Oil Rotary Vacuum Pump [VD Series]

VD series is a direct-drive low noise oil rotary vacuum pump. This pump is suitable for a wide range of applications such as evaporator, sputtering and food packaging.

Features

- Optimized Design Operation for Quiet
- Easy Maintenance
  Pump head can be removed without disconnecting the vacuum piping (except VD151, VD201). See attached figure.
  Oil level gauge and drain valve accessible for easy oil exchange and daily inspection.
- Forced Oil Circulation System Ensures Stable Pumping Speed Below Atmospheric Pressure
  When equipped with the optional oil mist trap and oil return mechanism, the VD301, VD401 and VD601 can continuously run at all pressure ranges below atmospheric pressure.

Applications

- Evaporation, sputtering, and ion plating
- Analytical instrument and leak test system
- Gas exchange, gas filling, and vacuum insulation
- Vacuum drying, freeze drying, vacuum degassing, vacuum packing, vacuum chuck and vacuum molding, etc.
Oil Rotary Vacuum Pump [VD Series]

### Dimensions

**VD151**
- **Inlet (JIS B 8365 KF25 equivalency)**
- **Oil cap G3/4**
- **Outlet G1**
- **Gas ballast valve**
- **Rubber legs**
- **Oil mist trap (option)**

**Unit: mm**

**VD201**
- **Inlet (JIS B 8365 KF25 equivalency)**
- **Oil cap G3/4**
- **Outlet G1**
- **Gas ballast valve**
- **Rubber legs**
- **Oil mist trap (option)**
- **Oil level gauge**

**Unit: mm**

**VD301, 401**
- **Gas ballast port G3/8**
- **Oil cap G1 (PF1)**
- **Outlet flange 4-M8 tap, Central diameter Ø85 JIS B 2290 VG40 equivalency**
- **Inlet flange 4-M8 tap, Central diameter Ø85 JIS B 2290 VG40 equivalency**
- **Drip-proof protected Flange induction motor 3phase 1.5kW 4P**
- **Oil drain valve G1/2**
- **Oil mist trap (option)**
- **Oil level gauge**

**Unit: mm**

*Note:* [VD401 dimension]
When a pump is removed (VD301 ～ VD901)

- **VD601**
  - Gas ballast port G3/8
  - Oil cap G1
  - Drip-proof protected
  - Flange induction motor
  - 3phase 2.2kW 4P
  - Unit: mm

- **VD901**
  - Gas ballast port G3/8
  - Oil cap G1
  - Totally-enclosed Fan-cooled
  - Flange induction
  - Motor 3phase 3.7kW 4P
  - Unit: mm
## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>VD151</th>
<th>VD201</th>
<th>VD301</th>
<th>VD401</th>
<th>VD601</th>
<th>VD901</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Designed pumping speed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50Hz m³/h</td>
<td>14.4</td>
<td>20.2</td>
<td>30</td>
<td>40</td>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>L/min</td>
<td>240</td>
<td>336</td>
<td>500</td>
<td>670</td>
<td>1000</td>
<td>1500</td>
</tr>
<tr>
<td>CFM</td>
<td>8.47</td>
<td>11.89</td>
<td>17.66</td>
<td>23.54</td>
<td>35.31</td>
<td>52.97</td>
</tr>
<tr>
<td>60Hz m³/h</td>
<td>17.3</td>
<td>24.2</td>
<td>36</td>
<td>48</td>
<td>72</td>
<td>108</td>
</tr>
<tr>
<td>L/min</td>
<td>288</td>
<td>403</td>
<td>600</td>
<td>800</td>
<td>1200</td>
<td>1800</td>
</tr>
<tr>
<td>CFM</td>
<td>10.18</td>
<td>14.24</td>
<td>21.29</td>
<td>28.25</td>
<td>42.38</td>
<td>63.57</td>
</tr>
<tr>
<td><strong>Ultimate pressure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP close</td>
<td>Pa</td>
<td>0.67</td>
<td>1.19</td>
<td>1.88</td>
<td>3.58</td>
<td>9.3</td>
</tr>
<tr>
<td>Torr</td>
<td>5x10^-2</td>
<td>1.19</td>
<td>1.88</td>
<td>3.58</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>mbar</td>
<td>6.7x10^-1</td>
<td>1.19</td>
<td>1.88</td>
<td>3.58</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>GP open</td>
<td>Pa</td>
<td>6.7</td>
<td>2</td>
<td>5.3</td>
<td>10.5</td>
<td>20</td>
</tr>
<tr>
<td>Torr</td>
<td>5x10^-2</td>
<td>1.19</td>
<td>1.88</td>
<td>3.58</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>mbar</td>
<td>6.7x10^-1</td>
<td>1.19</td>
<td>1.88</td>
<td>3.58</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td><strong>Motor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Totally Enclosed Fan Cooled Motor</td>
<td>Drip-proof protected Flange Motor</td>
<td>Totally Enclosed Fan Cooled Motor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>kw (number of poles)</td>
<td>0.55 (4)</td>
<td>0.75 (4)</td>
<td>2.2 (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HP (number of poles)</td>
<td>0.55 (4)</td>
<td>0.75 (4)</td>
<td>2.2 (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil capacity</td>
<td>0.7 to 1.1 L</td>
<td>1.0 to 2.5 L</td>
<td>2.5 to 4.0 L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External dimensions W×L×H</td>
<td>170×514×240mm</td>
<td>170×536×265mm</td>
<td>236×603×324mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>29 kg</td>
<td>34 kg</td>
<td>61 kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Certification</strong></td>
<td>CE</td>
<td>CE</td>
<td>CE (Option)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Standard accessories</strong></td>
<td>Motor, Oil for 1 pump, Operation manual</td>
<td>Oil mist trap, Gas ballast valve, Oil return mechanism, Helium tight, CE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Pumping Speed Curves

**VD151, 201**

**VD301, 401**

**VD601, 901**

---

**ULVAC, Inc. Components Division**

[www.ulvac.co.jp/eng](http://www.ulvac.co.jp/eng)

**Overseas Sales in Japan**

- **USA**: ULVAC Technologies, Inc. TEL +1-467-89-2261
- **PHILIPPINES**: ULVAC Singapore Philippines Branch TEL +63-2-828-7700
- **GERMANY**: ULVAC GmbH TEL +49-89-960909-0
- **VIETNAM**: ULVAC Singapore Vietnam Representative Office TEL +84-8-62566762
- **CHINA**: ULVAC (SHANGHAI) Trading Co., Ltd. TEL +86-21-6127-6618
- **THAILAND**: ULVAC (THAILAND) LTD TEL +66-2-312-4447
- **TAIWAN**: ULVAC TAIWAN, Inc. TEL +886-3-579-5688
- **MALAYSIA**: ULVAC MALAYSIA SDN. BHD. TEL +60-3-5121-4700
- **KOREA**: ULVAC KOREA, Ltd. TEL +82-31-883-2922
- **INDIA**: ULVAC, Inc., India Branch TEL +91-40-27007006

*This catalog is subject to change without notice.

*This catalog is published in order to sell this product in overseas. Please see Japanese catalog when purchasing in Japan.*