TempIn™

preserving life

Class II Type B2, CE

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⬤ Features

Biological safety cabinet Class IIB2 airflow ratio is 100% exhaust, providing protection to person, samples and environment from biological hazards and contamination. It equips with DC ECM motor for 60% energy saving,ULPA filter (U15) efficiency 99.9995%@0.12 micron which conforms EU standard EN1822 and Japan velocity sensor for accurate control and display accuracy at 0.001m/s.The performance meets the standard of YY0569 and NSF/ANSI49.

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

ULPA Filter (EN1822), 99.9995% efficiency for partical size 0.12um

Exhaust air valve with electromagnetic control, automatically adjust the air volume. When it is out of use, it full closes to avoid external impurities entry into cabinet

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

LED lamp provids 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.

Angled arm rest for comfortable working posture and prvents grill blocking

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

Casters for easy moving

Height adjustable support stand to make sure cabinet is set firmly

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

International Standards

	Biosafety Cabinets	Air Quality	Filtration	Electrical Safety
Standards Compliance	Designed to meet: NSF/ ANSI 49 (USA) 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

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 working with CPAS and CAV technology providing safe and reliable airflow and pressure in operation. Based on the ECM feature that can determine supply air volume and pressure by detecting changes in internal current and power, and realize automation 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%. The velocity meets USA NSF/ANSI49 standard.

Integrated Filtration System

USA HV brand ULPA Filter medium are applied in the supply U15 ULPA filter and exhaust ULPA filter guarantee the filtration efficiency ≥99.9995% for 0.12micron particles (Europe EN1822 standard) providing strong filtration capability. 2 ULPA filters are designed with the leakage resistance patent technology, ensuring the work area air cleanness at Class 4 (ISO14644.1 standard) . Therefore, it can provide the samples operated in clean environment.

Biosafety cabinet air pattern:

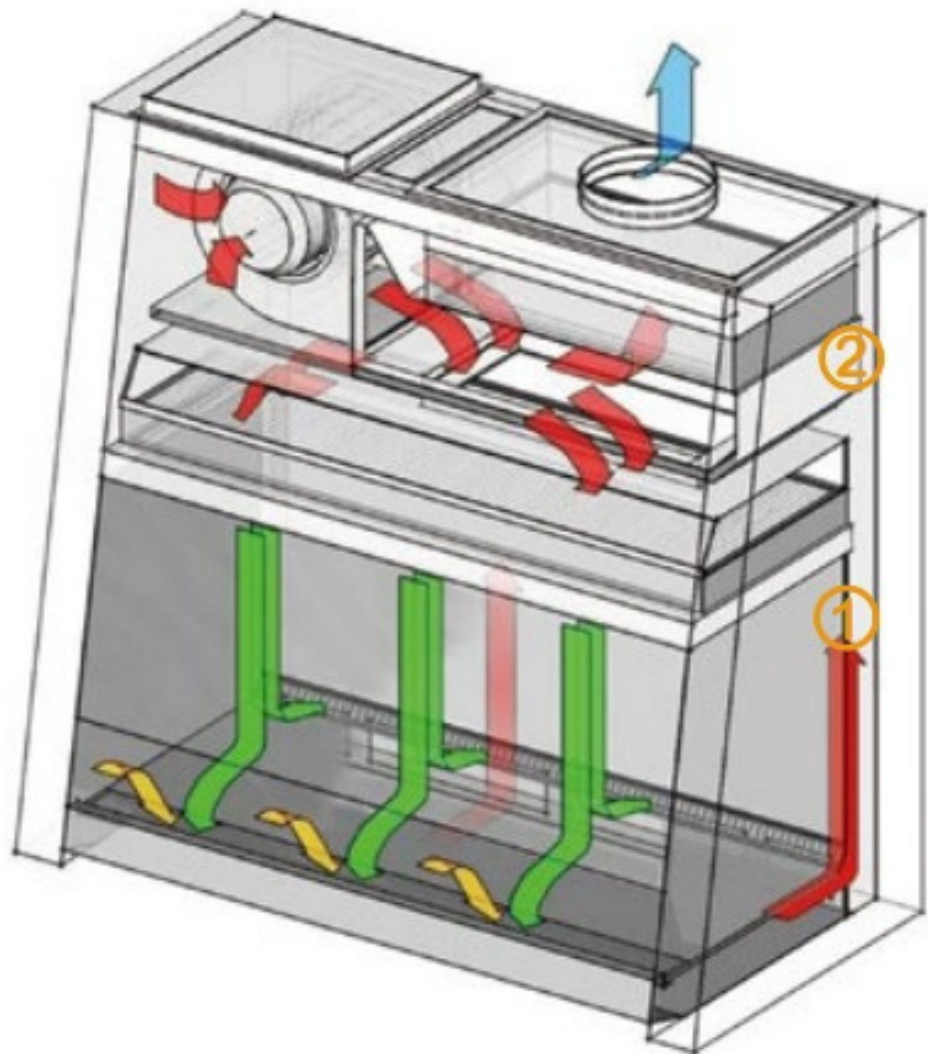100% contaminated air is filtered by ULPA filter and exhausted to the outside through duct system.

