BERAQUA®

SMARTAQUACULTURE

• Equipment for production, handling, laboratory, larviculture and transport of live fish and shrimp.
• Solutions for monitoring and control of water quality.
• Aerators for the treatment of effluents and wastewater.

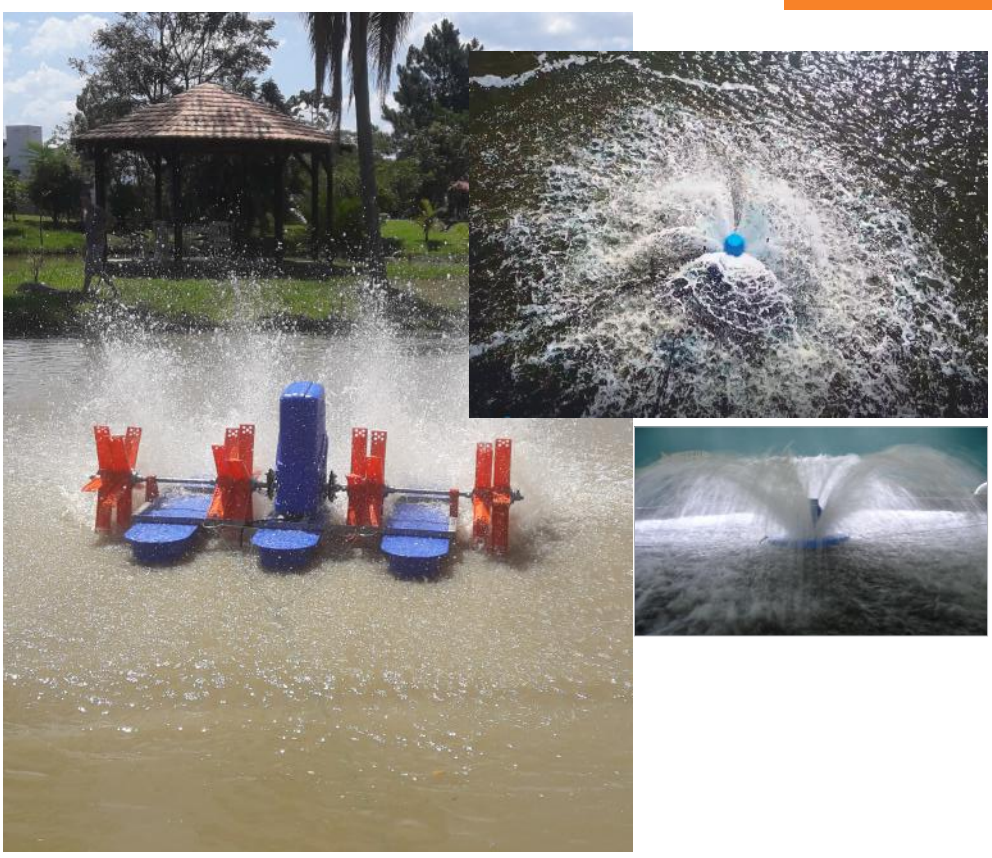
CATALOG

30 YEARS
TRADITION
QUALITY
AND TECHNOLOGY

AERATORS

Aerators are equipments that provide increased concentration of dissolved oxygen in water, used in the industrial market for the treatment of effluents and in the market of aquaculture in which it provides an increase in biomass per m3 and productivity.

AERATION



Mechanical aeration is fundamentally one of the most important processes for ensuring a better sustainability for the aquaculture production by increasing production capacity due to the fact that dissolved oxygen is the most critical variable in water quality.

Aquatic animals, such as fish and shrimp, require an adequate oxygen for metabolic processes to take place normally.

Aeration through mechanical aerators is employed in aquaculture by the forced passage of air through the water in order to increase the level of dissolved Oxygen (DO) and this process also expel undesirable gases, such as carbon dioxide (CO2) and non-ionized ammonia (NH3).

In the cultivation of fish and shrimp in systems with low water renewal or with increased biomass, there are large variations in dissolved oxygen and high concentration of carbon dioxide due to photosynthesis and respiration of aquatic organisms. In these systems there are also additional critical fluctuations in dissolved oxygen levels due to a decrease in the carrying capacity of the water, mainly by the greater amount of nutrients via feed that are incorporated into the water. This scenario can increase the losses of production by higher mortality.

In addition to dissolved oxygen, water temperature is very important item on the metabolic rates of cold blood organisms, where the breathing, feeding, and growth activities are directly influenced by this parameter.

Mechanical aerators are also responsible for all the movement of the water layers of a tank and consequently by mixing water with different temperatures, an effect that receives the technical name of thermal destratification.
Is important to know that the simple fact that a tank receives low or high rate of water renewal, does not prevent layers with different temperature levels.

The use of aerators in the cultivation of fish and shrimps, generates a fast growth, better health and avoids mortality that occurs with the lack of oxygen dissolved in water, allowing productions at high densities.

Since the 90's we have been producing high performance aerators, which aim to ensure the best oxygen transfer rates per kilowatt of electrical power consumed.
We always target on improving our manufacturing processes and delivering to the market greater durability aerators with low maintenance cost.

We employ in the manufacture of our aerators only noble and high durability materials, aiming to ensure full operation for long years and generating low risks of failures and consequently without losses to producers.

Bernauer Aquaculture is the most renowned manufacturer in Brazil of aerators for aquaculture and very known on countries like Ecuador and Colombia.

We do our best to offer high quality AERATORS, which have high oxygenation performance with the lowest electricity consumption.

AERATORS

AQUAMIX

Beraqua was a pioneer in the implementation of up flow water aerators ("splash" type), where by the means of a single propeller a water flow extracts the bottom water and throws it vertically and horizontally in a big "tulip shape". The water particles come into contact with the air, causing the incorporation of oxygen.
Comparing with other systems such as paddle wheel aerators, this product brings as an advantage a greater incorporation of oxygen per kWh and a lower maintenance cost because it contains fewer parts and does not require a reducer. Been now the best seller equipment in South America. The biggest fish and shrimp producers are replacing their paddle wheels equipments to achieve bigger profits with this cost reduction.

Its dynamics consists in launching the water in tulip shape, where the angle of expulsion was widely studied to obtain the better configuration on high and distance to obtain a better water incorporation and oxygen distribution and allow that the water column stays in suspension for much longer.

The sine waves generated by the flow of water moves to all the directions distributing hydrogen peroxide, avoiding stagnant and poor areas in oxygen. This flow of water ensures that the aerator always extracts water with less Oxygen from below, circulate and enrich it with oxygen with the lowest electrical consumption.

