

## Dissolved Oxygen

The measure of the amount of gaseous oxygen dissolved in a solution.



Dissolved Oxygen

### Handheld:

1. CyberScan DO 600
2. CyberScan DO 300
3. CyberScan DO 110
4. DO 6+

### Bench:

1. DO 2700
2. DO 700

“Eutech’s handheld dissolved oxygen meters help me keep my fish healthy and happy.”



## About Dissolved Oxygen Measurement

### What is Dissolved Oxygen?

Dissolved Oxygen (DO) is a measure of the amount of dissolved gaseous oxygen in a solution. Some gases, such as ammonia, carbon dioxide and hydrogen chloride, react chemically with water to form new compounds. However, gases such as nitrogen and oxygen merely dissolve in water without chemically reacting with it, and exist as microscopic bubbles between water molecules.

There are two main ways in which dissolved oxygen occurs naturally in water: From the surrounding atmosphere, where oxygen in the surrounding air dissolves readily when mixed into water, up to saturation, during water movements; via photosynthesis when oxygen is produced by aquatic plants and algae as a by-product of photosynthesis. The amount of oxygen dissolved in water is usually measured in percent saturation, or expressed as a concentration in milligrams per litre water. Accurate measurement of dissolved oxygen is essential in processes where oxygen content affects reaction rates, process efficiency or environmental conditions, such as biological wastewater treatment, wine production, bio-reactions, environmental water testing.

### Basic Principle in DO Measurement

In theory, the amount of DO in a solution is dependent on three factors, namely temperature, salinity and atmospheric pressure.

#### 1. Water Temperature

Solubility of oxygen reduces as temperature increases. Hence, the colder the water, the more dissolved oxygen it contains. Since temperature affects both the solubility and diffusion rate of oxygen, temperature compensation is necessary for any standardized DO measurements.

**All Eutech DO meters come with automatic temperature compensation for accurate readings even in varying temperature conditions.**

#### 2. Salinity

The amount of dissolved oxygen increases as salinity level decreases. In other words, freshwater holds more oxygen than saltwater. Since the presence of dissolved salts limits the amount of oxygen that can dissolve in water, the relationship between the partial pressure and concentration of oxygen varies with the salinity of the sample.

**Eutech meters feature manual salinity correction to compensate for variations in ionic concentration. Simply enter the salinity of the sample in parts per thousand (ppt) to ensure the correct DO measurements.**

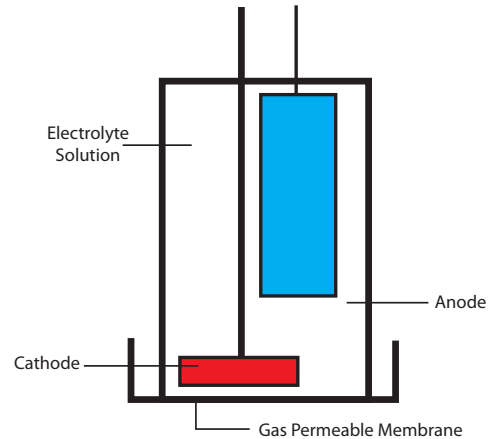
#### 3. Atmospheric Pressure

There is a direct proportional relationship between the solubility of dissolved oxygen and the surrounding atmospheric pressure. As pressure decreases with increase in altitude, the amount of dissolved oxygen found in water reduces.

To ensure that your dissolved oxygen is not affected by atmospheric pressure, Eutech meters come with manual barometric pressure compensation, with an Atmospheric Pressure Correction Chart included in the manuals for convenient referencing.

**Eutech DO instruments automatically compensate for temperature, salinity and barometric pressure. The salinity value and barometric pressure are either measured by the instrument or entered by the user.**

### DO Electrodes



The measurement of DO requires a special DO electrode that is made up of an anode, a cathode, electrolyte solution and a gas permeable membrane. The material of the membrane is specially selected to permit oxygen to pass through. Oxygen is consumed by the cathode which will create a partial pressure across the membrane. Oxygen then diffuses into the electrolyte solution. In short, a DO meter actually measures the pressure caused by movements of oxygen molecules in water or any other medium. Currently, galvanic and polarographic electrodes are the predominant methods for measuring dissolved oxygen.

