emec®
SIMPLE AS WATER

COOLING TOWER CATALOGUE

SYSTEMS FOR COOLING TOWERS



emec®
SIMPLE AS WATER



WATER TREATMENT SYSTEMS

Index

OVERVIEW

EMEC, Water Treatment Systems 5
Cooling Towers. How they work 8
Device, Cabin, Skid and Assembled Panels. All the Emec Choices 9

DOSING PUMPS

Stepper Motor/Peristaltic Dosing Pumps: Velon Series 10
Stepper Motor/Peristaltic Dosing Pumps: WT PER Series 12
Solenoid/Diaphragm Dosing Pumps: WT Series 14

MULTI-CHANNEL DIGITAL CONTROLLERS

Centurio Tower/Centurio Pro 16
MTower Plus 18
MTower 1CH/2CH 20

SINGLE-CHANNEL DIGITAL CONTROLLERS

LDS/LDS Plus 22

PREASSEMBLED MULTI-CHANNEL PANEL SOLUTIONS

Basic solutions 24
Intermediate solutions 26
Advanced solutions 28

PREASSEMBLED SINGLE-CHANNEL PANEL SOLUTIONS

Basic solutions 30
Intermediate solutions 31

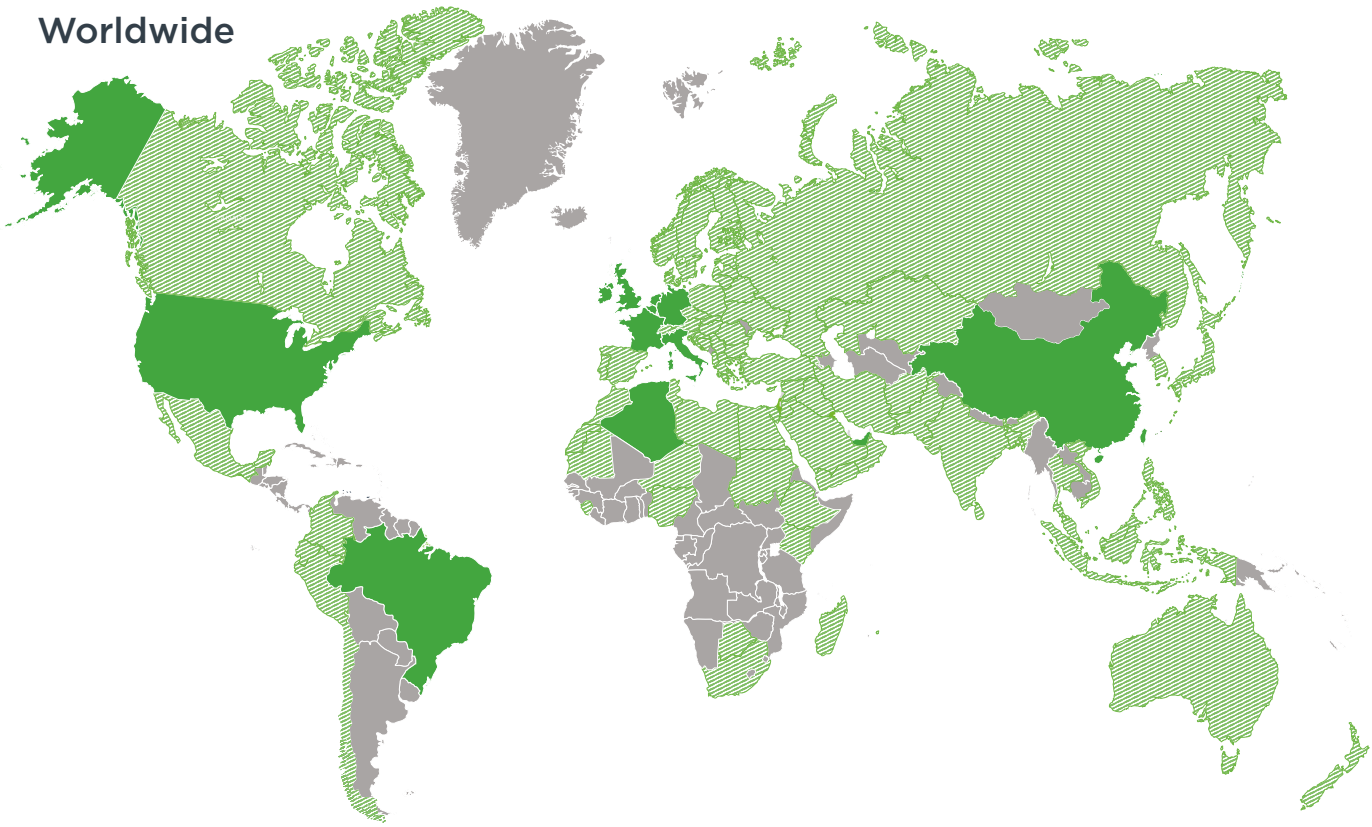
ONLINE CONTROL SYSTEMS

NIMBUS 32
MY EMEC APP 36

EMEC

WATER TREATMENT SYSTEMS

Worldwide



BRANCHES

DISTRIBUTORS

EMEC
SIMPLE AS WATER

40+ years of excellence
250+ employees
88 countries
10 branches
10+ sectors
120.000 dosing pumps/year
15.000 controllers/year
26.000 probes & sensors/year
8.000 dosing station/year
85.000 accessories

MADE IN ITALY

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

5 YEARS WARRANTY

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

Flexibility and innovation

Flexibility and innovation are fundamental to us.
Since 1982, we have been designing and producing reliable, cutting-edge systems for water treatment and chemicals dosing.
As a company, we are open to change and, just like water, we have branched out over time, spreading out into wide-ranging areas, from industrial water treatment to potabilization to water purification, from food and beverage industry to swimming pools.

COMPETENCE AND PROFESSIONALISM

Extremely high performance, top quality and high technology are our greatest assets. But there is more.
Every day, we safeguard something equally important: human capital. Our co-workers are the best professionals on the market; the most expert and competent people.
For this reason our organizational model is designed to manage their safety and health in an organic and systematic way, respecting the international standard ***BS OHSAS 18001***.

OUR VALUE

Being at the cutting edge means constant study. Our R&D and design departments are where our heart beats.
Extremely high-profile engineers and technicians are committed to developing software and designing hardware, but also to studying and evaluating hydraulic and mechanical components.
The customers and their satisfaction have always been at the heart of what we do, so we pay constant attention to the quality of our production processes, through a constantly updated and cutting-edge range of industrial machines.

ENVIRONMENTAL SUSTAINABILITY

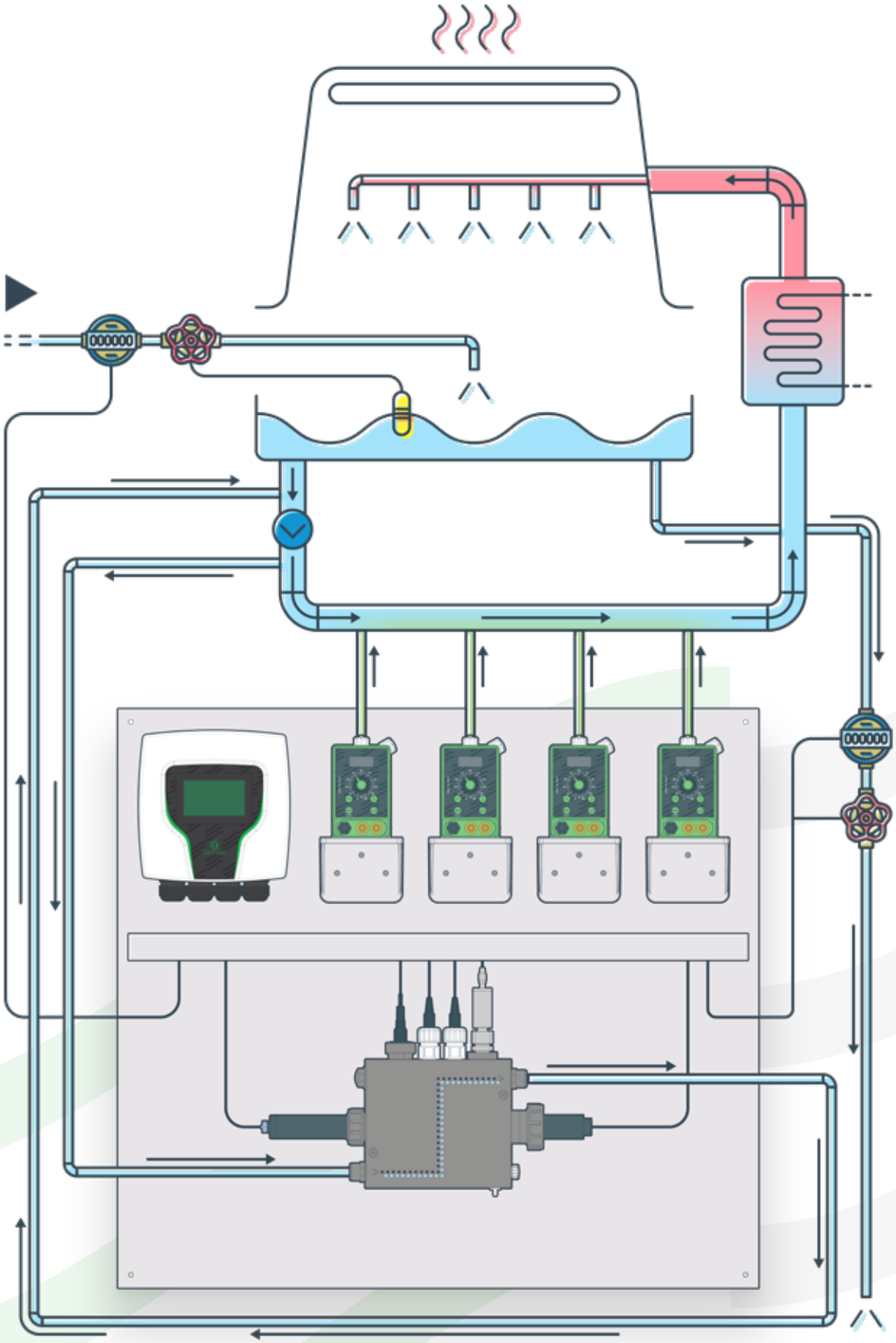
The adoption of an environmental management system compliant with the international standard ***ISO 14001*** arises from the awareness of the imprint that human activities leave on the planet.
Our environmental protection management system allows us to minimize the impact of production processes (with emissions well below the prescribed limits), of products and of raw materials used (with the recycling of most of the waste materials), also thanks to an energy saving system that covers all company spaces and to the use of renewable energy sources.

QUALITY AND SAFETY, FIRST OF ALL

We are entirely responsible for every stage of the process, from invention to delivery. Our products undergo up to 10 quality checks and are tested four times before reaching the customer.
The quality management system of our production process is ***ISO 9001*** certified and has customer satisfaction as its ultimate goal, as well as continuous improvement of company performance.
Customers satisfaction comes hand-in-hand with ensuring safety for them, their operators and final users.
Our dosing pumps and controllers are ***UL*** certified to guarantee full compliance with general requirements for safety of use, while ***NSF*** certifications guarantee that our pumps do not release hazardous pollutants into the water and therefore are fully safe for use in contact with drinking water, for example in the food production industry, or at recreational facilities like swimming pools and spas.

