Eutech 150 & 450 Series
Waterproof Handheld Meters

• pH • mV • ION • Conductivity • TDS • Salinity
• Dissolved Oxygen • Temperature

SOLUTIONS FOR WATER ANALYSIS

EUTECH INSTRUMENTS
Technology Made Easy ...

Part of Thermo Fisher Scientific

PC 450

EUTECH INSTRUMENTS

MEAS
7.30 pH
READY
22.8 °C
98.8 %

3 Year Meter Warranty

Features

DO 450 and PD 450
Utilize Optical
Oxygen Technology

PC 450 Can Accept
Combi Probe or
Separate pH/
Conductivity Probes

new

81 % Larger Three Line Display 450 series add backlight

Battery Life Indicator

Rugged Housing Floats
& Meets Waterproof
IP67 Rating
(With rubber covers)

EUTECH
INSTRUMENTS   PC 450

MEAS

7.30 pH

READY   **22.8** °C

98.8 %

All Measurements Include Temperature in ºC or ºF

Utilizes New and
Improved Grip-Clip™
Electrode Holder
(See page 11
for more details)

View Electrode Slope or Probe Efficiency At-A-Glance

Calibration Due Reminder
Set automatic notifications from 0 - 60 days

Uses Only Two AA
Batteries or
Optional Universal
Power Supply

Increased Memory:
150 points for 150 series,
500 points with
date/time for 450 series

CAL
MEAS
BACK

ENTER
HOLD

SETUP   SAVE

MODE   VIEW

450 series offers upgradable firmware and also can utilize **Free Communication Software**

Integral Built-In-Stand
for table use or
wall mounting

FC   TÜV   CE   RoHS 2011/65/EU

3 Year Meter Warranty

450 Models Offer
Output for
USB or RS232

Comparison Tables

Conductivity · pH · TDS · Dissolved Oxygen · Salinity · ION · Temperature · ORP

Meter Features

	pH 150	CON 150	pH 450	CON 450	DO 450	PD 450	PC 450
	See Page 4	See Page 5	See Page 6	See Page 7	See Page 8	See Page 9	See Page 10
pH & mV	✓	–	✓	–	–	✓	✓
ION	–	–	✓	–	–	–	–
Temperature	✓	✓	✓	✓	✓	✓	✓
Conductivity & TDS	–	✓	–	✓	–	–	✓
Optical Dissolved Oxygen	–	–	–	–	✓	✓	–
Salinity	–	–	–	✓	–	–	–
Display	Three line custom LCD		Three line custom LCD with backlight				
Temperature Compensation	Automatic or manual from -10 to 110 ºC						
Temperature Coefficient	–	0.00 to 10.00 %/ºC	–	0.00 to 10.00 %/ºC	–		0.00 to 10.00 %/ºC
Memory	150 data sets		500 data sets				
Output	–		USB or RS232				
Real-Time Clock	–		Time and date stamp on calibration and stored data				
Power	Two AA batteries (included)						
	>700 hours continuous use	>500 hours continuous use	>500 hours (without backlight)	>300 hours (without backlight)	>100 hours (without backlight)		
	9 V DC adapter, 1.3 A (100/240 VAC, SMPS) (optional)						
Dimensions (L x W x H)	Meter: 7$^7/_8$" x 3$^1/_8$" x 2 ¼" (20 x 8.3 x 5.7 cm) ; Boxed: 9$^1/_8$" x 9$^1/_8$" x 2 ¾" (23 x 23 x 7 cm)						
Weight	Meter: 1 lb (0.5 kg) ; Boxed: 1.4 lb (0.7 kg)						

Eutech 150 Series & Eutech 450 Series Configurations

Order Code	Product Combination	Double-Junction pH Electrode (ECFC7252201B)	pH Electrode, 26 mm Diameter (ECDA9350603B)	Combi pH/Con/ATC Electrode (COMBI03BW)	Conductivity/ATC Electrode, K = 1 (CONSEN91W)	ATC Probe (PHWPTEM01W)	RDO Electrode With Cap (RDO3M)	Glip-Clip™	Hard Carry Case	USB Cable	RDO Stainless Steel Weight/Guard	RDO Calibration Sleeve	60 mL Bottles of pH 4, pH 7, Storage Solution, DI Water	60 mL Bottles of 1413 µS, 12.88 mS, 111.8 mS, DI Water
		Electrodes						Accessories					Solutions	
ECPHWP15000	pH 150 Meter Only							✓						
ECPHWP15002	pH 150 Meter & Electrode	✓				✓		✓						
ECPHWP15002K	pH 150 Meter Kit	✓				✓		✓	✓				✓	
ECCONWP15003	CON 150 Meter & Electrode				✓			✓						
ECCONWP15003K	CON 150 Meter Kit				✓			✓	✓					✓
ECPHWP45000	pH 450 Meter Only							✓						
ECPHWP45002	pH 450 Meter & Electrode	✓				✓		✓						
ECPHWP45002K	pH 450 Meter Kit	✓				✓		✓	✓	✓			✓	
ECCONWP45003	CON 450 Meter & Electrode				✓			✓						
ECCONWP45003K	CON 450 Meter Kit				✓			✓	✓	✓				✓
ECDOWP45000	DO 450 Meter Only													
ECDOWP45003	DO 450 Meter & Electrode						✓							
ECDOWP45003K	DO 450 Meter Kit						✓		✓	✓	✓	✓		
ECPDWP45000	PD 450 Meter Only													
ECPDWP45004	PD 450 Meter & Electrodes		✓				✓							
ECPDWP45004K	PD 450 Meter Kit		✓				✓		✓	✓	✓	✓	✓	
ECPCWP45000	PC 450 Meter Only							✓						
ECPCWP45004	PC 450 Meter & pH & Con/ATC Electrodes	✓			✓			✓						
ECPCWP45004K	PC 450 Meter Kit	✓			✓			✓	✓	✓			✓	✓
ECPCWP45003	PC 450 Meter & Combi Electrode			✓										
ECPCWP45003K	PC 450 Meter Combi Kit			✓					✓	✓			✓	✓

