Biological Safety Cabinet, NSF/ANSI 49 Certified

BSC-1301IIA2/1302IIA2

Airtech Biological safety cabinet Class IIA2 airflow ratio is 70% recirculation and 30% exhaust, providing the protection to person, samples and environment from biological hazards and contamination.

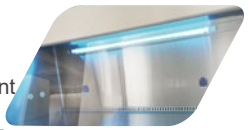
It equips with DC ECM motor for 60% energy saving,HEPA (H14) filter efficiency 99.995%@0.3 micron which conforms EU standard EN1822 and Japan velocity sensor for accurate control and accuracy display at 0.001m/s.The performance meets the standard NSF/ANSI49.

ECM DC brushless motor for stable and durable running and energy saving

HEPA (H14) Filter (EN1822),
99.995% efficiency for partical size 0.12um
Optional for ULPA(U15) filter (EN1822) 99.9995% efficiency for partical size 0.12um

LCD controller with angeled design for easy viewing display of working conditions and operation

LED lamp provides sufficient and uniform lighting; UV lamp with timer and Interlocked with LED lamp and sash window for convenient and safe decontamination



Waterproof Socket X 2 pcs

Interior work zone is made of one piece of stainless steel 304 sheet and with round corner, no leakage piont and easy for cleaning
The table is made of stainless steel 304 and can be lifted with support and taken out.

Dwyer brand (US imported) pressure gage indicates real-time negative pressure between two sides of downflow filter.

Removable spill retaining table top with front grille, curved corners made of SUS304, easy for cleaning

Casters for easy moving

Height adjustable support stand to make sure cabinet is set firmly and horizontally

Tempered sash glass, 6mm thickness security glass, high stability and anti-UV

International Standards				
	Biosafety Cabinets	Air Quality	Filtration	Electrical Safety
Standards Compliance	Designed to meet: NSF/ ANSI 49 (USA)	ISO 14644.1, Class 5, Worldwide JIS B9920, Class 5, Japan JIS BS5295, Class 5, Japan US Fed Std 209E, Class 10 USA	ISO29463, Worldwide EN-1822, Europe EN13091, Europe IEST-RP-CC034.1, USA	UL61010-1, USA CAN/CSA-22.2, No.61010-1

Reliable ECM DC brushless motor

Intelligent CAV technology(Constant Air Volume) and CPAS (Constant Pressure Apheresis System) technology

The biological safety cabinet adopts the USA Genteq brand ECM DC brushless motor works with the CPAS and CAV technology provides a safe and reliable airflow volume and pressure during the operation in BSC.
Based on the ECM feature that can determine supply air volume and pressure by detecting changes in internal current and power, and realize automatic regulation on the balance of air volume or pressure. The CPAS and CAV technologies are to precisely control airflow. When the cabinet is operated at set velocities and without readjusting the fan speed control, a 50% increase in pressure drop across the filter doesn't decrease total air delivery more than 10%.
Besides, the ECM DC motor can saves upto 60% energy compared with tradtional AC motor.

Integrated Filtration System

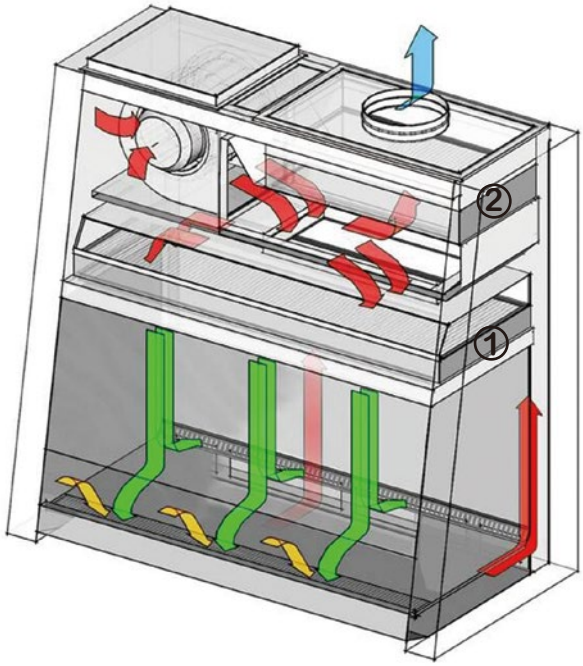
USA H&V brand HEPA Filter medium are applied in the supply HEPA (H14) filter and exhaust HEPA filter guarantee the filtration efficiency ≥99.995% for 0.3micron particles (Europe EN1822 standard) provide strong filtration capability. The 2 HEPA filters are designed with the leakage resistance patent technology, ensure the work area air cleanness at Class 5 (ISO14644.1 standard) .
Therefore, it can ensure the operated samples and opertor in clean environment.

