SJM Vertical Mixed Flow Pump
Main Applications

SJM pumps can handle common types of fluids including water, service water and wastewater. They are used in the following applications:

- Cooling water pumps in utility and industrial power stations
- Raw water supply to process plants or refineries
- Condenser circulation service in nuclear or conventional power plants
- Finished water booster pumps
- Large irrigation projects

Features and Benefits

1. **Bowls**
   - Combine energy conversion and diffusion of the intermediate bowl and discharge case in one single casing
   - Reduce the required components and allow for a direct connection to the column pipe

2. **Discharge head**
   - Integral driver stand allows easy access to removable packing/seal box and coupling
   - Each standardized discharge head comes with a segmented bend/motor stool and utilizes a stuffing box designed to accommodate various mechanical seals

3. **Impeller**
   - Semi-open design, cast from various materials of choice for versatility
   - Balanced to ensure vibration free operations
   - Polished to optimize performance
   - Secured to shaft by a key and split thrust ring

4. **Shaft seal**
   - Packed stuffing box provided for reliable sealing and simple maintenance

5. **Column assembly**
   - Column pipes are flanged
   - Line shaft bearings are replaceable
   - Column assemblies have an integral spider for column diameter above 14” (350 mm)
Options

**Thrust bearing assembly**
Thrust bearing assemblies are available when required by application. They are built to handle all of the down thrust produced by the pump and as much momentary up thrust that may occur. A one-piece fabricated motor stand housing is bolted down over the discharge to protect the bearing and support the motor.

The flexible coupling with spacer allows servicing the thrust bearing and mechanical seal as needed.

Optional features include sandstorm protection, special means for cooling and a constant level oil lubricator.

**Discharge head**
Below ground discharge head is available. Each comes with a segmented elbow designed to optimize pump efficiency. The elbows are made of various materials to meet virtually any requirements. The discharge nozzle can be either plain-end or flanged. The motor stand is mounted above ground and is designed to support the weight and provide the maximum clearance for multiple stuffing box options.
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Operating data

<table>
<thead>
<tr>
<th>50 Hz</th>
<th>60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 to 2,390 mm</td>
<td>Bowl sizes</td>
</tr>
<tr>
<td>up to 58,000 m³/h</td>
<td>Capacities</td>
</tr>
<tr>
<td>up to 25 m per stage</td>
<td>Heads</td>
</tr>
<tr>
<td>up to 18 bar</td>
<td>Pressures</td>
</tr>
<tr>
<td>up to 50°C</td>
<td>Temperatures</td>
</tr>
<tr>
<td>8 to 94 in</td>
<td>up to 250,000 USgpm</td>
</tr>
<tr>
<td>up to 82 ft per stage</td>
<td>up to 260 psi</td>
</tr>
<tr>
<td>up to 122°F</td>
<td></td>
</tr>
</tbody>
</table>

Performance ranges

Materials

<table>
<thead>
<tr>
<th>Pump part</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast parts</td>
<td>Cast iron, carbon steel, 316 stainless steel, duplex, super duplex and bronze</td>
</tr>
<tr>
<td>Shafts</td>
<td>12% chrome, 316 stainless steel, duplex, super duplex and monel</td>
</tr>
<tr>
<td>Fabrications</td>
<td>Carbon steel, 316L, duplex and super duplex</td>
</tr>
<tr>
<td>Bearings</td>
<td>Rubber, lined bronze, duplex and super duplex</td>
</tr>
</tbody>
</table>
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Customer partnership
• We are reliable partners
• We provide a high level of service
• We make our customers more competitive

Committed people
• We drive accountability
• We are open and transparent
• We are team players

Operational excellence
• We focus on results
• We take initiative and work within established processes
• We act safely

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