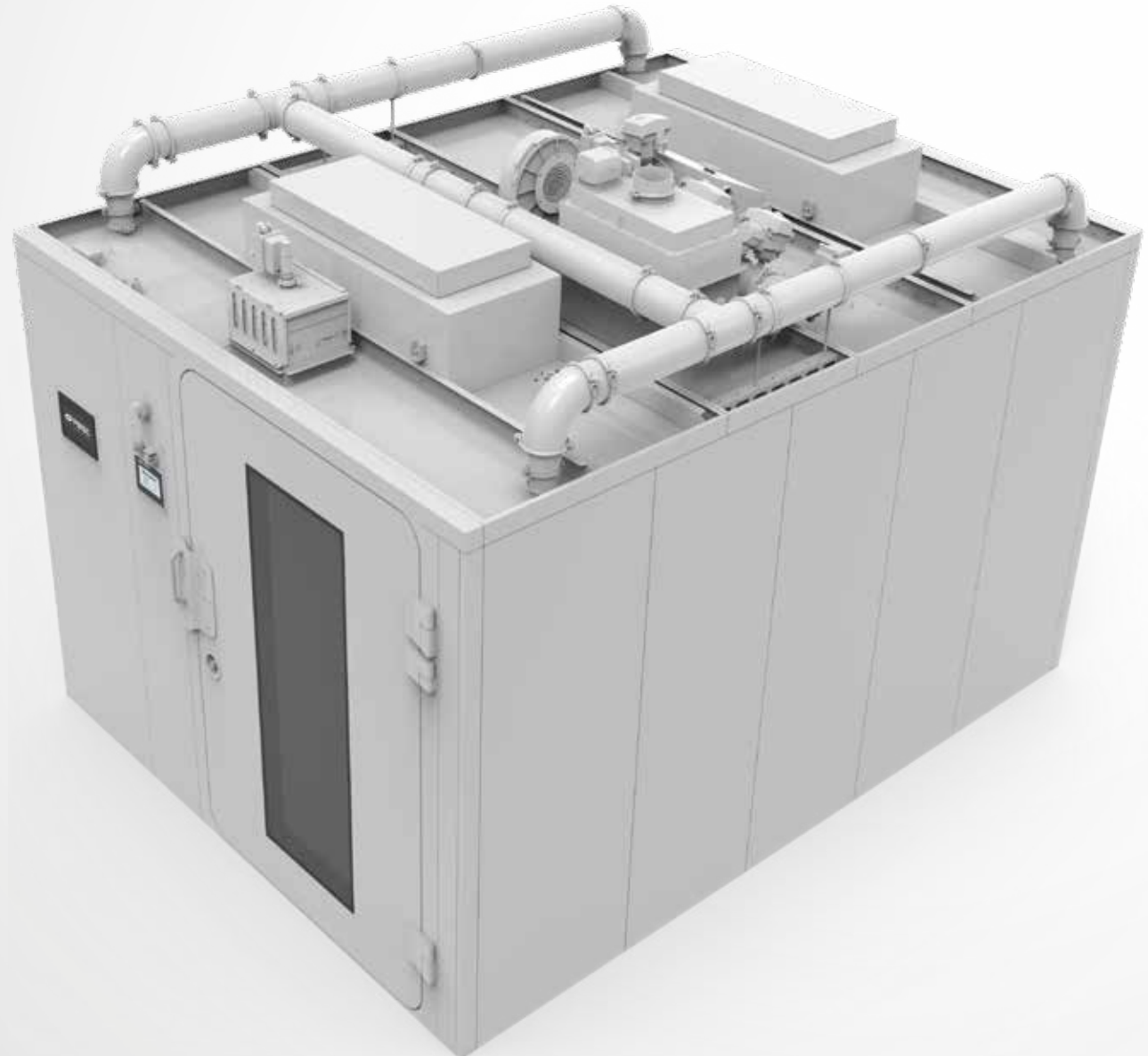


- Project specific general arrangement approval drawings
- DQ package including FDS, P&ID, HDS
- Installation Services
- Commissioning of Chamber
- Q-OQ
- Operator Training
- Gas Cycle Development
- Performance Qualification
- 6 or 12 monthly servicing/calibration

## Leakage Rates



Typical pressure loss of 0.4" w.g. over 30 minutes, with a starting pressure of 2" w.g.



# Integrated H2O2 Generator Solutions MD-Ci

## A truly integrated solution

Our high-level Log6 surface disinfection chamber is a modular design, ideal for material production environments and equipment loads in cleanroom and high containment environments up to BSL4. PBSC provides fully integrated decontamination solutions from market leading H2O2 generator manufacturers ensuring regulatory compliance and consumable traceability. The chamber is designed to be intuitive allowing ease of use for facility operators.

