Surface dewatering solutions

PAS and VAR pumps
Surface dewatering pumps

The surface dewatering pump ranges are designed and developed to offer high performance, reliability, and ease of use across multiple industries for applications like construction and mine site dewatering, removing floodwater, and other municipal applications.

At Atlas Copco, we understand pumps, their application, and most importantly, the people using them. We have a complete range of diesel and electric-driven pumps that offer durability and long life. The modular design delivers flexibility in packaging. And, easy servicing of wear components means less downtime and more pumping without stopping.
There is a surface pump for any of your dewatering needs

1. Oil & Gas
   Pipelines used to transport crude oil or natural gas must be dewatered to guarantee the quality of the hydrocarbons and prevent the formation of hydrates and protect pipes from internal corrosion.
   
   The ballasting process requires robust high performing pumps which, based on the needs, pumps seawater in and out of the shipyard tank during the loading and unloading of water vessels.

   Application
   - Ballasting
   - Pipeline hydrostatic test
   - Drilling
   - Pipeline flushing

2. Mining and Quarry
   For dewatering applications in the mines post dredging, our pumps offer effective and efficient solutions due to their solids handling capability.

   Application
   - Dewatering
   - Water relaunching
   - Washplants
   - Slit and Sludge removal

3. Municipalities
   Municipal public service applications can vary from sewage bypass to wastewater treatment plants to water reclamation centers. When wastewater is being treated, our pumps handle the fluids and solids without clogging or failing.

   Application
   - Sewage bypass
   - Dewatering
   - Emergency water treatment

4. Construction
   On construction sites, during casting of foundation, it becomes critical to avoid water infiltration. Our pumps have got you covered.

   Application
   - Site drainage
   - Jetting

5. Industry
   The effluent produced by different industries should be treated, relaunched, or drained. With the availability of different materials for our wet ends, we offer a complete solution.

   Application
   - Effluent handling and transporting.
   - Waste drainage and disposals.
   - Temporary firefighting protection

6. Civil works
   Modern-day civil engineering projects are fast-paced. Be it the construction of roads, dams, bridges, airports, or building, site dewatering, and drainage, before and during construction work is very important.

   Application
   - Sump water removal
   - Dewatering

7. Floods controls
   Our pumps are the right choice to provide quick solutions in case of a flood emergency, due to their high performance and portability.

   Application
   - Emergency

8. Wellpoint
   All the areas with high groundwater levels needs to be reduced before the initial digging up of the land. Our pumps can be installed on a side or around the excavation site.

   Application
   - Groundwater level reduction
   - Pipeline on-shore
   - Polluted soil remediation
   - Tunneling

9. Rental
   Rental applications require robust and long-running products. Our start and forget control panels and more than 24 hours of fuel autonomy make them ideal for such applications.

   Application
   - General construction
   - Flood controls
   - Industry
   - Mine and quarry dewatering
PAS HardHat® range

The new PAS HardHat® models come with Atlas Copco’s innovative HardHat®, made of medium-density polyethylene instead of metal to protect the working operation underneath from the elements.

**UNIQUE HardHat® TECHNOLOGY**
- The Atlas Copco HardHat® Technology ensures a high level of robustness and durability in any condition.
- No matter the circumstances on-site or during transport, the PE material remains in perfect condition, increasing the resale value of your asset.

**SCAN AND ORDER**
- PAS HardHat® pumps take advantage of digital technology, featuring QR codes that mean essential information about parts and spares is just a scan away.

**MULTIPLE PACKAGING OPTIONS**
- The Pas Hardhat® series pump comes standard with an EU-certified Trailer with 2 stabilizer legs.
- They can also be offered on a robust galvanized skid based on needs.
CLEAN AND GREEN PUMPS

- The PAS HardHat® pump range is fully EU emission compliant and features a 120% fully leak-free structure, making it a clean and green machine. Offering available for worldwide emission norms and certifications, this range can also use HVO renewable diesel.

