

Biological Safety Cabinet, SMARTFLOW Series



World-class DC motor with automatic air volume compensation system:
 Lower noise level;
 Lower power consumption;
 Better velocity stability & airflow protection
 Two independent sets of velocity sensors made in Japan & Austria

LED lamp providing sufficient and uniform lighting;
 UV lamp running time can be set
 Interlocked LED lamp and UV lamp

Waterproof Socket X 2 pcs

Two access ports (for valves) at both sides, suit different installation conditions.

Removable spill retaining table top with front grille, curved corners made in SUS304, easy to reach & cleaning

Casters for easy moving



ULPA Filter (per IEST-RP-CC001.3), with 99.999% efficiency for partical size between 0.1 to 0.3 microns

Angled color controller for easy reach and viewing

Display of working conditions including:
 · Velocity: downflow & inflow
 · Filter life: in percentage, with filter life alarm
 · Alarm with buzzing and code display
 · Blower/UV/Lamp/Socket working status
 · ECO working mode when sash is shut down:
 - Lower fan rotate speed
 - Lower energy consumption
 - Lower noise level
 - Faster resume normal working conditions

Curved corners for easy cleaning

Angled arm rest for comfortable working posture and prevents grill blocking

Adjustable supporter to make sure cabinet is set firmly and horizontally

International Standards

	Biosafety Cabinets	Air Quality	Filtration	Electrical Safety
Standards Compliance	Designed to meet: EN 12469 (Europe) NSF/ ANSI 49 (USA) JIS K 3800 (Japan) SFDA YY0569 (China)	ISO 14644.1, Class 4, Worldwide JIS B9920, Class 4, Japan JIS BS5295, Class 4, Japan US Fed Std 209E, Class 10 USA	ISO29463, Worldwide EN-1822, Europe EN13091, Europe IEST-RP-CC034.1, USA	EN-61010-1, Europe IEC61010-1, Worldwide

DC ECM motor

- Automatic air volume compensation system
- Stable airflow, even during voltage fluctuations and filter loading
- Reduced energy consumption

Single piece Wall & Work Tray:

- Large radius for easy clean
- Made in SUS304, rust free



Power Sockets

- Waterproof
- Overload protection
- Each one at right and left part of cabinet

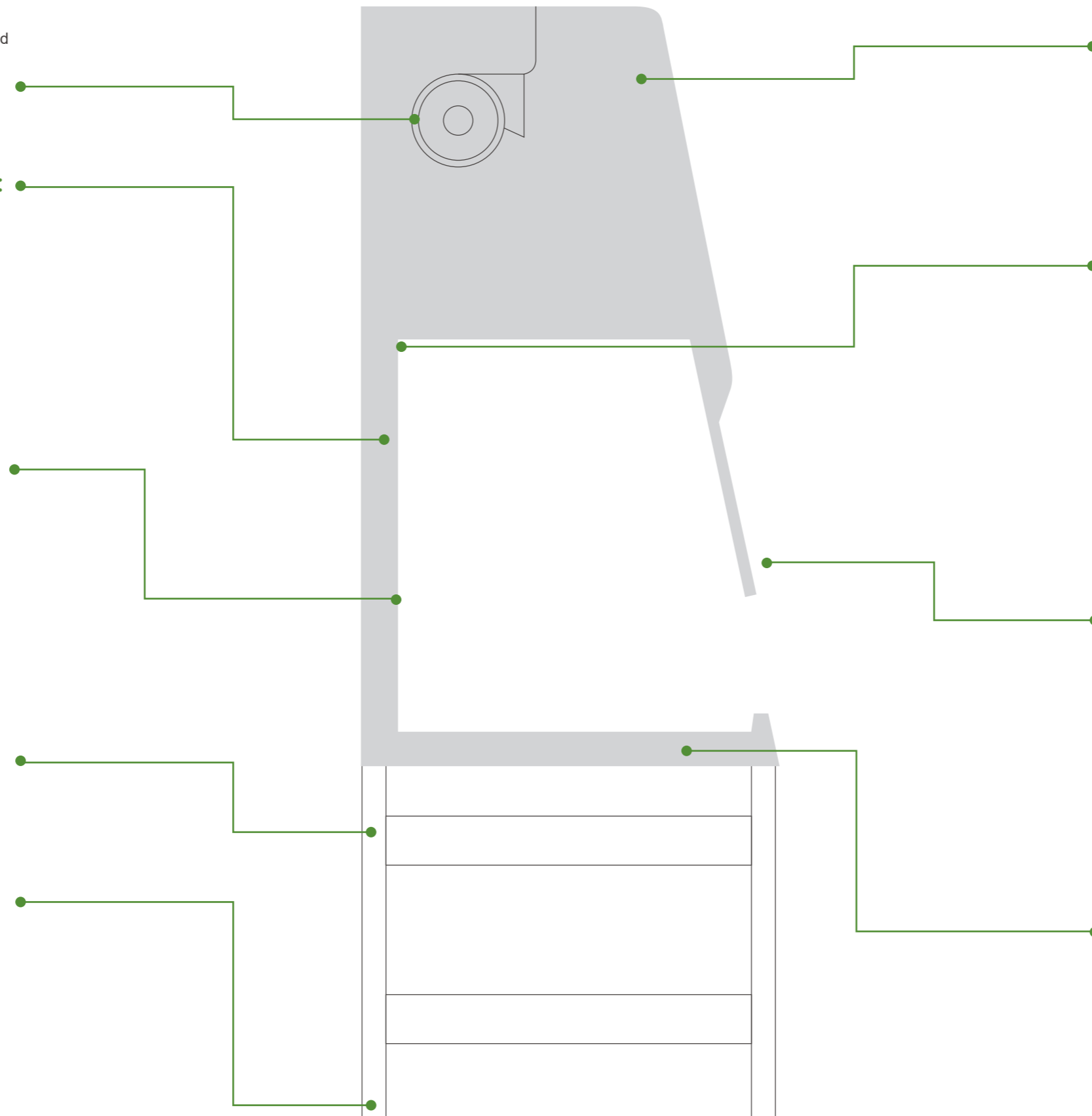


Frame Stand

convenient installation

Caster & Feet

- Adjustable feet to fit uneven floor
- Optional wheels for easy movement



Sloped Front

Cabinet front is sloped 10° for enhanced comfort and reduced operator fatigue.

