User Manual

Fumeclear



*Pictures are for reference only; please refer to the actual product.

Thank you for purchasing our air purifier. Please read this manual carefully before use and keep it in a safe place for future reference.

1. Product Overview

This smoke and dust purification system is specifically designed by our company for areas with fine dust generated from laser marking, engraving of metal workpieces, glass, ceramics, stone, and other materials. It delivers excellent comprehensive purification performance for dust, smoke, exhaust gas, and other toxic and harmful substances produced in these scenarios. Equipped with a multi-layer filtration system, it achieves a purification efficiency of 99.97%, allowing clean air to be directly exhausted indoors after treatment.

2. Product Features

1. Brushless motor: low noise, high speed, stable operation, long service life, low power consumption, and high efficiency (zero motor maintenance, zero consumables).

2.Vortex fan design: fatigue-resistant, smooth operation, strong air volume, high suction power, and high efficiency.

3. Multi-stage filtration design: ensures thorough filtration of toxic and harmful substances in smoke, effectively protecting the environment and human health.

4. Individual filter replacement: all filter elements can be replaced separately, extending their service life and reducing filter usage costs.

5. Easy installation and disassembly: simple assembly required, contributing to a neat and tidy workspace.

3. Unpacking and Inspection

Please carefully check the following accessories for missing or damaged parts. Contact the manufacturer or distributor immediately if any issues are found.

Component	Quantity	Size	Remarks
Mainframe	1		
Power cord	1	10A/220V	
Smoke pipe	1	Φ40*0.65M	
Smoke hood	1		
Primary filter	5		installed
Medium filter	1		installed
Premium filter	1		installed
Warranty Card	1		
Manual	1		

4. Pre-use Checks

◆Before powering on the product for the first time, please perform the following checks to ensure safe and reliable operation:

1.Inspect the machine's exterior for any damage.

2.Verify that the power switch is in the off position.

3.Ensure the internal filter elements are properly positioned.

4.Check that the machine's door cover and case are securely installed.

5. Safety Precautions

◆Please familiarize yourself with the following safety guidelines before use to avoid fire and personal injury:

1.Do not use this product in high-temperature environments (ambient temperature exceeding 60℃), or in flammable, explosive, liquid, or oil-contaminated areas.

2.The power cord must be grounded during use.

3.The product's internal voltage reaches up to 310V; non-professionals are forbidden from opening the back panel for inspection.

4.Do not remove or install filter elements while the product is in operation.

6. Product Dimensions



7. Performance Parameters

Model / Parameters	FC-2001S
Interface Size	Φ40mm
Input Voltage	□AC110V □AC220V
Power	50W
Flow Rate	128M³/h
Filtration Accuracy	0.3μm,99.97%
Noise	<58dB
Pipe Length	Φ40*0.65M
Size	130*130*210mm
Weight	1.2kg

8. Usage Instructions

8.1 Filter Installation

Open the main unit's top cover. Correctly install the high-efficiency filter cartridge and primary filter cotton into the chassis in sequence. Close the top cover and press down to fasten the clasps on both sides.

Attention
· **Never mix up the positions of the filtration layers; they must be installed in the direction indicated by the arrows on each layer.** · **Do not touch the internal fan inlet with your hands.**

8.2 Air Intake Box Cleaning, Maintenance, and Filter Replacement

1.Open the top cover by releasing the clasps on both sides.

2.Starting from the top, pull the pull straps to remove the filters.

3.Replace the cartridges and reinstall them in the original order.

Attention
·The air intake box requires regular cleaning (we recommend at least once a week) to prevent premature clogging and saturation of the filtration system, which would shorten the service life of the main filter cartridge.

8.3 Smoke Pipe Installation

1.Take the smoke pipe out of the package and insert it into the flange of the top cap.

2.Rotate the pipe to align the smoke hood with the smoke source, and adjust the distance of the smoke outlet based on the specific application.

Attention
·When adjusting the direction of the smoke pipe, keep the pipe gently curved to avoid reducing suction power. The smoke inlet should face the working area directly, and the distance should be kept within 150mm as much as possible. **·Avoid using the product in areas with strong air flow, as this may reduce or eliminate suction power.**

8.4 Operation Steps

1.Connect the power cord and ensure the power plug is securely inserted. (Figure 1)

2.Turn on the power switch. (Figure 2)

3.Adjust the air flow rate. (Figure 3)

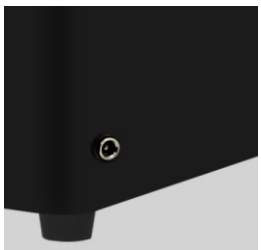


Figure 1

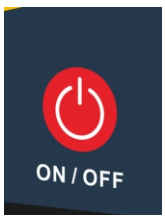


Figure 2

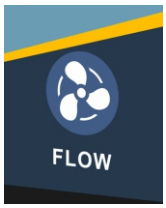


Figure 3

9. Troubleshooting

Before inspecting or repairing the equipment, always disconnect the power supply first!

