

CLASS II A2 BIOSAFETY CABINET

Model BSC-IIA2-HIGH END

Class II biological safety cabinet in accordance with EN 12469. Meets the main requirements of NSF/ANSI 49, JIS K3800 and SFDA YY-0569.

Protection of the user, the environment and the sample when working with biological agents at biosafety levels 1, 2 and 3

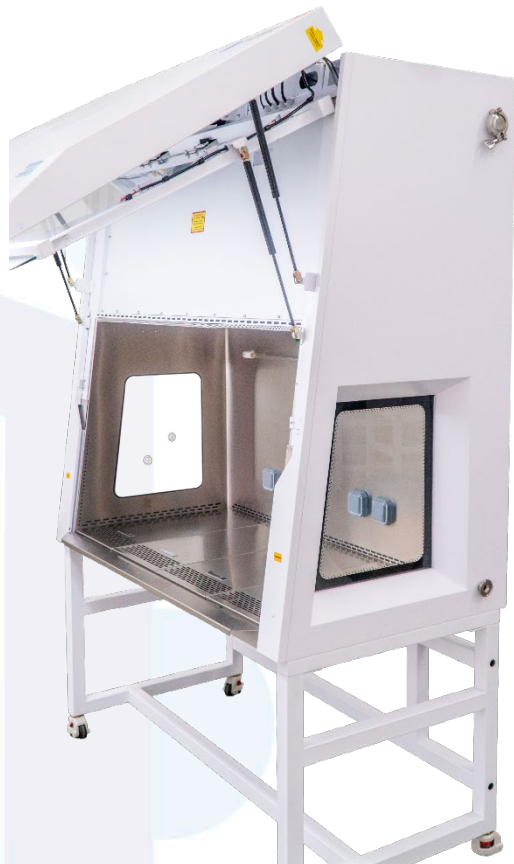
Features

AIR:

- Partial air recirculation in accordance with applicable standards: 30% exhaust and 70% recirculation.
- The work area maintains laminar airflow conditions with ISO 4 air cleanliness (per EN ISO 14644) or Class 10 (per Fed. Std. 209).
- Recirculated air is filtered through a ULPA U15 absolute filter (99.9995% efficiency at MPPS) or a HEPA H14 filter (99.995% efficiency at MPPS), in accordance with EN 1822, and is delivered to the work area at a velocity between 0.25 and 0.50 m/s (per EN ISO 14644).
- Air exhausted to the outside is filtered through a separate, dedicated ULPA U15 or HEPA H14 absolute filter in accordance with EN 1822.
- Protective air barrier at the work opening with a velocity above 0.50 m/s.

CONSTRUCTION:

- Work area made of AISI 304 stainless steel. Optional: AISI 316L.
- The cabinet has a depth of 795 mm, making it easy to pass through doorways to its installation site.
- Sliding front sash with alarm position. Raised and lowered manually or electronically. Anti-pinch function with obstacle detection when closing the sash.
- 6 mm safety glass sash with UV protection and anti-reflective coating, tilted up to 10° for better sample visibility and a full view of the entire work surface.
- Glass sash with special guide for improved sealing and safer sliding.
- Allows full opening of the work area with an extra height of 750 mm, making cleaning easier and allowing access for large equipment. ** See dimensions of the extra-height model.
- Alarms for detecting faults in the supply air system, the negative-pressure protective barrier and door opening, with voice and/or visual on-screen alerts.



High End cabinet with standard stand

- Microprocessor-controlled cabinet with updatable FLASH memory, touch panel, and easy-to-read control parameters (velocities, airflow rates, plenum pressure, exhaust barriers, humidity, temperature, etc.). Security PASSWORD.
- Pre-installation for decontamination with Vaporized Hydrogen Peroxide (VHP)
- Adjustable white LED lighting, UV-free.
- Operating voltage 110-220 V, 50/60 Hz. Maximum current consumption 3 A (approx. 450 W).
- The cabinet interior includes a UV light and 2 IP 55 electrical sockets (110-220 V), each rated for 1,000 W (2,000 W in total).



Advantages

Information and Control

- ❖ PLC able to record laminar airflow velocity, barrier and error alarm data at control level.
- ❖ Work area equipped with an air velocity sensor for real-time monitoring.
- ❖ Automatic air velocity adjustment.
- ❖ Independent control for gas solenoid valve.



