



Industrial System

Laminar Flow solutions
for Industry



LABORATORY AND
INDUSTRIAL EQUIPMENT

LAMINAR AIR FLOW BOOTHS

Laminar flow areas (Class ISO 5 - EN ISO 14664-1)

FASTER Unit modules are Vertical Laminar Flow units providing Class ISO 5 according to ISO 14644-1.

These units can be supplied as stand alone or joined together to build up bigger areas. These LAF modules can be fixed on stainless steel legs (with castors or feet) or suspended from the ceiling. Room air is drawn in from the G4 side prefilters by means of a centrifugal fan which is then pushing the air through the H14 filter generating laminar flow conditions and clean air.

Aluminum grids help to equalize the airflow under the modules.

Tailor made units can be realized to cover drug-making pharmaceutical machines and/or filling lines to guarantee the sterility of the products.

PVC strips are normally used to provide perimetral containment and guarantee optimum efficiency of laminar airflow.



MAIN BENEFITS

- **Full body** manufactured in aisi 304l stainless steel with scotch brite pharmaceutical-grade finishing.
- **Anodized** aluminum filter protective grid.
- **Prefiltration stage** consisting of **G4** prefilter in an aisi 304l stainless steel perforated panel.
- **Filtration stage** consisting of main **H14** hepa filter certified low pressure drop with typical efficiency of 99.995% mpps according to cen en 1822.
- **Filters** replacement from the bottom (br series).
- Improved **bag plenum design** for better **air flow diffusion** and **lower noise level**.
- **Dynamic tightness conforming to GMP requirements** to prevent risks of possible contaminated external air by-passing filter.
- **Outlet for DEHS** filter integrity test.
- **Ventilation** is provided by double inlet centrifugal ac motorblower.

OPTIONAL

- Side filter replacement (SR)
- LED lights
- Telescopic legs
- Automatic air flow speed regulation with digital display
- Integrated or external stainless steel control box
- Stainless steel diffusing grid
- Remote main controls (on/off, light, half speed) integrated in stainless steel leg
- Stainless steel blind panels or fitted with manometer
- Cooling coil
- Polycarbonate side panels in replacement of PVC strips
- DC motor blowers



DIMENSIONS

(useful internal WxDxH):

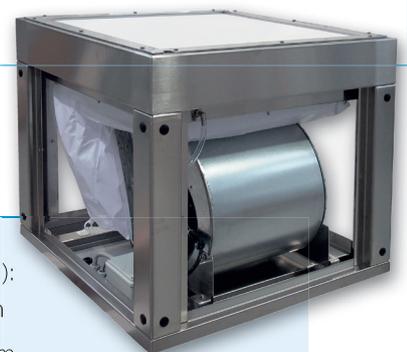
FU 22 680x680x600 mm

FU 24 1360x680x600 mm

FU 33 1000x1000x600 mm

FU 34 1360x1000x600 mm

Custom dimensions and special internal arrangement are available upon request.



CROSS FLOW UNITS

Powder Containment units (Class ISO 5 - ISO 14644-1)

FASTER Cross Flow Units (CFU) are designed to control the risk of powder contamination and reduce operator exposure when performing activities with powders and volatile substances. Such equipment are indeed used for weighing, dosing or sampling of powders, which are normally carried out in chemical-pharmaceutical, cosmetic or powder food production processes. The basic working principle is an air flow entering from the front and providing a slight negative pressure which isolates the booth from the surrounding area, eliminating any risk of contamination towards the external environment. The air drawn up by the motor blowers is then partially pushed on the H14 filters generating laminar flow conditions and partially exhausted via another H14 filtration level.



DIMENSIONS

(useful internal WxDxH):

MINI 1000x1000x2200 mm; 1000x1500x2200 mm

MEDIUM 2000x1500x2200 mm; 2000x2000x2200 mm

LARGE 3000x2000x2200mm; 4000x2000x2200 mm

Custom dimensions and special internal arrangement are available upon request.

OPTIONS AVAILABLE

- Cooling coil Kit (for temperature control inside the work space)
- External stainless steel control box
- Bag in/Bag out prefilters
- ATEX components
- EX certifications

MAIN BENEFITS

- **Full body** manufactured in AISI 304L stainless steel with Scotch Brite pharmaceutical-grade finishing.
- **Filtration** is provided by H14 HEPA/ULPA filter with typical efficiency of 99.995 % MPPS according to CEN EN 1822 both for downflow and exhaust with protective aluminum grids. Prefiltration stage consisting of G3 filtration cells fitted with a quick-release system and F9 dihedral bag filters according to EN 779.
- **Ventilation** is provided by high efficiency electronically commutated (ECM) double inlet motor blowers DDTAC type.
- **Bag plenum** made of textile material for superior air diffusion and low noise level.
- **Pressure control** is provided by electronic output in addition to the standard analogic visualization by means of Dwyer manometers.
- **Side containment** provided by means of PVC strip curtains or stainless steel side walls.