**The Galvanic Cell** consists of two metals, the positive anode and the negative cathode, connected by a salt bridge between the individual half-cells. As the metal electrodes leave electrons behind as they dissolve in the electrolyte. The different properties of the two metals causes them to dissolve at different rates, hence a pressure is created when the number of electrons in either side of the cell differs. The pressure is translated into an electric current proportion to the oxygen concentration in the electrolyte if an electrical circuit is created between the two electrodes. The galvanic electrode does not need polarising time and is able to assume operation immediately.

During this process, ions of the more active anode are transferred through the electrolyte to the less active cathode, and deposited there as a plating. In this way the anode is corroded. When the anode material eventually corrodes away, the potential drops and the current halts.

**Galvanic electrodes are available with most Eutech Instruments DO meters such as the DO 6+, CyberScan DO 110 and DO 300.**

**The Polarographic Cell** consists of two electrodes placed in the electrolyte: One with fixed potential called the reference electrode, and the other with a variable potential called the polarizable electrode. As voltage is applied to the polarizable electrode, a redox reaction occurs, where electrons break away from the electrode to bond with oxygen in the electrolyte. The rate at which the electrons break

away from the polarizable electrode is linearly proportionate to the amount of oxygen available in the electrolyte, hence this movement of electrons is representative of the amount of dissolved oxygen left in the electrolyte.

The advantage of a polarographic cell is that the cathode remains intact. The current flow of the polarographic cell is also linearly proportional to the amount of oxygen present in the electrolyte, enabling the cell to provide highly accurate measurements at low oxygen levels.

**Polarographic self-stirring DO/BOD probes are available for use with the Eutech DO 700 and DO 2700 bench meters.**

### BOD & COD

The BOD test measures the molecular oxygen utilized in the biodegradation of organic material and the oxidation of inorganic material. By measuring the amount of oxygen dissolved in samples at the beginning and end of a specified incubation period, the relative oxygen requirements of wastewaters, effluents, and polluted waters can be determined.

$$BOD_t \text{ (mg/L)} = \frac{D_1 - D_2}{P}$$

**BOD<sub>t</sub>** = Oxygen uptake during incubation period t

**D<sub>1</sub>** = DO of diluted sample immediately after preparation (mg/L)

**D<sub>2</sub>** = DO of diluted sample after incubation period t (mg/L)

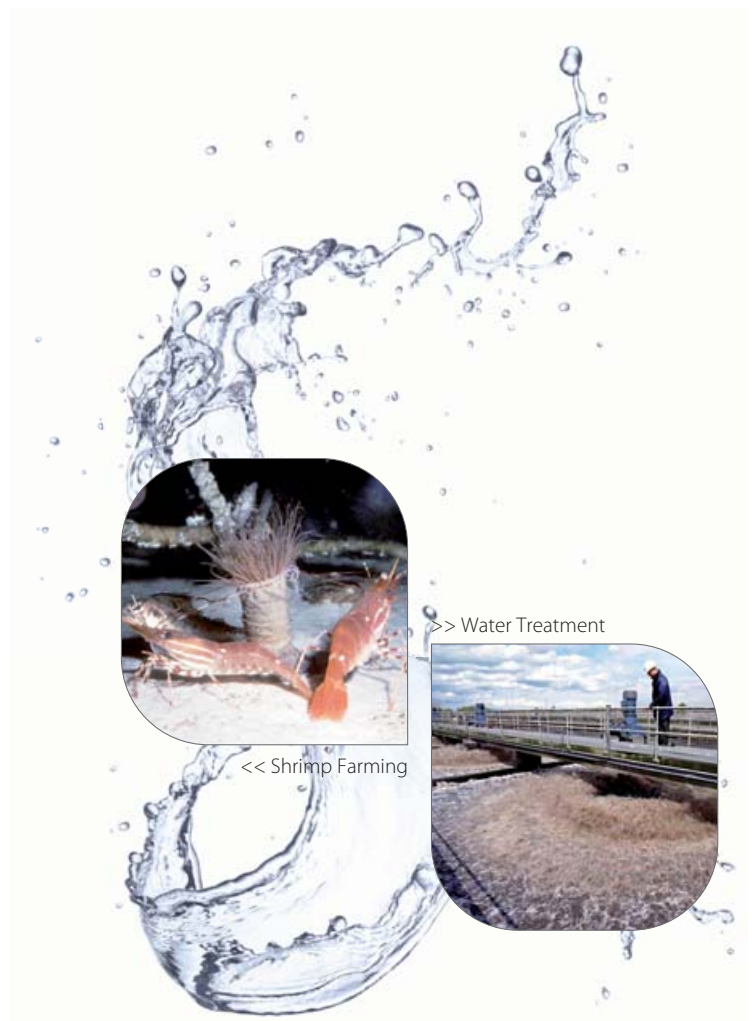
**P** = Decimal volumetric fraction of sample used

