



# FUCHS

A Metawater Company

## TurboStar<sup>®</sup> Mixer

Reliable mixing

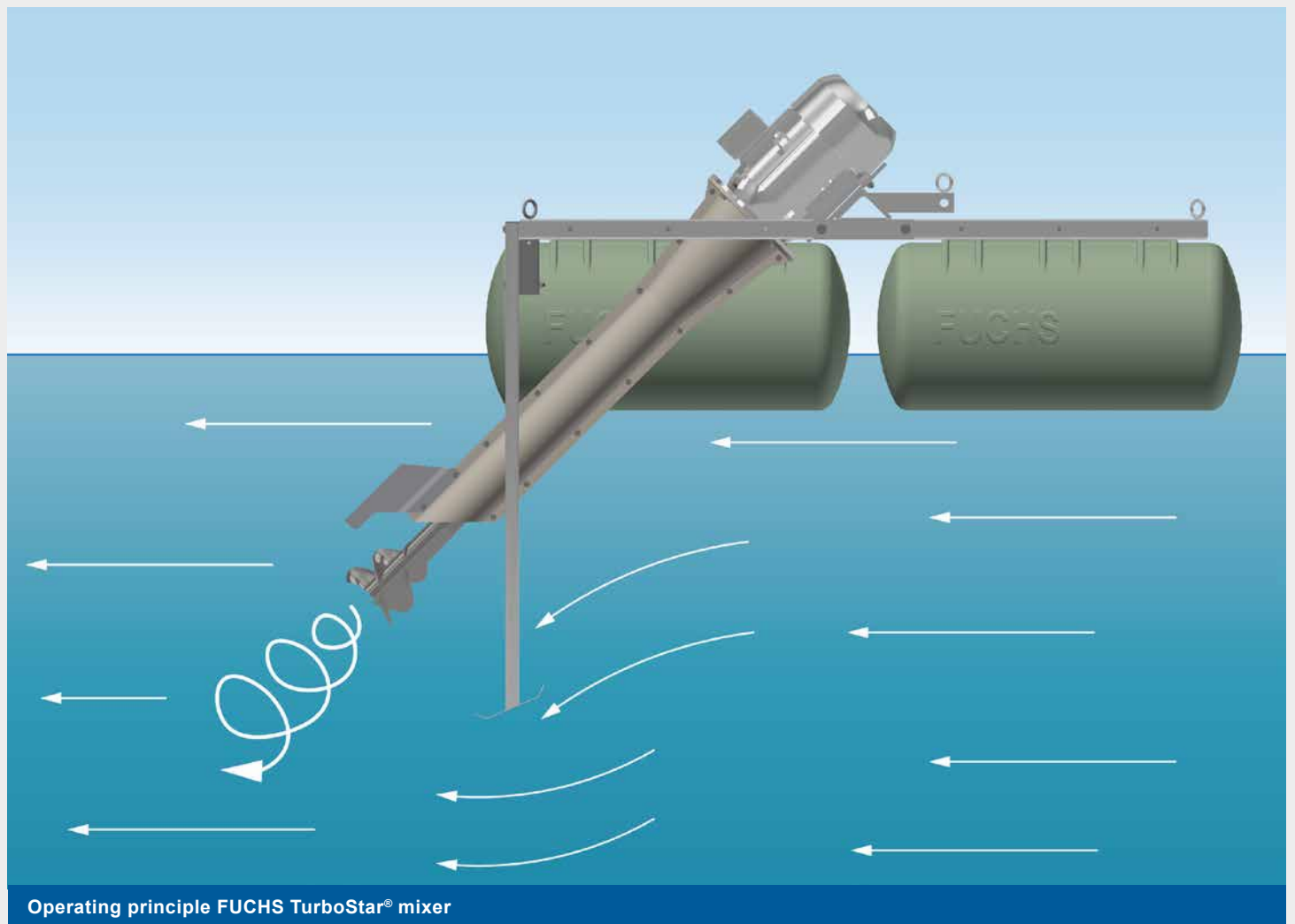
# GENERAL INFORMATION

The **FUCHS TurboStar® mixer** provides a cost-efficient solution for mixing municipal or industrial wastewater and sludge.

TurboStar® mixers are used in:

- » **Wastewater lagoons**
- » **Equalization basins**
- » **Oxidation ditches**
- » **Activated sludge tanks**

Thanks to their functional design, **TurboStar® mixers** are particularly robust, reliable and exceptionally low maintenance.



