

Hai-Sentra[®] G

Biological Safety Cabinet Class II
Intelligent Protection at the Heart of Your Work



**Air
Adapt**

**ONE
Touch**

**ECO
Silent**

HR900-IIA2-G | HR1200-IIA2-G | HR1600-IIA2-G

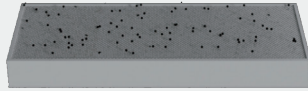
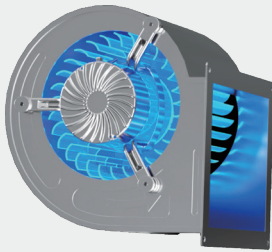
Qingdao Haier Biomedical Co., Ltd.

No.280 Fengyuan Road, High-tech Zone,
Qingdao, 266111, Shandong, P.R. China
E-mail: inquiry@haierbiomedical.com
Website: www.haiermedical.com

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Air Adapt

Airflow Auto-Compensation Technology ensures the cabinet maintains optimal containment performance under all operating conditions



Dynamic Fan Speed Adjustment

Auto-compensation technology continuously monitors and dynamically adjusts fan speed in real-time to sustain optimal airflow velocity. As HEPA filters gradually load with particulates over their service life, the system automatically compensates, ensuring uncompromised protection from day one through end of filter life.

Real-Time Dynamic Balancing

When paper sheets, consumables, or other objects temporarily obstruct the air intake grille, the system instantly detects the disturbance and rebalances the downflow and inflow air streams, preventing airflow disruption, minimizing contaminant leakage, and significantly reducing cross-contamination risks.



Airflow blocking Technology

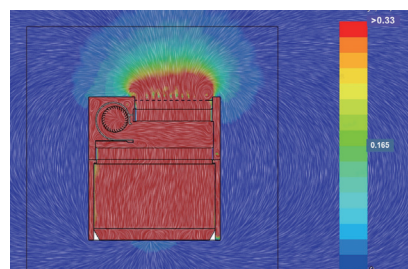


Top Critical Area Protection

Airflow blocking technology with top capture zones improves protection in this critical area susceptible to contaminant bleed out in conventional cabinets.

Lifecycle Performance Assurance

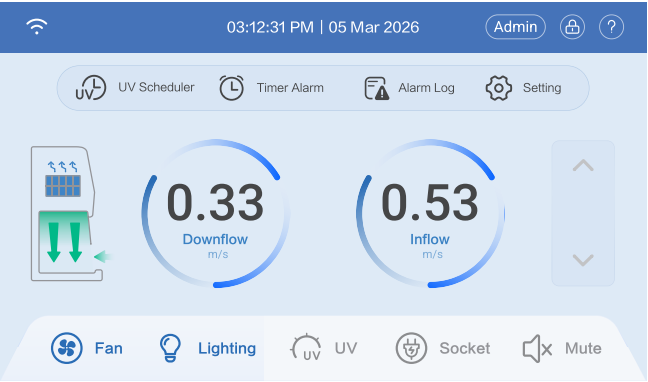
The downflow with uniform and stable air velocity delivers excellent operator and sample protection.



