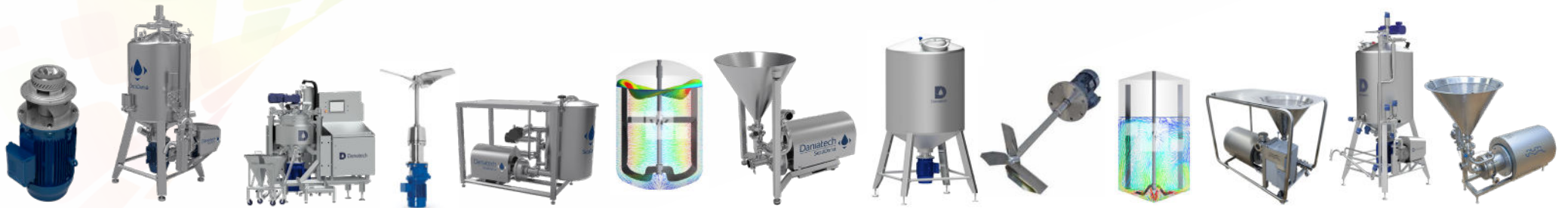








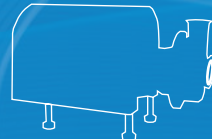
PRODUCT BROCHURE

MIXING EQUIPMENT



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About ITS



Industrial Trading Solutions Ltd are hygienic equipment specialists with over 100 years of combined technical knowledge and applied skills in the food & beverage, brewery, distillery, dairy, pharmaceutical and personal care industries.

Formed in 2002 and based in the Midlands UK, ITS now distribute a multitude of top industry brands with a fast service, at competitive prices and all with an unmatched customer ethos.

Our technical team can support you with large system projects, one-off product purchases and maintenance & repair services.

As an ISO9001, ISO14001 & ISO45001 accredited business, you can expect the very best service and the highest standards from Industrial Trading Solutions Ltd.

"Operating within a safe and transparent culture of respect and innovation, we are dedicated to positively conduct ourselves with high ethical standards and integrity. We will continue to invest in and develop our staff, reliable product ranges and services provided, to ensure the high standards expected with the market we operate are upheld or exceeded. As the complete solutions supplier of choice, we value all stakeholders of the business and build strong relationships to reinforce our unrivalled reputation and future growth."

Peter Jeans, Company Founder and Chairman



DISTRIBUTING SOLUTIONS ◆ PROCESSING EXCELLENCE



Our Approach to Sustainability

Climate change and sustainable development are vital and urgent global issues facing us today - as an industry leading Hygienic Flow Equipment Specialist, ITS has a key responsibility to adhere to frameworks, legal requirements and enforcement mechanisms to respond to these and other global challenges and help create a more sustainable society. ITS applies sustainable practices not only on a day to day basis, but embeds them within the underlying company infrastructure and ethos.

Ask us about Sustainability Audits and let ITS support your sustainability activities.



Scan the QR Code to visit our website page:



Our Sustainability Goals

Our sustainability goals continually drive us to improve on all aspects of our sustainable development.



<p>Water</p> <p>Reduce water consumption across all parts of the process to reduce waste management and energy usage.</p>	<p>Yield</p> <p>Increase product yield across all areas of the process to minimise waste management, along with reduction of water consumption for cleaning requirements.</p>	<p>Energy</p> <p>Reduce electrical energy consumption across the manufacturing process to lower carbon footprint and meet emission legislation.</p>

Introduction to Mixing

For many hygienic processing facilities, the mixing operation is a key process that can determine the output of a good or bad batch of product. Surely then, you need to be sure that the equipment being used is up to the job?

Hygienic Mixers and agitators combine, mix, blend, fold, and whip large amounts of ingredients. In addition to ingredient blending, mixing is also used in processing applications to control rates of heat and mass transfer, or to intentionally cause reactions or changes in the properties of the final delivery of product with regards texture and sensory profiles. The expectation is that the results of mixing will be uniformed and consistent with each and every lot produced.

At Industrial Trading Solutions Ltd we understand that the constant shift in people's tastes and requirements means the number of advanced ingredients and formulations for new products presents a great challenge for the mixing equipment. With more complex products, at higher capacities, we offer solutions with a more automated approach and select only the best manufacturers to supply processing solutions into some of the most regulated industries around the world.