Aquamix has patented differentials such as a protective cover with a snorkel opening that is better than any other similar product in the market to protect the engine against water damage. Also has a safer 2 parts floater with the largest area preventing it to turn beside other mechanical and design characteristics to optimize water flow.
This innovative project grants AQUAMIX the highest water flow and consequently the higher oxygen transfer rate than the other brands of splash aerators.

Its high-performance electric motor (exclusive design for Beraqua aerators by the multinational industry WEG) is housed on the float, with its long axis being above the surface of water. A rust-proof protection grille prevents debris from counting with the propeller.

It is built for severe regimes of continuous operation, light and easy to handle and install, works without reducer reducing maintenance expenses. Its versatility allows it to be used in numerous activities, such as the cultivation of shrimps, fish farming, fish purification tanks, fish farming in tanks, chlorine volatilization and wastewater treatment.

AQUAMIX

Flow of air for the engine (highlighted)

*PATENT BERAQUA

EXCLUSIVE PROTECTION

Cover made of high polyethylene density; Exclusive ventilation system of the engine with "Z" shaped (snorkel) input that prevents splashing of water from the outside in. Designed to allow correct ventilation of the motor in continuous working conditions and so not generating higher energy consumption by about heating.

1,26 m

FLOAT WITH 4 POINTS OF FASTENING, WIDER, STABLE AND BIPARTITE

Two-party float with the largest diameter on the market, making it stable against rollover in water during use; Molded in a single piece and made with high quality virgin plastic resins – HDPE (high density polyethylene); Resistant against acidic conditions or alkaline water, tolerates long exposed period in sunlight without suffering any cracks or water infiltration; Design that guarantees excellent stability during operation even in high wind conditions that generate ripples in the water; Each float is hydrostatically tested under standards; Largest thickness on the market (8 mm) and consequently the longest service life;

62 cm diameter
44 cm height

VARIOUS PROTECTIVE BASKET OPTIONS

Protective grille model FLOW manufactured in high density polyethylene.
Background without filtration area that inhibits the accumulation of material below the aerator increasing horizontal circulation of water.
Increased height to provide better water flow.
Grid holes: Ø 20 mm;
Largest protection grid on the market that ensures greater filtration area.

62cm width
19 cm height

Rustproof protective grille manufactured in stainless steel 304; Grille opening: 20 mm;
Largest stainless steel protection grid on the market that ensures larger filtration area without clogging by algae, aquatic plants and barnacles.

SPECIAL PROPELLER

Axial propeller made of high nylon PA 6.6 brass thread impact; The propeller was developed through the best concepts of fluid dynamics that guarantee the highest flow of water in the market;
Dynamic and static balancing;
Antifouling pigmentation to reduce adhesion of barnacles.

MOTOR MODEL - WEG EXCLUSIVE

Motor brand WEG BY BERAQUA specially produced in technological partnership with the multinational industry WEG and with a long seamless shaft; Exclusive with 2RS bearings that ensure greater durability; Triple inner layer of varnish;
IP55 motor for use in saline water - stainless steel shaft 304;
IP20 motor for use in fresh water - shaft in ACC;
Three-phase available for voltages 220/380/440V;
Single phase available for voltages 220/254/440V.

All screws and supports in stainless steel.

AQUAMIX

MODELO	B-401	B-403	B-501	B503	B-601	B-603	B-701	B-703
SAE (Kg O_2/kWh)	1,59		2,11		2,47		2,45	
Power (HP)	0,75		1		1,5		3	
Power (kW)	0,55		0,75		1,10		2,20	
Phases	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø	1Ø	3Ø
Voltage (Volts)	220	220	220	220	220	220	220	220
	254	380	254	380	254	380	254	380
	440	440	440	440	440	440	440	440
Frequency (Hz)	60 Hz e 50Hz (sob encomenda)							
SORT (Kg O_2/h)	1,11		1,87		3,15		6,17	
Launch diameter (m)	3,20		3,70		5,50		7,43	
Launch height (m)	0,80		0,85		1,10		1,20	
Suction Power (m)	1,50		1,75		2,00		3,60	
Flow rate (m^3/h)	150		240		327		655	
Dimensions in m (L x W x H)	1,2 x 1,2 x 0,75		1,2 x 1,2 x 0,75		1,2 x 1,2 x 0,75		1,2 x 1,2 x 0,75	
Cubing (m^3)	1,08		1,08		1,08		1,08	
Weight (Kg)	30		35		37		41	
Quantity aprox per container 20'	80 units (assembled) / 99 (disassembled)							
Qunatity aprox per container 40HC	185 units (assembled) / 230 (disassembled)							
CARACTERÍSTICAS CONSTRUTIVAS								
Floating Parts	Molded in HDPE (high density polyethylene), fully watertight for continuous service and resistant to sun exposure, acidity-alkalinity.							
Cloak/ Cover								
Motor	Special project WEG by Beraqua with triple layer of varnish in the winding and 2RS bearing.							
Propeller	Nylon.							
protection structure, brackets and	Made from 304 stainless steel (HDPE plastic option available).							
Eletric motor shaft	ACC for fresh water and stainless steel 304 for salt water.							

AERATORS

AQUAPÁ

Widely used in fish farming and shrimp farming, the Aquapá aerator is characterized by an up and backward flow of water caused by the rotation of the blades to oxygen incorporation. With the highly optimized blade design, it makes possible to achieve high performance in the aeration of all layers of water, with low consumption of energy, being indicated for application in ponds/tanks with greater longitudinal area and low depth.

The blades also promotes high surface movement and their unique design allows the destratification (homogenization of densities) of the water column.

Known as the most efficient aerator in the line of paddle wheel aerators, AQUAPÁ is the result of years of experience in aquaculture.

Combining our knowledge and experience, BERAQUA produces a product innovative that will change the way you think about paddle aerators.

Mechanically composed of a reliable gearbox and an efficient electric motor that together with its special design blades, it saves 20% of electrical consumption and provides an oxygen transfer rate that is about 35% higher than other similar equipment. Its blades represents a revolution in the concept of aeration by paddle aerator.

Our reducer has a built-in gear system JIS Standard (Japanese Industrial Standard) produced around professional CNC and reinforced (larger gears market diameter) for perfect balancing and durability are built for last many years compared to the life expectancy of 2 to 3 years of all other brands.

BERAQUA has continuously improved all the components of the AERATOR AQUAPÁ, so that the entire product can run with minimal maintenance for many years.

