05

Hoods

- Clean Benches
- Ductless Fume Hoods
- Movable Extraction Arm Hoods
- Extraction Arm Hoods
- Bench Top Fume Hoods
- PCR Workstations
- UV Sterilization Cabinets

General Applications

Clean Benches

Non-toxic IV solution, Preparation, Plant tissue culture, Media plate preparation, Electronics inspection, Medical device assembly, Pharmacy drug preparation.

Fume Hoods

Chemical sampling, Chemical preparation, Cosmetic Production, Numerous, Vapor-generating laboratory processes, Slide preparation, Welding fumes.

PCR Workstations

Medical device assembly, PCR, Staining with volatile, Sterile media preparation, Tissue fixation / Staining preparation.

UV Sterilization Cabinets

General sterilization in daily use.

Product Name		Clean Benches (Advanced)	Clean Benches (Basic)	Ductless Fume Hoods
Model		BC-H	BC-B	DLH-G
Description		Vertical laminar flow, Digital control	Vertical laminar flow, Analog control	Swing vane type, Digital control
Work space (W×D×H, mm)		945×570×670, 1245×570×670, 1845×570×670	945×570×670, 1245×570×670, 1845×570×670	880×640×800, 1180×640×800
Air volume (min. / max., cmh)		0 to 1020, 0 to 2040	0 to 1020, 0 to 2040	-
Airflow velocity (m/s)		0.3, 0.45	0.3, 0.45	Initial set point: 0.4m/s, 80fpm (face velocity)
Air flow				
Air cleanliness within workspace		ISO 14644-1 class 4 (US federal standard 209E class 10)		-
Filters (standard / optional)		Pre filter	Pre-filter	Pre-filter / Optional chemical filters
Construction	Work surface	Stainless steel grade 304, Hairline treatment	Stainless steel grade 304, Hairline treatment	Optional 6 different work surfaces
	UV lamp	O	O	-
Control	Display & Control interface	Dual, Digital-touch VFD	Analog-Switch, Knob	Digital-LED, Buttons
	Filter capacity check	Digital-Differential pressure sensor	Analog-Differential pressure guage	Analog-Gas detector (optional)
	Front access for filter replacement	O	O	O
	Diffusing muffler	O	O	-
	Blower speed adjustment	Digital	Analog	Digital
Safety	Door open level alarm	O	-	-
	Smart door system	O	-	-
	UV lamp auto off	O	O	-

Technical Benefits

› Reliable international standard

- ISO class 4 air cleanliness as per ISO 14644-1.
  - Equivalent to Class 10 as per US Federal Standard 209E
  - 99.99% efficient HEPA filter.

› Chemical filters are selectable according to the application

- Complex carbon filter
- Acid filter
- Formaldehyde filter
- Ammonia / Amines filter

Tips for Selection

› Protection target

- Clean benches / PCR workstations for sample protection.
  - HEPA-filtered environment protects the sample from air contamination. UV light enables effective sterilization of the sample.
    * Do not offer personnel protection.
- Fume hoods for personnel protection.
  - Efficiently designed to protect the user from harmful and toxic fumes generated from wide range of applications.
    * Ducted type and ductless type are available.

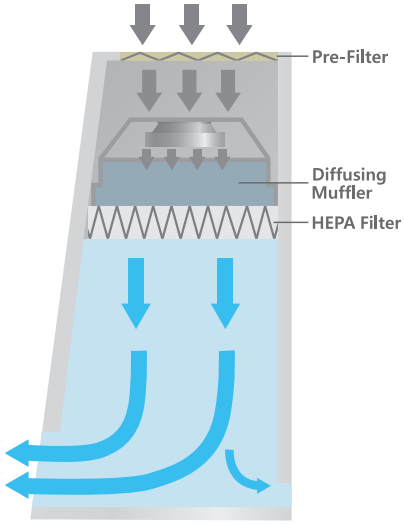
› Usage environment

- Ducted type for strong fume extraction.
  - In-lab exhaust system is essential to use the ducted fume hood. It guarantees strong and effective extraction of hazardous and toxic fumes.
- Ductless type for easy installation and maintenance.
  - Ventilation system in your lab is not required at all. Ductless fume hood with chemical filters enables effective fume extraction.