Work area is surrounded by Negative pressure

The work area is made by one piece of SUS304 plate without weld point, it supports the precisely controlled airflow forms to the biologically contaminated ducts and plenums under negative pressure or surrounded by negative pressure ducts and plenums. it reduce the contaminated air in work area to leakage to room and protects the operator in safety.
Filtered air exhaust to room or outside. Approximately 30% of the air in the common plenum is exhausted through the HEPA filter to the room. The contaminated air filtrated by HEPA filter and becomes clean air into the room. Japan Airflow sensors have a known standard of deviation exceeding safe airflow requirements by biological safety cabinets.

Approx. 30% air exhausted
Approx. 70% recirculated through downflow
Inflow air creates a air barrier to protects the
Inside air leakage to room and room air entry in
Work zone.

① Downflow HEPA filter
② Exhaust HEPA filter



- Room air
- HEPA filter downflow air
- Contaminated air
- HEPA filter exahust air

Intelligent control system

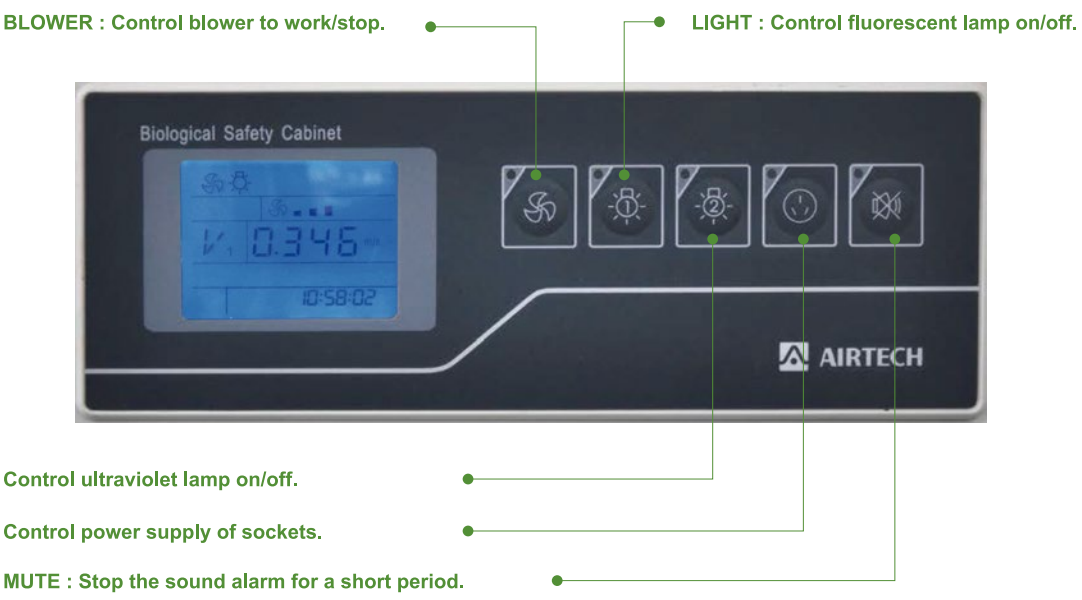
The controller is with password protection, the unauthorized person can not adjust the operating parameters.

Control buttons and button indicators :

1) Blower 2) LED light 3) UV light 4) Socket power 5) Mute, when the button works, the indicator is on.

Angled LCD display is easy to read the BSC working status.

- Display blower, LED light, UV light and socket works condition
- Display downflow velocity and inflow velocity, the velocity display accuracy is 0.001m/s, This is based independent sets of velocity sensors made in Japan.
- Display filter life in percentage, it reminds user to change the filter in time.
- Display UV timer



Alarm system:

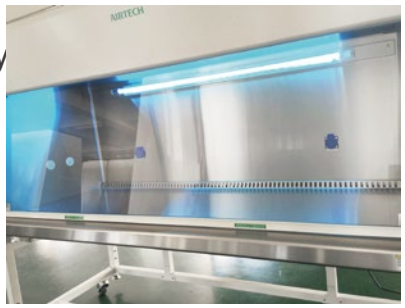
1) Abnormal velocity alarm: Inflow velocity alarm and Downflow velocity alarm
2) Sash window height alarm
3) Filter high resistance alarm
4) Blower failure alarm

Inquiry system

User can inquiry ECM DC motor service time and UV service time under engineer's permission

UV light and UV timer

254nm UV germicidal light for decontamination.
UV light, light and sliding sash are interlocked, UV light can only be turned on when light is off and anti-UV sliding sash is fully closed. It protects the operator in safe.
UV light timer function is programmable. UV light works time can be set according the enhances contamination control, extends UV lamp life and saves energy.



