

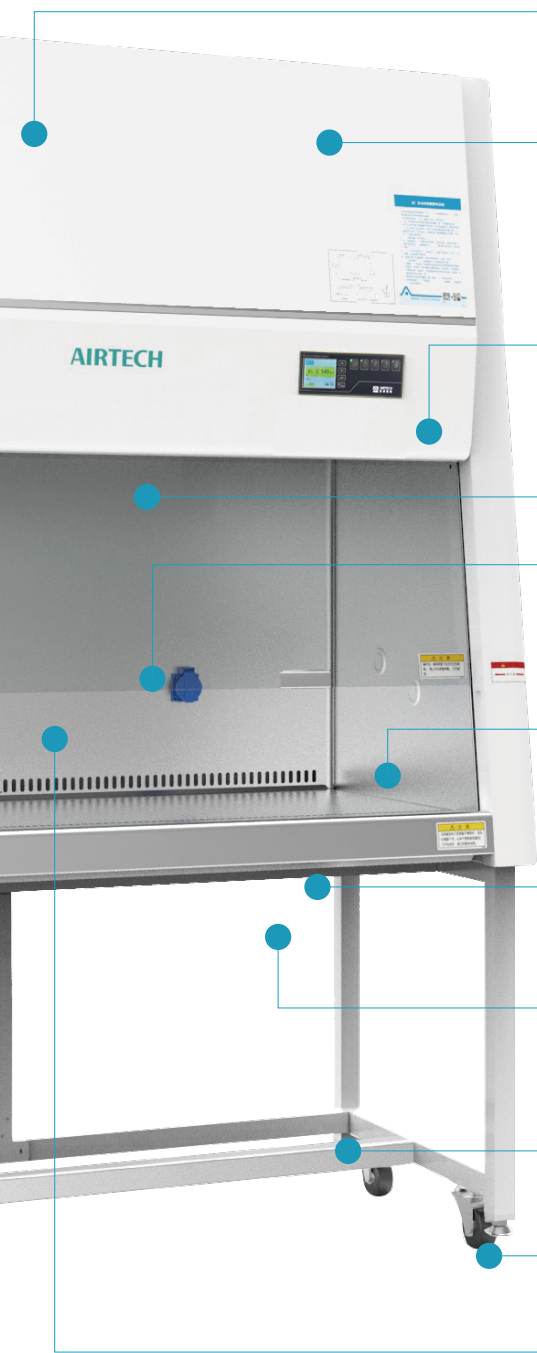
# Biological Safety Cabinet

BSC-1006IIA2/1306IIA2/1606IIA2/1806IIA2



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.

The performance meets the standard YY0569, EN12469 and NSF/ANSI49.



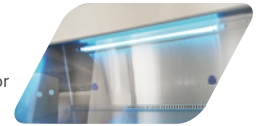
ECM DC brushless motor for stable and durable running and energy saving

H14 HEPA Filter (EN1822), 99.995% efficiency for partical size 0.3um(Optional U15 ULPA filter 99.9995% efficiency for partical size 0.12um)



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

LED lamp providing sufficient and uniform lighting;  
UV lamp with timer and is Interlocked with LED lamp and sash window for convenience and safet to do 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 working tray is made of stainless steel 304 and can be lifted by supporter and taken out for sterilization



Angled arm rest for comfortable working posture and prvents grill blocking

Integrated grille paper blocking system, it can prevent medical waste or foreign paper from entering the interior of the safety cabinet



Casters for easy moving

Adjustable stand to make sure cabinet is set firmly and horizontally



Tempered glass sash window anti-UV, it can be pulled down throughly for easy cleaning

### 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 5, Worldwide Fed Std 209E, Class 100 USA	ISO29463, Worldwide EN-1822, Europe EN13091, Europe IEST-RP-CC034.1, USA	EN-61010-1, Europe IEC61010-1, Worldwide



## ECM DC brushless motor

## CAV ( Constant air volume) technology

## CPAS (Constant pressure apheresis system ) technology

The biological safety cabinet adopts the ECM DC brushless motor working with the CPAS and CAV technology providing 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 adjustment 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 read-justing the fan speed control, a 50% increase in pressure drop across the filter doesn't decrease total air delivery more than 10%.



The velocity meets USA NSF/ANSI49 standard and EN12469 standard.

## Integrated filtration system

USA HV brand HEPA Filter medium are applied in the supply H14 HEPA filter and exhaust HEPA filter guaranteeing the filtration efficiency  $\geq 99.995\%$  for 0.3micron particles ( Europe EN1822 standard ) providing strong filtration capability. The 2 HEPA filters are designed with the leakage resistance patent technology, ensuring the work area air cleanness at Class 5 (ISO14644.1 standard) . Therefore, it can provide the production in operated in clean environment. Optional U15 ULPA filter 99.9995% efficiency for partial size 0.12um.