The decontamination cycle is initiated via the colour touch screens on either side of the chamber, which provides operators with in-cycle data from the chamber and H2O2 generator.

The generator can be either integrated internally in the chamber or mounted remotely in the building technical area. Both options have a remote bottle housing and printer to be mounted externally. Custom integration to a multi-room decontamination system is available.

The chamber includes either a S7-1200 or S7-1500 PLC which monitors and records all critical parameters of each cycle.

Various chamber sizes with pneumatic seal doors are available.

### Key Features



- Fast cycles from 45 minutes
- Safe, validated and reliable log6 decontamination
- Siemens S7-1200 or S7-1500 PLC, with either 7", 12" or 15" Comfort Touch Screens
- Data acquisition and management to allow for 21 CFR Part 11 and Annex 11 compliance
- Option for air handling system without connection to the building HVAC
- Various other air handling options – contact PBSC for details
- Flush door thresholds allowing easy wheeled access
- No floor pit required
- Inbuilt daily leak testing option
- Plug and play electrical spares for ease of maintenance







## Applications

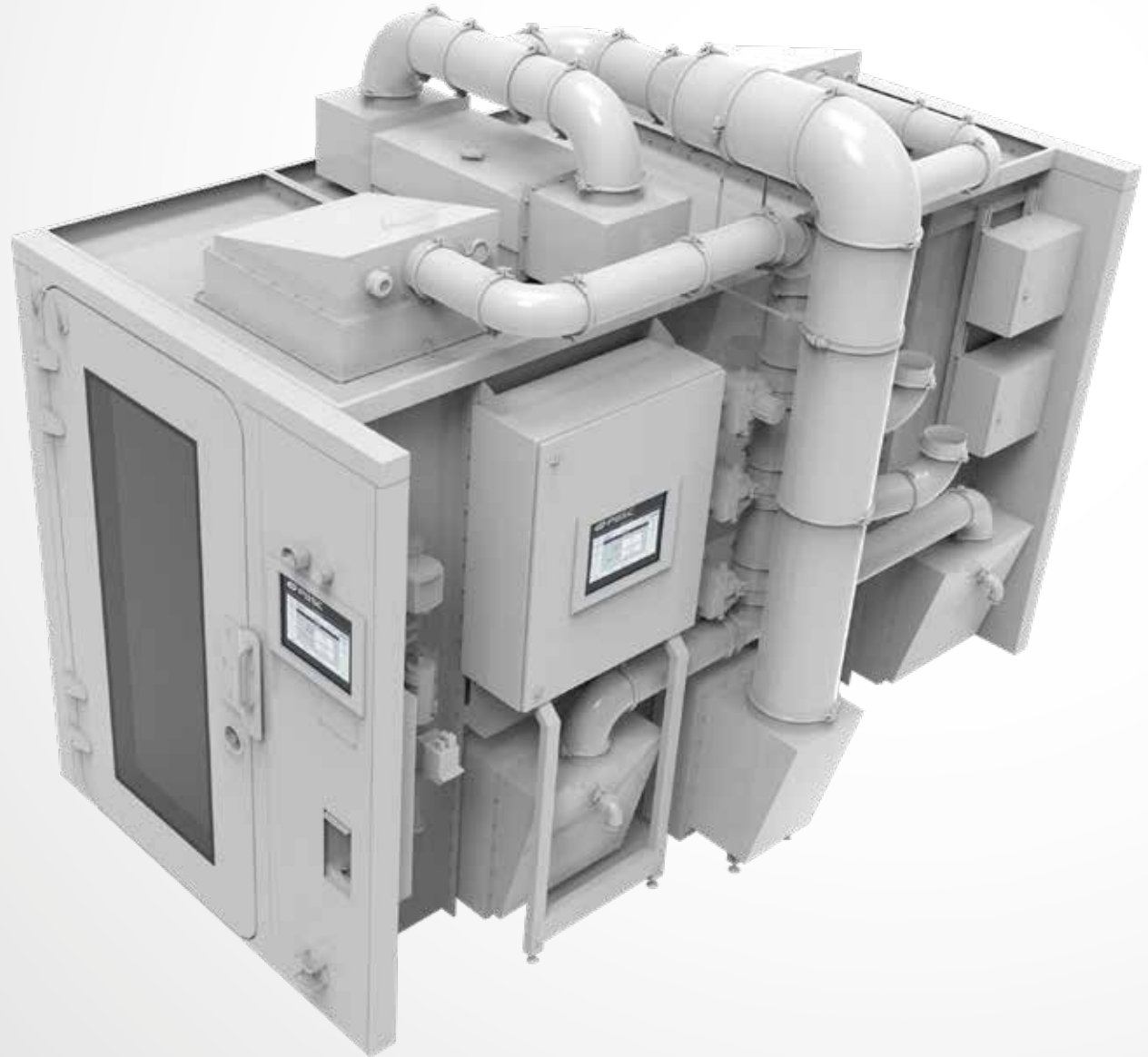
The decontamination chamber with the integrated generator is ideal for various facility applications where floor space is limited and the generator is not required for use with other equipment. Used globally in facilities to eradicate problematic bacteria, viruses and fungi on material loads of equipment entering/exiting controlled areas throughout the Pharmaceutical/Bio-Pharmaceutical, Containment and Biomedical sectors.

