



Electrostatic Air Cleaners for
Commercial and Industrial Applications.



For a Cleaner, Greener and More Sustainable World.



Modular Electronic Air Cleaner



DM2000B/DM1000B

The Solution To Clean Indoor Air



The RydAiR Modular Electronic Air Cleaner (EAC), DM 2000B/DM 1000B 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 the spread of infectious ailments resulting in less sick leave and increased productivity.

The DM 2000B/DM 1000B reduces the amount of airborne particulates from soiling the AHU's cooling coils and when in place of mechanical pre and post filters, huge savings in energy consumption is derived as a result of lower pressure drop of the EAC compared to these conventional mechanical filters.

FEATURES:

- Capable of handling up to 3400CMH for DM2000B & up to 1700CMH for DM1000B
- Modular type, multiple units can be connected to meet the system air flow requirements
- Pre filter collects larger particles of 10 micron and above, Ionizing & Collection Cells collects particles as small as 0.01 micron
- Meets MERV 14 Requirements.
- State of the art power supply ensure peak efficiency at all times
- Power supply incorporates arc suppression features for safety and durability
- Dual Ionizing voltage from higher efficiency
- On/Wash/Indicators for performance status
- BMS dry contacts for connection to Building Management System
- Front loaded cell access for ease of maintenance

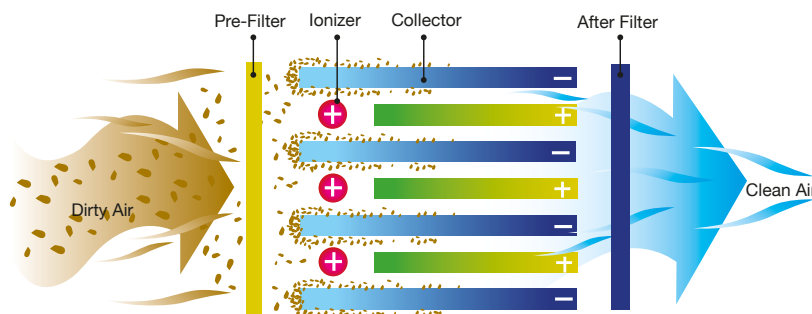
BENEFITS:

- Superior performance compared to conventional filters
- Low pressure drop
- Reduces energy consumption and improves HVAC's performance, helps buildings achieve Green mark
- Long lasting washable aluminium Ionizing & Collection Cells

This is in line with the Green Building policy and campaign all around the world today.

HOW RydAiR ELECTROSTATIC AIR CLEANERS WORK

Contaminated air is drawn by the blower (external) through a washable metal mesh pre-filter which traps large dust particles. The remaining particles, some as small as 0.01micron, pass through a strong electrical field (ionizing section) where the particulates receive an electrical charge. The charged particles then pass into the collector plates section made up 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.





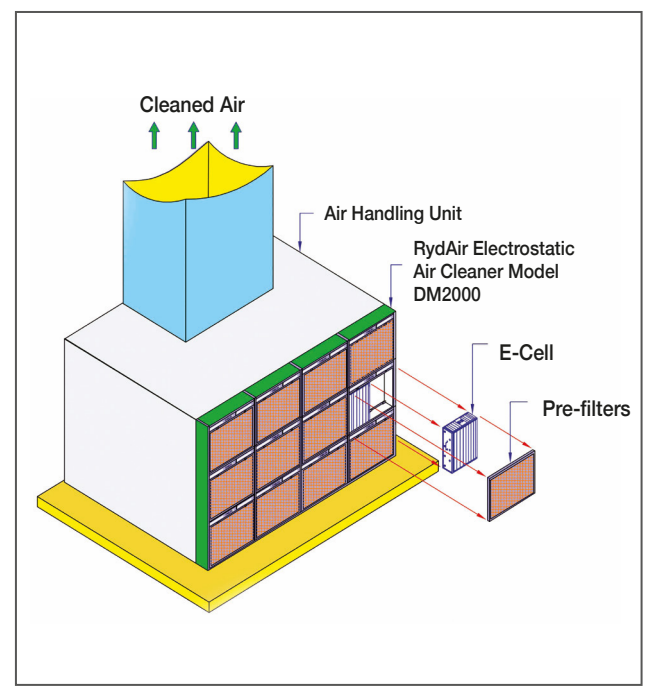
Modular Electronic Air Filters DM2000B /DM1000B