UV Lamp

for sterilization



Full Access for Glass Cleaning



Working tray can be supported for easy cleaning

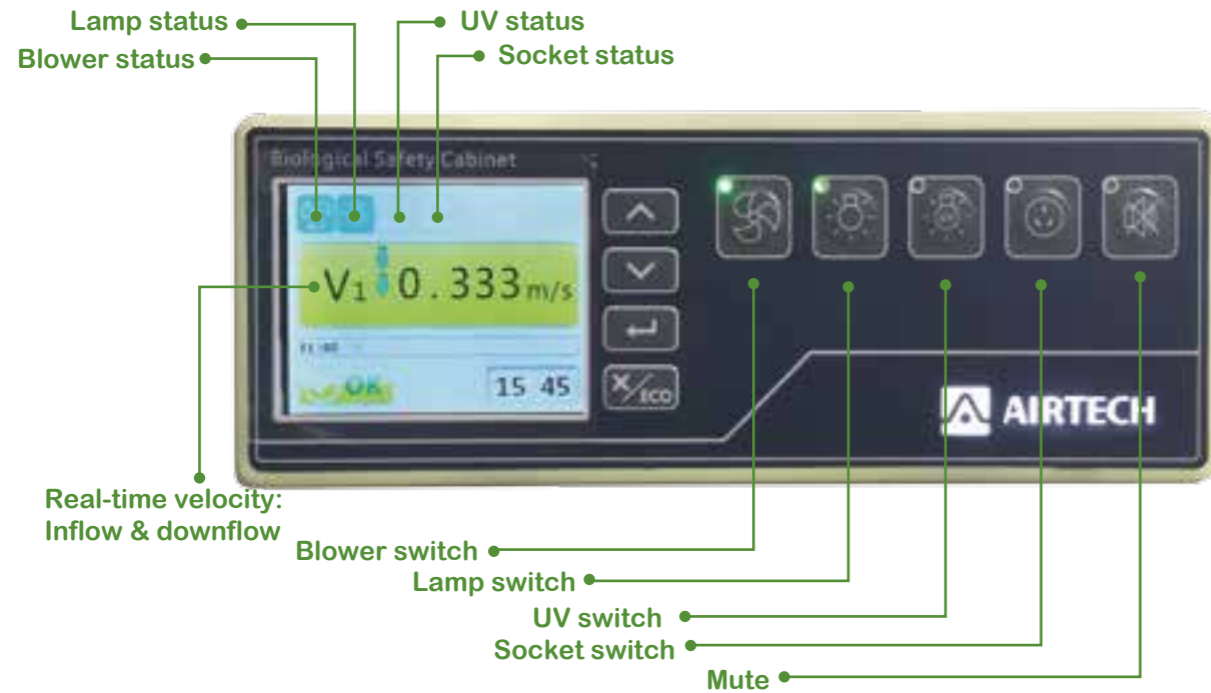


AIRTECH Intelligence Controlling system

Unique ECO Mode:



When sash is shut down, cabinet enter ECO mode. Blower rotate speed decreased, but still maintain basic airflow in cabinet.
When sash is opened again, blower rotate speed resumes to normal level and cabinet returns normal working condition within 10 seconds.



Various Alarms:

- Inflow velocity alarm
- Downflow airflow alarm
- Sash position alarm
- Filter high-resistance alarm
- Fan failure alarm

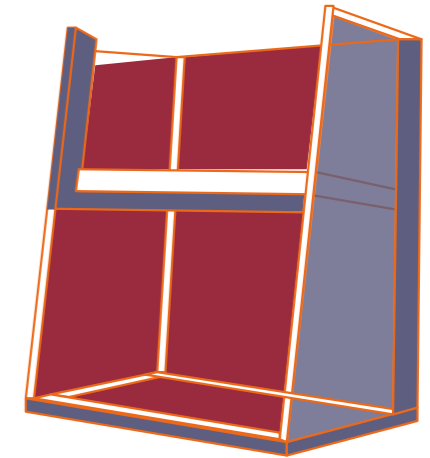


Non-compromising Safety

“Zero Leakage” Negative Pressure Protection

AIRTECH unique “Zero Leakage” patent technology, providing a dynamic negative pressure environment.
Imported automatic airflow compensation system to guarantee stable negative pressure

- Negative pressure
- Positive pressure



ULPA/HEPA Filter

- HV brand filter, US imported
- ULPA filter, efficiency $\geq 99.9995\%$ @ $0.12\mu\text{m}$ micron
- HEPA filter, efficiency $\geq 99.995\%$ @ $0.3\mu\text{m}$ micron
- Removable uniform-flow film to protect filter from liquor



Velocity Meter:

- SHIBAURA brand (Japan imported) velocity meter for down flow
- E+E brand (Austria imported) velocity meter for exhaust airflow



