PowderSafe™ Type A Enclosure

AirClean® Systems PowderSafe™ Type A enclosures are designed to provide operator protection from hazardous compounds and/or chemical fumes and vapors during weighing.

PowderSafe™ Type B Enclosure

AirClean® Systems PowderSafe™ Type B enclosures are designed specifically for operator protection while weighing powders.

PowderSafe™ Type C Enclosure

AirClean® Systems PowderSafe™ Type C enclosures provide effective operator protection from exposure to hazardous compounds, chemical fumes, and vapors.
Vertical Laminar Flow Workstation

AirClean® Systems vertical laminar flow workstations provide a USP 797 compliant, ISO 5 environment for your DCA (Direct Compounding Area).

(800) 849-0472
(919) 255-3220
AirSafe™ Automatic Safety Controller

The AirSafe™ automatic safety controller is a comprehensive solution for monitoring operator protection in a ductless enclosure. Incorporating a combination of airflow monitoring, HEPA filter monitoring, and/or gas detection, AirSafe™ allows you to breathe easier knowing your safety is constantly monitored. The AirSafe™ automatic safety controller is standard on all PowderSafe™ enclosures and the PharmaSafe™ enclosure.

Pharmacist-Friendly Features:

- **Real-time Airflow Display in LFM** - The AirSafe™ automatic safety controller constantly monitors airflow and displays the real-time face velocity on an easy-to-read display. AirSafe™ uses a special sensor developed by AirClean® Systems which, unlike traditional anemometers, provides reliable readings, is pre-installed and factory calibrated.

- **Automatic or Manual Blower Control** - In automatic mode the enclosure automatically adjusts blower speed to maintain a constant face velocity. In manual mode the blower speed is controlled by the operator.

- **HEPA Back-Pressure Alarm** - In the event of pre-filter or HEPA filter obstruction, an audible and visible alarm alerts the user to inspect/change filters.

- **Low Airflow Alarm** - A low airflow alarm may be set and displayed. An audible and visible alarm alerts the user of insufficient airflow.

- **Gas Detection/Filter Monitor** - A solid state electronic gas detector warns the user of filter breakthrough.

- **Timer** - A digital countdown lab event timer may be preset by the operator and used to time general lab functions.

“QUICK KEY” OPERATION is designed to easily activate and control routine functions.

- **BLOWER**: Turns blower on or off.
- **PUMP**: Activates and deactivates chemical transfer pump. (Optional - not included on PowderSafe™ Enclosures.)
- **LIGHT**: Turns light on or off, if equipped.
- **TIMER**: Displays elapsed time and alarms at cycle end.
- **AUXILIARY**: Disabled for PowerSafe™ Enclosures.
- **ALARM**: Silences alarm while continuing to visibly indicate alarm status.
- **POWER**: On/Off.
Unique PowderSafe™
Features

**HEPASafe™ Change-Out System**

AirClean® Systems HEPASafe™ filter change technology utilizes a permanent secondary HEPA filter, allowing end users to safely and easily replace contaminated filters under negative pressure. The pre-filter and primary HEPA filter are simply bagged-out within the enclosure while the enclosure is running.

If the primary HEPA filter should ever be compromised, the permanent HEPA filter would also act as an “undisturbed” backup safety filter.

This feature is available on Type B, Type C, and bulk enclosures.

**Waste Disposal Port, Slip Hatch, and Dark Blue Polypropylene Base**

The optional waste disposal port allows a waste bag to be attached to the inside of the enclosure and hang freely outside. The waste bag is easily sealed inside the enclosure for safe removal.

Slip hatch access allows power cords and printer cables to be connected through the enclosure wall to an external power outlet or other electronic device. Slip hatch access ports are standard on all PowderSafe™ enclosures.

An optional dark blue polypropylene base allows visible detection of light-colored powders on the work surface.

**Electrostatically Charged Pre-filters**

AirClean® Systems PowderSafe™ ductless enclosures utilize high efficiency, electrostatically charged pre-filters. Pre-filters are designed to capture larger particulate, aid in minimizing clogging of the HEPA filter, and prevent ‘particle rain’.