Movable Extraction Arm Hoods (with Filter System)		Extraction Arm Hoods (without Filter System)		Bench Top Fume Hoods	PCR Workstations	UV Sterilization Cabinets
EFS, AH		AH		PMH	PW	UVC
2 Joints	3 Joints	2 Joints	3 Joints	Compact size, Portable	Vertical laminar flow	UV lamp with timer control
Arm(LxØ,mm) 940x50, 1140x50, 1040x75	Arm(LxØ,mm) 1480x50, 1680x50, 1680x75	Arm(LxØ,mm) 940x50, 1140x50, 1040x75	Arm(LxØ,mm) 1480x50, 1680x50, 1780x50 1680x75	Entrance(WxD,mm) 560x300	700×585×602, 880×585×602, 1180×585×602	433×500×468, 583×500×468, 880×500×468
-		-		-	167 to 557, 209 to 697, 279 to 929	-
240 m^3/h (tested with installing one arm)		-		-	0.3 / 60	-
						
-		-		-	ISO 14644-1 class 4 (US federal standard 209E class 10)	-
Standard Pre-filter / Optional HEPA filter, chemical filters		-		-	Standard HEPA filter, Pre-filter	-
-		-		Polyethylene	10mm thick acrylic resin (clear type)	Stainless steel grade 304
-		-		-	O	O
Analog-Button, Knob		-		-	Digital-LED, Buttons	Digital-VFD, Buttons
Analog-Gas detector (optional)		-		-	Analog-Gas detector (optional)	-
-		-		-	O	O
-		-		-	-	-
Analog		-		-	Digital	-
-		-		-	-	-
-		-		-	-	-
-		-		-	O	O

Vertical laminar flow clean benches with advanced digital control and various convenient features.

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



BC-11H

with optional stand and gas cock, HEPA filter

Standard accessories
see page 63

- Pre filter
- UV lamp, Fluorescent lamp
- Electrical socket

Interlocking smart door system (patent pending)

Performance

- ISO class 4 (US class 10) HEPA filter for optimal protection against cross-contamination.
- 0.3 μm 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)
- High-quality polyester fiber pre filter (with minimal pressure loss and 85% arrestant on the A.F.I. test) for trapping larger particles and increasing the life of the main 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.
- Exclusive diffusing muffler structure forms high quality laminar flow.
- Quiet and comfortable working environment. (less than 65dB)

Convenience

- 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.
- Digital differential pressure sensor allows for easy verification of HEPA filter condition great for knowing when to change HEPA filter.
- When UV light intensity is lower than 80%, UV warning lamp is automatically on to let users know when to change UV-lamp.
- Comfortable front access to cartridge type of filters for easy replacement.
- Highly durable, rust-free, and easy-to-clean grade 304 stainless steel work surface.
- The inner left side magnetic board allows some memos and small tools.

Safety

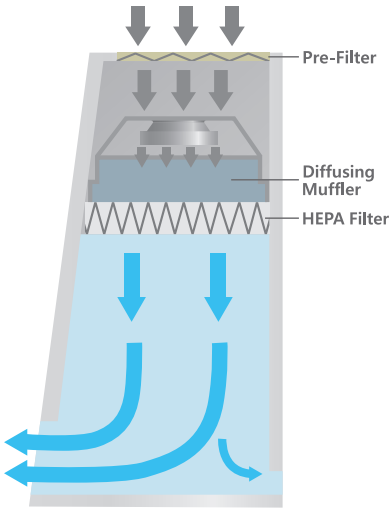
- UV-blocking and impact-resistant tempered glass door.
- If the sash is opened more than the recommended sash height level, during operation, warning alarm will activate and alarm users to lower the window to the recommended sash level to prevent contamination of samples.
- If the sash is opened during UV-lamp operation, UV lamp automatically turns off to protect users.
- Smoothly sliding front door stoppable at any height for user's safety and easy transport of equipment into the workspace.
- Protection against over-current.

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 0.3㎛ (US MIL-STD-282) ; Micro glass fiber Media, Particle board, AL separator, Neoprene gaskets					
	Pre filter	Polyester fibers with an filter efficiency of 85% (A·F·I 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)	30 x 2ea				32 x 2ea	
		Electronically ballasted Fluorescent Lamp					
	UV lamp (W)	25 x 1ea		30 x 1ea		25 x 2ea	
		Electronically ballasted UV Lamp					
Electric socket outlets		230V socket					
Dimension (WxDxH)	Interior (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	
	Exterior 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	
	Exterior 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**	

※ FDA establishment registered company. FDA listed products.

Vertical laminar flow clean benches offer quick operation by simple-adjustable analog control.

