

# EZ6000 Series

## Cadmium Trace Metal Analysers

### Applications

- Drinking water
- Surface water
- Industrial effluent



## Trace metal analysis of dissolved and total Cadmium in water by online voltammetry

### About the EZ6000 Series

The EZ6000 Series of online Trace Metal Analysers are based on the technology of stripping voltammetry, a sensitive analytical technique that can be automated for the determination of trace levels of metals in water. For many metals the EZ6000 Series boasts limits of quantification in the low ppb range.

EZ6000 Analysers can be equipped with an add-on sample digestion unit that has been designed specifically for samples with higher organic contents, suspended particles and changing composition. The optional combination with an external filtration system allows for detection and measurement of trace metals in a wide range of water matrices.

The **EZ6000 Series Analysers** combine tried and tested voltammetry technology in an industrial mainframe with prime features:

- Excellent selectivity and sensitivity
- Standard measuring ranges with optional internal dilution
- Smart automatic features
- Control and communication via industrial panel PC
- Analog and digital output options
- Multiple stream analysis

Options for the determination of **Cadmium** include: Cadmium, dissolved Cd(II) and Cadmium, total after digestion. A combined analysis is possible with **Copper, Lead or Zinc**.

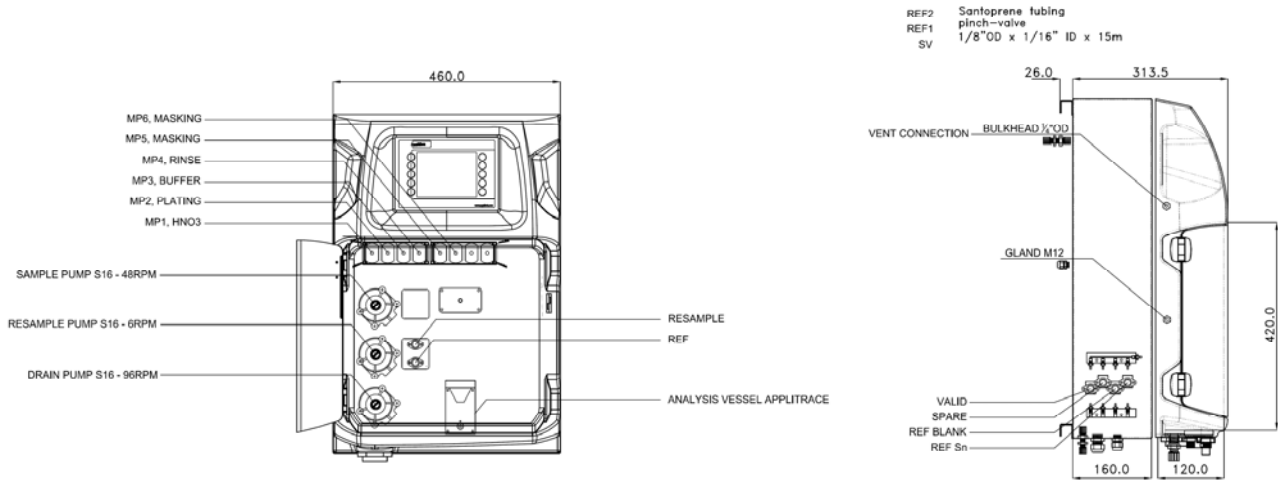
## Technical data\*

<b>Analysis method</b>	Stripping voltammetry using carbon electrode
<b>Parameter</b>	a) Cadmium, dissolved Cd(II); b) Cadmium, total after hot acid digestion
<b>Measuring ranges</b>	0 – 100 µg/L
<b>Cycle time</b>	a) 10 minutes (dilution +5 min.); b) 20 minutes (dilution +5 min.)
<b>Limit of detection (LOD)</b>	≤ 1 µg/L
<b>Precision/Repeatability</b>	Better than 5% 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>	Thallium (III), tin (VI), organic matter 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); particles: maximum size 100 µm, <0.1 g/L; turbidity <50 NTU
<b>Power</b>	a) 110 - 240 VAC, 4 A, 50/60 Hz, max. power consumption 150 VA b) 220 - 240 VAC, 4 A, 50/60 Hz, max. power consumption 440 VA; 110 VAC version also available (see configurator)
<b>Instrument air</b>	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
<b>Demineralised water</b>	For rinsing and/or dilution
<b>Cooling water</b>	a) Not required; b) Flow rate approx. 5L/h; temperature max. 30 °C (86 °F); pressure max. 0.5 bar
<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>	Analyser cabinet: IP55 / Panel PC: IP65
<b>Materials, hinged part</b>	Thermoform ABS, Door: plexiglass
<b>Materials, wall section</b>	Galvanised 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

