EZ7900 Series Toxicity Analysers
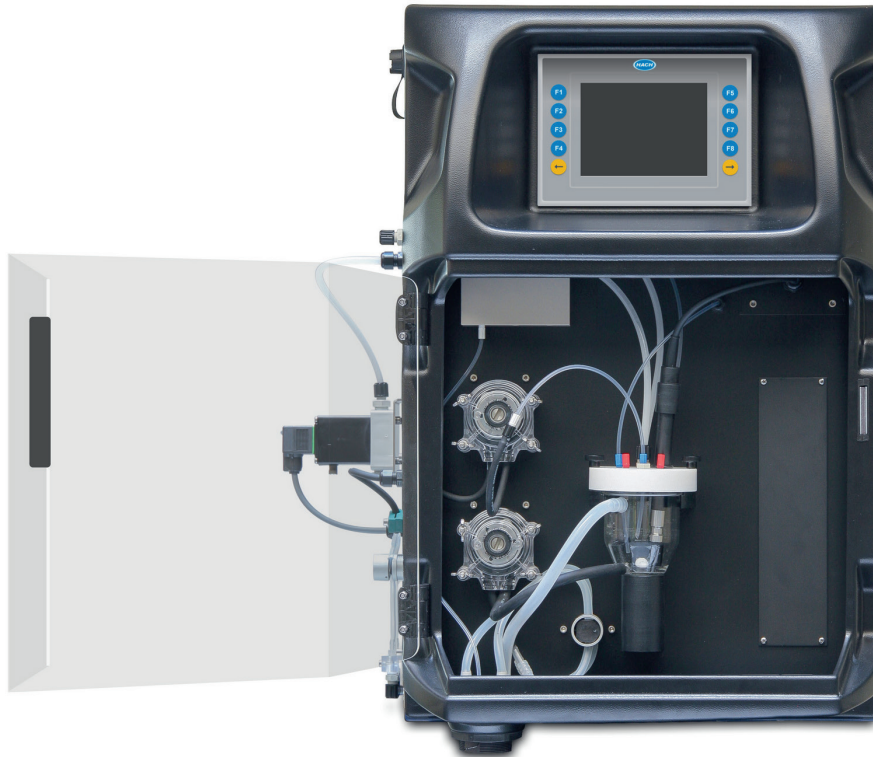
Online, automatic respirometry for early warning of toxicity in wastewater treatment plants

Early Warning System against calamities

The EZ7900 Toxicity Analyser is able to detect and measure wastewater streams that present an acute or chronic toxicity to the biomass of a biological wastewater treatment plant. This allows operators to take corrective measures to protect the viability of the activated sludge.

Representative measurements on fresh sludge

Measurements are carried out on real sludge freshly sampled from the treatment plant by means of a self-cleaning sampling-filtration system (option). This unique approach has the following advantages: dynamic changes in biomass viability are immediately detected, while sample temperature and pH in the analysis vessel reflects those of the treatment plant.

The EZ7900 Series combines a unique, field-proven respirometric analyser design with a robust sampling-filtration system, assuring detection of toxic compounds or shock loads in an early stage:

- Detection of acute and chronic toxicity on activated sludge
- Measurement of the respiration rate by means of a single dissolved oxygen (DO) sensor
- Smart automatic features
- Standard 4 - 20 mA signal output with alarm processing
- Communication ports supporting connectivity to Modbus
- Multiple stream analysis (up to 8 streams)

HACH®

Be Right™

Technical Data*

Parameter	Toxicity; respiration rate
Measurement method	Respirometry
Measuring range	0 - 100% inhibition
Precision	Better than 5% full scale range for standard test solutions
Detection limit	N.A.
Interferences	N.A.
Cycle time	10 - 15 minutes
Automatic cleaning	Yes
Calibration	Automatic; standard at every analysis cycle
Validation	Automatic; by means of standard solution
Ambient temperature	10 - 30 °C ±4 °C deviation at 5 - 95% relative humidity (non-condensing)
Reagent requirements	Keep between 10 - 30 °C
Sample pressure	By external overflow vessel
Flow rate	100 - 300 mL/min
Sample temperature	10 - 30 °C
Sample quality	Maximum particle size 500 μm, < 0.1 g/L Most applications require the use of a dual EZ9110 + EZ9120 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
Analogue 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	Analyser 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
Certifications	CE compliant / UL certified

Subject to change without notice.

