AHLSTAR End Suction Single Stage Close Coupled Centrifugal Pump
Main Applications

AHLSTAR pumps have been designed to meet the most demanding hydraulic coverage requirements and for all types of liquid, making it the ideal range for challenging pumping operations.

The pumps are also suited to the pumping of liquids with a high gas content of up to 40% of free gases or up to 70% of bound gases.
Features and Benefits

1. Versatile selection of reliable, high efficiency Sulzer EnerSave™ impellers
   - Reduce life-cycle costs, especially energy consumption, operation time and downtime costs

2. Innovative and reliable integrated degassing and self-priming units
   - For a variety of applications with difficult liquids
   - Designed to help the centrifugal pump start quickly when the liquid level is below the pump in self-priming applications

3. Patented, strong, reliable Rotokey impeller mounting
   - Enables an easy and quick dismantling and assembly
   - Helps to minimize maintenance costs

4. Patented externally adjusted side plate
   - Allows easy and quick impeller clearance setting to maintain continuous high efficiency and minimize life-cycle costs

5. Patented balancing holes
   - Secure good liquid circulation behind the impeller and in the seal chamber
   - Guarantee optimal conditions for shaft seal by reducing unexpected shutdowns and minimizing operation and maintenance costs

6. Proven Sulzer WaterLess™ shaft seal
   - Dynamic seal, single and double mechanical seals, gland packing
   - Cost savings with fast and easy installation
   - No measurements needed

7. Standard IEC dimensioned flange or flange/feet electric motor with heavy-duty bearing unit arrangement
   - Shrink fitted sturdy shaft which is equally dimensioned with the shaft of AHLSTAR long coupled pump
   - Possible to use same wet end and sealing unit components which helps minimizing spare part inventory costs

8. Heavy-duty shaft
   - Minimizes deflection at stuffing box to less than 0.05 mm / 0.002 in
   - Helps to extend the shaft seal lifetime and reduces unexpected shutdowns and maintenance costs

9. Jackscrews
   - Enable simple disassembly while minimizing maintenance costs
AHLSTAR End Suction Single Stage Close Coupled Centrifugal Pump

Operating data

<table>
<thead>
<tr>
<th>Liquid</th>
<th>Temperature up to 130°C / 266°F</th>
<th>Pressure up to 16/25 bar / 230/360 psi</th>
<th>Gas content up to 70%</th>
<th>Liquid position below or above the pump</th>
<th>Corrosion pH from 0 to 14</th>
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<tbody>
<tr>
<td>Clean and slightly contaminated liquids</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Viscous liquids</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Fibrous slurries</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Non-fibrous slurries</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Large solids containing liquids</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>

Capacities

- 600 m³/h / 2,900 USgpm
- Heads: 160 m / 525 ft
- Temperatures: 130°C / 266°F
- Frequencies: 50 or 60 Hz
- Pressures: 16/25 bar, 230/360 psi depending on material and size

Impeller options

- Closed impeller
- Open impeller
- Low pulse impeller
- Low flow impeller
- Special open impeller
- High-efficiency non-clogging vortex impeller
**Shaft Seals**

- Single mechanical seal
- Single mechanical seal with throttling seal chamber
- Double mechanical seal
- Gland packing

**Degassing and Self-Priming Units**

- LM liquid ring pump with single mechanical seal
- GM gas separator with single mechanical seal
- GS gas separator with static seal

**Materials**

<table>
<thead>
<tr>
<th>Standard material options</th>
<th>Materials</th>
<th>Grade</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Duplex SS</td>
<td>ASTM A890</td>
<td>3A</td>
<td>41</td>
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<tr>
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<td>ASTM A890</td>
<td>1B</td>
<td>4L</td>
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<td>5A</td>
<td>4T</td>
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<tr>
<td></td>
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<td>Sulzer 2304</td>
<td>EJ</td>
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<tr>
<td>Austenitic</td>
<td>ASTM A743</td>
<td>CF-8</td>
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<td>CB7Cu-2</td>
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<tr>
<td>Cast Iron</td>
<td>ASTM A216</td>
<td>CL 35 B</td>
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<tr>
<td>Carbon Steel</td>
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<td>WCB</td>
<td>46</td>
</tr>
</tbody>
</table>

Other materials on request.

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Interchangeability

All pumps in our AHLSTAR close coupled range have been standardized, using also common modules and components from basic long coupled AHLSTAR range, for maximum interchangeability and easy installation and maintenance. Fewer parts means lower inventory costs and greater process reliability.

Lower spare part inventory and higher process reliability with high interchangeability of wet ends, sealing units and bearing units

1. A hydraulics
2. APP/T hydraulics
3. NPP/T hydraulics*
4. WPP/T hydraulics*
5. GM and GS design gas separator
6. R design air separating pump
7. LM design liquid ring pump
8. S design liquid ring pump
9. Versatile shaft seals

*as option
Versatile Space Saving Installation

Fast and simple and space-saving installation of Close Coupled (CC) pumps without baseplate

- Installation directly on the floor or installation rig without a baseplate is simpler, faster and more economical
- No need for coupling alignment, making the installation even faster, simpler and more economical
- Standard IEC dimensioned heavy-duty bearing motors in sizes IEC 90 to 280 as standard
- IMB5 and IMV1 flange motors for low-power applications and IMB35 flange/feet motors for high-power applications
- AHLSTAR sizes 10, 11, 20, 21, 22, 23, 31, 32, 33 with all wet end and sealing unit options are available with the close coupled design