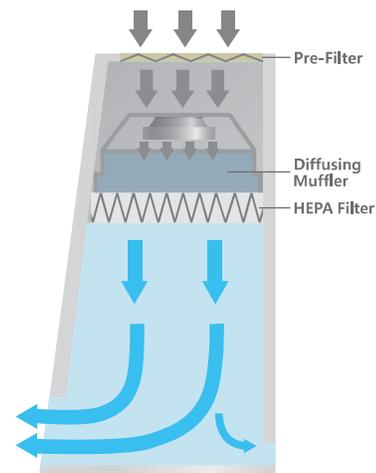


# H

## Hoods Clean Benches (Advanced Models)

Advanced vertical laminar flow clean benches with two digital displays are designed for high comfort and the best safe performance.

ISO Class 4 air cleanliness as per ISO 14644-1. (equivalent to Class 10 as per US Federal Standard 209E)  
Nominal downflow velocity. (max. 0.45 m/sec)



### BC-11H with an optional Stand

Included Accessories  
see page 55

- HEPA Filter, Pre-Filter
- UV Lamp, Fluorescent Lamp
- Electrical Socket



### Filtration Features

- ISO Class 4 (US Class 10) HEPA filter for optimal protection against cross-contamination.
- 0.3  $\mu\text{m}$  and larger particulates are removed with 99.99% efficiency, leak-tight HEPA filter which satisfying class 10. (US Federal Standard 209E) (average life span of HEPA filter: 3 years – it depends on the test room conditions)
- Comfortable front access for inspection of HEPA filter and easy validation.
  - Standard gas injection hole for easy checking of HEPA filter leak performance test.
- High-quality polyester fiber pre-filter (with minimal pressure loss and 85% arrestance on the A.F.I. test) for trapping larger particles and increasing the life of the main HEPA filter.
- Digital differential pressure sensor allows for easy verification of HEPA filter condition great for knowing when to change HEPA filter.
- Digital airflow rate sensor (Microprocessor) for automated airflow speed control.
  - Offers continual airflow speed of same velocity and extends the HEPA filter life span.

# Hoods

## Clean Benches (Advanced Models)

### ► Safety & Constructional Features

- UV-blocking and impact-resistant tempered glass door.
- If the sash is opened during UV-lamp operation, UV lamp automatically turns OFF to protect users.
- If the sash is opened more than the recommended sash height level, during operation, warning alarm will activate and alarm users to lower the window to the recommended sash level to prevent contamination of samples.
- When UV light intensity is lower than 80%, UV warning lamp is automatically ON to let users know when to change UV-lamp.
- Quiet and comfortable working environment. (less than 65dB)
- Highly durable, rust-free, and easy-to-clean grade 304 stainless steel work surface.
- Smoothly sliding front door stoppable at any height for user's safety and easy transport of equipment into the workspace.
- Interlocking Smart Door System
  - Simply open the door while UV-lamp is ON. Interlocking smart door system will automatically turn OFF UV-lamp, turn ON Fluorescent lamp and Blower instead of your manual control.
- Two digital displays for the best convenience.
  - Even if any test is ongoing inside of the chamber, unit conditions such as velocity, temperature and humidity can be easily checked by the inner and outside displays.
- Exclusive diffusing muffler structure forms high quality laminar flow.
- The inner left side magnetic board allows some memos and small tools.

