BOD/COD

MONITORING SYSTEM

REAL
CONTROLLER

REALTECH INC.
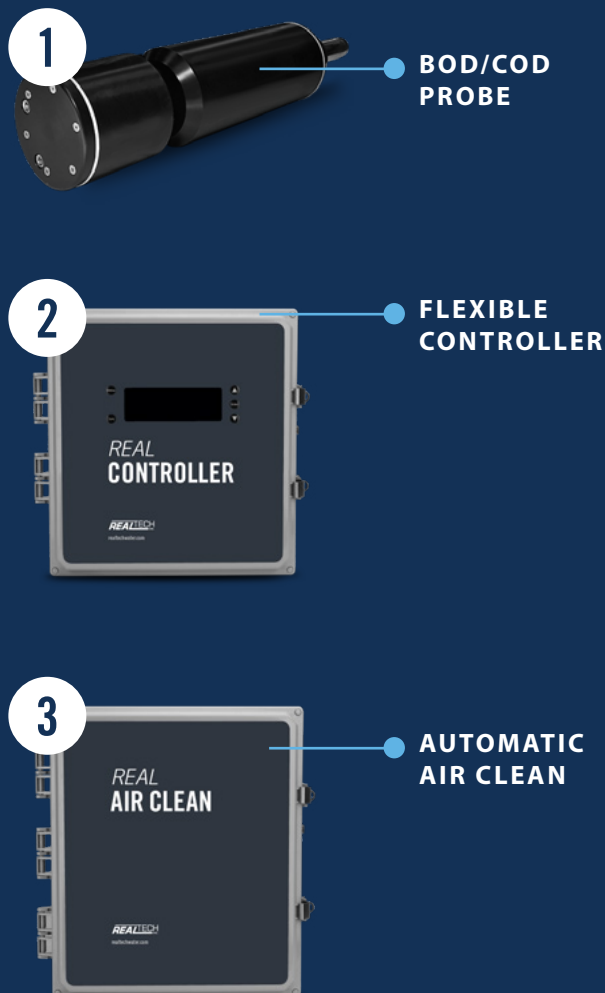
realtechwater.com

MUNICIPAL WASTEWATER

REALTECH
INC.

MONITOR YOUR SOURCE, PROTECT YOUR TREATMENT AND ENVIRONMENT

Wastewater quality can change drastically and quickly – particularly in the case of industrial discharges – to generate shock loads within the wastewater treatment system. Monitoring incoming organic loading with real-time BOD/COD enables you to anticipate potential operational problems such as increased coagulant and aeration demands and ensure wastewater is treated properly to meet regulatory compliance.

BOD/COD Monitoring System

1 BOD/COD PROBE

2 FLEXIBLE CONTROLLER

3 AUTOMATIC AIR CLEAN

MONITORING SYSTEM FEATURES

- Affordable real-time monitoring of organic load in a process
- Outputs aggregate organics parameters including BOD, COD and TOC
- Long life UV-VIS LED light sources
- Automatic compressed air cleaning
- Simple integration with 4-20 mA output
- Easy to install and operate
- Connects with Real Tech's Liquid Ai services platform to ensure reliable parameter calibrations over time

MEASUREMENT PRINCIPLE

Real Tech's BOD/COD probe uses absorbance of UV light to measure organic compounds that naturally absorb in this region of the light spectrum. The sensor measures organics in a multi-dimensional way that results in improved correlations to aggregate organics water quality parameters, such as BOD, COD and TOC. This also allows the sensor to be able to detect changes in the composition of organics independently of their concentration. The patent pending LED technology keeps maintenance and costs at a minimum, making the probe an ideal choice for real-time organics monitoring.

BOD/COD

MONITORING SYSTEM SPECIFICATIONS

CHARACTERISTIC	TECHNICAL DATA
SENSOR	
Parameters	BOD, COD, TOC, TSS
Units	mg/L or ppm
Range	Depends on model selected. Refer to range chart on page 4
Sampling Time	10 seconds
Calibration	Zero to DI water. Factory calibration(s) allows field adjustment as required
Cleaning	Automatic compressed air cleaning
Self-Diagnostics	Continuous detection of leaks, lamp output, humidity, temperature and electrical fault
Humidity Control	Humidity sensor with desiccant pack
Wavelengths	Multiple UV and visible light wavelengths
Light Source	LED
CONTROLLER	
Display	4 line x 20 character backlit LCD with LED indicator
Operator Interface	Five push buttons to control a comprehensive hierarchical menu system
Alarms	Display of sensor specific alarms.
Communication	Modbus (RS485), 4-20mA output standard. Optional WiFi, additional 4-20mA, cellular modem
Data Logging	Onboard (6 month nominal configuration dependent). Optional remote data logging. Export data via USB
Enclosure	NEMA 4, wall mountable
CLEANING	
Air Clean Frequency	User configurable
Operating Pressure	80-120 PSI
Air Connection	1/4" tube push in/out
Enclosure	NEMA 4, wall mountable
FULL MONITORING SYSTEM	
Electrical	24VDC 13.4A power adapter (accepts 90-250VAC 50/60Hz)
Storage Temp.	-20 to 60°C (-4 to 140°F)
Operating Temp.	0 to 45°C (32 to 113°F)
Warranty	2-year limited warranty (Extended care packages available)

* Technical Specifications are subject to change without notice.

1

SELECT A BOD/COD SENSOR

PRODUCT#	BOD (mg/L)	COD (mg/L)	TOC (mg/L)
BA2010	0 - 750	0 - 1500	0 - 400
BA2020	0 - 375	0 - 750	0 - 200
BA2040	0 - 190	0 - 375	0 - 100
BA2100	0 - 75	0 - 150	0 - 40

* Stated ranges are approximate, dependent on industry, site and application.
   Contact Real Tech to confirm model selection.

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REAL CONTROLLER

PRODUCT #	DESCRIPTION
S-169000	Wall mounted controller with 4-line x 20-character back lit LCD display for sensors

3

SELECT AN AIR CLEAN SYSTEM

PRODUCT #	DESCRIPTION
S-188101	Air cleaning valve module requires on-site air (no compressor)
S-188103	Automatic compressed air cleaning system including compressor

Additional Selections

POLE MOUNTING

PRODUCT #	DESCRIPTION
S-189031	Secure wall mounting attachment. No pole included
S-189032	Secure wall mounting attachment. 5ft pole included
S-189033	Secure wall mounting attachment. 10ft pole included

DATA SERVICE

PRODUCT #	DESCRIPTION
Liquid Ai Calibration Health Monitoring	On-going calibration monitoring service to ensure a high level of accuracy and reliability in parameter and compound data over time
Liquid Ai Remote Monitoring	User friendly, secure web-based platform for remote access to sensor system information anywhere, anytime

Additional water quality parameters can be added to any monitoring system configuration.

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