Jet pumps
50 Hz
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**Application**

Built for long trouble-free life, the small and handy Grundfos jet pump is suitable for a wide variety of water supply and transfer duties in home, garden and hobby applications as well as in agriculture, horticulture and small-scale service industries.

Combined with Presscontrol or tank for demand control the Jet pump is ideal for small water supply systems.

**Pumped liquids**

Clean, thin, non-aggressive and non-explosive liquids without solid particles or fibres. Use of the pump for pumping unclean liquids, such as pool water, requires subsequent flushing with clean water. The pump must not be used for transfer of diesel oil or other oil-containing liquids.

**Duty range**

- Flow, Q: Up to 117 l/min (7 m³/h).
- Head, H: Maximum 48 metres.
- Operating pressure: Maximum 6 bar.
- Suction lift: Maximum 8 metres, including suction pipe pressure loss at a liquid temperature of +20°C.
- Liquid temperature: Material variant A: 0°C to +40°C. Material variant B: 0°C to +55°C.
- Ambient temperature: Maximum +40°C.

**Pump**

The JP pump is a self-priming, single-stage centrifugal pump with axial suction port and radial discharge port, G 1 or Rp 1. The pump has a built-in ejector with guide vanes for optimum self-priming properties.

JP pumps are available in two material variants:

**Material variant A:** Cover plate, motor stool and base plate in one unit. The handle is fitted crosswise. Both are made of composite material.

**Material variant B:** Stainless steel cover plate, aluminium motor stool and stainless steel base plate, all separate parts. The robust design makes the pump suitable for fixed installation. The custom-built composite handle is fitted lengthwise.

For further information about the material specifications of the pump, see "Materials".

**Motor**

The pump is directly coupled to a special fan-cooled asynchronous Grundfos motor, adapted to the pump performance. Single-phase motors have a built-in thermal switch and require no additional motor protection. Three-phase motors require external motor protection.

Enclosure class: IP 44 (splash-proof).

Insulation class: F.

**Materials**

<table>
<thead>
<tr>
<th>Shaft seal</th>
<th>Material</th>
<th>DIN W.-Nr.</th>
<th>AISI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationary seat</td>
<td>Carbon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotating face</td>
<td>Ceramic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>Stainless steel</td>
<td>1.4301</td>
<td>304</td>
</tr>
<tr>
<td>Housing for rotating face</td>
<td>Stainless steel</td>
<td>1.4301</td>
<td>304</td>
</tr>
<tr>
<td>O-rings</td>
<td>NBR rubber</td>
<td></td>
<td></td>
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</tbody>
</table>

Other parts

<table>
<thead>
<tr>
<th>Material variant A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor stool with base plate</td>
</tr>
<tr>
<td>Bearing plate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material variant B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor stool</td>
</tr>
<tr>
<td>Base plate</td>
</tr>
<tr>
<td>Cover plate</td>
</tr>
</tbody>
</table>

**Ejector settings**

The JP pump design features a built-in ejector, fitted with an ejector valve or a plug.

The ejector valve has two setting possibilities:

- Position 1: Completely open ejector nozzle.
- Position 2: Completely closed ejector nozzle.

The plug allows only selection of position 1.

Position 1 is used for

- start-up when the suction pipe is empty and the pump is to be primed
- maximum discharge pressure
- maximum head and minimum flow
- pressure boosting in connection with car washing, etc.

Position 2 is used for

- maximum flow at reduced pressure
- maximum pump efficiency
- low noise level
- draining and similar tasks as well as in installations with positive head on the suction side.
**General data**

**Presscontrol**

Presscontrol, types PC 15 and PC 22, with preset cut-in pressure at 1.5 and 2.2 bar, respectively, is used for automatic operation of pumps in minor water supply systems.

A built-in flow valve and pressure switch ensure a steady flow without water hammering, irrespective of the water consumption. Presscontrol starts and stops the pump automatically according to demand. In addition, the built-in dry-running protection stops the pump after 10 seconds of operation without water.

It is recommended to make the installation in such a way that the difference of height between the Presscontrol and the highest tap point does not exceed the stated values.

The arrows on the Presscontrol indicate the direction of flow. The Presscontrol must always be installed in such a way that the arrows point upwards.

No tap points are allowed between pump and Presscontrol.

**Diaphragm tank**

Diaphragm tanks are recommended for use with the JP pump where it is necessary to ensure a controlled pressure in the water supply system.

