

# PpO<sub>2</sub> Monitor

## Digital PpO<sub>2</sub> Monitoring Unit



The **Digital PpO<sub>2</sub> Monitoring Unit** is an advanced, fully electronic measurement system designed for demanding underwater operations and closed circuit rebreather (CCR) applications. Engineered for reliability, accuracy, and deep water performance, the unit integrates state of the art solid state oxygen sensing technology with comprehensive dive parameter tracking.



### Applications

- Closed circuit rebreathers (CCR)
- Technical and professional diving
- Scientific underwater missions
- Hyperbaric systems and life support instrumentation
- Industrial and defense grade underwater operations

### Key Features

#### 1. Fully Digital Architecture

The device operates on a 100% digital platform, ensuring superior signal stability, noise immunity, and long term accuracy compared to analog sensor systems. All measurements, internal diagnostics, and data processing are handled through a high precision digital controller.

#### 2. Solid State Oxygen Sensor

Equipped with a next generation solid state O<sub>2</sub> sensor, the system delivers accurate partial pressure of oxygen (PPO<sub>2</sub>) readings without the degradation issues typical of galvanic cells. This ensures longer lifespan, improved repeatability, and reduced maintenance.

#### 3. Comprehensive Dive Parameter Monitoring

Beyond PPO<sub>2</sub> measurement, the unit provides real time tracking of essential operational parameters:

- Oxygen pressure
- Depth
- Dive time
- Lung bag temperature monitoring for CO<sub>2</sub> scrubber absorbent management, improving safety and early detection of potential breakthrough conditions.

#### 4. CO<sub>2</sub> Scrubber Temperature Control

The system includes a dedicated thermal sensor to monitor the breathing loop's lung bag temperature, allowing predictive insight into CO<sub>2</sub> absorbent performance and warning the diver of abnormal thermal deviations.

#### 5. Data Logging & Download Capability

All dive data are automatically recorded in onboard memory and can be downloaded post dive for analysis, documentation, and maintenance tracking via USB or wireless interface (depending on configuration).

#### 6. Deep Rated Housing (200 m)

The entire unit is built inside a rugged, corrosion resistant housing rated to 200 meters of depth, suitable for technical diving, military missions, and scientific marine operations.