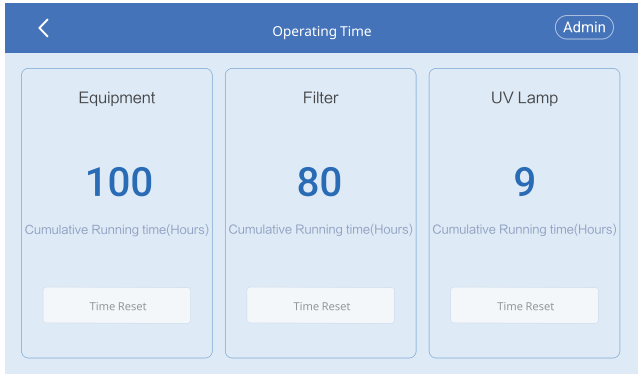
CFD downflow diagram of HR1200-IIA2-G



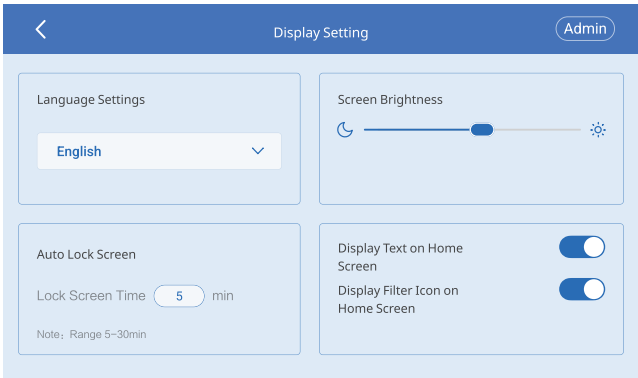
Distinct & legible icons right at your fingertips, helping make everyday operation easier, safer and more consistent while supporting compliance.



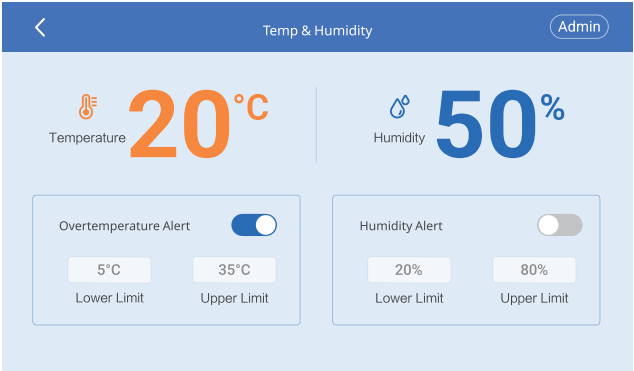
Core operational and safety data at a glance.



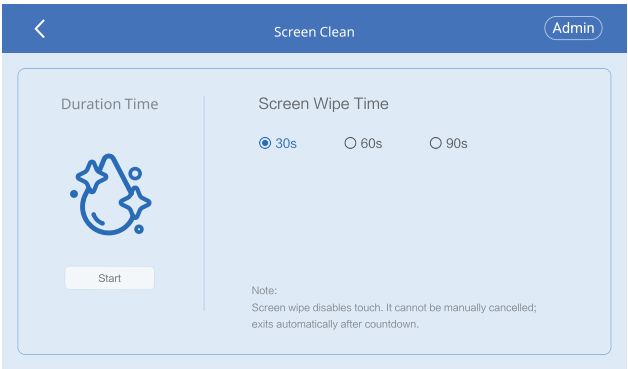
Cumulative operating time recording enables filter/UV replacement planning, preventive service and GMP compliant traceability.



Multi language user interface provides intuitive and user friendly operation experience



Temperature and humidity alarm thresholds can be adjusted according to actual local operating environments.



Screen wipe mode enables convenient on demand screen cleaning

**ONE
Touch**

Status at a Glance



The ONE Touch visual status light provides clear reassurance that the cabinet is operating correctly and makes alarms immediately visible, even from across the lab and in the dark.



Green status light indicates the state of equipment is Normal



Yellow status light indicates the state of equipment is Abnormal

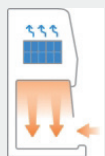


Red status light indicates the state of equipment is Faulty

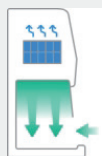
Simple visual icons make the cabinet's operating status instantly recognizable



