

S3e™ Biosafety System Class I





PROTECTION FOR YOU AND YOUR ENVIRONMENT

The S3e Biosafety System Class I provides protection for the user and the environment when conducting cell sorting. This system is custom designed to work seamlessly with the S3e Cell Sorter for easy access and is software controlled for real-time monitoring. The S3e Biosafety System is an affordable solution for flow core facilities and individual laboratories requiring biosafety containment.



AFFORDABLE

Provides an alternative to the traditional large and expensive biosafety hoods offered for cell sorters.



COMPACT DESIGN

Has a small footprint, complementing the S3e Cell Sorter, with quick access to and easy interaction with all sides of the sorter.



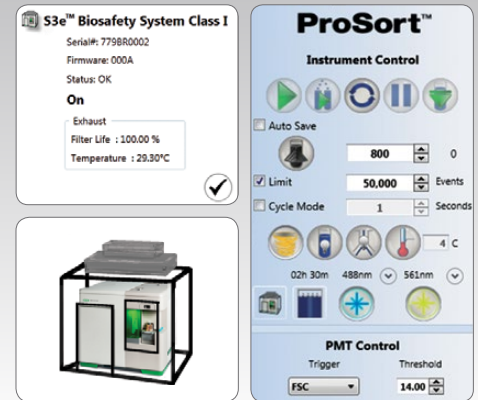
QUIET AND ENERGY EFFICIENT

Generates low vibrations and sound pressure levels. Specialized fans and low backpressure from the HEPA filter reduce energy usage.

INTEGRATION

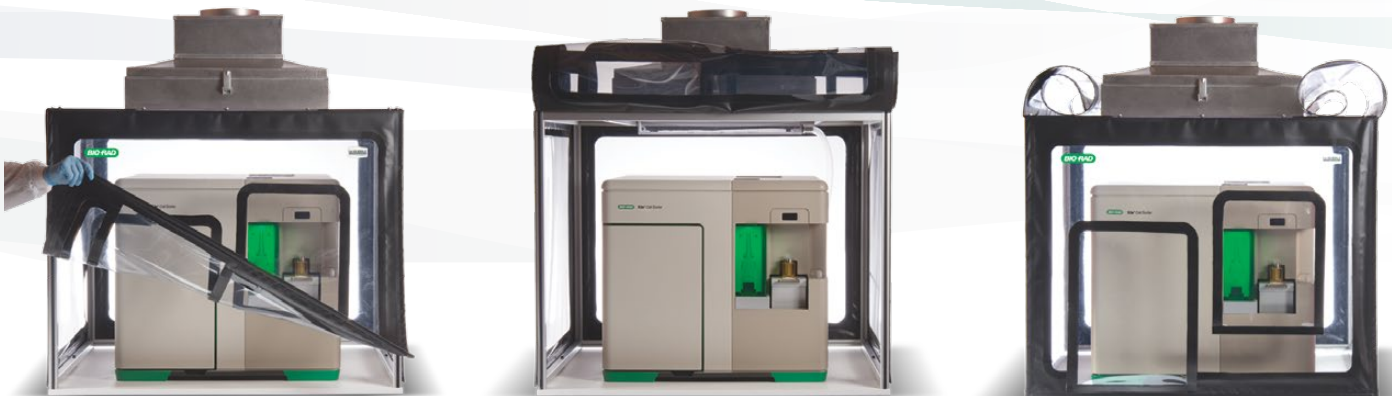
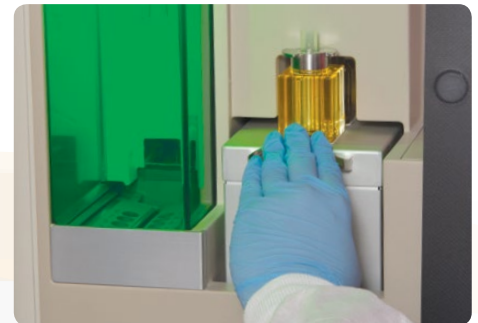
The S3e Biosafety System Class I has a system board that can communicate with the S3e Computer and is managed by ProSort™ Software. The biosafety system runs in two different modes: idle (low flow) and sorting (running at Class I airflow).

If the S3e Computer is off, the system board maintains airflow in idle mode. A status window has been added to ProSort Software to display HEPA capacity depending on the functional mode – sorting or idle.



