PWT / SEWAGE

Delivery contents

Case

1x grey plastic case with matching foam insert

PoolLab 2.0

1x PoolLab 2.0 device with in-built triple cuvette and light shield
OEM:
Unimarine keypad foil
Unimarine start screen logo

3x AA batteries
1x 10.5 cm white stirring rod
1x 10.5 cm blue stirring rod
1x 10.5 cm red stirring rod
100 tablets DPD 1 Photometer/Comparator
100 tablets DPD 3 Photometer/Comparator
100 tablets Copper N° 1 Photometer/Comparator
100 tablets Copper N° 2 Photometer/Comparator
100 tablets Glycine
20ml/10ml Total Hardness N°1 and N°2 liquid reagents

Ft7200

(Ft7200 with pH-electrode, with EC-electrode but WITHOUT ORP Elektrode):

Electronic Meter pH/ (ORP) /EC/TDS/Salt/Temp.
2x screw-on extensions: a) pH + Temp. / b) EC/TDS/Salt + Temp
ORP electrode is not part of the kit and needs to be purchased separately (FTGD-7000EO)
Ranges: 2.00 - 16.00 pH/ (-1000 to +1000 mV) /0-2000 µS/cm (2.00-20.00 mS/cm/0-1300 ppm (1.3 - 13.00 ppt)/0-1000 ppm (1.00-12.00 ppt)/0-90°C
Microprozessor based for fast and accurate measurements
Large LCD display to view all results on just one page
IP57 waterproof
Exchangeable electrode
Auto-power-off (10 min.) / Low battery indicator.
Simple button-calibration with ATC (aut. temp. comp.), manual Salinity (MSC) compensation
Electrode protection by screwed on cap with KCl solution.
Accuracies: +/- 0.01 pH; +/- 2mV; +/- 2% FS (EC/TDS/Salt); +/- 0.2°C
Resolution: 0.01 pH / 1mV / 1µS/cm - 0.01 mS/cm / 1 ppm - 0.01 ppt / 0.1°C
ATC: Yes (0-90°C pH/mV; 0-50°C EC/TDS/Salt)
Calibration: 4.00/7.00/10.01 pH; 1413 µS/cm/12.88 mS/cm; +468mV
Incl. 4 x 1.5V batteries (AAA/UM-4)
Incl. KCl refill bottle
Incl. rope to hang the meter aound neck
Incl. English manual
Incl. Calibration certificate
Incl. 12 x 20ml sachet EACH:
pH 4.00/7.00/10.01; 1413 µS/cm; 12.88 mS/cm

AquaVial

3 x AquaVial E.Coli/Coliforms Bactera-testKit with 4 tests (12 tests in total)
Detektion-limit: 1 cfu/ml
Colour comparison (liquid in vial)
24h @ 35-40°C / 48h @ 20-25°C
Shelf-life: 2 years after production

Turbidity Tube

1 x 26" Turbidity Tube (2 separate pieces)

Parameters & Specifications

Pool Lab 2.0	
Chlorine	(0.0 - 6.0 mg/l)
Cl. Dioxide	(0.0 - 11.00 mg/l)
Copper	(0.0 - 5.0 mg/l)
Total Hardness	(0 - 500 mg/l)
Electronic Meter FT7200	
pH	(-2.00 - 16.00)
Temperature	(0 - 90°C)
Electronic Conductivity	(0 - 2000 µS/cm)
TDS	(0 - 1300 mg/l)
Salt	(0 - 1000 mg/l)
Aquavial Water Test Kit	
E. Coli & Coliform	
Turbidity Tubes	
Turbidity and Suspended Solids	

Water treatment testing methods

PoolLab 2.0

Chlorine (0.0 - 6.0)
Cl. Dioxide (0.0 - 11.00 mg/l)
Copper (0.0 - 5.0 mg/l)
Total Hardness (0 - 500 mg/l)

Please use instruction manual supplied with the PoolLab 2.0.