CLEAN FLOW BOOTH

Class ISO 6, ISO 7 - EN ISO 14664-1

These clean air enclosures provide Class ISO 6 or ISO 7 according to ISO 14644-1.

In fact there are cases where an ISO 5 cleanliness level is over: typically in productions areas to confine an area in clean environment.

Such structures are using a less number of modules compared to ISO 5 areas as the requirement is just for clean air and not laminar flow. These structures are supported by stainless steel legs while the ceiling is covered with polycarbonate panels where a module is not present.

Room air is drawn in from the G4 top prefilters by means of a radial fan which is then pushing the air through the H14 filter generating clean air.

Aluminum grids help to equalize the airflow under the modules.

PVC strips are normally used to provide perimetral containment.



MAIN BENEFITS

- Full body manufactured in AISI 304L stainless steel with Scotch Brite pharmaceutical-grade finishing.
- Anodized aluminum filter protective grid.
- Prefiltration stage consisting of G4
- Filtration stage consisting of main H14 HEPA filter certified low pressure drop with typical efficiency of 99.995% MPPS according to CEN EN 1822.
- Ventilation is provided by radial DC motorblower.

OPTIONAL

- LED lights
- Automatic air flow speed regulation with digital display
- Integrated or external stainless steel control box
- Stainless steel diffusing grid
- Remote main controls (on/off, light, half speed) integrated in stainless steel leg
- Stainless steel blind panels or fitted with manometer
- Polycarbonate side panels in replacement of PVC strips



AIR SHOWERS

Clean Room Dust Removal Systems (Class ISO 5 - ISO 14644-1)

Frequently used in dust free environments such as micro-electronics, semiconductor production or spray-painting areas or pharmaceutical environments, **FASTER air showers** are used to remove dust from the outer surfaces of operators' garments and clothing before entering or leaving a contamination controlled environment (cleanroom).

The air, pushed downwards and re-circulated via a G3 prefilter is then pulled upstream and pushed through the H14 HEPA/ULPA filter before being blown into the chamber by means of air nozzles installed in the ceiling and the two internal sides. The resulting clean air inside the unit is in Class ISO 5 quality according to ISO 14644-1 Standard.

Analogic Dwyer manometer to check the differential pressure on the filter face.



Air-nozzles made in aluminum with internal damper to regulate the air flow outlet.



MAIN BENEFITS

- **Full body** Full body manufactured in AISI 304L stainless steel with Scotch Brite pharmaceutical-grade finishing.
- **Filtration** is provided by H14 HEPA/ULPA filter with typical efficiency of 99.995 % MPPS according to CEN EN 1822 and a prefiltration stage made of G3 prefilter according to EN 779.
- Access for filter replacement is from the inspection panel mounted on top of the unit while prefilter panels, fitted with a quick-release system (no screw driver needed), can be replaced from the inside of the air shower.
- **Ventilation** is provided by a double inlet centrifugal fan with nominal air flow rate of 2.400 m³/h at an operational pressure of 1.600 Pa.
- **Doors** are manufactured in stratified safety glass of 10 mm thickness flush mounted with the body of the unit and frameless for superior lighting and higher finishing, installed one in front of the other or angled; an interlocked electromagnetic system allows the opening at the end of each dust removal cycle.
- **Handle bars** made of AISI 316 stainless steel.
- **Pressure control** is provided by means of analogic Dwyer manometer to check the differential pressure on the filter face.
- **Air is blown** by means of orientable nozzles into the main chamber. The nozzles are made of aluminum with internal damper to regulate the air flow outlet.
- **Half speed** is activated automatically at the end of each cycle.
- **LED indicators** are fitted as standard (blue, green, red) either on the external and internal clean side
 - Blue LED on: CYCLE IN PROGRESS
 - Red LED on: DOOR OPENING NOT POSSIBLE
 - Green LED on: DOOR OPENING POSSIBLE
- **3 Emergency stop buttons** are fitted as standard: one on the outer surface of the dirty side, one on the outer surface of the clean side and one in the main chamber).

DIMENSIONS

(useful internal WxDxH):

SINGLE 1180x940x2050 mm

DOUBLE 1600x980x2050 mm

Custom dimensions and special internal arrangement are available upon request.

OPTIONS AVAILABLE

- Construction fully made of AISI 316 stainless steel
- Automatic entry controls (badges, cards, codes etc.)
- Elevated footboard
- Air ionizer

Mobile LAF Trolleys

Horizontal Laminar Flow Trolleys (Class ISO 5 - ISO 14644-1)

FASTER LAF trolleys are generally used for the storage and the transfer of products (sensitive to contamination) which are generally loaded on the LAF trolley right out of the autoclave and moved through areas with different cleanliness level. These units are equipped with a dry UPS on-board battery to maintain the laminar flow conditions inside the LAF trolley at all times. The battery level is monitored by a charge indicator.