BOD is similar to the Chemical Oxygen Demand (COD), which also measures relative oxygen-depletion. However, the possible presence of non-biologically oxidisable may render the COD test to be less accurate.

The COD Test is often used to measure the amount of organic compounds in surface water by measuring the amount of oxygen required to oxidize and break down an organic compound into carbon dioxide, ammonia and water. The basis of the COD test is that anything can be oxidized into carbon dioxide using a strong oxidizing agent in acidic environments. A blank sample, created by adding all reagents to distilled water is usually used as a control in COD measurements.

Both the BOD and COD tests are means to measure the relative oxygen-depletion effect of a waste contaminant, and are widely used to monitor pollution levels. The BOD test measures the oxygen demand of biodegradable pollutants whereas the COD test measures the oxygen demand of biodegradable pollutants plus the oxygen demand of non-biodegradable oxidizable pollutants.

However, because COD measures everything that can be chemically oxidised and not just the level of biologically active organic matter, the possibility of non-biological oxidizable may render the COD Test as a less accurate method compared to the BOD method.



**DO**  
CyberScan Waterproof  
Handheld

**CyberScan DO 600**  
Dissolved Oxygen/°C/°F



Wireless data transfer



Waterproof external  
power input



Complimentary  
Cybercomm 600 software  
– download data from  
meter to PC as text or  
Excel® spreadsheet



Sturdy rubber boot  
doubles up as meter stand

Fast, intuitive and powerful – the CyberScan DO 600 offers one of the widest measurement ranges and biggest memory spaces in the DO handheld market today. Data-transfer is easy with incorporated IrDA wireless communications technology: No wires, no cables. Send data with the press of a button!

Large backlit screen  
with multi-data  
display and intelligent  
prompt messages



Intuitive soft-key  
operation

Rugged and  
IP67 waterproof

**Applications**

**Aquacultural:** Use to monitor oxygen levels in catfish and shrimp farming; game stocking ponds; ornamental fish tanks and ponds; and in other fish farming applications.

**Industrial:** Ideal for checks on the quality of plant water intake and discharge, wastewater and water treatment, recirculating systems and industrial process systems.

**Environmental:** Use to test water quality, monitor health of aquatic ecosystems, survey surface and ground water drinking supplies, and meet EPA regulations.

**Educational:** Ideal for quick, accurate DO readings in laboratories and schools.

**Wide Measurement Range**

- Measures oxygen concentration up to 90.00 mg/L and saturation up to 600.0 %
- Accurate readings even in varying conditions with Temperature, Salinity and Barometric Pressure Compensation

**User-Friendly**

- Cal-due alarm for periodic calibration updates
- IP67 waterproof design for applications in harsh environments
- High/low set-points function for quality control checks – meter warns when readings fall outside set limit
- Built-in barometer for auto-pressure correction

**Advanced Data-Management**

- Auto-logging function that automatically records up to 500 data sets in GLP-compliant format
- RS232C through LED\*, IrDA wireless communications technology

\* RS232C (LED) interface adapter available as separate accessory (order code: 01X344201)



# CyberScan DO 300

Dissolved Oxygen/°C/°F

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 esis.enq@esis.com.au

**ESIS**  
 Industrial Electronics

**DO**  
 CyberScan Waterproof  
 Handheld

Designed to meet the rigours of outdoor field measurement, Eutech's waterproof CyberScan DO 300 is IP67-rated waterproof and even floats on water for easy retrieval. Its galvanic probe requires no warm-up time, delivers repeatable, stable readings and calls for almost no maintenance.



