Innovative Solutions for Challenging Problems

Xylem, is committed to providing our customers with solutions to their most challenging problems through the use of our expertise and innovative technology.

As part of that commitment, Xylem continues to develop and launch new innovative product lines, building upon our proven sensor and analytics technology. We take pride in improving and setting new standards in the markets that we serve.

If you want to know more about Xylem, please visit www.xylem-analytics.asia

Content

Company Introduction ......................................................... 3
Category ................................................................. 4 - 5
Featured Products .......................................................... 6 - 7
  Dissolved Oxygen ....................................................... 8 - 9
  Biochemical Oxygen Demand ...................................... 10 - 11
  pH / ORP / Ion Concentration ....................................... 12 - 15
  Multi-Parameter and Conductivity ................................. 16 - 17
  Turbidity / Color / Suspended Solid ............................. 18 - 19
  Chemical Oxygen Demand ........................................... 20 - 21
  Photometry ............................................................... 22 - 23
  Piston Burette . Titration .............................................. 24 - 29
  Online Controllers & Sensors .................................... 30 - 43
  Flow, Level & Samplers ................................................ 44 - 47
  Total Organic Carbon .................................................. 48 - 49
Xylem Brands ............................................................... 50 - 51
Welcome to Xylem Inc.

Company Overview

Xylem is a leading water technology company committed to “solving water” by creating innovative and smart technology solutions to meet the world’s water, wastewater and energy needs.

In a world of ever-growing challenges, Xylem delivers innovative water technology solutions throughout the cycle of water.

Our technological strength across the life cycle of water is second-to-none. From collection and distribution to reuse and return to nature, our highly efficient water technologies, industrial pumps and application solutions not only use less energy and reduce life-cycle costs, but also promote sustainability.

Contact Information

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</tbody>
</table>
MultiLine® & inoLab® - Wireless Multi Channel Meters  Pg 8

- Bench top and handheld
- Wireless sensors
- pH, ORP, dissolved oxygen, turbidity parameters available
- Galvanic isolation - No interference of measuring signals
- Calibration records and additional information are stored in the sensors
- Smart sensor evaluation

Spectrophotometer UV-VIS Reagent Free COD Nitrate Nitrite  Pg 22

- Easy to use: place cuvette, read measurement value
- More than 250 test programs for water and general lab analytics
- Cell and reagent test kits with barcode for automatic program selection
- Automatic cuvette and measurement range detection for rectangular cuvettes
- Top reliability due to menu guided comprehensive AQA
- Measurement “Light” on the road with car battery use
- USB and Ethernet-connections for easy update, print to PDF or printer, storage and data export

Titroline 7800 - Multi-Functional Auto-Titrator  Pg 27

- High accuracy with temperature compensated pH electrodes
- Titration & Karl-Fisher switchable
- Conductivity sensor connectable
- Two parameters display

Portable Automated Sampler  Pg 46

- Robust PE, double-walled, insulated housing for temperature control
- Easy tube replacement for minimal downtime
- Highly accurate sample volume using two captive sensors in the peristaltic pump for volume control
- User-friendly, simple programming and calibration from sampler or PC
- Long battery life - up to 550 samples per battery charge
- Data recovery via USB and does not require direct transfer to a laptop
- Non-volatile data memory for up to 5 years, so you never have to worry about losing your data if power is lost
- “Mini” PM option has smaller footprint
IQ Sensor Net, Controllers and Sensors  Pg 32

- 3-year warranty
- Ultrasonic cleaning
- Lightning protection
- Modular expansion from 1 to 20 sensors; ability to extend network with up to 3 additional modules
- One 120V power supply
- Up to 48 output channels (mA/relays) are possible
- One cable for power AND communications
- Factory calibrated optical DO cap
- USB interface (can also be used as a security feature)
- System redundancy for backup control

Digital Optical UV Spectral Sensors  Pg 41

- The chemical-free spectral measurement allows a precise determination of the COD and nitrate level.
- Whether influent, biological tank or effluent, the self-cleaning sensors CarboVis provides:
  - High measurement reliability
  - Low operating costs
  - Simple handling
  - Maximum durability

Online Single and Multi-Parameter Systems  Pg 43

The TresCon® analyzer system is the perfect solution for highly precise online measurement of NH4, NO3, NO2, SAC, PO4, and Ptot. With the TresCon multi-parameter analyzer, up to 3 measuring parameters can be detected. Thanks to the modular setup of the system, you will have maximum flexibility when combining the parameters. Also, a later expansion by more measuring modules is therefore no problem. The economical solution for single parameter measuring points is the TresCon® UNO. With this analyzer, you can measure all parameters, except for total phosphorus, at a low cost.

Aurora Online TOC  Pg 49

- Accurate, real-time monitoring and analysis of natural organic matter (NOM) in influent and effluent streams
- Water-tight, Dust-tight Housing for indoor or outdoor installation
- Reagent-less Electrochemical Oxidation
- Non-dispersive infrared (NDIR) detection
- Easy to maintain – no need for costly service contracts
- Intuitive, easy-to-use software
- Large, color touchscreen display

Online TOC 9210p
Dissolved Oxygen  

Every species on our planet depends on water and oxygen. For aquatic species, adequate dissolved oxygen is of prime importance to their continued survival. Since dissolved oxygen levels are directly related to good water quality, the two are highly interdependent. Many factors can affect DO levels, and an understanding of these levels in order to make informed decisions concerning wastewater treatment operations, hypoxic zones, aquaculture facilities or large-scale ecosystems is essential.

Benchtop Meter Dissolved Oxygen Measurement inoLab® Oxi 7310

The inoLab® Oxi 7310 is the perfect benchtop meter with secure and convenient menu-controlled operation via a graphic display for the measurement of dissolved oxygen with the proven, galvanic oxygen sensors, the universal CellOx® 325, the self-stirring StirrOx® G for BOD measurements and DurOx® 325 for training purposes. With automatic documentation according to GLP/AQA, it supports the traceability - not only in the environmental lab. For this, the serial number of the sensor can be saved. On request also available with an optional built-in printer.

Wireless Optical IDS Dissolved Oxygen Sensors  
FDO® 925-P

The FDO® 925 is especially suited for lab and process thanks to its compact size. The flow-free, easy to clean beveled membrane allows it to be used in containers with low sample volumes. Also, low oxygen concentrations below 1 mg/L can be shown exactly.

WTW’s proven FDO® 925 is now available as sustainable plug head version. The universal plug head fits the sensor with wireless functionality – disturbing cables are no longer required. Furthermore it can be connected to AS/IDS-x cables with lengths of up to 100 m. With this new technology WTW significantly expands the range of applications and the measuring comfort of its optical dissolved oxygen sensors.
Multi-parameter Portable Meter MultiLine® Multi 3510 IDS

The Multi 3510 IDS compact portable multi-parameter instrument for applications with digital IDS pH/ORP Electrodes, dissolved oxygen sensors, conductivity cells or turbidity sensors. Calibration records and additional information are stored in the sensor. Well laid-out menus make the operation safe and easy. With a wide range of electrodes almost every application including depth measurement down to 100 m will be covered in the field and in the laboratory. The delivery also contains the MultiLab® Importer software for data acquisition via Excel®.

Oxygen Portable Meter ProfiLine Oxi 3000 Series

Dissolved oxygen measurement - really simple: The Oxi 3000 series are an easy to use, robust and waterproof portable meter for the measurement of dissolved oxygen, i.e. in surface waters, in wastewater treatment plants and in fish farming applications. It is suitable for galvanic oxygen sensors of the CellOx® and DurOx® series; the adjustable salinity compensates for the salt content when measuring sea water and allows correct measured values. The results can be displayed either as saturation or concentration.

DO Electrodes

The meter combines the features for mobile application in the field with the precision and comfort of a laboratory meter with plain text structure menu, integrated data logging system and a rugged watertight IP 65 housing. The meter is the ideal choice for determination of the oxygen content in surface water, sewage and for application in wastewater treatment. The meter in connection with the sensor indicating the mass concentration of dissolved oxygen in aqueous solutions in mg/l and the oxygen saturation index (%-saturation). With automatic temperature compensation.
WTW’s benchtop meters can safely determine and reliably document biochemical oxygen demand (BOD). For this, a series of dilutions is prepared depending on the BOD, where the start and end values as well as the value of the dilution water are determined with WTW meters and sensors. The inoLab® Multi IDS series are digital multi-parameter benchtop meters for IDS sensors. Our digital IDS meters are now ready for radio measurement. Benefit from wireless communication between lab meter and sensor!

The IDS concept from WTW: Intelligent, Digital Sensors for standard parameters pH, conductivity, dissolved oxygen and turbidity. The IDS system is based on two components: digital sensors and corresponding field and benchtop meters. The outstanding innovation: The measurements are processed in the sensor, not in the meter. And in addition: As of now all IDS benchtop meters support wireless measurement.

Sensors for the Determination of BOD

BOD determination with galvanized or optical oxygen sensors according to DIN EN 1899-1 and DIN EN 1899-2 - with portable and benchtop devices.

WTW’s benchtop meters can safely determine and reliably document the biochemical oxygen demand (BOD). For this, a series of dilutions is prepared depending on the BOD, where the start and end values as well as the value of the dilution water are determined with WTW meters and sensors. The conventional benchtop meters type inoLab® Oxi 7310 you can measure with the self-stirring StirrOx® G or with the CellOx® 325 and the stirring attachment RZ 300. The optical oxygen sensor FDO® 925 can be used for all digital meters; it will also require the stirring attachment RZ300, just like the CellOx® 325.
WTW OxiTop® systems are easy-to-use meters for BOD self-monitoring. OxiTop®-C measuring systems can execute anaerobic and aerobic examinations across the entire spectrum of biodegradability and evaluate them on the computer.

Complete packages of 6 or 12 samples are available and ready for immediate use. Flexible, customisable and scalable, based on pressure measurement (no mercury). Simplifies handling, no need for dilution series or multiple bottles. Data security with built-in memory – classic 5 measurements/days or up to 360 points and 99 days graphical results with Control systems. Suitable for routine BOD5 and other special applications – compliant to multiple international methodologies and standards. Incubators, accessories and consumables also available.

**OxiTop Control 12-inch (Measuring system: Sensor head, sample container, stirrer, controller)**

**OxiTop IS12 type (Measuring system: Sensor head, sample container, stirrer)**

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**Biochemical Oxygen Demand Test**

When properly used, the BOD test provides a reliable characterization of wastewater. It can be expected to be a standard for regulatory agencies for many years even though its use as a control tool is limited by the 3 or 5 day wait required for the test (and sometimes 20 days!). Various methods (based on short-term monitoring and extrapolation) of quickly estimating the probable results of the BOD test on a sample have been devised and the interested reader is advised to consult appropriate literature but a ‘true’ BOD test requires time and incubation.
pH  
pH Measurements

pH determines the acid and base characteristics of water. A pH of 7.0 is neutral; values below 7 are acidic and values above 7 are alkaline. Excessively high or low pH levels are often associated with nutrient deficiencies, metal toxicities, or other problems for aquatic life. High pH makes ammonia more toxic. During algal blooms, photosynthesis increases the water pH, especially in stagnant or slow-moving water.

pH is measured by a sensing electrode for Hydrogen and a reference electrode along with a meter to measure the electrode potential. The YSI pH sensor is a glass bulb filled with a solution of stable pH (usually 7), so the inside of the glass surface experiences constant binding of H+ ions. The outside of the bulb is exposed to a water sample where H+ varies. The resulting differential of H+ creates a potential which is read by the meter versus the stable potential of the reference electrode.

Lab pH Meter  inoLab pH 7000 series

Simple, easy-to-use lab pH meter for the routine measurement with reproducible measuring results and increased measuring accuracy. The inoLab® pH 7000 series is highly suitable for routine measurements in the lab, where automatic documentation is not a priority. Less keys make operation simple and safe with a smooth, easy to clean surface.

Lab pH/ORP/Ion Meter  inoLab pH/ION 7320

Precise pH/ISE benchtop meter with enhanced ISE methods for concentration measurement with ion selective electrodes.

Portable pH/ORP Meter  pH/ION 331

pH/ISE pocket meter for pH, mV and concentration measurements.
Handheld pH/ORP Meter  
**ProfiLine pH 3000 Series**

Easy and robust portable pH/mV meter for routine measurement - secure and reliable pH measurement due to repeatable results. The ProfiLine pH 3000 Series is the right choice for all who are looking for a simple meter for portable pH measurements. A clear keypad with only 6 keys and the automatic AutoRead function for repeatable measured values make pH measurement safe and prevent errors. The anti-skidding keypad can be operated with gloves as well. The large display is clear and easy to read.

### Measurement

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>pH</th>
<th>mV</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>±2.00~19.999</td>
<td>±1,200~1,200</td>
<td>±5.0~105.0</td>
</tr>
<tr>
<td></td>
<td>±2,500~2,500</td>
<td>±1,200,000</td>
<td>±1.0°C</td>
</tr>
</tbody>
</table>

### Accuracy

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>pH</th>
<th>mV</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>±0.1 pH</td>
<td>±0.3 mV</td>
<td>±0.1°C</td>
</tr>
<tr>
<td></td>
<td>±0.9 pH</td>
<td>±200 mV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>±9.99 pH</td>
<td>±2,500 mV</td>
<td></td>
</tr>
</tbody>
</table>

### Memory

<table>
<thead>
<tr>
<th>Memory</th>
<th>pH3110</th>
<th>pH3310</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A</td>
<td>200 points (Manual) / 5,000 points (Auto)</td>
</tr>
</tbody>
</table>

### Interface

USB Connection (pH3310 only)

---

Handheld Ion Meter  
**3310 pH/ISE**

The pH/ION 3310 effortlessly delivers precise measuring results. The 1 to 5-point calibration for pH and the 2 to 7-point ISE calibration (also non-linear) as well as a GLP-supporting documentation meets all the requirements of modern metrology. The USB interface is used for data transfer, but can also be used as a power supply in the lab.

### Measurement

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>pH</th>
<th>ISE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0~1,999 mg/L</td>
<td></td>
</tr>
</tbody>
</table>

### Power supply

4x AA batteries

### Weight & dimensions

80(W) × 55(D) × 180(H) mm, Approx 400g

Electrodes: 145(L) × 11(Ø) mm

---

Portable pH Meter  
**pHotoFlex® pH**

pHotoFlex® pH: portable LED photometer combined with full value pH measurement for environmental monitoring, fish hatcheries, extensive routine and water analytics.

