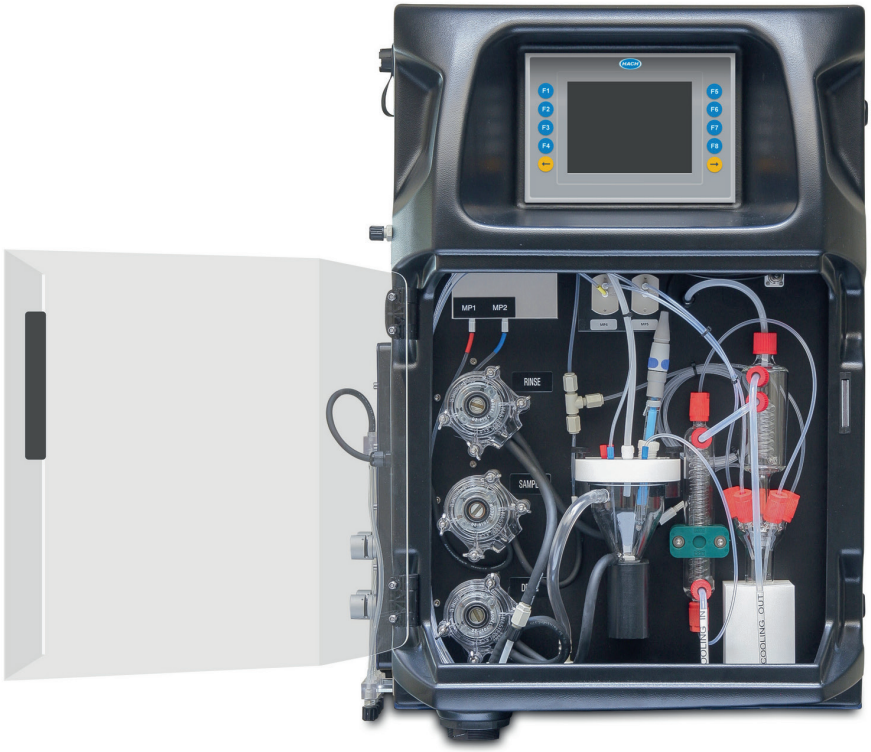
EZ7000 Series Chemical Oxygen Demand (COD) Analysers

Applications

- Wastewater
- Surface water



Online, automatic, wet-chemical determination of COD in wastewater and surface water applications

Bridging traditional chemistry with modern analytics

The EZ7000 Series are wet-chemical COD analysers bringing new levels of automation, reliability and performance in measuring COD values in wastewater and surface water. The superior analytical performance is exemplary of their build quality, thanks to the use of high quality components, state of the art wet chemistry and standard smart software features.

Prior to analysis, the sample is oxidised by means of either dichromate or permanganate solution and heat, in accordance with the standard method applied.

The EZ7000 Series of online COD Analysers are the answer to the needs of those users who require "true" COD values to quantify organic load in various water applications:

- Wet-chemical COD analysis conform standard methods for dichromate or permanganate destruction
- Built-in sample digestion/oxidation unit
- Smart automatic features
- Control and communication via industrial panel PC
- Standard 4 - 20 mA signal output with alarm processing
- Communication ports supporting connectivity to Modbus
- Multiple stream analysis (up to 8 streams)

