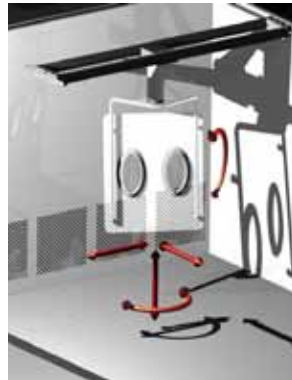


# 5D High Containment Screen

Bringing a new dimension to containment with the all new 5D High Containment Screen™.



## High Containment Screens

Howorth's High Containment Screens (HCS) are a simple but effective way of boosting the containment capabilities of any downflow booth. With our new range of screens, Howorth is now able to offer previously unattainable levels of operator protection in new or retro-fit applications.

## Principles of a High Containment Screen

Downflow booths are designed to protect the operator from dust rising into the breathing zone. The High Containment Screen (HCS) is fitted into the booth and forms an actual barrier between the operator and the dust source, keeping all dust laden air close to the exhaust grilles of the booth.

## Key Benefits

- Available in a variety of sizes, materials and with optional extras
- Ideal containment solution for a wide range of processes
- Independent testing of Howorth's Screens has confirmed that OELs as low as  $0.5\mu\text{g}/\text{m}^3$  can be achieved (See over)
- Retrofitting capabilities for any downflow booth
- Enhanced operator comfort

## Features

- 10mm Toughened glass.
- 2 x Oval gloveports 500mm x 200mm to allow movement within ports c/w sleeves and hypalon gloves.
- 316L St St tubular support framework.
- 304 St St overhead crane-type support structure to allow for smooth movement forward and back as well as left or right and rotational.
- Ball-bearing turning mechanism providing 180 degree rotation to either direction.
- Allows movement of screen virtually anywhere within safe zone of the booth.
- Vertical movement providing adjustment of 300mm thus increasing flexibility of glove elevation for varying height operators.
- Tilt adjustment of glass screen with frame of 25° from 90° standing position.
- Ability to carry out varying tasks from drums of different heights whilst maintaining an acceptable ergonomic posture.
- Optional Tool Shelf

## Health & Safety

Howorth's new 5D HCS is our most flexible screen yet and is an ATEX compliant component suitable for installation in any Zone 1/21 IIGD T4 IP65.

Developed in collaboration with existing booth operators, the 5D HCS offers unparalleled levels of operator flexibility, making it the ideal solution for a wide range of processes.

# Operator Exposure Level (OEL) Testing

Independent containment verification testing activities were performed in a manner that was consistent with recognised industry guidelines including the International Society of Pharmaceutical Engineering (ISPE) SMEPAC Committee document entitled, "Assessing the Particulate Containment Performance of Pharmaceutical Equipment (APCPPE) – A Guide,"

## Dispensing and Weighing Activities

Sample Location	Air Sampling Results (µg/m <sup>3</sup> ) Sample Time 30 mins		
	Iteration 1	Iteration 2	Iteration 3
Personal Sample Breathing Zone	<0.0483	<0.0485	<0.0485
Approx 200mm from the GlovePorts on the High Containment Screen	<0.0405	<0.049	<0.049
Approx 200mm inside the Containment Zone	0.0816	<0.0493	<0.0493
Approx 200mm outside the Containment Zone	<0.0421	<0.0505	<0.0505
Collected at the face of the Containment Zone limit	<0.0408	0.0494	<0.049
Collected 2m from the Containment Zone line	<0.0403	<0.0483	<0.0483

## Compression Activities

Sample Location	Air Sampling Results (µg/m <sup>3</sup> ) Sample Time c. 27 mins		
	Iteration 1	Iteration 2	Iteration 3
Personal Sample Breathing Zone	0.083	0.114	0.385
Approx 200mm from the GlovePorts on the High Containment Screen	0.141	0.536	0.329
Approx 200mm inside the Containment Zone	0.102	<0.0513	0.431
Approx 200mm outside the Containment Zone	0.0576	<0.0526	0.325
Collected at the face of the Containment Zone limit	0.114	0.321	0.996
Collected 2m from the Containment Zone line prior to dispensing and weighing activities	0.236	0.395	0.443

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