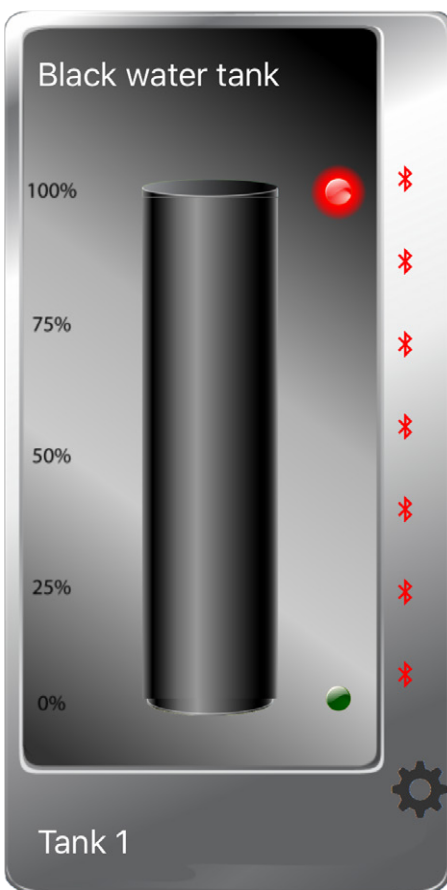


# Gobius® Pro

## Tank Monitoring

### A Breakthrough in Tank Monitoring

The idea of Gobius Sensor Technology was born at a party 12 years ago when Anders Meiton, an entrepreneur and sailor, tapped his dinner partner's glass before preparing to make a speech. The distinct sound made by the two glasses – one full and one almost empty – occupied Meiton's thoughts for the better part of the evening.



The next day, a light bulb went off in Meiton's head:

*"If vibrations in liquid create different sounds, is it possible to measure the liquid levels in tanks by using just sounds and vibrations?"*

Meiton's mind raced to the matter of waste tanks due to his vast experience of travelling the seas.

*"As a sailor, I know that many boats have problems with toilets. They either do not work, or the waste tank is full,"* he says.

Since the 1960s, leisure boats have had toilets on board with waste tanks, but without a reliable method to gauge liquid levels. The only available technology involved measuring liquid from inside the tank. This required boat owners

to drill holes and mount sensors inside the tank, which often resulted in leakage of aggressive liquids and gases.

A little over a decade ago, Meiton made strategic investments, and Gobius was born. Since then, Gobius has sold close over 100,000 sensors. The success is a validation of Gobius's first-of-a-kind measuring technology that uniquely measures liquid waste from outside the tank.

#### Turning the Tank Monitoring Process Inside Out

The patented technology is based on vibrations in the tank wall to measure the liquid level in the tank. A Gobius sensor exerts

force on to a tank or container wall, causing it to vibrate for a second. The heart of the sensor is a so-called exciter, which can be compared to a loudspeaker without a membrane that creates vibrations when fed with electrical impulses. The vibrations are transmitted to the tank wall, which starts oscillating. An accelerator registers how the vibrations change when the tank is full. Once the accelerometer measures the vibrations and transmits the signal

to the digital signal processor, the processor's algorithms calculate a vibration value each time Gobius performs a measurement.

Taking the technology a step further has resulted in Gobius Pro, the latest product from Gobius. Compatible with iOS and Android phones, the Gobius Pro is controlled through an app that allows the users to setup and visualise the level. In addition, the new sensor has two digital outputs. This way,

the sensor can integrate with the control systems. Most of all, Gobius technology solves the longstanding problem of overfilled waste tanks, in a smart and simple way.

## The Journey that Led to Gobius

Soon after the party where Meiton conceived the possibility of measuring waste tanks from the outside, the entrepreneur had to convince technologists and boat owners of his novel idea.

*"For over 50 years, boat companies have designed water level indicators to measure water tanks from the inside. Suddenly, this Swedish guy comes along and says, 'we can do it from the outside'. Naturally, the market did not welcome me," recounts Meiton, who admittedly assumed a humble attitude throughout the journey when Gobius faced difficult times.*

Despite the differences in the materials and dimensions of the tanks, Gobius used the same sensor to measure all types of water, fuel, and waste tanks. As the years progressed, Meiton took a careful approach to examine the various types of tanks, their materials, their dimensions, and the reaction of certain types of tanks with assorted liquids/chemicals.

*"We had the vision to become the de-facto solution provider for waste tank monitoring," he adds.*

## Trusted by the Biggest Boat Manufacturers

Meiton has successfully fulfilled his vision. Today, Gobius's tank gauges function on all types of materials – metal, plastic, stainless steel, or



aluminium – and can measure all kind of fluids.

You can find Gobius tank gauges across most European yacht brands. Gobius is now installing in production of new leisure boats, like Bavaria Yachts, Beneteau Yachts, Elan Yachts, Hanse Group Yachts and most of the Scandinavian Boats, Arcona Yachts, Arcona Yachts, Axopar Yachts, Hallberg-Rassy Yachts, Najad Yachts, and X-Yachts.

