



Flygt Top-Entry Agitators

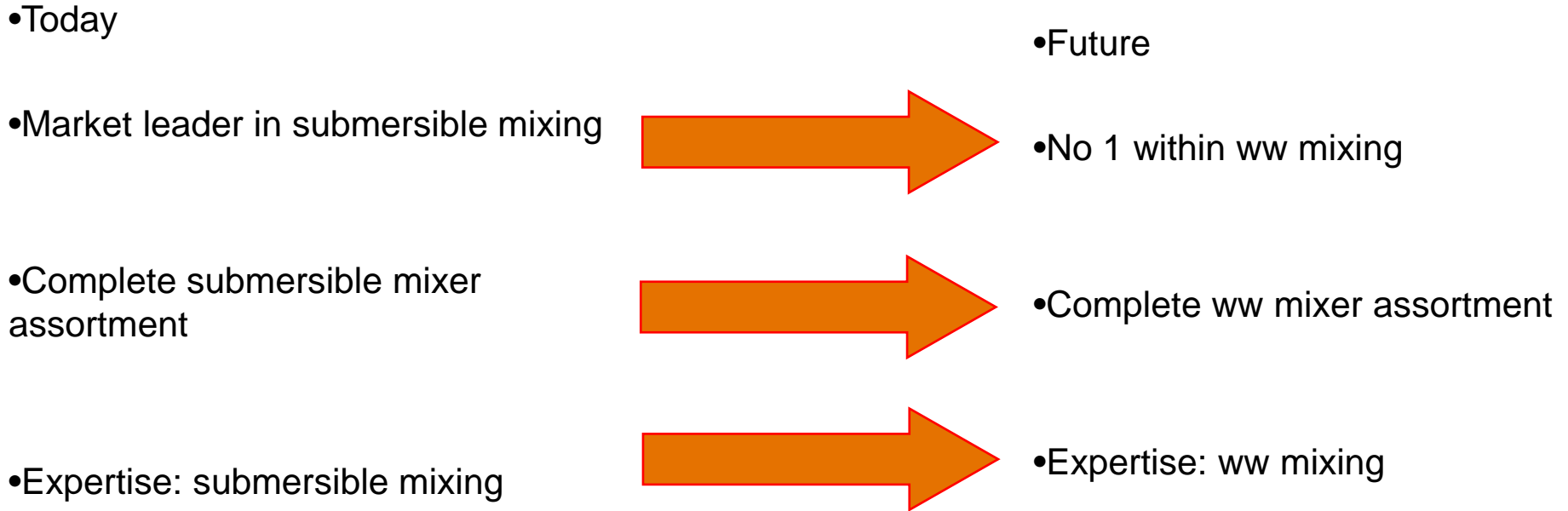


SY4850 – SY4860 – SY4870

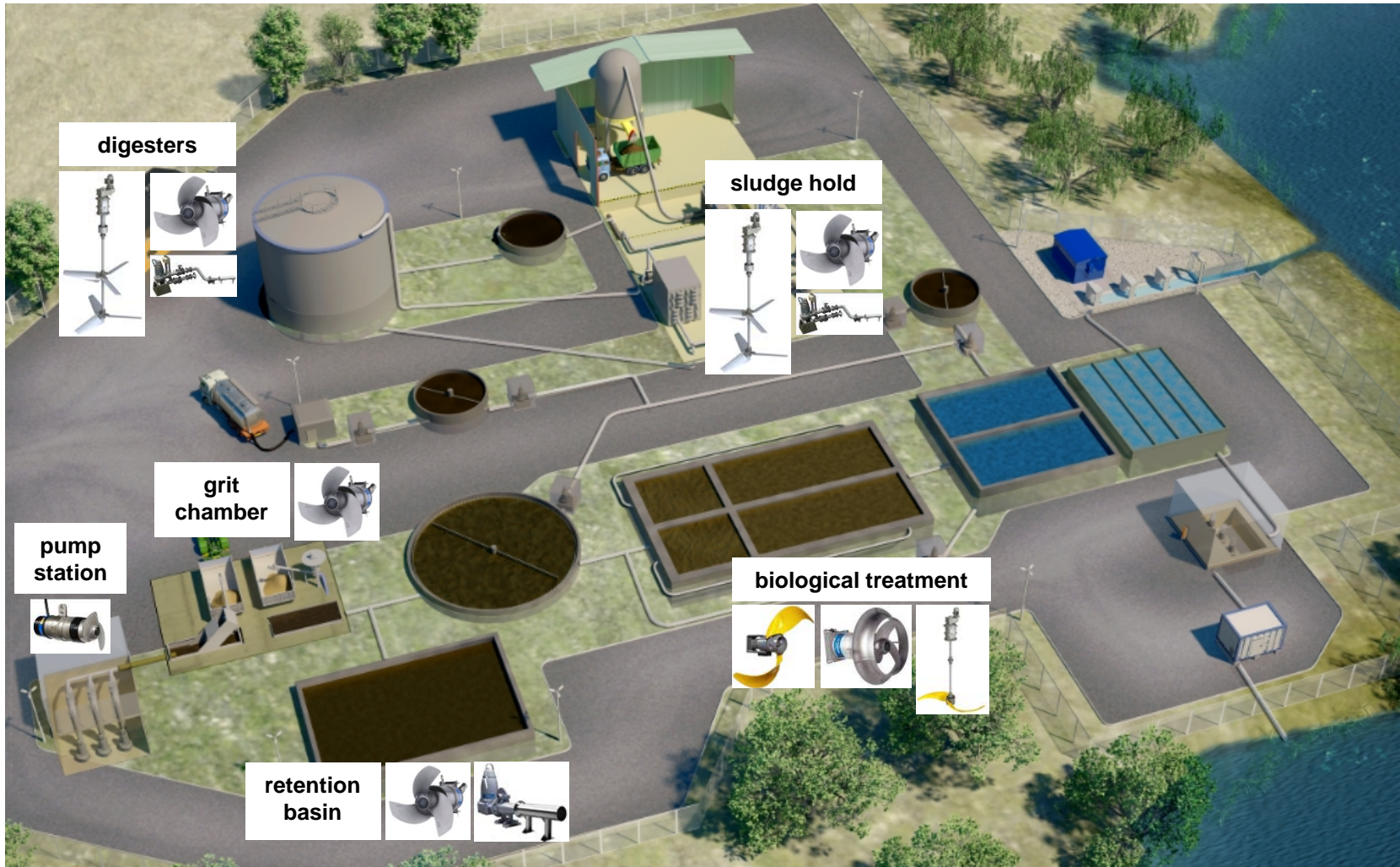
Flygt Top Entry Agitators



Position today vs the future

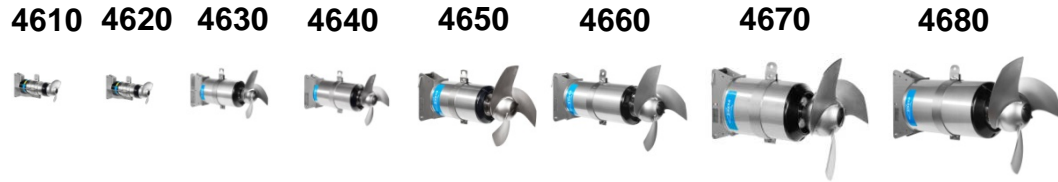


Mixers in wastewater treatment

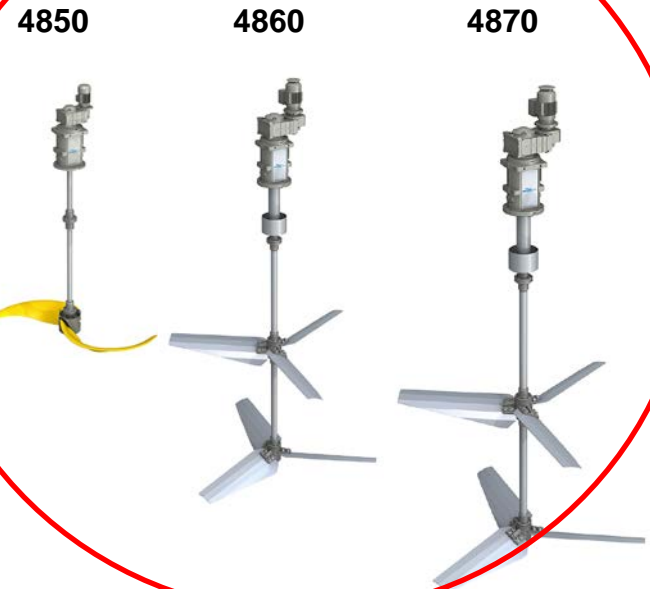


The Flygt mixer and agitator range

Submersible compact mixers



Top entry agitators



Compact high-efficiency

4650 LSPM



Submersible low-speed mixers



Jet mixers

JT4710 JT4715 JT4720 JT4730 JT4735



Hydro ejectors



Ultra-low-head pumps

PP4630-PP4680

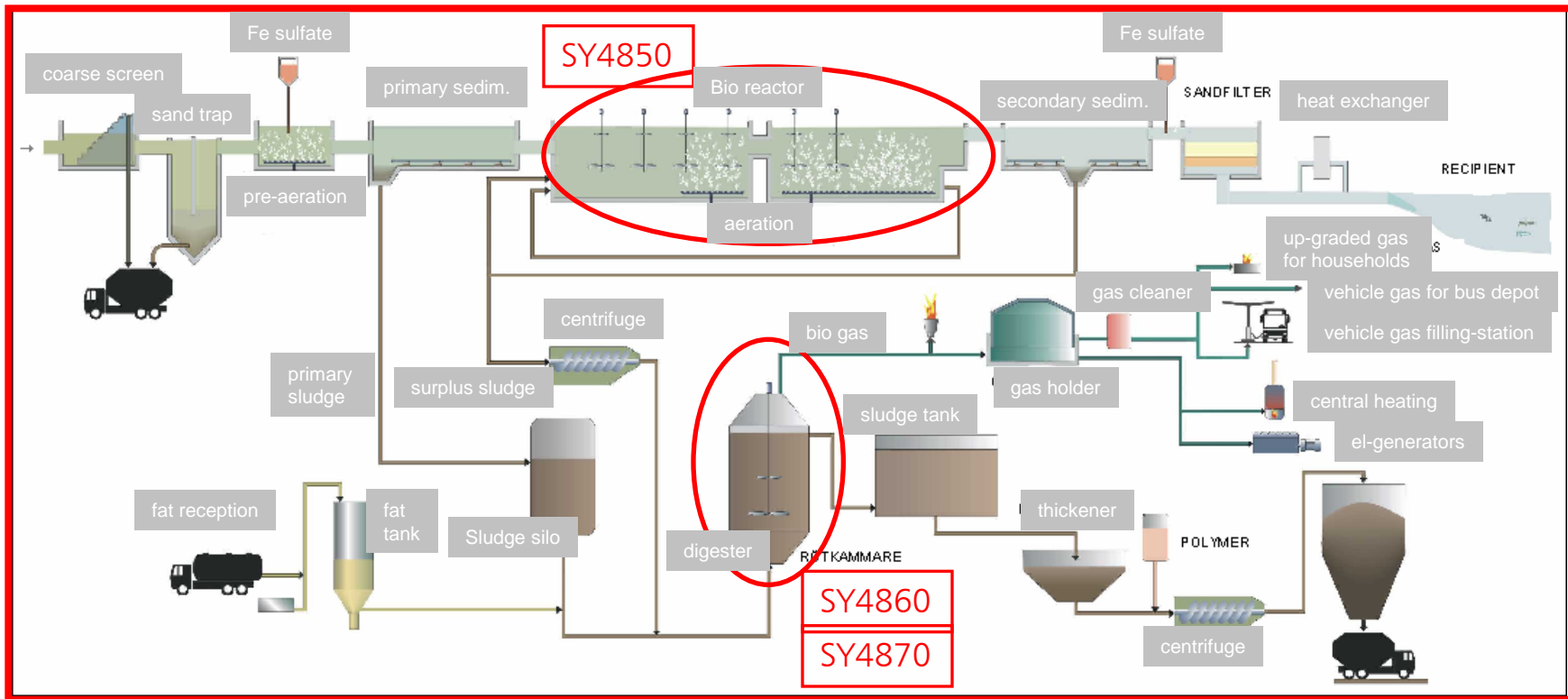


Why Top Entry Agitator

- Hygienical reason (HSE)
- Insignificant environmental impact
- Very low power consumption (1-2W/m³)
- Very long operational life span (20 years)
