VERTICAL LAMINAR FLOW CABINET

STERIL POLARIS – CLASS ISO 3

Introduction

They are used in all those situations in which it is necessary to protect the product from harmful effects deriving from the uncontrolled diffusion of airport contaminants during its handling.
Since these are not biological safety cabins, they CANNOT be used for handling pathogens.

Applications

It is used in the laboratories of Microbiology, Virology, Haematology, Cell cultures; is increasingly used in innovative research fields and in particular for the handling in sterility of:
• Non-pathogenic cell cultures
• Quality control in the pharmaceutical and food industry
• Micromechanical assemblies

Definition

The POLARIS model cabins produced by ALS are defined as: Vertical Laminar Flow as they are able to satisfy the performances described in the previous paragraph. Class ISO 3 according to EN 14644-1 standards

Performance

• Product protection: sterility of the working area above ISO class 3 according to EN 14644-1

Specifications

- ✓ **External structure in epoxy powder coated cold-rolled steel** for excellent corrosion resistance to the attack by aggressive common chemicals
- ✓ **Rear wall in epoxy coated steel**, designed to conform to requirements and pass the “cleanability test”
- ✓ **Work surface in stainless steel AISI 304L** fixed in one piece
- ✓ **Front window:** Stratified hinged safety glass to give easy access to large items. It is provided with gas springs to keep it open during maintenance or sanitization operations
- ✓ **Filtration:** H14 HEPA/ULPA filter with an efficiency better than 99,995 % MPPS (EN-1822)
- ✓ **Prefiltration:** Inlet G3 pre-filter efficiency 80≤AM≤90 according to EN 779 and UNI 10339
- ✓ **Operation Condition:** Air cleanliness in Class ISO 3 as per ISO EN 14644-1
- ✓ **Motor blower:** direct coupled fan, electronic controlled to maintain a constant LAF of 0,45m/sec, and compensate for a partially clogged filter up to a maximum plenum pressure of 40 mm of water
- ✓ **Servicing side glass with ports** for service taps installation
- ✓ **The user-friendly practical keyboard** and the rear-lit LCD (optional) will continuously display all required data keeping the user constantly informed of the cabinet conditions in operation, and in particular:
- ✓ display of laminar airflow velocity
- ✓ display of inside and outside temperature
- ✓ display of residual lifetime of HEPA/ULPA filter, UV Lamp.
- ✓ display of total number of hours of operation
- ✓ display of saturation level of HEPA/ULPA filter
- ✓ Audio-visual alarms (optional) provided for:
- ✓ out of range or incorrect laminar airflow velocity
- ✓ front window opened
- ✓ clogging of HEPA/ULPA filter
- ✓ end of lifecycle of UV lamp
- ✓ fan-motor malfunction
- ✓ power failure
- ✓ **Lighting:** fluorescent tubes in built-in housing, placed outside the sterile area.
- ✓ **D.O.P.-DEHS** inlet port for testing the HEPA/ULPA filters
- ✓ **Magnetic and removable UV sterilizing lamp** (optional) that can be easily placed in each area of the back wall. It is completed with two switch-off countdown timers, one variable on a 0-3 hours scale (1-minute steps), the other set to 3 fix

Testing

Each cabin is individually tested at the quality department of our production site with certified instrumentation in SIT centres and in accordance with internal procedures included in the ISO 9001 quality manual. Upon request, it is possible to carry out "VALIDATION TESTS" on site with PROTOCOLS IQ. and / or OQ.

Standard equipment

- Work top in AISI 304L stainless steel with blind top in a single indivisible sector
- Power socket (2 sockets for models 60 and 72)
- Perforated side windows
- 100% DEHS port

Accessories

- Floor stand
- Gas / vacuum / air / nitrogen / water taps
- Chest of drawers on wheels,
- UV lamp to be positioned on the front closing panel in stainless steel
- Additional power outlets

Maintenance

The filters are replaced from the rear of the booth and any extraordinary maintenance operations (checking the electronic card, replacing fluorescent lamps) are carried out from the front.

Technical data

Description	**Unit**	**POLARIS 36**	**POLARIS 48**	**POLARIS 60**	**POLARIS 72**
Code		**14622**	**14623**	**14624**	**14625**
External dimensions WxDxH	mm	1045x760x1500	1350x760x1500	1655x760x1500	1960x760x1500
Internal dimensions WxDxH	mm	893x609x755	1198x609x755	1503x609x755	1808x609x755
Frontal working aperture	mm	250			
Weight	kg	185	192	274	325
Noise	dB(A)	<	<60	<60	<60
Electrical data		230V / 1 + T / 50Hz			
Power	kW	0.9	0,9	1,4	1,4

Product name	**POLARIS** series. STERIL™ brand is full property of Angelantoni Group
Manufacturer	Angelantoni Life Science S.r.l. Loc. Cimacolle, 464 06056 Massa Martana (PG) - Italy
Voltage	208 – 253 VAC 50 Hz
Environmental conditions - operations	Temperature: +2° ~ +50° C RH%: 30 ~ 85% without condensation
Environmental conditions - storage	Temperature: +2° ~ + 50° C RH%: 20 ~ 80% without condensation
Alarms	Acoustic and visual
In case of black-out	System shuts down
Warranty	12 (twelve) months