

Thermo Scientific Orion 3106 COD Analyzer

Monitoring of Chemical Oxygen Demand

Thermo Scientific™ products are designed to provide fast, accurate and reliable online Chemical Oxygen Demand detection – optimized for applications that require on-line COD detection.



Chemical Oxygen Demand (COD) is often monitored in industrial and municipal waste water treatment, as well as in other environmental applications.

Our Thermo Scientific™ Orion™ 3106 COD Analyzer provides continuous, online measurement of COD for the control of oxidizable contaminants in wastewater treatment processes.

The optimized design of the Orion 3106 COD Analyzer leads to a flexible platform with lower operating costs through reduced maintenance and reagent consumption.

Advantages:

- Automated ranging for accurate determination of COD
- Temperature compensation – auto selection of extended method
- Robust design – rugged enclosure and modular components
- Simplified operation – intuitive menu simplifies navigation
- Low operating costs – reduced maintenance and reagent consumption (30 days between reagent changes)

Markets:

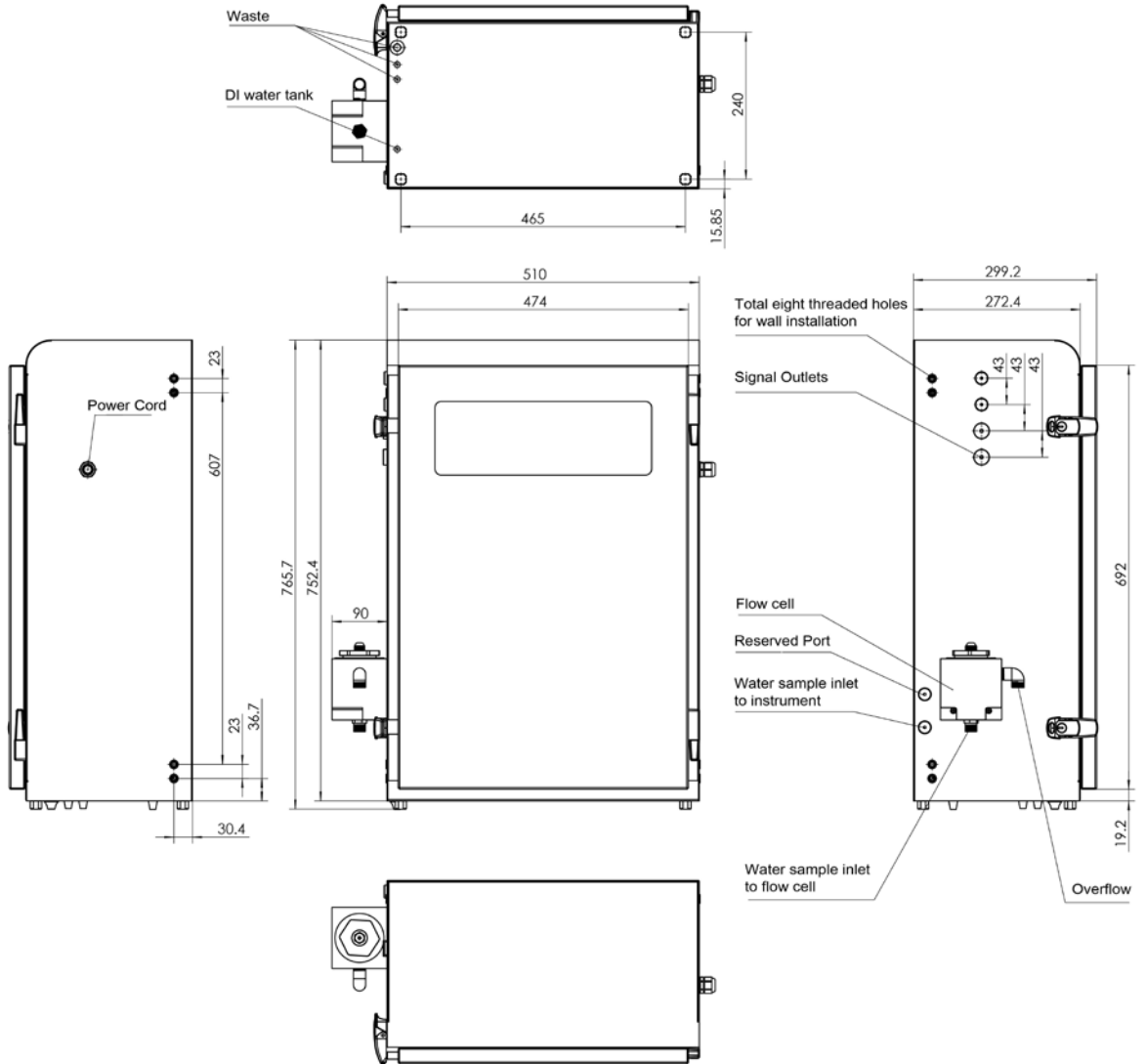
- Municipal Wastewater
- Industrial Wastewater
- Environmental

