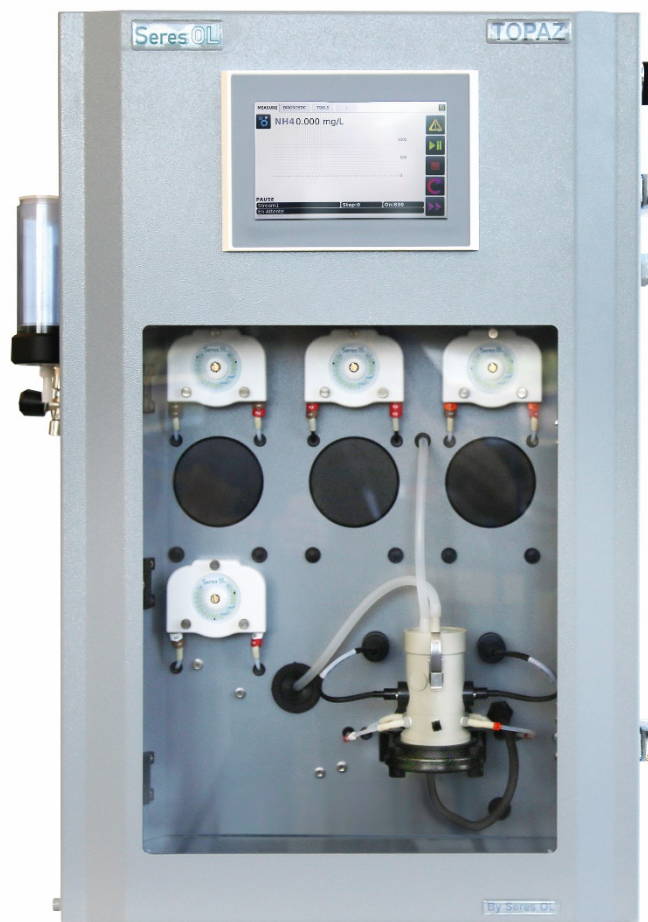


Complete monitoring system for the automatic, continuous measurement of aluminum in potable water, wastewater and effluents.

Analyzer Topaz Aluminum

- For the continuous, colorimetric online determination of aluminum per **DIN ISO 10566:1994** within ranges of 0 to 200 ppb.
- Complete system including measurement and control electronics, measuring unit, flow indicator, reaction chamber and reagent dosing system.
- Robust, high quality analyzer cabinet painted stainless steel, 316L.
- Automatic, electrical zero measurement prior to each measurement cycle.
- Automatic cell cleaning.
- 4 easily accessible peristaltic pump modules for accurate, automatic dosing of chemical reagents.
- 2 analog and 7 digital outputs for alarms for process values and diagnostic alarms for each sample stream.
- RS485 Modbus/JBUS RTU interface.
- Large back-lit touchscreen color LCD display for the reading of all measured values and status information simultaneously.
- Easy menu-guided operation in English or French.



Topaz Series Showcase

Analyzer	Topaz Aluminum	(0-200 ppb)	SOL-55.331.200
Configuration	2-Channel Setup	(similar range)	SOL-83.590.020
Configuration	4-Channel Setup	(similar range)	SOL-83.590.040
Configuration	6-Channel Setup	(similar range)	SOL-83.590.060
Configuration	Ethernet Interface (TCP/IP)		SOL-81.410.020
Option	1-Year Spare Part Package "Basis" (Analyzer + 1 st channel)		SOL-84.110.040
Option	1-Year Spare Part Package "Multi-Channel" (add once if multi-channel config. was selected)		SOL-84.110.150
Option	Reagent Shelf in SS316L		SOL-89.610.010

Aluminum Measurement

Colorimetric determination of aluminum ions after chemical reaction in an alkaline environment.

Reaction time <13 min.

Sensors/Measurement Equipment

Detection wavelength 585 nm

Temperature controlled measuring chamber

Analyzer Measuring range

Topaz Aluminum 0-200 ppb

Limit of Detection 6 ppb

Repeatability $\pm 2\%$ FS or ± 3 ppb (whichever is greater)

Accuracy $\pm 3\%$ FS or ± 3 ppb (whichever is greater)

Automatic baseline adjustment.

