EZ4000 Series Online Volumetric Alkalinity Analyzers

Applications

- Wastewater
- Drinking Water
- Power Generation
- Surface Water

Online automatic titration of Free or Total Alkalinity in water

Results you can rely on

EZ4000 Series Analyzers are single-parameter titrators that achieve excellent precision and accuracy. Depending on the parameter of interest, the measuring range and the water matrix the EZ4000 Series may use either potentiometry i.e. acid-base, redox or precipitation titration, where the endpoint is determined by a change in a specific variable, or photocolorimetry, where color change is used to determine the endpoint of the titration. The high precision dispenser for addition, robust peristaltic pumps for sampling and drain, and carefully designed liquid pathways all add up to the highest performance for industrial and environmental analysis needs.

Smart automatic features for validation, priming and cleaning are embedded in the controller software and contribute to analytical performance, maximized uptime and negligible operator invervention. 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 Alkalinity 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 Alkalinity include:
Free Alkalinity, Total Alkalinity

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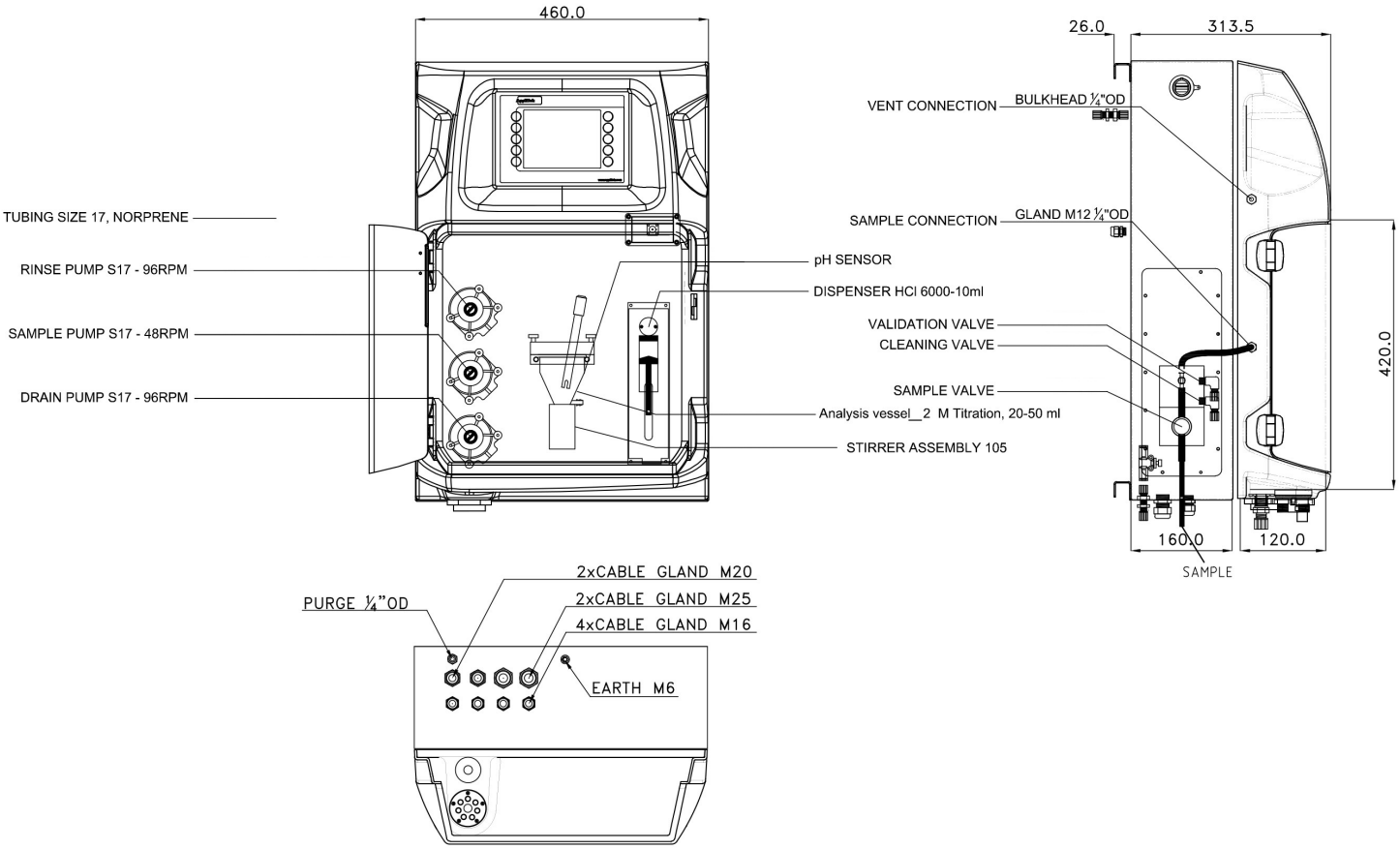
Technical Data*

Parameter	Total Alkalinity, Free Alkalinity
Measurement Method	Acid-base titration with hydrochloric acid
Range	100 - 5000 mg/L $CaCO_3$ Optional: 10 - 500 mg/L $CaCO_3$ 25 - 1250 mg/L $CaCO_3$ 50 - 2500 mg/L $CaCO_3$ Internal dispenser dilution (max. factor 100)
Precision	Better than 2% full scale range for standard test solutions
Lower Limit of Detection (LOD)	≤ 10 mg/L
Interferences	Soaps, oily matter, suspended solids or precipitates may coat the glass electrode and cause a sluggish response. Allow additional time between titrant additions to let the electrode come to equilibrium or clean the electrodes occasionally.
Cycle Time	10 - 15 minutes
Automatic cleaning	Yes
Calibration	N.A.
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 (50 - 86 °F)
Sample Pressure	By external overflow vessel
Sample Flow Rate	100 - 300 mL/min
Sample Temperature	10 - 40 +/- 5 °C (50 - 104 +/- 9°F)
Sample Quality	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU
Power	100 - 240 VAC, 50/60 Hz Max. power consumption: 120 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 32 mm
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	Analyzer cabinet: IP55 / Panel PC: IP65
Material	Hinged part: Thermoform ABS, door: plexiglass Wall section: Galvanized steel, powder coated
Dimensions (H x W x D)	690 mm x 465 mm x 330 mm
Weight	25 kg (55 lbs.)
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

Free Alkalinity, 100-5000 mg/L $CaCO_3$ Total Alkalinity, 100-5000 mg/L $CaCO_3$	EZ4003.99 EZ4004.99	X	X	X	X	X	2
Measurement range settings							
10% of standard range		A					
25% of standard range		B					
50% of standard range		C					
Standard range		0					
Internal dispenser dilution (max. factor 100)		5					
Power supply							
Standard 100 - 240 VAC, 50/60 Hz			0				
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	

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