

SAFPLUS[®]
your air, our care

SAFZONE[®]

Each Biosafety Cabinet has been put through 8 performance tests, a UV lighting intensity test and 3 electrical safety tests before leaving the factory.





NSF Certified
EN12469 Certified
YY 0569 Certified
UL61010-1/CSA-C.22.2 No.61010-1 Certified
ISO 9001:2008 Quality Management System Certified



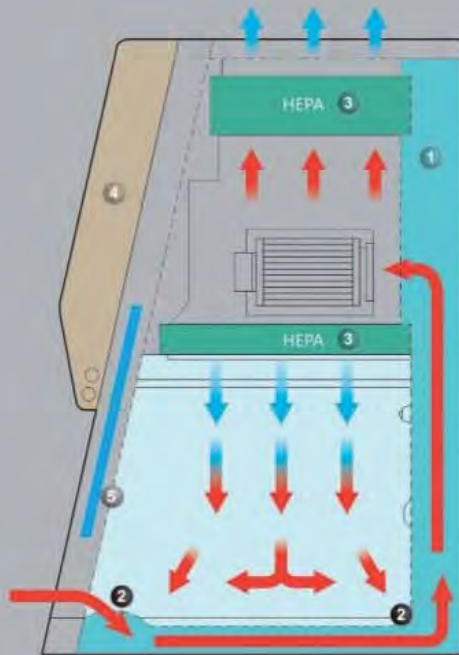
CE **CFDA**

The Biosafety Cabinet is a safety device to protect the personnel, environment and product. It is the most commonly used containment device for work with biohazardous agents or materials. During operations, it helps avoid exposure to possible infectious aerosols and spills for the operation of experimental material of bio-hazardous, nature microbial strains or clinical diagnostic inspection sample. This Biosafety Cabinet is widely used in biological experiments; it is the most important barrier (Primary Barrier) and front line defense for the safety of the operator. Biological safety cabinets that are installed, certified, and used correctly offer user, environmental, and product protection from biohazards.

Class II type A2 Biosafety Cabinets currently dominate the market in popularity among all Biosafety Cabinets. They are designed to work with agents that require Biosafety Level 1 ~ 3 containment and minimize hazards. A2 Biosafety Cabinets maintain negative pressure environments inside the cabinet during operation to prevent the contaminants from escaping the work area to protect the employees. To protect the product, approximately 70% of the room air is pressurized by the blower and forced through the supply HEPA filter prior to entering the work area. Finally, the remaining 30% of air is filtered through an exhaust HEPA filter. The sterile air finally exits the cabinet and is released back into the environment.

Application areas: Hospitals, Universities, Research Centers, Pharmaceutical Companies and other Biological / Life Science Laboratories.





➔ Sterile (clean) air
➔ Contaminated (dirty) air



Multiple Protection Design Increases Security Level Significantly

DOUBLE-WALL CABINET STRUCTURES. CONTAMINATED AREA SURROUNDED WITH NEGATIVE PRESSURE TO FULLY PREVENT LEAKAGE OF CONTAMINATED AIR. ❶

Supply/Exhaust HEPA filter 99.99% efficiency @0.3 micron (Class H14) ❸

Control systems and pipelines completely isolated from contaminated areas for convenient and safe maintenance. ❹

Innovative surrounded air intake grille design. All contaminated air in the work area is enclosed inside the cabinet. No safety dead end; the safety of personnel is never compromised. ❷



Electrical outlets with splash-proof cover. ❻



North America
(UL listed)



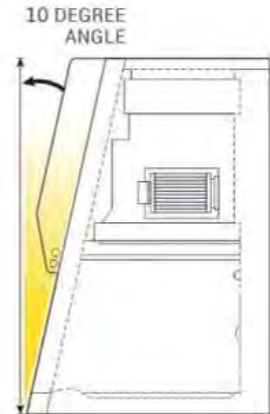
Europe/Worldwide
(CE Certified)

Service valves for gas, air and vacuum. Maximum working pressure 75PSI. (CSA Certified) ❼