## Negative Pressure Protection

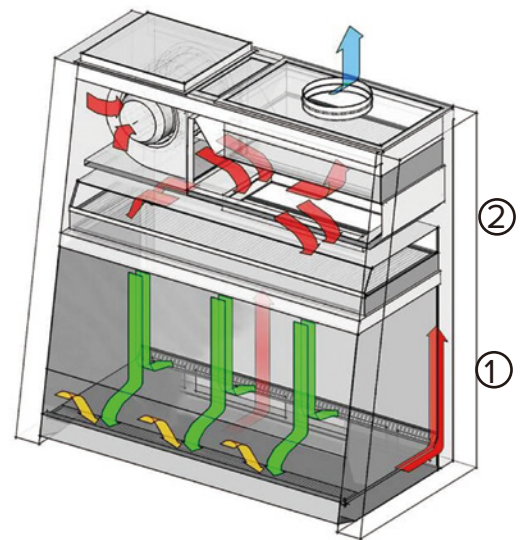
The work area is made of one piece of SUS304 plate without weld point, it supports the precisely controlled airflow forms to the biologically contaminated ducts and plenums under negative pressure or surrounded by negative pressure ducts and plenums. it reduce the contaminated air in work area to leakage 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 H14 HEPA filter and becomes clean air into the room. Advanced 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 into  
 Work zone.

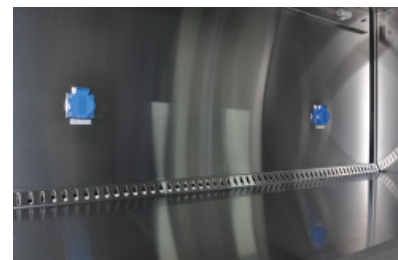
- ① Downflow HEPA filter
- ② Exhaust HEPA filter

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

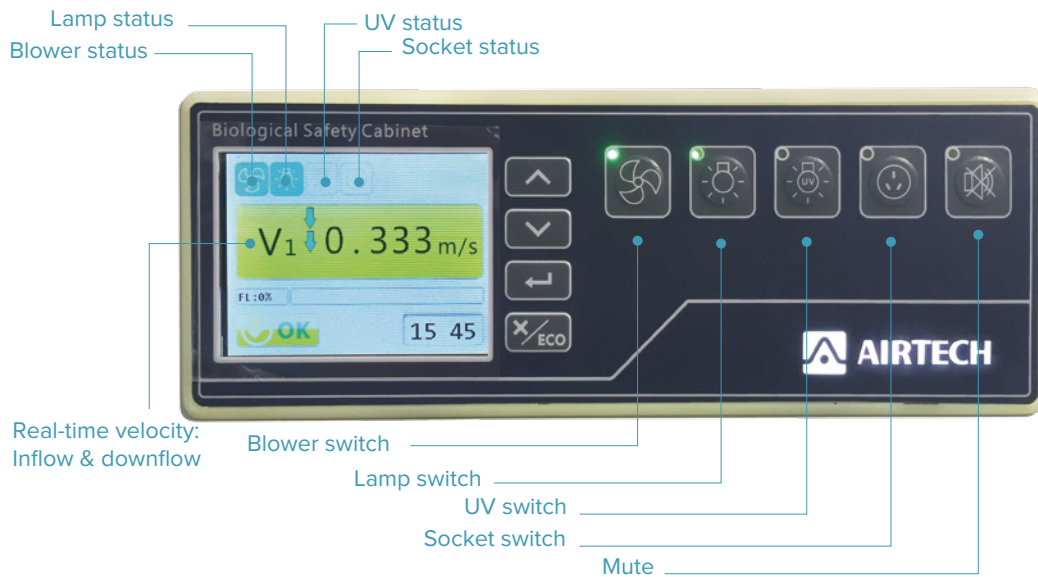


## Humanized design

- ▶ 6mm 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.
- ▶ The interior work zone is made of one piece of SUS304 plate with round corner and no weld points, no leakage risk and easy for cleaning. The work zone is surrounded by negative pressure, ensuring the contaminated air not leak outside.
- ▶ Worktable is made of SUS304 plate and can be taken out. It can be risen up by handle and support rode, convenient for cleaning.
- ▶ 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.



