

Testers



	Page
Table of Contents	
Comparison Chart	B2
Introduction	B3
pH Testers	B4
pH/ORP Testers	B14
EC/TDS Testers	B16
Combination Testers	B24
Sodium and RH Testers	B28
Temperature Testers	B32

Part Number	Range	Accuracy	Water Resistant	ATC	Replaceable Probe	Calibration	Calibration Page Check
pH Testers							
HI 96106 (Champ®)	0.0 to 14.0 pH	±0.5 pH				1 point	B4
HI 96107 (pHep®)	0.0 to 14.0 pH	±0.1 pH				1 point	B4
HI 96108 (pHep®+)	0.0 to 14.0 pH	±0.1 pH		•		2 point	B4
HI 98103 (Checker®)	0.00 to 14.00 pH	±0.2 pH			HI 1270	2 point	B5
HI 99104	0.00 to 14.00 pH	±0.2 pH			HI 1270	2 point	B6
HI 98106 (Champ®)	0.0 to 14.0 pH	±0.2 pH			HI 73106 ²	1 point	B7
HI 98107 (pHep®)	0.0 to 14.0 pH	±0.1 pH			HI 73106 ²	2 point	B7
HI 98108 (pHep®+)	0.0 to 14.0 pH	±0.1 pH		•	HI 73108 ²	2 point	B7
HI 98127 ¹ (pHep®4)	-2.0 to 16.0 pH	±0.1 pH	•	•	HI 73127	2 point	B8
HI 98128 ¹ (pHep®5)	-2.00 to 16.00 pH	±0.05 pH	•	•	HI 73127	2 point	B8
HI 98111 (Piccolo®)	1.00 to 13.00 pH	±0.01 pH		•	HI 1280	2 point	B9
HI 98111 (Piccolo® 2)	1.00 to 13.00 pH	±0.01 pH		•	HI 1290	2 point	B9
HI 98113 (Piccolo® Plus) ¹	1.00 to 13.00 pH	±0.01 pH		•	HI 1295	2 point	B9
HI 98109 (Skincheck™)	0.00 to 14.00 pH	±0.2 pH			HI 1413S/50	2 point	B10
HI 98110 (Skincheck™1)	0.00 to 14.00 pH	±0.2 pH			HI 1413B/50	2 point	B10
HI 981408	0.0 to 14.0 pH	±0.2 pH	•		HI 1219	1 point	B11
TDS Testers							
HI 96301 (DiST®1)	0 to 1990 ppm	±2% F.S.		•		1 point	B18
HI 96302 (DiST®2)	0 to 10000 ppm	±2% F.S.		•		1 point	B18
Primo	0 to 1999 ppm	±2% F.S.		•		1 point	B15
Primo 2 ¹	0 to 1999 ppm	±2% F.S.		•		1 point	B15
Primo 1	0 to 1999 ppm	±2% F.S.		•		1 point	B16
Primo 3 ¹	0 to 1999 ppm	±2% F.S.		•		1 point	B16
TDS 1	0 to 999 ppm	±2% F.S.		•		1 point	B17
HI 98300 (DiST®1)	0 to 1999 ppm	±2% F.S.		•	HI 73301 ²	1 point	B19
HI 98301 (DiST®1)	0 to 1999 ppm	±2% F.S.		•	HI 73301 ²	1 point	B19
HI 98302 (DiST®2)	0.00 to 10.00 ppt	±2% F.S.		•	HI 73302 ²	1 point	B19
HI 98307 (Conmet 3)	0.00 to 19.99 ppt	±2% F.S.		•	HI 3292	1 point	B31
HI 981409	0 to 1999 ppm	±2% F.S.	•	•	HI 1220	1 point	B23
HI 983310 (Aqua Dip) ¹	0 to 1999 ppm	±2% F.S.	•	•		factory calibrated	B26
Conductivity Testers							
HI 96303 (DiST®3)	0 to 1990 µS/cm	±2% F.S.		•		1 point	B18
HI 96304 (DiST®4)	0 to 19900 µS/cm	±2% F.S.		•		1 point	B18
Primo 5	0 to 1999 µS/cm	±2% F.S.		•		1 point	B15
Primo 4	0.00 to 10.00 mS/cm	±2% F.S.		•		1 point	B16
HI 98303 (DiST®3)	0 to 1999 µS/cm	±2% F.S.		•	HI 73303 ²	1 point	B19
HI 98304 (DiST®4)	0.00 to 19.99 mS/cm	±2% F.S.		•	HI 73304 ²	1 point	B19
HI 98305 (Conmet 1)	0 to 1999 µS/cm	±2% F.S.		•	HI 3291	1 point	B31
HI 98306 (Conmet 2)	0.00 to 19.99 mS/cm	±2% F.S.		•	HI 3292	1 point	B31
HI 98308 (PWT)	0.0 to 99.9 µS/cm	±2% F.S.		•	HI 73308 ²	1 point	B22
HI 98309 (UPW)	0.000 to 1.999 µS/cm	±2% F.S.		•	HI 73309 ²	factory calibrated	B22
HI 981410	0.00 to 10.00 mS/cm	±2% F.S.	•	•	HI 1220	1 point	B23
Combination Testers							
HI 98311 (DiST®5) ¹	0 to 2000 ppm 0 to 3999 µS/cm	±2% F.S. ±2% F.S.	•	•	HI 73311	1 point 1 point	B20
HI 98312 (DiST®6) ¹	0.00 to 10.00 ppt 0.00 to 20.00 mS/cm	±2% F.S. ±2% F.S.	•	•	HI 73311	1 point 1 point	B20
DiST®7 ¹	0 to 2000 ppm 0 to 3999 µS/cm	±2% F.S. ±2% F.S.	•	•		1 point 1 point	B21
DiST®8 ¹	0.00 to 10.00 ppt 0.00 to 20.00 mS/cm	±2% F.S. ±2% F.S.	•	•		1 point 1 point	B21
HI 98204 (Water Test) ¹	0.0 to 14.0 pH ±1000 mV	±0.2 pH ±5 mV				2 point factory calibrated	B27
	0 to 1999 µS/cm	±2% F.S.				1 point	
HI 98121 ¹	2.00 to 16.00 pH ±1000 mV	±0.05 pH ±2 mV	•	•	HI 73127	2 point factory calibrated	B14
HI 98129 ¹	0.00 to 14.00 pH 0 to 2000 ppm 0 to 3999 µS/cm	±0.05 pH ±2% F.S. ±2% F.S.	•	•	HI 73127	2 point 1 point 1 point	B24-25
HI 98130 ¹	0.00 to 14.00 pH 0.00 to 10.00 ppt 0.00 to 20.00 mS/cm	±0.05 pH ±2% F.S. ±2% F.S.	•	•	HI 73127	2 point 1 point 1 point	B24-25

¹ Also reads temperature.

² To be replaced by authorized technical personnel only.

Part Number	Range	Accuracy	Water Resistant	ATC	Replaceable Probe	Calibration	Calibration Page Check
Temperature Testers							
HI 98501 (Checktemp®C)	-50.0 to 150.0°C	±0.3°C				factory calibrated	• B32
HI 98505 (Checktemp®L C)	-50.0 to 150.0°C	±0.3°C				factory calibrated	• B32
HI 98502 (Checktemp®F)	-58.0 to 302.0°F	±0.5°F				factory calibrated	• B32
HI 98506 (Checktemp®L F)	-58.0 to 302.0°F	±0.5°F				factory calibrated	• B32
HI 98501-1	-50.0 to 150.0°C	±1°C				factory calibrated	B33
HI 98509 (Checktemp® 1 C)	-50.0 to 150.0°C	±0.3°C				factory calibrated	• B34
HI 98510 (Checktemp® 1 F)	-58.0 to 302.0°F	±0.5°F				factory calibrated	• B34
HI 98509-1	-50.0 to 150.0°C	±1°C				factory calibrated	B33
HI 151-00 (Checktemp® 4 C)	-50.0 to 220°C	±0.3°C				factory calibrated	• B35
HI 151-01 (Checktemp® 4 F)	-58.0 to 428.0°F	±0.8°F				factory calibrated	• B35
HI 145-00	-50.0 to 220.0°C	±0.3°C				factory calibrated	• B36
HI 145-01	-58.0 to 428.0°F	±0.6°F				factory calibrated	• B36
HI 145-20	-50.0 to 220.0°C	±0.3°C				factory calibrated	• B36
HI 145-30	-58.0 to 428.0°F	±0.6°F				factory calibrated	• B36
HI 147-00 (Checkfridge C)	-50.0 to 150.0°C	±0.3°C				factory calibrated	• B37
HI 147-01 (Checkfridge F)	-58.0 to 302.0°F	±0.6°F				factory calibrated	• B37
HI 98517 (KEY® C)	-40 to 550°C	±2°C			see page B38	factory calibrated	B38
HI 98518 (KEY® F)	-40 to 999°F	±4°F			see page B38	factory calibrated	B38
ORP Testers							
HI 98201	±999 mV	±5 mV			HI 73201 ²	factory calibrated	B12
HI 98120 ¹	±1000 mV	±2 mV	•		HI 73120	factory calibrated	B13
Other Testers							
HI 98202 (pNa)	0.0 to 3.0 pNa	±0.2 pNa			HI 73202 ²	1 point	B28
HI 98203 (SALINTEST)	0.00 to 1.00 pNaCl	±0.02 pNaCl			HI 73202 ²	1 point	B29
HI 98601 (HYGROCHECK®)	10.0 to 90.0% RH	±3% F.S.				factory calibrated	B30

¹ Also reads temperature.

² To be replaced by authorized technical personnel only.

HANNA instruments® Testers

A Solution for Every Application

The following section contains the largest selection of testers offered by a manufacturer. The HANNA instruments® tester line covers a multitude of parameters, from pH to TDS, Conductivity, ORP, Temperature, Sodium, Salt and Relative Humidity.

Testers are ideal in applications where it is important to have quick and accurate sample readings. They allow the user to know the quality of the water without bringing the sample to a laboratory, or having to purchase expensive and more complicated analytical equipment. HANNA instruments® testers also provide the user with much more accurate and speedy results than test strips or chemical test kits.

Modern technology has allowed the Research and Development teams at HANNA instruments® to produce testers that have ten times the accuracy of the testers first introduced by HANNA instruments® to the market over 15 years ago. HANNA instruments® was the first manufacturer in the world to introduce the concept of an easy-to-use tester and has since been the leader in tester technology, both in terms of innovation, as well as in market research. We are constantly looking for ways to improve our line and to solve new and existing market needs for water quality testing.

Testers are widely used in many applications including aquaculture, aquariums and pet care, agriculture, hydroponics, school science programs, food manufacturing and transportation, tanneries, water conditioning, water analysis, water purification, printing, boilers and cooling towers, environmental analysis, skin care, swimming pools, spas, wine and beer manufacturing.



pHep[®], introduced in 1986, is the smallest and most economical pH meter in the world. It is only 15 cm long, it weighs 85 grams and it is the ideal instrument to perform quick pH measurements.

pHep[®] is based on the combination of an electrode with an LCD that displays the measurement. The electrode is protected by a rugged epoxy external body and it is supplied with a cap that can be used as a vessel to perform measurements. Simple, precise and rugged, pHep[®] is the answer to the litmus paper, used many years ago.

This tester family includes 3 models:

- HI 96106 (*Champ*[®]): pH tester with one calibration point
- HI 96107 (pHep[®]): pH tester with one calibration point and ± 0.1 pH accuracy
- HI 96108 (pHep[®]+): combining pHep[®]'s characteristics with automatic temperature compensation (ATC) and calibration at 2 points. The ATC system measures the temperature of the sample and compensates the pH reading. Precision is increased by this feature even in quick measurements.

Specifications

	HI 96106 <i>Champ</i> [®]	HI 96107 pHep [®]	HI 96108 pHep [®] +
Range	0.0 to 14.0 pH	0.0 to 14.0 pH	0.0 to 14.0 pH
Resolution	0.1 pH	0.1 pH	0.1 pH
Accuracy (@20°C/68°F)	± 0.2 pH	± 0.1 pH	± 0.1 pH
Calibration	manual, 1 point	manual, 1 point	manual, 2 points
Temperature Compensation	—	—	automatic, 0 to 50°C
Battery Type / Life	3 x 1.5V / approx. 150 hours		
Environment	0 to 50°C (32 to 122°F); RH max 95%		
Dimensions	150 x 30 x 21 mm (5.9 x 1.2 x 0.8")		
Weight	70 g (2.5 oz.)		

Accessories

HI 77400P	pH 4 and pH 7 buffer sachets (20 mL, 5 pcs./each)	HI 7007M	pH 7.01 buffer solution, 230 mL bottle
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7010M	pH 10.01 buffer solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle
HI 7004M	pH 4.01 buffer solution, 230 mL bottle		

Ordering Information

HI 96106 (*Champ*[®]) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

HI 96107 (pHep[®]) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

HI 96108 (pHep[®]+) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

pH Tester with Replaceable Electrode



At the cost of just a few rolls of litmus paper, you can have the industry's best pocket-sized pH tester.

The *Checker*[®] supplies you with fast and accurate readings from 0 to 14 pH with a resolution of 0.01 pH.

This compact tester features a large easy-to-read LCD and simple to perform 2-point calibration.

The pH electrode of the *Checker*[®] can be replaced. You only need to unscrew the electrode from the meter body and screw on a new one.

The *Checker*[®] is fast, accurate, light-weight and with 3000 hours of battery life, you don't have to worry about frequent battery replacement.

Testing pH has never been easier!

