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<td>pg. 5-15</td>
</tr>
</tbody>
</table>
**Technical Data**

**Oil Mist Discharge Filters**

**General**

Recent developments in product design allow for the possible selection of oil mist discharge filters based on the type of equipment being used. It is, for the first time, possible to identify the appropriate grade of aerosol discharge filter because of the extensive research completed by the Solberg R&D department. Please follow the rules below to correctly size your oil mist discharge filter. If further consultation is required, please contact Solberg or your Solberg sales representative in your area.

**Filter Selection Guidelines**

#1:
Forget all that you know about air/oil separators for Compressed Air Systems, as such systems repeatedly fail in a vacuum pump application. The first consideration is to determine the type of Vacuum Pump being used. The particle size distribution and mass of oil aerosol discharging from a vacuum pump is as varied as the number of separator tank designs utilized by the industry. The main pump types are Rotary Vane, Rotary Screw, Rotary Piston, Liquid Ring, and Reciprocating Vacuum Pumps. Each type of pump produces its own specific oil discharge characteristics and requires the appropriate media make-up to effectively capture and drain oil aerosols.

#2:
Determine the type of oil being used in the vacuum pump. Trade names, viscosity/grade of oil, and the lubricant base (mineral, synthetic, etc.) are all useful in determining the discharge aerosol characteristics.

#3:
Determine how much oil the pump consumes under normal operating conditions. Typical consumption rates are gallons or liters per hour. The amount of oil consumed is typically the amount of oil being discharged.

#4:
Pump operating cycles including vacuum range, temperature fluctuations, contaminant gases or vapors, and hours of operation per day/week. Also, determine the maximum pressure drop or filter restriction the system will allow.

#5:
Determine the operating temperature at the discharge connection. If it is above +220 ° F, methods of cooling the aerosol should be considered.

#6:
Note the Horsepower of the pump, the outlet connection, and the air flow.

#7: When an external unit is to be used as the primary or sole air/oil separator in a system, a multi-stage Severe Duty system is required.

#8: In the case where an existing air/oil separator (internal or external) is already used, it is important to specify the desired goal for a second filter. Is it planned to have a multi-staged system for severe or extreme duty applications, or is there a requirement for exceptionally clean discharge air? If a multiple stage system is needed, try to identify the primary stage unit and the purpose for the second stage.

#9: Consider where to install the Filter. Where possible it is best to install in moderate temperature (+36° to +100°F) environments and avoid freezing conditions to ensure the oil drains freely without causing undue back pressure to the vacuum pump.
Applications & Equipment

- Vacuum Pumps & Systems
- Vacuum Furnaces & Ovens
- Vacuum Freeze Drying & Outgassing
- Vacuum Metallizing
- Vacuum Drying
- Vacuum Coating
- Custom Vacuum Pumping Systems
- Food Processing & Packaging
- Industrial Vacuum Processes
- Pressure Unloading Vents on Piston Compressors
- Reciprocating Engines
- Crankcase
- Medical Work Areas
- Industrial Aerosol Scrubbing
- Heat Treating Equipment/Vacuum Hold Down
- Routing Equipment
- Laboratory Industry
- Leak Detectors
- Autoclaving, Sterilization

Identification

All Solberg products should have an identification label/nameplate that gives the following information:

Assembly Model #
Replacement Element #

The part number designates the filter type, the element configuration and housing connection size. For example, the following part number identifies the filter as being a “HDL” design filter with a “PSG344/2” coalescing element, and 3” MPT connection size.

HDL-PSG344/2-300
Oil Mist Discharge Filters
HDL Series 1” - 2 1/2” FPT

Features
• Captures oil fog, mist or smoke from exhaust of oil flooded vacuum pumps
• Seamless drawn housings-no welds to rust or vibrate apart
• Positive engagement O-ring seal system
• Rugged all steel construction with baked white enamel finish
• 1/4” drain tap

Benefits
• Large oil holding capacity and easy field maintenance
• Pleated filter element provides increased surface area for low back pressure separation of ultra-fine oil mists

Technical Specifications
• 0.3 micron media; 99.97% efficiency
• Continuous operating temp: 68°F (20°C) to 180°F (80°C)

