



# FUCHS

A Metawater Company

## DualStar Aerator

**Two functions in one machine**

- Aeration with efficient mixing
- or only mixing

# GENERAL INFORMATION

The **FUCHS DualStar aerator** is a further development of the globally successful OxyStar® aerator and combines the two most important functions in wastewater treatment: **aeration and mixing**.

DualStar aerators are used in:

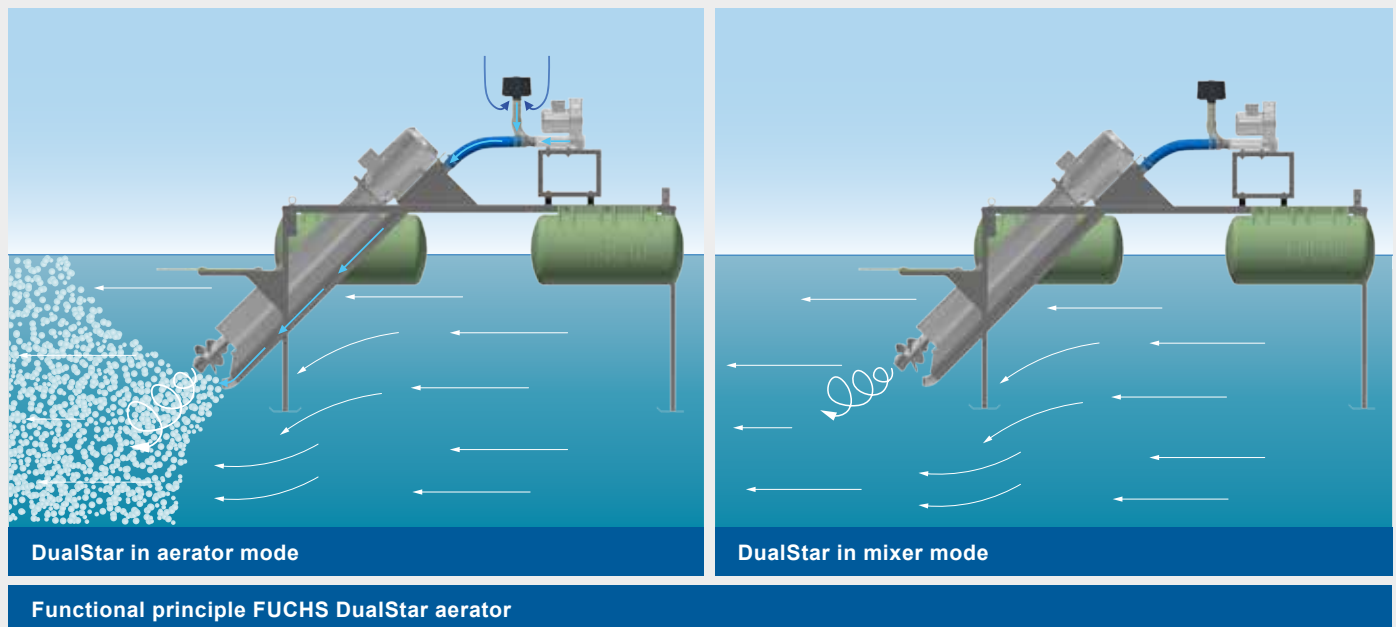
- » **Activated sludge plants**
- » **SBR systems**
- » **Wastewater lagoons**
- » **Equalization basins**

They are the right choice when wastewater needs to be either aerated or just mixed.

In **aerator operation**, the DualStar ensures, together with thorough mixing, deep aeration with fine bubbles.

During the **mixing operation**, the air flow is interrupted and the machines work exclusively as efficient mixer.

The combination of these two operating modes makes the DualStar aerator ideal for a variety of applications in municipal and industrial wastewater treatment.



# OPERATING MODES

The **DualStar aerator** consists of two main components:

- » **one Mixer and**
- » **one additional side channel compressor**

In **mixing operation**, the DualStar generates a highly directed flow without the introduction of air. The side channel compressor is switched off.