Specifications

HI 98103 <i>Checker</i> [®]	
Range	0.00 to 14.00 pH
Resolution	0.01 pH
Accuracy (@20°C/68°F)	±0.2 pH
Calibration	manual, 2 points
Electrode	HI 1270 (included)
Battery Type / Life	2 x 1.5V / approx. 3000 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 95%
Dimensions	66 x 50 x 25 mm (2.6 x 2.0 x 1.0") - without probe
Weight	50 g (1.8 oz.)

Ordering Information

HI 98103 (*Checker*[®]) is supplied complete with HI 1270 pH electrode, batteries and instructions.

Accessories

HI 1270	pH electrode with screw-type connector	HI 7004M	pH 4.01 buffer solution, 230 mL bottle
HI 77400P	pH 4 and pH 7 buffer sachets (20 mL, 5 pcs./each)	HI 7007M	pH 7.01 buffer solution, 230 mL bottle
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7010M	pH 10.01 buffer solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle

For a complete range of calibration, cleaning and maintenance solutions, see section F.



pH Tester for Education, with Replaceable Electrode

HI 99104 is an ideal pocket tester for education.

Thanks to its 0.01 pH resolution and two-point manual calibration through easy-to-reach trimmers, it immediately displays pH variations to reflect the smallest change in the sample.

Unlike conventional testers, HI 99104 has a long and slim stem, ideal for measurements in small samples or vials.

HI 99104 is supplied with a rugged, plastic body electrode and a screw connector making electrode replacement quick and easy.

On top of that, it offers a 1000 hours life with common 1.5V batteries!

Specifications

HI 99104	
Range	0.00 to 14.00 pH
Resolution	0.01 pH
Accuracy (@20°C/68°F)	±0.2 pH
Calibration	manual, 2 points
pH Electrode	HI 1270 (included)
Battery Type / Life	2 x 1.5V / approx. 1000 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 95%
Dimensions	200 x 28 x 20 mm (7.9 x 1.1 x 0.8")
Weight	46 g (1.6 oz.)

Accessories

HI 1270	pH electrode with screw-type connector	HI 7004M	pH 4.01 buffer solution, 230 mL bottle
HI 77400P	pH 4 and pH 7 buffer sachets (20 mL, 5 pcs./each)	HI 7007M	pH 7.01 buffer solution, 230 mL bottle
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7010M	pH 10.01 buffer solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle

Ordering Information

HI 99104 is supplied complete with HI 1270 pH electrode, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

**Electronic pH Tester
with Replaceable Electrode**



Introduced in 1986, the pHep® revolutionized pH measurement by providing everyone with a simple, inexpensive pocket pH tester.

Thanks to over two decades of manufacturing experience, this series of pH testers has been completely re-designed: today, the pHep® family features a casing that is rugged and ergonomically enhanced to fit your hand.

The design of these testers also features a larger LCD so measurements are easier to read from any angle.

Each instrument in the pHep® family comes with a protective cap that can be used as a measurement vessel.

With the latest innovation of a non-clogging fiber junction the new pHep® meters last much longer. You can simply pull out 1-2 mm (1/8") of the junction fiber to completely renew it. The temperature sensor of the pHep®+ is exposed for rapid temperature compensation.

These testers are the standard in quick, on-the-spot pH testing.



Specifications

	HI 98106 (<i>Champ</i> ®)	HI 98107 (pHep®)	HI 98108 (pHep®+)
Range		0.0 to 14.0 pH	
Resolution		0.1 pH	
Accuracy (@20°C/68°F)	±0.2 pH	±0.1 pH	
Calibration	manual, 1 point	manual, 1 point	manual, 2 points
Temperature Compensation	—	—	automatic, 0 to 50°C
Battery Type / Life	4 x 1.5V / approx. 800 hours of continuous use	4 x 1.5V / approx. 700 hours of continuous use	4 x 1.5V / approx. 700 hours of continuous use
Environment		0 to 50°C (32 to 122°F); RH max 95%	
Dimensions		175 x 41 x 23 mm (6.9 x 1.6 x 0.9")	
Weight		95 g (3.4 oz.)	

Ordering Information

HI 98106 (*Champ*®) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

HI 98107 (pHep®) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

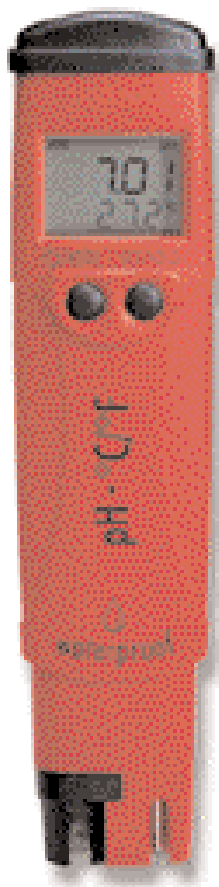
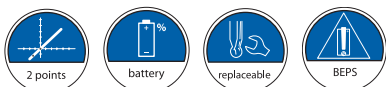
HI 98108 (pHep®+) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

Accessories

HI 73108*	Spare electrode for HI 98108	HI 7007M	pH 7.01 buffer solution, 230 mL bottle
HI 73106*	Spare electrode for HI 98106 and HI 98107	HI 7010M	pH 10.01 buffer solution, 230 mL bottle
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle
HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.		
HI 7004M	pH 4.01 buffer solution, 230 mL bottle		

* To be replaced by authorized technical personnel only.

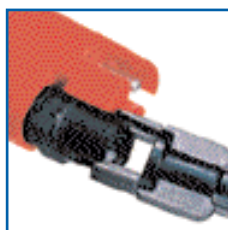
For a complete range of calibration, cleaning and maintenance solutions, see section F.



The pHep®4 and pHep®5 use the exclusive cartridge pH electrode. Electrode replacement with the stainless steel round connector means there are no pins to bend or break during replacement.

The pHep®'s replaceable electrode has a pull-out cloth junction. When the cloth junction becomes dirty from routine testing, simply pull out 3 mm (1/8") to rejuvenate the electrode.

The pHep®4 and pHep®5's exposed temperature sensor provides fast response time, and its proximity to the pH electrode guarantees much more accurate temperature compensated readings.



Waterproof pH Testers with Replaceable Electrode

When HANNA instruments® introduced its first version of the pHep® (pH electronic paper) in 1986, it immediately revolutionized the standard in pH measurement. The pHep®'s ease-of-use in combination with its affordability made it possible for non-technical and technical personnel alike to measure pH on the spot, accurately and inexpensively throughout a variety of industries. Since its introduction, over 1 million pHep®s have gone to satisfied customers around the world.

We at HANNA instruments® have always valued the comments and suggestions coming from our customers. For this series, we have included all of the features you have asked for and more! The pHep®4 and pHep®5 include features such as a dual-level LCD, battery level indicator, replaceable pH electrode cartridge, stability indicator, automatic shut-off and automatic calibration all in a floating, waterproof casing.

Specifications

		HI 98127 (pHep®4)	HI 98128 (pHep®5)
Range	pH	-2.0 to 16.0 pH	-2.00 to 16.00 pH
	Temperature	-5.0 to 60.0°C / 23.0 to 140.0°F	
Resolution	pH	0.1 pH	0.01 pH
	Temperature	0.1°C / 0.1°F	
Accuracy (@20°C)	pH	±0.1 pH	±0.05 pH
	Temperature	±0.5°C / ±1°F	
pH Calibration		automatic, at 1 or 2 points with 2 sets of memorized buffers (pH 4.01 / 7.01 / 10.01 or pH 4.01 / 6.86 / 9.18)	
Temperature Compensation		automatic	
Battery Type / Life		4 x 1.5V with BEPS / approx. 300 hours of continuous use; auto-off after 8 minutes of non-use	
Environment		-5 to 50°C (23 to 122°F); RH max 100%	
Dimensions		163 x 40 x 26 mm (6.4 x 1.6 x 1.0")	
Weight		100 g (3.5 oz.)	

Accessories

HI 73127	Spare electrode for HI 98127 and HI 98128	HI 70009P	pH 9.18 buffer solution, 20 mL sachet, 25 pcs.
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.
HI 70006P	pH 6.86 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 73128	Electrode removal tool

Ordering Information

HI 98127 (pHep®4) is supplied complete with protective cap, electrode removal tool, batteries and instructions.

HI 98128 (pHep®5) is supplied complete with protective cap, electrode removal tool, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

pH Tester with ±0.01 Accuracy and Replaceable Electrode



PICCOLO® is a revolutionary pH meter with a 4-in-1 electrode and amplifier. Conventional pH meters are susceptible to the weak high impedance signal which makes the electrode, connector, cable and meter delicate and vulnerable to noise, humidity and dirty environments.

PICCOLO® has overcome these problems with a pre-amplified electrode delivering a strong signal to the meter. The 4-in-1 interchangeable electrode is inexpensive and rugged and houses the pH sensor, reference system, temperature sensor and the amplifier module.

Three models to choose from:

PICCOLO® with a 9 cm (3.5") electrode (HI 1280).

PICCOLO® 2 with a 16 cm (6.3") electrode (HI 1290).

PICCOLO® plus with a 16 cm (6.3") electrode (HI 1295) and temperature readout directly on LCD.



Specifications

	HI 98111 (PICCOLO®)	HI 98112 (PICCOLO®2)	HI 98113 (PICCOLO® plus)
Range	1.00 to 13.00 pH	1.00 to 13.00 pH	1.00 to 13.00 pH; 0.0 to 70.0°C
Resolution	0.01 pH	0.01 pH	0.01 pH; 0.1°C
Accuracy (@20°C/68°F)	±0.01 pH	±0.01 pH	±0.01 pH; ±1°C
Calibration	manual, 2 points		
Temperature Compensation	automatic, 0 to 70°C (32 to 150°F)		
Electrode	HI 1280 (included)	HI 1290 (included)	HI 1295 (included)
Battery Type / Life	3 x 1.5V / approx. 100 hours of continuous use		
Environment	0 to 50°C (32 to 122°F); RH max 95%		
Dimensions (with electrode)	194x29x15 mm (7.6x1.1x0.6")	265x29x15 mm (10.4x1.1x0.6")	
Weight	70 g (2.5 oz.)		

Ordering Information

All **PICCOLO®** models are supplied complete with pH electrode, pH 4.01 & pH 7.01 sachets, calibration screwdriver, batteries, rugged carrying case and instructions.

HI 98111 (PICCOLO®) is supplied with 90 mm (3.5") HI 1280 amplified pH electrode

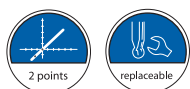
HI 98112 (PICCOLO®2) is supplied with 160 mm (6.3") HI 1290 amplified pH electrode

HI 98113 (PICCOLO® plus) is supplied with 160 mm (6.3") HI 1295 amplified pH electrode

Accessories

HI 1280	Spare pH electrode for Piccolo® (90 mm / 3.5")	HI 7004M	pH 4.01 buffer solution, 230 mL bottle
HI 1290	Spare pH electrode for Piccolo®2 (160 mm / 6.3")	HI 7007M	pH 7.01 buffer solution, 230 mL bottle
HI 1295	Spare pH electrode for Piccolo® plus (160 mm / 6.3")	HI 7010M	pH 10.01 buffer solution, 230 mL bottle
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle
HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.		

For a complete range of calibration, cleaning and maintenance solutions, see section F.



pH Tester for Skin

The health and beauty industry has been searching for a professional product that can determine the pH value of scalp, hair strands and skin quickly, accurately and inexpensively.

HANNA instruments® offers the *Skincheck*™, the first pH meter that makes it possible for you to easily measure pH in this application.

Skincheck™ measures pH in just a few seconds with a special flat-tip electrode specifically designed to measure pH on body surfaces. *Skincheck*™ has a measurement range that covers the full spectrum of hair and skin pH levels. Measurements are quickly displayed on a large easy-to-read LCD with an accuracy of 0.01.

Skincheck™ is an absolute must for Hair Care Specialists, Beauty Salons, Cosmeticians, Beauticians, Dermatologists & The Cosmetic Industry.

Specifications

	HI 98109 (<i>Skincheck</i> ™)	HI 98110 (<i>Skincheck</i> ™1)
Range	0.00 to 14.00 pH	
Resolution	0.01 pH	
Accuracy (@20°C/68°F)	±0.2 pH	
Calibration	manual, 2 points	
Electrode	HI 1413S/50 (included)	HI 1413B/50 (included)
Battery Type / Life	2 x 1.5V / approx. 3000 hours of continuous use	
Environment	0 to 50°C (32 to 122°C); RH max 95%	
Dimensions	66 x 50 x 25 mm (2.6 x 2.0 x 1.0")	
Weight (with electrode)	70 g (2.5 oz.)	90 g (3.2 oz.)

Accessories

HI 1413B/50	Spare pH electrode for <i>Skincheck</i> ™1 with BNC connector and 1 m (3.3') cable	HI 7004M	pH 4.01 buffer solution, 230 mL bottle
HI 1413S/50	Spare pH electrode for <i>Skincheck</i> ™ with screw connector	HI 7007M	pH 7.01 buffer solution, 230 mL bottle
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7010M	pH 10.01 buffer solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle



Ordering Information

HI 98109 (*Skincheck*™) is supplied complete with HI 1413S/50 pH electrode, calibration screwdriver, batteries and instructions.

HI 98110 (*Skincheck*™1) is supplied complete with HI 1413B/50 pH electrode with 1 m (3.3') cable, calibration screwdriver, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

pH Tester for Fertigation Solutions

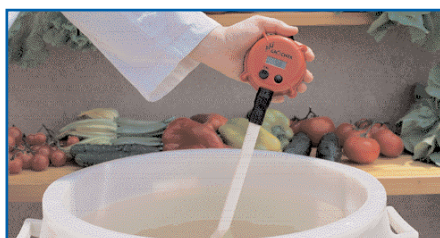


HI 981408 has been specifically designed to address the needs of operators in hydroponics, greenhouses and nurseries.

