

# COMPLETE SOLUTIONS FOR WATER POLLUTION



Together, aLBriggs and aQuamec now offer a complete and innovative solution for sanitation and the treatment and cleanup of water and soils/sediments contaminated by sewage, hydrocarbons, hazardous liquids and household or industrial wastewater, offering the very best of international technologies.

**aLBriggs**, the new brand of the companies Alpina Ambiental and Alpina Briggs, pioneers in Brazil in the segment of oil and hazardous liquids spill response. Leaders in Latin America for the supply of services and environmental emergency response equipment, 24 hours a day, seven days a week.

**aQuamec**, a specialized company in water and wastewater treatment and sanitation, since 1994 in the environmental field with expertise in design, production, installation and operation of equipment and turnkey systems - for the treatment of drinking and industrial water, municipal and industrial effluents and the reuse of treated effluent.

The companies have more than 70 units distributed in Latin America with professionals trained in compliance with international standards, they also have their own structure of logistics and maintenance, which allows greater efficiency in operations.



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## Equipment for oil spill response

Equipment for all stages of oil spill response, including:

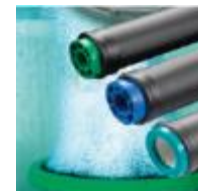
- **Containment Booms:** Used to respond to oil and oil derivatives spills on the water surface. They are available in different models, sizes and functions.
- **Oil Skimmers:** High performance for oil recovery. They may come as standalone models or fitted onto vessels.
- **Transfer Pumps:** Self-priming and with the capacity to pump liquids contaminated by solids. Available in different types and models.
- **Temporary Storage Tanks:** Ground or floating free-standing and abrasion-resistant tanks.
- **Absorbents and Spill Kits:** Containment kits and absorbents for spills involving aggressive, non-aggressive liquids or oil derivatives.
- **Monitoring and Surveillance:** Cameras, radars and other equipment for detection of oil on water surface.



## Equipment and systems for water and wastewater treatment

Extensive supply of equipment and systems for the treatment of water and effluents:

- Bar Gratings
- Screens
- Material transporters
- Sand Traps
- Mixers / Flocculators
- Aerators
- Valves
- Sludge removal
- Disinfection, H<sub>2</sub>S removal and Odors control
- Sludge thickeners
- Membrane filtration
- Disc Filter
- Pumping
- Floats
- Compact plants







## Environmental emergency response

- Operation and management of over 60 environmental emergency control centres in the Americas
- Response to environmental incidents involving spills of any contaminant in water bodies, and of oil in water or land
- Response to emergencies onshore, nearshore or in offshore environments
- 24/7 response structure
- Tier 1, 2 and 3 emergency response (local, regional, national or international level)





## Pumping systems and lowering of water table

### Pumping systems

aLBriggs and aQuamec have a range of autonomous equipment dedicated to pumping operations of viscous liquids and/or liquids contaminated with debris.

### Lowering of water table

The lowering of the water table provides the ideal structure for the construction of rainwater retention tanks in civil engineering works in general, avoiding the damages caused by flooding during rainy periods.

The services provided by aLBriggs and aQuamec are carried out with high efficiency equipment, such as filter tips and vacuum pumps.







## Valves and pumps

- **Transfer pumps:** Motor pumps are specially designed for the transfer of products such as sewage, sludge, oily water and tank residues under different situations, such as refineries, construction work, mining, dredging, water distribution, supply, replacement pumps for maintenance, and others.
- **Centrifugal and submersible pumps, and valves:** For pumping fluids with flow rates up to 6,000 m<sup>3</sup>/h and motor power up to 500 cv (368 KW). Valves for control and blocking fluids from 1" to 80". Line for water and sewage in vulcanized rubber.
- **Screw pumps:** They are ideal for implantation in sewage elevation stations, for the recirculation of activated sludge, for irrigation systems, for the control of flood water, for the recovery of wetlands and for various pumping applications in industrial waste treatment plants.
- **Pump rental:** In order to meet the sporadic needs of your company, we provide you with efficient, versatile and high technology equipment rental.





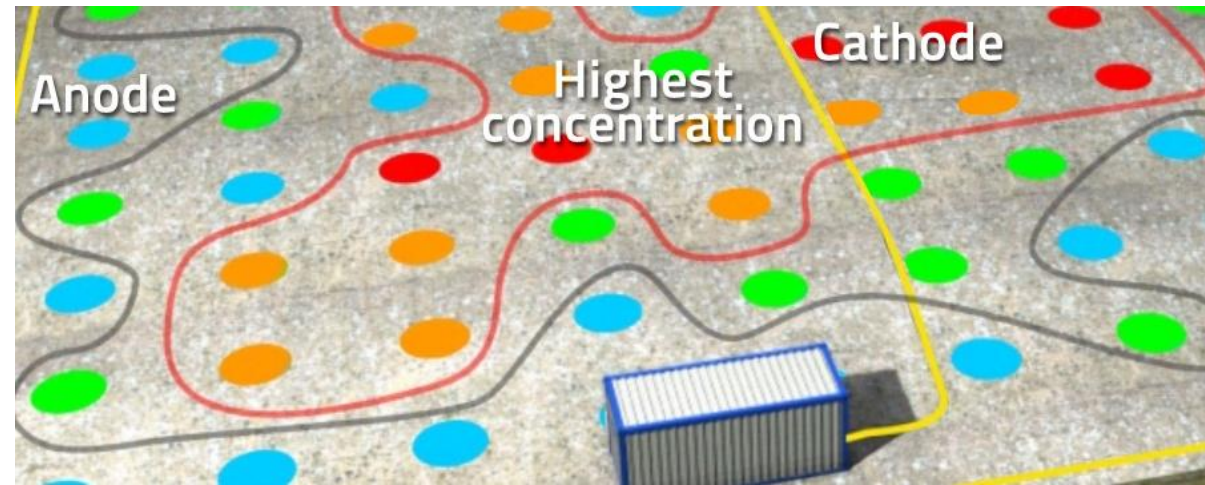


## Soil remediation

The EKO/GRID® System is an “in situ” remediation system for contaminated soil and ground water. This innovative technology eliminates the need for earth removal to another site for treatment, which promotes low logistics and waste disposal costs, making the operation faster, while still:

- Being effective against various types of pollutants, including oil
- Being suitable for all kinds of environments
- Being applicable to scenarios where there is iodine, surface and ground water, soil, sand and clay

EKO/GRID® is quick and simple to install and the system does not rely on chemical additives to operate.





## Industrial solutions

Technologies and equipment for industrial water, wastewater and soil treatment solutions:

- **Oil and Water Separator:** Used in the physical removal of non emulsified oil phase in the aqueous effluent with low solids content.
- **SOPEP Kit:** Environment emergency kit for use in small and medium size oil and oil derivative spills. It can be assembled according to the needs of each client, with sorbents, personal protective equipment and other items on request.
- **SpillDrum:** Polyethylene roto-molded container for the storage of damaged drums.
- **Equipment and systems for water and wastewater treatment:** Equipment for all water and wastewater treatment processes, supplied separately or as complete and integrated systems. Also supply of compact plants.
- **Soil remediation – EKO/GRID® System:** “In situ” remediation system for contaminated soil and ground water. This innovative technology eliminates the need for earth removal to another site for treatment







## Ballast water treatment

High flow rate system, for fresh or salt water applications and consists of a self-cleaning metal filter system suitable for pre-treatment and capable of removing solids and large size organisms, followed by a disinfection system consisting of peroxide metering devices and conventional UV lamps or LEDs, in order to inactivate biological organisms including zooplankton, algae, bacteria and other pathogens in ballast water.

It is more effective than conventional technologies, as it does not have common problems such as filter clogging and a lack of processing capacity while backwashing. The use of peroxide prevents the reactivation of microorganisms after treatment, complying with IMO standards (International Maritime Organization), and the resulting chemical compound is water and carbon dioxide, so no generation of disinfection byproducts.

- Available in autonomous, mobile or fixed units
- For operations on board vessels or on the deck of barges.



## Water desalination

The system for desalination of brackish water or seawater is composed of specific pre-treatment equipment and a reverse osmosis filtration system deployed on a container. Easy to transport and quick setup, the system provides microbiological safety, smart automation and remote control, making it possible to turn sea water into drinking water anywhere in the world.



## Protection of water intakes

The planning and the use of first-line materials and equipment operated by specialized personnel removes, in a differentiated way, the aquatic macrophytes avoiding their infestation and the silting of the water bodies.

This action brings benefit to activities such as:

- Navigation
- Recreation
- Fishing
- Operation of hydroelectric power plants





## Equipment rental

Effective, versatile and high-tech equipment is available for rental, including:

- Ocean Containment Booms, such as HDB and Airfence®
- Current Buster Containment System
- Offshore Oil Skimmers, flow rates up to 350 m<sup>3</sup>/hr, such as the LWS
- Side Collector Containment and Skimmer system
- Radar for Oil Detection at Sea







## Environmental technical studies

Besides being of the utmost importance for the organization of response preparedness, for structuring of emergency control bases, and for the process of obtaining/renewing facilities environmental licenses, environment technical studies assist in the design, implementation, management and QHSE audit procedures (Quality, Health, Safety and Environment) of operating bases.

- ECP (Emergency and Contingency Plans)
- ESM (Environment Sensitivity Maps)
- IRS (Initial Response Strategy)
- Environmental Monitoring
- Information Management and Emergency Administration Software
- Development of Emergency Scenarios



## Training programmes

### Water and Wastewater treatment:

- Operations and maintenance training and capacity building on aQuamec's technology and manufactured equipment
- Theory and practical for operating effluent and water treatment plants

### Oil and Hazardous Liquids Spill Response:

- Training courses, lectures and simulation exercises on pollution from oil and chemicals spills.
- IMO (International Maritime Organization), MCA (Maritime and Coastguard Agency) and ICS (Incident Command System) standard training courses





## Logistics corporate structure

The corporate logistics structure allows for more efficient and rapid response operations.

Our Logistics department carries out several studies in order to optimize the mobilization of resources.

- System that provides all necessary information for prompt mobilization of resources
- Emergency transfer capability of equipment from any base in the world
- Satellite and VHF Communications System
- Wide international experience
- Air transportation database, cargo flights by air carrier, continuously kept up to date



## Maintenance and technical assistance corporate structure

The corporate maintenance and technical assistance structure allows more effective operations.

- Group of highly trained/ qualified employees
- Preventive, corrective and planned maintenance tasks are carried out, either in the client's site or at aLBriggs' and aQuamec's workshops
- Strict maintenance plan recognized and certified by manufacturers represented in Brazil
- All products sold by aLBriggs and aQuamec are covered by warranty and thorough post sales service, including spare parts



## Technologies





## PLANTS

Jabaquara Office

Faria Lima Office

Mexico Office

Itu Manufacturing Plant

Over 70 units distributed in the Americas





# COMPLETE SOLUTIONS FOR WATER POLLUTION

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