Haier Biomedical Intelligent Protection of Life Science



Mini Biological Safety Cabinet HR700-IIA2

Scope of Application:

Professional air purification equipment suitable for the test environments of small spaces and single person operations, such as virus sampling warehouses, sampling stations at airports and railway stations, on-board laboratories, and other space limited organizations.

Innovative Design

- Space-saving design with large working area
- Real-time monitoring of the airflow for safety
- Ergonomic design for single person
- Energy-efficient EBM motor

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Product Parts (



Product Advantages



Safe and reliable

Adopts AAF filters, class 1 cleanliness, provides strong protection for people, environment and samples



Interlocking function

The product features an interlocking function between UV disinfection, fluorescent lamp, front window and fan



LCD display

LCD screen displays various parameters and service life of accessories in real time, and the operational condition of the equipment is clear at a glance



One-click operation

UV lamp one-click reservation allows users to set 0 min to 24 hours of automatic on/off time and sterilization interval, and reduces the waiting time



2 standard sockets

Waterproof socket timing technology: equipped with 2 waterproof sockets to ensure the regular opening/closing



Alarms

Audible and visual alarm functions: hardware failure alarm, operation parameter overrun alarm, filter and UV lamp life warning



Uniform airflow

- · EBM fan, combined with professional air distribution design, has lower noise and more uniform air flow
- · AAF filter, high efficiency and uniformity, low resistance



Standard

Designed according to E.U. EN12469

Specifications ()

Model		HR700-IIA2	
Power supply (V/Hz)		220/50/60	
Power (VA)		1200	
Power of Blower (W)		210	
Airflow Circulation		70%Downflow, 30%Exhaust	
Main Filter Typical Effciency		≥99.999%@0.3µm (H14)	
Exhaust Filter Typical Effciency		≥99.9995%@0.12µm (U15)	
Exhaust filter		Single	
Filter's Brand		AAF	
Downflow Velocity (m/s)		0.30	
Inflow Velocity (m/s)		0.45	
Lighting Intensity (Lux)		≥650	
Internal	mm	600*550*540	
Dimensions (W*D*H)	in	23.62*21.65*21.26	
External	mm	700*710*1200	
Dimensions (W*D*H) in		27.26*27.95*47.24	
Supporter (mm)		700 (optional)	

 $\label{product} \mbox{Product appearance and specifications are subject to change without notice}$



Intelligent Series Biological Safety Cabinet

HR900-IIA2/HR1200-IIA2/HR1500-IIA2



Drop-down front window

 Remove the hand rest, drop down the front window to clean the upper edge off the glass conveniently, without leaving any blind spots.



V-shaped air inlet

The V-shaped air inlet can prevent the samples or arms of the operator from blocking the air flow
The handle is used for lifting the workbench and cleaning the liquid collected in the tank conveniently



Patented Technology: UV Lamp One-touch application

The UV Lamp can be preset to automate on/off sterilization and remember the user's settings and habits, it is set by pressing one button, reducing down time for user.



Patented Technology: Waterproof Receptacle Timing

The receptacle can be set by using a microcomputer to supply power at a specified time, to satisfy the user's demands for timing of experiment.





• Universal Casters with Built-in Threaded Supporting Legs

The under-frame is designed with universal casters for moving the cabinet conveniently, and the built-in threaded supporting legs can prevent the propagation of bacteria.





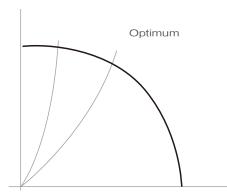
Key Components

• Ultra-Low Penetration Air System (ULPA) Filter (U15)

- The ULPA filter is made from moisture-proof and fireproof glass with a typical efficiency up to 99.9995% when filtering 0.12µm solid particles, fully meeting the cleanliness requirements of USA FED STD 209E Grade 1 (or ISO 14644-1 Grade 3).
- The ULPA filter can supply vertical air flow to the workbench, preventing the samples from being contaminated.
- The filter can be scanned from point by point to ensure high performance, reliability and safety.