Eutech pH 150

pH / mV / Temperature

Best value for an IP67-rated waterproof pH meter

- **Large, three line LCD** – View pH or mV measurement with temperature and % slope
- **Built-in memory function** – Stores up to 150 measurements along with temperature
- **Auto buffer recognition** – Automatically identifies USA, NIST or DIN buffer sets for rapid calibration
- **Power with AA batteries** or use optional AC adapter for benchtop measurements
- **Calibration due alarm** – Set a visible reminder when it is time to recalibrate the meter
- **Selectable ºF/ºC** – Choose units to best fit your application
- **Features mV offset** – Calibrate to a Redox/ORP standard or use for pH electrode diagnostics
- **Ready indicator**, manual or automatic measurement hold feature and optional automatic shutoff function
- **% slope and temperature** displayed with each measurement
- **Built-in stand** – Ideal for easy benchtop or long-term use
- **Wall-mount option** – Ideal to save on bench space
- **Includes innovative Grip-Clip™** – Quickly and easily secures the electrode to your beaker or container
- **Compatible with pH electrodes** having a BNC connector

Specification Table

pH	Range	-2.00 to 16.00 pH
	Resolution	0.01 pH
	Accuracy	±0.01 pH
	Calibration	Up to 5 points (USA & NIST) Up to 6 points (DIN)
mV	Range	±2000 mV
	Resolution	0.1 mV ±999.9 mV; 1 mV beyond
	Accuracy	±0.2 mV +2 LSD or +0.5 % of reading; whichever is greater
	Calibration	±200 mV
Temperature	Range	-10.0 to 110.0 ºC (14.0 to 230.0 ºF)
	Resolution	0.1 ºC/ºF
	Accuracy	±0.5 ºC; ±0.9 ºF
	Calibration	Offset in 0.1 increments, ±10 ºC or ±18 ºF
Display		Three line custom LCD
Temperature Compensation		Automatic or manual from -10 to 110 ºC
Memory		Stores up to 150 data sets
Power		Two AA batteries (included), >700 hours continuous use; AC adapter (optional)
Dimensions (L x W x H)	Meter	7⁷/₈″ x 3¹/₈″ x 2 ¼″ (20 x 8.3 x 5.7 cm)
	Boxed	9¹/₈″ x 9¹/₈″ x 2 ¾″ (23 x 23 x 7 cm)
Weight	Meter	1 lb (0.5 kg)
	Boxed	1.4 lb (0.7 kg)

Ordering Information

Order Code	Part No.	Description
Meter		
ECPHWP15000	01X651607	**pH 150 Meter Only:** Meter, Grip-Clip™, two AA batteries
ECPHWP15002	01X651608	**pH 150 Meter & Electrode:** Meter with double-junction pH electrode and ATC probe, Grip-Clip™, two AA batteries
ECPHWP15002K	01X651609	**pH 150 Meter Kit:** Meter with double-junction pH electrode and ATC probe, Grip-Clip™, two AA batteries, hard carry case, pH buffers, storage solution, rinse solution
Electrodes		
ECFC7252201B	01X099417	Replacement pH electrode, double-junction, epoxy body, BNC
ECFE7372801W	93X218990	pH electrode with built-in ATC. Double-junction, epoxy body, BNC
ECFC7352901W	01X218995	pH electrode with built-in ATC. Single-junction, epoxy body, BNC
ECFC7960201B	01X256613	ORP electrode. Double-junction, epoxy body, gel-filled, BNC
PHWPTEM01W	01X021807	ATC probe. Use with any standard pH electrode for temperature compensation
Accessories		
GRIPCLIP	GRIPCLIP	Grip-Clip™
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
ECPHBUFKITC	01X639001	pH buffer set, pH 4 (red), 7 (yellow), 10 (blue), 480 mL each
ECPHBUFKIT	01X638901	Colourless pH buffer set, pH 4, 7 and 10 (480 mL each)