## Commissioning Options

- Project Specific Approval Drawings
- DQ package including FDS, P&ID, HDS
- Installation Services
- Commissioning of Chamber
- IQ-OQ
- Operator Training
- Gas Cycle Development
- Performance Qualification
- 6 or 12 monthly servicing/calibration

## Leakage Rates

Typical pressure loss of 0.4" w.g. over 30 minutes, with a starting pressure of 2" w.g.





# Decontamination Pass Through Hatch MD-H

## Smaller loads – rapid decontamination

Our high level Log6 surface disinfection hatch is a freestanding unit, ideal for samples and equipment loads in cleanroom and high containment environments. PBSC provides fully integrated decontamination solutions with market leading H2O2 generator manufacturers ensuring regulatory compliance and consumable traceability. The hatch is designed to be intuitive allowing ease of use for facility operators.

PBSC also offer Formaldehyde decontamination hatches; please contact PBSC for details.

The decontamination cycle is initiated via the colour touch screens on either side of the hatch, which provides operators with in-cycle data from the hatch and H2O2 generator.

Effective against a wide range of micro-organisms and viruses, the hatch provides a low temperature decontamination solution for heat sensitive items such as electronics or biologic preparations. The decontamination hatch is a viable addition to a facilities process ethos for material transfer either into or out of the critical environment with repeatable log6 efficacy.

Including either a S7-1200 or S7-1500 PLC which monitors and records all critical parameters of each cycle.

Various custom sizes are available, please contact PBSC to discuss.

### Key Features



- Fast cycles from 30 minutes
- Safe, validated and reliable log6 decontamination
- Siemens S7-1200 or S7-1500 PLC, with either 7", 12" or 15" Comfort Touch Screens
- Data acquisition and management to allow for 21 CFR Part 11 and Annex 11 compliance
- Plug and play electrical spares for ease of maintenance
- Option for air handling system without connection to the building HVAC
- Bespoke trolley and rack designs
- Standard internal sizes (WxHxD)
  - 24" x 48" x 44"
  - 36" x 48" x 44"







## Applications



The decontamination hatch with the mobile generator is ideal for various facility applications. Used globally in facilities to eradicate problematic bacteria, viruses and fungi on material loads of equipment entering/exiting controlled areas throughout the Pharmaceutical/Bio-Pharmaceutical, Containment and Biomedical sectors.

A mobile decontamination generator allows for use in other equipment and room decontamination.



## Commissioning Options



- Project Specific Approval Drawing
- DQ package including FDS, P&ID, HDS etc.
- Installation Services
- Commissioning of Hatch
- IQ-OQ
- Operator Training
- Gas Cycle Development
- Performance Qualification
- 6 or 12 monthly servicing/calibration

## Leakage Rates



Typical pressure loss of 0.3" w.g. over 30 minutes, with a starting pressure of 2" w.g.





# Integrated Decontamination Pass through MD-Hi

## Compact rapid decontamination

Our high level Log6 surface disinfection hatch is a freestanding unit, ideal for samples and equipment loads in cleanroom and high containment environments. PBSC provides fully integrated decontamination solutions with market leading H2O2 generator manufacturers ensuring regulatory compliance and consumable traceability. The hatch is designed to be intuitive allowing ease of use for facility operators.

The decontamination cycle is initiated via the colour touch screens on either side of the hatch, which provides operators with in-cycle data from the hatch and H2O2 generator.

The generator can be either integrated internally on the hatch or a remote generator in the building technical area. Both options have a remote bottle housing and printer to be mounted externally. Custom integration to a multi-room decontamination system is available.

Including either a S7-1200 or S7-1500 PLC which monitors and records all critical parameters of each cycle.

Various custom sizes are available, please contact PBSC to discuss.

### Key Features



- Fast Cycles from 30 minutes
- Safe, validated and reliable log6 decontamination
- Siemens S7-1200 or S7-1500 PLC, with either 7", 12" or 15" Comfort Touch Screens
- Data acquisition and management to allow for 21 CFR Part 11 and Annex 11 compliance
- Plug and play electrical spares for ease of maintenance
- Option for air handling system without connection to the building HVAC
- Bespoke trolley and rack designs
- Standard internal sizes (WxHxD)
  - 24" x 48" x 44"
  - 36" x 48" x 44"





## Applications

The decontamination chamber with the integrated generator is ideal for various facility applications where floor space is limited and the generator is not required for use with other equipment. Used globally in facilities to eradicate problematic bacteria, viruses and fungi on material loads of equipment entering/exiting controlled areas throughout the Pharmaceutical/ Bio-Pharmaceutical, Containment and Biomedical sectors.

