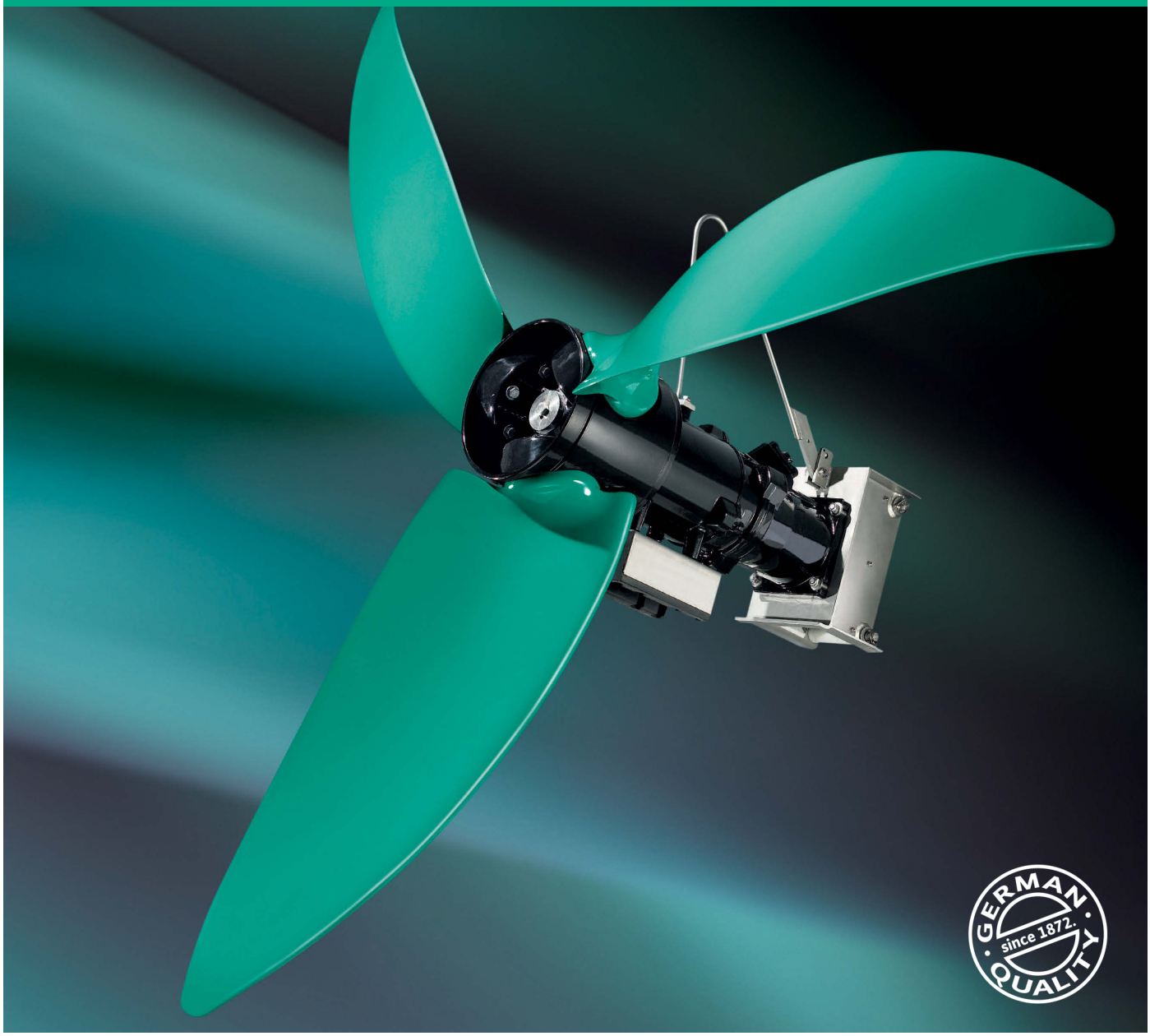
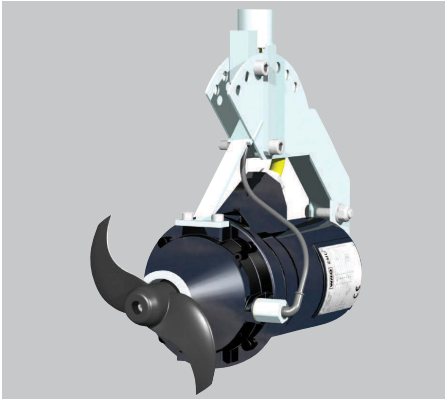
Pumpen Intelligenz.

