

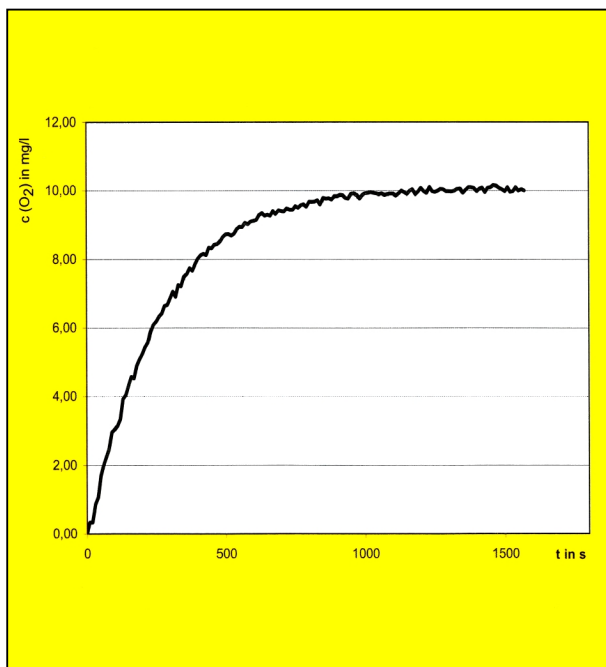
Application

The TMB 3 submersible aerator is an especially compact and efficient apparatus for the circulation and aeration of wastewater in the activated sludge stage of small-scale SBR clarification plants. It has been specially developed for systems which operate with SBR techniques and specifically adapted for systems serving up to 12 inhabitants. Laboratory investigations and field tests confirm the system's exceptionally good clarification and mixing performance. The COD content which can be attained with the TMB 3 is significantly lower than with conventional aerators.

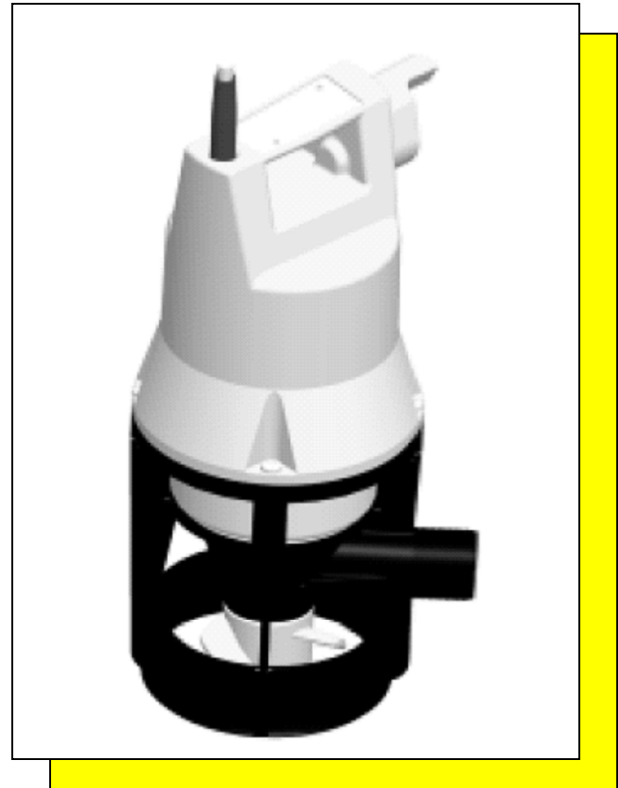
The TMB 3 creates bubbles of ultra-fine size, along with a high performance ratio for air insertion and penetration depth in the chamber. This results in reduced running times as well as a very gentle mode of operation, especially in underloaded activated sludge and SBR systems. Due to a special wing design, the flake structure of the activated sludge is preserved well, short deposit times are achieved and the ideal conditions for nitrification are created. In addition, the aeration propeller is safely protected from being damaged by a ring on the housing.

The submersible aerator can be combined with the U 3 K NIRO and U 3 KS NIRO submersible pumps to create an effective and efficient system for small-scale clarification plant techniques. For larger systems, higher performance ratios for air insertion can be obtained by combining multiple aerators. With respect to operating safety, a greater number of aerators is seen as a favourable arrangement.