## Commissioning Options

- Project Specific Approval Drawings
- DQ package including FDS, P&ID, HDS etc...
- Installation Services
- Wiring of Hatch
- Commissioning of Hatch
- IQ-OQ
- Operator Training
- Gas Cycle Development
- Performance Qualification
- 6 or 12 monthly servicing/calibration

## Leakage Rates

Typical pressure loss of 0.3" w.g. over 30 minutes, with a starting pressure of 2" w.g.





# Pneumatic Seal APR Doors HC-ISD

Excellent containment control and functionality

PBSC's Pneumatic Inflatable Seal Doors provide the highest possible airtight containment in applications involving high traffic, wheeled equipment or large animals. The doorframe threshold is flush with the floor eliminating any trip hazard or trolley interference.

The seal around the perimeter of the door is inflated by compressed air against the radiused doorframe and provides excellent leakage resistance up to pressure differences of 8" w.g.

The door leaf is available in polished stainless steel, powder-coated steel, aluminium or solid core phenolic resin construction.

Provided with the option to use PBSC's control system, which integrates with the building access control system. Allowing proven software at FAT, reducing site time and risk.

Designed to install into a range of wall types e.g. cast concrete, block, stud and partition systems.

## Key Features



- True Flush threshold option
- Door leaf construction options
- Available with either single or twin inflatable seals
- Silicone or EPDM inflatable seal
- Hydraulic or Automatic Door Closers
- Button sets and LED indicators, with emergency override option
- Flush double glazed vision panels – toughened or laminated safety glass
- Fumigant low level sampling port options





## Applications

Pneumatic seal doors are used primarily in high containment and high traffic situations where air leakage cannot be permitted, such as bio-hazard laboratories (BSL3, BSL4, BSL3-Ag and BSL4-Ag), pharmaceutical laboratories and medical clean rooms.

The seal allows high containment during decontamination and fumigation processes in clean room facilities and laboratories. The frame can be supplied to seal into cast concrete walls, stud partition walls and block work walls.

## Leakage Rates

Typical pressure loss of 0.2" w.g. over 30 minutes, with a starting pressure of 2" w.g. Test data available up to 10" w.g. pressure difference.



The **PBSC** Inflatable Seal Door can be configured for any laboratory or cleanroom between a BSL2 and BSL4-AG. The flush threshold makes it ideal for heavy foot and/or cart traffic.







# Mechanical Seal APR Doors HC-MSD

## Highly reliable containment

These high containment doors create a dependable airtight barrier by using a strong but flexible silicone seal that is compressed against the doorframe. With manual compression of the seal no compressed air is required, providing a fail-safe seal in the event of a power failure.

An easy to use stainless steel lever is used to compress the seal against the door frame. The mechanical mechanism is mounted in the door frame, minimising door leaf weight and improving maintenance.

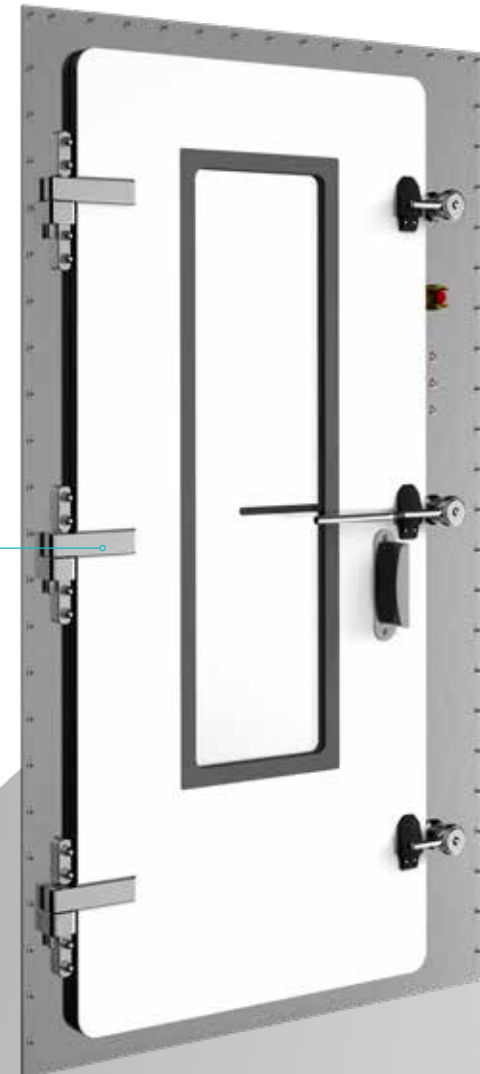
The door has a raised threshold for the seal at the base of the door, minimum 1" high. If a flush door threshold is required, please see the [PBSC](#) pneumatic seal door models.

