MICROCONTAMINATION CONTROL

Wafergard® II SF Mini and Mini XL In-line Gas Filters

Superior particulate filtration for ultrapure gas system filtration

Wafergard® II stainless steel gas filters are the filter of choice for high-purity gas systems when all-stainless steel construction is preferred. A state-of-the-art housing assembly eliminates outgassing by minimizing weld area. The all-metal construction is ideal for high-temperature and dynamic-pressure applications. Its compact size and flexible choice of fittings provide ultimate design efficiency and minimize engineering costs.

APPLICATIONS

- Ultrapure gas lines
- High-temperature applications
- Dynamic-pressure applications
- Inert and reactive gases*

*Not compatible for O₂

FEATURES & BENEFITS

- All 316L stainless steel components has good chemical compatibility with most semiconductor process gases, resulting in preventing use of incompatible filters and gases
- Special cleaning and high temperature baking achieve superior initial cleanliness, therefore can start up gas delivery in short times
- High flow rate/low pressure drop characteristic is suitable for use of low vapor pressure gases
- High particle removal efficiency contributes to improvement of yield
SPECIFICATIONS

<table>
<thead>
<tr>
<th>Materials</th>
<th>Filter membrane</th>
<th>316L stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>Low sulfur 316L stainless steel</td>
<td></td>
</tr>
<tr>
<td>End cap</td>
<td>Low sulfur 316L stainless steel</td>
<td></td>
</tr>
</tbody>
</table>

Initial downstream cleanliness

≤0.03 particles/liter (≤1 particle/ft³) ≥0.01 µm

Removal rating

≥0.003 µm

Particle retention

Greater than 99.9999% (6 LRV) removal of all particles at 30 slm (Mini) and 60 slm (Mini XL); referenced at the most penetrating particle size

Surface finish interior

≤5 µin Ra

Helium leak rating

Tested 9 × 10^{-10} Pa m³/sec (9 × 10⁻⁹ atm cc/sec)

Maximum conditions

Maximum operating pressure:
16.2 MPa (162 bar, 2346 psig) @ 20°C (68°F)

Maximum forward/reverse differential pressure:
3 MPa (30 bar, 435 psid) @ RT

Maximum design temperature:
460°C (860°F)

Flow rating

See performance data

PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Wafergard II SF Mini</th>
<th>Differential Pressure (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGMSA1HRIU</td>
<td>N₂ Flow Rate (slm) @ 20°C (68°F), 101 kPa</td>
</tr>
</tbody>
</table>

0.1 MPa inlet 0.2 MPa inlet 0.3 MPa inlet 0.5 MPa inlet

<table>
<thead>
<tr>
<th>Wafergard II SF Mini XL</th>
<th>Differential Pressure (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGMS32PRU</td>
<td>N₂ Flow Rate (slm) @ 20°C (68°F), 101 kPa</td>
</tr>
</tbody>
</table>

0.1 MPa inlet 0.2 MPa inlet 0.3 MPa inlet 0.5 MPa inlet

<table>
<thead>
<tr>
<th>Wafergard II SF Mini XL</th>
<th>Differential Pressure (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGM502PRU</td>
<td>N₂ Flow Rate (slm) @ 20°C (68°F), 101 kPa</td>
</tr>
</tbody>
</table>

0.1 MPa inlet 0.2 MPa inlet 0.3 MPa inlet 0.5 MPa inlet
DIMENSIONS

Wafergard II SF Mini
WGMS A1HRU ¼" Gasket Seal, Male Inlet/Outlet

Wafergard II SF Mini XL
WGMS 02PRU ¼" Gasket Seal, Male Inlet/Outlet

Wafergard II SF Mini XL
WGMS 32PRU ½" Gasket Seal, Male Inlet/Outlet

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part number</th>
<th>Fitting options</th>
<th>Overall length</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGMSA1HRU</td>
<td>Wafergard SF Mini in-line filter, ¼&quot; gasket seal (compatible with VCR® fitting), male inlet/outlet</td>
<td>84 mm (3.31&quot;)</td>
</tr>
<tr>
<td>WGMS 02PRU</td>
<td>Wafergard II SF Mini XL in-line filter, ¼&quot; gasket seal (compatible with VCR fitting), male inlet/outlet</td>
<td>127.0 mm (5.00&quot;)</td>
</tr>
<tr>
<td>WGMS 32PRU</td>
<td>Wafergard II SF Mini XL in-line filter, ½&quot; gasket seal (compatible with VCR fitting), male inlet/outlet</td>
<td>133.5 mm (5.25&quot;)</td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION

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