

## Measuring and control system spaliQ Professional

### Intended use

The measuring and control system spaliQ Professional is used to measure and control water parameters for swimming pools and whirlpools in the private sector.

### Application limits

In principle, the limit values of DIN EN 16713 do apply for the application of the spaliQ Professional.

The exception to the above are the parameters below:

- Salt concentration < 3.5 %
- Isocyanuric acid ≤ 1.0 mg/l
- Conductivity ≥ 50 µS/cm

### Mode of operation

The spaliQ Professional measures the water meters pH and Redox value, compares the measured value with the setpoint and then controls the demand-based addition of the dosing agents. The dosing agents can be added via separate hose dosing pumps, diaphragm dosing pumps or chemical dosing units.

In addition, the water temperature is measured.

The determined water temperature can be used for temperature compensation of the pH value measurement as well as for controlling the water temperature.

The flocculation dosing output can be used to control a hose dosing pump or diaphragm dosing pump for the addition of flocculant.

### Functions

- Archiving the measured values on an SD memory card
- Integrated dosing time monitoring
- Software-guided calibration
- Partial load operation reduces the use of dosing agents and/or pump current if the water values allow so
- Economy operation reduces the use of disinfectants, e.g. in case of longer absence
- High chlorination increases the use of disinfectants in the event of the heaviest load, e.g. increased use of the pool.
- Overview with relevant information on the touchscreen
- Operation via quick accesses
- Cloud connection via Grünbeck's myProduct app
- Web browser-based access
- Integration into the smart home system (into building automation) via Modbus interfaces
- Email dispatch when warnings and faults occur

- In combination with a filter control unit GENO-BW-tronic: Operation of temperature selection, backwash, filter and channel cleaning