Designed to install into a range of wall types e.g. cast concrete, block, stud and partition systems.

### Key Features



- Robust, fail-safe design
- Easy manual operation, with 3 point compression
- Low maintenance
- Mechanism is mounted in the door frame for more robust design
- Stainless steel or solid core HPL door leaf
- Button sets and LED indicators, with emergency override option
- Flush double glazed vision panels – toughened or laminated safety glass
- Fumigant low level sampling port options



## Applications

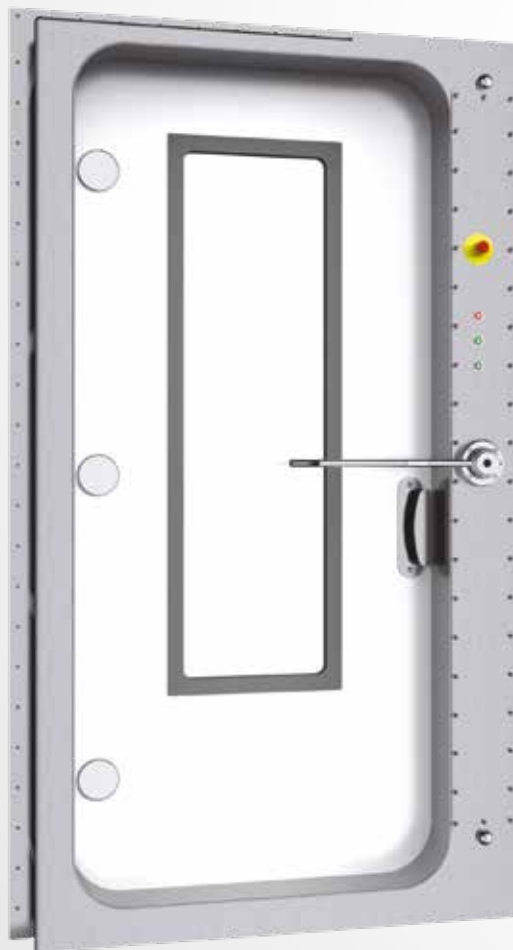
Our range of mechanical seal doors are used in applications where high containment is required, such as in BSL3 and BSL4 labs. With the raised threshold, these doors create a natural bund, assisting containment of liquid during wash down.

## Access Control

Door control is typically the building access control system, **PBSC** control panel available on request.

## Leakage Rates

Typical pressure loss at SAT of 0.1" w.g. over 30 minutes, with a starting pressure of 2" w.g. Test data available up to 10" w.g. pressure difference.





# Glass Doors HC-Gd

Transparent, functional, with a spacious atmosphere

PBSC's glass door sets incorporate the proven wrap-around door frame with its easy clean design. The combination of the 3" thick tempered safety glass door leaf with smooth polished edges and the stainless steel frame will undoubtedly give a showpiece appearance in any facility whilst providing excellent functionality.

The glass door system comprises of a frameless glass leaf with no hollow cavities that prevents contamination accumulating and is easy to clean. The 'open space' atmosphere created by the large glass area makes the frameless glass doors a favourite with operatives working within the confines of a laboratory room.

Available with a cast in frame design, which reduces uncontrolled spaces. An ideal solution for all cast concrete containment facilities. The cast frame allows the option to fit a temporary inflatable seal containment shroud when room gassing.

## Key Features



- Frameless toughened glass door leaf (10mm thick)
- Full stainless steel or powder coated steel frame
- Purpose built solid stainless-steel hinges to provide easy cleaning and opening up to 170°
- Custom frame sizes to preferred door openings
- Made to suit specific wall thicknesses
- Flush maglock in frame
- Concealed closer system available for added hygiene



## Applications

The frameless glass door is a popular choice in many laboratory applications, in particular those where ease of cleaning and reduction of hollow cavities for increased levels of contamination control are required. The glass door sets are widely used within facilities with frequent traffic, possessing high durability and excellent scratch resistance. The doors are ideally suited to environments where pressure differences are used, with the airflow through the door configurable by design the door threshold gap and/or the inclusion of ventilation holes in the glass leaf.



## General Door Options

- Single leaf and half leaf or double leaf doors
- Automatic door closer option
- Flush Maglock
- Button sets and LED indicators
- Wrap-around door frame or cast concrete frame

## Leakage Rates

Not intended to be leak tight unless an inflatable shroud is fitted to the cast frame design. Leakage rate of the shroud is the same as the inflatable seal door set.



# Phenolic Resin Doors **AR-DP**

## Strong and robust

Ideal for laboratory, cleanroom and corrosive environments, these doors are incredibly tough. They have great resistance to damage and most importantly they have no hollow cavities where contamination could ingress.