Eutech CON 150

Conductivity / Total Dissolved Solids / Temperature

Best value for an IP67-rated waterproof conductivity meter

- **Large, three line LCD** – View conductivity or TDS measurement with temperature as well as cell efficiency
- **Built-in memory function** – Stores up to 150 measurements along with temperature
- **Adjustable temperature coefficient** – Set to 0.0 % to meet USP methods for non-compensated measurements
- **Power with AA batteries** or use optional AC adapter
- Calibrate using automatically recognized standards or manually; to a single point across all ranges or to multiple points (one calibration point per each conductivity range)
- **Calibration due alarm** – Set a visible reminder when it is time to recalibrate the meter
- Accepts probes with a 0.1, 1.0, or 10 cell constant
- **Adjustable conductivity-to-TDS conversion factor** – From 0.4 to 1.0
- **Selectable manual or automatic temperature compensation (ATC)** – For the highest accuracy in any situation
- **Selectable ºF/ºC** – Choose units to best fit your application
- Ready indicator, manual or automatic measurement hold feature and optional automatic shutoff function
- Includes our easy to clean conductivity cell
- **Built-in stand** – For easy benchtop or long-term use
- **Wall-mount option** – Ideal to save bench space
- **Innovative Grip-Clip™** – Quickly and easily secures the probe to your beaker or container

Specification Table

Conductivity	Range	0 to 200 mS
	Resolution	0.01 µS to 0.1 mS
	Accuracy	±1 % full scale
	Calibration	Auto/manual; 1 point/range
TDS	Range	0 to 200 ppt (TDS factor 1.0)
	Resolution	0.01 ppm to 0.1 ppt
	Accuracy	±1 % full scale
	Calibration	Manual; 1 point/range
Temperature	Range	-10.0 to 110.0 ºC (14.0 to 230.0 ºF)
	Resolution	0.1 ºC/ºF
	Accuracy	±0.5 ºC; ±0.9 ºF
	Calibration	Offset in 0.1 increments, ±10 ºC or ±18 ºF
Display		Three line custom LCD
Temperature Compensation		Automatic or manual from -10 to 110 ºC
Temperature Coefficient		0.0 to 10.0 %/ºC
Memory		Stores up to 150 data sets
Power		Two AA batteries (included), >500 hours continuous use; AC adapter (optional)
Dimensions (L x W x H)	Meter	7⁷⁄₈" x 3¹⁄₈" x 2 ¼" (20 x 8.3 x 5.7 cm)
	Boxed	9¹⁄₈" x 9¹⁄₈" x 2 ¾" (23 x 23 x 7 cm)
Weight	Meter	1 lb (0.5 kg)
	Boxed	1.4 lb (0.7 kg)

Ordering Information

Order Code	Part No.	Description
Meter		
ECCONWP15003	01X651611	**CON 150 Meter & Electrode:** Meter, conductivity cell (K = 1.0), Grip-Clip™, two AA batteries
ECCONWP15003K	01X651612	**CON 150 Meter Kit:** Meter, conductivity cell (K = 1.0), Grip-Clip™, two AA batteries, hard carry case, calibration solution
Electrodes		
ECCONSEN72W	93X244303	Conductivity/ATC cell, glass, K = 0.1
CONSEN91W	01X244702	Conductivity/ATC cell, K = 1.0
CONSEN92W	CONSEN92W	Conductivity/ATC cell, epoxy, K = 10.0
Accessories		
GRIPCLIP	GRIPCLIP	Grip-Clip™
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
ECCON84BT	01X211241	84 µS conductivity standard, 480 mL
ECCON1413BT	01X211207	1413 µS conductivity standard, 480 mL
ECCON1288BT	01X211210	12.88 mS conductivity standard, 480 mL
ECCON1118BT	01X211244	111.8 mS conductivity standard, 480 mL

Eutech pH 450

pH / mV / ION / Temperature

Backlit, rugged waterproof meter is ideal for any environment

- Durable waterproof and dustproof design with IP67 rating
- **Large, backlit display** – View measurement with temperature and % slope
- **Grip-Clip™** – Quickly and easily secures the pH electrode to your beaker or container
- Calibrate up to 5 points automatically with USA or NIST buffer groups (up to 6 points with DIN). New manual option allows calibration with up to 5 custom buffer standards
- **Auto buffer recognition** – Automatically identifies the correct pH buffer for rapid calibration
- **Calibration due alarm** – Set a visible reminder when it is time to recalibrate the meter
- Ready indicator, manual or automatic measurement hold feature and optional automatic shutoff function
- **Selectable ºC/ºF** – Choose units to best fit your application
- **Intuitive, user-friendly icons** – Electrode status displays pH slope
- **Store up to 500 data sets** – Easy USB or RS232 output with optional data cables
- **Built-in real-time clock stamps stored data and calibration data with time and date** – Meets standards for GLP (Good Laboratory Practices)
- Extended battery life from two AA batteries, or use optional universal power adapter
- **Built-in stand with wall-mount option** – Allows for easy benchtop measurement or storage
- Compatible with pH, ORP or ISE electrodes having a BNC connector