In **aerator mode** the compressor is switched on and fine bubbles of air are introduced. The side channel compressor pushes the required air through a separate pipe into the area of the propeller. There the air is broken into fine bubbles and the water jet carries them deep into the pond or lagoon.

# INSTALLATION

DualStar aerators can be easily integrated into existing systems and are easy to install. Conversions or retrofitting are carried out without interrupting operations or emptying the ponds. No special buildings or compressed air pipes, covers or adjustable weirs are required. The protective housing prevents the formation of splash water when the drive shaft rotates in the wastewater or the build-up of ice in frosty weather.

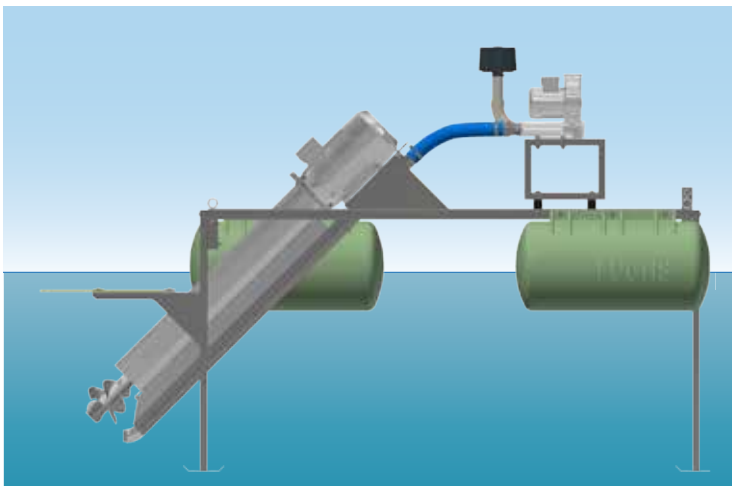


DualStar aerator with mounting bracket on a machine bridge

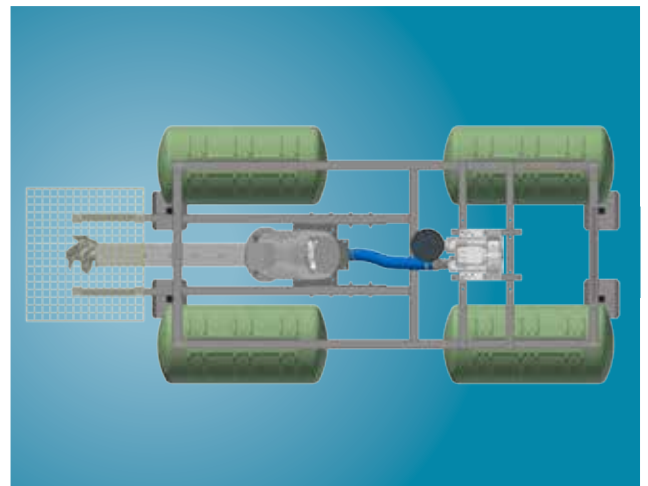


DualStar aerator on floats in a sewage pond system

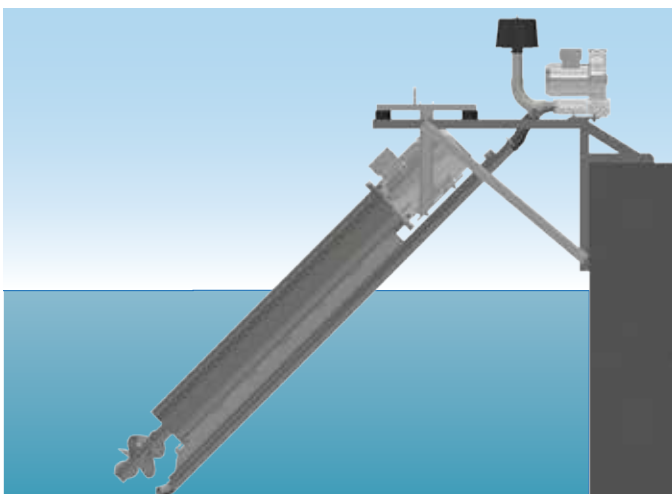
For use in ponds and lagoons with **fluctuating water levels**, the **installation is carried out on robust floats**. The side channel compressor can be mounted either on the float or on land