### Light source

LED

### Reproducibility

0.01 NTU or < 0.5% of measured value

### pH/ORP

pH 0–16 with automatic temperature control (ATC)

### Accuracy

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Photometry</th>
<th>pH</th>
<th>ORP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;2 nm wavelength accuracy, 0.005 abs.</td>
<td>±0.1 pH</td>
<td>±0.1 mV</td>
</tr>
<tr>
<td></td>
<td>Reproducibility pH: ±0.01 pH</td>
<td>±0.3 mV (±1,200 mV)</td>
<td>±1 mV (±2,500 mV)</td>
</tr>
</tbody>
</table>

### Power supply

4x AA batteries for approx. 3,000 measurements

### Weight & dimensions

86(W) × 236(D) × 77(H) mm

600g

---

Portable pH/MV/ISE Meter AM40 Meter

The meter combines the features for mobile application in the field with the precision and comfort of a laboratory meter with plain text structure menu, integrated data logging system and a rugged watertight IP 65 housing. The TM 40 has an automatic temperature compensation for the pH measuring as well as an adjustable reference temperature with measurements without temperature sensor. For calibration a manual or automatic two point calibration routine can be used. Other possible applications of the device are the measurements of redox (ORP) or ISE-potential relative to the standard hydrogen electrode to DIN 38404.

### Measurement range

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>pH</th>
<th>mV</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>-5.0~105.0</td>
</tr>
</tbody>
</table>

### Power supply

(3 x AA, IEC R6, LR6, 1.5 V)

### Weight & dimensions

200 x 95 x 40 mm (WHD)
290 g incl. batteries
The new mobile pH measuring devices by SI Analytics with MEMOSENS® technology offers increased safety and a user-friendly interface.

Function
<table>
<thead>
<tr>
<th>HL700</th>
<th>HL 750</th>
<th>HL 750EX</th>
<th>HL 780</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMOSENS® pH , ORP</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Analog pH, ORP</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Temp</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Explosion proof Ex-Zone 0/1</td>
<td>–</td>
<td>•</td>
<td>–</td>
</tr>
<tr>
<td>PC Software HandyLab® Pilot</td>
<td>–</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Micro USB-B</td>
<td>–</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Data logger (Memory)</td>
<td>–</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Lithium battery</td>
<td>–</td>
<td>•</td>
<td>–</td>
</tr>
</tbody>
</table>

Scale
- MEMOSENS® pH: -2.000~+16.000 pH, -2.000~+2.000 mV, -50~250 °C
- MEMOSENS® ORP: -2.000~+2.000 mV, -50~250 °C, ΔmV
- Analog pH: -2~14 pH, below 2.5 digit Resolution
- Analog ORP: -1300~+1300

Temperature
- Con: 2 x Ø 4 mm
- NTC 30 kΩ: -20~+120 °C
- Pt 1000: -40~+250 °C
- Accuracy/Reproducibility: ±0.3°C/0.2 °C

Weight & dimensions
- 132(W) × 156(H) × 30(D) mm
- 500g

Portable Meters for MEMOSENS® Electrodes HandyLab® 7 Series

Our MEMOSENS® program contains pH and redox electrodes. They are compatible to all at the market available measuring devices based on the MEMOSENS® protocol.

Features
- Complete galvanic isolation
- Resistant to environmental influences
- Radical improvement in measuring point reliability
- Lifecycle memory makes predictive maintenance possible
- MEMOSENS® is an open system
- All MEMOSENS® sensors and devices from the manufacturers involved are compatible with each other

Electrodes for IDS / Wireless IDS Digital Meters

MEMOSENS® Process Electrodes MEMOSENS® Electrodes

Model A7781 FLA93-MF PL 83 SL 83 Pt 8281 PL 89 SL 89
Parameter pH, Temp pH, Temp pH, Temp pH, Temp ORP, Temp ORP, Temp ORP, Temp ORP, Temp
Length (mm) 120, 225 120, 225 120, 225 120, 225, 325, 425 120 120 120, 225
Use General Low temperature High temperature High alkalinity Autoclave High temperature High temperature Autoclave
Temp Item -5~+80 °C -30~+100 °C 0~+130 °C 0~+140 °C -5~+100 °C 0~+130 °C 0~+140 °C
System: Silamid® - Silamid® Silamid® Silamid® Silamid® Silamid® Silamid®
Range/material 0~14pH 0~14pH 0~14pH 0~14pH KPG annular gap junction Ceramic Ceramic
Max (Bar) 12 12 12 12 12 12 12
ATEX Cert All MEMOSENS® process electrodes are ATEX certified
## pH Sensor Options

<table>
<thead>
<tr>
<th>Type</th>
<th>pH Sensor Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>SenTix 41</td>
<td></td>
</tr>
<tr>
<td>SenTix 81</td>
<td></td>
</tr>
<tr>
<td>SenTix L</td>
<td></td>
</tr>
<tr>
<td>SenTix SP</td>
<td></td>
</tr>
<tr>
<td>SenTix HWS</td>
<td></td>
</tr>
<tr>
<td>SenTix Mic-D/B</td>
<td></td>
</tr>
</tbody>
</table>

### Scale
- 0–14 pH
- 2–13 pH
- 0–14 pH

### Temperature Item
- -5–80 °C
- 0–100 °C
- -5–100 °C
- 0–80 °C
- -5–100 °C
- -5–100 °C

### Connector
- Epoxy
- Glass
- Epoxy
- Glass

### Internal Solution
- Gel
- 3M KCl (Ag/Na)
- 3M KCl (Ag/Na)

### Junction Type
- Ceramic
- Platinum
- Pin hole
- Sleeve

### Use
- High accuracy
- General use
- Laboratory measurement
- Food (Needle type)
- Precision measurement
- Low volume samples

### pH Combination Electrode

<table>
<thead>
<tr>
<th>Type</th>
<th>pH Combination Electrode</th>
</tr>
</thead>
<tbody>
<tr>
<td>SenTix Sur</td>
<td>SenTix MIC-D</td>
</tr>
<tr>
<td>SenTix ORP</td>
<td>SenTix Ag</td>
</tr>
<tr>
<td>SenTix Au</td>
<td>SenTix ORP</td>
</tr>
</tbody>
</table>

### Scale
- 2–13 pH
- 0–14 pH
- –

### Temperature Item
- 0–50 °C
- -5–100 °C
- 0–100 °C
- -5–100 °C

### Material
- Glass
- Glass

### Internal Solution
- Refend®
- 3M KCl (Ag/Na)
- 3M KCl

### Junction Type
- KPG
- Platinum
- Platinum
- Silver
- Gold
- Platinum

### Feature
- SenTix Sur, pH electrode, Single Junction, Flat glass membrane, Glass shaft, 1 meter cable, BNC connector
- SenTix MIC-D pH electrode, Combination, Flat glass membrane, Glass shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ

### Use
- General use
- Laboratory measurement
- General use
- Argentometry
- Oxidation
- General use

### ORP Combination Electrode

<table>
<thead>
<tr>
<th>Type</th>
<th>ORP Combination Electrode</th>
</tr>
</thead>
<tbody>
<tr>
<td>SenTix ORP</td>
<td>SenTix Au</td>
</tr>
<tr>
<td>SenTix ORP</td>
<td>SenTix ORP</td>
</tr>
</tbody>
</table>

### Scale
- 2–13 pH
- 0–14 pH
- –

### Temperature Item
- 0–50 °C
- -5–100 °C
- 0–100 °C
- -5–100 °C

### Material
- Glass
- Glass

### Internal Solution
- Refend®
- 3M KCl (Ag/Na)
- 3M KCL

### Junction Type
- KPG
- Platinum
- Platinum
- Silver
- Gold
- Platinum

### Feature
- SenTix Sur, pH electrode, Combination, Flat glass membrane, Glass shaft, 1 meter cable, BNC connector
- SenTix MIC-D pH electrode, Combination, Flat glass membrane, Glass shaft, 1 meter cable, BNC connector, 1 banana plug, NTC 30 kΩ

### Use
- General use
- Laboratory measurement
- General use
- Argentometry
- Oxidation
- General use

### Feature
- The scale is comparable with that of pH measurement. Typical areas of use are the monitoring of the disinfection effect, the determination of ORP potentials in biochemical reactions, measuring in waters of different quality and more. The platinum electrodes can be used universally, the gold electrode is especially suited for strongly oxidizing media without the presence of chloride. The silver electrode is intended for argentometry.

### Use
- General use
- Laboratory measurement
- General use
- Argentometry
- Oxidation
- General use

### Fiolax® Ampoule pH Buffer

The exactness of the pH measurement is mainly dependent on the accuracy of calibration. This again highly depends on the reliability of the buffer.

Hermetically sealed in the glass ampoule and sterilized with hot steam, same as a pharmaceutical product, the buffer solutions free of preservation agent have an extremely long shelf life and guarantee continuously error-free characteristics.

Buffer solutions in the unique double-end ampoules offer a particularly high degree of reliability and measuring accuracy.

### Features
- Reliability and measuring safety
- Extremely long storage times, thanks to hot-steam sterilization
- Without preservative agent
- A maximum of calibration safety

**250mL PE bottles:** pH 4.01, 7.00, 10.01
Multi parameter and Conductivity

### Multiparameter Benchtop Meter - inoLab Multi 9000 Series

inoLab® benchtop devices offer the correct solution for pH, ORP, dissolved oxygen and conductivity measurements in the lab.

The new inoLab® Multi 9310 IDS is highly suitable for digital measurements of pH, ORP, dissolved oxygen (optical), BOD, conductivity and turbidity in the lab. Use the new wireless modules together with the new IDS plug head sensors, be independent from cables and measure i.e. conveniently under laboratory hoods or laminar flow benches. The IDS technology allows optimized measurements and efficient documentation in the simplest manner. A USB interface or an optionally installed printer allow the documentation via the computer or directly on the meter.

#### Model
- **Multi 9310**
  - 1 Measurement Channel
  - DO/BOD, pH, ORP, conductivity and ISE
- **Multi 9620**
  - 2 Measurement Channel
- **Multi 9630**
  - 3 Measurement Channel

#### Measurement range
- **pH**: 0.000~14.000 pH
- **ORP**: –1,200.0~1,200.0 mV
- **DO**: 0.00~20.00 mg/L
- **Conductivity**: 10 μS/cm~2,000 mS/cm
- **Turbidity**: 0.0~4,000.0 FNU/NTU

#### Weight & dimensions
- **9310**
  - 240(W) × 190(D) × 80(H) mm
  - Approx 0.8 kg
- **9310P**
  - 290(W) × 190(D) × 80(H) mm
  - Approx 1.0 kg
- **9620 / 9630**
  - 180(W) × 80(D) × 55(H) mm
  - Approx 0.4kg

### Multi-parameter Portable Meter - MultiLine 3000 Series

High-quality portable digital IDS multi-parameter instrument with a universal measurement input for starting with digital measurement technology.

The Multi 3510 IDS compact portable multi-parameter instrument for applications with digital IDS pH/ORP electrodes, dissolved oxygen sensors, conductivity cells or turbidity sensors. Calibration records and additional information are stored in the sensor. Well laid-out menus make the operation safe and easy. With a wide range of electrodes almost every application including depth measurement down to 100 m will be covered in the field and in the laboratory.

#### Model
- **Multi 3510**
  - 1 Measurement Channel
  - DO/BOD, pH, ORP, conductivity and ISE
- **Multi 3620**
  - 2 Measurement Channel
- **Multi 3630**
  - 3 Measurement Channel

#### Measurement range
- **pH**: 0.000~14.000 pH
- **ORP**: –1,200.0~1,200.0 mV
- **DO**: 0.00~20.00 mg/L
- **Conductivity**: 10 μS/cm~2,000 mS/cm
- **Turbidity**: 0.0~4,000.0 FNU/NTU
- **Depth**: 0.5~100 m
- **Temperature**: 0~50 °C

#### Weight & dimensions
- **80(W) × 180(D) × 55(H) mm, 400g**

### Multi-Parameter Sensors - MPP930

MPP IDS - the digital multi-parameters with Multi 3430 digital display

Multi-parameter probes for simultaneous measurement of up to three parameters from the following selection: Dissolved oxygen (optical), pH or ORP, conductivity as well as turbidity. A built-in pressure sensor delivers the depth. Every sensor measures the temperature required for its compensation on its own. All probes are available in kits with sensors. The MPP 930 IDS can measure up to 3.

#### Model
- **Multi-Parameter Electrodes MPP910/MPP930**

#### Use
- Spot sampling and short term logging

#### Sensor
- **MPP910**: 1 port
- **MPP930**: 3 ports

#### Measurement range
- **DO (Optical)**: 0.00~20.00 mg/L
- **pH**: 0~14
- **ORP**: –1,250~1,250 mV
- **Conductivity**: 1 μS/cm~2,000 mS/cm
- **Depth**: 0.5~100 m
- **Temperature**: 0~50 °C

#### Weight & dimensions
- **MPP910**: 443(L) × 40(Ø) mm, Approx 355g
- **MPP930**: 400(L) × 69.5(Ø) mm, Approx 1.1kg
Benchtop EC/Cond Meter  inoLab Cond 7000 Series

The new inoLab® Cond 7310 is highly suitable for all conductivity precision measurements connected with automatic documentation according to GLP/AQA in quality labs in all industries. It works with all modern WTW conductivity measuring cells to cover all applications. For the documentation, the serial number of the used sensor can be entered. Upon request, the measured values can be put out via the optional built-in printer.

Conductivity Cells

Conductivity meters inoLab

<table>
<thead>
<tr>
<th>Model</th>
<th>TetraCon 325</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
<td>General Use (Spot sampling)</td>
</tr>
<tr>
<td>Measuring range</td>
<td>0.0 µS/cm to 2,000 mS/cm</td>
</tr>
<tr>
<td>Features</td>
<td>4 electrode graphite cell</td>
</tr>
</tbody>
</table>

ProflineSeries compatible sensors

<table>
<thead>
<tr>
<th>Model</th>
<th>LR325/01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
<td>Pure water measurement</td>
</tr>
<tr>
<td>Measuring range</td>
<td>0.001 µS/cm to 200 µS/cm</td>
</tr>
<tr>
<td>Features</td>
<td>2 electrode stainless steel measuring cell, flow vessel</td>
</tr>
</tbody>
</table>

Handheld EC/Cond Meter  inoLab Cond 3000 Series

The versatile Cond 3310 is designed for conductivity measurements in changing media with different 2 and 4 pole measuring cells. With its large memory and its waterproof USB interface, this meter is ideal for the capture of large data volumes, e.g. for pump tests including date, time and ID number. Via the interface, the data can be transferred to the computer and processed as needed.