The meter has all the characteristics necessary to check the pH of the fertilizer mix during preparation.

HI 981408 is sturdy and waterproof. It also floats so that it can be quickly retrieved if accidentally dropped in the tank.

To resolve the problem of frequent battery replacement, our R&D team has produced a meter that will run for 2000 hours continuously on common AA-type batteries (included). This translates into more than 2 years of continuous use up to 2 hours a day, seven days a week! Calibration has been simplified to one-point through a dial on the front of the meter. The outer casing also incorporates a molded eye so you can hang the meter when not in use.



Ordering Information

HI 981408 is supplied complete with HI 1219 pH electrode, pH 7 buffer solution, batteries and instructions.

Specifications

	HI 981408
Range	0.0 to 14.0 pH
Resolution	0.1 pH
Accuracy (@20°C/68°F)	±0.2 pH
Calibration	manual, 1 point
Electrode	HI 1219 pH electrode, 240 mm (9.4") long, with double junction and DIN connector (included)
Battery Type / Life	2 x 1.5V AA / approx. 2000 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 100%
Dimensions (meter only)	86 x 94 x 33 mm (3.4 x 3.7 x 1.3")
Weight (meter only)	150 g (5.3 oz.)

Accessories

HI 1219	Spare pH electrode with double junction	HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle

For a complete range of calibration, cleaning and maintenance solutions, see section F.



Tester for ORP Measurements

Oxidation is a process in which a molecule or ion loses electrons. This occurs most readily in water treatment as well as pool and spa maintenance where an oxidizer, such as chlorine, is added to the water to destroy contaminants. The higher the ORP value, the greater the sanitizing power of your water. The **ORP** tester can provide a valuable indication of water quality.

HI 98201 is a unique hand-held tester developed for quick and affordable tests. The **ORP** tester utilizes a platinum electrode and **HANNA** instruments' unique cloth fiber junction, which can be pulled out when clogging occurs, reactivating the reference and restoring the electrode.

Specifications

HI 98201 ORP	
Range	±999 mV
Resolution	1 mV
Accuracy (@20°C/68°F)	±5 mV
Battery Type / Life	4 x 1.5V / approx. 700 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 95%
Dimensions	175 x 41 x 23 mm (6.9 x 1.6 x 0.9")
Weight	95 g (3.4 oz.)

Accessories

HI 73201	Spare electrode for ORP , to be replaced by authorized technical personnel only	HI 7091M	Reducing solution, 230 mL bottle
HI 7020M	200/275 mV test solution, 230 mL bottle	HI 7092M	Oxidizing solution, 230 mL bottle

Ordering Information

HI 98201 (ORP) is supplied complete with protective cap, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

The New Tester for ORP Measurements

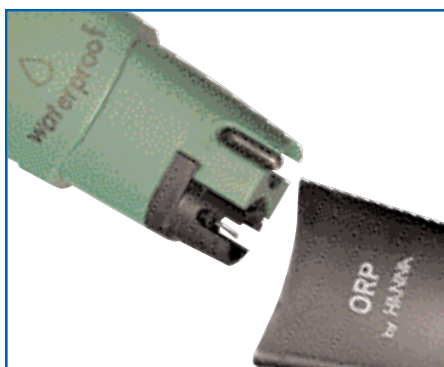
This new microprocessor-based tester provides the most advanced solution in ORP measurement:

- replenishable junction
- dual level LCD
- battery life percentage indication
- stability indicator
- floating and waterproof body

This tester is factory calibrated and measurements are highly accurate.

The HI 73120 ORP electrode is provided with a pull-out cloth junction and can be easily replaced by the user. The encapsulated stainless steel temperature sensor provides a fast response thanks to its external location.

All these features ensure a long life to these **HANNA** instruments® pocket meters!



Ordering Information

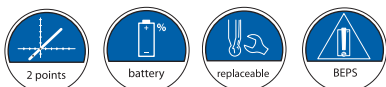
HI 98120 is supplied complete with protective cap, electrode removal tool, batteries and instructions.

Specifications

		HI 98120
Range	ORP	± 1000 mV
	Temperature	-5.0 to 60.0°C / 23.0 to 140.0°F
Resolution	ORP	1 mV
	Temperature	0.1°C / 0.1°F
Accuracy (@20°C)	ORP	± 2 mV
	Temperature	± 0.5°C / ± 1°F
Calibration		factory calibrated
ORP Electrode		HI 73120 (included)
Battery Type / Life		4 x 1.5V with BEPS / approx. 300 hours of continuous use; auto-off after 8 minutes of non-use
Environment		-5 to 50°C (23 to 122°F); RH max 100%
Dimensions		163 x 40 x 26 mm (6.4 x 1.6 x 1.0")
Weight		100 g (3.5 oz.)

Accessories

HI 73120	Spare electrode for HI 98120	HI 7091M	Reducing solution, 230 mL bottle
HI 73128	Electrode removal tool	HI 7092M	Oxidizing solution, 230 mL bottle
HI 7020M	200/275 mV test solution, 230 mL bottle		
HI 7021M	240 mV test solution, 230 mL bottle		
HI 7022M	470 mV test solution, 230 mL bottle		



Combination pH and ORP Tester

The *Combo* series of combination waterproof testers with advanced functions now includes the new model **HI 98121** for simultaneous pH and ORP measurements.

HI 98121 also reads temperature, which is continuously displayed on the dual level LCD.

The pH electrode fiber junction can be easily pulled out for replenishment. The pH electrode cartridge can be quickly replaced with the supplied electrode removal tool. The encapsulated external stainless steel temperature sensor provides a fast response due to its close proximity to the pH electrode.

HI 98121 works with common batteries and when turned on, displays the percentage of remaining battery life. The stability indicator ensures reliable readings.

The body is ergonomically designed and the meter will float if dropped into water.

Specifications

		HI 98121
Range	ORP	± 1000 mV
	pH	-2.00 to 16.00 pH
	Temperature	-5.0 to 60.0°C / 23.0 to 140.0°F
Resolution	ORP	1 mV
	pH	0.01 pH
	Temperature	0.1°C / 0.1°F
Accuracy (@20°C)	ORP	±2 mV
	pH	±0.05 pH
	Temperature	±0.5°C / ±1°F
Calibration	ORP	factory calibrated
	pH	automatic, 1 or 2 points with 2 sets of memorized buffers (pH 4.01 / 7.01 / 10.01 or 4.01 / 6.86 / 9.18)
Temperature Compensation	automatic for pH readings	
Electrodes	HI 73127 replaceable pH electrode (included); fix ORP sensor	
Battery Type / Life	4 x 1.5V with BEPS / approx. 250 hours of continuous use; auto-off after 8 minutes of non-use	
Environment	-5 to 50°C (23 to 122°F); RH max 100%	
Dimensions	163 x 40 x 26 mm (6.4 x 1.6 x 1.0")	
Weight	100 g (3.5 oz.)	

Accessories

HI 73127	Spare pH electrode	HI 70006P	pH 6.86 buffer solution, 20 mL sachet, 25 pcs.
HI 73128	Electrode removal tool	HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.
HI 7020M	200/275 mV test solution, 230 mL bottle	HI 70009P	pH 9.18 buffer solution, 20 mL sachet, 25 pcs.
HI 7091M	Reducing solution, 230 mL bottle	HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.
HI 7092M	Oxidizing solution, 230 mL bottle	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.		

Ordering Information

HI 98121 is supplied complete with protective cap, electrode removal tool, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.



Conductivity and TDS Testers with Automatic Temperature Compensation

The *Primo* TDS tester provides a fast and dependable way to measure the Total Dissolved Solids in your water samples. It is ideally suited for the rigorous demands of water quality professionals, who will appreciate the practicality of the *Primo*'s easy-to-read Liquid Crystal Display when demonstrating the before and after results of conditioning and filtration systems. Temperature is compensated automatically to ensure the readings are consistent to the standard or reference temperature.

Operating and routine maintenance has never been easier. The *Primo* TDS uses a single button at the top of the meter. Press it once and the meter is powered and ready for use. Press and hold the button for a few seconds and the *Primo* automatically enters calibration mode. Simply open a sachet of the calibration solution, dip the probe and within seconds, the meter recognizes the calibration solution and calibrates itself! Maximum battery life is managed by the *Primo* power microprocessor, which automatically turns it off after 5 minutes of inactivity.



Specifications

	<i>Primo</i>	<i>Primo 2</i>	<i>Primo 5</i>
Range	0 to 1999 ppm (mg/L)	0 to 1999 ppm (mg/L); 0.0 to 60.0°C	0 to 1999 μ S/cm
Resolution	1 ppm (mg/L)	1 ppm (mg/L); 0.1°C	1 μ S/cm
Accuracy (@20°C/68°F)	$\pm 2\%$ F.S.	$\pm 2\%$ F.S.; $\pm 0.5^\circ$ C	$\pm 2\%$ F.S.
Calibration Solution	HI 70032P	HI 70032P	HI 70031P
Calibration	automatic, at 1382 ppm	automatic, at 1382 ppm	automatic, at 1413 μ S/cm
Temperature Compensation		automatic, 0 to 60°C (32 to 140°F), $\beta = 2\%/^\circ$ C	
Battery Type / Life	2 x 1.5V / approx. 200 hours; auto-off after 5 minutes of non-use		
Environment	0 to 50°C (32 to 122°F); RH max 95%		
Dimensions	180 x 50 x 25 mm (7.1 x 2.0 x 1.0")		
Weight	50 g (1.8 oz.)		

Ordering Information

Primo is supplied complete with batteries and instructions.

Primo 2 is supplied complete with batteries and instructions.

Primo 5 is supplied complete with batteries and instructions.

Accessories

HI 70031P	1413 μ S/cm calibration solution, 20 mL sachet, 25 pcs.	HI 70032P	1382 ppm calibration solution, 20 mL sachet, 25 pcs.
HI 7031M	1413 μ S/cm calibration solution, 230 mL bottle	HI 7032M	1382 ppm calibration solution, 230 mL bottle

For a complete range of calibration, cleaning and maintenance solutions, see section F.



EC and TDS Testers with Automatic Calibration and Probe with 1 m Cable



This series of *Primo* testers has been designed for those hard-to-reach places where standard testers are not particularly suitable. The specially designed conductivity/TDS probe, supplied with the *Primo* series, has a one meter (3') cable. This helps insertion in inaccessible or low level places without the operator having to get into inconvenient positions merely to take a reading. The automatic calibration together with the convenience of the **HANNA** instruments' 20 mL sachet solutions make frequent calibration easier, which translates to better accuracy. Conductivity and TDS readings are temperature sensitive and as a result, the probes contain a linearized temperature sensor. All *Primo* models compensate for the temperature automatically.

Primo 1 measures TDS from 0 to 1999 ppm in steps of 1 ppm. *Primo 3* measures both TDS and temperature from 0 to 60.0°C. *Primo 4* on the other hand reads EC from 0 to 10.00 in one hundredths of mS/cm (EC).

Specifications

	<i>Primo 1</i>	<i>Primo 3</i>	<i>Primo 4</i>
Range	0 to 1999 ppm (mg/L)	0 to 1999 ppm (mg/L); 0.0 to 60.0°C	0.00 to 10.00 mS/cm
Resolution	1 ppm (mg/L)	1 ppm (mg/L); 0.1°C	0.01 mS/cm
Accuracy (@20°C/68°F)	±2% F.S.	±2% F.S.; ±0.5°C	±2% F.S.
Calibration Solution	HI 70032P	HI 70032P	HI 70039P
Calibration	automatic, at 1382 ppm	automatic, at 1382 ppm	automatic, at 5.00 mS/cm
Temperature Compensation		automatic, 0 to 60°C (32 to 140°F), $\beta=2\%/^{\circ}\text{C}$	
Battery Type / Life	2 x 1.5V / approx. 200 hours; auto-off after 5 minutes of non-use		
Environment	0 to 50°C (32 to 122°F); RH max 95%		
Dimensions (meter only)	66 x 50 x 25 mm (2.6 x 2.0 x 1.0")		
Weight	115 g (4.1 oz.)		

Accessories

HI 70032P	1382 ppm calibration solution, 20 mL sachet, 25 pcs.	HI 70039P	5.00 mS/cm calibration solution, 20 mL sachet, 25 pcs.
HI 7032M	1382 ppm calibration solution, 230 mL bottle	HI 7039M	5.00 mS/cm calibration solution, 230 mL bottle

Ordering Information

Primo 1 is supplied complete with batteries and instructions.

Primo 3 is supplied complete with batteries and instructions.

Primo 4 is supplied complete with batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

TDS Tester

TDS 1 is a simple and affordable pocket tester for TDS measurements.

The measurement is automatically compensated for temperature variations, thanks to its internal sensor.

Calibration can be performed in one point with a trimmer.

The tester is supplied with a cap that protects the probe when it is not in use.

Batteries can be easily replaced after removing the top cover.

Light and small, the TDS 1 is an ideal pocket meter to perform quick TDS measurements.



Specifications

	TDS 1
Range	0 to 999 ppm (mg/L)
Resolution	1 ppm (mg/L)
Accuracy (@20°C/68°F)	±2% F.S.
Calibration Solution	HI 70080P
Calibration	manual, 1 point, through trimmer
Temperature Compensation	automatic, 5 to 50°C (41 to 122°F)
Battery Type / Life	4 x 1.5V / approx. 150 hours
Environment	0 to 50°C (32 to 122°F); RH max 95%
Dimensions	150 x 30 x 21 mm (5.9 x 1.2 x 0.8")
Weight	70 g (2.5 oz.)

