Gas Particulate Filters

JCI Filtration & Separation Inc.
Filtration & Separation Solutions
The function of the Gas Particulate Filters (also known as Dry Gas or Dust Filters) is to remove solid particulate from natural gas, in which no liquid contaminant is present. Equipped with high efficiency cartridges, this type of vessel offers an efficient method of filtering small to moderate quantities of solids to protect critical equipment or remove carryover contaminant from various processes, which may include:

- Downstream of dry desiccant beds
- Downstream of catalyst beds
- Metering and gate stations
- Fuel gas to compressors
- Protection of regulators and valves

The contaminant filtered by a Particulate Filter may include:

- Sand and silica
- Desiccant particles
- Dust
- Pipeline scale
How It Works

Natural gas enters the vessel via the cartridge compartment. The flow direction is outside-to-inside through the filter elements, which allows for maximum usage of the filtering media. A number of crucial design aspects include nozzle positioning, filter element spacing, pressure drop, nozzle and riser velocity and flux rates. Positive element seal and riser open area are also crucial aspects of Dust Filter design.

Units are constructed to ASME code requirements and can be furnished with a variety of quick opening closures and various element styles to suit any application.

Element Selection

The standard element for a JCI Gas Particulate Filter is the high efficiency JPME pleated polyester media for maximum solids loading capacity. The cartridge is designed with inner and outer cores to protect against erosion in high flow applications, available in carbon or stainless steel. A micro glass depth element for shear sensitive contaminant and high temperature applications is also available. Consult factory for non-standard efficiency requirements.

<table>
<thead>
<tr>
<th>JPME SERIES</th>
<th>JFG SERIES</th>
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<tbody>
<tr>
<td>Material of Construction</td>
<td>Pleated Polyester</td>
</tr>
<tr>
<td>Maximum Temperature</td>
<td>240°F</td>
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<tr>
<td>Minimum Temperature</td>
<td>-60°F</td>
</tr>
<tr>
<td>Change Out Differential</td>
<td>15 PSID</td>
</tr>
<tr>
<td>Collapse Pressure</td>
<td>&gt;75 PSID</td>
</tr>
<tr>
<td>Efficiency Rating</td>
<td>0.3, 0.5, 1, 5, 10</td>
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<tr>
<td>Available Sizes</td>
<td>312, 318, 324, 336, 536</td>
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</tbody>
</table>
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Vessel Nomenclature

JVP  6  20  1440  9  336

- SERIES
  H=HORIZONTAL
  V=VERTICAL

- VESSELS DIAMETER
- DESIGN PRESSURE
- NO. OF ELEMENTS
- ELEMENT STYLE

Inquiry Information

As a minimum, the following information is required for all Coalescing Filter sizing and pricing inquiries:

- Gas volumetric flow rate
- Gas specific gravity
- Gas operating pressure range
- Gas operating temperature range
- Type of contaminant to be filtered
- Amount of entrained solids (if available)
- Type of application
- Vessel design conditions, including pressure, temperature and corrosion allowance

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