

# EZ3500 SERIES

## On-line ISE/SA Analyzers Analysis of Chloride

### Applications

- Waste water
- Process water



## On-line, automatic ion-selective/standard addition measurements for industrial applications

### ISE technology for complex water matrices

The **EZ3500 Series** are used for water monitoring applications where ion-selective electrodes are the preferred analytical technique, but specifically for complex water matrices such as industrial effluent. Standard addition is used to minimize matrix interferences that may contribute to the output signal of the electrode.

### Discontinuous, automatic standard addition

Similar to the **EZ3000 Series** with direct ISE, the **EZ3500 Series** run discontinuous measurements with careful addition of a known standard in an analysis vessel. Discontinuous ISE analysis enhances control over the potentiometry, eliminates cross-contamination between cycles and reduces overall consumption of reagents.

The **EZ3500 Series** combine unique ISE technology with a set of analysis, control and communication features in an industrial analyzer mainframe designed for the highest performance:

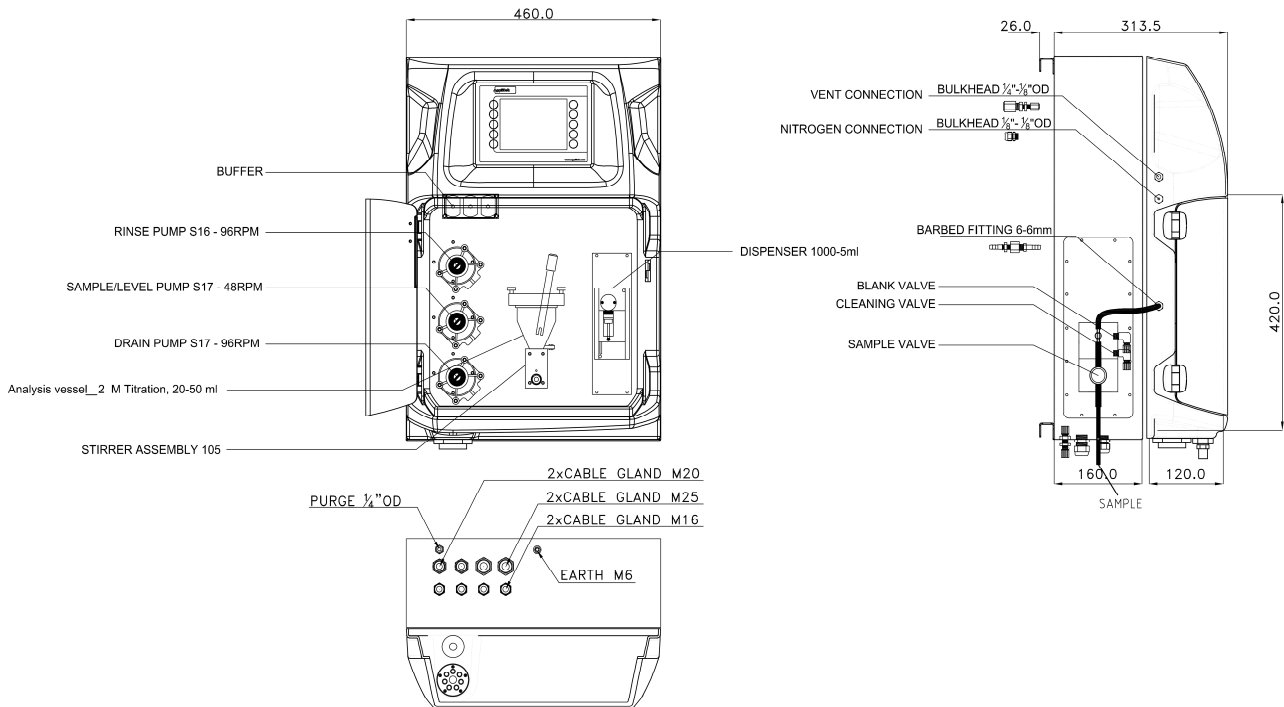
- Automatic ion-selective analysis by standard addition
- Smart automatic features
- Control and communication via industrial panel PC
- Standard 4 - 20 mA signal output with alarm processing
- Communication ports supporting connectivity to Modbus
- Multiple stream analysis