Ordering Information

TDS 1 is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

Accessories

HI 70080P	800 ppm calibration solution, 20 mL sachet, 25 pcs.	HI 7080M	800 ppm calibration solution, 230 mL bottle
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For a complete range of calibration, cleaning and maintenance solutions, see section F.

The Original DiST®



It is very important to determine the quantity of dissolved salts in water. High concentrations can cause corrosion and deposits in heating systems and can damage the aquatic plants and animals.

DiST® is an affordable pocket tester that ensures precise EC and TDS readings. Simply immerse the tester in the solution and the reading will be clearly displayed.

HI 96301 (DiST® 1) and HI 96302 (DiST® 2) read in ppm, while HI 96303 (DiST® 3) and HI 96304 (DiST® 4) read in $\mu\text{S}/\text{cm}$.

Automatic temperature compensation ensures correct readings. The digital display allows the operator to see the reading from every angle. Calibration is very simple to perform: immerse the tester in the calibration solution and adjust the trimmer on the rear of the meter until the correct value is displayed.

Specifications

	HI 96301 (DiST® 1)	HI 96302 (DiST® 2)	HI 96303 (DiST® 3)	HI 96304 (DiST® 4)
Range	1990 ppm	10000 ppm	1990 $\mu\text{S}/\text{cm}$	19900 $\mu\text{S}/\text{cm}$
Resolution	10 ppm	100 ppm	10 $\mu\text{S}/\text{cm}$	100 $\mu\text{S}/\text{cm}$
Accuracy (@20°C/68°F)	±2% F.S.	±2% F.S.	±2% F.S.	±2% F.S.
Calibration	manual, 1 point, through trimmer			
Temperature Compensation	automatic, 5 to 50°C (41 to 122°F)			
Battery Type / Life	4 x 1.5V / approx. 150 hours of continuous use			
Environment	0 to 50°C (32 to 122°F); RH max 95%			
Dimensions	150 x 30 x 21 mm (5.9 x 1.2 x 0.8")			
Weight	70 g (2.5 oz.)			

Accessories

HI 70031P	1413 $\mu\text{S}/\text{cm}$ calibration solution, 20 mL sachet, 25 pcs.	HI 70038P	6.44 ppt calibration solution, 20 mL sachet, 25 pcs.
HI 7031M	1413 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL bottle	HI 70039P	5000 $\mu\text{S}/\text{cm}$ calibration solution, 20 mL sachet, 25 pcs.
HI 70032P	1382 ppm calibration solution, 20 mL sachet, 25 pcs.	HI 7039M	5000 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL bottle
HI 7032M	1382 ppm calibration solution, 230 mL bottle		

Ordering Information

HI 96301 (DiST® 1) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

HI 96302 (DiST® 2) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

HI 96303 (DiST® 3) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

HI 96304 (DiST® 4) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

EC and TDS Testers



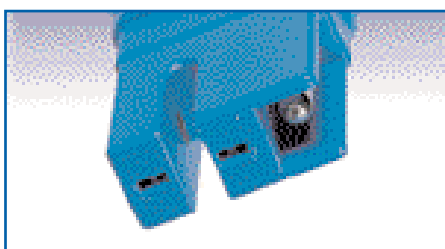
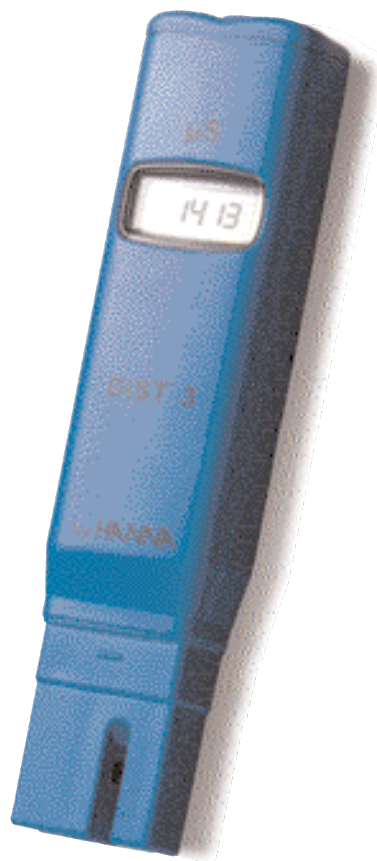
The DiST® testers are reliable, pocket-sized instruments that will give you quick and accurate readings of conductivity and TDS.

This popular line of Dissolved Solids Testers has been redesigned to offer a host of improvements.

The casing has been designed for increased strength, a better fit for holding and a large LCD for easy viewing. The graphite sensors provide better repeatability since they do not oxidize. The casing has been engineered to allow air bubbles to escape. The temperature sensor is exposed to provide faster response time.

HI 98300, HI 98301 (DiST®1) and HI 98302 (DiST®2) perform TDS measurements, while HI 98303 (DiST®3) and HI 98304 (DiST®4) provide conductivity readings.

If calibration is necessary, simply submerge the electrode tip into calibration solution and adjust the easily accessible trimmer on the side of the tester.



Specifications

	HI 98300 / HI 98301 (DiST® 1)	HI 98302 (DiST® 2)	HI 98303 (DiST® 3)	HI 98304 (DiST® 4)
Range	1999 ppm (mg/L)	10.00 ppt (g/L)	1999 μ S/cm	19.99 mS/cm
Resolution	1 ppm (mg/L)	0.01 ppt (g/L)	1 μ S/cm	0.01 mS/cm
Accuracy (@20°C/68°F)	±2% F.S.	±2% F.S.	±2% F.S.	±2% F.S.
TDS Factor	0.65 / 0.5	0.5	-	-
Calibration Solution	HI 70442P / HI 70032P	HI 70038P	HI 70031P	HI 70039P or HI 70030P
Calibration	manual, 1 point	manual, 1 point	manual, 1 point	manual, 1 point
Probe	HI 73301	HI 73302	HI 73303	HI 73304
Temperature Compensation	automatic, 0 to 50°C (32 to 122°F)			
Battery Type / Life	4 x 1.5V / approx. 200 hours of continuous use			
Environment	0 to 50°C (32 to 122°F); RH max 95%			
Dimensions	175 x 41 x 23 mm (6.9 x 1.6 x 0.9")			
Weight	95 g (3.4 oz.)			

Ordering Information

HI 98300 (DiST® 1 with TDS factor = 0.65) is supplied complete with protective cap, screwdriver, batteries and instructions.

HI 98301 (DiST® 1 with TDS factor = 0.5) is supplied complete with protective cap, screwdriver, batteries and instructions.

HI 98302 (DiST® 2 with TDS factor = 0.5) is supplied complete with protective cap, screwdriver, batteries and instructions.

HI 98303 (DiST® 3) is supplied complete with protective cap, screwdriver, batteries and instructions.

HI 98304 (DiST® 4) is supplied complete with protective cap, screwdriver, batteries and instructions.

Accessories

HI 73301*	Spare probe for HI 98300 and HI 98301	HI 70032P	1382 ppm calibration solution, 20 mL sachet, 25 pcs.
HI 73302*	Spare probe for HI 98302	HI 7032M	1382 ppm calibration solution, 230 mL bottle
HI 73303*	Spare probe for HI 98303	HI 70442P	1500 ppm calibration solution, 20 mL sachet, 25 pcs.
HI 73304*	Spare probe for HI 98304	HI 70038P	6.44 ppt calibration solution, 20 mL sachet, 25 pcs.
HI 70030P	12.88 mS/cm calibration solution, 20 mL sachet, 25 pcs.	HI 70039P	5.00 mS/cm calibration solution, 20 mL sachet, 25 pcs.
HI 7030M	12.88 mS/cm calibration solution, 230 mL bottle	HI 7039M	5.00 mS/cm calibration solution, 230 mL bottle
HI 70031P	1413 μ S/cm calibration solution, 20 mL sachet, 25 pcs.		
HI 7031M	1413 μ S/cm calibration solution, 230 mL bottle		

* To be replaced by authorized technical personnel only.

For a complete range of calibration, cleaning and maintenance solutions, see section F.



- Sealed battery compartment
- Dual level LCD displays EC/TDS and temperature
- One handed push button operation
- Floating, waterproof casing
- Replaceable EC/TDS graphite electrode
- Exposed temperature sensor



Waterproof EC/TDS/Temperature Testers

The original **DiST**® (Dissolved Solids Tester) was first introduced in 1986 by **HANNA** instruments®. Since then, the measurement of Conductivity and Total Dissolved Solids has never been easier. The **DiST**®'s ease-of-use, in combination with its affordability, made it the standard in EC and TDS measurement. **HANNA** instruments® continues the tradition of innovation with the **DiST**®5 and **DiST**®6. We at **HANNA** instruments® have always valued the comments and suggestions coming from our customers. For this series, we have included all the features you have asked for and more! The **DiST**®5 and **DiST**®6 include features such as a replaceable graphite electrode, adjustable TDS ratio, temperature in °C or °F, automatic temperature compensation with adjustable β, battery level indicator, stability indicator, automatic shut-off and automatic calibration all in a floating, waterproof casing. This 3-in-1 tester is unmatched in EC/TDS/Temperature measurement!

Specifications

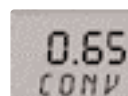
		HI 98311 (DiST®5)	HI 98312 (DiST®6)
Range	EC	0 to 3999 μ S/cm	0.00 to 20.00 mS/cm
	TDS	0 to 2000 ppm	0.00 to 10.00 ppt
	Temperature	0.0 to 60.0°C / 32.0 to 140.0°F	
Resolution	EC	1 μ S/cm	0.01 mS/cm
	TDS	1 ppm	0.01 ppt
	Temperature	0.1°C / 0.1°F	
Accuracy (@20°C)	EC	±2% F.S.	
	TDS	±2% F.S.	
	Temperature	±0.5°C / ±1°F	
Calibration		automatic, 1 point	
TDS Conversion Factor		adjustable from 0.45 to 1.00	
Temperature Compensation		automatic, with β adjustable from 0.0 to 2.4% / °C	
Environment		0 to 50°C (32 to 122°F); RH max 100%	
Battery Type / Life		4 x 1.5V with BEPS / approx. 100 hours of continuous use, auto-off after 8 minutes of non-use	
Dimensions		163 x 40 x 26 mm (6.4 x 1.6 x 1.0")	
Weight		100 g (3.5 oz.)	

Remaining battery life indication



When turned on, the LCD indicates the percentage of the remaining battery life.

Adjustable TDS ratio



For greater accuracy of measurement, the user can choose between different conductivity to TDS conversion factors.

Instability and ATC indicators



Instability indicator ensures reliable EC and TDS measurements. The ATC symbol is shown when temperature compensation is active.

Adjustable temperature coefficient



For more precise temperature compensated measurements, the user can choose between different BETA factors.

Ordering Information

HI 98311 (**DiST**®5) is supplied complete with protective cap, batteries, probe removal tool and instructions.

HI 98312 (**DiST**®6) is supplied complete with protective cap, batteries, probe removal tool and instructions.

Accessories

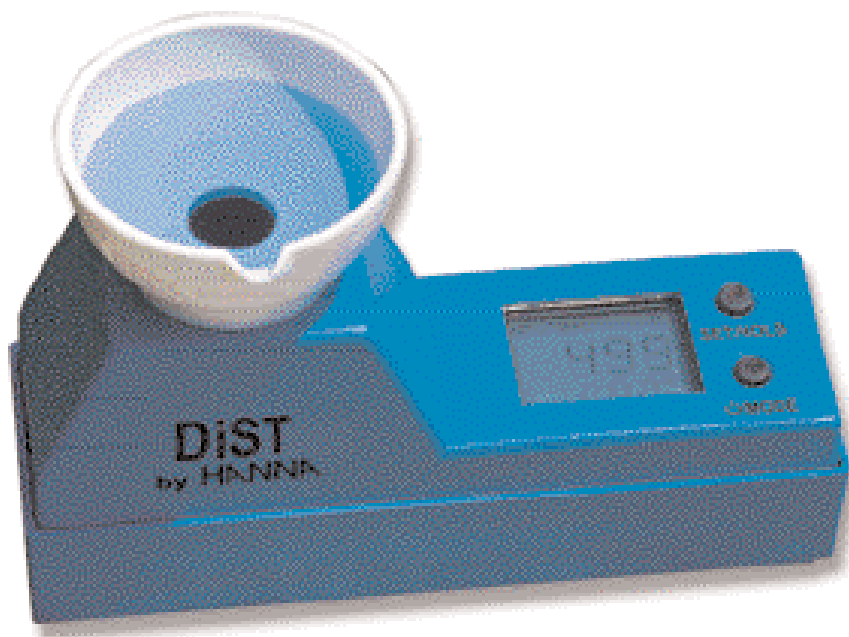
HI 73311	Spare probe for HI 98311 and HI 98312
HI 70030P	12.88 mS/cm calibration solution, 20 mL sachet, 25 pcs.
HI 70031P	1413 μ S/cm calibration solution, 20 mL sachet, 25 pcs.
HI 70032P	1382 ppm calibration solution, 20 mL sachet, 25 pcs.
HI 70038P	6.44 ppt calibration solution, 20 mL sachet, 25 pcs.
HI 70442P	1500 ppm calibration solution, 20 mL sachet, 25 pcs.
HI 73128	Probe removal tool

For a complete range of solutions, see section F.