**High-Mass Polypropylene Base**

AirClean® Systems solid 3/8” thick polypropylene built-in work surface is designed to function like a traditional granite or marble slab. Polypropylene acts as a diffuser of noise and vibration and provides a stable, quiet, and vibration-free work surface ideal for weighing.
PowderSafe™ Type A Enclosures

PowderSafe™ Type A enclosures provide a safe and effective weighing environment for toxic compounds or liquid chemicals. The pre-filter is electrostatically charged, preventing “particle rain” when the enclosure is powered down. For added safety, the pre-filter can easily be bagged out under negative pressure.

PowderSafe™ Type A has been independently tested and validated for containment of particulate.

How the PowderSafe™ Type A works:
1. Turbulence-free laminar flow room air enters enclosure at “A”.
2. Air moves evenly through enclosure at “B” while capturing any particulate.
3. Clean air is exhausted at “C” after passing through pre-filtration and HEPA filtration.

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<th>TYPE A DIMENSIONS</th>
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<th>AC710C</th>
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*Additional height options available
**AirSafe™ microprocessor controller not available on 24” AC705

Features:
- AirSafe™ automatic safety controller**
- Compact ergonomic design
- Portable - NO DUCTWORK REQUIRED
- Solid 3/8” polypropylene base — prevents vibration
- Tested with 3- and 4-place balances
- Factory leak tested and certified before shipment
- 360° visibility — seamless, clear polycarbonate shell
- Audible and visible alarms
- Optional carbon filtration
- Quiet operation < 49dBA
- Electrical cord access ports
- Fluorescent light included on AC720C; optional on AC710C
- Available in 24”, 32” and 48” widths
PowderSafe™ Type B Enclosures

AirClean® Systems PowderSafe™ Type B enclosures utilize HEPASafe™ filter change technology, allowing the end user to safely and easily bag out contaminated filters under negative pressure.

A permanent HEPA filter protects the operator during primary HEPA filter change-out, and also serves as an “undisturbed” backup safety filter if the primary HEPA filter should ever become compromised.

How PowderSafe™ Type B works:

1. Turbulence-free air enters at “A” and is drawn in an even horizontal laminar fashion toward the rear plenum of the enclosure while being mixed with contaminated air at “B”.
2. At “C” the contaminated air first enters a roughing pre-filter before entering the primary HEPA filter.
3. Air cleaned by the primary HEPA filter enters the permanent safety HEPA filter at “D”.
4. Clean air is returned to the room at “E”.

Features:

- Variable airflow volume via AirSafe™
- HEPASafe™ filter change-out
- High mass - solid polypropylene construction prevents vibration
- Effectively weigh to 5 decimal places
- Real-time airflow display on LCD screen
- Audible and visible alarms
- Three-stage filtration
- Portable - NO DUCTWORK REQUIRED
- Quiet operation < 49 dBA
- Electrical cord access ports
- Factory leak tested and certified before shipment
- Available in 32” and 48” widths

PowderSafe™ Type B has been independently tested and verified for operator protection by SafeBridge Consultants, Inc.®

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PowderSafe™ Type C Enclosures

AirClean® Systems PowderSafe™ Type C balance enclosures incorporate the airflow dynamics and HEPASafe™ features of the PowderSafe™ Type B with the user-friendly features and chemical fume containment capabilities of AirClean® Systems ductless fume hoods.

Thermally-fused polypropylene makes the PowderSafe™ Type C enclosure perfect for weighing powders and/or solvents.