## Technical data\*

<b>Analysis method</b>	Discontinuous measurement by combined ion-selective electrode with standard addition
<b>Parameter</b>	Chloride
<b>Measuring ranges</b>	1 – 10 mg/L; 10 – 100 mg/L; 100 – 1,000 mg/L Cl <sup>-</sup>
<b>Cycle time</b>	8 minutes
<b>Limit of quantification (LOQ)</b>	≤ 1 mg/L
<b>Precision/Repeatability</b>	Better than 2% full scale range for standard test solutions
<b>Cleaning</b>	Automatic; frequency freely programmable
<b>Calibration</b>	Automatic, 2-point; frequency freely programmable
<b>Validation</b>	Automatic; frequency freely programmable
<b>Interferences</b>	Bromide [(Br) <sup>-</sup> ], sulphide [(S) <sup>2-</sup> ], iodide [(I) <sup>-</sup> ], cyanide [(CN) <sup>-</sup> ] ions may interfere. Mercury [(Hg) <sup>+</sup> ] must be absent. Ammonia [NH <sub>3</sub> <sup>+</sup> ] and thiosulphate [(S <sub>2</sub> O <sub>3</sub> ) <sup>2-</sup> ] may interfere. Fats, oil, proteins, surfactants and tar.
<b>Ambient operating conditions</b>	10 °C – 30 °C +/- 4 °C deviation (50 °F – 86 °F +/- 7.2 °F deviation) at 5 - 95% relative humidity non-condensing
<b>Reagent temperature</b>	Keep between 10 °C - 30 °C (50 °F - 86°F)
<b>Sample pressure</b>	By external overflow vessel
<b>Sample flow rate</b>	100 - 300 ml per minute
<b>Other sample requirements</b>	Temperature: 10 °C – 30 °C (50 °F – 86 °F); Maximum size 100 µm, < 0.1 g/l; Turbidity < 50 NTU
<b>Power</b>	110 - 240 VAC, 4 A, 50/60 Hz Max. power consumption: 150 VA
<b>Instrument air</b>	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
<b>Deminerlized water</b>	For rinsing purposes (application depending)
<b>Drain</b>	Atmospheric pressure, vented, min. Ø 64 mm
<b>Earth connection</b>	Dry and clean earth pole with low impedance (< 1 ohm) using an earth cable of > 2.5 mm <sup>2</sup>
<b>Analogue outputs</b>	Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option)
<b>Digital outputs (option)</b>	MODBUS, RS232, RS485
<b>Alarms</b>	1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts
<b>Protection class</b>	Analyzer cabinet: IP55 / Panel PC: IP65
<b>Materials, hinged part</b>	Thermoform ABS, Door: plexiglass
<b>Materials, wall section</b>	Galvanized steel, powder coated
<b>Dimensions (H X W X D)</b>	69 cm (27.2") x 46.5 cm (18.3") x 33 cm (13")
<b>Total weight</b>	25 kg (55 lbs.)
<b>Certification</b>	CE compliant / UL certified
<b>Warranty</b>	2 years

\* Subject to change without further notice.

## Dimensions - Drawings



## Service packages

### Start-Up/Commissioning:

Our service technicians visit your site and setup instrumentation, provide basic end-user training on operations and maintenance, and validate settings and performance to get you started.

### Service Agreement:

Hach provides on-site and in-factory repair, preventive maintenance, and calibration programs for your instruments to ensure reliability and instrument up-time. We have services to fit your specific needs.

*Contact us to learn about what Hach Service option is right for you.*

## Order information

<b>EZ3503.99XXXXX</b>	EZ3500 Series, Chloride, 1 - 10 mg/L
<b>EZ3504.99XXXXX</b>	EZ3500 Series, Chloride, 10 - 100 mg/L
<b>EZ3505.99XXXXX</b>	EZ3500 Series, Chloride, 100 – 1,000 mg/L

### All options (see Configurator)

E	Z	3	5	X	X	.	9	9	X	X	X	X	X	2
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#### Measurement range settings / Dilution options

25% of standard range	B
50% of standard range	C
standard range	0
customized	Z

#### power supply

Standard 110 - 220 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 adaptations required, to specify	S