

# biosafe™

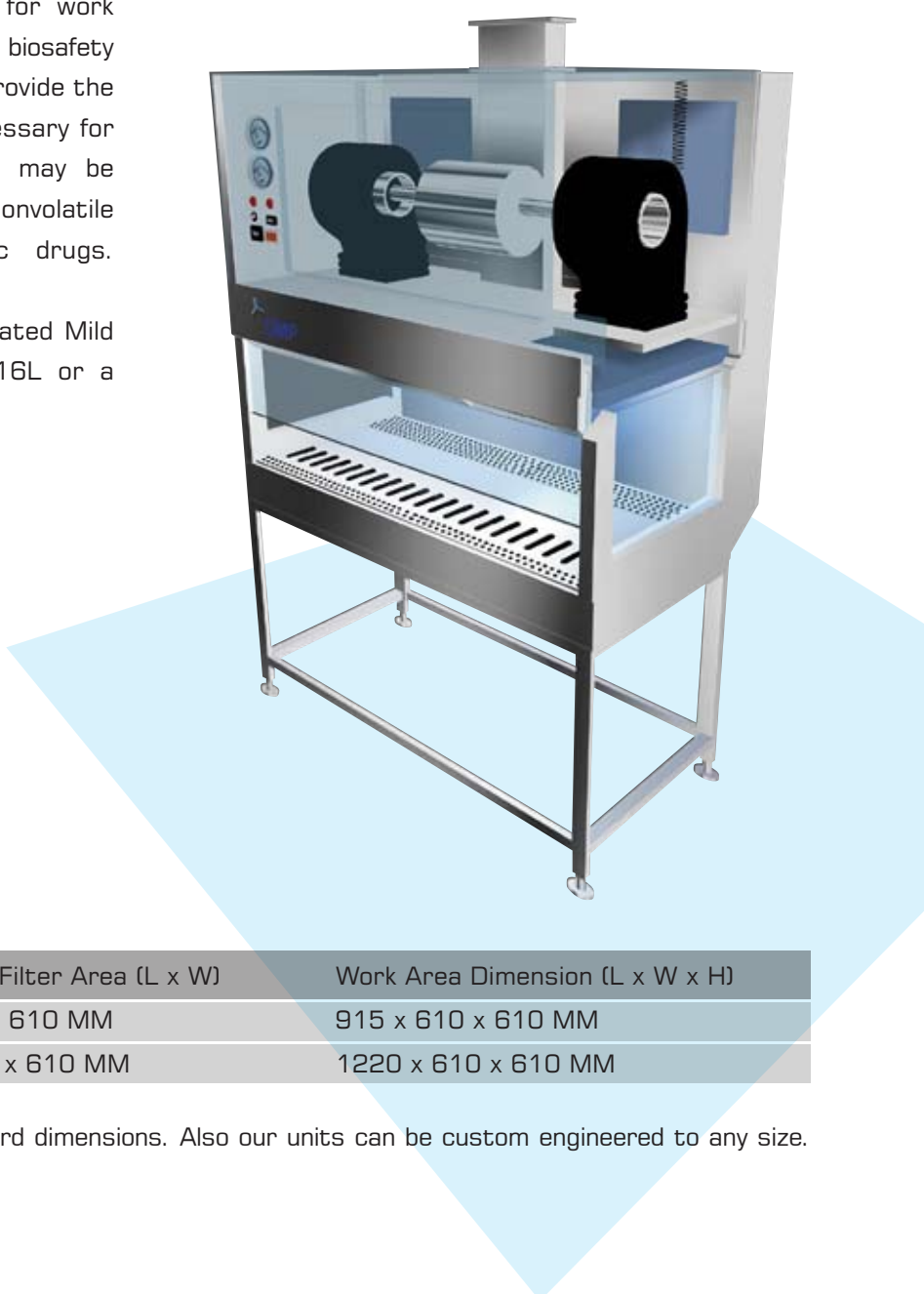
## Bio Safety Cabinet

**biosafe™** is designed to provide personnel, environmental and product protection. Air flow is drawn around the operator into the front grille of the cabinet, which provides personnel protection.

In addition, the downward laminar flow of HEPA-filtered air provides product protection by minimizing the chance of cross-contamination along the work surface of the cabinet. Because cabinet air passes through the exhaust HEPA filter, it is contaminant-free (environmental protection).