OUR CERTIFICATIONS

OUR SOCIAL CHANNELS

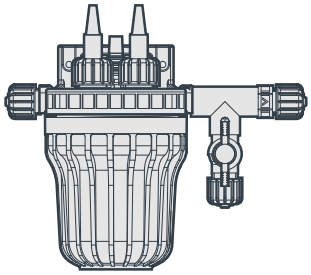


COOLING TOWERS: HOW THEY WORK

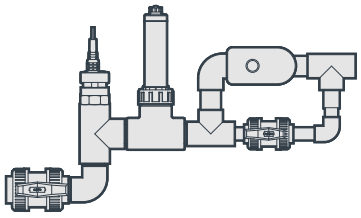
The most efficient management of cooling tower systems

Cooling towers can lower the temperature of water in a plant, whether civil or industrial, by evaporating a small but sufficient quantity of water to generate cooling of the entire circulating mass, allowing it to be reused (at a lower temperature) and thus limiting consumption.
For an efficient cooling system, however, continuous monitoring and, above all, careful water treatment is essential to prevent both corrosion of system components and the formation of bacterial biofilm or other potentially dangerous biological components.

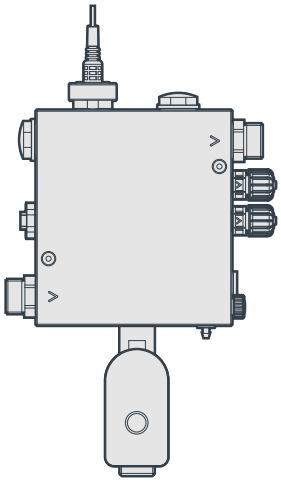
PROBE HOLDER



PIPING MANIFOLD



MANIFOLD



From the very beginning, EMEC has been searching for the most complete solutions to offer the highest possible efficiency in cooling tower operation. With our experience we now features solutions for cooling tower systems both for the civil sector, such as hospitals, large apartment blocks, shopping centres, and for industries such as food, paper, pharmaceuticals, sugar refineries, the chemical industry through to the heavy industry of steel mills. For those who build cooling towers and for those who are involved in water treatment and in particular in the production of chemicals.
Plug-and-play solutions were chosen for their ease of handling, with the aim of having all the equipment compactly in one place rather than split up in various locations.
Given the need to handle often aggressive chemicals, our solutions are also designed to safeguard the safety of operators.

HYDRAULIC SOLUTIONS

- Simple probe holders
- Piping or manifolds to be able to both measure and inject the chemicals used for conditioning
- Piping or manifolds to handle the purging on the panel but not the injection of the chemical
- Piping or manifolds for measuring, injection but also purging directly on the panel

COMPACT AND RELIABLE SOLUTIONS

- Conductivity measurement in recirculation water for purging with motorised valve for maintaining salinity
- In case of changes, second conductivity measurement for make-up water, with subsequent purge opening
- Measurement of make-up and/or purge flow rate for control of cycles of concentration, with totaliser.
- pH measurement for controlled pH towers with acid dosing and possible redundancy (i.e. two pH measurements, with the second to control the first)
- Redox potential measurement or hypochlorite or hypobromite for oxidising biocide control/dosing
- Timers for shock dosing of biocides
- Tracer product measurement, ppm measurement of dosed product
- Corrosion measurement with sensors in various materials to see MPY
- Turbidity measurement
- Dosing for various products, depending on flow rate or analytical measurement or timer

DEVICE, CABIN, SKID AND ASSEMBLED PANELS. ALL THE EMEC CHOICES

Our solutions

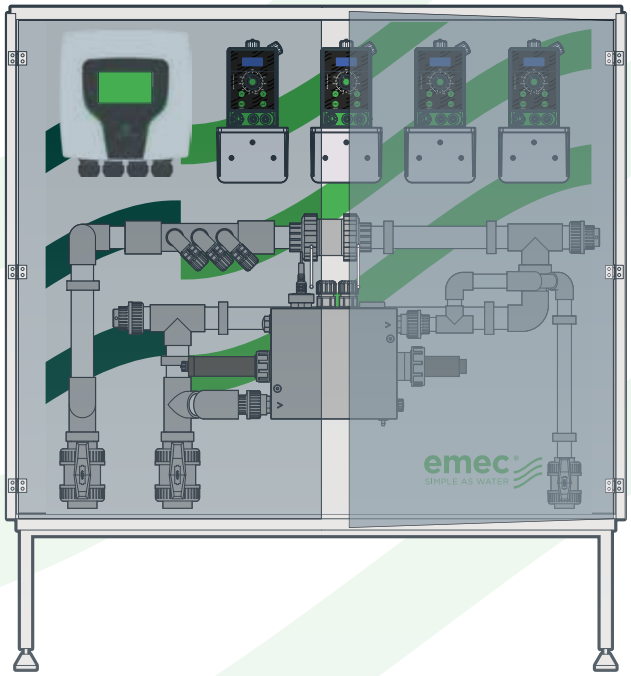
EMEC dosing pumps and measuring and control systems can be assembled with probes and accessories on panels according to specific combinations in order to offer turnkey all-in-one solutions for cooling tower systems.

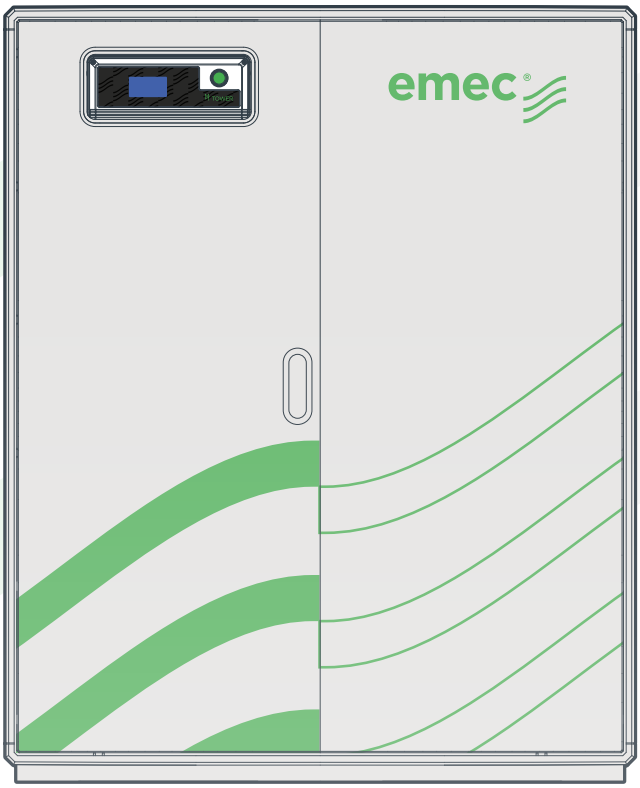
Pre-assembled panels may have:

- **pumps, controllers or elements owned by the customer and assembled by EMEC**
- **customised logos**
- **backgrounds chosen by the customer**
- **customised sizes**
- **custom power panels**

SYSTEMS ON SKIDS OR IN CUSTOM-MADE CABINS

The Stainless Steel or plastic skid is designed and built on client requirements.
In addition to the solution on skids, it is possible to create dosing plants in a cabin, screen guard or with window.
Electric control panels designed to control all the assembeld solution.
The final product includes electrical and piping hook-ups ready for installation.





STEPPER MOTOR/PERISTALTIC DOSING PUMPS

VELON Series

Peristaltic dosing pumps with stepper motor

VELON

WIFI

NIMBUS
DIGITAL SERVICES

APP **MY EMEC**

ONLINE STATS

CUSTOMIZABLE



MAX FLOW RATE

12 **l/h**

MAX PRESSURE

2 **bar**

POWER SUPPLY

12 | 24 **VDC**

24 **VAC**

100-240 **VAC**

VELON is a state-of-the-art compact peristaltic dosing pump, equipped with a high-precision, electronically-controlled multifunction stepper motor that guarantees constant and regular chemical product dosing, even in demanding working conditions and with load variations. Designed to offer a complete, easy-to-use solution in all installation contexts that require precise, reliable, quiet and safe operation.

ACCESSORIES

- 1 PVDF injection valve (0.3 bar)
- 1 PVDF foot filter with level probe
- 4 m suction tubing (flexible PVC)
- 1 long-life biocompatible tubing, 4.8 × 1.6 mm (standard supply)
- 1 long-life biocompatible tubing, 1.6 × 1.6 mm (included accessory)

FEATURES COMMON TO THE ENTIRE SERIES

Microprocessor	Pressure (bar - psi)	RPM Range (rpm)	Protection	Power Supply	installation Class
Next-Generation, High-Performance	2 (29)	da 1 a 100	IP65	24 | 100–240 VAC, 12VDC, 24VDC	II

Flow Rate Range (l/h – gal/h) (Ø1,6x1,6)	Flow Rate Range (l/h – gal/h) (Ø4,8x1,6)	Operating Temperature	Additive Temperature	Manufacturing Materials	Remote Control
0,018 – 1,8 l/h 0,0047 – 0,47 gal/h	0,12 – 12 l/h 0,0317 – 3,17 gal/h	10 – 45 °C 55 – 113 °F	0 – 50 °C 32 – 122 °F	PC/ABS, PVDF, POM, TPV	Web (NIMBUS) e App (MyEmec)

AVAILABLE VERSIONS

DIGITAL

ANALOGIC

VELON MF



VELON PO



VELON PM



VELON CL



SPECIFIC MODEL FEATURES

	Velon MF	Velon PO	Velon CL	Velon PM
DESCRIPTION	Multifunction pump with extensive dosing modes and digital management, including remote control	Versatile pump with proportional adjustment and remote control	Essential, practical pump for constant dosing with manual adjustment via potentiometer	Pump with MODBUS RTU integration, ideal for automated systems
INTER./CONT.	Backlit RGB LCD display, encoder, remote management via app/web	Backlit LCD display, encoder, remote management via app/web	Front potentiometer, LED, ON/OFF button	MODBUS RTU, LED, tasto ON/OFF
WORKING MODE	Constant, CC/Pulse, PPM, %, MLQ, Batch, Volt, mA, Pulse, Weekly Program, Ext Constant	Proportional, Autodosing pH and/or Redox	Constant	External Control
MAINTENANCE	Scheduled maintenance via activity meters	Scheduled maintenance via activity meters	Scheduled maintenance via activity meters	Scheduled maintenance via activity meters
INPUT	MODBUS RTU, Multi-function, Level	MODBUS RTU, Standby, Level, Serial Probe	Level	MODBUS RTU, Level
OUTPUT	Alarm (optional)	Allarm (optional)	Allarm (optional)	Allarm (optional)
CONNECTIVITY	Wi-Fi & Bluetooth	Wi-Fi & Bluetooth	-	-
FW UPDATE	OTA	OTA	-	-

SOLENOID / DIAPHRAGM DOSING PUMPS

WT PER Series

Peristaltic dosing pumps with stepper motor

WT

WIFI

NIMBUS
DIGITAL SERVICES

APP **MY EMEC**

ONLINE STATS

CUSTOMIZABLE

MAX FLOW RATE
3 **l/h**

MAX PRESSURE
2 **bar**

POWER SUPPLY
100-240 **VAC**





DOSING
Green



STAND-BY
White



WARNING
Yellow



ALARM
Red

FEATURES

- No. 2 high-precision stepper motors
- High precision through peristaltic dosing
- Low maintenance requirements (long-life, biocompatible peristaltic tubing)
- LCD display with backlighting that adapts to device operation
- Encoder knob for instrument control
- PC+ABS box
- Flow control input
- Conductivity reading
  - 0/3 mS - 0/30 mS (ECDINDPT)
  - 0/10 mS (ECDSINDPT)
  - 0/10 mS (ECDCCPT)
- Alarms: level, no flow
- Configurable digital inputs (N.O. / N.C.)
- Delayed start of dosing
- Permanent data storage with system log viewable on display
- Bluetooth LE / 2.4Ghz WiFi connection for APP and Remote Control
- Upgradable firmware (via OTA)
- Installation class II (IEC/EN 61010-1)
- Pollution level 2 (IEC/EN 61010-1 and IEC 60664-1)
- IP 65 protection (IEC/EN 60529)
- Manual or automatic bleed
- Built-in MODBUS
- Vertical installation
- Remote control via NIMBUS / My EMEC App

