

Titration device

SYCON 2702

The entry-level model
for high demands



Safety reliably produced.

 **RLSWacon**

Definitely the correct and reliable measuring value.

Since 2012 ...

... our SYCON analyzers stand the test in the daily use. The SYCON 2702 is the entry-level model for high demands. It is a titration device which is able to monitor an adjustable limit value. With its optional WLAN module the SYCON 2702 offers a state of the art interface: the status of the device and all measured values are transferred to the internet. Thus, the SYCON 2702 becomes an IoT analyzer.

It can be used ...

... where a process depends on the precise compliance with individual readings. With the SYCON 2702 we offer reliable analysis technology according to your requirements. The SYCON 2702 includes a demand-controlled regeneration of a softening unit. For this purpose, you choose the reagent with the appropriate measuring range from our extensive range of products. This is controlled in an adjustable time interval and if exceeded, a signal is passed to the controller.

The advantages and highlights at a glance:

- 1** The display allows a quick and comprehensive metering of the device's status and shows the results of the last 100 measurements. Simplified operation via detailed, clear menu navigation. An installation wizard helps you during the initial startup.
- 2** In contrast to the SYCON 2502 and 2602 limit value devices, the SYCON 2702 allows to freely select the limit value to be measured in the range from 0.02 to 30 °dH. In addition, the measurement of the carbonate hardness is possible in the range from 0.3 to 9.0 °KH.
- 3** The new colour-coded terminals facilitate the assignment and ensure a convenient connection of the cables. There are two additional terminals each with switched L- and N-conductors, which can be bridged to the relay contacts.
- 4** The optional WLAN module is the intelligent interface of the SYCON 2702 to the cloud.
- 5** Cost-effective and easy exchange of the pump thanks to the new clip fixing at the drive.
- 6** By using a special PMMA plastic measuring chamber, no condensation forms on the optics in case of temperature differences between the water and the environment.
- 7** No service and maintenance effort due to the maintenance-free full colour sensor. It also guarantees that the SYCON 2702 is absolutely safe against external influences such as impure water or interfering lights.
- 8** Tool-free maintenance of the measuring chamber by installation of locking pins directly on the measuring chamber.
- 9** Our reagents are produced according to our own recipe and have a shelf-life of 24 months. They are optimally synchronized with the full-colour sensor.
- +** On the inserted SD card, all measurement results are saved with a time stamp.
- +** Detailed manual with over 50 pages of text for commissioning and installation as well as many application examples.

Safety reliably produced.

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The analyzer SYCON 2702.



- Titration device, optimally adjusted for residual hardness monitoring
- More than 10.000 analyses per 500 ml reagent bottle are possible
- Optional cloud integration for IoT-connectivity

Safety reliably produced.

 **RLS Wacon**

The analyzer SYCON 2702.



We provide

- technically competent contact persons at eye level
- modern development with many years of experience in the area of measurement and sensor technology
- complete production on site in Hildesheim, from the assembly of the electronics to the final assembly of the devices

Our measuring chamber tested according to DIN EN 13443-3 can withstand a pressure of 5 bar for at least 200,000 analyses: check out the video on our website www.rls-wacon.de/messkammer



Overview of performance features:

Fully automatic

The device detects hardness breakthroughs fully automatically depending on the reagent used. Thus, the analysis process is more effective than manual methods and more sustainable than other measurement methods that work only indirectly.

Intelligent and accurate

The device does not need to be calibrated. Due to the integrated measuring technology and a two-stage analysis procedure with zero point measurement, external measuring influences due to contamination of the measuring chamber, turbidity of the sample and extraneous light influences are automatically detected and eliminated in the evaluation of the analysis. The maintenance-free full colour sensor is one of the key components for the autonomous operation of the device.

Programmable limit value

Hardness breakthroughs are reliably detected by the reagent's colour reaction. You choose the reagent according to your degree of hardness. The limit value can be freely selected within the measuring range of 0.02 to 30 °dH.

Analog interface

The measured value is shown on the display and can be emitted via the analog 4 to 20 mA interface.

Very high accuracy

After a bad measurement, a reference measurement can be carried out to evaluate the result at intervals of 4 minutes. This prevents false alarms due to the negative ion effect.

Multilingual menu

The menu navigation is switchable between German, English, French, Spanish and Italian.

Adjustable unit of the measured value

The displayed unit can be set on the device. In combination with the multilingual menu navigation, the device can be configured according to the local language and regulations.

Cloud-integration

The SYCON 2702 is an online analyzer that optionally connects to a cloud via WIFI. With the complete known functionality, this device shows the way to digital water 4.0.