Waterproof to IP67 standards

Rubber grips for firmer grip

Galvanic electrode with built-in ATC and 3 m waterproof cable



Back-lit display for easy reading in the dark



Rubber sleeve protects connector



Waterproof meter floats for easy retrieval

Dissolved Oxygen

- Custom dual-display LCD that shows DO readings (in ppm, mg/L or % saturation) and temperature readings (in °C and °F)
- Non-volatile memory stores up to 50 data sets with temperature readings
- Auto-compensation of Salinity and Barometric Pressure with manual input
- Independent 100 % and zero adjustment calibrations
- Adjustable backlit display
- GLP-compliant
- Self-diagnostic for easy trouble-shooting
- IP67 waterproof housing

### Applications

- Aquaculture (shrimp & catfish farming)
- Ponds and aquariums
- Water quality testing
- Water and wastewater treatment
- Recirculating systems and industrial process systems
- Geological and ecological testing
- Monitoring surface and ground drinking water (in compliance with EPA regulations)
- Schools and laboratories





Complimentary  
CyberComm Data  
Acquisition software



RS232C output allows  
direct data transfer  
from meter to PC



Adjustable hinge  
acts as a table stand

Accurate with sophisticated yet user-friendly features, the CyberScan DO 110 delivers repeatable, stable measurements with its unique galvanic electrode – no warm-up time required!

Dual-display  
with temperature  
annunciator

Ergonomic slim  
design for that  
perfect palm fit

Galvanic electrode  
requires no  
warm-up time

IP54-rated  
housing protects  
meter against  
water splashes



**Applications**

**Aquacultural:** Use to monitor oxygen levels in catfish and shrimp farming; game stocking ponds; ornamental fish tanks and ponds; and in other fish farming applications.

**Industrial:** Ideal for checks on the quality of plant water intake and discharge, wastewater and water treatment, recirculating systems and industrial process systems.

**Environmental:** Use to test water quality, monitor health of aquatic ecosystems, survey surface and ground water drinking supplies, and meet EPA regulations.

**Educational:** Ideal for quick, accurate DO readings in laboratories and schools.

- Custom dual-display LCD that shows DO readings in mg/L (ppm) or % saturation and temperature in °C and °F
- Auto-compensation of Salinity and Barometric Pressure with manual input
- Stores up to 100 data sets with temperature readings
- Direct data transfer via RS232C output – auto data-logging to PC with CyberComm DAS
- Independent 100 % and zero adjustment calibrations
- One-glance monitoring of electrode performance with electrode data display
- Self-diagnostic for easy trouble-shooting
- IP54 splashproof housing



# DO 6+

Dissolved Oxygen/°C

The Eutech DO 6+ offers high performance at an economical price. Rugged and user-friendly, this no-frill meter comes with a protective rubber boot and a convenient benchtop stand. Measures in mg/L (ppm), or % saturation.



Reader-friendly screen display

IP54-rated housing protects against dust and water splashes



Splashproof keypad



Protective rubber boot

Dissolved Oxygen

- Push-button calibration with auto-buffer recognition for quick and easy calibrations with no mistakes
- Calibration can be performed at 100 % and/or 0 % solution
- Auto-compensation of Salinity and Barometric Pressure with manual input
- Galvanic probe eliminates polarisation delay and delivers quick, stable response
- Non-volatile memory holds meter settings, even when batteries run out
- Hold function freezes readings for easy reference
- Auto-off conserves energy and lengthens battery life-span
- Easy troubleshooting with comprehensive self-diagnostic messages



### Applications

- Ponds and aquariums • Aquaculture (catfish and shrimp farming) • Water and wastewater treatment • Recirculating systems • Industrial process systems
- Water-quality testing • Surface and ground water testing (meet EPA regulations)
- Ecological studies and monitoring • Field, laboratory and education institutions