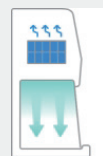
Not running



Self-cleaning



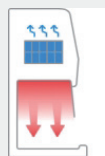
Normal Mode



ECO



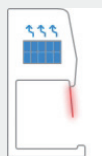
UV



Downflow Abnormal



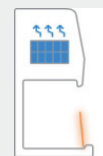
Inflow Abnormal



Door Position
Abnormal



Filter Service
Life Low



Glass Cleaning Mode



Ultra Quiet and Ultra Energy Efficient



Ultra-Low Noise Operation

-Tested per EN 12469-2000 at 200mm operating position

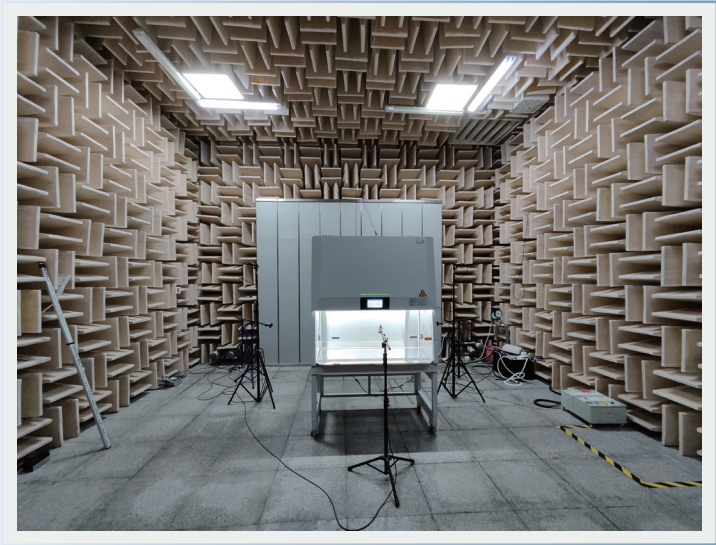
- HR900-IIA2-G: 46.4 dB(A)
- HR1200-IIA2-G: 48.6 dB(A)

Tested per EN 12469-2025 at 200mm operating position

- HR900-IIA2-G: 53.2dB(A)
- HR1200-IIA2-G: 54.8dB(A)

Noise level decreases by over **55%**, shifting from typical working printer volume to gentle ambient rain noise, enabling uninterrupted concentration.

- 60dB(A) – Working printer
- 55dB(A) – Quiet café
- 50dB(A) – Rain tapping on window
- 46.4~48.6dB(A) – Our cabinet (nearly inaudible)



Low Energy Consumption & Eco-Friendly Performance

Hai-Sentra [®] G 4ft Operating Cost/ CO ₂ emission Comparison**			
	Hai-Sentra [®] G 4ft	Other Cabinet A	Other Cabinet B
Blower Type	ECM	AC Blower	Other ECM
Energy Consumption (watts)	180	515	299
Annual Energy Cost	94.61 €	270.69 €	157.16 €
15-year Energy Cost	1419.15€	4060.35€	2357.4€
Annual CO ₂ Emission	135.60 kg CO ₂	387.96kg CO ₂	225.24kg CO ₂
Equivalent Number of Trees for Carbon Sequestration	6	18	10

** Calculations are Based on:
4ft models with a 200 cm sash opening.
German industrial electricity tariff: 0.24 €/kWh
Daily operating duration: 6 hours
German grid-mix emission factor: 344 gCO₂/kWh
Assumption: Annual CO₂ sequestration of 22 kg CO₂ per mature broad-leaf tree

Easy Clean Design



Easy Clean for Sash

Detach the armrest and lower the front sash to thoroughly clean the upper glass corner without blind spots for ergonomic cleaning.

Easy Clean for Screen (Screen Wipe Mode)

Dedicated screen wipe mode deactivates the touch panel during cleaning to avoid accidental triggering.

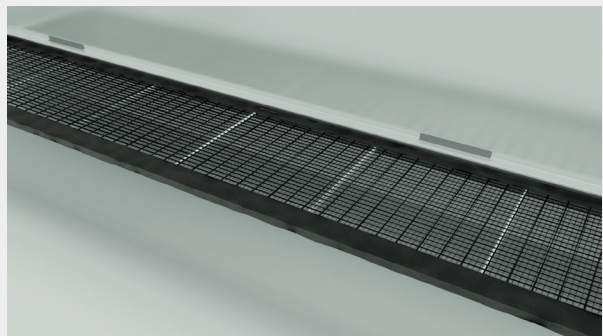


Easy Clean for Drain Pan

The work platform is a liftable, removable 304 stainless steel tray, enabling full drainage and residue removal for hassle-free sanitization.

Paper Catch

Positioned under the work tray, the paper catch traps large debris and safeguards the motor, and is easy to access and remove for cleaning.



World-class energy-efficient, quiet and ergonomic Class II Biological Safety Cabinet with innovative upgrades for contamination prevention, user experience and information management, Designed, Tested and TÜV Certified to EN12469-2025

ECO Silent

ECM Blower to deliver ultra quiet operation as low as 46.4dB(A)
65% Energy savings with ECM Blower compared to AC Blower

Air Adapt

Auto compensation technology dynamically adjusts fan speed to sustain optimal airflow velocity throughout lifecycle

Airflow blocking Technology improves protection in top critical area susceptible to contaminant bleed out

ONE Touch

Distinct & Legible Icons right at your fingertips

All-new HMI enables better GMP compliance

Ergonomic Operation

Designed for greater comfort during extended periods of work.