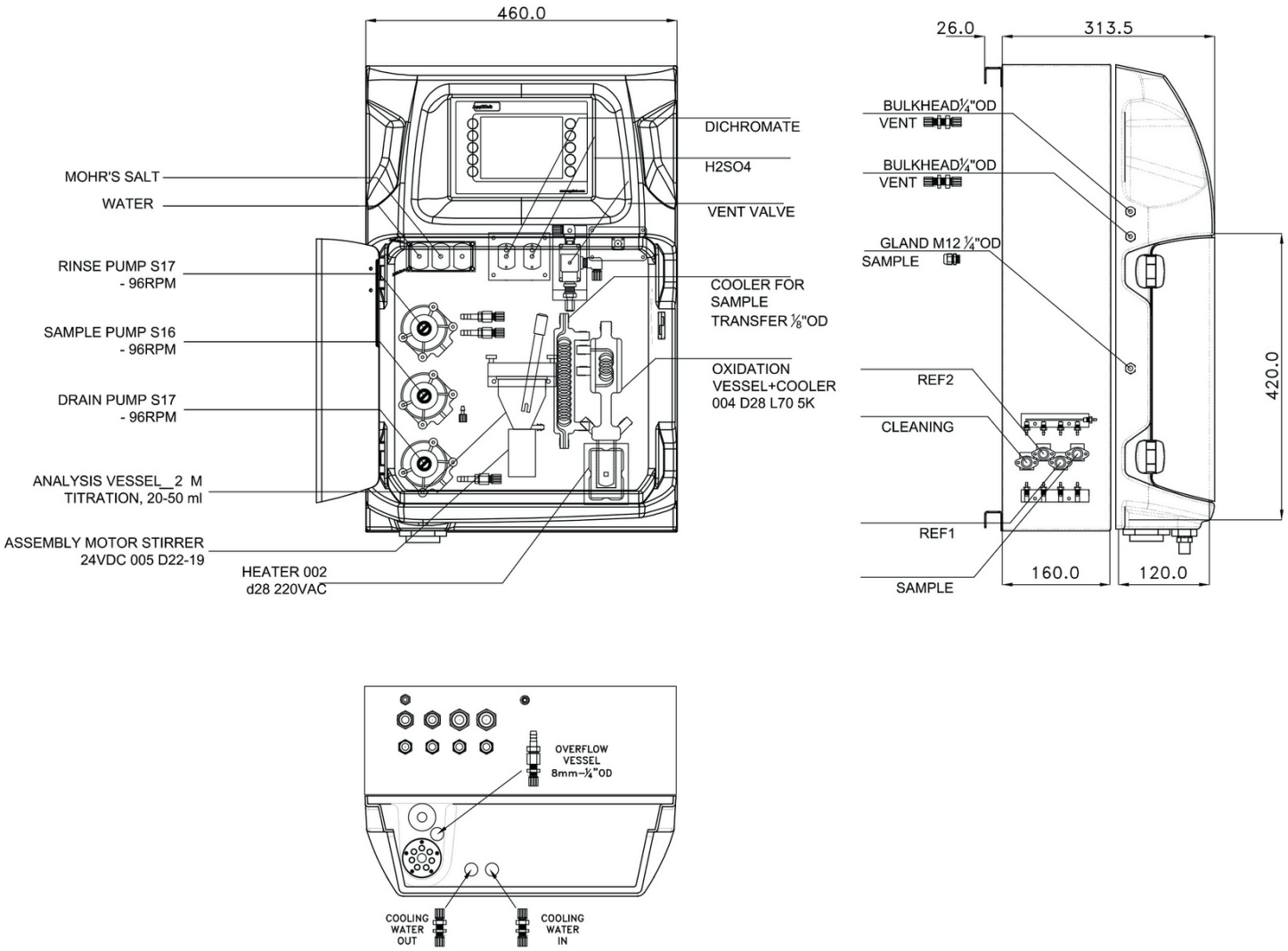
HACH®
Be Right™

Technical Data*

Model	EZ700X	EZ705X
Measurement method	Redox titration after oxidation by acid-potassium dichromate solution, conform with ISO 6060 method	Redox titration after oxidation by potassium permanganate solution, conform with ISO 8467 and JIS K0806 methods
Measuring range	5 - 100 mg/L O_2 40 - 500 mg/L O_2 60 - 1,000 mg/L O_2 80 - 1,500 mg/L O_2 600 - 10,000 mg/L O_2	1 - 20 mg/L 20 - 200 mg/L O_2
Precision	Better than 5% full scale range for standard test solutions	Better than 5% full scale range for standard test solutions
Detection limit	≤ 5 mg/L	≤ 1 mg/L
Interferences	Chloride >1 g/L, inorganic reducing agents such as nitrites, sulphides and iron(II) will increase the result, aromatic hydrocarbons and pyridine are not oxidised to any appreciable extent. Some very volatile organic substances may escape the oxidation by evaporation. Straight chain aliphatic compounds are effectively oxidised by the silver sulphate/sulphuric acid solution. Fats, oil, proteins, surfactants and tar.	
Parameter	Chemical Oxygen Demand (COD)	
Cycle time	40 minutes, including oxidation time of 30 minutes Note: standard method for Cr destruction requires 120 minutes	
Automatic cleaning	Yes	
Calibration	Automatic, 2-point; frequency freely programmable	
Validation	Automatic; frequency freely programmable	
Ambient temperature	10 - 30 °C ± 4 °C deviation at 5 - 95% relative humidity (non-condensing)	
Reagent requirements	Keep between 10 - 30 °C	
Sample pressure	By external overflow vessel	
Flow rate	100 - 300 mL/min	
Sample temperature	10 - 30 °C	
Sample quality	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU	
Power	230 VAC, 50/60 Hz 120 VAC, 50/60 Hz Max. power consumption: 440 VA	
Instrument air	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air	
Demineralised water	For rinsing	
Drain	Atmospheric pressure, vented, min. Ø 64 mm	
Cooling water	Flow rate approx. 5 L/h; temperature max. 30 °C; pressure max. 0.5 bar	
Earth connection	Dry and clean earth pole with low impedance (< 1 Ohm) using an earth cable of > 2.5 mm^2	
Analogue outputs	Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option)	