Together with our electric motor supplier, the multinational WEG, we have developed a motor exclusive where bearings have been replaced by superior 2RS bearings for high temperatures and a triple layer of varnish was added on the inside of the motor, generating greater energy efficiency and long durability against oxidation of the coil.

EXCLUSIVE MOTOR - WEG BY BERAQUA

Exclusive motor for the AQUAPÁ aerator;
Brand WEG W22 high performance IR3 developed in partnership with Weg with improvements such as winding special and differentiated bearings 2RS, IP55 protection, class B, isolation F; Triple inner layer of varnish;
Special shaft grooved in Stainless Steel 304.

This line of engines was developed to overcome the yield levels specified in ABNT 17094 (Brazilian regulations) with losses up to 40% lower than the available versions in the market; The W22 engine housing is produced in cast iron FC-200 and is designed to optimize heat exchange; Designed to meet mechanically the most critical specifications.

AERATORS

AQUAPÁ

NEW REDUCERS 2022 - CAST IRON

Designed for continuous work, housing made in molten nodular iron and with anti-rust epoxy paint; Output shafts and screws in stainless steel AISI 304; Uses wider balanced gear system and reinforced than traditional gearboxes with copper bushing; Dual seals to ensure total safety during crops;
High durability and dual bearings to minimize maintenance and downtime.

NEW REDUCERS 2023 - NYLON (OPTIONAL)

Housing produced in high-density nylon with fiber glass, reducing any type of maintenance generated with oxidation in use in saline waters.
Monobloc body that allows easy access to all its components, making maintenance easier.
The shafts are manufactured in stainless steel 304 heat treated and all seats and exit tips are rectified.

The gears are manufactured in high quality alloy steel which after the thinning operations are subjected to treatment of carburizing and tempering. Built-in gear system JIS Standard (Japanese Industrial Standard) produced by professional CNC for perfect balancing and durability. Energy saving, stable performance, long durability and low maintenance cost.

CHASSIS/ FRAME

Manufactured in square bars reinforced in stainless steel AISI 304 or in pultruded GRP totally immune to oxidation. Structurally reinforced to ensure efforts in conditions extremes of ripples in the water. Those bars are directly on the patented floats that has a fixing structure on his surface to ensure the structure stays still. This is another Beraqua innovation and has no weld points to oxidation.

FLOATERS

Molded in a single piece and made with high quality resins and virgin plastics – HDPE (high density polyethylene); Resistant against acid and alkaline water normal conditions; With ultraviolet protection; Tolerates long periods exposed to sunlight without suffering any cracks or water infiltration;

Design that ensures excellent stability during operation even in conditions of strong winds that generates ripples/waves in the water; Each float is hydrostatically tested to meet the standard quality; Largest thickness on the market (8 mm) and consequently the longest service life.

PROTECTIVE COVER (patented)

Protective cover of the motor/reducer assembly allows a better ventilation, reducing the operating temperature of the electric motor which significantly increases its lifespan; It is fixed only by fitting (without screws) in the protective tray ; Protective tray reduces the flow of splashes from water and sea in the reducer/ motor set.
Cover and tray set made of HDPE.

ROTOR

Rotor made of virgin nylon PA 6.6
Blades with exclusive design by Beraqua that increases the oxygen dissolved and decreases the mechanical efforts making the motor/ reducer lass longer. The blades are fit on the central rotor so if needed is possible to replace a single blade and not the entire rotor such as other paddle wheel aerators. The angle of positioning of the blades does not generates cavitation and raises the efficiency index of the water flow, during the operation of the aerator all blades are generating drag and not passing in a vacuum.
The high torsional and impact resistance of nylon 6.6, results in blades of very high strength and durability.

BEARING

Made of nylon PA 6.6 with grooved bushing synthetic rubber; Self-lubricating water system and anti-friction for continuous operation; Designed grooved bushing for 10 years of use due to the possibility of four reuse positions.

AERATORS

AQUAPÁ

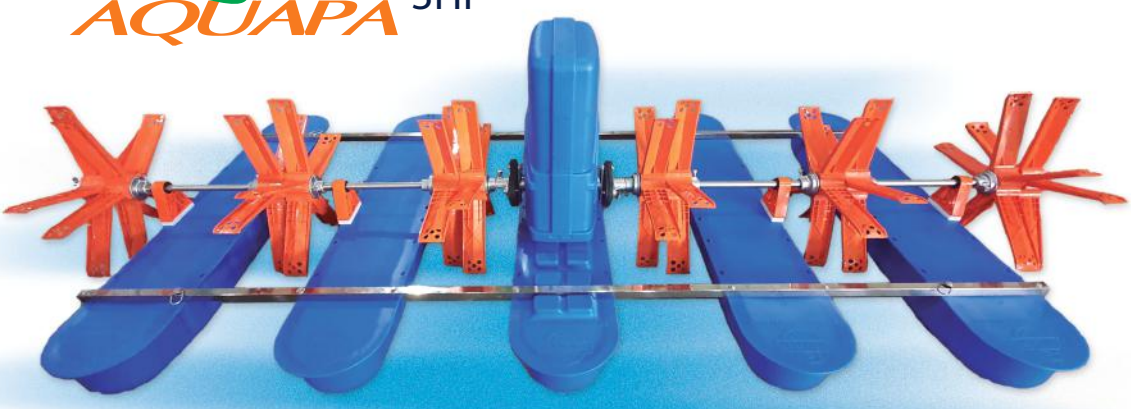
FLEXIBLE COUPLING

Flexible coupling for shaft union of the reducer shaft with shaft of blade transmission made of special alloy of cast aluminum;
Machined and grooved internal hole to ensure perfect laying on the axles, perfect balancing of the Swivel assembly and easy disassembly even with use in saline waters.
Robust and resistant levers for long years of use.

FIXING CUBES

Rotor fixing hubs made of special alloy cast aluminum;
Machined and grooved internal hole to ensure perfect drive shaft settling, perfect balancing of the rotating assembly and easy disassembly even with use in saline waters.
Robust and resistant part for long years of use.

