AGISTAR™ SSA Side-Mounted Agitators
AGISTAR™ SSA Side-Mounted Agitators – Efficiency by Design

Sulzer continuously strives to reduce our environmental impact. With the new AGISTAR SSA, we have taken a significant step to further decrease the power consumption with groundbreaking efficient hydraulics. Through cost effective innovations, a new propeller design and extensive knowhow, Sulzer can also minimize the total cost of ownership (TCO) in your agitator applications.

Main Applications

The AGISTAR SSA agitator has been designed to operate in demanding applications. The versatile design makes it suitable for various industries, such as:

• Paper stock as well as other pulp and paper applications
• Biofuels industry
• Food industry
• Municipal and industrial wastewater treatment and sludge

Key Customer Benefits

The new AGISTAR SSA agitator is a product of our in-depth expertise and our long-standing experience in mixing technology, which allow us to maximize the value for our customers.

Maximun efficiency

• New high-efficiency hydraulic (patent pending)
• High pumping capacity and high axial thrust
• Precise selection - not oversized, not undersized
• Compatible with IE4 motors

High reliability

• Bearing lifetime more than 200,000 hours
• Strong shaft with minimal deflection
• Smooth hydraulic and rigid construction ensure low vibrations and long lifetime of seals and bearing

Minimized total cost of ownership (TCO)

• High-efficiency hydraulics provide substantial savings in power consumption
• Adjustable blade angles allow performance flexibility without any additional investments
• Low operational cost and minimized service needs due to robust construction
• Easy and fast installation thanks to innovative design
• Low spare part costs due to high standardization

Service friendly

• Adjustable blade angles allow performance flexibility without any additional investments
• Easy access to the gland
• Easy handling of belt guard
AGISTAR™ SSA Side-Mounted Agitators

Operating data

<table>
<thead>
<tr>
<th>50 Hz</th>
<th>60 Hz</th>
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</thead>
<tbody>
<tr>
<td>800 to 1,300 mm</td>
<td>32 to 52 in</td>
</tr>
<tr>
<td>7.5 to 75 kW</td>
<td>10 to 100 hp</td>
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</tbody>
</table>

**Materials**

Stainless steel design fits various applications across industries. The AGISTAR SSA agitator is equipped with a duplex stainless steel propeller for higher strength and wear properties. This ensures longer lifetime compared to agitators using austenitic stainless steel propellers.

**Belt drive**

- Sturdy and reliable design for demanding conditions
- High flexibility. Speed of the agitator can be adjusted with new pulleys and belt, without entering the tank.
- Easily handled belt guard with ergonomic design
Superior Design Features and Benefits

1. High-efficiency propeller with adjustable blades
   - Patent pending propeller design
   - Particularly suitable for high viscosities, such as paper pulp
   - Adjustable blades provide easily adaptable performance
   - Duplex stainless steel gives high wear resistance and longest lifetime

2. Sturdy shaft design
   - Shaft in high-strength carbon steel for maximum reliability
   - All wetted parts in stainless steel design
   - Full dry shaft design

3. Motor bracket ready for various motor options
   - Prepared for IE2, IE3 and IE4
   - NEMA compatible

4. Various seal options
   - Gland packing, single or double mechanical seal
   - Sulzer seals offer the most cost-effective and reliable solution
   - Other seal manufacturers available
**Belt drive unit**
- Robust and reliable design
- Easy to modify if operating speed needs to be adjusted

**Reliable and robust bearing unit**
- Bearing lifetime more than 200,000 hours

**Service friendly bearing frame design**
- Large space around seal area
- Bearings are easily accessible for inspection

**Agitator flange available as PN 10 ISO and 150 ANSI**
- Full stainless steel construction

**Easy installation with Sulzer wall rings**
- SI and SO for steel tanks
- CT for concrete tanks

**Patent pending support legs**
- Robust design
- Flexible and quick installation with adjustable height

**Ergonomic design of belt guard**
- Hand grips on the backside for easy lift on/off

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**Typical Distribution of Total Cost of Ownership**

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Savings Up to 25%</th>
<th>Initial Cost</th>
<th>Installation Cost</th>
<th>Environmental Cost</th>
<th>Decommissioning Cost</th>
<th>Operating Cost</th>
<th>Maintenance Cost</th>
<th>Downtime Cost</th>
<th>Energy Cost</th>
</tr>
</thead>
</table>
High-Efficiency Propeller

Sulzer has developed new high-efficiency hydraulics with very high axial thrust and low power consumption. The performance of the agitator can be adapted with adjustable propeller blades.

- Lowest TCO thanks to high efficiencies
- Adjustable blade angles to reduce energy input – or to increase capacity
- High pumping capacity with axial flow
- Higher hydraulic power to increase thrust may result in a smaller frame than the competitors
- Low vibrations due to efficient propeller design
- Performance proven in full-scale lab-trials and at customer sites
- Developed with the latest computational fluid dynamics (CFD) technology
- Suitable for viscous liquids, such as paper pulp, or water and other clean liquids

Agitation Levels

Sulzer has extensive knowledge of designing agitator systems. Selecting an agitator may be an easy task if you can oversize, but Sulzer has the expertise to select the right agitator for the application. You can be confident that there will not be too much agitation – nor too little.

- Precise selection of agitator level independently of process
- Pulp and paper, biofuels, clean liquids, sludge and others
- Optimal tank shape will reduce the installed power need

Level 1: Bottom clean

Level 2: Storage

Level 3: Full mixing
Shaft Seals

Versatile shaft seal options are available from gland packing to mechanical seals. The agitator has low shaft deflection and low vibrations, which provides long seal lifetime. If using Sulzer mechanical seals, you also benefit from our extensive knowledge as an equipment and seal manufacturer for the most cost-effective and reliable mechanical seal.

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Gland packing
- For light to heavy-duty applications
- With or without sealing water

Single mechanical seal
- For light and medium-duty applications
- Available from Sulzer or other manufacturers
- With or without sealing water

Double mechanical seal
- For light to heavy-duty applications
- Available from Sulzer or other manufacturers

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Simple and Quick Installation

The AGISTAR SSA agitator is quick and easy to install thanks to Sulzer’s smart, patented solutions. Our tank wall ring solutions also minimize expensive downtime.

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- Smart, adjustable support legs (patent pending)
- Flanges according to ISO or ANSI
- Wall ring options for both steel or concrete tanks