Attention!
Wear protective gloves and safety gogles when performing any tests using corrosive, harmful or irritant reagents. Do not ingest.

Water treatment testing methods

Electronic Meter FT7200

pH (-2.00 - 16.00)
Temperature (0 - 90°C)
Electronic Conductivity (0 - 2000 µS/cm)
TDS (0 - 1300 mg/l)
Salt (0 - 1000 mg/l)

Features

- Large LCD displays pH or ORP or Conductivity or TDS or Salinity and Temperature simultaneously. (Device-specific)
- Waterproof IP-57 standard and rugged design for field use conveniently. It floats on water.
- Automatic Temperature Compensation (ATC) and degree °C/°F switchable.
- Displays function mode automatically during insert sensor module.
- Icon **PH**, **ORP**, **COND**, **TDS**, **Salt** and unit **pH, mV, µS, mS, ppm, ppt, °C**, **°F** for recognition easy during select function mode.
- Displays Maximum/Minimum value and data hold.
- Low battery and consumption indicator. Auto shut off after 10 minutes.
- Easy to replace Conductivity cell, pH electrode or ORP electrode module by user

Applications

- Agriculture
- Aquarium
- Anti-freeze recycling
- Boiler
- Chemical industry
- Cooling tower
- Drinking water
- Fish farming
- Food industry
- Garden husbandry
- Hydroponic
- Laboratory usage
- Plating industry
- Swimming pool & Spa
- Water treatment

Specifications

7200			
	pH	**ORP**	**Temp.**
Range	-2 - 16	± 1000	0 - 90 °C
Accuracy	± 0.01	± 2	± 0.2 °C
Resolution	0.01 pH	1 mV	0.1 °C
ATC	0 - 90 °C		
Calibration	pH 4.00, 7.00, 10.01		

	Conductivity	**TDS**	**Salinity**
Range	0 - 2000 µS/cm 2.00 - 20.00 mS/cm	0 - 1300 ppm 1.30-13.00 ppt	0 - 1000 ppm 1.00-12.00 ppt
Accuracy	± 2 % FS (Cond. - TDS - Salz)		
Resolution	1 µS/cm | 0.01 mS/cm	1 ppm/0.01 ppt	1 ppm/0.01 ppt
ATC	0 - 50 °C		
Calibration	0 µS/cm, 1413 µS/cm, 12.88 mS/cm		

Power	DC1.5V × 4 battery (UM-4/AAA)
Dimensions	Meter: 195 × 40 × 36 mm Kits: 230 × 205 × 50 mm
Weight	Meter: 135g (with battery), Kits: 780g

