

无尘室滤网 Clean Room Special Purpose Air Filter

风车滤网箱组 (AR603)

风车滤网组适用于乱流型及层流型，无尘室洁净度Class1到100K之环境。依无尘室等级，可选择HEPA或ULPA等滤网。箱体材质可选用不锈钢、镀铝锌或阳极处理铝框。

Fan Filter Unit (F.F.U) (Cat. #AR 603)

AIRREX FFU It is a lightweight self-contained ceiling fan filter unit for use in unidirectional or non-unidirectional air flow clean room area, such as semiconductors, microelectronics, biotechnology, pharmaceutical plants and other location requesting rigorous cleanliness air. It is consisted of a motor/fan assembly and a mini pleat HEPA (or ULPA) filter. Typical applications include Clean Room Class 1 to 100K. According to classes of clean room request, efficiency is from 99.99% -99.999% @0.3 micron (H13-14) HEPA filter to 99.999% - 99.999999% @ 0.1 micron (U15-U17) ULPA filter.

Material of housing is available for Stainless Steel (304 SS), Galvanized Steel, Aluminum (Aluminum coated zinc plate) and Anodized Extruded Aluminum.



Cat.No: AR603

风车滤网箱组

Fan Filter Unit (F.F.U.)

F.F.U. : Fan Filter Unit风车滤网组简称

第一部分：FAN UNIT，送风机。

第二部份：FILTER，滤网，可搭配HEPA或ULPA，效率99.99% ~ 99.999995%。

FFU is short for Fan Filter Unit which is consisted of Fan Unit and a Mini Pleat HEPA/ULPA Filter with efficiency99.99% - 99.999995%.

• F.F.U.使用優點：

- 1、过滤系统终端设备：可达CLASS 1~100K洁净等级。
- 2、模块化：容易调配位置、增减F.F.U.数量符合洁净环境RELAYOUT需求。
- 3、可调整风量：借由控制马达转速调整风量，对于洁净室层流有相当帮助。
- 4、广泛应用：无尘室厂务端、设备端…都可以加以应用。

• 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 meetthe clean environment a Relayout needs.
- 3.Adjustable Air Flow: By controlling the motor speed to adjust air flow, the clean room laminar flow (unidirectionalflow) are very help.
- 4.Widely Used: Clean Room factory side, device-side....can be applied.



无尘室滤网 Clean Room Special Purpose Air Filter

Airrex F.F.U.特点

- **马达**：Airrex F.F.U.选用德制外转子马达。
 - 1.外转子马达，风扇随马达转动。
 - 2.高信赖度，运转稳定。
 - 3.高静压，有效延长业主F.F.U.使用年限。
 - 4.散热能力优异，气流经过马达，降低故障机率。
 - 5.动平衡优异，轴承较传统马达短。
- **风扇**：Airrex F.F.U.选用3D设计后倾式风扇，风扇叶片不易附着粉尘。
- **风量可调整**：1.AC F.F.U.可以三段、五段或无段调速。
2.EC F.F.U.采用EBM BUS系统，可以群组或各台方式直接控制调整FFU风量，并远端控制马达转速.系统操作简便, 扩充性极佳可扩充至7936台。
- **电源输入**：1.AC- 1 ϕ 220~230V 50~60Hz，采环式变压器，可减少电源部份噪音可形成较完美的电源输入曲线降低马达损耗。
2.EC - 1 ϕ 220~230V 50~60Hz，采500W电子整流器无段变速可利用外在参数（压力、温度等讯号）控制转数或利用计算机直接输入。直流马达可比交流马达节省40~60%的耗电量，运转时也较安静、温度较低。
- **滤网**：欧规EN1822标准测试，即测试滤网之上风处与下风处粒子浓度，HEPA级效率从95~99.999%通过0.3 μ m，ULPA级效率从99.999~99.999995%通过0.1~0.2 μ m。
- **滤材**：滤材由超细玻璃纤维经折叠装入框架内，滤纸经由热熔胶间隔，不会释出化学性污染到无尘室，使空气以最低的压损通过滤网。
- **箱体材质**：为不锈钢、镀锌铝。
- **AIRREX可依业主需求设计低压损HEPA、ULPA FILTER，使F.F.U.提供较大机外静压，以符合特殊设计需求。**
- **Motor**: Airrex FFU used Germany-made External Rotor Motor.
 - 1.External Rotor Motor, the fan with the motor rotation.
 - 2.High Reliability, Stable Operation.
 - 3.High Static Pressure, prolong the service life of FFU.
 - 4.Excellent Cooling Capacity, airflow through motor, reduce the failure probability.
 - 5.Balancing Excellence, bearing shorter than traditional motors.
- **Motor Fans**: Airrex FFU used 3D design backward fans, motor fan (blades) difficult to attach the dust.
- **Adjustable air volume flow**:
 - 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.
 - 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.
- **Power Supply**:
 - 1.AC Type – Single Phase, 220-230V, 50 or 60 Hz. Use ring type transformer to reduce noise and eddycurrent, i.e. less energy loss.
 - 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.
- **Filter Efficiency**:

According to European Standard EN1822, by testing the particle concentration of upstream & downstream area, efficiency is from 99.99% to 99.999% @0.3 micron (H13-14) size particles HEPA filter; and 99.999% - 99.999999% @ 0.1-0.2 micron (U15-U17) size particles ULPA filter.
- **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.
- **Housing Material**:Stainless Steel or Anodized Extrude Aluminum Housing.
- **HEPA or ULPA Filter' s pressure drop can be lower to meet special design requirement.**

无尘室滤网 Clean Room Special Purpose Air Filter

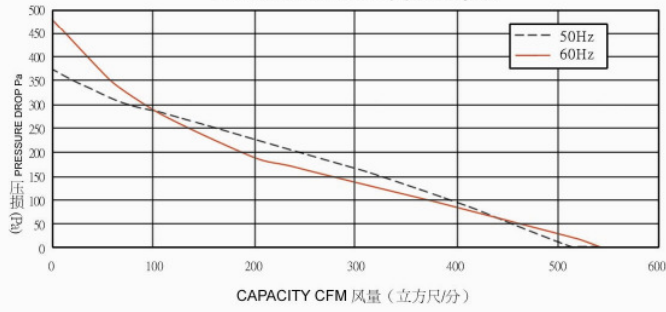
无尘室滤网 Clean Room Special Purpose Air Filter



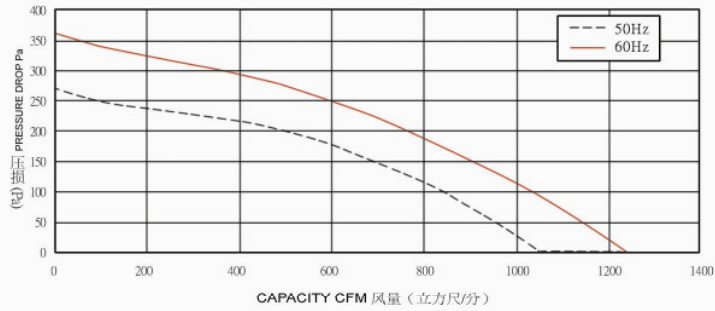
专营空气滤网及无尘室设备服务
Services of Filters for Cleanroom and HVAC System

风量压损对照表 CAPACITY VS. PRESSURE DROP

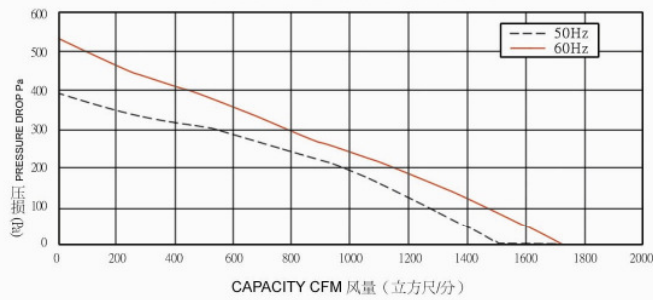
220 FFU CURVE (2'x2') 风车曲线图
1 PHASE 220 VAC 单相 220伏特



