Fume Hoods

Clean Benches.
Ductless Fume Hoods.

Selection Guide

Fume Hoods

Description		Filter	Work Surface	Page
Clean Benches	BC-01E	HEAP Filter	Stainless Steel #304	26
	BC-11E			
	BC-21E			
Ductless Fume Hoods	DLH-01G	Optional 6 Different Filters	Optionl 6 Different Work Surface	30
	DLH-11G			

Accessories & Options

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General Applications

Clean Benches

- Biotechnology :

Sterile Media Preparation, Non-biohazardous Culture Maintenance, Non-biohazardous Tissue Culture Maintenance, Plant Tissue Culture Maintenance.

- Microbiology :

Sterile Media Preparation, Non-biohazardous Tissue Maintenance, Non-biohazardous Tissue Culture Maintenance.

- Pharmacy :

Non-toxic IV Solution Preparation.

- General Purpose :

Tissue Fixation / Staining Preparation, Weighing Toxic Powders, General Forensics, Asbestos Handling, Suspicious Mail Handling, QA / QC Testing, Electronics Inspection / Repair, Soldering.

Ductless Fume Hoods

- Chemistry :

Chemical sampling, Chemical preparation such as in an electron microscopy or histology laboratory, forensic, and pharmaceutical applications, depending on the solvents used, numerous vapor-generating laboratory processes such as HPLC preparation and biochemistry protocols can be performed with improved safety and comfort.

- Industry & Other :

Cosmetic production to photochemical, dental laboratory, fingerprinting, powder extraction, slide preparation, Solvent Cleaning, solvent fume extraction, Spray Adhesives, touch up painting, weighing, welding fumes, and other processes where fumes or vapors are generated.

Technical Benefits

Clean benches

Safety functions

- 2 separated over- current fuses for user safety.
- Toggle switch provided can be selective one of them. (UV, off, and fluorescent)
- Automated UV lamp switch off when unintended window opening.
- Tempered glass sliding sash window and intercept the UV light for user safety.
- Permanent magnetic differential pressure gauge displays across the HEPA filter to check the exchange period. (optional)
- Using a 99.99% efficient supply HEPA filter.

Ideal construction

- Optimum PWM (pulse width modulation) control performance.
- As a blower of large enough capacity is adopted, sufficient intake flow rate is maintained and noise is low.
- Dirt-repellent powder coating external surface.
- Light and blower switches are located within easy reach of the operator.
- Good chemical resistance work surface (#304) from various organic solvents.