Portable Cond/Salinity Meter LF40 Meter

The meter combines the features for mobile application in the field with the precision and comfort of a laboratory meter with plain text structure menu, integrated data logging system and a rugged watertight IP 65 housing. The TM 40 has an automatic temperature compensation for the pH measuring as well as an adjustable reference temperature with measurements without temperature sensor. For calibration a manual or automatic two point calibration routine can be used. Other possible applications of the device are the measurements of redox (ORP) or ISE-potential relative to the standard hydrogen electrode to DIN 38404.
Benchtrop Turbidity Meter  
**Turb 555**

Professional turbidity meters for the lab from 0.01 – 10,000 NTU according to drinking water standard, for quality, goods receiving and production inspections.

**Measurement range**
- NTU: 0–10,000
- EBC: 0–2,450
- Nephelos: 0–6,000

**Accuracy**
- 0–1,000: ±0.02 NTU or ±2% of the value
- 1,000–4,000: ±0.1 NTU or ±5% of the value
- 4,000–10,000: ±0.5 NTU or ±10% of the value

**Reproducibility**
- 0.01 NTU or ±1% of the measured value

**Power supply**
- AC 100–240V ±10% / 47–63 Hz

**Weight & dimensions**
- 252(W) × 290(D) × 100(H) mm
- Approx 1kg

---

Portable Turbidity Meter  
**Turb 430T**

Portable nephelometric with highest precision according to DIN ISO / US EPA for water analytics, quality control and process monitoring.

**Measurement ranges**
- NTU: 0–1,100 / 0–1,100
- FNU: 0–1,100

**Reproducibility**
- 0.01 NTU or ±0.5% of measured value

**Measurement ranges**
- NTU: 0–1,100
- FNU: 0–1,100

**Accuracy**
- ±0.01 NTU or ±2% of the measured value

**Power supply**
- 4x AA batteries for approx. 3,000 measurements

**Weight & dimensions**
- 86(W) × 236(D) × 77(H) mm
- 650g

---

Economical Portable Turbidity Meter  
**Turb 355**

Small portable turbidity meter as per DIN ISO / US EPA for nephelometric measurements in quality control and environmental monitoring.

**Measurement ranges**
- NTU: 0–10,000
- EBC: 0–2,450
- Nephelos: 0–6,000

**Reproducibility**
- 0.05 NTU or ±1% of the measured value

**Resolution**
- 0.01 NTU in the range 1...999
- 0.1 NTU in the range 10,00...99,9
- 1 NTU in the range 100...1,000

**Accuracy**
- 0–500 NTU/FNU: ±0.1 NTU/FNU or ±2% of measured value
- 500–1,100 NTU/FNU: ±3% of the measured value

**Power supply**
- 4x AAA batteries for approx. 1,500 measurements

---

Portable Turbidity Meter  
**WQ770B**

The Global Turbidity Meter is a highly accurate device with a fully submersible sensor for in-situ environmental or process monitoring. The meter is provided with a padded carrying case and 25’ of marine grade cable, with lengths up to 100’ available upon request.

**Measurement ranges**

- Sensor=0-50 NTU and 0-1,000 NTU; Meter=0-50 NTU or 0-1,000 NTU selectable

**Output**
- 4–20mA (Sensor, both ranges), LED screen (Meter)

**Cable Length**
- Sensor=25 ft standard (optional to 500 ft)

**Accuracy**
- ±1% of full scale

**Operating Voltage**
- 10–36 VDC (Sensor); Internal 9VDC battery (Meter)

**Weight & dimensions**
- Body= 1.5 x 8.5 inches (3.8 x 21.6 cm) (Dia x Length)
- 1lb (454 g) (Sensor), 2 lbs (907 g) (Meter+sensor)
Portable Suspended Solids  TSS 711

The Royce Model 711 Portable Suspended Solids/ Interface Level Analyzer is a rugged, waterproof instrument designed for the rigors of remote sampling. The meter provides reliable operation in waste treatment plants, rivers, lakes and other aqueous systems. The meter will read in either grams per liter when in the suspended solids mode or relative density percentage while in the interface level mode of operation.

<table>
<thead>
<tr>
<th>Measurement range</th>
<th>0.01~10 grams per liter (10 to 10,000 mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproducibility</td>
<td>±1 % of reading or ±20 mg/L, whichever is greater</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±5 % of reading or ±100 mg/L, whichever is greater</td>
</tr>
<tr>
<td>Power supply</td>
<td>Standard 9V batteries</td>
</tr>
<tr>
<td>Weight &amp; dimensions</td>
<td>7&quot;(L) x 3.2&quot;(W) x 1.5&quot;(D) Approx 1kg</td>
</tr>
</tbody>
</table>

Swing Samplers

Swing Samplers for collecting water samples.
• Hinged end for easy sample collection
• Pole extends up to 12 feet

Long Handled Dippers
Long handle polyethylene dipper for taking water samples.
• Strong but lightweight
• Inert high density polyethylene

Sludge Samplers  SLUDGE JUDGE

SLUDGE JUDGE® Sludge Samplers for taking accurate readings of settled solids.

Features
• Take accurate readings of settled solids
• Combine sections to achieve the sampling length needed
• Ideal for sewage treatment plants, chemical plants, and food processing facilities

The Sludge Judge® sludge samplers are designed to take accurate readings of settled solids, 5 % or less, in a variety of liquids, to any depth. The sludge samplers are ideal for sewage treatment plants, chemical plants, and food processing facilities - anywhere that accurate sample levels of settled solids in non-caustic materials are needed. The sludge sampler holds approximately 3 oz. per foot (89 ml per 0.31 m). The Sludge Judge® comes in 5 ft (1.53 m) sections of 3/4 inch (1.90 cm) plastic pipe with screw-type connectors.
**Spectrophotometer photoLab® 7100 VIS COD Plus**

photoLab® 7100 VIS of 320–1,100 nm supports fastest and affordable routine analysis via barcoded test kits for round and rectangular cuvettes. More than 250 methods are available for waste/drinking water, food & beverage industry as well as production, environmental monitoring or fish farming.

**Measurement**
- Multiparameter

**Measurement range**
- 0.5–11 mg/L

**Wavelength range**
- 320–1,100 nm COD
- 525 nm

**Technology**
- Monochromator with reference beam

---

**Spectrophotometer photoLab® 7600 UV-VIS COD Reagent Free**

The spectrophotometer photoLab® 7600 UV-VIS combine routine analysis with spectral analysis and pioneering procedure OptRF.

For the standard parameters COD, nitrate and nitrite, a spectrum in the UV range is evaluated by means of complex algorithms which are based on reference spectra. The result is put out directly as concentration reading, without the use of reagents.

**Measurement**
- Multiparameter

**Measurement range**
- 0.5–11 mg/L

**Wavelength range**
- 190–1,100 nm COD
- 525 nm

**Technology**
- Monochromator with reference beam

---

**Filter Photometer photoLab® S6- S12 COD 6-12 Wavelengths**

The photoLab® S6&12 filter photometer with 6 & 12 wavelengths combines lab precision with highest comfort and highest speeds for extensive water analytics.

Approx. 100 methods are detected automatically. So, it can be used in water analytics as well as galvanization and in the food industry.

**Measurement**
- Multiparameter

**Measurement range**
- 0.5–11 mg/L

**Wavelength range**
- 190–1,100 nm COD
- 525 nm

**Technology**
- Monochromator with reference beam

---

**The Spectral Sensors of WTW**

Carbon and nitrogen parameters can be measured easily and without the use of chemicals by means of the optical method of the UV-VIS and UV sensors. Steps such as sampling and sample preparation, which usually take a lot of time, are omitted. Another plus is the integrated, maintenance-free ultrasound cleaning process, which minimizes the manual cleaning effort for almost all applications.
InoLab Benchtop pH/ORP & ISE

InoLab 7110 / 7310 / 7320

The WTW InoLab line includes the 7110 (single channel), 7310 and 7310P (single channel) and 7320 and 7320P (dual channel) instruments providing easy-to-use and calibrate instruments ideal for the laboratory.

### Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>pH (mV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>-2.0 to 20.0, -2.00 to -20.00, -2.000 to -19.999</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1, 0.01, 0.001</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.1, ±0.01, ±0.05 (Sample temp 15–35 °C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>ORP (mV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>-1,200 to 1,200.0, -2,500 to 2,500</td>
</tr>
<tr>
<td>Resolution</td>
<td>1.0</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.3, ±1.0 (Sample temp 15–35 °C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>ISE (mol/l, mmol/l, ppm, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>0.000 to 9.999, 10.00 to 99.999, 100.0 to 999.999, 1,000 to 999,999</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.001, 0.01, 0.1, 1</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.1, ±0.01, ±0.5 (Sample temp 15–35 °C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Temp (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>-5 to 105</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.1</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.1</td>
</tr>
</tbody>
</table>

### pHotoFlex® STD Phosphate and Nitrogen Set

**TNP-A**

These rugged, waterproof, multiparameter colorimeters are ideal for laboratory and field testing. The instruments feature a large, backlit display, waterproof rating, data logging with the ability to export data to a computer using LsData software, user-defined programs and a 2-year warranty.

Plus CR 3200 thermostimulator for thermal digestion with 2x12 round cuvettes with 8 fixed/8 user-defined programs with temperatures of up to 170 °C and AQA.

### photoLab® 7100 Phosphate and Nitrogen Set

**TNP-7100**

The spectral photometer photoLab® 7100 VIS with AQA and IQ LabLink combines secured water analysis with uncomplicated special and spectral analytics.

CR 3200 thermostimulator for thermal digestion with 2x12 round cuvettes with 8 fixed / 8 user-defined programs with temperatures of up to 170 °C and AQA.
**Spectrophotometer photoLab®**

<table>
<thead>
<tr>
<th>Model</th>
<th>photoLab® 7100 (VIS)</th>
<th>photoLab® 7600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength range</td>
<td>Spectral photometer VIS 320–1,100 nm</td>
<td>Spectral photometer VIS 190–1,100 nm</td>
</tr>
<tr>
<td>Lamp</td>
<td>Tungsten-Halogen</td>
<td>Xenon</td>
</tr>
<tr>
<td>Accuracy/reproducibility</td>
<td>±1 nm, &lt; 0.5 nm</td>
<td>±1 nm, &lt; 0.5 nm</td>
</tr>
<tr>
<td>Scan speed</td>
<td>700–2,000 nm/min in 1, 2, 5, 10 nm steps</td>
<td>700–2,000 nm/min in 1, 2, 5, 10 nm steps</td>
</tr>
<tr>
<td>Data memory</td>
<td>5,000 measurements, 40 MB for spectrums and kinetics</td>
<td></td>
</tr>
<tr>
<td>Weight &amp; dimensions</td>
<td>404(W) x 314(H) x 197(H) mm, Approx 4.5kg</td>
<td></td>
</tr>
</tbody>
</table>

**Features**
- Easy to use: place cuvette, read measurement value
- More than 250 test programs for water analysis, galvanics and general lab analytics
- Cell and reagent test kits with barcode for automatic program selection
- Automatic cuvette and measurement range detection for rectangular cuvettes
- Top reliability due to menu guided comprehensive Analytical Quality Assurance - AQA
- Measurement “Light” on the road with car battery use
- USB and Ethernet-connections for easy update, print to PDF or printer, storage and data export

**Portable Meters for Photometric Meters**

**pHotoFlex®**

- **Wavelength (nm)**: 436, 517, 552, 594, 610, 690 (+860: Turb only)
- **Measurement range**
  - **pH (pHotoFlex® STD)**: 0–16
  - **Turbidity (pHotoFlex® Turb only)**: 0–1,100 NTU/FNU
- **Power supply**: 1.5V × 4 (Approx 5,000 measurements)
- **Weight & dimensions**: 86(W) x 236(D) x 117(H) mm, 600g

**Reactor**

**CR2200/3200/4200**

Thermoreactors for the disintegration of COD, total nitrogen and total phosphorus, including brief and self-programmed high temperature disintegration up to 170 °C.

