



# **GENERAL CATALOGUE**

WATER TREATMENT SYSTEMS







# WATER TREATMENT SYSTEMS





# SIMPLE AS WATER

Water is a vital element. We are connected to it by a covenant of respect and pure gratitude. For over 40 years we have been working to make the human-water relationship more harmonious, safe and natural, drawing from a single source of inspiration.

*The Simplicity.*

## Flexibility, with three fundamental principles

Since 1982, we have been designing and producing reliable, cutting-edge instruments for water treatment and chemical dosage. 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.

---

### CONSTANT RESEARCH

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.

Just like water, we have branched out over time, spreading out into wide-ranging areas.

- Industrial water treatment
- Purification plants
- Treatment of water used in industrial processes
- Chemical-physical purification processes
- Bacteriological purification systems
- Sewage irrigation plants
- Chemical industry
- Food processing Industry
- Cooling towers
- Refineries
- Wellness centres
- Swimming pools
- Car washes

### EXTREME PRECISION

Our second fundamental principle is complete control of our production line.

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.

### HEALTHY RELATIONSHIPS

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 **ISO 45001**.

At the moment our company numbers nearly 200 employees, 35% of these are women. Statistically, this is a highly respectable percentage in a technical sector like ours. It is a number that is destined to grow.

## The difference between consultant and supplier

Over the years, we have learnt to be good listeners, which is fundamental to an understanding of customers' real needs. This delicate task is handled by our Business Unit, which is entirely made up of technicians.

Their in-depth knowledge of every step of the production process makes it possible for them to offer focussed consulting, both for the choice and the personalisation of products.

We can offer a high level of customisation, which ranges from branding to hardware and software modifications made to standard models.

### COMPETENCE THAT SETS A PRECEDENT

As leaders in our sector, we realise that we have a great responsibility: preparing specialists and customers so that they can use the products we produce in the best possible way.

That is why we created the Emec Training Program: a series of training courses dealing with installation and maintenance in both private and company contexts.

Our training and refresher courses are run at our expense; and that includes participants' logistics costs. So you do not have to pay, but you earn in terms of competence.

---

### A BACK OFFICE THAT IS ALWAYS UP FRONT

It is one of the feathers in our cap: a helpful and competent back office. Every day, their important contribution ensures that every aspect of our supply process is impeccable. This excellent care and attention contributes to the fact that the number of customers who choose to leave us is close to zero.

### QUALITY FROM THE OUTSET TO AFTER-SALES

For us, closing a deal does not mean the end of a relationship. We remain at our customers' disposal to make sure that, over time, our products are working properly. We are ready to respond to any request in real time, even outside office hours.





## A world of care and attention

Water is the vital element on which our business is based. The least we can do to respect this inestimable resource is treat the environment in the best possible way. It is not just about abiding by laws, it is about respect for our ethics.

### LESS IMPACT, MORE SUSTAINABILITY

We think of sustainability as an endless path: each responsible step we take further reduces our company's environmental footprint.

To this end, we have adopted an Environmental Management System compliant with the international standard **ISO 14001**. This makes it possible to reduce atmospheric and acoustic emissions well below the prescribed limits; to rationalise consumption of water, electricity and gas; and to reduce the production of waste and the contamination of the land.

Sustainability also means giving waste material a second life: we recycle or reclaim 93% of circuit boards, paper and plastic; as well as shreds or chips of iron, aluminium, copper, bronze, brass and wood. In addition, we are equipped with an extractor that separates water from oil during the machine cleaning process, so that it can be reused in the production process.

### MAXIMUM EFFICIENCY. STARTING WITH ENERGY

We have opted for renewable energy sources, state-of-the-art boilers, and intelligent air conditioning. This has made it possible for us to drastically reduce our consumption of gas and electricity. The only energy we do not want to save is the one we put into our work.

### FROM GOOD INTENTIONS TO BEST PRACTICES

Everything we do to improve sustainability is shared with our employees, collaborators and partners through information and training activities. Every update is included in our Integrated System Manual: a tool that we ask everyone to respect in order to ensure that good intentions correspond to the day to day practices at work.

