

## WaterStation

Smart, Compact & Reliable Water Monitoring

### Description

WaterStation is a fully autonomous monitoring station designed for continuous water quality measurement in rivers, lakes, and other inland water bodies. Equipped with advanced sensors and remote data transmission, it enables real-time monitoring of key physicochemical parameters of water and air, ensuring reliability and precision year-round.



#### Meteorological measurements (basic)

°C↑

##### Air Temperature

Measurement range: -10°C to +80°C  
Dokładność pomiaru : ±0.5°C

RH

##### Air Humidity

Measurement range: 10%RH to 80%RH  
Accuracy: ±3% RH

hPa

##### Air Pressure

Measurement range: 300 - 1100 hPa  
Accuracy: ±1 hPa

#### Physicochemical measurements (basic)

°C

##### Temperature

Measurement range: 0 - 40°C  
Measurement accuracy: ±0.1°C

pH

##### pH

Measurement range: 0 - 14 pH  
Measurement accuracy: ± 0.02 pH

EC

##### Conductivity

Measurement range: 0.1 - 500 mS/cm, 0-500 ppt (PSU)  
Measurement accuracy: ±1.5%

O<sub>2</sub>

##### Dissolved Oxygen

Measurement range: 0 - 25 mg/L oraz 0 - 250%  
Measurement accuracy: ±2%

ORP

##### ORP Redox

Measurement range: -1000 - 1000 mV  
Measurement accuracy: ±15 mV

↓m

##### Depth

Measurement range: 0 - 50 m  
Measurement accuracy: ±10 cm

+

##### And more

Upgrade to include more sensors possible

#### Integration with WaterSense systems

##### WaterCloud

Full integration with WaterCloud – a central operations hub that enables automated analysis, real-time monitoring and remote system management, as well as WaterStation control, alert configuration and data-driven decision-making.

##### WaterForecast

Full integration with WaterForecast – the world's first predictive AI model for water quality monitoring. WaterForecast analyzes environmental data in real time, predicting changes before they happen, enabling better decisions, disaster prevention and assessment of remediation proactive actions, supporting sustainable water management.

##### WaterMap

Full integration with WaterMap – an open platform for real-time water quality monitoring desired to be used by everyone. WaterStation operators can share their data with one click on WaterCloud, highlighting their commitment to environmental protection, and add logos and information to support clean water initiatives.

## WaterStation

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### Technical Specification

#### ⚡ Energy

**Autonomy** ∞  
(the station operates fully autonomously)

#### 📶 Telemetry

**Communication** 4G LTE + GPS

**Measurement frequency** 5 min - 72h (to be set)

#### 💡 Lighting (optional)

**Color** White / Green / Red

**Light mode** Steady light / Flashing

**Visibility** 3km + (1.85 mi +)

#### 🔒 Security & Guardancy

**Movement Sensor** IMU (9DoF)

**Sound Alarm (Siren)** 120 dB

**Systems monitoring** Temperature, Humidity, Flooding

#### 📏 Dimensions

|                             |                                                       |
|-----------------------------|-------------------------------------------------------|
| Overall outside diameter    | ø 42 cm (16.50")                                      |
| Upper housing diameter      | ø 26 cm (10.25")                                      |
| Bottom housing diameter     | ø 22 cm (8.65")                                       |
| Lower housing diameter      | ø 15 cm (5.90")                                       |
| Total height                | 80 cm (31.50")                                        |
| Weight                      | 5 kg (11 lbs)                                         |
| Buoyancy (net)              | 12.5 kg (27.55 lbs)                                   |
| Outer hull material         | Polyethylene (PE) with polyurethane foam (PU) filling |
| Inner hull material         | Acrylonitrile styrene acrylic (ASA)                   |
| Anchorage attachment points | 4x Stainless steel eyelet                             |

### WaterStation Head



→ Cage for Sensors

→ Anti-biofouling  
Proprietary System

### WaterStation Precision



→ Measurement  
Module

→ Anti-biofouling  
Pumping System

→ Cage for Optical  
Sensors

→ Water Sampling  
from up to 10 m

→ Particulate Filter

## WaterSensors

List of extended available physicochemical parameters that can be measured by WaterStation.

