HIGRA | Dewatering

URBAN DEWATERING

Robust and Sustainable Solution for Prevention and Emergency

AMPHIBIOUS PUMP HIGRA

Original pumping technology developed by HIGRA, designed to operate both underwater and in dry environments!

Its wet motor ensures lubrication and cooling through the water inside the motor, eliminating the need for oil and reducing environmental risks.

A robust and sustainable solution for urban drainage, whether for preventive measures or emergency situations like floods.

The use of CFD (Computational Fluid Dynamics) software in the development and optimization of HIGRA Pump Rotor designs allows the pumps to operate with low suction heights, increasing overall system efficiency – unlike traditional pumps.

THE PUMP ADVANTAGES

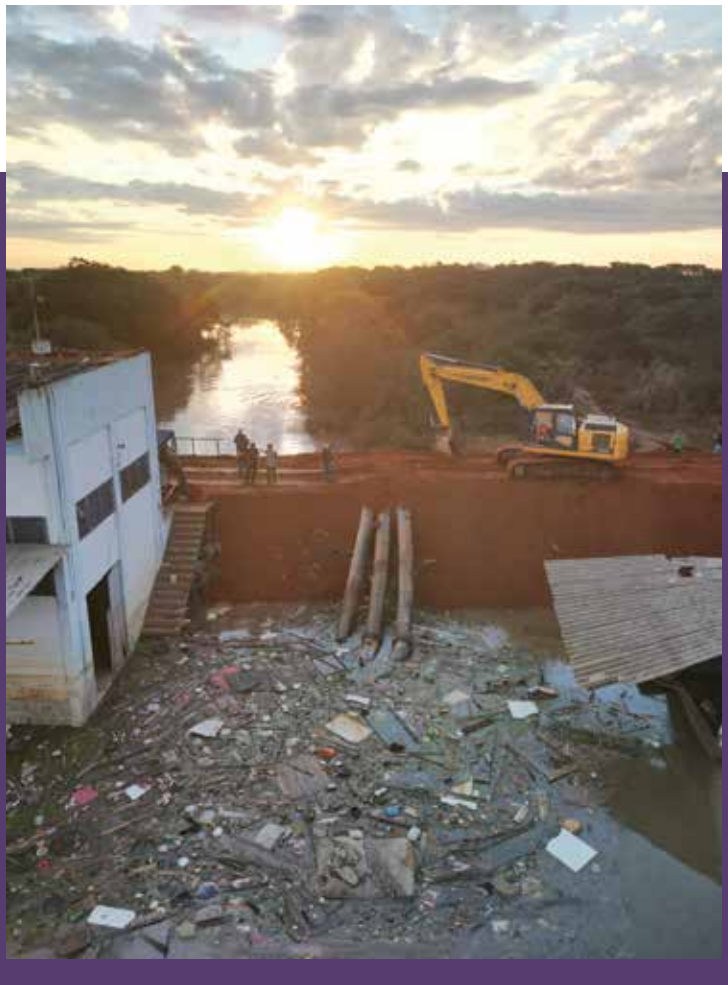
1. Easy and versatile installation
2. Water-lubricated motor
3. Low operational noise
4. Simplified maintenance
5. Vandalism resistance
6. Greater reliability and energy efficiency
7. Reduced civil construction needs – no specific infrastructure required for the pump
8. High efficiency in handling large volumes of water and debris (trash, mud, etc.) that usually clog traditional systems