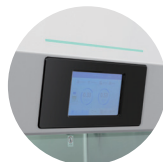
Certified Protection

Tested and certified to EN12469-2025, delivering performance you can trust with confidence.



ONE Touch Control

Simple, intuitive control puts essential information at your fingertips, even in gloves.



Trusted Reliability

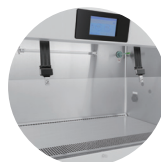
Designed for dependable performance, day after day.





Easy-Clean Interface

Screen wipe mode helps make routine cleaning quicker and easier.



Easy-Clean Sash

Designed to give users easier access for thorough cleaning.



Easy-Clean Drain Pan

Accessible components simplify routine cleaning and maintenance.



Clear Safety Identification

Clearly visible safety information helps users quickly recognize hazards and important operating information.

Easy Clean Design :

Unified ergonomic easy clean design for convenient routine cleaning & decontamination

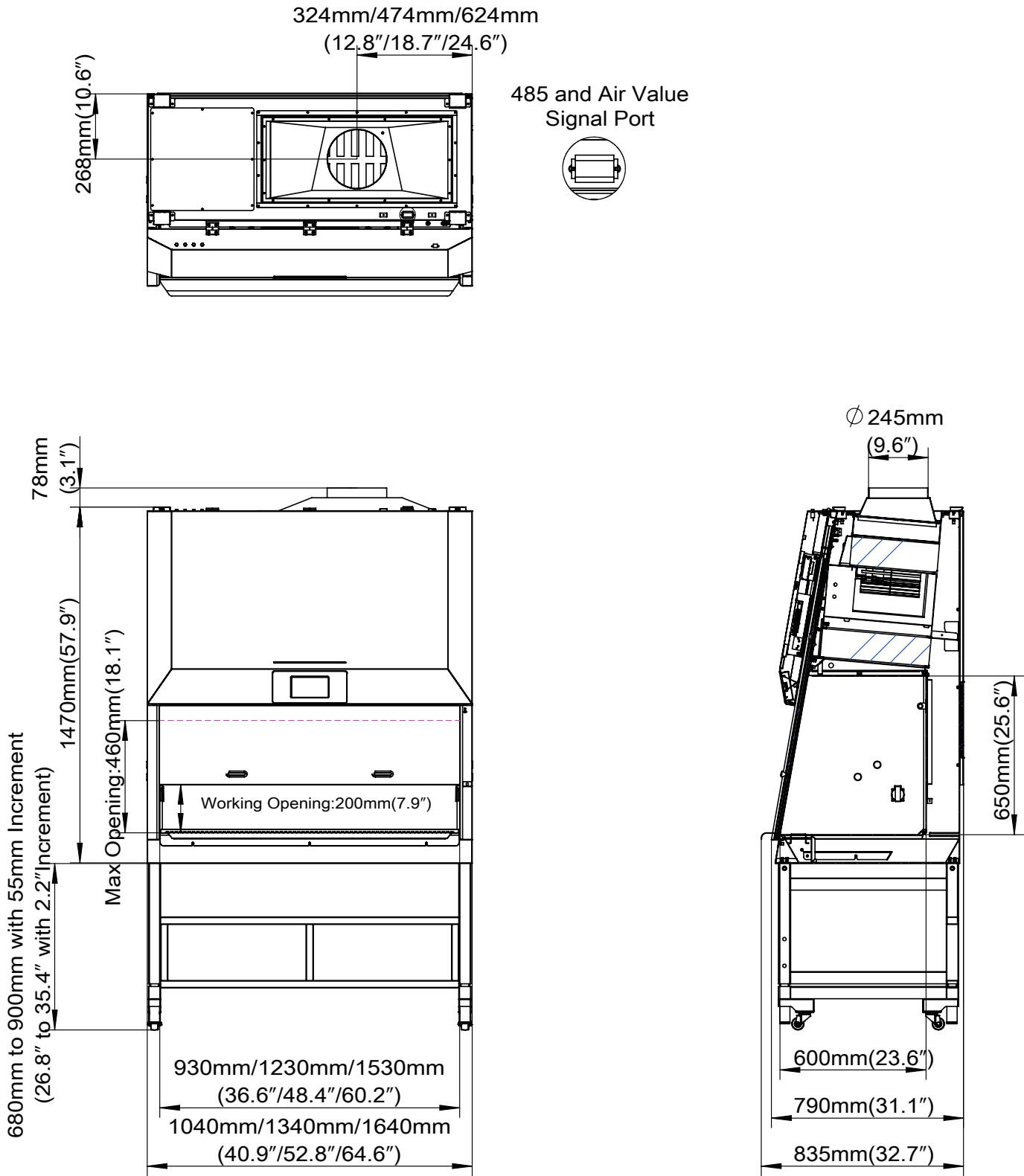
Regulatory Compliance :