The self-powered unit provides a laminar air flow conditions in Class ISO 5 (ISO 14644-1) blown horizontally from the filter towards the loading door, thus sweeping through the area where the products are stored (over the shelves and trays), maintaining a constant positive pressure within the transfer trolley and thereby eliminating the possibility of any cross contamination.



DIMENSIONS

(useful internal WxDxH):

540x685x580mm

660x1030x928mm

900x1140x1270mm

900x1140x1190mm.

Custom dimensions and special internal arrangement are available upon request.

MAIN BENEFITS

- **Full body** manufactured in AISI 304L stainless steel with Scotch Brite pharmaceutical-grade finishing.
- **Filtration** is provided by a G4 prefilter according to EN 779 fitted on stainless steel cell with quick release system (no screws needed to remove the panel) and low pressure drop H14 HEPA/ULPA filter with typical efficiency of 99.995 % MPPS according to CEN EN 1822.
- **Ventilation** provided by energy efficiency low power consumption EBM Papst motorblower.
- **Dry battery UPS** recovery pack with a capacity of 30minutes starting from full charge status and fitted with a charge indicator (UPS must be plugged for recharging anytime in order to keep it always close to full charge level).
- **Castor wheels** with brakes are fitted as standard
- **Side and top visor** are made of stainless steel or safety glass as per customer request.
- **Stainless steel internal shelves** to slide in trays unloaded from the autoclave (trays not included in standard package, total number of shelves depends on the internal useful height and may vary upon customer request).
- **Front and rear resin handle bars** to help operator while moving the trolley from one place to another.
- **Front door hinged or removable** with closing handle.

OPTIONAL

- Automatic air flow speed regulation with digital anemometer and LCD display
- Stainless steel internal shelves
- Double UPS dry battery package.
- Sliding side windows for access into the chamber.
- Internal removable rails for autoclave connection.
- Two columns of trays to increase shelves housing.



Handle bars and frontal hinged stainless steel panel



Dry battery UPS recovery pack

PASS BOXES

Material Transfer Hatches (Class ISO 5 - EN ISO 14644-1)

FASTER transfer hatches are laminar flow equipment commonly known as pass boxes which provide a clean environment in Class ISO 5 in accordance to ISO 14644-1 and separating physically and dynamically two areas classified with different air cleanliness. These units can in positive or negative pressure with respect to the surrounding environment.

The pressure set up and operational mode mostly depend on the lay-out of the clean room or on specific standard requirements. Possible options of working principles are

- **Positive steps of pressure:** the inside pressure is higher than the "not clean side" and lower than the "clean side".
- **Overpressure:** the inside pressure is higher than both "not clean side" and "clean side".
- **Well of pressure:** the inside pressure is lower than both "not clean side" and "clean side area".



MAIN BENEFITS

- **Full body** manufactured in AISI 304L stainless steel with Scotch Brite pharmaceutical-grade finishing.
- **Filtration** is provided by low pressure drop H14 HEPA/ULPA filter with typical efficiency of 99.995 % MPPS according to CEN EN 1822.
- **Internal surfaces:**
 - 4 segments work surface made of AISI 304L stainless steel with 5 mm holes for superior laminar flow;
 - drain pan under work surface in AISI 304L stainless steel;
 - equalizer diffuser grid made in anodized aluminum.
- **Front doors** are made of 10mm thickness safety glass and fitted with electro-magnetic interlock system.

Perforated work surface with 5 mm holes for perfect laminar flow shape made AISI 304 L stainless steel.



DIMENSIONS

(useful internal WxDxH):

600x600x600 mm

800x800x1000 mm

1000x1000x1000 mm

Custom dimensions and special internal arrangement are available upon request.

OPTIONAL

- Passive transfer hatch (no ventilation)
- UV light
- Software and fittings for integration with Hydrogen Peroxide generators



Passive transfer hatch (no ventilation) with UV light sanitizing cycles.



We know how important safety and cleanliness are for industries dealing with products or processes which are sensitive to contamination or needing clean and dust free environments.

With its range of Industrial systems FASTER is able to meet such needs offering a variety of equipment like: laminar air flow booths, cross flow units, clean flow booths, air showers, mobile LAF trollies, pass boxes.



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Striving everyday to improve our environmental performance, FASTER developed environmental procedures are founded on three guiding principles:

- Protect the Environment for present and future generations manufacturing low energy consumption equipments
- Reduce risks and improve efficiencies
- Introduce improved technology and processes