AQUAPÁ 3HP



AERATORS

AQUAPÁ

MODEL	B-105		B-209		B-309
SAE (Kg O_2/kWh)	1,80		2,42		2,26
Power (HP/ kW)	1,00 / 0,75		2,00 / 1,5		3,00 / 2,25
Phases	1	3	1	3	3
Voltage (Volts)	220/ 440	220/380/ 440	220/ 440	220/380/ 440	220/380/440
Frequency (Hz)	60 Hz e 50 Hz (on request/ on demand)				
SORT (Kg O_2/h)	1,35		3,60		5,10
Number of blades (propeller)	20		40		60
Dimensions m (L x W x H)	1,60 x 1,62 x 0,95		1,63 x 2,36 x 0,95		1,65 x 3,00 x 0,95
Cubing (m^3)	0,36		0,47		0,73
Weight (Kg)	78	68	104	91	119
Approximate quantity per container 20'	63		47		36
Approximate quantity per container 40 HC	146		108		84
CONSTRUCTIVE CHARACTERISTICS					
Floating Parts / Cloak/ Cover	Molded in HDPE (high density polyethylene), fully watertight for continuous service and resistant to sun exposure, acidity-alkalinity.				
Motor	Special project WEG by Beraqua with triple layer of varnish in the winding and 2RS bearing.				
Gearbox	Made of modular cast iron with anti-rust epoxy paint. Option with plastic housing on request/ on demand.				
Frame (chassis), axles and screws	Made of 304 stainless steel.				
Rotor blades and hubs	Robust construction in nylon polyamide 6.6, with exclusive design of high performance providing excellent oxygenation and destratification.				
Levers and Couplings	Marine Aluminum				

BERAQUA BY WEG
ESPECIAL MOTOR AERATORS

POLYETHYLENE
HIGH DENSITY
100% VIRGEN +
UV PROTECTION
2 HDPE

FEEDERS/ FEED DISTRIBUTORS

The biggest cost in fish and shrimp production is feed. The quantity, homogeneity and flow of their distribution defines the optimization of investments and the growth/fattening of production. Automations therefore guarantee not only savings in labor but also better results.

POTYGUABA

We have developed one of the best quality floating automatic feeders and with better efficiency for the shrimp industry. While manual feeding is usually applied 4 times a day at most , through the feeder Potyguaba this can be increased up to 360 times with extremely precise dosages of feed.

The distance of launching the feed is one of the great differentials, reaching up to 30-40 meters in diameter (variation according to the density of the feed pellet), which guarantees to Potyguaba the longest launch distance on the brazilian market and maybe the world.

With our special mechanical doser (patent required) the quantities are even more precise, and this system also makes Potyguaba capable of dispersing moist food.

POTYGUABA automatic feeders are supplied in several versions and configurations, which can be electric or solar, with capacity for 100 and 200 kg, with mechanical or manual feeder, with wireless control by our own cloud system (LoRa technology) or by cyclic programmer.

This product is also soon will be released for fish production with a capacity of 650 kg.

POTYGUABA

100 KG SILO

200 KG SILO

- Electric 220/440 mono*
- With or without wireless programming.
- Electric or manual feeder.
- Solar option 24V with battery.

*Three-phase option available for models without electric feeder

EXLUSIVE MECHANICAL DISTRIBUTION/DOSING SYSTEM

The amount of feed for each start is guaranteed by a mechanical feeder (optional) with a transportation screw with rotating arms for the total flow of feed inside the silo.
The feeder allows precise adjustments in the dosages of each feeding. Uniformity and standardization in the flow of food in grams per second provides cycles accurate with the same dosage.
The feed is released through a high-speed rotating disc with directional rails driven by a high-performance electric motor.

POTYGUABA SOLAR

Equipped with a photovoltaic power system and a battery pack well dimensioned that guarantees total stability in the nocturnal feeds and greater safety of operation on cloudy and rainy days for places without energy supply. Another great differential of Potyguaba SOLAR is the life of the batteries, it comes equipped with an intelligent charge controller with electric protection for the motors, giving the batteries more lifetime without any maintenance.

Specifications - Solar Model			
Feed Dispenser Disc	Launch of feed by runoff; Feed dispersion diameter up to 40m.	**Battery**	2 maintenance-free stationary batteries - 30Ah 12Vdc.
Mechanical Feeder	Mechanical feeder with gearmotor, American technology and conveyor thread. Permanent magnet motor – working class S1 (continuous use).		
	Maximum feed flow 28,0 g/s.		

PHOTOVOLTAIC SOLAR MODULE
WEG polycrystalline silicon; System voltage: The maximum voltage is promoted to 1500V and the module strings are extended by 50%, which reduces the overall BOS system; 5 bus solar cell with new technology to improve the efficiency of the modules; High efficiency: Higher conversion efficiency of the module (up to 17.50%); Advanced textures of glass surfaces and solar cells enables excellent performance even in low-light environments; Advanced textures of glass surfaces and solar cells enables excellent performance even in low-light environments; Certified to support: wind load (2400 Pascal) and snow load (5400 Pascal); High resistance to salt mist and ammonia certified by TUV NORD. Tested for harsh environments (salt mist, ammonia and sand corrosion; High resistance to salt mist and ammonia certified by TUV NORD. Tested for harsh environments (salt mist, ammonia and sand corrosion; Strict quality control to meet the highest standard: ISO9001:2008, ISO 14001:2004 and OHSAS:18001:2007; Blow test: IEC 61701, IEC 62716, DIN EN 60068-2- 68); Long-term reliability tests; EL inspection of 2 * 100% ensuring modules without defects; LINEAR PERFORMANCE WARRANTY: 10-year product warranty and 25-year linear power warranty. Additional insurance supported by Swiss RE.

Solar panel technical data			
Solar cells	Poly 156.75×156.75 mm	**Backsheet**	White
Cell Orientation	72 inches (6×12)	**J-Box**	IP68 rating
Module Dimensions	1956×992×35mm	**Cabos**	4.0mm² (0.006 inches²), 1200mm (47.2 inches)
Weight	22,2 kg	**Conector**	Original or compatible MC4
Glass	High transparency solar glass 3,2 mm (0,13 in.)		

FEEDERS/ FEED DISTRIBUTORS

POTYGUABA

	ELECTRIC AAP100	SOLAR AAP 100 (Out of Sale)	ELECTRIC AAP200	SOLAR AAP200
Capacity (Kg)	100		200	
Range	Up to 40 m (radial diameter)			
Dimensions (m)	1,47 (L) x 1,47 (W) x 0,96 (H)		2,30 (L) x 2,30 (W) x 1,70 (H)	2,30 (L) x 2,30 (W) x 2,00 (H)
Weight (Kg)	40		100 Aprox.	
Feed dispenser engine	1/3HP	200w	1/3HP	200w
Tension	220 single phase 220/440V. Three-phase option for model w / mechanical feeder without connectivity	24V	220 single phase 220/440V. Three-phase option for model w / mechanical feeder without connectivity	24V
Quantity Controler (FEEDER)	Manual or mechanical		Manual or mechanical	
Connectivity Lora	With or without software control	Control via software	With or without software control	Control via software
Solar panel	N/A	390 a 440 wp (min)	N/A	390 a 440 wp (min)
CONSTRUCTIVE CHARACTERISTICS				
Silo and Float	HDPE (high density polyethylene) resistant to sun exposure. Models with feeder and above 200kg with segmented float option to facilitate transport and provide greater buoyancy safety.			
Structure	Inox 304.			

