



# WASTE WATER AERATION

For more than 25 years we have also been supplying our aeration units for waste water applications. Of course – due to the harder operating conditions – other materials are used.

But the basic idea is the same: Simple and uncomplicated oxygen input in connection with good mixing of the complete tank or pond volume with floating devices - without costly and time-consuming installation work.

Our waste water aeration system TURBO-JET works under the water surface – this is necessary in the waste water area in order to avoid unwanted odour formation.

TURBO-JET waste water is available in power ratings up to 4.0 kW. The system is suitable for equipping sewage treatment plants with a connected load of up to 10,000 population equivalents (P.E.). The price-performance ratio of our system is unbeatable wherever decentralised wastewater ponds and sewage treatment plants have to be ventilated.

TURBO-JET is always an alternative to retrofitting ponds or plants when the oxygen input of the existing aeration technology is no longer sufficient due to additional loads. TURBO-JET is also the solution for many industrial applications.

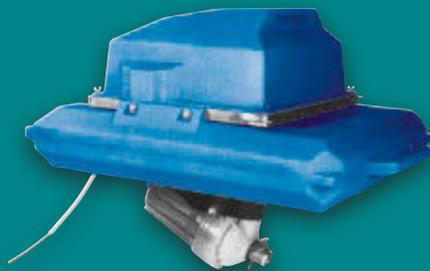
Send us your inquiry with the conditions of your case of use. The easiest way is to calculate the number of units and the engine power if we know the required oxygen input for the plant. If this is not the case, it can usually be calculated according to the ATV worksheet - we are happy to help.



### Turbo-Jet waste water



Turbo-Jet 2.5 kW

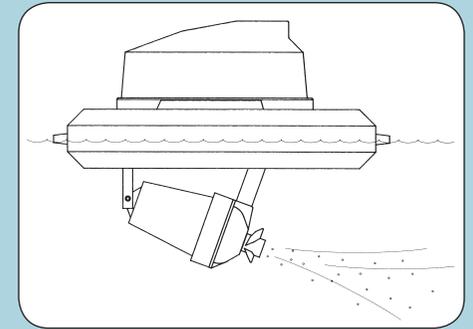


Turbo-Jet 2.5 kW  
floating version

The **TURBO-JET** wastewater aerator, manufactured in various variants, offers versatility and flexibility, so that an effective solution can be offered for every wastewater treatment application, particularly in rural areas. Our waste water aeration system **TURBO-JET** is a handy device for aeration and circulation in the waste water sector. The unit is equipped with a submersible motor, i.e. it works below the water level. In this way, aerosol formation and running noises are largely avoided.

In addition to the enormous circulation, the directly driven axial display wheel also ensures the desired fine to medium-bubble air-water mixture. This guarantees a good oxygen input and a large effective zone. By means of additional controls on the air intake system, the ventilation and circulation processes can be realised alternately as required.

In this way, nitrification and denitrification processes can also be achieved with little effort. Additional agitators are not required. In principle, we supply equipment that is completely ready for operation and therefore ready for immediate use. The assembly on site usually only includes the fastening by means of tensioning ropes and can usually be carried out without problems by the personnel of the sewage treatment plant.



The heart of the **TURBO-JET** wastewater aeration system is the aeration unit. The main component is the robust submersible motor (protection class IP 68). All materials have been selected for tough use in waste water and have proven themselves over many years.

The motor pot is made of grey cast iron (GG 25) and is therefore robust and durable. Motor shaft, brackets and screw connections are made of stainless steel. The engine is sealed with a mechanical seal in an oil bath (vegetable engine oil).



Turbo-Jet 1.1 kW floating - parallel operation



Turbo-Jet 1.1kW - three aerators working in an oxidation pond

The vacuum chamber is also made of grey cast iron. The propeller has been specially developed by us for „dirty water“ applications. The material used is a particularly hard bronze alloy (tungsten carbide bronze). This ensures long operating times. Wear and tear on the propeller is hardly noticeable even after several years of operation.

The propeller shape was developed in such a way that no blockages or deposits are possible. The free passage in the propeller core ensures the addition of air. The dimensioning ensures trouble-free continuous operation.