Meticulously engineered and manufactured with a chemical grade phenolic resin, these doors are impervious to most chemicals and cleaning agents. They will also improve the looks of your facility incorporating the renowned **PBSC** wrap-around doorframe featuring clean, uninterrupted lines with solid stainless-steel hinges and concealed door system.

Available with a cast in frame design, which reduces uncontrolled spaces. An ideal solution for all cast concrete containment facilities. The cast frame allows the option to fit a temporary inflatable shroud when room gassing.

The Phenolic Resin door set are available in single or double door swing construction with the unique **PBSC** cast stainless-steel hinge assembly, allowing a maximum clear opening and can be bespoke to fit existing walls.

## Leakage Rates



Not intended to be leak tight unless an inflatable shroud is fitted to the cast frame design. Leakage rate of the shroud is the same as the inflatable seal door set.

## Key Features



- Excellent resistance to most corrosive chemicals
- High impact resistance
- Solid core door leaf
- Full wrap around frame option, without rebate
- Purpose built solid stainless-steel hinge to provide easy cleaning and opening up to 170°
- Flush glazed vision panels in custom sizes
- Flush Maglock in frame
- Concealed closer system available for added hygiene

## Applications



Attractive solid core phenolic resin door sets are primarily used in controlled environments, where impact, abrasion and chemical resistance are a necessity.

This makes them an ideal choice where stainless steel doors may have previously been used. Multiple frame designs are available for installation in stud, block, or concrete walls.







# APR Windows HC-Cd/Vs/Vf

We take care of your panes...

PBSC offer a range of vision panels that provide excellent functionality and aesthetics throughout your facility. Our high containment vision panel is available double glazed or single glazed with a polished stainless-steel frame. It is mechanically sealed to the wall with a compression gasket. We also offer window systems that use structural silicone for finishing to walls.

Our vision panels can be installed into cast concrete, concrete block or stud walls. Pressure test points are incorporated to enable fast and easy checking of the gasket seal.

PBSC provide security and fire rated options. The security window is available up to SR5, tested and certified by BRE.

Please contact PBSC for specific information on these specialist windows.

## Leakage Rates



Typical pressure loss of 2" w.g. over 30 minutes, with a starting pressure of 2" w.g.

## Key Features



- Flush glazing (double glazed version)
- Easy to clean and maintain
- Simple pressure testing
- Double glazed to provide redundancy for sealing
- Toughened or laminated safety glass
- Security version available
- Fire rated upgrade available

## Applications



Vision panels are essential in controlled environments from BSL2 to BSL4-Ag to provide visibility and a friendly and functional open space atmosphere.

Custom designs are available on request.





# Transfer Hatches

## HC-BHm/HC-BHi

Don't pass by our pass-through solutions...

Our range of room-to-room hatches provide reliable interlocked door transfer routes and are custom designed to address a wide range of applications; from non-containment environments right up to the most rigorously controlled BSL4 laboratories. Wall-mounted versions are ideal for small hand-held items and our floor-mounted hatches are designed to handle larger items and carts.

Transfer Hatches are available in polished stainless steel with a fully welded construction. All models feature the reliable **PBSC** door interlocks and proven door hinge and seals.

The hatches are available with either inflatable or mechanical seal APR door design. Both provide excellent levels of containment.

### Applications



These hatches are used in a broad range of applications from pharmaceutical facilities BSL2 through to BSL4. At the higher end of the containment spectrum, our hatches can be fitted with pneumatic seals and sophisticated access and control options. Hatches can be installed into preformed openings in cast concrete walls, block or stud walls.

For applications without containment please see **PBSC's** standard transfer solutions.

### Key Features



- Highly reliable and easy to clean
- Custom sizes
- Solid core door leaf
- Pneumatic Seal and Mechanical Seal models
- Maglock or electro-mechanical interlock
- Flush glazed vision panels in custom sizes
- Air purge and UV lights available
- Range of control panels and security features

### Leakage Rates



Typical pressure loss of 0.3" w.g. over 30 minutes, with a starting pressure of 2" w.g.



# Dunk Tank

## HT-DT

### Take the plunge

Where decontamination of small-scale items are needed **PBSC** produce a dunk tank system for installation on the containment barrier.

Based on the classic design, the **PBSC** dunk tank features stainless steel lids (mounted on cast stainless-steel hinges, with silicone lid seals). Within the tank a hinge down submersion plate is provided to ensure items are held below the surface of the neutralizing chemical liquid. A recovery claw is provided to extract items after decontamination.

The dunk tank can be manually locked during shut down with the doors providing a barrier seal without the fluid in the tank.

The chemical dunk tank can be supplied with a control panel to provide PLC controlled immersion times and interface to card swipe systems for access control.