Maintenance-free fan system

- Forward centrifugal fan with air inflow from both sides of the motor, reducing noise to a very low level
- Self-cooling, low energy consumption enhances reliability
- Optimal balance between air supply and energy consumption
- Stable air flow for the safety cabinet by controlling the precise voltage of the fan







Safe

Abnormal operation condition alarm

Audible and visual alarms in the form of voice or text will be present when the air turbulence level exceeds 20%, and door height (high or low)or work area temperature exceeds limits.

Patented technology: UV lamp end-of-life reminder

The microcomputer will track the usage time of the UV lamp, and will warn the user to replace the UV lamp when its remaining life is less than 10%.

Patented technology: filter end-of-life reminder

The pressure transducer monitors the resistance variations to determine the remaining life of the filter, and will warn the user when the remaining life is below 10%.

• Interlocking feature to ensure high safety and reliability

Patented technology: UV lamp interlocking control UV lamp, front window, fan and interior light are interlocked to prevent any leakage of UV rays or micro organisms

* Type B2 safety cabinet with internal & external fans interlocked

The external fan will be activated first when the safety cabinet is powered on, and the internal fan will be deactivated first when the safety cabinet is powered off. When the air inflow is lower than the limit, the internal fan will be deactivated, and the external fan will continue working, accompanied with audible and visual alarms. If the internal fan is deactivated while in use, the external fan will continue working, accompanied with audible and visual alarms.



Professional

• Digital display of operating parameters

The LCD screen displays in real-time operating parameters such as digital display of down flow, inflow, exhaust volume, working area temperature, remaining life of the filter, UV lamp plus negative pressure and positive pressure.



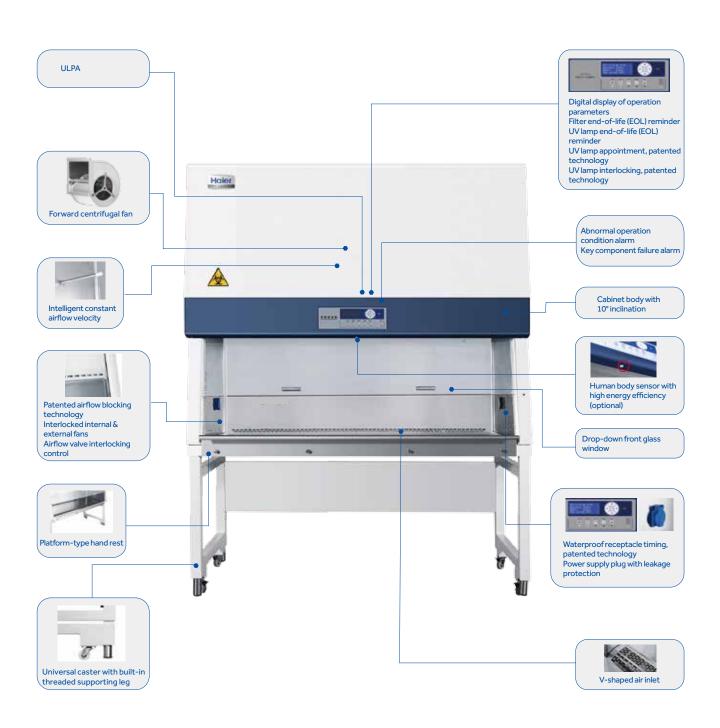
• Key component failure alarm

Audible and visual alarms will be given in case of any failures in the airflow velocity sensor, pressure sensor, temperature sensor, microcomputer board or air flow valve, indicating the position of failure in voice or text.