Wilo Mixers

Submersible Mixers

Product Brochure



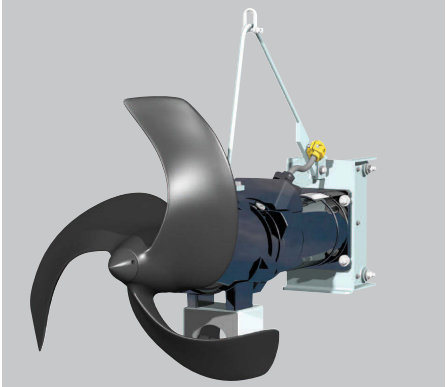


Wilo Miniprop TR 21

- Submersible mixer with optimized blade profile
- Propeller made of made wear resistant PUR

Wilo Uniprop TR 36S

- Heavy duty propeller for heavy sludge and storm water applications



Wilo Uniprop TR 75-2

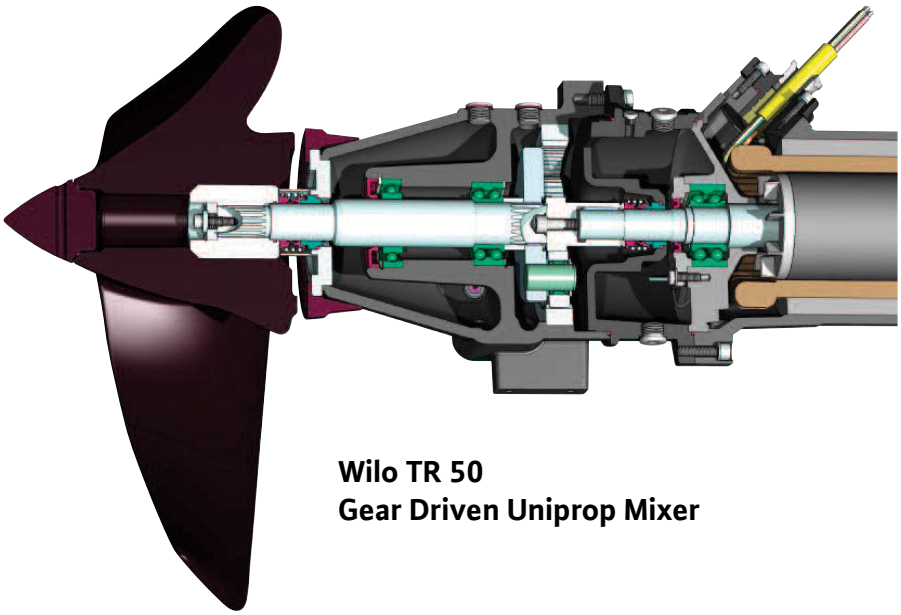
- Standard version with flow optimized PUR propeller for a wide range of applications

Wilo Mixers
Miniprop & Uniprop

Wilo Miniprop
These submersible mixers are particularly suited to applications in small pumping stations. They are used for maintaining solids in suspension, so they can be pumped on for further treatment, and also for dispersing grease and light solids, that tend to form a floating solids layer in these stations.

Wilo Direct Drive Uniprop
Wilo's smaller direct drive Uniprop mixers are ideal for continuous duty applications in wastewater treatment plants. Whether you have a small BNR or sludge holding basin, Wilo will have a mixer that is right for your application. The durable units can be used for blending influent streams, or for keeping solids in suspension.

Wilo Gear Driven Uniprop
Wilo's gear driven mixers are designed for efficiency and durability, a wide range of wastewater treatment applications. Our molded polyurethane propellers are designed to provide maximum thrust and flow generation, and to minimize the radial losses that require the use of jet rings. The compact in-line planetary gear sets provide stability and efficient speed reduction. Two sets of bearings between the gear set and propeller provide additional mechanical stability. The combination of using large efficient propellers operating at low speeds gives Wilo the opportunity to choose mixers that provide superior mixing performance with minimal power use, often saving thousands of dollars a year in power costs when compared to direct drive options. The slower turning propeller speeds means less wear on the mixer's bearings and seals, which means longer life, much greater reliability, and lower maintenance costs.



Wilo TR 50
Gear Driven Uniprop Mixer

Wilo Mixers
Megaprop & Maxiprop

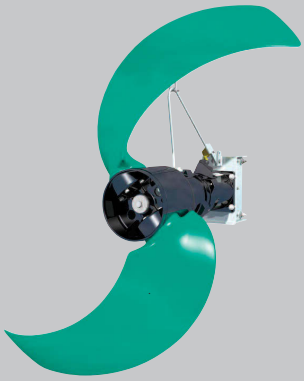
Wilo offers two types of low-speed submersible mixer models:

· Maxiprop with two-blade propeller
· Megaprop with three-blade propeller

Different blade loads occur here with the same thrust. With the Wilo Megaprop, the load is distributed among three propeller blades. That ensures smooth operation even if inflowing conditions are unfavorable. Extremely durable one-piece laminated GRP blades ensure maximum periods of use and minimum maintenance costs, and can also be replaced individually. “Slow runners” are ideal for creating a directed flow in water treatment systems and for suspending solids. In activated sludge tanks, biological phosphorus removal tanks and denitrification tanks, they prevent activated sludge from settling. This makes Wilo’s low speed mixers suitable for a wide range of applications in water treatment technology, industry, agriculture and water supply.

