

WATER QUALITY INSTRUMENTS

Water Quality Test Kits

Calibration Solutions

pH & Redox (ORP)

Conductivity / Salinity / TDS

Dissolved Oxygen

Turbidity

Suspended Solids

Ion Specific

Multi-Parameter

Flow Cell

Online Analysers

Hanna Portable Test Kits

Hanna's test kits are simple to use and provide a very economical way to perform chemical analysis. Each kit comes with all you need and includes a comprehensive instruction manual.



Ordering Information

- HANHI3820** Acidity - Range (0-100 mg/L) (0-500 mg/L)
- HANHI38084** Acidity - Range (0.0-2.5 meq/100 g)
- HANHI3811** Alkalinity - Range (0-100 mg/L) (0-300 mg/L)
- HANHI38014** Alkalinity - Range (0-500 gpg)
- HANHI3824** Ammonia - Range (0.0-2.5 mg/L)
- HANHI3826** Ammonia - Range (0.0-2.5 mg/L)
- HANHI38049** Ammonia - Range (0.0-3.0 mg/L)
- HANHI3850** Ascorbic Acid - Range (10-200 mg/L)
- HANHI38074** Boron - Range (0.0-5.0 mg/L)
- HANHI3830** Bromine - Range (0.0-3.0 mg/L)
- HANHI38080** Ca and Mg - Range (>0.0 meq/100 g)
- HANHI38081** Ca and Mg - Range (>0.0 meq/l)
- HANHI38086** Calcium (Ca) - Range (0-125 mg/L) (0-250 mg/L)
- HANHI3818** Carbon Dioxide - Range (0.0-10.0 mg/L) (0.0-50.0 mg/L) (0-100 mg/L)
- HANHI3815** Chloride - Range (0-100 mg/L) (0-1000 mg/L)
- HANHI3898** Chloride - Range (1000 mg/L) (2000 mg/L)
- HANHI38015** Chloride - Range (500-10000 mg/L) (5000-100000 mg/L)
- HANHI3831F** Chlorine - Range (0.0-2.5 mg/L)
- HANHI3831T** Chlorine - Range (0.0-2.5 mg/L)
- HANHI3875** Chlorine - Range (0.0-3.5 mg/L)
- HANHI38016** Chlorine - Range (0.0-3.5 mg/L)
- HANHI38022** Chlorine - Range (0.0-4.0 mg/L) (0.0-20.0mg/L)
- HANHI38017** Chlorine - Range (0.00-0.70 mg/L) (0.0-3.5 mg/L)

- HANHI38018** Chlorine - Range (0.00-0.70 mg/L) (0.0-3.5 mg/L)
- HANHI38019** Chlorine - Range (0.00-0.70 mg/L) (0.0-3.5 mg/L)
- HANHI38020** Chlorine - Range (0.00-0.70 mg/L) (0.0-3.5 mg/L) (0.0-10.0 mg/L)
- HANHI3887** Chlorine - Range (Cl²: 0.0-2.5 mg/L) (pH: 6.0-8.5 pH)
- HANHI3888** Chlorine - Range (Cl²: 0.0-2.5 mg/L) (pH: 6.0-8.5 pH)
- HANHI38023** Chlorine - Range (10-200 mg/L)
- HANHI3845** Chromium - Range (0-100 mg/L) (100-1000 mg/L)
- HANHI3846** Chromium - Range (0.0-1.0 mg/L)
- HANHI38075** Copper - Range (0.00-0.25 mg/L) (0.0-6.0 mg/L)
- HANHI3847** Copper - Range (0.0-2.5 mg/L)
- HANHI3856** Copper - Range (0.00-0.25 mg/L)
- HANHI3855** Cyanide - Range (0.00-0.30 mg/L)
- HANHI3851** Cyanuric Acid - Range (10-100 mg/L)
- HANHI3857** Detergents (anionic)
- HANHI38083** Exchangeable Sodium and Gypsum Requirement
- HANHI3838** Formaldehyde - Range (0.00-1.00%) (0.0-10.0%)
- HANHI38033** Hardness (as CaCO₃), total - Range (0-30 gpg)
- HANHI3840** Hardness - Range (0-150 mg/L)
- HANHI38034** Hardness - Range (0.0-20.0 gpg) (0.0-20.0 mg/L)
- HANHI3812** Hardness - Range (0.0-30.0 mg/L) (0-300 mg/L)
- HANHI3841** Hardness - Range (40-500 mg/L)
- HANHI3842** Hardness - Range (400-3000 mg/L)
- HANHI38035** Hardness - Range (Total: 0.0-20.0 gpg) (Calcium: 0.0-20.0 gpg)
- HANHI3849** Hydrazine - Range (0.00-1.00 mg/L)
- HANHI3844** Hydrogen Peroxide - Range (0.00-2.00 mg/L) (0.0-10.0 mg/L)
- HANHI3839** Hydroxide - Range (0.00-1.00 g/L) (0.0-10.0 g/L)
- HANHI3843** Hypochlorite - Range (50-150 g/L)
- HANHI3879** Iodine - Range (0-5 mg/L)
- HANHI3832** Iodine - Range (0.0-2.5 mg/L)
- HANHI3889** Iron and Total Hardness - Range (Fe: 0-5 mg/L) (Total Hardness: 40-500 mg/L)

- HANHI3834** Iron, (Fe²⁺ & Fe³⁺) - Range (0-5 mg/L)
 - HANHI38041** Iron, (Fe²⁺ & Fe³⁺) - Range (0.0-10.0 mg/L)
 - HANHI38040** Iron, (Fe²⁺ & Fe³⁺) - Range (0.0-5.0 mg/L)
 - HANHI38039** Iron, (Fe²⁺ & Fe³⁺) - Range (0.00-1.00 mg/L)
 - HANHI38079** Magnesium (Mg) - Range (0.0-240.0 mg/L) (0.0-725.0 mg/L)
 - HANHI38072** Manganese - Range (0.0-10.0 mg/L)
 - HANHI38042** Manganese - (Range 0.0-3.0 mg/L)
 - HANHI38050** Nitrate (as NO₃--N) - Range (water: 0-50 mg/L) (soil: 0-60 mg/L)
 - HANHI3874** Nitrate - Range (0-50 mg/L)
 - HANHI3873** Nitrite - Range (0.0-1.0 mg/L)
 - HANHI38051** Nitrite - Range (0.00-0.50 mg/L)
 - HANHI3810** Oxygen, Dissolved - Range (0.0-10.0 mg/L)
 - HANHI38054** Ozone - Range (0.0-2.3 mg/L)
 - HANHI3882** pH - Range 3.0 - 5.0 pH
 - HANHI38058** pH - Range 4.0 - 10.0 pH
 - HANHI3880** pH - Range 4.0 - 6.5 pH
 - HANHI3881-5** pH - Range 4.0 - 8.0 pH
 - HANHI3881/0** pH - Range 6.0 - 8.5 pH
 - HANHI3886** pH - Range 7.5 - 10.0 pH
 - HANHI3833** Phosphate - Range (0-5 mg/L)
 - HANHI38077** Phosphate - Range (0.0-5.0 mg/L)
 - HANHI38061** Phosphate - Range (0.00-1.00 mg/L) (0.0-5.0 mg/L) (0-50 mg/L)
 - HANHI38073** Phosphorus - Range (0.0-130.0 mg/L)
 - HANHI38082** Potassium - Range (0-50 mg/L) (50-250 mg/L)
 - HANHI3835** Salinity - Range (0.0-40.0 g/kg)
 - HANHI38001** Sulphate - Range (100-1000 mg/L) (1000-10000 mg/L)
 - HANHI38000** Sulphate - Range (20-100 mg/L)
 - HANHI3822** Sulphite - Range (0.0-20.0 mg/L) (0-200 mg/L)
 - HANHI38076** Zinc - Range (0.0-4.0 mg/L) (0.0-20.0 mg/L)
 - HANHI3854** Zinc - Range 0.0-3.0 mg/L
- Combination Test Kits**
- HANHI3814** Environmental Monitoring Test Kit
 - HANHI3817** Water Quality Test Kit

Calibration Solutions for water quality instruments

EnviroEquip supplies a full range of calibration solutions for calibrating your instruments:

- pH buffers
- Conductivity, TDS and Salinity
- Turbidity
- ORP Test Solutions
- Electrode storage solutions
- DO Zero (Sodium Sulphite powder)
- Zobell Solution



Which calibration solutions do I need?