Phenomenon 1: Weak Air Volume and Significantly Reduced Suction Power (System Still Operating)

Reason: Clogged air inlet, foreign objects in the pipe, or filter element saturation and clogging.

Solution: Turn off the power, open the front door, and check for foreign objects blocking the air inlet and outlet. If the suction power is normal when the machine is empty, replace the filter element.

Phenomenon 2: Automatic Shutdown and Immediate Restart Cycle

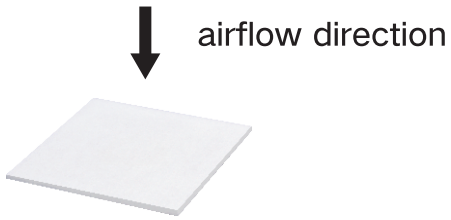
Reason: Excessive internal air flow resistance from the filter, leading to high fan startup current and automatic protective shutdown.

Solution: Turn off the power, open the top cover, and check for foreign objects blocking the air inlet. If no issues are found, set the air volume to the minimum, restart the machine, and then adjust it to the optimal level.

10. Filtration System Usage and Maintenance

10.1 Pre-filter

Usage: Lift the buckles on both sides, insert the pre-filter cotton into the high-efficiency filter. Replace the primary filter cotton when approximately 70% of its area is covered with dust and it cannot be cleaned effectively.



10.2 Medium Filter

Usage: Clean the filter element immediately when it is visibly dust-clogged and suction power is affected. Replace it if cleaning is ineffective.



10.3 Premium Filter

Usage: Clean the filter element immediately when it is visibly dust-clogged and suction power is affected. Replace it if cleaning is ineffective.



11. Important Notes

1.Operate the machine within the specified rated voltage range (refer to the power label on the unit). Do not use it under overvoltage or undervoltage conditions. If the ambient voltage is unstable, turn off the machine and unplug it until the voltage stabilizes.

2.When the machine is in use, the ambient temperature for the air inlet (inhaling gas and dust) should be between 5°C and 50°C. Do not use it outside this temperature range.

3.The ambient humidity for the air inlet (inhaling gas and dust) should be between 40% and 80% during operation. High humidity will cause rapid filter element failure and damage to the machine's internal circuitry. Do not use it in environments with humidity exceeding 80%.

4.Ensure the primary filter cotton is correctly installed before using the machine. The primary filter cotton is a disposable consumable; do not wash or reuse it. Regularly replace it with the original factory-supplied filter cotton. Do not operate the machine without the primary filter cotton or with low-quality aftermarket filter cotton. (Low-quality filter cotton and washed filter cotton have poor filtration performance, which will quickly clog and damage the subsequent medium and high-efficiency filter cartridges, resulting in greater losses.)

5.Do not use the machine without installing the filter elements. Inhaling fumes or dust particles directly into the machine will damage the fan and control system. Repairs for failures caused by such operation will be at your own expense, leading to greater losses.

6.Do not continue using the machine when the filter elements and filter cotton are severely clogged. This will greatly shorten the machine's service life and may even cause damage. Perform regular cleaning and maintenance, and replace filter elements periodically to ensure optimal machine performance.

7.If the filter elements are clogged (resulting in reduced suction) or the odor-removing filter elements fail to eliminate odors, do not reduce the number of filtration layers or omit the primary filter cotton. Replace the filter elements and primary filter cotton with the original factory configurations.

8.Do not open the machine for internal maintenance without authorization. The warranty sticker on the unit is the sole proof for receiving after-sales service; do not tear or damage it.

We are not liable for any damage resulting from non-compliance with the above precautions, and such damage is not covered by the warranty.

After-Sales Support

FUMECLEAR is committed to providing our customers with exceptional after-sales support. Our customer service team is available 24 hours a day, 7 days a week to assist you with any questions or concerns you may have about our products.

If you experience any problems with your fume extractor, please feel free to contact us at

Support@fumeclear.com

Our team of experts will work with you to resolve any issues and ensure that your product is functioning optimally.

In addition to email and our official website, you can also contact our customer service through the Amazon platform, which also provides 24/7 support. Thank you for choosing FUMECLEAR, and we look forward to serving you.

Best regards,
The FUMECLEAR Team