## Making an Impact in Rail Transport

Gobius's presence is not restricted to the marine industry. The company recently won the trust of Alstom in England, and Sweden is now an active user of Gobius products. As revealed by Meiton, Alstom's trains were previously using old technologies with outdated indicators that stopped working within a few years of installation. For years, the crew aboard Alstom's trains "had no clue" if their holding tanks were filled to capacity or not, leading to guesswork and excessive maintenance work. All that changed when Alstom adopted Gobius technology.

In the near future, Meiton expects more engagement in the rail transport sector.

*"Each train has an average of 7 to 10 toilets, and each toilet has its own waste holding tank. Now, with the Gobius app on a smart phone, they can check (from the outside train) that the tanks are empty before the train leaves the depot. As well as during the train journey know reliably that the tank is not full. Since most trains still utilise legacy technologies, this is an industry we can definitely impact,"* stresses Meiton.



The interesting aspect of Gobius is its unwillingness to predict the future. While using a fishing analogy, Meiton mentions that *"the entire planet is our market"* and Gobius does not go fishing while anticipating specific results. Little wonder why Meiton named the company Gobius, the Latin name for the Black Goby fish. A small fish often rests at the bottom of the sea, lurking for prey, akin to Gobius *"waiting for the tank to be filled"*.

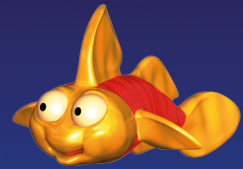
Gobius is ready to take the next step in its evolution. Having grown at an impressive annual rate of 50

percent, it will continue to keep tabs on the latest sensor technology, processors and regularly update its product suite.

This year Gobius is focused on integration capabilities. While its products are already easy to connect to control systems, relays, lamps, and buzzers, Gobius wants its sensors to connect with other systems.

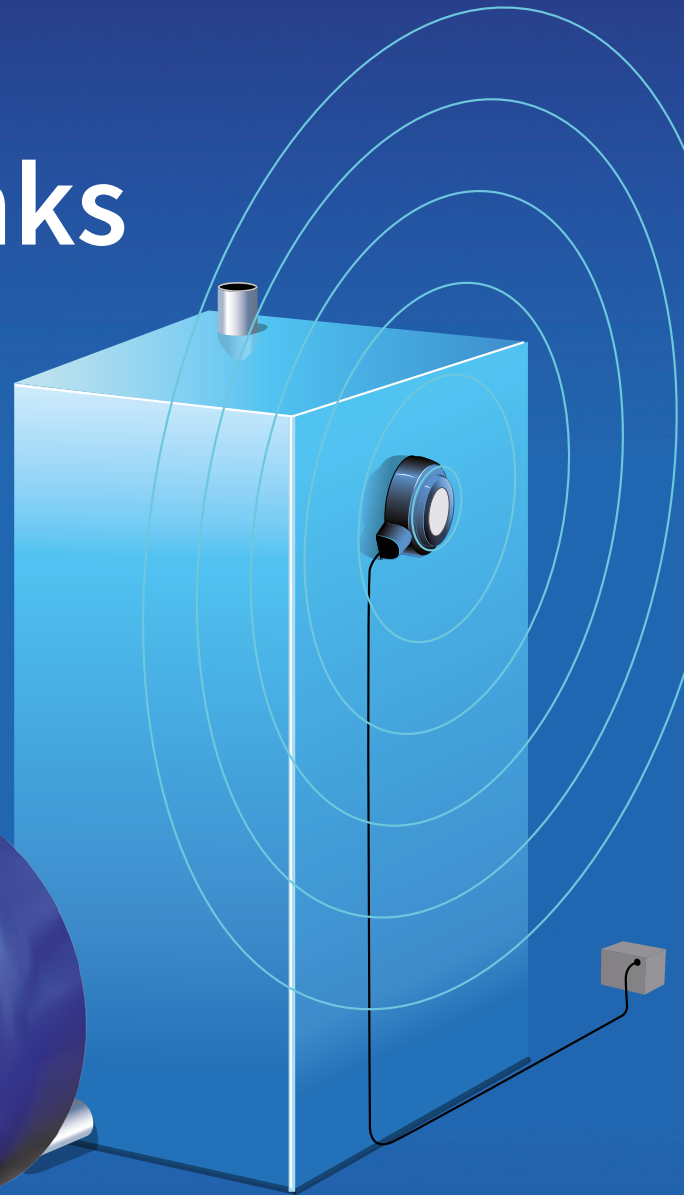
*"Our sensors must talk to technologies besides Bluetooth. That is why we are this year focused on IoT and technology integrations,"* reveals Meiton.





# Get Control of Train Waste Tanks

- Measures From the Outside
- Quick and Easy Installation
- Simple to Integrate with Control Systems
- Proven Measurement Technique
- Reliable
- With Bluetooth Interface



– Nothing on the Inside  
of the Tank!