

CYTOTOXIC DRUG SAFETY CABINET

Model BSC-CITOSTATX.X

Biological safety cabinet for handling cytotoxic and antineoplastic drugs.

Features

AIR:

- Partial air recirculation in accordance with applicable standards: 30% recirculation and 70% exhaust.
- 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.
- The cabinet is equipped with 3 FILTRATION STAGES (ULPA U15 or HEPA H14 filters). A fourth, carbon filtration stage with a specific HEPA or ULPA filter can be added below the work surface, in accordance with the applicable standards.

CONSTRUCTION:

- Work area made of AISI 304 stainless steel. Optional: AISI 316L.
- Sliding front sash with alarm position. Raised and lowered manually or electronically. Anti-pinch function with obstacle detection when closing the sash.
- The 6 mm safety glass sash features UV protection and an anti-reflective coating, with a tilt of up to 10° that gives the user a better view of the samples and a full view of the entire work surface.
- Glass sash with special guide for improved sealing and safer sliding.
- Microprocessor-controlled cabinet with updatable FLASH memory and an external display showing the cabinet's control parameters at a glance (velocities, airflow rates, plenum pressure, exhaust barriers, humidity, temperature, etc.). Easy-to-use touch panel with security PASSWORD for unit control and start-up.
- 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.
- 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).



Computerized model



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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.
- ❖ The unit features a Bag-in/Bag-out system for safe filter changes of the third filtration stage, which captures hazardous dust.

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.



Color touchscreen

- ❖ 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.

Maintenance / Cleaning

- ❖ Monitoring and adjustment of filter loading, minimizing filter replacement costs.
- ❖ Front filter change, avoiding the need to disconnect the cabinet from its ducting.
- ❖ Quick-clamp plenum system allows a single technician to replace the filters, reducing downtime for corrective maintenance by 50%.
- ❖ 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.
- ❖ The Privilege series offers the optional High End version, which opens the work area fully with an extra height of 750 mm, making cleaning easier and allowing access for large equipment.

Ergonomics

- ❖ Lighting control system – 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 μm (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 includes a base with lockable wheels, supplied separately from the unit.



Armrest in work area



Pedal for adjusting the height of the front sash



UV light emitting at 254 nm



Wheel with brake and leveling.

Accessories and Options



Ask about our computerized model for hardware integration: BSC-CITOSTAT.INF

- 1 USB port
- 1 HDMI port
- 1 DP Internet port
- 1 monitor, 21.5"
- Keyboard support
- Computer support

Description	Reference
Plenum for double 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
Hinged front glass for full opening of the work area, XL height of 750 mm. High End.	price on request
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



Connector for Vaporized Hydrogen Peroxide (VHP)

Technical Specifications

MODEL		BSC-CITOSTAT1.1	BSC-CITOSTAT1.3	BSC-CITOSTAT1.8
Internal size mm (WxDxH)		910 x 600 x 630	1220 x 600 x 630	1700 x 600 x 630
External size mm (WxDxH)		1087 x 760 x 2100	1380 x 760 x 2100	1800 x 760 x 2100
Tested opening		Safety height 200 mm (8")		
Max. opening		440 mm		
Work zone height		850 mm		
Control system	Monitor	7" color LCD touchscreen		
	Alarm	Abnormal airflow velocity, HEPA filter failure, UV lamp failure, front sash at unsafe height.		
Airflow System	Airflow mode	30% air recirculation, 70% 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		
	Exhaust airflow	347m ³ /h	465m ³ /h	636m ³ /h
Filtration System	ULPA or HEPA filters (Exhaust and Supply)	EN 1822 ULPA or HEPA filters, 2 pcs, $\geq$ 99.9995% and $\geq$ 99.995% efficiency respectively 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	Cold-rolled 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	40Wx1
		254 nm emission for more efficient decontamination; UV lifetime indicator; UV timer.		
	LED lamp	12Wx2	16Wx2	16Wx2
	Maximum consumption	700 W (excludes power consumption of socket loads)		
	Fan power	500W		
	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. HEPA 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; 13. Base stand.		
Optional Accessories		1. UGR<16 LED lighting; 2. Gas tap; 3. Vacuum tap; 4. Hook bar; 5. ULPA filters; 6. Carbon filter.		
Net weight (kg)		224	263	370
Gross weight (kg)		320	371	495
Shipping dimensions mm (WxDxH)		1240 x 910 x 2280	1540 x 910 x 2280	2050 x 910 x 2280
Shipping volume (m ³)		2.6	3.2	3.7

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Ordering Reference

CODE	DESCRIPTION
440206-BSC-CITOSTAT1.1	CYTOTOXIC DRUG CABINET C10. MOD. BSC-1100
440206-BSC-CITOSTAT1.3	CYTOTOXIC DRUG CABINET C10. MOD. BSC-1300
440206-BSC-CITOSTAT1.8	CYTOTOXIC DRUG CABINET C10. MOD. BSC-1800

CODE	ACCESSORIES AND OPTIONS DESCRIPTION
440206-BSC-IIA2-XXXX-HE	HINGED FRONT GLASS FOR FULL OPENING OF WORK AREA, XL HEIGHT 750 MM
00-CAMPA-EXT SEG	CANOPY (THIMBLE) CONNECTION FOR SAFE EXHAUST OF BSC BIOLOGICAL SAFETY CABINETS
00-VHP-CSB	1" CONNECTOR FOR DECONTAMINATION WITH VAPORIZED HYDROGEN PEROXIDE – VHP, 316L STAINLESS STEEL
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
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)



Computerized model + side glass panels + VHP connection

The photographs in this catalog are for illustrative and guidance purposes only. Final products vary depending on the model, size and options chosen by the customer.

"All information, features, dimensions and electrical data shown in TDI's commercial documents and data sheets are indicative and non-contractual and are therefore subject to change according to each customer's needs, provided the applicable regulations so permit."

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