All Class II cabinets are designed for work involving microorganisms assigned to biosafety levels 1, 2 and 3. Class II cabinets provide the microbe-free work environment necessary for cell culture propagation, and also may be used for the formulation of nonvolatile antineoplastic or chemotherapeutic drugs.

**biosafe™** is available in powder coated Mild Steel, SS 304 / SS 316 / SS 316L or a combination of both.



### Standard Models

Model	Hepa Filter Area (L x W)	Work Area Dimension (L x W x H)
BS-36-24-24	915 x 610 MM	915 x 610 x 610 MM
BS-48-24-24	1220 x 610 MM	1220 x 610 x 610 MM

**biosafe™** is with a variety of standard dimensions. Also our units can be custom engineered to any size.

### General Specifications

- ✦ Two Stage filtration
  - EU6 - Intermediate Filter (95% down to 6 micron)
  - EU14 - HEPA Filter - Supply / Exhaust (99.999% down to 0.3 micron)
- ✦ Statically & Dynamically balanced Motor-blower with suspension arrangement to reduce noise level
- ✦ Double walled flushed Glass Side Panels
- ✦ SS 304 work table with perforations at front & back which can be removed occasionally for cleaning purpose
- ✦ 1-piece fully openable sliding toughened glass front door with counterweight arrangement
- ✦ Sealed Fluorescent Lights with Milky White Diffuser
- ✦ Differential Pressure Gauges : 2 Nos.
- ✦ ON/OFF Switches for motor & Lights
- ✦ Clean Down Timer with Operation HOLD indicator
- ✦ Alarm triggers in case front door is raised more than 8" (i.e. safe clear opening during operation)
- ✦ DOP Test Port
- ✦ 5/15 Amp Switch Socket for external equipment
- ✦ SS 304 stands with leveling lugs
- ✦ SS 304 1 ft long elbow duct for exhaust

### Operating Conditions

Air cleanliness : ISO Class 5 (ISO 14644-1:1999 (E))  
 Air Velocities : 0.45 ± 0.05 mps  
 Air Flow : Vertical - Recirculatory  
 Noise Level : Less than 67 dB  
 Vibration Level : Minimum  
 Light intensity : > 300 lux

POWER SUPPLY : 230V AC 1-Ø 50HZ / 415V AC 3-Ø 50HZ

### Options and Accessories

A wide range of configurations to suit any containment application :

- Night Mode Operation
- Filter blocked alarms (audible and visible)
- Velocity display with alarms (audible and visible)
- Explosion proof electrics for Flame-proof applications
- Once through System
- Front doors with Glove arrangement
- Transfer hatch for material movement
- PLC based Control System
- Safe change Bag in/Bag out arrangement for filters

# horiflo™

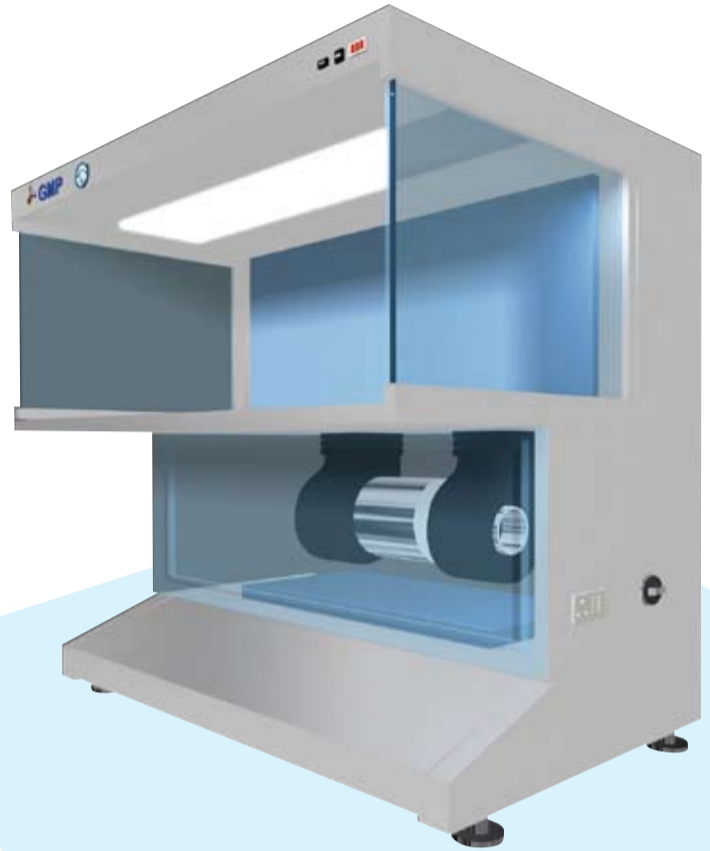
## Horizontal Laminar Air Flow Unit

**horiflo™** is designed for offering highest product protection by providing ISO Class 5 particle free work area for handling critical process. **horiflo™** offers proven protection for the samples and processes. The work area is continuously supplied with positive pressure HEPA filtered horizontal air flow.