SPECIFICATIONS:

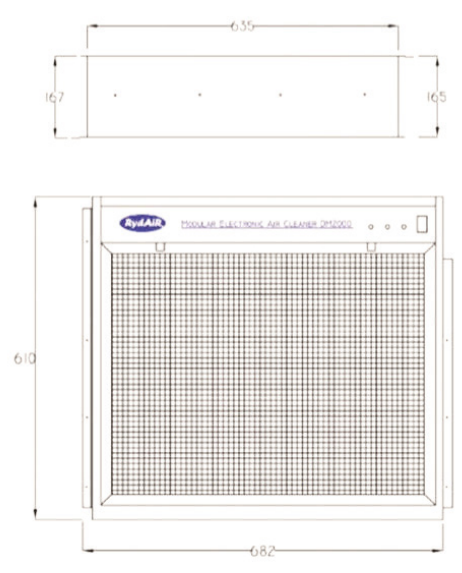
Air Handling Capacity	3400 CMH (DM2000B) 1700 CMH (DM1000B)
Power Consumption	36 Watts (DM2000B) 30 Watts (DM1000B)
Voltage & Frequency	220/240 VAC 50/60Hz
Ionizing Voltage	8.1 KVDC
Collector Voltage	4.1 KVDC
No. of collection cells	2 (DM2000B) 1 (DM1000B)
Cell dimensions	500mm x 315mm x 110mm
No. of plates per cell	71
No. of Ionizing wires per cell	9
Cell weight (each)	4.6kg
Cell material	Aluminum
Efficiency	MERV 14 – ASHRAE 52.2-2017
Pressure drop	0.11" WG-0.25" WG (28Pa to 66Pa)
Operating temperature	4°C to 55°C
Building Management System	Yes
Status & Performance	On, Wash, Check signal Indicator
Power supply protection (Anti arc suppression)	Shuts down high tension output when short circuit occurs
Safety features	Safety cut of switch
Accessories	Pre-filters & cells
Option	Charcoal after filter for odor reduction
Cell Loading	Front Loaded
Housing material	1.2mm Hot dip Galvanized steel
Mounting / Installation	Air return of AHU/Fresh air inlet
Unit Dimension	DM2000B: 682mmx610mmx165mm DM1000B: 367mmx610mmx165mm
Unit Weight	DM2000B – 18.5 Kg DM1000B – 9.8 Kg

TYPICAL INSTALLATION OF DM2000B/DM1000B

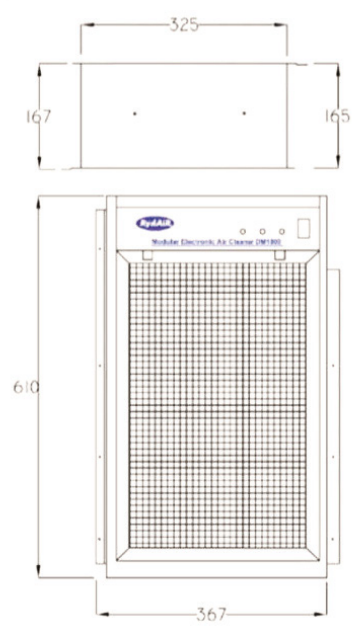
RyAiR Electrostatic Air Cleaner Model DM2000B/DM1000B



DIMENSION - DM2000B



DIMENSION - DM1000B



RydAiR DM B series are tested for efficiency and static pressure drops under ASHRAE 52.2-2017. Extracts are reproduced for reference.