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



BC-11B

with optional stand, HEPA filter

Standard accessories
see page 63

- Pre filter
- UV lamp, Fluorescent lamp
- Electrical socket
- Differential pressure gauge

Performance

- ISO class 4 (US class 10) HEPA filter for optimal protection against cross-contamination.
- 0.3 µm 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)
- High-quality polyester fiber pre filter (with minimal pressure loss and 85% arrestant on the A.F.I. test) for trapping larger particles and increasing the life of the main HEPA filter.
- Exclusive diffusing muffler structure forms high quality laminar flow.
- Quiet and comfortable working environment. (less than 65dB)

Convenience

- Built-in differential pressure gauge for easy checking HEPA filter condition.
- Comfortable front access to cartridge type of filters for easy replacement.
- Easy blower speed adjustment by the control panel.
- Highly durable, rust-free, and easy-to-clean grade 304 stainless steel work surface.
- The inner left side magnetic board allows some memos and small tools.

Safety

- 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.
- Smoothly sliding front door stoppable at any height for user's safety and easy transport of equipment into the workspace.
- Protection against over-current.

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 0.3㎛ (US MIL-STD-282) ; Micro glass fiber Media, Particle board, AL separator, Neoprene gaskets					
	Pre filter	Polyester fibers with an filter efficiency of 85% (A·F·I 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)	30 x 2ea				32 x 2ea	
		Electronically ballasted Fluorescent Lamp					
	UV lamp (W)	25 x 1ea		30 x 1ea		25 x 2ea	
		Electronically ballasted UV Lamp					
Electric socket outlets		230V socket					
Dimension (WxDxH)	Interior (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	
	Exterior 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	
	Exterior 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.		**AAHA6011K**	**AAHA6012K**	**AAHA6021K**	**AAHA6022K**	**AAHA6031K**	**AAHA6032K**
Electrical requirements (120V, 1ph)		60Hz / 2.62 A		60Hz / 3.27 A		60Hz / 4.36 A	
Cat. No.		**AAHA6013U**		**AAHA6023U**		**AAHA6033U**	

※ FDA establishment registered company. FDA listed products.

Accessories & Options

HEPA filter

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

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.

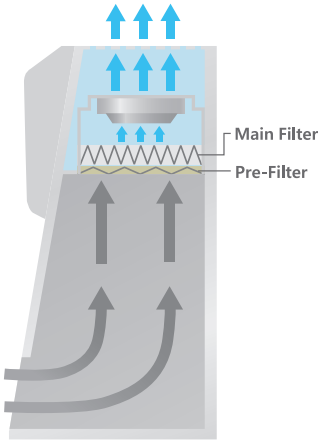
Filters

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 (for BC-B)	•	•	•

Safe and energy-saving mobile workspace free from toxic vapors and fumes without the need of costly ductwork.



Digital controller

Anemometer


Front cover

DLH-01G

with optional work surface and stand

Standard accessories
see page 65

- Pre filter
- Fluorescent lamp

* DLH series do not come with any work surface. Please place an order one work surface among 6 optional different work surfaces for proper use.

Performance

- A variety of filters and work surfaces available to suit your specific experimental needs. (refer to accessory section)
- High-quality polyester fiber pre-filter for trapping larger particles and increasing the life of the main HEPA filter.
- Large-capacity blower maintaining sufficient intake flow rate and reducing noise. (less than 55 dB under normal operation)
- Fluorescent light installed outside the workspace in order to prevent the airflow hindrance as well as the contamination while maintaining illumination intensity.

Convenience

- Easy monitoring of the internal airflow speed thanks to built-in anemometer.
- Comfortable front access to cartridge type of filters for easy replacement.
- Built-in utility hole for easily routing the cords or wires of the equipment placed inside the hood.
- Fully or half openable front door for convenient transport of experimental apparatuses and equipment into or out of the workspace.

Standards compliance

- Efficiency and capacity of activated carbon filters: BS 7989:2001
- Structure, electrical outlet, lighting, and sound level: BS 7258-1:1994
- Local smoke, large volume visualization, face velocity, and tracer gas: ANSI/ASHRAE 110-1995 and NF EN 14175-1

