

EZ2000 Series Online Colorimetric Analyzer for Total Chromium

Applications

- Wastewater
- Drinking Water
- Surface Water



Online colorimetric analysis of Total Chromium in water

Results you can rely on

EZ2000 Total Chromium Analyzers achieve excellent precision and accuracy. At the heart of the colorimeter there is a compact photometer assembly developed especially for the EZ Series. Consumption of reagents is reduced by low volume analysis, yet high sensitivity is assured by a long optical path length. The limit of detection is in the low $\mu\text{g/L}$ range.

EZ2000 Total Chromium Analyzers have an internal digestion unit. This additional step prior to analysis allows to measure non-soluble or complexed metal species.

Smart automatic features for calibration, validation, priming and cleaning are embedded in the controller software and contribute to analytical performance, maximized uptime and negligible operator intervention. Precision micropumps dose all reagents. Sample lines and analysis vessel are cleaned with demineralized water to eliminate cross contamination between samples. Electronic and wet-chemical part of the analyzer are strictly separated. A transparent door allows for instant visual inspection of the wet part.

Flexibility that meets your needs

EZ Series Chromium Analyzers come in an attractive, ergonomic mainframe with a compact footprint. All hardware is controlled by the integrated industrial panel PC. The modular build allows for the analyzer to match your application and operational needs.

- The standard measuring range can be narrowed by a different calibration range or extended via internal dilution options.
- Analog and digital output options
- Multiple stream analysis for up to 8 sample streams

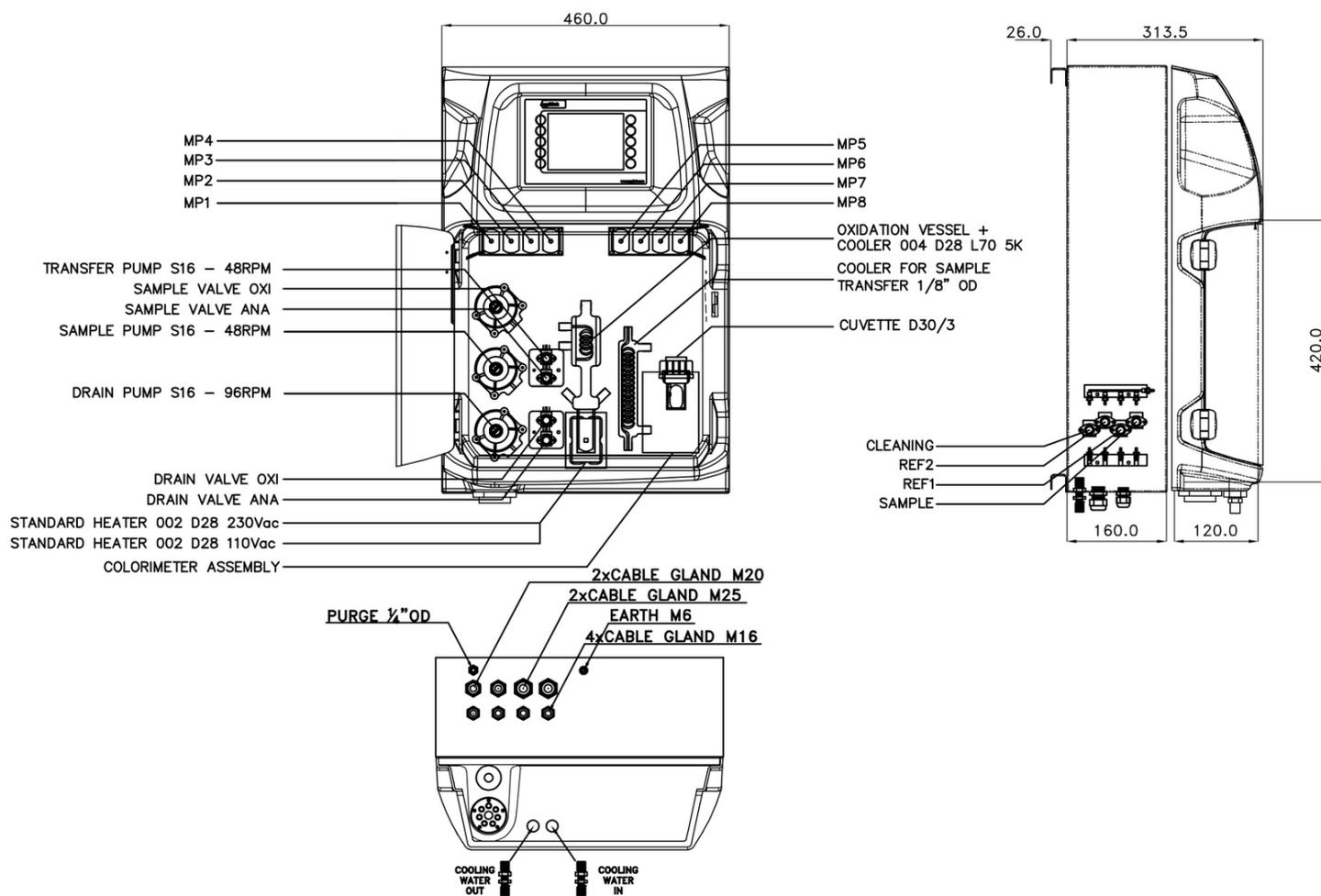
Options for the determination of Chromium include: Total Chromium; Total Chromium & Chromium Cr(VI), dissolved hexavalent; Total Chromium & Chromium Cr(VI), dissolved & Chromium Cr(III), dissolved