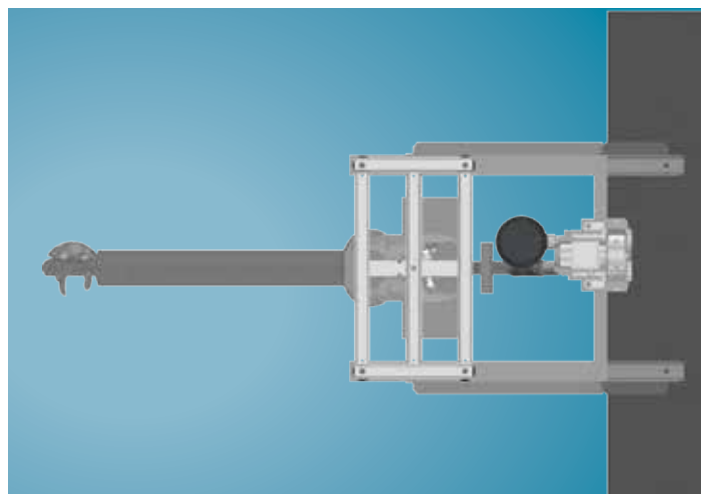
DualStar aerator on floats



In basins with a **constant water level**, DualStar aerators are attached to the basin wall or to existing machine bridges using mounting brackets made of steel profiles. The mounting brackets are adapted to the existing conditions on a project related basis



DualStar aerator with standard mounting bracket



# DIVERSE POSSIBILITIES OF APPLICATION

FUCHS DualStar aerators are ideal for a variety of applications in municipal and industrial wastewater treatment.



Oxidation ditch of a municipal sewage treatment plant (Czech Republic)



Additional aeration in a sewage treatment plant (France)



DualStar aerator with a land-side compressor in a sewage treatment plant of a cheese factory (Germany)



DualStar aerator on floats in a municipal sewage treatment plant (Czech Republic)



Municipal SBR pond system (Germany)

# TECHNICAL DATA

DualStar aerators are intelligently and robustly designed and are characterized by a reliable operation. All materials used meet the highest standards.

All submerged parts are corrosion-free and are made of either stainless steel or plastic. In addition, there are neither bearings nor sealings in the submerged part of the machine.

		Standard	Variants
<b>Motor</b>	Nominal power	4,0 - 45 kW	Upon request
	Voltage, frequency	400/460 V, 50/60 Hz	Upon request
	Protection class	IP 55	Upgrade to IP 56 or IP 65
	Energy efficiency class	IE3	Upon request
	Certifications	Nema / CSA / UL	Upon request
	Isolation	ISO F	ISO H
<b>Compressor</b>	Nominal power	from 0,75 kW	
	Voltage, frequency	400/460 V, 50/60 Hz	
	Protection class	IP 55	Upon request
	Energy efficiency class	IE3	Upon request
	Certifications	Nema	Upon request
	Isolation	ISO F	Upon request
	Execution	MOR / MS	Upon request
<b>Aerator</b>	Material protective housing	Stainless steel 1.4571	
	Air duct	Stainless steel, plastic	
	Shaft and impeller	Stainless steel 1.4571	
<b>Installation options</b>	Wall mounting Bridge mounting	Galvanized steel	Stainless steel
	Float		
<b>Float</b>	Material frame	Galvanized steel	Stainless steel
	Pontoons	PE foamed	PE not foamed, FRP
	Pivot arm and landside mount	Galvanized steel	Stainless steel
<b>Optional equipment</b>			Cold conductor
			Heated housing
			Heated compressor
<b>Electrical cable</b>		Delivery on request	Upon request
<b>Accessories</b>	Pivot arm, landside mount, mooring rope, rope winch, local control switch	Delivery on request	Upon request




# FUCHS

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## THAT'S YOUR WAY TO A CLEAN SOLUTION!

**FUCHS Enprotec GmbH**  
Stocktal 2 | 56727 Mayen  
Germany

 +49 2651 80040

 [info@fuchswater.com](mailto:info@fuchswater.com)

[www.fuchswater.com](http://www.fuchswater.com)