Model		DLH-01G		DLH-11G	
Controller		Microprocessor control			
Face velocity		Initial set point: 0.4m/s, 80fpm			
Air flow meter		Swing vane type			
Main filter		Chemical Filter (optional 6 different filters)			
Pre filter		Washable high efficiency nylon filter			
Materials	Main body, window (front / side)	2.0mm steel (epoxy powder-coated), 8mm / 6mm thick acrylic resin			
	Work surface	Optional 6 different work surfaces			
Fluorescent light intensity		> 600lux			
Noise level		55dB under normal operation			
Dimension (W×D×H)	Interior (mm / inch)	880×640×800 / 34.6×25.2×31.5		1180×640×800 / 46.5×25.2×31.5	
	Exterior without stand (mm / inch)	900×660×1250 / 35.4×26×49.2		1200×660×1250 / 47.2×26×49.2	
	Exterior with stand (mm / inch)	900×660×1985 / 35.4×26×78.1		1200×660×1985 / 47.2×26×78.1	
	Net weight (body) (kg / lbs)	100 / 220.5		118 / 260.1	
	Net weight (body + stand) (kg / lbs)	120 / 264.6		140 / 308.6	
Electrical requirements (230V)		50Hz, 0.6A	60Hz, 0.7A	50Hz, 0.6A	60Hz, 0.7A
Cat. No.		**AAHB2002K**	**AAHB2001K**	**AAHB2012K**	**AAHB2011K**
Electrical requirements (100V, 120V)		100V, 50Hz, 1.5A	120V, 60Hz, 1.3A	100V, 50Hz, 1.5A	120V, 60Hz, 1.3A
Cat. No.		**AAHB2004U**	**AAHB2003U**	**AAHB2014U**	**AAHB2013U**

※ FDA establishment registered company. FDA listed products.

Accessories & Options

Filters

Cat. No.	Description	Application	DLH-01G	DLH-11G
EDA9191	Activated carbon filter	All common laboratory chemicals, especially VOC, Organic, Benzene, Toluene, etc	•	-
EDA9192			-	•
EDA9199	Acid filter [1]	An acidic solvent ; Acetic acid, etc	•	-
EDA9200			-	•
EDA9203	Formaldehyde filter	Formadehyde applications	•	-
EDA9204			-	•
EDA9205	Ammonia / Amines filter	Ammonia/Amines by chemisorptions	•	-
EDA9206			-	•
EDA9193	HEPA filter	Biohazardous aerosols and other visible and non-visible particles (filtration efficiency: 99.99% at 0.3 microns)	•	-
EDA9194			-	•
EDA9196	Pre filter	-	•	-
EDA9198			-	•

1) Please do not use high percentage of reactive acid such as perchloric acid.

Work surfaces / Stands

Cat. No.	Description	DLH-01G	DLH-11G
AAAB2501	Work surface (SUS #304)	•	-
AAAB2502		-	•
AAAB2503	Work surface (SUS #316)	•	-
AAAB2504		-	•
AAAB2505	Work surface (ceramite)	•	-
AAAB2506		-	•
AAAB2507	Work surface (polypropylene)	•	-
AAAB2508		-	•
AAAB2509	Work surface (bakelite)	•	-
AAAB2510		-	•
AAAB2511	Work surface (PVC)	•	-
AAAB2512		-	•
AAAB2521	Stand with casters	•	-
AAAB2522		-	•

Gas detector / Gas detecting tubes

Cat. No.	Description	DLH-01G	DLH-11G
AAAB2531	Gas detector (KITAGAWA AP-20)	•	•
EAA1550	Gas detecting tube (benzene, GASTEC-121SP (0.5-10ppm))	•	•
EAA1551	Gas detecting tube (toluene, GASTEC-122L (1-100ppm))	•	•
EAA1552	Gas detecting tube (acetic acid, GASTEC-81L (0.125-25ppm))	•	•
EAA1553	Gas detecting tube (chloroform, GASTEC-137 (4-400ppm))	•	•
EAA1554	Gas detecting tube (formaldehyde, GASTEC-91LL (0.05-1ppm))	•	•
EAA1555	Gas detecting tube (ammonia, GASTEC-3L (0.5-60ppm))	•	•

Filtering

In-lab ventilation system is no longer necessary with movable extraction arm hood.
It can serve as the best mobile or fixed mounted fume extraction system.

Extraction filter system
(filter box with pre-filter)

EFS-33-50D with AH-50 (2ea)

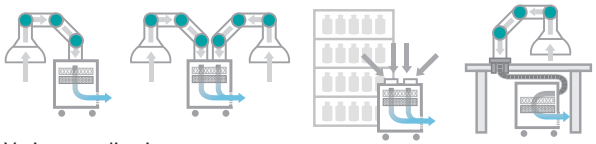
Essential Components
see page 67

- Extraction filter system
  (filter box with pre-filter)
- Chemical filter
- Extraction arm hood

Make your own extraction hood by selecting each component.

