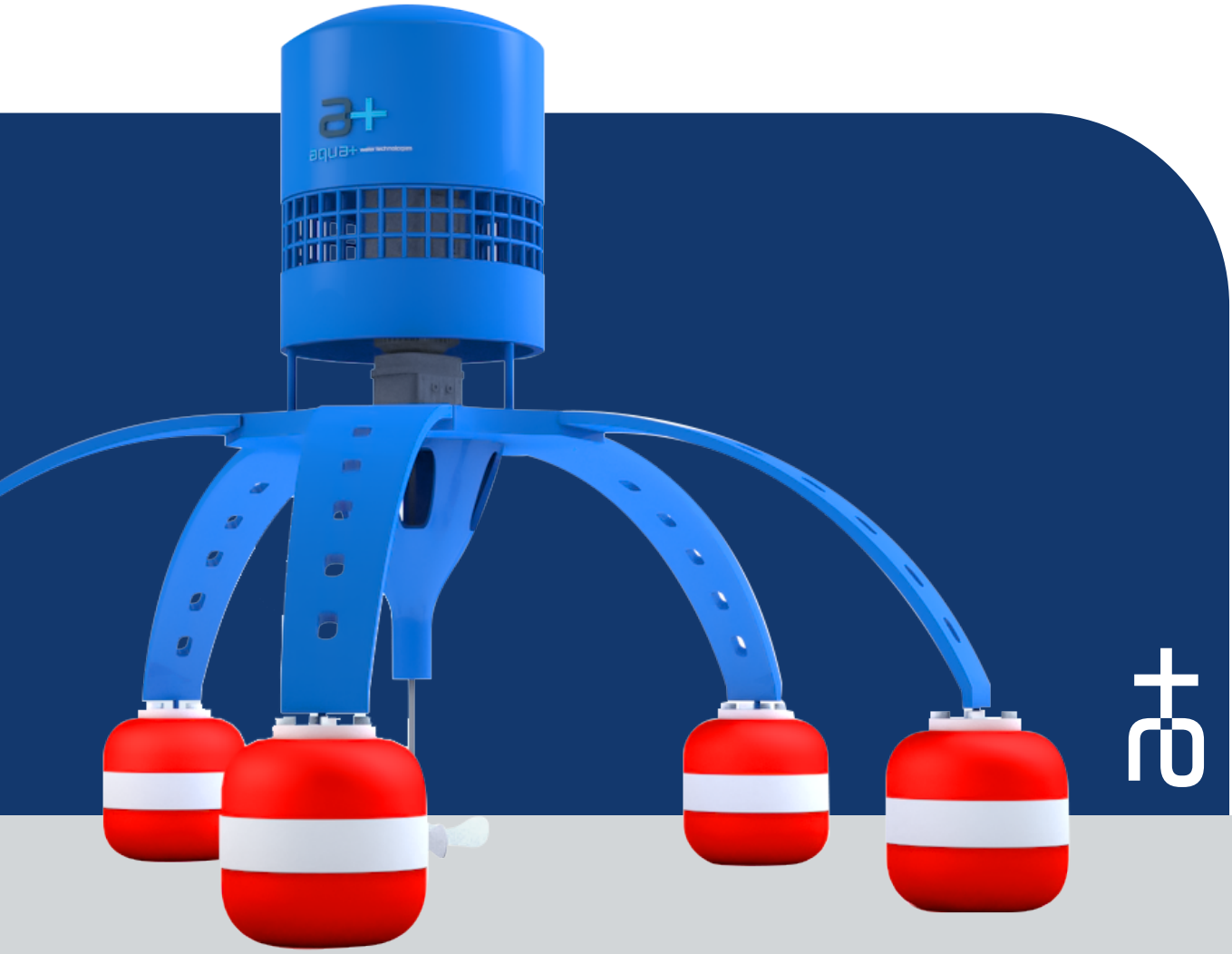
aqua+
water technologies



Floating mixing system

Manufacturing water treatment solutions.

