

MAC10

FFO

The

World's

First

Smart

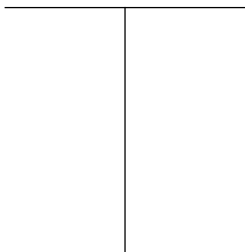
Fan

Filter

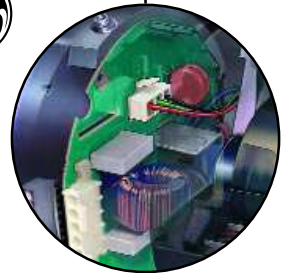
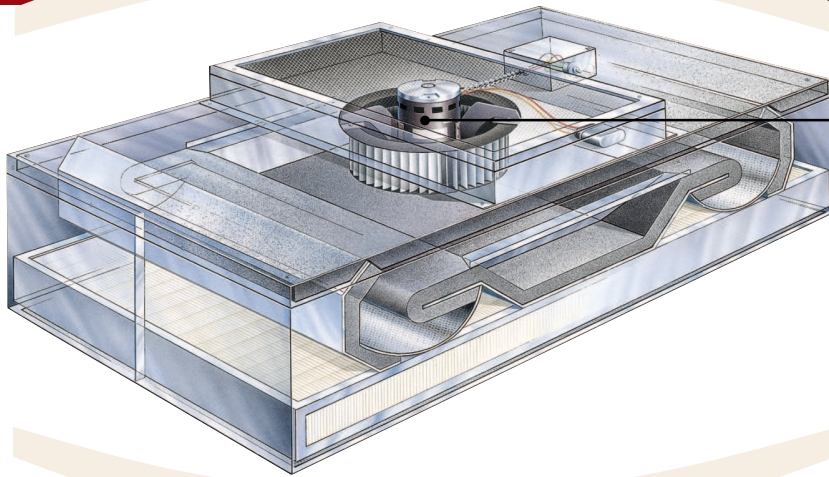
Unit



ENVIRCO™
CORPORATION
Innovators in clean air technology



The First FFU With a BUILT-IN BRAIN



MAC 10 IQ™


ENVIRCO™
CORPORATION

A WHOLE NEW FFU

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

The electrically commutative (EC) motor with internal microcomputer provides low energy consumption (80 W @ 90 ft/min / 80 W @ 0.45 m/s), high performance and long motor life. The IQ utilizes Enviroco's patented VE5 baffling technology, offering low sound levels that are a MAC 10 family benchmark.

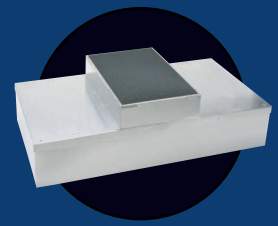
CONSTANT AIRFLOW

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 meets IEST Recommended Practices. With its unique constant airflow feature, the MAC 10 IQ is also an ideal component for mini-environments.

The **MAC 10 IQ** is the world's first **smart** fan filter unit. With its microcomputer controlled 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.



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
- **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 IEST Recommended Practices**
- **UL Listed (120 V, 240 V, 277 V)**
- **Various Sizes Available**

OPTIONS

Room-Side Replaceable (RSR): gel seal filter element (available on RSR and RSRE models)

Infrared Speed Control: room-side airflow adjustment with a hand-held remote control

A/C Collar (12 in. (304.8 mm) diameter): direct connection to air conditioning supply

Knife Edge: easy placement in gel track ceiling grid systems

Ultra Low Penetration Air Filter (ULPA): 99.9995% @ 0.12 micron

Fluorescent Light

Ion Bar

Painted or Stainless Steel Exterior

Power Cord: convenient plug-in connection for non-permanent applications

Challenge Port: convenient aerosol challenge and HEPA filter testing

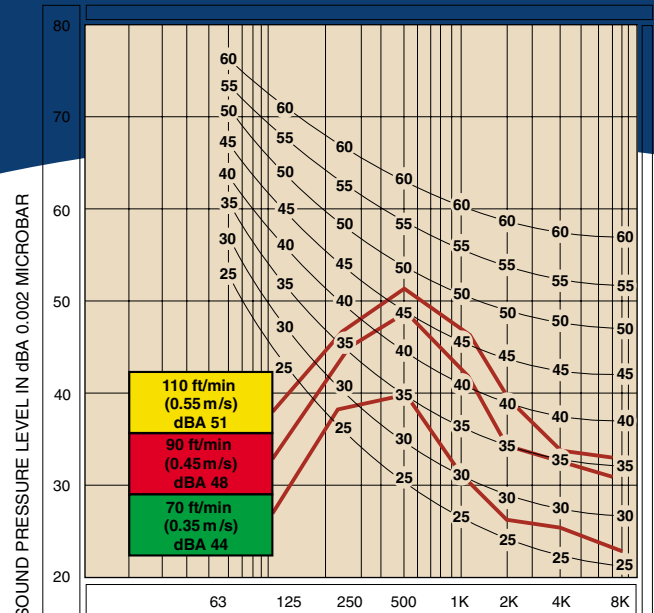
ePTFE Boron-Free ULPA Filter

CE Marked 230 V Units Available

Monitoring & Control System: on-site or remote monitoring and adjustment

SOUND CURVE

2 ft x 4 ft (609.6 mm x 1,219.2 mm) IQ standard HEPA, 50/60 Hz • ft/min (m/s) data

