

MICROPLEAT™ EC EC Fan / Filter System

MicroPleat EC fan / filter units consist of a HEPA or ULPA filter contained in an aluminum housing with a motorized impeller. The motors used in these fan units are electronically commutated DC motors, referred to as "EC" motors. The units have an external electronics package which allows the use of AC current. The EC motors and external electronics can operate on 115 volts, 230 volts or 277 volts AC with no adjustment or change of equipment.

EC motors allow all units to be inter-connected by means of "twisted pair" wires. An electronic "repeater" box is required for every increment of 31 units. The repeater boxes can be operated from 230 volts or 277 volts. For operation on 115 volts, a step up transformer must be used. The repeater boxes are inter-connected to a computer interface which operates on 12 volt DC power. An AC/DC power adapter (120 volts AC to 12 Volts DC) is provided to operate the computer interface. The computer interface is connected to a central computer which operates on 120 volts AC.

EC motors offer two significant operating benefits --- substantial energy savings compared to standard AC powered units and highly flexible system control.

Energy Savings - Power consumption of EC motors is significantly lower than units operating on AC power. MicroPleat EC modules consume approximately 110 watts at the design air flow of 90 FPM. Airguard standard AC units use approximately 190 watts at the same air flow. Competitive units use as much as 400 watts. The energy savings of EC units will quickly pay for the cost of the more sophisticated system.

System Control - The speed of each fan motor can be monitored and controlled individually, in groups or all units simultaneously. The units can also be turned on or off through the computer individually, in groups or all at once. To simplify balancing the system, a chart is included with the computer operating instructions correlating motor speed to filter exit velocity.

Total System Support from Airguard - All electronic components required for the installation are provided, including the computer, computer interface, repeater boxes, AC/DC power adaptor, and wiring. Software to monitor and control the units is loaded on the computer and verified as operational before it is shipped to the job site. Airguard Engineering personnel will supervise installation of the EC system and provide on site start up training.