MFL NEW Series of Vacuum Generators

Specifically Designed to Reduce Size & Weight while Providing High Vacuum Flow for Fast Evacuation

Big Performance In A Small Package
- Vacuum Flow: to 19.5 scfm
- Vacuum Level: 27.2"Hg
- Light Weight: 11.5 oz.
- Compact: 7/8" x 1-7/8" x 6-1/2"

Efficient Multi-Stage Design
- High Initial Flow Rate
- Fast Evacuation
- Quiet Operation
- Low Maintenance
- Low Cost
- FREE Application Assistance

MFL Multi-Stage Design
- Used in “pick and place” applications.
- Used with vacuum cups for material handling where sealing is difficult and leakage is common due to uneven surfaces.
- High initial flow rate allows vacuum cups to quickly attach to the surface.
- Other applications include end-of-arm tooling and evacuation of chambers.

Flexible Mounting & Positioning
Simple Installation
- Elbow allows muffler to be mounted 90° to pump and rotated if necessary. Muffler can also be attached directly for straight through exhaust.
- Mounting plate for easy attachment to flat surface.
- Multiple units assembled together reduces space requirements.

Principle of Operation
Compressed air flows through a small venturi nozzle to generate a high velocity. The air expands into the first chamber to generate vacuum. The combination of compressed air and vacuum flow from the first chamber flows through a second venturi where it produces additional vacuum flow. This combination flows through a third venturi to produce additional vacuum flow. This design is capable of vacuum levels up to 27.2"Hg and vacuum flow up to 19.5 scfm.
MFL Multi Stage Design Provides Four Different Capacities

Two sizes are available. Each provides two vacuum levels of 27"Hg or 19"Hg, providing similar vacuum flow rates but different air consumption. The H60 version generates a vacuum level of 27"Hg. The VF version generates 19"Hg vacuum level but with a saving of 50-60% air usage.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Specifications</th>
<th>Vacuum Flow Rate (scfm) @ Vacuum Levels, &quot;Hg</th>
<th>Time in Seconds to Evacuate 1 Cubic Foot to Vacuum Levels, &quot;Hg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vac level</td>
<td>1.5&quot; 3&quot; 6&quot; 9&quot; 12&quot; 15&quot; 18&quot; 21&quot; 24&quot;</td>
<td>6&quot; 9&quot; 12&quot; 15&quot; 18&quot; 21&quot; 24&quot;</td>
</tr>
<tr>
<td>MFL147H60</td>
<td>&quot;Hg  scfm  scfm psi</td>
<td>27.2 13.3 4.3 60</td>
<td>9.2 6.1 2.8 1.5 1.2 .93 .72 .54 .3</td>
</tr>
<tr>
<td>MFL147VF</td>
<td>&quot;Hg  scfm  scfm psi</td>
<td>19.5 12.0 2.5 60</td>
<td>6.6 4.7 2.2 1.8 1.4 .85 .36 - -</td>
</tr>
<tr>
<td>MFL187M</td>
<td>&quot;Hg  scfm  scfm psi</td>
<td>27.2 19.5 7.5 75</td>
<td>16.3 11.0 6.3 2.6 2.2 1.8 1.3 .73 .4</td>
</tr>
<tr>
<td>MFL187VF</td>
<td>&quot;Hg  scfm  scfm psi</td>
<td>18.5 15.2 3.9 75</td>
<td>10.5 7.0 3.6 2.8 2.0 1.2 - - -</td>
</tr>
</tbody>
</table>

Vacuum Inlet - 3/8 NPTF for MF147; 1/2 NPTF for MF187

Sound Level with muffler 71dBA

Weight 11.5 oz.

Options

- MF Flow Through Muffler
  Quiets pump to 71dBA.
  - S375 MF (1 1/4" dia.). Used in single unit installations.
  - MFLMP Mounting Plate required for mounting to flat surface.
  - S475 MF (7/8" dia.). Used in multiple mounting installations.

- VG30 Vacuum Gauge
  - 1-1/2" diameter
  - 0-30"Hg scale
  - MFLMP Mounting Plate includes screws.
  - MFLMA Elbow Assembly with set screw for securing position of muffler.
  - Multiple units assembled together reduces space.
  - MFLR5 Assembly Kit - Consists of two mounting rods, two mounting plates, nuts, washers and spacers for assembling multiple pumps. Contact Air-Vac to specify number of pumps required.

The following part numbers should be used when ordering options with vacuum pump.
- Vacuum Pump only: ie. MFL147H60
- Vacuum Pump with Mounting Plate and Muffler: ie. add suffix MFL147H60B
- Other options can be ordered separately

*5 indicates number of pumps

www.airvacpumps.com