- Maximum uptime
- Very low Life Cycle Cost
- Easy to maintain (once a year)
- All service points above the water line
- All wetted parts made of high alloy steel
- Insignificant wear – Fewer spares
- Huge agitated volume with one (1) agitator
- Keeps the entire volume homogeneous
- Good gas production
- Prevents or breaks surface crust
- Prevents sedimentation
- Prevents stratification



TEA for WWTP



Technical range

Model	SY4850	SY4860	SY4870
Application	Secondary treatment	municipal digester	municipal digester
Installed Electric Power	2,2 to 7,5kW at 50Hz	1,5 to 4kW at 50Hz	5,5 to 15kW at 50Hz
	2,6 to 9kW at 60Hz	1,8 to 4,8kW at 60Hz	6,6 to 18kW at 60Hz
Speed	18 to 44 rpm at 50Hz	10 to 24 rpm at 50Hz	12 to 23 rpm at 50Hz
	22 to 59 rpm at 60Hz	12 to 29 rpm at 60Hz	14 to 28 rpm at 60Hz
Thrust	~6000N	~6000N	~13500N
Impellers	2,5m banana blade	3-bladed 1.5m to 3.0m	3-bladed 2.0m to 4.0m
	3-bladed steel 1.5m; 2.0m; 2.5m	loose steel blades	loose steel blades
Working volumes	ox/anox channels (denitrification)	ap. 2000m ³	ap. 5000m ³
ATEX approval	No	Yes	Yes
Accessories	Bottom support	Shaft stabilizer	Shaft stabilizer
		Leveling flange	Leveling flange

Impellers optimized for the applications

SY4850

Material SS 304



Tapered sleeve for fastening to shaft

Diameters

1.5m (59") 2.0m (77") 2.5m (98")

SY4850



Material polyurethane

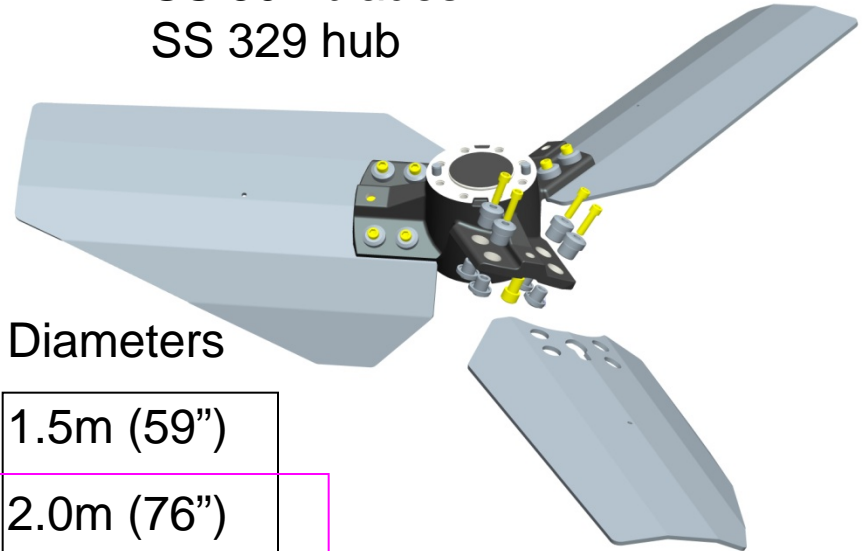
Diameters to 2.5m (98")

SY4860 – SY4870

Loose blades

SS 304 blades

SS 329 hub



Diameters

1.5m (59")

2.0m (76")

2.5m (98")

3.0m (118")

3.5m (138")

4.0m (157")