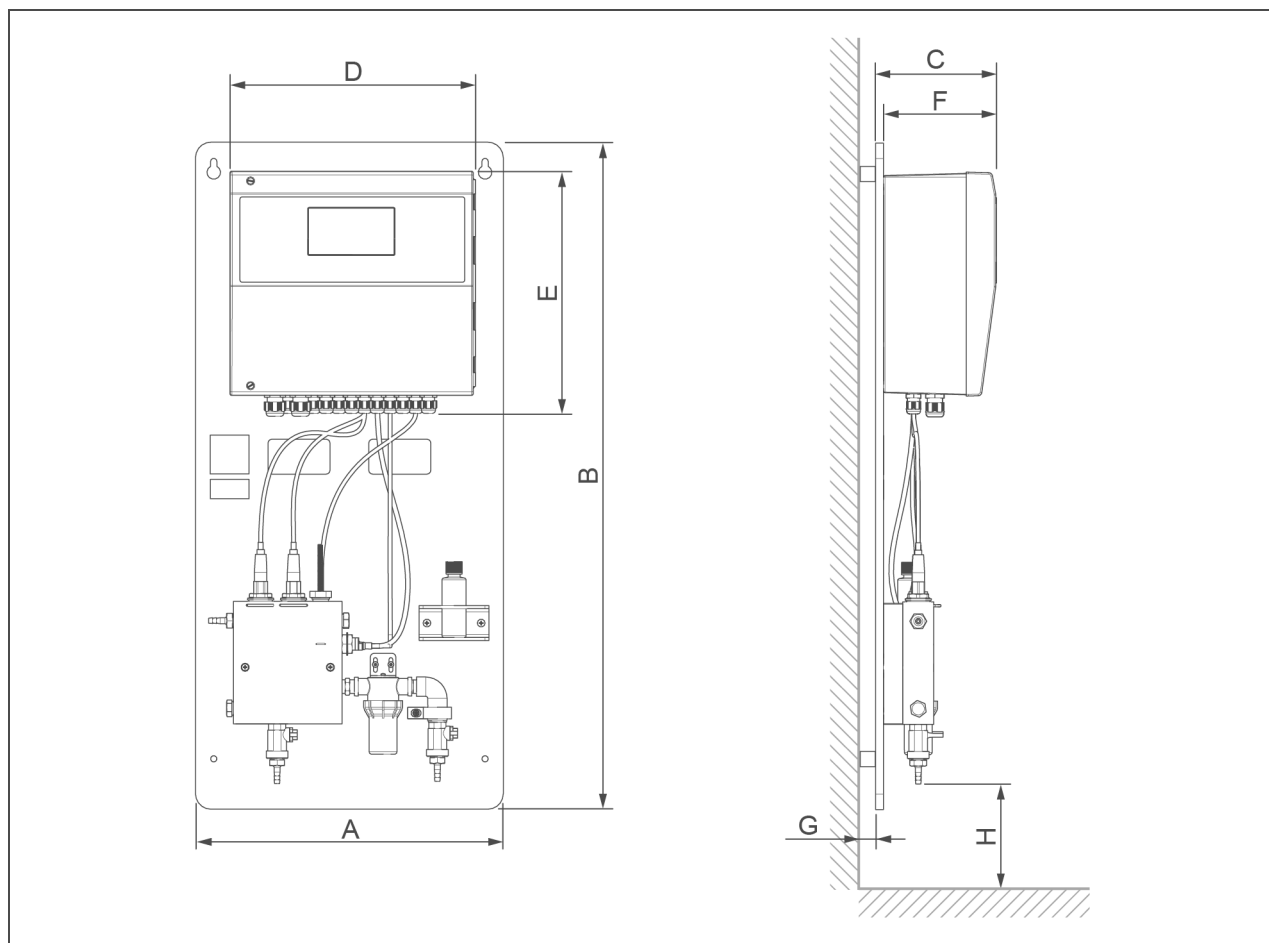
### Design

- 4.3" touchscreen
- Flow fitting with easy-to-remove measuring electrodes (pH, Redox) for cleaning and calibration
- Bottle holder for convenient calibration
- Flow monitoring of the required measuring water volume
- Measuring water filter to protect the downstream electrodes
- Sampling point for measuring water samples

### Scope of supply

- System pre-assembled on mounting plate
- Fastening material
- Calibration solutions: pH7, pH9, Redox 475 ml
- Bottle with screw cap
- SD memory card
- Operation manual

## Technical specifications I



Dimensions and weights			spaliQ Professional
A	System width	mm	397
B	System height	mm	860
C	System depth	mm	160
D	Width of switch cabinet	mm	320
E	Height of switch cabinet	mm	316
F	Depth of switch cabinet	mm	150
G	Distance to wall	mm	20
H	Minimum distance to the floor	mm	≥ 200
Operating weight			kg
Empty weight			kg
			~ 16
			~ 16

## Technical specifications II

Connection data		spaliQ Professional
Rated voltage	V~	230 (+10 %/-15 %)
Rated frequency	Hz	50 – 60
Rated input	W	~ 17
Power cable with Schuko power plug (length)	mm	~ 1500
Protection/protection class		IP 65/Ⓜ
Fuse protection by client on site	A	≤ 16
Measuring water inlet Hose nozzle		DN 6
Measuring water outlet Hose nozzle		DN 6
Performance data		spaliQ Professional
Nominal pressure		PN 2
Operating pressure in the flow fitting	bar	0.1 – 2.0
Measuring water flow	l/h	> 30
Pressure loss in case of measuring water flow	bar	≥ 0.15
Measuring water filter cut-off	µm	≤ 300
Measuring range of pH		0 – 14
Measuring range of Redox	mV	0 – 1300
Measuring range of temperature	°C	0 – 100
General data		spaliQ Professional
Pool water temperature	°C	0 – 40
Ambient temperature	°C	0 – 40
Humidity (non-condensing)	%	≤ 90
Order no.		203000010000

## Interfaces of control unit

- LAN interface for integration into the customer's network
  - For access to the web server
  - For access to the VNC server
  - For internet connection via Cloud
  - For communication with building automation via Modbus TCP/IP
- RS485 interface for communication with building automation via Modbus RTU
- 2 x USB interface (reserve)

