



# STEIEL



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## Sensors and Accessories



### pH and Redox Electrodes

STEIEL Elettronica proposes a wide range of pH and redox electrodes for industrial use, laboratory and swimming pools.

Glass or shock-resistant body, ceramic junction, KCl gel or refillable electrolyte, screw head or soldered cable with BNC connector or tips for direct connection to terminal block, redox models with platinum or gold sensor, pH models with membrane resistant to hydrofluoric acid, high quality electrodes for application at high temperature / pressure, etc.

### Amperometric Cells for Chlorine Analysis

Model CLE12: two-electrode (Cu/Pt) open amperometric cell, assembled in a down-flow probe-holder, with flow control and housings for two sensors of dia. 12 mm, flow sensor and PT100. Chlorine analysis up to 5 ppm.



Series CAC: closed amperometric cells, with ion-selective membrane. Models for analysing free chlorine (active and available), chlorine in sea water, and total chlorine. Available several measurement ranges.

### Solutions

To have your control system always reliable and top performing, we recommend a periodic calibration, with proper solutions.

STEIEL offers a full range of calibration and maintenance solutions for pH and ORP electrodes.



### Probe Holders

Models are available for various types of installation: in-line, and down-flow configuration.



## MONITOR & CONTROL SYSTEMS FOR SWIMMING POOL WATER

### ELECTRONIC UNITS, SENSORS, DOSING SYSTEMS







## Analysis & Control Systems for pH and Chlorine Levels in Swimming Pool Water

**Complete Assembled and Wired Panels, Ready for the Installation and Use**



STEIEL Elettronica offers a wide range of panels complete with control unit, measurement sensors, calibration solutions, with or without dosing pumps and data recording system. The pH value is always analysed by a specific electrode, while the chlorine concentration can be determined indirectly via redox potential measurements or directly by an amperometric cell. The above pictures show some standard panels, but you can ask for customized systems for specific application needs.

### Compact Systems for Private Pools

STEIEL also manufactures compact systems, extremely easy to install and use. All models are equipped with a BNC connector for pH electrode and with an input for chlorine analysis (BNC connector for ORP electrode or prewired input for CLE12 or CAC amperometric cell, depending on model).



The digital control unit is provided with two adjustment outputs, which can drive two built-in electromagnetic or peristaltic pumps (pH/ORP models), or supply a 230V~ power voltage for external dosing pumps (pH/chlorine models). Models are also available with one built-in electromagnetic or peristaltic pump for the acid dosage and one output for controlling a chlorine adjustment device (for example, a salt electrolysis chlorinator).

Moreover, these systems feature a large backlit LCD, multilingual menu, inputs for monitoring the products to be dosed, OFF/FLOW digital input and serial port; two housing sizes are provided.



### Colorimetric Unit

The MCO14 digital control unit measures the pH, redox potential and temperature values with proper probes, while for the free and total chlorine analyses the unit uses a colorimetric system based on the DPD method.



### Remote Control via Web

Tele-control device which connects to STEIEL instruments through RS232 ports (up to 4), analogic (2) or digital (4) inputs.

Specific Web pages allow the user to interact remotely through a normal PC, tablet or smartphone provided with network connection. The Internet connection is available through LAN port or WiFi module. The remote access to device is done by connecting to the dedicated web site.



## Dosing Pumps

### Digital Pumps with built-in pH/ORP Meter

Pumps with built-in pH/ORP meter and electrode input on BNC connector. Input for level sensor. Housing for wall installation.

Model EF110 with 1.8 l/h peristaltic pump; model EF158 with electromagnetic pump (standard version with PP dosing head, Pyrex ball valves and FPM seals), available with three flow rate options.



### Pump for Water Disinfection with Hydrogen Peroxide

EF125 is a professional peristaltic pump provided with a specific software for the disinfection of swimming pool water with hydrogen peroxide; inputs for PT100 sensor, external consent and level sensor.

Standard model: 2.4 l/h (other flow rates available upon order).

### Electromagnetic Pumps, EF150 Series (Basic Line) and EF155 Series (Semi-professional Line)

Electromagnetic dosing pumps, with flow rate adjustment through keys and visualization, red LED display, input for level sensor, designed for wall installation and suitable for mounting on preassembled panels.

PP or PVDF (also available with self-bleeding option) dosing head, Pyrex ball valves and FPM (EPDM or PTFE) seals. Available 3 flow rates curves.

Basic ON/OFF pump (EF150).

Semi-professional line is also provided with optional external consent input, and includes a basic ON/OFF model (EF155), a version with timer for the pause / work schedule (EF156), a model with pulse input for volumetric water meter (EF157) and a version with built-in pH / ORP meter and electrode input on BNC connector (EF158).



## Control Unit for Chlorine Dosing Device

EF117 is a digital control unit with built-in ORP meter, electrode input on BNC connector, LED display, and prewired power cable with Schuko plug.

The device includes a double-pitch Schuko socket, which powers a plugged-in dosing unit (for example, a salt chlorinator) when the set threshold is exceeded.



## Water Disinfection with Ozone or UV Radiations

The STEIEL ozone generators are modular systems suitable to the disinfection of swimming pool water. The ozone is generated in an environmental safe and effective manner, using the corona discharge technology. The system works making air or oxygen flow into a reaction chamber, where an electrical discharge is produced.

Moreover, STEIEL offers a full range of water sterilization systems with UV radiations, both for private and public pools, from 0.3 up to 1200 m<sup>3</sup>/h. Models are available with AISI304 or AISI316L steel, or HDPE vessel; mercury vapour (low and medium pressure) and amalgam lamps; digital electronic control unit; IP65 and IP55 cabinet.



## Portable Photometers



Portable digital photometers, SHP01 and S7000 Plus series, for the analysis of the main parameters of swimming pool water.

Backlit LCD, automatic selection of wavelength, IP67 protection, battery powered (with automatic shutdown function).

Models with USB and Bluetooth SMART interfaces.

Supplied in hard carrying case, with cuvettes, accessories and start kit of reagents.