MODULAR ELECTRONIC AIR FILTERS

Electronic Air Cleaners for Commercial Applications.
DM2000/DM1000

The Solution To Clean Indoor Air

Model DM2000/DM1000 is a commercial unit designed for use in Custom Air Handling System / Air Handling Units. It is a fact that “Sick Building Syndrome” exists in many commercial buildings, and having a good and reliable air filtration system is a major step towards improving the quality of indoor air. This in turn creates a healthy work environment for employees, reduces spread of infectious ailments resulting in less sick leave and increased productivity.

DM2000/DM1000 replaces conventional media filters which are generally less effective and creates more pressure drop for the air handling system.

FEATURES:

• Capable of handling up to 3400CMH (m3/hr) for DM2000; 1700CMh for DM1000
• Modular type. Multiple units can be connected to meet the system airflow requirements.
• Pre-filter screen collect larger contaminants.
• Collects particles from 0.01 micron and above.
• State of art power supply ensures peak operating efficiency.
• Power supply incorporates arc suppression features.
• Dual ionizing and collecting voltages for better efficiency.
• On/Wash/Check indicators.
• BMS relay contacts for connection to building management systems.
• Collection cells are “front loaded” making it easier for maintenance.

BENEFITS:

• Superior performance compared to conventional media filters.
• Low pressure drop
• Reduces HVAC operating costs.
• Easy maintenance.
• Unlike disposable media filters, cells are made of aluminum and washable.
• Improves overall indoor air quality in the building.

TYPICAL INSTALLATION OF DM2000/DM1000

RydAir Electrostatic Air Cleaner
Model DM2000 / DM1000 For AHU
**SPECIFICATIONS:**

- **Voltage & Frequency**: 220/240 VAC 50/60 hz
- **Power Consumption**: 36 watts; (DM1000: 30 Watts)
- **Ionizer Voltage**: 8.1KV
- **Collector Voltage**: 4.1KV
- **Efficiency**: See Chart, Figure 1
- **Pressure Drop**: See Chart, Figure 1
- **Operating Temperature**: 4 Deg C to 55 Deg C
- **Maximum Wash Temperature for Cells**: 85 Deg C
- **Building Management System Feature**: Yes
- **Accessories**: Mesh Pre filter
- **Option**: Charcoal Filter.
- **Dimensions**: See figure 2 & 3
- **Weight of unit**: 17Kg; (DM1000: 9.5KG)
- **Shipping weight**: 19KG; (DM1000:11.5KG)
- **Cell Weight**: 5.5Kg (each)
- **No of Cells**: 2; (DM1000 : 1)
- **Cell Materials**: Aluminum
- **Cell Loading**: Front Loaded
- **Installation**: Mounted in front of Return Air Plenum of Air Handling Unit

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**EFFICIENCY AND PRESSURE DROP**

![Efficiency and Pressure Drop Graph](image)

Figure 1

- **Efficiency ASHRAE 52.2 Dust Spot Test**
- **Pressure drop (in Pascal)**

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**Dimension – DM2000**

![Dimension Diagram DM2000](image)

**Dimension – DM1000**

![Dimension Diagram DM1000](image)

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Rydair reserves the right to change dimensions & specification without notice.
Contaminated air is drawn by the motor/blower through a washable metal mesh pre-filter which traps large dust particles. The remaining particles, some as small as 0.01 micron, pass into a strong electrical field (ionizing section) where the particulates receive an electrical charge. The charged particles then pass into a collector plate section made up of a series of equally spaced parallel plates. Each alternate plate is charged with the same polarity as the particles, which repel, while the interleaving plates are grounded, which attract and collect the contaminants. The contaminants are held in these plates until they are washed away. Air cleaners trap dry particulates like dust, dirt, lint pollens, haze particles etc.

**RANGE OF POLLUTANTS**

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Particle Dia. (microns): 0.001 0.01 0.1 1.0 10 100 1000