### EXCLUSIVE DISTRIBUTORS FOR EXCLUSIVE QUALITY

Becoming an exclusive Emec dealer in your country is an excellent opportunity for a variety of reasons:

- The excellent value for money of our references;
- Our company is extremely solid with a long-standing management structure;
- Guaranteed, qualified support to manage processes and solve technical and administrative problems;
- An in-house shipping department that can guarantee lead times (from order to shipment) to any country in the world;
- Access to training and refresher courses;
- Assistance is available directly online and can be accessed at any time. through the Reserved Area on **emecpumps.com**;
- Precious support for branding and communication.

# NOTHING IS MORE SIMPLE THAN COMPLEXITY

The numbers speak for themselves. We are an extremely prolific company, with high-level technical know-how. We manage articulate and complex processes with increasingly sophisticated standards of innovation.



**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



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



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

And all with the same objective: *to make the lives of companies and professionals increasingly simple.*



## OUR CERTIFICATIONS



## OUR SOCIAL CHANNELS



# INDEX

## Dosing Pumps

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| <b>STEPPER DOSING PUMPS</b>                                                 | 10/17 |
| <i>Stepper Motor Dosing Pumps: Prisma, WN, WT, Velon</i>                    |       |
| <b>SOLENOID-DRIVEN DOSING PUMPS</b>                                         | 18/21 |
| <i>Solenoid-driven dosing pumps AMS, K, T, V series</i>                     |       |
| <b>SOLENOID-DRIVEN DOSING PUMPS WITH CONTROLLER</b>                         | 22/24 |
| <i>Solenoid-driven dosing pumps WD, WT series</i>                           |       |
| <b>COMPRESSED AIR DOSING PUMPS</b>                                          | 25/25 |
| <i>Solenoid-driven dosing pumps RAC series</i>                              |       |
| <b>MULTIFUNCTION MOTOR-DRIVEN DOSING PUMPS</b>                              | 26/27 |
| <i>Multifunctional motor-driven dosing pumps PRIUS D MF and P MF series</i> |       |
| <b>MOTOR-DRIVEN DOSING PUMPS</b>                                            | 28/29 |
| <i>Motor-driven dosing pumps PRIUS D and P series</i>                       |       |
| <b>ACCESSORIES FOR DOSING PUMPS</b>                                         | 30/31 |
| <i>Tanks, mixers, lances, valves, sensors, water meters</i>                 |       |
| <b>PULSE OUTPUT METERS</b>                                                  | 32/33 |
| <i>Pulse output meters and meters pulses per litre table</i>                |       |
| <b>MODEM AND EXTERNAL MODULES</b>                                           | 34/34 |
| <i>For LD, MTOWER, WD and CENTURIO controller series</i>                    |       |

## Controllers

|                                                                            |       |
|----------------------------------------------------------------------------|-------|
| <b>CENTURIO PRO/TOWER/POOL</b>                                             | 36/37 |
| <i>Multi-parameter digital controllers</i>                                 |       |
| <b>LD MULTICHANNEL/ LD MULTICHANNEL PRO</b>                                | 37/37 |
| <i>2-channel controllers</i>                                               |       |
| <b>LDS/LDS PLUS</b>                                                        | 38/39 |
| <i>1-channel controllers</i>                                               |       |
| <b>MTOWER PLUS/2 CH/1 CH</b>                                               | 40/40 |
| <i>Controllers for cooling towers with up to 3 channels</i>                |       |
| <b>RACK CONTROLLERS</b>                                                    | 41/41 |
| <i>Rack-mount controllers JA PRO, J DIGITAL and DIN DIGITAL series</i>     |       |
| <b>MEASUREMENT SYSTEMS</b>                                                 | 42/43 |
| <i>Probes: Chlorine, pH, ORP, Dissolved Oxygen, Turbidity, Tracers ...</i> |       |
| <b>ACCESSORIES FOR MEASURING SYSTEMS</b>                                   | 44/44 |
| <i>Probe Holders, Filters, Buffer Solutions</i>                            |       |

## Pre-configured solutions, skids, cabinets and dosing stations

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| <b>LOTUS DISINFECTION SYSTEMS</b>                                     | 46/57 |
| <i>All-in-one chlorine dioxide disinfection systems</i>               |       |
| <b>POOLBRAVO</b>                                                      | 58/59 |
| <i>All-in-one system for swimming pool installations</i>              |       |
| <b>PRE-CONFIGURED SOLUTIONS FOR POOLS AND SPAS</b>                    | 60/61 |
| <i>Control and dosing systems for pools, spas and water treatment</i> |       |
| <b>PRE-CONFIGURED SOLUTIONS FOR COOLING TOWERS</b>                    | 62/63 |
| <i>Control and dosing systems for cooling towers</i>                  |       |
| <b>PRE-CONFIGURED SKID SOLUTIONS</b>                                  | 64/65 |
| <i>Multi-parameter dosing and control systems Skid</i>                |       |
| <b>REMOTE MONITORING AND CONTROL SYSTEMS</b>                          | 66/71 |
| <i>Nimbus, My Emec App</i>                                            |       |

