

# STARTER SERIES

## DISSOLVED OXYGEN



### WHAT IS DISSOLVED OXYGEN?

Dissolved Oxygen (DO) is the amount of gaseous oxygen (O<sub>2</sub>) dissolved in water.

Oxygen enters the water by direct absorption from the atmosphere

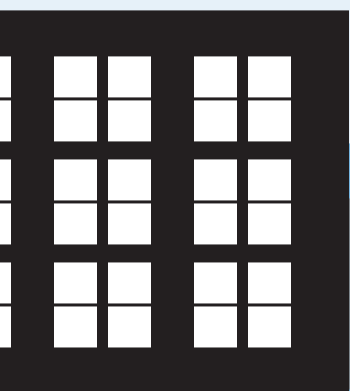
Diffusion from the atmosphere

Waste product of plant and phytoplankton photosynthesis

Wind cycling and rapid water movement

### WHY IS DISSOLVED OXYGEN IMPORTANT?

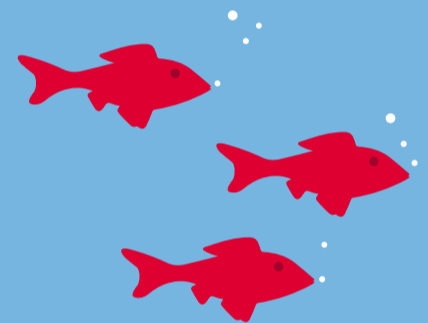
Dissolved oxygen is important to all forms of life. Most aquatic life cannot strip oxygen from water molecules. They breathe the saturated oxygen in the water to stay alive. DO has such a big influence on aquatic life that we need to monitor the byproducts of large facilities. Their daily processes can greatly impact the environment, because they can change the water system's chemistry.



< 3.0 PPM\*  
Too low for fish populations

6.0 PPM\*  
Supports spawning

> 9.0 PPM\*  
Supports abundant fish populations



\*Parts Per Million (PPM) Dissolved Oxygen

### DO METERS FOR EDUCATION RESEARCH AND CAREERS

Aquatic life has a fundamental relationship to water temperature, salinity, and dissolved oxygen saturation. Students from secondary school through the collegiate level are able to forge an exciting view of how the earth's ecosystems are interconnected, that will never dissolve.



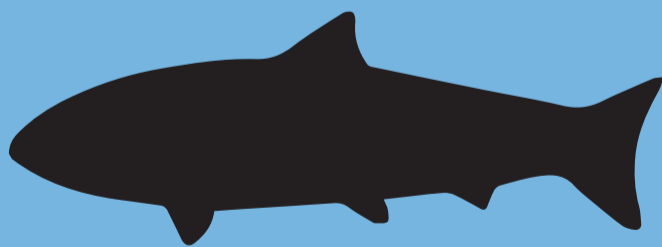
#### SECONDARY EDUCATION

Learn Basic Principles Of Measurement Parameters & Impact of DO in Life Science



#### UNIVERSITIES & COLLEGE

Conducting Involved Research Projects While Advancing Learning & Preparing for Careers



#### PROFESSIONAL USE

Implementation of Learned Skills To Solve Today's Environmental Issues



### STARTER SERIES

#### DISSOLVED OXYGEN METERS

Model	ST20D	ST300D	ST400D
Electrode Technology	Polarographic	Galvanic	Optical
Calibration	1 point	1 or 2 points	1 or 2 points
Memory	N/A	30 measurement Last calibration data	99 measurement Last calibration data
Display	LCD	LCD	Backlit LCD
Input	N/A	BNC, Cinch, NTC 30 k	Mini-DIN
IP Protection	IP67 Waterproof	IP54 Water-resistant	IP54 Water-resistant
Sample Preparation Required	Yes	Yes	No
Electrode Maintenance	Requires periodic maintenance	Requires periodic maintenance	Almost no maintenance
Warm up	Typically 10 minutes	Not needed	Not needed

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