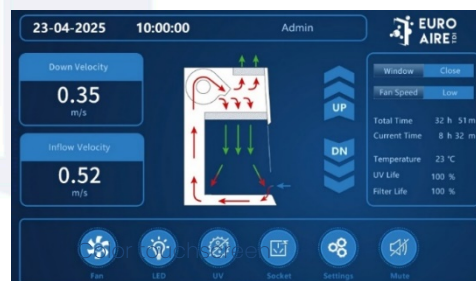
Internal air velocity probe for monitoring.

Safety

- ❖ Sliding front sash that can be raised or lowered manually or electronically, so the cabinet can be opened or closed in the event of a power failure or a user emergency.
- ❖ Anti-pinch function: detects obstacles (hands, objects, etc.) when the sash closes.
- ❖ Internal interlock function: UV lamp and front sash; UV lamp and fan; white LED lamp; fan and front sash.
- ❖ The UV lamp will not operate while the sash is raised.
- ❖ User profiles with different access permissions: administrator, operator or technician.
- ❖ Configurable start-up password – prevents unauthorized personnel from operating the unit incorrectly.
- ❖ Timer function – automatically sets the cabinet's start and shutdown times and the operating time of the UV lamp, fans and sockets, reducing the unit's start-up time.
- ❖ Power-off memory function – after switch-on, the unit restores the state it had before it was switched off. Indicated by a visual alarm.

Ease of use

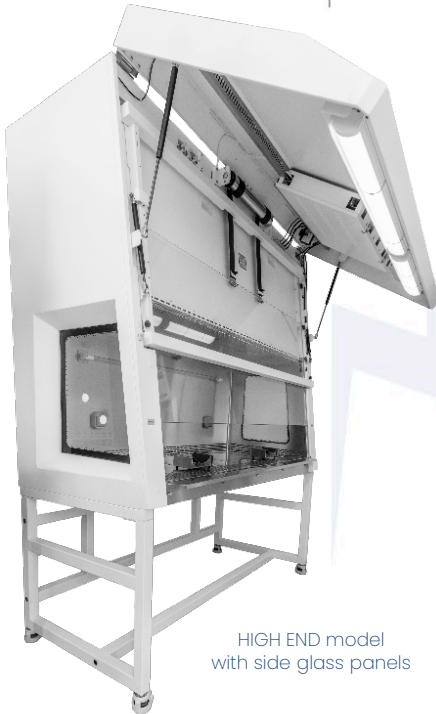
- ❖ 7-inch color touchscreen displaying the cabinet's parameters in real time, in a clearer and more dynamic way.
- ❖ Audible and color-coded indications that make data and alarms faster and more intuitive for the user to interpret.
- ❖ New development to connect and integrate gas taps with their solenoid valve from the control panel, if these accessories are fitted.



- ❖ Daily ultraviolet decontamination scheduling, with programmable start and end times.
- ❖ The system tracks the hours of use against the factory-estimated service life, keeping the user informed.

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HIGH END model
with side glass panels

Maintenance / Cleaning

- ❖ Quick-clamp plenum system allows a single technician to replace the filters, reducing downtime for corrective maintenance by 50%.
- ❖ Front filter change, avoiding the need to disconnect the cabinet from its ducting.
- ❖ Monitoring and adjustment of filter loading, minimizing filter replacement costs.
- ❖ One-piece work area (walls) with rounded corners to prevent particle build-up and ease cleaning.
- ❖ The integrated design of the operating area makes disassembly and cleaning easier.

Ergonomics

- ❖ Lighting control system – the cabinet lets the user adjust the white light intensity to suit the task, reaching more than 1,000 lux. Optionally, LED lighting with UGR <16 (Unified Glare Rating) can be fitted instead, providing visual comfort during use, preventing glare-induced eye fatigue and creating a visually pleasant environment.
- ❖ Ergonomically tested: noise level below 55 dBA, well under the 65 dBA required by standards, and vibration below 5 μ m (rms).
- ❖ The sash design, tilted up to 10°, gives a better view of the interior.
- ❖ Stainless steel armrest integrated into the cabinet and removable.
- ❖ Foot pedal for raising and lowering the front sash.
- ❖ The cabinet is independent of its stand, which can optionally be:
 - Standard support stand – with lockable wheels, allowing all working positions.
 - Electric height-adjustable support stand – working height is adjustable and customizable to the user's measurements.



Armrest in work area



Pedal for adjusting the front sash height



UV light emitting at 254 nm



Wheel with brake and leveling.