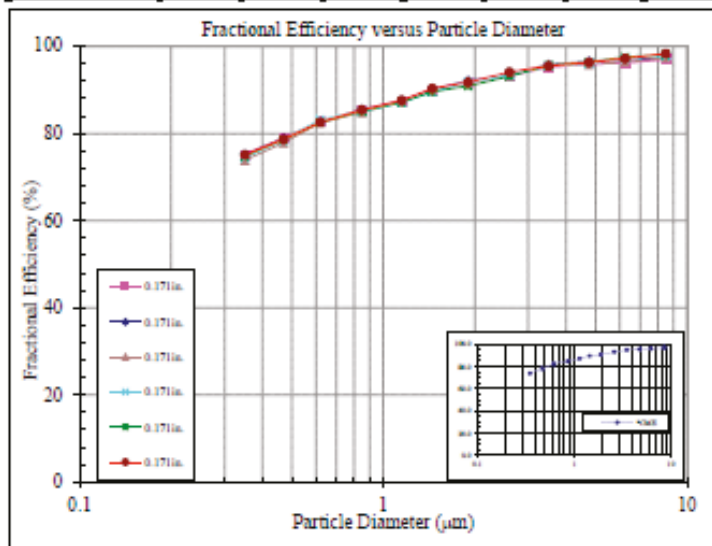
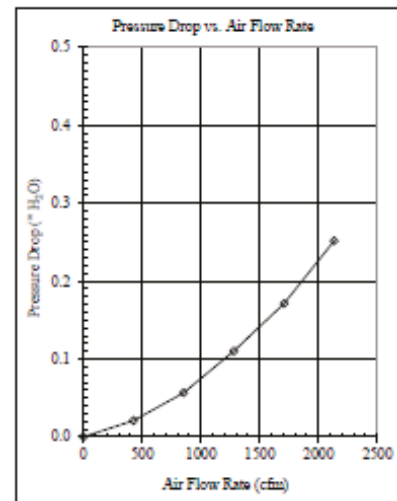
INDEPENDENT THIRD PARTY TEST REPORTS
By U.S. Based Laboratory

MERV 14

EFFICIENCY

ASHRAE TEST STANDARD 52.2-2017
(NEW CLASSIFICATION)

ΔP (" H ₂ O)	0.171in.	0.171in.	0.171in.	0.171in.	0.171in.	0.171in.	*CME
Size Range (μm)	Fractional Efficiency (%)						
0.3-0.4	74.9	75.2	73.9	74.6	74.8	75.1	73.9
0.4-0.55	78.8	78.9	77.9	78.5	78.6	78.7	77.9
0.55-0.7	82.6	82.7	82.5	83.1	82.5	82.6	82.5
0.7-1.0	85.2	85.5	84.9	85.1	85.1	85.4	84.9
1.0-1.3	87.3	87.5	87.2	87.2	87.2	87.6	87.2
1.3-1.6	89.9	90.1	89.8	89.6	89.6	90.3	89.6
1.6-2.2	91.6	92.1	91.7	91.7	90.9	91.7	90.9
2.2-3.0	93.3	93.5	93.4	93.5	93.1	94.1	93.1
3.0-4.0	95.2	95.8	95.4	95.5	95.6	95.5	95.2
4.0-5.5	96.0	96.5	95.9	96.2	96.4	96.3	95.9
5.5-7.0	96.2	96.9	96.3	97.3	97.5	97.2	96.2
7.0-10.0	97.0	97.3	97.3	97.9	98.1	98.3	97.0



Test indicates that RydAiR DM2000B/DM1000B meet MERV 14 requirements at velocity of 492fpm or 2.5m/s

Standard 52.2 Minimum Efficiency Reporting Value (MERV)	Composite Average Particle Size Efficiency, % in Size Range, μm			
	Range 1 (0.3-1.0)	Range 2 (1.0-3.0)	Range 3 (3.0-10.0)	Average Arrestance, %
1	n/a	n/a	E3 < 20	Aavg < 65
2	n/a	n/a	E3 < 20	65 ≤ Aavg < 70
3	n/a	n/a	E3 < 20	70 ≤ Aavg < 75
4	n/a	n/a	E3 < 20	75 ≤ Aavg
5	n/a	n/a	20 ≤ E3 < 35	n/a
6	n/a	n/a	35 ≤ E3 < 50	n/a
7	n/a	n/a	50 ≤ E3 < 70	n/a
8	n/a	20 ≤ E2	70 ≤ E3	n/a
9	n/a	35 ≤ E2	75 ≤ E3	n/a
10	n/a	50 ≤ E2 < 65	80 ≤ E3	n/a
11	20 ≤ E1	65 ≤ E2 < 80	85 ≤ E3	n/a
12	35 ≤ E1	80 ≤ E2	90 ≤ E3	n/a
13	50 ≤ E1	85 ≤ E2	90 ≤ E3	n/a
14	75 ≤ E1 < 85	90 ≤ E2	95 ≤ E3	n/a
15	85 ≤ E1 < 95	90 ≤ E2	95 ≤ E3	n/a
16	95 ≤ E1	95 ≤ E2	95 ≤ E3	n/a



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The RydAiR brand is owner by RydAiR Pte Ltd, a subsidiary of Airverclean Pte Ltd