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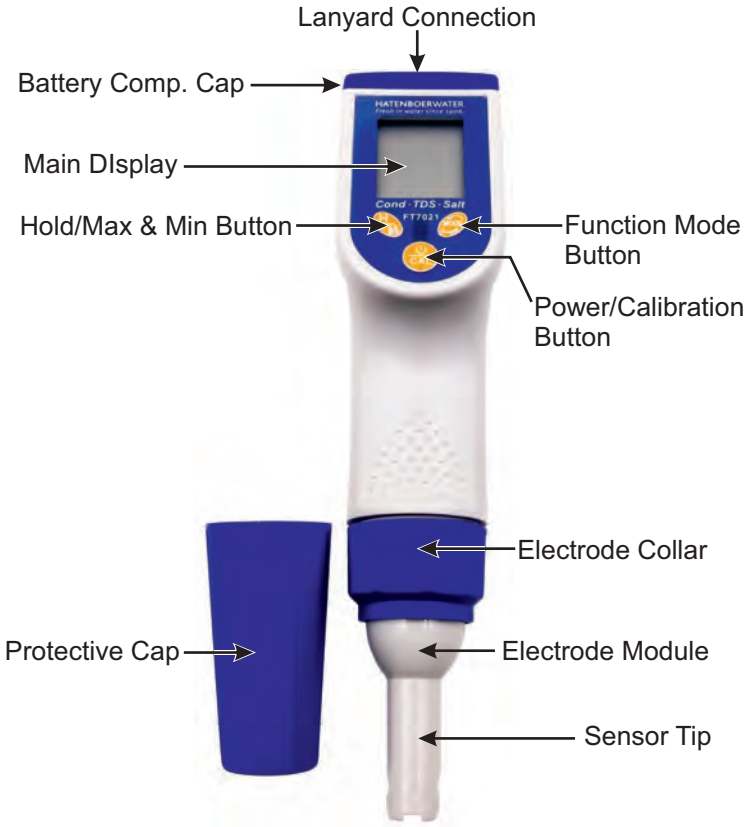
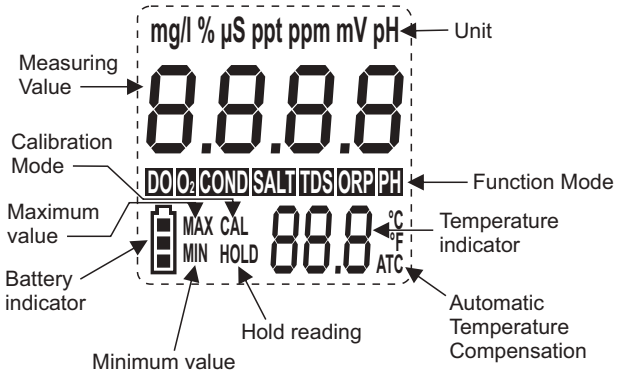
Water treatment testing methods

Device



Display



Power/Calibration

1. Press the "Power/Calibration" button to switch the device On or Off.
2. Press and hold the button to enter calibration mode. The calibrations starts automaticly. While the calibration mode is active, the indicator "**CAL**" will be shown next to the temperature. The device will automaticly return to measurment mode when the calibration is done.

Function Mode

1. Press the "Mode" button to switch between "Conductivity", "TDS" and "Salinity" measurement modes, when the Conductivity cell is attached.
2. Press and hold the button to switch between **°C** or **°F.**

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Water treatment testing methods

Hold / Max & Min

1. Press the "Hold/Max&Min" button to enter hold mode. While the hold mode is active, the currently shown reading value will be locked and the indicator "**HOLD**" will appear next to the temperature. Press the "Hold/Max&Min" button again to exit the hold mode and return to measurment mode.
2. Press and hold the "Hold/Max&Min" button to enter Max & Min mode. The indicators "**MAX**" and "**MIN**" will be flashing next to the battery icon. Press the button while in Max&Min mode, to get the Maximum and Minimum value displayed. Press and hold the "Hold/Max&Min" button again to exit this mode and return to measurement mode.

Note: (1) The device will not auto shut off while in Max&Min mode.

Preparation

1. Remove the protection cap and/or unscrew soaking bottle (pH, ORP only) from meter to rinse the electrode with clean water and wipe it dry. Don't leak soaking solution from bottle, and replace bottle when end of usage.
2. Press the "Power/Clibration" 

button to turn the meter on.

Note:

(1) Don't touch or wipe the surface of inner black sensor of conductivity cell.

pH Calibration

1. Make sure the pH sensor electrode is attached, or check if the icon on the display shows the **PH** icon.
2. Immerse the electrode in the buffer solution pH 7. Stir gently and wait until the value on the display has stabilized. Press and hold the "Power/Calibration" button until "**CAL**" appears next to the temperature to enter calibration mode and the value 7.00 is flashing. When the calibration is ending, the value stops flashing and indicates "SA", followed by "End". After the calibration has ended the device will return to measurment mode automatically.
3. Rinse the electrode with clean water and wipe it dry. Immerse the electrode into the buffer solution pH 4. Stir gently and wait until the value on the display has stabilized. Press and hold the "Power/Calibration" button until "**CAL**" appears next to the temperature to enter calibration mode and the value 4.00 is flashing. When the calibration ends, the value stops flashing and indicates "%" (percentage of slope), followed by "SA" and "End". After calibration the device will return to measurment mode automatically.
4. After the slope calibration of pH 4 or pH 10, the display will show the percentage of the slope (PTS) to indicate the status of the electrode. If the PTS is below 70% or above 130%, the electrode must be replaced. A slope of 100% is ideal.