High Shear Mixers

Overview

Our high-shear mixers and process mixing solutions are versatile and can be used in many setups and applications. Not only are they more compact and perfectly optimised for energy-efficient high-shear mixing, but also virtually maintenance-free.

How it works

Our powerful, high-shear mixers and scraper agitators generate a controlled vortex in the tank, effectively separating air from the liquid and generating a perfect homogeneous dispersion within seconds. The result is a highly stable and homogeneous, air and lump-free end product.



LabMaster

Products

LabMaster: The LabMaster is a small, compact mixer designed to work as pilot mixer for developing new recipes but can also be used for small scale productions. The unit comes with an isolated jacket for fast heating and cooling with steam or ice water. For extra quick heating the unit is equipped with a direct steam valve.

InjectMaster: The InjectMaster is the most energy-efficient solution on the markets for inline High Shear mixing. The special designed injector creates a strong suction of powder. The mixer unit is very versatile and can be used in many setups and applications.

MixMaster: The MixMaster is versatile, compact solution for inline High Shear mixing. The mixer works according to the rotor-stator principle, where a special closed mixing wheel passes the product through patented slots.



MixMaster



InjectMaster

Products

ProcessMaster: The ProcessMaster represents the next generation of mixing solutions for the process industry. Not only is it more compact and perfectly optimised for energy-efficient high shear mixing, it is also virtually maintenance-free.

VacuumMaster: Depending on the selected options, the mixer can be used as a batch mixer or as an in-line mixer. For in-line mixing a circulation loop is required. The result is a highly stable and homogeneous, air- and lump-free end product.

InlineMaster: This mixer produces a highly stable and homogeneous, air and lump-free end product. Due to the discharge flow/pressure of the InlineMaster, an external re-circulation pump is in some cases not required.

Ultra MixMaster: The Ultra MixMaster is a very powerful Ultra High Shear mixer with a shear rate up to 120.000S-1. The Ultra MixMaster can create homogenisation down to 1 μ m lump free.



ProcessMaster



VacuumMaster



**Ultra
MixMaster**



InlineMaster

Products

LiquidMaster: The LiquidMaster is the most energy-efficient solution for inline High Shear mixing on the market. The powder is dosed manually into the vessel, where the liquid level is manually controlled by a butterfly valve on the inlet pipe.

BasicMaster: The BasicMaster represents the newer and more energy-efficient generation of mixing solutions for the process industry. Not only is it more compact and perfectly optimised for energy-efficient high shear mixing, it is also virtually maintenance-free.

ShearMaster: This mixer unit is designed to be welded onto existing or new tanks, where better and more efficient mixing is needed. The ShearMaster is welded into the bottom or side of the tank. It is also possible to install more units onto the silo tanks.

Hybrid Powder Mixer M15: This Hybrid Powder Mixer is a patented hygienic mobile unit that both disperses powders into liquids quickly and efficiently and pumps the resulting solution at outlet pressures of up to 5 barg, all using a single motor.

Hybrid Powder Mixer S15: Powder Mixer S15 is a patented hygienic unit that both disperses powders into liquids quickly and efficiently and pumps the resulting solution at outlet pressure of up to 5 bar, all using a single motor. This versatile, easy-to-use mixer produces homogeneous products at high dry matter concentrations and high productivity.



ShearMaster



BasicMaster



LiquidMaster



Hybrid Powder Mixer S15



Hybrid Powder Mixer M15



Agitators

Overview

Our mixers are built to last, utilising premium materials and cutting-edge engineering techniques. Robust construction ensures durability and longevity, even in the most demanding industrial environments. With a wide range of mixer models to suit various applications from batch mixers to continuous mixers, our versatile line-up caters to diverse production requirements and boast innovative design features aimed at optimising mixing efficiency and performance.

Products

ALS Side Agitator | ALT Top Mounted Agitator | ALB Bottom Mounted Agitator

Our side mounted agitator ALS offers mixing solutions to meet any requirements in food, dairy, beverage, pharmaceutical, biotechnology and cosmetic applications. Type ALS agitators can be sized for several applications for both atmospheric and pressurised tanks. Configuration for use in sterile/aseptic applications is also possible. Sizing and customising the agitator to the specific task ensures optimised power consumption and pricing.