# PRISMA Series

## Stepper motor dosing pumps



DIGITAL SERVICES



### MAX FLOW RATE

80 l/h

### MAX PRESSURE

25 bar

### POWER SUPPLY

12-24 VDC

24 VAC

100-240 VAC

### VENTING

Manual

### FEATURES

- Pump head available in PVDF, PP, SS and PMMA
- Accessories available in PVDF and PP
- Stepper motor
- Multifunctional software
- High-strength PTFE diaphragm
- Horizontal mounting
- RGB backlit LCD display

### STEPPER MOTOR

SLOW MODE

TURNDOWN RATIO 1:4800

MULTI-COLOUR DISPLAY

MULTIFUNCTION

### WORKING MODES

CONSTANT

MODBUS

NIMBUS

CONSTANT WITH EXTERNAL INPUT

PPM

%

mA

PAUSE-WORK

WEEKLY TIMER

MLQ

CC/PULSE

VOLT

BATCH EXTERNAL/MANUAL

### PUMP HEADS



PVDF



PP



SS AISI316L



PMMA

### ACCESSORIES



Foot filter with level probe



Injection valve 1/2" or 3/4"

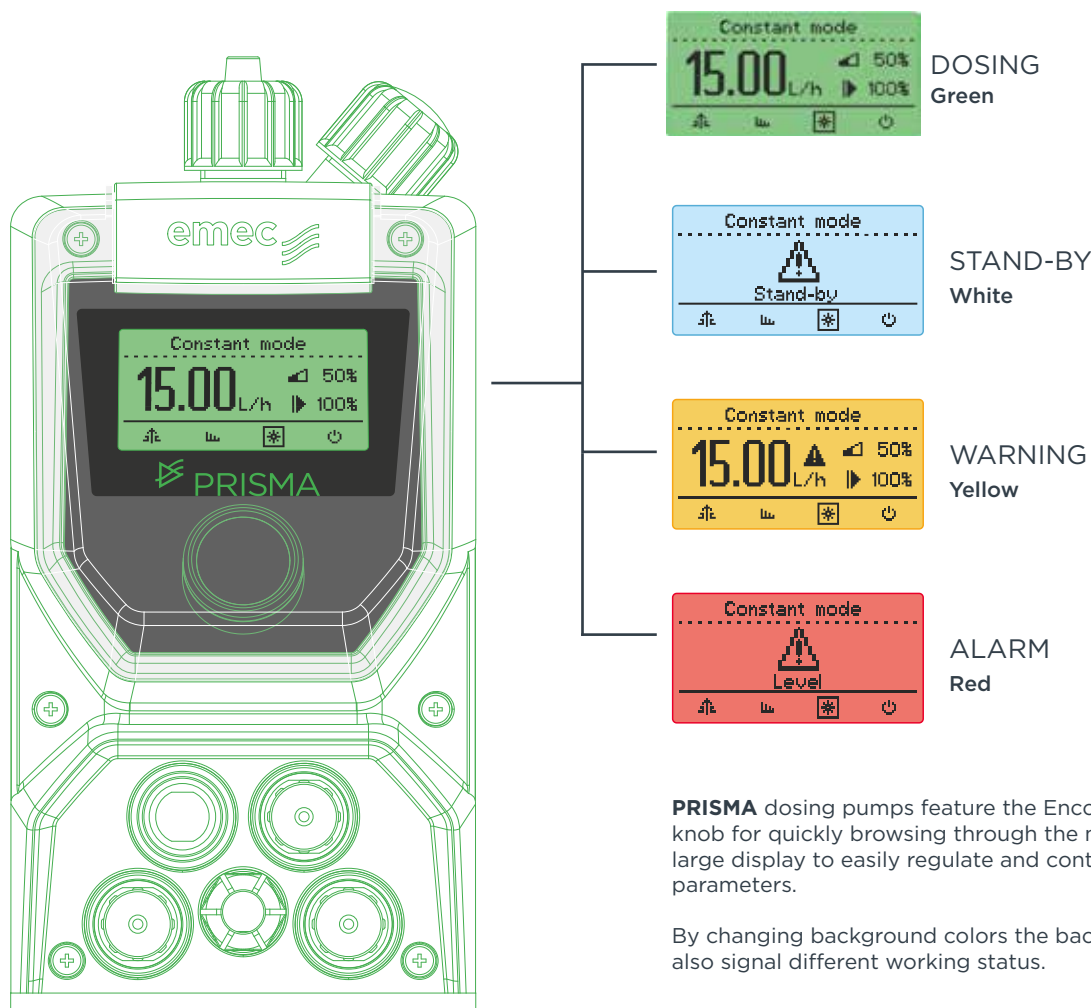


**PRISMA** stepper motor-driven dosing pump has been designed by EMEC to be the best solution for offering high-accuracy metering and extreme reliability.

Thanks to the new stepper motor and to the Multifunction software, **PRISMA** dosing pumps offer complete control over dosing speeds and working modes as well as great flexibility, meeting even extremely complex application needs.

## INFO COLOR SCREEN

### REAL-TIME FLOW



**PRISMA** dosing pumps feature the Encoder control knob for quickly browsing through the menus and a large display to easily regulate and control the working parameters.

By changing background colors the backlight display can also signal different working status.