Follow us on: @aquaplus.maroc

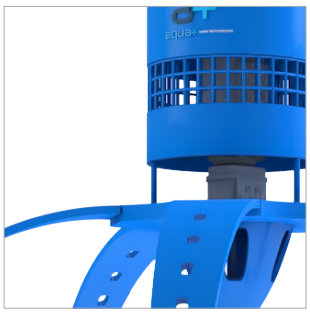
Mail: contact@aqua-plus.ma

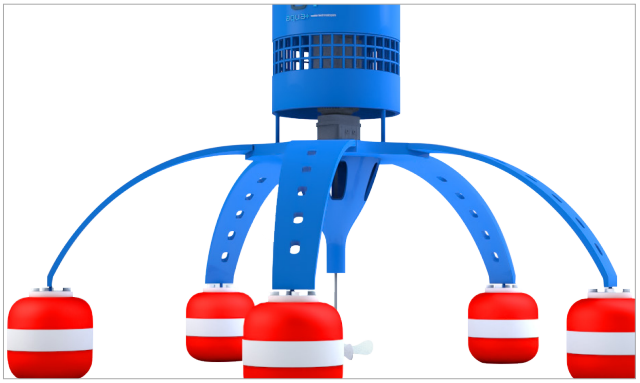
Website: www.aqua-plus.ma

Floating mixing system

DEFINITION:

The floating mixing system is designed to aerate and mix lagoon basins to counteract eutrophication and sludge production in wastewater.
The system is dedicated to providing oxygen capacity for water treatment purposes.





DESCRIPTION :

The mixing system consists of:

- 5 floats ensuring the buoyancy of the entire system,
- A rigid frame made of stainless steel or PRV (Polyester Reinforced with Glass Fiber), resistant to corrosion,
- An appropriately powered motor reducer,
- An agitator (shaft + propeller) ensuring oxygen production.
- The system can be powered by solar panels or directly from the electrical grid.

BENEFITS :

Among the major advantages of the floating agitation system SBF+:

- Excellent stability of the floating system (5 Floats) ensuring anti-roll protection.
- Easy assembly.
- Low energy consumption.
- Elimination of dead zones.
- Prevents algae production.
- High purification capacity.
- Very long bearing life due to the excellent stability of the system.
- Increases bearing lifespan and consequently that of the gearmotor.

APPLICATIONS :

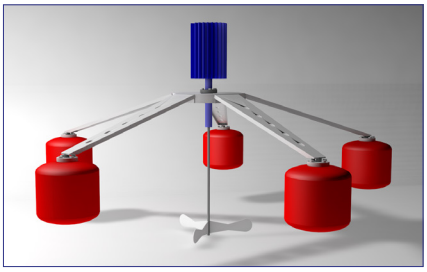
The system can be used in various applications:

- Lagoon-type wastewater treatment plants
- Combatting algae formation
- Agitation of different liquid environments
- Stirring of sludge

Our system stands out from the competition due to the presence of a third bearing located at the bottom of the lantern (refer to exploded view on page 4), which prevents shaft deflection and consequently extends the lifespan of the motor bearings.

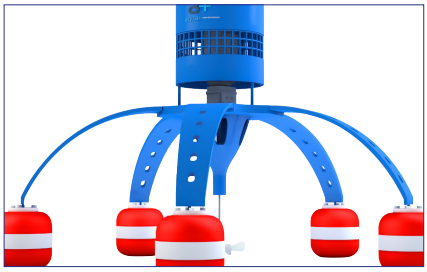
OUR PRODUCT RANGE

SBFplus



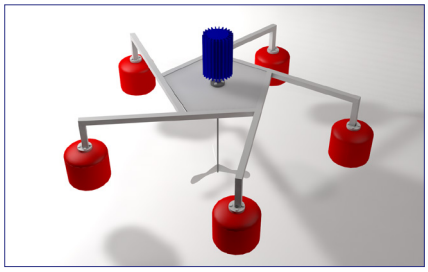
SBFI

Floating Mixing System in Stainless Steel



SBFP

Floating Mixing System in GRP



SBFO

Floating Mixing System in Pentagonal Shape

REFERENCE TABLE

Product Reference	Power (kW)	Flow Rate (m3/h)	Propeller Diameter (mm)
SBF18	0,18	1500	500
SBF25	0,25	1700	500
SBF37	0,37	1900	500
SBF55	0,55	2000	500
SBF75	0,75	2700	500
SBF110	1,10	3000	500

GEAR MOTOR:

The gear motor is intended to modify the speed ratio and/or torque between the input shaft and the output shaft of a mechanism.