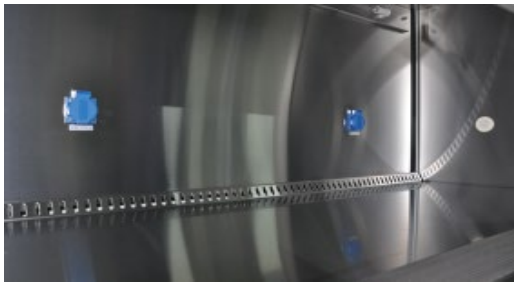
1) UV light turning off delay setting: UV light will be off automatically the UV light off time is 30 minutes.

2) UV light turning on time and turning off time setting. UV light can be on and be off automatically and programed as per actual time, adjustment is 1 second.

Excellent Designed parts

Front sash window adopts hanging lifting system (Imported from Japan) ,using spring to limit the sash glass height level at arbitrary positioning, and avoid sash glass drop down suddenly.
Front sash glass thickness is 6mm, high stability and convenient for sterilization when it losed.

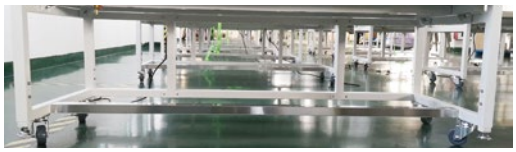
The interior work zone is made of one piece of SUS304 plate with round corner and no weld point, no leakage risk and easy for cleaning. The work zone is surrounded by negative pressure, ensuring the contaminated air not leak outside.



Work table is made by SUS304 plate and can be taken out.
It can be risen up by handle and support rode, convenient for cleaning the area below working table and collecting tank.

4 liter capacity SUS collecting tank with drainage valve, easy to collect water, cleaning and disinfection liquid.
The exterior is made of steel with sprayed powder, anti-bacteria and easy for cleaning.

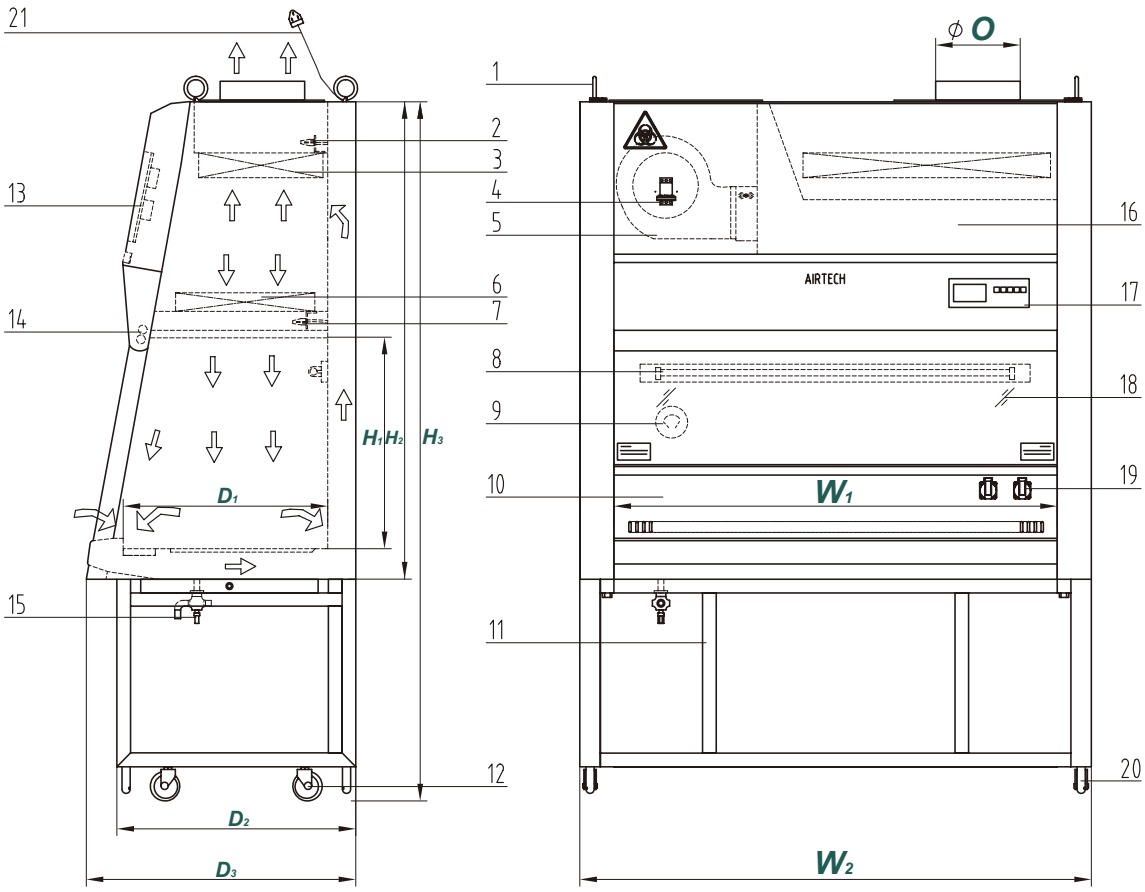
The base stand is equipped with mobile castors and leveling feet. The base stand height is adjustable and leveling foot is without exposure thread. It is convient for user to adjust the height of BSC and easy to fix BSC.



