

# FGS Series Fume Extractor

Purification of micro-nano-level sticky smoke, harmful gases and irritating odors generated by **laser processing of wood, plywood, glued board and other wood materials, etc.**



## PURE-AIR TECH----Define New Standards For Clean Production And Protect The Respiratory Health Of Thousands Of Employees!

With more than 10 core patented technologies that lead the industry, Pure-Air are committed to creating the ultimate clean solutions for the production environment of 30+ industries around the world.

From high-precision laser processing, semiconductor manufacturing, 3D printing, to the booming lithium-ion photovoltaic new energy, 3C electronics, metal processing, to food and pharmaceutical production, inkjet printing, etc. that are related to people's livelihood, we deeply empower 5,000+ well-known domestic and foreign companies in 70+ countries and regions. Define new standards for clean production and protect the respiratory health of thousands of employees!

Our mission: Use green technology to eradicate pollution hazards in the production process, protect employees' respiratory health in all aspects, seamlessly connect efficient production with a sustainable future, and make cleanliness a powerful engine for high-quality development of enterprises.





**\*Note: Not all models can be equipped with the above 10 technologies together. The specific is subject to the parameter sheet of different models of Pure-Air.**

### 3 Equipment Features & Advantages

#### 1 Integrated Design:

【Dynamic And Intelligent Space Revolution】 -- Subverting the traditional 40% space occupancy.

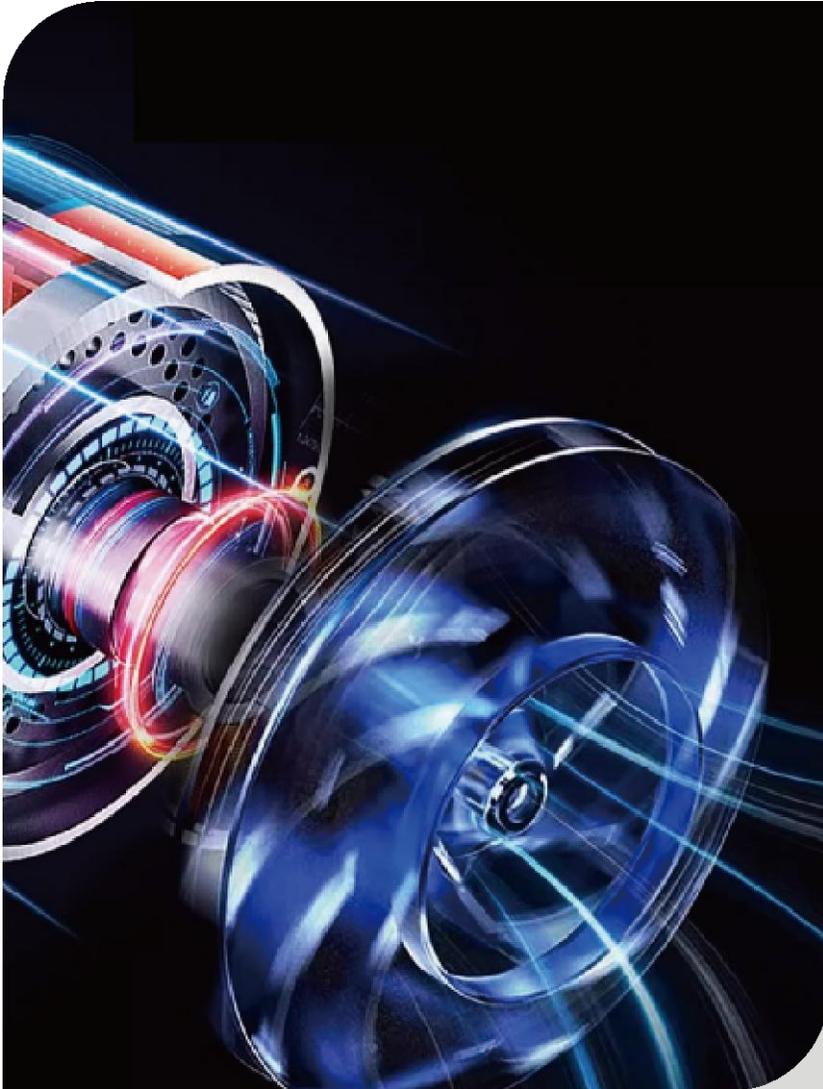
**(1) Spiritual Purification :**

Innovative design, compact body, anti-collision and anti-pressure. Narrow workshop, multi-station sharing, easy to adapt.