ACCESSORIES

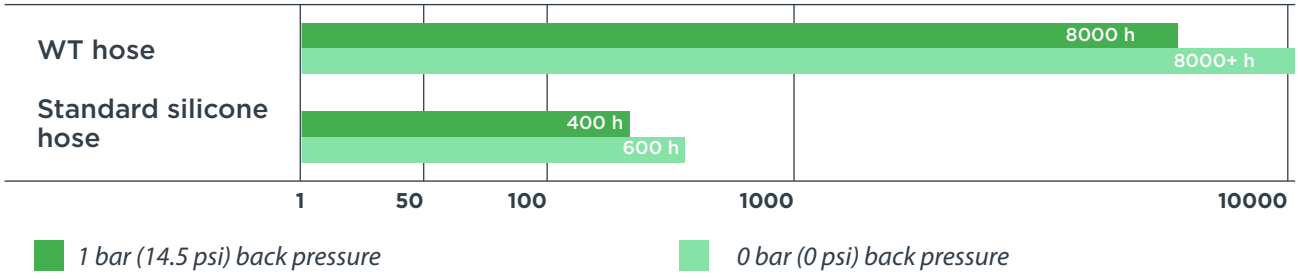
- 2 long-life biocompatible hoses, 4.8 × 1.6 mm (standard supply)
- 2 long-life biocompatible hoses,1,6x1 ,6 (included accessories)

PERFORMANCE

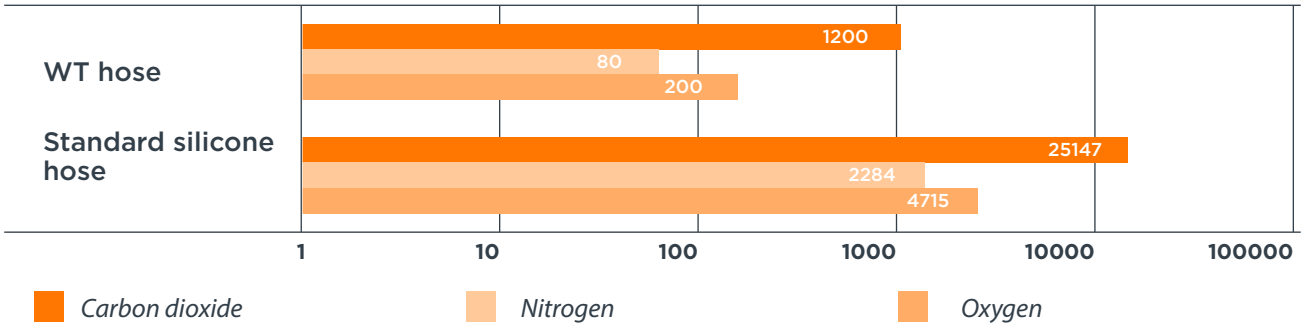
Hose	Pressure		Flow Rate		RPM range
	bar	*psi*	*l/h*	*gal/h*	*rpm*
Ø 1,6x1,6	**2**	**29,0**	**0,018 - 0,45**	**0,0047 - 0,1175**	**1 - 25**
Ø 4,8x1,6	**2**	**29,0**	**0,12 - 3**	**0,0317 - 0,7925**	**1 - 25**

LONG-LIFE BIOCOMPATIBLE TUBING

Hose life comparison



Permeability coefficient comparison (x10^{-11})



INPUTS

- CONDUCTIVITY PROBE
- INLET WATER METER
- LEVEL 1 AND LEVEL 2
- FLOW SENSOR
- STANDBY MODE

OUTPUTS

- ALARM (VOLTAGE-FREE RELAY CONTACT)
- MODBUS RTU PORT
- PUMP 1 AND PUMP 2
- BLEED (WATER DISCHARGE)

WT Series

Solenoid-driven dosing pumps

WT

WIFI

NIMBUS

DIGITAL SERVICES

APP **MY EMEC**

ONLINE STATS

CUSTOMIZABLE

MAX FLOW RATE

3 **l/h**

MAX PRESSURE

5 **bar**

POWER SUPPLY

115 **VAC**

230 **VAC**

RGB DISPLAY





DOSING
Green



STAND-BY
White



WARNING
Yellow



ALARM
Red

PERFORMANCE

Pressure	Flow Rate		SPM Range
bar (psi)	*l/h*	*gal/h*	*spm*
up to 5 bar	up to 3 l/h	up to 0,79 gal/h	45

FEATURES

- Dual Magnet, 45 strokes/min, continuously adjustable (1%–100%)
- Double Ball Check Valves
- Standard PVDF Hydraulic Components
- Wide LCD Display with Adaptive Backlighting
- Rotary Encoder Knob for Instrument Control
- PC + ABS Enclosure
- Flow Control Input
- Conductivity Measurement:
  - 0–3 mS / 0–30 mS (ECDINDPT)
  - 0–10 mS (ECDSINDPT)
  - 0–10 mS (ECDCCPT)
- Alarms: Level, No-Flow
- Digital Inputs Configurable as N.O. or N.C.
- Delayed Dosing Start
- Permanent Data Storage with System Log Viewable on Display
- Bluetooth® LE / 2.4 GHz Wi-Fi Connectivity for App and Remote Control
- Firmware Upgradeable via OTA (Over-the-Air)
- Installation Class II (IEC / EN 61010-1)
- Pollution Degree 2 (IEC / EN 61010-1 and IEC 60664-1)
- IP65 Protection Rating (IEC / EN 60529)
- Manual or Automatic Priming
- Integrated MODBUS
- Vertical Installation

INPUT

CONDUCTIVITY PROBE · INLET WATER METER · LEVEL 1 AND LEVEL 2 · FLOW SENSOR · STANDBY MODE

OUTPUT

ALARM (VOLTAGE-FREE RELAY CONTACT) · MODBUS RTU PORT · PUMP 1 AND PUMP 2 · BLEED (WATER DISCHARGE)

MULTI-CHANNEL DIGITAL CONTROLLERS

CENTURIO Series | CENTURIO TOWER or CENTURIO PRO

Complete control system for cooling towers

CENTURIO BASIC | USB | ETH | GSM | WIFI | MODBUS

CENTURIO control instruments are multiparameter measurement and regulation systems that combine an absolute control and an extreme ease of use with the elegance of the case created by Giugiaro Design.

CENTURIO TOWER and CENTURIO PRO are digital control instrument designed for cooling tower water treatment and equipped with LINUX operating system, high-performance ARM A5 microprocessor and a large color touchscreen display. It can manage at the same time 5 measurement parameters, read and regulate setpoints of the 5 channels and get real-time graphs. CENTURIO has also an high-capacity storage to archive data logs as well as download option via USB port.

CENTURIO PRO is a complete digital control instrument designed for managing water treatment plants, equipped with LINUX operating system, high-performance ARM A5 microprocessor and a large color touchscreen display. It can manage at the same time the main measurement parameters, read and regulate setpoints of the 6 channels and get real-time graphs. CENTURIO has also an high- capacity storage to archive data logs as well as download option via USB port.

Centurio Tower available configurations:
CENTURIO TOWER - CONDUCTIVITY
CENTURIO TOWER - INDUCTIVE CONDUCTIVITY



NIMBUS

DIGITAL SERVICES

Modbus

FEATURES - CENTURIO TOWER

Biocide programmable in 10 daily interventions.
Pre-bleed (water discharge before biocide dosing).
Blow down (discharge control on conductivity values).
Lockout (discharge valve locked for a settable time, after biocide dosing).

INPUTS

8 product level inputs
Flow input
2 water meter inputs
1 RS485 bus probe input
6 slots for channels reading

FEATURES - CENTURIO PRO

For each reading channel:
2 digital setpoints (ON/OFF), 2 proportional setpoints (IS), 1 mA output setpoint, 1 temperature setpoint
6 timers with a maximum of 10 daily schedules each
Laser level output

OUTPUTS

Alarm output
8 proportional outputs
6 on/off outputs
2 freecontact on/off outputs
6 current outputs

CHANNEL 1 - CENTURIO TOWER only

Conductivity

probe | ECD/EICD

range | 0.1µS-100mS (K=1) - 0.01µS-100mS (K=01)
0.001µS-100mS (K=001) - 1µS-1S (K=10)

comp. | Temperature

Inductive conductivity

probe | ECDIND

range | 0,1-3mS (K=1) - 0,3-30mS (K=01) - 0,3-300mS (K=001)

comp. | Temperature

CHANNEL 1 TO CHOOSE ONLY BETWEEN CONDUCTIVITY AND INDUCTIVE CONDUCTIVITY

CHANNELS 2 to 6 - CENTURIO TOWER
CHANNELS 1 to 6 - CENTURIO PRO

pH

probe | EPH

range | 0-14 pH

comp. | Temperature
comp. | pH in Temperature - ECL6

ORP

probe | ERH

range | -999/+999 mV

comp. | Temperature

Chlorine (total, free and combined)

probe | ECL/SCL

range | depending on probe

comp. | Chlorine in Temperature

Tracers

probe | ETRC2

range | 0/999,9 ppm

comp. | Temperature

Bromine

probe | SBR

range | depending on probe

comp. | Chlorine in Temperature

Corrosion

probe | ECORR

range | 0.001/10 MPY

comp. | Temperature

Chlorine Dioxide

probe | SCL2

range | depending on probe

comp. | Chlorine in Temperature

Turbidity

probe | ETORB2

range | 0/40,00 NTU
0/400,0 NTU
0/4000 NTU

comp. | Temperature

Hydrogen peroxyde

probe | SCL9

range | depending on probe

comp. | Chlorine in Temperature

Ozone

probe | SCL10

range | depending on probe

comp. | Chlorine in Temperature

mA input

range | Analogic input module 0-20 mA

Paracetic Acid

probe | SCL11

range | depending on probe

comp. | Chlorine in Temperature

Conductivity

probe | ECD/EICD

range | 0.1µS-100mS (K=1) - 0.01µS-100mS (K=01)
0.001µS-100mS (K=001) - 1µS-1S (K=10)

comp. | Temperature

Inductive conductivity

probe | ECDIND

range | 0,1-3mS (K=1) - 0,3-30mS (K=01) - 0,3-300mS (K=001)

comp. | Temperature

MTOWER Series | MTOWER PLUS

Three parameters control system for cooling towers

MTOWER PLUS BASIC | USB | ETH | GSM | WIFI | MODBUS

MTOWER PLUS controllers are a series of fully feature control systems for cooling towers.
They manage simultaneously three parameters: pH or ORP, chlorine, conductivity or inductive conductivity (to specify on order) and temperature. Probes are not included.

They can be remotely controlled through the exclusive web management system NIMBUS.