Step 1. Extraction Filter Systems

- Single type and double type filter systems are available. Double type filter system can accommodate two arms, beneficial for space efficiency. If necessary, you can cover up one extraction hole in order to use it as single type filter system. In this case, you can also place filter system under table. Use of it alone without installing any arms can also perform as an air purifier.
- Durable BLDC motor provides quiet and comfortable working environment.
- Automatic fan malfunction warning alarm.
- Convenient air flow control.
- Airflow rate Max. 240m³/h. (tested with installing one arm)
- Compact body with built in castors for great mobility.
  (460x460x650mm / 18.1x18.1x25.6inch)



Various applications

Cat. No.	Description	Suitable for
AAHB6312	EFS-33-50S, Single hole	AH-50
AAHB6313	EFS-33-50D, Double holes	
AAHB6314	EFS-33-75S, Single hole	AH-75
AAHB6315	EFS-33-75D, Double holes	

※ 230V, 50/60Hz, 1.5A.

Step 2. Filters

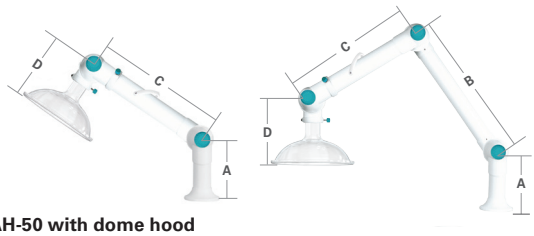
- Various filters are on your selection for safe and effective fume extraction.
- Gas detecting port for checking filter condition.

Cat. No.	Description
AAAB6354	Complex carbon filter
AAAB6356	Acid filter [1]
AAAB6358	Formaldehyde filter
AAAB6359	Ammonia / Amines filter
AAAB6353	HEPA filter
AAAB6360	Pre filter

1) Please do not use high percentage of reactive acid such as perchloric acid.
※ For chemical filters' application list and Gas Detector &Tubes ordering information, please refer to page 65.

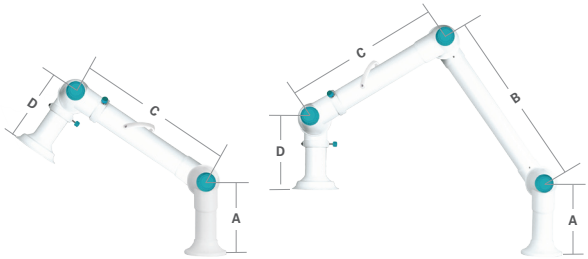
Step 3. Extraction Arm Hoods

- 50mm and 75mm arms are available. Also 2 joints and 3 joints are selective. Arm joints are easily removable for simple adjustment of length of the arm. (removable parts : B)
- 360-degree rotatable joints in the arms provide exceptional flexibility for easy positioning.
- Chemical-resistant and heavy duty polypropylene extraction arm.
- Air flow rate is adjustable by the damper of the extraction arm.



AH-50 with dome hood

Cat. No.	Joint	Length (mm / inch)				
		A	B	C	D	Total
AAAB6552	2	250/9.8	-	440/17.3	250/9.8	940/37
AAAB6554			-	640/25.2		1140/44.9
AAAB6562	3		540/21.3	440/17.3		1480/58.3
AAAB6563			640/25.2	540/21.3		1680/66.1



AH-75 with basic hood

Cat. No.	Joint	Length (mm / inch)				
		A	B	C	D	Total
AAAB6511	2	250/9.8	-	530/20.9	260/10.2	1040/40.9
AAAB6541	3		640/25.2			1680/66.1

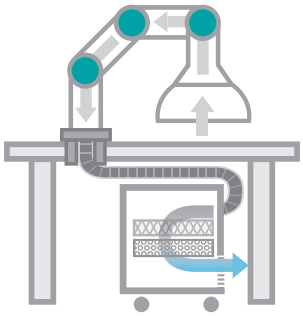
Step 4. Additional Components

- Different shapes of hoods are available for effective fume extraction. Dome hood is suitable for extracting heated fumes or fumes lighter than air. Square hood is specially designed to face on the working surface, extracting fumes heavier than air.
- Table bracket set can fix arm to working table, beneficial for convenient user's experiments on the table. In addition to that, filter system can be located under table for space saving.

Dome hood
(transparent / white)

Square hood
(transparent / white)

Table bracket



Cat. No.	Description	Suitable for
AAAB6221	Dome hood (polypropylene, white, ØxH 400x140 mm / 15.7x5.5 inch)	AH-75
AAAB6211	Dome hood (styrene butadiene copolymer, transparent, ØxH 400x140 mm / 15.7x5.5 inch)	
AAAB6241	Square hood (polypropylene, white, WxDxH 494x390x245 mm / 19.4x15.4x9.6 inch)	
AAAB6231	Square hood (styrene butadiene copolymer, transparent, WxDxH 494x390x245 mm / 19.4x15.4x9.6 inch)	
AAAB6352	Table bracket set (bracket + flexible duct) (WxDxH 165x254x110mm / 6.5x10x4.3 inch)	AH-75
AAAB6351	Table bracket set (bracket + flexible duct) (WxDxH 165x254x110mm / 6.5x10x4.3 inch)	AH-50

The best solutions for eliminating dust and fume hazards at source. Mountable on any surface such as ceiling, wall only when you have a ventilation system in your lab.

