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EMEC.
SIMPLE AS WATER

We are connected to water by a covenant of respect and pure gratitude. For over 35 years we have been designing and producing reliable, cutting-edge systems for water treatment and dosing of chemicals to make the human-water relationship more harmonious, safe and natural, drawing from a single source of inspiration.

The simplicity.

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Flexibility, with three fundamental principles

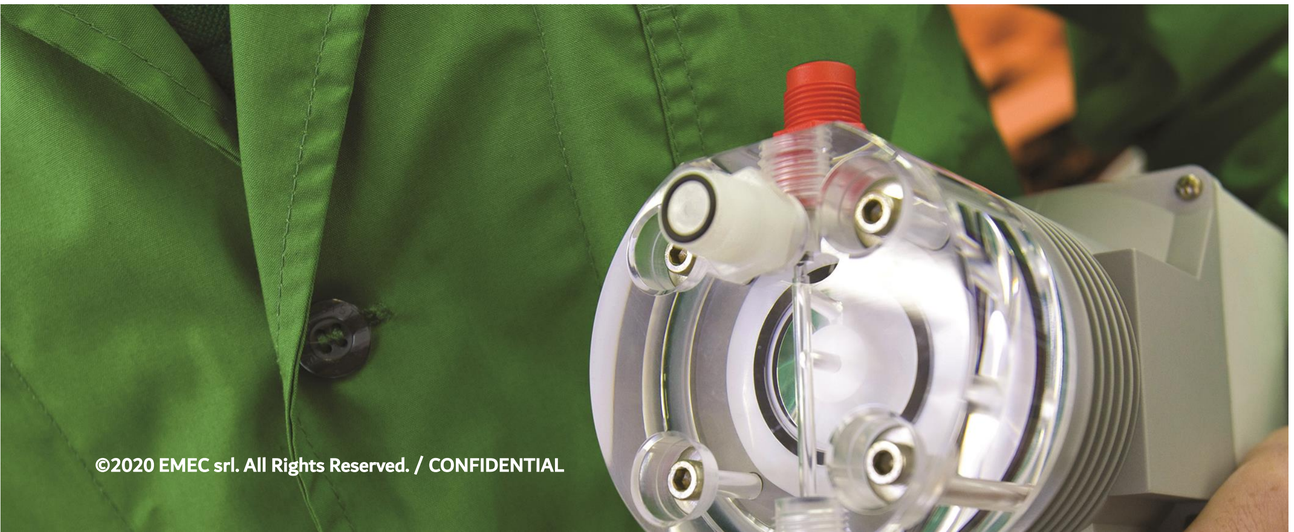
In a world that changes so fast, flexibility and innovation are fundamental to us. As a company, we are open to change, because we are rooted in three fundamental principles: constant research, extreme precision, healthy relationships.

The difference between consultant and supplier

Business Unit's in-depth knowledge of every step of the production process makes it possible for us to offer focused consulting, both for the choice and the customization of products.

A world of care and attention

Water is the vital element on which our business is based and to respect this inestimable resource we treat the environment in the best possible way in order to also respect our ethics.



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NOTHING IS SIMPLER THAN COMPLEXITY

We are an extremely prolific company, with high-level technical know-how. We manage articulate and complex processes with increasingly sophisticated standards of innovation. And all with the same objective: to make the lives of companies and professionals increasingly simple.