Specification Table

pH	Range	-2.00 to 16.00 pH
	Resolution	0.01 pH
	Accuracy	±0.01 pH
	Calibration	Up to 5 points (USA & NIST & CUSTOM) Up to 6 points (DIN)
mV	Range	±2000 mV
	Resolution	0.1 mV ±999.9 mV; 1 mV beyond
	Accuracy	±0.2 mV +2 LSD or +0.5 % of reading; whichever is greater
	Calibration	±200 mV
ION	Range	0.0 to 2000 ppm
	Resolution	0.01 / 0.1 / 1 ppm
	Accuracy	±0.5 % full scale (monovalent); ±1 % full scale (divalent)
	Calibration	From 2-4 or 2-5 points: 0.10, 1.00, 10.0, 100.0 & 1000 / 0.20, 2.00, 20.0, 200.0 & 2000 / 0.50, 5.00, 50.0 & 500.0
Temperature	Range	-10.0 to 110.0 ºC (14.0 to 230.0 ºF)
	Resolution	0.1 ºC
	Accuracy	±0.5 ºC; ±0.9 ºF
	Calibration	Offset in 0.1 increments, ±10 ºC or ±18 ºF
Display		Custom LCD with backlight
Memory		Stores up to 500 data sets
Output		USB or RS232
Real-Time Clock		Time and date stamp on calibration and stored data
Temperature Compensation		Automatic or manual from -10 to 110 ºC
Power		Two AA batteries (included), >500 hours (without backlight); AC adapter (optional)
Dimensions (L x W x H)	Meter	7⁷⁄₈″ x 3¹⁄₈″ x 2 ¼″ (20 x 8.3 x 5.7 cm)
	Boxed	9¹⁄₈″ x 9¹⁄₈″ x 2 ¾″ (23 x 23 x 7 cm)
Weight	Meter	1 lb (0.5 kg)
	Boxed	1.4 lb (0.7 kg)

Ordering Information

Order Code	Part No.	Description
Meter		
ECPHWP45000	01X651628	**pH 450 Meter Only:** Meter, Grip-Clip™, two AA batteries
ECPHWP45002	01X651629	**pH 450 Meter & Electrode:** Meter with double junction pH electrode and ATC probe, Grip-Clip™, two AA batteries
ECPHWP45002K	01X651630	**pH 450 Meter Kit:** Meter with double-junction pH electrode and ATC probe, Grip-Clip™, two AA batteries, hard carry case, USB cable, pH buffers, storage solution, rinse solution
Electrodes		
ECFC7252201B	01X099417	Replacement pH electrode, double-junction, epoxy body, BNC
ECFE7372801W	93X218990	pH electrode with built-in ATC. Double-junction, epoxy body, BNC
ECFC7352901W	01X218995	pH electrode with built-in ATC. Single-junction, epoxy body, BNC
ECFC7960201B	01X256613	ORP electrode. Double-junction, epoxy body, gel-filled, BNC
PHWPTEM01W	01X021807	ATC probe. Use with any standard pH electrode for temperature compensation
Accessories		
GRIPCLIP	GRIPCLIP	Grip-Clip™
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
MINIPHONEUSB	MINIPHONEUSB	USB cable for 450 series, mini phone plug to USB
30X427301	30X427301	RS232 cable for 450 series, mini phone plug to RS232 9-pin (F)
ECPHBUFKITC	01X639001	pH buffer set, pH 4 (red), 7 (yellow), 10 (blue), 480 mL each
ECPHBUFKIT	01X638901	Colourless pH buffer set, pH 4, 7 and 10 (480 mL each)

Eutech CON 450

Conductivity / Total Dissolved Solids / Salinity / Temperature

Backlit, rugged waterproof meter is ideal for any environment

- Durable waterproof and dustproof design with IP67 rating
- **Large, backlit custom display** – View measurement with temperature and cell efficiency
- **Grip-Clip™** – Quickly and easily secures the probe to your beaker or container
- Calibrate using automatically recognized standards or manually; to a single point across all ranges or to multiple points (one calibration point per each conductivity range)
- **Selectable cell constant** – 0.10, 1.00, or 10.0
- Adjustable temperature coefficient from 0.00 to 10.00 % per ºC. Set to 0.0 % to meet USP methods for non-compensated measurements
- **Adjustable conductivity-to-TDS factor** – Adjustable 0.4 to 1.0
- **Selectable ºC / ºF** – Choose units to best fit your application
- Includes our easy to clean conductivity cell
- Ready indicator, manual or automatic measurement hold feature and optional automatic shutoff function
- **Store up to 500 data sets with data** – Use USB or RS232 output with optional data cable to send data to your software or our free communication software
- **Built-in real-time clock stamps stored data and calibration data with time and date** – Meets standards for GLP (Good Laboratory Practices)
- **Built-in stand with wall-mount** – Allows for easy benchtop measurement or storage