CODE	CAP. (kg)	ENGINE TYPE	FEEDER	Conect. Software LoRa
C001000032	100	Single-Phase	Manual	No
C001000015	100	Three-Phase	Manual	No
C001000036	100	Single-Phase	Mechanic	No
C001000033	100	Single-Phase	Mechanic	Yes
C001000039	200	Single-Phase	Manual	No
C001000040	200	Three-Phase	Manual	No
C001000035	200	Single-Phase	Mechanic	No
C001000034	200	Single-Phase	Mechanic	Yes
C001000019	200	Solar	Mechanic	Yes

*** Models with software connectivity via LoRa require a GATEWAY and antenna (sold separately) properly sized with the positioning distance of the feeders.**

COMPLEMENTARY ITEMS

CODE	DESCRIPTION
1C01000128	GATEWAY for wireless connectivity to the feeders. Range of up to 3km depending on topography and local interferences.
2C01000008	External GATEWAY and ONMI directional antenna for wireless connectivity with the feeders. Range of up to 7 km depending on topography and local interferences.

FEEDERS/ FEED DISTRIBUTORS

PIRAGUABA

Mechanical feed dispenser designed to propel feed through high air pressure generated by the powerful blower/blower that generates an air speed of 330 km/h.
It is designed to be used on any type of platform, such as micro-tractors, automobile/quad trailers and even in vehicles with animal traction.
In this way it is possible to feed your fish or shrimp quickly and homogeneous around the pound, providing a reduction in the time of 70% of the amount compared to manual feeding.

PIRAGUABA
distribuidor mecânico de ração

TECHNICAL DATA OF THE PRODUCT			
Maximum feed silo capacity (kg)	175	Dimensions (m)	1,06 (L) x 0,67 (W) x 1,257 (H)
Lounch distance (m)	12	Weight (Kg)	70
TECHNICAL DATA - MOTORIZATION			
Engine	2-stroke	Engine Stop	Button
Maximum power (cc)	3,55 CV at 7500 rpm	Starting System	Manual
Cylinders	1 Cylinder	Air Max Speed	330 km/h
Fuel (gasoline : 2T oil)	25:1	Volume of air (m³/h)	1152 m3/h
Tank capacity (l)	2,30 liters		

Dosage control of the quantity of feed through with pantographic selector with 10 adjustment positions.

Command device for manual or static start integrated. On-off with easy access and manipulation.

Articulated cannon for the feed output that allows you to go up or down avoiding obstacles on the way.

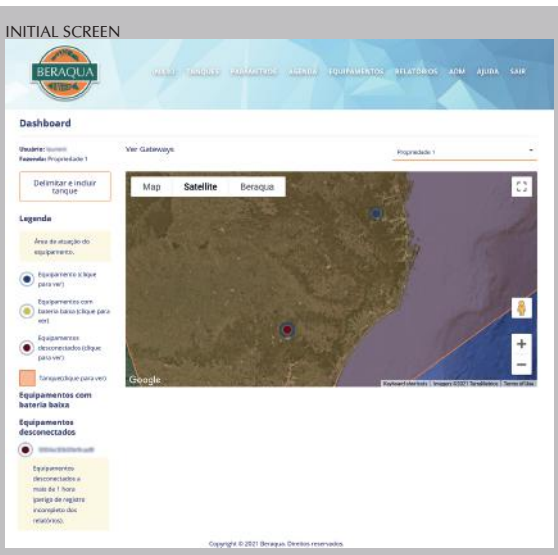
WIRELESS AUTOMATION SYSTEM

Current industry trend, automation and connectivity are indispensable tools for the better control and reduction of expenses. Beraqua has developed solutions integrating LORA communication (long range distance), internet and WEB management platforms that can be accessed anywhere.

CYCLIC - BERAQUA SYSTEM

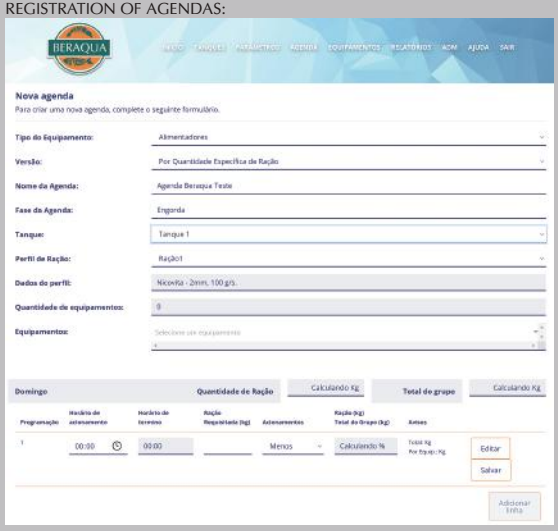
The system integrates technologies of long-range protocol (LoRa) normally used for farm and industry equipment offline automation with an online web-based system.
A computerized board installed in the equipment that memorizes the schedules and gets information like battery life, GPS position receives and sends information though the LoRa network in small packages of compressed data that reaches not meters but miles of distance.
The LoRa gateway is connected to the internet and this device is connected to the internet and exchanges information with a web-based system where the user controls everything anywhere he is in the world.

INITIAL SCREEN

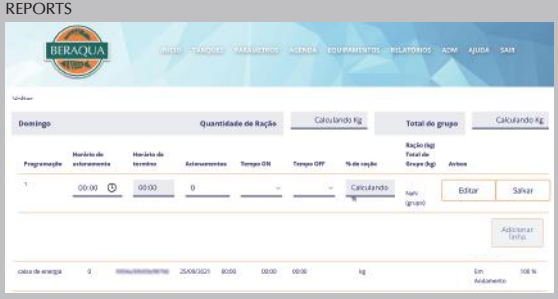


TANK REGISTRATION:

REGISTRATION OF AGENDAS:



REPORTS



In the system it is possible to visualize the tanks geographically as well as the position of the equipment and if any equipment is offline or without power and the agenda in progress, between other information. It can to control aerators and feeders.

Programming is practical and simple.

After registering the equipment and register / delimit the tank where it will be destined just fill out an agenda for the equipment or for a group of equipments.

