

Fan Filter Unit (F.F.U.)

FFU is short for Fan Filter Unit which is consisted of Fan Unit and a Mini Pleat HEPA/ULPA Filter with efficiency 99.99% - 99.999995%.

F.F.U. Advantages:

1. Can filter system terminal equipment; cleanliness level is from Class 1 to 100K.
2. Modular: Easy deployment location, and may increase or decrease by the number of FFU in order to meet the clean environment a Relay layout needs.
3. Adjustable Air Flow: By controlling the motor speed to adjust air flow, the clean room laminar flow (unidirectional flow) are very help.
4. Widely Used: Clean Room factory side, device-side...can be applied.

Airrex F.F.U. features:

1. **Motor:** Airrex FFU used Germany-made External Rotor Motor.

1-1. : External Rotor Motor, the fan with the motor rotation.

1-2. : High Reliability, Stable Operation.

1-3. : High Static Pressure, prolong the service life of FFU.

1-4. : Excellent Cooling Capacity, airflow through motor, reduce the failure probability.

1-5. : Balancing Excellence, bearing shorter than traditional motors.

2. **Motor Fans:**

Airrex FFU used 3D design backward fans, motor fan difficult to attach the dust.

3. Adjustable air volume flow:

3-1 : AC Series FFU is available with 3 speeds control model, 5 speeds control model or continuous speed control model to adjust FFU air volume flow.

3-2 : EC Series F.F.U. used EBM BUS System. The air volume flow of each EC Series F.F.U. can be controlled locally or remotely. Each unit can be independently operated and controlled; or a group of EC Series F.F.U. can be operated and controlled together as a system. The EBM BUS system can control up to 7936 units of EC Series F.F.U. This system is accurate, easy to use and provide maximum flexibility for future expansion.

4. Power Supply:

4-1. : AC Type – Single Phase, 220-230V, 50 or 60 Hz. Use ring type transformer to reduce noise and eddy current, i.e. less energy loss.

4-2. : EC Type – Single Phase, 220-230V, 50 or 60 Hz. Use a 500W variable speed controller to control the motor rpm according to an external analogue input (pressure, temperature settings etc..). DC motors consumes 40-60% energy less than AC motors, thus DC motors run with less noise and less temperature rise.

5. Filter Efficiency:

According to European Standard EN1822, by testing the particle concentration of upstream & downstream area, efficiency is from 99.99% to 99.9999% @0.3 micron (H13-14) size particles HEPA filter; and 99.9999% - 99.999999% @ 0.1-0.2 micron (U15-U17) size particles ULPA filter.

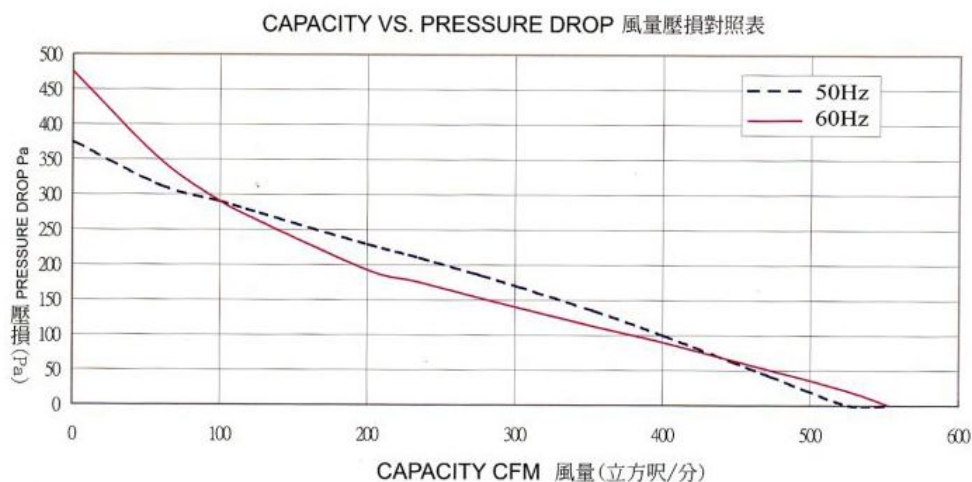
6. Media:

Media is made from ultra fine glass fiber formed with high density papers. Each pleat is spaced by hot-melt adhesive to allow air flow through the filter with minimum resistance.