Efficient reagent consumption

The reagent bottle can easily be exchanged. In practice, a 500 ml bottle allows more than 10.000 analyses on a water softening system.

Extensive alarm functions

If the measured value is exceeded, an alarm is emitted by switching a potential-free relay. This alarm output can be placed on a control room for signaling purposes, or used to operate a horn, to close a valve or to head for a program to regenerate a water softening unit.

Diagnostic program

If you encounter technical problems with the device, a fault message is issued by switching a potential-free relay. The detailed diagnostic program guides you step by step through all functions in an easy to understand way. Thus, the device is roundly checked and the cause of the error message is clearly located.

Minimal maintenance effort

The measuring chamber must be cleaned depending on the set measuring interval or the frequency of measurements. The reagent hoses and sealing rings typically need to be replaced only once or twice a year. No additional tools are required for maintenance. It is very easy to perform.

Compact design

The device is hung directly on a wall or supporting structure. Installation and commissioning are an intuitive process.

Digital input

The potential-free switch of a flow meter, a timer or any other state switch can be connected to this input. When the contact is open, no analyses are run in the programmed interval. Alternatively, this input can be used as start input for analyses.

Two potential-free relay outputs

The SYCON 2702 has 2 relays. The first relay reports a measured value exceeded during the detection of hard water. Relay two indicates the readiness for operation or a fault on the device.

General Specifications	Value / Range
Supply voltage	85 ... 264 VAC at 47... 440 Hz
Power consumption	25 VA (during operation)
Protection class	IP 43 (with housing IP 54)
Ambient temperature	5 ... 45 °C
Temperature of water sample	5 ... 40 °C
Humidity	20 ... 90 % RH non-condensing

Technical Data	Value / Range
Installation	Wall mounting in closed rooms
Dimensions	on wall holder: 274 x 275 x 130 mm (W x L x H) with housing: 330 x 300 x 185 mm (W x L x H)
Weight	on wall holder: 1,9 kg with housing: 3,7 kg
Relay outputs	2 relays, 250 VAC / VDC 4 A potential free outputs NC/NO > limit value alert > device error
Signal input	potential free input contact
Connection inlet / outlet	tubes with 6 mm outer diameter

Analysis Features	Value / Range
Measuring principle	colorimetric method
Measuring range	total hardness carbonate hardness
	0,012 ... 30 0,3 ... 22,5 °dH
	0,015 ... 37,6 0,4 ... 28,2 °e
	0,021 ... 53,4 0,5 ... 40 °fH
	0,214 ... 534 5,34 ... 400 ppm
Reagent consumption	< 0,05 ml / analysis (soft water) up to 10.000 analyses per 500 ml bottle
Shelf-life of reagents	24 months
Water consumption	approx. 1000 ml / analysis The water consumption depends on the inlet pressure and the flushing time
Pressure of inlet water	approx. 0,5 ... 5 bar Use a pressure reducer in case of an inlet water pressure above 2 bar
Water sample	clear, colour free, without any solids and gas bubbles pH 4 ... 10,5, iron < 3 ppm, copper < 0,2 ppm, aluminium < 0,1 ppm, manganese < 0,2 ppm, acid capacity KS4.3 < 5 mmol/l

Our product range:

Water softening controllers

The controllers of the HAcon series are used to control back flushable systems or ion exchangers in connection with pilot distributors or central control valves.



Pilot Distributors

The new models PVcon 1000 and PVcon 5000 can be used for water softening and gravel filtration systems.



The units can be activated either by impulses or a change of voltage.

For both applications, connections are available in the device.

Sample Coolers

In our product range, we offer sample coolers that allow sampling for manual analysis. We also offer pre-sample coolers for analyzers.

Corpus and cooling coil are made of stainless steel (Type 1.4571) and are approved for a nominal pressure up to 16 bar.



Reagents

Here, you get the suitable reagent for your analyzer. Please contact us for an overview of available reagents for your SYCON analysis device. In addition to our RLS Wacon reagents, we also offer reagents which are compatible with those of other manufacturers.



Test kits

We offer a wide range of test kits for determining water parameters. Apart from the quick-kits commonly used for checking residual hardness, total hardness, chlorine content and iron concentration we also offer several test kits for niche applications.

RLS Wacon GmbH is a family-owned enterprise based in Hildesheim, Germany. For more than 40 years, we are developing and manufacturing robust and safe measurement and sensor technology for demanding applications. We hereby consistently focus on quality and well-known products. Our particular interest is the dialogue with customers, partners and suppliers. That's how **safety is reliably produced.**

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