| Models   | CyberScan Dual-Display                                      |  |  | Eutech Single-Display              |                                   |
|--|---|--|--|------------------------------------|-----------------------------------|
|  | DO 600  | DO 300                                       | DO 110   | DO 6+                              |                                   |
| <b>Dissolved Oxygen Handheld Meters Specifications</b> |   |  |  |                                    |                                   |
| Measuring Parameter                                    |   | Dissolved Oxygen / °C / °F                   |  |                                    |                                   |
| Highlights   |   | Waterproof, GLP, RS232C, IrDA                | Waterproof, back-lit display                                 | Standard handheld, RS232C          |                                   |
| Dissolved Oxygen                                       | Range   | 0 to 90.00 mg/L or ppm                       |  |                                    |                                   |
|  | Resolution  | 0.01 mg/L or ppm                             |  |                                    |                                   |
|  | Accuracy  | ±0.20 mg/L                                   |  |                                    |                                   |
| % Saturation of Oxygen                                 | Range   | 0 to 600.0 %                                 |  |                                    |                                   |
|  | Resolution  | 0.1 %  |  |                                    |                                   |
|  | Accuracy  | ±2.0 %                                       |  |                                    |                                   |
| Calibration  |   | 2-point (0 %, 100 %), 1-point (mg/L)         |  |                                    |                                   |
| Temperature  | Range   | 0.0 to 60.0 °C / 32 to 140 °F                |  |                                    |                                   |
|  | Resolution  | 0.1 °C / 0.1 °F                              |  |                                    |                                   |
|  | Accuracy  | ±0.3 °C / ±0.5 °F                            |  |                                    |                                   |
| Salinity Correction                                    | Range   | 0.0 to 50.0 ppt                              |  |                                    |                                   |
|  | Resolution  | 0.1 ppt                                      |  |                                    |                                   |
|  | Method  | Automatic correction after manual input      |  |                                    |                                   |
| Barometric Pressure Correction                         | Range   | 450 to 825 mmHg / 59.9 to 109.9 kPa          |  |                                    |                                   |
|  | Resolution  | 500 to 1499 mmHg / 66.6 to 199.9 kPa         |  |                                    |                                   |
|  | Method  | Automatic correction with in-built sensor    |  |                                    |                                   |
| Probe  | Type  | Galvanic                                     |  |                                    |                                   |
|  | Temperature Compensation                                    | ATC / MTC (0.0 to 50.0 °C)                   |  |                                    |                                   |
|  | GLP   | Yes  |  | –                                  |                                   |
|  | Cal-Due Alarm   | Yes  |  | –                                  |                                   |
|  | IP67  | Yes  |  | –                                  |                                   |
|  | Datalogging   | Yes  | –  | Yes                                |                                   |
|  | Memory  | 500 data sets                                | 50 data sets   | 100 data sets                      |                                   |
|  | Operating Temperature                                       | 0 to 50 °C                                   |  |                                    |                                   |
|  | Average/Stability   | Yes (selectable)                             |  |                                    |                                   |
|  | LCD Display   | Dot-matrix LCD with backlight (5.4 x 7.1 cm) | Dual-display LCD with backlight (5.8 x 3.3 cm)               | Dual-display LCD (5.8 x 3.3 cm)    | Single-display LCD (4.5 x 2.3 cm) |
| Auto-Off   | 2 to 30 mins after last key pressed                         |  | 20 mins after last key pressed                               |                                    |                                   |
| Input  | DC phono sockets, 6-pin connector                           |  | DC socket, 6-pin connector                                   |                                    |                                   |
| Output   | IrDA, RS232C (via LED) *                                    | –  | RS232C   | BNC, 2.5 mm phono socket           |                                   |
| Power  | 4 x 1.5 V 'AA' alkaline batteries or 9 V DC adapter, 500 mA | 4 x 1.5 V 'AAA' alkaline batteries           | 4 x 1.5 V 'AAA' alkaline batteries or 9 V DC adapter, 200 mA | 4 x 1.5 V 'AAA' alkaline batteries |                                   |
| Battery Life   | > 200 hrs   | > 100 hrs                                    | > 700 hrs  |                                    |                                   |
| Dimensions (LxWxH); Weight                             | Meter   | 18.3 x 9.5 x 5.7 cm ; 460 g                  | 19 x 10 x 6 cm ; 320 g                                       | 18 x 9 x 4 cm ; 220 g              | 15.7 x 8.5 x 4.2 cm ; 255 g       |
|  | Boxed   | 40 x 33 x 10 cm ; 2680 g                     | 40 x 33 x 10 cm ; 2100 g                                     |                                    | 36 x 28 x 8 cm ; 1555 g           |