Horizontal unidirectional airflow speed prevents contamination from operator and environment to workarea. The laminarity of the flow prevents cross contamination between the items handled in the working space.

**horiflo™** is suitable for the handling of non hazardous products, sensible to dust and/or to contamination such as injectable medicines, cell and tissue cultures, food sample preparation for sterility testing, sterile packaging and I.V. pharmacy preparations as well as micromechanics, optics, electronics.

**horiflo™** is available in powder coated Mild Steel, SS 304 / SS 316/ SS 316L or a combination of both.



### Standard Models

Model	Hepa Filter Area (L x W)	Work Area Dimension (L x W x H)
HF-36-24-24	915 x 610 MM	915 x 610 x 610 MM
HF-48-24-24	1220 x 610 MM	1220 x 610 x 610 MM
HF-48-24-30	1220 x 760 MM	1220 x 610 x 760 MM
HF-48-30-30	1220 x 760 MM	1220 x 760 x 760 MM
HF-72-24-24	1830 x 610 MM	1830 x 610 x 610 MM

**horiflo™** is with a variety of standard dimensions. Also our units can also be custom engineered to any size.

### General Specifications

Glass Side panels

Two Stage filtration

- EU6 – Prefilters (95% down to 5 micron)
- EU14 - HEPA Filter (99.999% down to 0.3 micron) at supply position

Statically & Dynamically balanced Motor-blower with suspension arrangement to reduce noise level

SS work table with due reinforcement

Fluorescent Lights with Milky White Diffuser

Differential Pressure Gauge : 1 No.

ON/OFF Switches

Clean Down Timer with Operation HOLD indicator

DOP Test Port

5/15 Amp Switch Socket for external equipment

### Operating Conditions

Air cleanliness : ISO Class 5 (ISO 14644-1:1999 (E))

Air Velocities : 0.45 ± 0.05 mps

Air Flow : Horizontal

Noise Level : Less than 67 dB

Vibration Level : Minimum

Light intensity : > 300 lux

POWER SUPPLY : 230V AC 1-Ø 50HZ

### Options and Accessories

A wide range of configurations to suit any containment application :

- Front doors (hinged/pneumatic cylinder)
- U. V. Light with Hour Meter
- Air / Gas Cock
- Night Mode Operation
- Filter blocked alarms (audible and visible)
- Velocity display with alarms (audible and visible)
- Explosion proof electrics for Flame-proof applications

# passthru™

## Static Pass Box

In pharmaceuticals manufacturing facilities it's essential to minimise man / material movement & avoid cross contamination between different classified areas to achieve desired classification & to maintain integrity of products & process.

**passthru™** is designed to allow material transfer without much personnel movement. It also aids controlling ingress of particulate contaminants into cleanroom & between different classified area.

**passthru™** is available in powder coated Mild Steel, SS 304 / SS 316/ SS 316L or a combination of both.

### General Specifications

- ✦ Double Walled Construction
- ✦ Doors with double walled flush glass view panels
- ✦ SS Handles & SS hinges
- ✦ Internal covings for easy cleaning
- ✦ Electro-magnetic Interlocking
- ✦ Door Release Switch on either side
- ✦ Indicator on either side

### Standard Models

Model	Work Area Dimension (L x W x H)
PT-18-18-18	450 x 450 x 450 mm
PT-24-24-24	610 x 610 x 610 mm

**passthru™** is with a variety of standard dimensions. Also our **passthru™** can be custom engineered to any size.

### Operating Conditions

POWER SUPPLY : 230V AC 1-Ø 50HZ

### Options and Accessories

A wide range of configurations to suit any application :

- Mechanical Interlocking
- Provision for ventilation with perforated grille
- U. V. Light with Hour Meter with interlocking arrangement to put-off U.V. Light if either door opens
- Three wall construction in case of floor mounting
- Floor mounted construction with three side wall structure & Door Drop Seal
- Support stand to mount the pass box
- Flange for sealing the gap between the pass box and the cleanroom wall



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# sterigar™

## Garment Storage Cabinet

**sterigar™** is designed to provide ISO Class 5 (Class 100) particle free work area to meet garment storage needs which avoids any particulate accumulation. The work area is continuously supplied with positive pressure HEPA filtered recirculated vertical / horizontal air flow.