Options
• Application specific filter media and gaskets/seals
• Custom connections
• Epoxy or PTFE coated finishes
• Stainless steel housings

FPT Connections

<table>
<thead>
<tr>
<th>FPT Inlet &amp; Outlet</th>
<th>Assembly</th>
<th>Assembly Part Number</th>
<th>Dimensions - Inches</th>
<th>Suggested Service HT.</th>
<th>Approx. Wt. lbs</th>
<th>Replacement Element Part No.</th>
<th>Element SCFM Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1”</td>
<td>40</td>
<td>HDL-PSG848-100HC</td>
<td>A 6 3/4 B 4 1/8 C 7 5/16 D 4 5/8</td>
<td>5 1/4</td>
<td>5</td>
<td>PSG848</td>
<td>50</td>
</tr>
<tr>
<td>1 1/4”</td>
<td>50</td>
<td>HDL-PSG848-125HC</td>
<td>6 3/4 4 1/8 7 5/16 4 5/8</td>
<td>5 1/4</td>
<td>5</td>
<td>PSG848</td>
<td>50</td>
</tr>
<tr>
<td>1 1/2”</td>
<td>50</td>
<td>HDL-PSG848-150HC</td>
<td>6 3/4 4 1/8 7 5/16 4 5/8</td>
<td>5 1/4</td>
<td>5</td>
<td>PSG848</td>
<td>50</td>
</tr>
<tr>
<td>2”</td>
<td>125</td>
<td>HDL-PSG850/1-200HC</td>
<td>11 1/4 4 9/16 8 3/4 5</td>
<td>9 1/4</td>
<td>15</td>
<td>PSG850/1</td>
<td>125</td>
</tr>
<tr>
<td>2”</td>
<td>175</td>
<td>HDL-PSG860/1-200HC</td>
<td>17 1/2 4 9/16 8 3/4 5</td>
<td>14 1/2</td>
<td>30</td>
<td>PSG860/1</td>
<td>200</td>
</tr>
<tr>
<td>2 1/2”</td>
<td>250</td>
<td>HDL-PSG244/2-250C</td>
<td>15 11/16 8 7/8 12 8 3/4 10</td>
<td>35</td>
<td>35</td>
<td>PSG244/2</td>
<td>300</td>
</tr>
</tbody>
</table>

2 1/2” housing has 1/4” taps standard on inlet and outlet.

See Discharge Filter Technical Data section for sizing guidelines.
Oil Mist Discharge Filters
HDL Series 3”MPT - 8” FLG

Features
- Captures oil fog, mist or smoke from exhaust of oil flooded vacuum pumps
- Positive engagement O-ring seal system
- Rugged all steel construction with baked white enamel finish
- 1/4” drain tap

Technical Specifications
- 0.3 micron media; 99.97% efficiency
- Continuous operating temp: 68°F (20°C) to 180°F (80°C)
- Housing pressure rating: 14.5 PSI

Benefits
- Large oil holding capacity and easy field maintenance
- Pleated filter element provides increased surface area for low back pressure separation of ultra-fine oil mists
- Multiple separation stages in single element design

Options
- Application specific filter media and gaskets/seals
- Custom connections
- Epoxy or PTFE coated finishes
- Stainless steel housings
- Nameplate bracket
- Lifting lugs

MPT/Flange Connections
<table>
<thead>
<tr>
<th>MPT Inlet &amp; Outlet</th>
<th>Assembly SCFM Rating</th>
<th>Assembly Part Number</th>
<th>DIMENSIONS - inches</th>
<th>Suggested Service HT. E</th>
<th>Approx. Wt. lbs</th>
<th>Replacement Element Part No.</th>
<th>Element SCFM Rating</th>
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</thead>
<tbody>
<tr>
<td>3”</td>
<td>300</td>
<td>HDL-PSG344/2-300</td>
<td>A 31 B 9 C 14 D 22 1/2 E 15</td>
<td>75</td>
<td>PSG344/2</td>
<td>500</td>
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<tr>
<td>4”</td>
<td>500</td>
<td>HDL-PSG344/2-400</td>
<td>A 31 B 9 C 14 D 22 1/2 E 15</td>
<td>78</td>
<td>PSG344/2</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>5”</td>
<td>800</td>
<td>HDL-PSG474/2-500</td>
<td>A 38 B 11 C 18 1/2 D 29 1/2 E 22</td>
<td>160</td>
<td>PSG474/2</td>
<td>1100</td>
<td></td>
</tr>
<tr>
<td>6”</td>
<td>1100</td>
<td>HDL-PSG474/2-600</td>
<td>A 39 B 12 C 18 1/2 D 30 1/2 E 22</td>
<td>160</td>
<td>PSG474/2</td>
<td>1100</td>
<td></td>
</tr>
<tr>
<td>8” FLG</td>
<td>1800</td>
<td>HDL-PSG476-800F</td>
<td>A 38 13/16 B 14 C 21 D 25 1/2 E 22</td>
<td>180</td>
<td>PSG476/2</td>
<td>1800</td>
<td></td>
</tr>
</tbody>
</table>