The high reaction temperature over a defined period of time ensures a complete degradation of the sample. The required temperatures and degradation times for the standard parameters are stored in every WTW thermoreactor. In addition, there are different options for self programming and cuvette numbers available.
## Reagents

### PhotoLab® Series

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acidity</td>
<td>-</td>
<td>Indicator</td>
</tr>
<tr>
<td>Aluminum</td>
<td>-</td>
<td>Indicator</td>
</tr>
<tr>
<td>Ammonial Nitrogen</td>
<td>NH₃-N</td>
<td>-</td>
</tr>
<tr>
<td>Adsorbate organic Nitrogen</td>
<td>ADN</td>
<td>-</td>
</tr>
<tr>
<td>Arsenic</td>
<td>As</td>
<td>-</td>
</tr>
<tr>
<td>BOD</td>
<td>BOD</td>
<td>-</td>
</tr>
<tr>
<td>Baran</td>
<td>R</td>
<td>-</td>
</tr>
<tr>
<td>Bromate</td>
<td>Br</td>
<td>-</td>
</tr>
<tr>
<td>Cadmium</td>
<td>Cd</td>
<td>-</td>
</tr>
<tr>
<td>Calcium</td>
<td>Ca</td>
<td>-</td>
</tr>
<tr>
<td>Chloride</td>
<td>Cl</td>
<td>-</td>
</tr>
<tr>
<td>Residual Chloride (Free Total)</td>
<td>Cl</td>
<td>-</td>
</tr>
<tr>
<td>Chlorine-Dioxide</td>
<td>Cl₂</td>
<td>-</td>
</tr>
<tr>
<td>COD</td>
<td>O₃</td>
<td>-</td>
</tr>
<tr>
<td>Copper</td>
<td>Cu</td>
<td>-</td>
</tr>
<tr>
<td>DEHA</td>
<td>DEHA</td>
<td>-</td>
</tr>
<tr>
<td>DEOXY</td>
<td>DEOXY</td>
<td>-</td>
</tr>
<tr>
<td>Fluoride</td>
<td>F</td>
<td>-</td>
</tr>
<tr>
<td>Holes</td>
<td>HCHO</td>
<td>-</td>
</tr>
<tr>
<td>Gold</td>
<td>Au</td>
<td>-</td>
</tr>
<tr>
<td>Hardness (Total)</td>
<td>CaO</td>
<td>-</td>
</tr>
<tr>
<td>Hydrazine</td>
<td>N₂H₄</td>
<td>-</td>
</tr>
<tr>
<td>Hydrogen-Peroxide</td>
<td>H₂O₂</td>
<td>-</td>
</tr>
<tr>
<td>Isocitrate</td>
<td>I</td>
<td>-</td>
</tr>
<tr>
<td>Iron(III, II)</td>
<td>Fe</td>
<td>-</td>
</tr>
<tr>
<td>Lead</td>
<td>Pb</td>
<td>-</td>
</tr>
<tr>
<td>Magnesium</td>
<td>Mg</td>
<td>-</td>
</tr>
<tr>
<td>Manganese</td>
<td>Mn</td>
<td>-</td>
</tr>
</tbody>
</table>

### pHotoFlex® Series

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molybdenum</td>
<td>Mo</td>
<td>-</td>
</tr>
<tr>
<td>Monochromal Ramin</td>
<td>Cl₂</td>
<td>-</td>
</tr>
<tr>
<td>Nickel</td>
<td>Ni</td>
<td>-</td>
</tr>
<tr>
<td>Nitrate Nitrogen</td>
<td>NO₃-N</td>
<td>-</td>
</tr>
<tr>
<td>Nitrite Nitrogen</td>
<td>NO₂-N</td>
<td>-</td>
</tr>
<tr>
<td>Total Nitrogen</td>
<td>TN</td>
<td>-</td>
</tr>
<tr>
<td>Volatile organic acid</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td>O₂</td>
<td>-</td>
</tr>
<tr>
<td>Ozone</td>
<td>O₃</td>
<td>-</td>
</tr>
<tr>
<td>Phenol</td>
<td>CN/HIN</td>
<td>-</td>
</tr>
<tr>
<td>Orthophosphoric acid</td>
<td>PO₄</td>
<td>-</td>
</tr>
<tr>
<td>Total phosphorus</td>
<td>TP</td>
<td>-</td>
</tr>
<tr>
<td>pH</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Potassium</td>
<td>K</td>
<td>-</td>
</tr>
<tr>
<td>Silica</td>
<td>SiO₂</td>
<td>-</td>
</tr>
<tr>
<td>Silver</td>
<td>Ag</td>
<td>-</td>
</tr>
<tr>
<td>Sodium</td>
<td>Na</td>
<td>-</td>
</tr>
<tr>
<td>Sulfate</td>
<td>SO₄</td>
<td>-</td>
</tr>
<tr>
<td>Sulfit</td>
<td>S</td>
<td>-</td>
</tr>
<tr>
<td>Sub Sulfate</td>
<td>SO₄</td>
<td>-</td>
</tr>
<tr>
<td>Surfactant (aerosol)</td>
<td>CTAM</td>
<td>-</td>
</tr>
<tr>
<td>Surfactant (latex)</td>
<td>MEA</td>
<td>-</td>
</tr>
<tr>
<td>Tin</td>
<td>Sn</td>
<td>-</td>
</tr>
<tr>
<td>TDC</td>
<td>TDC</td>
<td>-</td>
</tr>
<tr>
<td>Lead</td>
<td>Zn</td>
<td>-</td>
</tr>
</tbody>
</table>

## pHotoFlex® STD

### pHotoFlex® pH

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acidic Buffer Solution</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Basic Buffer Solution</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Buffer</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chelating agent</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chloride</td>
<td>Cl</td>
<td>-</td>
</tr>
<tr>
<td>EDTA</td>
<td>EDTA</td>
<td>-</td>
</tr>
<tr>
<td>Ferric-Chelate</td>
<td>Fe</td>
<td>-</td>
</tr>
<tr>
<td>Oxidation-Reduction Potential</td>
<td>ORP</td>
<td>-</td>
</tr>
<tr>
<td>pH</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Photometric measurement</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Redox potential</td>
<td>ORP</td>
<td>-</td>
</tr>
<tr>
<td>Silver</td>
<td>Ag</td>
<td>-</td>
</tr>
<tr>
<td>Sub-sulfate</td>
<td>SO₄</td>
<td>-</td>
</tr>
</tbody>
</table>

## pHotoFlex® Turb

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbidity</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

---

### COD

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD</td>
<td>O₃</td>
<td>-</td>
</tr>
</tbody>
</table>

款

### COD (Mercury-free)

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>COD</td>
<td>O₃</td>
<td>-</td>
</tr>
</tbody>
</table>

### Copper

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>Cu</td>
<td>-</td>
</tr>
</tbody>
</table>

### Cyanide

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyanide</td>
<td>CN</td>
<td>-</td>
</tr>
</tbody>
</table>

### DEHA

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEHA</td>
<td>DEHA</td>
<td>-</td>
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</table>

### DEOXY

<table>
<thead>
<tr>
<th>Item Symbol</th>
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<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEOXY</td>
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<td>-</td>
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### Fluoride

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Fluoride</td>
<td>F</td>
<td>-</td>
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</tbody>
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### Holes

<table>
<thead>
<tr>
<th>Item Symbol</th>
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<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holes</td>
<td>HCHO</td>
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</tr>
</tbody>
</table>

### Gold

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>Au</td>
<td>-</td>
</tr>
</tbody>
</table>

### Hardness (Total)

<table>
<thead>
<tr>
<th>Item Symbol</th>
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<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness</td>
<td>CaO</td>
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</tbody>
</table>

### Hydrazine

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Hydrazine</td>
<td>N₂H₄</td>
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### Hydrogen-Peroxide

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<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen-Peroxide</td>
<td>H₂O₂</td>
<td>-</td>
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</table>

### Isocitrate

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isocitrate</td>
<td>I</td>
<td>-</td>
</tr>
</tbody>
</table>

### Iron(III, II)

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III, II)</td>
<td>Fe</td>
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</tbody>
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### Lead

<table>
<thead>
<tr>
<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
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### Magnesium

<table>
<thead>
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<th>Item Symbol</th>
<th>Measurement range</th>
<th>Measurement method</th>
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<tbody>
<tr>
<td>Magnesium</td>
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### Manganese

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<th>Measurement range</th>
<th>Measurement method</th>
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<tbody>
<tr>
<td>Manganese</td>
<td>Mn</td>
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### Selection table titration - piston burettes TITRONIC® and automatic titrators TitroLine®

<table>
<thead>
<tr>
<th>Application</th>
<th>TITRONIC® 300</th>
<th>TITRONIC® 500</th>
<th>TitroLine® 5000</th>
<th>TitroLine® 7000</th>
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</thead>
<tbody>
<tr>
<td>Intelligent interchangeable units</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>(5, 10, 20 and 50 ml)</td>
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</tr>
<tr>
<td>Manual Titration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dosing</td>
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<tr>
<td>Solutions preparation</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(manually or automatically with con balance)</td>
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<td></td>
</tr>
<tr>
<td>Automatic titration (independent with external software)</td>
<td>2</td>
<td>2</td>
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<tr>
<td>pH/mV titrations &quot;aqueous&quot; (Alkalinity, hydrochloric acid, citric acid, Kjeldahl...)</td>
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<tr>
<td>pH/mV titrations &quot;non aqueous&quot; (TAN/TBN, FFA, titrations with perchloric acid...)</td>
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</tr>
<tr>
<td>Redox titrations (iodometry, permanganometry...)</td>
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<tr>
<td>Redox titrations (COD)</td>
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<tr>
<td>Halide titrations (chloride, &quot;salt&quot;...)</td>
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<tr>
<td>Hydrogen sulphide and mercaptans</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Sulfurous acid in wine and beverages</td>
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<tr>
<td>Bromine number</td>
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<tr>
<td>Conductivity Measurement (Smart Sensor (IDS®))</td>
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<tr>
<td>pH-stat-applications (enzyme kinetics, soil samples, biotechnology)</td>
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<tr>
<td>Water analysis according to KF Volumetric method (10 ppm - 100 %)</td>
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<tr>
<td>Water analysis according to KF Coulometric method (1 ppm - 5 %)</td>
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</tr>
<tr>
<td>Sample</td>
<td></td>
<td></td>
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<tr>
<td>TitriSoft</td>
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</table>

1) 20~50 mL User selectable cylinder sizes
2) Can be used as titration and dosing burette in automatic titration systems
<table>
<thead>
<tr>
<th></th>
<th>TitroLine® 7500 KF</th>
<th>TitroLine® 7500 KF trace</th>
<th>TitroLine® 7750</th>
<th>TitroLine® 7800</th>
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<tbody>
<tr>
<td>Manual Titration</td>
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<td>Dosing</td>
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</tr>
<tr>
<td>Solutions preparation</td>
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<td></td>
</tr>
<tr>
<td>Automatic titration</td>
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</tr>
<tr>
<td>pH/mV titrations “aqueous”</td>
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<tr>
<td>pH/mV titrations “non aqueous”</td>
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<td></td>
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<tr>
<td>Redox titrations (iodometry, permanganometry)</td>
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<tr>
<td>Redox titrations (COD)</td>
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<tr>
<td>Halide titrations (chloride, “salt”)</td>
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<tr>
<td>Hydrogen sulphide and mercaptans</td>
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<tr>
<td>Bromine number</td>
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<tr>
<td>Conductivity Measurement</td>
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<tr>
<td>pH-stat-applications</td>
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<tr>
<td>Water analysis according to KF Volumetric method</td>
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<tr>
<td>Water analysis according to KF Coulometric method</td>
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<tr>
<td>Sample</td>
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</tr>
<tr>
<td>TitriSoft</td>
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</tbody>
</table>
TITRONIC® Piston Burette  TITRONIC® 300

The new burette TITRONIC® 300 not only allows you to perform dosing operations quickly and easily but also accomplishes manual titrating operations without difficulty. The burette can be used with all dosing liquids, solvents and titrants.

The adjustment of any dosing volume and the dosing speed is made simply by pressing a button. For incremental dosing operations, the entry of the volume and the waiting time between the volume increments can be adjusted just as easily and quickly.

TITRONIC® Piston Burette  TITRONIC® 500

The TITRONIC® 500 is the perfect piston burette for manual titrations, accurate dosing of small and large volumes and the preparation of solutions.

The TITRONIC® 500 can also be used as automatic dosing (TitroLine® 7000, TitriSoft 3.0) and titration burette (TitriSoft 3.0).

Features
- Intelligent exchangeable units with 5, 10, 20 and 50 ml volume
- Connection of printer and analytical balances
- Complete remote control via RS232 or USB-B interface thanks to the two RS232 ports it is possible to connect up to 16 devices on one RS232 or USB port at ones

Accessories

TZ 3880  285220530
Manual controller
TZ 3803  285220590
1,000 ml
TM 50  285225840
TITRONIC®300 + TitroLine®5000 stirrer
TZ 3830  285220420
USB Channel expansion hub
TZ 3835  285220410
USB Channel expansion hub
TZ 3865  285220440
DIN A4 Printer
TZ 3863  285220480
112 mm USB-Thermo printer
TZ 3846  285220710
Printer paper (5 rolls)

About us

By developing the glass electrode 75 years ago, SCHOTT laid the foundation for the success of electrochemical measurement. With high-performance pH glasses, innovative electrodes and electrochemical measuring instruments such as pH meters, conductivity meters, oxygen measuring instruments, piston burettes and titrators.

Piston Burette

By developing the glass electrode 75 years ago, SCHOTT laid the foundation for the success of electrochemical measurement. With high-performance pH glasses, innovative electrodes and electrochemical measuring instruments such as pH meters, conductivity meters, oxygen measuring instruments, piston burettes and titrators.
TitroLine® Automatic Titration

TitroLine® 5000

This new automatic titrator combines a syringe burette and pH/mV meter plus integrated intelligence. This intelligence carries out the parameterisation of the method for you.

The new Titrator TitroLine® 5000 offers even more features than its predecessor and is even more convenient to use.

Features
- High Resolution pH/mV measuring interface and measuring input for temperature measurement
- Measuring interface for polarisable electrodes ("dead-stop")
- Available standard methods such as FOS/TAC, alkalinity, total acidity in soft drinks
- Linear and dynamic titration to equivalence point
- Titrations to pH, mV and μA end point
- Manual titrations and dosing tasks are also practicable

Burette capacity
- 20ml~50ml

Burette accuracy
- 20ml Burette: ±0.15 mL, Reproducibility: ±0.05 mL
- 50ml Burette: ±0.025 mL, Reproducibility: ±0.25 mL

Interface
- 1x USB-A and 1x USB-B, 2x RS-232-C

Power
- 100~240V or more, 50/60 Hz, Power 30VA

Weight & dimensions
- 135(W) × 310(H) × 205(D) mm
- 2kg (not including stirrer)

TitroLine® 7000

TitroLine® 7000 is with its spectrum of benefits the ideal entry into the potentiometric titration and the perfect choice for applications in the field of food, water/waste water and environmental analysis. Thanks to the high Resolution and precise pH/mV and "dead-stop" measuring interface it is possible to determine a wide range of parameters.

Features
- High Resolution pH/mV measuring interface and measuring input for temperature measurement
- Measuring interface for polarisable electrodes ("dead-stop")
- Available standard methods such as FOS/TAC, alkalinity, total acidity in soft drinks
- Linear and dynamic titration to equivalence point
- Titrations to pH, mV and μA end point
- Manual titrations and dosing tasks are also practicable

Burette capacity
- 5 ml, 10 ml, 20 ml, 50 ml

Burette accuracy
- Accuracy: ±0.1~0.15 %
- Reproducibility: ±0.05~0.07 % (EN ISO 8655-6)

Applications
- Acid and base numbers in oils
- Titrations in glacial acetic acid with perchloric acid
- Hydroxyl, NCO (isocyanate) number and further specific values
- Determination of the enzyme activity (ex. Lipase)
- pH-stat elution of soil sample at pH 4
- Monitoring of the pH value during chemical syntheses

User-defined methods
- TL 7000 : 50x

Interface
- 1×LAN, 2×USB-A, 1×USB-B, 2×RS232

Weight & dimensions
- 153(W) × 45(H) × 296(D) mm
- 2.3kg for basic unit
- 3.5kg for complete device incl.

