

Emmveo™

Metal Viscous Oil Filter

Applications

AES Environmental Emmveo is a low maintenance self cleaning viscous impingement filter suitable for use in areas where high concentrations of large airborne particles are encountered.

Principle of Operation

The AES Environmental Emmveo consists of three major parts - the filter cells, the drive unit and the oil bath. Air passes through the honeycomb filter medium which is mounted in steel-framed cells. The cells form a curtain which is rotated by the drive unit. The filter cells leave the oil bath at the foot of the filter, move up the dirty air-entering side and then down the clean or air-leaving side of the filter.

When reaching the top and out of the airstream, each cell is lifted vertically to disengage it from the cell below, so breaking the edge seal between adjacent cells.

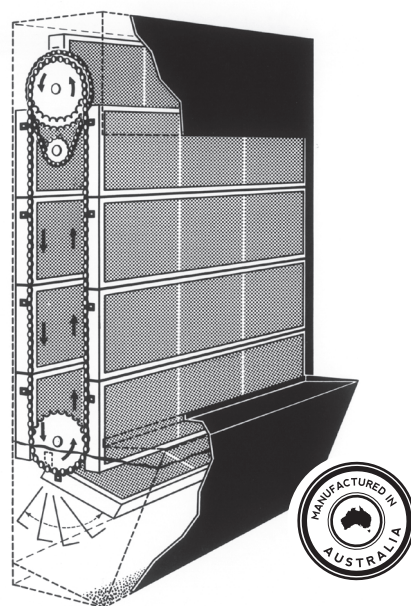
The seal is remade before the cell again enters the airstream. With the airflow always passing through the cell in the same direction, the possibility of built-up dirt being blown-off into the clean airstream is eliminated.

Description

Drive unit: The filter curtain is rotated by a gear motor acting through a chain drive.

Control system: The drive motor is controlled by a solid-state timer.

Media: The filter media is an aluminum double compound curve honeycomb, 50mm thick.



Performance

The normal initial operating resistance of an Emmveo filter is 80Pa. at rated capacity. Units are available in size from 1680 L/s up to 70,000 L/s capacity. ASHRAE tests give an efficiency of 90% at rated capacity.

Selection

In laying out a filter system it is recommended that there is a 1metre space both before and after the filter for maintenance purposes. Contact your local AES Environmental office for an engineered solution.

Maintenance & Service

AES Environmental provides full air filter maintenance, replacement parts and servicing facilities. The sludge which settles at the bottom of the oil tank should be removed at regular intervals. Local dust conditions will determine the frequency of service required.

Units should be inspected monthly to ensure that excessive dust build-up does not occur.



Standard Model Types

Model No.	Capacity m ³ /s	Capacity cfm	Size (mm)		No. of Sections	Oil Capacity	Installed Weight (kg)
			H	W			
3/60	1.68	3,560	1524	933	3	127	363
3/75	2.629	5,570	1905	933	3	127	386
3/80	2.945	6,240	2032	933	3	127	394
4/65	2.737	5,800	1651	1238	4	168	440
4/75	3.606	7,640	1905	1238	4	168	460
4/80	4.04	8,560	2032	1238	4	168	469
5/75	4.583	9,712	1905	1543	5	209	522
6/70	4.889	10,362	1778	1848	6	250	597
6/75	5.56	11,780	1905	1848	6	250	612
10/60	5.852	12,400	1524	3086	5+5	418	916

Note: System design and model arrangements available to suit airflow requirements between 6.107m³/s (12,940cfm) to 78.532m³/s (166,400) contact your local AES sales office for more details.

How to specify

Air filters shall be Emmveo filters as manufactured by AES Environmental, in sizes and capacities as listed on the plans and/or specifications. The filters shall be of the oil-coated movable curtain type.

The individual cells of the curtain shall be attached to chains and shall form two filter areas, through which the air shall be so constructed that each filter cell moves from the curtain on the air-entering side to the curtain on the air-leaving side while maintaining the same relative direction to airflow. The lower end of the curtain shall run in a bath of oil.

The curtain shall be moved at pre-determined intervals by an electric gear motor controlled by a timer.

Each filter shall be provided with a rigid sheet steel enclosure, heavily braced with the flanges for connection to adjoining ductwork, etc.

Oil reservoirs shall be of ample size, constructed of heavy sheet steel and rigidly braced. Joints shall be oil-tight and shall be welded.

Each filter shall be fitted with a sludge pan and scraper for removal of sludge. The filter shall be provided with sufficient amount of adhesive oil to fill the reservoirs to the proper level.

Each filter, when operated at manufacturers' rated capacity, shall have an efficiency not less than 96% on No.3 dust and 80% on No.2 dust when tested to AS1132 and a resistance to airflow not more than 80 Pa.

© 2018 AES Environmental | Bulletin No. 28N.11.17AES157REV6

In keeping with our policy of continuing product improvement, we reserve the right to alter specifications without notice.



9A Pembury Rd, Minto 2566
Ph 1300 550 116 **F** 1300 550 117
 sales@aesenvironmental.com.au
 www.aesenvironmental.com.au