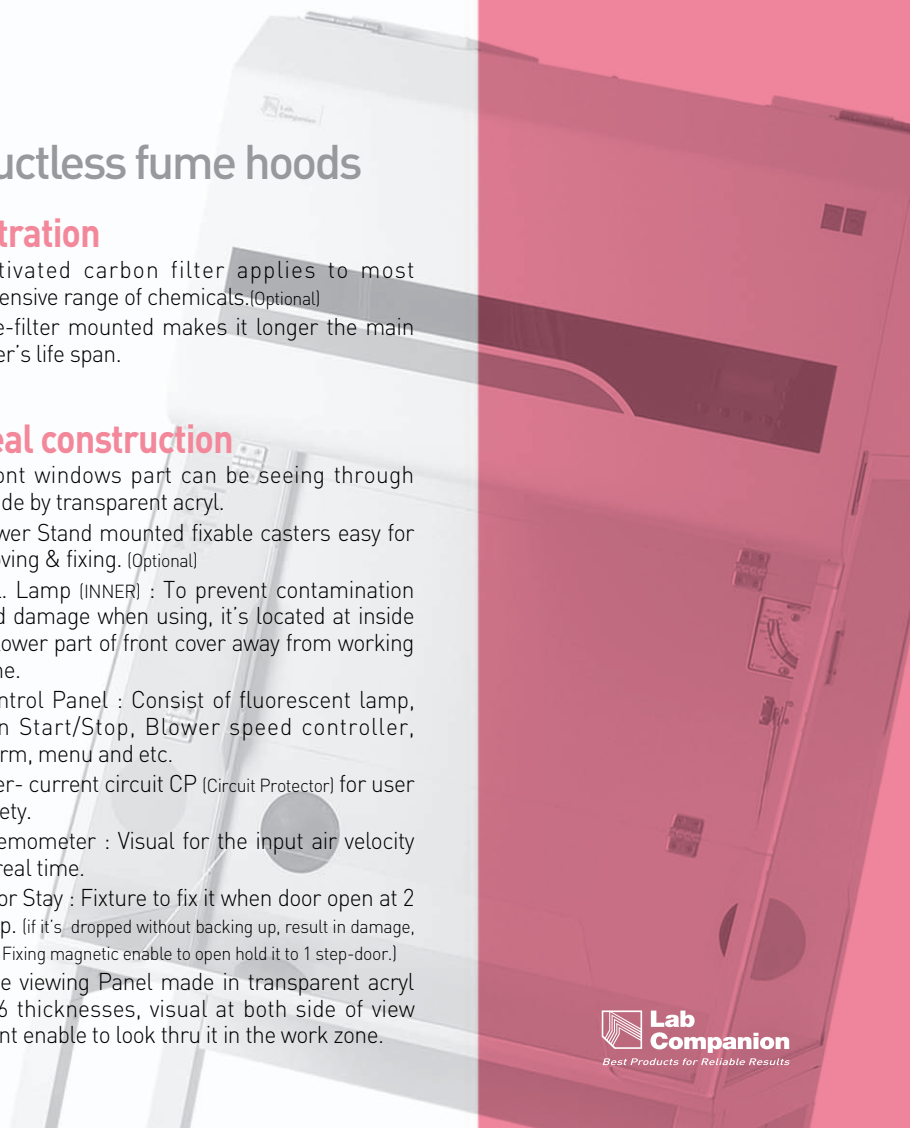
Ductless fume hoods

Filtration

- Activated carbon filter applies to most extensive range of chemicals.(Optional)
- Pre-filter mounted makes it longer the main filter's life span.

Ideal construction

- Front windows part can be seeing through made by transparent acryl.
- Lower Stand mounted fixable casters easy for moving & fixing. (Optional)
- F.L. Lamp (INNER) : To prevent contamination and damage when using, it's located at inside of lower part of front cover away from working zone.
- Control Panel : Consist of fluorescent lamp, Fan Start/Stop, Blower speed controller, alarm, menu and etc.
- Over- current circuit CP (Circuit Protector) for user safety.
- Anemometer : Visual for the input air velocity at real time.
- Door Stay : Fixture to fix it when door open at 2 step. (if it's dropped without backing up, result in damage, and Fixing magnetic enable to open hold it to 1 step-door.)
- Side viewing Panel made in transparent acryl in 6 thicknesses, visual at both side of view point enable to look thru it in the work zone.



Lab Companion
Best Products for Reliable Results

Clean Benches

Go to JEIO TECH *.com*

Further information on Temperature Chamber products is readily available on our website.

CE

BC-11E

Optional Accessories

see page 29

- Stand with caster.
- Differential pressure gauge.

※ Product design subject to change without notice.

Clean Benches

Vertical type laminar flow clean bench!

ISO 14644-1 Class 4 air. (formerly Class 10 per Federal Standard 209E)
Supply HEPA filter, high efficient on particles 0.3micron.
Nominal downflow velocity of 0.3m/s. (60fpm)
Ergonomic 5 degree sloped front for comfortable use.

Filtration features

Particle-free ISO 14644-1 Class 4 air

- Particle count in the work area conform to ISO Class 4 conditions (formerly Class 10 per Federal Standard 209E). This ensures fewer than 0.3㎛ or larger per cubicmeter or air.
- Polyester fiber pre-filter that has a small pressure loss and 85% arrestance on the A.F.L. test which serves to trap larger particles and increase the life of the main filter.
- HEPA filter ensures airtight to the body unit by connecting with neoprene gaskets.

※ The HEPA filter life span is usually 3 years, but it depends on test room conditions.

Constructional features

Ergonomic design

- Angled front profile is free of protrusions that could interfere with visibility or obstruct taller users.
- 304 stainless steel work surface - Highly durable and rust prevented work zone for easy cleaning.
- Use of tempered glass door to be strong of damage and intercept the UV light for user safety.
- The door smoothly slides up and down for maintaining cleanness and stops at any height you want.
- Right and left both sides also have wide glasses for a clear view.
- Adjustable the speed of blower by front located blower controller.

Lighting

- Electronically ballasted FL lamp is installed on the top center that minimizes disturbance of airflow and shadows on the work zone, and to relieve of user's eyes strain.
- Toggle switch provided can be selective one of them (UV, off, and fluorescent), so it can make sure that user can be safer protected from careless switching on UV & fluorescent lamps at the same time.