User-Friendly Operation and Maintenance

- Apply Key to switch power for operator security control.
- Ergonomic 10 degrees angle window design. Reduces operation discomfort over long-term use of limbs and eye strain.
- Work area and work tray are fabricated in one single-piece of stainless steel with rounded corners designed to reduce particulate adhesion and for easy cleaning and maintenance.
- Patented HEPA filter fixation design for a more secure locking device. Can replace HEPA filters rapidly from the front of cabinet quickly and easily.
- Pioneered single-piece stainless steel design of work tray with front grille. The front grille Arc increases the fluency of the inflow air. It can be used as an armrest and eliminates the need for additional armrest fittings.
- Removable single-piece work tray can be easily removed for cleaning and collection of spilled liquid.



▲ Arc-shaped armrest / grill

▲ Uplifting tray

ECM Brushless DC Motor With Excellent Energy Efficiency

SAFPLUS AND **SAFZONE** BIOSAFETY CABINETS WITH THE WORLD'S HIGHEST ECM RATING FOR BRUSHLESS DC MOTOR; MULTIPLE ENERGY - SAVING, STABILITY, HIGH EFFICIENCY AND LOW MAINTENANCE CHARACTERISTICS.



Power consumption saving by 86% against traditional PSC motors. (Internal test)

- Constant air flow design adjusts air pressure automatically providing stable air flow to extend the HEPA filter life.
- High torque design and superior efficiency. It can transport more air volume and pressure than traditional AC motors.
- More than 80% of the output power is converted into kinetic energy to achieve amazing energy-savings.
- Stable motor output which is not sensitive to external voltage surges can withstand 6KV surge circuit.
- Applied case design protects internal electronic components from dust pollution.
- Low operation temperature to extend the motor life.

Full-Color Microcomputer Touch Panel

GRAPHICAL USER INTERFACE DESIGN. EASY TO OPERATE. PROVIDES USER WITH A BETTER VIEW OF REAL-TIME OPERATION STATUS THROUGH THE SCREEN. IDEAL TO ACCESS VARIOUS FUNCTIONS AND PARAMETER SETTINGS.



▲ Real-time digital display of inflow velocity, downflow velocity, HEPA filter pressure, and usage time of HEPA filters and UV lamp.

AUTOMATIC PRE-PURGE

The pre-purge time can be set for the fan to run when the cabinet is warmed up. During pre-purge, the air is recycled in the cabinet to achieve uniform flow and steady state prior to performing operation.

AUTOMATIC POST-PURGE

The post-purge time can be set for removing the residual contaminated air in the cabinet to ensure the cleanliness of the work area after use.

TIMER

Built-in timer for counting up and down, electrical outlet, UV light.

ALARM

Audible and visual text alarms will be activated when the following situations occur.

- Low inflow velocity
- The window is not at the correct operation height.
- High HEPA filter pressure.
- Usage time of HEPA filter exceeds the setting hour.
- Usage time of UV lamp exceeds the setting hour.

LOW FAN SPEED MODE

When the window is closed, the fan speed is automatically reduced to maintain work area cleanliness and energy-saving.

SAFETY INTERLOCK

Safety interlock for window and UV light to protect the operator from UV irradiation. When the window is opened, the UV light turns off automatically. UV light only activates when the window is fully closed.

OPERATION RECORD

Operation records can be viewed with a simple touch of the control panel.

UNIT DISPLAY

The unit display for air velocity and pressure can be set.

LANGUAGE DISPLAY

Multi-lingual display setting.

