Ductless Fume Hood

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Ductless Fume Hood

**DSH-800DL/DSH-1000DL
DSH-1200DL**

The installation position of the fume hood should avoid facing roads and places where people
frequently pass by, blocking windows and areas with poor ventilation and lighting, blocking entrances and
exits and affecting door and window switches, and avoiding placement in wall corners

Work environment

(1) Only applicable for indoor operation;
(2) Environmental temperature: 15 ℃~35 ℃;
(3) Relative humidity: ≤ 75%;
(4) Atmospheric pressure range: 70 kPa to 106 kPa;
(5) Electrical parameters: Provide sufficient power supply for the fume hood;
(6) The power supply should be grounded (use a multimeter to test the live wire to ground voltage
and the neutral wire to ground voltage separately, where the live wire to ground voltage is the grid power
supply and the neutral wire to ground voltage is 0, otherwise the power supply grounding is poor).

Installation

a) Remove all packaging components;
b) Check for scratches, deformations, or foreign objects on the outer surface;
c) Check the accessories according to the packing list;
d) Move the device to a location near its final placement and convenient for installation;
e) Check if the ambient voltage and frequency match the voltage and frequency displayed on the label.

Machine assembly

As shown in Figure 1, prepare the parts and tools
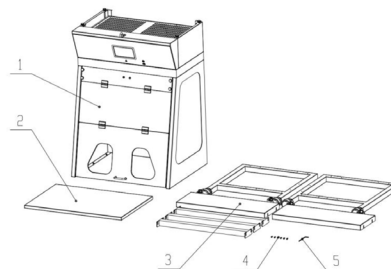
- Main body; 2. Operating table; 3. Base (FMH-800DL standard does not include);
- M5 bolt; 5. Allen key

Assemble the base, as shown in Figure 2 and 3

As shown in Figure 2, first connect the left and right frames with cross braces. Then, as shown in Figure 3, install the two cross plates on the base and tighten them with an Allen key

Figure 2

Figure 3

Connect the cabinet with base.

As shown in Figure 4, install M5 bolts at the marked positions on the diagram, then connect the cabinet and base, and tighten them with a wrench.
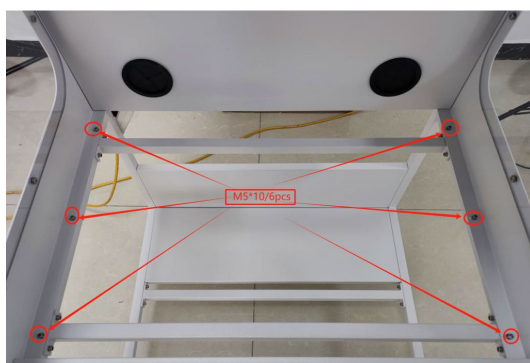

Figure 4

If you have any questions, please contact our services department for help.

Product Description

Function

In the chemistry laboratory, a large amount of odors, moisture, and corrosive substances are generated during the experimental process. To protect the safety of users and prevent the spread of pollutants in the laboratory, fume hoods are usually used.

Note: The FMH series ductless fume hood filters have poor adsorption effects on hydrogen, helium, inert gases, methane, ethane, ethylene oxide, carbon monoxide, carbon dioxide, nitric oxide, propylene, acetylene, organic phosphorus compound mercury, hydrogen cyanide, and radioactive isotopes. Generally speaking, the adsorption effect on gases with a molecular weight less than 36 is not good, and in this case, it is not recommended to use this type of fume hood. In addition, this type of fume hood cannot be used in experiments involving large amounts of volatile chemicals, large amounts of smoke, strong acidity and alkalinity, flammability, explosiveness, and toxicity

Working principle/ airflow mode and protection area diagram

Figure 5

Protection objects

Safety is the main function of the fume hood. The use of a fume hood in the laboratory is intended to ensure the safety of the users and to prevent contamination of the laboratory environment.

Note: DARSUN SCIENTIFIC reserves all rights to make design changes to the product, and we will not provide prior notice of any design changes.