1. Downflow ULPA filter
2. Exhaust ULPA filter

■ Room air
■ ULPA filter downflow air

■ Contaminated air
■ ULPA filter exahust air

Intelligent Smartflow control system ECO mode, Energy saving, lower noise level TM

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

Control buttons and button indicators :

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

TAMngled 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 made in Japan.
- Display filter life display in percentage, it reminds user tochange the filter in time. Display �me display it is easy to know the opera�on �me Display UV �mer

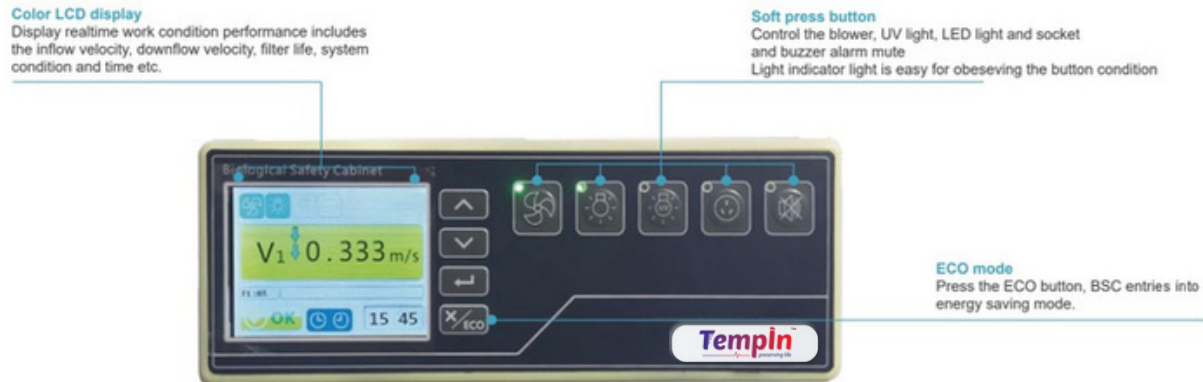## TAMngled color LCD display is easy to read the BSC working status.

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- Display downflow velocity and inflow velocity, the velocity display accuracy is 0.001m/s, This is based on 2 independent sets of velocity sensors made in Japan.
- Display filter life display in percentage, it reminds the user to in safe condition to operate the BSC and change the filter in time.
- Display tome display it is easy to know the operation time.
- Display UV timer.

Alarm system:

Inflow velocity alarm Downflow velocity alarm SasTMh height alarm Filter high resistance alarm Blower failure alarm UV life tIme alarm

Color LCD display
Display realtime work condition performance includes the inflow velocity, downflow velocity, filter life, system condition and time etc.

Soft press button
Control the blower, UV light, LED light and socket and buzzer alarm mute
Light indicator light is easy for obeseving the button condition

V_1 0.333 m/s

OK 15 45

Tempin

ECO mode
Press the ECO button, BSC entries into energy saving mode.

UV light timer

UV light timer function is programmable with increment of 1 minutes. UV light works time can be set according the enhances contamination control, extending UV lamp life and saves energy.

