High Efficiency Air Filters

Vokes Absolute air filters are designed for the air intake and extract systems of critical applications where high efficiency air filtration is necessary. Developed to meet the demanding requirements of process and laboratory applications. Absolute MAD filters are designed to be resistant to high temperatures.

Vokes Absolute MAD filters are subjected to full quality assurance procedures and are sodium flame tested to EUROVENT 4/4-BS3928. Where required Vokes can undertake leak testing according to DIN 24184 Class S. Each filter is numbered and stamped with the guaranteed efficiency and the results recorded for future reference. If necessary the filter can be subsequently purged with clean air.

Construction

MAD Absolute filters are manufactured as ‘deep pleat’ filters, using high efficiency filter media and materials specially selected to resist high temperatures (MAD). The filters are constructed from a continuous length of pleated water repellant filter media, with aluminium (MAD) separators.

The filter media is bonded into a coated mild steel case using ceramic (MAD) sealant, to give a rigid and robust construction. When required Absolute MAD filters can be supplied with stainless steel cases.

Range

Vokes MAD Absolute filters are available with an efficiency of 99.99% (66) and in three standard sizes designed for nominal air flows of 425, 850 and 1700m³/h. There is also an extended MAD filter with a nominal air flow capacity of 2550m³/h. Other filter sizes are available on request.

Applications

Designed for high efficiency air handling installations including the UNIPAK systems, Absolute filters are intended for use as final filters. A prefilter should therefore be fitted up-stream to extend the life of the Absolute filter.

Vokes MAD Absolute filters have been proven in critical process and laboratory applications worldwide, including defence and nuclear installations.
Vokes Absolute 66 MAD

Resistant to High Temperatures.

Vokes Absolute 66 MAD filters are specially designed to withstand temperatures of 200°C continuous and 250°C for short periods. Manufactured with an efficiency of 99.99% (66), MAD type filters are available in three sizes for nominal air flows of 425, 850 and 1700m³/h. There is also an extended media E66 MAD filter with a nominal air flow capacity of 2400m³/h.

Absolute 66 MAD filters have been type tested in a static oven at temperatures of 500°C for short periods. When subsequently tested to BS3928, the filter efficiency will not fall below 99% and the integrity of the sealant holding the media in the case is maintained. Absolute 66 MAD filters have the following design features.

- Case: Mild steel with temperature resistant paint finish (M)
- Spacers: Aluminium (A)
- Sealant: Temperature resistant ceramic sealant (D)
- Gasket: Temperature resistant silicone rubber

Nuclear Specification Absolutes - McLeod Russel UK Ltd, also manufactures nuclear specification high temperature absolute filters designed in accordance with AESS 30/93402 Type 2. Nuclear specification absolutes are similar in construction to a 66 MAD, except that they have filter media which complies with the requirements of AESS 30/93400 and are fitted with protective grilles and handles. They are available with an efficiency of 99.99% (66) in the standard range of sizes and air flow capacities.

Performance

Air Volume Capacities

Types: 66 MAD & 66 SMP

<table>
<thead>
<tr>
<th>Filter</th>
<th>425</th>
<th>850</th>
<th>1700m³/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>E66MAD</td>
<td>250</td>
<td>500</td>
<td>1000</td>
</tr>
</tbody>
</table>

Maximum Temperatures

Continuous MAD - 200°C  SMP - 66°C
Short Periods Only MAD - 250°C  SMP - 120°C

Maximum Relative Humidity

100%

(Burst Pressure) >3800 Pa (MAD after exposure to 500°C > 3000 Pa)

Resistant - To air flow

Performance cannot be guaranteed at excess of rated flow.

How to Specify

Case Sizes

<table>
<thead>
<tr>
<th>Size</th>
<th>Dimensions</th>
<th>Rated Air Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td>609 x 609 x 298</td>
<td>3400 m³/h</td>
</tr>
<tr>
<td>850</td>
<td>1700 m³/h</td>
<td>1700 m³/h</td>
</tr>
<tr>
<td>1700</td>
<td>2550 m³/h</td>
<td>2550 m³/h</td>
</tr>
</tbody>
</table>

**NOTE - Depth includes a 6mm gasket

Gaskets

<table>
<thead>
<tr>
<th>Type</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard Flow</td>
</tr>
<tr>
<td>DS</td>
<td>Double Seal</td>
</tr>
<tr>
<td>R</td>
<td>Reverse Flow</td>
</tr>
</tbody>
</table>

Examples

Part No. 66MAD/S/S

66 - Absolute 66 - Efficiency 99.99%
MAD - Resistant to High Temperatures

S - Dims. 609 x 609 x 298, Nominal 1700m³/h
S - Gasket, Air Exit Face

Resistance

Performance cannot be guaranteed at excess of rated flow.