- Select a solution that is nearest to the value you're expecting to read in your samples.
- Most water quality meters require 2 or more points of calibration per parameter. (Except ORP, which cannot be calibrated, only checked to see that it probe is still within range).

Ordering Information

pH Buffer

EEQ0113-4PH-500ML pH 4 Buffer, 500ml

EEQ0113-4PH-1L pH 4 Buffer, 1L

EEQ0114-7PH-500ML pH 7 Buffer, 500ml

EEQ0114-7PH-1L pH 7 Buffer, 1L

EEQ0116-10.00PH pH 10 Buffer, 500ml

EEQ0116-10.00PH-1L pH 10 Buffer, 1L

EEQ0781-6.88PH-500ML pH 6.88 Buffer, 500ml

EEQ0781-6.88PH-1L pH 6.88 Buffer, 1L

ORP (Redox)

HANHI7021L ORP (Redox) 240mV Test Solution, 500ml

TPS121309 Redox Solution, Zobell, Part A & B, 2 x 200mL

EEQ1908-ORP475MV-500ML ORP solution ORP 475mV 500ml

Conductivity Standard

EEQ0442-12880US-500ML Calibration Solution 12,880uS/cm, 500ml

EEQ0442-12880US-1L Calibration Solution 12,880uS/cm, 1L

EEQ0442-1413US-500ML Calibration Solution 1413uS/cm, 500ml

EEQ0442-1413US-1L Calibration Solution 1413uS/cm, 1L

EEQ0442-80MS-500ML Calibration Solution 80uS/cm, 500ml

EEQ0442-80MS-1L Calibration Solution 80uS/cm, 1L

EEQ0442-2760US-500ML Calibration Solution 2.76mS/cm, 500ml

EEQ0442-2760US-1L Calibration Solution 2.76mS/cm, 1L

EEQ0442-58.6MS-500ML Calibration Solution 58,000uS/cm, 500ml

EEQ0442-58.6MS-1L Calibration Solution 58,000uS/cm, 1L

Salinity Standard

EEQ1347-2PPK-500ML Calibration Solution 2ppk, 500ml

EEQ1347-2PPK-1L Calibration Solution 2ppk, 1L

EEQ1347-36PPK-500ML Calibration Solution 36ppk, 500ml

EEQ1347-36PPK-1L Calibration Solution 36ppk, 1L

Turbidity Standard

EEQ0800-0NTU-500ML Enviroequip calibration std turbidity 0NTU

EEQ0800-10NTU-500ML Enviroequip calibration std turbidity 10NTU

EEQ0800-50NTU-500ML EnviroEquip calibration std turbidity 50NTU

EEQ0800-90NTU-500ML Enviroequip calibration std turbidity 90NTU

EEQ0800-100NTU-500ML Enviroequip calibration std turbidity 100NTU

EEQ180NTU-500ML Enviroequip calibration std turbidity 180NTU

EEQ0800-200NTU-500ML Enviroequip calibration std turbidity 200NTU

EEQ0800-360NTU-500ML Enviroequip calibration std turbidity 360NTU

EEQ900NTU-500ML Enviroequip calibration std turbidity 900NTU

Dissolved Oxygen

TPS123302 Sodium Sulphite for Zero Calibration, 50g

TPS123303 Filling Solution, 45mL

Storage Solution

TPS121308 pH Probe Storage Solution, 200 mL

Quick-Cal Solution

ISI0033250 "Quick-Cal" Solution, 4-pak of 250 mL (8-Cals), (for calibrating DO, Cond., pH & ORP) - for In-Situ TROLL 9500 only

*pH, Conductivity, Salinity solutions also available in 5L



Eutech TN100 Turbidimeter Turbidity

The microprocessor-based waterproof TN100 meter is an easy-to-use turbidimeter that meets the rigor of rugged field applications. It is a “must-have” for anyone monitoring turbidity on the go. Using an Infrared light source, it delivers laboratory accuracy with a resolution of 0.01 NTU across an extended range of up to 20 NTU (Nephelometric Turbidity Units).

- IP67 Waterproof and Dustproof - Cleaning and maintenance is simple. It floats!
- Automatic Push-Button Calibration (4 points) for unprecedented full-range accuracy
- Sturdy Carrying Kit complete with 4 calibration standards, 3 empty cuvettes, batteries and comprehensive instruction manual
- Power-saving feature allows over 1200 measurements to be taken with a single set of AAA alkaline batteries
- Large Easy-to-Read Display for optimum viewing of measurements with user-friendly message codes for easy troubleshooting
- Meets Performance Criteria as specified by ISO 1727 (DIN EN 27027) method



Specifications

Turbidity Range	0 to 1000 NTU
Resolution	
0.01 NTU	0 to 19.9 NTU
0.1 NTU	20.0 to 99.9 NTU
1 NTU	100 to 1000 NTU
Accuracy	± 2% of reading ± 1 LSD for 0 to 500 NTU ± 3% of reading ± 1 LSD for 501 to 1000 NTU
Repeatability	± 1% of reading or ± 0.01 NTU
Calibration Points	4 points (automatic)
Power Requirements	4 x 1.4V batteries, > 200 hours

Order Information

EUT01X357301E Waterproof TN 100 Infra-Red Turbidimeter (NTU) with calibration kit (EC-TN100CALKT), 3 sample vials (EC-TN100CUVKT) and carrying case

TPS Aqua DP pH, Dissolved Oxygen & Temp. Meter

The Australian Made Aqua DO/pH is an economical, waterproof handheld Dissolved Oxygen, pH and Temperature meter. It provides accurate, reliable measurements and is very easy-to-use. Genuine one-touch calibration puts an end to time-consuming calibration procedures. The Aqua DO/pH comes with all the accessories needed for immediate use.



Specifications

ppm Dissolved Oxygen	
Range	0.0 to 25.0ppm
Resolution	0.1ppm
Accuracy	+0.1ppm
pH	
Range:	0 to 14 pH
Resolution	0.01 pH, 1 mV
Accuracy	+/-0.01pH; +/-1 mV
% Saturation Dissolved Oxygen	
Range	0 to 250.0 %Sat'n
Resolution	0.1 %Sat'n
Accuracy	+/-0.3 %Sat'n
Temperature Compensation	
Oxygen	Dual automatic system for: 1. Membrane permeability 2. Solubility compensation in ppm mode
pH	Automatic, 0 to 100 OC.
Power	9V Alkaline battery for 100+ hours.

Ordering Information

TPS123152/1 AQUA-DP - Waterproof Handheld DO2-pH Meter, uses ED1 sensor. Includes 9V Battery, cal solution and handbook.

Options

TPS130057 Hard Carry Case for Aqua Meter

Other probes ranges/types and additional cable lengths (up to 20m) are available

IIG Model 3150 Portable Suspended Solids Analyzer

**Don't send samples to the lab
- the 3150 provides instant
suspended solids readings!**

The InsiteIG Model 3150 portable suspended solids analyser is a state of the art, easy-to-use meter that provides many benefits to the plant operations staff.

It is a unique system that combines advanced electronics with a solid-state, optical sensor. It is designed for the measurement of suspended solids in aqueous solutions. The microprocessor-based electronics of the analyser provide a high degree of flexibility and ease-of-use. Data logging and the ability to download the data directly to a computer are optional features.

- Real-time SS for better process control
- Eliminates the need for daily lab analysis
- Data logging with direct downloading to your PC
- Can also be used to measure sludge blankets in clarifiers

The Model 3150 analyser uses the Model 15 sensor which operates on the principal of single gap light absorption as the means of determining the concentration of suspended solids.