TitroLine® 7800 - The Universal Titrator with IDS®

The TitroLine® 7800 enhanced the universal features of the TitroLine® 7750 with an additional IDS® measurement input. The TitroLine® 7800 is able to perform a range of titrations from potentiometric titrations to Karl Fisher.

The IDS (intelligent digital sensors) automatically store their unique serial number and calibration data. In addition, they also digitally process the measurement signal.

Burette capacity
- 5 ml, 10 ml, 20 ml, 50 ml

Burette accuracy
- Accuracy: ±0.1~0.15 %
- Reproducibility: ±0.05~0.07 % (EN ISO 8655-6)

Measurement channel
- 1 (analog) pH/mV with reference electrode input
- 2 (IDS) IDS Accuracy +/- 1 digit in dependence from the used IDS-electrode

Interface
- 90~240V or more, 50/60 Hz, Power 30VA
- 1× LAN, 2× USB-A, 1× USB-B, 2× RS232

Weight & dimensions
- 153(W) × 45(H) × 296(D) mm
- 2.3kg for basic unit
- 3.5kg for complete device incl.
The TitroLine® 7500 KF is the volumetric generalist for a wide range of use.

Features
- Fast, easy and precise
- With standard methods for different applications (titer determination, blank value...)
- High visible full color display, that can be easily viewed from a distance and extreme angles
- Storage of results via USB port (PDF- and CSV-format)
- With intelligent interchangeable modules

Features
- Fast, easy and precise
- With standard methods for different applications (titer determination, blank value...)
- High visible full color display, that can be easily viewed from a distance and extreme angles
- Storage of results via USB port (PDF- and CSV-format)

Specifications
- TitroLine® 7500KF

Application
- KF volumetry, dead-stop-titrations (SO2, bromine number)

TitroLine® 7500 KF Trace

TitroLine® 7500 KF Trace is the specialist for low water contents.

Features
- Fast, easy and precise
- With standard methods for different applications (titer determination, blank value...)
- High visible full color display, that can be easily viewed from a distance and extreme angles
- Storage of results via USB port (PDF- and CSV-format)

Features
- Fast, easy and precise
- With standard methods for different applications (titer determination, blank value...)
- High visible full color display, that can be easily viewed from a distance and extreme angles
- Storage of results via USB port (PDF- and CSV-format)

Specifications
- TitroLine® 7500KF

Application
- KF volumetry, dead-stop-titrations (SO2, bromine number)

The image below shows possible device configurations.

TW alpha plus sample changer

Now that GLP and ISO 900X have been adopted, the number of samples obtained is constantly rising. The new TW alpha plus from SI Analytics will help you to meet these additional requirements. Our sample changer enables you to titrate in series with automatic sample changing.

Features
- Extremely robust and long-lasting
- Various sample plates from 12~24 positions for standard bechers acc. to DIN
- Sample vessels from 50~400 ml
- Sample plate for CSB vessels acc. to DIN with 24 positions
- Different titration heads
- Connection for cleaning and suction pump but also cleaning in pre-defined vessels or for conditioning of electrodes

Model | TW alpha plus | TW 7400 |
---|---|---|
Number of samples | 24x 50 ml beaker, 16x 150 ml beaker, 12x 250 ml beaker, 24x COD beaker | 42x 150 ml-250 ml beaker, 48x 100 ml beaker, 72x 50 ml beaker |
Use | Various automatic Measurement Applications (Micro-Titration, COD Titration) | 42 Sample: Water quality and environmental 72 Sample: pH of the soil, the alkalinity of the sea Water, beverage, 48 Sample: Wine |
Weight & dimensions | 143(W) × 45(H) × 296(D) mm 2.3kg (not including stirrer) | 153(W) × 45(H) × 296(D) mm 2.3kg (not including stirrer) |
TitriSoft 3.0 - Convincingly simple ...

The TitriSoft 3.0 titration software is the optimum solution for your titration tasks. The software can be used with Windows XP, Vista and 7 and supports your daily work procedures during sample preparation, titration and evaluation of the results. The software has been developed to be clear, logical and user-friendly.

You can connect the titration hardware to any of your PC’s available USB-A or serial interfaces. Each of the interfaces allows different combinations of devices (configurations).

To automate a titration procedure the software may be used to control the TitroLine® 7000 in connection with the TW alpha plus sample changer. For more complex titration tasks with sample preparation you can dose with piston burettes followed by titration with a TitroLine® 7000. Of course, you can also use the software for dosing only.
System-wide Process Monitoring & Control

IQ Sensor Net 2020 XT
Influent:
- pH, Conductivity, Ammonium,
- COD, TOC, DOC, BOD, SAC

Aeration:
- D.O., Ammonium,
- Nitrate, TSS, pH

TOC Flow, Level &
Samplers
Online Controllers &
Sensors
Piston Burette ∙
Titration Photometry COD TURB MULTI ∙ COND pH ∙ ORP ∙ EC ∙ ISE DO & BOD
**Effluent:**
Ammonium, Nitrate, pH, Conductivity, D.O., Turbidity, COD, TOC, DOC, BOD, SAC

**Back-up Terminal**
**Final Setting:**
Nitrogen, Turbidity, TSS, pH, Sludge Blanket Level

**Effluent:**
Ammonium, Nitrate, pH, Conductivity, D.O., Turbidity, COD, TOC, DOC, BOD, SAC

**Back-up Terminal**
**Final Setting:**
Nitrogen, Turbidity, TSS, pH, Sludge Blanket Level

**Effluent:**
Ammonium, Nitrate, pH, Conductivity, D.O., Turbidity, COD, TOC, DOC, BOD, SAC

**Back-up Terminal**
**Final Setting:**
Nitrogen, Turbidity, TSS, pH, Sludge Blanket Level
WTW’s IQ Sensor Net systems for wastewater treatment plant and industrial applications offers nearly unlimited network opportunities - for up to 20 sensors.

The systems are modular system and can “grow” with increasing demands! You can transfer all of your information to your PLC via one single cable and will save in unnecessary investments. Furthermore, you can read all measured parameters on a single display.

### Parameters

<table>
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<th>Parameters</th>
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<th>3</th>
<th>4</th>
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<td></td>
</tr>
<tr>
<td>Ammonium</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrate</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Nitrite</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td></td>
</tr>
<tr>
<td>Potassium</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride*</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COD (chemical oxygen demand)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOC (total organic carbon)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BOD (biochemical oxygen demand)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOC (dissolved organic carbon share of TOC)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAC (spectral absorption coefficient)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface (Sludge) Level Measurement**</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td></td>
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</tr>
</tbody>
</table>

*Chloride is used as compensation only and is not a visible parameter on the IQSN system. Please contact us for more information.
**IQ Sensor Net System 2020XT**

Customizable configuration, to fit all applications.

**Display Unit/Controller**
- Displays up to 8 parameters simultaneously

**MIQ Module**
- Power supply
- Analog output / input
- Interface
- System expansion
- Control (Max 3 modules)

**Cable**
- Low-voltage installation
- Cable lengths up to 1 km

**Sensors**
- DO
- pH/ORP
- Conductivity
- Ammonia/Nitrate
- Ammonia
- Nitrate
- UV Sensor
- Turbidity/SS
- Sludge Level

**Display Unit/Controller**

An example of a 2020 XT system using 7 sensors to monitor and control throughout a facility.
Terminal/controller MIQ/TC 2020 3G  | IQ Sensor Net

The heart of every IQ Sensor Net system 2020 - multi-parameter system for up to 20 sensors with USB interface, remote maintenance and remote communication.

Features
- Safe and easy - multi-functional USB interface for extremely fast data exchange and software updates
- A solution for every application - up to 20 sensors can be connected, all IQ parameters are measurable
- Flexible and ready for the future - the IQ Sensor Net can be expanded as needed thanks to its modular construction

MIQ/MC3  | IQ Sensor Net

The controller family with network connection via ethernet/WIFI interface for the multi-parameter system IQ Sensor Net 2020 XT for up to 20 sensors.

The field busses PROFIBUS DP and Modbus RTU (connected via RS485 interface), PROFINET, EtherNet/IP and Modbus TCP (connected via LAN) ensure a reliable and direct data transfer to the PLC.

Features
- The integrated LAN interface allows the simplest network and internet connection (integrated web server) and remote access
- Connection to the PLC made easy with our profibus DP and MODBUS RTU versions
- Quick software updates and data backup via the standard USB interface

Terminal/controller DIQ/S 282/284  | IQ Sensor Net

Controller for small and mid-sized wastewater treatment plants including USB-interface and internal data logger - up to 4 sensors, all parameters, available anytime.

Features
- All parameters available (O2, NH4, NO3, COD, PO4, sludge level, ...)
- USB-interface and internal data logger by default
- Convenient and available anytime via Ethernet-interface
The new system 181 - the digital and cost-efficient single parameter measuring point with proven IQ Sensor Net technology and matching fixed cable sensors.

Features
- Low-cost alternative to analog measuring points
- Matching digital IQ fixed cable sensors for pH/ORP, conductivity, O2 and turbidity
- Stable, robust and proven measuring technology

Version
DIQ/S 181/34/1
Connectable sensors
1 IQ fixed cable sensor
Power outputs and relays
2 x (0) 4–20 mA, 3x relays
Parameters
pH/ORP, conductivity, O2, turbidity, temperature
Sensor cable length
10 m
Max. cable length
250 m (DIQ/JB and SNCIQ required sold by the meter)
Power supply
Wide range power supply (100-240 VAC) or 24 V
Connectable modules
DIQ/CHV (Cleaning Head Valve)

MIQ Modules for Outputs, Inputs and Communication

Module to transfer the measured values or with a alert/alarm function - thanks to the modular principle and simple installation this is individually customizable.

Features
- Can be combined in any configuration thanks to the modular system - no matter where, when or how
- Simple installation - the stacking technique of the IQ Sensor Net saves additional installation materials, work effort and time
- Integrated lightning protection ensures high operational safety in any weather

Power supply
Directly via IQ Sensor Net
Housing
Polycarbonate with 20 % glass fibre, protection class IP 66
Dimensions
144(W) x 144(H) x (D)52 mm
Cable screw connections
4 cable screw connections M16 x 1.5
IQSN connections
2
Digital outputs
MIQ/2-PR: PROFIBUS-DP
MIQ/2-MOD: MODBUS RTU
Analog outputs
MIQ/C6: 6 x (0) – 20 mA
MIQ/R6: 6 x relays
MIQ/CR3: 3 x (0) – 20 mA, 3 x Relay
Inputs
MIQ/IC2: 2 x (0) – 20 mA

MIQ Modules for System Expansion

The IQ Sensor Net grows with its tasks - modules for individual system expansions with up to 4 IQSN connections and wireless communication.

Features
- Simple system expansion - removal possible from any location
- The two-wire technology or stacking technique makes the installation extremely easy
- The integrated lightning protection ensure high operational safety in any weather

Power supply
directly via IQ SENSOR NET
Housing
Polycarbonate with 20 % glass fiber, protection class IP 66
Dimensions
144(W) x 144(H) x 52(D) mm
Cable screw connections
4 cable screw connections M16 x 1.5
Ambient conditions
Operating temperature: -20 °C … +55 °C
Storage temperature: -25 °C … +65 °C
IQSN connections
MIQ/JB (R): 4 MIQ/WL PS: 3
Radio transmission MIQ/WL PS
Frequency: 2.4 GHz
ISm-Band Distance: max. module distance 100 m
MIQ Modules for Power Supply  
IQ Sensor Net

Module to supply voltage to the system components in the IQ Sensor Net - thanks to the modular principle and simple installation this is individually customizable.

Features
- Individually adaptable to the energy requirement - up to 6 modules can be installed in one system
- Simple mounting - mount anywhere in the system, stacked without additional mounting hardware
- Integrated lightning protection ensures high operational safety in any weather

Other MIQ-Module  
IQ Sensor Net

Whether you need compressed air cleaning for sensors or ground cable terminal strips - the modules IQ Sensor Net make this possible, simple installation included.

Features
- Simple function expansion - compressed air cleaning is quick and uncomplicated to install
- Simple system expansion - cable extension of ground cables made easy
- Easy mounting - the modular design saves money, time and work

DIQ Modules  
IQ Sensor Net

Modules for the flexible expansion of digital IQ Sensor Net systems 181 and 282/284 by additional measuring points or functions - compact design.

Features
- The simple installation - connection and mounting are carried out with terminal boxes and screws
- The flexible system expansion allows you to upgrade at a later date
- Its compact design make it space and cost saving
Optional air pressure cleaning for IQ Sensor Net sensors. For heavy pollution. For systems with and without their own compressed air supply.

Features
- Easy installation
- Reliable cleaning
- Saves time and cost

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIQ/CHV</td>
<td>Dual IQ/Cleaning Head Valve, for the automatic, relay controlled compressed air cleaning in the system 282/284</td>
</tr>
<tr>
<td>MIQ/CHV PLUS</td>
<td>Module IQ/Cleaning Head Valve, for the automatic relay controlled or IQ SENSOR NET compressed air cleaning in the system 282/284, 2020</td>
</tr>
<tr>
<td>Cleaning Air Box - 230 VAC</td>
<td>Air pressure compressor to supply cleaning air for different sensors. Power supply 230 VAC. Activation via relay.</td>
</tr>
<tr>
<td>Cleaning Air Box - 115 VAC</td>
<td>Air pressure compressor to supply cleaning air for different sensors. Power supply 115 VAC. Activation via relay.</td>
</tr>
<tr>
<td>CH</td>
<td>Cleaning head for online sensors with a diameter of 40 mm, delivery includes 15 m compressed air hose</td>
</tr>
</tbody>
</table>

Terminal boxes and cables for analog pH/ORP, conductivity or oxygen measurements for cable extension or to connect to the IQ Sensor Net.