### ► Specifications & Ordering Information



Model		BC-01H		BC-11H		BC-21H	
Air Flow Type		Vertical laminar flow					
Air Volume (Minimum / Maximum)		0 to 1020 cmh / 0 to 600 cfm		0 to 2040 cmh / 0 to 1200 cfm			
Laminar Airflow Velocity (m / s / fpm)		0.3 / 59		0.45 / 89		0.3 / 59	
Air Cleanliness within Work space		ISO 14644-1 Class 4, US Federal Standard 209E Class 10					
Filters	HEPA Filter	Typical efficiency of 99.99% on 0.3µm (US MIL-STD-282) ; Micro glass fiber Media, Partide board, AL separator, Neoprene gaskets					
	Pre Filter	Polyester fibers with an filter efficiency of 85% (A-F-TEST) ; Aluminum frame, Polyester fiber media					
Noise Level		Typically < 65dB at blower speed					
Materials	Main Body	Steel powder coating					
	Work Surface	Stainless steel grade 304, Hairline treatment					
	Windows (Front / Side)	Colorless and transparent UV absorbing 5mm tempered glass					
Illumination	Intensity (lux)	> 650					
	Fluorescent lamp (W)	30Wx2ea				32Wx2ea	
	UV lamp (W)	25Wx1ea		30Wx1ea		25Wx2ea	
Electric Socket Outlets		230V socket					
Dimension (WxDxH)	Internal (mm / inch)	945×570×670/ 37.2×22.4×26.4		1245×570×670/ 49.0×22.4×26.4		1845×570×670/ 72.6×22.4×26.4	
	External without Stand (mm / inch)	1135×647×1150/ 44.7×25.5×45.3		1435×647×1150/ 56.5×25.5×45.3		2035×647×1150/ 80.1×25.5×45.3	
	External with Stand (mm / inch)	1135×647×1870/ 44.7×25.5×73.6		1435×647×1870/ 56.5×25.5×73.6		2035×647×1870/ 80.1×25.5×73.6	
	Net Weight (Body) (kg / lbs)	140 / 308.6		185 / 407.9		225 / 496	
	Net Weight (Body+Stand) (kg / lbs)	170 / 374.8		215 / 474		255 / 562.2	
Electrical Requirements (230V, 1ph)		60Hz / 1.25 A    50Hz / 1.38 A		60Hz / 1.57 A    50Hz / 1.73 A		60Hz / 2.09 A    50Hz / 2.30 A	
Cat. No.		AAHA5011K    AAHA5012K		AAHA5021K    AAHA5022K		AAHA5031K    AAHA5032K	
Electrical Requirements (120V, 1ph)		60Hz / 2.62 A		60Hz / 3.27 A		60Hz / 4.36 A	
Cat. No.		AAHA5013U		AAHA5023U		AAHA5033U	

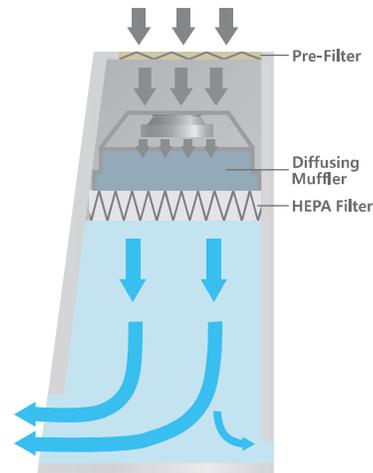
※ Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

# H

## Hoods Clean Benches (Basic Models)

### Vertical laminar flow clean benches!

ISO Class 4 air cleanliness as per ISO 14644-1. (equivalent to Class 10 as per US Federal Standard 209E)  
Nominal downflow velocity. (max. 0.45 m/sec)



#### BC-11B with an optional Stand

- Included Accessories
- HEPA Filter, Pre-Filter
  - UV Lamp, Fluorescent Lamp
  - Electrical Socket
  - Differential Pressure Gauge
- ➔ see page 55



#### ➤ Filtration Features

- ISO Class 4 (US Class 10) HEPA filter for optimal protection against cross-contamination.
- 0.3  $\mu\text{m}$  and larger particulates are removed with 99.99% efficiency, leak-tight HEPA filter which satisfying class 10. (US Federal Standard 209E) (average life span of HEPA filter: 3 years – it depends on the test room conditions)
- Comfortable front access for inspection of HEPA filter and easy validation.
  - Standard gas injection hole for easy checking of HEPA filter leak performance test.
- High-quality polyester fiber pre-filter (with minimal pressure loss and 85% arrestance on the A.F.I. test) for trapping larger particles and increasing the life of the main HEPA filter.
- Built-in differential pressure gauge for easy checking HEPA filter condition.
- Easy blower speed adjustment by the control panel.

#### ➤ Safety & Constructional Features

- UV-blocking and impact-resistant tempered glass door.
- If the sash is opened during UV-lamp operation, UV lamp automatically turns OFF to protect users.
- Lighting mode selection by 3-position toggle switch (UV/OFF/Fluorescent) preventing harmful UV exposure.
- Quiet and comfortable working environment. (less than 65dB)
- Highly durable, rust-free, and easy-to-clean grade 304 stainless steel work surface.
- Smoothly sliding front door stoppable at any height for user's safety and easy transport of equipment into the workspace.
- Exclusive diffusing muffler structure forms high quality laminar flow.
- The inner left side magnetic board allows some memos and small tools.