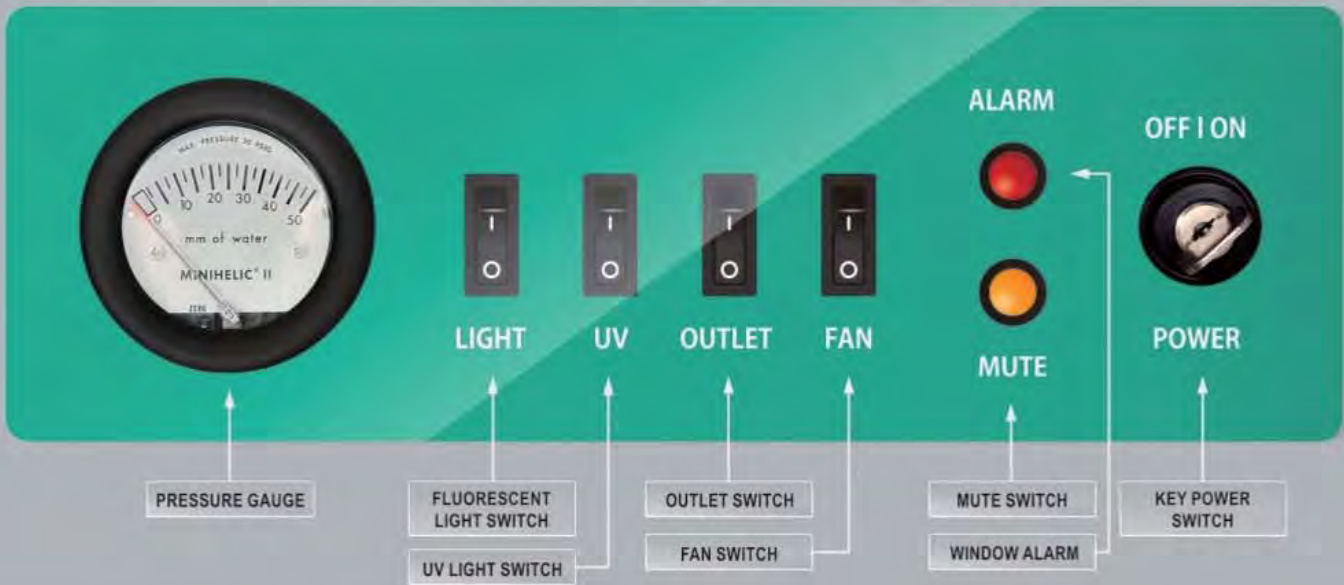
FAN CONTROL

Fan control setting allows the administrator to restrict the usage of cabinet by unauthorized personnel.

MUTE

When the audible alarm is activated, it can be muted temporarily by touching the mute switch. If the abnormal situation has not been settled, the cabinet alarm will be activated again within a set time to alert the user.





WINDOW ALARM

When the window is not at the operation height of 20 cm, it will release an audible and visual alarm automatically.

MUTE SWITCH

When the alarm is activated, it can be muted temporarily while the alarm light continues to flash. If the abnormal situation has not been settled, the cabinet alarm will be activated again within a set time (5 minutes) to alert the user.

SAFETY INTERLOCK

When the window is opened, the fan and fluorescent light will be activated automatically and the uv light will be switched off. When the window is fully closed, the uv light will be re-activated automatically. The fan and fluorescent light will be switched off.

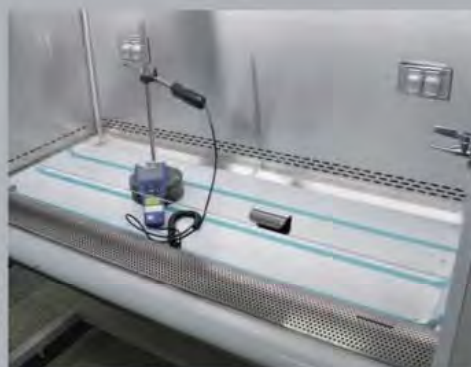
※ UV LIGHT TIMER for extra order.