Optional configurations:
MTOWER PLUS + mA output
MTOWER PLUS + 12VDC or 24VDC power supply



NIMBUS
DIGITAL SERVICES

Modbus

ALARMS

No water flow alarm
3 product levele alarms
Bleed timeout alarm

INPUTS

6 product level inputs
2 water meter inputs
Flow input
Temperature probe input
Stand-by input

OUTPUTS

mA output*

INPUTS/OUTPUTS WITH * ARE TO BE CONSIDERED AS OPTIONAL

CHANNEL 1 - MTOWER PLUS | CD/PH/CL and CD/PH/RH

Conductivity

probe | ECD/EICD

range | 0/300,0 µS
0/3000 µS
0/30,0 mS
0/300,0 mS

comp. | Temperature

Inductive conductivity

probe | ECDIND

range | 0/3,000 mS
0/30,00 mS
0/300,0 mS

comp. | Temperature

CHANNEL 2 - MTOWER PLUS | CD/PH/CL and CD/PH/RH

pH

probe | EPH

range | 0-14 pH

comp. | Temperature

comp. | pH in Temperature - ECL6

CHANNEL 3 - MTOWER PLUS | CD/PH/CL only

Chlorine (total, free and combined)

probe | ECL/SCL

range | depending on probe

comp. | Chlorine in Temperature

Bromine

probe | SBR

range | depending on probe

comp. | Chlorine in Temperature

Chlorine Dioxide

probe | SCL2

range | depending on probe

comp. | Chlorine in Temperature

Hydrogen peroxyde

probe | SCL9

range | depending on probe

comp. | Chlorine in Temperature

Ozone

probe | SCL10

range | depending on probe

comp. | Chlorine in Temperature

Paracetic Acid

probe | SCL11

range | depending on probe

comp. | Chlorine in Temperature

CHANNEL 3 - MTOWER PLUS | CD/PH/RH only

ORP

probe | ERH

range | 0/1000 mV

comp. | Temperature

MTOWER Series | MTOWER 1 OR 2 CHANNELS

Single or double parameters control system for cooling towers

MTOWER 1CH or 2CH BASIC | USB | ETH | GSM | WIFI | MODBUS

MTOWER 1CH and MTOWER 2CH controllers are a series of fully feature control systems for cooling towers.
MTOWER 1CH manages one parameter: conductivity or inductive conductivity (to specify on order) and temperature. Probes are not included.
MTOWER 2CH manage simultaneously two parameters: pH or ORP or chlorine, conductivity or inductive conductivity (to specify on order) and temperature. Probes are not included.

They can be remotely controlled through the exclusive web management system NIMBUS.

Optional configurations:
MTOWER 2CH + mA output
MTOWER 2CH + 12VDC or 24VDC power supply



NIMBUS
DIGITAL SERVICES

Modbus

ALARMS

No water flow alarm
2 product levele alarms
Bleed timeout alarm

INPUTS

6 product level inputs
2 water meter inputs
Flow input
Temperature probe input
Stand-by input

OUTPUTS

mA output*

INPUTS/OUTPUTS WITH * ARE TO BE CONSIDERED AS OPTIONAL

CHANNEL 1 - MTOWER 1CH | CD
MTOWER 2CH | CD/PH, CD/RH, CD/CL and CD/TRC

Conductivity

probe | ECD/EICD

range | 0/300,0 µS
0/3000 µS
0/30,0 mS
0/300,0 mS

comp. | Temperature

Inductive conductivity

probe | ECDIND

range | 0/3,000 mS
0/30,00 mS
0/300,0 mS

comp. | Temperature

CHANNEL 2 - MTOWER 2CH | CD/PH only

pH

probe | EPH

range | 0-14 pH

comp. | Temperature

comp. | pH in Temperature - ECL6

CHANNEL 2 - MTOWER 2CH | CD/RH only

ORP

probe | ERH

range | 0/1000 mV

comp. | Temperature

CHANNEL 2 - MTOWER 2CH | CD/CL only

Chlorine (total, free and combined)

probe | ECL/SCL

range | depending on probe

comp. | Chlorine in Temperature

Hydrogen peroxyde

probe | SCL9

range | depending on probe

comp. | Chlorine in Temperature

Bromine

probe | SBR

range | depending on probe

comp. | Chlorine in Temperature

Ozone

probe | SCL10

range | depending on probe

comp. | Chlorine in Temperature

Chlorine Dioxide

probe | SCL2

range | depending on probe

comp. | Chlorine in Temperature

Paracetic Acid

probe | SCL11

range | depending on probe

comp. | Chlorine in Temperature

CHANNEL 2 - MTOWER 2CH | CD/TRC only

Tracers

probe | ETRC2

range | 0/9999,9 ppm

SINGLE-CHANNEL DIGITAL CONTROLLERS

Series LDS | LDS OR LDS PLUS

LDS is a single reading system with setpoints
LDS PLUS is a single reading system with PID regulation

LDS or LDS PLUS BASIC | USB | ETH | GSM | WIFI | MODBUS

LDS PLUS controllers are a series of single reading digital systems with PID regulation. LDS controllers are a series of single reading controllers that meet a wide range of applications.
Both of two have: easy control by encoder wheel, flow control, local & remote control, NIMBUS web communication, permanent data storage with system log, PT100 temperature probe, stand-by input, water meter input (only LDS PLUS), alarms, programmable delay at dosing start-up (up to 60 minutes), automatic temperature compensation, probe readout menu (LDSCDIND PLUS / LDSCDIND), different working modes [on/off, impulsive proportional, proportional PWM and fixed PWM, PID (only LDS PLUS)], automatic or manual dosing activity, mA output (optional for LDS), mA water meter input (optional for LDS PLUS only), probe cleaning and 5 relais [2 setpoint; alarm; probe cleaning; circulation (only for LDS PLUS)].

Optional configurations:
LD MULTICHANNEL PLUS + mA output
LD MULTICHANNEL PLUS + 12VDC or 24VDC power supply
LD MULTICHANNEL PLUS + LED strip



NIMBUS
DIGITAL SERVICES
Modbus

ALARMS

General alarm
No water flow alarm
Out of range alarm
Level alarm
Max dosing alarm
Damaged probe alarm

INPUTS

Product level inputs
Flow input
mA water meter input (only for LDS PLUS)*
Temperature probe input
Stand-by input

OUTPUTS

Alarm output
mA output (optional for LDS)*
Proportional outputs
Set points outputs (only for LDS PLUS)
Relay outputs
Opto coupled output (only for LDS PLUS)

INPUTS/OUTPUTS WITH * ARE TO BE CONSIDERED AS OPTIONAL

CH 1 - LDS or LDS PLUS | CD only

Conductivity

probe | ECD/EICD

range | 0/300,0 µS - 0/3000 µS - 0/30,0 mS - 0/300,0 mS

comp. | Conductivity in temperature

CH 1 - LDS or LDS PLUS | CDIND only

Inductive conductivity

probe | ECDIND

range | 0/3,000 mS - 0/30,00 mS - 0/300,0 mS

comp. | Conductivity in temperature

CH 1 - LDS or LDS PLUS | PH only

pH

probe | EPH

comp. | pH in Temperature - ECL6

range | 0-14 pH

CH 1 - LDS or LDS PLUS | RH only

ORP

probe | ERH

range | 0/1000 mV

CH 1 - LDS or LDS PLUS | CL only

Chlorine (total, free and combined)

probe | ECL/SCL

comp. | Chlorine in Temperature

range | depending on probe

Bromine

probe | SBR

comp. | Chlorine in Temperature

range | depending on probe

Chlorine Dioxide

probe | SCL2

comp. | Chlorine in Temperature

range | depending on probe

Hydrogen peroxyde

probe | SCL9

comp. | Chlorine in Temperature

range | depending on probe

Ozone

probe | SCL10

comp. | Chlorine in Temperature

range | depending on probe

Paracetic Acid

probe | SCL11

comp. | Chlorine in Temperature

range | depending on probe

CH 1 - LDS or LDS PLUS | ETORB2 only

Turbidity

probe | ETORB2

range | 0/4000 NTU

CH 1 - LDS or LDS PLUS | DO only

Dissolved Oxygen

probe | EOLUM

range | 20 mg/l O_2

comp. | Temperature and pressure

CH 1 - LDS or LDS PLUS | TRC only

Tracers

probe | ETRC2

range | 0/9999,9 ppm

CH 1 - LDS or LDS PLUS | FL only

Fluoride

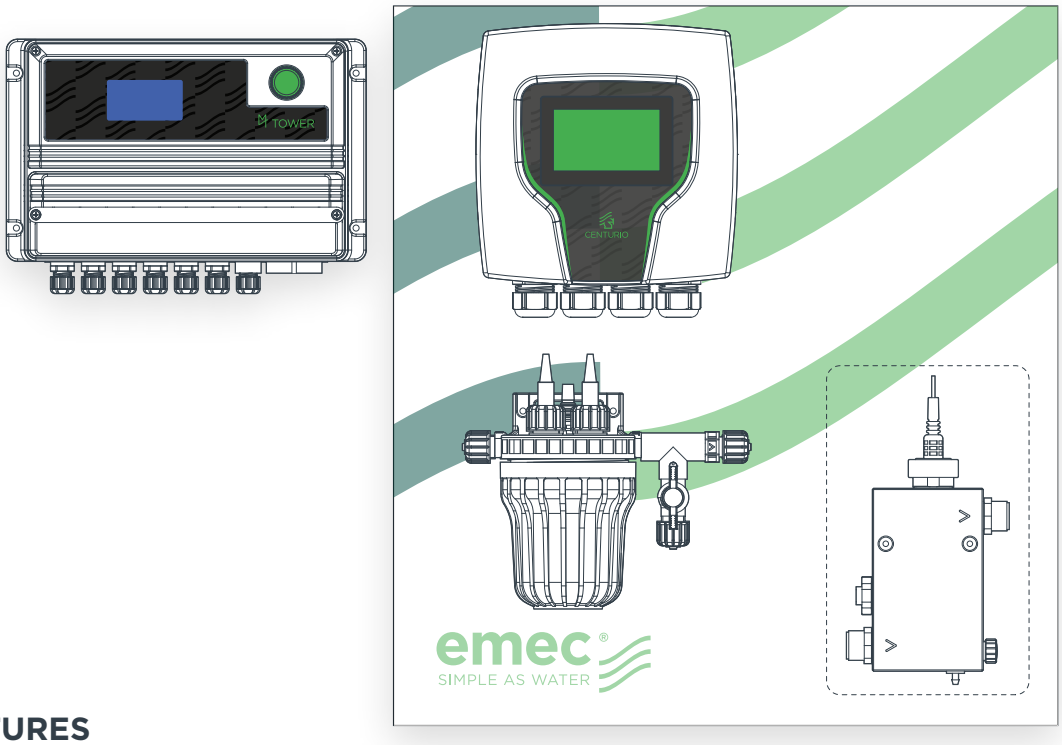
probe | EFL

range | conc. 0/3,00 ppm (0,01 ppm) - mV 0/1000,00 ppm (0,01 ppm)

PREASSEMBLED MULTI-CHANNEL PANEL SOLUTIONS

Basic solutions

Preassembled panel with Centurio Tower or MTower systems



FEATURES

Panel with MTOWER controller, for managing the bleed valve and chemical measurement and dosing, and for measuring the make-up and bleed flow rate.

Available in 4 versions: Conductivity (only); Conductivity/PH; Conductivity/RH; Conductivity/PH/RH.