**EC/TDS Tester
with Sample Cell**



The DiST®7 & DiST®8 portable meters from HANNA instruments® are designed for quick and easy, high accuracy EC, TDS and temperature measurements. These new waterproof instruments features a dual-level LCD that displays EC or TDS and °C or °F. These microprocessor meters have been developed in direct response to the requests of users in water treatment, boilers and cooling towers, reverse osmosis and agriculture. The rugged, easy-to-use DiST®7 & DiST®8 feature an on board sample cell with built-in funnel, digital readout, push button automatic calibration and automatic temperature compensation. The EC/TDS conversion factor and temperature coefficient (β) are user adjustable for application-specific measurements.



At startup the DiST®7 & DiST®8 perform a self-check and then display the battery level to assure proper working condition. They also have a stability indicator and hold feature to prompt the user when to take the reading and freeze the display for easy and accurate recording.

Choose your model according to the EC/TDS range of your application:

- DiST®7: 0 to 3999 μS/cm (EC); 0 to 2000 ppm (TDS)
- DiST®8: 0.00 to 20.00 mS/cm (EC); 0.00 to 10.00 ppt (TDS)

Specifications

		DiST®7	DiST®8
Range	EC	0 to 3999 μS/cm	0.00 to 20.00 mS/cm
	TDS	0 to 2000 ppm	0.00 to 10.00 ppt
	Temperature	0.0 to 60.0°C / 32.0 to 140.0°F	
Resolution	EC	1 μS/cm	0.01 mS/cm
	TDS	1 ppm	0.01 ppt
	Temperature	0.1°C / 0.1°F	
Accuracy (@20°C)	EC	±2% F.S.	
	TDS	±2% F.S.	
	Temperature	±0.5°C / ±1°F	
Calibration	automatic, 1 point		
TDS Conversion Factor	adjustable from 0.45 to 1.00		
Temperature Compensation	automatic, with β adjustable from 0.0 to 2.4% / °C		
Environment	0 to 50°C (32 to 122°F); RH max 100%		
Battery Type / Life	4 x 1.5V AA / approx. 2000 hours of continuous use, auto-off after 8 minutes of non-use		
Dimensions	120 x 53 x 81 mm (4.7 x 2.1 x 3.2")		
Weight	205 g (7.2 oz.)		

Ordering Information

DiST®7 is supplied complete with calibration solution, batteries and instructions.

DiST®8 is supplied complete with calibration solution, batteries and instructions.

Accessories

HI 70030P	12880 μS/cm calibration solution, 20 mL sachet, 25 pcs.	HI 7032M	1382 ppm calibration solution, 230 mL bottle
HI 7030M	12880 μS/cm calibration solution, 230 mL bottle	HI 70038P	6.44 ppt calibration solution, 20 mL sachet, 25 pcs.
HI 70031P	1413 μS/cm calibration solution, 20 mL sachet, 25 pcs.	HI 70442P	1500 ppm calibration solution, 20 mL sachet, 25 pcs.
HI 7031M	1413 μS/cm calibration solution, 230 mL bottle	HI 70442M	1500 ppm calibration solution, 230 mL bottle
HI 70032P	1382 ppm calibration solution, 20 mL sachet, 25 pcs.		

For a complete range of calibration, cleaning and maintenance solutions, see section F.



Inexpensively Measuring the Purity of Water



Pure Water Test (PWT) enables you to check the purity of your distilled or demineralized water in laboratory or industrial environments. Ultra Pure Water (UPW) is an ideal tester for Megohm checks. PWT is ideally suited for fields such as Printed Circuit Board washing, laundry, steam cleaning, checking car battery water and all areas where distilled, demineralized or pure water is used. UPW is the first pure water tester to measure in 1/1000ths of micro-siemens and provides on-the-spot and fast checks of minute traces of contamination in your water, assuring high quality of finished products in processes. These testers are housed in a durable case that provides excellent protection against harsh industrial environments. The casing also features a larger LCD than previous models and is easier to handle with a more ergonomic shape.

Resistance of distilled/deionized water	Equivalent UPW reading
1 MΩ	1.000 μS/cm
2 MΩ	0.500 μS/cm
5 MΩ	0.200 μS/cm
10 MΩ	0.100 μS/cm
15 MΩ	0.067 μS/cm
20 MΩ	0.050 μS/cm

Specifications

	HI 98308 PWT	HI 98309 UPW
Range	0.0 to 99.9 μS/cm	0.000 to 1.999 μS/cm
Resolution	0.1 μS/cm	0.001 μS/cm
Accuracy (@20°C/68°F)	±2% F.S.	
Calibration	manual, 1 point	factory calibrated
Temperature Compensation	automatic, 0 to 50°C (32 to 122°F)	—
Battery Type / Life	4 x 1.5V / approx. 250 hours of continuous use	4 x 1.5V / approx. 120 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions	175 x 41 x 23 mm (6.9 x 1.6 x 0.9")	
Weight	95 g (3.4 oz.)	

Accessories

HI 73308	Spare probe for HI 98308, to be substituted by authorized technical personnel only	HI 70033P	84 μS/cm calibration solution, 20 mL sachet, 25 pcs.
HI 73309	Spare probe for HI 98309, to be substituted by authorized technical personnel only	HI 7033M	84 μS/cm calibration solution, 230 mL bottle

Some typical conversions of measurements performed with PWT

μS/cm reading	resistivity	mg/L NaCl
99.9	10 KΩ	48
10	100 KΩ	4.6
1	1 MΩ	0.4
0.1	10 MΩ	0.02

Ordering Information

HI 98308 (PWT) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

HI 98309 (UPW) is supplied complete with protective cap, batteries and instructions.

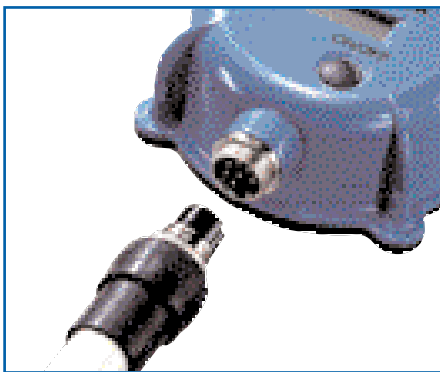
For a complete range of calibration, cleaning and maintenance solutions, see section F.

EC/TDS Tester for Fertigation Solutions



HI 981409 and HI 981410 TDS and EC meters have been specifically designed to address the needs of operators in hydroponics, greenhouses and nurseries. The meters employ the latest in custom-built application specific microchips together with a purpose-built rugged housing to measure the TDS and EC of the fertilizer mix. Calibration is easy and completely automatic. Simply press and hold the on/off button for a few seconds and the microchip inside the meter requests the appropriate calibration solution. Place the probe in the solution and wait until it is calibrated. No extra buttons to press or dials to turn!

The HI 1220 probe measures 25 cm (10") and can even be used to mix the fertilizer solution! The custom-built microprocessor switches the meter off after five minutes of inactivity to save the batteries. The outer casing also incorporates a molded eye so that the meter can be hung right where it is needed.



Specifications

	HI 981409	HI 981410
Range	0 to 1999 mg/L (ppm)	0.00 to 10.00 mS/cm
Resolution	1 mg/L (ppm)	0.01 mS/cm
Accuracy (@20°C/68°F)	±2% F.S.	
Calibration	automatic, at 1500 ppm	automatic, at 5.00 mS/cm
Temperature Compensation	automatic, 5 to 50°C (41 to 122°F) with $\beta = 2\%/^{\circ}\text{C}$	
Probe	HI 1220, replaceable EC/TDS probe, 240 mm (9.4") long, with DIN connector (included)	
Battery Type / Life	2 x 1.5V AA / approx. 3000 hours of continuous use; auto-off after 5 minutes of non-use	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions (meter only)	86 x 94 x 33 mm (3.4 x 3.7 x 1.3")	
Weight (meter only)	150 g (5.3 oz.)	

Accessories

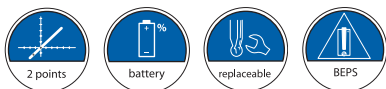
HI 1220	Spare probe for HI 981409 and HI 981410	HI 70039P	5.00 mS/cm calibration solution, 20 mL sachet, 25 pcs.
HI 70442P	1500 ppm calibration solution, 20 mL sachet, 25 pcs.		

Ordering Information

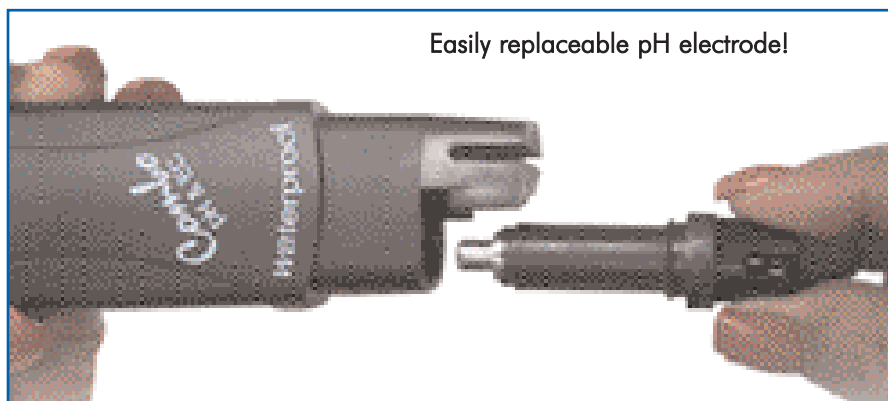
HI 981409 is supplied complete with HI 1220 probe, 1500 ppm calibration solution (20 mL) batteries and instructions.

HI 981410 is supplied complete with HI 1220 probe, 5.00 mS/cm calibration solution (20 mL) batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.



Measure pH/EC/TDS/Temperature with Only One Tester



The HI 98129 and HI 98130 Combo waterproof testers offer high accuracy pH, EC/TDS and temperature measurements in a single tester! No more switching between meters for your routine measurements. The waterproof **Combo** (it even floats) has a large easy-to-read, dual-level LCD and automatic shut off. pH and EC/TDS readings are automatically compensated for the effects of temperature (ATC). This technologically advanced tester has a replaceable pH electrode cartridge with an extendable cloth junction as well as an EC/TDS graphite electrode that resists contamination by salts and other substances. This gives these meters a greatly extended life. Your tester no longer needs to be thrown away when the pH sensor is exhausted.

The EC/TDS conversion factor is user selectable as well as the temperature compensation coefficient (β). Fast, efficient, accurate and portable, the **Combo** pH, EC/TDS and temperature tester brings you all the features you've asked for and more!

Specifications

		HI 98129	HI 98130
Range	pH	0.00 to 14.00 pH	0.00 to 14.00 pH
	EC	0 to 3999 $\mu\text{S}/\text{cm}$	0.00 to 20.00 mS/cm
	TDS	0 to 2000 ppm	0.00 to 10.00 ppt
	Temperature	0.0 to 60.0°C / 32.0 to 140.0°F	
Resolution	pH	0.01 pH	
	EC	1 $\mu\text{S}/\text{cm}$	0.01 mS/cm
	TDS	1 ppm	0.01 ppt
	Temperature	0.1°C / 0.1°F	
Accuracy (@20°C)	pH	±0.05 pH	
	EC/TDS	±2% F.S.	
	Temperature	±0.5°C / ±1°F	
Temperature Compensation		pH: automatic; EC/TDS: automatic with β adjustable from 0.0 to 2.4% / °C	
Calibration	pH	automatic, 1 or 2 points with 2 sets of memorized buffers (pH 4.01 / 7.01 / 10.01 or 4.01 / 6.86 / 9.18)	
	EC/TDS	automatic, 1 point	
TDS Conversion Factor		adjustable, from 0.45 to 1.00	
pH Electrode		HI 73127 (replaceable; included)	
Environment		0 to 50°C (32 to 122°F); RH max 100%	
Battery Type / Life		4 x 1.5V / approx. 100 hours of continuous use, auto-off after 8 minutes of non-use	
Dimensions		163 x 40 x 26 mm (6.4 x 1.6 x 1.0")	
Weight		100 g (3.5 oz.)	

Accessories

HI 73127	Spare pH electrode for Combo	HI 70031P	1413 $\mu\text{S}/\text{cm}$ buffer solution, 20 mL sachet, 25 pcs.
HI 73128	Electrode removal tool	HI 70032P	1382 ppm buffer solution, 20 mL sachet, 25 pcs.
HI 70004P	pH 4.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70038P	6.44 ppt buffer solution, 20 mL sachet, 25 pcs.
HI 70006P	pH 6.86 buffer solution, 20 mL sachet, 25 pcs.	HI 70442P	1500 ppm buffer solution, 20 mL sachet, 25 pcs.
HI 70007P	pH 7.01 buffer solution, 20 mL sachet, 25 pcs.	HI 70300M	Electrode storage solution, 230 mL bottle
HI 70009P	pH 9.18 buffer solution, 20 mL sachet, 25 pcs.	HI 7061M	Cleaning solution, 230 mL bottle
HI 70010P	pH 10.01 buffer solution, 20 mL sachet, 25 pcs.		
HI 70030P	12.88 mS/cm buffer solution, 20 mL sachet, 25 pcs.		

Ordering Information

HI 98129 is supplied complete with protective cap, electrode removal tool, batteries and instructions.

HI 98130 is supplied complete with protective cap, electrode removal tool, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.



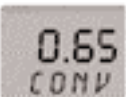
Remaining battery life indication

When turned on, the LCD indicates the percentage of the remaining battery life.



Stability and ATC indicators

Stability indicator ensures reliable measurements. The ATC symbol is shown when temperature compensation is active.