### Standard Models

Model	Work Area Dimension (L x W x H)
SGV-36-24-60	915 x 610 x 1525 MM
SGV-36-24-72	915 x 610 x 1830 MM

**sterigar™** is with a variety of standard dimensions. Also our units can also be custom engineered to any size.

### General Specifications

Two Stage filtration

- EU6 - Prefilter (95% down to 5 micron) for return air & fresh air intake
- EU14 - HEPA Filter (99.999% down to 0.3 micron) at supply position

Statically & Dynamically balanced Motor-blower with suspension arrangement to reduce noise level

U. V. Light with Hour Meter with interlocking arrangement to put-off U.V. Light if either door opens

Differential Pressure Gauge : 1 No.

SS 304 Hanging Arrangement / SS 304 removable Shelves

SS 304 doors with double walled flush glass view panels

Heater with thermostat

ON/OFF Switches

DOP Test Port

5/15 Amp Switch Socket for external equipment



### Operating Conditions

Air cleanliness	: ISO Class 5 (ISO 14644-1:1999 (E))
Air Velocities	: $0.45 \pm 0.05$ mps
Air Flow	: Vertical / Horizontal (Based on application)
Noise Level	: Less than 67 dB
Vibration Level	: Minimum

POWER SUPPLY : 230V AC 1-Ø 50HZ

### Options and Accessories

A wide range of configurations to suit any containment application :

- Blower tripping alarms (audible and visible)
- Velocity display with alarms (audible and visible)
- Filter blocked alarms (audible and visible)
- Explosion proof electrics for Flame-proof applications

### Standard Models

Model	Work Area Dimension (L x W x H)
SGH-24-24-24	610 x 610 x 610 MM
SGH-24-24-36	610 x 610 x 915 MM
SGH-36-24-24	915 x 610 x 610 MM

**sterigar™** is with a variety of standard dimensions. Also our units can also be custom engineered to any size.



# sterijet™

## Air Shower

**sterijet™** is designed to supply Class 100 HEPA filtered air at high velocity to remove particulate matter from the person entering into the Clean Room.

Model	Work Area Dimension (L x W x H)
SJ-001	700 x 850 x 2000 MM
SJ-002	700 x 1200 x 2000 MM

**sterijet™** is with a variety of standard dimensions. Also our units can also be custom engineered to any size.

### General Specifications

Two Stage filtration

- EU6 - Prefilter (95% down to 5 micron) for return air & fresh air intake
- EU14 - HEPA Filter (99.999% down to 0.3 micron) at supply position

SS 304 doors with double walled flush glass view panels & door closer

Statically & Dynamically balanced Motor-blowers with suspension arrangement to reduce noise level for suction and booster

Differential Pressure Gauge : 1 No.

ON/OFF Switches

DOP Test Port

5/15 Amp Switch Socket for external equipment

Control Systems – to ensure that both the doors cannot open at the same time & to ensure that both the door will be locked during the time air flow is on.

Timer for setting Air Shower operation time (settable for 30 seconds to 5 minutes)

Emergency STOP

Straight Entry – Straight Exit / 90° Door Opening

Automatic as well as Manual Mode



### Operating Conditions

Air cleanliness	:	ISO Class 5 (ISO 14644-1:1999 (E))
Air Velocities	:	18 - 20 mps
Vibration Level	:	Minimum
POWER SUPPLY	:	415V AC 3-Ø 50HZ

# steripass™

## Dynamic Pass Box

**steripass™** is designed to allow material transfer through controlled environment without much personnel movement. It also aids controlling ingress of particulate contaminants into cleanroom & between different classified area.