Digital outputs	Optional: Modbus (TCP/IP, RS485)	
Alarm	1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts	
Protection class	Analyser cabinet: IP55 / Panel PC: IP65	
Material	Hinged part: Thermoform ABS, door: plexiglass Wall section: Galvanised steel, powder coated	
Dimensions (H x W x D)	690 mm x 465 mm x 330 mm	
Weight	25 kg	
Certifications	CE compliant / ETL certified	

**Subject to change without notice.*

Dimensions - Drawings



Hach Service

With Hach Service, you have a global partner who understands your needs and cares about delivering timely, high-quality service you can trust. Our Service Team brings unique expertise to help you maximise instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

Order Information - Part Number Configurator

COD, dichromate destruction, 5 - 100 mg/L O_2	**EZ7000.99**						
COD, dichromate destruction, 40 - 500 mg/L O_2	**EZ7001.99**						
COD, dichromate destruction, 60 - 1,000 mg/L O_2	**EZ7002.99**						
COD, dichromate destruction, 80 - 1,500 mg/L O_2	**EZ7003.99**	**X**	**X**	**X**	**X**	**X**	**2**
COD, dichromate destruction, 600 - 10,000 mg/L O_2	**EZ7004.99**						
COD, permanganate destruction, 1 - 20 mg/L O_2	**EZ7050.99**						
COD, permanganate destruction, 20 - 200 mg/L O_2	**EZ7051.99**						
Measurement range settings / Dilution options							
Standard range		0					
Power supply							
230 VAC, 50/60 Hz			A				
120 VAC, 50/60 Hz			B				
Number of sample streams							
1 stream				1			
2 streams				2			
3 streams				3			
4 streams				4			
5 streams				5			
6 streams				6			
7 streams				7			
8 streams				8			
Outputs							
1x mA					1		
2x mA					2		
3x mA					3		
4x mA					4		
5x mA					5		
6x mA					6		
7x mA					7		
8x mA					8		
Modbus TCP/IP					B		
Modbus RS485					C		
1x mA + Modbus RS485					E		
2x mA + Modbus RS485					F		
3x mA + Modbus RS485					G		
4x mA + Modbus RS485*					H		
1x mA + Modbus TCP/IP					I		
2x mA + Modbus TCP/IP					J		
3x mA + Modbus TCP/IP					K		
4x mA + Modbus TCP/IP*					L		
**Combinations of up to 8x mA + Modbus are available.*							
No adaption, standard version						0	

DOC053.52.35178.Dec20

HACH®
Be Right™