\* RS232C (LED) interface adapter available as separate accessory (see page 59 for order information)



### Dissolved Oxygen Handheld Meters

| Item   | Order Code   | Part No.  | Parameters       |             | Electrodes                             |                                       |                                     |                                     |                            | Accessories                     |                                |                                      |                       |              |               |  |  |
|--------|--------------|-----------|------------------|-------------|--|---------------------------------------|-------------------------------------|-------------------------------------|----------------------------|---------------------------------|--------------------------------|--------------------------------------|-----------------------|--------------|---------------|--|--|
|        |              |           | Dissolved Oxygen | Temperature | 7.6 m Cable DO Electrode (ECDOHANDY8M) | 3 m Cable DO Electrode (ECDOHANDYNEW) | 3 m Cable DO Electrode (DO6HANDY3M) | 0.9 m Cable DO Electrode (DO6HANDY) | CyberComm 600 DAS Software | CyberComm Portable DAS Software | Assembled Membrane Cap Housing | Assembled Membrane Cap Housing (x 2) | Refilling Electrolyte | RS232C Cable | Power Adapter | CyberScan Carry Kit, Set With 4 Sample bottles | Economy Carry Kit, Set With 4 Sample bottles |
| DO 600 | ECDOWP60042K | 01X419503 | •                | •           | •                                      |                                       |                                     |                                     |                            | •                               |                                | •                                    |                       |              | •             |  |  |
| DO 600 | ECDOWP60041K | 01X419502 | •                | •           |  | •                                     |                                     |                                     |                            | •                               |                                | •                                    |                       |              | •             |  |  |
| DO 300 | ECDOWP30002K | 01X262314 | •                | •           | •                                      |                                       |                                     |                                     |                            |                                 |                                | •                                    |                       |              | •             |  |  |
| DO 300 | ECDOWP30001K | 01X262307 | •                | •           |  | •                                     |                                     |                                     |                            |                                 |                                | •                                    |                       |              | •             |  |  |
| DO 110 | ECDO11002K   | 01X403503 | •                | •           | •                                      |                                       |                                     |                                     |                            |                                 |                                | •                                    |                       |              | •             |  |  |
| DO 110 | ECDO11001K   | 01X403502 | •                | •           |  | •                                     |                                     |                                     |                            |                                 |                                | •                                    |                       |              | •             |  |  |
| DO 6+  | ECDO602PLUSK | 01X370113 | •                | •           |  |                                       | •                                   |                                     |                            |                                 |                                | •                                    |                       |              |               |  | •  |
| DO 6+  | ECDO601PLUSK | 01X370114 | •                | •           |  |                                       |                                     | •                                   |                            |                                 |                                | •                                    |                       |              |               |  | •  |