Features
- Flexible via connection of analog sensors to the IQ Sensor Net
- Safe measured value transfer also for longer distances
- Simple mounting thanks to the clamping of open cable ends

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K 5 S</td>
<td>Coaxial electrode plug, 5 m coaxial cable, 5 plug (extension cable)</td>
</tr>
<tr>
<td>Kl/pH-MIQ/S</td>
<td>Active terminal box for the connection of high ohm plug head pH/ORP measuring chains to MIQ measuring systems. Plug/cable combination A57/S as well as temperature sensor TFK 325/150 required.</td>
</tr>
<tr>
<td>K1LF-0.9/MIQ</td>
<td>Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ measuring systems and a cell constant of 0.917 cm⁻¹.</td>
</tr>
<tr>
<td>K1LF-0.7/MIQ</td>
<td>Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ measuring systems and a cell constant of 0.778 cm⁻¹. To connect lab measuring cells you will need an adapter (303212 ADA/AMPH LAB LF).</td>
</tr>
<tr>
<td>K1LF-0.4/MIQ</td>
<td>Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ measuring systems and a cell constant of 0.475 cm⁻¹. To connect lab measuring cells, you will need an adapter (303212 ADA/AMPH LAB LF).</td>
</tr>
<tr>
<td>K1LF-0.1/MIQ</td>
<td>Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ measuring systems and a cell constant of 0.04 in⁻¹. To connect lab measuring cells, you will need an adapter (303212 ADA/AMPH LAB LF).</td>
</tr>
<tr>
<td>K1LF-0.01/MIQ</td>
<td>Active terminal box to connect 2 and 4 electrode measuring cells with NTC to MIQ measuring systems and a cell constant of 0.00 in⁻¹. To connect lab measuring cells, you will need an adapter (303212 ADA/AMPH LAB LF).</td>
</tr>
<tr>
<td>SNCIQ</td>
<td>Special two-pin IQ Sensor Net Cable with shield for safe energy and data transfer within the IQ Sensor Net system. Indicate length in m when ordering.</td>
</tr>
</tbody>
</table>

SACIQ connecting cable, a cable for all sensors. For data transfer and power supply. In combination with sensor waterproof up to 100 m.

Features
- One cable for data transfer and power supply
- One connector for all sensors
- Available as regular or sea water edition

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>-35 °C ... + 80 °C</td>
</tr>
<tr>
<td>Pressure range</td>
<td>106 Pa (10 bar) (cable connected to sensor)</td>
</tr>
<tr>
<td>Cable lengths</td>
<td>1.5 m, 7 m, 15 m, 20 m, 25 m, 50 m, 75 m, 100 m, special lengths</td>
</tr>
<tr>
<td>Material connector</td>
<td>Normal model: Stainless steel 1 4571, POM Sea water</td>
</tr>
<tr>
<td>Model</td>
<td>Model: Titanium Grade 2, POM</td>
</tr>
</tbody>
</table>

Terminal Boxes and Connecting Cables

Connection Cables for IQ Sensors
Online Digital Electro-chemical Oxygen Sensors  

In the analog sensors of the TriOxmatic® series, you will find the ideal solution for your application. In addition to the continuous measuring accuracy, the sensors are equipped with an automatic self-diagnosis system, a shorter response time and different cable lengths as options.

<table>
<thead>
<tr>
<th>Model</th>
<th>700IQ(SW) Seawater</th>
<th>701IQ</th>
<th>702IQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>DO Con: 0.0–60.0 mg/L; Saturation: 0–600 %</td>
<td>DO Con: 0.00–20.00 mg/L; 0.0–60.0 mg/L; Saturation: 0–200.0 %; 0–600 %</td>
<td>DO Con: 0–2,000 μg/L; 0.00–10.00 mg/L; Saturation: 0–110 %</td>
</tr>
<tr>
<td>Weight &amp; dimensions</td>
<td>700IQ: 360(L) × 40(Ø) mm; Approx 660g</td>
<td>701IQ: 360(L) × 59.5(Ø) mm; Approx 1,770g</td>
<td>/</td>
</tr>
</tbody>
</table>

FDO® sensors are the perfect solution for measuring dissolved oxygen. In addition to being free of calibration and flow, with their 45° membrane, they are also insensitive to air bubbles. Therefore, you will not require any additional installation equipment. The robust design of this sensors allows the use with an overpressure of up to 10 bar. The special membrane has a unique stability and thus ensures stable measured values.

Calibration-free, reliable, DIN compliant - the optical FDO® oxygen sensors for the IQ Sensor Net to regulate biological cleaning steps.

**FDO 700IQ**
- **Usage**: Seawater Model (FDO® 700 IQ SW)
- **Materials**: All wetted parts are made of titanium and plastic and are therefore extremely resistant to corrosion.
- **Measurement range (25°C)**:
  - DO: 0–20.00 mg/L, Saturation: 0–200.0 %
- **Accuracy**:
  - ±0.05 mg/L (1 mg/L)
  - ±0.1 mg/L (1 mg/L)
- **Power supply**: Max DC24 V (Supplied via controller)
- **Weight & dimensions**: 340(L) × 40(Ø) mm; not incl cable
  - Approx 900g

**Converter (P36)** required separately.

---

**Online Digital IQ Sensors for Dissolved Oxygen**  

FDO® sensors are the perfect solution for measuring dissolved oxygen. In addition to being free of calibration and flow, with their 45° membrane, they are also insensitive to air bubbles. Therefore, you will not require any additional installation equipment. The robust design of this sensors allows the use with an overpressure of up to 10 bar. The special membrane has a unique stability and thus ensures stable measured values.

Calibration-free, reliable, DIN compliant - the optical FDO® oxygen sensors for the IQ Sensor Net to regulate biological cleaning steps.

**FDO 700IQ**
- **Usage**: Seawater Model (FDO® 700 IQ SW)
- **Materials**: All wetted parts are made of titanium and plastic and are therefore extremely resistant to corrosion.
- **Measurement range (25°C)**:
  - DO: 0–20.00 mg/L, Saturation: 0–200.0 %
- **Accuracy**:
  - ±0.05 mg/L (1 mg/L)
  - ±0.1 mg/L (1 mg/L)
- **Power supply**: Max DC24 V (Supplied via controller)
- **Weight & dimensions**: 340(L) × 40(Ø) mm; not incl cable
  - Approx 900g

**Converter (P36)** required separately.
**Online pH/ORP Sensor**  
**SensoLy7 700 IQ**

SensoLy7 700 IQ - digital pH/ORP armature with integrated preamplifier and temperature sensor as well as lightning protection to be connected to IQ Sensor Net.

By storing calibration values within the sensor, a “pre-calibrated pH-measurement” can be generated. Due to our quick-lock, the sensor can be disconnected and after laboratory calibration re-connected at the site easily. Inconvenient calibrations in the field under adverse conditions can be completely eliminated if there is an IQ connection in the lab.

**Online Conductivity Sensor**  
**TetraCon 700 IQ**

TetraCon® 700 IQ - digital 4 electrode conductivity measuring cell with flow-free operation, especially with high conductivity. This measuring technique has proven itself over the years and offers an interference-free operation, also and foremost at high conductivity values. The 4-electrode measuring cell is very insensitive to contamination. Based on the pressure resistance of up to 10 bars, there is nothing to stop you from mounting into pipes or on lines.

The sea water model includes the sensor for use in special media. All wetted parts are made of titanium and plastic and are therefore extremely resistant to corrosion.

**Online Turbidity/TSS Sensor**  
**VisoTurb 700 IQ/ViSolid 700 IQ**

VisoTurb® - Optical turbidity sensors according to nephelometric principle according to DIN EN 27027 and ISO 7027 for the in-situ use in water/wastewater with ultrasonic cleaning system.

---

**Sensor**

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Material</th>
<th>Weight &amp; dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SensoLy7 700IQ</td>
<td>SUS 316Ti</td>
<td>508(L) × 40(Ø) mm, Approx 970g</td>
</tr>
</tbody>
</table>

**Electrodes**

<table>
<thead>
<tr>
<th>Electrode</th>
<th>Measurement range</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEA</td>
<td>pH 2–12</td>
<td>0–60 °C</td>
</tr>
<tr>
<td>SEA-HP</td>
<td>pH 4–12</td>
<td>0–60 °C</td>
</tr>
<tr>
<td>DWA</td>
<td>pH 0–14</td>
<td>0–60 °C</td>
</tr>
<tr>
<td>ECA</td>
<td>pH 2–12</td>
<td>0–60 °C</td>
</tr>
<tr>
<td>PtA</td>
<td>±2000 mV</td>
<td>0–60 °C</td>
</tr>
</tbody>
</table>

**Measurement range**

<table>
<thead>
<tr>
<th>Range</th>
<th>Units</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00–20.00 μS/cm</td>
<td>0.0–2000 μS/cm</td>
<td></td>
</tr>
<tr>
<td>0.000–2.000 mS/cm</td>
<td>0.0–20.00 mS/cm</td>
<td></td>
</tr>
<tr>
<td>0.0–200.0 mS/cm</td>
<td>0–500 mS/cm</td>
<td></td>
</tr>
</tbody>
</table>

**Material**

<table>
<thead>
<tr>
<th>Model</th>
<th>SUS316Ti (IP68)</th>
</tr>
</thead>
</table>

**Weight & dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight &amp; dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>VisoTurb</td>
<td>357(L) × 40(Ø) mm, 660g</td>
</tr>
<tr>
<td>ViSolid</td>
<td>357(L) × 40(Ø) mm, 660g</td>
</tr>
</tbody>
</table>

---
Online Ion Selective Ammonium and Nitrate Sensor

**Ammonium/Nitrate Sensor**
VARiON Plus 700IQ

Ion selective measurement of ammonium and nitrate free of reagents with automatic compensation of potassium/chloride with the VARiON® Plus 700IQ.

**Measurement**
Ion Electrodes

**Measurement range**
- **Ammonia**
  - NH₄⁺: 0.1~100.0 mg/L; 1~1,000 mg/L
  - NH₄⁻: 0.1~129.0 mg/L; 1~2,580 mg/L
  - K⁺: 1~1,000 mg/L (Compensation ranges)
- **Nitrate**
  - NO₃⁻: 0.1~100.0 mg/L; 1~1,000 mg/L
  - NO₂⁻: 0.5~450.0 mg/L; 5~4,500 mg/L
  - Cl⁻: 1~1,000 mg/L (Compensation ranges)

**Accuracy**
- Meas value ±5 % or ±0.2 mg/L whichever is larger
- pH points: pH4~8.5

**Weight & dimensions**
392(L) × 40(Ø) mm
Approx 670g (electrodes only)

**Ammomun Sensor**
AmmoLyt Plus 700IQ

Ammonium measurement directly in the medium without sample preparation and sample transfer. Measurement of centrate and other process waters up to 2,000 mg/L NH₄-N.

**Weight & dimensions**
392(L) × 40(Ø) mm
Approx 670g (electrodes only)

**Nitrate Sensor**
NitraLyt Plus 700IQ

Nitrogen elimination - transparent, process optimized, economical. Nitrate measurement directly in the medium - optimized for regulation purposes.

**Weight & dimensions**
392(L) × 40(Ø) mm
Approx 670g (electrodes only)

**Online Optical Nitrate/Nitrite Sensors**
NitraVis 700IQ / NiCaVis 700IQ / NiCaVis 700IQ Ni

Spectral measurement of nitrate and suspended solids content without chemicals for all applications needing an accurate nitrate measurement.

The integrated WTW ultrasonic cleaning prevents the attachment of deposits from the very beginning. This ensures comparable and reliable measured values in continuous operation.

**Item**
- **Model**
- **Optical Spectral**
- **NOx Optical Single Wavelength**
  - **Measurement**
    - **Optical Spectral**
    - **UV absorption measurement**
  - **pH range**
  - **Weight & dimensions**

**Nitrite Sensor**
NitraLyt Plus 700IQ

Nitrogen elimination - transparent, process optimized, economical. Nitrate measurement directly in the medium - optimized for regulation purposes.

**Weight & dimensions**
392(L) × 40(Ø) mm
Approx 670g (electrodes only)

**Online Ion Selective Ammonium and Nitrate Sensor**

Ion selective measurement of ammonium and nitrate free of reagents with automatic compensation of potassium/chloride with the VARiON® Plus 700IQ.

**Measurement**
Ion Electrodes

**Measurement range**
- **Ammonia**
  - NH₄⁺: 0.1~100.0 mg/L; 1~2,000 mg/L
  - NH₄⁻: 0.1~129.0 mg/L; 1~2,580 mg/L
  - K⁺: 1~1,000 mg/L (Compensation ranges)
- **Nitrate**
  - NO₃⁻: 0.1~100.0 mg/L; 1~1,000 mg/L
  - NO₂⁻: 0.5~450.0 mg/L; 5~4,500 mg/L
  - Cl⁻: 1~1,000 mg/L (Compensation ranges)

**Accuracy**
- Meas value ±5 % or ±0.2 mg/L whichever is larger
- pH points: pH4~11

**Weight & dimensions**
392(L) × 40(Ø) mm
Approx 670g (electrodes only)

**Online Optical Nitrate/Nitrite Sensors**
NitraVis 700IQ / NiCaVis 700IQ / NiCaVis 700IQ Ni

Spectral measurement of nitrate and suspended solids content without chemicals for all applications needing an accurate nitrate measurement.

The integrated WTW ultrasonic cleaning prevents the attachment of deposits from the very beginning. This ensures comparable and reliable measured values in continuous operation.

**Item**
- **Model**
- **Optical Spectral**
- **NOx Optical Single Wavelength**
  - **Measurement**
    - **Optical Spectral**
    - **UV absorption measurement**
  - **pH range**
  - **Weight & dimensions**

**Nitrite Sensor**
NitraLyt Plus 700IQ

Nitrogen elimination - transparent, process optimized, economical. Nitrate measurement directly in the medium - optimized for regulation purposes.

**Weight & dimensions**
392(L) × 40(Ø) mm
Approx 670g (electrodes only)

**Online Optical Nitrate/Nitrite Sensors**
NitraVis 700IQ / NiCaVis 700IQ / NiCaVis 700IQ Ni

Spectral measurement of nitrate and suspended solids content without chemicals for all applications needing an accurate nitrate measurement.

The integrated WTW ultrasonic cleaning prevents the attachment of deposits from the very beginning. This ensures comparable and reliable measured values in continuous operation.

