



Environments For Science™

PRODUCT SPECIFICATION

SteriIGARD®

For Cytoflex SRT Cell Sorter

Class II, Type
Biosafety Containment Cabinet for
Beckman Coulter Life Sciences



MODELS: BEC404XD/BEC404XD-INT/BEC404XD-J
Baker P/N 415U000/415U001/415U002
BC P/N C67770/C70461/C70462

Revision	Date	Description	Author
A	08/12/2020	Initial preliminary release	A.Van Dintel
B	11/19/2020	Updated title page	A.Van Dintel



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SPECIFICATIONS	
Exterior Dimensions	
Nominal Size with Stand (w x d x h)	53 3/4" x 34 3/8" x 98 3/8" [1,345 x 889 x 2498.7 mm]
Nominal Size without Stand (w x d x h)	53 3/4" x 34 3/8" x 64 1/4" [1,180 x 991 x 1,632 mm]
Weights	
Net Cabinet Weight with Stand	616 lbs [279 kg]
Gross Shipping Weight	818 lbs [371 kg] Estimated
Interior Dimensions	
Interior Dimensions (w x d x h)	46" x 23 3/8" x 27 1/2" [1,168 x 624 x 697 mm]
Useable Work Surface (w x d)	44" x 23 7/8" [1117.6 x 606.43 mm]
Performance	
Certified Access Opening Height	10" [254 mm] (3.19 ft ² [0.29 m ²] opening)
Maximum View screen Opening Height	20" [508 mm]
Average Intake Airflow Velocity	105 FPM [0.53 m/s]
Average Downflow Velocity	45-55 FPM [0.20-0.25 m/s] without Flow Cytometer Installed
Average Downflow Velocity	95-115 FPM [0.48-0.58 m/s] with Flow Cytometer Installed
Typical Noise (per NSF/ANSI 49)	≤ 68.0 dbA (Cabinet On /AMS Off)
Typical Noise (per NSF/ANSI 49)	≤ 68.0 (Cabinet On /AMS Low setting)
Typical Noise (per NSF/ANSI 49)	≤ 74.8 dbA (Cabinet On /AMS High setting)
Typical Noise (per EN12469)	≤ 62.4 dbA (Cabinet On /AMS Off)
Typical Noise (per EN12469)	≤ 62.4 dbA (Cabinet On /AMS Low setting)
Typical Noise (per EN12469)	≤ 69.2 dbA (Cabinet On /AMS High setting)
Lighting (per NSF)	Minimum 100 foot-candles average at work surface with Mustang cell sorter not installed.
Vibration (per NSF)	≤.0002 inches RMS Amplitude
Typical Motor/Blower Reserve	>100% with no more than 10% decrease in total flow
Cabinet Air Recirculation/Exhaust	Partial recirculation
Vent to Room Exhaust Volume ¹	351 CFM [165 l/s]
Electrical Service	
Cabinet Service Requirements	
100 V	100 V AC, 20A, 50/60 Hz, 1Ø, 16A maximum useable current
120 V	120 V AC, 20A, 60 Hz, 1Ø, 16A maximum useable current
230 V	230 V AC, 16A, 50/60 Hz, 1Ø, 13A maximum useable current
230 V (Australia option: no UL listing)	230 V AC, 13A, 50/60 Hz, 1Ø, 10A maximum useable current
Circuit Protection	
100/120V	Internally protected with a 250V, 20 A circuit breaker
230V	Internally protected with a 250V, 16 A circuit breaker
230 V (Australia option: no UL listing)	Internally protected with a 250V, 13 A circuit breaker
Power Cord (IEC C20 Power Inlet)	
100 V	One 20 ft [6 M] power cord with type NEMA 5-15 plug
120 V	One 20 ft [6 M] power cord with type NEMA 5-15 plug
230 V	One 6 M power cord with listed plug for the destination country
	(Standard is Schuko type F plug)