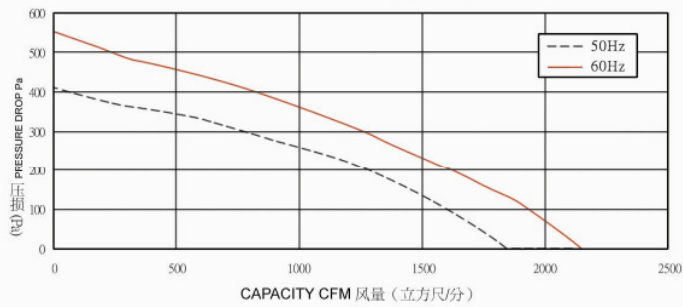
310 FFU CURVE (2'x2', 2'x3', 2'x4') 风车曲线图
1 PHASE 220 VAC 单相 220伏特



355 FFU CURVE (3'x4', 2.5'x5') 风车曲线图
1 PHASE 220 VAC 单相 220伏特



355 FFU CURVE (4'x4') 风车曲线图
1 PHASE 220 VAC 单相 220伏特

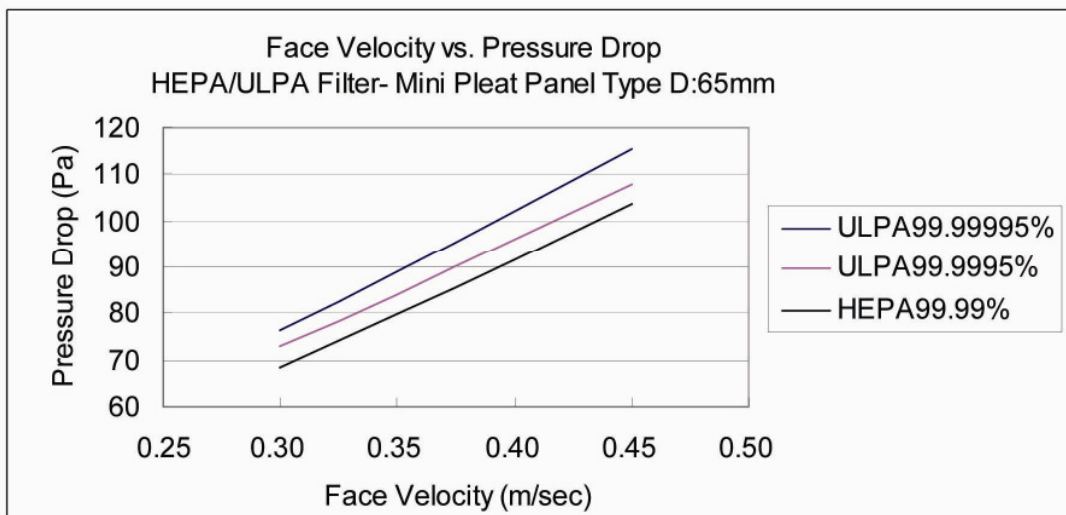


无尘室滤网 Clean Room Special Purpose Air Filter

测试方法 Testing Method

测试方法 Testing Method	粒径 Particle Size	效率 Efficiency (%)
	0.3um	95%
		99.97%
		99.99%
		99.999%
0.1-0.2um	99.999%以上	
依欧规EN1822标准 By European Standard EN1822		

风量关系曲线图



风车滤网箱组性能表 Fan Filter Unit (F.F.U) Performance Data

效率 Efficiency (%)	箱体尺寸 Housing Size (W*H*D) (inch)	滤网尺寸 Filter Size (W*H*D) (mm)	额定风量 Rated Capacity (CMH)	初压损 Initial Resistance (Pa)	粒径 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	

* Special Sizes are available upon request.

※特殊规格可生产制造。