



OPTI POOL SYSTEM

WALLACE & TIERNAN® ANALYZERS/CONTROLLERS

The Wallace & Tiernan® Opti Pool system is a simple and easy to use measuring and control system designed specifically for the needs and requirements of a private pool system. It measures ORP (redox voltage) and the pH value and is able to dose pH correction and inorganic disinfectants such as sodium hypochlorite using the integrated peristaltic dosing pumps. The content of the free chlorine in the pool is calculated from the measured redox voltage value and then displayed.

The chlorine content for public pool systems is defined in DIN 19643 "Treatment of water of swimming pools and baths". Private pools are not subject to any specific rules and regulations. The following values are thus only recommendations. DIN 19643 stipulates that the pool water should contain 0.3 to 0.6 mg of free chlorine per litre throughout the pool after flocculation, filtering and chlorination. The water at the pool outlet must have a minimum residual free chlorine content of 0.3 mg per litre. Certain operating conditions may call for higher concentrations to maintain microbiological requirements.

The redox voltage is considered the composite parameter for the content of oxidising and reducing substances in the water. It is indicated as the voltage between an inert electron conductor and the standard hydrogen electrode. Disinfectants are considered oxidising substances. The charging compounds in the water have a reducing effect. The following relationship applies to the redox voltage and disinfecting capacity of the used disinfectant: The higher the redox voltage, the shorter the time needed to kill microbes and germs. standard battery.

Benefits:

- Compact measuring and control system for the most important parameters in small pools
- Available with integrated peristaltic dosing pumps
- Fair price/performance ratio with functions designed for practical application
- Integrated safety functions such as automatic shutdown in case of sample water failure or failure of the circulation system, dosing delay function, dosing time monitoring with manual or automatic operation
- User-friendly due to clearly structured display and easy calibration
- Adjustable limit contacts for pH and redox

Design and function

The Opti Pool unit consists of the electronic module and flow cell module with two combined electrodes. The electronic module displays the measured data and functions as the control unit. Two controller outputs, two alarm contacts and integrated safety functions are standard features.

Display

The easy to use Opti Pool display is especially user-friendly. Clear indicators depict whether the water meets the specified limit values. If this is the case for all parameters (chlorine content, pH value and redox voltage), the float lamp is lit in green. The display also individually depicts the alarms for the pH and redox values as well as the operating state of the peristaltic dosing pumps.

Versions

The Opti Pool unit is available in the following versions: As individual unit with two measuring electrodes as described or with two additional integrated peristaltic dosing pumps (0.6 l/h with max. 1 bar) for directly adding disinfectants and pH correction.

The unit is completely wired and inspected. The scope of supply includes the following: Foot valve and injection applicator with 4 x 1 mm PVC hose.

TECHNICAL DATA

Opti Pool flow cell module

The Opti Pool cell module assembly includes the combined measuring and reference electrodes for pH value and redox voltage as well as a sample water flow monitoring unit with sampler for calibration and a stop valve. Pressurised version for 0.2 to max. 1.5 bar of admission pressure and max. 1.3 bar of back-pressure in sample water return line Sample water connector for 6 x 3 mm PVC hose or 6 x 1 mm PE hose

Opti Pool electronic module

Measuring ranges:

Free chlorine: 0.2 – 3.0 mg/l (bar graph with low and high indicators)

pH value: 4.00 – 9.00; Redox voltage: 0 – 1000 mV
Min. sample water conductivity: 300 µS/cm

Measurement inputs:

1 x pH; 1 x redox
Electrically isolated up to 100 V to earth

Digital inputs:

1 x sample water stop
1 x external stop
Electrically isolated up to 500 V to earth

Switching outputs:

2 alarm/limit contacts (programmable time delay and hysteresis), voltage-free change-over contacts up to 250 V/1250 VA

Controller:

Two integrated P controllers for regulating the chlorine dosing and the pH value regulation for the peristaltic dosing pumps

Additional functions:

- Safety shutdown if circulation or sample water fails
- Dosing delay function
- Dosing time monitoring in manual and automatic operation

Power supply:

230 V AC +/-10 % or 115 V AC +/-10 %
Power consumption: 14 VA

Ambient temperature: 0 – 50 °C

Protection: IP 54

Dimensions (W x H x D): 360 x 260 x 90 mm

Weight: 4,0 kg

Display/Operation:

Back-lit digital LCD display for measured values and operating messages/menu navigation Select from the following languages: German, English, French, Italian, Spanish, Polish, Czech and Hungarian Code-protected parameterisation (code freely selectable)

Testing and marking:

Conforms to CE; EMC tests acc. to EN 61326;
Electrical safety to EN 61010-1



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