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Accessories and Options

Description	Reference
Plenum for double ULPA or HEPA filtration on the exhaust, for extra safety when the unit exhausts air into the laboratory.	price on request
Third filtration stage with additional activated carbon filter for aerosols / removal of volatile chemical compounds and odors.	price on request
<i>Different types of activated carbon.</i>	
Side glass panels.	price on request
Standard support stand with wheels and brakes.	440206-BASE-BSC-XXXX
Electric height-adjustable support stand.	440206-MESAREGALTXXX
Canopy (thimble) connection for safe exhaust.	00-CAMPA-EXT SEG
Check valve.	79-CAJANTR
1" connector for decontamination with vaporized hydrogen peroxide (VHP), in 316L stainless steel	00-VHP-CSB
Solenoid valve for gas tap, controlled from the cabinet panel.	32-GE08150
Taps for gas, vacuum, air, etc.	77-006831, 77-006841
UGR < 16 LED light (UGR – Unified Glare Rating)	price on request



Double-filter plenum



Check valve



Canopy (thimble)
connection,
exhaust



Electric height-adjustable stand



Connector for Vaporized
Hydrogen Peroxide (VHP)

CLASS II A2 BIOSAFETY CABINET

Model BSC-IIA2-HIGH END

Technical Specifications

MODEL		BSC-IIA2-1100HE	BSC-IIA2-1300HE	BSC-IIA2-1400HE	BSC-IIA2-1500HE	BSC-IIA2-1800HE
Internal size mm (WxDxH)		950*645*600	1200*645*600	1300*645*600	1400*645*600	1700*645*600
Cabinet body external size mm (WxDxH)		1050*795*1470	1300*795*1470	1400*795*1470	1500*795*1470	1800*795*1470
External size of standard support stand includes: 90 mm in height: wheels		1050*730*714	1300*730*714	1400*730*714	1500*730*714	1800*730*714
Tested opening		Safety height 220 mm (8")				
Maximum opening		450 mm				
Work zone height includes 90 mm wheels		892 mm				
Control system	Monitor	7" color LCD touchscreen				
	Alarm	Abnormal airflow velocity, ULPA/HEPA filter failure, UV lamp failure, front sash at unsafe height.				
Airflow System	Airflow mode	70% air recirculation, 30% exhaust to outside				
	Downflow velocity	0.35 m/s $\pm$ 0.025 m/s				
	Barrier velocity	> 0.52 m/s $\pm$ 0.025 m/s				
	Inflow volume	355m³/h (209CFM)	450m³/h (265CFM)	486m³/h (286CFM)	524m³/h (309CFM)	636m³/h (375CFM)
	Downflow volume	718m³/h (423CFM)	907m³/h (534CFM)	983m³/h (579CFM)	1058m³/h (623CFM)	1285m³/h (757CFM)
	Exhaust volume	355m³/h (209CFM)	450m³/h (265CFM)	486m³/h (309CFM)	524m³/h (309CFM)	636m³/h (375CFM)
Filtration System	ULPA or HEPA filters (Exhaust and Supply)	EN 1822 filters, 2 pcs, $\geq$ 99.9995% and $\geq$ 99.995% efficiency at 0.1–0.3 μ m, with filter life indicator				
	Air cleanliness classification	Class 10 (ISO 14644-1 Class 4)				
Cabinet Construction	Main body	Electro-galvanized steel with antimicrobial powder coating				
	Work area	304 stainless steel (optional AISI 316L)				
	Front sash	Motorized, double-layer laminated tempered glass $\geq$ 6 mm. Anti-UV.				
Electrical System	UV lamp	20Wx1	30Wx1	30Wx1	30Wx1	40Wx1
		254 nm emission for more efficient decontamination; lifetime indicator and timer.				
	LED lamp	16Wx2	20Wx2	20Wx2	20Wx2	20Wx2
	Maximum consumption	750 W (excludes power consumption of socket loads)				
	Operating consumption	450W				
	Fan power	450W				
Voltage		AC 220 V $\pm$ 10%, 50/60 Hz; 110 V $\pm$ 10%, 60 Hz				
Illumination		$\geq$ 1000 lx				
Sound emission		$\leq$ 55 dB(A)				
Vibration		Performance: amplitude $\leq$ 5 μ m (rms)				
Standard Accessories		1. Dimmable LED lights; 2. Air velocity sensor; 3. ULPA filters; 4. LCD touchscreen; 5. LED lamp x 2; 6. UV lamp x 1; 7. IP55 sealed sockets x 2; 8. Motorized front sash; 9. Solenoid valve control; 10. RS485 interface; 11. USB port; 12. Front sash pedal.				
Optional Accessories		1. UGR<16 LED lighting; 2. Gas tap; 3. Vacuum tap; 4. Hook bar; 5. HEPA filters; 6. Base stand; 7. Electrically height-adjustable base stand; 8. Carbon filter.				
Net weight (kg)		224	245	263	290	370
Gross weight (kg)		267	290	313	380	500
Shipping dimensions mm (WxDxH)		1250*1080*1720	1450*1100*1720	1550*1120*1720	1650*1120*1720	2050*1220*1870
Shipping volume (m³)		2,3	2,7	3	3.2	4,7