Biological Safety Cabinet: Intelligent Series, Type A2





Specifications







Model		HR900-IIA2	HR1200-IIA2	HR1500-IIA2
Working Voltage&Frequency(V/Hz)		220V 50Hz 220V 50Hz		220V 50Hz
Power(VA)		1400	1500	1600
Power of Blower(W)		AC-L=330W,M=465W,H=735W	AC-L=330W,M=465W,H=735W	AC 650W
Airflow Circulation		70% Downflow,30% Exhaust	70% Downflow,30% Exhaust	70% Downflow,30% Exhaust
Main Filter Typical Efficiency		ULPA ,U15,99.9995%@0.12um	ULPA ,U15,99.9995%@0.12um	ULPA,U15,99.9995%@0.12um
Exhaust Filter Typical Efficiency	/	ULPA,U15,99.9995%@0.12um HEPA,H14,99.995%@0.3um		HEPA,H14,99.995%@0.3um
Filter's Brand		AAF AAF		AAF
Downflow Velocity(m/s)		0.33	0.34	0.31
Inflow Velocity(m/s)	Inflow Velocity(m/s)		0.55 0.55	
Fluorescent Lamp Intensity(Lu:	×)	≥900 ≥900		≥900
Not/Cross Maight(approv)	kg	270/293	320/339	360/393
Net/Gross Weight(approx)	lbs	595.3/646	705.5/747.4	793.7/866.4
lataria y Dissa a a i a a a (\A/*D*L.)	mm	920*620*650	1220*620*650	1520*620*650
Interior Dimensions(W*D*H)	in	36.2*24.4*25.6	48.0*24.4*25.6	59.9*24.4*25.6
	mm	1080*845*2160	1380*845*2160	1680*845*2160
Exterior Dimensions(W*D*H)	in	42.5*33.3*85.0	54.3*33.3*85.0	66.1*33.3*85.0
	mm	1145*920*1690	1470*920*1690	1755*920*1690
Packing Dimensions(W*D*H)	in	45.1*36.2*66.5	57.9*36.2*66.5	69.1*36.2*66.5
Supporter		680-900mm adjustable height	680-900mm adjustable height	680-900mm adjustable height
Container load (20'/40'/40'H)		12/24/24	8/16/16	6/12/12
Alarm	Alarm		Sound and Flash	Sound and Flash
Certificate		CFDA,CE,EN12469	CFDA,CE,EN12469	CFDA,CE,EN12469



Optional components









Valve port, yellow, for fuel gas

Valve port, blue, for compressed air

Valve port, grey, for vacuum

Valve port, green, for water



1.5mm thickened workbench and liner



316 stainless steel workbench and liner



VHP sterilization kit



Type A2 BSC exhaust hood



Activated carbon kit



Height-adjustable support



Europe, UK and USA standard power supply sockets

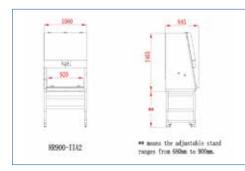


Europe, UK and USA standard power supply plugs

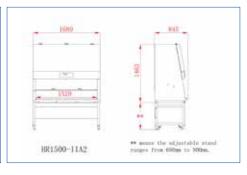


IR sterilizer

Product dimension







HR900-IIA2 HR1200-IIA2 HR1500-IIA2

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Note:If a slight difference occurs between pictures and actual products, please refer to actual products. Our company reserves the right of final interpretation of this brochure, please contact us for any further information as required.

PRODUCT SPECIFICATIONS

Model		HR1200-IIA2-S	
Product Type		CLASS II,A2	
Working Voltage&Frequency(V/Hz)		220V 50/60Hz	
Power(W)		210	
Power of Blower(W)		Down DC Fan 120W max Exaust DC Fan 112W max	
Current(A)		8A (Including Socket)	
Energy consumption (kW.h)		0.21	
Applicable People		1-2	
Airflow Circulation		70% Downflow, 30% Exhaust	
Main Filter Typical Efficiency		HEPA,H14,99.995%@0.3μm	
Exhaust Filter Typical Efficiency		HEPA,H14,99.995%@0.3µm	
Filter's Brand		AAF	
Downflow Velocity(m/s)		0.3	
Inflow Velocity(m/s)		0.45	
Fluorescent Lamp Intensity(Lux)		≥1000	
Ultraviolet Lamp		Y	
Clean Level		10# (ISO Class 4)	
Noise(dB(A))		58	
Fan		DC×2	
Fan's Brand		EBM	
Service Valves		4(2 on each side)	
Outlets		2(1 on each side)	
N . / C W I .	kg	320/360	
Net/Gross Weight	lbs	705.5/793.0	
Internal Dimensis == /\langle X \tag{\tag{\tag{\tag{\tag{\tag{\tag{	mm	1310*620*630	
Internal Dimensions(W*D*H)	in	51.5*24.4*24.8	
Everyal Dimonsis = -(M/*D*LI)	mm	1380*780*1465	
External Dimensions(W*D*H)	in	54.3*30.7*57.7	
Danking Dimension (MAPDELL)	mm	1470*920*1690	
Packing Dimensions(W*D*H)	in	57.9*36.2*66.5	
Working Height of Front Window(mm)		200	
Stand		680-900mm adjustable height	
Container Load (20'/40'/40'H)		8/16/16	
Alarm		Sound and Flash	
Certificate		CE, BS EN 12469, TUV	