The easiest way to use our ventilation system is in a floating version. We supply this waste water aerator completely ready for operation. Aeration aggregate and float form a compact, firmly connected unit. Practical carrying handles on the float allow two people to carry and insert the unit without lifting gear or the like. The devices are relatively light and easy to handle. The float is made of PE plastic as a hollow body and is very robust.

The foaming of the cavities known from GFK floats is not necessary with our high-quality floats!

**TURBO-JET** floating can be optimally used for expansion or retrofitting - but also for original equipment. The floating unit only has to be placed on the waste water, pulled to the desired position with the aid of stainless steel wire ropes and attached to the edge.

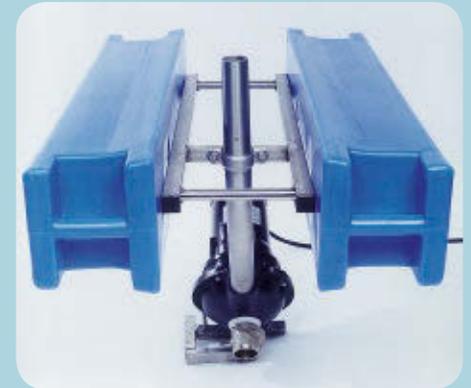
Then all you need is a connection to the power supply! It couldn't be simpler - or faster or cheaper. Consider the cost savings by omitting the installation (electricity connection excluded).

### ADVANTAGES:

- flexible and versatile
- minimum energy consumption
- good oxygen input
- large circulation
- low acquisition costs – fast amortisation
- low maintenance costs
- no installation
- no laying of air ducts
- no construction work
- absolutely winterproof
- immediately usable
- almost noiseless

**TURBO-JET** in floating design is particularly suitable for pools with fluctuating water levels, as the propeller immersion depth of floating units is always constant and therefore always optimal, while permanently installed units have problems here.

The **TURBO-JET** floating aerator is also available in some special versions. For example, we manufacture a variant with two floats. This device is designed in such a way that it can be inserted into a pool through a 60 cm man hole. Only the two floats (approx. 20 x 20 x 100 cm) still have to be fixed in the tank! In tanks, this unit can easily be locked in place with two vertical guide tubes (mounted on the pool floor and guided by the handles on the floats). The aerator can float up and down according to the water level on these



special version - to use in closed tanks with manhole

guide pipes. An additionally mounted stand protects the propeller from damage when the tank is completely emptied. Here, too, you can see how versatile our system is!

Motor rating	kW	1.1	2.5	4.0
Power take-up	W	1500	3000	5300
Voltage	V	400	400	400
Motor	rpm	2900		
Active zone max.	m	70	85	100
Water delivery max.	m <sup>3</sup> /h	300	500	750
Air delivery max.	m <sup>3</sup> /h	30	60	85
Motor case		grey cast		
Vacuum-casing		grey cast		
Propeller		bronze		
Air supply		stainless steel		
Float		U-float 97 x 76 cm		
Dimension/height	cm	85	85	90
Weight	kg	45	62	70
Oxygen enrichment	kg/h	0.9	1.8	3.18



## Turbo-Jet stationary

### Turbo-Jet with hinged stainless steel fixing

For use in closed basins or for attachment to existing bridges of failed aeration rollers, we manufacture the aeration unit with a stainless steel bracket. This version can also be used for retrofitting or original equipment. Here again we deliver a completely assembled unit ready for operation.

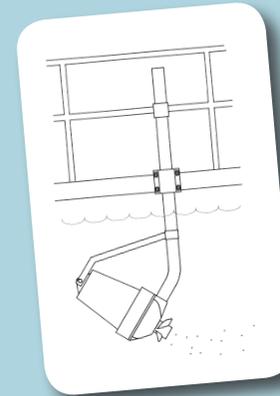
The aeration unit can be aligned horizontally and vertically by means of the bracket. The unit can easily be removed for possible maintenance work with the

fixing. The stainless steel support tube is used simultaneously as an air intake tube.

TURBO-JET with hinged stainless steel fixing should be mounted so that the propeller works 40-50 cm below the waste water level. Thus the equipment achieves the largest effectiveness and the best oxygen input.

With larger immersion depth of our ventilation aggregate the air intake track decreases.

The exact execution of the mounting plate can be adapted to the local conditions.



Turbo-Jet stationary 1.1 kW



### Technical

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