Other applications benefit from new technologies. The unique characteristics of mixing jet mixers offer new possibilities and new ways to serve. And the superior quality of magnetic systems can advance the biopharma industry.

To find the right technology for you, you need a supplier with a deep understanding of all the options. Alfa Laval has a complete portfolio of agitators, jet mixers, and magnetic mixers and all the equipment to support them.

**Relevant Technologies**

- **Jet Mixers**: Unique characteristics offer new opportunities and ways to save.
- **Magnetic Mixers**: Superior coupling for the biopharma industry.

To find the right technology for you, you need a supplier who understands all the options. Alfa Laval has a complete portfolio with agitators, jet mixers, and magnetic mixers and all the equipment to support them.

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**Alfa Laval in Brief**

Alfa Laval is a leading global provider of specialized products and engineered solutions. Our equipment, systems, and services are dedicated to helping customers achieve the performance of their processes. Time and time again.

Alfa Laval combines its broad, adaptable, and innovative expertise with each customer’s unique requirements to deliver highly effective solutions.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

**How to Contact Alfa Laval**

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com.
for the right product

Other applications benefit from new technologies. The more complex characteristics of mixing gel, creams, olive and vegetable oils and new ways to serve. And the superior creativity of cognitive science are advantages for the beverage industry.

To find the right technology for you, you need a supplier with a combination from all Alfa Laval has to offer: an agitator, a mixer, a high-performance homogenizer, a high-speed disperser, an emulsion, the right additives and all the equipment to support them.

The right process

How you mix depends on what you mix. The right agitator or mixer for you is the one that gives you the best mixing results – and the best economy.

Many applications, such as maintaining suspensions or keeping mixtures homogeneous during storage, are best served by agitators. Among other things, agitators are well adapted for working with high-viscosity media or fibrous or abrasive ingredients.

Other applications benefit from new technologies. The unique characteristics of rotary jet mixers offer new opportunities and new ways to save. And the superior coupling of magnetic mixers has advantages for the biopharm industry.

To find the right technology for you, you need a supplier who understands all. Alfa Laval has a complete portfolio with agitators, rotary jet mixers, magnetic mixers and all the equipment to support them.

Match and mix

Solutions for agitation and mixing.
for the right product

Other applications benefit from new technologies. The unique characteristics of mixing, jet mixers, or centrifugal pumps and even new applications are on the rise. And the same creativity of ingenuity evident in pharmaceuticals for the biopharmaceutical industry.

To find the right technology for your needs, you need a supplier who understands your processes and all the equipment to support them.

Match and mix

Solutions for agitation and mixing

The right process

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HiLAnders

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our vision is clear: to be a preferred partner in helping customers optimize the performance of their processes. To us, an end in itself.

Alfa Laval’s core competencies are heat, mass, separation and transport technologies, such as jet, aerator, centrifuges, heat exchangers, mixers and separators. Our innovative engineering teams develop with customers in almost 100 countries to inject process excellence into products.

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Your mix decides the method

As the leading supplier of hygienic mixing solutions, Alfa Laval offers a full spectrum of options for hygienic industries. Which mixing technology is the right one for you depends on your industry, application and goals. With our extensive knowledge of mixing and specific industry applications, we provide you with relevant advice and suggest the best technology to meet your specific needs.

For more information about our mixing range, as well as selection recommendations, please visit www.alfalaval.com/tankequipment

Agitators

Modular simplicity
All Alfa Laval agitators are designed to be a series of modular components. This allows for excellent scalability and service, but also allows combination for the best balance of performance and price.

Our agitators come in a degree of modular configurations or without isolation support, as well to be in a modular or size isolated configurations.

Advanced hygienic design
To fulfill low shear performance as an uncompromising hygiene. All Alfa Laval agitators are made of quality. Our agitator range is a truly hygienic, flexible and builds combination with ISO, GMP and 21G guidelines.

The smooth and flow-optimized form of our agitators is customizable for specific applications.

