

Fan Filter Units FFU AC & EC

HEPA Filters with fan modules for laminar air flow clean rooms



General Characteristics

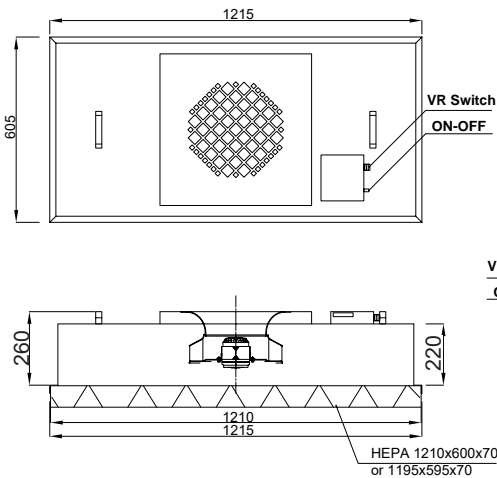
Fan Filter units (FFU) are used in applications which require local laminar airflow environments to obtain clean air and contamination control of ISO 4/5 in accordance to ISO 14644-1 or Class 10/100 to Fed209E, GMP Grade A,B,C,D. The integrated fan module provides extra or adequate airflow and pressure through the HEPA or ULPA filters. The FFU series are used in industrial process testing, assembly, packing & transfer which include microelectronics, semiconductor wafer manufacturing, pharmaceutical, healthcare & hospitals, sterile filling. Food, labs and research, air purification. Clean rooms, laminar flow cabinets, workstations and clean booths.



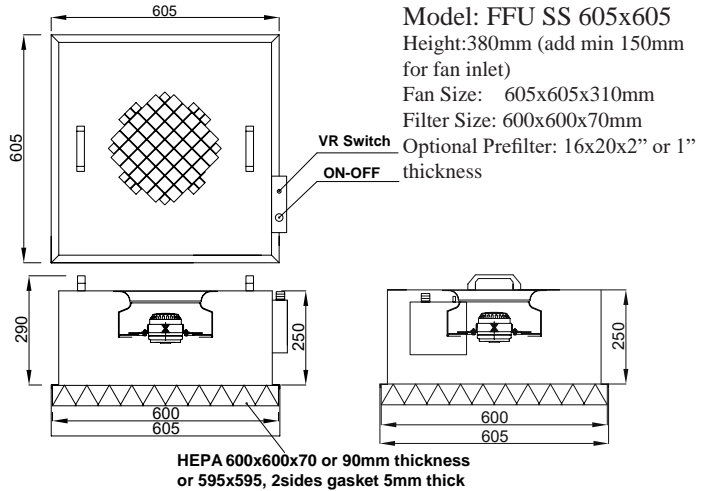
SS FFU



- + Fan Frame Enclosure: SS430 Stainless Steel 430 or GAL Galvalume
- + Efficient and Low noise
- + Sits on HEPA filter (replace from top)
- + Option: RPM TR Replaceable Room side



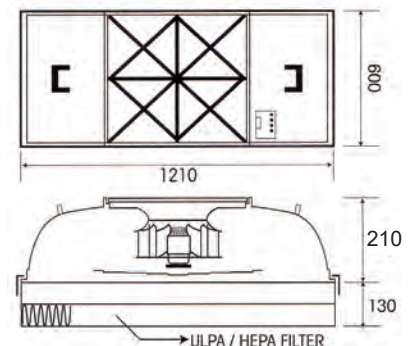
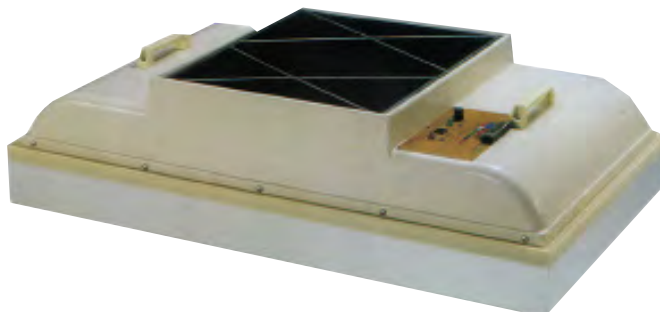
Model: FFU SS 1205x605
 Height: 350mm (add min 150mm fan inlet)
 Fan Size: 1205x605x280mm
 Filter Size: 1210x600x70mm
 Optional Prefilter: 16x20x2" or 1" thickness



Model: FFU SS 605x605
 Height: 380mm (add min 150mm for fan inlet)
 Fan Size: 605x605x310mm
 Filter Size: 600x600x70mm
 Optional Prefilter: 16x20x2" or 1" thickness

ABS FFU

- + Fan Frame Enclosure: ABS
- + Light Weight, One Standard Size 1210x600mm
- + Plastic hooks HEPA Filter Replaceable



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Specifications

HEPA Minipleat / ULPA Minipleat	99.99% @ 0.3um		99.9995% @ 0.1-0.2um	
Filter Model	H4MH		U5MH	
Frame Thickness t mm (Standard 70mm +/-2)	70	90	70	90
Initial Pressure Drop at 0.45m/s Pa	120	90	160	120
Filter Class to EN1822	H13 / H14		U15	
IES RP-CC-001.3	Type A / C / D		Type F	
EN1822 MPPS Global/ Integral value	≥99.95 / 99.995%		≥99.9995%	
PSL/ PAO/ DEHS/ DOP @ 0.3um	≥99.99% / 99.999%		—	