The sensor was specifically designed for solids concentrations typically found in aeration basins (1000 mg/L to 5000 mg/L) and RAS streams (7000 mg/L to 20,000 mg/L) of wastewater treatment plants. There are independent calibration points for each. Furthermore, a 15L low range sensor (0-1000 mg/L) is available. The Model 15L sensor was designed to measure very low solids concentrations typically found in secondary clarifier and plant effluents. The sensor utilizes an infrared emitter to minimise colour effects and compensates for emitter variations due to temperature by measuring source brightness.

Easy Calibration

Any optically based device for measuring suspended solids should only be span calibrated against a typical sample of the actual process water being measured. To do a complete calibration, a zero and a span calibration should be performed.

Zero Calibration

The analyser must first be zeroed in clean water such as potable or distilled water.

Span calibration

A sample/snapshot reading should be taken in a normal representative water sample. The Model 3150 utilises its microprocessor memory in a unique way to make a span calibration as easy and accurate as possible. This span calibration is performed as a two step process. First, the SNAPSHOT function of the analyser is used to store actual process conditions to the instrument's memory. Later, when standard laboratory analysis results are available for those previous conditions, the analyser's SPAN function will recall the stored value and allow the user to adjust the span value accordingly.

As long as the lenses are kept clean, frequent calibration should not be necessary. Every six months or longer should be more than adequate for a complete calibration.



Specifications

Range	0 to 30,000 mg/L (standard sensor) 0 to 1,000 mg/L (low range sensor)
Accuracy	Greater of +/-3% of reading or 20 mg/L (standard sensor) +/-3% of reading (low range sensor)
Sensitivity/Res	1 mg/L below 1000mg/L 10 mg/L between 1,000 and 9999 mg/L 100 mg/L above 10,000 mg/L
Repeatability	+/- 0.5%
Sensor drift	Less than 1% per year
Temp range	0 to 60 deg C
Sensor check	Automatic self diagnostics
Output	RS232 serial
Memory back up	Yes
Display	LCD graphic display with UV protection, contrast adjustment via keypad, on demand backlighting
Cable length	6m
Sensor dia.	48mm (standard sensor) 75mm (low range sensor)
Ambient Temp	-40 to 60 deg C
Ambient Humidity	0 to 100%
Enclosure rating	NEMA 4X
Wetted materials	Epoxy, polyurethane, PVC
Max pressure	100psi
Ordering Information	
IIG3150-35	Model 3150 Portable SS meter, 7.5m cable 0 to 30,000 mg/L
IIG3150-35L	Model 3150 Portable SS meter, 7.5m cable 0 to 1,000 mg/L
IIDK	Download kit, including cable and software
PPAPPE1500	Pelican Hard Carry Case

TPS Aqua pH pH, Temp

Also available ORP (Redox), Temp

The Australian made Aqua pH is an economical, waterproof handheld pH, mV and Temperature meter. It provides accurate, reliable measurements, and is very easy to use. Genuine one-touch calibration puts an end to time-consuming calibration procedures.

Rugged & Water Resistant

Tough enclosure fully waterproof to an IP65 rating and the connectors, IP65. Designed for the harshest field and industrial environment.

One-touch Calibration

Calibration of the Aqua pH could not be simpler. Just place the pH electrode into any of the pre-selected buffers and press the calibrate key.



Specifications

pH Range	0 to 14.00 pH
pH Resolution	0.01 pH
pH Accuracy	+/-0.01pH
ORP (Redox) Range	0 to +/-1500 mV
ORP (Redox) Resolution	1 mV
ORP (Redox) Accuracy	+/-1 mV
Temp. Range	-10.0 to 120.0 OC
Temp. Resolution	0.1 OC
Temp. Accuracy	+/-0.2 OC

Temp. Compensation

0 to 100°C, automatic or manual. The Aqua-pH automatically detects whether or not the temperature sensor is connected.

Display

24 Character alphanumeric LCD with full-text prompts and error messages.

Power 9V Alkaline battery for 100+ hours.

Ordering Information

TPS121112/1 Aqua pH/mV, Temp Meter

Kit Includes pH Sensor, Temp/ATC Sensor, Cal soln, 9V battery, handbook

Options

TPS121262	ORP Sensor, Plastic, AgCl Ref, Porous Teflon Junc, 1m
TPS121263	ORP Sensor, Plastic, AgCl Ref, Intermediate Junc, 1m
TPS130057	Hard Carry Case for Aqua Meter

Additional cable lengths (up to 20m) are available

TPS WP80 & WP80D pH, ORP (Redox) & Temp Meter

- WP80 - pH or ORP (Redox), Temp
- WP80D - pH and ORP (Redox), Temp - all displayed simultaneously

The WP80 water quality instrument is a field-rugged meter. It is loaded with features yet easy to use.

User-friendly menu system - guides the user through every step of operation to make calibration and set up easy.

Logging of data - Date and time are recorded with every reading, when using the Notepad and AutoLog functions. Up to 150 readings can be stored and downloaded with the RS232 cable and WinTPS software. Autolog function records readings into the memory, with a user-set logging interval from 1 minute to 24 hours.



Specifications

pH Range	0 to 14.00 pH
pH Resolution	0.01 pH
pH Accuracy	+/-0.01pH
ORP (Redox) Range	0 to +/-500.0 & 0 to +/-1500 mV (auto-ranging)
ORP (Redox) Resolution	0.15 & 1 mV
ORP (Redox) Accuracy	+/-0.3 & +/-1 mV
Temp. Range	-10.0 to 120.0 OC
Temp. Resolution	0.1 OC
Temp. Accuracy	+/-0.2 OC
Temperature Compensation	0 to 100 OC, automatic or manual
Power	6V NiMH Rechargeable battery pack for approx 75 hours operation.
Memory	150 readings, including date and time.
Automatic Logging	User-set for one reading every 1 to 90 seconds, 1 to 90 minutes or 1 to 24 hours.

Ordering Information

TPS121109/1 WP80 meter & pH Cal Kit, pH & Temp Sensor

TPS 121110/1 WP80D meter & pH Cal Kit, pH & Temp Sensor

Options

TPS130041	RS232 Interface Cable
TPS130086	WinTPS Software for Windows 95,98&ME
TPS130046	Charger Lead for 12V Car Cig Lighter Socket
TPS130012	12V Solar Panel
TPS130059	Aluminium Carry Case

Additional cable lengths (up to 20m) are available

TPS Aqua C Conductivity, Salinity, TDS, Temp.

The Australian Made Aqua Conductivity is an economical, waterproof handheld Conductivity, Salinity and Temperature meter. It provides accurate, reliable measurements and is very easy to use. Genuine one-touch calibration puts an end to time-consuming calibration procedures.

One-touch Calibration

Calibration of the Aqua C could not be simpler. Just place the electrode into any of the pre-selected solution and press the calibrate key.



Specifications

Ranges 4 ranges with auto range selection

Conductivity Range

k=0.1 0 to 2mS/cm

k=1.0 0 to 20mS/cm

k=10 0 to 200mS/cm

Resolution 0.05% of range (25°C)

Accuracy 0.2% of full scale (25°C) of selected range

TDS Range

k=0.1 0 to 1 ppk

k=1.0 0 to 10 ppk

k=10 0 to 100 ppk

Resolution 0.1% of range (25°C)

Accuracy 0.5% of full scale (25°C) of selected range

Temp. -10 to 60°C

Temperature Compensation Automatic, 0 to 100°C.

Display 24 Character alphanumeric LCD with full-text prompts and error messages.

Power 9V Alkaline battery for 70+ hours

Ordering Information

122162/1K1 Aqua Cond/TDS/TempMeter
Includes k=1.0/ATC/Temp Sensor, cal soln,
9V Battery, Handbook

Options

TPS130057 Hard Carry Case for Aqua Meter

*Other probes ranges/types
and additional cable lengths (up to 20m) are available*

TPS WP84 Conductivity, Salinity, TDS, Temp.

The WP84 water quality instrument is a field-rugged meter. It is loaded with features yet easy-to-use.