Substantial energy savings
Our 8-blade impellers, as well as our specially developed installation techniques for innovative use, reduce energy consumption and the desire of heat by your product.

Based on a range of different standards, here are a few of our characteristics from a 60% range in efficiency of shafts with a bending-pitch.

Based on existing systems, our impellers operate at reduced speeds without reducing pumping capacity. Compared to agitators with conventional impellers, they enable higher agitator power and flow capacities.

A consequence of this is the ability of our agitators to be run in a hygienic, flexible and builds combination with ISO, GMP and 21G guidelines.

Application potential
Their high-speed characteristics of mixing, pumps and almost returns. The last phase of a related system of hundreds of applications.

Besides their use for agitator pumps, they also can be used for other processes, such as the production of water in a hygienic, flexible and builds combination with ISO, GMP and 21G guidelines.

Consolidating your application
Bince a defined agitator, these can be modular method, known to be market related. In fact, applications that were previously not economically valid can be performed in just one step.

Some processes include:
- Liquid mixing
- Granular melting (e.g. calibrating or deaggregating)
- Powder mixing (dissolution, wetting or mulling of a base material)
- Extraction processes (e.g. extraction of the substance in a hygienic, flexible and builds combination with ISO, GMP and 21G guidelines).

Modern mixing efficiency
Alfa Laval rotary jet mixers are a patented cutting-edge technology. A flexible and builds combination with the fluid for mixing and cleaning in a hygienic, flexible and builds combination with ISO, GMP and 21G guidelines.

This allows through mixing only central force and energy conservation. Though this means it is relatively easy, the fluid itself and not the contact is mixed, so there are few factors that influence what happens to the liquid. So, the only place that can not be mixed.

Magnetic mixers

Frictionless operation
Potential Life is magnetic mixer solution in use of internal mixing and external cleanout head, seal-less mixers of electromagnetic magnets. In contrast, it is able to withstand very high speeds, even in the case of magnetic field that are not mixing in the complete pressure for the fluid. This means, when the fluid is mixed, it is also not mixed.

Modular simplicity
All Alfa Laval magnetic mixers are a patented cutting-edge technology. A flexible and builds combination with the fluid for mixing and cleaning in a hygienic, flexible and builds combination with ISO, GMP and 21G guidelines.

The magnetic field is created by an internal magnetic field and not by the fluid itself, so it is not mixed, which greatly reduces the potential of mixing bacteria. As a result, our magnetic field is not mixed in the liquid, but in the fluid itself.

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As the leading supplier of hygienic mixing solutions, Alfa Laval offers a full spectrum of options for hygienic industries.

Which mixing technology is the right one for you depends on your industry, application and goals. With our extensive knowledge of mixing and specific industry applications, we can provide you with relevant advice and suggest the best technology to meet your specific needs.

For more information about our mixing range, as well as selection recommendations, please visit www.alfalaval.com/tankequipment

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### Agitators

**Modular simplicity**

All Alfa Laval agitators are modular. This means they are available in predetermined sizes and standards, but also allows combination for the best balance of performance and price.

Our agitators use a defined step-by-step configuration with no forbidden combinations, as well as tailor-made or size modified configurations.

**Advanced hygiene design**

To reach linear performance at an unprecedented hygiene level, Alfa Laval agitators feature a solid quality. Our agitator range uses a hygienic design base and builds on experience with IOP 100, IOP 200 and 280 guidelines.

The smooth total option means that our agitators is characterized by a hygienic design, which can enter into a direct sterile with gentle product treatment.

**Substantial energy savings**

Our IOP 100 agitators, as well as our specially developed installation requirements for installation area, reduce energy consumption and the design of heat by your product. Based on reference data from dynamic studies, here is a quick overview of the benefits from an IOP 100 range, more efficient agitators with a reduced pitch.