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Outlets in Work Area			
100 V	Cabinet is provided with one duplex receptacle located on the right-side wall. The outlet is protected by a self-resetting circuit breaker. The breaker allows for 5A on the outlet		
120 V	Cabinet is provided with one GFCI protected duplex outlet located on right side wall. The outlet is protected by a self-resetting circuit breaker. The breaker allows for 5A on the outlet.		
230 V	Cabinet is provided with one outlet on the right-side wall with the outlet configuration dependent on the destination country (Standard is Schuko Type F outlet). The outlet is protected by two self-resetting circuit breakers. The breakers allow for 5A on the outlet. With optional 13A service, breakers are de-rated to 3A.		
Normal Operating Power Consumption ² (Lights On/ Does not included Outlets)	Cabinet ON No AMS	Cabinet ON Low AMS Setting	Cabinet ON High AMS Setting
100V 50Hz	711W (7.9A) / 2427 Btu/Hr	747W (8.3A) / 2550 Btu/Hr	963W (10.7A) / 3288Btu/Hr
120V 60Hz	690W (6.0A) / 2356 Btu/Hr	736W (6.4A) / 2513 Btu/Hr	1116W (9.7A) / 3810 Btu/Hr
230V 50Hz	690W (3.0A) / 2356 Btu/Hr	736W (3.2A) / 2513 Btu/Hr	1127W (4.9A) / 3847 Btu/Hr
230V 60Hz (not UL listed)	667W (2.9A) / 2277Btu/Hr	713W (3.1A) / 2434 Btu/Hr	1104W (4.8A) / 3769 Btu/Hr
ReadySafe™ Power Consumption (Sash Closed Position)	Cabinet ON No AMS	Cabinet ON Low AMS Setting	Cabinet ON High AMS Setting
100V	711W (1.7A) / 2427 Btu/Hr	747W (2.2A) / 2550 Btu/Hr	963 W (4.4A) / 3288 Btu/Hr
120V	161W (1.4A) / 550 Btu/Hr	219W (1.9A) / 748 Btu/Hr	621W (5.4A) / 2120 Btu/Hr
230V 50Hz	161W (0.7A) / 550 Btu/Hr	207W (0.9A) / 707 Btu/Hr	598W (2.6A) / 2042 Btu/Hr
230V 60Hz	161W (0.7A) / 550 Btu/Hr	207W (0.9A) / 707 Btu/Hr	598W (2.6A) / 2042 Btu/Hr
Environmental Conditions			
Use	Indoor		
Altitude	Up to 6,561' [2,000 meters]		
Temperature Range	From 41°F [5°C] to 104°F [40°C]		
Relative Humidity	Maximum 80% for temperatures up to 88°F [31°C] decreasing linearly to 50% at 104°F [40°C]		
Voltage	Main supply ± 10% V AC		
Transient	Over voltage according to Installation category (OVERVOLTAGE CATEGORIES) II per UL/IEC61010-1, 3 rd Edition		
Pollution Degree	2		