# Hoods

## Accessories & Options



### Specifications & Ordering Information

Model		BC-01B	BC-11B	BC-21B
Air Flow Type		Vertical laminar flow		
Air Volume (Minimum / Maximum)		0 to 1020 cmh / 0 to 600 cfm	0 to 2040 cmh / 0 to 1200 cfm	
Laminar Airflow Velocity (m / s / fpm)		0.3 / 59	0.45 / 89	0.3 / 59
Air Cleanliness within Work space		ISO 14644-1 Class 4, US Federal Standard 209E Class 10		
Filters	HEPA Filter	Typical efficiency of 99.99% on 0.3µm (US MIL-STD-282) ; Micro glass fiber Media, Particle board, AL separator, Neoprene gaskets		
	Pre Filter	Polyester fibers with a filter efficiency of 85% (A-F-TEST) ; Aluminum frame, Polyester fiber media		
Noise Level		Typically < 65dB at blower speed		
Materials	Main Body	Steel powder coating		
	Work Surface	Stainless steel grade 304, Hairline treatment		
	Windows (Front / Side)	Colorless and transparent UV absorbing 5mm tempered glass		
Illumination	Intensity (lux)	> 650		
	Fluorescent lamp (w)	30Wx2ea		32Wx2ea
	UV lamp (w)	25Wx1ea	30Wx1ea	25Wx2ea
Electric Socket Outlets		230V socket		
Dimension (WxDxH)	Internal (mm / inch)	945x570x670/ 37.2x22.4x26.4	1245x570x670/ 49.0x22.4x26.4	1845x570x670/ 72.6x22.4x26.4
	External without Stand (mm / inch)	1135x647x1150/ 44.7x25.5x45.3	1435x647x1150/ 56.5x25.5x45.3	2035x647x1150/ 80.1x25.5x45.3
	External with Stand (mm / inch)	1135x647x1870/ 44.7x25.5x73.6	1435x647x1870/ 56.5x25.5x73.6	2035x647x1870/ 80.1x25.5x73.6
	Net Weight (Body) (kg / lbs)	140 / 308.6	185 / 407.9	225 / 496
	Net Weight (Body+Stand) (kg / lbs)	170 / 374.8	215 / 474	255 / 562.2
Electrical Requirements (230V, 1ph)		60Hz / 1.25 A	50Hz / 1.38 A	60Hz / 2.09 A
Cat. No.		AAHA6011K	AAHA6012K	AAHA6021K
Electrical Requirements (120V, 1ph)		60Hz / 2.62 A	60Hz / 3.27 A	60Hz / 4.36 A
Cat. No.		AAHA6013U	AAHA6023U	AAHA6033U

※ Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

### for Clean Benches



#### HEPA Filter

- 99.99% efficient HEPA filter, industry standard size for economical replacement.



#### Stand with Casters

- Stand with Casters : Mobile stand made of powder-coated steel ideal for easy relocation.



#### Pre Filter

- Easy-to-replace pre-filter for trapping larger particles and extending the life of HEPA filters.

### Filters

Cat. No.	Description	BC-01H/B	BC-11H/B	BC-21H/B
AAAB1601	HEPA Filter	•		
AAAB1602			•	
AAAB1603				•
AAAB1611	Pre-Filter	•		
AAAB1612			•	
AAAB1613				•

### Others

Cat. No.	Description	BC-01H/B	BC-11H/B	BC-21H/B
AAAB1621	Stand with Casters	•		
AAAB1622			•	
AAAB1623				•
AAAB1631	UV Lamp(230v)	•		
AAAB1633			•	
AAAB1635				•
AAAB1632	UV Lamp(120v)	•		
AAAB1634			•	
AAAB1636				•
AAAB1561	Gas cock	•	•	•
AAAB1571	Differential Pressure Gauge (only for BC-B)	•	•	•

# Hoods

## PCR Workstations

Specially designed to minimize the sample contamination during PCR applications by combining ISO Class 4 (US Class 10) clean air environment.