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Haier Biomedical

Intelligent Protection of Life Science

Class II **Biosafety Cabinets**



Haier Biomedical's single exhaust

filtered Class II microbiological

protection:operator, product and

environment.

safety cabinet offers three levels of



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Energy Efficient Dual DC fans and LED lights to reduce energy consumption.



High Efficiency Filter

High efficiency HEPA filter for downflow air - typical efficiency of 99.995% for 0.3µm particle



Side Glass Windows

Glass wall allows more natural light in, reducing optical stress caused by artificial lighting, as well as maximising the usable space.



Safer by Design

The HR1200-IIA2-S biological safety cabinet utilises one highly efficient HEPA exhaust filter and one HEPA downflow filter to provide three levels of protection: operator, product and environment. As there is no need for external ducting, this is a cost-effective solution.

The unit is certified to the EN 12469 standard. It uses energy efficient DC fans, as well as LED lights to ensure for optimal performance with a low noise output and reduced energy consumption. The ergonomic design ensures maximum comfort and alleviates operator fatigue.



Patented Technologies

The range incorporates two patented technologies which offer total user protection and improves the cabinet's energy efficiency.



Patented Safe Airflow Disruption System

The units utilise side air design on the upper edge and on both sides of the front window to eliminate'blind spots'. This prevents crossflow between inside and outside air, reducing contamination.



Certified to EN 12469 Standard

HEPA exhaust filters – typical efficiency of >99.995% for 0.3 micron particles.HEPA filter (downflow)provides vertical laminar flow to the worktable



Multiple Alarm Functions

Clear and easy to understand alarm with visual and sound alert functions. Alarms include filter and UV end-of-life alerts, fan turned-off after door opening alert and door open alarm.



Easy to Clean

The divided work surface can easily be removed for sterilisation and allows for easy access to the base of the cabinet for cleaning. The unique drop-down front glass window can be removed in seconds to enable quick and efficient cleaning of upper sections, limiting downtime. There is also a stainless steel rear wall and easy to access drain valve.



Ergonomic Design

Designed with the user in mind, this cabinet features 10° angled front window to provide a comfortable workspace, adjustable height stand, castors with self-levelling feet and a drop-down window design for easy cleaning. A removable hand rest reduces arm fatigue without interfering with the air inflow.



Lower Noise and Airflow Uniformity

DC fan operates with lower noise and better uniformity airflow.



Patented Waterproof Socket Timer

The two IP rated 44 waterproof sockets within the cabinet have a timed on/off function for improved safety and energy conservation.



Simple Controller with LCD screen display

LCD control panel displays various parameters and clear operational conditions.



Two Service Fixtures

Two access ports are located on either side of the cabinet for easy access and flexibility



Ultraviolet light can be set with one single key to automate on/off time, sterilisation time and sterilisation time interval from 0 to 24 hours, reducing downtime.



Tubular Motor(Opional)

The motor is stable and reliable. Two position limiting devices make the auto glass - door system more safe.



Optional Electric Glass Door

The glass door is electrically operated. The standard glass-height opening during work is set to 200mm. The glass door can also be pulled down - in order to allow easy access for complete and effective cleaning and decontamination.

PRODUCT ADVANTAGES



EBM DC Fan, Energy consumption as low as 112W, Low noise to 58 dB.