EASY SERVICEABILITY IN THE FIELD

- The Pas PAS HardHat® range pump helps customers reduce Service time.
- Features like the Atlas Copco hinge Kit and link belts mean that the wear components can be serviced and replaced without dismantling the pump.
- Advanced PW Series Control Panel

ERGONOMIC LIGHTING

- The PAS HardHat® comes with internal lighting to facilitate visibility during maintenance or repair.
## PAS HardHat® range

### Technical data

<table>
<thead>
<tr>
<th>Specifications</th>
<th>PAS 100 HardHat®</th>
<th>PAS 150 HardHat®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. head</td>
<td>m</td>
<td>42</td>
</tr>
<tr>
<td>Max. capacity</td>
<td>m³/h</td>
<td>260</td>
</tr>
<tr>
<td>Suction /discharge size</td>
<td>Flanged</td>
<td>4&quot; Multi-standard</td>
</tr>
<tr>
<td>Max. solids handling</td>
<td>mm</td>
<td>76</td>
</tr>
<tr>
<td>Best efficiency point</td>
<td>%</td>
<td>70</td>
</tr>
<tr>
<td>Max. absorbed power</td>
<td>kW</td>
<td>29</td>
</tr>
</tbody>
</table>

### Engine

<table>
<thead>
<tr>
<th>Emission compliance EU (Stage)</th>
<th>Stage V</th>
<th>Stage V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission compliance LRC (Tier)</td>
<td>T3</td>
<td>T3</td>
</tr>
<tr>
<td>Max. engine power EU (Stage)</td>
<td>kW</td>
<td>42</td>
</tr>
<tr>
<td>Max. engine power LRC (Tier)</td>
<td>kW</td>
<td>36</td>
</tr>
<tr>
<td>Max. operating speed</td>
<td>rpm</td>
<td>2000</td>
</tr>
<tr>
<td>Max. fuel autonomy</td>
<td>h</td>
<td>35</td>
</tr>
</tbody>
</table>

### Weight and dimensions

| Weight (skid/undercarriage)    | kg      | 1415 / 1720 | 1415 / 1720 |
| Length (skid/undercarriage)    | mm      | 2420 / 3810 | 2420 / 3810 |
| Width (skid/undercarriage)     | mm      | 1200 / 1880 | 1200 / 1880 |
| Height (skid/undercarriage)    | mm      | 1680 / 2000 | 1680 / 2000 |
Performance curves

**PAS 100 HardHat®**

**PAS 150 HardHat®**
PAS MF/HF range

The PAS MF/HF range of dry prime pumps is engineered to offer high performance in any condition. Comprising of an air separator unit and a vacuum pump, it delivers rapid automatic priming. Even with suction heights of several meters, the machine rapidly evacuates the air from the suction pipe and starts to pump.

Additionally, thanks to the semi-open impeller, the PAS range is also suitable for pumping liquids with solids in suspensions.

**SERVICEABILITY IN ANY CONDITIONS**

- Patented Hinged door access guarantees easy clean-up with minimal downtime.
- All wear components are easily accessible with minimal downtime.
- Easy replacement of the wear components (Impeller and wear plates).
- Trimming plate to guarantee the hydraulic performance as an emergency reserve before scheduled maintenance.

**PACKAGING FLEXIBILITY**

- One-by-one stackability in standard canopy and open version.
- Mobility, with heavy-duty skids and road trailer equipped for a range of conditions.

**STACKABILITY**
INTEGRATED CONTROL AND POWER CUBICLE

- Digital controller with standard warnings, shutdown, stop/start function, emergency stop and easy-to-access and read diagnostics. Configurable setpoint via transducer to control engine speeds*

SOLIDS HANDLINGS CAPABILITY

- The whole range can handle high solids.

FLEX-MOUNT SYSTEM

- Integrated vibration mounts eliminate unwanted vibration.

Key options

- Impeller CF3M
- Wear plate CF3M
- Stainless steel shaft
- Zinc anodized
- Fleet Link

Key features

- Hinge Kit
- Trimming plate*
- Diaphragm vacuum pump
- Dry running system
- PW 250, PW500, PW 750 control panel*

* Available options may change depending on the model selected.
## PAS MF/HF range