Note:

(1) "SA" will not appear if the calibration fails.

(2) When performing a 2-point or 3-point calibration, calibrate first with pH 7 buffer and then with pH 4 or pH 10 buffer.

Function Mode

Conductivity Calibration

1. Make sure the Conductivity sensor cell is attached, or check if the display shows one of the icons **COND**, **TDS** or **Salt**.
2. Immerse the conductivity cell in the standard solution 1413 µS/cm. Stir gently and wait until the value has stabilized. Press and hold "Power/Calibration" button until "**CAL**" appears next to the temperature to enter calibration mode and the value 1413 is flashing. When the calibration is ending, the value stops flashing and indicates "SA", followed by "End". After the calibration has ended the device will return to measurment mode automaticly.
3. If the reading is not 0 when the conductivity cell is in air and not immersed in any solution, then calibrate in air so that the reading becomes 0.

Note:

(1) For the measurement of high conductivity solutions, please calibrate with a 12.88 mS/cm standard solution.

(2) When entering the calibration mode, the **COND** icon is automatically displayed.

(3) "SA" will not appear if the calibration fails.

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Water treatment testing methods

pH Measurement

1. Make sure the pH electrode is attached, or check if the icon on the display shows the PH icon.
2. After the calibration, rinse the electrode with clean water and wipe it dry. Immerse the electrode in the sample solution to be measured. Stir gently and wait for a stable reading.

Note:

(1) The display will show "_ _ _ _" when a reading exceeds the measurment range.

(2) Rinse the electrode with clean water after the measurement. Replace the protective cap and soaking bottle. The soaking bottle should be always kept wet by adding soaking solution.

Battery replacement

1. Make sure the device is turned off.
2. Unscrew the screws on the top of the device with a screwdriver. Take off the battery compartment cap.
3. Replace the current battery with a fresh AAA(UM-4) type battery.
4. Put the battery compartment cap back on, and screw the screws back in with a screwdriver.

Note:

(1) Make sure that the battery is correctly positioned according to the polarity.
(2) Don't lose the O-ring which has been mounted on cap.
(3) Replace the battery when the battery icon is flashing.

Electrode replacement

1. Unscrew the electrode collar counterclockwise, and remove it completely.
2. Pull the electrode module out of the tester socket.
3. Insert a new electrode module into the tester socket carefully.
4. Screw in the new electrode collar clockwise.

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Aquavial Water Test Kit

E Coli & Coliform

Please use instruction manual inside the Aquavial Water Test Kit

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Water treatment testing methods

Turbidity and Suspended Solids

by 26 inch tube

Info

The Turbidity Test is designed to give a measure of the suspended solids content of the final effluent. It is also useful in following day to day variation in the quality of sewage and effluent.

The Turbidity Test uses a specially calibrated plastic tube and provides the simplest possible method of performing this important test.

The tube is graduated at 30 to 500 turbidity units on the 13 inch tube.

A double length tube of 26 inches with additional graduations from 5 to 25 turbidity is part of the kit.

Test

1. Hold the tube vertically over a white surface and view downwards.
2. Gradually pour in the effluent sample untill the black cross is just no longer visible.
3. Read of the graduation corresponding to the height of the sample in the tube. This represents the turbidity of the effluent in Jackson Turbidity Units (JTU).
4. For sweage effluents the graduations may also be taken as being approximately equivalent to the Suspendet Solids Content as milligrams per liter.

Note

The Royal Commission standsards for Effluent recomended that the suspended solids content of sewage effluent shoulld be no more than 30 mg/l.

Any staining may be removed by the use of a household detergent.

The tube should be rinsed after each use.

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