User-friendly menu system - guides the user through every step of operation to make calibration and set up easy.

Logging of data - Date and time are recorded with every reading, when using the Notepad and AutoLog functions. Up to 150 readings can be stored and downloaded with the RS232 cable and WinTPS software. Autolog function records readings into the memory, with a user-set logging interval from 1 minute to 24 hours.



Specifications

Cond. Ranges 5 Ranges with auto range selection

k=0.1 2.0uS/cm to 2mS/cm

k=1.0 20.00uS/cm to 20mS/cm

k=10 200.0uS/cm to 200mS/cm

Resolution 0.05% of selected range (25°C)

Accuracy + 0.5% full scale selected range at (25°C)

TDS Ranges 5 Ranges with auto range selection and linearising software

k=0.1 0 to 1ppk

k=1.0 0 to 10ppk

k=10 0 to 100ppk

Resolution 0.1% of selected range at (25°C)

Accuracy +0.5% full scale selected range

Temp. Range -10 to 60°C

Temp Resolution 0.1°C

Temp Accuracy ±0.2°C

Temp. Comp. Automatic 0 to 100°C

Ordering Information

122159/1K1 WP84 w/k=1.0/ATC/Temp Sensor & cal kit

Options

TPS130041 RS232 Interface Cable

TPS130086 WinTPS Software for Windows 95,98&ME

TPS130046 Charger Lead for 12V Car Cig Lighter Socket

TPS130012 12V Solar Panel

TPS130059 Aluminium Carry Case

*Other probes ranges/types
and additional cable lengths (up to 20m) are available*

TPS Aqua D Dissolved Oxygen & Temp. Meter

The Australian made Aqua DO is an economical, waterproof handheld Dissolved Oxygen and Temperature meter. It provides accurate, reliable measurements, and is very easy-to-use.

One-touch Calibration

Calibration of the Aqua DO could not be simpler. Just place the electrode into zero solution or air and press the calibrate key.



Specifications

ppm Dissolved Oxygen

Range 0.0 to 25.0ppm

Resolution 0.1ppm

Accuracy +0.1ppm

% Saturation Dissolved Oxygen

Range 0 to 250.0%

Resolution 0.1%

Accuracy + 0.3%

Temp (auto compensation)

Range -10.0 to 50oC

Resolution 0.1oC

Accuracy + 0.2oC

Sensor Clark type polarographic

Salinity 0 to 50ppk NaCl (manual Correction entry)

Calibration zero & air

Display 12 x 2 Char. alphanumeric with full-text prompts, error messages

Ordering Information

TPS123143/1AQUA-D DO Meter, ED1 Sensor and kit

Options

TPS130057 Hard Carry Case for Aqua Meter

TPS123201 BOD Bottle Adaptor for ED1 & ED500 Oxygen Sensors

TPS123301 Membrane Kit & Filling Solution, for ED1 & ED500 Oxygen Sensors

TPS123302 Sodium Sulphite for Zero Dissolved Oxygen cal, 50g

TPS123303 Filling Solution, ED500, ED1 & YSI DO Sensors, 45mL

TPS123202 Protector Cover, for ED1 & ED500 Oxygen Sensors

Additional cable lengths (up to 20m) are available

TPS WP82 & WP82Y Dissolved Oxygen & Temp. Meters

The WP82 water quality instrument is a field-rugged meter. It is loaded with features yet easy to use. The WP82Y uses the YSI field sensor which automatically compensates for pressure when submerged.

User-friendly menu system - guides the user through every step of operation to make calibration and set up easy.



Specifications

Ranges 0 to 20.00ppM; to 40.0ppM (WP82Y)

Resolution 0.01 & 0.1 ppM

Accuracy +0.2% of full scale of selected range

% Saturation

Ranges 0 to 240.00% & 240 to 450% Sat.(WP82Y)

Resolution 0.1 & 1% Saturation

Accuracy +0.3% of Saturation

% Gaseous

Ranges 0 to 45.0% Gas. and 45 to 100% Gas.

Resolution 0.1 & 1% Gaseous

Accuracy +0.1% Gaseous

Auto. range selection subject to sensor performance

Temperature

Range -10.00 to 120.0oC (Sensor limit 50oC)

Resolution 0.1oC, Accuracy +0.2oC

Dual auto. temperature compensation system.

Salinity, Barometric Press. & Altitude Corr User Set

Ordering Information

TPS123148/1WP-82Y Waterproof Dissolved Oxygen & Temperature Meter, Includes: WP-82Y, Handbook & Battery Charger

TPS123147/1WP-82 Waterproof Dissolved Oxygen & Temperature Meter, Including: WP-82, Handbook & Battery Charger

Options

TPS130041 RS232 Interface Cable

TPS130086 WinTPS Software for Windows 95,98&ME

TPS130046 12V cigarette lighter adaptor lead for WP Series, 2m

TPS130012 Solar Panel, 12V, 5W

TPS130059 Aluminium Carry Case

TPS123302 Sodium Sulphite for Zero Dissolved Oxygen cal, 50g

TPS123303 Filling Solution, ED500, ED1 & YSI DO Sensors, 45mL

TPS123202 Protector Cover, for ED1 & ED500 Oxygen Sensors

Additional cable lengths (up to 20m) are available

TPS WP88 Turbidity Meter

The WP88 water quality instrument is a field-rugged meter. It is loaded with features yet easy-to-use.

User-friendly menu system - Guides the user through every step of operation to make calibration and set up easy.

Logging of data - Date and time are recorded with every reading when using the Notepad and AutoLog functions. Up to 150 readings can be stored and downloaded with the RS232 cable and WinTPS software. Autolog function records readings into the memory, with a user-set logging interval from 1 minute to 24 hours.

Good Laboratory Practices (GLP) - Stores the date, time and results of the last calibration.

Rechargeable battery - Supplied with a rechargeable NiMH battery and charger as standard. For extended field trips a solar panel, or a charger lead for a car cigarette lighter socket are also available.



Specifications

Ranges	0.1 to 200.0 NTU 1 to 2000 NTU (Exact ranges subject to sensor performance)
Resolution	0.1 NTU 1 NTU
Repeatability	2% +/- 1 digit on all ranges
Power	6V NiMH Rechargeable - approx 50 hours operation. Battery can be charged from any 12V DC source.
Memory	150 readings, including date and time.
Automatic Logging	User-set for one reading every 1 to 90 seconds, 1 to 90 minutes or 1 to 24 hours.

Ordering Information

TPS125188/5 WP88 Turbidity Handheld Waterproof Meter
Includes: Turbidity sensor w/o cable, 5m detachable cable, Battery Charger, WP88 Handbook, 360 NTU standard 200 ml

TPS125189 Protector Cover for ENDC Turbidity Sensor

Options

TPS130041 RS232 Interface Cable

TPS130086 WinTPS Software for Windows 95,98&ME

TPS130046 12V cigarette lighter adaptor lead for WP Series, 2m

TPS130012 Solar Panel, 12V, 5W

TPS130059 Aluminium Carry Case

Additional cable lengths (up to 20m) are available

TPS Aqua CPA Conductivity, Salinity, pH & Temp. Meter

The Australian made Aqua CP/A is an economical, waterproof handheld pH, Conductivity, Salinity and Temperature autoranging meter. It provides accurate, reliable measurements and is very easy to use. Genuine one-touch calibration puts an end to time-consuming calibration procedures. The Aqua CP/A comes with all the accessories needed for immediate use.

One-touch Calibration

Calibration of the Aqua CP/A could not be simpler. Just place the electrode into any of the pre-selected solution, and press the Calibrate key. Repeat for a second point and that's it!