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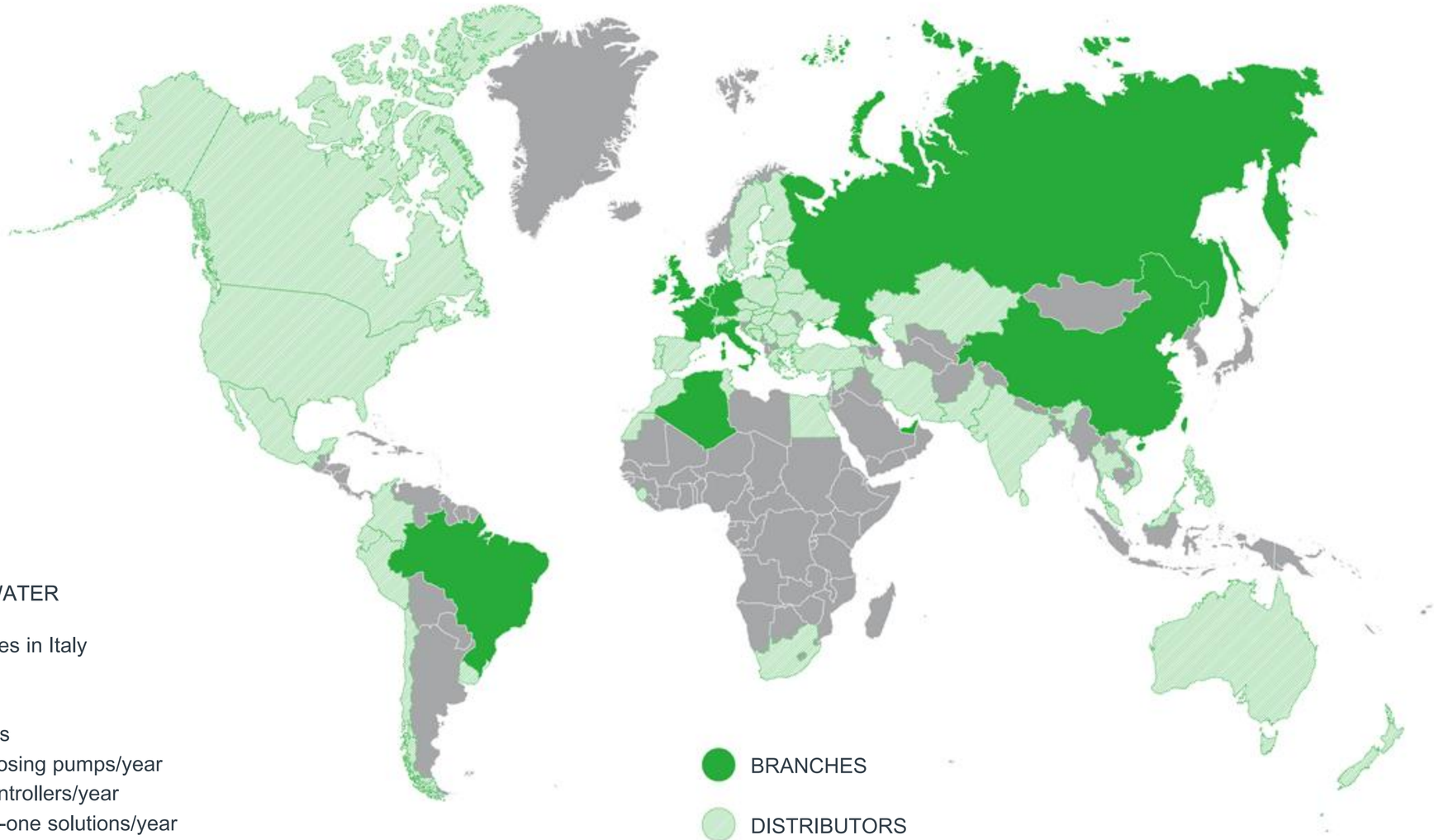
EMEC WORLDWIDE



WARRANTY
5 years warranty for
our dosing pumps
and controllers
Terms and conditions apply

100% MADE IN ITALY
All our products are
100% Made in Italy

OUR CERTIFICATIONS

www.emecpumps.com

EMEC
SIMPLE AS WATER

188 employees in Italy
54 countries
10 branches
24 distributors
150.000 dosing pumps/year
30.000 controllers/year
5.000 all-in-one solutions/year
100% of products tested

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Cooling tower controllers

Cooling tower are amongst the most common installations in the main industries around the world.

The presence of an open circuit makes it necessary to treat and disinfect the water to avoid dangerous bacteria developing and maintain the correct functioning of the tower.