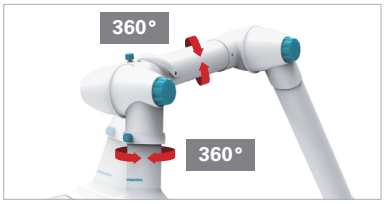
AH-75 / AH-50(C)

with optional brackets and dome hood

Essential Components **see page 69**

- Extraction arm hood, Bracket

Quick tilt-adjustable knob

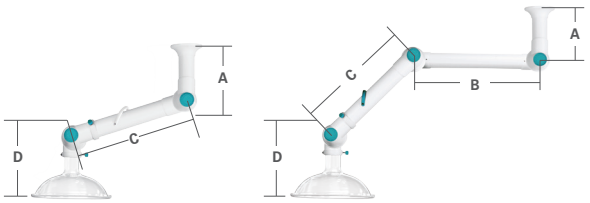


360° rotatable joint

Damper for airflow rate adjustment

Step 1. Extraction Arm Hood

- 50mm and 75mm arms are available. Also 2 joints and 3 joints are selective. Arm joints are easily removable for simple adjustment of length of the arm. (removable part : B)
- Chemical-resistant and heavy duty polypropylene extraction arm.
- 360-degree rotatable joints in the arms provide exceptional flexibility for easy positioning.
- Chemical-resistant and heavy duty polypropylene extraction arm.
- Air flow rate is adjustable by the damper of the extraction arm.

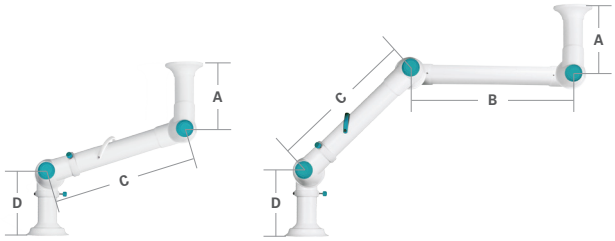


AH-50 with dome hood

Cat. No.	Joint	Length (mm / inch)				
		A	B	C	D	Total
AAAB6552	2	250/9.8	-	440/17.3	250/9.8	940/37
AAAB6554			-	640/25.2		1140/44.9

AH-50C with dome hood

Cat. No.	Joint	Length (mm / inch)				
		A	B	C	D	Total
AAAB6565	3	250/9.8	540/21.3	440/17.3	250/9.8	1480/58.3
AAAB6566			640/25.2	540/21.3		1680/66.1
AAAB6567			740/29.1	540/21.3		1780/70.1

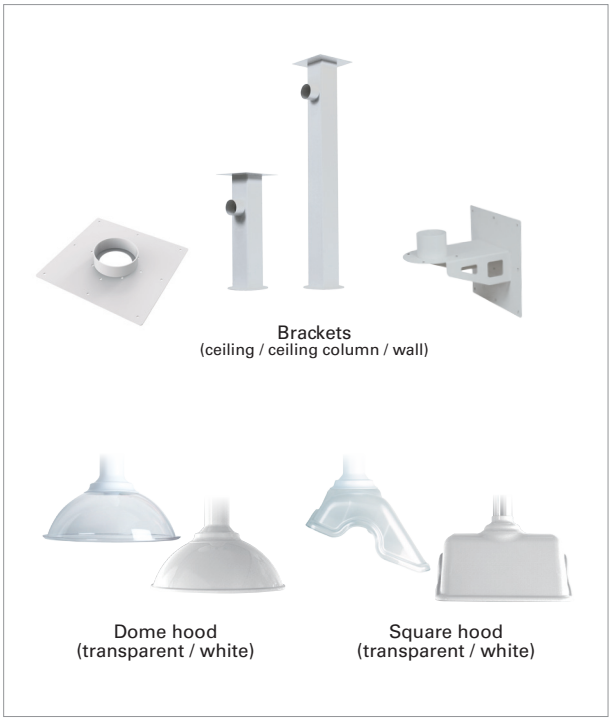


AH-75C with basic hood

Cat. No.	Joint	Length (mm / inch)				
		A	B	C	D	Total
AAAB6524	2	250/9.8	-	530/20.9	260/10.2	1040/40.9
AAAB6542	3		640/25.2			1680/66.1

Step 2. Additional Components

- Different shapes of hoods are available for effective fume extraction. Dome hood is suitable for extracting heated fumes or fumes lighter than air. Square hood is specially designed to face on the working surface, extracting fumes heavier than air.
- One of the various brackets is essentially required for installing the extraction arm hood in your laboratory.