Performance data is based on IES RP-CC-001.3,6,CC034.4 and EN1822. Test method, data provided is for comparison and information MPPS: Most Penetrating Particle Size + IES RP-CC-001.3 - HEPA grade of Photometer Penetration Leak test of MPPS at 0.3um + EN1822 Particle Counter scanning of MPPS: Most Penetrating Particle Size of 0.1-0.2um x2 Gasket 5mm thickness are provided downstream and upstream on filters for FFU use. x1 gasket 5mm upstream on filter for RPM replaceable module

Dimensions

Model	ABS FFU	FFU SS	FFU SS	FFU EC SS
External Dimensions (WxLxH) mm Total with filter	600 x 1210 x 340	1215 x 605 x 350	605 x 605 x 380	575 x 1175 x 365
Filter Dimensions (WxLxH/t) mm	600 x 1210 x 130	1210 x 600 x 70 1195 x 595 x 70	600 x 600 x 70 595 x 595 x 70	570x1170x70
Rated Air Flow for HEPA 99.99% @ 0.3um m³/h	1020 (600cfm) @ 120Pa		550 @ 120Pa	1000 @ 120Pa
Rated Air Flow for ULPA 99.9995% @ 0.1-0.2um m³/h	1020 (600cfm) @ 160Pa		550 @ 160Pa	1000 @ 160Pa
Material	ABS	Stainless Steel 430	SS430	GAL / SS430
Electrical Input / Max Ampere	Single Phase AC220/240V - 50Hz / 2A			
Rated Power, Rated Ampere	150W / 0.65A +/-20%		100W or 0.5A +/-20%,	
Sound Level +/-3.0 dB(A) at 1.5m	<60.0	<52.0	<52.0	<50.0
Speed Control	Variable	Variable/ 3 step	Variable/ 3 step	Electronic Control /PC
Weight kg	18	21 + 6	18 + 4	30 + 6kg
Average Velocity m/s	0.35-0.55	0.35-0.55	0.35-0.55	0.25-0.50
Pre-filter	with FC AI Frame PPI foam	Optional FC AI Frame or Interfold Pleated disposable		

Specifications Tested with Airflow at 0.40m/s or 1020cmh. Laminar air flow from 0.25 to 0.55m/s. Use of 90mm HEPA/ULPA reduce pressure

Technical Data

Filter Media

Micro Fibreglass Paper

Fan Enclosing Frame

Stainless Steel 430 (SS), ABS, Galvalume (GAL)

Filter Enclosing Frame

Extruded Aluminum

Separator

Hotmelt

Gasket

EVA Rubber

Sealant

Polyurethane

Filter Faceguard

Aluminum Expanded Mesh

Continuous Operating Temperature 40°C

Relative Humidity 80%

Recommended Final Pressure Drop 200 Pa

or min 150% of Initial PD

Maximum Final Pressure Drop 300 Pa

Construction

Filter Media

Micro Fibreglass fibre paper folded and pleated in consistent calibrated spacing using thermoplastic threads

Fan Frame

Upper plenum in ABS, Stainless Steel 430 or Galvalume body

Filter Frame

Filter frame in extruded Aluminium natural colour

Structure

These modules are made by upper fan body ABS jointed plastic hooks w filter frame 130mm or Stainless Steel Frame with filter frame 70mm or 90mm frame.

Fan

High performance centrifugal fan with radial statically and dynamically balanced, backward curved impeller directly connected to the motor

Motor

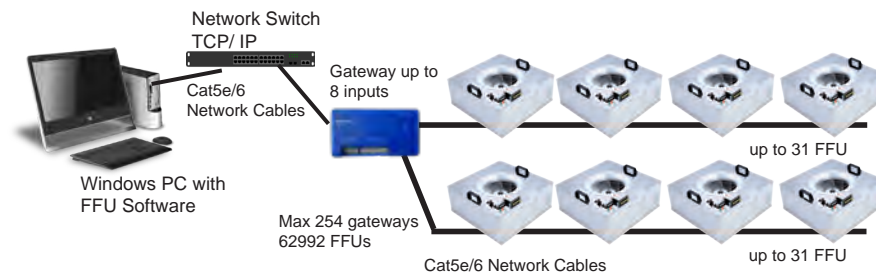
AC or EC External motor type with pre-lubricated ball-bearings and class B insulation. Single phase electrical supply 220-240V/ 50Hz Solid state control (AC) or electronic control (EC) with factory connected capacitor. Low rated power of 150watt (AC), 100W (EC)

Speed Control

Variable or step speed control of airflow capacities

Option

FFU can come with Replaceable HEPA module for room side filter replacement



FFU EC with DC motor

External DC motor type with electronic control. Low Rated power of 100watts

Speed Control / Alarm Alert

Fan units using Electronic Control. Gateway up to 8 groups each input of 31 fan units. Expandable up to 254 gateways total of 62992 fans. Windows PC FFU software