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01

Cooling tower – functioning and dosing necessity

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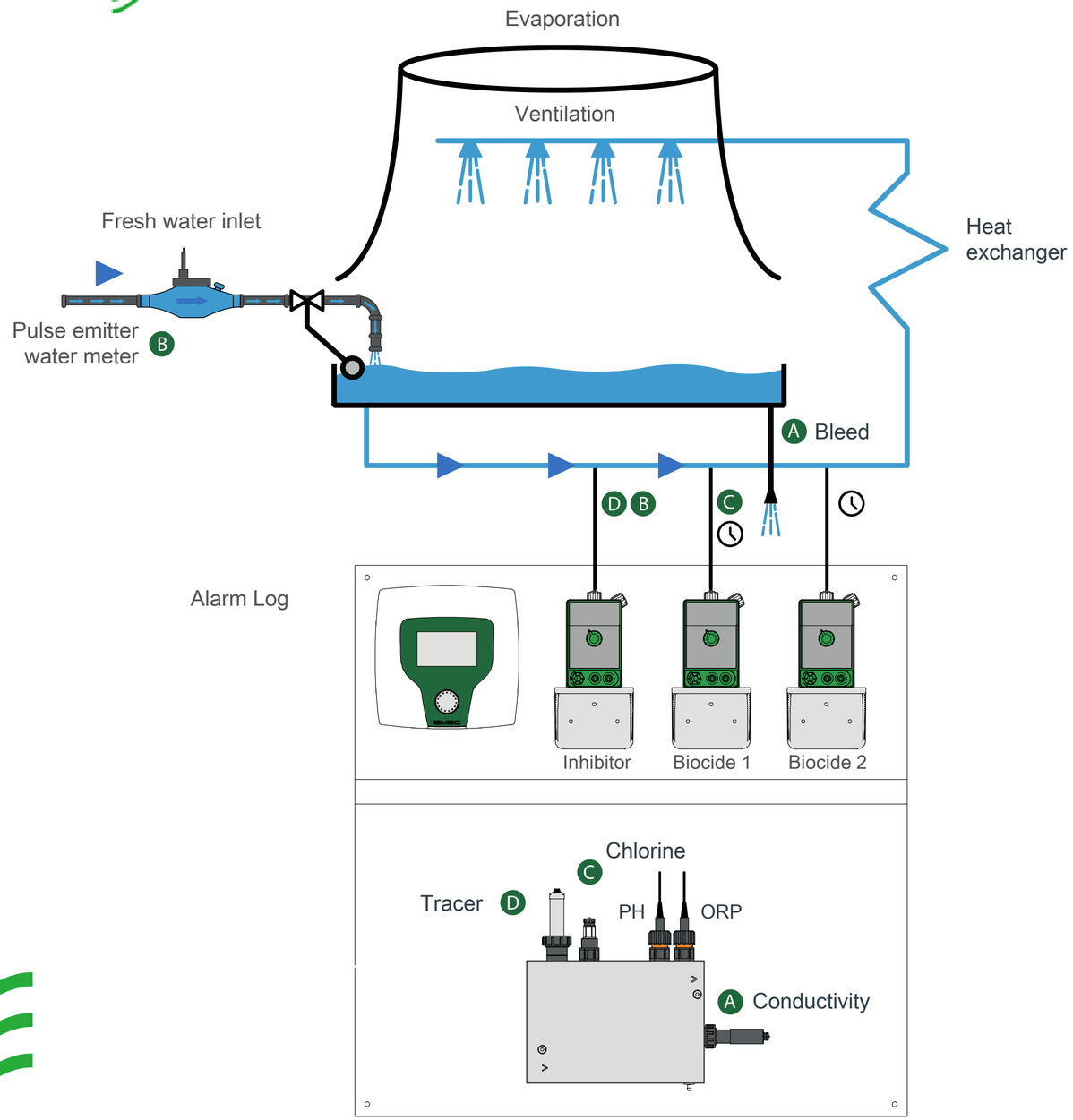
Main risk topic

- Keeping low conductivity values in order to prevent the formation of film on the serpentine and thus invalidating the cooling effect;
- Assuring fresh water supply in the circuit;
- Preventing the corrosion and pitting of the tubing system;
- Preventing the creation of the biofilm and the generation of dangerous bacteria;