Adjustable TDS ratio

For greater accuracy, the user can choose between different conductivity to TDS conversion factors.



Adjustable temperature coefficient

For more precise temperature compensated measurements, the user can choose between different BETA factors.



Calibrate to standard or N.I.S.T. buffers

Two sets of pH buffers for automatic calibration at 1 or 2 points:

- pH 4.01/7.01/10.01 or
- pH 4.01/6.86/9.18

Sealed battery compartement

Dual level LCD displays pH/EC/TDS and temperature simultaneously

One handed push button operation

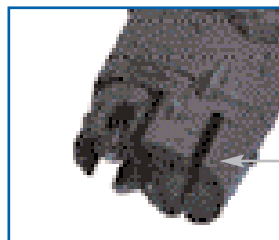
Floating, waterproof casing

Replaceable pH electrode cartridge

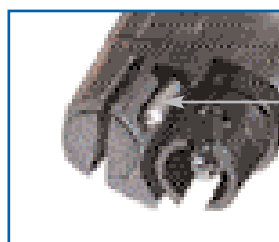
EC/TDS graphite electrode



The *Combo's* stainless steel connector means there are no pins to bend or break.



The replaceable pH electrode of the *Combo* has a cloth junction which can be extended to rejuvenate the electrode.



Graphite conductivity electrode provides greater accuracy because it does not get dirty from salt deposits in the solution.

Exposed temperature sensor provides fast response time and its proximity to the pH and conductivity electrodes guarantees more accurate temperature compensated readings.



Water-resistant TDS Meter

To perform simple and fast TDS measurements in places with a high percentage of humidity, **HANNA** instruments® offers the **Aqua Dip**. With only two operation buttons, the **Aqua Dip** allows an immediate and precise response. This instrument indicates the TDS measurement in ppm and the temperature in °C. It is very simple to use, one button turns the meter on, the other to switch from TDS to temperature measurements, or to activate the HOLD function. This feature, in particular, is very important for measurements in tanks, where many parameters need to be monitored and the values need to be recorded manually.

Aqua Dip is factory calibrated. Measurements are automatically compensated up to 60 °C with a reference temperature of 25 °C and it uses common AAA batteries.

Total protection against humidity makes **Aqua Dip** ideal for analysis in the field.

Specifications

HI 983310 Aqua Dip		
Range	TDS / Temperature	0 to 1999 ppm / 0.0 to 60.0°C
Resolution	TDS / Temperature	1 ppm / 0.1°C
Accuracy (@20°C/68°F)		±2% F.S. / ± 0.5°C
TDS Factor		0.5
Temperature Compensation		automatic, 0 to 60°C (32 to 140°F); $\beta = 2\%/^{\circ}\text{C}$
Battery Type / Life		2 x 1.5V AAA batteries; 1000 hours of continuous use
Environment		0 to 50°C (32 to 122°F); RH 100%
Dimensions		94 x 38 x 440 mm (3.7 x 1.5 x 17.3")
Weight		200 g (7.8 oz.)

Ordering Information

HI 983310 (Aqua Dip) is supplied complete with batteries and instructions.

pH/ORP/EC/Temperature in One Unit

Water Test is the smallest portable water testing laboratory in the world! It provides quick and reliable measurement of the four most important variables in water analysis: pH, ORP, conductivity and temperature.

The lightweight and compact package makes it perfect for use in the plant as well as the field. Superior in design and construction, **Water Test** is made of rugged VALOX® material which provides excellent protection from typical environmental conditions.

Water Test is engineered with such simplicity that even non-technical personnel can use it: Fill the base of **Water Test** with the sample to be measured, press "RANGE" to select the mode and then simply read your measurement!

The rugged construction and simple operation make **Water Test** perfect for use in the fields of water treatment analysis, waste water tests, ecological studies, aquaculture and hydroponic applications.



Specifications

	pH	ORP	Conductivity	Temperature
Range	0.0 to 14.0 pH	±1000 mV	0 to 1999 μ S/cm	0.0 to 60.0°C
Resolution	0.1 pH	1 mV	1 μ S/cm	0.1°C
Accuracy (@20°C/68°F)	±0.2 pH	±5 mV	±2% F.S.	±1°C
Calibration	manual, 2 points	factory calibrated	manual, 1 point	factory calibrated
Battery Type / Life	3 x 1.5V / approx. 200 hours of continuous use			
Environment	0 to 50°C (32 to 122°F); RH max 95%			
Dimensions	190 x 85 x 85 mm (7.5 x 3.3 x 3.3")			
Weight	260 g (9.2 oz.)			

Ordering Information

HI 98204 (**Water Test**) is supplied complete with measuring compartment, batteries and instructions.

Accessories

HI 740088	Plastic vessel for sample	HI 7031M	1413 μ S/cm calibration solution, 230 mL bottle
HI 7004M	pH 4.01 buffer solution, 230 mL bottle	HI 70300M	Electrode storage solution, 230 mL bottle
HI 7007M	pH 7.01 buffer solution, 230 mL bottle	HI 7091M	Reducing solution, 230 mL bottle
HI 7010M	pH 10.01 buffer solution, 230 mL bottle	HI 7092M	Oxidizing solution, 230 mL bottle
HI 7020M	200/275 mV test solution, 230 mL bottle		

For a complete range of calibration, cleaning and maintenance solutions, see section F.



Test the Hardness of Water

The **pNa** is an easy-to-use and inexpensive instrument for determining water hardness/softness. The hardness of water is due to the presence of magnesium and calcium. These make washing difficult, waste soap and create unpleasant scum and scale. With a zeolite system, the calcium and magnesium ions are substituted on a one-to-one basis with sodium ions from a resin. Once all the sodium ions are exhausted, the resin has to be regenerated. This is currently determined by estimating the volume of water that goes through the softener and guessing when to change the resin!

Even though this may work in some cases, it fails in most since the sodium content of feed water is never constant. As a result, either the resin is regenerated too early, waste of resources, or too late, causing damage due to scaling. With the **pNa**, you can measure the sodium content of feed water and exit water in seconds. When the resin is exhausted of sodium, there will be no exchange and the pNa will read the same value at the two ends. Only then should the resin be changed. **pNa** takes guess work out of resin regeneration!

Specifications

HI 98202 pNa	
Range	0.0 to 3.0 pNa (23 to 0.023 g/L Na ⁺)
Resolution	0.1 pNa
Accuracy (@20°C/68°F)	±0.2 pNa
Calibration	manual, 1 point
Battery Type / Life	4 x 1.5V / approx. 800 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 95%
Dimensions	175 x 41 x 23 mm (6.9 x 1.6 x 0.9")
Weight	95 g (3.4 oz.)

Accessories

HI 73202	Spare electrode for HI 98202 and HI 98203, to be substituted by authorized technical personnel only	HI 7080L	2.3 g/L Na ⁺ solution, 500 mL bottle
HI 7080M	2.3 g/L Na ⁺ solution, 230 mL bottle	HI 7061M	Cleaning solution, 230 mL bottle

Ordering Information

HI 98202 (pNa) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

For a complete range of calibration, cleaning and maintenance solutions, see section F.

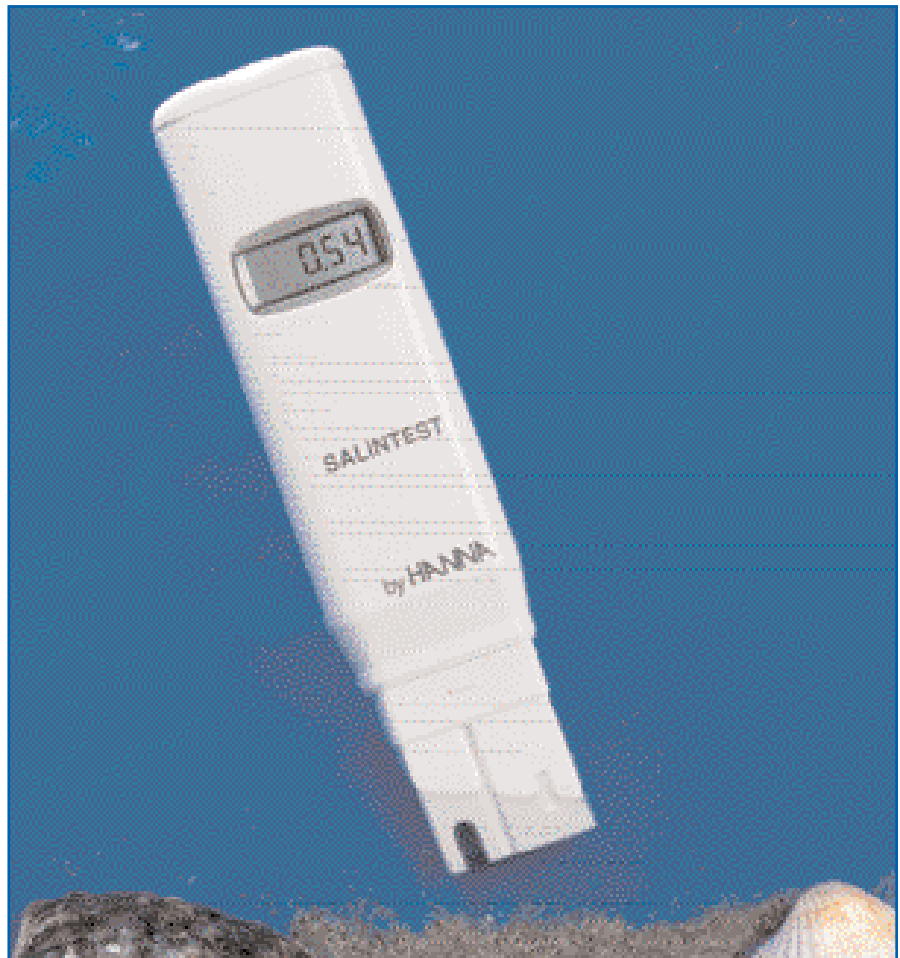
Measure the Salt Content of Water



Worldwide fish farming has made great strides in the past two decades with aquaculture becoming a prime source for quality seafood in an ever growing industry. As the methods and products keep changing, one crucial factor remains the same: the salinity of the water. The main component of salt in seawater is sodium chloride.

The **SALINTEST** can help you monitor the concentration of sodium chloride, assuring high quality in aquaculture. **SALINTEST** is also ideal for marine fish tanks and aquariums.

Instruments for measuring salinity of seawater currently available on the market are cumbersome and difficult to use. **HANNA** instruments® has re-engineered this compact salt tester with a more durable, ergonomic casing and a larger LCD. Besides applications in aquaculture, **SALINTEST** is also ideal for checking salt concentrations in live fish storage tanks, tropical fish aquariums, refrigerated storage and oceanographic investigation.



Specifications

HI 98203 SALINTEST	
Range	0.00 to 1.00 pNaCl (58.4 to 5.84 g/L NaCl)
Resolution	0.01 pNaCl
Accuracy (@20°C/68°F)	±0.02 pNaCl
Calibration	manual, 1 point
Battery Type / Life	4 x 1.5V / approx. 500 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 95%
Dimensions	175 x 41 x 23 mm (6.9 x 1.6 x 0.9")
Weight	95 g (3.4 oz.)

Ordering Information

HI 98203 (SALINTEST) is supplied complete with protective cap, calibration screwdriver, batteries and instructions.

SALINTEST is also supplied with a handy chart that converts readings into g/L of sodium chloride.

Accessories

HI 73202	Spare electrode for HI 98202 and HI 98203, to be substituted by authorized technical personnel only	HI 7081L	30 g/L NaCl solution, 500 mL bottle
HI 7081M	30 g/L NaCl solution, 230 mL bottle	HI 7061M	Cleaning solution, 230 mL bottle

For a complete range of calibration, cleaning and maintenance solutions, see section F.

Quick and Easy-to-use Electronic Hygrometer



The **HANNA** instruments® **HYGROCHECK**® uses the advanced TFPC* sensing method to measure humidity and an integrated electronic circuit to perform all relative conversions. This method of Relative Humidity measurement assures a quick and accurate reading. With a complete measurement range of 10% to 90% RH and an accuracy of 3% across the ENTIRE RANGE, **HYGROCHECK**® is the most complete and versatile pocket-sized Hygrometer available!

Most hygrometers on the market today are too large or heavy to be carried around together with other instruments for on-the-spot testing. The pocket-sized **HYGROCHECK**® is only 180 x 30 x 15 mm (7.1 x 1.2 x 0.6") and weighs just 62 grams (2.2 oz.). This compact, rugged unit will slip right into your pocket, it can be carried anywhere!

The housing is constructed of durable ABS material and the LCD is protected behind a transparent plastic cover. The LCD displays the RH reading digits that can be read from any angle. Also, a vented cap protects the sensor while allowing maximum airflow for rapid response!

Unlike an ordinary hygrometer, **HYGROCHECK**® performs all relative conversions electronically.

(*Thin Film Polymer Capacitance)

Specifications

HI 98601 (HYGROCHECK®)	
Range	10.0 to 90.0% RH
Resolution	0.1% RH
Accuracy (@20°C/68°F)	±3% F.S.
Response Time	20 seconds for 95% accuracy
Battery Type / Life	3 x 1.5V / approx. 100 hours of continuous use
Environment	0 to 50°C (32 to 122°F); RH max 95%
Dimensions	180 x 30 x 15 mm (7.1 x 1.2 x 0.6")
Weight	62 g (2.2 oz.)

Ordering Information

HI 98601 (**HYGROCHECK**®) is supplied complete with batteries, soft carrying case and instructions.