**Item**
- **Model**
- **Optical Spectral**
- **NOx Optical Single Wavelength**
  - **Measurement**
    - **Optical Spectral**
    - **UV absorption measurement**
  - **pH range**
  - **Weight & dimensions**

**Nitrite Sensor**
NitraLyt Plus 700IQ

Nitrogen elimination - transparent, process optimized, economical. Nitrate measurement directly in the medium - optimized for regulation purposes.

**Weight & dimensions**
392(L) × 40(Ø) mm
Approx 670g (electrodes only)
Online Optical UV VIS Spectral Sensors  
CarboVis 700 IQ/NiCaVis 700 IQ

CarboVis® 700 IQ: Spectral sensor with integrated ultrasonic cleaning for the chemical-free measurement of the organic load and suspended solids concentration.

NiCaVis® 705 IQ: Sensor with integrated ultrasonic cleaning for the reagent-free measurement of nitrate and carbon parameters in the wastewater treatment system drain.

The optical measuring method of these sensors allows continuous measuring of carbon and nitrogen parameters directly in the medium. With this procedure, the information of the entire spectrum is evaluated, which allows the simultaneous determination of multiple parameters. At the same time, cross sensitivities of individual parameters among each other and interference such as turbidity are eliminated.

Measurement
Spectral measurement in the UV-VIS range of (200~720 nm)

Measurement range
CarboVis 705 IQ/5 mm
COD: 0.1~800.0 mg/L
TOC: 1~500.0 mg/L
SAC: 0.1~600.0 m\(^{-1}\)

CarboVis 701 IQ: 1 mm
COD: 1~12,500 mg/L
TOC: 1~20,000 mg/L
SAC: 1~5,000 m\(^{-1}\)

NiCaVis 705 IQ: 5 mm
COD: 0.1~800.0 mg/L
TOC: 1~500.0 mg/L
SAC: 0.1~600.0 m\(^{-1}\)
NO\(_3\)-N: 0.01~50.00 mg/L

Cleaning
Maintenance-free WTW ultrasonic cleaning

IQ SENSOR NET system
282/284 and 2020

Online Optical UV sensors  
UV 700 IQ SAC

UV 700 IQ SAC: Low-cost probe (integrated ultrasonic cleaning, turbidity compensation) for the maintenance-free and reagent-free SAC measurement according to DIN 38404 C3.

With the new sensor UV 700 IQ SAC, you can determine the spectral absorption coefficient at 254 nm directly and without chemicals. Turbidity influences are compensated by a reference measurement at 550 nm.

Measuring method
UV absorption measurement 254 nm

Measurement range
UV 705 IQ SAC: 5 mm
AC.: 0.1~600.0 m\(^{-1}\)
UVT.: 0.0~100.0 %

UV 701 IQ SAC: 1 mm
CSAC: 0.5~3,000.0 m\(^{-1}\)
UVT.: 0.0~100.0 %

Cleaning
WTW ultrasonic cleaning

IQ SENSOR NET system
282/284 and 2020

Online Digital IQ Sensor to Determine the Sludge Level  
IFL700 IQ

Unique on the market: Sludge level measurement with maintenance-free cleaning system - the FL 700 IQ with smart signal processing.

Detailed echo profile presentation on the display.

Maintenance-free cleaning system.

Measuring method
Ultrasound echo measurement (ultrasonic)

Measurement range
0.40~15.00 m

Weight & dimensions
442(L) x 105(Ø) mm (Max) /
IFL 700 IQ: 3.9kg, IFL701 IQ: 3.7kg

Converter (P36) required separately
Online Drinking Water Turbidity Meter  
Turb 2000 Series

The TURB 2000 Series - nephelometric turbidity meter with large measuring range, with integrated bubble trap and white light according to US EPA 180.1. The nephelometric turbidity meter TURB 2000 can be used for nearly all applications thanks to its large measuring range. By using white light and the respective standards, the meter meets all requirements of the US EPA 180.1 as well as those of the EN ISO 7027.

Drinking Water Analyzer  
Chlorine 3000

Chlorine 3000 - photometric analyzer with large measuring range and high resolutions for free and total chlorine with DPD method according to US EPA.

Process Chlorine electrodes  
CL/CS/CP series

The special construction of the ProcessLine electrodes brings them very close to the optimum for liquid electrolyte electrodes with respect to their accuracy, stability, rapid response and long working life. The Chlorine electrodes cover a wide array of applications including drinking water, processes and swimming pool both recreational and commercial.
Online Single and Multi-parameter Measuring Systems

The TresCon® analyzer system is the perfect solution for highly precise online measurement of NH₄, NO₃, NO₂, SAC, PO₄ and Ptot. With the TresCon multi-parameter analyzer, up to 3 measuring parameters can be detected.

Analyzer/module for ammonium
TresCon OA110

Measurement
Gas-sensitive NH₃ electrode

Measurement range 1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>mg/L</th>
<th>mmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH₄⁺N</td>
<td>0.1~100</td>
<td>0.01~7.10</td>
</tr>
<tr>
<td>NH₃</td>
<td>0.1~1280</td>
<td>0.01~7.10</td>
</tr>
</tbody>
</table>

Measurement range 2

<table>
<thead>
<tr>
<th>Parameter</th>
<th>mg/L</th>
<th>mmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH₄⁺N</td>
<td>0.05~10</td>
<td>0.005~0.71</td>
</tr>
<tr>
<td>NH₃</td>
<td>0.05~12.8</td>
<td>0.005~0.71</td>
</tr>
</tbody>
</table>

Analyzer for Nitrate/SAC
TresCon ON210 / OS210

Measurement
4-beam photometer

Measurement range 1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>mg/L</th>
<th>μmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO₃⁻N</td>
<td>0.1~60</td>
<td>0~4,000</td>
</tr>
<tr>
<td>NO₂⁻N</td>
<td>0.1~250</td>
<td>0~4,000</td>
</tr>
<tr>
<td>SAC</td>
<td>0.1~2000</td>
<td>3~320</td>
</tr>
</tbody>
</table>

Analyzer/module for Total Phosphorus
TresCon ONS10

Measurement
Diazotization

Measurement range 1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>mg/L</th>
<th>mmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO₄⁻P</td>
<td>0.05~1.200</td>
<td>0.40~90</td>
</tr>
<tr>
<td>NO₃⁻N</td>
<td>0.020~4.000</td>
<td>0.40~90</td>
</tr>
</tbody>
</table>

Analyzer for Orthophosphate
TresCon OP210

Measurement
Phosphate

Measurement range 1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>mg/L</th>
<th>μmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO₄⁻P</td>
<td>0.05~3.00</td>
<td>1.5~100</td>
</tr>
<tr>
<td>PO₃⁻</td>
<td>0.15~9.00</td>
<td>1.5~100</td>
</tr>
</tbody>
</table>

Measurement range 2

<table>
<thead>
<tr>
<th>Parameter</th>
<th>mg/L</th>
<th>μmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO₄⁻P</td>
<td>0.1~10.00</td>
<td>3~320</td>
</tr>
<tr>
<td>PO₃⁻</td>
<td>0.3~30.00</td>
<td>3~320</td>
</tr>
</tbody>
</table>

Measurement range 3

<table>
<thead>
<tr>
<th>Parameter</th>
<th>mg/L</th>
<th>μmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO₄⁻P</td>
<td>0.1~25.0</td>
<td>3~800</td>
</tr>
<tr>
<td>PO₃⁻</td>
<td>0.3~80.00</td>
<td>3~800</td>
</tr>
</tbody>
</table>

Online Orthophosphate Analyzer
P700 IQ

The P 700 IQ orthophosphate analyzer is another component for the IQ Sensor Net (System 2020 XT). It can be integrated into new and existing systems just as easily as a sensor. The measuring principle is based on the photometric yellow method (molybdate vanadate), which has been a proven measuring method for orthophosphate.

Measurement

<table>
<thead>
<tr>
<th>Measuring range</th>
<th>mg/L</th>
<th>μmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 0.05 ... 15.00</td>
<td>0.40~90</td>
<td></td>
</tr>
</tbody>
</table>

Weight & dimensions

825(H) x 436(W) x 438(D) mm
Approx. 30 kg

Sample Preparation System
PurCon

The perfect online sample preparation - continuous, safe, low-maintenance. Yields samples free of suspended solids and bacteria.

Permeat performance levels
Max 3.6 lh, adjustable in 4 steps
Sample extraction
Approx 400~1,500 L/h
Weight & dimensions
575(W) x 220(D) x 735(H) mm
Approx 36 kg
Expert™ Hydrostatic Submersible Level Transmitters are developed to deliver stable and exact level measurement even in very harsh environments. Expert™ works flawlessly with a minimum of maintenance.

Features
- Designed in enforced housing material
- Extremely wide measuring range from 0 to 300 m
- The transmitters are delivered with a predefined but re-programmable measuring range
- Easy installation
- PUR insulation and constructed for 1,000kg tensile strength

Expert Level Measurement

Expert™ Hydrostatic Water Level Measurement

MJK’s Shuttle® measures, displays, transmits and controls levels for about the same price as the competitors’ stripped-down transmitters, plus you get the high quality product you expect from MJK. With MJK’s cabled sensor it is easy to locate the display, where it can be useful, and the large display allows viewing from a distance. It has a one-step measurement start-up procedure that is easy to follow and easy to modify set-up of all functions, controls and signal management features. The advanced on-board software ensures accurate and reliable operation even in difficult applications.

Features
- Tanks in storm flow installations
- Lift stations
- Tanks at sewage plants
- Tanks in drinking water facilities
- Tanks and basins in process and food industries
- Sludge containers
- Many types of solids levels
- Level measurement in open channels, flumes and weirs

### Model

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Water Wells</td>
<td>Water Wells and Water Storage and Processing</td>
<td>Water Wells and Water Storage and Processing</td>
<td>Water Wells and Water Storage and Processing</td>
<td>Wastewater and process water</td>
<td>Drinking, waste and process water</td>
</tr>
<tr>
<td>Body</td>
<td>AISI 316L</td>
<td>AISI 316L</td>
<td>AISI 316L</td>
<td>AISI 316L</td>
<td>PP</td>
<td>PP</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>AISI 316L</td>
<td>AISI 316L</td>
<td>AISI 316L</td>
<td>Ceramic</td>
<td>AISI 316</td>
<td>Ceramic</td>
</tr>
<tr>
<td>Features</td>
<td>Outer diameter Ø 16 mm</td>
<td>Outer diameter Ø 22 mm</td>
<td>Outer diameter Ø 22 mm</td>
<td>Outer diameter Ø 60 mm</td>
<td>Outer diameter Ø 50 mm</td>
<td>Outer diameter Ø 50 mm</td>
</tr>
<tr>
<td>Output</td>
<td>Analog 4-20 mA, voltage or Modbus</td>
<td>Analog 4-20 mA, voltage or Modbus</td>
<td>Analog 4-20 mA, voltage or Modbus</td>
<td>Analog 4-20 mA, voltage or Modbus</td>
<td>Analog 4-20 mA, voltage or Modbus</td>
<td>Analog 4-20 mA, voltage or Modbus</td>
</tr>
</tbody>
</table>

Shuttle® Ultrasonic Level Transmitters

Range
- In liquids: 0~10 cm to 0~25 m / 0~4 in. to 0~80 ft.
- In solids: 0~4 m to 0~10 m / 0~4 in. to 32 ft.

Frequency
- 30 kHz, 40 kHz or 50 kHz

Temperature range
- -20 to +60 °C / -4 °F to +140 °F

Temperature compensation
- Built-in -20 to +60 °C / -4° to +140 °F

Spread
- 3°, 6° or 7°

Material
- Depends on the sensor model

Enclosure
- IP 68 / NEMA IP (submersible to 10 m / 30 ft. of water)

Max. cable length
- 250 m
MagFlux Electromagnetic Flow Meters deliver very stable and accurate flow measurements in any conductive liquid in a pressurized closed pipe system. MagFlux Flow Meters have no moving parts and have no hydraulic influence on the flow in the pipe system.

The measurement method used is very accurate over a wide measurement range. We have developed an outstanding sensor measuring method for MagFlux. An individual sensor calibration code adapts the converter automatically to communicate with the sensor. The calibration code includes calibration data, nominal diameter and sensor features. Once the calibration code is entered, the MagFlux Flow Meter is ready to operate. The calibration code means there is no need to make difficult adjustments in the field.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sensor 7100</th>
<th>Sensor 7200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Process fluids</td>
<td>Wastewater, Process fluids</td>
</tr>
<tr>
<td>Sizes</td>
<td>Min. DN15</td>
<td>DN20</td>
</tr>
<tr>
<td></td>
<td>Max. DN1000</td>
<td>DN1400</td>
</tr>
<tr>
<td>Precision (≥0.2m/s)</td>
<td>0.25 %</td>
<td>0.25 %</td>
</tr>
<tr>
<td>Fluid flow speed</td>
<td>0.2–10 m/s (0.6–30 ft./s)</td>
<td>0.2–10 m/s (0.6–30 ft./s)</td>
</tr>
<tr>
<td>Flange</td>
<td>EN-1092-1</td>
<td>EN-1092-1</td>
</tr>
<tr>
<td></td>
<td>ANSI B 16.5</td>
<td>B 16.5</td>
</tr>
<tr>
<td></td>
<td>AWWA C207-01</td>
<td>C207-01</td>
</tr>
<tr>
<td>Liner</td>
<td>PTFE</td>
<td>Hard rubber</td>
</tr>
<tr>
<td>Housing</td>
<td>Epoxy painted steel</td>
<td>Epoxy painted steel</td>
</tr>
<tr>
<td>Electrodes</td>
<td>1.4571 (AISI 316 Ti)</td>
<td>1.4571 (AISI 316 Ti)</td>
</tr>
<tr>
<td>Enclosure rating</td>
<td>IP67 / 68</td>
<td>IP67 / 68</td>
</tr>
<tr>
<td>Reversible flow direction</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Build-in liquid earth electrode 3)</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

MagFlux Q Electromagnetic Flow Meter, created in ABS plastic, designed with an optimized construction which secures optimal performance. MagFlux Q provides you very stable and highly accurate flow measurements in conductive liquids, especially at low flow velocity.

MagFlux Q Flow Sensors are available in the sizes DN 50, DN80, DN 100 and DN150 with standard construction lengths and EN flanges. MagFlux Q Flow Meters can be installed either with the converter compact mounted on.
The ProSample series of fully automated portable samplers is an extension of YSI's process monitoring and control equipment offering for wastewater, surface water and industrial treatment markets. They assist with regulatory compliance and process optimization in various stages through these processes.