See Discharge Filter Technical Data section for sizing guidelines.

125/150# Dimensions - inches
<table>
<thead>
<tr>
<th>Pattern Flg</th>
<th>O.D.</th>
<th>B.C.</th>
<th>B.H.</th>
<th>No. of Holes</th>
<th>Flange Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>8”</td>
<td>13.5</td>
<td>11 3/4</td>
<td>0.88</td>
<td>8</td>
<td>0.38</td>
</tr>
</tbody>
</table>
Compact Closed Oil Mist Filters
EE/SV Series 3/8” - 1” MPT, ISO Flg

Features
• Captures oil fog, mist or smoke from exhaust of oil flooded vacuum pumps
• Seamless drawn housings – no welds to rust or vibrate apart
• Rugged all steel construction

Technical Specifications
• 0.3 micron media; 99.97% efficiency
• Continuous operating temp: 68°F (20°C) to 180°F (80°C)

Benefits
• Compact low profile design
• Easy field maintenance

Options
• Additional ISO flange connections
• Additional coating options available
• Side outlet configuration
• Drain for SV Series

EE Series Specifications
• Back pressure valve designed to release element at 0.5 bar (7.35 PSI) differential for pump safety
• 1/8” oil drain

<table>
<thead>
<tr>
<th>Inlet Type</th>
<th>Outlet Type</th>
<th>Assembly SCFM Rating</th>
<th>Assembly Part Number</th>
<th>Dimensions - inches</th>
<th>Replacement Element Part No.</th>
<th>Element SCFM Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4” MPT</td>
<td>1/2” FPT</td>
<td>8</td>
<td>EE-GL915-075</td>
<td>4 11/16 1 1/4 3 1/4 1/2</td>
<td>GL915</td>
<td>8</td>
</tr>
<tr>
<td>16mm ISO Flg</td>
<td>16mm ISO Flg</td>
<td>8</td>
<td>EE-GL915-QF16</td>
<td>4 11/16 7/8 3 1/4 7/8</td>
<td>GL915</td>
<td>8</td>
</tr>
<tr>
<td>25mm ISO Flg</td>
<td>25mm ISO Flg</td>
<td>8</td>
<td>EE-GL915-QF2516</td>
<td>4 11/16 7/8 3 1/4 7/8</td>
<td>GL915</td>
<td>8</td>
</tr>
</tbody>
</table>

SV Series Specifications
• Configured without valve or external drain

<table>
<thead>
<tr>
<th>Inlet Type</th>
<th>Outlet Type</th>
<th>Assembly SCFM Rating</th>
<th>Assembly Part Number</th>
<th>Dimensions - inches</th>
<th>Replacement Element Part No.</th>
<th>Element SCFM Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8” BSPT</td>
<td>5/8” Tube</td>
<td>4</td>
<td>SV-GL910-039</td>
<td>3 1/2 7/8 2 1/2 1/2</td>
<td>GL910</td>
<td>4</td>
</tr>
<tr>
<td>1/2” MPT</td>
<td>5/8” Tube</td>
<td>4</td>
<td>SV-GL910-050</td>
<td>3 1/2 7/8 2 1/2 1/2</td>
<td>GL910</td>
<td>4</td>
</tr>
<tr>
<td>3/4” MPT</td>
<td>1/2” FPT</td>
<td>8</td>
<td>SV-GL915-075</td>
<td>4 11/16 1 1/4 3 1/4 1/2</td>
<td>GL915</td>
<td>8</td>
</tr>
<tr>
<td>16mm ISO Flg</td>
<td>16mm ISO Flg</td>
<td>8</td>
<td>SV-GL915-QF16</td>
<td>4 11/16 7/8 3 1/4 7/8</td>
<td>GL915</td>
<td>8</td>
</tr>
<tr>
<td>25mm ISO Flg</td>
<td>25mm ISO Flg</td>
<td>8</td>
<td>SV-GL915-QF2516</td>
<td>4 11/16 7/8 3 1/4 7/8</td>
<td>GL915</td>
<td>8</td>
</tr>
</tbody>
</table>