7. **Housing Material:** Stainless Steel or Anodized Extrude Aluminum Housing.

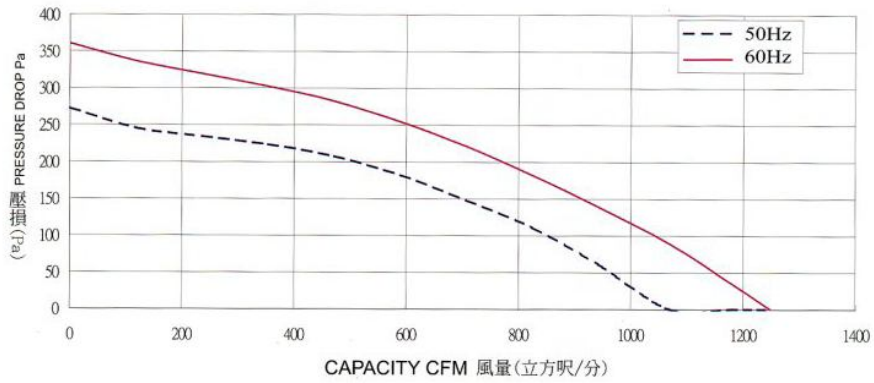
8. HEPA or ULPA Filter's pressure drop can be lower to meet special design requirement.

220 FFU CURVE (2' x 2') 風車曲線圖
1 PHASE 220 VAC 單相 220伏特



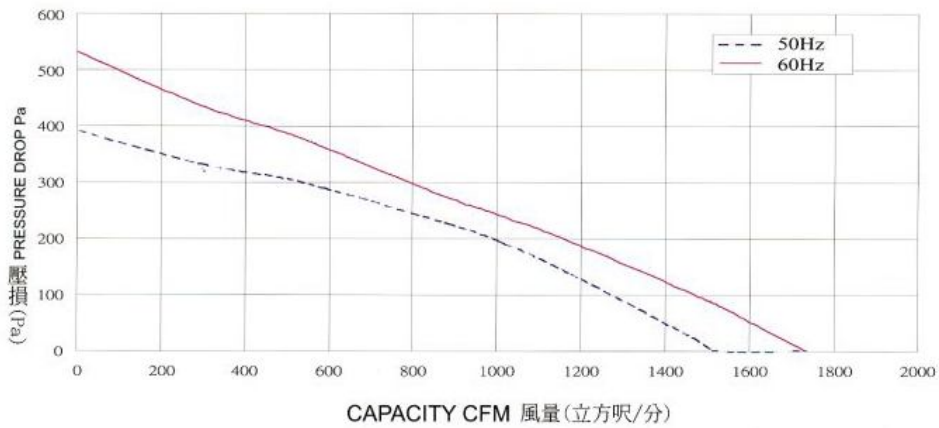
310 FFU CURVE (2' x 2', 2' x 3', 2' x 4') 風車曲線圖
 1 PHASE 220 VAC 單相 220伏特