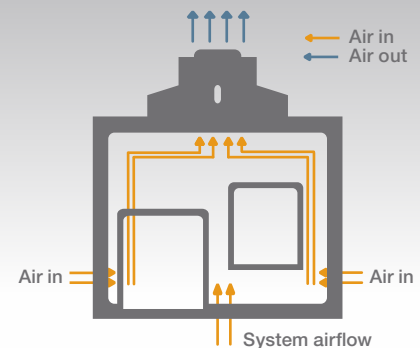
ACCESSIBILITY

The biosafety system walls are made of 30 mil fire retardant material. All four vinyl side panels are connected to the aluminum frame using magnetic attachments. The front panel has two doors for sample access and bulk fluidic access. Both access doors are attached to the front panel by magnets. The panels and doors can be detached with minimal effort and are designed for easy access to the S3e Cell Sorter inside. Perform service or maintenance from any side of the S3e Cell Sorter inside.



ASSURANCE

Airflow is drawn from all four sides and through the access doors when opened, allowing maximum air circulation. The air within the system is exchanged approximately six to eight times a minute. The HEPA filter used in the system provides 99.9997% efficiency at 0.3 µm. If the airflow through the HEPA filter falls below required limits for containment, the software will alert the user and stop the sort.



Certification

The S3e Biosafety System must be certified on-site by a certified vendor. The S3e Biosafety System is validated for Class I containment with the S3e Cell Sorter inside upon delivery. If the system is not certified, there is the possibility that it will fail to provide protection under Class I specifications.

Certification is required:

- At installation
- If unit is moved or relocated
- If unit is decontaminated
- If unit is serviced or HEPA filter is changed
- Annually as recommended for proper maintenance

On-site testing follows NSF/ANSI 49-2011 and International Society for Advancement of Cytometry (ISAC) guidelines for safety when cell sorting.

Bio-Rad can provide recommended companies for Class I on-site certification for your institution. As with all biosafety cabinets or biosafety hoods, certification is recommended once a year.

Decontamination

The S3e Biosafety System with the S3e Cell Sorter inside can be decontaminated using vaporized hydrogen peroxide. Consult your safety officer about facility requirements before, during, and after decontamination.

Biosafety hood type.

Type	Airflow	Protection			
		Personnel	Environment	Sample	HEPA
Class I	Unrecirculated inward	Yes	Yes	No	Yes
Class II	Inward, downward filtered laminar	Yes	Yes	Yes	Yes

Referenced from NSF/ANSI 49-2011 guidelines.

Specifications

Power requirements	100–240 VAC, 50–60 Hz, 1.25 A
Power and efficiency	125 W
Heat load	50 W as <85 BTU/hr
Airflow	175 cubic feet per minute (CFM)
Blower	R1G 175 DC motorized impeller
Fuse	2.0 A slow blow
Weight	52 lb
Dimensions (W x D x H)	135 x 96 x 146 cm (53.2 x 37.8 x 57.5 in.)
Sound level	65 dB at maximum airflow
Operating temperature	18–25°C
Operating humidity	20–60%
HEPA filtration	99.99% or better on 0.3 µm filter per IEST-RP-CC034 test
HEPA filters (W x D x H)	23.6 x 3.5 x 23.6 in.; certify annually
Top panel	Clear polycarbonate
Base floor	High-density polyethylene
Vinyl sides	30 mil polyvinyl chloride film and 18 oz vinyl-coated polyester
Frame	25 mm anodized aluminum T-slot profile

Ordering Information

Catalog #	Description
145-1078	S3e Biosafety System Class I
145-1029	S3e Cell Sorter (488 nm) with S3e Biosafety System Class I , 488 nm 100 mW laser, 1L2D, includes 2 fluorescence detectors with filters, AutoGimbal™ System, 2 fluidic containers with connectors and tubing (sheath, water, waste), power cord, ProSort Software
145-1030	S3e Cell Sorter (488/561 nm) with S3e Biosafety System Class I , 488 and 561 nm 100 mW lasers, 2L4D, includes 4 fluorescence detectors with filters, AutoGimbal System, 2 fluidic containers with connectors and tubing (sheath, water, waste), power cord, ProSort Software
145-1032	S3e Cell Sorter (488/640 nm) with S3e Biosafety System Class I , 488 and 640 nm 100 mW lasers, 2L4D, includes 4 fluorescence detectors with filters, AutoGimbal System, 2 fluidic containers with connectors and tubing (sheath, water, waste), power cord, ProSort Software

Visit bio-rad.com/web/S3eBiosafetyMore for more information.



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