CLASS II A2 BIOSAFETY CABINET

Model BSC-IIA2-HIGH END-75

Technical Specifications

**** Dimensions of the HIGH END extra-height model: BSC-IIA2-HIGH END-75**

MODEL	BSC-IIA2-1100HE-75	BSC-IIA2-1300HE-75	BSC-IIA2-1400HE-75	BSC-IIA2-1500HE-75	BSC-IIA2-1800HE-75
Internal size mm (WxDxH)	950*645*750	1200*645*750	1300*645*750	1400*645*750	1700*645*750
Cabinet body external size mm (WxDxH)	1050*795*1540	1300*795*1540	1400*795*1540	1500*795*1540	1800*795*1540
External size of standard support stand, includes: 90 mm in height: wheels	1050*730*714	1300*730*714	1400*730*714	1500*730*714	1800*730*714
Tested opening	Safety height 220 mm (8")				
Maximum opening	450 mm				
Work zone height includes 90 mm wheels	892 mm				
Net weight (kg)	234	257	273	304	390
Gross weight (kg)	277	302	326	394	520
Shipping dimensions mm (WxDxH)	1250*1080*1800	1450*1100*1800	1550*1120*1800	1650*1120*1800	2050*1220*1900
Shipping volume (m³)	2,4	2,8	3,1	3,3	4,8



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Ordering Reference

CODE	CABINETS DESCRIPTION
440206-BSC-IIA2-1100HE	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1100 EN 12469
440206-BSC-IIA2-1300HE	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1300 EN 12469
440206-BSC-IIA2-1400HE	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1400 EN 12469
440206-BSC-IIA2-1500HE	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1500 EN 12469
440206-BSC-IIA2-1800HE	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1800 EN 12469
440206-BSC-IIA2-1100HE-75	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1100 EN 12469 – interior height 75 cm
440206-BSC-IIA2-1300HE-75	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1300 EN 12469 – interior height 75 cm
440206-BSC-IIA2-1400HE-75	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1400 EN 12469 – interior height 75 cm
440206-BSC-IIA2-1500HE-75	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1500 EN 12469 – interior height 75 cm
440206-BSC-IIA2-1800HE-75	HIGH END. HIGH-SAFETY MICROBIOLOGICAL CABINET C10 MOD. BSC-IIA2-1800 EN 12469 – interior height 75 cm

CODE	ACCESSORIES AND OPTIONS DESCRIPTION
440206-BASE-BSC-XXXX	STANDARD STAND FOR BSC MODEL CABINETS
440206-MESAREGALTXXX	ELECTRIC HEIGHT-ADJUSTABLE STAND FOR CABINETS – please enquire about sizes
00-CAMPA-EXT SEG	CANOPY (THIMBLE) CONNECTION FOR SAFE EXHAUST OF BSC BIOLOGICAL SAFETY CABINETS
79-CAJANTR	PMMA CHECK-VALVE BOX, 4 mm THICK, 330 mm X 150 mm
32-GE08150	MADAS GAS SOLENOID VALVE, AUTOMATIC RESET, N.C., 230 VAC, 1/2", Pmax 6 bar, RP
00-VHP-CSB	1" CONNECTOR FOR DECONTAMINATION WITH VAPORIZED HYDROGEN PEROXIDE – VHP, 316L STAINLESS STEEL
77-006831	WALL-MOUNTED GAS TAP, STRAIGHT OUTLET (LIGHT GREY, YELLOW KNOB, FOR NATURAL GAS, SPECIAL 125 MM THREAD)
77-006841	WALL-MOUNTED VACUUM TAP, STRAIGHT OUTLET (LIGHT GREY, FOR VACUUM UP TO 1 MBAR, SPECIAL 125 MM THREAD)

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