Biest-Houtakker

The Netherlands
Secondary treatment
Anaerobe zone





SY4850

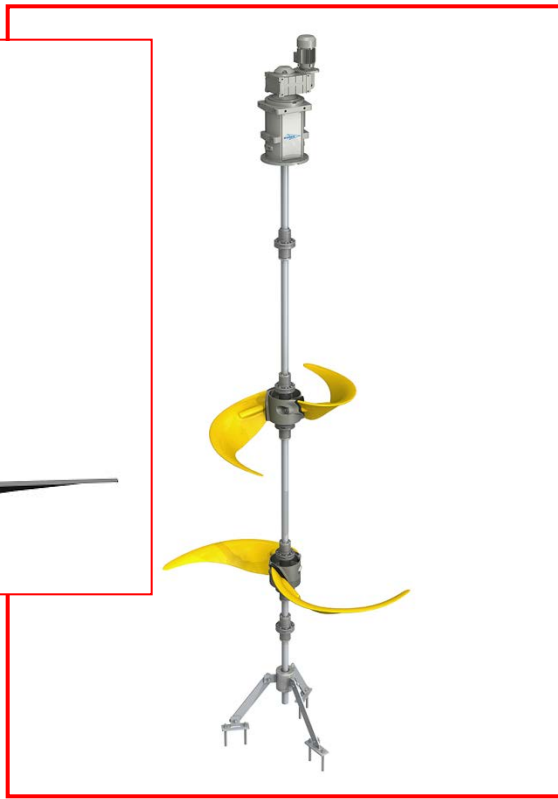
Flygt top entry agitators

SY4850 Agitators

Standard execution



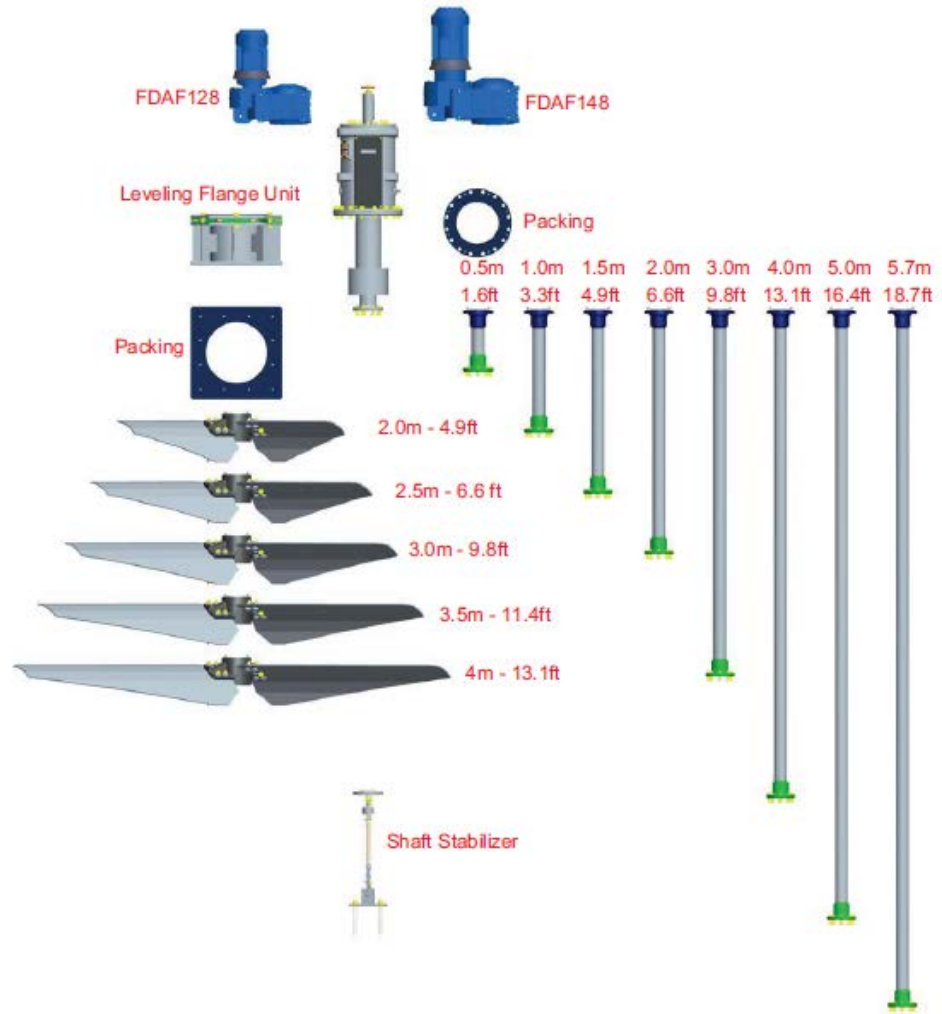
With two Flygt Banana impellers and bottom support



With two 3-bladed hydrofoils and with bottom support



4870 Modular details

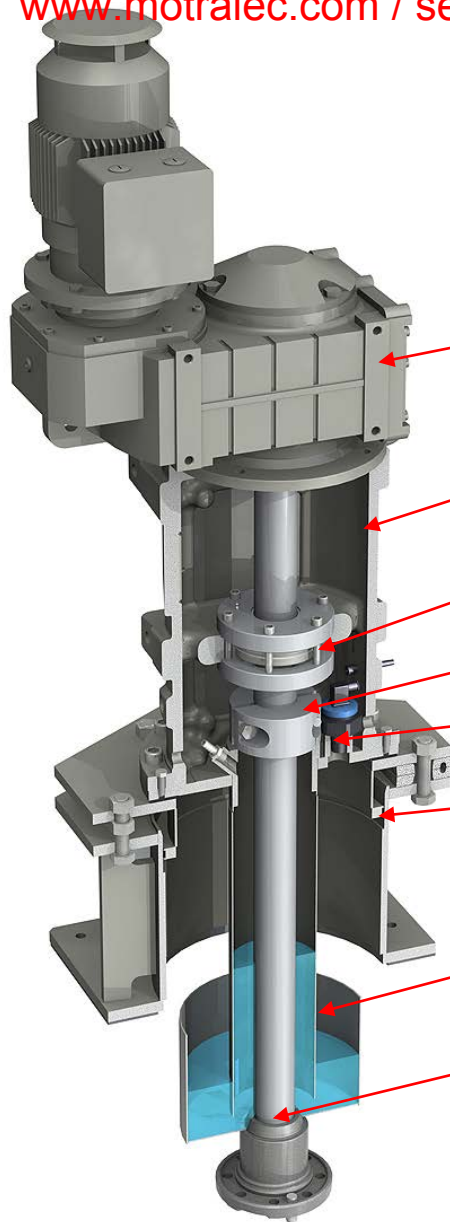


Digester agitators SY4860 - SY4870

Optional accessories



Drive Unit 4860 - 4870



Parallel gear motor

Cast iron bearing pedestal

Spherical roller bearing

Retainer ring (part of the service kit)