Optional: Also available with Centurio Tower controller
Also available with customised colour background

CONDUCTIVITY

controller | MTOWER-CD	**controller** | MTOWER-CD-PH	**controller** | MTOWER-CD-RH	**controller** | MTOWER-CD-PH-RH
p. holder | NPED4	**p. holder** | NPED4	**p. holder** | NPED4	**p. holder** | NPED4
probe | ECDCCPT1	**probe** | ECDCCPT1-EPHS	**probe** | ECDCCPT1-ERHS	**probe** | ECDCCPT1-EPHS-ERHS

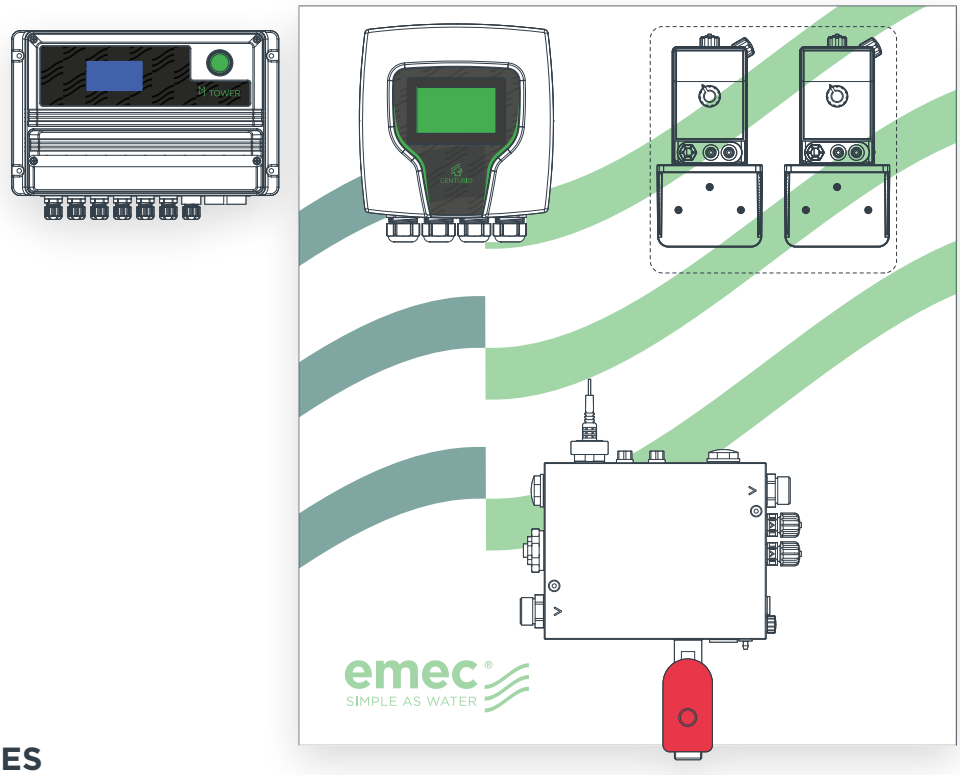
INDUCTIVE CONDUCTIVITY

controller | MTOWER-CDIND	**controller** | MTOWER-CDIND-RH	**controller** | MTOWER-CDIND-pH	**controller** | MTOWER-CDIND-PH-RH
p. holder | MANIFOLD-E-3	**p. holder** | MANIFOLD-E-3 NPED1	**p. holder** | MANIFOLD-E-3 NPED1	**p. holder** | MANIFOLD-E-3 NPED1
probe | ECDCCPT1	**probe** | ECDCCPT1-EPHS	**probe** | ECDCCPT1-ERHS	**probe** | ECDCCPT1-EPHS-ERHS

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

Basic solutions

Preassembled panel with Centurio Tower or MTower systems



FEATURES

Panel with MTOWER controller, for managing the bleed valve and chemical dosing, equipped with 2 dosing pumps and make-up and bleed flow measurement. Equipped with MANIFOLD, 1" controllable bleed valve, 2 dosing pumps, 2 injection points.

Available in 4 versions: Conductivity (only); Conductivity/PH; Conductivity/RH; Conductivity/PH/RH.

Optional: Also available with Centurio Tower controller
Also available with customised colour background

CONDUCTIVITY

controller | MTOWER-CD	**controller** | MTOWER-CD-PH	**controller** | MTOWER-CD-RH	**controller** | MTOWER-CD-PH-RH
p. holder | MANIFOLD 1EV	**p. holder** | MANIFOLD PLUS 1EV	**p. holder** | MANIFOLD PLUS 1EV	**p. holder** | MANIFOLD PLUS 1EV
probes | ECDCCPT1	**probes** | ECDCCPT1 EPHS	**probes** | ECDCCPT1 ERHS	**probes** | ECDCCPT1 EPHS ERHS
pumps | Up to 2x KMF1504 *(with bracket)*	**pumps** | Up to 2x KMF1504 *(with bracket)*	**pumps** | Up to 2x KMF1504 *(with bracket)*	**pumps** | Up to 2x KMF1504 *(with bracket)*

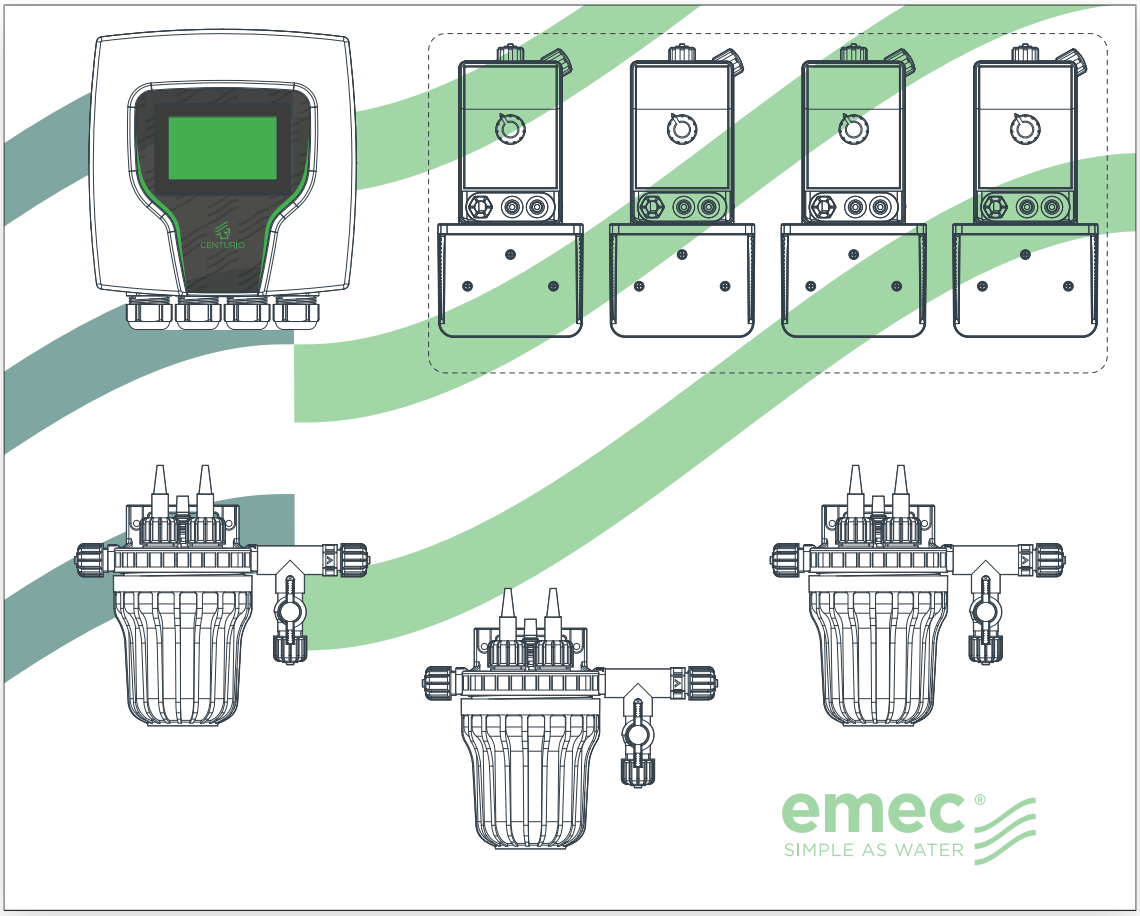
INDUCTIVE CONDUCTIVITY

controller | MTOWER-CDIND	**controller** | MTOWER-CDIND-PH	**controller** | MTOWER-CDIND-RH	**controller** | MTOWER-CDIND-PH-RH
p. holder | MANIFOLD 1EV-IND	**p. holder** | MANIFOLD PLUS 1EV-IND	**p. holder** | MANIFOLD PLUS 1EV-IND	**p. holder** | MANIFOLD PLUS 1EV-IND
probes | ECDCCPT1	**probes** | ECDIND EPHS	**probes** | ECDIND ERHS	**probes** | ECDIND EPHS ERHS
pumps | Up to 2x KMF1504 *(with bracket)*	**pumps** | Up to 2x KMF1504 *(with bracket)*	**pumps** | Up to 2x KMF1504 *(with bracket)*	**pumps** | Up to 2x KMF1504 *(with bracket)*

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

Intermediate solutions

Preassembled panel with Centurio Tower system



FEATURES

Panel with CENTURIO PRO controller, up to 3 conductivities, therefore up to 3 purges, equipped with 4 dosing pumps: one for inhibitor in make-up function and 3 for biocide shock dosing. (Up to 6 purges can be implemented).

Available in 2 versions: Capacitive Conductivity and Inductive Conductivity.

.

Optional: Also available with customised colour background

CONDUCTIVITY

controller | CENTURIO PRO-CD-CD-CD

p. holder | 3x NPED4

probes | 3x ECDCCPT

pumps | Up to 4x KMF1504
(with bracket)

INDUCTIVE CONDUCTIVITY

controller | CENTURIO PRO-CDIND-CDIND-CDIND

p. holder | 3x MANIFOLD-3-E

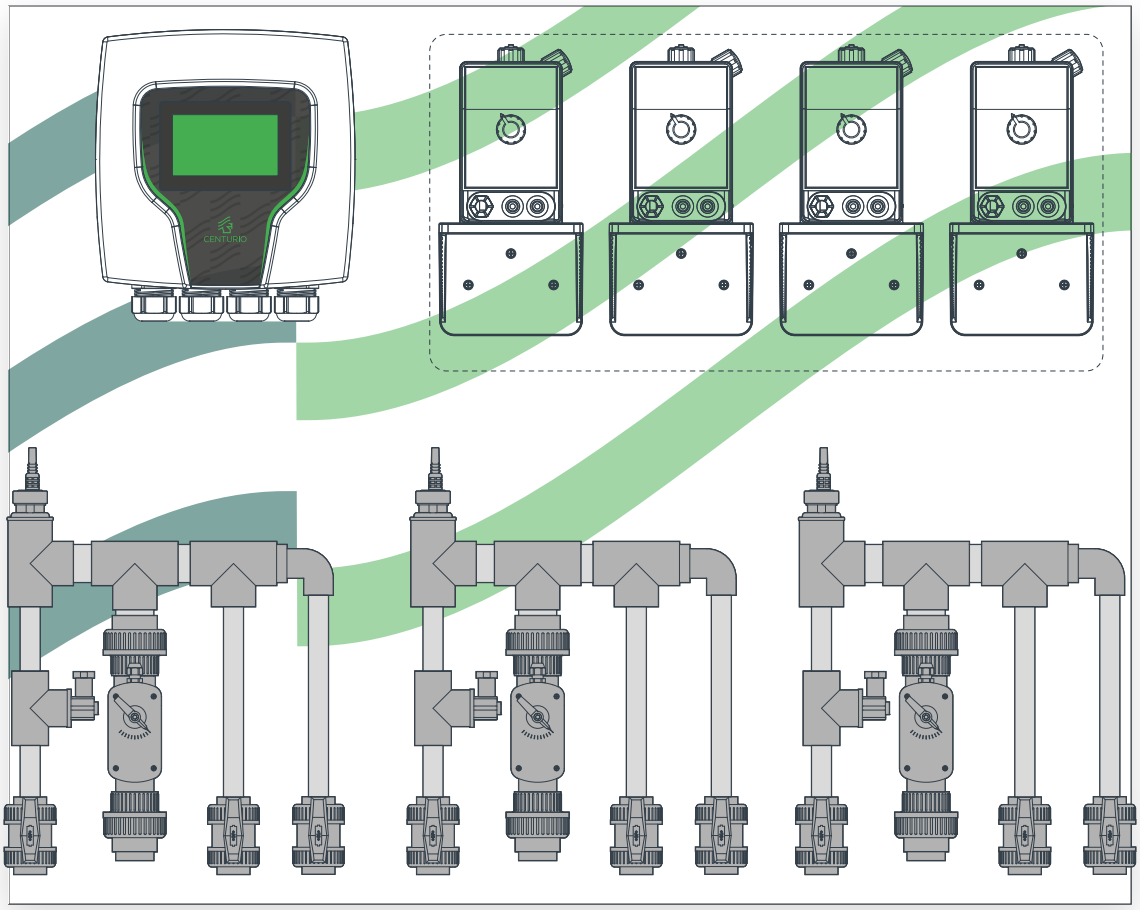
probes | 3x ECDIND

pumps | Up to 4x KMF1504
(with bracket)

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

Intermediate solutions

Preassembled panel with Centurio Tower system



FEATURES

Panel with CENTURIO PRO controller, up to 3 conductivities, therefore up to 3 purges, equipped with EV and 4 dosing pumps: one for inhibitor in make-up function and 3 for biocide shock dosing. (Up to 6 purges can be implemented).