Options
See Oil Mist Discharge Filter Technical Data section for sizing guidelines.
Compact Oil Mist Filters
EF Series 1/2” - 1 3/4”, MPT, ISO Flg

Features
- Captures oil fog, mist or smoke from discharge of oil flooded vacuum pumps
- Steel construction with nickel plated finish

Benefits
- Easy thumb screw access for element maintenance
- Seamless drawn housings – no welds to rust or vibrate apart

Technical Specifications
- 0.3 micron media; 99.97% efficiency
- Continuous operating temp: 68°F (20°C) to 180°F (80°C)

Options
- Additional ISO flange connections
- Special connections

Connection Sizes & Styles

<table>
<thead>
<tr>
<th>Inlet Size</th>
<th>Inlet Type</th>
<th>Assembly SCFM Rating</th>
<th>Assembly Part Number</th>
<th>DIMENSIONS - inches</th>
<th>Approx. Wt. lbs.</th>
<th>Replacement Element Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2” MPT</td>
<td>4.5</td>
<td>EF-FG5-050</td>
<td>4 1/2 1 2 1/2</td>
<td>0.6</td>
<td>FG5</td>
<td></td>
</tr>
<tr>
<td>1/2” MPT</td>
<td>7</td>
<td>EF-FG7-050</td>
<td>5 1/2 1 2 1/2</td>
<td>1.8</td>
<td>FG7</td>
<td></td>
</tr>
<tr>
<td>3/4” 20 Fine Thread</td>
<td>4</td>
<td>EF-FG3-077</td>
<td>3 1/4 1 2 1/2</td>
<td>1.2</td>
<td>FG3</td>
<td></td>
</tr>
<tr>
<td>3/4” MPT</td>
<td>4.5</td>
<td>EF-FG5-075</td>
<td>5 1 2 1/2</td>
<td>0.9</td>
<td>FG5</td>
<td></td>
</tr>
<tr>
<td>3/4” MPT</td>
<td>7</td>
<td>EF-FG7-075</td>
<td>6 1 1/2 2 1/2</td>
<td>1.8</td>
<td>FG7</td>
<td></td>
</tr>
<tr>
<td>1” 20 Fine Thread</td>
<td>4.5</td>
<td>EF-FG5-103</td>
<td>3 7/8 7/8 2 1/2</td>
<td>0.7</td>
<td>FG5</td>
<td></td>
</tr>
<tr>
<td>1” 20 Fine Thread</td>
<td>7</td>
<td>EF-FG7-103</td>
<td>5 7/8 2 1/2</td>
<td>0.8</td>
<td>FG7</td>
<td></td>
</tr>
<tr>
<td>1” 20 Fine Thread</td>
<td>16</td>
<td>EF-FG9-103</td>
<td>5 1/8 7/8 5 1/8</td>
<td>1.8</td>
<td>FG9</td>
<td></td>
</tr>
<tr>
<td>1” 20 Fine Thread</td>
<td>24</td>
<td>EF-FG10-103</td>
<td>7 1/4 7/8 5 1/8</td>
<td>7</td>
<td>FG10</td>
<td></td>
</tr>
<tr>
<td>1 3/4” 20 Fine Thread</td>
<td>24</td>
<td>EF-FG10-177</td>
<td>8 1/8 1 3/4 5 1/8</td>
<td>3.5</td>
<td>FG10</td>
<td></td>
</tr>
<tr>
<td>16mm ISO Flange</td>
<td>4.5</td>
<td>EF-FG5-NW16</td>
<td>4 1/2 7/8 2 1/2</td>
<td>0.6</td>
<td>FG5</td>
<td></td>
</tr>
<tr>
<td>25mm ISO Flange</td>
<td>4.5</td>
<td>EF-FG5-NW2516</td>
<td>4 1/2 7/8 2 1/2</td>
<td>1.4</td>
<td>FG5</td>
<td></td>
</tr>
<tr>
<td>25mm ISO Flange</td>
<td>24</td>
<td>EF-FG10-KF25</td>
<td>9 1/4 2 1/8 5 1/8</td>
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<td>FG10</td>
<td></td>
</tr>
<tr>
<td>40mm ISO Flange</td>
<td>44</td>
<td>EF-FG20-KF40</td>
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<td>7</td>
<td>FG20</td>
<td></td>
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<tr>
<td>40mm ISO Flange</td>
<td>55</td>
<td>EF-FG24-KF40</td>
<td>9 1/4 2 1/8 10 1/4</td>
<td>9</td>
<td>FG24</td>
<td></td>
</tr>
</tbody>
</table>