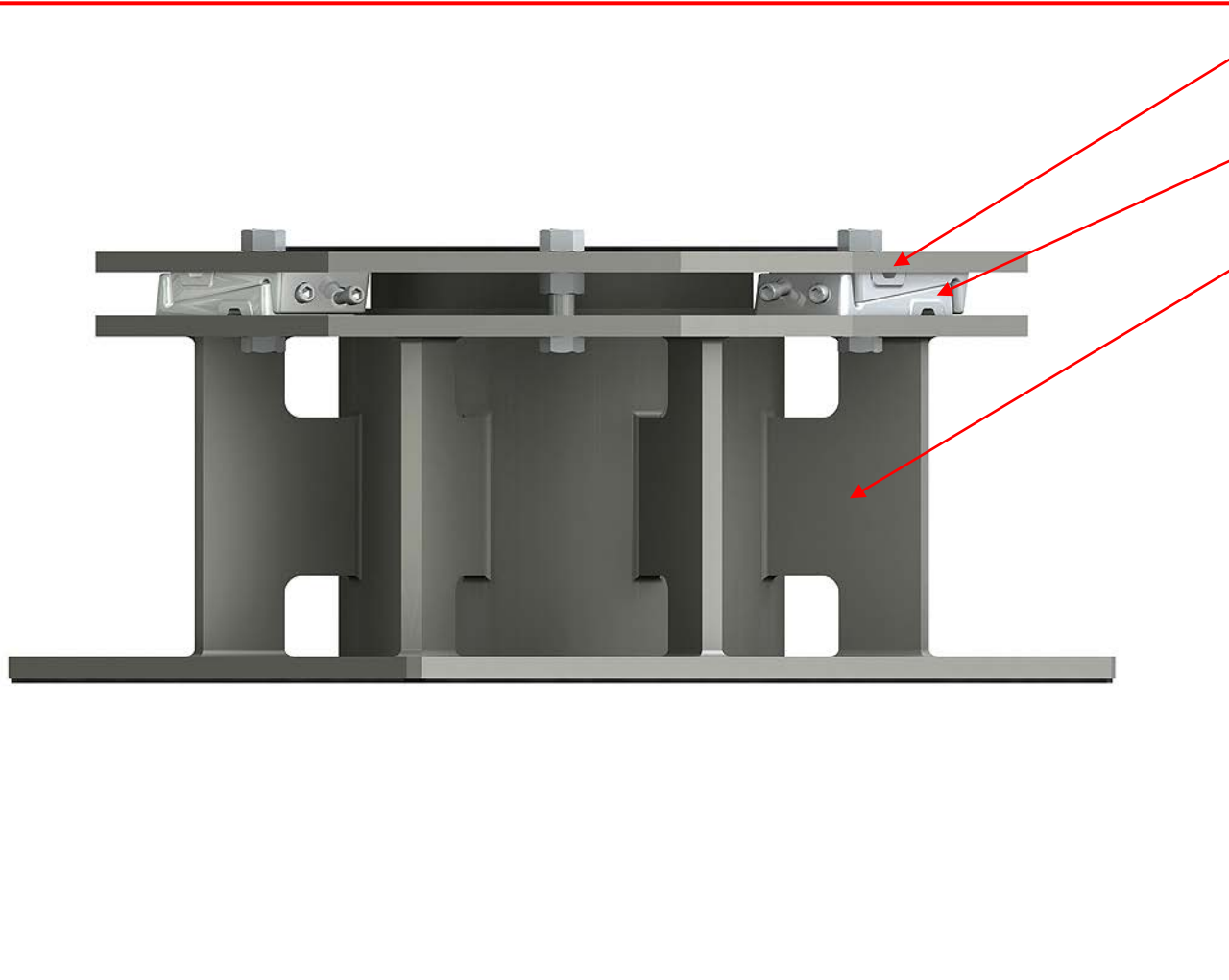
Water Trap - Ultra Sound Sensor

Leveling flange unit (accessory)