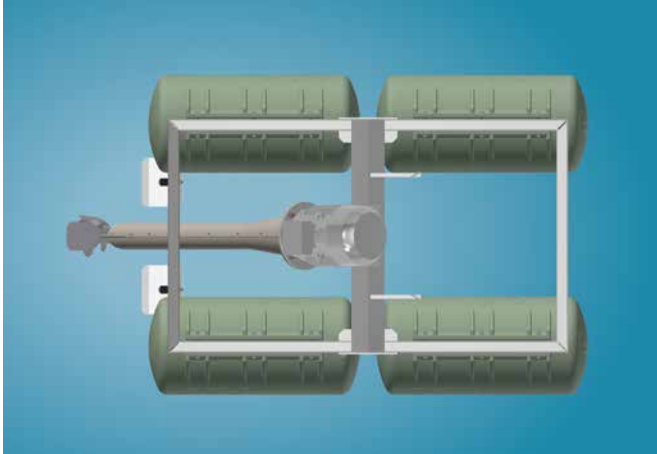
# OPERATING MODE

The propeller rotating at engine speed creates a highly directional flow and causes intensive circulation and thorough mixing of the wastewater or sludge.

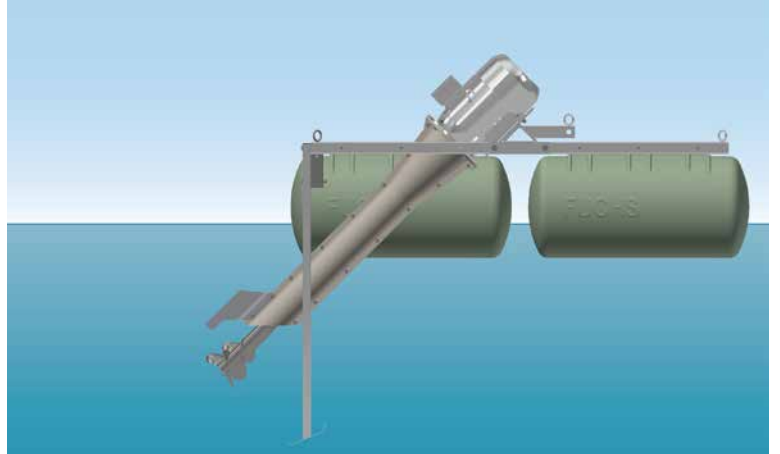
Due to the sophisticated propeller design, TurboStar® mixers are especially clog-resistant.

# INSTALLATION

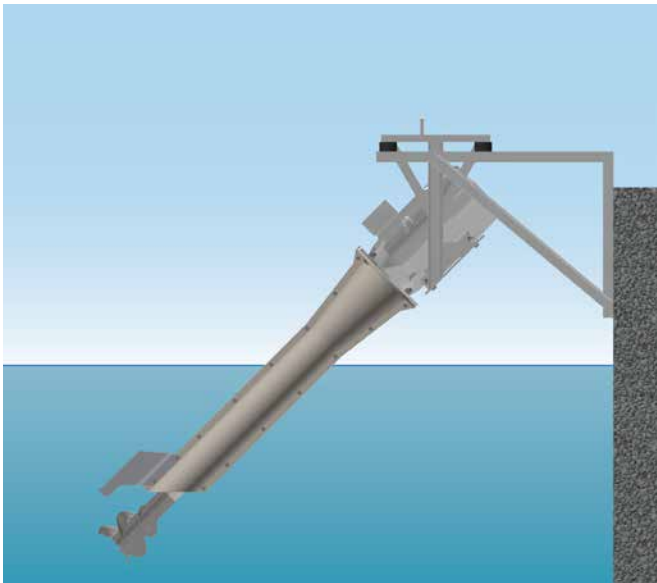
**TurboStar® mixers** are easy to handle and can be integrated effortlessly into existing systems. Conversions or retrofitting of existing systems are carried out without interrupting operations.



