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MAC 10[®] IQ: The First FFU with a Built-In Brain



The MAC 10[®] IQ is the world's first smart Fan Filter Unit (FFU). With its microcomputer controlled electrically commutative (EC) motor, the MAC 10 IQ dynamically adjusts itself to maintain the set airflow, compensating for changes in static pressure, filter loading or other local conditions. Competitively priced, the MAC 10 IQ offers low sound, low energy consumption and a low profile, with high performance and built-in intelligent control.

It's the combination of the GE ECM[™] motor with Envirco's patented baffling system and forward curve fan that make the MAC 10 IQ intelligent and energy efficient. This unique merger combines Envirco's expertise in FFUs with GE's expertise in brushless DC electric motors.

The EC motor with internal microcomputer provides low energy consumption - only 80 watts at 90 ft/min (0.45 m/s) - high performance and long motor life. The IQ utilizes Envirco's patented VE5[®] baffling technology, offering the same low sound level (48 dBA) that is a MAC 10 family benchmark.

Unlike conventional induction motors, the EC motor regulates itself by automatically adjusting its torque and speed. Each MAC 10 IQ includes a digital speed control which provides a constant airflow of 50 - 130 ft/min (0.25 - 0.66 m/s) over a wide range of static pressures.

The MAC 10 IQ maintains airflow so constantly and consistently that the need for future balancing is greatly reduced. The correlated velocity feature of the digital speed control provides infinite control and fine tuning capabilities for each FFU.

The MAC 10 IQ efficiently and easily maintains set cleanroom air levels, and still exceeds IEST Recommended Practices. With its unique constant airflow feature, the MAC 10 IQ is also an ideal component for mini-environments.

Features

- EC brushless DC motor with internal microprocessor
- Digital Speed Control: constant airflow over a wide range of external static pressures
- Low power consumption FFU at 80 watts
- Low sound at only 48 dBA
- High Efficiency Particulate Air (HEPA) Filter: 99.99% @ 0.3 micron

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- 1.00 in. w.g. (250 Pa) of external static capability at 90 ft/min (0.45 m/s) with HEPA filter
- Forward inclined centrifugal-type fan
- Walkable plenum (excluding prefilter)
- Snap-in prefilter; no tools required
- Meets latest IEST Recommended Practices
- UL Listed (120 V, 240 V, 277 V) and CE Marked (240 V) units available
- Various sizes available

Options

- **Room-Side Replaceable (RSR):** gel seal filter element (available on RSR and RSRE models)
- **Infrared Speed Controller:** room-side airflow adjustment with a hand-held remote control
- **A/C Collar (12 in. (305 mm) diameter):** direct connection to air conditioning supply
- **Knife Edge:** easy placement in gel track ceiling grid systems
- **Fluorescent Light:** provides illumination with minimal airflow disruption
- **Ion Bar:** neutralizes static charges below the HEPA filter
- **Painted or Stainless Steel Exterior**
- **Ultra Low Penetration Air Filter (ULPA) Filter:** 99.9995% @ 0.12 micron
- **ePTFE Boron-Free ULPA Filter**
- **Monitoring & Control System:** on-site or remote monitoring and adjustment from computer terminal

Sizes

Standard MAC 10 sizes include 2 ft x 4 ft (600 mm x 1,210 mm), 2 ft x 3.5 ft (600 mm x 1,057.5 mm), 2 ft x 3 ft (600 mm x 905 mm), and 2 ft x 2 ft (600 mm x 600 mm) units. Custom size units are also available.

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