AAF HEPA fiter, The filtration efficiency is 99.995%@0.3 um.



Adjustable chassis adapts to different height requirements





Drop-down glass door is easy to clean



socket.(Option water valve and air valve.)

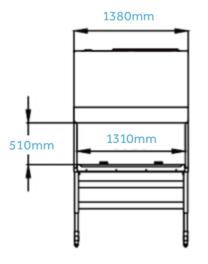


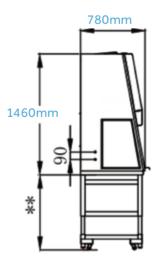
Electrical glass door motor make the use procedure more comfortable.(Optional)



Compartmented working surface is easy to be sterilised and cleaned.

PRODUCT DIMENSION DRAWING





^{**} Height adjustable stand, adjustable range: 680-900mm

PRODUCT SPECIFICATIONS

Model		HR1200-IIA2-D		
Product Type		CLASS II,A2		
Working Voltage&Frequency(V/Hz)		220V 50/60Hz		
Power(W)		200		
Power of Blower(W)		DC 190W max, DC 170W max		
Current(A)		8A(Including Socket)		
Energy consumption (kW.h)		0.2		
Applicable People		1-2		
Airflow Circulation		70% Downflow, 30% Exhaust		
Main Filter Typical Efficiency		ULPA,U15,99.9995%@0.12μm		
Exhaust Filter Typical Efficiency		HEPA,H14,99.995%@0.3μm		
Filter's Brand		AAF		
Downflow Velocity(m/s)		0.3		
Inflow Velocity(m/s)		0.45		
Fluorescent Lamp Intensity(Lux)		≥1000		
Ultraviolet Lamp		Y		
Clean Level		10# (ISO Class 4)		
Noise(dB(A))		58		
Fan		DC		
Fan's Brand		ЕВМ		
Service Valves		4(2 on each side)		
Outlets		2(1 on each side)		
	kg	320/360		
Net/Gross Weight	lbs	705.5/793.0		
	mm	1310*620*630		
Internal Dimensions(W*D*H)	in	51.5*24.4*24.8		
E	mm	1380*845*2160		
External Dimensions(W*D*H) in		54.3*33.3*85.0		
D. I.I. Di	mm	1470*920*1690		
Packing Dimensions(W*D*H)	in	57.9*36.2*66.5		
Working Height of Front Window(mm)		200		
Stand		680-900mm adjustable height		
Container Load (20'/40'/40'H)		8/16/16		
Alarm		Sound and Flash		
Certificate		CE, BS EN 12469, TUV		

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Haier Biomedical

Intelligent Protection of Life Science

Class II **Biosafety Cabinets**

Haier Biomedical's double exhaust

filtered Class II microbiological safety cabinet offers three levels of

protection:operator, product and

environment.



Energy Efficient Two DC fans and longer lasting LED lights reduce energy consumption.



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Double Exhaust Filters Two highly efficient HEPA dual output filters reduce the risk of lab pollution.



Side Glass Windows

Glass wall allows more natural light in, reducing optical stress caused by artificial lighting, as well as maximising the usable space.



Safer by Design

The HR1200-IIA2-D double exhaust filtered biological safety cabinet utilises two highly efficient HEPA exhaust filters and one ULPA downflow filter to provide three levels of protection: operator, product and environment. As there is no need for external ducting. this is a cost-effective solution.

The unit is certified to the EN 12469 standard. It uses energy efficient DC fans, as well as LED lights to ensure for optimal performance with a low noise output and reduced energy consumption. The ergonomic design ensures maximum comfort and alleviates operator fatique.



Patented Technologies

The range incorporates two patented technologies which offer total user protection and improves the cabinet's energy efficiency.



Patented Safe Airflow Disruption System

The units utilise side air design on the upper edge and on both sides of the front window to eliminate 'blind spots'. This prevents crossflow between inside and outside air, reducing contamination.



Intelligent Constant Velocity Technology

To maintain a constant airflow speed across the workbench, the Haier Biomedical series of biological cabinets utilise sensors to monitor workbench airflow in real-time and compare this with standards. The microprocessor controller then adjusts the fan speed to keep the downflow and inflow speed at a constant velocity.