**steripass™** is available in powder coated Mild Steel, SS 304 / SS 316/ SS 316L or a combination of both.

### General Specifications

- ✦ Two Stage filtration
  - EU6 – Prefilter (95% down to 5 micron)
  - EU14 - HEPA Filter – Supply (99.999% down to 0.3 micron)
- ✦ Statically & Dynamically balanced Motor-blower with suspension arrangement to reduce noise level
- ✦ Doors with double walled flush glass view panels
- ✦ SS Handles & SS hinges
- ✦ Internal covings for easy cleaning
- ✦ Electro-magnetic Interlocking
- ✦ Indicator on either side
- ✦ Door Release Switch on either side
- ✦ Differential Pressure Gauge : 1 No.
- ✦ On / Off Switch for Motor
- ✦ DOP Test Port

### Standard Models

Model	Work Area Dimension (L x W x H)
PT-18-18-18	450 x 450 x 450 mm
PT-24-24-24	610 x 610 x 610 mm

**steripass™** is with a variety of standard dimensions. Also our **steripass™** can be custom engineered to any size.

### Operating Conditions

Air cleanliness	: ISO Class 5 (ISO 14644-1:1999 (E))
Air Velocities	: 0.45 ± 0.05 mps
Air Flow	: Vertical - Recirculatory
Noise Level	: Less than 67 dB
Vibration Level	: Minimum
POWER SUPPLY	: 230V AC 1-Ø 50HZ

### Options and Accessories

A wide range of configurations to suit any application :

- Mechanical Interlocking
- U. V. Light with Hour Meter with interlocking arrangement to put-off U.V. Light if either door opens
- Floor mounted construction with three side wall structure & Door Drop Seal
- Support Stand to mount the pass box
- Flange for sealing the gap between the pass box and the cleanroom wall



# steritrans™

## Mobile Trolley

**steritrans™** is designed for transporting sterile products under ISO Class 5 (Class 100) particle free work area. The work area is continuously supplied with positive pressure HEPA filtered recirculated horizontal air flow.

Model	Work Area Dimension (L x W x H)
ST-24-24-24	610 x 610 x 610 MM
ST-24-24-36	610 x 610 x 915 MM

**steritrans™** is with a variety of standard dimensions. Also our units can also be custom engineered to any size.

### General Specifications

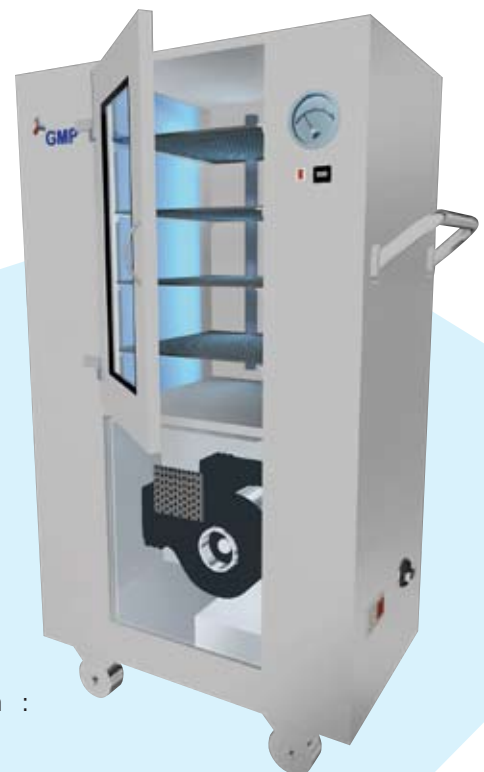
- ✦ Two Stage filtration
  - EU6 – Prefilter (95% down to 5 micron) for return air & fresh air intake
  - EU14 - HEPA Filter (99.999% down to 0.3 micron) at supply position
- ✦ Statically & Dynamically balanced Motor-blower with suspension arrangement to reduce noise level
- ✦ Differential Pressure Gauge : 1 No.
- ✦ SS 304 removable Shelves
- ✦ SS 304 doors with double walled flush glass view panels
- ✦ SS 304 handle for mobility
- ✦ Battery back-up with inverter for 30 mins
- ✦ PU coated Lockable castor wheels
- ✦ ON/OFF Switches
- ✦ DOP Test Port

### Operating Conditions

Air cleanliness : ISO Class 5 (ISO 14644-1:1999 (E))  
 Air Velocities :  $0.45 \pm 0.05$  mps  
 Air Flow : Horizontal  
 Noise Level : Less than 67 dB  
 Vibration Level : Minimum  
 POWER SUPPLY : 230V AC 1-Ø 50HZ

### Options and Accessories

- A wide range of configurations to suit any containment application :
- Velocity display with alarms (audible and visible)
  - Filter blocked alarms (audible and visible)
  - Explosion proof electrics for Flame-proof applications
  - Blower tripping alarms (audible and visible)



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# sterireverse™

## Reverse Laminar Air Flow Unit

**sterireverse™** is designed for providing highest level of protection from airborne contaminants generated during powder handling operations such as sampling, charging & dispensing.