Specification Table

Conductivity	Range	0 to 200 mS
	Resolution	0.01 µS to 0.1 mS
	Accuracy	±1 % full scale
	Calibration	Auto/manual; 1 point/range
TDS	Range	0 to 200 ppt (TDS factor 1.0)
	Resolution	0.01 ppm to 0.1 ppt
	Accuracy	±1 % full scale
	Calibration	Manual; 1 point/range
Salinity	Range	0 to 50 ppt
	Resolution	0.01
	Accuracy	±1 % full scale
	Calibration	Manual; 1 point
Temperature	Range	-10.0 to 110.0 ºC (14.0 to 230.0 ºF)
	Resolution	0.1 ºC/ºF
	Accuracy	±0.5 ºC; ±0.9 ºF
	Calibration	Offset in 0.1 increments, ±10 ºC or ±18 ºF
Display		Custom LCD with backlight
Memory		Stores up to 500 data sets
Output		USB or RS232
Real-Time Clock		Time and date stamp on calibration and stored data
Temperature Compensation		Automatic or manual from -10 to 110 ºC
Power		Two AA batteries (included), >300 hours (without backlight); AC adapter (optional)
Dimensions (L x W x H)	Meter	7⁷/₈" x 3¹/₈" x 2 ¼" (20 x 8.3 x 5.7 cm)
	Boxed	9¹/₈" x 9¹/₈" x 2 ¾" (23 x 23 x 7 cm)
Weight	Meter	1 lb (0.5 kg)
	Boxed	1.4 lb (0.7 kg)

Ordering Information

Order Code	Part No.	Description
Meter		
ECCONWP45003	01X651632	**CON 450 Meter & Electrode:** Meter, conductivity cell (K = 1.0), Grip-Clip™, two AA batteries
ECCONWP45003K	01X651633	**CON 450 Meter Kit:** Meter, conductivity cell (K = 1.0), Grip-Clip™, two AA batteries, hard carry case, USB cable, calibration solutions
Electrodes		
ECCONSEN72W	93X244303	Conductivity/ATC cell, glass body, K = 0.1
CONSEN91W	01X244702	Conductivity/ATC cell, K = 1.0
CONSEN92W	CONSEN92W	Conductivity cell, K = 10
Accessories		
GRIPCLIP	GRIPCLIP	Grip-Clip™
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
MINIPHONEUSB	MINIPHONEUSB	USB cable for 450 series, mini phone plug to USB
30X427301	30X427301	RS232 cable for 450 series, mini phone plug to RS232 9-pin (F)
ECCON84BT	01X211241	84 µS conductivity standard, 480 mL
ECCON1413BT	01X211207	1413 µS conductivity standard, 480 mL
ECCON1288BT	01X211210	12.88 mS conductivity standard, 480 mL
ECCON1118BT	01X211244	111.8 mS conductivity standard, 480 mL

Eutech DO 450

Dissolved Oxygen / Temperature

Affordable optical RDO technology reduces maintenance time and costs

- Maintenance free optical probe with no electrolyte eliminates hassle of replacing delicate membranes and salt build up from refilling solutions
- Durable waterproof and dustproof design with IP67 rating
- Large, backlit custom display provides measurement with temperature
- Switch between % saturation and mg/L (ppm) dissolved oxygen with a press of a button
- **Calibration due alarm** – Set a visible reminder when it is time to recalibrate the meter
- Manual barometric pressure and salinity correction
- **Selectable ºC or ºF** – Choose the unit to best fit your application
- Ready indicator, manual or automatic measurement hold feature and optional automatic shutoff function
- **Store up to 500 data sets** – Easy USB or RS232 output with optional data cables
- **Built-in real-time clock stamps stored data and calibration data with time and date** – Meets standards for GLP (Good Laboratory Practices)
- 500 hours battery life or use optional universal power adapter
- **Built-in stand with wall-mount** – Allows for easy benchtop measurement and storage

Calibration Chamber RDO Weight/Guard RDO Sensor Cap RDO Probe

Specification Table

Dissolved Oxygen	Range	0 to 200 %; 0 to 20 ppm/mg/L
	Resolution	0.10 %; 0.1 ppm/mg/L
	Accuracy	±2 %; ±0.1 ppm or mg/L up to 8; ±0.2 ppm or mg/L above 8
	Calibration	Zero and saturation
Temperature	Range	0.0 to 50.0 ºC (0.0 to 122.0 ºF)
	Resolution	0.1 ºC/ºF
	Accuracy	±0.5 ºC; ±0.9 ºF
	Calibration	Offset in 0.1 increments, ±10 ºC or ±18 ºF
Display		Custom LCD with backlight
Memory		Stores up to 500 data sets
Output		USB or RS232
Real-Time Clock		Time and date stamp on calibration and stored data
Temperature Compensation		Yes
Pressure & Salinity Compensation		Manual
Power		Two AA batteries (included), >100 hours (without backlight); AC adapter (optional)