Where high level decontamination of materials is required please see our decontamination chambers.

### Leakage Rates



Typical pressure loss of 0.3" w.g. over 30 minutes, with a starting pressure of 2" w.g.

### Key Features

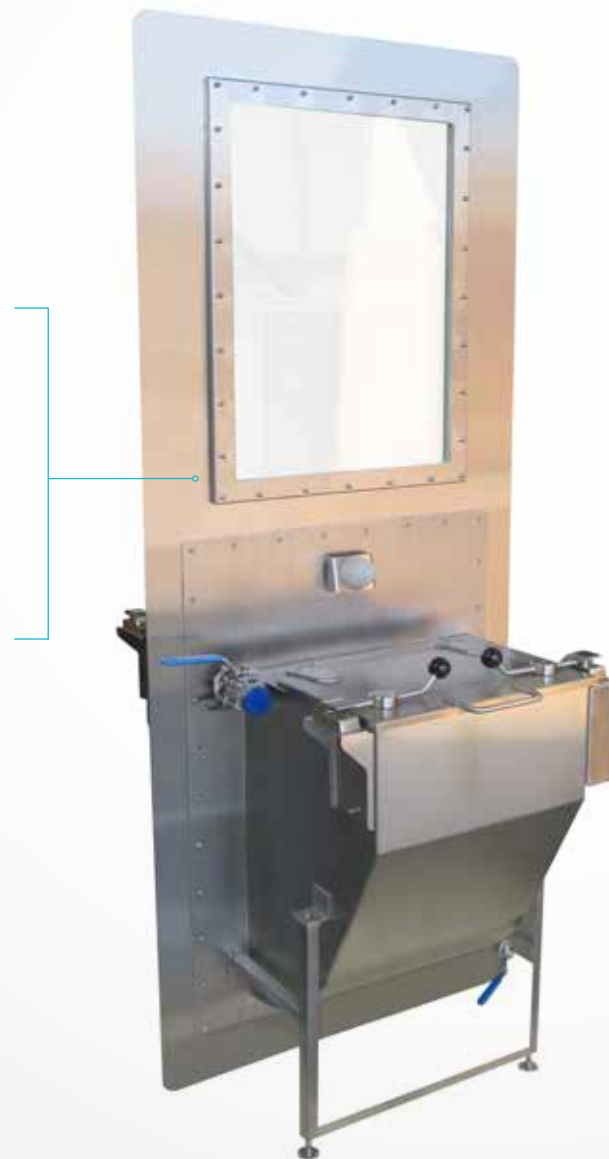


- Suitable for BSL3 and BSL4 containment barriers
- Air tight performance from the lids without the liquid in the tank
- Mesh transfer system
- Design solutions to suit stud, block or cast concrete walls
- Customized designs available

### Applications



Where decontamination of small-scale items is needed the dunk tank is the reliable solution. Suitable for BSL3 and BSL4 containment.



# Personnel Decontamination Showers HC-Sh

## Versatile decontamination

Our personnel showers are versatile, freestanding modular systems. The PBSC shower chamber can be fitted with the optimum decontamination system for your facility.

These include:

- Water showers
- Bio-decontamination chemical showers
- Ultrasonic fogging showers
- Air showers

Along with our frameless glass doors both mechanical compression gasket seals and pneumatic seals are available where high containment is required through the shower. All showers are available in stainless steel construction.



### Key Features

- Can accommodate multiple shower systems for maximum flexibility
- Showers for 1, 2 or more operatives
- Easy to clean and maintain
- Interlocked doors
- Adjustable timers for the shower cycles
- A range of chemical dosing and delivery systems for chemical showers
- Deluge safety shower and eyewash station options
- Automatic CIP systems
- Breathing air points
- Wash down guns and brushes
- Air shower with dedicated AHU and safe change housings
- Modular design allows easy transportation to site
- Standard or bespoke designs and control systems





## Applications

Our showers cover the range of decontamination solutions to meet your specific application:

### Water Showers

Conventional water showers are used to shower in and/or out of laboratory or production areas. These showers can be supplied with conventional shower heads or alternatively high coverage spray nozzle systems, using thermostatically controlled warm water. Water showers can be manually controlled or alternatively supplied with PLC systems providing automatic showering and/or controlling access and privacy through the entire shower suite.

### Bio-Decontamination Chemical Showers

Chemical showers are used for bio-decontamination of fully suited personnel, including air suits, generally with an initial chemical dosing stage followed by a water rinse cycle, usually using warm water. These showers can be designed for high containment with APR doors and are often configured for two operatives in a 'buddy' system. The chemical is usually applied via water sprays, or sometimes by an ultrasonic fog, with adjustable chemical dosing, followed by a water spray rinse. Various chemical dosing systems are offered, together with automatic checks on chemical usage and concentration e.g. by chemical loss-in-weight and/or conductivity measurement. A final air shower cycle can be included where required to minimise water retention on suits. Shower decontamination cycles are automatically PLC controlled, to ensure a reliable and repeatable process, with alternative decontamination cycles available to operatives or supervisors if required.