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Product Performance and Safety Testing before Leaving the Factory

- Pressure decay test
- HEPA filter leak test
- Lighting intensity test
- UV lighting intensity test
- Inflow velocity test
- Airflow smoke patterns test
- Vibration test
- Electrical safety test
- Downflow velocity test
- Noise level test



Class II type A2 Biosafety Cabinet



Detailed Specifications

Model No.	AHA-143-AA-A	AHA-143-AB-A	AHA-143-BA-A	AHA-143-BB-A
Control Panel / Electricity	Touch Panel 115V, 60Hz, 10A	Touch Panel 230V, 50/60Hz, 7A	Push Switch Panel 115V, 60Hz, 10A	Push Switch Panel 230V, 50/60Hz, 7A
International Certification	<ul style="list-style-type: none"> • NSF 49 • EN 12469 • China YY 0569(230V model) • UL61010-1/CSA-C.22.2 No.61010-1 • ISO 9001:2008 			
External Dimensions W×D×H (without support stand 660 mm)	1430×887×1650 mm			
Internal Dimensions W×D×H	1245×587×637 mm			
Cabinet Main Construction	Stainless Steel#304			
Air Flow	70% recirculated/ 30% exhausted			
Window Operation Height	20 cm (8")			
Ave. Inflow Velocity	0.51 m/s			
Ave. Downflow Velocity	0.375 m/s			
Exhaust Air Volume with Exhaust Canopy	16 m ³ /min			
Supply/Exhaust HEPA Filter	99.99% @0.3 micron (Class H14)			
Light Intensity	> 800 lux			
Sound Level	< 65dBA			
UV Lamp	254 nm/ FL 30W×1			
Fluorescent Lamp	T5/ 28W×2			
Window Glass	6mm tempered glass			
Electrical Outlets	North America (UL Listed), Europe/Worldwide (CE Certified)			
Optional Accessories	<ul style="list-style-type: none"> • IV bar with 6 hooks • Service valves(air, gas, vacuum), CSA Certified • Exhaust canopy 			
Room Height Suggested	250 cm at least			
Power Consumption	430 W			
Net Weight. kg	320 kg			
Shipping Weight. kg	382 kg			
Shipping Dimensions W×D×H	1520×960×2010 mm			