This filling can be done from 3 different forms in the case of feeders: By exact start and end time, by amount of specific feed or per amount of feed and start time and exact end time.

It can have up to 10 agendas cyclical per day totally different. For instance, starting 9 am till 11 am and dispersing 10 kg of feed divided in 30 start/stop actions within this period is just one of the 10 cyclical you can add in a day.

The application will send the information to the equipment so that meet better continuous feed distribution during programming.

The electronical devices placed in the equipment has geo-positioning for better identification on the software; internal clock synchronized with the system so all the equipments on the same agenda starts on the same time; and internal memory that stores the schedule so any internet fail won't means that the equipment will stop.

The system also generates reports that can be easily exported to Excel so you can work with your data as needed.

The system is available temporary free of charge for use with Beraqua's equipments. Enjoy!

TRANSPORTATION BOXES

TRANSPOTY

The first thermal box for transport developed in Brazil especially for the transport of Pl's and live shrimp for long distances. With a capacity of 800, 1000 and 1600 liters. It has an inclined bottom and discharge register, as well as hand-held supports that facilitate handling.

Equipped with special flow regulator and frame-grid diffuser that can be used in conjunction with air compressor (optional) and oxygen (cylinder) ensuring a better aeration through "Microbubbles". The box can be supplied with or without partition in the models:

With partition: E-21000 cap. 2 x465L, E-21600 cap. 2x 740L.
Without partition: E-2800 cap. 740L, E-21000 cap. 930L and E-21600 cap. 1480L

In addition to the Transpoty boxes we offer the TRANSPOTY SYSTEM, which consists of in the design and installation of the set of boxes on the platform of the trucks:

TRANSPORTATION BOXES

Secure and strong boxes for transportation of live fish and shrimp.

TRANSFISCH

Boxes for the transportation of living fish for long distance (thermal insulated) or short distance (without thermal insulation). The thermal insulated product line (E-2000 series) is indicated for long distance transportation and are manufactured with double wall of fiber + structural polyurethane. The E-1000 series boxes have a single fiber-reinforced wall and is indicated for short distances or internal handling.

Equipped as standard with wave breaker and anti-leak system (SQA) that eliminates the movement of water during movement and consequently avoiding collisions between the animals against the walls of the box. With the elimination of this stress and of the injuries that can be caused in fish there is up to 30% increase in transport capacity.

The powerful thermal insulation of high density and structural, guarantees the boxes of the series E-2000 more than 30 hours.

Top cover and discharge gate with leak-proof sealing.
All the metal structure and screws are made of 304 stainless steel.

The aeration of water is carried out by oxygen under pressure in cylinders through the frame diffuser with micro laser perforated hoses.

The diffuser frame has been dimensioned to ensure that even at high oxygen flows, the size of the bubbles is maintained, and oxygen consumption is limited to 10 m3 for 80 hours of transport per m3 of water volume.

The diffuser frame is articulated to facilitate the discharge of fish and removable for cleaning and sanitization of the box. Comes equipped as standard with flow regulator and optionally with imported flow regulator of high precision.

In addition to the Transfisch boxes we offer the E-3000 TRANSPORT SYSTEM, which consists of in the design and installation of the set of boxes on the platform of the trucks:
- Fixing of the boxes with damping and torsion system;
- Individual interconnection of oxygen by flame retardant hoses;
- Manifold flow stabilizer for individual adjustments per box;

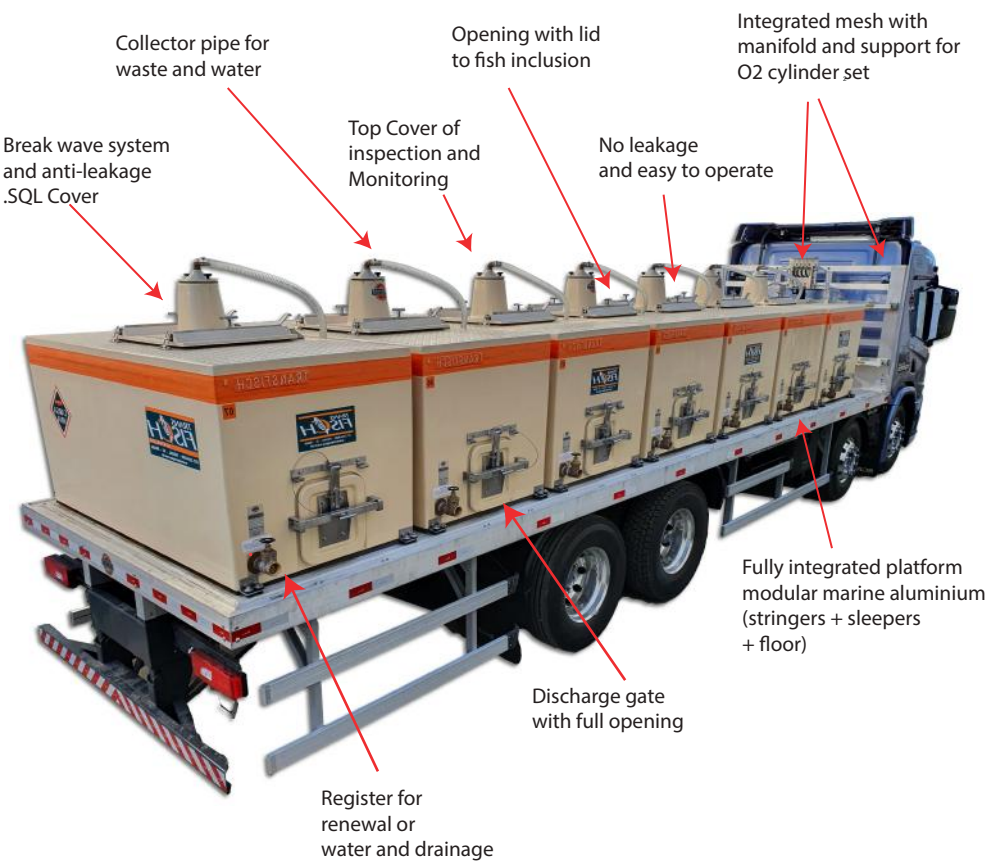
- Support for the set of oxygen cylinders and reinforcement of the body mesh;
- Access stairs for the body and boxes;
- Side platform of the body for loading and unloading of fish;
- Reservoir collecting waste and water discarded during transportation.

