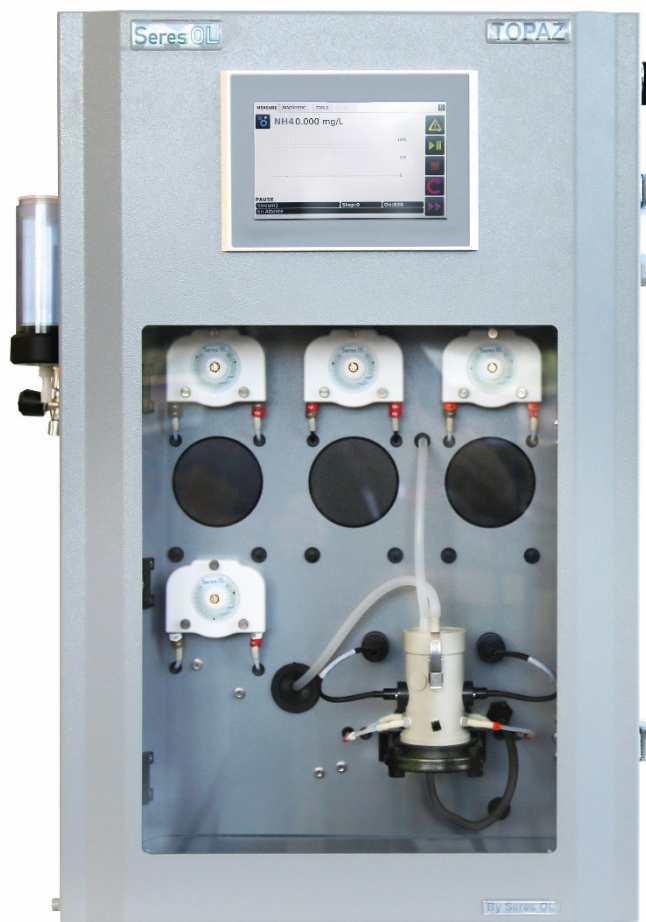


Complete monitoring system for the automatic, continuous measurement of silica in process water, surface water, wastewater and effluents.

Analyzer Topaz Silica

- For the continuous, colorimetric online determination of Silica.
- Available in separate measuring ranges:
Topaz Silica MR: 0 to 20 ppm
Topaz Silica HR: 0 to 50 ppm
Topaz Silica HRx2: 0 to 100 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 (4 for HRx2) for accurate, automatic dosing of chemical reagents.
- 2 analog and 6 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

По вопросам продаж и поддержки обращайтесь:

Архангельск (8182)63-90-72
 Астана +7(7172)727-132
 Астрахань (8512)99-46-04
 Барнаул (3852)73-04-60
 Белгород (4722)40-23-64
 Брянск (4832)59-03-52
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 Воронеж (473)204-51-73
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Казань (843)206-01-48
 Калининград (4012)72-03-81
 Калуга (4842)92-23-67
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 Краснодар (861)203-40-90
 Красноярск (391)204-63-61
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 Мурманск (8152)59-64-93
 Набережные Челны (8552)20-53-41
 Нижний Новгород (831)429-08-12

Новокузнецк (3843)20-46-81
 Новосибирск (383)227-86-73
 Омск (3812)21-46-40
 Орел (4862)44-53-42
 Оренбург (3532)37-68-04
 Пенза (8412)22-31-16
 Пермь (342)205-81-47
 Ростов-на-Дону (863)308-18-15
 Рязань (4912)46-61-64
 Самара (846)206-03-16
 Санкт-Петербург (812)309-46-40
 Саратов (845)249-38-78
 Севастополь (8692)22-31-93
 Симферополь (3652)67-13-56

Смоленск (4812)29-41-54
 Сочи (862)225-72-31
 Ставрополь (8652)20-65-13
 Сургут (3462)77-98-35
 Тверь (4822)63-31-35
 Томск (3822)98-41-53
 Тула (4872)74-02-29
 Тюмень (3452)66-21-18
 Ульяновск (8422)24-23-59
 Уфа (347)229-48-12
 Хабаровск (4212)92-98-04
 Челябинск (351)202-03-61
 Череповец (8202)49-02-64
 Ярославль (4852)69-52-93

Киргизия (996)312-96-26-47

Казахстан (772)734-952-31

Таджикистан (992)427-82-92-69

Silica Measurement

Molybdate method; colorimetric determination of silica ions.