Lightweight and easy to use, the samplers come with a proprietary peristaltic pump for highly accurate sampling based on time, flow or weather event. Once an event occurs, or during normal operation, the log data is easily extracted from the sampler via a USB and can be taken to a PC for further evaluation. The ProSample series provides a unique combination of user-friendly design and unmatched technology.

Features
- Robust PE, double-walled, insulated housing for temperature control
- Easy tube replacement for minimal downtime
- Spring-loaded roller bearings in peristaltic pump providing longer tubing life, up to 20 % longer than competition
- Highly accurate sample volume using two captive sensors in the peristaltic pump for volume control
- User-friendly, simple programming and calibration from sampler or PC
- Long battery life - up to 550 samples per battery charge
- Data recovery via USB and does not require direct transfer to a laptop
- Non-volatile data memory for up to 5 years, so you never have to worry about losing your data if power is lost
- "Mini" PM option has smaller footprint

Applications
- Stormwater
- Wastewater treatment (municipal and industrial)
- Pre-sedimentation
- Post-sedimentation
- Industrial pre-treatment

ProSample Technical Specifications

<table>
<thead>
<tr>
<th>Sampling method</th>
<th>peristaltic pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 to 10,000 mL</td>
<td>(flow proportional)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Single sample volume accuracy on peristaltic pump ±5 % or ±5 mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suction height</td>
<td>Maximum 6.3 m (21.33 ft) at 1,013 h Pa</td>
</tr>
<tr>
<td>Pumping speed</td>
<td>&gt;0.5 m/s (1.64 ft/s) at suction height up to 5 m (16.4 ft) at 1,013 h Pa; pump capacity can be adjusted electronically</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calibration</th>
<th>Automatic (adjustable) or manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material (housing)</td>
<td>PE (polyethylene)</td>
</tr>
<tr>
<td>Material (tubing)</td>
<td>PVC L = 5 m (16.4 ft), ID = 10 mm (0.39 in) maximum, hose length = 30 m (98.43 ft)</td>
</tr>
<tr>
<td>Dimensions (D x H)</td>
<td>P = 500 x 740 mm (19.8 x 29.1 in) PM = 400 x 650 mm (15.74 x 23.82 in)</td>
</tr>
<tr>
<td>Weight</td>
<td>P = 15.6 kg (34 lb) PM = 12.8 kg (28 lb)</td>
</tr>
<tr>
<td>Measuring interval</td>
<td>Range A: 5 minutes (adjustable) or greater; Range B: 10 minutes or greater</td>
</tr>
<tr>
<td>Communications</td>
<td>Mini-USB, RS232, Connection via USB and PC (YSIConnect must be installed on PC)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Memory</th>
<th>Up to 3,000 entries, non-volatile data memory for up to 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data log</td>
<td>Stores sampling and malfunction data, bottle changes, messages, external signals</td>
</tr>
<tr>
<td>Signal inputs</td>
<td>Analog: (2) 4-20 mA</td>
</tr>
<tr>
<td>Digital</td>
<td>1 (Flow, event, 1 input can be programmed independently</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 to 50 °C (32 to 122 °F)</td>
</tr>
<tr>
<td>Sample temperature</td>
<td>0 to 40 °C (32 to 104 °F)</td>
</tr>
<tr>
<td>Power supply</td>
<td>12 V / 7.2 Ah lead storage battery (maintenance-free, leak proof) 115V or 230V operation by means of battery charger in buffer mode</td>
</tr>
<tr>
<td>Certifications, standards</td>
<td>CE sampling according to ISO 5667-10, EN 16479</td>
</tr>
<tr>
<td>Programming</td>
<td>12 user-defined selectable programs</td>
</tr>
<tr>
<td>Keypad</td>
<td>Graphic display (128 x 64 pixels), back lit</td>
</tr>
<tr>
<td>Climate control</td>
<td>Insulated sample compartment - insulation thickness of 20 mm (0.78 in)</td>
</tr>
</tbody>
</table>
A unique water monitoring package that includes an easy to use lightweight composite/discrete water sampler, an open channel flow monitor and dual displays and outputs with a data recorder that is both Windows™ and Windows™ CE compatible. System has over 20 pre-programmed flume and weir tables for ease of use and flexibility. The peristaltic pump prevents sample contamination. The FSS is portable and can easily be set up to take samples based on flow rates such as a stream monitoring application.

**Accessories & Parts**

- **DA0000**
  - Water Temperature Sensor
- **DB0000**
  - pH Sensor
- **DFH000**
  - Turbidity Sensor
- **DCC500**
  - Conductivity Sensor
- **DD0500**
  - Optical D.O., 25 ft cable

**WS701R – Refrigerated Sampling Systems**

This economical refrigerated Sampler allows you to take individual time-weighted composite samples or full-bottle discrete grab samples in the supplied 2 gallon polyethylene sample bottle. Sample size control allows individual time-weighted samples or full-bottle discrete samples. Sample interval control allows you to set the time between individual composite samples or enable the external trigger mode. Start delay timer allows multiple units to be set for concurrent sampling or to delay the start of sampling after an event for a more representative sample.

**Features**

- Easy transport-quick disconnect pickup hose conveniently stored inside the enclosure
- Durable-heavy duty wheels and retractable handle built in
- Improved battery life-enclosed battery compartment with smart battery charger
- Rugged construction for harsh environments

**WQMS Water Quality Monitoring System**

Allows you to monitor multiple water quality parameters with a fully integrated, easy to use, economical system.

System Includes:

- Multichannel datalogger (7 analog channels and 2 digital channels) for data recording, four of our rugged 4-20 mA water quality sensors for measuring water temperature, pH, conductivity, and dissolved oxygen. You can select up to 3 more analog sensors and up to 2 digital sensors to monitor additional parameters.

**WQMS Features**

- Monitor temperature, DO, pH, conductivity, and 5 additional parameters at the same time
- High quality, rugged sensors
- Battery powered for remote locations
- User-friendly Windows™ and Windows CE-based PDA software included
- Four sample modes: timed, 10 times per second, logarithmic, and exception composite samples
- Both USB and serial communication ports
- Rugged, lockable, weather resistant enclosure
Applications
OI Analytical has been an innovator in TOC instrumentation since 1972. Hundreds of laboratories and industrial facilities rely on our TOC analyzers for their water quality monitoring applications.

- Drinking Water
- Pharmaceutical Cleaning Validation
- Municipal Wastewater
- Ground Water / Surface Water
- Process Water
- Boiler Feed Water & Condensate
- Metal Plating Solutions
- Ultrapure Water

Aurora 1030C TOC Analyzer

The Aurora 1030 TOC Analyzer combines OI Analytical’s innovative concurrent sampling technique with ACT II combustion to quickly and accurately process aqueous samples. Direct connectivity of the Aurora eliminates the need for a PC in the laboratory and provides remote instrument control from anywhere on the network. A microprocessor within the Aurora regulates temperatures, controls timing sequences, performs data calculations, and provides continuous system diagnostics. The standard electronic pressure control (EPC) automatically adjusts system pressures from method to method, even within a single sequence.

Features
- Wide operational range, 50 ppb C to 30,000 ppm C
- TC/TIC/TOC/NPOC/standard measurements
- Optional analysis module for total nitrogen (TNb)
- ACT II Dual Pack Advanced Combustion Technology reactor (patent-pending) that meets or exceeds requirements of USEPA, ASTM, and Standard Methods
- Reactor design for enhanced performance, reduced maintenance, and extended reactor and catalyst life
- Totally automated system for aqueous and particulated samples

Operating principle
Heated sodium persulfate oxidation

Scale
2 ppb C–30,000 ppm C

Accuracy / reproducibility
±2 % FS or 2 % relative, whichever is greater, 3.0 %

Method compliance
USEPA, CEN, USP, EUP, ASTM, ISO, DIN, STD Method

Autosampler
88 position rotary autosampler designed to fit directly underneath Aurora 1030C analyzer

Power
100–240 VAC, 50/60 Hz, 950 W

Weight & dimensions
430(W) × 460(D) × 610(H) mm
17.2kg, 36.3kg (Auto-sampler)

Aurora 1030CW TOC Analyzer

The Aurora 1030W TOC Analyzer processes aqueous samples for analysis of the total organic carbon (TOC), total inorganic carbon (TIC), and non-purgeable organic carbon (NPOC) content of the samples. Using heated persulfate oxidation technology, samples containing 2 ppb to 30,000 ppm of organic carbon can be analyzed. The supports Aurora 1030W USEPA-approved methods, Standard Methods, ASTM, DIN/ISO/CEN, USP, and EU Methods. Depending upon the protocol employed, up to 300 samples per 24-hour period can be analyzed, and in excess of 100,000 samples per year.

Features
- Wide operational range, 50 ppb C to 30,000 ppm C
- TC/TIC/TOC/NPOC/standard measurements
- Optional analysis module for total nitrogen (TNb)
- ACT II Dual Pack Advanced Combustion Technology reactor (patent-pending) that meets or exceeds requirements of USEPA, ASTM, and Standard Methods
- Reactor design for enhanced performance, reduced maintenance, and extended reactor and catalyst life
- Totally automated system for aqueous and particulated samples

Operating principle
High temperature (680 °C) catalytic combustion

Scale
100 ppb C–30,000 ppm C

Accuracy / reproducibility
±2 % FS or 2 % relative, whichever is greater, 3.0 %

Method compliance
USEPA, CEN, USP, EUP, ASTM, ISO, DIN, STD Method

Autosampler
88 position rotary autosampler designed to fit directly underneath Aurora 1030C analyzer

Power
100–240 VAC, 50/60 Hz, 950 W

Weight & dimensions
425(W) × 495(D) × 420(H) mm
15.4kg, 34.5kg (Auto-sampler)
The 9210p provides water and wastewater facilities with a dynamic, real-time analysis of natural organic matter (NOM) levels in influent and effluent streams. Fast, accurate results enable facility operators to rapidly adjust the treatment process and more precisely control coagulation, flocculation, and the formation of disinfection by-products, helping the facility to stay in compliance and reduce costs.

The 9210p Online Water Analysis Package includes everything you need for fast, accurate, real-time TOC analysis: the 9210p Online TOC Analyzer, 6-port stream selector, process gas module, 2 sample inlets, and wall-mount installation kit and reagent rack.

In 2006, OI Analytical began work on a project to develop a Total Organic Carbon Analyzer (TOCA) for use on the International Space Station. The successful culmination of the project came on November 14th, 2008, with NASA’s launch of the Space Shuttle Endeavor carrying the TOCA for installation in the water recycling system on board the space station. The TOCA is used to analyze the organic carbon level in water that has been processed and purified ensuring it is safe for human consumption.

**On-line TOC Analyzer 9210p**

**Features**
- Accurate, real-time monitoring and analysis of natural organic matter (NOM) in influent and effluent streams
- Handles up to 6 process streams
- Use standard reagents - no need for expensive proprietary chemicals
- Easy to maintain - no need for costly service contracts
- Proven, reliable heated sodium persulfate oxidation
- Compliant with USEPA Method 415.3 and SM310C
- Intuitive, easy-to-use software
- Large, color touchscreen display

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<table>
<thead>
<tr>
<th>Operating principle</th>
<th>Heated sodium persulfate oxidation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range</td>
<td>0.050 to 25 / 5 to 250 ppm carbon</td>
</tr>
<tr>
<td>Accuracy reproducibility</td>
<td>±5 %</td>
</tr>
<tr>
<td>Method compliance</td>
<td>SM 5310 C, USEPA 415.3 (Drinking Water)</td>
</tr>
<tr>
<td></td>
<td>SM 5310 C (Wastewater)</td>
</tr>
<tr>
<td>Measurement technique</td>
<td>Non-dispersive infrared (NDIR) detection</td>
</tr>
<tr>
<td>Power</td>
<td>24VDC (Optional 24VDC power supply allows operation with 90-250VAC 50/60 Hz source)</td>
</tr>
<tr>
<td>Weight &amp; dimensions</td>
<td>48.3(H) x 31.1(W) x 31.1(D) cm</td>
</tr>
<tr>
<td></td>
<td>19(H) x 12.25(W) x 12.25(D) 11kg</td>
</tr>
</tbody>
</table>
WTW Online offers a comprehensive range of water quality parameters from the standard physio-chemical through to the optical determination of carbon and nitrogen parameters to the range of chemical analysers for nutrient based determination.

Core product lines
- Online and portable water quality instruments
- UV/Vis, spectrophotometers

Global Water, founded in 1990, is a manufacturer, distributor, and systems integrator of water instrumentation serving the water, wastewater, and environmental markets.

Core product lines
- Water level and flow
- Samplers
- Water quality

Offers analytical instruments that detect, measure, analyze and monitor chemicals in liquids, solids and gases and products used to digest, extract and separate components of chemical mixtures.

Core product lines
- TOC, Online/Laboratory
- Purge and Trap
- Flow solutions
YSI’s environmental products provide high quality, high resolution data to better understand and manage our water resources. YSI Life Science and laboratory products are considered the gold standard for QC applications. They are used for process control, research and industrial applications by food and beverage, pharmaceutical and other demanding markets.

**Core product lines**
- Life Science analysers
- Water quality sensors and instruments

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SI Analytics*

The manufacturer of titrators, viscosity measuring systems, extensive line of glass capillary viscometers, SCHOTT® Instruments high-performance laboratory and process electrodes as well as meters for the measurement of pH, dissolved oxygen and conductivity for food and beverage, pharmaceutical and other demanding markets.

**Core product lines**
- Titration
- Water quality sensors and monitoring equipment
- Viscometry

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**ROYCE TECHNOLOGIES**

Primary global supplier of high quality monitoring and control instrumentation and sensors specifically designed for municipal and industrial wastewater treatment applications. Other markets in which Royce might be found are mining, pulp and paper manufacturing, chemical processing, aquaculture, and the power and steam generating industries.

**Core product lines**
- Online and portable water quality instruments

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**Core product lines**
- Life Science analysers
- Water quality sensors and instruments
1. The tissue in plants that brings water upward from the roots;
2. a leading global water technology company.

We’re a global team unified in a common purpose: creating innovative solutions to meet our world’s water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to www.xylem-analytics.asia