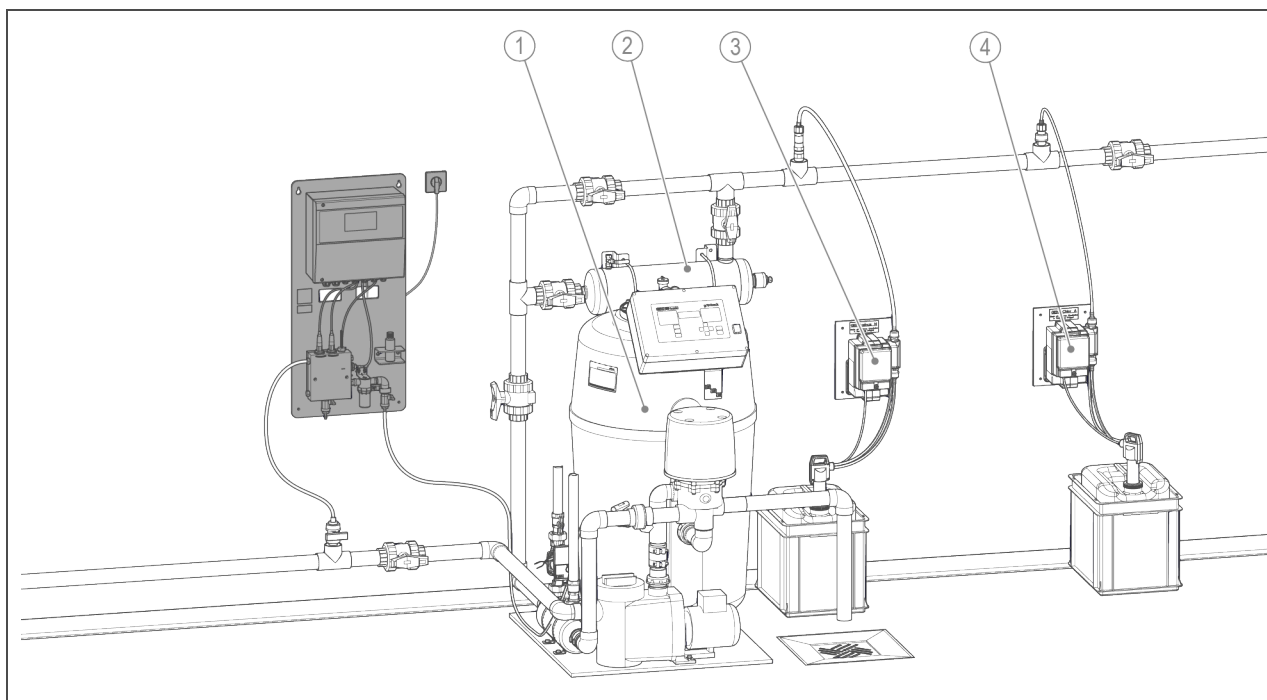
### Outputs

- 3 x Dosing outputs 230 V (pH- or pH+, disinfection, flocculation, or pH- or pH+)
- 3 x Dosing outputs Pulse frequency (pH- or pH+, disinfection, flocculation, or pH- or pH+)
- Voltage-free output Enabling partial load operation
- Voltage-free output Heating request
- Voltage-free output Redox GW1/GW2
- Voltage-free output Collective fault signal
- 4 x Analogue outputs (0/4 – 20 mA) for relaying measured values

### Inputs

- 3 x Switching inputs for fault signal Dosing pump or Dosing tank level (pH, disinfection, flocculation), e.g. for empty alarm
- Switching input Flow monitoring Measuring water
- Switching input Enabling control
- Switching input Partial load operation
- Switching input Flow monitoring Filtrate
- Analogue input (4 – 20 mA) Room temperature
- Analogue input (4 – 20 mA) Room humidity

## Installation example



Item	Designation	Item	Designation
1	Filter system GENO-mat F 600 AK	2	UV disinfection system GENO-UV
3	pH dosing system GENODOS SB	4	Chlorine dosing system GENODOS SBC

## Requirements for the installation site

Obey the local installation directives, general guidelines and technical specifications.

