



Fan Filter Unit

Class 100 Cleanliness, Modular Design
FFU Flexibly Builds a Dust-Free Space



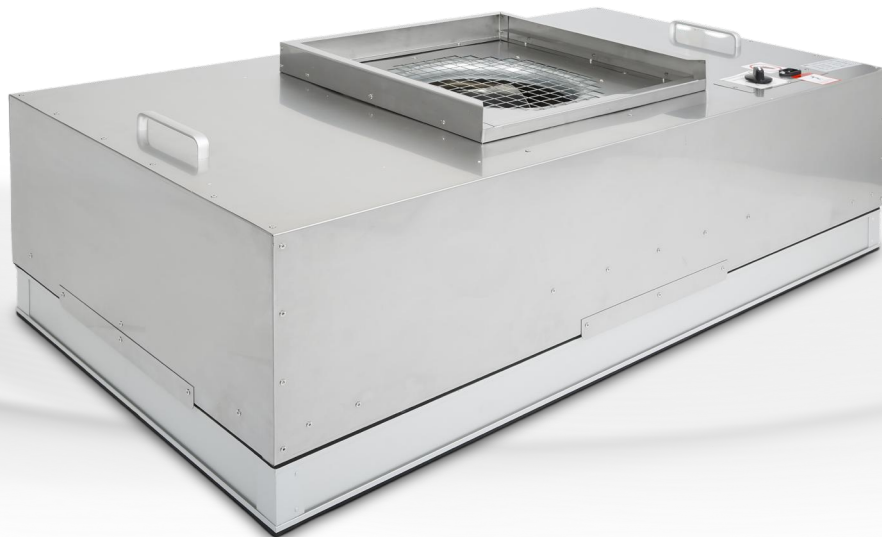
Fan Filter Unit

The Fan Filter Unit (FFU) is a self-powered terminal air purification device that integrates a fan and a HEPA/ULPA within a single housing. Installed in the ceiling system of a cleanroom, it delivers high-purity air to local areas through its dedicated fan-driven airflow.

It is suitable for both laminar and turbulent flow

cleanrooms, and can be flexibly installed in a variety of ceiling structures to achieve cleanliness levels from Class 1000 to Class 1.

FFUs are widely used in cleanrooms, clean benches, clean production lines, and localized high-purity zones, making them an ideal choice for enhancing cleanliness, reducing noise, and lowering costs in both new construction and renovated clean environments.



Feature

- Uses high-quality HV-brand ultra-fine glass fiber filter paper for stable filtration performance and extended service life.
- Equipped with either high-performance domestic motors or imported EBM direct-drive motors for reliable, energy-efficient operation.
- CE-certified, complies with international safety and performance standards.
- 3-speed adjustable airflow, allows flexible settings based on operational needs, ensuring optimal FFU performance.
- Captures $\geq 0.3 \mu\text{m}$ particles with up to 99.99% efficiency, meeting Class 100 cleanroom standards.

CLASS 100 CLEANLINESS

Structure



Handle and box body

Manufactured from stainless steel or galvanized aluminum alloy panels, offering a robust structure and excellent corrosion resistance.



Air inlet protection net

The FFU air inlet can be equipped with a coarse efficiency air filter.



Speed switch

Three-speed airflow adjustment are provided to meet the airflow requirements of various clean zones.



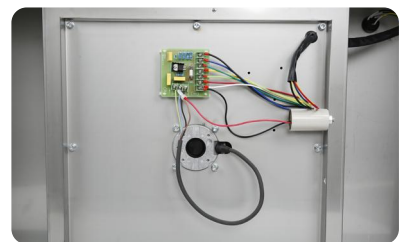
HEPA/ULPA filter

Engineered to capture fine particles, ensuring the supply of clean air and compliance with cleanroom class standards.



EBM motor

Equipped with high-performance AC or EC motors, with options for imported EBM or domestic brands, ensuring stable operation and high energy efficiency.



Control panel

It is used for start-stop control, wind speed regulation and operation status monitoring.