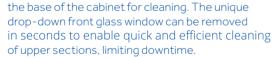
Certified to EN 12469 Standard

HEPA exhaust filters – typical efficiency of >99.995% for 0.3 micron particles.ULPA filter (downflow)provides vertical laminar flow to the worktable





for sterilisation and allows for easy access to the base of the cabinet for cleaning. The unique drop-down front glass window can be removed There is also a stainless steel rear wall and easy



to access drain valve.



Lower Noise and Airflow Uniformity

DC fan operates with lower noise and better uniformity airflow.



Smart Mode Operation

A human body module detects whether a person has moved outside of the operating area for 15 minutes. The cabinet will automatically switch to a Low Noise Safety Energy Conservation mode, to reduce noise and improve the service life of the filter.



Clear Controller with LCD screen display

LCD control panel displays various parameters and clear operational conditions.



Multiple Alarm Functions

Clear and easy to understand alarm with visual and sound alert functions. Alarms include filter and UV end-of-life alerts, fan turned-off after door opening alert and door open alarm.



Ergonomic Design

Designed with the user in mind, this cabinet features 10° angled front window to provide a comfortable workspace, adjustable height stand, castors with self-levelling feet and a drop-down window design for easy cleaning. A removable hand rest reduces arm fatigue without interfering with the air inflow.



Patented Waterproof Socket Timer

The two IP rated 44 waterproof sockets within the cabinet have a timed on/off function for improved safety and energy conservation.



Two Service Fixtures

Two access ports are located on either side of the cabinet for easy access and flexibility



Ultraviolet light can be set with one single key to automate on/off time, sterilisation time and sterilisation time interval from 0 to 24 hours. reducing downtime.



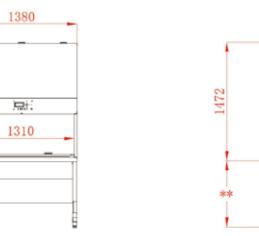
Optional Electric Glass Door

The glass door is electrically operated. The standard glass-height opening during work is set to 200mm. The glass door can also be pulled down - in order to allow easy access for complete and effective cleaning and decontamination.

PRODUCT ADVANTAGES



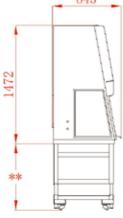
PRODUCT DIMENSION DRAWING



HR1200-IIA2-D

Electrical glass door motor make the use

procedure more comfortable. (Optional



** means the adjustable stand ranges from 680mm to 900mm.

Haier Biomedical

Intelligent Protection of Life Science

Smart IoT Series Biosafety Cabinets

HR1200-IIA2-X

HR1500-IIA2-X

HR1800-IIA2-X



Main Applications

Professional localized air purification equipment suitable for pharmaceuticals, medical and health industries and scientific research laboratories of universities and colleges as well as other related fields



Product function advantages

- The dual DC fans meet the low-noise, energy-saving and high-reliability requirements
- Utilizing intelligent constant air speed design to monitor the downward airflow and the inlet airflow in real-time. The dual air speed sensors adjust the fan speed through a microcomputer system so as to maintain constant air speed inside the cabinet
- Adopting ultralow penetration air filters (ULPA) ensuring a cleanness grade conforming to Class 1 of the American standard FED STD 209E (Class 3 of IS014644-1) and using pressure sensors to monitor the service life of the filters in real-time to ensure superior accuracy and efficiency
- Optional X series electric lifting glass doors with matching foot switches
- Optional X series comes equipped with surveillance cameras to record the operating status of the left and right working areas respectively and independently
- Optional Intelligent IoT module to enable the mobile App to monitor the running state of the safety cabinet and display the performance parameters such as air speed and filter life in real-time
- Adopting an intelligent interlock design to avoid the risk of misoperation; with an operational front window interlocking with the UV lamp, LED lamp and fan intelligently to ensure better security
- Patented technology one-button UV lamp timer, enabling the memory setting of the user's UV lamp usage habits for convenient one-key start-up of the UV lamp timing function