### Replacement Electrodes

| Used With                       | Description   | Order Code    | Part No.  |
|---------------------------------|---|---------------|-----------|
| DO 600 / DO 300 / DO 110        | Galvanic Dissolved Oxygen electrode, ATC, 7.6 m cable with 1 assembled membrane cap housing, 1 refilling electrolyte & 1 scouring pad | ECDOHANDY8M   | 01X239606 |
| DO 600 / DO 300 / DO 110        | Galvanic Dissolved Oxygen electrode, ATC, 3 m cable with 1 assembled membrane cap housing, 1 refilling electrolyte & 1 scouring pad   | ECDOHANDYNEW  | 01X239601 |
| DO 6+                           | Galvanic Dissolved Oxygen electrode, ATC, 3 m cable with 2 assembled membrane cap housing, 1 refilling electrolyte & 1 scouring pad   | ECDO6HANDY3M  | 01X233916 |
| DO 6+                           | Galvanic Dissolved Oxygen electrode, ATC, 0.9 m cable 2 assembled membrane cap housing, 1 refilling electrolyte & 1 scouring pad      | DO6HANDY      | 01X233913 |
| DO 600                          | CyberScan DO 600 series carry kit set – plastic carry case, 4 empty sample bottles (60 ml)  | ECWP600DRYKIT | 01X430203 |
| DO 600                          | 100 / 240 VAC SMPS power adapter, 9 V, 6 W, centre +ve, with US / UK / EUR / Japan plug   | 01X030132     | 01X030132 |
| DO 600                          | RS232C (LED) interface adapter  | 91100-85      | 01X344202 |
| DO 600 / DO 300 / DO 110 / DO 6 | DO refilling electrolyte (60 ml)  | 01X211226     | 01X211226 |
| DO 300 / DO 110                 | CyberScan neutral carry kit set – plastic carry case, 4 empty sample bottles (60 ml)  | ECWPDYKIT     | 01X266804 |
| DO 300 / DO 110                 | Carry pouch for CyberScan handheld  | ECPOUCH02     | 56X201400 |
| DO 110                          | 100 / 240 VAC SMPS power adapter, 9 V, 6 W, centre +ve, with US / UK / EUR / Japan plug   | 60X030130     | 60X030130 |
| DO 110                          | RS232C communication cable – 9-pin male to 9-pin female connector, 1 m cable  | ECCA02M09F09  | 30X219503 |
| ECDOHANDYNEW / ECDOHANDY8M      | Assembled membrane cap housing  | 15X241402     | 15X241402 |
| ECDOHANDYNEW / ECDOHANDY8M      | Membranes & o-rings (pack of 5 units)   | 01X241603     | 01X241603 |
| ECDOHANDYNEW                    | Tool for membrane housing   | 15X241502     | 15X241502 |
| DO6HANDY / ECDO6HANDY3M         | Assembled membrane cap housing  | 01X241608     | 01X241608 |

<< Laboratories



<< Industrial Process Systems



<< Fish Ponds





Built-in barometer automatically adjusts for most accurate readings



Stability display – faded out and then turns completely black when stable



Non-skid foot pads



Download the latest software from our website

Designed for optimal performance and versatility, the DO 2700 come with intuitive, advance set-up options for extensive user-customization at an affordable price! Meter comes with self-stirring probe and bi-directional RS232 – ideal for BOD and other Dissolved Oxygen applications in the laboratory.



**Applications**

- Environmental studies • Wastewater and water treatment • Ecological studies
- Education institution

- Measures Dissolved Oxygen in % saturation, ppm, mg/L at  $\pm 0.5$  % full scale accuracy
- Automatic calibration at 100 % and independent 0 % – greater measurement sensitivity during low oxygen levels
- Accurate readings in varying conditions with Temperature, Salinity and Barometric Pressure Compensation
- Non-volatile memory holds up to 500 data points – time and date-stamped for GLP compliance
- Bi-directional RS232 for easy data transfer to computer
- Cal-due alarm – no more out-dated calibrations!
- Auto-logging function for convenient continuous monitoring
- Limit alarm alerts when reading falls out of range
- Password protection for setup and calibration

# DO 700

Dissolved Oxygen/°C/°F

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**DO**  
Economy Bench

Economical, user-friendly and accurate, the Eutech DO 700 is your ideal choice for routine applications in laboratories, production plants and schools.



Larger display



Electrode arm can be used on either side



Splashproof keypad



Quick reference guide



- Dissolved Oxygen measurements in ppm, mg/L or % saturation
- Accurate readings in varying conditions with Temperature, Salinity and Barometric Pressure Compensation
- Large, comprehensive screen that displays readings, calibration points and electrode indicator
- Ready indicator alerts when readings are stable
- Push button calibration
- Non-volatile memory holds up to 100 data points
- Integral electrode holder

Electrode arm and bracket available as separate accessory (order code: 01X321801) – please refer to page 106



### Applications

- Environmental studies • Wastewater and water treatment • Ecological studies
- Education institution