Available in 2 versions: Capacitive Conductivity and Inductive Conductivity.

Optional: Also available with customised colour background

CONDUCTIVITY

controller | CENTURIO PRO-CD-CD-CD

p. holder | 3x PIPING with EV

probes | 3x ECDCCPT

pumps | Up to 4x KMF1504
(with bracket)

INDUCTIVE CONDUCTIVITY

controller | CENTURIO PRO-CDIND-CDIND-CDIND

p. holder | 3x PIPING with EV

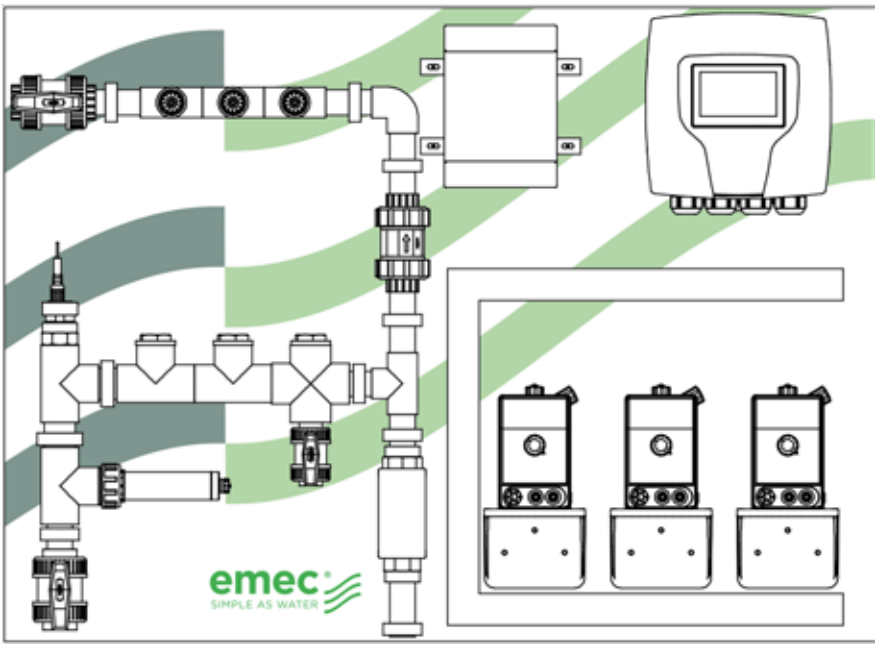
probes | 3x ECDIND

pumps | Up to 4x KMF1504
(with bracket)

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

Intermediate solutions

Preassembled panel with Centurio Tower or MTower systems



FEATURES

Panel with CENTURIO/MTOWER controller, with three measurements (CD, pH and Redox), measurement and metering of make-up and purge flow, with PIPING for measurement, 1 1/4" purge and 4 injection points, equipped with 2 dosing pumps (expandable).

Available in 2 versions: Capacitive Conductivity and Inductive Conductivity.

Optional: Also available with customised colour background

CONDUCTIVITY

controller | CENTURIO/MTOWER-CD-PH-RH

p. holder | PIPING with EV and injection points

probes | ECDCCPT
EPHS
ERHS

pumps | Up to 2x KMF1504
(with bracket)

INDUCTIVE CONDUCTIVITY

controller | CENTURIO/MTOWER-CD-PH-RH

p. holder | PIPING with EV and injection points

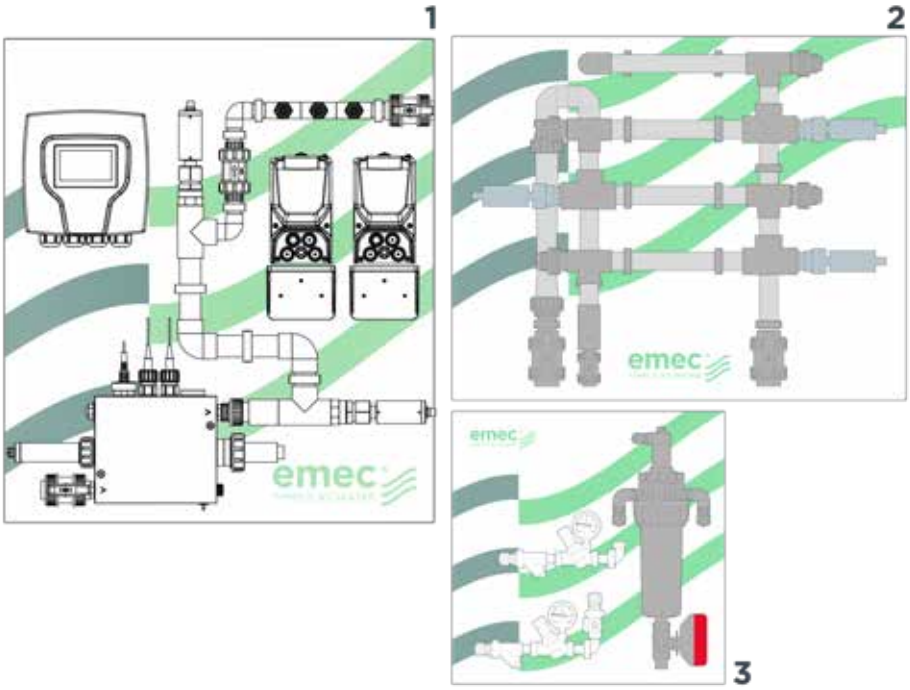
probes | ECDIND
EPHS
ERHS

pumps | Up to 2x KMF1504
(with bracket)

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

Top of the range solutions

Modular preassembled panels with Centurio Tower system



FEATURES

Top of the range panel with CENTURIO-TOWER controller, with up to 6 measurements (CD, pH and Redox, Tracer, Corrosion and Turbidity), measurement and metering of make-up and purge flow rate, with litre counter and valve on the panel, with PIPING for measurement, 1 1/4" purge and 4 injection points, equipped with 4 dosing pumps.
With separate panels for turbidity probe and double/triple corrosion measurement.

The panel is modular so you can remove or put in probes, valves, dosing pumps.

Available in 2 versions: Capacitive Conductivity and Inductive Conductivity.

Optional: Also available with customised colour background

1 - CONDUCTIVITY

controller | CENTURIO

p. holder | PIPING with injection points for purge flow rate measurement

probes | 1 ECDCCPT
1 ETRC2
2 ECORR
1 EPHS
1ERHS

pumps | Up to 2 x Prisma
(with bracket)

1 - INDUCTIVE CONDUCTIVITY

controller | CENTURIO

p. holder | PIPING with injection points for purge flow rate measurement

probes | 1 ECDCCPT
1 ETRC2
2 ECORR
1 EPHS
1ERHS

pumps | Up to 2 x Prisma
(with bracket)

2 - CORROSION

probes | Up to 3x ECORR

other | Corrosion specimen holder kit

3- TURBIDITY

p. holder | NPED TORB

probes | ETORB2

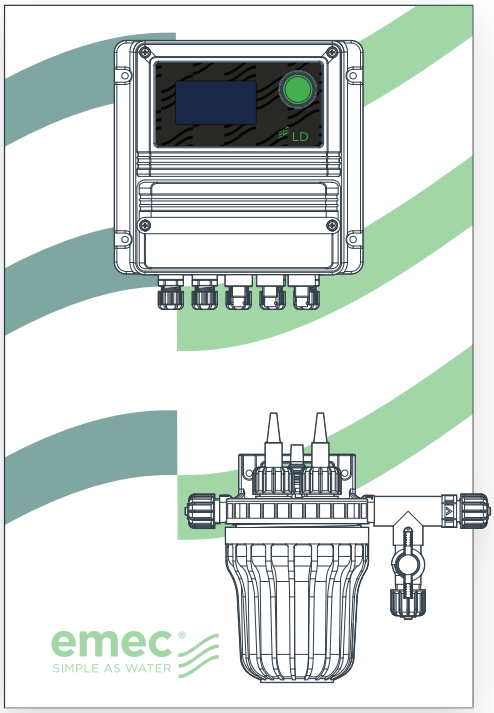
other | Cleaning Kit

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

PREASSEMBLED SINGLE-CHANNEL PANEL SOLUTIONS

Basic solutions

Preassembled panel with LDS system



FEATURES

Panel with LDSCD controller for purge valve management, with socket probe-holder.

Available in 2 versions: Capacitive Conductivity and Inductive Conductivity.

Optional: Also available with customised colour background

CONDUCTIVITY

controller | LDS-CD

p. holder | NPED4

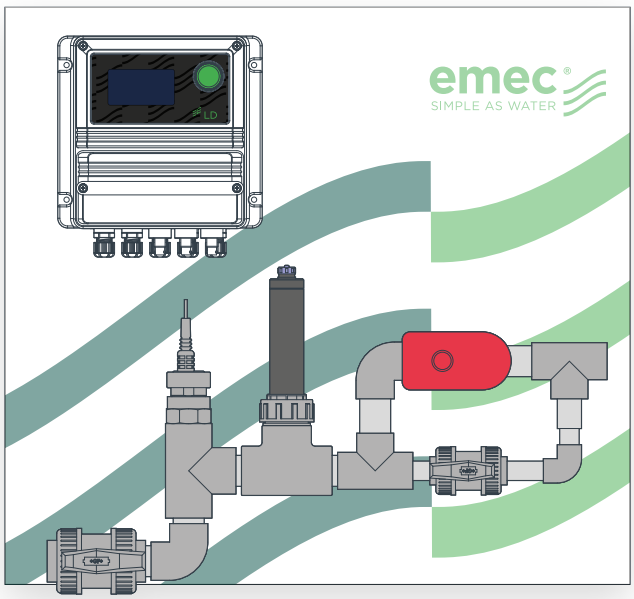
probe | ECDCCPT

INDUCTIVE CONDUCTIVITY

controller | LDS-CDIND

p. holder | MANIFOLD-E-3

probe | ECDIND



FEATURES

Panel with LDSCD controller for managing the 1" partitionable bleed valve, included in the panel.