### Technical data

<table>
<thead>
<tr>
<th>Specifications</th>
<th>PAS 80MF 202</th>
<th>PAS 100MF 250</th>
<th>PAS 150MF 250</th>
<th>PAS 200MF 310</th>
<th>PAS 300MF 401</th>
<th>PAS 100HF 250</th>
<th>PAS 150HF 300</th>
<th>PAS 200HF 305</th>
<th>PAS 300HF 440</th>
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<tr>
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<td>m</td>
<td>19</td>
<td>30</td>
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<td>Max. capacity</td>
<td>m³/h</td>
<td>160</td>
<td>250</td>
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<td>660</td>
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<td>Suction /discharge size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Suction size</td>
<td>Flanged</td>
<td>3” Multi-standard</td>
<td>4” Multi-standard</td>
<td>6” Multi-standard</td>
<td>8” Multi-standard</td>
<td>12” Multi-standard</td>
<td>4” Multi-standard</td>
<td>6” Multi-standard</td>
<td>8” Multi-standard</td>
</tr>
<tr>
<td>Discharge size</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Discharge size</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Max. solids handling</td>
<td>mm</td>
<td>40</td>
<td>50</td>
<td>76</td>
<td>76</td>
<td>100</td>
<td>76</td>
<td>76</td>
<td>76</td>
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<tr>
<td>Best efficiency point</td>
<td>%</td>
<td>68</td>
<td>70</td>
<td>77</td>
<td>70</td>
<td>60</td>
<td>70</td>
<td>70</td>
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<tr>
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<td>kW</td>
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<td>17</td>
<td>27</td>
<td>40</td>
<td>65</td>
<td>29</td>
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### Engine

<table>
<thead>
<tr>
<th>Emission compliance EU (Stage)</th>
<th>Stage V</th>
<th>Stage V</th>
<th>Stage V</th>
<th>Stage V</th>
<th>Stage IV</th>
<th>Stage V</th>
<th>Stage IV</th>
<th>Stage IV</th>
<th>Stage IV</th>
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<tbody>
<tr>
<td>Emission compliance LRC (Tier)</td>
<td>T3</td>
<td>T2-T3</td>
<td>T2-T3</td>
<td>T2-T3</td>
<td>T2-T3</td>
<td>T2-T3</td>
<td>T2-T3</td>
<td>T2-T3</td>
<td>T2-T3</td>
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<tr>
<td>Max. engine power</td>
<td>kW</td>
<td>8,6</td>
<td>24,3</td>
<td>28,4</td>
<td>55</td>
<td>100</td>
<td>31,0</td>
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<td>79,1</td>
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<td>Max. operating speed</td>
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<td>1800</td>
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<td>1500</td>
<td>2000</td>
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<td>Max. fuel autonomy</td>
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<td>120</td>
<td>51</td>
<td>48</td>
<td>45</td>
<td>24</td>
<td>45</td>
<td>27</td>
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### Weight and dimensions

<table>
<thead>
<tr>
<th>Weight (dry)</th>
<th>kg</th>
<th>900</th>
<th>1260</th>
<th>1400</th>
<th>1650</th>
<th>2600</th>
<th>1400</th>
<th>1680</th>
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<th>4200</th>
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<tbody>
<tr>
<td>Length</td>
<td>mm</td>
<td>1850</td>
<td>2250</td>
<td>2250</td>
<td>2560</td>
<td>2610</td>
<td>2250</td>
<td>2560</td>
<td>2610</td>
<td>3900</td>
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<tr>
<td>Width</td>
<td>mm</td>
<td>1100</td>
<td>1100</td>
<td>1100</td>
<td>1100</td>
<td>1225</td>
<td>1100</td>
<td>1100</td>
<td>1225</td>
<td>2200</td>
</tr>
<tr>
<td>Height</td>
<td>mm</td>
<td>1480</td>
<td>1550</td>
<td>1550</td>
<td>1705</td>
<td>1840</td>
<td>1550</td>
<td>1705</td>
<td>1840</td>
<td>2000</td>
</tr>
</tbody>
</table>
VAR range

The **VAR range** of wet prime pumps offers a robust and flexible solution for dewatering applications. The technology allows having a simple first prime due to its first water fill-in capabilities. Due to its open impeller and solids handling capabilities, the equipment is perfectly suitable for medium construction and flood controls.

WET PRIME SYSTEM

- The system allows the unit to prime in any conditions through first water fill.
- The liquid rings formed evacuate air for quick priming

MOBILITY PACKAGE

- Open-frame version is available.
MECHANICAL SEAL FLUSHING

- Integrated port on pump casing to flush the mechanical seal.
- Solution guarantees the correct startup of the units and helps prevent possible casing failure due to fluid solidification.

SOLIDS HANDLINGS CAPABILITY

- The whole range can handle high solids.