MODEL	DIMENSIONS (m) LxWxH	WEIGHT (Kg)	VOLUME (l)	THERMAL INSULATION
E-1500	1,07 x 0,97 x 0,95	31	500	No
E-1501	1,05 x 0,97 x 0,95	36	500	No
E-1502	0,97 x 0,97 x 0,95	28	500	No
E-11000	1,98 x 0,80 x 1,08	67	1000	No
E-11001	1,96 x 0,80 x 1,08	80	1000	No
E-21800	1,55 x 0,85 x 0,85	114	800	Yes
E-21000	1,55 x 0,85 x 1,03	130	1000	Yes
E-21600	1,94 x 1,04 x 1,00	198	1600	Yes
E-22400	2,26 x 1,15 x 1,05	236	2400	Yes



TRANSPORTATION BOXES

TRANSFISCH



PP FLEXIBLE POWER CABLE

Thinking of offering the best option for the electrical connection of aerators, Beraqua now offers 2 lines of high quality and durability power cables. They are available in standard and premium versions, generating lower consumption of electric power and greater durability to electric motors.

	PP 500V STANDARD BC	PP 500V PREMIUN CDM
Characteristics	Electrolytic copper wires, class 5 stringing, soft tempering	Electrolytic copper wires, class 5 stringing, soft tempering.
Isolation	PTC/D 70 °C – Polyvinyl thermoplastic compound (PTC)	PTC/D 70 °C – thermoplastic compound of polyvinyl chloride.
Coverage	PTC ST5 – Polyvinyl thermoplastic compound (PVC)	PTC ST5 – thermoplastic compound of polyvinyl chloride.
Applicable standard	ABNT NBR NM 247-5 (Brazilian Standard)	NBR NM 247-5 – Polyvinyl chloride (PVC) insulated cables for rated voltages up to 450/750V,
		Inclusive – Part 5 – Flexible cables (cords) (IEC 60227-5, MOD).
		NBR NM 280 – Insulated cable conductors.
		NBR NM 247-1 – Polyvinyl chloride insulated cables for rated voltages up to and including 450/750V – Part 1 – Requirements
		General (IEC 60227-1, MOD).

FLEXIBLE CABLE PP 500V STANDARD BC		
Code	**Number of drivers**	**Nominal conductor section (mm2)**
1N0200001	2	4
1N0200002	3	2,5
1N0200003	3	4
1N0200004	4	2,5
1N0200005	4	4

CABLE PP 500V PREMIUN CDM		
1N02000006	3	2,5
1N02000007	3	4
1N02000008	4	2,5
1N02000009	4	4

FLEXIBLE CABLE PP 500V PREMIUM CDM							
Code	Number of drivers	Nominal Section (mm2)	Conductor diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	Outside Diameter	Mass (kg/km)
1N02000006	3	2,5	2	0,8	1,1	9,8	159,9
1N02000007	3	4	2,5	0,8	1,2	11,2	224,3
1N02000008	4	2,5	2	0,8	1,1	10,7	193,3
1N02000009	4	4	2,5	0,8	1,3	12,4	227,7

DIFFUSE AIR

Compressors are used to propel air or oxygen through a porous or micro-perforated structure to create tiny bubbles at the bottom of the tank that in contact with water make the oxygen incorporation. Technique used in water/effluent treatment and aquaculture when used smaller tanks than ponds.

POROUS HOSES

The NANO TUBE BERAQUA aeration hose is manufactured with “state-of-the-art” technology and with high quality raw material, made with virgin rubber that allows its use at various levels of pressure.

With it, producers can increase the density of their fish tanks and shrimps without making large investments or greater consumption of electric power.

The porous condition of the NANO TUBE aeration hose is one of the reasons that makes it so efficient in transferring oxygen. It does not demand high energy consumption to work as it can operate with minimum blower pressure and thus transfer a high level of microbubbles into the water.

The surface area of the bubbles is where water comes into contact with air and where the oxygen transfers.The smaller size of the bubble results in more area of surface per m3 of air. So to maximize the efficiency of aeration in a system, achieve smaller bubbles with minimal energy consumed is the goal. Beraqua nano tube meets both objectives in addition to long life and low maintenance.

The technology behind the extremely efficient performance of the nano tube hose Beraqua, is a combination of technique and raw material, creating numerous tiny pores along the length of the hose. These micro-pores allow efficient transfer of air to water.

The energy efficiency of Beraqua nano tube hoses is basically obtained in two ways:

1 – Due to the number of pores created during our manufacturing process, there is little resistance created by pushing air through the pipe. Resistance equals power demand, so you can use it significantly less power when compared to low-quality hoses.

2 – The small size of the pores of the Beraqua nano tube hose creates bubbles of extremely small diameter. The smaller the air bubble, the more efficiently transfers oxygen to water (more surface area). Small bubbles also takes longer to rise when they are introduced into the water. Slower, smaller diameter bubbles means more contact with water and a much higher rate of oxygen transfer.

SPECIFICATIONS	
Outside diameter (mm)	25
Inner diameter (mm)	12
Wall thickness (mm)	6.5
Weight (g/m)	330
Cold resistance (-40ºC up to 8 hours)	Longitudinal tension ≥ 0,5 Mpa
	Elongation stress ≥ 0.5%
Empty resistance to heat (70ºC up to 72 hours)	Tensile strength rate ≤ 1%
	Elongation rupture rate ≤ 1.5%
Resists 5% NaOH (23ºC up to 72 hours)	Tensile strength rate ≤ 0.4%
	Elongation rupture rate ≤ 1.1%
Resists 5% HCl (23ºC up to 72 hours)	Tensile strength rate ≤ 0.3%
	Elongation rupture rate ≤ 0.9%
Pressure	s-1 200Kpa (amount of water infiltration) 600-800 ml/h.m
	s-2 200Kpa (amount of water infiltration) 10.8 l/h.m
	200 Kpa (increase in amont of oxygen) 420 ml/h.m
Dynamic power	02/kWh
Airflow	3 m^3
	12 HRM (m^3/h/m of linear hose)

INCUBATORS

Used in the artificial reproduction of fish. Reinforced and with removable mesh ring.

INCUBATORS

Model	A-1200	A-1056
d / d1 (m)	0,79 / 0,58	0,54 / 0,35
h / h1 (m)	1,28 / 1,11	1,025 / 0,79
E / E1 (m)	0,16 / 0,07	0,16 / 0,06

h - Total height with tubular support

h1 - Height incubator with mesh ring

d - Outer diameter of the incubator

d1 - Inner Diameter incubator cylinder

E - Length water outlet trough

E1 - Distance between the screen ring and the incubator body

Incubators with high efficiency design, in capacities of 56 and 200 liters.
Smooth interior finish in white color. Removable mesh ring with conical fitting which guarantees total sealing.
Optional: Tubular support with epoxy paint and screen ring with stainless steel screen.

