

Pioneering for You

wilo

Product information

Wilo-EMU TRE 312.

Maximum efficiency in minimum space.



Calculate with maximum efficacy.

Even in energy-intensive continuous duty.



Biological treatment economically defined.

In the case of wastewater treatment plants, inflows can vary according to the weather as well as the season. With the EMU-TRE 312 series, Wilo has developed a highly efficient submersible mixer that is ideally suited to sludge activation with MBBR procedures. Due to the small propeller diameter, it can also be used in smaller activated sludge tanks. The new mixer provides an effective suspension and flow generation in the continuous biological treatment process. For this reason, the Wilo-EMU TRE 312 is an optimal addition to the product range of slow running Wilo submersible mixers and rounds off the program.

Advantages you can count on.

- Operational reliability. Clogging-free thanks to the backward-curved incoming flow edge.
- Durability. Low-wearing propeller thanks to the abrasion-resistant plastic.
- Efficiency. Low energy and operating costs thanks to an optimum thrust output figure due to the innovative blade geometry and energy-efficient IE3 motor.
- Smooth operation. Even at high thrust ranges and with unfavourable inflow conditions.

Sophisticated technology you can rely on.

The Wilo-EMU TRE 312 has a propeller made of the low-wearing plastic PA 6C in solid material. This is pre-assembled on a newly developed stainless steel hub. The propeller has 3 blades and a nominal diameter of 120 cm. The mixer is underpinned by a 2-stage planetary gear, whose planetary gear speed is exchangeable on the system parameters for an optimal configuration. The gear bearings are of extra-large dimensions to absorb the resulting thrusts. The submersible motor with its oversized motor bearing and the IE3 efficiency class (derived from IEC 60034-30) ensure maximum efficiency in the mixer.

Technical data:

- IE3 motor technology
- Mains connection: 3 – 400 V, 50 Hz
- Propeller diameter 1,200 mm
- Propeller speed 92 – 146 rpm
- Thrust 820–2280 N
- Operating mode: Continuous duty (S1)
- Max. immersion depth: 20 m



Framework conditions		
Number of basins	3	
Submersible mixers per basin	2	
Running time	10 years	
Comparison of mixers		
Submersible mixer	TR 90.2-24-4/12	TRE 312.138-4/17
Nominal propeller diameter	900 mm	1,200 mm
Propeller speed	241 rpm	138 rpm
Thrust	1960 N	2020 N
Power consumption $P_{1.1}$	4.7 kW	3.5 kW

Calculation of energy cost savings		
Difference in power consumption	$P_{1.1}(\text{TR } 90-2) - P_{1.1}(\text{TRE } 312)$	1.2 kW
Energy saving per basin	$1.2 \text{ kW} \times 2$	2.4 kW
Annual operating time in hours	$365 \text{ d} \times 24 \text{ h}$	8,760 h
Energy costs		EUR 0.15/kWh
Energy cost saving per basin/year*	$8,760 \text{ h} \times \text{EUR } 0.15/\text{kWh} \times 2.4 \text{ kW}$	EUR 3,154
Energy cost saving for 3 basins/year*	$\text{EUR } 3,154 \times 3 \text{ pieces}$	EUR 9,461
Overall energy cost saving of the system*	$\text{EUR } 9,461 \times 10 \text{ years}$	EUR 94,610

Calculation of the amortisation time		
Investment costs for the TR 90.2-24-4/12	$6 \times \text{EUR } 8,000$	EUR 48,000
Investment costs for the TRE 312.138-4/17	$6 \times \text{EUR } 11,100$	EUR 66,600
Extra costs for efficiency class IE3 (derived from IEC 60034-30)		EUR 18,600
Energy cost savings for 3 basins/year*		EUR 9,461
Amortisation time of extra costs**		24 months

*Energy costs calculated at a constant rate of EUR 0.15/kWh.

** Solely the pure energy costs are considered in the amortisation calculation.

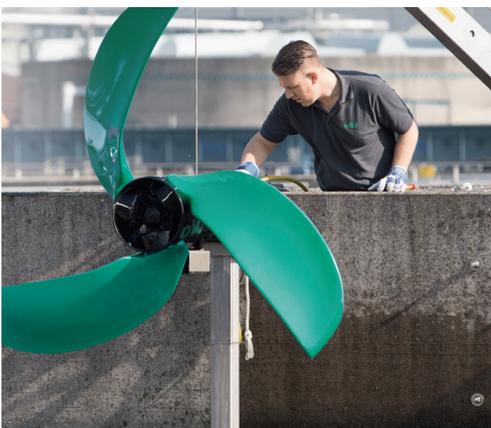
Wilco-EMU TRE 312. Saves costs even in continuous duty.

The newly developed submersible mixer allows you to save energy costs.

The new blade geometry and the highly ef-

ficient submersible motor ensure convincing energy efficiency – even in energy-intensive continuous duty. The overall annual savings show that the required thrust output can also be economical.

Try & Buy. Try it out for half a year before you decide.



Giving you the best advice also means:

we want you to be 100% satisfied with the chosen product before we sell you a submersible mixer. What can be more informative than trying it yourself?

That is why we offer you this unique service: Try & Buy.

Try out the chosen Wilco submersible mixer before you purchase it. For six months, without any obligation. Get an accurate picture of the quality, ease of installation, and efficiency.

Benefit from "Try and Buy". Don't hesitate to contact us, we would be happy to provide you with more information.



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