

# LAMINAR MODULAR SYSTEM WITH VERTICAL AIRFLOW

Laminar modular system can be used anywhere where it is necessary to perform working operations in a dust-free environment for example in health care system, pharmaceuticals, precision mechanics, optics, electronics, etc.

Individual modules can be assembled in rows creating continual working spaces with laminar airflow above work desks or technological lines. The work line is thus protected from particle and bacterial contamination.

- Fully automatic operation controlled by a microprocessor unit providing optimal parameters of the laminar airflow in working areas
- Low acquisition costs when compared with the typical clean room
- Using maintenance-free fans, which provide maximum reliability even during non-stop operation
- Assembly form enabling transport of the device through standard access routes
- Upon request the modular system can be made mobile
- In case of replacing the technology, the elements can be re-used for covering another technology



## DESIGN

The module is equipped with a fan featuring an electronically-controlled electric engine. The fan revolutions are controlled by a microprocessor unit, which monitors the laminar flow velocity for each module separately and maintains the module in the programmed value. The monitored velocity is at the same time shown on the control unit display located on the portal control panel.

The standard velocity of the portals delivered is programmed to 0.45 m/s. Upon request, the velocity can be adjusted within the range of 0.2 to 0.6 m/s. A service engineer can make this programmed adjustment upon request also to a portal already delivered or in operation.

Modules are equipped with high-capacity fans with continuous automatic regulation of revolutions. This enables long-term maintenance of the required airflow velocity with high preciseness, despite gradual sedimentation of the filter, and thus optimal use of the module's maximum service life is possible.

The module sheath is made from zinc-coated metal sheet, whose exterior side is coated with polyester enamel, shade RAL 9010. A high-quality silencer guarantees silent operation. The air is filtered with a filtration element - in standard version with the filtration class H13 (HEPA), upon request a higher filtration class can be implemented. The frame is made from steel closed sections equipped with powder stoving enamel of a high chemical resistance.

## ACCESSORIES

- **Plastic lamellar curtains** - The assembly of laminar modules may be delimited along its perimeter with overlapping plastic lamellar curtains (lamella width 200 mm, thickness 2 mm).
- **Lighting** - Light in the working area is provided both from the outside through plastic curtains and by fluorescent lamps placed under the front panel of the portal.
- **Mobile version** - Upon request, the module system PORTAL 2, 3 and 4 can be made as mobile.
- **Stainless steel version** - Upon request the module system can be made as stainless steel.

We produce standard dimensions lines. In addition to standard variant we solve other sizes and dimensions of laminar module. **Individual modules can be join to dimensionally complex assembly** (technological line). The basis for the composition of the assembly is module with area **1160x565** or **1560x565**.

For walk-through height 2000 mm is total height 2600 mm. At the request is possible to deliver PORTAL with other height. Height depends on requirement height of workspace (approximate calculation: height workspace + 600 mm)

Due to the fact, that **device is supplied to order**, it is possible to respond to the **specific needs and requirements**. That can be technical (fixed wall, special holders, folding shelf, pole for drying, ...), and aesthetic character (color adjustment, ...). If you would like we help you with specification.



Modular system for covering technological devices which are sensitive to particle/microbiological contamination FBB 120-PORTAL (ISO CLASS 3-8/ GMP A-D)

## TECHNICAL DATA

<b>Cleanliness class</b>	
US FS 209 E	100 (M 3, 5)
EN ISO 14644-1	ISO Class 3-8
EC GMP Volume 4, Annex 1	A-D
<b>Other parameters</b>	
Supply voltage	230V/50 Hz (power from 2 KW) 400V/50 Hz (power from 2 KW)
Air flow rate *	0,45 m.s-1 ± 0,05
Noise level in workspace	max. 53 dB(A)
Noise level in environment	max. 55 dB(A)
Light intensity	min 700 lx
Socket maximal power input	1000 W
Filter efficiency **	HEPA H14

\* programmable within the range of 0,20 až 0,60 m..s-1

\*\* at the request can be used ULPA

FOR MORE INFORMATION OR QUESTION VISIT OUR WEBSITES [WWW.LABOX.CZ](http://WWW.LABOX.CZ) OR COTACT US ON [obchod@labox.cz](mailto:obchod@labox.cz) AND ALSO AT SEVERAL OTHER CONTACT INFORMATION LISTED ON OUR WEBSITE

- Production of laminar flow cabinet
- Design and supply of clean room
- Development and supply of component for clean rooms
- Measurement and validation laminar flow cabinet, clean rooms and hot air sterilisers
- Calibration of particle counter
- Installation of continuous oring
- Service (facility management)



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