



## HQ440D Water Quality Laboratory Biochemical Oxygen Demand (BOD) and pH Meter Package with LBOD101 Sensor and PHC301 Electrode

**Product #:** 8510100  
**ZAR Price:** Contact Hach  
**Ships within 1 week**

Designed for water quality experts, the Hach HQ440D Laboratory Multi-Meter is an advanced laboratory meter that takes the guesswork out of measurements. HQD meters connect with smart Intellical electrodes that automatically recognize the testing parameter, calibration history, and method settings to minimize errors and setup time. The advanced HQD Laboratory Meter is designed to withstand years of continuous lab use. HQD meters feature a simple user interface that does not require manuals or training to operate. The Intellical PHC301 is a standard, digital, combination pH electrode with a robust plastic body and a refillable single-junction reference and built-in temperature sensor. It is intended for laboratory use. The PHC301 is ideal for measuring pH in general purpose water quality applications. The Intellical LBOD101 is the latest embodiment of Hach's patented Luminescent Dissolved Oxygen (LDO) technology. The LBOD101 is a digital, luminescent dissolved oxygen (LDO) sensor with a replaceable, integrated stirring system. The LBOD101 measures the dissolved oxygen for BOD (Biochemical Oxygen Demand) determination in BOD bottles in BOD5 testing applications. The LBOD101 electrode is used for initial and final dissolved oxygen measurements.

### **Make your Biochemical Oxygen Demand (BOD) and pH water laboratory quality parameters testing more efficient and flexible**

Two input channels for simultaneous measurement of pH, Conductivity, Total Dissolved Solid (TDS), Optical Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD), Oxydo Reduction Potential (ORP/RedOx), Temperature, Ion Selective Electrode (ISE) direct concentration reading for Ammonia, Ammonium, Fluoride, Chloride, Sodium - connect any Intellical™ smart probe.

### **Intuitive user interface for simple operation, reliable and accurate results**

Guided calibration and check standard routines reduce calibration errors while stabilization alerts and visual measurement lock ensure that you can trust the accuracy of the results.

### **Trust your measurements with Intellical smart probes that store all calibrations in the probe**

Calibration history allows quick and easy change out of probes without re-calibrating. The HQD smart system records serial numbers, current calibration data, user ID, sample ID, time, and date automatically in the data log for complete Good Laboratory Practice (GLP) traceability.

### **Enhance data connectivity with easy to read results**

Internal USB ports simplify data transfer, peripherals, and software updates and connection to PCs printer and keyboards, with a large ultra-bright backlit LCD screen with large font size for convenient reading.

### **Complete convenient kit**

Package content includes everything you need to start testing. Details below

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## Specifications

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| Automatic Buffer Recognition:          | Yes  |
| Barometric Pressure Measurement:       | Automatic compensation of DO when using an LDO or LBOD probe |
| BOD Bottle:                            | Included (x100)  |
| BOD5/CBOD resolution:                  | Available when used with Hach WIMS BOD Manager software      |
| Calibration Intervals/Alerts/Reminder: | Off, selectable from 2 hours to 7 days                       |
| CDC Electrode Calibration:             | Demal (1D/ 0.1D/ 0.01D);<br>Molar (0.1M/ 0.01M/0.001M);      |

|   |  |
|---|--|
|   | NaCl (0.05%; 25µS/cm; 1000µS/cm; 18mS/cm);   |
|   | Standard sea water;  |
|   | User defined   |
| Communication:                                    | Integrated USB type A (for USB 2.0 flash memory device, printer, keyboard) and Integrated USB type B (for PC)  |
| Compliance Certifications:                        | CE.WEEE  |
| Conductivity Measurement at Stable Reading:       | Yes  |
| Conductivity measurement: Temperature correction: | None; Linear; NaCl Non-Linear Natural Water.   |
| Conductivity Range:                               | 0.01 µS/cm - 200.0 mS/cm   |
| Conductivity resolution:                          | 0.01 µS/cm - 0.1 mS/cm upon selected measuring range   |
| Contents:   | Meter + Probe(s) + Lab. Accessories + Reagents   |
| Custom Calibration Standards:                     | Yes  |
| Data Export:                                      | Download via USB connection to PC or flash memory device. Automatically transfer entire data log or as readings are taken.   |
| Data Memory:                                      | 500 records/FIFO   |
| Data storage:                                     | Automatic, GLP ISO compliant reading data stored with calibration details.   |
| Dimensions:                                       | 859 x 175 x 235 mm   |
| Display:  | Detailed mode/Large mode   |
| Display Type:                                     | 440 x 160 pixel LCD with backlight illumination  |
| DO Measurement Range:                             | 0.1 - 20.0 mg/L (ppm) 1 - 200% saturation  |
| DO Resolution:                                    | 0.1  |
| DO sensor calibration:                            | <ul style="list-style-type: none"> <li>• 100% (water-saturated air (100%) calibration</li> <li>• 100% with 0 (water-saturated air (100%) calibration with 0 point</li> <li>• mg/L (calibration with a specified dissolved oxygen concentration (mg/L) solution)</li> <li>• mg/L with 0 (calibration with a specified dissolved oxygen concentration (mg/L) solution with 0 point)</li> <li>• Factory (calibration with the default LDO calibration)</li> </ul> |
| Electrode Holder:                                 | NA   |
| Electrode stand:                                  | Included   |
| Environmental Conditions: Relative Humidity:      | 90 % relative humidity (non-condensing)  |
| Environmental Conditions: Temperature:            | 0 - +60 °C (32 - 140 °F)   |
| GLP Features:                                     | Date; Time; Sample ID; Operator ID   |
| Instrument:                                       | Bench  |
| IP Rating:  | IP54 (Resistant to spray of water; Dust-proof)   |
| ISE Direct Measurement Range:                     | Yes  |
| ISE Electrode Calibration:                        | 2 - 5 points   |
| Kit?:   | Yes  |
| Languages user interface:                         | English, French, German, Italian, Spanish, Danish, Dutch, Polish, Portuguese, Turkish, Swedish, Czech, Russian   |
| Lock Function:                                    | Continuous / Auto-stabilization ("press to read") / At Interval  |
| Measurement method:                               | Probe specific programmed method settings  |

