

OBSCAPE
WAVE GAUGE

A SWELL WAY TO MEASURE WAVES

Non-contact radars offer the highest resolution of sea wave measurements in real-time. Obscape's radar Wave Gauge offers a low-cost and user-friendly way to obtain accurate nearshore wave observations.

The Wave Gauge is conveniently mounted above the water surface. Its millimetre-accurate radar sensor ensures good-quality wave data. Wave observations in a harbour basin, at an offshore platform or at a shore-based pier or jetty have never been so easy. Whether you are interested in improving navigational safety or wish to investigate the impact of waves on coastal morphology, the Obscape Wave Gauge suits your needs.



KEY FEATURES

- Accurate wave data
- Radar technology
- No underwater components
- Real-time data
- Mains powered
- Real-time data up to 4G (upgradable to Satellite)
- Multiple mounting options
- Versatile data portal included

CONVENIENT WAVE MONITORING

Wave monitoring plays an important role in various fields of science and industry. The Wave Gauge is suitable for application whenever a fixed structure is available to mount the device to. This can either be a platform, pier, jetty, pole, bridge deck, etc. The instrument measures the distance to the water surface using an industry-standard, millimetre-accurate radar sensor. Compared to alternative wave gauges that rely on measuring water pressure, Obscape's Wave Gauge has the benefit of easy installation (because there are no submerged parts, which avoids costly and labour-intensive underwater operations) and direct observation of the water surface elevation rather than through a proxy (i.e. water pressure). The 40 metre range of the Wave Gauge will cover even the most extreme water level variations.

MAINS POWER, WIRELESS TELEMTRY

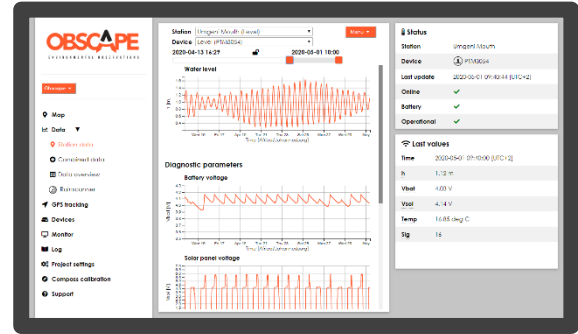
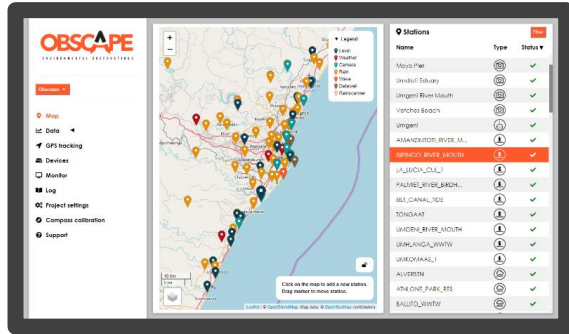
The Wave Gauge is powered by 6V mains power, while data transmission to the Obscape Data Portal is completely wireless because of the built-in 4G cellular modem. Therefore, the Wave Gauge is easy to install at any desired location within cellular coverage where mains power can be made available.

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VERSATILE DATA PORTAL

The value of real-time observations strongly depends on the ability to view and analyse them in real-time. Therefore, the Wave Gauge comes with a license for the Obscape Data Portal. The data collected by your Wave Gauge, as well as the data from any other Obscape device you own, are collected into the Data Portal. The Data Portal offers various options for viewing, managing and downloading your water level data, including the generation of PDF reports. It is your ultimate tool to unify the office and the field.



TECHNICAL SPECIFICATIONS

DATA SPECIFICATIONS	
PARAMETERS	Hm0, Hmax, Tp, Tm01, Tm02, Tm-10, Tavg, Tmax, water level, battery voltage, GSM signal strength, internal temperature, internal humidity, sensor inclination
VERTICAL REFERENCE	Specified by the user in the Data Portal
MAXIMUM RANGE	40 m
SENSOR ACCURACY	2 mm
SAMPLING INTERVAL	30 minutes
BURST LENGTH	24 minutes (7168 samples at 5 Hz)
STORAGE	On-board micro SD card

WEB-PORTAL SPECIFICATIONS	
REAL-TIME GRAPHS	Hm0, Hmax, Tp, Tm01, Tm02, Tm-10, Tavg, Tmax, water level, battery voltage, GSM signal strength, internal temperature, internal humidity, sensor inclination
DOWNLOADS	Raw data (CSV format), Graphs (PNG), Reports (PDF)
FORWARDERS	JSON API or HTTP post
STATUS NOTIFICATION EMAILS	Online/offline, battery level, parameter threshold exceedance

PHYSICAL CHARACTERISTICS	
HOUSING WIDTH	87 mm
HOUSING DEPTH	87 mm
HOUSING HEIGHT	280 mm
HOUSING WEIGHT	2 kg
RADAR SENSOR	InnoSenT iSYS-6030

ELECTRICAL CHARACTERISTICS	
POWER SUPPLY	External mains 6V power supply required
INTERNAL BATTERY	1 single 18650 lithium battery
NOMINAL VOLTAGE	3.7 V

TELEMETRY SPECIFICATIONS	
COMMUNICATION MODE	GSM (4G with 2G fallback- region determine prior to order), upgradable Satellite (Iridium).
REAL-TIME DATA INTERVAL	30 minutes – 24 hours (user selectable)
REAL-TIME DATA	Hm0, Hmax, Tp, Tm01, Tm02, Tm-10, Tavg, Tmax, water level, battery voltage, GSM signal strength, internal temperature, internal humidity, sensor inclination
GSM DATA LOAD	Approx. 8 kB per message

PRICING	
WAVE GAUGE	€3,200 including web-portal license and back-side mounting bracket
CELLULAR COMMUNICATION	Micro SIM card and sufficient data credit to be arranged by user, or Global SIM card to be purchased through Obscape. Wave Gauge can also be run in offline mode (data saved to SD card).

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