ZPP and Z22 Double Suction Axially Split Single Stage Centrifugal Pumps
ZPP and Z22 double suction axially split single stage centrifugal pumps are used for demanding high-capacity industrial applications to ensure process reliability, high efficiency, and low operating costs.

The range comprises over 20 sizes for each series with different impeller designs. This flexibility ensures that energy consumption is minimized throughout the complete operating range of a pump.

ZPP and Z22 pump series are designed for demanding industrial applications to pump:
- Clean and slightly contaminated liquids
- Viscous liquids
- Low-consistency fibrous slurries
- Liquids in applications with small pressure pulsations

Main Applications

Features and Benefits

1. **Double entry impeller**
   - Double suction impeller, with split, staggered and skewed vanes give high efficiency and low Net Positive Suction Head (NPSH) values
   - Low pulsation impellers are available, designed to meet the stringent performance requirements of paper machine head box applications
   - Impeller installed on the shaft by strong interference fit without keyway in ZPP, which is easy to assemble, disassembled hydraulically

2. **Axially split casing**
   - Heavy-duty horizontally split casing
   - Inspection, maintenance and removal of the rotating unit is possible without disturbing the piping or motor
   - Single volute for lower head and double volute for higher head applications
   - Low radial loads on bearings and low shaft deflection providing extended seal and bearing life

3. **Casing wear rings**
   - Renewable casing wear rings protect the casing from wear and assure smooth flow to the impeller improving efficiency
   - Maintaining correct clearance is easy
   - Wear ring locked in lower casing to prevent rotation

4. **Heavy duty shaft**
   - For high corrosion and wear resistance plus high strength
   - Reduced shaft deflection for extended seal and bearing life
   - Duplex stainless steel shaft

5. **Versatile shaft sealing**
   - Stuffing box
     - External or internal sealing liquid
     - Split stuffing box gland and lantern ring in ZPP with withdrawal grooves for easy service
   - Mechanical seal
     - Different mechanical seals available
     - Seals fit into the same chamber in ZPP as packings providing easier change to another type of sealing

6. **Bearing unit**
   - ZPP
     - Long lifetime with high thrust spherical roller bearings, identical on both sides
     - Grease or oil lubrication
     - Effective bearing protection by non-contact wear-free labyrinth seals and deflector
     - No adjustments needed making assembly quicker
   - Z22
     - Long lifetime with high thrust angular contact ball bearing for axial load and deep ball bearing for radial load
     - Grease lubrication as standard

7. **Flexible installation**
   - Single and dual drive alternatives
   - Horizontal or vertical installation gives compact installation
   - Some Z22 sizes are available in angled execution

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ZPP Double Suction Axially Split Single Stage Centrifugal Pump

Operating data

<table>
<thead>
<tr>
<th>50 Hz</th>
<th>60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 to 900 mm</td>
<td>10 to 35 in</td>
</tr>
<tr>
<td>up to 25,000 m³/h</td>
<td>up to 110,000 USgpm</td>
</tr>
<tr>
<td>up to 160 m</td>
<td>up to 525 ft</td>
</tr>
<tr>
<td>up to 20 bar</td>
<td>up to 290 psi</td>
</tr>
<tr>
<td>120°C*</td>
<td>250°F*</td>
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* depending on material and size

Performance range

Materials

<table>
<thead>
<tr>
<th>Main part</th>
<th>Duplex stainless steel design</th>
<th>Cast iron design</th>
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<tr>
<td>Volute casing</td>
<td>SS ASTM A890 Gr.3A</td>
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- Oil and gas
- Hydrocarbon processing
- Power generation
- Pulp and paper
- General industry
- Chemical process industry
- Water and wastewater

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<tr>
<td>200 to 1,000 mm</td>
<td>Pump sizes</td>
</tr>
<tr>
<td>up to 17,000 m³/h</td>
<td>Capacities</td>
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<tr>
<td>up to 220 m</td>
<td>Heads</td>
</tr>
<tr>
<td>up to 25 bar</td>
<td>Pressures</td>
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<tr>
<td>140°C*</td>
<td>Temperatures</td>
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Performance range

![Performance range graph]

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Series Z22 is available in a wide range of material. Please contact your Sulzer representative for more information.