Item	JFFU140S JFFU140AZ	JFFU160S JFFU160AZ	JFFU180S JFFU180AZ	JFFU280S JFFU280AZ
Air Velocity (m/s)	0.35-0.5			
Filter Mesh	Filtration efficiency for particles $\geq 0.3 \mu\text{m}$ reaches $\geq 99.99\%$			
HEPA/ULPA Filter Efficiency (%)	$\geq 99.99\%$ @ $\geq 0.3 \mu\text{m}$ U15 or higher grade filters available			
Noise (db @ 0.45 m/s)	≤ 50			
Power Supply (V)	220 V \pm 10%, 50 \pm 2 Hz			
Maximum Input Power (kW)	140	160	180	280
External Dimensions (mm)	1175 \times 575 \times 300 1175 \times 575 \times 250	1175 \times 575 \times 300 1175 \times 575 \times 250	1175 \times 875 \times 330 1175 \times 875 \times 280	1175 \times 1175 \times 300 1175 \times 1175 \times 250
Primary Air Filter Specifications (mm)	454 \times 404 \times 25			
HEPA/ULPA Filter Specifications (mm)	1170 \times 570 \times 69	1170 \times 570 \times 69	1170 \times 870 \times 69	1170 \times 1170 \times 69
External Static Pressure (Pa)	120			
Weight (kg)	24	28	42	52

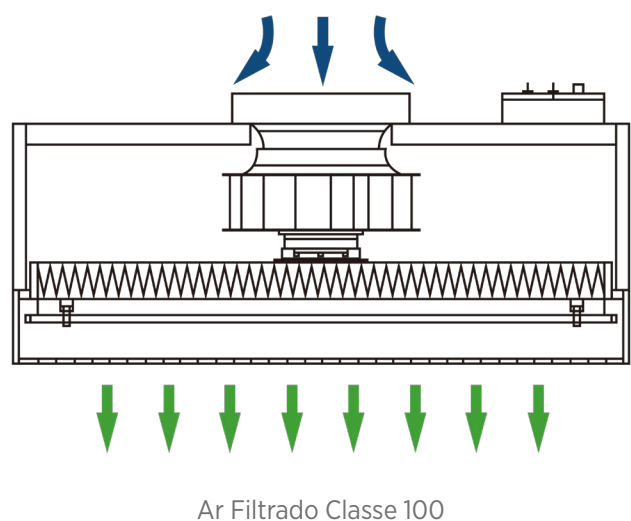
Note: Non-standard sizes can be customized. S represents stainless steel material; AZ represents aluminized zinc steel plate.

Operating Principle

The operating principle can be divided into three main steps: air intake, air filtration, and air discharge.

- First, the built-in fan generates airflow and draws indoor air through the air inlet.
- Next, the air passes through the HEPA/ULPA filter, removing dust, bacteria, and other particulates.
- Finally, the filtered clean air is uniformly supplied into the room through the entire air outlet surface at a velocity of $0.45 \pm 20\%$ m/s, thereby completing the air purification process.

During this process, the FFU operates continuously to circulate and purify indoor air, delivering high-quality clean air to cleanrooms and microenvironments of various sizes and cleanliness levels.



Applications



Microelectronics Industry

Effectively prevents particulate contamination, protecting the safety and performance of precision electronic components.



Biopharmaceutical Industry

Provides sterile conditions to meet the rigorous requirements of biotechnology and pharmaceutical manufacturing.



Healthcare Industry

Establishes clean environments to ensure the safety of operating rooms and critical medical areas.



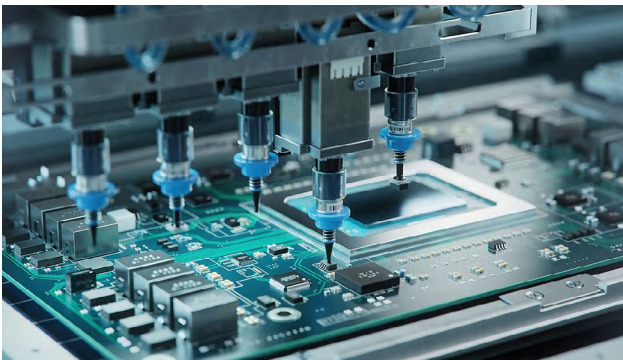
Food and Beverage Industry

Prevents airborne contaminants from entering production areas, safeguarding food safety and product quality.



Laboratories

Creates a dust-free environment to ensure the accuracy and stability of research and development activities.



PureFlow

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