Stick Conductivity Meter with 4-ring Technology and ATC



The need for an easy, accurate and reliable method to measure conductivity and TDS prompted HANNA instruments[®] to develop *Conmet*[®]1, *Conmet*[®]2 and *Conmet*[®]3. These meters utilize the proven 4-ring potentiometric method of measuring conductivity in liquids. The 4-ring probe is constructed of a rugged resin shaft that houses 4 stainless steel rings, providing excellent immunity to hostile environments. The 4-ring technology provides a reading that is almost immune to dirt and unclean samples. The smooth shaft of the probe makes eventual cleaning quick and simple. All the readings are temperature compensated. 1 point calibration is performed by turning the trimmer on the instrument body.

Conmet[®]1 has a range of 0 to 1999 $\mu\text{S}/\text{cm}$, designed for areas such as softeners, demineralizers, and drinking water. *Conmet*[®]2 has a range of 0.00 to 19.99 mS/cm and is particularly suitable for waste water, hydroponics and fertilizer control. *Conmet*[®]3 with a range of 0.00 a 19.99 ppt is perfect for HVAC applications.



Specifications

	HI 98305 (<i>Conmet</i> [®] 1)	HI 98306 (<i>Conmet</i> [®] 2)	HI 98307 (<i>Conmet</i> [®] 3)
Range	0 to 1999 $\mu\text{S}/\text{cm}$	0.00 to 19.99 mS/cm	0.00 to 19.99 ppt (g/l)
Resolution	1 $\mu\text{S}/\text{cm}$	0.01 mS/cm	0.01 ppt (g/l)
Accuracy (@20°C/68°F)	±2% F.S.		
Calibration	manual, 1 point		
Temperature Compensation	automatic, 0 to 50°C with $\beta=1.9\pm 0.15\%$ /°C, with reference temperature 25°C		
Probe	HI 3291 (included)	HI 3292 (included)	HI 3292 (included)
Battery Type / Life	4 x 1.5V AA / approx. 150 hours of continuous use		
Environment	0 to 50°C (32 to 122°F); RH max 95%		
Dimensions	265 x 29 x 15 mm (10.4 x 1.1 x 0.6")		
Weight	400 g (0.88 lb.) - with carrying case		

Ordering Information

HI 98305 (*Conmet*[®] 1) is supplied with HI 3291 probe, 1413 $\mu\text{S}/\text{cm}$ solution (120 mL), screwdriver, batteries, hard carrying case and instructions.

HI 98306 (*Conmet*[®] 2) is supplied with HI 3292 probe, 12880 $\mu\text{S}/\text{cm}$ solution (120 mL), screwdriver, batteries, hard carrying case and instructions.

HI 98307 (*Conmet*[®] 3) is supplied with HI 3292 probe, 12.41 ppt solution (120 mL), screwdriver, batteries, hard carrying case and instructions.

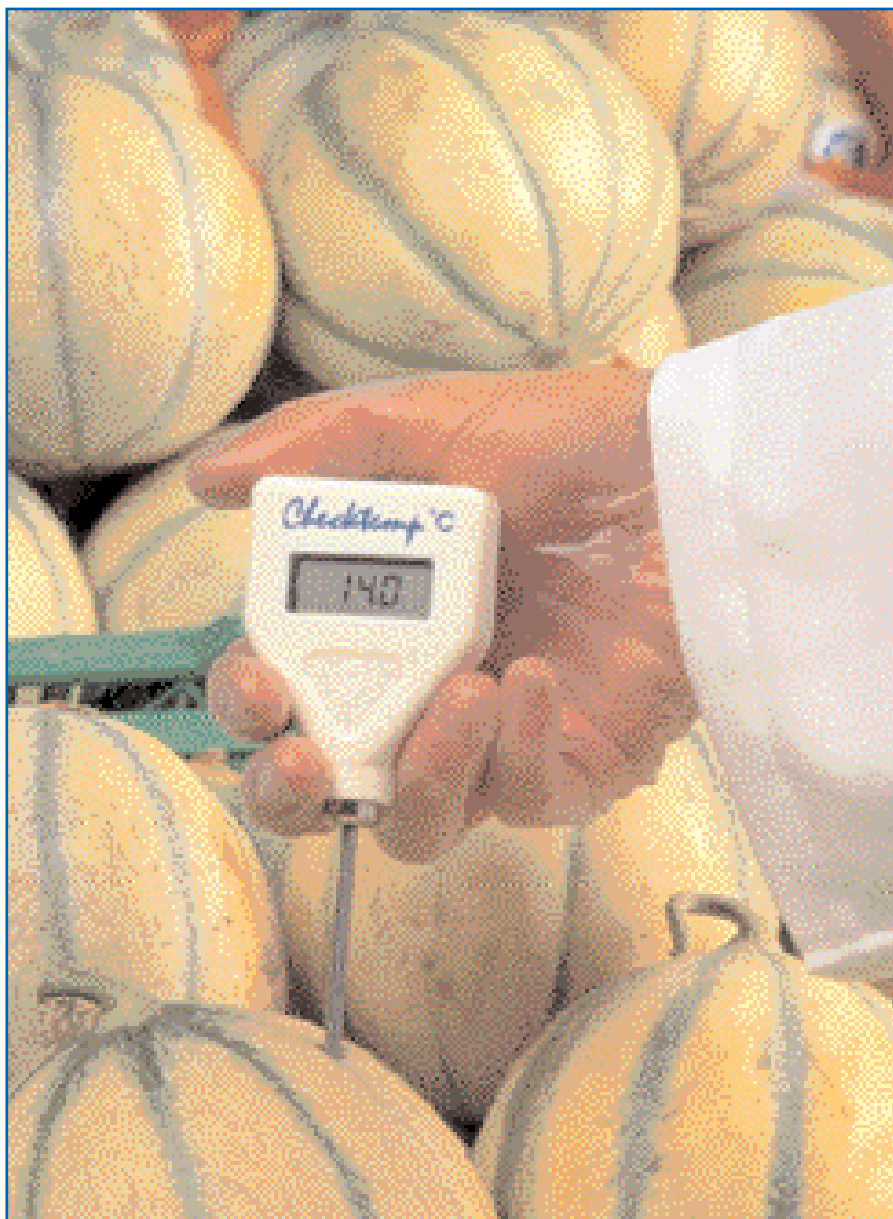
Accessories

HI 3291	Spare probe for <i>Conmet</i> [®] 1	HI 70031P	1413 $\mu\text{S}/\text{cm}$ calibration solution, 20 mL sachet, 25 pcs.
HI 3292	Spare probe for <i>Conmet</i> [®] 2 and <i>Conmet</i> [®] 3	HI 7031M	1413 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL bottle
HI 70030P	12880 $\mu\text{S}/\text{cm}$ calibration solution, 20 mL sachet, 25 pcs.	HI 7036M	12.41 ppt calibration solution, 230 mL bottle
HI 7030M	12880 $\mu\text{S}/\text{cm}$ calibration solution, 230 mL bottle		

For a complete range of calibration, cleaning and maintenance solutions, see section F.



Electronic Thermometer with $\pm 0.3^{\circ}\text{C}$ Accuracy and Cal-Check[®]



Did you ever wish that your temperature measurements could be made a little easier, in clear digits with a better accuracy or even over a wider range without worrying about breakage or condensation? *Checktemp* might just be what you have been looking for!

The *Checktemp* gives you a temperature readout from -50 to 150°C or -58 to 302°F in seconds on a large LCD with $\pm 0.3^{\circ}\text{C}$ or $\pm 0.5^{\circ}\text{F}$ accuracy. NO breakage, NO waste, NO injuries, NO difficulty in reading. Not even a parallax error by taking a wrong measurement due to the angle of view!

Checktemp is provided with the unique Calibration Check function: simply activate the proper switch and the instrument will simulate a 0.0°C (32.0°F) signal that has to be read on the LCD within a range of $\pm 0.3^{\circ}\text{C}$ ($\pm 0.5^{\circ}\text{F}$). This system guarantees the accuracy of your measurement at any time!

The sharp-tip probe can easily penetrate semisolid products such as fruits, vegetables and cheese, making routine controls simple and quick for both incoming and outgoing goods.

The AISI 316 stainless steel material of the probe is in compliance with food regulations.

Checktemp is the ideal instrument for measuring temperature according to HACCP requirements.

The *Checktemp L* models feature a round tip probe for liquid measurements.

Specifications

	HI 98501 <i>(Checktemp C)</i>	HI 98502 <i>(Checktemp F)</i>	HI 98505 <i>(Checktemp L C)</i>	HI 98506 <i>(Checktemp L F)</i>
Range	-50.0 to 150.0°C	-58.0 to 302.0°F	-50.0 to 150.0°C	-58.0 to 302.0°F
Resolution	0.1°C	0.1°F (58.0 to 199.9°F); 1°F (200 to 302°F)	0.1°C	0.1°F (58.0 to 199.9°F); 1°F (200 to 302°F)
Accuracy	$\pm 0.3^{\circ}\text{C}$ (-20 to 90°C) $\pm 0.5^{\circ}\text{C}$ (outside)	$\pm 0.5^{\circ}\text{F}$ (-4 to 194°F) $\pm 1^{\circ}\text{F}$ (outside)	$\pm 0.3^{\circ}\text{C}$ (-20 to 90°C) $\pm 0.5^{\circ}\text{C}$ (outside)	$\pm 0.5^{\circ}\text{F}$ (-4 to 194°F) $\pm 1^{\circ}\text{F}$ (outside)
Probe	fixed, stainless steel $105 \times \text{dia } 3 \text{ mm}$ ($4.1 \times \text{dia } 0.1''$) (penetration)	fixed, stainless steel $105 \times \text{dia } 3 \text{ mm}$ (penetration)	fixed, stainless steel $105 \times \text{dia } 3 \text{ mm}$ (liquid)	fixed, stainless steel $105 \times \text{dia } 3 \text{ mm}$ (liquid)
Battery Type / Life	$1 \times 1.5\text{V}$ / approx. 3000 hours of continuous use			
Environment	0 to 50°C (32 to 122°F); RH max 95%			
Dimensions / Weight	$66 \times 50 \times 25 \text{ mm}$ ($2.6 \times 2.0 \times 1.0''$) / 50 g (1.8 oz.) - meter only			

Ordering Information

HI 98501 (*Checktemp C*) is supplied complete with penetration probe, protective cap, battery and instructions.

HI 98505 (*Checktemp L C*) is supplied complete with probe for liquid measurement, protective cap, battery and instructions.

HI 98502 (*Checktemp F*) is supplied complete with penetration probe, protective cap, battery and instructions.

HI 98506 (*Checktemp L F*) is supplied complete with probe for liquid measurement, protective cap, battery and instructions.

Thermometers with -50 to 150°C Range and ±1°C Accuracy

HI 98501-1 and HI 98509-1 are two models with the same technical characteristics, but designed for different applications.

HI 98501-1 is a compact meter with direct probe, suitable for temperature measurements in semisolid samples and soil, for liquid testing in HVAC applications, boiler and industrial heating plants. The fast response time is also ideal for gas measurements.

HI 98509-1 is provided with a probe with 1 meter (3.3') cable, that allows easy measurements in hard-to-reach locations, as well as in laboratories. Moreover, the large LCD immediately displays the temperature value, making routine monitoring simple and fast.

This series of thermometers is the most advanced and rugged technological answer to traditional glass thermometers.



Ordering Information

HI 98501-1 is supplied complete with battery and instructions.

HI 98509-1 is supplied complete with battery and instructions.

Specifications

	HI 98501-1	HI 98509-1
Range	-50.0 to 150.0°C	
Resolution	0.1°C	
Accuracy	±1°C	
Probe	stainless steel 105 mm x dia 3 mm (4.1 x dia 0.1")	stainless steel with 1 m (3.3') cable 160 mm x dia 3 mm (6.3 x dia 0.1")
Battery Type / Life	1 x 1.5V / approx. 3000 hours of use	1 x 1.5V AAA / approx. 3 years of use
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions	66 x 50 x 25 mm (2.6 x 2.0 x 1.0")	106 x 58 x 19 mm (4.2 x 2.3 x 0.7")
Weight	50 g (1.8 oz.) - meter only	80 g (2.8 oz.) - meter only



Pocket Thermometer with Stainless Steel Probe with 1 m (3.3') Cable, ±0.3°C Accuracy and Cal-Check®

High precision thermometer

Checktemp® 1 is a high accuracy thermometer with a 1 m (3.3') cable between the meter and the probe. The stainless steel probe is perfect for fast response in liquids, air, frozen and semisolid materials. The probe utilizes a high-tech NTC thermistor sensor to measure the temperature. Thermistors make it possible to obtain extremely high accuracy in a very short period of time.

The Calibration Check function ensures accurate measurements

A calibration test device has been incorporated into the meter: activate the "test" switch and this device will simulate a 0.0°C (32.0°F) signal that has to be read on the LCD within a range of ±0.3°C (±0.5°F). This assures the user that the reading is reliable and accurate, every time.

The sharp-tip probe can easily penetrate semisolid products such as fruits, vegetables and cheese, making routine controls simple and quick for both incoming and outgoing goods.

The AISI 316 stainless steel material of the probe is in compliance with food regulations.

Checktemp® 1 is an ideal instrument for measuring temperature according to HACCP requirements.

Checktemp® Dip is also available with a weighted probe and 3 m cable, ideal for measurements in tanks.

Ordering Information

HI 98509 (*Checktemp*® 1 C) is supplied complete with battery and instructions.

HI 98509-01 (*Checktemp*® Dip C) is supplied complete with weighted probe with 3 m (10') cable, battery and instructions.

HI 98510 (*Checktemp*® 1 F) is supplied complete with battery and instructions.