Grundfos offers a range of small booster sets, each complete with a jet pump and one of the following tanks:

- 24 litres horizontal tank
- 50 litres horizontal tank
- 18 litres vertical tank

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**Electrical data**

<table>
<thead>
<tr>
<th>JP 5, 50 Hz</th>
<th>( P_1 ) [W]</th>
<th>( n ) [min(^{-1})]</th>
<th>( \cos \varphi )</th>
<th>( I_p ) [A]</th>
<th>( \frac{I_{st}}{I_{11}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 220-230 V</td>
<td>775</td>
<td>2650</td>
<td>0.99</td>
<td>3.7</td>
<td>3.5</td>
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<tr>
<td>1 x 230-240 V</td>
<td>775</td>
<td>2650</td>
<td>0.98</td>
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<td>3.4</td>
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<tr>
<td>3 x 220-240 V</td>
<td>780</td>
<td>2830</td>
<td>0.87</td>
<td>2.4</td>
<td>2.9</td>
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<tr>
<td>3 x 380-415 V</td>
<td>780</td>
<td>2830</td>
<td>0.87</td>
<td>1.4</td>
<td>5.0</td>
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</table>

<table>
<thead>
<tr>
<th>JP 6, 50 Hz</th>
<th>( P_1 ) [W]</th>
<th>( n ) [min(^{-1})]</th>
<th>( \cos \varphi )</th>
<th>( I_p ) [A]</th>
<th>( \frac{I_{st}}{I_{11}} )</th>
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<tbody>
<tr>
<td>1 x 220-240 V</td>
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<td>2800</td>
<td>0.90</td>
<td>6.2</td>
<td>4.2</td>
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<td>3 x 220-240 V</td>
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<td>2850</td>
<td>0.81</td>
<td>4.1</td>
<td>3.9</td>
</tr>
<tr>
<td>3 x 380-415 V</td>
<td>1325</td>
<td>2850</td>
<td>0.81</td>
<td>2.4</td>
<td>6.8</td>
</tr>
</tbody>
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**JP 5 performance curves**

![JP 5 performance curves](image)

**JP 6 performance curves**

![JP 6 performance curves](image)
## Technical data

### Material variant A

![Diagram of JP booster with horizontal diaphragm tank]

**Material variant B**

![Diagram of JP booster with vertical diaphragm tank]

### JP booster

**JP with horizontal diaphragm tank**

### JP with vertical diaphragm tank

<table>
<thead>
<tr>
<th>Pump type</th>
<th>Dimensions [mm]</th>
<th>A</th>
<th>B</th>
<th>C</th>
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</thead>
<tbody>
<tr>
<td>JP 5, material variant A</td>
<td>300 364 240</td>
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<td></td>
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<tr>
<td>JP 6, material variant A</td>
<td>300 401 240</td>
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</table>

<table>
<thead>
<tr>
<th>Pump type</th>
<th>Dimensions [mm]</th>
<th>A</th>
<th>B</th>
<th>C</th>
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</thead>
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<td>JP 5, material variant B</td>
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<td>JP 6, material variant B</td>
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### Presscontrol

<table>
<thead>
<tr>
<th>Pump type</th>
<th>Tank size [l]</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
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<tbody>
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<td>JP 5, JP 6</td>
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<td>692</td>
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### Weights

<table>
<thead>
<tr>
<th>Type</th>
<th>Connection</th>
<th>Tank size [l]</th>
<th>Weight [kg]</th>
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<tr>
<td></td>
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<tr>
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<td>G 1 / Rp 1</td>
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<tr>
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<tr>
<td>Presscontrol</td>
<td>G 1</td>
<td>-</td>
<td>1.2</td>
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</table>
Further product documentation
In addition to this printed data booklet, Grundfos offers the following sources of product documentation.

- WinCAPS
- WebCAPS.

WinCAPS
WinCAPS is a Windows-based Computer Aided Product Selection program containing information on more than 185,000 Grundfos products.
Available on CD-ROM in more than 22 languages, WinCAPS offers
- detailed technical information
- selection of the optimum pump solution
- dimensional drawings of each pump
- detailed service documentation
- installation and operating instructions
- wiring diagrams of each pump.

Fig. 1 WinCAPS CD-ROM

Click Catalogue and select a product from the extensive product catalogue.
Click Sizing and select the most suitable pump for your application.

Fig. 2 WinCAPS
Further documentation

WebCAPS
WebCAPS is a Web-based Computer Aided Product Selection program and a web-version of WinCAPS.

WebCAPS is accessible on Grundfos’ homepage, www.grundfos.com, and offers
- detailed technical information
- dimensional drawings of each pump
- wiring diagrams of each pump.

Fig. 3 WebCAPS
Subject to alterations.