Cat. No.	Description	Suitable for
AAAB6508	Ceiling bracket (WxDxH 260x260x2 mm / 10.2x10.2x0.1 inch)	All models
AAAB6512	Ceiling column (100x100x250 mm / 3.9x3.9x9.8 inch)	
AAAB6513	Ceiling column (100x100x500 mm / 3.9x3.9x19.7 inch)	
AAAB6514	Ceiling column (100x100x750 mm / 3.9x3.9x29.5 inch)	
AAAB6515	Ceiling column (100x100x1000 mm / 3.9x3.9x39.4 inch)	
AAAB6516	Ceiling column (100x100x1250 mm / 3.9x3.9x49.2 inch)	
AAAB6517	Ceiling column (100x100x1500 mm / 3.9x3.9x59.1 inch)	
AAAB6510	Wall bracket (158x259x81.7 mm / 6.2x10.2x3.2 inch)	
AAAB6221	Dome hood (polypropylene, white, ØxH 400x140 mm / 15.7x5.5 inch)	AH-75
AAAB6211	Dome hood (styrene butadiene copolymer, transparent, ØxH 400x140 mm / 15.7x5.5 inch)	
AAAB6241	Square hood (polypropylene, white, WxDxH 494x390x245 mm / 19.4x15.4x9.6 inch)	
AAAB6231	Square hood (styrene butadiene copolymer, transparent, WxDxH 494x390x245 mm / 19.4x15.4x9.6 inch)	

Filtering

Ideal for use in limited laboratory spaces.

Cost-effective, fully portable alternative to metal hoods.

Features

- Compact design for easy moving and space saving.
- Transparent polycarbonate front door for observation.
- The door opens to five positions for comfort and convenience.
- One-piece molded design for leak-tight and exceptional durability.
- Chemical resistance and spark-less polyethylene.
  - Whole body and every single part are made of anti-acid and corrosion material, optimum for storing chemical samples.
- An exhaust motor is required. The unit can be connected to an in-house laboratory exhaust system. Either 150mm (6") dia flexible duct can be used.
- Bench top fume hood can be also connected to optional fume extraction devices.
  - Extraction module (EM-33)
  - Movable extraction arm hood (EFS with AH)
- Rounded inner corners for continuous air flow and easy cleaning.

PMH-720

with optional extraction module (EM-33)

Information of accessories

Extraction module

Cat.No.	Description
AAAF1536	EM-33, Extraction module (pre filter built in) (230V, 60Hz) (348x498x343mm / 13.7x19.6x13.5inch)

Bracket

Cat.No.	Description
AAAB6411	Bracket for bench top fume hood (178x178x2mm / 7x7x0.1inch)

※In case of using bench top fume hood (PMH-720) with movable extraction arm hood (EFS with AH), at least one bracket is required to order.

※It is available to use with movable extraction arm hood.

※**see page 66-67** for detailed information of movable extraction arm hood (EFS with AH).

Model		PMH-720
Permissible air velocity (m/s, fpm)		0.3 to 1 / 59.1 to 196.9
Permissible Environmental Condition		Temperature 2℃ to 60℃, Maximum relative humidity 80%, Maximum altitude up to 2,000m
Material	Main body	Polyethylene
	Window	Polycarbonate
Dimension	Exterior (WxDxH, mm/inch)	720x450x560 / 28.3x17.7x22
	Entrance (WxD, mm/inch)	560x300 / 22x11.8
	Duct hole (O.D., mm/inch)	150 / 6
	Net weight (kg / lbs)	7 / 15.4
Cat. No.		**AAAB5011**

※ FDA establishment registered company. FDA listed products.

Performance

- 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% arrestant on the A.F.I. test) for trapping larger particles and increasing the life of the main HEPA filter.
- 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.