Ordering Information

Order Code	Part No.	Description
Meter		
ECDOWP45000	01X651634	**DO 450 Meter Only:** Meter, two AA batteries
ECDOWP45003	01X651644	**DO 450 Meter & Electrode:** Meter, RDO electrode with sensor cap, two AA batteries
ECDOWP45003K	01X651635	**DO 450 Meter Kit:** Meter, RDO electrode with sensor cap, two AA batteries, hard carry case, USB cable, RDO stainless steel weight/guard, RDO calibration chamber
Electrodes		
RDO3M	RDO3M	RDO probe, 3 m (10 ft) cable
RDO6M	RDO6M	RDO probe, 6 m (20 ft) cable
RDO15M	RDO15M	RDO probe, 15 m (50 ft) cable
Accessories		
RDOCAP	RDOCAP	Replacement RDO sensor cap
RDOWEIGHT	RDOWEIGHT	RDO weight/guard, screw thread to attach to probe
RDOCALCHAMBER	RDOCALCHAMBER	Calibration chamber
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
MINIPHONEUSB	MINIPHONEUSB	USB cable for 450 series, mini phone plug to USB
30X427301	30X427301	RS232 cable for 450 series, mini phone plug to RS232 9-pin (F)
ECDOZEROSOLN	01X211238	Zero oxygen solution, 0 % DO, 480 mL

Eutech PD 450

pH / mV / Dissolved Oxygen / Temperature

Affordable optical RDO technology reduces maintenance time and costs

- Maintenance free optical probe with no electrolyte eliminates hassle of replacing delicate membranes and salt build up from refilling solutions
- **Switch between pH, mV, % saturation and mg/L (ppm) dissolved oxygen** – With the press of a button
- Durable waterproof and dustproof design with IP67 rating
- Large, backlit graphic display provides measurement with temperature
- Calibrate up to 5 points automatically with USA or NIST buffer groups (up to 6 points with DIN). New manual option allows calibration with up to 5 custom buffer standards
- **Auto buffer recognition** – Automatically identifies the correct pH buffer for rapid calibration
- **Calibration due alarm** – Set a visible reminder when it is time to recalibrate the meter
- **Selectable ºC or ºF** – Choose units to best fit your application
- Ready indicator, manual or automatic measurement hold feature and optional automatic shutoff function
- **Store up to 500 data sets** – Easy USB or RS232 output with optional data cables
- Built-in real-time clock stamps stored data and calibration data with time and date – Meets standards for GLP (Good Laboratory Practices)

Calibration Chamber   RDO Weight/Guard   RDO Sensor Cap   RDO Probe

Specification Table

pH	Range	-2.00 to 16.00 pH
	Resolution	0.01 pH
	Accuracy	±0.01
	Calibration	Up to 6 points: USA, NIST, DIN or custom
mV	Range	±2000 mV
	Resolution	0.1 mV ±999.9 mV; 1 mV beyond
	Accuracy	±0.2 mV +2 LSD or +0.5 % of reading; whichever is greater
	Calibration	±200 mV
Dissolved Oxygen	Range	0 to 200 %; 0 to 20 ppm/mg/L
	Resolution	0.10 %; 0.1 ppm/mg/L
	Accuracy	±2 %; ±0.1 ppm or mg/L up to 8; ±0.2 ppm or mg/L above 8
	Calibration	Zero and saturation
Temperature	Range	-10.0 to 110.0 ºC (14.0 to 230.0 ºF)
	Resolution	0.1 ºC/ºF
	Accuracy	±0.5 ºC; ±0.9 ºF
	Calibration	Offset in 0.1 increments, ±10 ºC or ±18 ºF
Display	Custom LCD with backlight	
Memory	Stores up to 500 data sets	
Output	USB or RS232	
Real-Time Clock	Time and date stamp on calibration and stored data	
Temperature Compensation	Automatic or manual from -10 to 110 ºC	
Pressure & Salinity Compensation	Manual	
Power	Two AA batteries (included), >100 hours (without backlight); AC adapter (optional)	

Ordering Information

Order Code	Part No.	Description
Meter		
ECPDWP45000	01X651641	**PD 450 Meter Only:** Meter, two AA batteries
ECPDWP45004	01X651646	**PD 450 Meter & Electrodes:** Meter, pH/ATC electrode, RDO electrode with sensor cap, two AA batteries
ECPDWP45004K	01X651642	**PD 450 Meter Kit:** Meter, pH electrode, RDO electrode with sensor cap, two AA batteries, hard carry case, USB cable, RDO stainless steel weight/guard, RDO calibration chamber, calibration solutions
Electrodes		
ECDA9350603B	93X218879	Replacement pH electrode, submersible, single-junction, ABS, 26 mm diameter, BNC, 3 m cable
RDO3M	RDO3M	RDO probe, 3 m (10 ft) cable
RDO6M	RDO6M	RDO probe, 6 m (20 ft) cable
RDO15M	RDO15M	RDO probe, 15 m (50 ft) cable
Accessories		
RDOCAP	RDOCAP	Replacement RDO sensor cap
RDOWEIGHT	RDOWEIGHT	RDO weight, screw thread to attach to probe
RDOCALCHAMBER	RDOCALCHAMBER	Calibration chamber
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
MINIPHONEUSB	MINIPHONEUSB	USB cable for 450 series, mini phone plug to USB
30X427301	30X427301	RS232 cable for 450 series, mini phone plug to RS232 9-pin (F)
ECDOZEROSOLN	01X211238	Zero oxygen solution, 0 % DO, 480 mL

