

AQUACON GH05/GH10/GH20

Process analyzers for total water hardness

The AQUACON GH process titrators are developed for the measurement total hardness in boiler water, cooling water or potable water. Measurement principle is a complexometric titration of the water hardness with a special combination reagent which includes a buffer solution, the titrant solution and a hardness specific indicator. A photodetection system determines the titration end point (color change from red to blue). The result is displayed on the touchscreen as ppm CaCO₃. Main applications for the analyzer are the survey and monitoring of water treatment plants and the analysis of drinking water.

The analyzer consists of a control unit with touchscreen and an analysis unit with measuring chamber, valve, dosing pump (incl. stepper motor) and all required tube connections. The control unit includes a microprocessor which controls the automatic measurement incl. sampling, rinsing, titration and surveillance of the photodetection system. The analysis results can be used for the monitoring and control of a supervised process.

Your advantages:

- $\Rightarrow\,$ Automatic measurement incl. self test and drift compensation
- ⇒ Measurement ranges:
 Aquacon GH05: 4 70 ppm CaCO₃
 Aquacon GH10: 30 350 ppm CaCO₃
 Aquacon GH20: 50 900 ppm CaCO₃
- \Rightarrow Easy operation via touchscreen
- \Rightarrow Adjustable limit value and alarm value
- \Rightarrow Programmable analog output (0/4-20 mA)
- \Rightarrow External start/stop of an analysis possible
- \Rightarrow No external calibration required.

Reagent GH-B3000 (for GH10, GH20)

- \Rightarrow Multi range power supply (110–230 Volt,50–60 Hz) for variable use.
- \Rightarrow Including 2 polycarbonate wall cabinets (for control unit and analysis unit)

Order informations:

AQUACON GH05	(4 – 70 ppm))	Order No. 693 2764 01
AQUACON GH10	(30 – 350 ppm)	Order No. 693 2765 01
AQUACON GH20	50 – 900 ppm)	Order No. 693 2766 01
Option Cleaning pump		Order No. 125 0012 01
Reagent GH-B2500 (for GH05)	(500 ml)	Order No. 101 2764 01

(500 ml)

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Order No. 101 2765 01



Technical Data

Current output	0/4 - 20 mA, max. load 500 ohm		
Display	240 x 128 dots, touchscreen		
Relay	1 x Alarm, potential-free 230 V/50 Hz, 3A		
	1 x Limit, potential-free 230 V/50 Hz, 3A		
	1 x Analysis state, potential-free 230 V/50 Hz, 3A		
External Switching	potential-free contact, 18 V DC, ca. 4 mA		
Power Supply	110 - 230 V 50/ 60 Hz		
Power Consumption	approx. 16 VA		
Dimensions	640 x 315 x 190 mm (H x W x D)		
Protection	IP 65 (transmitter housing)		
Connections	Plugs with circular connection 1,5 mm ²		
Temperature	5° to 45°C, at consumption of reagents within 6 months		

Since it is company policy to continuously improve its product range, we reserve the right to make changes in the product design without notification to its users.

Specifications

Parameter	Total Hardness				
Description	Microprocessor-controlled analyzer for the determination of				
-	hardness in water				
Typical Applications	Monitoring and cont	rol of water treatmer	nt, water blending		
	and potable water plants				
Analysis Method	Complexiometric titration of the total hardness using a				
-	combined reagent, comprising titer and hardness indicator				
Туре	GH05	GH10	GH20		
Measuring Range	4-70 ppm	30-350 ppm	50-900 ppm		
Resolution	0,7 ppm	7 ppm	10 ppm		
Accuracy	5 % of end value				
Reproducibility	3 % of end value				
Zero-point Stability	automatic adjustment				
Number of Samples	1				
Sample					
Operating Pressure	0,1 - 10 bar				
Temperature	5 - 30 °C				
Sample Volume	25 ml per analysis (excluding rinsing)				
Sample Condition	clear, with particles < 0.5 g/l ; < 50 μm				
Chemical Demands	pH 4 - 10, Fe < 3 ppm, Cu < 0,2 ppm, CO_3^{2-} < 10 mmol/L				
Drain	pressure free into open drain				
Reagents					
Number	1, (optional 2)				
Storage Temp.	5 – 20 °C				
Usage/analysis	hardness dependent				
Reagent volume	500 ml				
Suitable for	hardness dependent				
Analysis					
Cycle (approx.)	13 min., incl. rinsing				
Sample interval	1 – 99 min or external start/stop				
Optional	2 ^{nu} pump (for cleaning solution)				