**(2) Cleanliness That Grows With The Production Line :**

Space saving, allowing clean productivity to extend freely with the production line, achieving a win-win situation of efficiency and convenience.





# 2

## Dynamical System:

### 【Super Power Intelligent Drive Future】

--30,000 hours of maintenance-free , suction soared 3 times!

#### (1) Eddy Pressure Technology:

10 years of research and development precipitation, high negative pressure brushless fan 0.3 seconds speed dust, energy consumption straight down 25%.

#### (2) Intelligent Working Condition Matching:

With intelligent drive control module, real-time matching working condition requirements. The negative pressure purification is strong and does not decay, and the workshop respiratory health is protected online 24 hours.

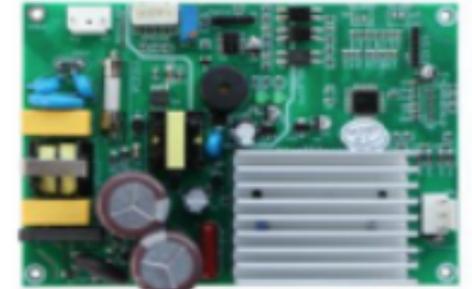
**\*Note: Not all models can be equipped with high negative pressure fans and cast aluminum volutes. The specific is subject to the parameter sheet of different models of Pure-Air.**

## 3 Equipment Features & Advantages

### 3 Control System :

【Professional Control Circuit Safe And Reliable; LCD display, Easy To Operate】

- (1) The electrical system adopts a safety modular control board specially designed by our company, and the key components are imported brand sand materials to fully guarantee. Safety and reliability of equipment operation. And it has a unique switching function that is compatible with 110V and 220 Vinput voltage.
- (2) LCD display can display real-time data such as fan speed, air volume, gear level, etc. The air volume unit can be switched, which is convenient decipher the working status of the equipment and perform operations.
- (3) When the filter is blocked, the LCD screen will have a filter element blockage alarm symbol flashing and a buzzer alarm function. Reminder to use personnel clean or replace the filter.



**\*Note: Not all models can be equipped with liquid crystal displays.  
The specific is subject to the parameter sheet of different models of Pure-Air.**

## 4

## Purification System:

## 【Multi-layer Purification Direct Row Worry-free】

--The cost of consumables drops by 50%, and the life is extended by 30%.

## (1) Three Times The Filter Area Filter Element:

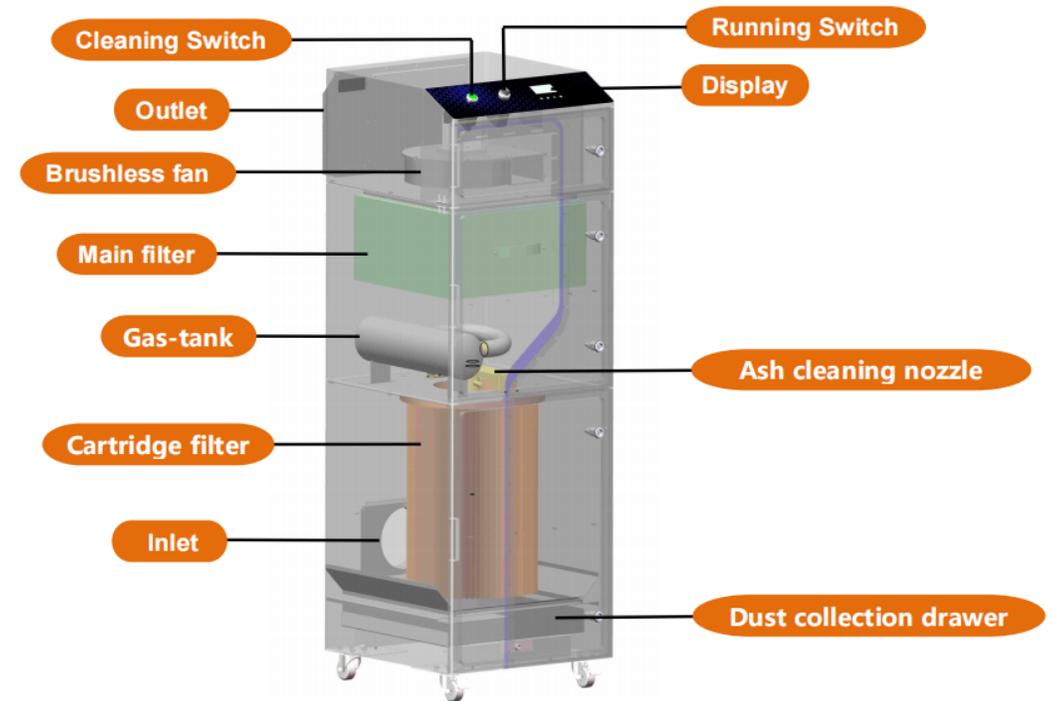
The surface filtration area of the filter element reaches 10-30 square meters, and the smoke and dust capacity is three times larger than before.