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Materials of Construction	
Down Flow Diffuser	18 gauge, 304 Stainless Steel
Work Chamber	16 gauge, 304 Stainless Steel
Work Surface	16 gauge, 316L Stainless Steel
Front, Left, & Right Exterior Panels	18 and 16 gauge, Carbon Steel, painted in exterior color
Positive Pressure Supply Plenum	18 gauge, Carbon Steel, painted in exterior color
Exhaust Plenum/Transition	16 gauge, Carbon Steel, painted in exterior color
Removable Armrest	16 gauge, 304 Stainless Steel with removable EPDM sponge pad that is resistant to UV light and most chemicals
View Screen	1/4" [6.35 mm] thick laminated safety plate glass
HEPA Filters	HEPA rated class H14 (99.995%) filter media with aluminum frame
AMS Filter	HEPA rated class H14 (99.995%) filter media with aluminum frame
Standard Features	
Work surface	One-Piece construction
Working Access Opening Height	10" [254mm]
View Screen	Counter balanced vertically sliding
Lighting	LED lighting external to work area
Sash Position Alarm	Audible and visual alarm warning of unsafe view screen opening
Filter Access	All access and changing from the front of the cabinet
Supply Filter	Minimum HEPA 99.995% efficient at MPPS per EN 1822, Class H14
Exhaust Filter [Cabinet]	Minimum HEPA 99.995% efficient at MPPS per EN 1822, Class H14
Exhaust Filter [AMS Blower]	Minimum HEPA 99.995% efficient at MPPS per EN 1822, Class H14
Membrane Switch Control Pad	Controls all cabinet functions
EAO Control Switch	Two used to control AMS blower
Cabinet Blower assembly	One- piece centrifugal blower/motor assembly
AMS Blower assembly	Centrifugal blower operating independently from cabinet supply blower with two flow modes: Sort mode @ 10-12 CFM [4.7-5.7 l/s] Evacuation mode @ >15 CFM [7.1 l/s]
AMS Filter Protector	Mounted downstream over the exhaust side of the filter
Cabinet Pressure Monitor	Measures differential pressure related to proper cabinet operation and displays a digital readout. Provides audible and visual alarm when differential pressure exceeds preset high and low limits.
AMS Airflow Monitor	Measures differential pressure in AMS ducting and displays a digital readout. Pressure monitor will convert this reading to AMS airflow units (SCFM)
Timers	15 minute and 1 hour increment programming using touchpad for fluorescent lights, UV lights, and electrical outlets
ReadySafe™ Mode	Reduces the total airflow and energy consumption when the cabinet is not in use. The view screen is closed, and the fluorescent lights are off during this mode.
Cable Ports	Allows access to the cabinet workarea for external power cables, tubing. Three 4" Dia. Cable Ports in all, one on Left Side Wall and two on Right Side Wall
Stand with Telescoping Legs	Provides cabinet height adjustment for worker comfort
Exterior Color	Sherwin Williams Powdura Polyester-Epoxy powder coating HAS2-30057 Perma White. Gloss 20-30 units
Suction slots - side	Located at left and right sides of front view screen access opening



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Suction slots - top	Located at top of work area opening behind front view screen	
Ergonomics		
Front View Screen	Sloped 10° for worker comfort	
Armrest	Removable 3/8" [9.5mm] EPDM rubber Pad	
Cabinet Controls	Located on front fascia panel within easy reach sitting or standing	
Height	Stand with adjustable legs for work surface heights of 30 1/8" to 38 5/8" [765 mm to 778 mm] and with leg levelers for an additional 2" [51 mm] of adjustment	
Optional Features		
FlexAIR® Exhaust Connection	Ø12" [305mm]	
Canopy Exhaust Requirements ²	Minimum Flow & Static	Maximum Flow & Static
Ø8" [203mm] Exhaust Duct	400 CFM [189 l/s] @ -0.15" WG	661 CFM [311 L/s] @ -0.29" WG
Ø10" [254mm] Exhaust Duct	400 CFM [189 l/s] @ -0.05" WG	661 CFM [311 L/s] @ -0.18" WG
Ø12" [305mm] Exhaust Duct	400 CFM [189 l/s] @ -0.04" WG	661 CFM [311 L/s] @ -0.10" WG
Standards and Codes		
NSF/ANSI 49-2019 [International Standard]	Cabinet will be microbiologically tested to validate personnel and product protection for each listed standard with instrument inside work area. This testing does not constitute actual product listing.	
EN12469-2000 [European Standard]		
BS EN12469-2000 [British Standard]		
SANS 12469-2001 [South Africa National Standard]		
NF-095-2006 [French Standard]		
SFDA YY-0569-2011 [China Standard]		
JIS K 3800-2009 [Japanese Industrial Std]		
AS 1807.1:2009 [Australian Standard]		
UL/IEC 61010-1, 3 rd Edition	Mechanical, Electrical and Personal safety testing, US and International	
CE mark	Cabinet adheres to the safety and health requirements of the relevant EC directives	
Work Area Cleanliness	Meet or exceed ISO Class 5 (Class 100)	

¹ The exhaust flow rate is based on a nominal 110 FPM [0.56 m/s] intake velocity.

² For new Cabinet with clean filters and LED lighting on.