Clean Bench Airflow Profile

- Room air is taken in from the top blower of the bench through a disposable pre-filter.
- The firstly filtered air is purified by the secondary HEPA filter to confirm the class.
- The laminar down-flowed air supplies from the dual filtering system into the working zone.
- The working zone can maintain on a high cleanness condition because it keeps up on positive pressure to prevent from outside pollution.
- The purified air is across to the working zone of the cabinet in a vertical, unidirectional stream and leaves the main work chamber across the entire open front of the cabinet and through slots.

Control panel

Service Fixtures (Optional)

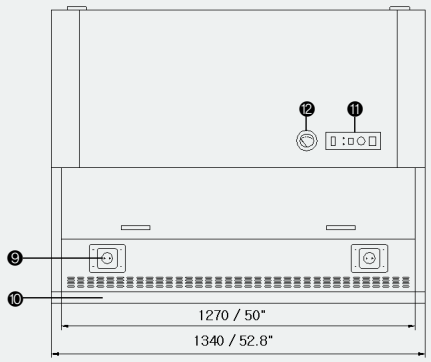
Gas

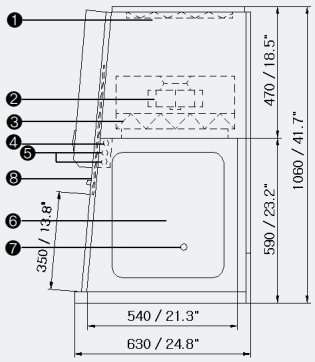
Vacuum

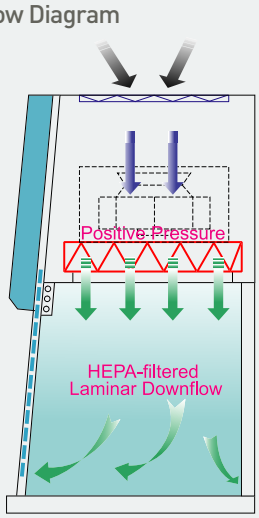
Air

Clean Benches

Dimensions (Model: BC-11E)







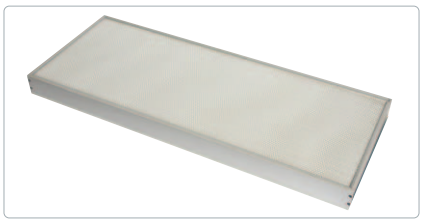
1. Pre-Filter 2. Blower 3. HEPA Filter 4. UV Lamp 5. Fluorescent Lamps 6. Tempered Glass Side Panel
7. Service Fixture 8. Sliding Front Sash Window 9. Electrical Outlet socket 10. Stainless Steel Grade 304 Work Surface
11. Blower Speed Controller 12. Differential pressure gauge

Specifications & Ordering Informations

Model		BC-01E		BC-11E		BC-21E	
Air flow Type		Vertical flow					
Air Volume (Minimum / Maximum)		274 to 914 cmh / 119 to 399 cfm					
Laminar Airflow Velocity (m / s / fpm)		0.3 / 60					
Air Cleanliness Within Working Area		ISO 14644-1 Class 4, US Federal Standard 209E Class 10					
Filters	HEPA Filter	Typical efficiency of 99.99% at 0.3 ㎛ US MIL-STD-282 ; Micro glass fiber Media, Particle board, AL separator, Neoprene gaskets					
	Pre-filter	Polyester fibers with an efficiency of 85% (A · F · I TEST); AL frame, Polyester fiber Media					
Noise Level		Typically 〈 67dBA at initial Blower speed					
Materials	Main Body	Stainless steel grade 304 & Steel powder coating					
	Work Surface	Stainless steel grade 304					
	Front / Side Windows	Colorless and transparent UV absorbing 5mm tempered glass					
Illumination	Intensity (lux)	〉1000					
	FL lamp (W)	30W×2EA electronically ballasted FL Lamp					
	UV lamp (W)	30W electronically ballasted UV Lamp					
Electric Socket Outlets		230V socket, 120V socket					
Dimensions (W×D×H)	Internal (mm / inch)	970×540×570 / 38.2×21.3×23.2		1270×540×570 / 50×21.3×23.2		1870×540×570 / 73.6×21.3×23.2	
	External Without Stand (mm / inch)	1040×630×1060 / 40.1×24.8×42.7		1340×630×1060 / 52.8×24.8×42.7		1940×630×1060 / 76.4×24.8×42.7	
	External With Stand (mm / inch)	1040×630×1780 / 40.1×24.8×70.1		1340×630×1780 / 52.8×24.8×70.1		1940×630×1780 / 76.4×24.8×70.1	
	Weight (Body) (kg / lbs)	110 / 242.5		110 / 242.5		110 / 242.5	
	Weight (Body+Stand) (kg / lbs)	130 / 302		150 / 330.7		190 / 418.9	
Electrical Requirements (230V)		60Hz / 1ph / 1.7A	50Hz / 1ph / 1.82A	60Hz / 1ph / 1.7A	50Hz / 1ph / 1.82A	60Hz / 1ph / 1.7A	50Hz / 1ph / 1.82A
Cat. No.		AAHA4011K	AAHA4012K	AAHA4021K	AAHA4022K	AAHA4031K	AAHA4032K
Electrical Requirements (120V)		60Hz / 1ph / 3.48A		60Hz / 1ph / 3.48A		60Hz / 1ph / 3.48A	
Cat. No.		AAHA4013U		AAHA4023U		AAHA4033U	