Specifications

pH

Range 0 to 14 pH

Resolution 0.01 pH

Accuracy +/-0.01pH

Temp

Range -10 to 60OC

Resolution 0.1 OC

Accuracy +/-0.2 OC

Cond k=1.0 0 to 20mS/cm
k=10 0 to 200mS/cm

Resolution 0.01uS @ lower end, for K=1 sensor

Accuracy + 0.2% of FS at 25oC

TDS k=1.0 0 to 10ppk
k=10 0 to 100ppk

Resolution 0.01 ppM @ lower end for K=1 sensor

Accuracy + 0.4% range at 25oC

Temp. Compensation 0 to 100°C, auto or manual

Ordering Information

TPS121135/1K1 Aqua CPA meter k=1/ATC/Temp sensor, pH Sensor, cal solutions, battery, handbook

Options

TPS130057 Hard Carry Case for Aqua Meter

Other probes ranges/types

and additional cable lengths (up to 20m) are available

TPS WP81 Conductivity, Salinity, pH & Temp. Meter

The WP81 water quality instrument is a field-rugged meter. It is loaded with features yet easy-to-use. The WP82Y uses the YSI field sensor which automatically compensates for pressure when submerged.

User-friendly menu system - Guides the user through every step of operation to make calibration and set up easy.

Logging of data - Date and time are recorded with every reading, when using the Notepad and AutoLog functions.



Specifications

pH

Range 0 to 14 pH

Resolution 0.01 pH

Accuracy +/-0.01pH

Temp

Range -10 to 60OC

Resolution 0.1 OC

Accuracy +/-0.2 OC

Conductivity Range

k=0.1 0.0 uS/cm to 2mS/cm

k=1.0 0.0 uS/cm to 20mS/cm

k=10 0.0 uS/cm to 200mS/cm

Resolution 0.05% select'd range 25C

Accuracy + 0.5% range at 25oC

TDS k=0.1 0 to 1ppK

k=1.0 0 to 10ppk

k=10 0 to 100ppk

Resolution 0.05% select'd range 25C

Accuracy + 0.5% range at 25oC

Power 6V NiCad rechargeable

Datalogging Log up to 150 readings

Ordering Information

TPS121132/1K1 WP81 meter k=1/ATC/Temp sensor, pH Sensor, Cal Soln's, Charger, Handbook

Options

TPS130041 RS232 Interface Cable

TPS130086 WinTPS Software for Windows 95,98&ME

TPS130046 Charger Lead for 12V Car Cig Lighter Socket

TPS130012 12V Solar Panel

TPS130059 Aluminium Carry Case

Other probes ranges/types

and additional cable lengths (up to 20m) are available

TPS WP91 pH, ORP (Redox), Dissolved Oxygen & Temp. Meter

- pH, DO & Temp. **OR**
- ORP (Redox), DO & Temp.

The WP91 offers the handy combination of DO & pH. Rugged sensors are ideal for field use.

User-friendly menu system - Guides the user through every step of operation to make calibration and set up easy.



Specifications

Range

Oxygen Automatic range selection
0 to 20.00ppM and 20.0 to 40.0ppM
0 to 240.00% Sat & 240 to 450% Sat.
0 to 45.0% Gas. and 45 to 100% Gas.

pH 0 to 14.00pH

mV Automatic range selection
0 to +500.0 & 0 to + 1500mV

Temp Dual auto temperature compensation
-10.00 to 120.0oC (Sensor limit 50oC)

Resolution

Oxygen 0.01 & 0.1 ppM / 0.1 & 1% Saturation
0.1 & 1% Gaseous

pH 0.01pH

mV 0.15 & 1 mV

Accuracy

Oxygen +0.2% ppm / +0.3% of Sat.
+0.1% Gaseous

pH +0.01 pH

mV +0.3mV & + 1mV

Temperature + 0.2 deg C

Ordering Information

TPS123150/1 WP-91 Waterproof Dissolved Oxygen- pH-mV- Temperature Meter, Including: Battery Charger, Handbook

Options

- TPS130041** RS232 Interface Cable
- TPS130086** WinTPS Software for Windows 95,98&ME
- TPS130046** Charger Lead for 12V Car Cig Lighter Socket
- TPS130012** 12V Solar Panel
- TPS130059** Aluminium Carry Case

Additional cable lengths (up to 20m) are available

TPS Aqua DP pH, Dissolved Oxygen & Temp. Meter

The Australian Made Aqua DO/pH is an economical, waterproof handheld Dissolved Oxygen, pH and Temperature meter. It provides accurate, reliable measurements and is very easy-to-use. Genuine one-touch calibration puts an end to time-consuming calibration procedures. The Aqua DO/pH comes with all the accessories needed for immediate use.



Specifications

ppm Dissolved Oxygen

Range 0.0 to 25.0ppm

Resolution 0.1ppm

Accuracy +0.1ppm

pH Range: 0 to 14 pH

Resolution 0.01 pH, 1 mV

Accuracy +/-0.01pH; +/-1 mV

% Saturation Dissolved Oxygen

Range 0 to 250.0 %Sat'n

Resolution 0.1 %Sat'n

Accuracy +/-0.3 %Sat'n

Temperature Compensation

Oxygen Dual automatic system for:
1. Membrane permeability
2. Solubility compensation in ppM mode

pH Automatic, 0 to 100.0C.

Power 9V Alkaline battery for 100+ hours.

Ordering Information

TPS123152/1 AQUA-DP - Waterproof Handheld DO2-pH Meter, uses ED1 sensor. Includes 9V Battery, cal solution and handbook.

Options

- TPS130057** Hard Carry Case for Aqua Meter

Other probes ranges/types

and additional cable lengths (up to 20m) are available

TPS 90FL Series pH, Dissolved Oxygen, Conductivity, Salinity, ORP (Redox), Turbidity & Temp.

- 90FL - pH, DO, Conductivity, Salinity, Temp
- 90FLMV - pH, DO, Conductivity, Salinity, ORP (Redox), Temp
- 90FLT - pH, DO, Conductivity, Salinity, ORP (Redox), Turbidity, Temp

The Australian made 90FL, 90FLMV and 90FLT are ideally suited to spot checking and logging applications. The sensors allow for in-situ measurements in 50mm boreholes, lakes, streams, sewers and channels. The sensor design is simpler than more complicated sonde-type probes resulting in easier maintenance and less servicing.

Easy-to-use with 80 character display

Provides simultaneous viewing of all channels; common-sense menu system; calibration prompts; and error messages.

Field rugged & waterproof

Designed for field applications in wet environments. The case, keypad and connectors are water resistant.

Data Logging

The 90FL comes with standard and optional data logging. Extended data logging (included) enables storage of readings timed or manually entered (pressing the ENTER button) readings.

Readings can also be downloaded to PC via the RS232 interface cable and Windows software.



Specifications

Ranges

DO 0-30.00ppM DO in Fresh Water
0 - 25.00 ppM DO in Salt Water
0 - 300% Saturation Oxygen

Temp -10 to +110oC

pH 0 to 14.00 pH

ORP (Redox) 0 to +1999mV

Conductivity with k=10 cell with k=1cell
0 to 200mS/cm 0 to 20mS/cm

TDS 0 to 100.00ppK 0 to 10.00ppK

Turbidity 0 to 1000 NTU

Resolution

DO 0.01ppM(mg/L) and 0.1% Satn.

pH 0.01pH

ORP (Redox) 1mV

Temp. 0.1oC

Conductivity 0.1% of selected range

Salinity 0.1% of selected range

Turbidity 0.1 NTU

Accuracy

DO 0.002ppM(mg/L) and 0.2% Satn.

pH 0.01pH within 3 pH of buffer

ORP (Redox) 1mV (90FLMV only)

Temp. 0.1oC

Conductivity 0.2% of selected range

Salinity 0.3% of selected range

Turbidity 3% (linearity)

Memory

90FL 1980 data sets

90FLMV 1760 data sets

90FLT 800 data sets

Power 7.2V Rechargeable Ni-Cad battery

Ordering Information

TPS126103/5K10 90FL Field Analyser - pH, Conductivity, TDS, Dissolved Oxygen & Temperature
Including: cal solutions, Battery Charger, Handbook

TPS130018/5K10 90FLMV Field Analyser - pH, mV, Conductivity, TDS, Dissolved Oxygen & Temperature
Including: cal solutions, Battery Charger, Handbook