**sterireverse™** provides :

- Operator Protection
- Product Protection
- Environment Protection

The downflow booth operates on a recirculatory airflow principle providing containment by air movement.

A clean, constant, laminar downflow of Class 100 air is supplied in workarea suppressing any dust clouds generated during open powder processing, removing and capturing airborne particles from the operator's breathing zone.

The Prefilters at the base of the rear wall capture the airborne contaminants generated. Intake velocity at prefilters increases to ensure scavenging effect.

A small percentage of air is discharged from the booth through the bleed exhaust HEPA filter to maintain the working space under negative pressure.

**sterireverse™** is available in powder coated Mild Steel, SS 304 / SS 316 / SS 316L or a combination of both.



### Standard Models

Model	Hepa Filter Area (L x W)	Work Area Dimension (L x W x H)
STRV-48-36	1220 x 915 MM	1220 x 915 x 2135 MM
STRV-48-48	1220 x 1220 MM	1220 x 1220 x 2135 MM
STRV-72-48	1830 x 1220 MM	1830 x 1220 x 2135 MM
STRV-72-72	1830 x 1830 MM	1830 x 1830 x 2135 MM
STRV-96-72	2440 x 1830 MM	2440 x 1830 x 2135 MM

**sterireverse™** is with a variety of standard dimensions. Also our booths can be custom engineered to any size.

### General Specifications

- ✦ Triple Stage filtration
  - EU4 - Prefilters (90% down to 10 micron)
  - EU7 - Intermediate Filter (95% down to 3 micron)
  - EU14 - HEPA Filter - Supply / Exhaust (99.999% down to 0.3 micron)
- ✦ Statically & Dynamically balanced Motor-blower with suspension arrangement to reduce noise level
- ✦ Double skin puff filled side panels
- ✦ Horizontal internal Covings at base
- ✦ Fluorescent Lights with Milky White Diffuser
- ✦ Differential Pressure Gauges : 3 Nos.
- ✦ ON/OFF Switches
- ✦ Clean Down Timer with Operation HOLD indicator
- ✦ DOP Test Port
- ✦ 5/15 Amp Switch Socket for external equipment

### Operating Conditions

Air cleanliness : ISO Class 5 (ISO 14644-1:1999 (E))  
 Air Velocities : 0.45 ± 0.05 mps  
 Air Flow : Vertical - Recirculatory  
 Noise Level : Less than 67 dB  
 Vibration Level : Minimum  
 Light intensity : > 300 lux  
 POWER SUPPLY : 230V AC 1-Ø 50HZ / 415V AC 3- Ø 50HZ

### Options and Accessories

A wide range of configurations to suit any containment application :

- Double skin side panels with view windows
- Stainless steel perforated grille for HEPA Filter
- Front Anti Static PVC Curtains (for warehouse applications)
- Front doors (hinged/sliding/rapid roller)
- SS Stand alone table for keeping Weighing Scale
- Sodium Vapor Lamps
- Night Mode Operation
- Velocity display with alarms (audible and visible)
- Filter blocked alarms (audible and visible)
- Explosion proof electrics for Flame - proof applications
- PLC based Control System
- Once-through airflow systems
- Safe change Bag in / Bag out arrangement for filters