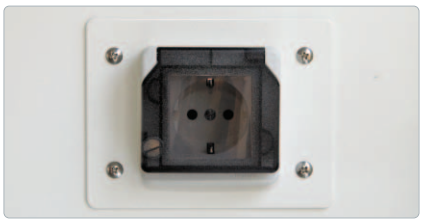
Accessories & Options

for Clean Bench



HEPA Filter (1EA included)

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



Electric Sockets (optional)

- Provided a convenient power source for small devices or equipment used within the cabinet. Two style of 120V and 230V outlets are available which have transparent aryl lids for user safety.

Pre-Filter (1EA included)

- Replaceable pre-filter, trap large particles, extend HEPA filter life.

Service Fixture (optional)

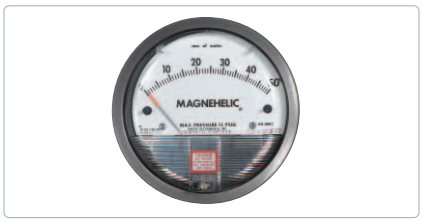
- Convenient source for Gas/ Vacuum/ Air within the working area.
- CSA limited (Canadian Standards Association)

Basic Stand (optional)

- Economical basic stand without casters made of powder coated steel.

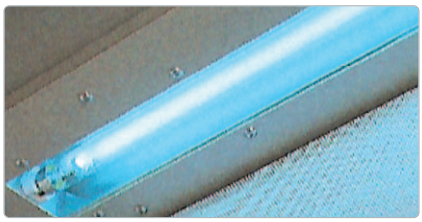
Stand with Casters (optional)

- For easy transport with exclusive 4 casters made of powder coated steel.



Differential Pressure Gauge (optional)

- Permanent magnetic differential pressure gauge displays across the HEPA filter to check the exchange period.



UV Lamp (optional)

- For secondary decontamination while the bench is not in use.

Accessories for BC-01 / 11 / 21E

Cat. No.	Description
AAAB1501	BCE-501 HEPA Filter for BC-01E
AAAB1502	BCE-502 HEPA Filter for BC-11E
AAAB1503	BCE-503 HEPA Filter for BC-21E
AAAB1511	BCE-511 Pre Filter for BC-01E
AAAB1512	BCE-512 Pre Filter for BC-11E
AAAB1513	BCE-513 Pre Filter for BC-21E
AAAB1521	BCE-521 Basic Stand for BC-01E
AAAB1522	BCE-522 Basic Stand for BC-11E
AAAB1523	BCE-523 Basic Stand for BC-21E
AAAB1531	BCE-531 Stand with casters for BC-01E

Cat. No.	Description
AAAB1532	BCE-532 Stand with casters for BC-11E
AAAB1533	BCE-533 Stand with casters for BC-21E
AAAB1541	BCE-541 UV lamp for BC-01E (230V)
AAAB1542	BCE-542 UV lamp for BC-01E (120V)
AAAB1543	BCE-543 UV lamp for BC-11E (230V)
AAAB1544	BCE-544 UV lamp for BC-11E (120V)
AAAB1545	BCE-545 UV lamp for BC-21E (230V)
AAAB1546	BCE-546 UV lamp for BC-21E (120V)
AAAB1551	BCE-551 Electrical socket for BC-01/11/21E
AAAB1561	BCE-561 Gas cock for BC-01/11/21E
AAAB1571	BCE-571 Differential pressure gauge for BC-01/11/21E

※ In addition to providing standard accessories, we will manufacture customized accessories to meet your specific requirements. Contact us for details.