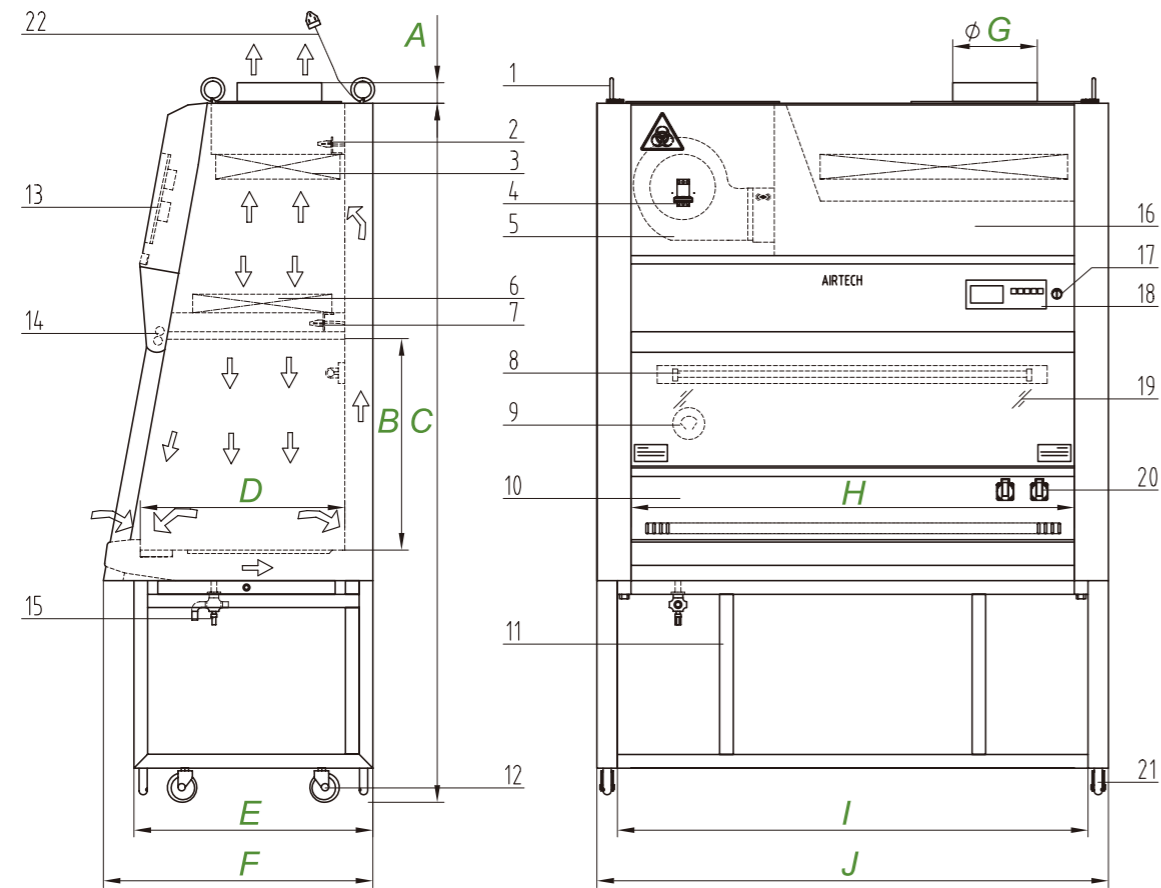
External air can't enter working area from front sash, protecting sample



