AHLSTAR NK Non-clogging and WK Wear-resistant Vertical Sump Pumps
AHLSTAR NK non-clogging and WK wear-resistant vertical cantilever sump pumps are used for demanding industrial applications to pump:
- abrasive liquids and/or liquids containing large solids
- abrasive fibrous slurries and/or fibrous slurries containing large solids
- abrasive non-fibrous slurries and/or non-fibrous slurries containing large solids
Features and Benefits

1. **NPP/T and WPP/T pump casing, impeller and side plate**
   - Casing, impeller and side plate are interchangeable with the Sulzer AHLSTAR NPP/T non-clogging and WPP/T wear-resistant process pumps.
   - Minimized spare parts inventory

2. **Impeller**
   - Non-clogging design NK (closed or vortex impeller) with wide open channels and self-cleaning vane profile for liquids containing large solids, long fibers, clips or plastics
   - Non-plugging impeller back vane design prevents plugging caused by longer fibers or plastics
   - Pressure-reducing impeller front vanes and self-cleaning cutter grooves prevent fibers from entering the gap between the impeller and side plate and reduce internal flow losses
   - Wear-resistant design WK (closed, open or vortex impeller) for abrasive and corrosive liquids and slurries containing solid particles

3. **Suction bell**
   - Stainless steel suction bell with guiding and straining vanes to help prevent clogging

4. **Line shaft and bearing design**
   - One-piece shaft guarantees straightness and easy assembly. Critical speed always above the max. operating speed
   - No support bearing inside the liquid needed resulting in more reliable operation

5. **Thrust bearing**
   - Heavy-duty roller bearing unit with angular contact ball bearings for axial load guarantees long bearing lifetime. Grease lubrication

6. **Mounting plate and driver support**
   - Sturdy one-piece epoxy-coated carbon steel base frame and motor support/bearing housing assures accurate alignment

7. **Discharge pipe**
   - Length adjustment in discharge piping and flexible sealing water hoses for proper mounting

8. **Drivers and coupling**
   - IEC 34-7 with IM code V1 or corresponding Nema vertical motors as standard
   - Flexible Rex-Viva coupling is standard. Other coupling types also available

9. **Shaft seal**
   - No shaft seal needed resulting in more reliable operation
NK Non-clogging and WK Wear-resistant Vertical Cantilever Sump Pumps

Operating data

<table>
<thead>
<tr>
<th>50 Hz</th>
<th>60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>from 50 mm to 100 mm / NK</td>
<td>from 2 in to 4 in / NK</td>
</tr>
<tr>
<td>from 50 mm to 125 mm / WK</td>
<td>from 2 to 5 in / WK</td>
</tr>
<tr>
<td>Discharge sizes</td>
<td></td>
</tr>
<tr>
<td>430 m³/h</td>
<td>Capacities</td>
</tr>
<tr>
<td>up to 60 m</td>
<td>1,900 USgpm</td>
</tr>
<tr>
<td>up to 10 bar*</td>
<td>Heads</td>
</tr>
<tr>
<td>up to 95°C</td>
<td>up to 200 ft</td>
</tr>
<tr>
<td>up to 50°C</td>
<td>Pressures</td>
</tr>
<tr>
<td>up to 95°F</td>
<td>up to 150 psi*</td>
</tr>
<tr>
<td>* Depending on material and size</td>
<td></td>
</tr>
</tbody>
</table>

Performance ranges

![Performance chart](chart.png)

Materials

<table>
<thead>
<tr>
<th>Main parts</th>
<th>Duplex stainless steel design NK/WK</th>
<th>Cast iron design NK</th>
<th>Chromium Iron design WK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing</td>
<td>Duplex SS ASTM A890 Grade 3A</td>
<td>Cast Iron ASTM A48 CL 35B</td>
<td>Chromium Iron A532 IIIA</td>
</tr>
<tr>
<td>Impeller</td>
<td>Duplex SS ASTM A890 Grade 3A</td>
<td>Duplex SS ASTM A890 Grade 3A</td>
<td>Chromium Iron A532 IIII</td>
</tr>
<tr>
<td>Shaft</td>
<td>Duplex SS 2324</td>
<td>Duplex SS 2324</td>
<td>Duplex SS 2324</td>
</tr>
<tr>
<td>Side plate</td>
<td>Duplex SS ASTM A890 Grade 3A</td>
<td>Duplex SS ASTM A890 Grade 3A</td>
<td>Chromium Iron A532 III</td>
</tr>
<tr>
<td>Casing cover</td>
<td>Duplex SS ASTM A890 Grade 3A</td>
<td>Cast Iron ASTM A48 CL 35B</td>
<td>Chromium Iron A532 IIIA</td>
</tr>
</tbody>
</table>

Other materials can be delivered on request.
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

A Global Specialist at Your Doorstep

Sulzer serves clients worldwide through a network of over 150 production and service sites and has a strong footprint in emerging markets.