Ductless Fume Hoods

Go to JEIO TECH *.com*
Further information on Temperature Chamber products is readily available on our website.

DLH-01G

Optional Accessories
see page 33

- Stand with caster.
- 6 Different chemical filters.
- 6 Different work surfaces.

Ductless Fume Hoods

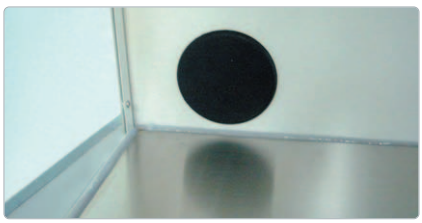
Ductless Fume Hoods are manufactured and gone through a complete safety tests of rigorously international standards.

Constructional features

- Internal wind speed in the workspace can be identified with attached anemometer. Wind speed can be controlled by identifying varying wind speed in accordance with surrounding environment and filter conditions.
- Connection with separate exhaust system is not required, since the hood already has a recirculation air flow discharging into the laboratory.
- Filter of cartridge type can be easily replaced with opening the upper cover of the foront.
- Front sash can be fully opened and fixed to enable experimental apparatus and equipment to move conveniently into the workspace.
- As a utility hole is provided, apparatus inside the hood can easily be connected to outside the hood or apparatus outside the hood can be so to inside the hood.
- As a blower of large enough capacity is adopted, sufficient intake flow rate is maintained and noise is low.
- A fluorescent light is provided outside the workspace so that air circulation is not hindered, pollution from the reagents can be prevented and intensity of illumination can be maintained.
- Various filters and work surface are optional for their experiment purpose. (Refer to accessory section)

Digital controller

Anemometer


Utility hole

Reliable Test

: Efficiency, Capacity of Activated carbon filters tested according to **BS 7989:2001**

: Structure, Electrical outlet, Lighting, Sound level tested according to **BS 7258-1:1994**

: Local smoke, Large volume visualization, Face velocity, Tracer gas tested according to **ANSI/ASHRAE 110-1995, NF EN 14175-1**

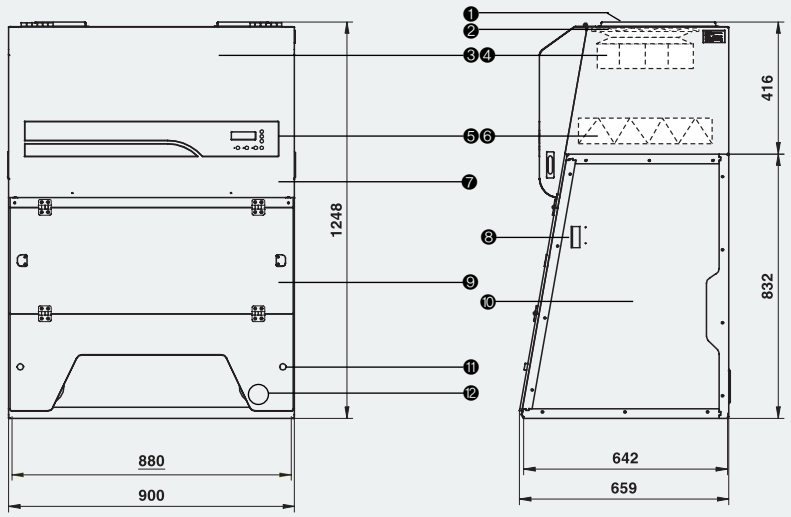
Front cover

Selection for Chemical Filter

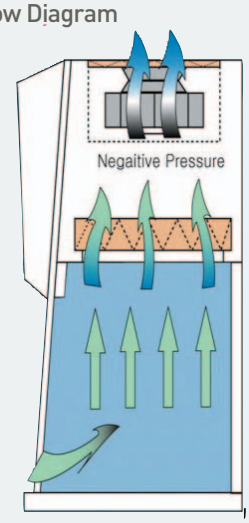
Code	Filter Name	Application
GF	Activated carbon Filter	All common laboratory chemicals, especially VOC, Organic, Benzene, Toluene, etc
AC	Acid Filter	An acidic solvent; Acetic acid, Hydrochloric acid, etc
HF	Halogen Compounds Filter	Halogen compounds like Chlorine, Flourine, Iodine, Bromine, Astatine, etc
FF	Formaldehyde Filter	Formadehyde applications
AM	Ammonia / Amines Filter	Ammonia / Amines by chemisorptions
HEPA	HEPA Filter	the filtration efficiency of 99.99% at 0.3 microns For trapping biohazardous aerosols and others