How it works

Based on a modular design, our ALS side-mounted agitators consist of a drive unit with a bearing frame, a shaft with a special shaft seal and specially designed energy-saving airfoil (EnSaFoil) impellers with two or three blades.

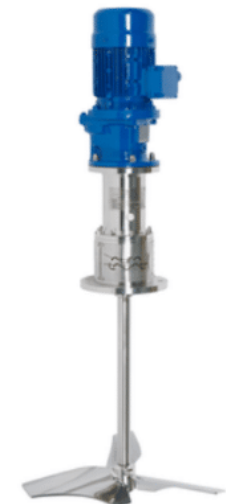
An electrical drive motor transmits the energy required for mixing and blending (directly or via a gearbox) to the tank agitator shaft. The shaft rotates, turning the EnSaFoil impellers. The impeller movement creates a high flow with low shear due to the highly effective axial pumping effect on the liquid in the tank. This results in effective mixing and blending of the entire contents of the tank.



ALT Top Mounted Agitator



ALB Bottom Mounted Agitator

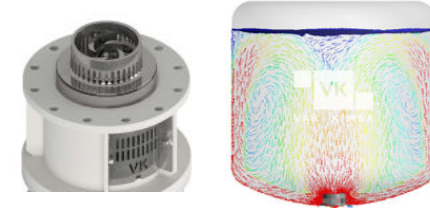


ALS Side Agitator

Products

Mulfo-LK Agitator: This new bottom agitator is optimal for dissolution and dispersion processes for a wide range of applications: food, chemical, cosmetic and pharmaceutical. Its radial design with slotted stator generates high pump flow rate and high-shearing.

EnSaFoil Blade: The distinctive design of the EnSaFoil propeller delivers a remarkably high flow rate while requiring minimal energy input from the drive motor. Compared to propellers with standard pitch blades, an EnSaFoil propeller can achieve up to 400% greater efficiency.



Mulfo LK	
Type of flow	Radical
Process	Dissolution / Dispersion
Impeller Ø / Tank Ø	0.15 – 0.33
Tangential Speed (m/s)	5 : 25
Viscosity	Low - Medium - High
Pump Flow Rate	High

How it works

Our mixers leverage a combination of mechanical, fluidic, and thermal forces to achieve efficient mixing and blending of ingredients, ensuring uniformity, consistency, and quality in the final product

Video:



Scan the QR Code to visit our website page:



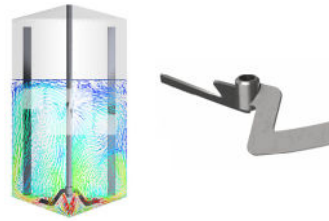
EnSaFoil Blade

Impeller Options

Overview

Knowing how to apply the ideal impeller to each process, selecting the right speed and optimising to the maximum, is what we do. All our impellers are perfectly characterised in number of power, in such a way that the power consumed by our agitators is the minimum necessary.

Other options are available Our Process Engineering department will study the most appropriate impeller system for your process.



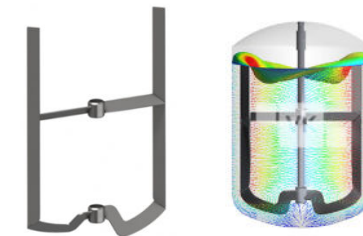
Semi Anchor Impeller	
Type of flow	Axial - Radial
Process	Homogenization / Keeping In Suspension / Thermal Exchange
Impeller Ø / Tank Ø	0.40 - 0.95
Tangential Speed (m/s)	2 : 8
Viscosity	Medium
Pump Flow Rate	Medium



Trivak Impeller	
Type of flow	Axial
Process	Dissolution / Homogenization
Impeller Ø / Tank Ø	0.20 - 0.60
Tangential Speed (m/s)	2 : 15
Viscosity	Low - Medium
Pump Flow Rate	High



Helical Ribbon Anchor Impeller	
Type of flow	Axial - Radial
Process	Homogenization / Mixing / Thermal Exchange
Impeller Ø / Tank Ø	0.80 - 0.96
Tangential Speed (m/s)	0.4 : 3
Viscosity	High
Pump Flow Rate	High



Anchor Impeller	
Type of flow	Radial
Process	Homogenization / Heat Exchange
Impeller Ø / Tank Ø	0.80 - 0.96
Tangential Speed (m/s)	0.5 : 4
Viscosity	Medium - High
Pump Flow Rate	Low - Medium



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