class II type B2 biosafety cabinet with ulpa filter

Class II type B2 biosafety cabinet integrates advanced biological safety protection design and intelligent monitoring technology, widely used in microbiology, cell biology, molecular biology and medical diagnosis and other fields.

Class II type B2 biosafety cabinet strictly follows the Chinese YY/0569-2011 standard and the EU EN12469 standard for design, manufacture and quality testing. Class II type B2 biosafety cabinet has passed the strict testing of China NMPA and obtained the “Class III Medical Device Registration Certificate”, which ensures the quality and safety.

Main Advantages of Class II B2 Biosafety Cabinets

1. Exhaust design: Unlike A2 Biosafety Cabinets, 100% of the exhaust gases of B2 Cabinets are discharged directly to the external environment without passing through the indoor air system, thus reducing the risk of contamination.
2. energy saving and low noise: equipped with energy efficient DC brushless fan, energy efficiency increased by more than 40%, low operating noise, reducing the impact on the experimental environment.

3. filtration effect: the use of ULPA ultra-high-efficiency filters, filtration efficiency up to 99.9995%, can effectively filter the diameter of 0.12um of tiny particles, to ensure clean air.
4. convenient operation and maintenance: casters and bracket integrated design, easy and safe to move. Moreover, the cabinet and bracket can be separated, the height of the bracket can be customized according to the actual needs, further improving the flexibility and adaptability of the equipment.

Main Features of Class II Type B2 Biosafety Cabinet

1. High-efficiency protection design: In order to ensure the safety of operators, experimental samples and experimental environment, class II type B2 biosafety cabinet is designed with multiple protection systems. The air flow and filtration system prevents biohazardous substances from leaking into the external environment through negative pressure and high efficiency filter technology.
2. Intelligent monitoring interface: Equipped with 7-inch high-definition touch screen human-machine interface, real-time display of equipment status. It supports switching between Chinese and English, and the monitoring data is displayed on one screen, which is able to show the operating status of fans and filters as well as the alarm information, thus improving the operation convenience and reliability of the equipment.
3. high-quality materials and structural design: the cabinet body is made of high-quality stainless steel integrated structure, the three side wall panels of the working area are made of high-standard stainless steel, and the surface treatment is designed as large rounded corners, which is easy to clean and effectively prevents the formation of dead corners.

Working Principle

Class II type B2 biosafety cabinet through the precision design of the air ducts and fans to ensure that the air flow in accordance with the predetermined way. The airflow passes through a high efficiency particulate air (ULPA) filter to ensure the purification of the incoming and outgoing air. Negative pressure is maintained inside the cabinet to ensure that the air flow in the operating space does not leak to the outside. The filtered air is 100% exhausted to prevent the spread of biohazardous materials into the laboratory environment. Vertical laminar air curtains and internal negative pressure mechanisms further protect operators and samples from cross contamination.

Overall Design of Class II Type B2 Biosafety Cabinet

1. ergonomic design: the cabinet body adopts 9 degrees tilt angle design, which makes the working table more ergonomic, improves the operation comfort and avoids the fatigue brought by long time operation.
2. efficient airtight design: the inner cavity is pressurized with 500Pa to ensure that the air pressure is not less than 450Pa within 30 minutes, and it strictly passes the airtightness test to ensure the safety and sealing in the operation process.
3. Negative pressure surround design: The working area is surrounded by negative pressure on all sides, providing all-round protection, effectively avoiding the external environment from polluting the working area, ensuring the high purity and safety of the samples.

4. the cabinet adopts 9 degrees tilt angle design, in line with ergonomic principles, a larger perspective, easy to operate and more humanized. safety cabinet exposed work area three side wall plate using high-quality stainless steel integrated structure, the internal parts can be cleaned with 20mm large rounded corners, leaving no dead ends, easy to clean.
5. the work area using four sides, left and right two sides, rear, bottom, negative pressure surround design, better protection in the work area, more secure.
6. the worktop material is high quality stainless steel, separated worktop design, easy to clean, can be autoclaved. Even if there is waste liquid overflow from the experiment, it can flow into the liquid collection tank for easy cleaning.
7. caster design: casters and bracket integrated design, the safety cabinet can be moved safely by casters, but also by adjusting the fixed feet for fixing and leveling.
8. the cabinet and bracket can be separated, the height of the bracket can be customized according to the actual situation.
9. front window airflow isolation design: prevent airflow leakage through the side wall and upper side of the front window, making the operation safer.

Alarm Function

1. glass door height alarm: when the glass door is higher than the safe height of 200mm, the device will trigger sound and light alarm to remind the operator to adjust the position to avoid accidents.
2. filter service life alarm: when the service life of the filter reaches the set value, the system will remind the staff to replace it in time through alarm.
3. airflow fluctuation alarm: If the airflow fluctuation of the equipment exceeds 20% of the nominal value, the system will send an alarm signal in time to remind the operator to check the airflow status.

Protection Design

1. Chain protection design: to prevent misoperation from causing harm to the equipment or personnel. For example, the fan and the glass door interlock, when the glass door is completely closed, the fan will automatically cut off the power to protect and extend the service life of the equipment.
2. UV lamp and lighting interlock: in the glass door is closed and the lighting is not turned on, the UV lamp is automatically turned on to prevent misoperation caused by ultraviolet radiation on the personnel, enhance operational safety.
3. external fan and safety cabinet interlock: only when the external fan starts and the wind speed reaches the specified standard, the biological safety cabinet will start to run, and after the work is finished, the fan will be delayed to close to ensure that the external exhaust system works normally, to further protect the environment and personnel safety.

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Model	**BC20B2**	**BC30B2**
Air cleanliness	ISO Class 5, Federal Standard 209E Class 100. The number of particles ⩾0.5 um must not exceed 100 per cubic foot of air. This corresponds to no more than 3.5 particles ⩾0.5 um per liter of air.	
Downflow velocity	0.32 meters per second	
Inflow velocity	0.55 meters per second	
Noise	⩽67	
Work area dimensions	1330x520x640mm	1630x520x640mm
External dimensions	1500x815x2200mm	1800x815x2200mm
Illuminance	⩾650Lx	
Exhaust direction	Top out	
Weight	324kg	373kg

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Model	**BC20B2**	**BC30B2**
Power supply	230Vac, 50Hz	
Power	1500W	