MANAGEMENT

Equipment and accessories for fish and shrimp production management.

SIZE SELECTION BOXES

Equipment for selection of live fish by size.

The body of the machine is marine grade aluminum, and the other components are made with stainless steel, High quality and corrosion-resistant materials.
It is a practical equipment for the selection of juveniles fish, he guarantees uniform shoals for settlement in the ponds and tanks.

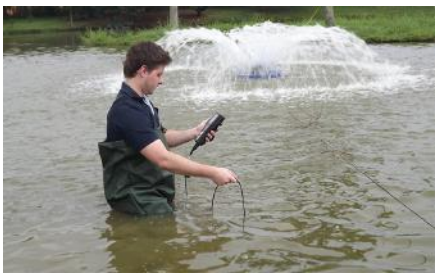
Composed of a body, with 2 handgrips, tubular grille with a regulation system with pantographic setup that makes it possible to change the opening size.

MODEL	D-6000	D-6002
Rating range (mm)	3,5 a 20	20 a 35
Dimensions (m)	0,50 x 0,20 x 0,23	0,64 x 0,40 x 0,30
Weight (Kg)	5,5	8,1

MANAGEMENT

IMPERMEABLE SUITS

It is the proper, correct and necessary professional clothing for the working day in aquaculture, providing safety, security and consequently better user yield and productivity.



Made with thicker and stronger material of PVC/Polyester, resistant, flexible and waterproof; with new design for your comfort and safety; with integrated boot to the pants by electronic welding; with elastic suspenders and adjustable.
The boot 10cm shorter, allows larger mobility during work.
The sole has special design and material for ensure greater grip and traction.

WASTEWATER TREATMENT

In effluent treatment plants the process is divided into biological, chemical or physical systems. In the biological system bacteria are the main agent of decomposition and for that occurs, oxygenation and movement/suspension of water with the application of aerators is necessary.

AERATORS

Bernauer Aquacultura (Beraqua) has been operating since 1994 in the aerators segment, with the development of equipment dedicated to oxygen transfer in nurseries of fish farming and shrimp farming. For about ten years the company has been employing, in its environmental division, its accumulated experience in the development of aerators for effluent treatment systems. With the focus on reaching the maximum transfer rate and the best cost/benefit ratio, Beraqua proposes not only the use of aerators, but of aeration systems.
Beraqua aerators for wastewater treatment admit application in the most various cases.
Beraqua aerators for wastewater treatment admit application in the most various cases. Been the best cost/ benefits are achieved with the Aquamix and Aquapá products.

AQUAPROP

AQUAPROV

AQUAMIX

AQUAPÁ

AQUAPROP - Uses an axial flow rotor coupled directly to the engine, promoting the flow of an air mass in the direction of the shaft. Aeration is generated from the venture principle. The flow of water creates a suction in the shaft and so there is the suction of the external air and the injection into the water. It has adjustable angle of the axis position that allows use in high or low deep up to 4 meters and depending on the angulation makes it possible to direct the water flow in the reactor.

It has oxygen incorporation of 1.2 Kg O_2/kWh models of 0,37 kW a 22 kW.

AQUAPROV - It uses a principle similar to AQUAPROP but without adjustment of axis angle. It works exclusively in the vertical direction. More suitable in reactors with low surface area/depth ratio. For best equipment performance, the depth of the reactor should fluctuate between 2.5 and 5.0 meters.

It has oxygen incorporation of 1.6 Kg O_2/kWh and models of 0,37 kW a 22 kW.

AQUAMIX - Best cost/benefit ratio in aeration for reactors without a restriction on the formation of mist. It has high oxygen transfer rate per kWh and has a plastic basket option with a closed bottom to increase flow horizontal water and enabling use in reactors of lower depth.

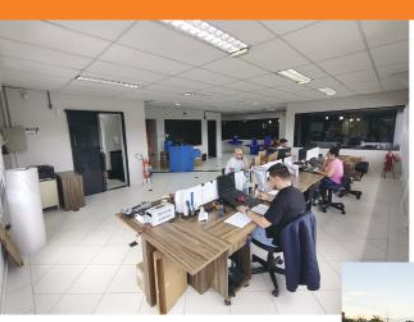
Check the specifications of the equipment in the Beraqua catalog.

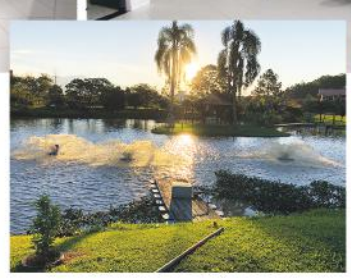
AQUAPÁ - Due to the upward flow, the use of the equipment is more appropriate in situations where there are no restrictions on aerosol formation and the environment does not present high chemical aggressiveness. It has a high rate of oxygen transfer and little agitation in the vertical direction, being limited to depths up to 1.5m.

Check the specifications of the equipment in the Beraqua catalog.

WHO WE ARE

BERAQUA





BERNAUER AQUACULTURA through its brand BERAQUA, is a manufacturer and supplier of a wide range aquaculture equipment, such as aerators, automatic feeders, transport boxes fish and shrimp, instruments for monitoring water quality, professional clothing, fish hatchers, fish classifiers, feed dispensers, in order to satisfy all the needs of aquaculture activity.

It is also a pioneer in the development and commercialization of aerators in Brazil and official distributor of the renowned American brand of precision instruments focused on the monitoring and control of water quality, YSI exclusively to the Brazilian market.

A powerful and innovative technology development company, leader in Brazil with performance and prominence throughout Latin America in the field of equipment, instruments and machinery for the aquaculture industry. Historical highlight for aerators, being the first national company to develop and commercialize these equipments, which enabled the expressive increase of the productivity of the farms by providing a higher biological density per m^3.

We apply our deep understanding of the biological and technical aspects of aquaculture to find the most appropriate technological solution for each specific need.
Come visit our Showroom in our new headquarters, where you can get to know the products and talk to one of our consultants.

We will be at your disposal to help you improve your results and propose you the best solutions because along with the Beraqua brand comes a tradition and safety of more than 30 years of experience.

NATIONAL AND INTERNATIONAL SALES AND SUPPORT

Beraqua also has exceptional after-sales support through specialized technical assistance and spare parts at fair costs maintaining service through highly specialized distributors, representatives and technicians.

Our salespeople are trained to offer not only products but customized solutions for our customers. Being every query carefully analyzed for the best equipment.

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