Dosing control of towers

- Dosing Inhibitor with water flow
- Dosing 2nd Inhibitor with probe measure
- Opening the bleed valve when conductivity rises (fresh water reintegrates)
- Dosing Biocide (timerized or with probe measure)
- Dosing 2nd Biocide (timerized)
- Coordinate Bleed and Biocide feeding to maximize the effect (Pre-Bleed and Lockout)
- Dosing Pre-Biocide, activators and defoamers

Parameters to control in the water

- Tracer (Inhibitor)
- pH
- Biocide direct measurement for Chlorine, Chlorine Dioxide and Bromine
- ORP
- Corrosion

02

EMEC controllers for cooling towers

- MTOWER
- MTOWER 2CH
- MTOWER PLUS
- CENTURIO TOWER

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EMEC TOWER CONTROLLERS

- Inhibitor proportional dosing
- Biocide 1 dosing (measurement or timered)
- Biocide 2 dosing (timered)
- Pre-biocide dosing
- Bleed function (down driven by conductivity)
- Lockout function
- Pre-bleed function
- Logbook with full list of events
- Remote control (ERMES server)

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MTOWER CONTROLLER

MTOWER

ALARMS	INPUTS	OUTPUTS	CHANNELS
▪ No water flow alarm ▪ Level alarm ▪ Bleed timeout alarm ▪ Min/Max range alarm	▪ 6 products level inputs ▪ 2 water meter inputs ▪ Flow input ▪ Temperature probe input ▪ Stand-by input	▪ mA output	▪ Conductivity

MTOWER 2 CH

ALARMS	INPUTS	OUTPUTS	CHANNELS
▪ No water flow alarm ▪ 2 products level alarms ▪ Bleed timeout alarm ▪ Min/Max range alarm	▪ 6 products level inputs ▪ 2 water meter inputs ▪ Flow input ▪ Temperature probe input ▪ Stand-by input	▪ mA output	▪ Conductivity ▪ PH/RH/CL/TRC

MTOWER PLUS

ALARMS	INPUTS	OUTPUTS	CHANNELS
▪ No water flow alarm ▪ 3 products level alarms ▪ Bleed timeout alarm ▪ Min/Max range alarm	▪ 6 products level inputs ▪ 2 water meter inputs ▪ Flow input ▪ Temperature probe input ▪ Stand-by input	▪ mA output	▪ Conductivity ▪ PH ▪ RH/CL

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CENTURIO TOWER

Hardware & Software

- WIFI - 4G - LAN – MODBUS - JSON:API
- ERMES Online Remote Control via Smartphone, tablet and PC
- SETUP WIZARD: Assisted programming helper for first setup
- SETTINGS UPLOAD: Remote or USB upload of settings

Communication

- ARM A5 high-performance processor
- Large memory capacity
- Reliable LINUX Operating System

Touchscreen Display

- Large 4” LCD full color
- DASHBOARD: Quick parameters visualization
- STATS: Real-time graphs and graphs history
- CHANNELS: Reading and setting of setpoints for the 10 channels
- LOGS: Large storage and download option

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ONLINE REMOTE CONTROL

ERMES

WIFI

4G

ETHERNET

Our controllers can be connected to the Internet via WIFI, 4G or ETHERNET and remotely controlled via ERMES.
ERMES is EMEC's online remote control system, through which you can monitor the actual status of the plant and intervene to change the parameters, just as you were on on sight.

ONLINE STATS

MODBUS

EMEC controllers are also equipped with the MODBUS serial communication protocol which allows connection with other devices within RS485 networks.