**TYPE C DIMENSIONS**

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How the PowderSafe™ Type C works:

1) Air enters at “A” in an even horizontal laminar fashion.
2) Contaminated air enters “B” where particulate is removed via electrostatic pre-filtration and HEPA filtration.
3) Particulate free air moves upward to “C” where it enters the HEPASafe™ filtration area.
4) Particulate free air then passes into “D”, the bonded carbon filtration bed, where dangerous chemical fumes and vapors can be removed.
5) Clean air is then exhausted at “E” for return to the laboratory.
PharmaSafe™ is designed to protect both the operator and the process by recirculating HEPA-filtered air within the chamber. Thermally-fused polypropylene construction makes the PharmaSafe™ easy to clean and maintain. PharmaSafe™’s compact design allows it to easily fit onto a standard countertop, measuring only 36 inches wide with a nominal depth of 30 inches. The front opening is designed to completely close to prevent contaminants from entering the enclosure when not in use. Blowers are automatically engaged when the door is opened.

Features:
- AirSafe™ automatic safety controller
- ISO 5/Class 100 air
- Seamless polypropylene construction
- Fluorescent light
- Stainless steel perforated airfoil

Typical Applications:
- Chemotherapy drug compounding
- Sterile compounding

How the PharmaSafe™ works:
1) Room air enters at “A” where it is pulled into the lower baffle along with a portion of the chamber air.
2) Air travels through the lower baffle and up the rear baffle. Chamber air is mixed with room air at “B” before moving into the filtration area at “C”.
3) The majority of air moves through the HEPA filter at “D”, providing ISO 5 clean air to the chamber. Remaining air is HEPA filtered and exits the enclosure at “E”.

PharmaSafe™ is designed to provide a bench-top mini-cleanroom area while protecting the operator from potential toxins.
ISO 5 / Class 100 Laminar Flow

Horizontal Laminar Flow Clean Bench

Constructed from all white seamless polypropylene, AirClean® Systems horizontal laminar flow clean benches are ideal primary engineering controls for your pharmacy clean room. Horizontal laminar flow clean benches provide an ISO 5 Class 100 environment for sterile compounding.

AirClean® Systems horizontal laminar flow clean benches receive rigorous QC/QA testing for cabinet and filtration integrity.

**POLYPROPYLENE SERIES HORIZONTAL CLEAN BENCH DIMENSIONS**

<table>
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<tr>
<th></th>
<th>AC4000HLF</th>
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**Standard Features:**
- UVTest™ microprocessor controller
- All polypropylene construction - NO RUST!
- Seamless, smooth construction minimizes air turbulence
- Built-in fluorescent lighting
- All-white, chemically-impervious surfaces are easily cleaned
- HEPA filter monitor indicates when filter change is required
- Meets ISO 5 and FS209E Class 100 clean bench standards
- Helps meet USP 797 guidelines for sterile compounding

**Options:**
- Support stand
- Polypropylene base cabinet
- Sliphatch access ports
- IV bar

UVTest™ microprocessor controller is standard on all AirClean® Systems clean benches
AirClean® Systems AC600 Series vertical laminar flow workstations provide an ISO 5 Class 100 environment for sterile compounding. Our vertical laminar flow workstations are small, compact primary engineering controls for your pharmacy clean room.

AirClean® Systems vertical laminar flow workstations have been independently certified to meet or exceed applicable clean bench standards.

**Vertical Laminar Flow Workstation**

**AC632LF with optional IV bar and cart**

AirClean® Systems AC600 Series vertical laminar flow workstations provide an ISO 5 Class 100 environment for sterile compounding. Our vertical laminar flow workstations are small, compact primary engineering controls for your pharmacy clean room.

AirClean® Systems vertical laminar flow workstations have been independently certified to meet or exceed applicable clean bench standards.

**Standard Features:**
- UVTect™ microprocessor controller*
- Seamless, polycarbonate shell provides 360° visibility
- Integral polypropylene base for easy cleaning
- Built-in fluorescent light
- HEPA filter monitor indicates when filter change is required
- Meets ISO 5 and FS209E guidelines
- Helps meet USP 797 guidelines for sterile compounding

**Options:**
- Support cart or stand
- Sliphatch access ports
- IV Bar

**UVTect™ Microprocessor Controller**

**Features:**
- Constant monitoring of filters
- Variable speed blower control
- Audible and visible alarms
- Lab event timer
- One-touch feature control

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*UVTect™ microprocessor controller not available on 24” AC624LF