### Air Showers

Air showers provide a general de-dusting of PPE, ideal for removal of dust, dander and potential particulate contamination prior to entry into a clean facility. They are less suitable for the removal of occupational exposure than our alternative showers. Also used for reduction of

water particles on re-useable suits following a water or fogging shower.

### Ultrasonic Fogging Showers

PBSC fogging showers offer very low water and chemical consumption. They envelop the operative in a fine fog to capture particulate contaminants on the operative's suit, and can also provide application of a dosed chemical with a typical chemical dilution of 1% to 5% into the fog. Fogging showers are used with both re-usable and disposable suits.

### Leakage Rates

High containment APR showers can be supplied including APR inflatable seal or mechanical seal doors to provide very low air leakage rates.



Stainless steel surfaces with no visible fixings

Breathing air point for connection to air suits

Ultra-sonic fogging nozzles fine mist saturation

Sloped extract system reduces moisture build up

Stainless-steel non-skid floor grid for easy drainage







# Product Development, Quality Assurance, Testing & Training

## Product Development

PBSC carry out extensive in-house research and product development to provide leading technology to meet customer and market demands, ensuring our products are safe, reliable and provide the required quality and performance together with excellent value.

PBSC works with end users and consultants to meet the growing challenges of bio-safety and bio-security in laboratories and clean rooms, from enhancing bio-containment in government BSL4 virology labs to protecting the clean environments of pharmaceutical, hospital and electronics manufacturing facilities.

## Quality is Guaranteed

Quality Assurance at PBSC is fundamental. All designs are submitted for client approval, and all products are individually rigorously inspected and tested at PBSC's facility prior to delivery to site, with full traceability. Similarly all PBSC site installations and tests are fully documented and signed off by the client. Our QA processes to ISO 9001 are independently audited and regularly updated.

## PBSC Testing

Client FATs are offered. Similarly all PBSC site installations and site testing (SAT, IQ-OQ) are fully documented and signed off by the client.

Safety and verification have always been important values at PBSC. We handle virtually all testing in-house, to increase the reliability and durability of our products, whilst providing important first-hand demonstrations and evaluations for both our engineers and customers.

For example, the pneumatic seals used in our APR doors undergo rigorous testing and inspections from the initial compounding stage through to final factory equipment testing, and rigorous pressure decay leakage testing and controls functionality testing is routinely carried out to provide confidence that the product will perform as expected after installation.

## PBSC Training

Over the years, as our products have grown more complex to meet user requirements, there is a growing need to offer end-user training to operational and maintenance staff.

Having your maintenance technicians properly trained will save you time and money. Improving your knowledge of preventative maintenance will help you keep your controlled environment running smoothly and safely – we encourage you to take advantage of our training.

## PBSC Life-Time Support

PBSC offer an extensive after sales support service, including Planned Preventative Maintenance programmes, servicing, spare parts and refresher training.



The following are some of the companies and organizations that have used **PBSC** for their critical containment solutions:

**Private Sector Clients**

- Allergan
- AstraZeneca
- Bilthoven
- Boehringer Ingelheim
- Bristol Myers Squibb
- Corning
- Eli Lilly
- GlaxoSmithKline
- Hoffmann-La Roche
- Intel
- Intervet (Merck Animal Health)
- Johnson & Johnson
- Lonza
- Merck
- Novo Nordisk
- Novartis
- Pfizer
- Sanofi–Aventis
- Schering Plough
- 3M Healthcare
- Wyeth

**University Clients**

- Dublin City University (Ireland)
- Nottingham University (UK)
- NUI Galway (Ireland)
- Cardiff University (UK)
- Edinburgh University (UK)
- Sabah University (Malaysia)

**Public Sector Clients**

- Backweston, Ireland
- Cancer Research UK
- DTU, Denmark
- Francis Crick Institute, UK
- LabPlus, New Zealand
- MPI, New Zealand
- NHS Hospitals (UK)
- Parvill Neurosciences Development Project (PNP) (Australia)
- Public Health England (PHE), UK
- Porton Down, UK
- PFR Hamilton, New Zealand
- PUMC Medical and Pharmaceutical Corp (China)
- Singapore Govt. (Singapore)
- Staten Serum Institute (Denmark)
- The Institute of Animal Health – Pirbright (UK)
- USDA, GA, USA
- PHAC Winnipeg - Canada







Due to continued product development PBSC reserve the right to change or alter specifications without prior notice.

Visit: [pbsc-inc.com](http://pbsc-inc.com) | Email: [info@pbsc-inc.com](mailto:info@pbsc-inc.com)