### Filtration Features

- ISO Class 4 (US Class 10) HEPA filter for optimal protection against cross-contamination. (average life span of HEPA filter: 3 years – it depends on the test room conditions)
- High-quality polyester fiber pre-filter (with minimal pressure loss and 85% arrestance on the A.F.I. test) for trapping larger particles and increasing the life of the main HEPA filter.
- Convenient change of filter cartridges by opening the upper front cover.
- Large capacity blower and easy blower speed adjustment by the control panel.



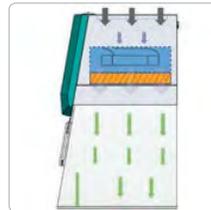
### Safety & Constructional Features

- Interlocking safety door system shuts off UV light automatically when opening the door.
- UV-blocking door and side panels made of transparent acrylic resin provides clear inside view.
- UV over-exposure alarm and over-current protection.
- Effective sterilization using a long-life 254 nm UV lamp. (average life span of UV lamp: 8,000 hours)
- Built in anti-glare fluorescent lamp minimizes shadows and relieves eye strain.
- Programmable digital UV light timer with Delayed OFF function.
- User-friendly microprocessor-based control panel.

### PW-11

Included Accessories  
 see page 63

- HEPA Filter
- Pre Filter
- UV Lamp
- Fluorescent Lamp



### Specifications & Ordering Information



Model		PW-01		PW-11		PW-21		
Air Flow Type		Vertical						
Max. Air Volume (cmh / cfm)		557 / 327		697 / 408		929 / 546		
Min. Air Volume (cmh / cfm)		167 / 97		209 / 121		279 / 162		
Laminar Airflow Velocity (m / s / fpm)		0.3 / 60						
Filter	Air Cleanliness	ISO 14644-1 Class 4						
	HEPA Filter	Typical efficiency of 99.99% at 0.3 μm US MIL-STD-282 ; Micro glass fiber Media, Particle board, Aluminum separator, Neoprene gaskets						
	Pre Filter	Polyester fibers with an efficiency of 85% (A-F-ITEST); AL frame, Polyester fiber media						
Noise level (dBA)		Typically < 60 dBA at blower speed						
Material	Work Surface	10mm thick acrylic resin (clear type)						
	Window (Front, Side / Back)	8mm / 10mm thick acrylic resin (clear type)						
Illumination	Intensity	Fluorescent Lamp (lux)	>1000					
		UV Density (μW / cm <sup>2</sup> )	165		185		330	
	Capacity	Fluorescent Lamp	15W×1EA		20W×1EA		30W×1EA	
		UV Lamp	15W×1EA		20W×1EA		30W×1EA	
Dimension (W×D×H)	Interior (mm / inch)	700×585×602 / 27.5×23×23.7		880×585×602 / 34.6×23×23.7		1180×585×602 / 46.5×23×23.7		
	Exterior (mm / inch)	720×605×964 / 28×24×38		900×605×964 / 35.4×24×38		1200×605×964 / 47.2×24×38		
	Net Weight (Body) (kg / lbs)	56.2 / 123.9		64.2 / 141.5		77.8 / 171.5		
Electrical Requirements (230V)		60Hz, 1.3A 50Hz, 1.3A		60Hz, 1.4A 50Hz, 1.4A		60Hz, 1.5A 50Hz, 1.5A		
Cat. No.		AAHB3001K AAHB3002K		AAHB3011K AAHB3012K		AAHB3021K AAHB3022K		
Electrical Requirements (120V)		60Hz, 2.2A		60Hz, 2.7A		60Hz, 2.9A		
Cat. No.		AAHB3003U		AAHB3013U		AAHB3023U		

※ Above specifications can be changed without prior notice.

# Hoods

## UV Sterilization cabinets

Ideal for effective decontamination of apparatus and equipment before carrying out sensitive PCR experiments using a high-quality UV lamp with timer control.



### UVC-11

Included Accessories  
 see page 63

- UV Lamp
- Fluorescent Lamp



### Safety Features

- Interlocking safety door system shuts off UV light automatically when opening the door.
- UV-blocking door and side panels made of transparent acrylic resin provides clear inside view.
- UV over-exposure alarm and over-current protection.

### Constructional Features

- Effective sterilization using a long-life 254 nm UV lamp. (average life span of UV lamp: 8,000 hours)
- Built in anti-glare fluorescent lamp minimizes shadows and relieves eye strain.
- Programmable digital UV light timer with Delayed OFF function.
- User-friendly microprocessor-based control panel.
- Easy-to-clean grade 304 stainless steel work surface with high chemical resistance against various organic solvents.