Dimensions - Drawings
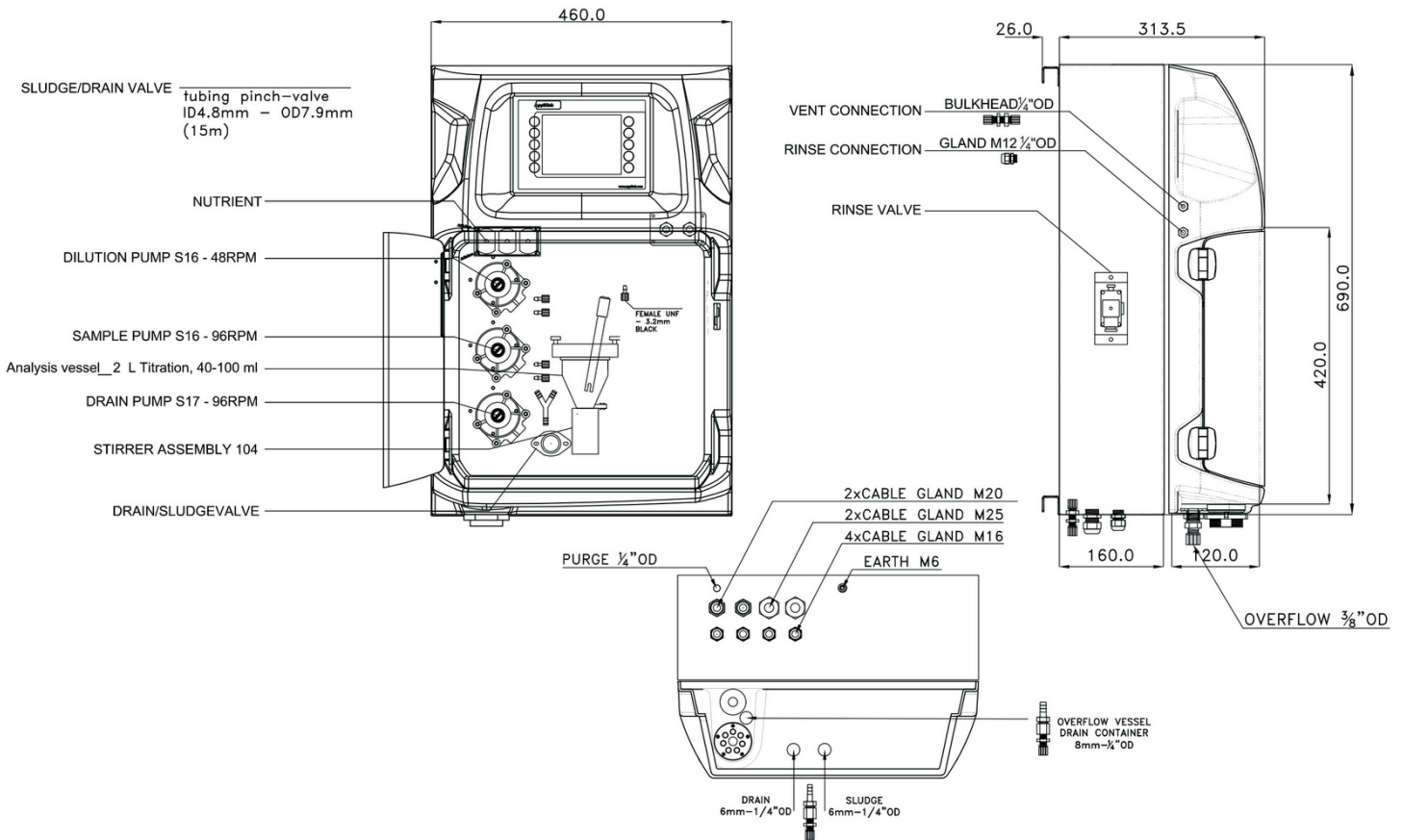
Be confident with Hach Service

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.

Order Information - Part Number Configurator

Toxicity analyser, 0 - 100%	EZ7900.99	X	X	X	X	X	2

Measurement range settings / Dilution options							
Standard range	0						
Customised	Z						

Power supply							
Standard 110 - 240 VAC; 50/60 Hz		0					
Customised		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			
Customised / combined				Z			

Specials							
No adaption, standard version							
Customer specific adaptions required, to specify							

HACH®

Be Right™