1. Vibration amplitude The vibration amplitude between 10Hz and 10 KHz should not exceed 5μm (root mean square value)
2. Voltage resistance The voltage increases to 1390V (AC) within 5 seconds and remains unbroken for 5 seconds.
3. Grounding resistance Grounding resistance ≤ 0.1Ω.
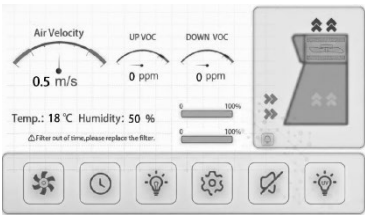
Product Structure

Structural Composition

Figure 6

1. Screen;
2. Alarm indicator light;
3. Lighting fixtures;
4. Filter
5. Fan components;
6. Power key;
7. External expansion port

Main interface of control panel

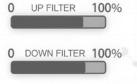| Feature		DSH-800DL	DSH-1000DL	DSH-1200DL
External Size (WxDxH)		800x620x1800mm (with base)	1000x620x1800mm	1200x620x1800mm
Internal Size (WxDxH)		780x540x775mm	980x540x775mm	1180x540x775mm
Max Opening		650 mm		
Operation Surface Height		690mm		
Control System		7-inch color touch screen; displays air velocity, VOC, temp/humidity, and filter life		
Airflow system	Airflow Velocity	0.4-0.6m/speed adjustable		
Air Filtration System	Filter	1pcs Pre-filter, Polyester fiber, washable 1pcs Active Carbon filter		
Cabinet Construction	Main body	Electro-galvanized steel with antimicrobial Powder Coating		
	Work Surface	304 Stainless Steel (Max load 70kg)		
	Front window	Manual acrylic window		
Electrical System	LED lamp	16W×1	16W×2	
	Blower	DC Centrifugal blower, adjustable speed, low noise		
	Consumption	60W		120W
	Power supply	220V±10%, 50/60Hz; 110V±10%, 60Hz		
Sound Emission		≤50dB(A)		
Standard Accessory		Active Carbon Filter×1; 2. Pre-Filter×1; 3.LED Lamp×1	1. Base Stand; 2. Active Carbon Filter×1; 3. Pre-Filter×1; 4. LED Lamp×2	
Optional Accessory		Base Stand; 2.Base Cabinet; 3.HEPA Filter; 4.Chemical filter; 5. Upgraded LED Lamp	Base Cabinet; 2. HEPA Filter; Chemical filter; 4. Upgraded LED Lamp	
Net Weight		96 kg	96 kg	113 kg
Gross Weight		138kg	138kg	160kg
Shipping Size (WxDxH) (mm)		1160×840×1320	1160×840×1320	1360×840×1320
Shipping Volume		1.3m3		1.5m3

|	
	Fan key: Press to turn on or off the fan.
	Countdown key: After clicking this key, the countdown will be timed according to the set countdown time, and the fan, lighting, etc. will be turned off after the countdown ends.
	Lighting key: Clicking the lighting key can turn on or off the lighting
	Settings key: Click the settings key to enter the settings function interface.
	Mute key: Clicking the mute key can execute or cancel the mute.
	UV switch key: Clicking the UV switch key can turn on or off the lighting. This function is customized and not standard.
Air Velocity 0.5 m/s	Wind speed display: The white area displays the current wind speed value of the wind speed sensor. The pointer points to the wind speed value. The pointer indicates the real-time values of wind speed and gas sensor values. When the values of wind speed and gas sensor are within the blue range, it indicates that the wind speed value meets the requirements. Click on the wind speed unit to switch from m/s to FPM.
Temp.: 18 ℃ Humidity: 50 %	Temperature and Humidity: Display the current temperature and humidity. Click on the temperature unit to switch from ℃ to ℉.
0 UP FILTER 100% 0 DOWN FILTER 100%	Filter lifespan indicator: used to indicate the lifespan of the filter. When the remaining lifespan of the filter is 20% (inclusive) -100%, the progress bar color will be green; When the remaining lifespan of the filter is 10% (inclusive) -19%, the color is yellow; When the remaining lifespan of the filter is less than 10%, the color is red.
	Status display area: Under normal operating conditions, display colored arrows indicating movement. The green arrow represents the safe area, and the red arrow represents the polluted area.
	Alarm indication: When an alarm occurs, the alarm indication is red and flashes.