Equipment.
Wilo Maxiprop and Megaprop submersible mixers are available with propeller diameters from 1,600 mm to 2,600 mm. Depending on the submersible motor (4, 6 and 8-pole motors are available) and the transmission of the planetary gear, propeller speeds between 17 and 77 rpm are feasible. The resulting mixing forces are absorbed by the oversized gear mounting, and are not passed to the motor bearings. A thermal sensor and a three-chamber system are part of standard construction. The gear shaft is made of saltwater-resistant AISI 329 duplex stainless steel (1.4462). The standard protective sleeve, the hub closing ring and the well-designed propeller geometry reliably prevent any entangling. The counter ring of the mechanical seal is pressed into a stainless steel bushing to prevent any corrosion. The submersible mixer is optionally available with explosion rating according to the FM or CSA standard. The submersible mixers are equipped with an external sealing chamber control as an option. We recommend our Ceram C0 coating for applications in abrasive and/or corrosive fluids.

Modular Design.
With all Wilo submersible mixers, the submersible motor, the gear and the propeller form a compact unit of individual components that enable the precise adjustment of the mixers to the required performance data. With all of our units, ideal mixing results are based on modularly applicable propeller diameters and speeds. With the use of 4, 6 or 8-pole submersible motors and various gear transmission ratios, the propeller speed may vary as required to provide the optimal mixing energy. Due to the modular system used by Wilo, the motor, the gear and the propeller can be combined in many ways so that a large range of submersible mixers and pump curves are available.

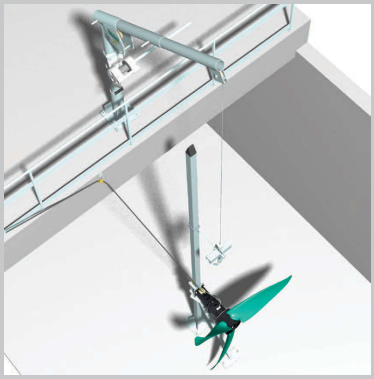


Wilo Maxiprop TR 221

- Low speed submersible mixer with 2 bladed propeller
- One-piece GRP laminated blades for maximum periods of use

Wilo Megaprop TR 326

- Innovative blade shape for very smooth operation
- Self-cleaning effect due to backward bent blades
- Up to 10% energy cost savings*



Accessories

- Wilo provides all accessories – from guide pipes, frames and sliding carriages to rubber buffers

* compared to similar low-speed mixers

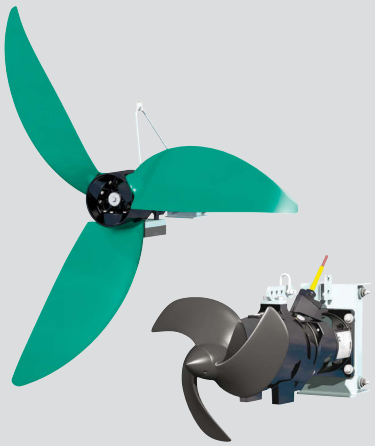
Wilo Mixers

Submersible Mixers

Applications Include:

- » **Biological Nutrient Removal**
- » **Flow Generation**
- » **Equalization Tanks**
- » **Sludge Holding Tanks**
- » **Digestion**
- » **Industrial Applications**

Wilo Mixers



The primary efficiency improvement in Wilo's TR family of mixers can be seen in the TR50 thru TR90 medium speed mixers.

First, Wilo employs gear driven mixers in the medium speed size range, as opposed to the direct driven units used by most competitors. Utilizing 4, 6, or 8-pole motors, coupled with 14 different gear sets, we can provide a wide speed range for each propeller size. Speeds range from 110 rpm up to 560 rpm for our gear driven mixers. This allow us to "dial-in" the most efficient selection for your application.

More energy consumption is required to spin a propeller faster than it does to rotate it slower. Given that the TR series Low and Medium speed mixers generally operate at a much slower propeller speed, they consume less energy to perform the same job, all the while, providing mechanical reliability.

Finally, Wilo's polyurethane propellers have the ability to be cast into the optimum hydrodynamic shape and design, permitting superior hydraulic performance. The industry standard is to use a flat metal blade that is so inefficient it requires the mounting of a ring around the perimeter of the blade to "re-direct" the wasted radial flow. However, all major competitors use non metallic blades in their largest slow speed mixers, because it's the most efficient design. Wilo uses no metallic blades as our standard propeller material.

Tank Volume	Selection of Min. Investment Req.	Selection of Opt. Operating Costs	Difference	Total
0.78 MGal	18.5 HP/MGal	8.6 HP/MGal	9.85 HP/MGal	
Energy Savings				5.7 kW
Annual Operating Time				8,760 h
Energy Costs				$0.10 / kWh
Number of Tanks				4
Total Energy Cost Savings* per tank/year (* at constant energy costs)				**$4993**
4-Tank Yearly Savings of Approx.				**$19,972**

the right mix.

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GERMAN QUALITY since 1872.

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