Innovations in Water Monitoring

Instruction Sheet

Dissolved Oxygen Calibration Kit

0075600 - Aqua TROLL 600 | 0080830 - Aqua TROLL 400 | smarTROLL MP | TROLL 9500 (sub 2-inch)
0048580 - TROLL 9500 (sub 4-inch)

Kit Contents (0075600, 0080830)

- Battery-powered air pump
- Large bubbler cup, tubing, check valve, and pinch valve for calibrating the 100% dissolved oxygen saturation point
- Bubbler cup restrictor
- 2 alkaline D-cell batteries
- Sodium sulfite solution, 500 mL for calibrating the 0% dissolved oxygen point
- In addition to these items, you will need the plastic calibration cup that came with the instrument for calibrating the 0% dissolved oxygen point.

Kit Contents (0048580)

- Battery-powered air pump
- Large bubbler cup, tubing, check valve, and pinch valve for calibrating the 100% dissolved oxygen saturation point
- 2 alkaline D-cell batteries
- Sodium sulfite solution, 500 mL for calibrating the 0% dissolved oxygen point
- Small calibration cup for calibrating the 0% dissolved oxygen point.

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Application

The RDO Sensor is extremely stable, which eliminates the need for frequent calibration. Standard operating procedures, environmental conditions (e.g., potential for fouling, abrasive conditions) may necessitate routine calibration.

After installing a new RDO Sensor, In-Situ recommends that you perform a calibration. For best results, perform a 2-point calibration at 100% and 0% dissolved oxygen (DO) saturation before using the sensor.

100% Oxygen Saturation Calibration

1. Install the batteries in the portable air pump as shown in the diagram on the inside cover.
2. Fill the large calibration cup to within 4 cm (1.5 in.) of the top with clean water.

> ⚠ Use tap water, distilled water, or your sample matrix if it is freshwater, not brackish or saline.

3. Turn on the bubbler, open the pinch valve on the tubing. Run at full flow rate for 10 minutes to fully saturate the water with oxygen. After 10 minutes you can use the control valve to match the water turbulence conditions expected in the field.
4. Place the instrument in the water ensuring that the sensor and the temperature thermistor are completely submerged and that the RDO sensing material is not in the direct path of the bubbles.
5. Connect the instrument to a computer and establish a connection to the calibration software.
6. Follow the calibration wizard provided in the software.

0% Oxygen Saturation Calibration

1. Fill the smaller calibration cup to the upper fill line with sodium sulfite (NA_2SO_3) solution.
2. Place the instrument in the solution and allow time for temperature stabilization.
3. Ensure there are no air bubbles on the sensing surface of the RDO Sensor.
4. Follow the calibration wizard provided in the software.
5. When you are finished rinse thoroughly in clean water.

Replacement Parts

Sodium Sulfite Solution	0017670