

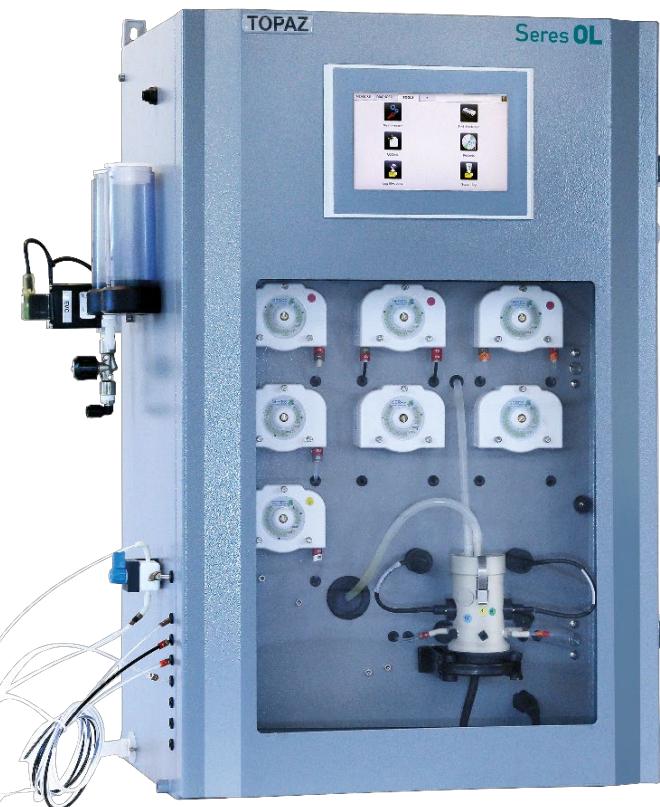
Complete monitoring system for the automatic, continuous measurement of total iron Fe in potable water, surface water, wastewater and effluents.

Analyzer Topaz Total Iron

- For the continuous, colorimetric online determination of total iron per ISO 6332:1988, DIN 38406-E1-1 and NF T90 017.
- Available in separate measuring ranges:

Topaz Total Iron LR:	0 - 100 ppb	or
	0 - 1000 ppb	

Topaz Total Iron HR:	0 - 2 ppm	or
	0 - 5 ppm	
- 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.
- 3 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 Total Iron LR (0 - 100 ppb or 0 - 1000 ppb)	SOL-55.331.000
Analyzer	Topaz Total Iron HR (0 - 2 ppm or 0 - 5 ppm)	SOL-55.331.100
Configuration	2-Channel Setup	SOL-83.590.020
Configuration	4-Channel Setup	SOL-83.590.040
Configuration	6-Channel Setup	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-84.110.080
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

Total Iron Measurement

Colorimetric method: in a medium buffered to pH 4.6, iron III is reduced to iron II. Phenanthroline then forms a complex with iron II of red color which is detected by the analyzer.

Reaction time 15-18 min.

Sensors/Measurement Equipment

Detection wavelength 470 nm
Temperature controlled measuring chamber

Analyzer Measuring range

Topaz Total Iron LR	0-100 or 0-1000 ppb
Limit of Detection	8 ppb
Repeatability	< ± 2 % FS or ± 0.008 ppm (whichever is greater)
Precision	< ± 2 % FS or ± 0.008 ppm (whichever is greater)

Topaz Total Iron HR

0-2 or 0-5 ppm
8 ppb
< ± 2 % FS
< ± 2 % FS

Automatic baseline adjustment.

Sample flow surveillance.

Specifications and Functionality

Pump type	peristaltic
Pump quantity	3

Power supply

Voltage:	110 - 240 VAC
Frequency:	50 / 60 Hz
Power consumption: Typical 150 VA, 300 max.	

Operation

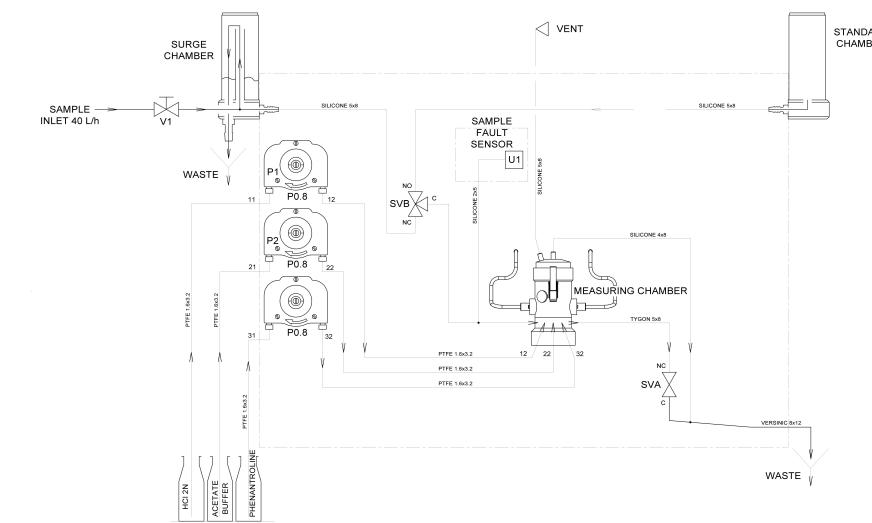
Display: Color LCD display, 7", touch-screen

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 Total Iron 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

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
pH buffer acetate pH 4.5	RXX237
Reagent Consumption LR/HR	0.6l/month

Phenanthroline 1.10	RXX151
Reagent Consumption LR	1.6 l/month
Reagent Consumption HR	2.4 l/month

Topaz Total Iron LR	
Hydrochloric acid 2N + 0.4mg/l iron	RXX153MI400
Reagent Consumption	0.6l/month

Topaz Total Iron HR	
Hydrochloric acid 2N	RXX150
Reagent Consumption	0.6l/month