Technical Data*

Model	EZ2001	EZ2301	EZ2400
Parameter	Chromium, total	Chromium, total; Cr(VI), dissolved	Chromium, total; Cr(VI), dissolved; Cr(III), dissolved
Range	10 - 500 µg/L Cr Optional: 2 - 50 µg/L 4 - 125 µg/L 5 - 250 µg/L 0.16 - 2 mg/L (with internal dilution) 0.32 - 5 mg/L (with internal dilution) 1 - 10 mg/L (with internal dilution)	10 - 500 µg/L Cr Optional: 2 - 50 µg/L 4 - 125 µg/L 5 - 250 µg/L 0.16 - 2 mg/L (with internal dilution) 0.32 - 5 mg/L (with internal dilution)	Total Cr, Cr(VI): 10 - 500 µg/L Cr(III): 20 - 500 µg/L Optional: 2 - 50 µg/L Cr(III): 5 - 50 µg/L 4 - 125 µg/L Cr(III): 10 - 125 µg/L 5 - 250 µg/L Cr(III): 10 - 250 µg/L 0.16 - 2 mg/L Cr(III): 0.32 - 2 mg/L (with internal dilution) 0.32 - 5 mg/L Cr(III): 0.64 - 5 mg/L (with internal dilution)
Precision	Better than 2% full scale range for standard test solutions	Better than 2% full scale range for standard test solutions	Better than 2% full scale range for standard test solutions
Lower Limit of Detection (LOD)	≤ 2 µg/L	≤ 2 µg/L	Total Chromium, Cr(VI): ≤ 2 µg/L Cr(III): ≤ 5 µg/L
Measurement Method	Colorimetric measurement at 546 nm using diphenylcarbazide method, conform with standard method APHA 3500-Cr (B)		
Interferences	Iron (III), mercury > 200 mg/L, molybdenum > 200 mg/L, vanadium > 5 mg/L. Large amounts of color and turbidity interfere. Fats, oil, proteins, surfactants and tar.		
Cycle Time	20 minutes Total Cr (dilution + 5 min.) 30 minutes Total Cr & Cr(VI)		
Automatic cleaning	Yes		
Calibration	Automatic, 2-point; frequency freely programmable		
Validation	Automatic; frequency freely programmable		
Ambient Temperature	10 - 30 °C ± 4 °C deviation (50 - 86 °F ± 7.2 °F deviation) at 5 - 95% relative humidity (non-condensing)		
Reagent Requirements	Keep between 10 - 30 °C		
Sample Pressure	By external overflow vessel		
Sample 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		
Demineralized Water	For rinsing / dilution		
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		
Analog 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: IP44 / Panel PC: IP65		
Material	Hinged part: Thermoform ABS, door: PMMA Wall section: Galvanized steel, powder coated		
Dimensions (H x W x D)	690 mm x 465 mm x 330 mm		
Weight	25 kg		
Certifications	CE compliant / UL certified		

*Subject to change without notice.

Dimensions



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 maximize instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

Order Information - Part Number Configurator

Total Cr, 10 - 500 µg/L	EZ2001.53						
Total Cr & Cr(VI), 10 - 500 µg/L	EZ2301.53	X	X	X	X	X	2
Total Cr & Cr(VI) 10 - 500 µg/L, Cr(III) 20 - 500 µg/L	EZ2400.53						
Measurement range settings / Dilution options							
10% of standard range		A					
25% of standard range		B					
50% of standard range		C					
Standard range		0					
Internal micropump dilution (factor 4)		1					
Internal micropump dilution (factor 10)		3					
Internal micropump dilution (factor 20) (only EZ2001)		4					
Power supply							
230 VAC, 50/60 Hz			A				
120 VAC, 50/60 Hz			B				
Number of sample streams							
1 stream					1		
2 streams					2		
4 streams					4		
8 streams					8		
Outputs							
1x mA						1	
2x mA						2	
4x mA						4	
8x mA						8	
1x mA + Modbus RS485						E	
2x mA + Modbus RS485						F	
4x mA + Modbus RS485						H	
8x mA + Modbus RS485						P	
1x mA + Modbus TCP/IP						I	
2x mA + Modbus TCP/IP						J	
4x mA + Modbus TCP/IP						L	
8x mA + Modbus TCP/IP						T	
No adaption, standard version							0