Bigfoot Cell Sorter

Technical specifications of the Invitrogen™ Bigfoot™ Cell Sorter

System	Sensitivity	<100 MESF for FITC, PE, and APC; <0.2 µm forward scatter (FSC) resolution with small particle detection module.
	Sample loader	6 sample positions for 1.5 mL, 5 mL, or 15 mL tubes; built-in sample vortexer; temperature control: 4–37°C.
	Sorting output	• Up to 6-way sorting into collection tubes. Adapters for 1.5 mL, 5 mL, 15 mL, and 50 mL tubes are available for configurable output collection. • Microwell plates with a standard footprint of up to 1,536 wells can be loaded directly for straight-down sorting; 4-way sorting into 96-well plates; 4-way sorting into 384 well plates. • Temperature control from 4°C to 37°C for all sorting media.
	Nozzle	70 µm, 100 µm, 120 µm, and 150 µm ceramic nozzle tips with adjustable pressure settings.
	Analysis type	Spectral and conventional compensation.
	Biocontainment	Integrated biocontainment enclosure and aerosol management system (AMS) are designed to be fully integrated parts of the cell sorter.
Optics	Excitation	Configurable for up to 9 lasers: 349 nm, 405 nm, 445 nm, 488 nm, 532 nm, 561 nm, 594 nm, 640 nm, 785 nm
	Detection	Up to 60 parameters, including FSC detection, side scatter (SSC) detection, multi-laser scatter detection, and/or polarization.
Electronics	Speed	Rates of >100,000 eps for acquisition and >70,000 eps for sorting* with all 60 parameters.
	Data processing	Peak height, area, and width are measured simultaneously for each channel, with true measured width at half height. Electrical signal is converted to a digital signal with 24-bit resolution for peak area and height to maximize dynamic range. Low-noise converters and proprietary digital processing reduce channel noise.
Fluidics	Bulk fluids	Two 4 L on-board bulk fluid containers for sheath and waste; 4 L bottle for DI water. Two 1 L on-board bottles for cleaning reagent and decontamination solution. Optional kits are available for external DI water and waste connections.

* When running at 70,000 eps, users may see a decrease in efficiency depending on experimental conditions and sort criteria. Sort speeds should always be optimized for specific experiments.

Installation	Power	100–240 VAC; 50/60 Hz; 800 W (maximum)
	Dimensions (W x D x H)	39 x 39 x 67 in. (99 x 99 x 170 cm)
	Weight	Approximately 1,433 lb (650 kg)
	Operating system	Microsoft™ Windows™ 10
	Software	Sasquatch Software (SQS) spectral sorting and analysis package
	FCS format	FCS 3.1
	QC	Automated quality control and drop delay with onboard calibration beads
	Workstation	Intel™ i9-12900K processor; 64 GB RAM; 2 TB PCIe solid state drive
	Monitor	LG™ 32-inch; 4K
Regulatory compliance		• IEC 61010-1:2010 (3rd Ed). Electrical Equipment for Measurement, Control, and Laboratory Use Part 1: General Requirements. • UL/CSA 61010-1:2012 (3rd Ed). Standard for Safety Electrical Equipment for Electrical Safety (USA, Canada, NRTL). • IEC 61010-2-081:2015, EN61010-2-081:2015. Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 2-081: Particular requirements for automatic and semiautomatic laboratory equipment for analysis and other purposes (includes Amendment 1). • IEC 60825-1:2014. Safety of laser products Part 1: Equipment classification and requirements. • Class 1 laser product per IEC 60825-1 and CDRH requirements and regulations EN 61326-1:2013 (Class A) Electrical equipment for measurement, control, and laboratory use. EMC requirements Part 1: General requirements. • IEC 61326-1:2012 (Class A) Electrical equipment for measurement, control, and laboratory use. EMC requirements Part 1: General requirements. • FCC Part 15 Subpart B Emissions (Class A). • EN55011 (Class A). • KN11 (Class A). • Device complies with Canadian ICES-001.

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