Available in 2 versions: Capacitive Conductivity and Inductive Conductivity.

Optional: Also available with customised colour background

CONDUCTIVITY

controller | LDS-CD

p. holder | PIPING with 1" EV

probe | ECDCCPT

INDUCTIVE CONDUCTIVITY

controller | LDS-CDIND

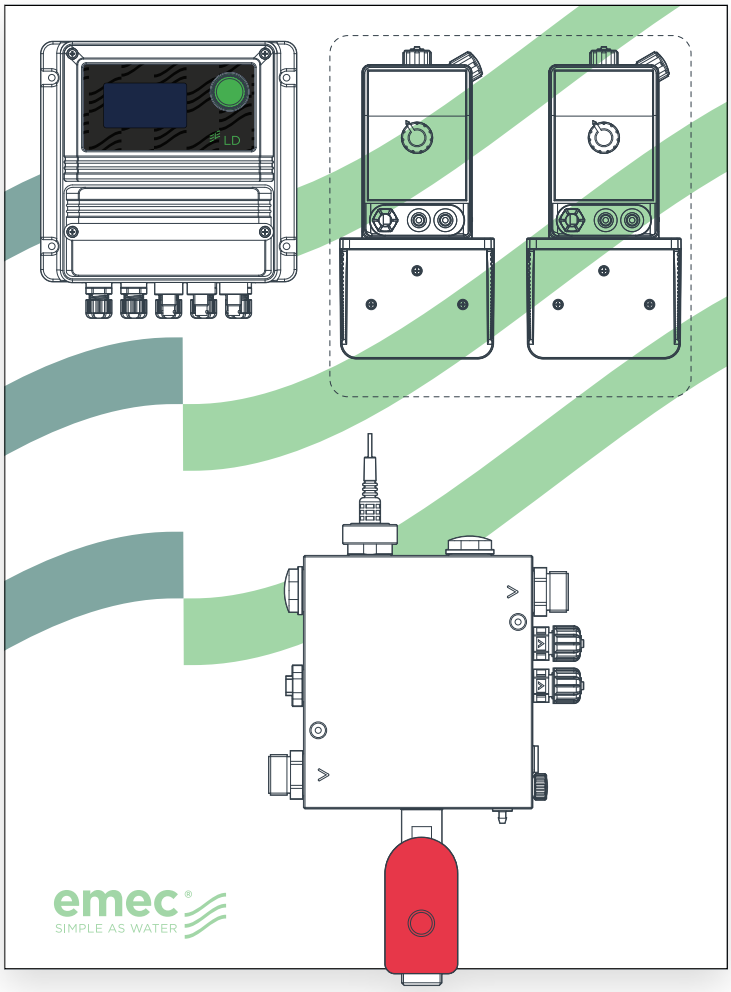
p. holder | PIPING with 1" EV

probe | ECDIND

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

Intermediate solutions

Preassembled panel with LDS system



FEATURES

Panel with LDSCD controller for managing the 1" partitionable bleed valve, included in the panel, equipped with a shock timer pump and an inhibitor pump, with injection points.

Available in 2 versions: Capacitive Conductivity and Inductive Conductivity.

Optional: Also available with customised colour background

CONDUCTIVITY

controller | LDS-CD

p. holder | MANIFOLD with 1" EV

probes | ECDCCPT

pumps | KMF1504 *(with bracket)*
KEN1504 *(with bracket)*

INDUCTIVE CONDUCTIVITY

controller | LDS-CDIND

p. holder | MANIFOLD with 1" EV with 2 injection points

probes | 3x ECDIND

pumps | KMF1504 *(with bracket)*
KEN1504 *(with bracket)*

The images on this page are for illustrative purposes only, for more information on possible configurations, please contact the sales department or your sales representative.

ADVANCED REMOTE MONITORING AND CONTROL SYSTEM

NIMBUS

Online platform for remote control

NIMBUS is an online platform that enables remote monitoring and control of all parameters of compatible EMEC products, allowing interactive management of probes, instrument inputs, product levels, temperature and setpoints.

HOW DOES NIMBUS WORK?

All EMEC instruments equipped with an encoder or touchscreen and an Ethernet or 3G/4G connection are immediately connected and ready for use.

In addition to remote interaction, NIMBUS allows you to receive email notifications regarding alarms and the status of your instruments, based on various configuration options.



ADVANTAGES

- Reduced on-site inspections and maintenance interventions
- Real-time status of network devices (probes, outputs, alarms and setpoints)
- Customisable reports including data from all plant instruments
- Charts, tables and activity logs downloadable to a PC (CSV format)
- Activity scheduling with automatic reminder notifications

COMPATIBLE SYSTEMS

- PRISMA
- CENTURIO PRO / POOL / TOWER
- MTOWER
- WD
- LD / LDS
- WN
- WT
- VELON
- LD OSIN PLUS
- LOTUS

KEY FEATURES

Nimbus has been developed to deliver a complete, intuitive and secure user experience: from interactive plant status visualisation to geolocation, from remote configuration to maintenance planning.

Thanks to advanced reporting tools, role-based access management, and the highest standards of security and data protection, Nimbus supports companies and teams in efficiently monitoring their infrastructure, streamlining daily operations and enhancing overall operational control.



INTUITIVE AND CUSTOMIZABLE DASHBOARD



INTERACTIVE MAP WITH REAL-TIME MONITORING OF SYSTEMS AND DEVICES



BUILT-IN GEOLOCATION FOR ALL YOUR INSTALLATIONS AND DEVICES



GUIDED DEVICE REGISTRATION



REMOTE SETUP AND CONTROL, ANYTIME, ANYWHERE



SMART TEAM MANAGEMENT WITH PROFILED ACCESS LEVELS



INTEGRATED CALENDAR TO PLAN TASKS AND MAINTENANCE



DETAILES, CUSTOMIZABLE REPORTS AT YOUR FINGERTIPS



MULTILINGUAL PLATFORM



SECURE CONNECTION WITH STATE-OF-THE-ART ENCRYPTION

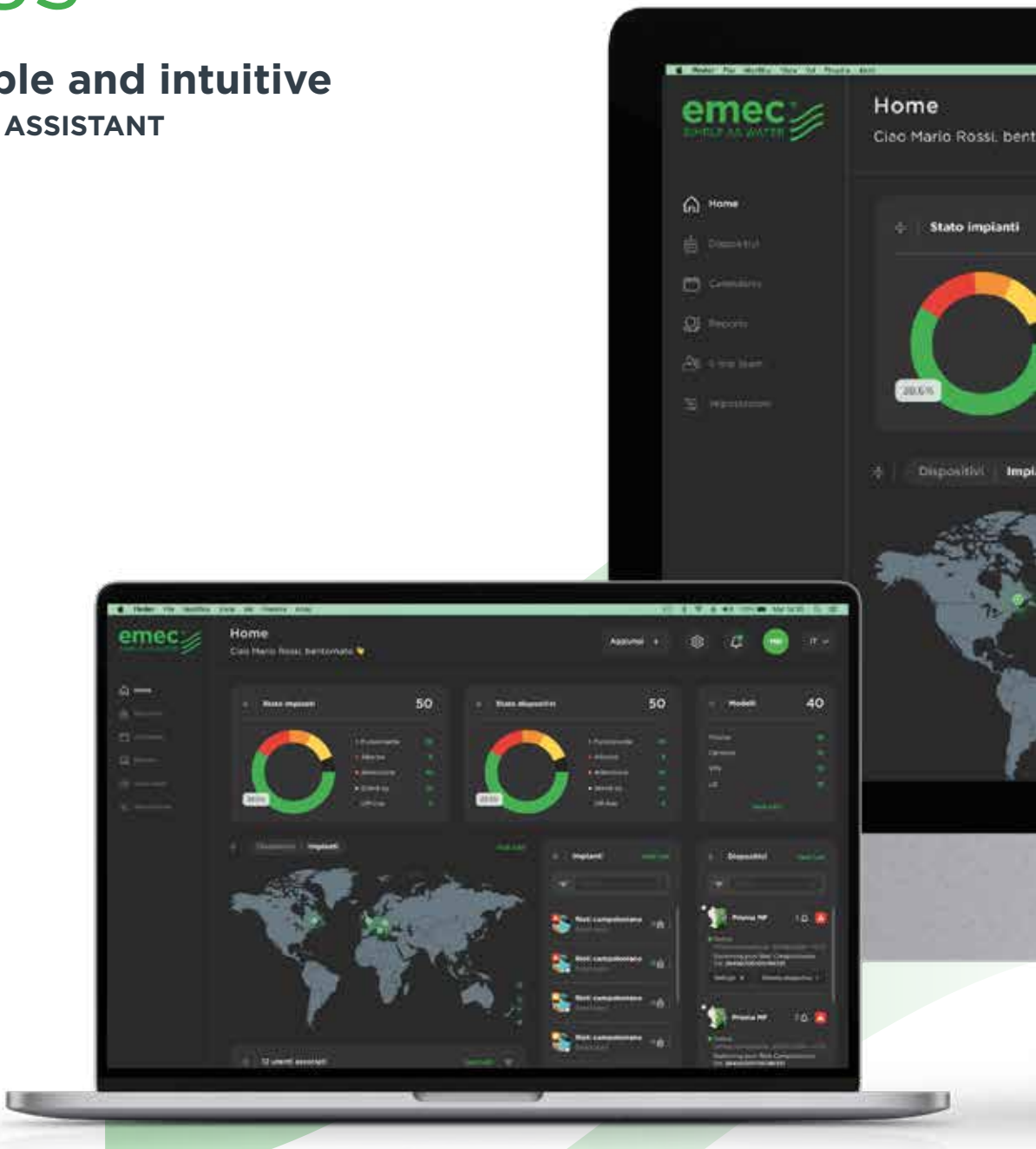


DATA MANAGEMENT IN COMPLIANCE WITH THE HIGHEST SECURITY AND PRIVACY STANDARDS

NIMBUS

Fast, simple and intuitive

YOUR SMART ASSISTANT



A MULTILINGUAL WEB PLATFORM

The user interface is available in 34 languages

MULTIPLE ACCESS LEVELS

Multiple users can be added to the system, with different access levels assigned to each installation