### Specifications & Ordering Information



Model		UVC-01		UVC-11		UVC-21	
Illumination	Intensity	Fluorescent Lamp (Lux)	>800	>900	>1000		
		UV Density ( $\mu\text{W} / \text{cm}^2$ )	150	385	450		
	Capacity	Fluorescent Lamp	8W×1ea	15W×1ea	20W×1ea		
		UV Lamp	8W×1ea	15W×1ea	20W×1ea		
Material	Work Surface	Stainless steel grade 304					
	Window (Front, Back / Side)	5 mm thick acrylic resin					
Dimension (W×D×H)	Interior (mm / inch)	433×500×468 / 17.0×19.7×18.4		583×500×468 / 23×19.7×18.4		880×500×468 / 34.6×19.7×18.4	
	Exterior (mm / inch)	450×509×610 / 17.7×20×24		600×509×610 / 23.6×20×24		900×509×610 / 35.4×20×24	
	Net Weight (Body) (kg / lbs)	15 / 33.1		17.5 / 38.6		20 / 44.1	
Electrical Requirements (230V)		60Hz, 0.1A	50Hz, 0.1A	60Hz, 0.2A	50Hz, 0.2A	60Hz, 0.3A	50Hz, 0.3A
Cat. No.		AAHB4001K	AAHB4002K	AAHB4011K	AAHB4012K	AAHB4021K	AAHB4022K
Electrical Requirements (120V)		60Hz, 0.2A		60Hz, 0.4A		60Hz, 0.6A	
Cat. No.		AAHB4003U		AAHB4013U		AAHB4023U	

※ Above specifications can be changed without prior notice.

# Hoods

## Accessories & Options

for PCR Workstations & UV Sterilization Cabinets

### ➤ General UV Dose and Time Required

Pathogen	Average UV Dose Required ( $\mu\text{W} \cdot \text{s}/\text{cm}^2$ )	Average UV Time Required ( $\mu\text{W}/\text{cm}^2/\text{sec.}$ )					
		PW-01	UVC-01	PW-11	UVC-11	PW-21	UVC-21
		165	150	185	385	330	450
<i>S. enteritidis</i>	4,000	25	27	22	10	13	9
<i>B. megatherium sp. (spores)</i>	2,730	17	18	15	7	9	6
<i>B. subtilis</i>	7,100	43	47	39	18	22	16
<i>Eberthella typhosa</i>	2,140	13	14	12	6	7	5
<i>Escherichia coli (E. coli)</i>	3,000	19	20	17	8	10	7
<i>Micrococcus candidus</i>	6,050	37	40	33	16	19	13
<i>Proteus vulgaris</i>	2,640	16	18	15	7	8	6
<i>Pseudomonas aeruginosa</i>	5,500	34	37	30	14	17	12
<i>Pseudomonas aeruginosa</i>	3,500	22	23	19	9	11	8
<i>S. typhimurium</i>	8,000	49	53	44	21	25	18
<i>Shigella paradysenteriae</i>	1,680	101	11	10	4	6	4
<i>Spirillum rubrum</i>	4,400	27	29	24	11	14	10
<i>Staphylococcus albus</i>	1,840	12	12	10	5	6	4

\* Permissible environmental conditions: temperature (20 to 25°C) and relative humidity (up to 60%).

\* Above listed applications are for general purpose use.



➤ HEPA Filter (only for PW models)



➤ Fluorescent Lamp



➤ UV Lamp

### ➤ for PCR Workstations

Cat. No.	Description	PW-01	PW-11	PW-21
EDA9219	HEPA Filter	•		
EDA9220			•	
EDA9221				•
CHE4436	Fluorescent Lamp	•		
CHE4410			•	
CHE4409				•
CHE4431	UV Lamp	•		
CHE4427			•	
CHE4423				•

### ➤ for UV Sterilization Cabinets

Cat. No.	Description	UVC-01	UVC-11	UVC-21
CHE4435	Fluorescent Lamp	•		
CHE4436			•	
CHE4410				•
CHE4434	UV Lamp	•		
CHE4431			•	
CHE4427				•