- Power supply: direct current (DC) or alternating
- current (AC).
  Appropriate power.
- Protection: with a weatherproof cover.

FLOATS :

The floats are used to ensure the buoyancy of the SBF+ system, characterized by:

- Solid cylindrical floats
- Floating body made of flexible PE foam (resistant to deformations and impacts)
- Floats designed for use in freshwater and wastewater.

TECHNICAL CHARACTERISTICS:

Mode S1 to 1800 / 1500 min^{-1} (230 V)									
							M_A / M_N with C_B	C_A for	M_A / M_N
Type of motor		P_N	n_N	I_N	Cos ϕ	C_B		%100	%150
	Hz	kW	min^{-1}	A		µF		µF	µF
DRK71S4	50	0.18	1450	1.53	0.81	20	0.5	14	25
	60		1755	1.38	0.87	18	0.45	14	25
DRK71M4	50	0.25	1455	2.05	0.80	25	0.45	16	35
	60		1760	1.80	0.89	25	0.5	14	30
DRK80S4	50	0.37	1420	2.40	0.98	18	0.5	12	25
	60		1730	2.45	0.94	15	0.45	12	20
DRK80M4	50	0.55	1430	3.45	0.97	25	0.5	12	30
	60		1740	3.45	0.94	20	0.5	12	25
DRK90M4	50	0.75	1430	4.45	0.93	15+15	0.5	20	40
	60		1740	4.75	0.90	25	0.5	18	35
DRK90L4	50	1.1	1415	4.80	0.97	25+20	0.5	30	70
	60		1725	6.6	0.93	20+15	0.55	30	50

SOLAR PANELS

The system will be powered by solar panels ensuring its operation.

- Power: 260W
- Support made of aluminum or galvanized steel.

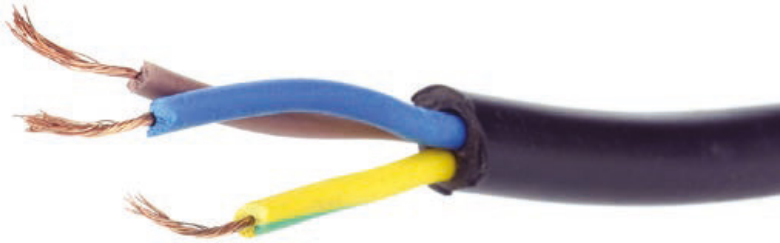
ELECTRICAL SOLUTION:

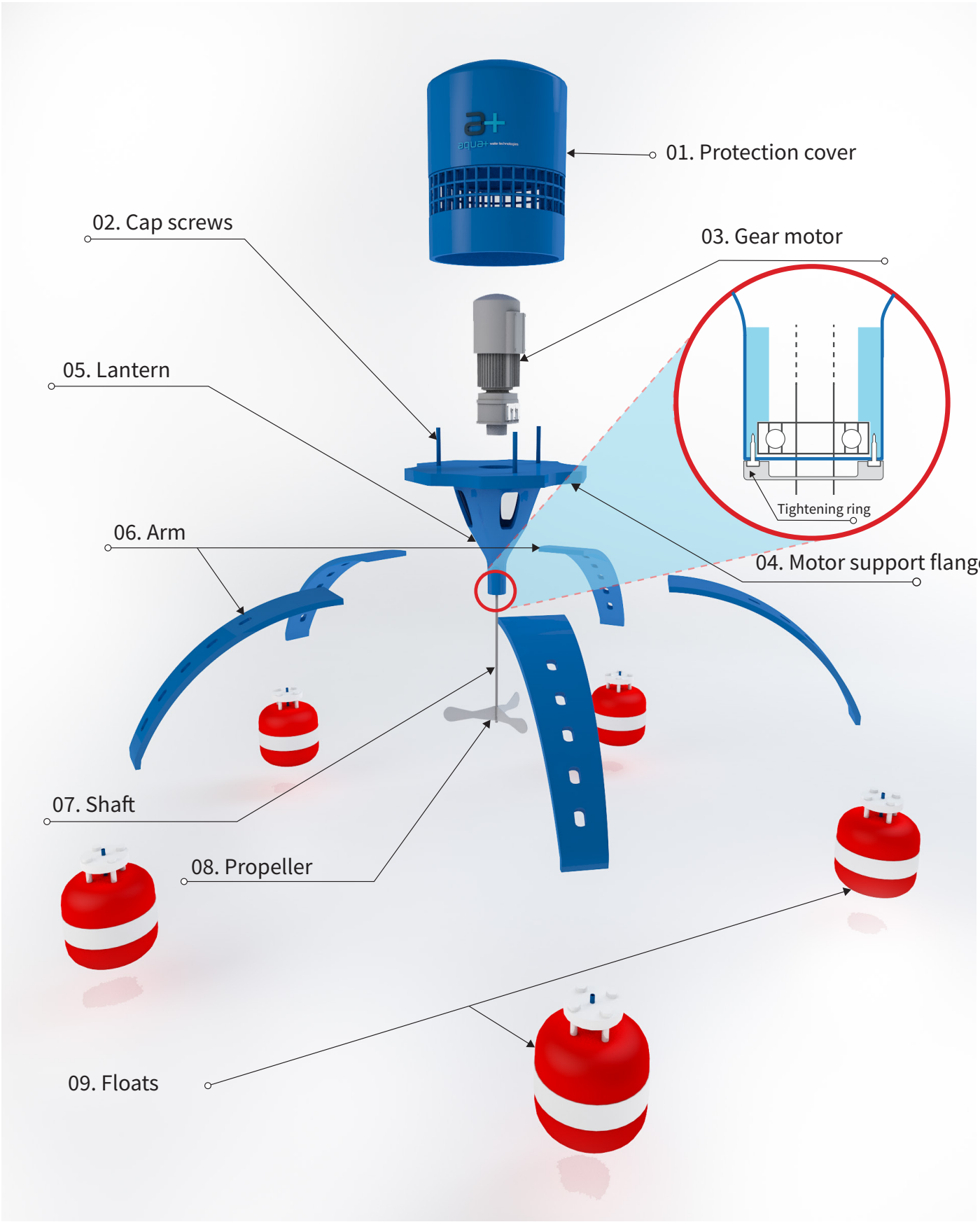
For the proper operation of the system, it is necessary to provide an inverter capable of converting voltages and alternating currents from the photovoltaic energy source to different voltage or frequency levels. The inverter should be sized according to the calculations.

CÂBLE :

The power cable with the following characteristics:

- Type: submersible.
- Reference: HO7RN-F.





Technical characteristics:

Motor	
power source	Alternative
Power	0,55 kW
Voltage	220 V
Protection	by a cover installed above the motor against weather conditions.
Cable	
Type	submersible
Reference	HO7RN-F
cable Section	3 x 2.5 mm
Solar Panels	
Minimum total power of the panels	Electrical power absorbed by the motor, increased by at least 30% au minimum (550 * 30%) + 550 = 715 W
Individual power of the solar panel	260 W
Buoyancy	
Intermediate support	PRV, Aluminum, Stainless Steel.
MainFloat	Polyethylene filled with foam.
Mixing	
Volume mixed at nominal rate of 2000 m3/h.	
Mixing speeds not exceeding 0.15 m/s at the bottom of the basin. .	
Omnidirectional mixing, 360°.	
Demonstrated effective diameter of 40 m.	
Solar Panel Support	
A set of solar panels mounted on an aluminum structure will be installed above water and away from traffic lanes.	
Special Parts	
Submerged parts resistant to corrosion (stainless steel)	
Stainless steel A4 fasteners.	
Motor-reducer coupling with easily detachable shaft, allowing for easy replacement of worn-out motors.	
Placement of Solar Panels	
The solar power station is positioned away from the agitator and installed out of the water.	
The movement of the solar stations can be accomplished without a crane, through manual handling.t	
Mooring System	
The anchoring devices withstand winds of up to 100 km/h.	
Stability of the Floating System	
Two stainless steel mooring cables connected to rings for the stability of the floating system.	

aqua+
water technologies

Site web:
www.aqua-plus.ma

E-mail:
contact@aqua-plus.ma

Suivez-nous sur:
@aquaplus.maroc