Water seal

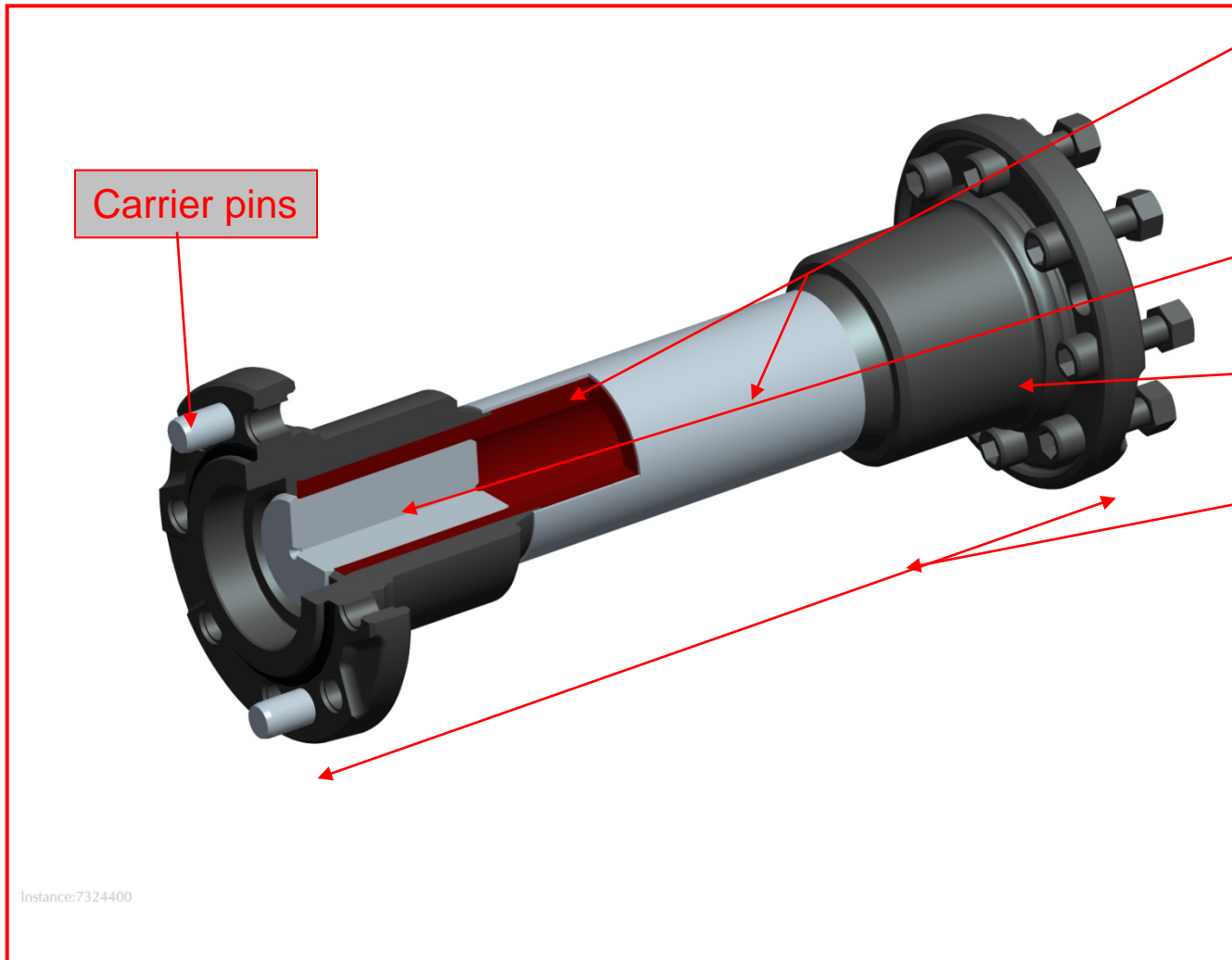
Solid SS2321 (431/1.4057) drive shaft

Leveling Flange Unit (4860 – 4870)



- Adjustment flange
- Adjustment wedges
- Static flange
 - For concrete or steel tanks

4860 – 4870 Agitator shaft

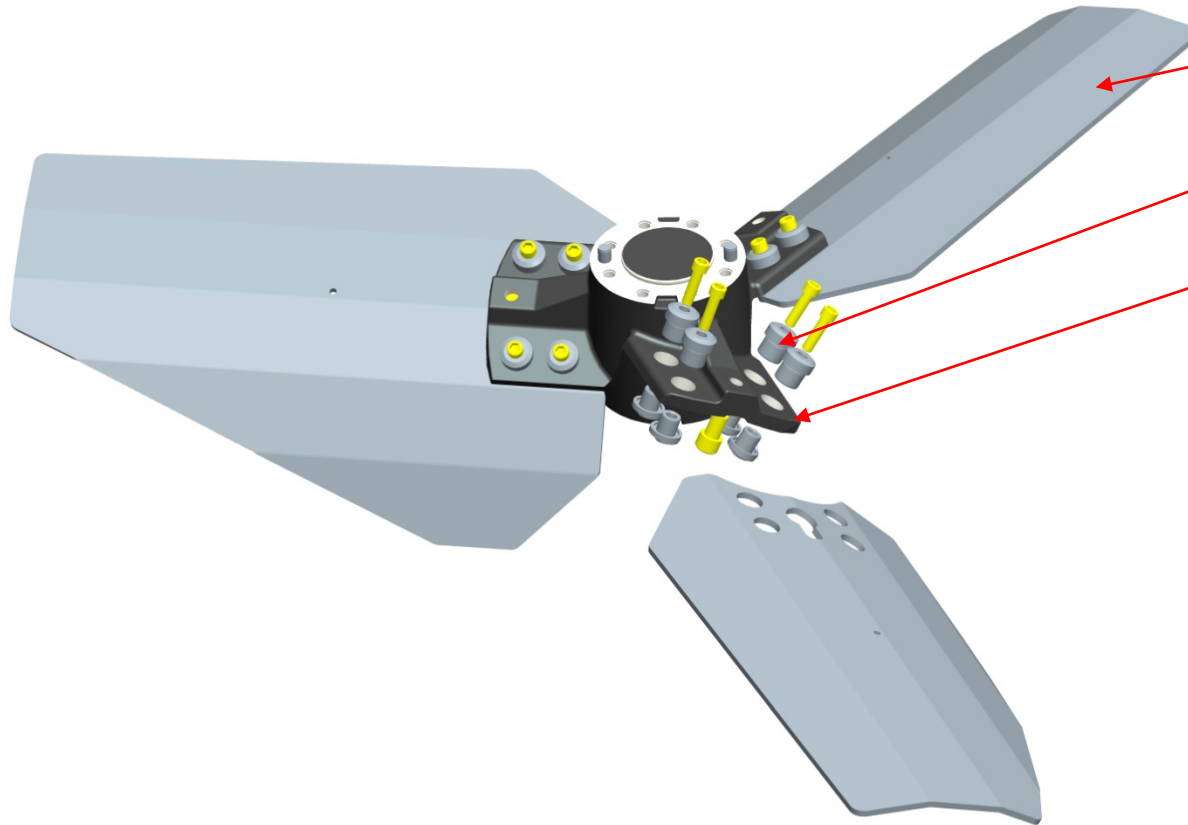


Carrier pins

- Hollow core shaft
- Shield pipe SS316
- Plunged ends to strengthen the joint
- Coupling material SS329
- Lengths m (in)
 - 0.5m (20)
 - 1.0m (40)
 - 1.5m (59)
 - 2.0m (79)
 - 3.0m (118)
 - 4.0m (157)
 - 5.0m (197)
 - 5.7m (224)

Instance:7324400

Bolted assembly 3-bladed hydrofoil impeller



Blades bolted to hub

Stress relievers

SS329 casted hub

4860 Diameters (in)

1.5m (59)