TPS126105/5K10 90FLT Field Analyser - pH, ORP (Redox), Conductivity, TDS, Dissolved Oxygen, Turbidity & Temperature. Including: cal solutions, Battery Charger, Handbook

Replacement Probes

TPS123204 Dissolved Oxygen Sensor, YSI-5739, NO CABLE

TPS123219 Sensor Cable, for YSI DO2 Sensor to 90 Series, 5m

TPS111224 pH Sensor, Plastic, AgCl Ref, Ceramic Frit Junc, 5m

TPS111259 ORP Sensor, Plastic, AgCl Ref, Ceramic Frit Junc, 5m

TPS125186 ENDC Detachable Cable Turbidity Sensor (no cable)

TPS125187 Detachable cable for ENDC Turbidity Sensor, 5m

TPS122218 Conductivity Sensor, k=10/ATC/Temp, for 90 Series, 5m

TPS122196 5 metre Conductivity Sensor, k=1/ATC/Temp, 5m

TPS122197 Conductivity Sensor, k=0.1/ATC/Temp, 5m

Options

TPS130015 RS232 cable

TPS130086 WinTPS Communication Software for Windows 95, 98 & ME

PPAPE1500B Pelican case PE1500 with foam - black

Other probes ranges/types

and additional cable lengths (up to 20m) are available

AQUAREAD™ GPS AQUAMETER

The AQUAREAD™ GPS AQUAMETER is the most sophisticated, yet easy to use multi-parameter water quality test system that we have come across.

Developed by an award-winning team of scientists and engineers whose experience include the design of moving map satellite navigation systems for high speed military jets, the GPS AQUAMETER™ is a breakthrough in ergonomic and operating system design. With the GPS AQUAMETER™ and its associated range of multi-parameter probes, it is now possible for anyone to obtain fast, reliable, accurate and dependable water quality readings, at an economical price.

The real star of the AQUAREAD™ water quality testing system is the multi parameter AQUAPROBE™. Available in eight different versions to cover everything from basic pH testing right through to comprehensive water analysis, these probes are built from high quality marine grade aluminium and stainless steel to withstand rough treatment in the harshest environments. All AQUAREAD™ products are designed and built in UK with full quality control and traceability on all parts to avionics industry standards. In February 2009, AQUAREAD™ won the Shell Livewire award for innovation.

Features:

- Measures pH, Turbidity, ORP, Dissolved Oxygen, Conductivity/TDS/Salinity/Resistivity/Sea water specific gravity, temperature, Atmospheric Pressure
- Log data easily along with GPS coordinate - either set the unit to log at regular intervals, or grab the current readings by hitting the M+ key
- Optional flow cell is perfectly suited to groundwater purging & sampling.
- New extended warranty –
 - 3 years on AQUAMETER™
 - 1 year on AQUAPROBE™ and accessories
 - 2 years on connectors

Specifications

Meter dimensions	90mm x 180mm x 39mm
Meter weight	450g
Probe dimensions	290mm x 42mm dia.
Probe Weight	725g
Meter Protection Class	IP67 (30 mins at 1M)
Probe Protection Class	IP68 (permanent immersion at 10M)
Data Memory	1000 full sets including GLP data
GPS Accuracy	+/- 10M in all 3 dimensions
Power	5 x AA cells. Alkaline or Ni-MH rechargeable
Battery Life	Alkaline > 20 hours. Ni-MH > 40 hours
Operating Temperature	-5°C – +50°
PC Interface	USB (cable provided)

Parameter	Range	Resolution	Repeatability
Atmospheric Pressure	150mb – 1150mb		Accuracy +/- 1mb
Turbidity	0 – 1000 NTU		± 2% of auto-ranged scale
Dissolved Oxygen	0 – 500% / 0 – 50.00mg/L	0.1% / 0.01mg/L	± 1% of reading
Conductivity	0 – 200mS/cm (200,000µS/cm)	3 Auto-range scales: 0 – 9999µS/cm, 10.00 – 99.99mS/cm, 100.0 – 200.0mS/cm	± 1% of reading or ± 1µS/cm if greater
TDS	0 – 100,000 mg/L (ppm)	2 Auto-range scales: 0 – 9999mg/L, 10.00 – 100.00g/L	± 1% of reading or ± 1mg/L if greater
Resistivity	5Ω-cm – 1MΩ-cm	2 Auto-range scales: 5 – 9999Ω-cm, 10.0 – 1000.0KΩ-cm	± 1% of reading or ± 1Ω-cm if greater
Salinity	0 – 70 PSU / 0 – 70 ppt (g/Kg)	0.01 PSU / 0.01 ppt	± 1% of reading or ± 0.1 unit if greater
Seawater Specific Gravity	0 – 50σ	0.1σ	± 1.0 σ
pH	0 – 14 pH / ± 625mV	0.01 pH / ± 0.1mV	± 0.01 pH / ± 0.5mV
ORP	± 2000mV	0.1mV	± 0.5mV
Temperature	-5°C – +50°C	0.1°C	± 0.5°C

In-Situ Aqua TROLL 200**Conductivity + Level + Temp
Data Logger**

Conductivity measurements can be used to characterize water quality changes relative to a baseline or to estimate the concentration of contaminants. Aqua TROLL® instruments simplify groundwater and surface water monitoring.

Two models available:

- Aqua TROLL® 100—Measures and logs conductivity and temperature.
- Aqua TROLL® 200—Measures and logs conductivity, water level/pressure, and temperature. Dynamic density compensation delivers superior water level accuracy.

Flexible Communications

- Built-in Modbus/RS485, SDI-12, and 4-20 mA simplify SCADA and telemetry system integration.
- Uses Win-Situ® software platform.

Extended Deployments

- Titanium housing safeguards against corrosion.
- Batteries last a minimum of 5 years when reading every 15 minutes—guaranteed.
- TROLL® Shield antifouling system significantly reduces biofouling.

**Aqua TROLL Specifications**

	Aqua TROLL 200		Aqua TROLL 200
<i>Length</i>	31.5cm	<i>Conductivity Sensor Type</i>	Balanced 4-electrode cell
<i>Diameter</i>	18.3mm	<i>Sensor Material</i>	PVC, Titanium
<i>Weight</i>	0.5 kg	<i>Range</i>	5µS/cm – 100,000µS/cm
<i>Housing Material</i>	Titanium	<i>Accuracy</i>	+/- 0.5% of reading plus 1 µS/cm from 5 µS/cm to 80,000 µS/cm +/- 1.0% of reading from 80,000 µS/cm to 100,000 µS/cm
<i>Nose Cone Material</i>	Black Delrin®	<i>Resolution</i>	0.1µS/cm
<i>Output Options</i>	Modbus RS-485, SDI-12, 4-20 mA	<i>Parameters Supported*</i>	Actual Conductivity Specific Conductivity** Salinity*** TDS Resistivity Density (Water) Pressure/Level**** Sensor Type Material Range, Non-Vented Range, Vented
<i>Fastest Polling Rate</i>	Modbus RS485 1 per sec SDI-12 1 per sec 4-20 mA 1 per sec		µS, mS 5 µS/cm – 100,000 µS/cm 5 µS/cm – 100,000 µS/cm 0 – 42 PSU ppt 0 – 82 ppt 10 Ohms-cm – 200,000 Ohms-cm 0.98 – 1.14 gm/cm ³
<i>Pressure Range of Operation</i>	5 psi – 500 psi		Silicon Strain Gauge Titanium
<i>Operating Temperature Range</i>	-20°C – 65°C		30, 100, 300, 500 psia 10.9, 60.1, 200.7, 341.3 m 5, 15, 30, 100, 300, 500 psig 33.5, 11, 21, 70, 210, 351 m
<i>Storage Temperature</i>	-40°C – 65°C		
<i>Power</i>		<i>Unit of Measure</i>	PSI, KPa, mm, cm, m, in., ft., Bar, mBar, mmHg
<i>Internal Battery</i>	3.6V lithium	<i>Accuracy*††</i>	@ 15°C +/- 0.05% Full Scale (FS) 0°C to 50°C +/- 0.1% FS -20°C to -1°C and 51°C to 80°C +/- 0.25% FS +/- 0.005% FS or better
<i>External Power</i>	8-36 VDC	<i>Resolution</i>	2X Range 3X range
<i>Typical Battery Life</i>	Guaranteed - 5 yrs or 200,000 readings* 4MB, 380,000 data points**	<i>Max. Pressure</i>	
<i>Logging Memory</i>	Linear 1 per minute Linear Average*** 1 per sec Event*** 1 per sec	<i>Burst Pressure</i>	
<i>Log Types</i>	Linear 1 per minute Linear Average*** 1 per 2 sec Event*** 1 per sec		
<i>Fastest Reading* Rate</i>	Linear 1 per minute Linear Average*** 1 per 2 sec Event*** 1 per sec		
<i>Maximum Number of Logs</i>	50		
<i>Temperature Material</i>	Titanium		
<i>Range</i>	-20°C to 65°C		
<i>Unit of Measure</i>	Celsius or Fahrenheit		
<i>Accuracy</i>	+/- 0.1°C		
<i>Resolution</i>	0.01°C		

* 1 reading = time and date plus all available parameters polled or logged from device.