## (2) Progressive Purification System:

Large particles, fine dust, harmful gases layer by layer break, so that efficient production and employee health zero conflict, indoor direct discharge pollution-free.

## (3) Quick Release Design:

1-minute core replacement, perfect air tightness, further reducing maintenance cost.



| Model   |             | PA-FGS800  | PA-FGS1600             | PA-FGS2400             |
|---|-------------|--|------------------------|------------------------|
| Air volume  |             | 800m <sup>3</sup> /hr                              | 1600m <sup>3</sup> /hr | 2400m <sup>3</sup> /hr |
| Pressure  |             | 10000Pa  | 10000Pa                | 10000Pa                |
| Input power   |             | 1.3kw  | 2.3kw                  | 3.5kw                  |
| Voltage   |             | 90v-110v / 210-257v, 1ph, 50/60Hz                  |                        |                        |
| Filter  | Pre filter  | PTFE cartridge filter with natural mineral powder  |                        |                        |
|   | Main filter | H14 deeppleat filter (99.997% @0.3um)              |                        |                        |
|   |             | Treated activated carbon (Weight 12-30kgs approx)  |                        |                        |
| Working noise *   |             | < 62dBA  | < 65dBA                | < 68dBA                |
| Machine size  |             | 500*597*1439mm                                     | 670*834*1705mm         | 750*907*1698mm         |
| Machine N.W   |             | 128kg  | 210kg                  | 241kg                  |
| Inlet size  |             | 100mm / 125mm                                      | 150mm                  | 200mm                  |
| Chassis technology  |             | Powder coated mild steel / Brushed stainless steel |                        |                        |
| *Measure the average value at a distance of 1 meter from the machine under normal usage conditions. |             |  |                        |                        |

## 1 Equipment Selection

### (1) How to choose the right purifier for the dust, harmful gases and irritating smells produced by processing?

Before equipment selection, please provide equipment type, equipment processing format, processing materials, daily working hours and other parameters, we will customize the adaptation plan for you!

### (2) Do fume extractor need explosion-proof design?

#### In which scenarios must explosion-proof models be selected?

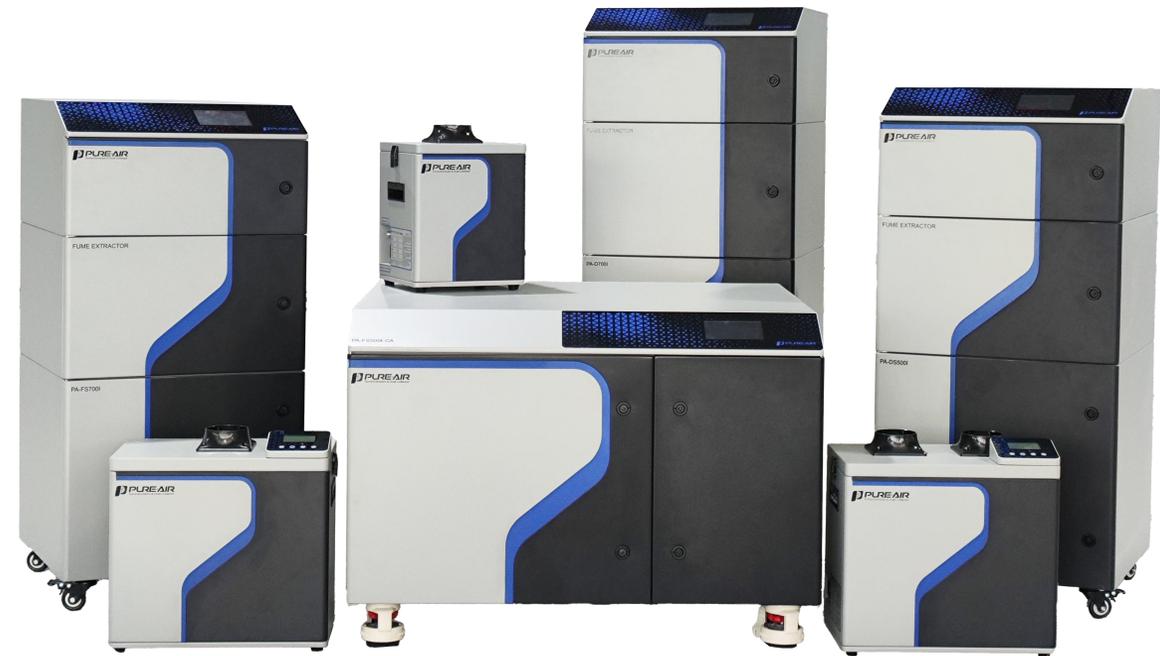
If the processing materials are flammable metals such as aluminum magnesium alloy and titanium alloy, or flammable gases exist in the workshop, explosion-proof models must be used.