| Models  |                            | Deluxe Bench<br>DO 2700   | Economy Bench<br>DO 700   |  |
|---|----------------------------|---|---|--|
| <b>Dissolved Oxygen Bench Meters Specifications</b> |                            |  |  |  |
| Measuring Parameter                                 |                            | Dissolved Oxygen / BOD / °C / °F  | Dissolved Oxygen / °C / °F  |  |
| Highlights  |                            | Graphic LCD with backlight & extensive display                                    | Large LCD with dual display   |  |
| Dissolved Oxygen                                    | Range                      | 0.00 to 50.00 mg/L  | 0 to 30 mg/L  |  |
|   | Resolution                 | 0.01 mg/L   | 0.01 mg/L   |  |
|   | Accuracy                   | ±0.5 % full scale   |   |  |
| % Saturation of Oxygen                              | Range                      | 0 to 600.0 %  | 0 to 199.9 % ; 300 %  |  |
|   | Resolution                 | 0.1 %   |   |  |
|   | Accuracy                   | ±0.5 % full scale   |   |  |
| Temperature   | Range                      | 15 to 35 °C with supplied probe   | 0.0 to 50.0 °C / 32.0 to 122.0 °F   |  |
|   | Resolution                 | 0.1 °C / 0.1 °F   |   |  |
|   | Accuracy                   | ±0.3 °C / ±0.5 °F   |   |  |
| Salinity Correction                                 | Range                      | 0 to 50.0 ppt   | 0 to 50 ppt   |  |
|   | Resolution                 | 0.1 ppt   |   |  |
| Barometric Pressure Correction                      | Range                      | 450 to 825 mmHg (automatic)   | 450 to 825 mmHg (manual)  |  |
|   | Resolution                 | 1 mmHg  |   |  |
| Meter Features                                      | Method                     | Automatic correction with built-in sensor   | Auto correction with manual input   |  |
|   | Temperature Compensation   | ATC / MTC (0 to 50 °C)  |   |  |
|   | GLP                        | Yes   | -   |  |
|   | Datalogging                | Yes   |   |  |
|   | Memory                     | 500 data sets   | 100 data sets   |  |
|   | Operating Temperature      | 5.0 to 45.0 °C / 41.0 to 113.0 °F   |   |  |
|   | LCD Display                | Graphic LCD with backlight (5.9 x 7.8 cm)   | Custom dual-display LCD (5.6 x 7.5 cm)  |  |
|   | Input                      | DC socket, 8-pin connector, RS232   |   |  |
|   | Output                     | RS232   | -   |  |
|   | Power                      | 9 V DC adapter, 1.3 A (100 / 240 VAC, SMPS)                                       |   |  |
|   | Dimensions (LxWxH); Weight | Meter   | 17.5 x 15.5 x 6.9 cm ; 650 g  |  |
|   |                            | Boxed   | 30.8 x 23.5 x 12.4 cm ; 1800 g  |  |

| Dissolved Oxygen Bench Meters |            |           |                  |     |             |   |  |                         |               |
|-------------------------------|------------|-----------|------------------|-----|-------------|---|--|-------------------------|---------------|
| Item                          | Order Code | Part No.  | Parameters       |     |             | Electrodes  |  | Accessories             |               |
|                               |            |           | Dissolved Oxygen | BOD | Temperature | Self-Stirring Dissolved Oxygen / BOD Electrode (EC620SSP) | Galvanic Dissolved Oxygen Electrode (DO6HANDY) | RS232 Cable (30X427301) | Power Adapter |
| DO 2700                       | ECDO270042 | 01X543907 | •                | •   | •           | •   |  | •                       | •             |
| DO 700                        | ECDO70042S | 01X543501 | •                |     | •           |   | •  |                         | •             |

| Replacement Electrodes & Accessories |  |            |           |
|--------------------------------------|--|------------|-----------|
| Used With                            | Description  | Order Code | Part No.  |
| DO 2700                              | Dissolved Oxygen / BOD electrode with self-stirring mechanism, 1 m cable   | EC620SSP   | 01X295704 |
| DO 700                               | Galvanic Dissolved Oxygen electrode, ATC, 0.9 m cable 2 assembled membrane cap housing, 1 refilling electrolyte & 1 scouring pad | DO6HANDY   | 01X233913 |
| DO 2700                              | RS232 to USB cable – use with 30X427301 cable to connect 2700 to USB port of PC  | 30X544601  | 30X544601 |
| DO 2700                              | 6 assembled membrane caps & electrolyte solution (20 ml)   | EC637DOM   | 01X241607 |
| DO 2700                              | 100 / 240 VAC SMPS power adapter, 9 V, 6 W   | 60X426401  | 60X426401 |
| DO 700                               | 100 / 240 VAC SMPS power adapter, 9 V, 6 W   | 60X030130  | 60X030130 |