## TURNDOWN



**PRISMA** stepper motor-driven pumps give you the most accurate control over the stroke speed, providing an outstanding turndown ratio of up to **4800:1**.

It means **PRISMA** can split up the dosing process into a maximum of **4800 steps** in order to offer the most homogeneous and precise distribution of the product to dose according to the required application.

## SLOW MODE



Extreme versatility of **PRISMA** dosing pumps is also due to **Slow Mode** function.

With Slow Mode enabled you can reduce the suction speed from **100** to **30%** of the normal speed, making easier and more reliable the priming and the dosing even when you have to work with particularly viscous liquids.

# WNPHXX Series

## Stepper motor dosing pumps



WIFI



DIGITAL SERVICES



APP MY EMEC



ONLINE STATS



CUSTOMIZABLE



### MAX FLOW RATE

12 l/h

### MAX PRESSURE

2 bar

### POWER SUPPLY

240 VAC

100-240 VAC



DOSING  
Green



STAND-BY  
White



WARNING  
Yellow



ALARM  
Red

## FEATURES

- No. 2 high-precision stepper motors
- Precision through peristaltic dosing
- Great flexibility of use (1 m<sup>3</sup> - 250 m<sup>3</sup>)
- Low maintenance requirements (longlasting biocompatible peristaltic hose)
- Scheduled maintenance alerts
- Advanced operator safety (inverters and low-permeability materials)
- New automatic dosage adjustment system
- Built-in Wi-Fi connectivity
- Remote control via NIMBUS/ My EMEC App

## BASIC MODEL ACCESSORIES

- 2 PVDF injection valves (0.3 bar)
- 2 PVDF foot strainers with PVDF level probes
- 8 meters of suction hose (flexible PVC)
- 2 long-lasting biocompatible hoses 4.8x1.6 (standard equipment)
- 2 long-lasting biocompatible hoses 1.6x1.6 (standard equipment)