1) UV light turning off delay seding: UV light will be off automatically when delay time is set up, the UV light off time is 0~999 minutes programed.

2) UV light turning on time and turning off time seng: UV light can be on and be off automatically and programed 00:01 to 23:59. 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.

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

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 to sterilization when closed. Front sash can be pulled down throughly after removing armrest. It enables user to clean all over the sash glass including exterior and interior.

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.

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 level foot is without exposure thread. It is convient for user to adjust the height of BSC and easy to fix BSC.
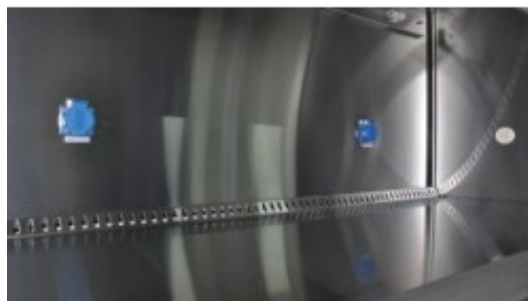
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The interior work zone is made of one piece of SUS304 plate with round corner and no weld points, no leakage risk and easy for cleaning. The work zone is surrounded by negative pressure, ensuring the contaminated air not leak outside.

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.
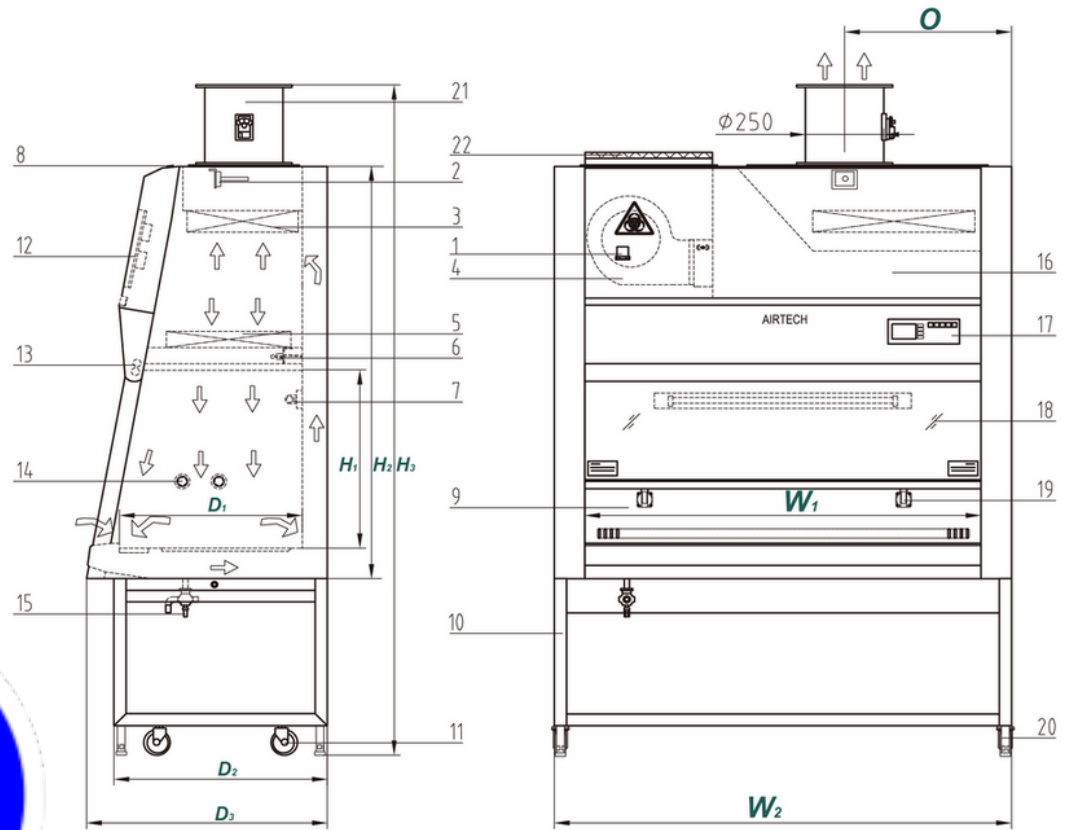
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Accessories

- 2 power sockets are reserved on right and interior back wall, it is easy for operator to use small device in BSC.