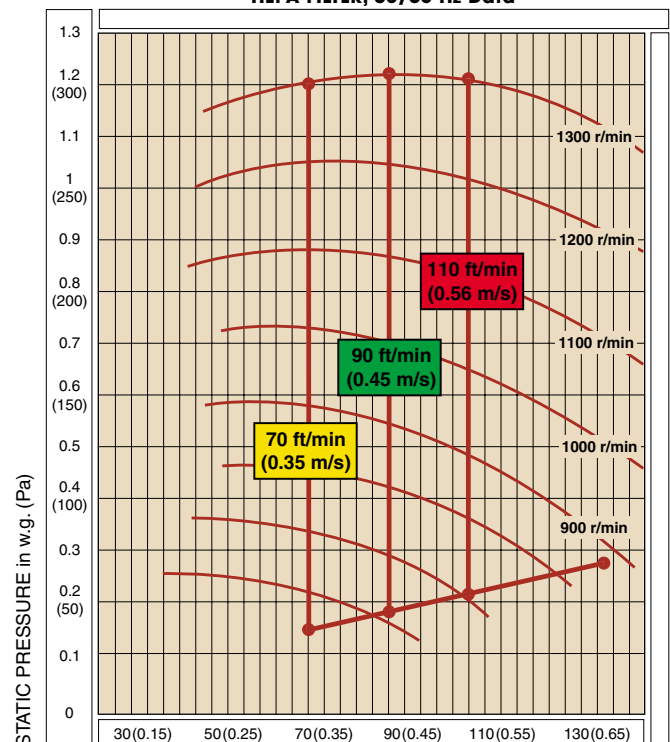


OCTAVE-BAND CENTER FREQUENCIES (Hz)

Sound measured at 30 in. (305 mm) from filter face; applies to all voltages.

FAN CURVE

2 ft x 4 ft (609.6 mm x 1,219.2 mm) IQ standard HEPA, HEPA FILTER, 50/60 Hz Data

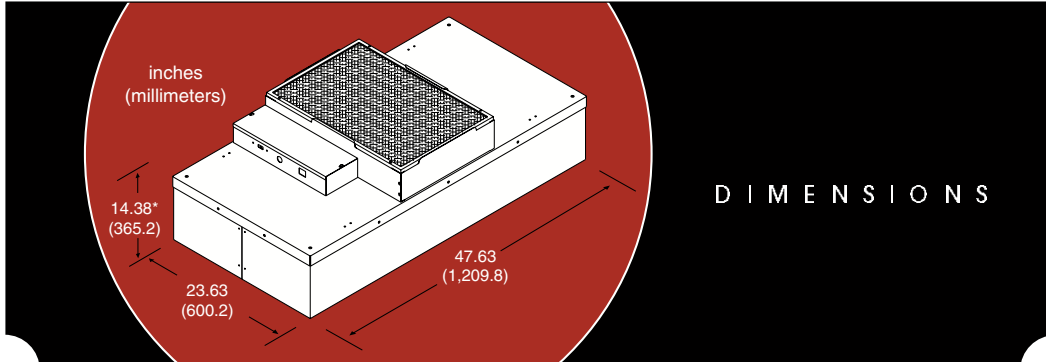


AIRFLOW ft/min (m/s)

Airflow measured with Velgrid with 6 in. (152 mm) standoffs and eight readings across filter face; applies to all voltages.



While Enviroco has introduced a variety of proprietary products, one of its most successful continues to be the MAC 10 family of fan filter units. MAC 10 FFUs are used worldwide for a variety of critical clean air applications.



D I M E N S I O N S



For more than 30 years, Enviroco has combined product innovation, high quality and superior service and support to create clean air systems for a variety of industries. As a worldwide leader in clean air technology, Enviroco manufactures a complete line of clean air products for the microelectronics, semiconductor, disc drive, biotechnology, aerospace, food and beverage, laboratory, pharmaceutical, medical device and hospital markets.

Model	Voltage 50/60 Hz	Avg. Airflow ft ³ /min (m ³ /hr)	Motor Size	Amps @ 90 ft/min (0.45 m/s) **	Watts	Sensible Heat (BTU) @ 90 ft/min (0.45 m/s)	Unit Weight lbs (kg)
2 ft x 4 ft Standard HEPA	120	650 (1100)	1/3 Hp	1.30	80	273	62 (28.2)
	240			0.71			
	277			0.56			
2 ft x 4 ft Standard ULPA	120	650 (1100)	1/3 Hp	1.70	100	341	68 (30.8)
	240			0.92			
	277			0.73			
2 ft x 4 ft RSR HEPA	120	650 (1100)	1/3 Hp	2.00	100	341	68 (30.8)
	240			1.10			
	277			0.87			
2 ft x 4 ft RSR ULPA	120	650 (1100)	1/3 Hp	2.28	120	410	68 (30.8)
	240			1.24			
	277			1.00			

*RSR height dimension is 15.38 in. (390.7 mm). ** Full-Load Amp 120 V = 3.4; 240 V = 1.9; 277 V = 1.6.

MAC 10 IQ 2 ft x 2 ft (609.6 mm x 609.6 mm), 2 ft x 3 ft (609.6 mm x 914.4 mm), 2 ft x 3.5 ft (609.6 mm x 1,066.8 mm) and 2 ft x 4 ft (609.6 mm x 1,219.2 mm) units available. Custom-sized units are also available.

All test data in chart is measured at 90 ft/min (0.45 m/s). Test data taken with an electronic micromanometer with Velgrid attachment; eight readings in unloaded conditions.

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For more information about Enviroco and our products, visit us at

www.enviroco.com.

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