# PERFORMANCE

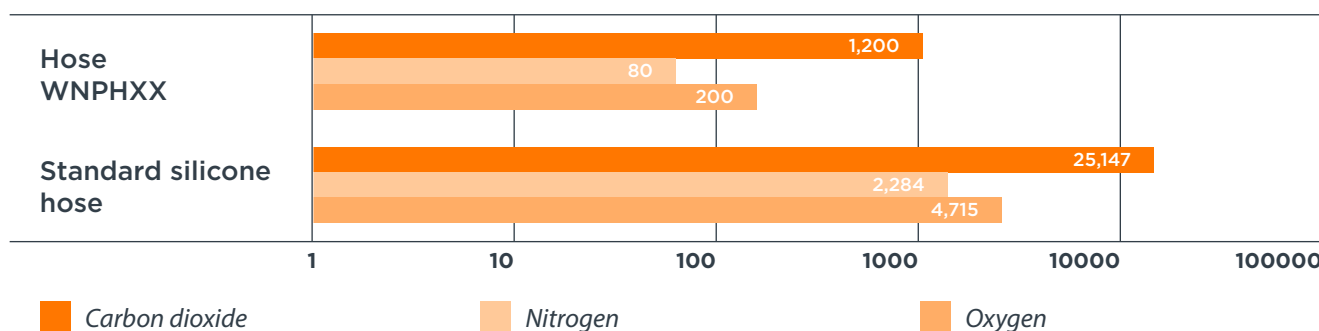
## LONG-LIFE BIOCOMPATIBLE HOSE

| Hose      | Pressure |      | Flow Rate   |               | RPM range |
|-----------|----------|------|-------------|---------------|-----------|
|           | bar      | PSI  | l/hr        | gal/hr        |           |
| Ø 1.6x1.6 | 2        | 36.2 | 0.018 - 1.8 | 0.0047 - 0.47 | 1 - 100   |
| Ø 4.8x1.6 | 2        | 36.2 | 0.12 - 12   | 0.0317 - 3.17 | 1 - 100   |

### Hose life comparison



### Permeability coefficient comparison ( $\times 10^{-11}$ )



# CHANNELS

UP TO TWO CHANNELS (+ TEMPERATURE)

- pH
- REDOX
- CLOSED AMPEROMETRIC CELLS
- OPEN AMPEROMETRIC CELLS (CHLORINE)
- CONDUCTIVITY
- TURBIDITY

CLOSED AMPEROMETRIC CELLS

FREE CHLORINE  
TOTAL CHLORINE  
BROMINE

# WT PER Series

Peristaltic dosing pumps with stepper motor



WIFI



DIGITAL SERVICES



APP MY EMEC



ONLINE STATS



CUSTOMIZABLE

## MAX FLOW RATE

12 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, 1.6 × 1.6 mm (included accessories)



# PERFORMANCE

| Hose      | Pressure |      | Flow Rate |            | RPM range |
|-----------|----------|------|-----------|------------|-----------|
|           | bar      | psi  | l/h       | gal/h      |           |
| Ø 1,6x1,6 | 2        | 29,0 | 0 - 1,8   | 0 - 0,48   | 1 - 100   |
| Ø 4,8x1,6 | 2        | 29,0 | up to 12  | up to 3,17 | 1 - 100   |

## LONG-LIFE BIOCOMPATIBLE TUBING

### Hose life comparison



### Permeability coefficient comparison ( $\times 10^{-11}$ )



## 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)

# VELON Series

## Peristaltic dosing pumps with stepper motor



WIFI



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<br>(bar - psi)                        | RPM Range<br>(rpm)        | Protection               | Power Supply                      | Installation Class             |
|------------------------------------------------|------------------------------------------------|---------------------------|--------------------------|-----------------------------------|--------------------------------|
| Next-Generation,<br>High-Performance           | 2 (29)                                         | from 1 to 100             | IP65                     | 24   100-240 VAC,<br>12VDC, 24VDC | II                             |
| Flow Rate Range<br>(l/h - gal/h)<br>(Ø1,6x1,6) | Flow Rate Range<br>(l/h - gal/h)<br>(Ø4,8x1,6) | Operating<br>Temperature  | Additive<br>Temperature  | Manufacturing<br>Materials        | Remote<br>Control              |
| 0,018 - 1,8 l/h<br>0,0047 - 0,47<br>gal/h      | 0,12 - 12 l/h<br>0,0317 - 3,17 gal/h           | 10 - 45 °C<br>55 - 113 °F | 0 - 50 °C<br>32 - 122 °F | PC/ABS, PVDF,<br>POM, TPV         | Web (NIMBUS) e<br>App (MyEmec) |



## AVAILABLE VERSIONS

DIGITAL

ANALOG

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, ON/OFF button                                |
| 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)                                                                                | Alarm (optional)                                               | Alarm (optional)                                                                       | Alarm (optional)                                              |
| CONNECTIVITY | Wi-Fi & Bluetooth                                                                               | Wi-Fi & Bluetooth                                              | -                                                                                      | -                                                             |
| FW UPDATE    | OTA                                                                                             | OTA                                                            | -                                                                                      | -                                                             |

# AMS Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Mechanical adjustment of single injection volume (from 100% to 0%)
- Manual or automatic venting
- High-strength PTFE diaphragm
- Horizontal mounting
- Pump head in PVDF, PP, SS, PMMA
- Accessories in PVDF, PP