Applications:

- COD

Engineering Specifications

1. The COD analyzer measures COD concentrations using a Chromium-based colorimetric method.
2. Measurement is continuous and is dependent on digestion time set.
3. The range of the measurement is between 20 and 2000 mg/L.
4. The detection limit is 20 mg/L in the range of 20 - 2000 mg/L.
5. Repeatability is 5 % of reading from 20 - 2000 mg/L.
6. Analyzer is capable of autocalibration.
7. Analyzer provides two 4-20 mA outputs and seven relays. The contacts are rated for 2 A @ 250 VAC.
8. Display is a digital graphics LCD with backlight.
9. Analyzer can be wall or panel mounted.
10. Analyzer is in a painted metal IP66 enclosure.
11. Power requirement is 100-240 VAC, 110 W, 50/60 Hz.
12. Analyzer is certified for CCEP, cTUVus, CE, CB scheme, CMC.



Product Specifications

Measurement Performance	Measuring Range:	20 to 2000 mg/L COD
	Accuracy:	±5 mg/L (≤50 mg/L) or ±10 % (>50 mg/L)
	Resolution:	<1 mg/L
	Response Time:	<75 minutes
	Precision:	≤5 %
	Limit of Detection:	20 mg/L
	Method:	Colorimetric dichromate
Environmental	Ambient Operating Temperature:	5 to 40 °C (41 to 104 °F) **
	Maximum Humidity:	90 % RH
Sample Requirements	Sample Flow	50-1000 mL/min
	Sample Pressure	1-5 bar
	Sample Supply	Continuous
	Sample Temperature Range	4 to 45 °C (41 to 113 °F)
	Sample Inlet/Outlet Connections	Flow cell inlet G¼ Male threaded, Tubing ID. 8 mm, SUS 304 Outlet - G½ Male threaded, Tubing ID. 16 mm, SUS304
	Sample Streams	One
Construction	Enclosure Integrity:	IP66
	Enclosure Dimensions (W x H x D):	20 in x 30 in x 12 in (510 mm x 766 mm x 300 mm)
	Shipping Weight:	93.5 lbs (42.5 kg)
Electrical	Power Requirements:	100 - 240 VAC, 110 Watts, 50/60 Hz
Data and Control	Current Loops:	Two 4 - 20 mA. Maximum 900 ohm load
	Relays:	7 contact relays, 2A @ 250 VAC
	Digital Comms:	RS485/RS232
Regulatory	Safety:	cTUVus, CB scheme, CE-low voltage directive
	EMC:	FCC, CE-EMC

** **Note:** It is recommended that for optimum performance the instrument be installed in an analyzer shelter with controlled temperature conditions of 20 °C ±10 °C.

Orion 3106 Chemical Oxygen Demand Analyzer

Global support — with experience that comes from supporting our customers for over 35 years throughout the world, our water quality specialists and customer support teams offer a quick, thorough and professional response to any problem encountered.

Focus on user benefits — we work closely with you to define your needs, and ensure you are using the analyzer in a way that improves your bottom line. For more information, contact your local water quality specialists, call 86-21-68654588 or visit www.thermoscientific.com/processwater.

Cat. No.	Description
3106COD	Model 3106 COD Analyzer

Cat. No.	Reagent and Standards
3106REC	COD reagent
3106DI	DI water
3106040	COD standard, 40 ppm
3106160	COD standard, 160 ppm
3106500	COD standard, 500 ppm
31061000	COD standard, 1000 ppm

Cat. No.	Maintenance and Service Items
3106MK6	Semi-annual maintenance kit - 6 months
3106MK12	Annual maintenance kit - 12 months
3106MK24	Biannual maintenance kit - 24 months

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