Reaction time 15 min.
Reaction time (HRx2) 17 min.

Sensors/Measurement Equipment

Detection wavelength (MR) 427 nm
Detection wavelength (HR/HRx2) 410 nm
Temperature controlled measuring chamber

Analyzer	Measuring range
Topaz Silica MR	0-20 ppm
Limit of Detection	< 0.1 ppm
Repeatability	± 2 % FS
Accuracy	± 2 % FS
Topaz Silica HR	0-50 ppm
Limit of Detection	0.5 ppm
Repeatability	± 2 % FS
Accuracy	± 2 % FS
Topaz Silica HRx2	0-100 ppm
Limit of Detection	1 ppm
Repeatability	± 3 % FS
Accuracy	± 2 % FS

Automatic baseline adjustment.
Semi-automatic calibration function.
Sample flow surveillance.

Specifications and Functionality

Pump type	peristaltic
Pump quantity (MR/HR)	3
Pump quantity (HRx2)	4

Power supply

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

Operation

Display: Color LCD, 7", touchscreen

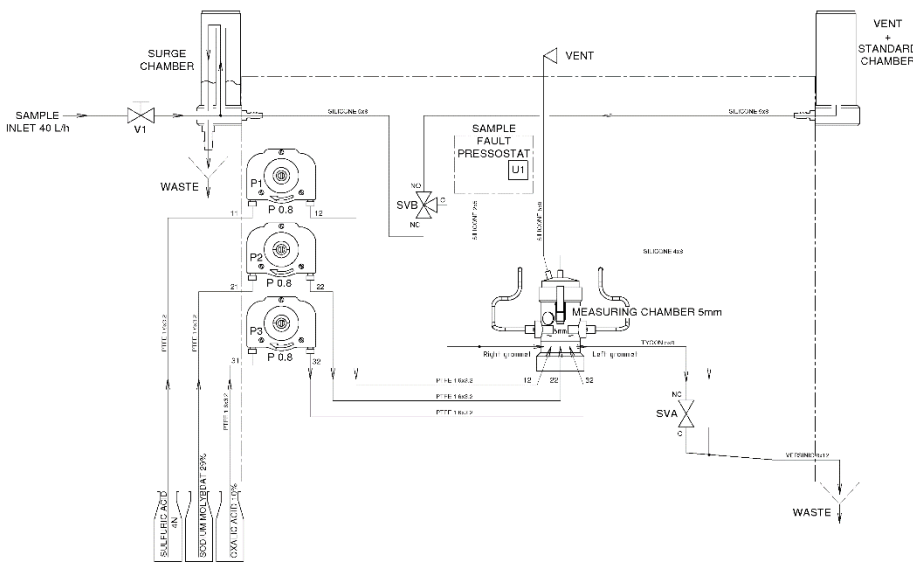
Display of process value, alarm status and time during operation.

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 Silica HR 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.

Reagent specifications
Analyzer Silica MR

Type	Code
Sulfuric acid 2N	RXX159
Oxalic Acid 10%	RXX165
Reagent Consumption	0.6l/month
Sodium Molybdate 12%	RXX170
Reagent Consumption	1.2l/month

Analyzer Data

Sample conditions

Flow rate for sample: min 30 l/h
opt. 40 l/h
5 to 40 °C
Temperature: 0.1 up to 2.0 bar
Inlet pressure_{Abs.} (25 °C): pressure-free
Outlet pressure: < 20 µm
Particle size:

Ambient Conditions

Temperature: 5 to 40 °C
Humidity: 10 to 80% rel.
Storage of reagents: Store between 10 - 30 °C

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-ch.: 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
Analyzer Silica HR/HRx2

Type	Code
Sulfuric acid 4N	RXX158
Sodium Molybdate 29%	RXX116G290
Oxalic Acid 10%	RXX165
Reagent Consumption	1.1l/month

Deionized Water (Dilution - Silica HRx2)
Consumption max 30l/month