### MAX FLOW RATE

60 l/h

### MAX PRESSURE

25 bar

### POWER SUPPLY

12 | 24 VDC

24 VAC

115 VAC

230 VAC

*Compressed Air*

### VENTING

*Manual*

*Self*



### DIGITAL

## AMS MF | PH | RH

**AMS MF** multifunction

**AMS PH** built-in pH-meter (reading & adjustment)

**AMS RH** built-in ORP-meter (reading & adjustment)



### ANALOG

## AMS PLUS | CL PLUS | CO PLUS

**AMS PLUS** costante / costante 1-10  
moltiplicatore 1-10  
divisore 1-10 / 1-100 / 1-1000  
segnale in mA

**AMS CL PLUS** costante con controllo di livello e divisore 1/10

**AMS CO PLUS** costante con divisore 1/10

### PUMP HEADS

Also available with configuration:

- Manual venting
- Compressed air

- Self venting
- Viscous liquids

- Low-viscosity liquids



PVDF



PP



SS AISI316L



PMMA



LPV



P

### ACCESSORIES



Foot filter with level probe



Injection valve 1/2" or 3/4"



# K Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Mechanical adjustment of single injection volume (from 100% to 0%)
- Manual or automatic venting
- High-strength PTFE diaphragm
- Horizontal mounting
- Pump head in PVDF, PP, SS, PMMA
- Accessories in PVDF, PP

### MAX FLOW RATE

18 l/h

### MAX PRESSURE

20 bar

### POWER SUPPLY

12-24 VDC

24 | 115 | 230 VAC

100 | 240 VAC

### VENTING

Manual

Self



### DIGITAL

## KMS DC | MF | PH | RH | CL

- KMS DC** constant
- KMS MF** multifunction + weekly timer
- KMS PH** built-in pH-meter (reading & adjustment)
- KMS RH** built-in ORP-meter (reading & adjustment)
- KMS CL** built-in chlorinometer (reading & adjustment)



### ANALOG

## K PLUS | CL PLUS | CO PLUS

- K PLUS** constant / constant 1-10 multiplier 1-10 divider 1-10 / 1-100 / 1-1000 mA signal
- K CL PLUS** constant with level control and 1/10 divider
- K CO PLUS** constant with 1/10 divider

### PUMP HEADS

Also available with configuration:

■ Manual venting

■ Self venting

■ Low-viscosity liquids



PVDF



PP



SS AISI316L



PMMA



LPV

### ACCESSORIES



Foot filter with level probe



Injection valve 1/2"

# T Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Manual or automatic venting
- High resistance diaphragm
- Wall mounting
- Pump head in PVDF, PP, SS, PMMA
- Accessories in PVDF, PP

### MAX FLOW RATE

100 l/h

### MAX PRESSURE

20 bar

### POWER SUPPLY

12 | 24 VDC  
24 VAC  
115 VAC  
230 VAC

### VENTING

*Manual*

*Self*



### DIGITAL

## TMS DC | MF | PH | RH

- TMS DC** constant
- TMS MF** multifunction + weekly timer
- TMS PH** built-in pH-meter (reading & adjustment)
- TMS RH** built-in ORP-meter (reading & adjustment)



### ANALOG

## T CL | CO

- TCL** constant with level control
- TCO** constant

### PUMP HEADS

Also available with configuration:

- Manual venting
- Viscous liquids

- Self venting

- Compressed air



PVDF



PP



SS AISI316L



PMMA



P

### ACCESSORIES



Foot filter with level probe



Injection valve 1/2" or 3/4"



# V Series

## Solenoid-driven dosing pumps

### FEATURES

- Electronic flow rate adjustment
- Manual or automatic venting
- High-strength PTFE diaphragm
- Wall mounting
- Pump head and standard accessories in PVDF
- Also available in silenced and ultra-silenced versions

### MAX FLOW RATE

16 l/h

### MAX PRESSURE

20 bar

### POWER SUPPLY

12 | 24 VDC  
24 | 115 | 230 VAC  
100-240 VAC

### VENTING

Manual

Self



### DIGITAL

## VMS MF | PO

**VMS MF** multifunction + weekly timer

**VMS PO** built-in pH-meter or ORP-meter (read & adjust).  
Menu-settable parameter



### ANALOG

## V CL | CO

**VCL** constant with level control

**VCO** constant

### PUMP HEADS

Also available with configuration:

■ Manual venting

■ Self venting



PVDF



PP

### ACCESSORIES



Foot filter with  
level probe



Injection valve  
1/2"

# WT Series

Solenoid-driven dosing pumps



WIFI



DIGITAL SERVICES



APP MY EMEC



ONLINE STATS



CUSTOMIZABLE

## MAX FLOW RATE

6 l/h

## MAX PRESSURE

7 bar

## POWER SUPPLY

115 VAC

230 VAC

## RGB DISPLAY



DOSING  
Green



STAND-BY  
White



WARNING  
Yellow



ALARM  
Red



# PERFORMANCE

## Pressure

*bar (psi)*

up to 7 bar

## Flow Rate

*l/h*

up to 6 l/h

*gal/h*

up to 1,58 gal/h

## sPM Range

*spm*

180

# 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)

# WDPHXX Series

Solenoid-driven dosing pumps with controller



DIGITAL SERVICES



## MAX FLOW RATE

10 l/h

## MAX PRESSURE

7 bar

## POWER SUPPLY

230 VDC

115 VAC

## VENTING

Manual

Self



DOSING  
Green



STAND-BY  
White



WARNING  
Yellow



ALARM  
Red

## DIGITAL

## WDPH RH | CL | CF | CA | OS

- WDPHRH** acid (pH) and disinfectant (ORP)
- WDPHCL** acid (pH) and chlorine
- WDPHCF** acid, flocculant (g/h) and 230VAC output for Cl
- WDPHCA** acid, algicide and 230VAC output for chlorine
- WDPHOS** acid (pH) and active oxygen

## FEATURES

- Specific for swimming pools also in peristaltic version
- Control and regulating instrument with two built-in dosing pumps and standard PVDF accessories
- Wall mounting
- Easy programming with encoder and easy-nav navigation system
- Double pump head
- Optional: RS485 port for remote control (Wi-Fi, Ethernet, GSM, USB, Modbus)

## PUMP HEADS

Also available with configuration:

Manual venting

Self venting



PVDF



PP

## ACCESSORIES



Foot filter with  
level probe



Injection valve  
1/2"



# R Series

## Compressed air dosing pumps

### FEATURES

- Specifically designed for car washes
- Constant dosing
- 3 installation modes: horizontal, wall, DIN rail
- Multiple installation (side by side)
- Mechanical volume adjustment 0-100% of single injection

### MAX FLOW RATE

12 l/h

### MAX PRESSURE

6 bar

### POWER SUPPLY

Compressed Air



▲  
RAC



▲  
RACV



▲  
RACP

## R AC | ACV | ACP

- RAC** Pneumatic pump
- RACV** Pneumatic pump with solenoid valve
- RACP** Pneumatic pump with priming button

### PUMP HEADS



Pump Head



Diaphragm

### INSTALLATION OPTIONS



DIN rail



Wall

### ACCESSORIES



Foot filter



Injection valve  
1/2"

# PRIUS D MF Series | DIAPHRAGM

## Multifunction electronic control motor-driven pumps

**PRIUS** MF



### MAX FLOW RATE

1000 l/h

### MAX PRESSURE

10\* bar

### POWER SUPPLY

115 VAC

230 VAC

### VENTING

Manual

Self

DEFAULT GEAR BOX POSITION



ALTERNATIVE GEAR BOX POSITION

## FEATURES

- High-strength PTFE diaphragm
- Large display with EASYNAV navigation system and encoder knob
- Pump housing can be rotated 90 degrees for optimal installation
- Pump head in PVDF, PP, SS
- Accessories in PVDF, PP
- Integrated inverter
- Mechanical single injection volume adjustment (100-0%)
- Working modes: Constant - ppm - % - mlq - pause; timer; weekly; pulse; mA; Volt and Batch
- Level input
- Stand-by
- MODBUS (optional)
- IP65 motor (optional)
- 4/20 mA output (optional)
- \*Also available PRIUS D MF HIGH PRESSURE versions up to 100 bar

## PUMP HEADS



PVDF

PP

SS AISI316L

UMS

\*\*\*For capacities above 350 l, with integral pressure relief valves

ATTENTION: In case of spare parts orders, the UMS pump head is supplied without the corresponding safety valve. If required, the safety valve must be ordered separately and will be charged additionally.