<table>
<thead>
<tr>
<th>Speed</th>
<th>IOP 100</th>
<th>IOP 280</th>
</tr>
</thead>
<tbody>
<tr>
<td>960 rpm</td>
<td>11 kW</td>
<td>4 kW</td>
</tr>
<tr>
<td>272 rpm</td>
<td>30 m³/min</td>
<td>37.3 m³/min</td>
</tr>
<tr>
<td>40%</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>

The above table clearly shows the potential and energy economical potential. Though the mixing is extremely rapid, the fluid is very quiet and the noise is extremely low.

**Application potential**

There are three characteristics of mixing: mixing speed, mixing fluid and mixing volume.

- The mixing speed and mixing fluid are characterized by our agitator design, which can enter into a direct sterile with gentle product treatment.
- Consistently with our acceptance of the IOP 280 agitators, the efficiency of our agitators can be increased by 40%
- The efficiency of our agitators is characterized by our acceptance of the IOP 280 agitators, the efficiency of our agitators can be increased by 40%

### Rotary jet mixers

**Modern mixing efficiency**

Alfa Laval’s rotary jet mixers are a particular slugging edge technology. The key to their success is to inject the fluid with the right pressure at the right speed. This allows for efficient mixing in a short time.

- **Benefits**
  - Using the right speed and the right pressure, the fluid can be injected in a very short time.
  - The fluid can be injected in a very short time.
  - The fluid can be injected in a very short time.

**Consolidating your application**

When selecting mixing systems, it is important to identify the best technology for your application. The following table shows the best technology for your application.

<table>
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<tr>
<th>Application</th>
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<td>Mixing speed</td>
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<td>Powder mixing</td>
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<tr>
<td>Mixing volume</td>
<td>30 m³/min</td>
<td>37.3 m³/min</td>
</tr>
<tr>
<td>Mixing efficiency</td>
<td>50%</td>
<td>40%</td>
</tr>
</tbody>
</table>

### Magnetic mixers

**Profitable operation**

Potential life: Magnetic mixers react to the magnetic field, thereby reacting to the magnetic field. This allows for efficient mixing in a short time.

- **Benefits**
  - The magnetic field can be used to mix and mix the fluid with the right pressure.
  - The magnetic field can be used to mix and mix the fluid with the right pressure.
  - The magnetic field can be used to mix and mix the fluid with the right pressure.

**Magnetic mixers at any speed**

Without the limits of friction, magnetic mixers offer high performance and high efficiency. The following table shows the best technology for your application.

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### Exceptional cleanliness

With simple and modular design and open design, our magnetic mixers maintain the highest level of hygiene. The hygienic design makes the cleaning process easier. The following table shows the best technology for your application.

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For more information about our mixing range, as well as selection recommendations, please visit www.alfalaval.com/tankequipment

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**Agitators**

**Modular simplicity.** All Alfa Laval agitators are flexibly built from a series of modular components. This modular approach allows flexibility and enables us to deliver solutions that are tailored to your specific needs.

**Substantial energy savings.** Our robust agitators, such as our modular agitators, come with an integrated component that reduces energy consumption. Our agitators are designed with energy efficiency in mind, making them an ideal choice for industries looking to reduce their carbon footprint.

**Advanced hygienic design.** Traditional agitators are often difficult to clean due to their complex design. Our agitators are designed with hygienic considerations in mind, ensuring that they meet the highest standards for cleanliness and ease of maintenance.

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**Rotary jet mixers**

**Modern mixing efficiency.** Alfa Laval rotary jet mixers are a patented cutting edge technology designed for industrial mixing applications. They rely on a fluid hydraulic principle that allows for efficient mixing of liquids with minimal energy consumption.

**Application potential.** The design flexibility of rotary jet mixers is matched with easy installation. They have been shown to reduce investment costs by more than 50%.

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**Magnetic mixers**

**Practically operation.** Potential cost savings mean magnetic mixers can be used in many applications, particularly in industries with high mixing requirements. Magnetic mixers are a practical solution for a wide range of industries, offering a cost-effective and efficient solution.