In other scenarios, common models can be used.

### (3) What are the differences in the configuration of the fume extractor when dealing with smoke from different materials (such as metal, plastic, wood)?

The dust of processing metal materials should be matched with spark catcher + flame retardant filter element.

It is recommended to adopt a multi-stage filtration combination design for processing plastic / wood smoke, and a moisture proof design for high humidity smoke.





## 2 Filter Element Use And Replacement

### (1) How long is the filter replacement cycle? How do I know if it needs to be replaced?

Under different processing frequencies and processing conditions of different materials, the replacement cycle of the filter element is different. PURE-AIR fume extractor has a filter status monitoring system, so customers can easily know when the filter needs to be replaced.

### (2) What may be the cause of the rapid blockage of the filter element?

If caking may be caused by pre-treatment failure (for example, sparks are not intercepted and burn through the filter element), excessive dust concentration, or high ambient humidity it is necessary to check the compatibility of the pre-filtration system with the working condition.

### (3) Can the filter element be cleaned and reused?

Only metal sintered filter element can be cleaned limited times, HEPA / PTFE coated filter element can not be cleaned, forced washing will destroy the filter structure.

### (4) Is there a filter life warning function?

The PURE-AIR clean wind intelligent purification system has the function of real-time display of filter status, real-time reminder of filter status, and support for early replacement reminder.

### 3 Voltage And Compatibility

#### (1) Is the device compatible with voltages in different countries (eg. 220v / 380v)?

Standard models support 220v single-phase power, high-power devices require 380v three-phase power. Export models can be customized single-phase 110v or three-phase 220v, 400v, 415v, 440v and other different voltages and frequencies.

#### (2) Is additional voltage regulator required for high voltage fluctuations?

Built-in wide voltage design ( $\pm 10\%$  fluctuation range can work normally), if the power grid fluctuation exceeds this range, it is recommended to install a voltage regulator.





## 4 Control And Operation

### (1) What controls does the device support?

The base model supports key panel control. Smart models support I/O remote start and stop control. RS-485 control, some can be connected to mes system.

### (2) How to adjust the air volume in automatic mode?

Pure-air environmental protection latest wind intelligent purification system built-in sensor real-time monitoring of filter element status, automatic adjustment, to achieve the actual air volume and set air volume automatic compensation.

### (3) Does it support linkage control of multiple purifiers?

It can achieve centralized start and stop and air volume coordination through RS-485 networking, which is suitable for large-scale workshop multi-station scenarios.

## 5 Safety And Maintenance

### (1) What are the special maintenance requirements for explosion-proof models?

It is necessary to regularly check the sealing of explosion-proof joints, grounding line resistance ( $\leq 4 \Omega$ ), regularly clean the dust in the dust collection hopper, and prohibit the use of non-original explosion-proof accessories.

### (2) How to maintain the equipment in high temperature and humid environment?

The high temperature environment needs to be properly cooled, and the high humidity environment needs to use the moisture-proof filter to extend the service life of the filter.

### (3) How to carry out daily maintenance of non-explosion-proof fume extractor?

Before using the dust purifier, it is necessary to check whether the filter element is sealed to ensure the normal use of the machine. When the dust purifier filter block alarm appears, the new original filter should be replaced in time to avoid the damage of the filter, smoke into the fan, damage to the fan and control system.





*Breathe Pure Air with Our Ultra-Efficient Fume & Dust Purifier!*

## ***DONGGUAN PURE-AIR TECH CO., LIMITED***

Fume Extractors

Dust Collectors

VOC & Odor Purifier

Ozone (O<sub>3</sub>) Purifier

Explosion-Proof Dust Collectors

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