Ductless Fume Hoods

Dimensions (Model: DLH-01G)



Air flow Diagram



1. Exhaust Hole 2. Pre-filter 3. Front cover 4. Blower 5. Control Panel
6. Chemical filter 7. F.L. Lamp (INNER) 8. Anemometer
9. Front Door 10. Side viewing Panel 11. Door Opening Fixing Magnet 12. Utility Hole

Specifications & Ordering Informations

Model		DLH-01G	DLH-01G
Fume Hood Type		Ductless	
Permissible environmental condition		Temperature 5℃ to 40℃ Maximum relative humidity 80% Altitude up to 2,000m	
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	
Construction	Main body	2.0mm steel (Epoxy powder-coated)	
	Work surface	Optional 6 Different work surfaces	
	Window (Front / Side)	Acryl 8mm / Acryl 6mm	
Fluorescent Light Intensity		〉600lux	
Sound Emission		55dB at Normal Operation	
Dimensions (W×D×H)	Internal (mm / inch)	880×640×800 / 34.6×25.2×31.5	1180×640×800 / 46.5×25.2×31.5
	External Without Stand (mm / inch)	900×660×1248 / 35.4×26×49.1	1200×660×1248 / 47.2×26×49.1
	External With Stand (mm / inch)	900×660×1953 / 35.4×26×76.8	1200×660×1953 / 47.2×26×76.8
	Weight (Body) (kg / lbs)	100 / 220.5	118 / 260.1
	Weight (Body+Stand) (kg / lbs)	120 / 264.6	140 / 308.6
Electric requirement		AC 230V, 60Hz / 0.7A	AC 230V, 60Hz / 0.7A
Cat. No.		**AAAB2001**	**AAAB2011**
Electric requirement		AC 230V, 50Hz / 0.6A	AC 230V, 50Hz / 0.6A
Cat. No.		**AAHB2002K**	**AAHB2012K**
Electric requirement		AC 120V, 60Hz / 1.3A	AC 120V, 60Hz / 1.3A
Cat. No.		**AAHB2003U**	**AAHB2013U**
Electric requirement		AC 100V, 50Hz / 1.5A	AC 100V, 50Hz / 1.5A
Cat. No.		**AAHB2004U**	**AAHB2014U**

Accessories & Options

for Ductless Fume Hoods

Gas Detector and Tubes

Filters

Working Table

Stand with Caster

Specifications & Ordering Informations

Cat. No.	Accessories for DLH-01G, 11G
AAAB2521	Stand with casters for DLH-01G
AAAB2522	Stand with casters for DLH-11G
EDA9191	GF Activated carbon filter for DLH-01G
EDA9192	GF Activated carbon filter for DLH-11G
EDA9199	AC Acid filter for DLH-01G
EDA9200	AC Acid filter for DLH-11G
EDA9201	HF Halogen compounds filter for DLH-01G
EDA9202	HF Halogen compounds filter for DLH-11G
EDA9203	FF Formaldehyde filter for DLH-01G
EDA9204	FF Formaldehyde filter for DLH-11G
EDA9205	AM Ammonia / Amines filter for DLH-01G
EDA9206	AM Ammonia / Amines filter for DLH-11G
EDA9193	HEPA filter for DLH-01G
EDA9194	HEPA filter for DLH-11G
EDA9196	Prefilter for DLH-01G
EDA9198	Prefilter for DLH-11G

※ Above spec can be changed without prior notice.

Cat. No.	Accessories for DLH-01G, 11G
AAAB2501	Work surface (SUS #304) for DLH-01G
AAAB2502	Work surface (SUS #304) for DLH-11G
AAAB2503	Work surface (SUS #316L) for DLH-01G
AAAB2504	Work surface (SUS #316L) for DLH-11G
AAAB2505	Work surface (Ceramite) for DLH-01G
AAAB2506	Work surface (Ceramite) for DLH-11G
AAAB2507	Work surface (Polypropylene) for DLH-01G
AAAB2508	Work surface (Polypropylene) for DLH-11G
AAAB2509	Work surface (Bakelite) for DLH-01G
AAAB2510	Work surface (Bakelite) for DLH-11G
AAAB2511	Work surface (PVC) for DLH-01G
AAAB2512	Work surface (PVC) for DLH-11G
AAAB2531	Gas Detector (KITAGAWA AP-20)
EAA1550	Gas Detecting tube (Benzene, GASTEC-121SP (0.5-10ppm)
EDA9207	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)