Dimension tolerance ± 1/4”
Oil Mist Filters w/Drain Back  
EFDB Series

Features
- Captures oil fog, mist or smoke from exhaust of oil flooded vacuum pumps
- Auto drain back design to recycle oil mist:
  - Internal drain returns oil back into pump
  - Prevents oil blow back with auto sealing
  - Enclosed housing allows clean environment

Benefits
- Easy thumb screw access for element maintenance
- Compact design
- Seamless drawn housings – no welds to rust or vibrate apart

Technical Specifications
- 0.3 micron media; 99.97% efficiency
- Continuous operating temp: 68°F (20°C) to 180°F (80°C)

Options
- Additional ISO flange connections
- Special connections

Connection Styles & Sizes

<table>
<thead>
<tr>
<th>Inlet Size &amp; Style</th>
<th>Assembly SCFM Rating</th>
<th>Assembly Part Number</th>
<th>Dimensions - inches</th>
<th>Approx. Wt. lbs</th>
<th>Replacement Element</th>
</tr>
</thead>
<tbody>
<tr>
<td>KF25 ISO Flange</td>
<td>16</td>
<td>EFDB-FG9-KF25</td>
<td>A: 8 3/8 B: 2 1/8 C: 5 1/8</td>
<td>2.5</td>
<td>FG9</td>
</tr>
<tr>
<td>1&quot;-20 Fine</td>
<td>16</td>
<td>EFDB-FG9-103</td>
<td>A: 7 1/8 B: 7/8 C: 5 1/8</td>
<td>2.3</td>
<td>FG9</td>
</tr>
<tr>
<td>1 3/4&quot;-20 Fine</td>
<td>24</td>
<td>EFDB-FG11-177</td>
<td>A: 9 5/8 B: 2 C: 6 1/4</td>
<td>2.5</td>
<td>FG11</td>
</tr>
</tbody>
</table>

See Oil Mist Discharge Filter Technical Data section for sizing instructions.  
Dimension tolerance ± 1/4"
Air/Oil Sump & Separator Tank
For Vacuum Pumps, ATS Series

**Features**
- Complete separator package for vacuum pumps
- Captures oil fog, mist or smoke from exhaust of oil flooded vacuum pumps
- Multiple separation stages
- Separator baffle system for larger particles
- Rugged carbon steel construction
- 2” NPT oil fill port
- 1” NPT sump drain
- 1” NPT pump return port
- 1/4” tap hole standard: 3” housing

**Benefits**
- Low profile design
- Connects directly to discharge; no hardware needed
- Simplifies system packaging by integrating sump tank with separator
- Pleated separator element provides increased surface area for low back pressure separation of ultra-fine oil mists

**Technical Specifications**
- 0.3 micron media; 99.97% efficiency
- Continuous operating temp: 68°F (20°C) to 180°F (80°C)