### Basic Physicochemical measurements of water

|     |                                                                                        |                |                                                                                                                |
|-----|----------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------|
| °C  | <b>Temperature</b><br>Measurement range: 0 - 40°C<br>Measurement accuracy: ±0.1°C      | EC             | <b>Conductivity</b><br>Measurement range: 0.1 - 500 mS/cm, 0-500 ppt (PSU)<br>Measurement accuracy: ±1.5%      |
| pH  | <b>pH</b><br>Measurement range: 0 - 14 pH<br>Measurement accuracy: ± 0.02 pH           | O <sub>2</sub> | <b>Dissolved Oxygen (Optical)</b><br>Measurement range: 0 - 25 mg/L oraz 0 - 250%<br>Measurement accuracy: ±2% |
| ORP | <b>ORP Redox</b><br>Measurement range: -1000 - 1000 mV<br>Measurement accuracy: ±15 mV | ↓m             | <b>Depth</b><br>Measurement range: 0 - 50 m<br>Measurement accuracy: ±10 cm                                    |

### Extended Physicochemical measurements of water

|                               |                                                                                                                          |                              |                                                                                                          |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------|
| EC                            | <b>Conductivity (for clean waters)</b><br>Measurement range: 10 - 2 000 µS/cm and 0-2 PSU<br>Measurement accuracy: ±1%   | NO <sub>3</sub>              | <b>Nitrate Nitrogen (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5% |
| Cl                            | <b>Chlorine</b><br>Measurement range: 0 - 20 mg/L<br>Measurement accuracy: ±5%                                           | NH <sub>4</sub> <sup>+</sup> | <b>Ammonium Ions (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%    |
| NTU                           | <b>Turbidity (Optical)</b><br>Measurement range: 0 - 100 NTU or 0 - 400 NTU<br>Measurement accuracy: ±5%                 | NO <sub>2</sub> <sup>-</sup> | <b>Nitrite Ions (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%     |
| COD                           | <b>Chemical Oxygen Demand (Optical)</b><br>Measurement range: 0 - 500 mg/L<br>Measurement accuracy: ±5%                  | F <sup>-</sup>               | <b>Fluorine (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Dokładność pomiaru : ±5%          |
| BOD                           | <b>Biological Oxygen Demand (Optical)</b><br>Measurement range: 0 - 300 mg/L<br>Measurement accuracy: ±5%                | Cl <sup>-</sup>              | <b>Chlorides (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%        |
| TOC                           | <b>Total Organic Carbon (Optical)</b><br>Measurement range: 0 - 200 mg/L<br>Measurement accuracy: ±5%                    | Cu <sup>2+</sup>             | <b>Copper (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%           |
| A <sub>(254)</sub>            | <b>Absorbance UV254 (Optical)</b><br>Measurement range: 0,1 - 1 A (optical path=10mm)<br>Measurement accuracy: ±5%       | Ca <sup>2+</sup>             | <b>Calcium (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%          |
| SCN <sup>-</sup>              | <b>Petroleum Substances (Optical)</b><br>Measurement range: 0 - 50 mg/L or 0-5 mg/L<br>Measurement accuracy: ±5%         | Na <sup>+</sup>              | <b>Sodium Ions (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%      |
| Chl                           | <b>Chlorophyll-a (Optical)</b><br>Measurement range: 0 - 500 µg/L oraz 0-100 RFU<br>Measurement accuracy: ±5%            | K <sup>+</sup>               | <b>Potassium (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%        |
| BGA                           | <b>Blue green algae Cyanobacteria (Optical)</b><br>Measurement range: 0 - 2000,000 cells/mL<br>Measurement accuracy: ±5% | Pb <sup>2+</sup>             | <b>Lead (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%             |
| PO <sub>4</sub> <sup>3-</sup> | <b>Orthophosphates (ISE)</b><br>Measurement range: 0,1 - 20mg/L<br>Measurement accuracy: ±5%                             | I <sup>-</sup>               | <b>Iodide (ISE)</b><br>Measurement range: 0-10 mg/L or 0-1000mg/L<br>Measurement accuracy: ±5%           |