Eutech PC 450

pH / mV / Conductivity / Total Dissolved Solids / Salinity / Temperature

PC 450 accepts a single pH/Con probe or separate pH and conductivity probes

- Durable waterproof and dustproof design with IP67 rating
- Switch between pH, mV, conductivity, TDS and salinity with a press of a button
- **Large, backlit custom display** – Lets you view measurement with temperature
- **Grip-Clip™** – Quickly and easily secures separate pH and conductivity electrodes simultaneously to your sample container or beaker
- Calibrate up to 5 points automatically with USA or NIST buffer groups (up to 6 points with DIN). New manual option allows calibration with up to 5 custom buffer standards you
- **Auto buffer recognition** – Automatically identifies the correct pH buffer for rapid calibration
- **Calibration due alarm** – Set a visible reminder when it is time to recalibrate the meter
- **Intuitive, user-friendly icons** – Electrode status displays pH slope or cell constant
- **Auto-range conductivity from 0 to 199.9 mS in five ranges** – With up to five calibration points
- **Selectable cell constant** – 0.10, 1.00 or 10.0
- **Adjustable temperature coefficient** – From 0.00 to 10.00 % per °C
- **Conductivity-to-TDS factor** – Adjustable from 0.40 to 1.00
- **Selectable °C/°F** – Choose units to best fit your application
- Ready indicator, manual or automatic measurement hold feature and optional automatic shutoff function
- Store up to 500 data sets; easy USB or RS232 output with optional data cables
- **Built-in real-time clock stamps stored data and calibration data with time and date** – Meets standards for GLP (Good Laboratory Practices)
- 500 hours battery life or use optional universal power adapter
- **Built-in stand with wall-mount** – Allows for easy benchtop measurement and storage

Specification Table

pH	Range	-2.00 to 16.00 pH
	Resolution	0.01 pH
	Accuracy	±0.01 pH
	Calibration	Up to 6 points: USA, NIST, DIN or custom
mV	Range	±2000 mV
	Resolution	0.1 mV ±999.9 mV; 1 mV beyond
	Accuracy	±0.2 mV +2 LSD or +0.5 % of reading; whichever is greater
	Calibration	±200 mV
Conductivity	Range	0 to 200 mS; 0 to 20 mS if using COMBI03BW probe
	Resolution	0.01 µS to 0.1 mS
	Accuracy	±1 % full scale
	Calibration	Auto/manual; one point per range
TDS	Range	0 to 200 ppt (TDS factor 1.0)
	Resolution	0.01 ppm to 0.1 ppt
	Accuracy	±1 % full scale
	Calibration	Manual; 1 point/range
Temperature	Range	-10.0 to 110.0 °C (14.0 to 230.0 °F)
	Resolution	0.1 °C/°F
	Accuracy	±0.5 °C; ±0.9 °F
	Calibration	Offset in 0.1 increments, ±10 °C or ±18 °F
Display		Custom LCD with backlight
Memory		Stores up to 500 data sets
Output		USB or RS232
Real-Time Clock		Time and date stamp on calibration and stored data
Power		Two AA batteries (included), >100 hours (without backlight); AC adapter (optional)