**Options**
- Specialty media configuration
- Housing material
- Special connections

**Connection Styles & Sizes**

<table>
<thead>
<tr>
<th>FPT Inlet</th>
<th>FPT Outlet</th>
<th>Assembly SCFM Rating</th>
<th>Assembly Part Number</th>
<th>DIMENSIONS - inches</th>
<th>Sump Capacity Liters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/2&quot;</td>
<td>2&quot;</td>
<td>100</td>
<td>ATS-PSG850/1-150HC</td>
<td>29 1/2 22 5/8 11 7/8 8 8 5/8 14 15</td>
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</tr>
<tr>
<td>2&quot;</td>
<td>2&quot;</td>
<td>200</td>
<td>ATS-PSG860/1-200HC</td>
<td>36 1/8 23 1/8 16 12 10 13/16 16 1/8 30</td>
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<tr>
<td>3&quot;</td>
<td>3&quot;</td>
<td>400</td>
<td>ATS-PSG344/2-300C</td>
<td>47 13/16 32 5/16 20 15 20 27 3/4 65</td>
<td></td>
</tr>
</tbody>
</table>

See Oil Mist Discharge Filter Technical Data section for sizing instructions.  
Dimension tolerance ± 1/4"
Vacuum Assisted Oil Mist Eliminators
Reciprocating Engines and Turbines

Our Vacuum Assisted Oil Mist Eliminators are designed for field upgrades and new reciprocating engines and turbine installations around the world. Our high efficiency filtration systems eliminate vented oil mist emissions while controlling engine pressure in crankcases and turbine lube oil reservoirs. We offer either vapor extractor and static options based on application requirements.

Series Specific Applications

Reciprocating Engines: Stationary

- Crankcase ventilation systems ensure environmental compliance and protect surrounding workplace from harmful oil mist emissions
- Open and closed system designs
- Prevents engine intake system contamination & seal leakage
- Improves engine performance
- Controls crankcase pressure
- Applications: landfill gas to energy, standby power, prime power and mechanical drive

Gas & Steam Turbines

- Retrofits and upgrades to replace outdated and inefficient vapor extractors for lube oil systems
- Typical systems include: high efficiency coalescing element, vacuum / pressure controls and integrated bypass device to simply maintenance and reduce operating costs
- Applications: peaking, nuclear, and base load power plants

Reciprocating Engines: Marine

- Crankcase ventilation systems ensure safety and reliability
- Unique piping configuration for easy installation, self regulation and seal leak prevention
- Captures vented oil mist emissions and reduces breathing and slipping hazards
- Applications: passenger ships, workboats, military vessels
Vacuum Assisted Oil Mist Eliminators

1 - 1500 CFM

Features
• Eliminates visible oil mist emissions
• High efficiency and long lasting replaceable coalescing elements
• Rugged carbon steel construction
• Industrial grade powder coat finish
• Drain ports for oil recovery
• Control valves for precise pressure regulation
• Large assortment of motor options (Explosion proof, ATEX, etc.)
• Integrated vacuum relief for motor protection
• Contact factory for specific flow ratings and sizes.

Technical Specifications
• 0.3 micron media; 99.97% efficiency
• Flow range: 1-1,500 ft³/m (1-2550 m³/h) std, higher flows are available on request
• Pressure Rating: 1 bar full vacuum (most models)

Environmental Compliance
Based on the U.S. EPA’s RICE NESHAP* ruling, stationary engines over 300HP must be equipped with a crankcase ventilation system by 2013. The objective is to reduce the harmful crankcase emissions emitted into the environment.

Solberg is committed to partnering with plant operators to update their equipment and lessen their environmental impact.

Options
• Redundant equipment to ensure continuous operation
• Full automation: PLC and DCS compatible
• Stainless steel construction for harsh environments
• Custom coating and colors
• ASME Section VIII or PED pressure certifications
• Explosive environ. options: ATEX, Class I Div. 1, etc.
• Motor listings: UL, CE, IEC, CSA, IEEE, KOSHA, etc.
• Motor accessories: Heaters, starters, switches, VFD, etc.
• Skid mounted units for ease of transport & installation
• Service and maintenance platforms
• GOST certification

* Reciprocating Internal Combustion Engines
**Closed Crankcase Ventilation Systems**

**Capture Vented Crankcase Emissions**

**CCV Series**

Solberg designs and manufactures high efficiency Closed Crankcase Ventilation Systems to capture oil mist and particulate emissions (blow-by) from the crankcases of a reciprocating engine. Solberg’s closed systems protect an engine’s turbo, intercoolers and exhaust catalysts from oil mist and particulate contamination. The results are optimized engine performance and a reduction in costly repairs and maintenance.

