

Fan Filter Units FFU

HEPA Filters with fan modules for terminal modules and clean rooms



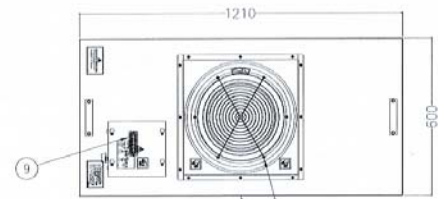
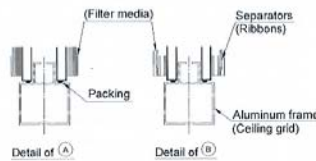
General Characteristics

Fan Filter units (FFU) are used in applications which require local laminar airflows in environments to obtain clean air and the control of the contamination in Class ISO 4/5 in accordance with ISO 14644-1 or Class 10/100 for Fed209E. The integrated fan module provides extra or adequate airflow and pressure through the HEPA or ULPA filters. The FFU series can be used in testing, assembly and micro-electronic manufacturing industries, pharmaceutical industries, food packaging industries, sterile filling, air shower for personnel in clean rooms and clean booths.

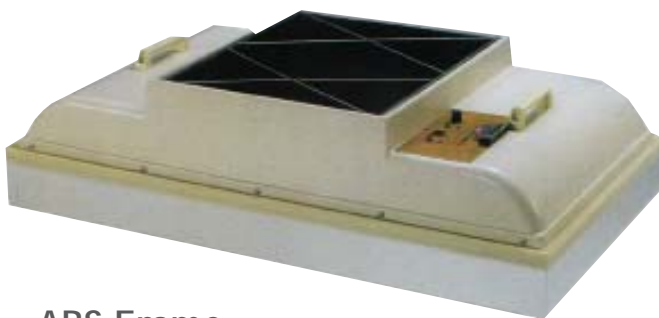
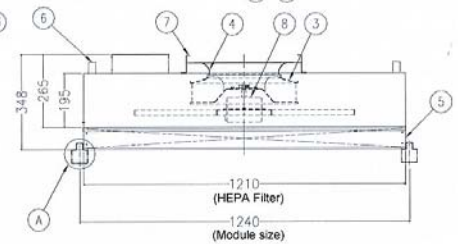
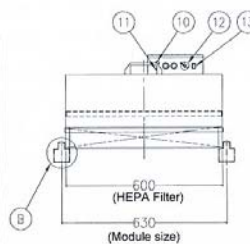


Description: FFU SS430
Fan Size: 604 x 604 x 305mm
Filter Size: 600 x 600 x 70mm

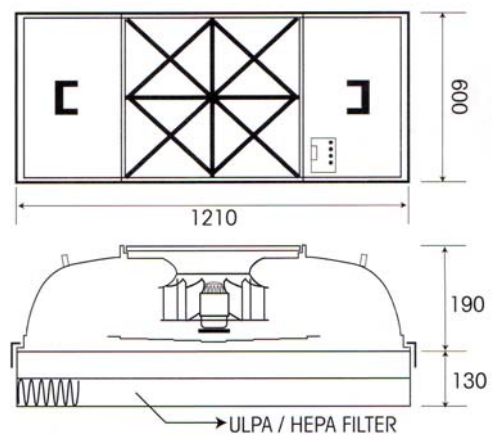
- + Stainless Steel 430 or Galvalume Frame
- + Custom Sizes
- + Efficient and Low Noise



Mark	Name
(1)	Body Assembly
(2)	Wire Netting
(3)	Turbo Fan
(4)	Bell Mouth
(5)	HEPA Filter
(6)	Handle
(7)	Pre-Filter Frame
(8)	Fan Motor
(9)	Terminal Block
(10)	Pilot Lamp(Running)
(11)	Pilot Lamp(Abnormal)
(12)	Rotary Switch
(13)	Power Switch



- + ABS Frame
- + Lightweight
- + Standard Size 600 x 1210mm



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HEPA Filters with fan modules for terminal modules and cleanrooms