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03

EMEC complete & customized solutions

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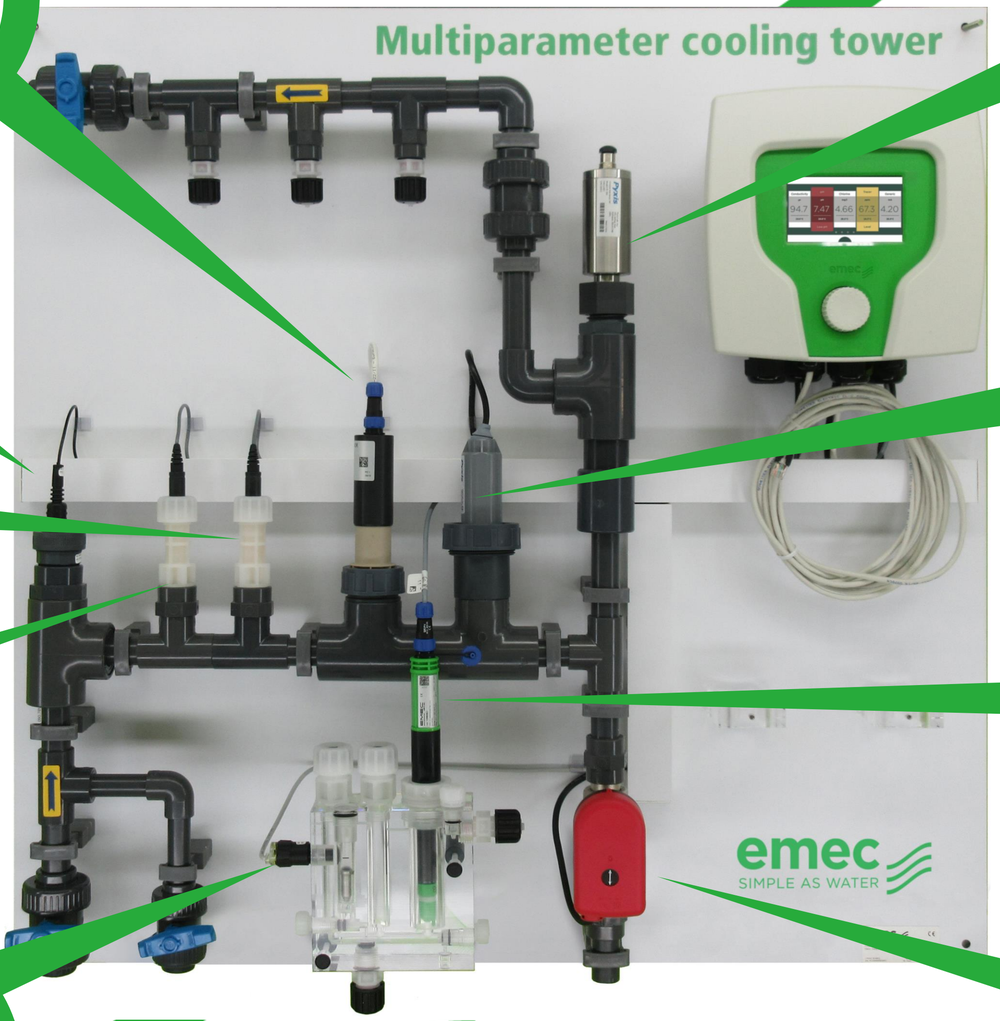
Conductivity probe

Flow sensor

pH probe

ORP probe

Flow control



Corrosion probe

Tracer probe

Chlorine probe

Bleed valve

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PROBES

Inductive Conductivity

- Inductive conductivity probe
- PEEK body
- Stable reading
- 4 m cable/connector
- Autorange

PTSA

- Tracers probes
- PVC body
- LED sensors

Corrosion

- Corrosion rate sensor
- Anti-electromagnetic interference (anti-EMI) design with stainless steel sensor body
- Three O-ring grooves positioned on the sensor body allow inser- tion depth control
- Ultra-low corrosion rate down to 0.001 MPY can be accurately measured
- Corrosion rate and pitting rate
- Alluminium, copper, brass, steel

Laser Level Sensor

- Level laser sensor for quantity detection of liquids in tank
- Suitable for aggressive fluids because it is not in contact with the liquid
- Different length available 0.2-10 m (Range referred to white paper, 90% remission)

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PROBES

pH

- Probes for pH measurement
- Epoxy body
- Cable available in different length

ORP

- Probes for ORP measurement
- Epoxy or glass body
- Cable available in different length

Amperometric

- Probes for Chlorine and Chlorine Dioxide
- Stables and reliable measurement even for low chlorine concentration
- The probe has to be installed into a probe holder and connected to a measuring and control instrument.
- 1 m cable

Potentiostatic

- Probes for Chlorine
- Stables and reliable measurement
- Resistant against dirt, little maintenance required