STATUS NOTIFICATIONS PUSH

Set up push notifications on the status of your installations



EVERYTHING UNDER CONTROL

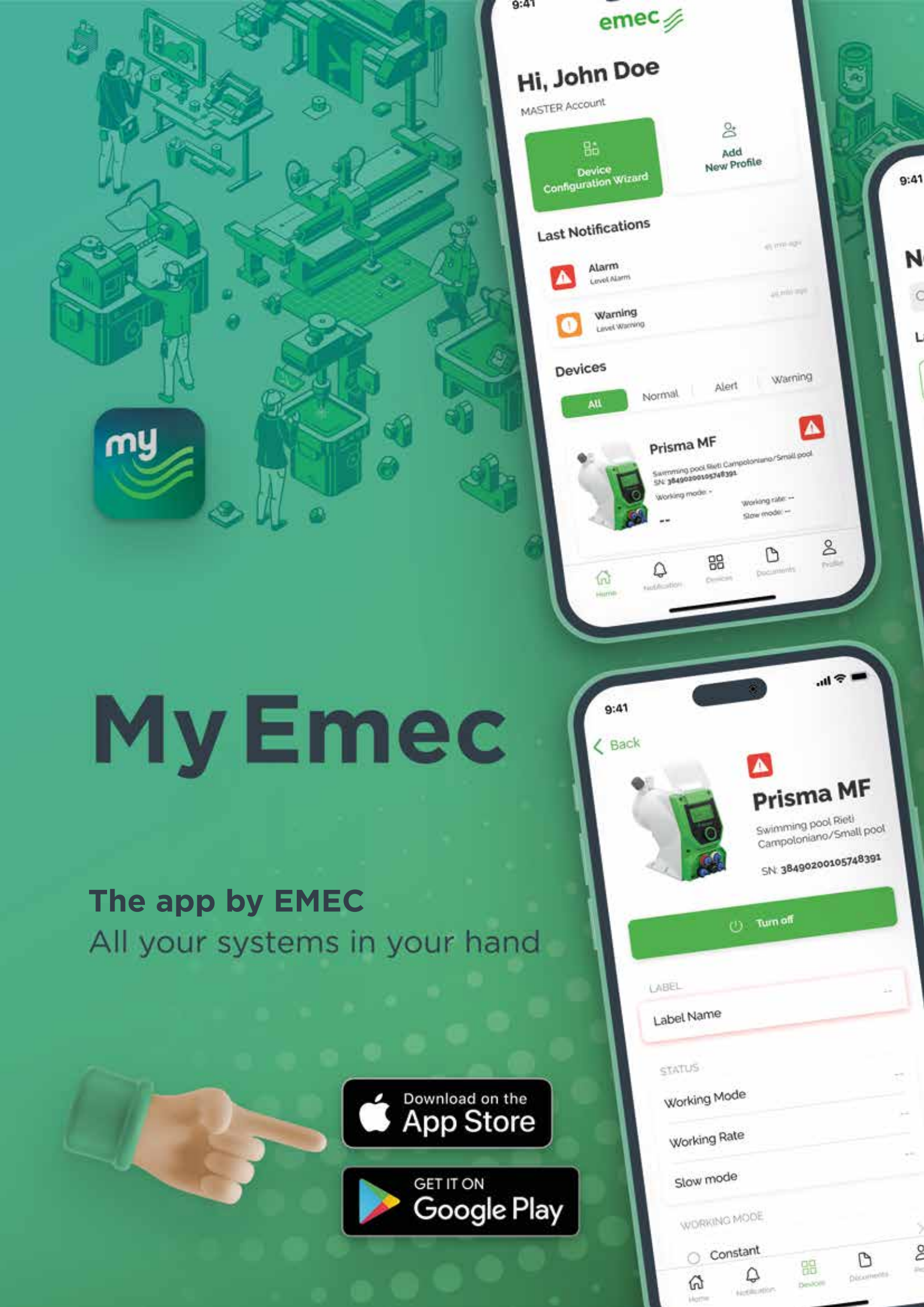
Real-time display of all your plant parameters and monitoring of the status of all probes

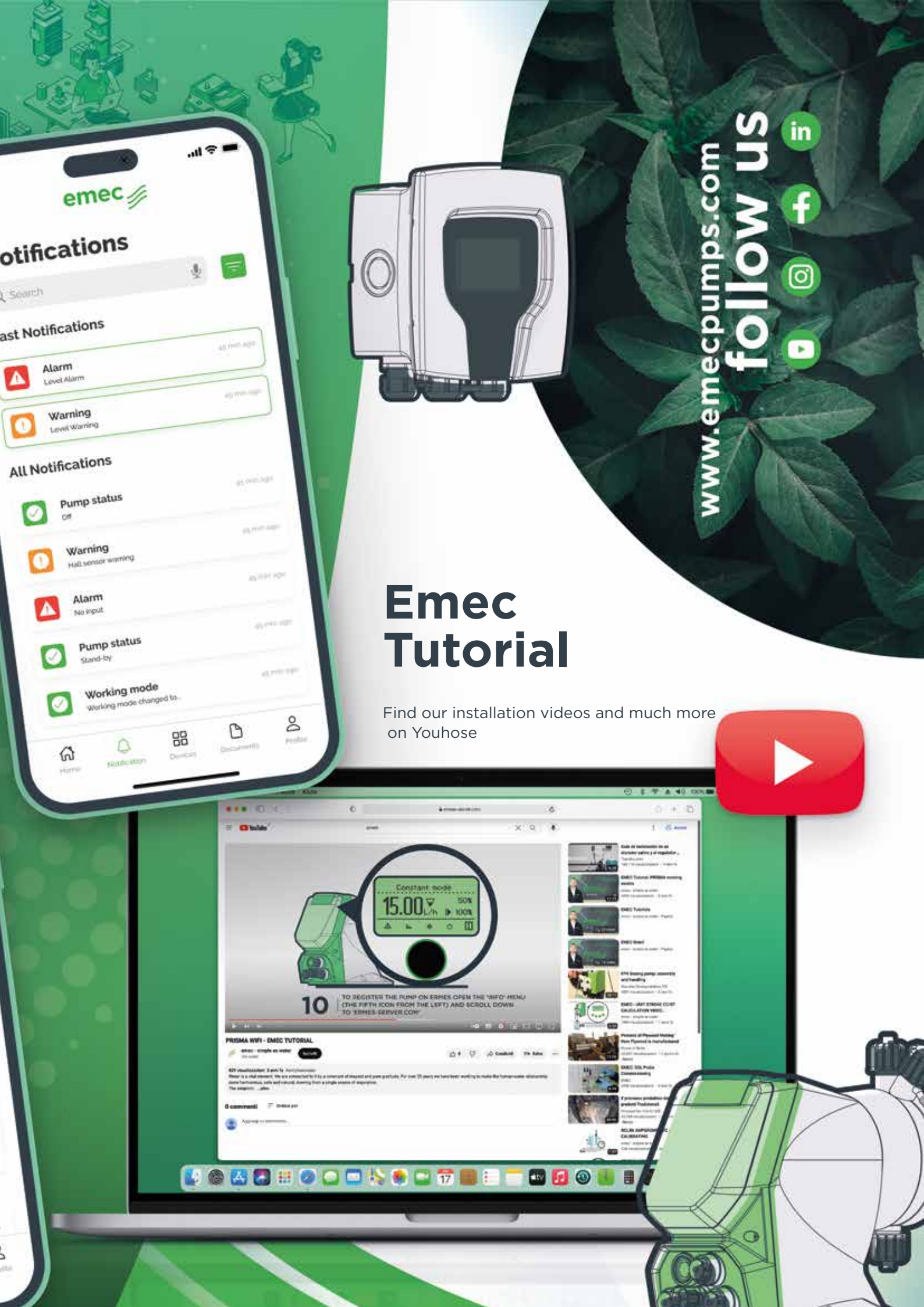
REAL-TIME MANAGEMENT

Real-time management and configuration of all your plant parameters

REAL-TIME CHARTSE

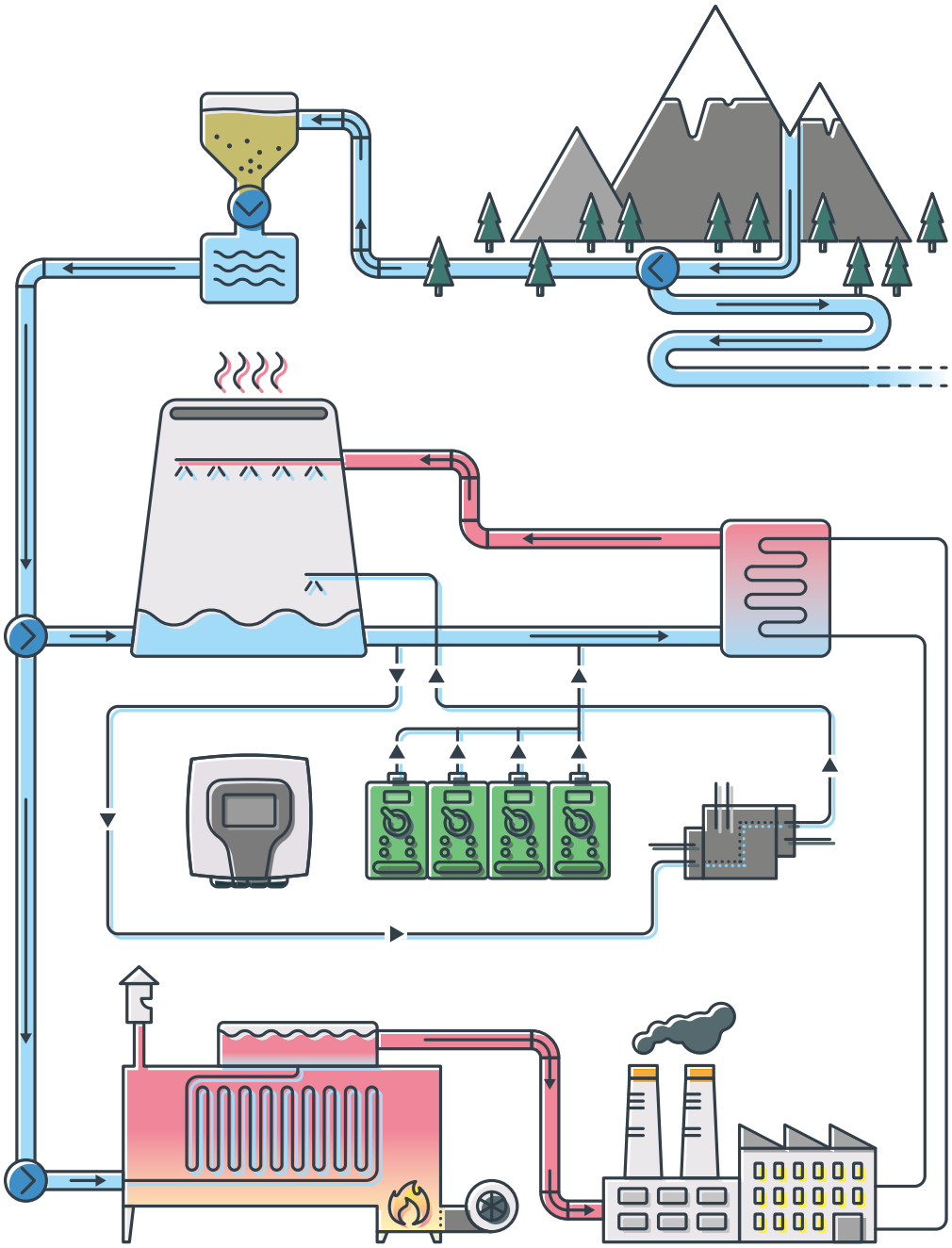
Charts of all your plant parameters, based on both real-time data and stored data


9:41
emec
Hi, John Doe
MASTER Account
Device Configuration Wizard
Add New Profile
Last Notifications
Alarm
Level Alarm
Warning
Level Warning
Devices
All
Normal
Alert
Warning
Prisma MF
Swimming pool Rieti Campoloniano/Small pool
SN: 38490200105748391
Working mode: -
Working rate: --
Slow mode: --
Home
Notification
Devices
Documents
Profile
9:41
Back
Prisma MF
Swimming pool Rieti Campoloniano/Small pool
SN: 38490200105748391
Turn off
LABEL
Label Name
STATUS
Working Mode
Working Rate
Slow mode
WORKING MODE
Constant
Home
Notification
Devices
Documents
my
My Emec
The app by EMEC
All your systems in your hand
Download on the App Store
GET IT ON Google Play



Emec Tutorial

Find our installation videos and much more on Youhose



emec®
SIMPLE AS WATER

emec®
SIMPLE AS WATER

cod. 20211340

EMEC S.r.l. Via Donatori di Sangue, 1 - 02100 Rieti - Italia
T. +39 0746 2284 1 F. +39 0746 2284 2
info@emec.it - www.emecpumps.com