Convenience

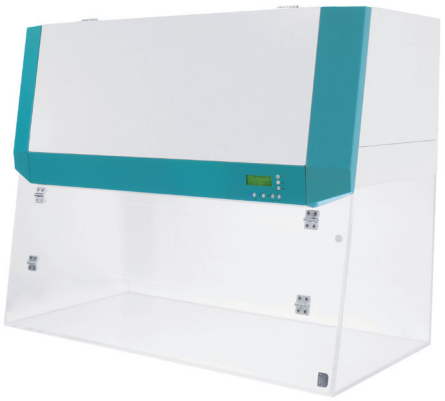
- User-friendly microprocessor-based control panel.
- Large capacity blower and easy blower speed adjustment by the control panel.
- Easy-settable digital timer for UV light exposure to deactivate DNA and RNA contaminants. (wait off, max. 30min.)
- Comfortable front access to cartridge type of filters for easy replacement.

Safety

- 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.

Specially designed to minimize the sample contamination during PCR

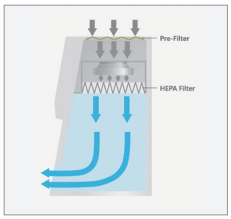
applications by combining ISO class 4 (US class 10) clean air environment.

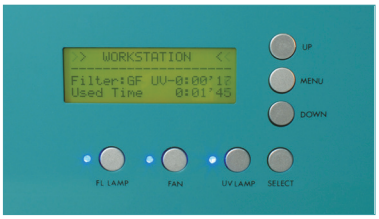


PW-11

Standard accessories
see page 73

- HEPA filter
- Pre filter
- UV lamp
- Fluorescent lamp





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 ㎛ 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.I TEST); 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 (㎼ / ㎠)	165		185		330	
	Capacity	Fluorescent lamp (w)	15 × 1ea		20 × 1ea		30 × 1ea	
		UV lamp (w)	15 × 1ea		20 × 1ea		30 × 1ea	
Dimension (WxDxH)	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**	

※ FDA establishment registered company. FDA listed products.

UV Sterilization Cabinets

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

UVC-11

Standard accessories
see page 73

- UV lamp
- Fluorescent lamp

Performance

- 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.

Convenience

- User-friendly microprocessor-based control panel.
- Digital UV light timer for convenient use.
- Easy-settable digital timer for UV light exposure to deactivate DNA and RNA contaminants. (wait off, max. 30min.)
- Easy-to-clean grade 304 stainless steel work surface with high chemical resistance against various organic solvents.

Safety

- 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.

Model			UVC-01		UVC-11		UVC-21	
Illumination	Intensity	Fluorescent lamp (Lux)	>800		>900		>1000	
		UV density (μW / ㎠)	300 ± 10%		350 ± 10%		300 ± 20%	
	Capacity	Fluorescent lamp (W)	8×1ea		15×1ea		20×1ea	
		UV lamp (254nm, W)	8×1ea		15×1ea		20×1ea	
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 (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**	

※ FDA establishment registered company. FDA listed products.

for PCR workstaions / UV sterilization cabinets

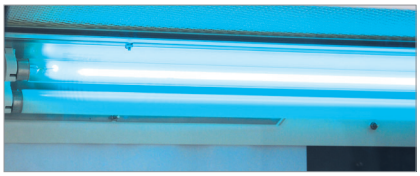
General UV dose and time required

Pathogen	Average UV dose required (μW . s/㎠)	Average UV time required (μW/ ㎠ /sec.)					
		PW-01	UVC-01	PW-11	UVC-11	PW-21	UVC-21
		165	300 ± 10%	185	350 ± 10%	330	300 ± 20%
S. enteritidis	4,000	25	15	22	13	13	17
B. megatherium sp. (spores)	2,730	17	11	15	9	9	12
B. subtilis	7,100	43	27	39	23	22	30
Eberthella typhosa	2,140	13	8	12	7	7	9
Escherichia coli (E. coli)	3,000	19	12	17	10	10	13
Micrococcus candidus	6,050	37	23	33	20	19	26
Proteus vulgaris	2,640	16	10	15	9	8	11
Pseudomonas aeruginosa	5,500	34	21	30	18	17	23
Pseudomonas aeruginosa	3,500	22	13	19	12	11	15
S. typhimurium	8,000	49	30	44	26	25	34
Shigella paradysenteriae	1,680	101	7	10	6	6	7
Spirillum rubrum	4,400	27	17	24	14	14	19
Staphylococcus albus	1,840	12	17	10	6	6	8

※ Above listed applications are for general purpose use.

HEPA filter (for PW)

Fluorescent lamp



UV lamp

for PCR workstations

Cat. No.	Description	PW-01	PW-11	PW-21
AAAB3511	Pre filter	•	-	-
AAAB3512		-	•	-
AAAB3513		-	-	•
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		-	-	•