Inner air not escape outside of outside, protecting operator

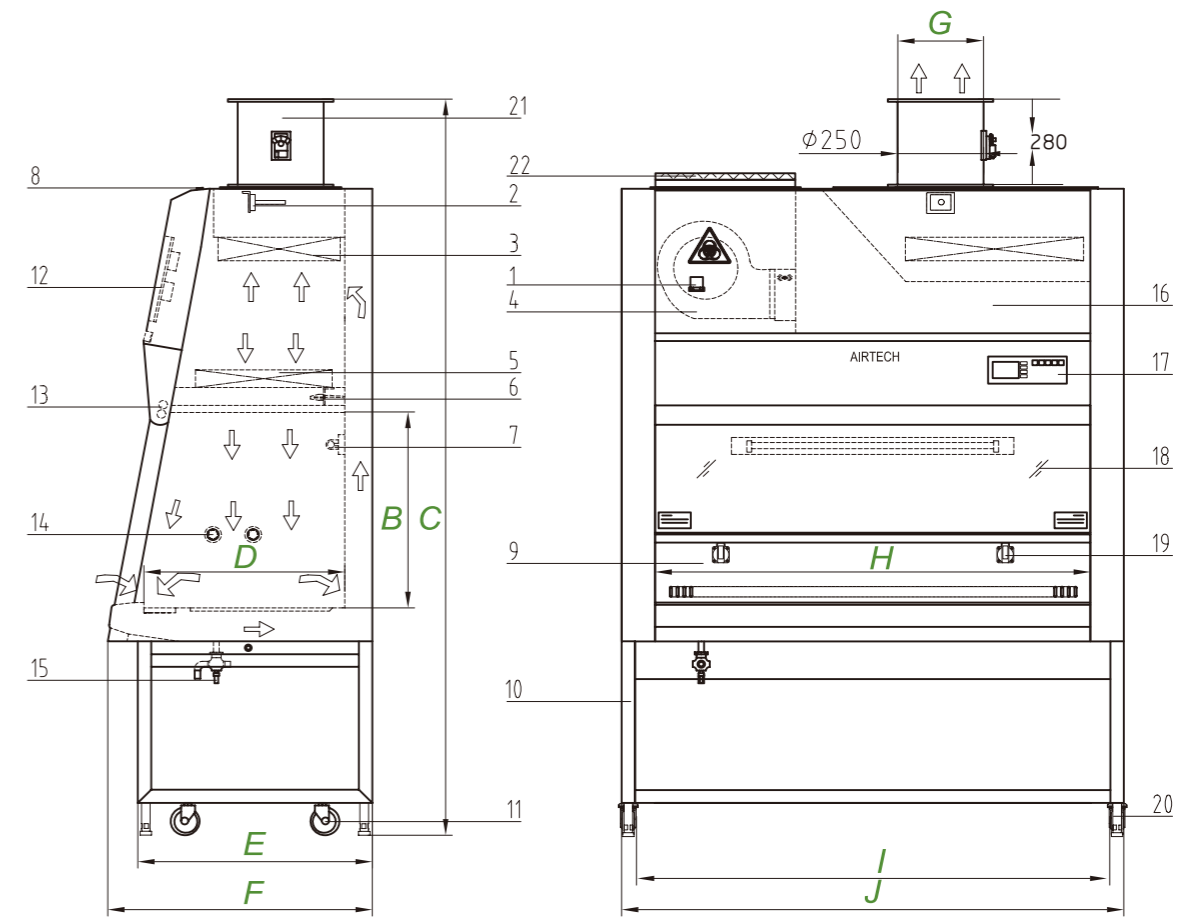


Class II Type A2 Biological Safety Cabinet Engineering Drawing



- | | | |
|---|--|---|
| 1. Eyebolt | 2. Velocity sensor (Austria made, air exhaust) | 3. HEPA/ULPA filter,air exhaust |
| 4. DC motor fan | 5. Main power switch | 6. HEPA/ULPA filter,air supply |
| 7. Velocity sensor (Japan made, air supply) | 8. UV lamp | 9. Dwyer differential pressure gauge(01/02/03 series) |
| 10. Work area | 11. Detachable stand | 12. Universal casters |
| 13. Main power board | 14. LED lamp | 15. Drain valve |
| 16. Main body | 17. Key switch | 18. Control panel |
| 19. Sliding door | 20. Sockets | 21.Adjustable feet |
| 22. Power cord | | |

Class II Type B2 Biological Safety Cabinet Engineering Drawing



- | | | |
|------------------------|----------------------|-------------------|
| 1. Power Switch | 8. Fuse Holder | 15. Water Valve |
| 2. Air Velocity Sensor | 9. Working Chamber | 16. Body |
| 3. Air Exhaust Filter | 10. Lower Stand | 17. Control Panel |
| 4. Fan | 11. Universal Caster | 18. Sliding Sash |
| 5. Air Supply Filter | 12. Elec.Box | 19. Spare Socket |
| 6. Air Velocity Sensor | 13. LED Light | 20. Leveling Feet |
| 7. UV Light | 14. Water/gas Pipe | 21. Air Valve |
| 22.Pre-filter | | |

Model	Dimensions in mm									
	A	B	C	D	E	F	G	H	I	J
BSC-1301A2/02A2/03A2	60	620	2000	540	700	790	250	1270	1380	1500
BSC-1003A2	60	620	2000	540	700	790	250	970	1080	1200
BSC-1004A2	50	630	2000	600	700	795	250	1004	1100	1200
BSC-1304A2	50	630	2000	600	700	795	250	1304	1400	1500
BSC-1603A2	60	620	2000	540	700	790	250	1570	1680	1800
BSC-1604A2	50	630	2000	600	700	795	250	1604	1700	1800
BSC-1804A2	50	630	2000	600	700	795	250	1804	1900	2000