# vertiflo™

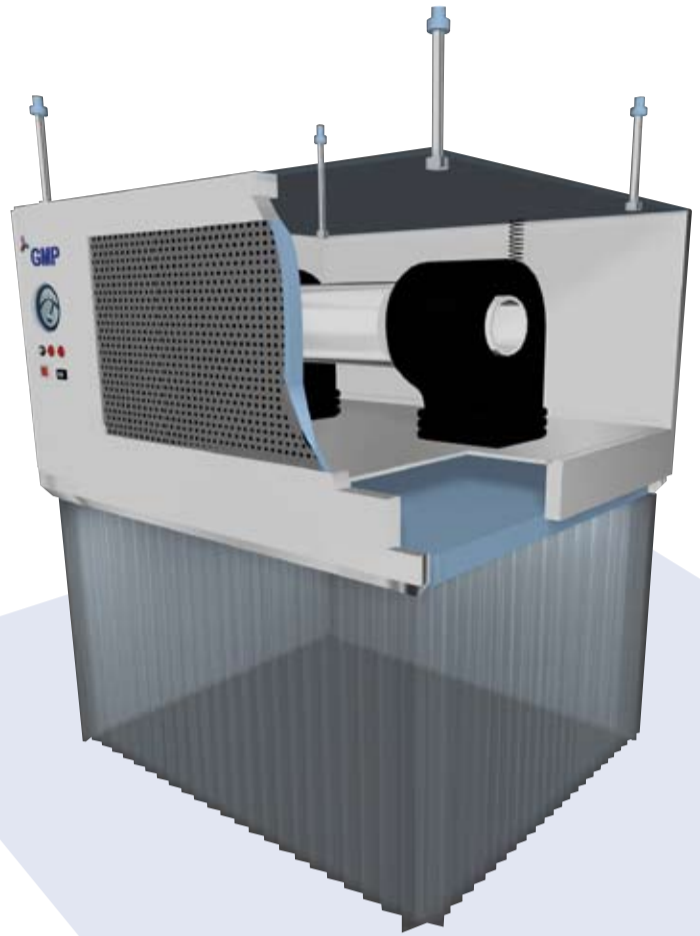
## Vertical Laminar Air Flow Unit

**vertiflo™** is designed for offering highest product protection for samples and processes by providing ISO Class 5 particle free work area. **vertiflo™** offers proven protection for the samples and processes. The work area is continuously supplied with positive pressure HEPA filtered Vertical air flow.

Vertical unidirectional airflow prevents contamination from operator and environment to workarea. The laminarity of the flow prevents cross contamination between the items handled in the working space.

**vertiflo™** is suitable for the handling of non hazardous products, sensible to dust and/or to contamination wherever operator protection is not required.

**vertiflo™** is available in powder coated Mild Steel, SS 304 / 316 / 316L or a combination of both.



### Standard Models

Model	Hepa Filter Area (L x W)	Work Area Dimension (L x W x H)
CSVF-48-24	1220 x 610 MM	1320 x 760 x 685 MM
CSVF-36-24	915 x 610 MM	1015 x 760 x 685 MM

**vertiflo™** is with a variety of standard dimensions. Also our booths can be custom engineered to any size.

### General Specifications

- ✦ Two Stage filtration
  - EU6 – Prefilter (95% down to 5 micron)
  - EU14 - HEPA Filter (99.999% down to 0.3 micron) at supply position
- ✦ Statically & Dynamically balanced Motor-blower with suspension arrangement to reduce noise level
- ✦ SS work table with due reinforcement
- ✦ Glass side panels
- ✦ Fluorescent Lights with Milky White Diffuser
- ✦ Differential Pressure Gauge : 1 No.
- ✦ ON/OFF Switches
- ✦ Clean Down Timer with Operation HOLD indicator
- ✦ DOP Test Port
- ✦ 5/15 Amp Switch Socket for external equipment

### Operating Conditions

Air cleanliness : ISO Class 5 (ISO 14644-1:1999 (E))  
 Air Velocities : 0.45 ± 0.05 mps  
 Air Flow : Vertical  
 Noise Level : Less than 67 dB  
 Vibration Level : Minimum  
 Light intensity : > 300 lux

POWER SUPPLY : 230V AC 1-Ø 50HZ

### Options and Accessories

A wide range of configurations to suit any containment application :

- Front doors (hinged/pneumatic cylinder)
- U. V. Light with Hour Meter
- Air / Gas Cock
- Night Mode Operation
- Velocity display with alarms (audible and visible)
- Filter blocked alarms (audible and visible)
- Explosion proof electrics for Flame-proof applications



### Standard Models

Model	Hepa Filter Area (L x W)	Work Area Dimension (L x W x H)
SMVF-36-30-30	915 x 610 MM	915 x 760 x 760 MM
SMVF-48-30-30	1220 x 610 MM	1220 x 760 x 760 MM
SMVF-60-30-30	1525 x 610 MM	1525 x 760 x 760 MM
SMVF-72-30-30	1830 x 610 MM	1830 x 760 x 760 MM

**vertiflo™** is with a variety of standard dimensions. Also our booths can be custom engineered to any size.

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