Specifications

Minipleat HEPA	99.99%@0.3um		99.999%@0.3um		99.9995%@0.1-0.2um	
	Standard Cap	High Cap (90mm)	Standard Cap	High Cap (90mm)	Standard Cap	High Cap (90mm)
Initial Pressure Drop Pa @ 0.45m/s	120	90	130	100	160	120
Filter Class to EN1822	H13		H14		U15	
IES RP-CC-001.3	Type A/C		Type 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 and EN1822. Test method, data provided is for comparison and information
 + ASHRAE 52.76 - Dust Arrestance refers to range of coarse particle sizes of 5um
 + IES RP-CC-001.3 - HEPA grade of Photometer Penetration Leak test of MPPS at 0.3um
 Gasket of 5mm thickness are provided downstream of filters
 MPPS: Most Penetrating Particle Size
 + ASHRAE 52.1-1992 - Dust Spot Efficiency refers to range of fine particles range of 1um
 + EN1822 Particle Counter scanning of MPPS: Most Penetrating Particle Size of 0.1-0.2um

Dimensions

Model	ABS FFU	FFU SS	FFU SS	FFU EC SS
External Dimensions (WxLxH) mm	600 x 1210 x 320	604 x 1214 x 340	604 x 604 x 375	574 x 1174 x 340
Filter Dimensions (WxLxH) mm	600 x 1210 x 130	600 x 1210 x 70	600 x 600 x 70	570x1170x70
Filter Class to EN1822	HEPA H13 99.99%@0.3um / ULPA U15 99.9995%@0.1-0.2um			
Rated Air Flow for H13 99.99%@0.3um m³/h	1020 (600cfm)@120Pa		550 @120Pa	900 @120Pa
Rated Air Flow for U15 99.9995%@0.1-0.2um m³/h	1020 (600cfm)@160Pa		550 @160Pa	900 @160Pa
Material	ABS	Stainless Steel 430	SS430	SS430
Electrical	Single Phase AC220/240V - 50Hz			
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	<55.0
Speed Control	Variable	3 step	3 step	Electronic Control /PC
Weight kg	18	21 + 6	18 + 4	21 + 6
Average Velocity m/s	0.35-0.55	0.35-0.55	0.35-0.55	0.25-0.45
Pre-filter Average Dust Weight Arrestance	with FC AI Frame	Optional FC AI Frame at 75%/ G3		

Specifications Tested with Airflow at 0.40m/s or 1020cmh

Technical Data

Filter Media

Micro Fibreglass Paper

Fan Enclosing Frame

Stainless Steel 430, ABS, Galvalume

Filter Enclosing Frame

Extruded Anodised Aluminium

Separator

Hotmelt

Sealant

Hotmelt / PU

Gasket

Rubber

Filter Faceguard

Aluminium

Continuous Operating Temperature 50°C

Relative Humidity 90%

Recommended Final Pressure Drop 250 Pa

Maximum Final Pressure Drop 450 Pa

Construction

Filter Media

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

Fan Frame

Fan Body plenum in ABS, Stainless Steel 430 or Galvalume body

Filter Frame

Filter frame in anodised extruded Aluminium natural colour

Structure

These modules are made by upper fan body ABS jointed or Stainless Steel Frame with the interior filter element with a depth of 130mm or 70mm or 90mm frame. For ABS, the fan body and filter is attached by plastic straps

Fan

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

Motor

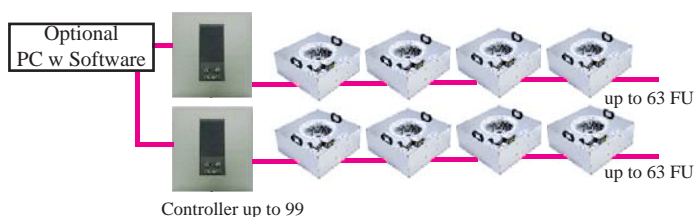
External motor type with pre-lubricated ball-bearings and class B insulation. Single phase electrical supply 220-240V/ 50Hz and electronic control with factory connected capacitor. Low rated power of 150watt

Speed Control

Variable or step speed control of airflow capacities

Option

FFU can come with Replaceable HEPA module



FFU EC with DC motor

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

Speed Control

Fan units using Electronic Control using Controller up to group of 63 units. Expandable groups by using more controllers.

Optional PC software using PC can be integrated.