- Each left wall and right wall are reserved 2 ports, enable user to install the water, vacuum or gas tap. 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.

- Optional exhaust blower is intalled at the terminal end system, it is powerful and 100% exhaust the air from Biosafety cabinet.

Class II Type B2 Biology Safety Cabinet Engineering Drawing

1. Power Switch
2. Air Velocity Sensor
3. Air Exhaust Filter
4. Fan
5. Air Supply Filter
6. Air Velocity Sensor
7. UV Light
22. Pre-filter

8. Fuse Holder
9. Working Chamber
10. Lower Stand
11. Universal Caster
12. Elec.Box
13. LED Light
14. Water/gas Pipe

15. Water Valve
16. Body
17. Control Panel
18. Sliding Sash
19. Spare Socket
20. Leveling Feet
21. Air Valve

Model	Dimensions in mm								
	W_1	W_2	H_1	H_2	H_3	D_1	D_2	D_3	O
TIBSC-3/ B2	1004	1200	300	630	2300	600	700	795	250
TIBSC-4/ B2	1304	1500	300	630	2300	600	700	795	250
TIBSC-5/ B2	1604	1800	300	630	2300	600	700	795	250
TIBSC-6/ B2	1804	2000	300	630	2300	600	700	795	250

TECHNICAL SPECIFICATIONS

Model		TIBSC-3/ B2	TIBSC-4/ B2	TIBSC-5/ B2	TIBSC-6/ B2
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 B2			
	Exhaust Direction	Top Exhaust			
	Airflow Pattern (downflow / exhaust)	100% Exhaust			
	Avarage Inflow Velocity	0.55m/s			
	Averrage Downflow Velocity	0.35m/s			
	Inflow volume	727m3/h			
	Exhaust volume	1125m3/h			
	Static pressure	≥680Pa			
Cabinet Construction	Blower	DC EBM Blower			
	Work Zone	Stainless Steel SUS304			
	Main Body	Electro-galvanized steel with Akzo-Nobel white oven-baked powder coating			
	Sash Glass Thickness	5mm			
	Sash Glass Type	Tempered Glass, UV-proof			
	Sash Working Opening	200mm			
	Sash Maximum Opening	460mm			
	Full Access for Glass Cleaning	Yes			
	Illumination (Lx)	≥1100			
	virbration	≤5um(center of table top)			
	Noise (dB)	≤60			
Cleanliness	Cleanliness	ULPA: ISO Class 4			
	Filtration Efficiency	ULPA:≥99.9995%,@0.12 µm			
	Total colony in impaction sampler	≤10CFU./Time			
	Total colony in slit type sampler	≤5CFU./Time			
	Total colony in culture dish	≤5CFU./Time			
	Total colony in culture dish	≤2CFU./Time			
Controlling System	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			
	Socket Power Switch	Yes			
	UV Timer	Yes			
	Main Power Switch	Yes			
Filter	Downflow	ULPA Filter, ≥99.9995%@0.12 µm			
	Exhaust	ULPA Filter, ≥99.9995%@0.12 µm			
Electrical Data	Reated Power (W)	330	380	430	430
Power Supply	AC220V,1Φ,50HZ	Yes	Yes	Yes	Yes
	AC220V,1Φ,60HZ	Yes	Yes	Yes	Yes
Weight	Net Weight(kg)	270	310	370	410
	Gross Weight	302	350	408	460
Alarm	Alarm Type	Yes	Yes	Yes	Yes
	Sash Height High/Low	Sound+Flash			
	Filter Blocked	Yes			
	Filter Shattured	Yes			
	Filter Lifetime Remind	Yes			
	Inflow Velocity High/Low	Yes			
	Downflow Velocity High/Low	Yes			
Accessories	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	Optional * 1 pc			
	Gas Valve	Optional * 1 pc			
	Stand	Yes			
	Adjustable Feet	4, as standard			
	Casters	4, as standard			