Powder Transfer Diaphragm Pumps

The Yamada Powder Transfer Pumps were specifically designed to move bulk solids more effectively throughout your process. They are a cost effective replacement for Augers and Conveyors and eliminate unsafe and labor intensive means of moving bulk powders. These heavy duty pumps consistently transfer fine-grained (100µm or finer), low bulk density (5 to 10 lbs/cubic feet or 0.08 to 0.16kg/liter), dry powders in a dust-free operation. Yamada offers a base unit specifically for light powders, which include the following standard features.

- Conveying distance depends upon the micron size and the bulk density of the powder. For example, fumed silica can be conveyed a maximum of 150 feet (45m). Flour can be conveyed a maximum of 40 feet (12M). Refer to the Yamada "Pumpable Powders" data sheet for specific materials.
- Powder must be 150 mesh (106 micron) or smaller size particle / powder and dry. The Pump will not pump crystals or flakes and the bulk density should be less than 50lbs/cubic feet (0.8kg/liter). The higher the bulk density, the shorter the conveying distance and the lower the flow rate.
- The Pump can be located a maximum of 15 feet (4.5M) above powder source.
- Yamada recommends aeration / fluidization of the powder a minimum of 10 to 15 seconds prior to starting the pump, premature diaphragm, center shaft, and center disk failure can be avoided.
- PTFE check balls are recommend for sticky powders.
- Yamada recommends regulating compressed air to 70PSI (0.5MPa) Maximum.

Applications

- Activated Carbon
- Acrylic Resins
- Aluminum Oxide
- Bentonite
- Carbon Black
- Cereal Flours
- Clay Powder
- Diatomaceous Earth
- Expanded Mica
- Fire - extinguishing Powder
- Fumed Silica
- Ground Limestone
- Kaolin
- Micro Dolomite Filter
- Dust
- Pearlite
- Pesticides
- Pharmaceuticals
- Pigments
- Powder Coatings
- Powdered Plastics
- Powdered Rock
- Quartz Powder
- Salicylic Acid
- Silicas
- Starch
- Talc
- Toners
- And many more...

Condition of powder

- Apparent specific gravity is 0.5 or less
- Angle of respose is 30 degree or less
- Powder must be completely dry
- Powder must have large fluidity

⚠️ REMARK

The performance data for powder transfer is highly dependent upon the material being pumped and the application. A trial of the pump in the actual use environment is recommended to verify the actual performance capabilities for any given material.
## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>NDP-25</th>
<th>NDP-40</th>
<th>NDP-50</th>
<th>NDP-80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal port size</td>
<td>1&quot; (25A)</td>
<td>1-1/2&quot; (40 A)</td>
<td>2&quot; (50A)</td>
<td>3&quot; (80A)</td>
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<tr>
<td>Connection to liquid</td>
<td></td>
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<tr>
<td>Inlet</td>
<td>Rc1</td>
<td>JIS 10K40A</td>
<td>JIS 10K50A</td>
<td>JIS 10K80A</td>
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<td>Outlet</td>
<td>Rc3/8</td>
<td>Rc1/2</td>
<td>Rc3/4</td>
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<td>Air connection</td>
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<tr>
<td>Inlet</td>
<td>Rc3/4</td>
<td>Rc3/4</td>
<td>Rc1</td>
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<td>Outlet</td>
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<tr>
<td>Wetted body</td>
<td>ADC12</td>
<td>ADC12, AC4C-T6</td>
<td>ADC12, AC4C-T6</td>
<td>ADC12, AC4C-T6</td>
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<tr>
<td>Non wetted body</td>
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<td>Ball seat</td>
<td>MSM1025, SUS316</td>
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<td>Center disk</td>
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<td>SUS316, A5056</td>
<td>SUS316, A5056</td>
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<td>Material</td>
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<td>Air supply pressure range</td>
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<tr>
<td>Max discharge pressure</td>
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<td>0.7 MPa</td>
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<tr>
<td>Max discharge volume</td>
<td>Approx 200kg/h</td>
<td>Approx 500kg/h</td>
<td>Approx 1000kg/h</td>
<td>Approx 1500kg/h</td>
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<tr>
<td>Max air consumption</td>
<td>1600L/min(ANR)</td>
<td>4000L/min(ANR)</td>
<td>6000L/min(ANR)</td>
<td>6000L/min(ANR)</td>
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<td>Max slurry diameter</td>
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<tr>
<td>Weight</td>
<td>13kg</td>
<td>20kg</td>
<td>29kg</td>
<td>40kg</td>
</tr>
</tbody>
</table>

### Dimensions

**NDP-25**

![NDP-25 Diagram](image)

**NDP-40**

![NDP-40 Diagram](image)

**NDP-50**

![NDP-50 Diagram](image)

**NDP-80**

![NDP-80 Diagram](image)