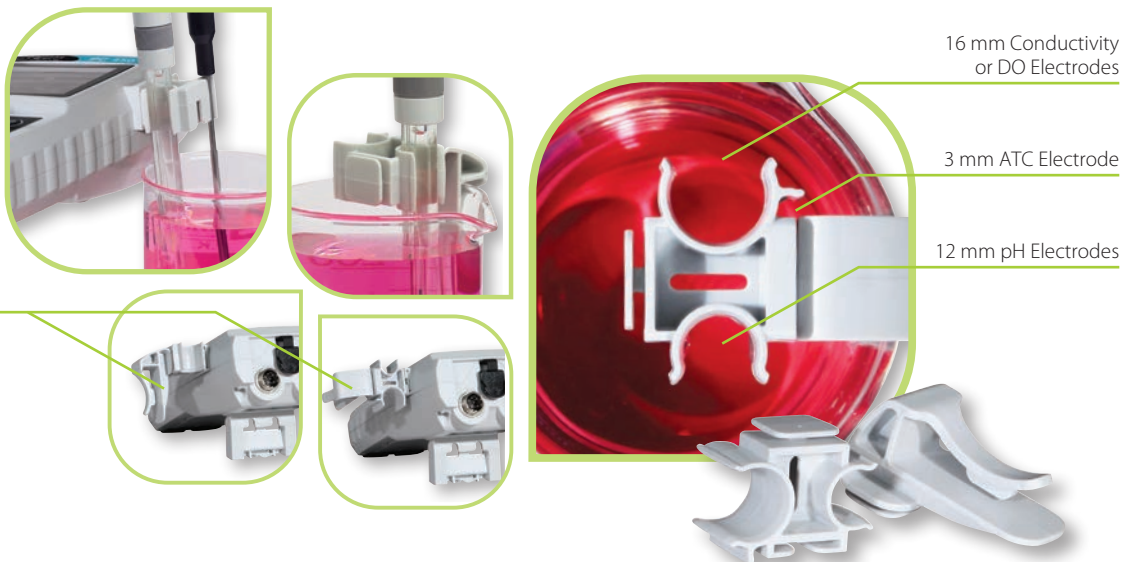## Ordering Information

Order Code	Part No.	Description
Meter		
ECPCWP45000	01X651636	**PC 450 Meter Only:** Meter, two AA batteries
ECPCWP45004	01X651639	**PC 450 Meter & pH & Con/ATC Electrodes:** Meter, double-junction pH electrode, conductivity cell (K = 1.0), Grip-Clip™, two AA batteries
ECPCWP45004K	01X651640	**PC 450 Meter Kit:** Meter, double-junction pH electrode, conductivity cell (K = 1.0), Grip-Clip™, two AA batteries, hard carry case, USB cable, calibration solutions
ECPCWP45003	01X651637	**PC 450 Meter & Combi Electrode:** Meter, combi pH/Con/ATC electrode, two AA batteries
ECPCWP45003K	01X651638	**PC 450 Meter Combi Kit:** Meter, combi pH/Con/ATC electrode, two AA batteries, hard carry case, USB cable, calibration solutions
Electrodes		
ECFC7252201B	01X099417	Replacement pH electrode, double-junction, epoxy body, BNC
PHWPTEM01W	PHWPTEM01W	ATC probe. Use with any pH electrode with BNC connector for temperature compensation
COMBI03BW	COMBI03BW	Combination pH/Con/ATC probe
ECCONSEN72W	93X244303	Conductivity/ATC cell, glass body, K = 0.1
CONSEN91W	01X244702	Conductivity/ATC cell, K = 1.0
CONSEN92W	CONSEN92W	Conductivity cell, K = 10
Accessories		
GRIPCLIP	GRIPCLIP	Grip-Clip™
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
MINIPHONEUSB	MINIPHONEUSB	USB cable for 450 series, mini phone plug to USB
30X427301	30X427301	RS232 cable for 450 series, mini phone plug to RS232 9-pin (F)

Accessories

Introducing the Grip-Clip™

Secure Grip-Clip™ to meter for storage or rotate for one-handed measurement

16 mm Conductivity or DO Electrodes

3 mm ATC Electrode

12 mm pH Electrodes

| Grip-Clip™ | Use this innovative electrode accessory to save time while preventing electrode damage. Designed for use with a 3 mm ATC electrode, 12 mm pH electrode, and a 16 mm conductivity or DO electrode. Attach the Grip-Clip™ to your instrument when not in use or for single-handed measurement. It secures to most beakers without the need for a separate electrode arm. Keeps electrode(s) suspended during use, away from dangerous stir bars and out of harm's way. Easy-access opening allows for electrode replacement without removal of the electrode storage bottle. Allows for quick height adjustment of your electrode(s) to suit your sample container and individual preference. Don't break another electrode bulb or waste time with clumsy holders – use the Grip-Clip™!

| RS232 Thermal Printer | The convenience of printing directly from your meter whenever, wherever! This compact thermal printer connects easily to your 450 series waterproof handheld meters via RS232 – ideal for data-recording and report-generation. Connecting cables included.

Ordering Information

Order Code	Part No.	Description
60X426401	60X426401	Optional 100 / 240 VAC SMPS power adapter, 9 V, 6 W
GRIPCLIP	GRIPCLIP	Grip-Clip™ ; includes separate electrode holder and beaker clip
56X259306	56X259306	Hard carry case
MINIPHONEUSB	MINIPHONEUSB	USB cable for 450 series, mini phone plug to USB
30X427301	30X427301	RS232 cable for 450 series, mini phone plug to RS232 9-pin (F)
ECPHBUFKITC	01X639001	pH buffer set, pH 4 (red), 7 (yellow), 10 (blue), 480 ml each
ECPHBUFKIT	01X638901	Colorless pH buffer set, pH 4, 7 and 10 (480 mL each)
ECCON84BT	01X211241	84 µS conductivity standard, 480 mL
ECCON1413BT	01X211207	1413 µS conductivity standard, 480 mL
ECCON1288BT	01X211210	12.88 mS conductivity standard, 480 mL
ECCON1118BT	01X211244	111.8 mS conductivity standard, 480 mL
01X594301	01X594301	Thermal printer, includes 100-240 V power supply with plug adapters for UK, US, EU and Australia. Includes 01X594101 cable, 30X427301 cable, null modem adapter, and roll of paper
01X594401	01X594401	Replacement paper for thermal printer, two rolls

Power Adapter
(60X426401)

Hard Carry Case
(56X259306)

USB Cable
(MINIPHONEUSB)

RS232 Cable
(30X427301)

Colored & Colorless
Buffer Solutions
(ECPHBUFKITC)
(ECPHBUFKIT)

RS232 Thermal Printer
(01X594301)

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