HI 98510-01 (*Checktemp*® Dip F) is supplied complete with weighted probe with 3 m (10') cable, battery and instructions.

Specifications

	HI 98509 <i>Checktemp</i> ® 1 C	HI 98510 <i>Checktemp</i> ® 1 F
Range	-50.0 to 150.0°C	-58.0 to 302.0°F
Resolution	0.1°C	0.1°F
Accuracy	±0.3°C (-20 to 90°C) / ±0.5°C (outside)	±0.5°F (-4 to 194°F) / ±1°F (outside)
Probe	stainless steel, 160 x dia 3 mm (6.3 x dia 0.1"), with 1 m (3.3') cable	
Battery Type / Life	1 x 1.5V AAA / approx. 3 years of use	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions	106 x 58 x 19 mm (4.2 x 2.3 x 0.7")	
Weight	80 g (2.8 oz.) - meter only	

Accessories

HI 740024 Base for *Checktemp*® 1

Pocket Thermometer with Folding Probe ±0.3°C Accuracy and Cal-Check®



The *Checktemp*® 4 provides practical solutions to temperature measurement for food service.

Special attention was given to the design of the *Checktemp*® 4. This thermometer fits comfortably and securely in your hand. The oversized liquid crystal display is easy to see and read. The fast responding, folding probe is made of high quality, stainless steel and can penetrate semi-frozen and semi-solid foods like meats, ice cream and cheeses. When you are finished using your *Checktemp*® 4, wipe the probe clean and fold it away. The *Checktemp*® 4 automatically turns OFF so you can safely carry it in your pocket.

Calibration Check

As you unfold the stainless steel probe, the *Checktemp*® 4 automatically turns ON and immediately performs a calibration test. This unique HANNA instruments® feature, Cal-Check®, provides the security of knowing you have accurate measurements. Cal-Check® lets you know if your battery level is too low or if your thermometer requires re-calibration.



Ordering Information

HI 151-00 (*Checktemp*® 4 C) is supplied complete with battery and instructions.

HI 151-01 (*Checktemp*® 4 F) is supplied complete with battery and instructions.

Specifications

	HI 151-00 (<i>Checktemp</i> ® 4 C)	HI 151-01 (<i>Checktemp</i> ® 4 F)
Range	-50.0 to 220°C	-58.0 to 428°F
Resolution	0.1°C (-50.0 to 199.9°C); 1°C (200 to 220°C)	0.1°F (-58.0 to 199.9°F); 1°F (200 to 428°F)
Accuracy	±0.3°C ±1 digit (-20.0 to 90.0°C); ±1% F.S. ±1 digit (outside)	±0.5°F ±1 digit (-4.0 to 194.0°F); ±1% F.S. ±1 digit (outside)
Calibration Check	automatic, at start-up	
Probe	stainless steel, with penetration tip, 117 x dia 3.5 mm (4.6 x dia 0.14")	
Battery Type / Life	1 x 1.5V AA / approx. 25000 hours; auto-off after 8 minutes of non-use	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions	165 x 50 x 20 mm (6.5 x 2.0 x 0.8")	
Weight	100 g (3.5 oz.)	



Rugged Thermometers with T-shaped Handle Designed for HACCP Control with $\pm 0.3^{\circ}\text{C}$ Accuracy and Cal-Check[®]



The HI 145 thermometers have been developed for HACCP programs and offer maximum simplicity-of-use together with high standards of performance. The durable T-shaped handle fits comfortably in hand and is ideal for applications where applied force is necessary for insertion, such as with incoming meat inspection and semi-frozen foods. The position of the LCD on top of the meter allows easy reading when used in cooking. The HI 145 thermometer is the ideal solution for temperature monitoring of incoming merchandise and food storage, as well as applications in food preparation, and during cooking.

HI 145-00 and HI 145-01 are equipped with a 5" (125 mm) long AISI 316 stainless steel probe. It has a conic sharp tip which provides fast response and improved accuracy over the entire range. HI 145-20 and HI 145-30 are supplied with a 12" (300 mm) long stainless steel probe and are ideal for monitoring hot liquids in cooking applications such as deep frying and soup preparation.

Automatic Calibration Check

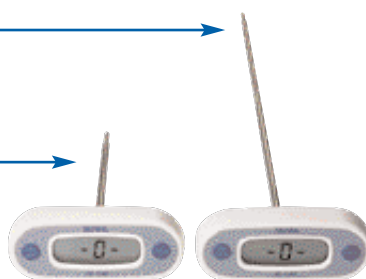
The HI 145 series is equipped with the exclusive Cal-Check[®] feature. When the instrument is turned on, it performs a self check of its calibration status and displays it on the LCD.

HI 145-20 (°C) - HI 145-30 (°F):

Stainless steel probe
300 x dia 5 mm

HI 145-00 (°C) - HI 145-01 (°F):

Stainless steel probe
125 x dia 5 mm



Specifications

	HI 145-00	HI 145-01	HI 145-20	HI 145-30
Range	-50.0 to 220°C	-58.0 to 428.0°F	-50.0 to 220°C	-58.0 to 428.0°F
Resolution	0.1°C (-50.0 to 199.9°C); 1°C (200 to 220°C)	0.1°F (-58.0 to 199.9°F); 1°F (200 to 428°F)	0.1°C (-50.0 to 199.9°C); 1°C (200 to 220°C)	0.1°F (-58.0 to 199.9°F); 1°F (200 to 428°F)
Accuracy	$\pm 0.3^{\circ}\text{C}$ (-20 to 90°C); $\pm 0.4\%$ F.S. (outside)	$\pm 0.6^{\circ}\text{F}$ (-4 to 194°F); $\pm 0.4\%$ F.S. (outside)	$\pm 0.3^{\circ}\text{C}$ (-20 to 90°C) $\pm 0.4\%$ F.S. (outside)	$\pm 0.6^{\circ}\text{F}$ (-4 to 194°F); $\pm 0.4\%$ F.S. (outside)
Probe	stainless steel 125 mm x dia 5 mm (4.9 x dia 0.2")		stainless steel 300 mm x dia 5 mm (11.8 x dia 0.2")	
Battery Type / Life	1 x 1.5V AAA / approx. 10000 hours of continuous use; auto-off after 8 minutes of non-use			
Environment	-10 to 50°C (14 to 122°F); RH max 95%			
Dimensions	692 x 165 x 38 mm		692 x 340 x 38 mm	
Weight	65 g (2.3 oz.)		80 g (2.8)	

Ordering Information

All models of the HI 145 series are supplied complete with battery and instructions.

HI 145-00, 125 mm probe

HI 145-01, 125 mm probe

HI 145-20, 300 mm probe

HI 145-30, 300 mm probe

**Checkfridge Thermometer with Magnetic Backing,
Remote Thermistor Sensor,
±0.3°C Accuracy and Cal-Check®**



Few manufacturers have given any thought to providing the user a convenient means to monitor internal temperature conditions from the outside. When the contents of freezer and refrigeration units must be monitored to ensure their safety and preservation, you need a thermometer just as sophisticated and efficient.

The HI 147 is the ideal choice when you need accurate and reliable temperature monitoring.

How do you know when the reading on any thermometer is correct? You could make an ice point or slurry. Even then there could be several degrees difference in the real and the theoretical, or perceived, temperatures. With HI 147, you do not need to waste time preparing for and making these tests. Its unique Cal-Check® feature can do it for you. Conveniently located on the face of the thermometer is a TEST switch. Engage the switch and the HI 147 performs an internal calibration check. In only a few seconds, you see the results on the large liquid crystal display. Return the switch to the READ position and the HI 147 returns to its normal measuring status.



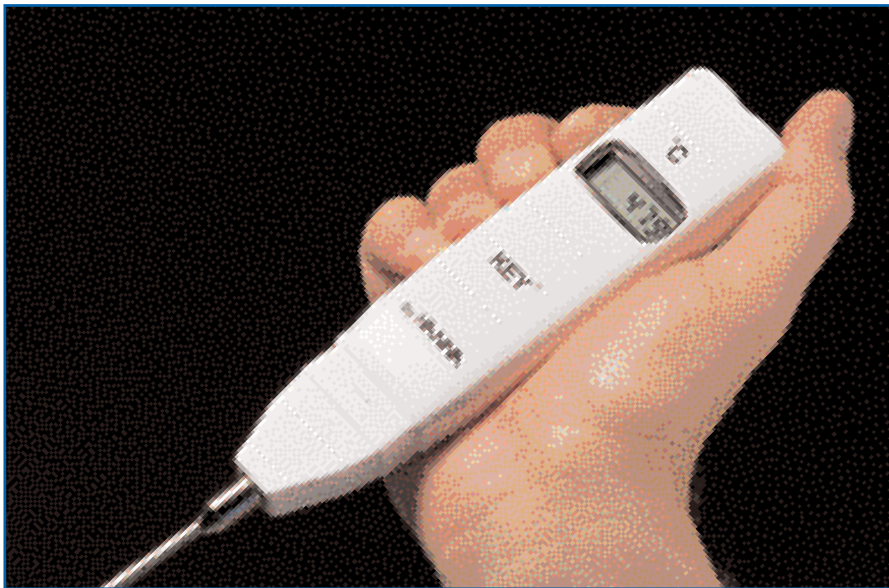
Ordering Information

HI 147-00 (Checkfridge C) is supplied complete with battery and instructions.

HI 147-01 (Checkfridge F) is supplied complete with battery and instructions.

Specifications

	HI 147-00 Checkfridge C	HI 147-01 Checkfridge F
Range	-50.0 to 150.0°C	-58.0 to 302.0°F
Resolution	0.1°C	0.1°F (-58.0 to 199.9°F) 1°F (200 to 302°F)
Accuracy	±0.3°C (-20 to 90°C); ±0.5°C (outside)	±0.6°F (-4 to 194°F); ±1°F (outside)
Calibration Check	manual, through switch	
Probe	stainless steel, general purpose; 40 x dia 5 mm (1.6 x dia 0.2"); 1 m (3.3') cable	
Battery Type / Life	1 x 1.5V AAA / approx. 3 years of use	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions (meter only)	93 x 39 x 31 mm (3.7 x 1.5 x 1.2")	
Weight	60 g (2.1 oz.)	



**From -40 to 550°C
in a Pocket Thermocouple
Thermometer**

KEY® is a K-type thermocouple thermometer with interchangeable probe for quick spot measurements of temperature. With a response time of less than 20 seconds in water, KEY® is ideal for quality control and routine industrial temperature monitoring.

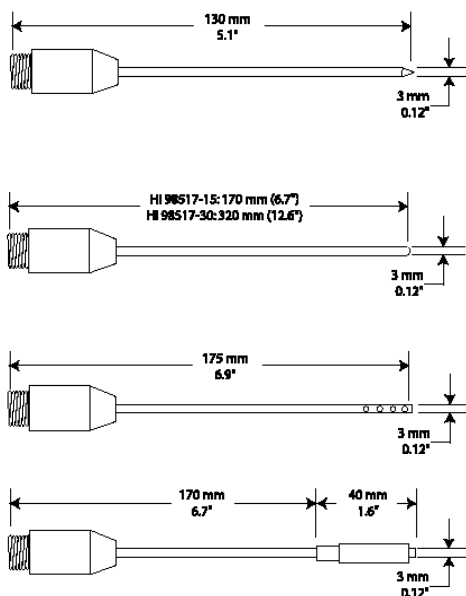
There are 5 interchangeable temperature probes available to meet your specific requirements.

In the HVAC field, gas and air can be monitored with the HI 98517-11 probe. The HI 98517-13 probe is for penetration and is included with the meter. It also provides a fast response typical of a thermocouple probe.

HI 98517-15 and HI 98517-30 probes are for general liquid monitoring. The HI 98517-12 probe is made for machine shops, molding facilities and welding surfaces.

The casing of the meter is completely redesigned with a more ergonomic and appealing shape. Each probe is made of a rugged AISI 316 stainless steel, resisting the harmful effects of chemicals and humid conditions.

HI 98517 (KEY®C) provides temperature measurements in degrees Celsius, while the HI 98518 (KEY®F) model reads in degrees Fahrenheit.



**HI 98517-13
penetration/general purpose**
K-type thermocouple probe supplied with KEY®. Application: liquid, air/gas, penetration of semisolids.

**HI 98517-15 and HI 98517-30
liquid/general purpose**
K-type thermocouple probe for KEY®. Application: liquids, air/gas.

HI 98517-11, air/gas
K-type thermocouple probe for KEY®. Application: air/gas.

HI 98517-12, surface
K-type thermocouple probe for KEY®. Application: solids, plates, furnaces, molds.

Specifications

	HI 98517 (KEY®C)	HI 98518 (KEY®F)
Range	-40 to 550°C	-40 to 999°F
Resolution	1°C	1°F
Accuracy	±2°C	±4°F
Response Time	approx. 20 seconds in water (with HI 98517-13 probe, included)	
Battery Type / Life	4 x 1.5V / approx. 700 hours of continuous use	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions (meter only)	175 x 41 x 23 mm (6.2 x 1.4 x 0.8")	
Weight	78 g (3.0 oz.)	

Accessories

HI 98517-11	K-thermocouple probe for air/gas	HI 98517-15	K-thermocouple probe for liquid/general purpose, length 170 mm (6.7")
HI 98517-12	K-thermocouple probe for surfaces	HI 98517-30	K-thermocouple probe for liquid/general purpose, length 320 mm (12.6")
HI 98517-13	K-thermocouple probe for penetration		

Ordering Information

HI 98517 (KEY®C) and HI 98518 (KEY®F) are supplied complete with HI 98517-13 probe, batteries and instructions.