HZB Double Suction Volute Pump
Main Applications

HZB pumps are horizontal, single stage, double suction, centerline mounted pumps. They are designed for hot water applications with relatively low NPSH available, primarily as booster pump for large boiler feed water units in both conventional thermal and nuclear power stations.
Centerline mounted cast pump casing with double suction and double volute, radially split at non-drive end with spiral wounded gasket between casing and cover
- Ensures reliable sealing under all operating conditions
- Provides optimized axial hydraulic balance and reduced radial load
- Allows free thermal expansion and high nozzle loads

Top suction / bottom discharge, top suction / top discharge (50°) or side / side nozzle arrangement
- Flange rating is ANSI 300#; transition pieces prepared for weld connections are optional
- Adaptable to the preferred piping layout

Double suction impeller, enclosed type and dynamically balanced; keyed to the shaft and positively positioned against a shaft shoulder
- Ensures low Net Positive Suction Head required (NPSHr)
- Allows low suction pressures, thus minimizing plant construction costs

Stiff shaft design with minimum bearing span used
- Ensures that deflection is minimized at seal faces, wear rings and coupling and that the critical speed is a minimum of 20% above the maximum operating speed

Amply sized sleeve radial and tilting pad (pivot shoe) bearings with forced lubrication are standard. Optionally, self-contained ring oil lubricated bearings are available (sleeve radial and ball thrust bearings)
- Long bearing life and safer operation under changing load conditions

Single mechanical seal - API and plan 23 - with jacket cooling
- Provides utmost reliability

Chrome steel pressure casing, impeller and shaft (2.5% chrome steel material for pressure casing is optional)
- Offers good corrosion resistance and excellent mechanical properties
- Provides cost effective material combination according to the feed water analysis

Replaceable, metallic bearing isolators
- Reliable sealing of the bearing housing
HZB Double Suction Volute Pump

Operating Data

<table>
<thead>
<tr>
<th>50 Hz</th>
<th>60 Hz</th>
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</thead>
<tbody>
<tr>
<td>Pump sizes</td>
<td>Pump sizes</td>
</tr>
<tr>
<td>up to 400 mm</td>
<td>up to 16 inches</td>
</tr>
<tr>
<td>up to 5,500 m³/h</td>
<td>Capacities</td>
</tr>
<tr>
<td>up to 340 m</td>
<td>up to 29,000 USgpm</td>
</tr>
<tr>
<td>up to 48 bar</td>
<td>Heads</td>
</tr>
<tr>
<td>up to 220°C</td>
<td>up to 1,115 feet</td>
</tr>
<tr>
<td></td>
<td>Pressures</td>
</tr>
<tr>
<td></td>
<td>up to 700 psi</td>
</tr>
<tr>
<td></td>
<td>Temperatures</td>
</tr>
<tr>
<td></td>
<td>up to 428°F</td>
</tr>
</tbody>
</table>

Performance Ranges

Materials

<table>
<thead>
<tr>
<th>Pump part</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing</td>
<td>2.5% Cr carbon steel, 12% chrome steel</td>
</tr>
<tr>
<td>Impeller</td>
<td>12% chrome steel</td>
</tr>
<tr>
<td>Shaft</td>
<td>12% chrome steel</td>
</tr>
<tr>
<td>Wear rings</td>
<td>12% chrome steel with heat treatment</td>
</tr>
</tbody>
</table>
We Do What We Say

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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