Accessories

- Optional 2 power sockets are reserved on right and left of interior back wall, it is easy for operator to use small device in BSC.
- LED light and UV lamp are standard Installed.
- Remote Dry contact enable user know the biosafety cabinet power on or off in remote distance.
- Blower positive pressure test port (filter upstream test) and Blower negative pressure port are convenient engineer to test the biosafety cabinet condition.

Class II Type A2 Biological Safety Cabinet Engineering Drawing



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

Model	Dimensions in mm								
	W_1	W_1	D_1	D_2	D_3	H_1	H_2	H_3	O
BSC-1301IIA2	1270	1380	600	700	790	620	1490	2050	250
BSC-1302IIA2	1270	1380	600	700	790	620	1490	2050	250

TECHNICAL SPECIFICATIONS

Model		BSC-1301IIA2	BSC-1302IIA2
Dimensions	Nominal Size	4 feet	
	Usable Work Area	0.762 ㎡	
	Stand Height	720 (mm) 28.4 (in)	
	Internal Dimensions (W x D x H)	1270*600*620 (mm) 50*23.6*24.4 (in)	
	External Dimensions (W x D x H)	1500*790*2050 (mm) 59.1*31.1*80.7 (in)	
	Plywoond Packing Dimensions (W x D x H)	1600*1070*1590 (mm) 63*42.1*62.6 (in)	
Airflow	Type	Class II, Type A2	
	Exhaust Direction	Top Exhaust	
	Airflow Pattern (recirculation / exhaust)	70% / 30%	
	Avarage Inflow Velocity	0.54m/s	
	Averrage Downflow Velocity	0.35m/s	
	Inflow Airflow Volume	617 m³/h	
	Downflow Airflow Volume	896 m³/h	
	Exhaust Airflow Volume	617 m³/h	
	Velocity Meter Accuracy	0.001m/s	
	Pressure Gage	Dwyer Brand	
Cabinet Construction	Work Zone	Stainless Steel SUS304	
	Main Body	Electro-galvanized steel with white oven-baked powder-coated finish	
	Sash Glass Thickness	5mm	
	Sash Glass Type	Tempered Glass, UV-proof	
	Sash Window Maximum Working Opening	250 (mm) 9.85 (in)	
	Sash Window Maximum Opening	540 (mm) 21.3 (in)	
	Illumination (Lx)	≥1000	
	Noise (dB)	≤64	
Cleanliness	Cleanliness	HEPA: ISO Class 5	
	Filtration Efficiency	HEPA:≥99.995%,@0.3 μm	
	Total colony in impaction sampler(Operator Protection)	≤10CFU./Time	
	Total colony in slit type sampler(Operator Protection)	≤5CFU./Time	
	Total colony in culture dish (Product Protection)	≤5CFU./Time	
	Total colony in culture dish (Cross Contamination)	≤2CFU./Time	
Controller	Display	LCD Screen	
	UV Timer	Yes	
	Overload protector	Yes	
Electrical Data	Power Consumption (KW.h/h)	0.8（with spare socket）	0.4（with spare socket）
	Power (W)	800（with spare socket）	400（with spare socket）
	Electrical Current (A)	7（with spare socket）	3（with spare socket）
Power Supply	AC115V,1Φ,50HZ	Yes	/
	AC220V,1Φ,50hz/60HZ	/	Yes
Weight	Net Weight(kg)	300	
	Gross Weight, Plywood Packing (kg)	405	
Alarm	Alarm Type	Sound+Flash	
	Sash window height limit	Yes	
	Filter Blocked	Yes	
	Filter Shattured	Yes	
	Filter Lifetime Remind	Yes	
	Inflow Velocity	Yes	
	Downflow Velocity	Yes	
Filter	Downflow	HEPA:≥99.995%,@0.3 μm;H14 per EN1822	
	Exhaust	HEPA:≥99.995%,@0.3 μm;H14 per EN1822	
Accessories	LED Lamp	Illuminance ≥1000Lx	
	UV Lamp	λ≥254nm,Irradiation intensity≥400mW/ ㎡	
	Receptacle (pieces/Power/Current)	2 pcs/115V/2A	2 pcs/220V/2A
	Gas Valve	Optional	
	Water Valve	Optional	
	Vaccum Valve	Optional	
	IV Bar	Optional	
	Stainless Steel Arm Rest	Optional	
	Detachable Stand	Yes	
	Adjustable Foot	Yes	
	Wheels	Yes	
Certificate		NSF49/UL	

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