EZ7200 Series
Volatile Fatty Acids Analyzer
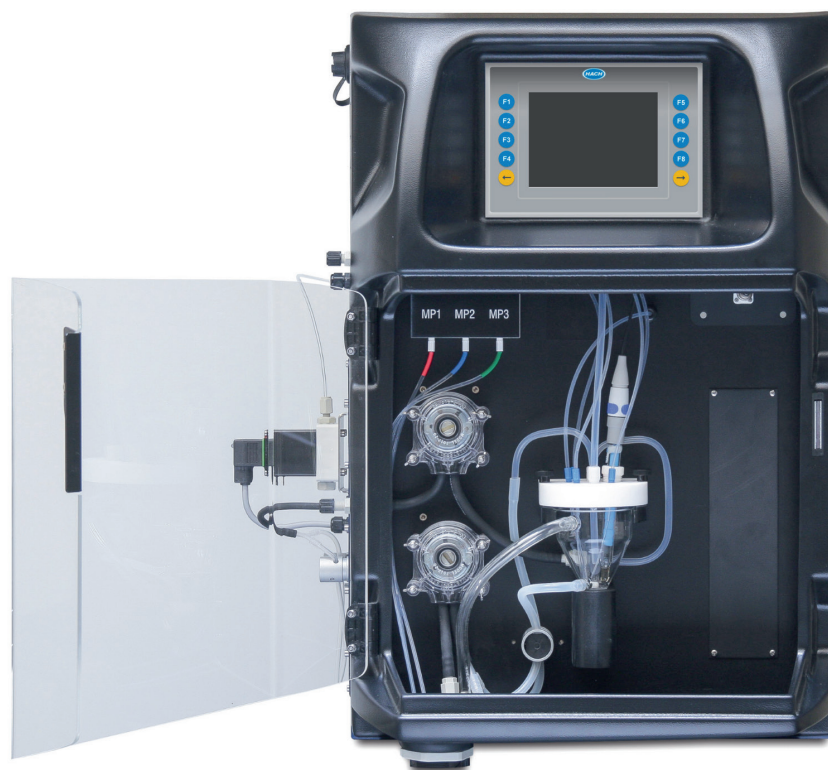
Online, automatic monitoring of critical process parameters and process efficiency in anaerobic digesters

A new control alternative for anaerobic digestion

Due to the expensive or time-consuming character of most analysis methods for anaerobic processes, industrial digesters are sometimes not adequately monitored. Developed specifically for monitoring anaerobic digesters, the EZ7200 Series bring the possibility of implementing new control alternatives to typical operating problems in mid to large scale digesters.

Critical parameter monitoring, online and automatic

Anaerobic digesters require monitoring of a specific set of critical parameters in order to obtain optimal production efficiency, compliance and biogas yield. The primary parameter is volatile fatty acids (VFAs), representing the metabolic condition of the anaerobic digester and responding quickly to stress induced changes, combined with bicarbonate and alkalinity.

The EZ7200 Series are easy-to-operate online titrators using a unique and robust method for measuring the critical process parameters in one single run, enabling insight as well as full control over the anaerobic process:

- Direct titration with minimum volatilisation
- Continuous monitoring of the anaerobic process
- Enabling higher loading rate for maximum methane production
- Prevention of digester failure due to VFA accumulation
- Easy implementation within a dynamic control strategy
- Easy integration into corporate networks
- Multiple stream analysis (up to 8 streams)