Key options

- Impeller CF3M
- Wear plate CF3M
- Stainless steel shaft
- Zinc anodized
- Fleet Link

FLEX-MOUNT SYSTEM

- Integrated vibration mounts eliminate unwanted vibration.
## VAR range
### Technical data

<table>
<thead>
<tr>
<th>Specifications</th>
<th>VAR 4-250</th>
<th>VAR 6</th>
<th>VAR 6-250</th>
<th>VAR 8-305</th>
<th>VAR 10-305</th>
<th>VAR 12-400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. head (m)</td>
<td>40*</td>
<td>26</td>
<td>33</td>
<td>35</td>
<td>39</td>
<td>29,3</td>
</tr>
<tr>
<td>Max. capacity (m³/h)</td>
<td>180</td>
<td>300</td>
<td>340</td>
<td>560</td>
<td>690</td>
<td>1400</td>
</tr>
<tr>
<td>Suction /discharge size</td>
<td>Threaded 4” BSP</td>
<td>Flanged DN 150 D.I. 1882 (6”)</td>
<td>Flanged DN 150 D.I. 1882 (6”)</td>
<td>Flanged DN 200 UNI 6082 (8”)</td>
<td>Flanged DN 250 D.I. 1882 (10”)</td>
<td>Flanged DN 300 UNI 6082 (12”)</td>
</tr>
<tr>
<td>Max. solids handling (mm)</td>
<td>50</td>
<td>50</td>
<td>76</td>
<td>76</td>
<td>76</td>
<td>70</td>
</tr>
<tr>
<td>Best efficiency point (%)</td>
<td>65</td>
<td>65</td>
<td>60</td>
<td>53</td>
<td>70</td>
<td>54</td>
</tr>
<tr>
<td>Max. absorbed power (kW)</td>
<td>16,5</td>
<td>14</td>
<td>25</td>
<td>31</td>
<td>45</td>
<td>85,5</td>
</tr>
</tbody>
</table>

### Engine

| Emission compliance EU (Stage) | EU | Stage V | Stage V | Stage V | Stage V | Stage V | Stage IV |
| Emission compliance LRC (Tier) | LRC | T2 - T3 | -       | T2 - T3 | T2 - T3 | T2 - T3 | T2 - T3 |
| Max. engine power (kW)         | 24,3 | 19     | 28,4    | 33,6     | 47,7     | 79,1     |
| Max. operating speed (rpm)     | 2000 | 1800   | 2000    | 1800     | 1800     | 1150     |
| Max. fuel autonomy (h)          | 48   | 45     | 42      | 50       | 47       | 29       |

### Weight and dimensions (1)

| Weight (dry) (kg)       | 905 | 950 | 935 | 1205 | 1850 | 2125 |
| Length (mm)             | 1750 | 1750 | 1750 | 2500 | 2800 | 2800 |
| Width (mm)              | 950  | 950  | 950  | 950  | 1450 | 1450 |
| Height (mm)             | 1520 | 1520 | 1520 | 1850 | 1850 | 1850 |

* Applicable for T2-T3 models only, for Stage 5 Variant max head is 32m
(1) Dimensions refer to the Block model. Please refer to the datasheet with overall dimensions with options.
Performance curves

**VAR 4-250**

![Performance curve for VAR 4-250](image)

**VAR 6**

![Performance curve for VAR 6](image)

**VAR 6-250**

![Performance curve for VAR 6-250](image)

**VAR 8-305**

![Performance curve for VAR 8-305](image)

**VAR 10-305**

![Performance curve for VAR 10-305](image)

**VAR 12-400**

![Performance curve for VAR 12-400](image)
Product portfolio

GENERATORS

PORTABLE
1.6–12 kVA

MOBILE
9–1250* kVA

INDUSTRIAL
10–1420* kVA

LARGE POWER
800–1450 kVA

*Multiple configurations available to produce power for any size application

DEWATERING PUMPS

ELECTRIC SUBMERSIBLE
250–16,200 l/min

SURFACE PUMPS
833–23,300 l/min

ENERGY STORAGE SYSTEMS

ZENERGIZE
45–1000 kVA

Diesel and electric options available

LIGHT TOWERS

DIESEL

BATTERY

ELECTRIC

AIR COMPRESSORS AND HANDHELD TOOLS

AIR COMPRESSORS
1–116 m³/min
7–345 bar

HANDHELD TOOLS
Pneumatic
Hydraulic
Petrol engine driven

ONLINE SOLUTIONS

SHOP ONLINE PARTS ONLINE

POWER CONNECT
Scan the QR code on your machine, and go to the QR Connect Portal to find all the information about your machine.

LIGHT THE POWER YOUR SIZING TOOL
A useful calculator to help you choose the best solution for your power and light needs

FLEETLINK
Intelligent telematics system that helps optimize fleet usage and reduce maintenance, ultimately saving time and cutting operating costs.

Atlas Copco Power Technique
www.atlascopco.com/ptba