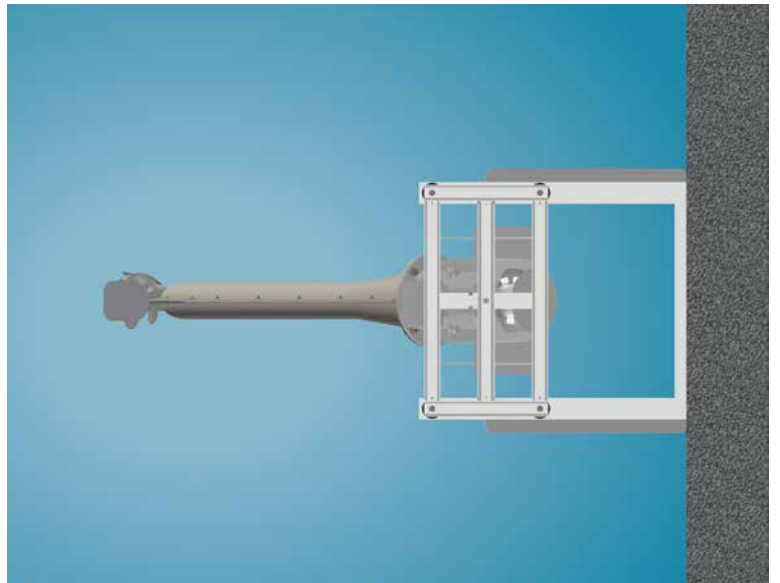
TurboStar® mixer on floats



In lagoons or equalization basins with **fluctuating water level** TurboStar® mixers are installed on **robust floats**.



TurboStar® mixer on standard mounting bracket



With a **constant water level**, the mixers are mounted on existing machine bridges or concrete walls using **mounting brackets** that are individually adapted according to each project's need.



TurboStar® mixer on standard mounting bracket



TurboStar® mixer on floats

# VARIETY OF APPLICATIONS

**TurboStar® mixers** are suitable for a wide variety of applications and stand out for their low operating and maintenance costs. They are ideal for upgrading, retrofitting, or replacing inefficient mixing equipment.



TurboStar® mixers prevent deposits formation in an anaerobic basin (municipal WWTP, UK)



TurboStar® mixers in an equalization basin (pulp and paper industry, Indonesia)

## TECHNICAL DATA

**TurboStar® mixers** are designed in a smart and robust way. There are no bearings or sealings in the submerged part of the machine. Only high quality machine parts and corrosion-resistant materials are used.

		Standard	Variants
<b>Motor</b>	Nominal power	1,1 - 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>Mixer</b>	Material protective housing	FRP	Stainless steel 1.4571 / AISI 316Ti Vertical installation without protective housing
	Shaft and propeller	Stainless steel 1.4571 / AISI 316Ti	
<b>Mounting 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>			PTC thermistor
			Heated housing
<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

## SPECIAL VERSIONS

Special versions with submersible motors are also available. **FUCHS submersible TurboStar® mixers (TS-sub)** are used in stormwater tanks for resuspension of settled solids. In equalization basins, activated sludge basins and small sludge storage tanks they ensure adequate mixing and circulation.

They are very robust, and the special design of the propeller guarantees high resistance against clogging.

## OPERATING MODE

In operation, the propeller draws the liquid from behind and generates a powerful directed flow. This technology guarantees high agitating and mixing performance.

## INSTALLATION

In storm water tanks the **submersible TurboStar® mixer** is preferably installed at the bottom of the tank on a stainless steel bracket.

A **mounting device** is often used for equalization basins, activated sludge basins and sludge storage tanks. This allows the **submersible FUCHS TurboStar® mixer** to be lowered, lifted or turned to the side.



Submersible TurboStar® mixer mounted on a bracket

## TECHNICAL DATA TS-SUB

		Standard	Variants
<b>Motor</b>	Nominal power	2,2 - 15 kW	Upon request
	Voltage, Frequency	400/460 V, 50/60 Hz	Upon request
	Protection class	IP 68	
	Certifications	Nema / CSA / UL	Upon request
	Isolation	ISO F	ISO H
	Motor protection	Leakage electrode Temperature monitoring	
<b>Mixer</b>	Shaft and propeller	Stainless steel 1.4571 / AISI 316Ti	
<b>Electrical cable</b>		10 m	Extension on request
<b>Mounting options</b>	Bracket	Stainless steel	
	Mounting device	Stainless steel	
<b>Optional equipment</b>	Explosion protection	Delivery on request	
<b>Accessories</b>	Tripping units	Delivery on request	Upon request



# FUCHS

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## THAT'S YOUR WAY TO A CLEAN SOLUTION

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