Designed , Tested and TÜV Certified to EN12469-2025

GMP Compliance :

Optional GMP compliance packages include three-level access authority, audit trail function, integrated particle counter and 316L stainless steel interior

Drawing



*Exhaust components on the engineering drawing are optional accessories.

Specifications

	Model		HR900-IIA2-G	HR1200-IIA2-G	HR1600-IIA2-G
	Order Code		BE0ZC2E00	BE1J83E00	BE1JA2E00
General Specifications	Working Voltage&Frequency(V/Hz)		220-240/50/60	220-240/50/60	220-240/50/60
	Nominal Size(ft)		3	4	5
	Touch Screen		Y (7-inch)	Y (7-inch)	Y (7-inch)
	Nominal Power Consumption (W)		150	180	210
	Airflow Circulation		70% Downflow,30% Exhaust	70% Downflow,30% Exhaust	70% Downflow,30% Exhaust
	Main Filter Typical Efficiency		H14 HEPA EN1822, 99.995% at MPPS	H14 HEPA EN1822, 99.995% at MPPS	H14 HEPA EN1822, 99.995% at MPPS
	Exhaust Filter Typical Efficiency		H14 HEPA EN1822, 99.995% at MPPS	H14 HEPA EN1822, 99.995% at MPPS	H14 HEPA EN1822, 99.995% at MPPS
	Exhaust filter		Single	Single	Single
	Filter Brand		AAF	AAF	AAF
	Downflow Velocity(m/s)		0.33	0.33	0.33
	Inflow Velocity(m/s)		0.53	0.53	0.53
	Lighting Intensity (lux)		>1000	>1000	>1000
	Current(A)		10A (Include EO 4A)	10A (Include EO 4A)	10A (Include EO 4A)
	Air Quality		ISO Class3 - 4	ISO Class3 - 4	ISO Class3 - 4
	RS485		Standard	Standard	Standard
	Noise level (measured according to EN 12469-2025)* Operating position 200mm (7.9")		53.2dB(A)	54.8dB(A)	57.5dB(A)
	Noise Level (measured according to EN 12469-2000) * Operating Position 200mm (7.9")		46.4dB(A)	48.6dB(A)	51.8dB(A)
	Noise Level (measured according to EN 12469-2025) * ECO mode		37.2dB(A)	36.2dB(A)	34.5dB(A)
	Blower Type		ECM	ECM	ECM
	Solid or Glass Sides		Solid	Solid	Solid
	Bench or Stand Only		Both	Both	Both
Dimensions	Internal Dimensions(W*D*H)	mm	930×600×650	1230×600×650	1530×600×650
		in	36.6×23.6×25.6	48.4×23.6×25.6	60.2×23.6×25.6
	External Dimensions(W*D*H) (Depth without Arm Rest)	mm	1040×835(790)×2150	1340×835(790)×2150	1640×835(790)×2150
		in	40.9×32.9(31.1)×84.6	52.8×32.9(31.1)×84.6	64.6×32.9(31.1)×84.6
	Packing Dimensions(W*D*H)	mm	1105×940×1745	1405×940×1745	1705×940×1745
		in	43.5×37.0×68.7	55.3×37.0×68.7	67.1×37.0×68.7
	Net/Gross Weight	kg	215/266	265/318	320/372
		lbs	474 / 586	584 / 701	705 / 820
	Working Height of Front Window	mm	200	200	200
	Maximum Window Opening (for cleaning, loading/unloading)	mm	460	460	460
Alarm Function	Support Stand	mm	680-900mm adjustable height(standard)	680-900mm adjustable height(standard)	680-900mm adjustable height(standard)
	Container Load (20'/40'/40'H)		8/16/16	8/16/16	6/12/12
	Alarm		Audible and visual	Audible and visual	Audible and visual
	Inflow Abnormal		Y	Y	Y
	Downflow Abnormal		Y	Y	Y
	Door Position Error		Y	Y	Y
	Temperature Abnormal ^①		Y	Y	Y
	Humidity Abnormal ^②		Y	Y	Y