**Solutions Designed For**

- Caterpillar
- Jenbacher
- Waukesha
- MTU
- Guascor
- Wartsila
- Cummins
- Fairbanks Morse

**Typical Applications**

- Electric Power Generation
- Marine Power Generation
- Marine Propulsion
- Gas Compression

**Benefits & Purpose**

- Captures the hazardous oil mist and particulate emissions “blow-by” vented from the crankcase.
- Achieves 99.97% efficiency for 0.3 micron oil mist and particulate
- Protects the turbocharger, intercoolers and exhaust catalysts from contamination and damage.
- Prevents potential health hazards from entering the surrounding environment and workplace.
- Maintains required crankcase vacuum via integrated self-regulating valve
- Recovers expensive lube oil lost during the venting process, which allows for efficient operation and lower maintenance costs.

**Vacuum Control Valve**

VLV Series

Solberg Closed Crankcase Ventilation System With Integrated Vacuum Control Valve

CLV Package
Static Vent Oil Mist Eliminators  
CV, CVH Series

**Series Specific Applications**
- Vents for Oil Reservoirs, Crankcases, Bearings, Coupling Guards
- Compressor, Turbine, Gearbox, Engine Applications

**Features**
- Eliminates visible vented oil mist emissions
- High efficiency fiberglass filter elements: 99.97% removal efficiency for 0.3 µm oil mist
- Carbon steel construction with durable powder coat finish
- Low back pressure filter element design: Pleated and wrapped fiberglass options
- Extensive flow range
- Continuous operating temp: 20°C (68°F) - 80°C (180°F)
- Contact factory for specific flows and sizes.

**Options**
- Stainless steel construction
- Special coatings and finishes
- Internal drain-back mechanism
- Alternative filtration media (wire mesh demister, vane separator)
- Multiple configurations
- Vacuum assisted oil mist eliminators (See page 5-10 to 5-11)
Static Vent Oil Mist Eliminators
CVB Series

Features
- Eliminates visible vented oil mist emissions
- Carbon steel construction with powder coat finish
- Low back pressure filter element design: Pleated and wrapped media options
- External drain-back mechanism
- Extensive flow range available upon request

Technical Specifications
- 0.3 micron media; 99.97% efficiency; Typically 5 PPM or less*
- Continuous operating temp: 68°F (20°C) to 180°F (80°C)
* 150 PPM challenge or less

Series Specific Applications
- Air/Oil Separation Vents for oil reservoirs, crankcases, bearings, coupling guards
- Compressors, turbines, gearboxes, engines and more

Options
- Stainless steel construction and resistance coatings
- Alternative filtration media (Wire mesh demister, vane separator)
- Vacuum assisted style available: BAE Series

Options
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- Alternative filtration media (Wire mesh demister, vane separator)
- Vacuum assisted style available: BAE Series
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Outlet Dimensions
- **Outlet Size**
- **Assembly Part Number**
- **Dimensions - inches**
- **Approx. Wt. lbs**
- **Replacement Element Part No.**

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<th>Outlet Size</th>
<th>Assembly Part Number</th>
<th>Dimensions - inches</th>
<th>Approx. Wt. lbs</th>
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Dimension: ± 1/4"
Series Specific Applications

- Landfill and Bio-Gas recovery
- Fuel for reciprocating engines and gas turbines
- Gas compression
- Compressor packages
  - Rotary Screw
  - Centrifugal
  - Reciprocating
  - Vane

Features

- Protects equipment from condensate, oil, and particulate entrained in the gas stream
- Multi-stage separation
  - 316 SS vane pack or demister pad for heavy condensate and oil removal
  - High efficiency 99+% final filter elements
- Rugged carbon steel construction
- Contact factory for model offering and availability

Options

- Special standards: PED, CRN, ATEX, ASME
  - Vessel code sec. VIII division I
- Stainless steel construction
- Special coatings or finishes
- Replaceable filter elements in various efficiencies for particulate removal
- Gauge ports, float switches
- Custom leg supports
- Flush port for vessel cleaning
- Removable vessel lid for element service
- Davit arm for vessel lid removal