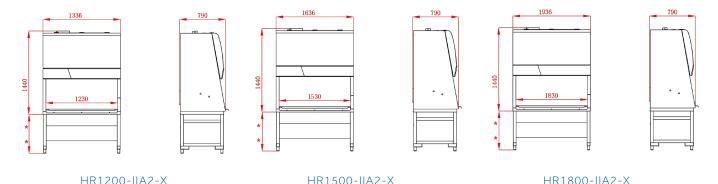


Product construction advantages

- Using platform-type hand rest racks which are comfortable to use and can relieve fatigue; with leak-proof construction to prevent the splashed liquid waste from entering into the seams of the racks
- The cabinet body has a 10-degree inclination design, which is in accordance with ergonomic principles and more comfortable to operate
- The cabinet has a pull-down front window, which makes cleaning of the upper glass easy after pulling down the glass front window and removing the hand rest racks
- With an integrated workbench and a stainless steel liquid collecting tank with an area larger than the workbench so as to prevent liquid leakage
- Constructed with a universal caster design to facilitate ease of movement by users; and comes with built-in threaded feet to prevent bacterial growth
- With real-time display of the filter life and the running time of the fan and the UV lamp, the system alerts the user by alarm when the service life of the filter and the UV lamp becomes less than 10%, which is convenient and safe



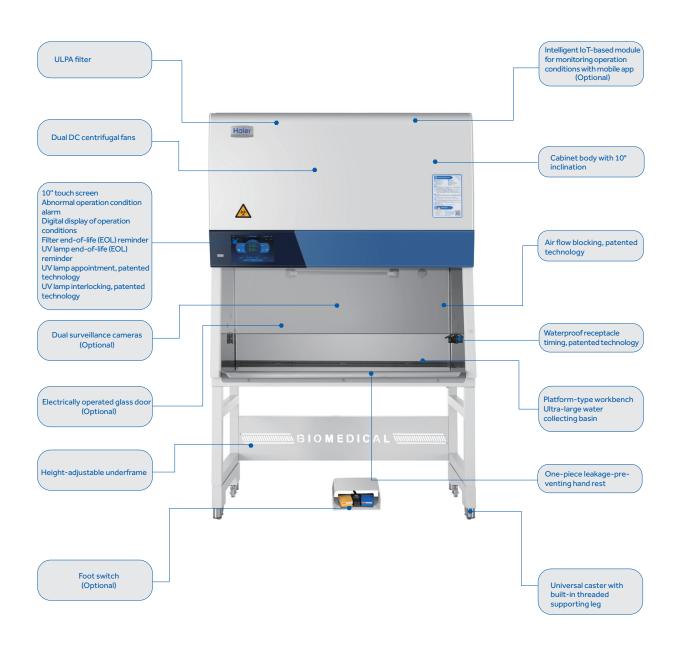
Product dimension



^{**}means the adjustable stand ranges from 680mm to 900mm.

Biological Safety Cabinet: Intelligent IoT Series

Product dimensions



Specifications

Model		HR1200-IIA2-X	HR1500-IIA2-X	HR1800-IIA2-X
Power(VA)		1600	1670	1850
Downflow Velocity		0.30	0.30	0.30
Inflow Velocity		0.45	0.45	0.45
Net/Gross Weight (approx)	kg	280/340	320/400	380/465
	lbs	617.3/749.6	705.5/881.8	837.8/1025.1
Internal Dimension (W*D*H)	mm	1230*600*655	1530*600*655	1830*600*655
	in	48.4*23.6*25.8	60.2*23.6*25.8	72.0*23.6*25.8
External Dimension (W*D*H)	mm	1336*790*2120	1636*790*2120	1936*790*2120
	in	52.6*31.1*83.5	64.4*31.1*83.5	76.2*31.1*83.5
Packing Dimension (W*D*H)	mm	1400*925*1665	1700*925*1665	2000*925*1665
	in	55.1*36.4*65.6	66.9*36.4*65.6	78.7*36.4*65.6
Container Load (20'/40'/4	10'H)	8/16/16	6/12/12	6/12/12

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