Sample flow surveillance.

Specifications and Functionality

Pump type peristaltic
Pump quantity 4

Power supply

Voltage: 110 - 240 VAC

Frequency: 50 /60 Hz

Power consumption: Typical 150 VA, 300 max.

Operation

Display: Color LCD, 7", touch-screen

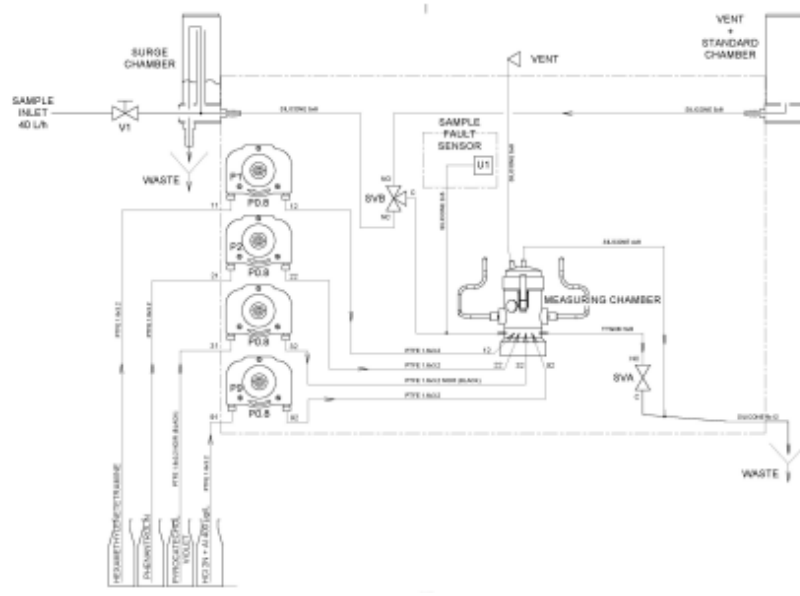
Display of process value, alarm status and time during operation.

Smart and intuitive interface based on separate menu sections: "Measurement", "Diagnostic" and "Tools".

User menus in English and French.

Password protection and storage of data records. Storage and graphical display of measurement history.

Topaz Aluminum Measurement Scheme



Alarm Relays

1 summary alarm for "analyzer failure"

Maximum load: 1A / 24 V

Relay Outputs

2 potential-free contacts for each channel programmable as limit switches for measuring values (high/low thresholds)

1 sample flow alarm for each channel

1 output for indication of the active sample stream for each channel.

1 output for maintenance indication.

Rated load: 1A / 24 V

Signal outputs

2 programmable signal outputs for measured values (freely scalable, linear).

Current loop: 4 - 20 mA

Communication interface

RS485 interface (galvanically separated) with Modbus/JBUS RTU protocol included in standard.

Ethernet interface (TCP/IP) optional.

Analyzer Data

Sample conditions

Flow rate: min 30 l/h
optimum 40 l/h

Temperature: 5 to 40 °C

Inlet pressure_{Abs.} (25 °C): 0.1 up to 2.0 bar

Outlet pressure: pressure-free

Particle size: < 20 µm

Ambient Conditions

Temperature: 5 to 40 °C

Humidity: 10 to 80% rel.

Sample connections

Sample inlet: 1/4" BSP F

Sample outlet: soft tubing D INT 9

Sample outlet waste: soft tubing D INT 12

Sample outlet multi-channel: soft tubing D INT 19

Wall cabinet

Dimensions: 780 x 570 x 370 mm

Material: Stainless Steel 316L

Total weight: 35 kg

Protection degree: IP 55

Reagent specifications

Type	Code
Chlorhydric acid 2N	
+400µg/L Aluminum	RXX152
Reagent Consumption	0.6l/month
Phenanthroline -1,10	RXX151
Reagent Consumption	0.8l/month
Pyrocatechol violet	RXX194
Reagent Consumption	0.8l/month
Buffer pH 6-6.2 Hexamethylenetetramine	RXX193
Reagent Consumption	3.3l/month