|                                   |   |
|-----------------------------------|---|
| Model:                            | HQ440D – Multi/2 Channels   |
| mV Measurement at Stable Reading: | Yes   |
| mV Measurement Range:             | -1500 - 1500 mV   |
| mV Resolution:                    | 0.1 mV  |
| Needed Cable Length:              | 1   |
| Operating Error Messages:         | Clear text error messages displayed   |
| Operating Interface:              | Soft Touch Keypad   |
| ORP Electrode Calibration:        | Predefined ORP standards (including Zobell's solution)                                |
| Parameter:                        | pH/Oxydo Reduction Potential (ORP)  |
|                                   | Conductivity/Total Dissolved Solid (TDS)/Salinity/Resistivity                         |
|                                   | Dissolved Oxygen (DO)   |
|                                   | Biochemical Oxygen Demand (BOD)   |
|                                   | Ion Selective Electrode (ISE): Ammonia, Ammonium, Chloride, Fluoride, Nitrate, Sodium |
| PC Data Transfer Software :       | HQD Series Meter Data Transfer Utility  |
| pH Buffer Sets:                   | Color-coded: 4.01, 7.00, 10.01 pH;  |
|                                   | IUPAC: 1.679, 4.005, 7.000, 10.012, 12.45 pH  |
|                                   | DIN: 1.09, 4.65, 9.23 pH  |
|                                   | User-defined custom buffer sets   |
| pH Electrode calibration:         | 1 - 3 Calibration points  |
|                                   | Calibration summary data logged and displayed   |
| pH Measurement Range:             | 0 - 14 pH   |
| pH Resolution:                    | Selectable:   |
|                                   | 0.001/0.01/0.1 pH   |
| Printer:                          | Yes, Optional   |
| Probes included:                  | PHC30101, LBOD10101   |
| Resistivity Measurement:          | 2.5 $\Omega$ .cm - 49 M $\Omega$ .cm  |
| Resistivity Resolution:           | 0.1   |
| Salinity Measurement Range:       | 0 - 42 (ppt) (‰)  |
| Salinity Resolution:              | 0.01 (ppt) (‰)  |
| Sensor A:                         | PHC30101  |
| Sensor B:                         | LBOD10101   |
| Sensor C:                         | NA  |
| Sensors:                          | Sensor A: PHC30101  |
|                                   | Sensor B: LBOD10101   |
|                                   | Sensor C: NA  |
| Simultaneous measurements:        | Yes   |
| TDS Measurement Range:            | 0.00 mg/L - 50.0 g/L as NaCl  |
| TDS Resolution:                   | 0.01 mg/L - 0.1 g/L upon measuring range.   |
| Temperature Compensation:         | Automatic Temperature compensation for pH   |
| Temperature Measurement:          | °C or °F  |

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|-------------------------|--|
| Temperature Range:      | -10°C - 110 °C   |
| Temperature resolution: | 0.1  |
| Type of measurement:    | Lab Water Quality applications.  |
| Warranty:               | 36 months  |
| Weight:                 | 750 g (1.65 lb) without batterie; 850 g (1.87 lb) with batteries   |
| What's included?:       | Meter package includes HQ440D Laboratory Multi Meter, Universal electrode Stand with electrode holder, PHC301 Standard Refillable pH Electrode with 1 m cable, pH Buffer Kit 4,01/7,00/10,01 (500 mL), pH electrode storage solution (500 mL), LBOD101 Luminescent/ Optical Dissolved Oxygen (LDO) electrode for BOD Measurement with 1 m cable, Disposable 300 mL BOD Bottle (100 pcs), BOD Bottle Stoppers (25 pcs), BOD Bottle cap (6 pcs), 4 Alkaline 1,5V AA batteries, Power Supply Adapter, Power Cord, USB cable for data transfer, and Operating Documentation. |

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