- Protect the system from the impacts below:
  - Frost, severe heat exposure and direct sunlight
  - Chemicals, dyes, solvents and their vapours
  - Heat sources (e.g. heating systems, boilers and hot water pipes)
- Ambient temperature and radiation temperature in the immediate vicinity  $\leq 40^\circ\text{C}$

- Access for maintenance work, required space:
  - Front: 800 mm
  - Left/Right: 500 mm
  - Bottom: 200 mm
- Sufficiently illuminated and ventilated
- Flat, vertical wall surface with appropriate load-bearing capacity to support the operating weight of the product

### Water installation

- Chemical-resistant floor drain or appropriate safety device with water stop function
- Chemical-resistant lifting system for drain connection located at a higher level

- Flow controller in the filtrate line provided by the client on site
  - The flow controller must electrically be connected to the measuring and control system.

### Electrical installation

- Schuko socket with permanent power supply (approx. 1.2 m max. from the control unit)
- Fuse protection according to local electrical regulations, e.g. ground fault circuit interrupter with 30 mA

## Accessories

### **Pool water safety package** **Order no. 210 880**

Protective equipment for handling caustic substances

### **Connecting kit for filter system GENO-mat, spaliQ:UF150** **Order no. 203000040000**

For new installations in connection with a filter system of the GENO-mat F or BWK series as well as an ultrafiltration system spaliQ:UF150

### **Flow controller** **Order no. 100235590000**

To monitor the required flow in the pool water circuit (filtrate line) for enabling dosing of the measuring and control system

### **Hygro thermo transmitter** **Order no. 203 535**

To measure the room temperature and room humidity in the indoor swimming pool

The measured values are displayed at the measuring and control system

### **Optional module for chemical refill and empty alarm** **Order no. 203 555**

To record two levels each (refill and empty alarm) of up to 3 suction lances (disinfection, pH, flocculation)

Transfer of the refill messages and the collective fault empty alarm to the measuring and control system

## Dosing systems

### **Dosing system** **GENODOS SB 1/40 (pH)** **Order no. 212 475**

For dosing liquid pH adjustment agents (GENO-minus N or GENO-plus N)

### **Dosing system** **GENO-Schlauflex-pH 1.5 i** **Order no. 203 591**

For dosing liquid pH adjustment agents (GENO-minus N or GENO-plus N)

### **Dosing system** **GENODOS SBC 1/40 (chlorine)** **Order no. 212 490**

For dosing liquid sodium hypochlorite (GENO-Chlor A)

### **Dosing system** **GENO-Schlauflex-Cl 1.5 i** **Order no. 203 586**

For dosing liquid sodium hypochlorite (GENO-Chlor A)

### **Dosing system** **GENODOS SBA 6/40** **Order no. 212 485**

For dosing liquid hydrogen peroxide (GENO-aktiv)

- Only in combination with filter control unit GENO-BW-tronic

### **Chemical dosing unit** **GENO-mat Comfort** **Order no. 203 123**

For dosing bromine tablets (GENO-Brom)

## Test devices

### **Digital test device Scuba II** **Order no. 211 245**

Electronic pool tester to determine the parameters chlorine (free, total), pH value, cyanuric acid, acid capacity and bromine

### **Test device MD4in1** **Order no. 211 230**

Photometer to determine the parameters chlorine (free, total), pH value, cyanuric acid and acid capacity

### **Test device for bromine, chlorine and pH value** **Order no. 211 112**

## Consumables

### **pH electrode** **Order no. 211 502**

### **Redox electrode** **Order no. 211 507**

### **Calibration solution pH7** **Order no. 203 628**

### **Calibration solution pH9** **Order no. 203 629**

### **Calibration solution Redox 475 mV** **Order no. 203 625**

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