On the other hand, the submersible aerator can also be used for mixing fluids or adding gases into the process. TMB 3 resistance and suitability must be checked prior to application.



Oxygen insertion performance at a submersion depth of 20 cm, 10°C and P1 = 260 W (oxygen insertion performance is dependent on the submersion depth).



- ▶ Low power consumption
- ▶ High bubble insertion performance reduces operating time
- ▶ Reduction of COD content
- ▶ Virtually no appearance of suspensions
- ▶ Large penetration depth
- ▶ Ultra-fine bubble insertion
- ▶ Optimal requirements for nitrification
- ▶ Ready to connect
- ▶ Safe to run dry
- ▶ Motorprotection




Submersible aerator TMB 3

Type	Height x Width x Depth (max.)	Cable H05RN	Inlet socket	Weight ca.	Code No.
TMB 3	300 x 128 x 149 mm	10 m (with safety-plug)	∅ 32 mm	3,6 kg	9337
TMB 3	300 x 128 x 149 mm	3 m (without plug)	∅ 32 mm	3,6 kg	9373

Electrical data

Type	Type of current	Voltage Volt	Motor rating kW P1 P2	Continuous operation S1	RPM min ⁻¹	F.L.C. Amp.	Motor protection
TMB 3	1-phase	1N-230	0,26 0,16	up to 30°C	2842	1,2	incorporated

Accessories

	Code No.
 U 3 K NIRO with 10 m cable (without level control)	205
U 3 KS NIRO with 10 m cable (with built-in level control)	9808
 Submersible ball contacts with 9,5 m cable, black	17505
 Submersible switch pack CmG, 1 submersible ball contacts with 9,5 m cable and counterweight	16739
Submersible switch pack A, 2 submersible ball contacts with 9,5 m cable and bracket	16718
Submersible switch pack AmG, 2 submersible ball contacts with 9,5 m cable and counterweight	16719

Technical data

Aerator

Vertical, submersible, aerator housing with diffuser and inlet socket – external diameter 32 mm, aerator impeller and aerator tubes optimised for flow

Bearings

Common shaft for aerator and motor, mounted in ball bearings and grease lubricated for life

Seal

Shaft sealing (3-times) by means of shaft sealing rings and intermediate oil chamber, safe to run dry

Motor

Submersible, type of enclosure IP 68, insulation class B,

motor thermostat for emergency switch-off on overheating with automatic switching, moisture sealed cable inlet for protection the aerator in the event of damage to the cable

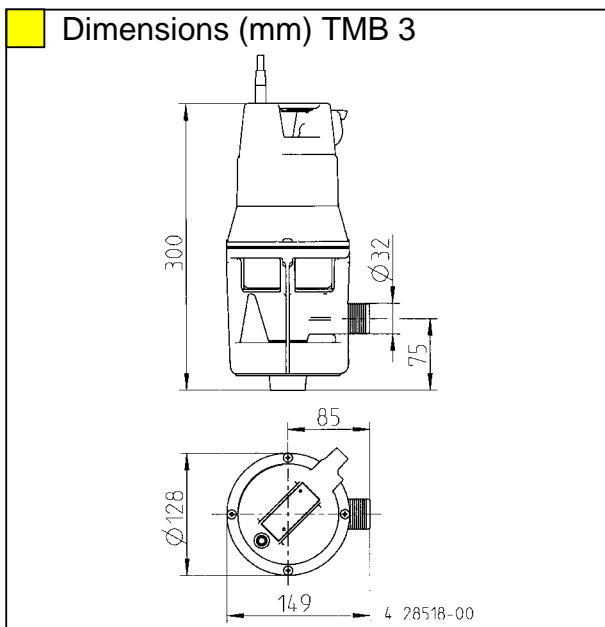
Materials

Motor housing, shaft and screws in stainless steel, aerator, housing and propeller in plastic (GFK), rubber insulated flexible cable

Scope of supply

Submersible aerator ready for connection with 10 m cable and plug or with 3 m cable without plug

Dimensions (mm) TMB 3



Mounting arrangement TMB 3