Setting interface
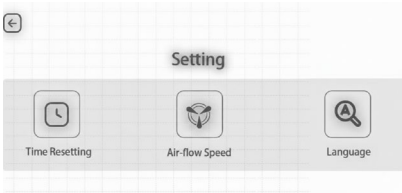
|	
←	Return: Click the return key to return to the main interface.
🕐	Time resetting: Click the time reset key to jump to the time reset interface.
(airflow icon)	Airflow Speed: Click the wind speed setting key to jump to the wind speed setting interface
(language icon)	Language: Click the language key to jump to the language settings interface
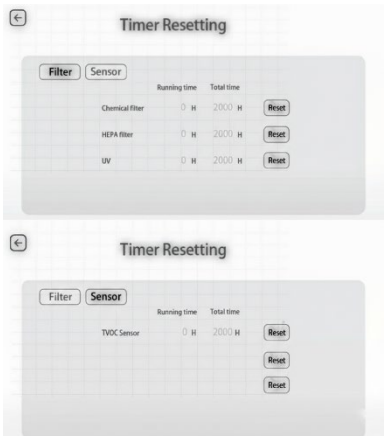
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←	Return key: Click the return key to return to the settings interface.
Reset	Reset key: Click the reset key to reset the total running time of the corresponding filter, sensor, and UV lamp (customized) to zero.

Air-flow speed setting interface
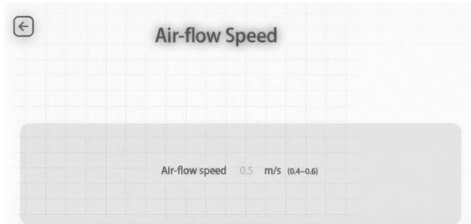
←	Return key: Click the return key to return to the main interface. Click
0.5	Click on the wind speed value and enter the expected wind speed value.

Language interface
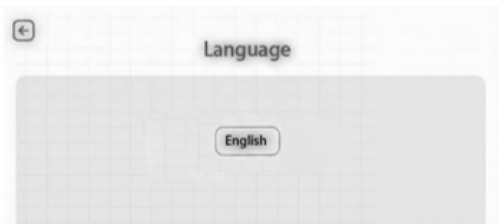
←	Return key: Click the return key to return to the settings interface.
English	Language key: Click the corresponding language key to set the language of the software

Daily Maintenance

Maintenance should be carried out once a year or every 1000 working hours
Before carrying out daily maintenance, please turn off the power first;
The data of equipment running time will directly affect the maintenance of the equipment. We suggest that you prepare a detailed running time record when using the equipment for reference and query;
Fans should be regularly inspected and maintained.
Maintenance method:

Weekly or monthly maintenance

1. Surface cleaning;
2. Check whether there are any abnormalities in the various functions of the equipment;
3. Record maintenance status;
4. Check if the primary filter needs to be cleaned or replaced.

When the initial filter accumulates too much dust, it can be cleaned with clean water. After cleaning, it can be naturally dried and then installed in the equipment for continued use. Each initial filter can be cleaned up to twice.

Annual maintenance

1. Check if the PC front window components and hinges are secure.
2. Check the LED lights.
3. Apply for an annual inspection of the overall performance of the fume hood to ensure its safety. The testing fee shall be borne by the user.
4. Record maintenance.

Surface Cleaning

To maintain the cleanliness of the cabinet, please clean it regularly (at least once a week). When wiping, a wrung out damp soft cloth should be used. Do not spray any chemical reagents on the operation
panel or other labels to prevent the label film from fading or the text from becoming blurry. Use flexible detergent or specialized PC material cleaner to clean the outer surface of the cabinet and the PC material front window.

Storage conditions

The fume hood should be stored in a warehouse with a relative humidity not exceeding 75%, a temperature below 40 ℃, good ventilation, and no corrosive gases such as acid or alkali. The storage period should not exceed one year. For ventilation cabinets that have not been opened for more than a year, an open box inspection should be conducted, and those that pass the inspection can be used.