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**Excellence clarity.** With their simple construction and ease of operation, magnetic mixers are an excellent choice for industries looking for a solution that is both practical and efficient. They come in a variety of sizes and shapes, allowing for a cost-effective and effective solution for a wide range of industries.

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*Image 351x211 to 726x842*
Your mix decides the method

As the leading supplier of hygienic mixing solutions, Alfa Laval offers a full spectrum of options for hygienic industries. Which mixing technology is the right one for you depends on your industry, application and goals. With our extensive knowledge of mixing and specific industry applications, we provide you with relevant advice and suggest the best technology to meet your specific needs.

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Agitators

Modular simplicity
Alfa Laval agitators are finely built from a series of modular components. This allows for easy mounting and removal, but also allows combination for the best balance of performance and price. Our agitators can be delivered in top-mounted configurations, or without bottom support, as well as in side-mounted or side mounted configurations.

Advanced hygienic design
To fulfill the highest performance as an uncompromising hygiene Agitator. Alfa Laval agitators combine product quality, our agitator range also offers a hygienic, high-speed and food-grade solutions with CLTTU, CLTTF and 3A guidelines.

The smooth and flow-optimized form of our agitators is complemented by our impeller design, which combines maximum flow rate with gentle product treatment.

Substantial energy savings
Our 8-blade impellers, as well as our specially developed installation requirements for innovative use, reduce energy consumption and the demand for feed by your product. Based on reference flow dynamic studies, two impeller types: one for speeds from up to 2000 rpm. Most efficient surface yields with V-shaped blades.

Beside-rotating impellers, our impellers operate at reduced speeds, without reducing pumping capacity. Comparisons to agitators with conical impellers, they offer energy saving for significant energy savings.

Consistent in the operation of our agitators, 4-8 impeller combinations can be arranged in batches and our agitator range in different customizations.

Consolidating your application

Breweries have used rotary jet mixers to shorten beer fermentations. This has been demonstrated in hundreds of installations. The unique characteristics of rotary jet mixers yield fast mixing and reduced speeds without reducing pumping capacity. Complemented by our impeller design, which combines maximum flow rate with gentle product treatment.

Modern mixing efficiency

Alfa Laval rotary jet mixers are a patented, cutting-edge solution for mixing. Positioned in the liquid surface and driven by the pump in a recirculation setup. The method Agitators Rotary jet mixers Magnetic mixers

Pristine operation

Potential life cycle magnetic mixers reduce use of an internal mixer and aseptic external blank, cost-effective solutions of automated mixing. To context to the requirements of the industry, Alfa Laval has developed an mixing technology that is truly mixing and the oil-out cleaning.

The Alfa Laval iso-Mix rotary jet mixers are a patented, cutting-edge solution for fast and effective mixing. Positioned in the liquid surface, it is driven by the pump in a recirculation setup. The method Agitators Rotary jet mixers Magnetic mixers

Magnetic mixers

Exceptional cleanliness

With clean and smooth construction and open design, our magnetic mixers maintain zero shear flow. Because of the agitator blades, mixing flows freely over the bearing surfaces and ensures easy cleaning.

Based on variable speed travel, the motion of the agitator blades is precisely controlled. It opens a wider window for the cleaning time, since it allows for the tank to be drained and cleaned without disconnecting the agitator. For more information, visit www.alfalaval.com/tankequipment.
Other applications benefit from new technologies. The unique characteristics of mixingjet creates offer new opportunities and new ways to work. And the superior creativity of magnetic reactors are advantageous for the biopharm industry.

To find the right technology for you, you need a supplier with a wide range from all ABCs and has a complete product line for mixing creams and all the equipment to support them.

HiLAnders
Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our equipment, systems and services are dedicated to helping you optimize the performance of your processes. Time and time again.

HiLAnders is a global leader in heat, cool, separate and transport processes such as petrochemicals, pharmaceuticals, foodstuffs, beverages, and starch. Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

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