2.0m (79)

2.5m (98)

3.0m (118)

4870 Diameters

2.0m (79)

2.5m (98)

3.0m (118)

3.5m (138)

4.0m (157)

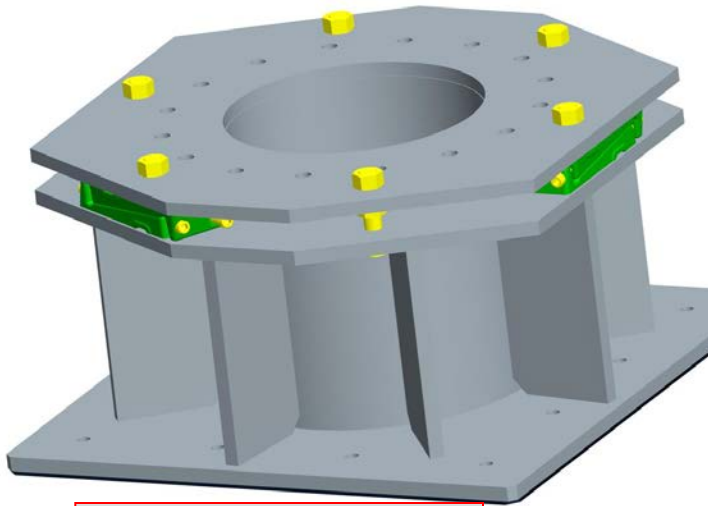
Explode State:EXPLODE

Instance:7413801

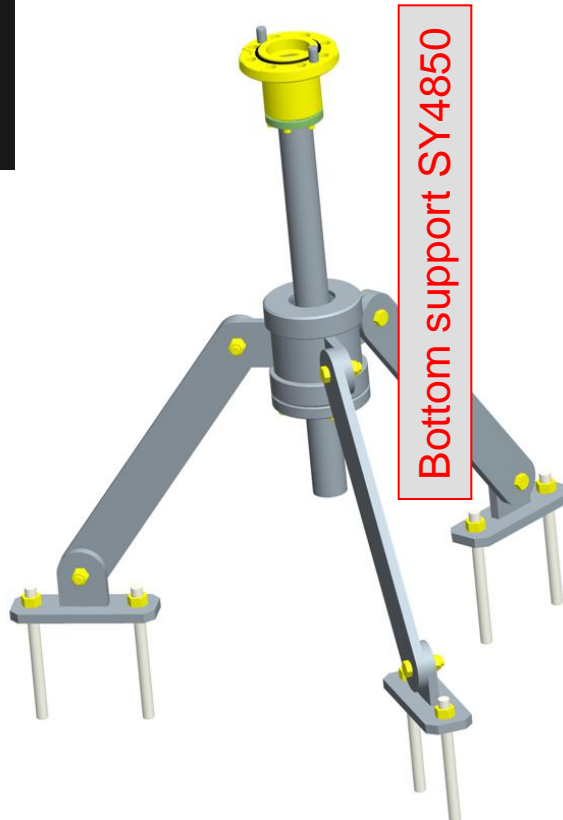
Accessories



Flygt VFD



Leveling flange unit



Bottom support SY4850

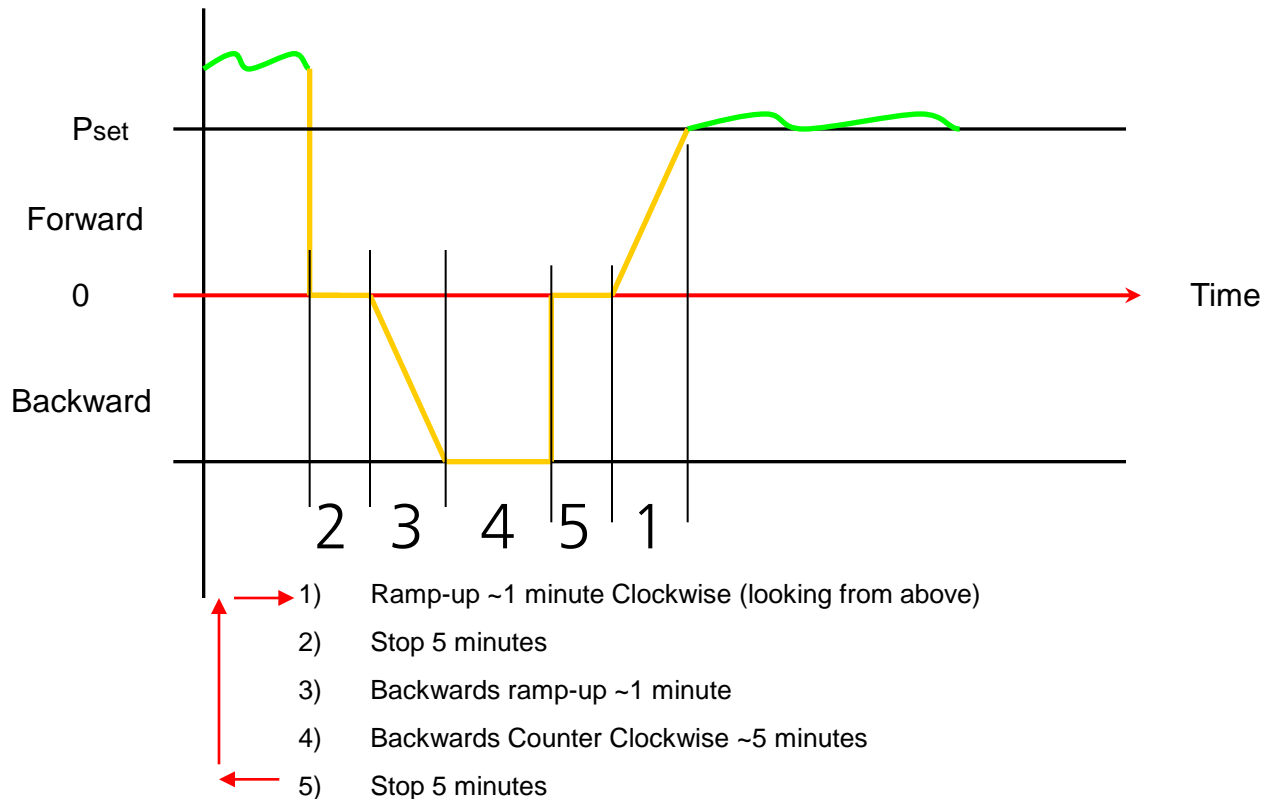


Shaft stabilizer SY4860 - SY4870

TEA PS200

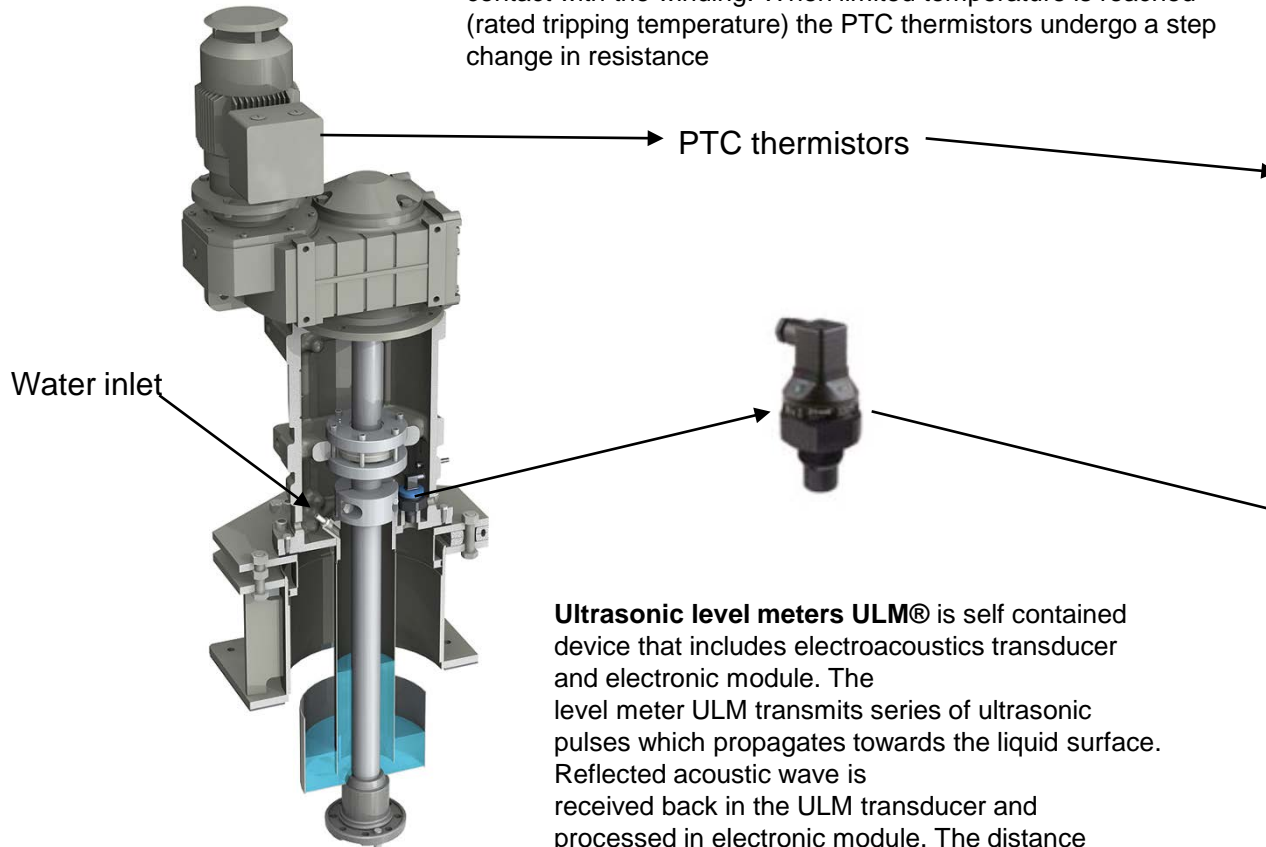
Ramp-up and Cleaning sequence

To smoothly ramp-up agitators in operation.
Integrated logic that monitors for increased power consumption (blockage of impeller)
Agitator automatically stops, runs in reverse rotation to remove blockage



TEA VFD

PTC thermistors is the most comprehensive protection against overloading of the motor is provided by PTC thermistors installed in the motor winding. The temperature of the can be accurately monitored thanks to its low heating capacity and excellent heat contact with the winding. When limited temperature is reached (rated tripping temperature) the PTC thermistors undergo a step change in resistance



Ultrasonic level meters ULM® is self contained device that includes electroacoustics transducer and electronic module. The level meter ULM transmits series of ultrasonic pulses which propagates towards the liquid surface. Reflected acoustic wave is received back in the ULM transducer and processed in electronic module. The distance calculations are based on time of flight of the acoustic wave to the level and back.



TEA PS200

The unique torque control makes the PS200 unique for controlling any mixer or agitator.

This algorithm sense the variation in load on the impeller, and makes it possible to monitor and smoothly control speed, and any cause of over and under load of impeller wings. In combination with level sensor, it will adapt needed speed/load to the application level in the tank.

With the PS 200 you can expect all the advantages of speed regulation and smoothly ramp-up the agitators in operation. It communicates with the PLC and interfaces with different SCADA systems.



= Intelligent agitator steering

- Saves money
- Less service calls

Service

Local service network – world-wide



From simply supplying machines, to full service and assistance



15-year spare parts availability guarantee