## Intelligent smartflow control system



- ▶ Angled color 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 on 2 independent sets of velocity sensors.
- ▶ Display filter life in percentage, it reminds the user to in safe condition to operate the BSC and change the filter in time.
- ▶ Display time it is easy to know the operation time.
- ▶ Display UV timer.
- ▶ The controller is with password protection, the unauthorized person can not adjust the operating parameters.

## Alarm

- ▶ Inflow velocity alarm
- ▶ Downflow velocity alarm
- ▶ Sash height alarm
- ▶ Filter high resistance alarm
- ▶ Blower failure alarm
- ▶ UV life time alarm

## ECO mode

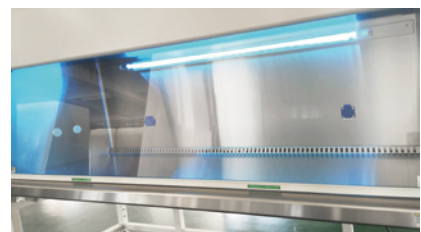
- ▶ When shut down front sash and BSC will turn to ECO mode automatically. It reduces the speed of the motor blower to save the energy. The cabinet is in slightly negative pressure to prevent contaminant from escaping and to keep work area clean. When open front window, BSC will return to standard running immediately.
- ▶ Using ECO Mode can reduce the open-close time. At the same time of saving energy, it saves time for self-purification, UV disinfection and also for cleaning works.

## 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 is to protects the operator in safe.

UV light timer function is programmable with increment of 1 minutes.

- ▶ UV light turning off delay setting.
- ▶ UV light turning on time and turning off time setting.



## Technical specifications

Model		BSC-1006IIA2	BSC-1306IIA2	BSC-1606IIA2	BSC-1806IIA2
<b>Dimensions</b>	Nominal Size	3 feet	4 feet	5 feet	6 feet
	Internal Dimensions (W x D x H)	1004*630*660 mm	1304*630*660 mm	1604*630*660 mm	1804*630*660 mm
	External Dimensions (W x D x H)	1200*785*2050 mm	1500*785*2050 mm	1800*785*2050 mm	2000*785*2050 mm
<b>Airflow</b>	Type	Class II, Type A2			
	Exhaust Direction	Top Exhaust			
	Airflow Pattern (downflow / exhaust)	70% / 30%			
	Average Inflow Velocity	≥0.53m/s			
	Average Downflow Velocity	≥0.33m/s			
<b>Cabinet Construction</b>	Blower	DC ECM Blower			
	Work Zone	Stainless Steel SUS304			
	Main Body	Electro-galvanized steel with powder coated			
	Sash Glass Thickness	6mm			
	Sash Glass Type	Tempered Glass, UV-proof			
	Sash Working Opening	200mm			
	Sash Maximum Opening	500mm			
	Full Access for Glass Cleaning	Yes			
	Illumination (Lx)	≥1000			
	Noise (dB)	≤65			
<b>Cleanliness</b>	Cleanliness	HEPA: ISO Class 5 (Optional U15 ULPA: ISO Class 4)			
	Filtration Efficiency	H14 HEPA:≥99.995%,@0.3 μm (Optional U15 ULPA≥99.9995%,@0.12um)			
	Personnel Protection	Total colony in impaction sampler ≤10CFU./Time Total colony in slit type sampler ≤5CFU./Time			
	Product Protection	Total colony in culture dish ≤5CFU./Time			
	Cross-contamination Protection	Total colony in culture dish ≤2CFU./Time			
<b>Controlling System</b>	Display	LCD 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			
	Socket Power Switch	Yes			
	UV Timer	Yes			
Main Power Switch	Yes				
<b>Electrical Data</b>	Reated Power (W)(without scoke)	180	220	290	330
	<b>Power Supply</b>	AC220V,1Φ,50HZ/60HZ	Yes	Yes	Yes
<b>Weight</b>	Net Weight(kg)	230	260	310	350
	Gross Weight	262	310	358	400
<b>Alarm</b>	Alarm Type	Sound+Flash			
	Sash Height High/Low	Yes			
	Filter Blocked	Yes			
	Filter Shattured	Yes			
	Filter Lifetime Remind	Yes			
	Inflow Velocity High/Low	Yes			
<b>Filter</b>	Downflow	HEPA Filter (Optional ULPA filter)			
	Exhaust	HEPA Filter (Optional ULPA filter)			
<b>Accessories</b>	LED Lamp	1 pc			
	UV Lamp	1 pc			
	Receptacle (pieces)	2 pcs			
	Water Valve	Optional * 1 pc			
	Vacuum Valve	Optional * 1 pc			
	Stand	Yes			
	Adjustable Feet	4, as standard			
Casters	4, as standard				