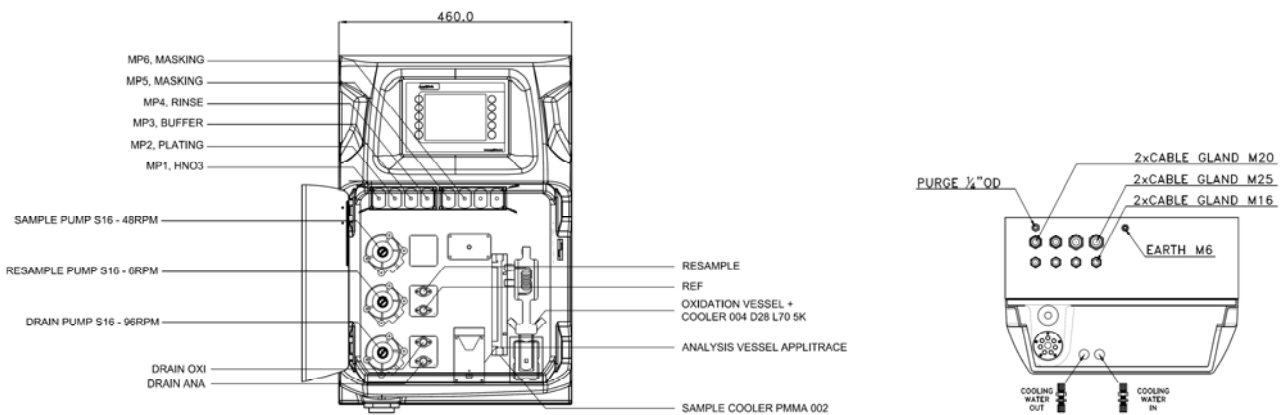
\* Subject to change without further notice.

## Dimensions - Drawings

### a) Cadmium, dissolved Analyser



### b) Total Cadmium Analyser with digestion unit



## 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 – Part Number Configurator

- EZ6002.99XXXXX** Cadmium, dissolved; standard range: 0 – 100 µg/L Cd(II)
- EZ6102.99XXXXX** Cadmium, dissolved & Lead, dissolved; standard range: 0 – 100 µg/L Cd(II), 0 – 100 µg/L Pb(II)
- EZ6103.99XXXXX** Cadmium, dissolved & Copper, dissolved; standard range: 0 – 100 µg/L Cd(II), 0 – 100 µg/L Cu(II)
- EZ6104.99XXXXX** Cadmium, dissolved & Zinc, dissolved; standard range: 0 – 100 µg/L Cd(II), 0 – 100 µg/L Zn(II)
- EZ6108.99XXXXX** Cadmium, dissolved & Lead, dissolved & Copper, dissolved; standard range: 0 – 100 µg/L Cd(II), 0 – 100 µg/L Pb(II), 0 – 100 µg/L Cu(II)
- EZ6109.99XXXXX** Cadmium, dissolved & Lead, dissolved & Zinc, dissolved; standard range: 0 – 100 µg/L Cd(II), 0 – 100 µg/L Pb(II), 0 – 100 µg/L Zn(II)

E	Z	6	X	X	X	.	9	9	X	X	X	X	X	2
<b>Measurement range settings / Dilution options</b>														
Standard range							0							
Internal micropump dilution (factor 4)							1							
Customised							Z							
<b>Power supply</b>														
Standard 110 - 240 VAC, 50/60 Hz							0							
Customised							Z							
<b>Number of sample streams</b>														
1 stream							1							
2 streams							2							
3 streams							3							
4 streams							4							
5 streams							5							
6 streams							6							
<b>Outputs</b>														
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							
Customised / combined							Z							
<b>Specials</b>														
No adaption, standard version							0							
Customer specific adaptations required, to specify							S							

## Order information

**EZ6201.99XXXXX** Cadmium, total; standard range: 0 – 100 µg/L Total Cd

**EZ6301.99XXXXX** Cadmium, total & Lead, total; standard range: 0 – 100 µg/L Total Cd, 0 – 100 µg/L Total Pb

**EZ6302.99XXXXX** Cadmium, total & Copper, total; standard range: 0 – 100 µg/L Total Cd, 0 – 100 µg/L Total Cu

**EZ6303.99XXXXX** Cadmium, total & Zinc, total; standard range: 0 – 100 µg/L Total Cd, 0 – 100 µg/L Total Zn

**EZ6307.99XXXXX** Cadmium, total & Lead, total & Copper, total; standard range: 0 – 100 µg/L Total Cd, 0 – 100 µg/L Total Pb, 0 – 100 µg/L Total Cu

**EZ6308.99XXXXX** Cadmium, total, & Lead, total & Zinc, total; standard range: 0 – 100 µg/L Total Cd, 0 – 100 µg/L Total Pb, 0 – 100 µg/L Total Zn

E	Z	6	X	X	X	.	9	9	X	X	X	X	X	X	2
<b>Measurement range settings / Dilution options</b>															
Standard range															
0															
Internal micropump dilution (factor 4)															
1															
Internal micropump dilution (factor 10)															
3															
Internal micropump dilution (factor 20)															
4															
Customised															
Z															
<b>Power supply</b>															
220 VAC / 50 Hz															
A															
110 VAC / 60 Hz															
B															
Customised															
Z															
<b>Number of sample streams</b>															
1 stream															
1															
2 streams															
2															
3 streams															
3															
4 streams															
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5 streams															
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6 streams															
6															
<b>Outputs</b>															
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2x mA															
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Customer specific adaptations required, to specify															
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