

CONTAINMENT AND POWDER HANDLING SOLUTIONS



Operator Protection



Product Protection



Environment Protection



Maintain Area Classification

DOWNFLOW BOOTHS

Downflow Booths offer a safe working zone for operatives; delivering protection from harmful, hazardous, toxic or sensitizing dusts generated and handled during manual powder handling activities including sampling, dispensing and charging and offloading sub-division from powders or solvents, drum loading and un-loading.

**NEW DESIGNS
deliver OELs
of $<1\mu\text{g}/\text{m}^3$**

RECIRCULATING DOWNFLOW BOOTHS

Achieving a minimum H14 grade 99.995% @MPPS filtration performance, Hosokawa Recirculation Booths are used where hazardous, toxic or sensitizing powders are handled. A conditioned downflow of air passes evenly from the booth's ceiling inlet plenum pushing any dust downwards and away from the operator's breathing zone. The air is extracted from the booth via low level exhaust grills and through a series of filters prior to recirculation into the booth.

SINGLE PASS DOWNFLOW BOOTHS

Ideally for use when fume or solvent laden substances are being handled or when high potency products demand a once through philosophy. The single pass booth operates a vertical airflow, pushing dusts and vapours downwards, to ensure clean air in the operator's breathing zone with air discharged 100% to atmosphere ensuring that solvent laden air will not be recirculated back into the booth.



DOWNFLOW BOOTHS

NEW DEVELOPMENTS FOR HIGH CONTAINMENT

5D ARTICULATED CONTAINMENT SCREENS

Hosokawa Micron's combination of clean air technology and barrier screen protection, between the operator and the source of dust particles, creates downflow booths capable of achieving OEL rates as low as $<1\mu\text{g}/\text{m}^3$, which is consistent with more robust, fully enclosed, containment methods.

5D articulated Containment Screens offer a range of movements, side to side; forward and backward; raise and lower; controlled tilt function; controlled rotation to give operators ease of movement with minimal restriction. Optional materials of screen construction include rigid and flexible transparent materials.

2D, 3D and 4D Containment Screens are also available to suit applications and can incorporate a range of neoprene, vinyl or latex gloves or gauntlets for additional ease of use and maintenance of standard operating procedures.



BETTER BY DESIGN

Hosokawa Micron Ltd can offer a range of standard and bespoke downflow booth options to suit individual requirements in operator protection, product protection, processing activities to be undertaken and environmental and energy issues. Specialists in ergonomic design and integration of processing or packing equipment, Hosokawa Micron is able to design and build the most operator friendly and efficient systems available.



Contained Powder Mill



Semi-Automatic Drum Filling



Booth Suite with Automated Sliding Glass Doors



Laminar Flow Bench Unit



Contained Drum Tipper

HOSOKAWA DOWNFLOW BOOTHS - FEATURE OPTIONS

A range of optional features enable customers to select specific downflow booth enhancements to achieve a more bespoke hazardous materials containment and processing solution.

AIRLOCKS

Airlocks provide a pressurized bridge between a controlled air environment to an unregulated area, preventing entry or egress of potentially harmful or unwanted contaminants. A range of safety alarm, access control and decontamination options within the air locks enhance safety of operations.

BAG-IN, BAG-OUT FILTRATION

Triple stage, safe change filtration (pre filter, fine duct, HEPA) enables maintenance personnel to remove contaminated particulate filters without coming in direct contact with the hazardous contaminants or internal booth surfaces during filter change.

TEMPERATURE COOLING AND HEATING PACKAGES

Fully integrated cooling and heating packages offer operators the most comfortable working environment appropriate to their operating procedures, allowing them maximum operational time.

In-booth temperatures can be regulated to suit specific dispensing procedures using chilled water or stand alone chiller units.

ENERGY CONSERVATION OPERATION

Automated control of lighting, temperature, start up procedures and air flow, that responds to continuous testing of the working zone, can maintain set operator exposure levels and save energy. Hosokawa Downflow Booths are designed with LED lighting, high efficiency motors and low noise and low power consumption plug fans to reduce energy demands. A PIR idle mode of operation ramps down booth operations when no movement is detected to affect a cost saving energy efficiency mode, is also available.

INTEGRATED EQUIPMENT

Integration of ancillary material handling equipment including vacuum manipulators, manual/automated drum tippers, roller conveyors and turntables is available for a more seamless operation.

MATERIALS OF CONSTRUCTION

- stainless steel
- high gloss epoxy powder coated mild steel
- NEW composite material of rigid polyurethane foam core between metal faced panels.

VALIDATION SERVICES

A full validation service is available including IQ/OQ and dust in air containment testing. Working with customers Hosokawa Micron engineers can help develop appropriate SOP procedures for all material handling activities, cleaning and product changeovers.



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PROCESS TECHNOLOGIES FOR TOMORROWSM