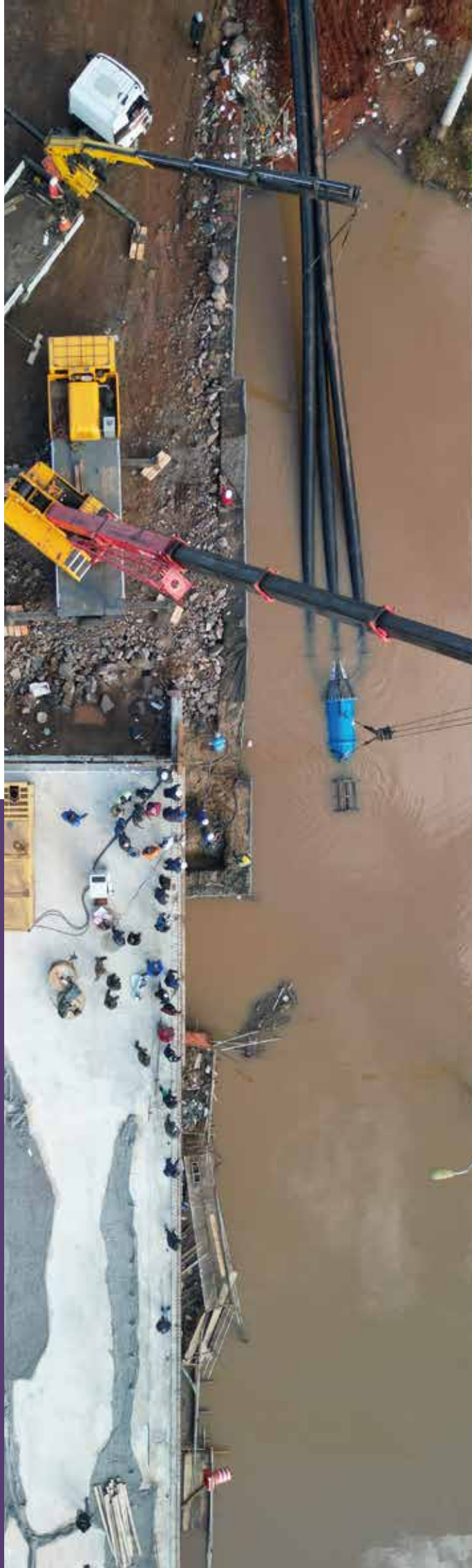
#AMPHIBIOUS PUMP

URBAN DEWATERING SYSTEM

Essential for the efficiency of urban drainage systems, HIGRA Amphibious Pumps ensure that cities remain safe and functional. During periods of heavy rainfall, they play a crucial role in draining water from streets, preventing flooding, infrastructure damage, and traffic disruptions.

Additionally, their ability to operate underwater, combined with versatility and easy installation, enables rapid deployment in various urban areas – both in and out of water – adapting to the specific drainage needs and varying conditions of each location.

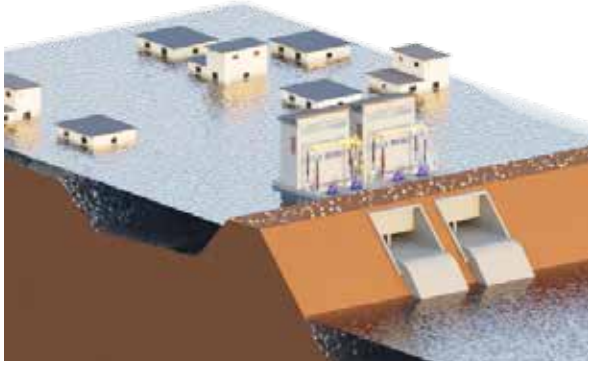




FLOOD PROTECTION SYSTEM

While urban drainage systems quickly remove rainwater, flood protection systems include dams, levees, and pumps to prevent rivers and seas from encroaching on inhabited areas, as well as to mitigate the effects of extreme weather events.

Thanks to their unique features, HIGRA Amphibious Pumps provide an high-performance and cost-effective solution for vulnerable cities, especially those below sea level.



EDAM – Modular Amphibious Drainage Station

A robust and efficient alternative to traditional, vulnerable pump stations, the Modular Amphibious Drainage Station or Estação de Drenagem Anfíbia Modular (EDAM) is designed to prevent and manage the challenges posed by floods and extreme weather events. These events have increasingly caused significant damage to urban infrastructure, leading to substantial economic and social losses.

Water level inside pump station during the floods.

Motors were moved to prevent damage, making the station inoperative.

EDAM replaces outdated stormwater pump stations, which often fail during critical moments due to their dry motors and electrical control panels that must be shut down when submerged.

With versatile amphibious pump sets operating both underwater and in dry environments, EDAM delivers reliability and flexibility for stormwater management. Designed for flood-prone areas, it ensures effective water level control, especially during peak flooding periods.

MOBILE DRAINAGE SYSTEM IN THE URBAN LANDSCAPE

The system developed by HIGRA consists of a HIGRA Submersible Pump, hose, transport trolley, and electrical panel powered by a generator. The solution is designed to address emergency scenarios or preventive urban drainage situations.

With this solution, we are enabling other communities to benefit from effective measures to prevent, control, and/or reduce damage in cases of flooding and heavy rain.

In 2023, most cities from Southern Brazilian area were impacted by an extratropical cyclone. Responding quickly to a request from the local government, we provided three HIGRA Submersible Pumps in record time, each capable of draining 450 liters of water per second.

In just 36 hours, we delivered the Mobile Drainage System as an efficient solution to mitigate the damage from the flooding that affected the region.

With easy installation, this system ensured fast and effective drainage by transferring accumulated water from the stream to the levee, preventing further flooding.

HIGRA technologies offer swift and reliable support in drainage situations, from floods to droughts, playing a vital role in disaster prevention across multiple cities in Brazil.

HIGRA

See more about HIGRA respond on emergency situations.

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