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Technical Data*

Model	EZ720x	EZ725x
Parameter	Volatile fatty acids (VFA)	Volatile fatty acids (VFA), bicarbonate, total alkalinity, partial alkalinity
Range	10 - 500 mg/L as acetate equivalent	VFAs 10 - 500 mg/L as acetate equivalent; Bicarbonate 1 - 50 meq/L or 5000 mg/L as $CaCO_3$; Alkalinity, total and Alkalinity, partial 1 - 50 meq/L or 5000 mg/L as $CaCO_3$
	20 - 1000 mg/L as acetate equivalent	VFAs 20 - 1000 mg/L as acetate equivalent; Bicarbonate 1 - 50 meq/L or 5000 mg/L as $CaCO_3$; Alkalinity, total and Alkalinity, partial 1 - 50 meq/L or 5,000 mg/L as $CaCO_3$
	100 - 5000 mg/L as acetate equivalent	VFAs 100 - 5000 mg/L as acetate equivalent; Bicarbonate 5 - 100 meq/L or 10,000 mg/L as $CaCO_3$; Alkalinity, total and Alkalinity, partial 5 - 100 meq/L or 10,000 mg/L as $CaCO_3$
	500 - 10,000 mg/L as acetate equivalent	VFAs 500 - 10000 mg/L as acetate equivalent; Bicarbonate 5 - 100 meq/L or 10,000 mg/L as $CaCO_3$; Alkalinity, total and Alkalinity, partial 5 - 100 meq/L or 10,000 mg/L as $CaCO_3$
Lower Limit of Detection (LOD)	$\leq$ 10 mg/L	
Precision	Better than 3% full scale range for standard test solutions	
Measurement Method	Acid-base titration	
Interferences	Phosphates and similar dissociating ions and non-fatty acids which on acidification from undissociated acids may cause interference. Sulphide may deteriorate some types of pH electrodes. Fats, oil, proteins, surfactants and tar.	
Cycle Time	10 - 15 minutes	
Automatic cleaning	Yes	
Calibration	Automatic; 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 (50 - 86 °F)	
Sample Pressure	By external overflow vessel	
Sample Flow Rate	100 - 300 mL/min	
Sample Temperature	10 - 30 °C (50 - 86 °F)	
Sample Quality	Maximum particle size 500 μm, < 0.1 g/L Most applications require the use of an EZ9130 sampling/filtration system.	
Power	110 - 240 VAC, 4 A, 50/60 Hz Max. power consumption: 150 VA	
Instrument Air	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air	
Rinsing	With tap water	
Drain	Atmospheric pressure, vented, min. Ø 64 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: RS232, 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: Galvanised 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 - Drawings
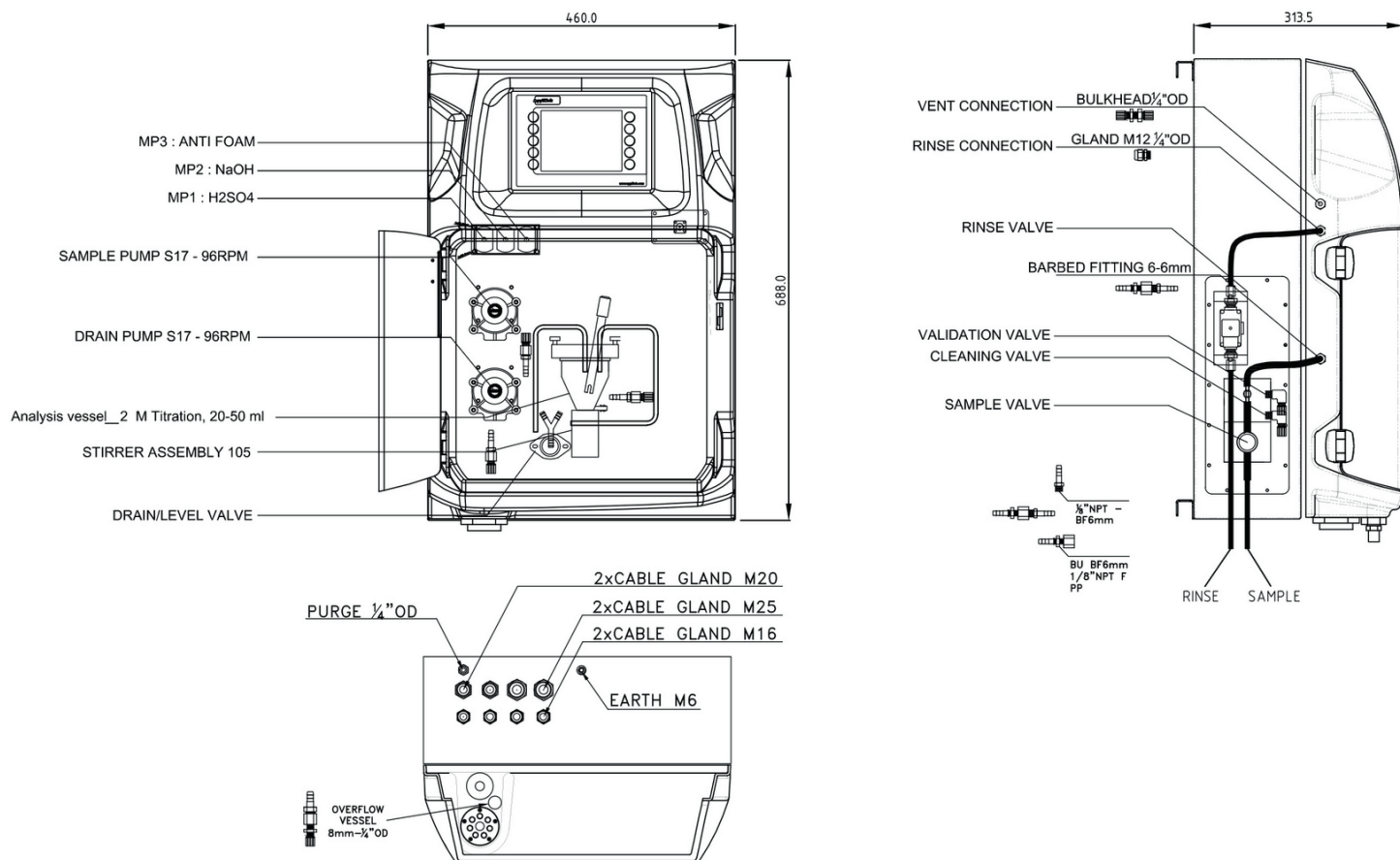
Hach Service

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

Order Information - Part Number Configurator

VFA 10-500 mg/L	EZ7200.99						
VFA 20-1,000 mg/L	EZ7201.99						
VFA 100-5,000 mg/L	EZ7202.99						
VFA 500-10,000 mg/L	EZ7203.99	X	X	X	X	X	2
VFA 10-500 mg/L; bicarbonate/total & partial alkalinity 1-50 meq/L or 5,000 mg/L CaCO$_3$	EZ7250.99						
VFA 20-1,000 mg/L; bicarbonate/total & partial alkalinity 1-50 meq/L or 5,000 mg/L CaCO$_3$	EZ7251.99						
VFA 100-5,000 mg/L; bicarbonate/total & partial alkalinity 5-100 meq/L or 10,000 mg/L CaCO$_3$	EZ7252.99						
VFA 500-10,000 mg/L; bicarbonate/total & partial alkalinity 5-100 meq/L or 10,000 mg/L CaCO$_3$	EZ7253.99						

Measurement range settings / Dilution options

Standard range	0
Customized	Z

Power supply

Standard 110 - 240 VAC; 50/60 Hz	0
Customized	Z

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
RS232	A
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
Customized / combined	Z

Specials

No adaption, standard version	0
Customer specific adaptions required, to specify	S

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