SAFZONE®

EN12469

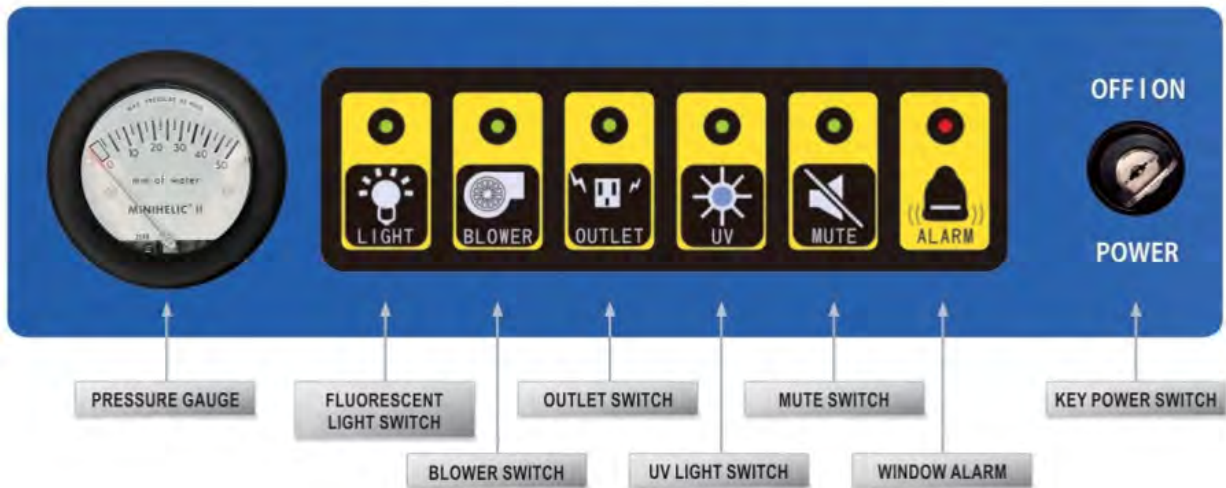
CE

Class II A2 Biosafety Cabinet

- EN12469 Compliance Certified.
- Double-wall cabinet structures. Contaminated area surrounded with negative pressure.
- Innovative surrounded air intake grill design. All contaminated air in the work area gets enclosed inside the cabinet to prevent the leakage of contaminated air.
- The ECM brushless DC motor with Best Energy efficiency.
- Supply/Exhaust HEPA filter 99.99% efficiency @0.3 micron(Class H14).
- Ergonomic 10 degree angle window design, reduces discomfort over long-term use of limbs and eye-strain.
- 6mm anti-ultraviolet tempered glass.
- 10 performance & safety tests before leaving the factory under strict quality control process.



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WINDOW ALARM

When the window is not at the operation height, it will release an audible and visual alarm automatically.

MUTE SWITCH

When the alarm is activated, it can be muted temporarily while the alarm light continues to flash. If the abnormal situation has not been settled, the cabinet alarm will be activated again within a set time (5 minutes) to alert the user.

SAFETY INTERLOCK

When the window is opened, the blower and fluorescent light will be activated automatically and the UV light will be switched off. When the window is fully closed, the UV light will be re-activated automatically. The blower and fluorescent light will be switched off.

UV LIGHT TIMER

Built-in UV light timer for 0~99 minutes or hrs.

Cabinet Type	4 feet		5 feet		6 feet		
International Certification	<ul style="list-style-type: none"> • EN 12469 • ISO 9001:2008 						
External Dimensions W×D×H (without support stand 660 mm)	1334×789×1537 mm		1634×789×1537 mm		1934×789×1537 mm		
Internal Dimensions W×D×H	1220×626×749 mm		1520×626×749 mm		1820×626×749 mm		
Cabinet Main Construction	Stainless Steel#304						
Air Flow	70% recirculated/ 30% exhausted						
Window Operation Height	20 cm , 25 cm						
Ave. Inflow Velocity	0.51 m/s						
Ave. Downflow Velocity	0.325 m/s		0.275 m/s		0.275 m/s		
Exhaust Air Volume with Exhaust Canopy	16 m ³ /min , 20 m ³ /min		20 m ³ /min , 25 m ³ /min		24 m ³ /min , 30 m ³ /min		
Supply/Exhaust HEPA Filter	99.99% @0.3 micron (Class H14)						
Light Intensity	> 1,000 lux						
Sound Level	< 60 dBA		< 62 dBA		< 62 dBA		
UV Lamp	254 nm/ FL 30W×1		254 nm/ FL 40W×1		254 nm/ FL 20W×2		
Fluorescent Lamp	T5/ 28W×2		T5/ 35W×2		T5/ 21W×4		
Window Glass	6mm tempered glass						
Electrical Outlets	North America (UL Listed), Europe/Worldwide (CE Certified)						
Optional Accessories	<ul style="list-style-type: none"> • IV bar with 6 hooks • Service valves(air, gas, vacuum), CSA Certified • Exhaust canopy 						
Room Height Suggested	227cm at least						
Power Consumption	115V / 10A	430 W		445 W		650 W	
	230V / 7A	430 W		445 W		650 W	
Net Weight, kg	275 kg		295 kg		340 kg		
Shipping Weight, kg	335 kg		360 kg		410 kg		
Shipping Dimensions W×D×H	1400×850×1910 mm		1700×850×1910 mm		2000×850×1910 mm		

Ordering Guide - Model Number

Cabinet Type	4 feet	5 feet	6 feet	Window Operation Height
Touch Panel / 115V,60Hz,10A	AHA-133-AA-A	AHA-163-AA-A	AHA-193-AA-A	20 cm
	AHA-133-AA-B	AHA-163-AA-B	AHA-193-AA-B	25 cm
Touch Panel / 230V,50/60Hz,7A	AHA-133-AB-A	AHA-163-AB-A	AHA-193-AB-A	20 cm
	AHA-133-AB-B	AHA-163-AB-B	AHA-193-AB-B	25 cm
Membrane Switch Panel / 115V,60Hz,10A	AHA-133-CA-A	AHA-163-CA-A	AHA-193-CA-A	20 cm
	AHA-133-CA-B	AHA-163-CA-B	AHA-193-CA-B	25 cm
Membrane Switch Panel / 230V,50/60Hz,7A	AHA-133-CB-A	AHA-163-CB-A	AHA-193-CB-A	20 cm
	AHA-133-CB-B	AHA-163-CB-B	AHA-193-CB-B	25 cm





Radiopharmacy Shielded Safety Cabinet

Application: Radiopharmaceutical preparing and operating.

