WATER QUALITY
MONITORING
SOLUTIONS

BOD/COD
MONITORING SYSTEM

INDUSTRIAL WASTEWATER

REALTECH INC.

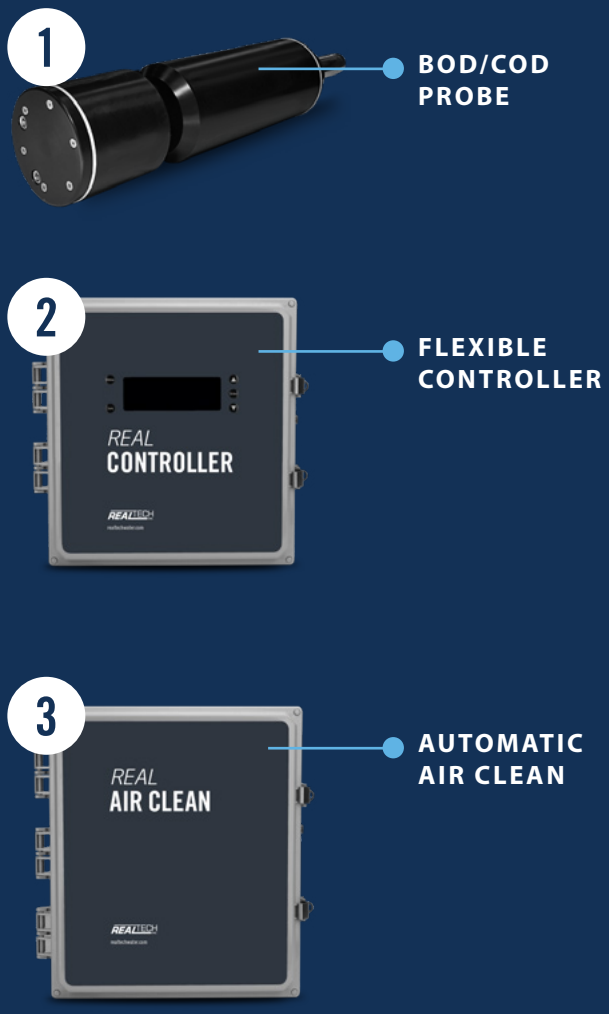
**MONITOR YOUR SOURCE,
PROTECT YOUR TREATMENT**

Monitoring incoming organic loading with real-time BOD/COD brings significant value to many applications

**BENEFICIAL APPLICATIONS
FOR ORGANICS MONITORING**

- Early Identification of Process Upsets
- Product Loss and Recovery of Value Streams
- Effluent Discharge Management and Control
- Compliance Adherence
- Nutrient Dose Optimization
- Coagulant Dose Optimization
- Contaminant Event/Spill Detection
- Environmental Pollution Monitoring

BOD/COD Monitoring System



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 4X, wall mountable
CLEANING	
Air Clean Frequency	User configurable
Operating Pressure	80-120 PSI
Enclosure	NEMA 4X, wall mountable
Air Connection	1/4" tube push in/out
FULL 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.

Build your BOD/COD Monitoring System

SELECT A BOD/COD SENSOR

Measurement range can be extended up to 40,000 mg/L BOD, 120,000 mg/L COD or 30,000 mg/L TOC using Real Tech's Dilution system and BOD/COD BL sensor or other Real Tech by-pass style cabinet sensor. Contact for details.

DAIRY

PRODUCT#	BOD (mg/L)	COD (mg/L)	TOC (mg/L)
BA2010	0 - 2500	0 - 5000	0 - 1250
BA2020	0 - 1250	0 - 2500	0 - 625
BA2040	0 - 625	0 - 1250	0 - 300
BA2100	0 - 250	0 - 500	0 - 125

BEVERAGE

PRODUCT#	BOD (mg/L)	COD (mg/L)	TOC (mg/L)
BA2010	0 - 4000	0 - 12,000	0 - 3000
BA2020	0 - 2000	0 - 6000	0 - 1500
BA2040	0 - 1000	0 - 3000	0 - 750
BA2100	0 - 400	0 - 1200	0 - 300

BREWERY

PRODUCT#	BOD (mg/L)	COD (mg/L)	TOC (mg/L)
BA2010	0 - 4000	0 - 12,000	0 - 3000
BA2020	0 - 2000	0 - 6000	0 - 1500
BA2040	0 - 1000	0 - 3000	0 - 750
BA2100	0 - 400	0 - 1200	0 - 300

MEAT PROCESSING

PRODUCT#	BOD (mg/L)	COD (mg/L)	TOC (mg/L)
BA2010	0 - 3000	0 - 5000	0 - 1250
BA2020	0 - 1500	0 - 2500	0 - 625
BA2040	0 - 750	0 - 1250	0 - 300
BA2100	0 - 300	0 - 500	0 - 125

PULP & PAPER

PRODUCT#	BOD (mg/L)	COD (mg/L)	TOC (mg/L)
BA2010	0 - 350	0 - 1000	0 - 250
BA2020	0 - 175	0 - 500	0 - 125
BA2040	0 - 90	0 - 250	0 - 60
BA2100	0 - 35	0 - 100	0 - 25

* Stated ranges are approximate, dependent on 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

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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 SERVICES

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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