** 1 data point = time and date plus one parameter logged.

*** External power supply or battery pack required when using event testing, recommended when using linear average testing.

* Parameters derived at 25°C and Actual Conductivity range of 5µS/cm – 100,000 µS/cm with a +/-0.05% plus 1µS/cm accuracy;

** Derived from Standard Methods 2510B.

*** Defined by the Practical Salinity Scale 1978 Standard Methods 2520B.

**** Real time Level compensation for Density of water.

*†† Accuracy with 4-20 mA output option: +/- 0.25% FS.

In-Situ TROLL® 9500 Multi Parameter Water Quality

The TROLL® 9500 is a powerful portable instrument that houses up to 9 water quality sensors, internal power and optional data logging capabilities.

Possible Parameters

- Dissolved Oxygen (% & mg/L)
 - > Optical D.O. (RDO®)
 - > Clark Polarographic
- Conductivity, Resistivity, TDS
- Temperature
- pH
- ORP
- Salinity
- Level, Depth, Pressure
- Barometric pressure
- Nitrate ("XP" Parameter)
- Chloride ("XP" Parameter)
- Ammonium ("XP" Parameter)
- Turbidity ("XP" Parameter)

Higher Reliability

The TROLL® 9500 features a corrosion-resistant housing that is suitable for fresh, waste and marine waters. The battery compartment and cable connector are IP67 rated even when detached. Sensors are field replaceable for easy maintenance and calibration.

Proven Accuracy

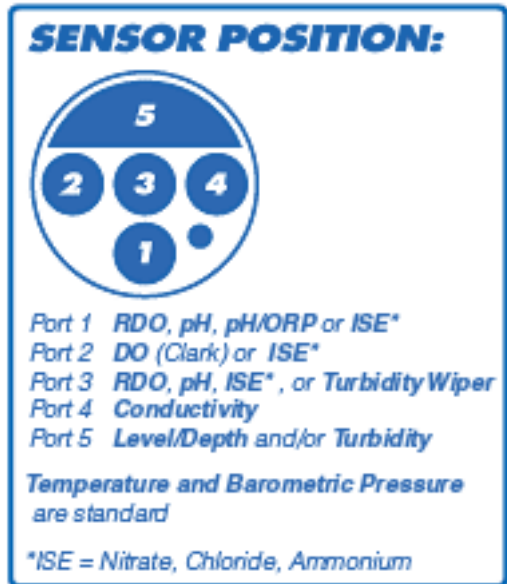
A factory report using NIST-traceable standards where applicable is included with each unit. Rigorous, independent 3rd-party validation proves our Optical D.O. (RDO®) is the most accurate and rugged sensor in the industry.

Easy Operation

The TROLL® 9500 features innovations like Quick-Cal solutions, Twist-Lock connectors and user-friendly software that make your job easier.



Sensor Port Options



TROLL 9500 Versions

	Available WQ Application/Use for:	Accepts "XP" Sensors (Extended Parameters)	Internal Data Logging	Logs data with RuggedReader®
Profiler	Profiling, dip and sample	No	No	Yes
Profiler XP	Profiling, dip and sample	Yes	No	Yes
Professional	Data logging and/or profiling	No	Yes	Yes
Professional XP	Data logging and/or profiling	Yes	Yes	Yes
LTS	Data logging, vertical profiling	No	Yes	Yes
Flow-Sense	Low flow groundwater sampling	Yes (Turbidity) No (Ammonium, Chloride, Nitrate)	No	Yes

In-Situ RDO (Optical Dissolved Oxygen Sensor)

The new RDO sensor utilises recent advances in lifetime-based optical fluorescence sensor technology to provide an extremely stable, precise and low maintenance dissolved oxygen sensor. This technology stands to revolutionize the current methods of water quality monitoring by eliminating the need for membranes, stirring and cleaning while allowing deployment for many months without need for re-calibration.

Will need image email to me as I don't have access to your servers...

Rugged Reader

When coupled with any of In-Situ's TROLL® Water Quality or Level instruments, the RuggedReader® delivers a reliable, easy-to-use data management system that will stand up to the harshest conditions. Improved smart battery, faster processing speed, a more flexible interface and the latest Microsoft® operating system make the new RuggedReader® a must have.



Flow Sense: Low-Flow Sampling System

The TROLL 9500 Low-Flow Sampling System is a vital component of your groundwater low-flow purging and sampling program. The system enables you to easily and professionally monitor water quality parameters for stabilisation during pumping.

Low-Flow Sampling System Includes

- In-Situ® Multi Parameter TROLL® 9500 water quality probe
- Precision Flowcell
- Flow-Sense - Automated Low-Flow Software
- RuggedReader® Handheld PC
- Necessary accessories
- All packed in a rugged field case

The Flow-Sense Software is included as the feature component of the Flow-Sense Automated Low-Flow Sampling System and is included with Win-Situ® 4.0 software. Flow-Sense Wizard is used during the low-flow sampling process to automatically monitor water quality parameters at specified intervals to determine whether the sample is representative of the ground water being drawn. Data collected by the wizard allows the user to closely adhere to and report with compliance to ASTM low-flow water quality monitoring methods.



TROLL LINK® Telemetry

Flexible and economical TROLL® Link Telemetry Systems offer reliable data retrieval from remote locations.

TROLL Link Telemetry Systems provide:

- Satellite or cellular options that guarantee communication from nearly any location.
- Faster data access at a lower total cost than other data retrieval methods.
- Full compatibility with Level TROLL® 300, 500, 700, Aqua TROLL® 200 or TROLL® 9500 instruments.
- User-defined configuration options for monitoring and alarming.
- A solar-powered option to eliminate on-site power supply.
- Remote access to instruments using Win-Situ® Plus software