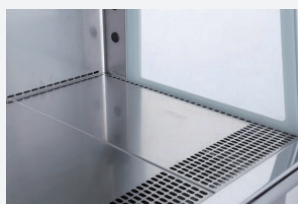
	Model	HR900-IIA2-G	HR1200-IIA2-G	HR1600-IIA2-G
Accessories	Side Wall Service ports (22 mm) ③	Standard	Standard	Standard
	LED Light	Standard	Standard	Standard
	UV Lamp	Standard	Standard	Standard
	Socket	2 Sockets	2 Sockets	2 Sockets
	LED Indicator Light	Standard	Standard	Standard
	Work Surface	One-piece	One-piece	One-piece
	Armrest	Standard	Standard	Standard
Others	Certification by TÜV	EN 12469-2025	EN 12469-2025	EN 12469-2025

*Noise testing is performed in a third-party anechoic chamber. Readings obtained in ordinary rooms vary with room size, layout and background noise, and may be approximately 3–5 dB(A) higher than the measured values.

① Alarm range is configurable by client ② Alarm range is configurable by client ③ 2 Ports on each side, 4 ports in total.

Accessory	Description	Cat. No.
Work Surface	316L stainless steel work surface, material upgrade	60010001
	Segmented work surfaces, removable for easy cleaning	60010003
Chamber	316L stainless steel inner shell, material upgrade	60020001
	1mm → 1.5mm (304 stainless steel inner shell)	60020002
Stands	Electric adjustable floor stand, height adjustable from 750mm to 950mm	60030001
Electrical & Control	2 additional sidewall sockets, with chamber opening and wiring	60040002
	Additional lighting fixtures (1 pc, 1000 lux) , increased work area illumination	60040003
	Foot pedal (for motorized window control) , optional foot switch controller	60040004
	Motorized Window	60040005
	Upgrade the serial-port touchscreen to an Android-based touch display for GMP compliance	60040006
Exhaust & Filtration	Exhaust components, including exhaust hood, exhaust pipe, pipe clamp and packaging box	60050001
Sidewall Utilities	Additional side wall sockets + valve ports, 4 sockets + 2x76mm sidewall ports	60070001
	Water valve tap, sidewall water valve connection	60070002
	Compressed air valve tap, sidewall compressed air connection	60070003
	Vacuum valve tap, sidewall vacuum connection	60070004
	Gas valve port, sidewall gas connection	60070005
	Solenoid gas valve, optional solenoid valve control assembly	60070006
	Universal valve port, sidewall general valve interface seat	60070007
Appearance & Coating	Bean-green sash cover, equipped with stainless-steel air outlet grille	60060001
	Pink appearance modification, pink mask + pink operation labels + logo	60060002
	Antibacterial coating, surface antibacterial treatment	60060003
Smart & Communication	IoT module, add-on IoT remote monitoring module	60080001
Regional Adaptation	Add working area size sticker	60090002
	Power plug replacement	60090003
User Convenience	Portable armrest	60100001

Accessories



Segmented Work Surfaces

Cat. No. 60010003



Portable Armrest

Cat. No.60100001



316L Stainless Steel Work Surface

Cat. No.60010001



Electric Stand

Cat. No.60030001



Exhaust Components

Cat. No. 60050001



Solenoid Gas Valve

Cat. No. 60070006



Foot Pedal

Cat. No. 60040004



Valve Tap

Cat. No.60070001