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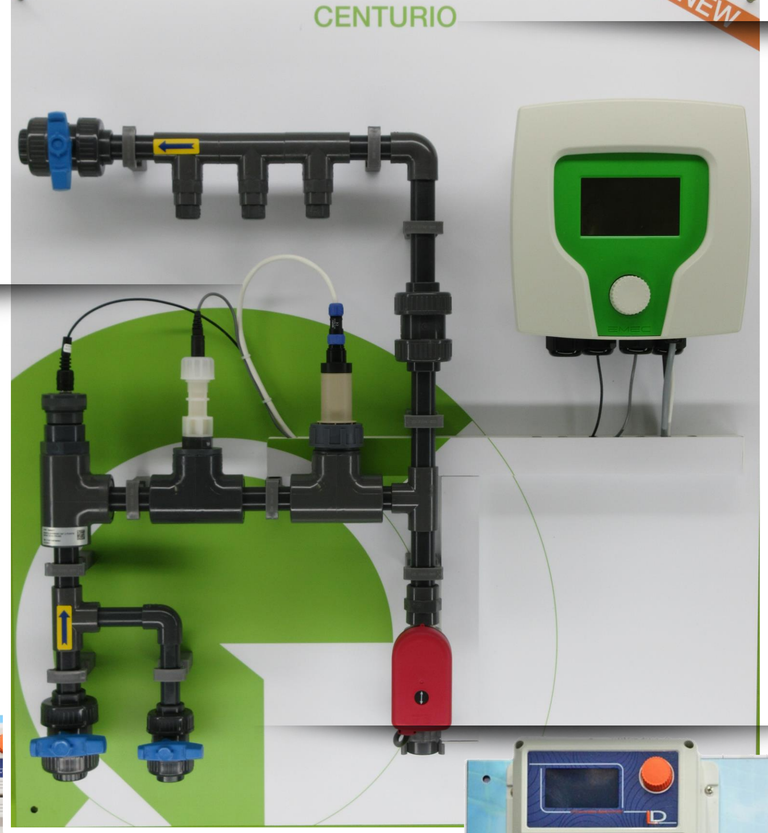
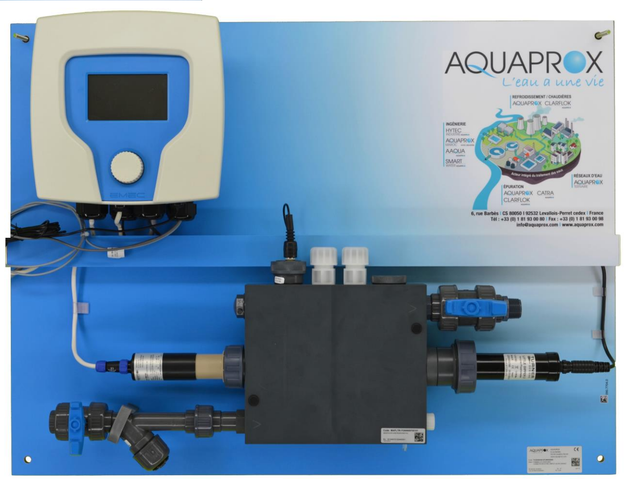
CUSTOMIZED
SOLUTIONS





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Chlorine dioxide

The best biocide.

ELIMINATION OF FREE BACTERIA AND BIO-FILM

In water plants, 90% of bacteria are born and reproduce in the bio-film. Bio-film is the film of biological material that settles inside the tubing system and hot water tanks. Chlorine dioxide penetrates in the bio-film and destroys it from the inside.

WATER pH

The action of chlorine dioxide does not require a determined value of pH in the water- The independence from the pH makes it an effective and versatile product.

LONG-TERM EFFECT

Chlorine dioxide has a residual effect that remains for days and reaches all the points of the plant.

TASTLESS AND ODORLESS

Chlorine dioxide does not modify the taste and odour of the water.

NO CHLORAMMINES

Chlorine dioxide does not create toxic chlorammines and haloforms, unlike other chlorine-based disinfectants.

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EMEC srl

Thanks for your availability and attention
We are available to answer Your questions.

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