TROLL 9500 Specifications

<i>Dimensions</i>	47 mm (1.9 in) OD, 52.7 cm (20.75 in) long With RDO® sensor: 88.4 mm (3.48 in) OD, 57.7 cm (22.7 in) long				
<i>Weight</i>	1.9 Kg				
<i>Wetted materials</i>	PVC, 316L stainless steel, Acetal, Viton®, nylon, Tefzel or polyurethane (cable)				
<i>Water tightness rating</i>	IP68 with all sensors and cable attached				
<i>Output options</i>	SDI-12 (optional with SDI-12 adapter), ASCII streaming mode or binary command;RS485/RS232				
<i>Internal Power</i>	2 internal user-replaceable D batteries (alkaline or high-power lithium)				
<i>External Power</i>	Power 9-12V DC (optional)				
Standard Sensors					
	<i>Accuracy</i>	<i>Range</i>	<i>Depth Rating</i>	<i>Response Time</i>	<i>Methodology</i>
<i>Barometric Pressure</i>	± 0.3% FS	7 – 16.5 psia	Meets highest rating of probe	< 30 sec per 30m (100 ft) cable	
<i>Temperature</i>	± 0.1°C	-5°C – 50°C	Meets highest rating of probe	< 30 sec	EPA 170.1
<i>Level Depth, Pressure</i>	± 0.05% FS	15 psi	11m / 35 ft	In thermal equilibrium: Instantaneous In thermal change— Instantaneous to ± 2% FS, 30 – 60 min to ± 0.1% FS, 1.5 – 2 hr to ± 0.05% FS	Silicon strain gauge
		30 psi	21m / 69 ft		
		100 psi	70m / 231 ft		
		300 psi	210m / 692 ft		
<i>pH (single or pH/ORP combo)</i>	± 0.1 pH units	0 – 12 pH units	246m / 807 ft	< 15 sec, pH 7 to pH 4	Std.Mthds. 4500-H+, EPA 150.2
<i>ORP (single or pH/ORP combo)</i>	± 4.0 mV	± 1400 mV	246m / 807 ft	< 15 sec	Std.Mth ds. 2580
<i>Dissolved Oxygen</i>					
<i>RDO® (Optical D.O.)</i>	± 0.1 mg/L	0 – 8 mg/L	Meets highest rating	30 seconds	ASTM #D888-05 Method C
	± 0.2 mg/L	8 – 20 mg/L	Meets highest rating	30 seconds	ASTM #D888-05 Method C
<i>Clark electrode</i>	± 0.2 mg/L	0 – 20 mg/L	246m / 807ft	1-mil membrane: 1–2 min@25°C	Std.Mthds. 4500-O G, EPA 360.1
	± 1%	0 – 200% saturation	246m / 807ft	2-mil membrane: 90 sec–3 min	Std.Mthds. 4500-O G, EPA 360.1
<i>Conductivity</i>					
<i>Low</i>	± 0.5% or 2 µS/cm	5 – 20,000 µS/cm	Meets highest rating	Instantaneous	Std.Mthds. 2510, EPA 120.1
<i>High</i>	± 0.5% + 2 µS/cm	150 – 112,000 µS/cm***	Meets highest rating	Instantaneous	Std.Mthds. 2510, EPA 120.1
Extended Parameter (XP) Sensors					
<i>Turbidity</i>	± 5% or 2 NTU/FNU	0 – 2000 NTU/FNU	105m / 346 ft	Instantaneous (5 sec for first reading)	ISO 7027
<i>Nitrate (NO3–)</i>	± 10%	0.14 – 14000 ppm N	14m / 46 ft	< 60 sec (T98), 1.4 to 14 ppm N	Std.Mthds. 4500-NO3 D
<i>Ammonium (NH4+)</i>	± 10%	0.14 – 14000 ppm N	14m / 46 ft	< 60 sec (T98), 1.4 to 14 ppm N	Std.Mthds. 4500-NH3 D, EPA 350.3
<i>Chloride (Cl-)</i>	± 15%	0.35 – 35500 ppm Cl	70m / 231 ft	< 60 sec (T98), 3.54 to 35.45 ppm Cl	Std Mthds 4500-Cl-D
Logging					
<i>Data Logging</i>	16 programmable tests (defined, scheduled to run or stored) / Logging Modes: Linear, Linear Average, Event				
<i>Memory</i>	4 MB (1,000,000 individual readings)				
<i>SDI-12</i>	Optional with SDI-12 adapter				

* No anode or cathode to scrub or clean.

*** Full operating range 70 µS/cm - 200,000 µS/cm

EnviroEquip Flow Cell

The EFC500 flow cell is a simple open cup type cell that hangs off the inside of a bucket or other container. The water quality probes are simply placed loosely into the cell. A lid is also provided with holes set up to hold sensors from the TPS 90FLMV water quality instrument.

- Smaller volume - faster sampling
- Easy to use - no extra fittings or joiners
- Counter-flow - no sample reaction with air
- Easy to set up - just hang in a bucket
- Easy to clean - comes apart with no tools
- 3 way valve for accurate flow collection
- Stainless steel fittings

When the pump is turned on, water is pumped through the cell and overflows the top. This ensures all the probes are fully submersed in water. Also since the flow cell is hanging inside a bucket, you don't need to worry about controlling the out-flow from the cell to avoid spills.

When pumping is first started, the three 3 valve is set to flow through the valve and into the flow cell and NOT out the sample tube on the branch leg of the 3 way valve. As water is pumped in through the inlet port, it fills the flow cell and then it drains out over the top into the bucket. When your water quality parameters have stabilised to meet your criteria, then redivert the 3 way valve and let the sample water flow directly out the branch leg of the 3 way valve and into your sample collection vessel. This bypasses the flow cell and eliminates any time averaging that would be occurring in the cell volume.

The flow cell has a volume of 500 ml empty and approx 400 ml with the probes inserted. This small volume will reduce the pumping time to get fresh formation water pumped through the cell.



Ordering Information

EEKEFC500 EnviroEquip Flow Cell, 500ml with lid

QED MP20 Flow Cell

Successful, consistent low-flow ground water sampling is based on knowing when purge water indicator parameters stabilize. This ensures that sampling begins only when the samples are truly representative of water in the surrounding aquifer.

Until now, deciding when stabilization had been achieved was complex; it required you to monitor multiple ground water quality parameters simultaneously and make repeated calculations to determine whether the fluctuations in each parameter had fallen within acceptable limits. The MP20 Flow Cell changed this process forever. Microprocessor-based PurgeScan technology performs the monitoring and calculations automatically, clearly signaling when stabilization has occurred with audio and visual alerts.

This makes low-flow sampling easier, more accurate, and more efficient, too, as it frees your time to perform other sampling tasks while purging is underway. You can do it the right way, collecting the most accurate samples, and saving time and money.

Beyond its exclusive PurgeScan feature, The MP20 Flow Cell has been designed to continuously monitor groundwater quality parameters in-line, such as pH, temperature, redox potential, conductivity and turbidity (optional sensor) during purge.

The MicroPurge MP20 Flow Cell purge water quality monitor leads the field in performance, convenience, completeness and warranty. On top of all that, QED's exclusive PurgeScan technology automatically signals when stabilization has been achieved for selected water quality parameters and stores key data points.



Specifications

Meter Specifications:

Display	9 cm
Weight	1 kg
Memory	100 data frames (200 opt.)
Rating	Waterproof NEMA 6 [IP67]
Power	3 x C batteries
Battery Life	12 hours
Temperature	-5 - 50°C
Cable	1.83 m

Flow Cell Specifications:

Volume	175 mL
Material	rigid urethane
Fitting Type	soft-tube "clamp-free"
Fitting Size(s)	
Inlet	1/4 in. I.D. x 3/8 in. O.D.
Outlet	3/8 in. I.D. x 1/2 in. O.D.
Venting Modes	horizontal and vertical
Sonde Connection	bayonet-style twist mount

Sonde Specifications

Size	8 x 23 cm
Weight	0.6 kg

Typical Sensor Performance Specifications:

Temperature	0.01°C
Range	-5 to 50°C
Accuracy	± 0.2°C
Resolution	0.01°C
DO	
Range	0 to 20 mg/l 0 to 100 mS/cm
Accuracy	± 0.2 mg/l ±1% of reading ± 1 count
Resolution	0.01 mg/l 4 Digits

pH

Range	2 to 12 units
Accuracy	± 0.2 units
Resolution	0.01 units

ORP

Range	-999 to 999 mV
Accuracy	± 20 mV
Resolution	1 mV

Turbidity (MP20DT Only)

Range	0 to 1,000 NTU
Accuracy	± 5% of reading
Resolution	± 1 NTU 1 NTU

Salinity (calculated)

Range	0 to 70 PSS
Accuracy	± 1% of reading
Resolution	± 1count 0.01 PSS

Ordering Information

QEDMP20	MicroPurge Basics Flow Cell for pH, dissolved oxygen (DO), conductivity, ORP (redox), and temperature. Includes calibration and maintenance supplies and carry case.
QEDMP20D	As above with Download
QEDMP20DT	As above with turbidity

ThermoFisher
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