Model	Dimensions in mm									
	A	B	C	D	E	F	G	H	I	J
BSC-1004B2	300	630	2300	600	700	795	250	1004	1120	1200
BSC-1304B2	300	630	2300	600	700	795	250	1304	1420	1500
BSC-1604B2	300	630	2300	600	700	795	250	1604	1720	1800
BSC-1804B2	300	630	2300	600	700	795	250	1804	1920	2000

TECHNICAL SPECIFICATIONS

Model		BSC-1004IIB2	BSC-1304IIB2	BSC-1604IIB2	BSC-1804IIB2
Dimensions	Nominal Size	3 feet	4 feet	5 feet	6 feet
	Internal Dimensions (W x D x H)	1004*630*630 mm	1304*630*630 mm	1604*630*630 mm	1804*630*630 mm
	External Dimensions (W x D x H)	1200*795*2050 mm	1500*795*2050 mm	1800*795*2050 mm	2000*795*2050 mm
Airflow	Type	Class II, Type A2			
	Exhaust Direction	Top Exhaust			
	Airflow Pattern (downflow / exhaust)	100% Exhaust			
	Average Inflow Velocity	0.55m/s			
	Average Downflow Velocity	0.35m/s			
	Inflow volume	727m3/h	945m3/h	1160m3/h	1307m3/h
	Exhaust volume	1125m3/h	1460m3/h	1798m3/h	2020m3/h
Cabinet Construction	Static pressure	≥680Pa	≥580Pa	≥580Pa	≥580Pa
	Blower	DC EBМ Blower			
	Work Zone	Stainless Steel SUS304			
	Main Body	Electro-galvanized steel with Akzo-Nobel white oven-baked powder coating			
	Sash Glass Thickness	5mm		6mm	
	Sash Glass Type	Tempered Glass, UV-proof			
	Sash Working Opening	200mm	200mm	200mm	200mm
	Sash Maximum Opening	460mm	460mm	460mm	460mm
	Full Access for Glass Cleaning	Yes			
	Illumination (Lx)	≥1100			
	vibration	≤5um (center of table top)			
Cleanliness	Noise (dB)	≤60	≤60	≤60	≤60
	Cleanliness	ULPA: ISO Class 4			
	Filtration Efficiency	ULPA:≥99.9995%,@0.12 μm			
	Total colony in impaction sampler(Operator Protection)	≤10CFU./Time			
	Total colony in slit type sampler(Operator Protection)	≤5CFU./Time			
Controlling System	Total colony in culture dish (Product Protection)	≤5CFU./Time			
	Total colony in culture dish (Cross Contamination)	≤2CFU./Time			
	Display	LED Color Screen			
	Downflow Velocity Display	Yes			
	Inflow Velocity Display	Yes			
	Filter Lifetime Display by %	Yes			
	Blower Switch	Yes			
	Brightness Lamp Switch	Yes			
	UV Lamp Switch	Yes			
Filter	Socket Power Switch	Yes			
	UV Timer	Yes			
Electrical Data	Main Power Switch	Yes			
	Downflow	ULPA Filter, ≥99.9995%@0.12um			
Power Supply	Exhaust	ULPA Filter, ≥99.9995%@0.12um			
	Rated Power (W)	330	380	430	430
Weight	AC220V, 1Φ, 50HZ	Yes			
	AC220V, 1Φ, 60HZ	Yes			
Alarm	Net Weight(kg)	270	310	370	410
	Gross Weight	302	350	408	460
	Alarm Type	Sound+Flash			
	Sash Height High/Low	Yes			
	Filter Blocked	Yes			
	Filter Shattured	Yes			
	Filter Lifetime Remind	Yes			
Accessories	Inflow Velocity High/Low	Yes			
	Downflow Velocity High/Low	Yes			
	LED Brightness Lamp	24.5W*1 pc	31W*1 pc	36W*1 pc	36W*1 pc
	UV Lamp	25W*1 pc	30W*1 pc	40W*1 pc	40W*1 pc
	Receptacle (pieces/Power/Current)	2 pcs/500W/3A	2 pcs/500W/3A	2 pcs/500W/3A	2 pcs/500W/3A
	Water Valve	Standard * 1 pc			
Casters	Gas Valve	Standard * 1 pc			
	Stand	Yes			
	Adjustable Feet	4, as standard			
	Casters	4, as standard			