- Comply with USP797 guideline.
- Air Flow: 70% recirculated/ 30% exhausted.
- Working Area Cleanliness: Class 100 (ISO 5).
- Cabinet Main Construction: Stainless steel #304 working area.
- Dual wall stainless steel #304 construction. Working area surrounded with negative pressure plenums for maximum safety.
- Lead shielding around the working area of 10 mm in sides, bottom and rear wall.
- 55 mm sliding lead glass window barrier in front of W515 x H313 mm.
- Ergonomic 10 degree angle window design, reduces discomfort over long-term use of limbs and eye-strain.



- Supply/Exhaust HEPA Filters: 99.99% efficiency for particle size at 0.3 micron(Class H14).
- Patent design for the fixation of HEPA filters.
- Removable single-piece work tray can be easily removed for cleaning.
- Safety Interlock: UV lamp interlocked with the window, fluorescent light and blower.
- Window Alarm: When the window is not at the operation height of 20 cm, it will release an audible and visual alarm automatically.
- Energy-saving ECM DC motor.



- ▲ Lead dose calibrator housing can be easily installed to protect the operator from potential radiation.



Cabinet Type	AHA-120 Series	
Air Flow	70% recirculated/ 30% exhausted	
Working Area Cleanliness	Class 100 (ISO 5)	
External Dimensions W×D×H	1200×880×2290 mm	
Internal Dimensions W×D×H	1010×587×630 mm	
Cabinet Main Construction	SUS#304 stainless steel (Option: SUS#316)	
Shielding Lead Sheet	10 mm(Option: 5 mm and 20 mm)	
Shielding Lead Glass	40 mm, 55 mm	
Window Operation Height	20 cm	
Ave. Inflow Velocity	0.51 m/s	
Ave. Laminar Downflow Velocity	0.32 m/s	
Supply/ Exhaust HEPA Filter	99.99% @0.3 micron (Class H14)	
Sound Level	< 65dBA	
UV Lamp	254 nm/ FL 30W	
Fluorescent Lamp	T5/ 21W	
Window Glass	6mm tempered glass	
Electrical Outlets	North America (UL Listed), Europe/Worldwide (CE Certified)	
Optional Accessories	<ul style="list-style-type: none"> • IV bar with 6 hooks • Service valves(air, gas, vacuum), CSA Certified • Exhaust canopy 	
Room Height Suggested	250 cm at least	
Power Consumption	115V,60Hz,10A	420 W
	230V,50Hz,7A	420 W
Net Weight, kg	900 kg	
Shipping Weight, kg	950 kg	
Shipping Dimensions W×D×H	1500×1050×1900 mm(for cabinet) , 1500×1050×700 mm(for support stand)	

Detailed Specifications

Ordering Guide - Model Number

Cabinet Type	AHA-120 Series
Touch Panel / 115V,60Hz,10A	AHA-120-AA-A
Touch Panel / 230V,50/60Hz,7A	AHA-120-AB-A
Push Switch Panel /115V,60Hz,10A	AHA-120-BA-A
Push Switch Panel /230V,50/60Hz,7A	AHA-120-BB-A
Membrane Switch Panel / 115V,60Hz,10A	AHA-120-CA-A
Membrane Switch Panel / 230V,50/60Hz,7A	AHA-120-CB-A



Yakos65's responsibility is to provide customers with comprehensive solutions. Please let us know what you are looking for so that we can process your inquiry as quickly and efficiently as possible.
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