CAPACITY VS. PRESSURE DROP 風量壓損對照表



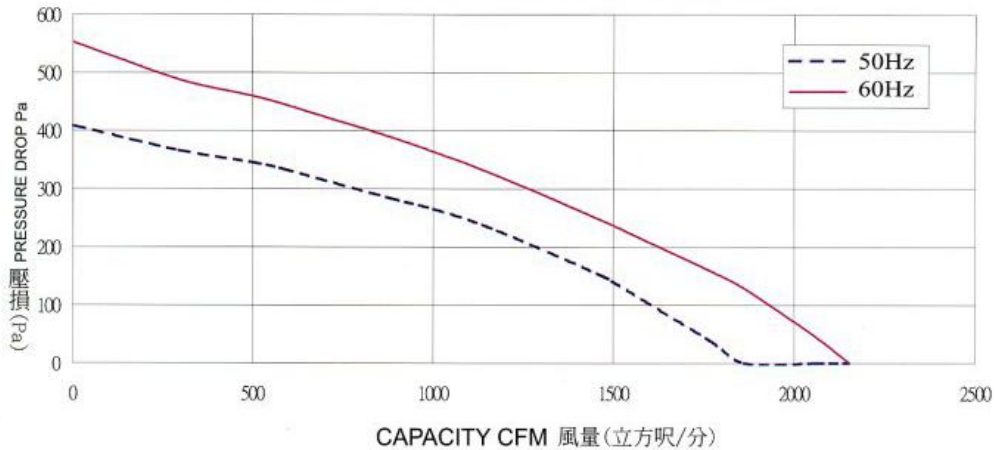
355 FFU CURVE (3' x 4', 2.5' x 5') 風車曲線圖
 1 PHASE 220 VAC 單相 220伏特

CAPACITY VS. PRESSURE DROP 風量壓損對照表

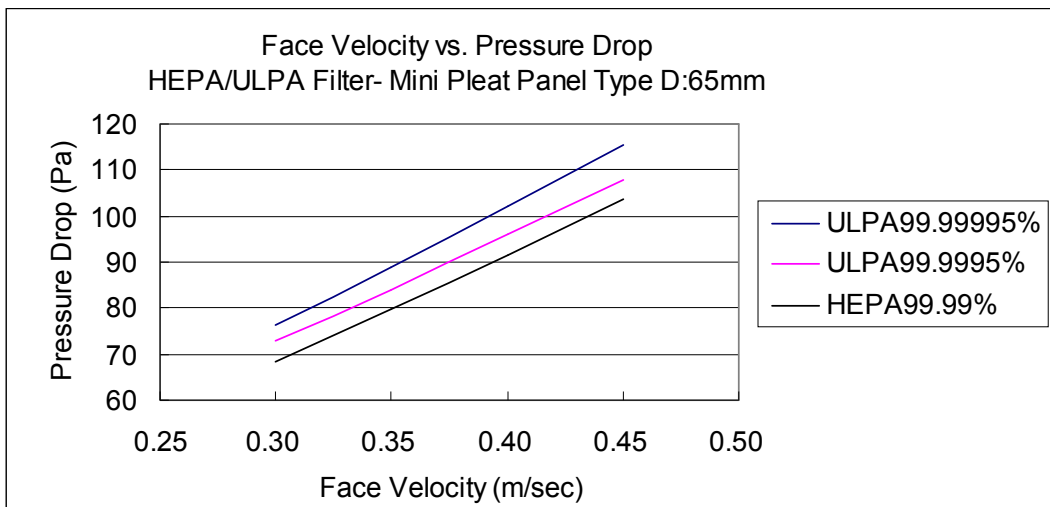


355 FFU CURVE (4'x4') 風車曲線圖
 1 PHASE 220 VAC 單相 220伏特

CAPACITY VS. PRESSURE DROP 風量壓損對照表



Testing Method	Particle Size	Efficiency (%)
	0.3um	95%
		99.97%
		99.99%
		99.999%
0.1-0.2um	99.999%以上	
By European Standard EN1822		



Fan Filter Unit (F.F.U) Performance Data – HEPA/ULPA Filter

Efficiency (%)	Housing Size (W*H*D) (mm)	Filter Size (W*H*D) (mm)	Rated Capacity (CMH)	Initial Resistance (Pa)	Particle size (um)
99.97 99.99	570*570*250	570*570*50	400	87	0.3
		570*570*65	450	99	
	570*1170*250	570*1170*50	800	82	
		570*1170*65	900	93	
99.9995 (5N5)	570*570*250	570*570*50	400	91	0.1~0.2
		570*570*65	450	103	
	570*1170*250	570*1170*50	800	86	
		570*1170*65	900	97	