# PRIUS P MF Series | PISTON

Multifunction electronic control motor-driven pumps

**PRIUS** MF



## MAX FLOW RATE

320 l/h

## MAX PRESSURE

10 bar

## POWER SUPPLY

230 VAC

115 VAC

## VENTING

Manual

Self

DEFAULT GEAR BOX POSITION



ALTERNATIVE GEAR BOX POSITION

## FEATURES

- Ceramic or Stainless Steel piston
- Display with EASYNAV navigation system and Encoder knob
- Pump housing can be rotated 90 degrees for optimal installation
- Integrated inverter
- Mechanical single injection volume adjustment (100-0%)
- Working modes: Constant - ppm - % - mlq - pause; weekly; pulse; mA; Volt and Batch
- Level input
- Stand-by
- MODBUS (optional)
- IP65 motor (optional)
- 4/20 mA output (optional)

## PUMP HEADS



PP

SS AISI316L

## PISTONS



CERAMIC  
SIALOX96

SS  
AISI420

# PRIUS D Series | DIAPHRAGM

## Motor-driven pumps

**PRIUS**



### MAX FLOW RATE

1000 l/h

### MAX PRESSURE

10\* bar

### POWER SUPPLY

115 VAC

230 VAC

380 VAC

### VENTING

*Manual*

*Self*

## FEATURES

- High-strength PTFE diaphragm
- SINGLE-PHASE or THREE-PHASE power supply
- Mechanical single injection volume adjustment (100%-0%)
- 0.18, 0.37 or 0.55 kW motor
- Standard pump head in PVDF
- 50 and 60 Hz motors
- IP65 motor (optional)
- Also available PRIUS D **HIGH PRESSURE** versions up to 100 bar\*.
- **ATEX 3G/3D** and **ATEX 2G/2D** versions also available for use in potentially explosive atmospheres

## PUMP HEADS



- \* For capacities above 350 l, with integral pressure relief valves

ATTENTION: in case of spare parts orders, the UMS pump head is supplied without the corresponding safety valve. If required, the safety valve must be ordered separately and will be charged additionally.



# PRIUS P Series | PISTON

## Motor-driven pumps

**PRIUS**



### MAX FLOW RATE

508 l/h

### MAX PRESSURE

10 bar

### POWER SUPPLY

380 VAC

220 VAC

115 VAC

### VENTING

*Manual*

*Self*

## FEATURES

- Ceramic or Stainless Steel piston
- Pump bodies in PP and Stainless Steel
- SINGLE-PHASE or THREE-PHASE power supply
- Mechanical adjustment of single injection volume (100%-0%)
- 0.18, 0.37 or 0.55 kW motor
- Pump head available in PP and SS
- 50 and 60 Hz motors
- IP65 motor (optional)
- ATEX 3G/3D and ATEX 2G/2D versions also available for use in potentially explosive atmospheres

## PUMP HEADS



PP

SS AISI316L

## PISTONS



CERAMIC  
SIALOX96

SS  
AISI420

# DOSING PUMPS ACCESSORIES

High efficiency products

## CHEMICAL TANKS AND SAFETY BUNDS

UV-proof polyethylene containers for chemicals, complete with safety tanks, dosing pump and mixers. Capacity up to 1000 litres.

### STANDARD TANK



### ASSEMBLED TANK



Can be equipped with:

- 1 dosing pump (2 without mixer)
- 1 mixer
- 2 taps (filling and draining) 1 outgassing valve
- 1 or 2 suction lances
- 2 level probes with filter (without mixer)
- 1 safety tank

### SAFETY BUNDS



## MIXERS

MIXVN/8  
MIXVN/4  
MIXVN/2



High speed mixer 1400 RPM. AISI rod with PVC coat. AISI shaft-PVC coated, different lengths available (depending on the container). "Marine" impeller.

MIXN/8  
MIXN/4  
MIXN/2



Slow speed mixer 1400 RPM. AISI rod with PVC coat, AISI shaft with PVC coating, different lengths available (depending on the container). 3-blade impeller.

## MANUAL MIXERS

MIXN/MAN



Manual mixer. PVC shaft, different lengths (depending on the container).

MIX WITH PISTON



Manual mixer. PVC shaft, different lengths (depending on the container).

**Note:** for full technical characteristics please refer to the corresponding product data sheet.

**LASP**

Suction lances with level control, for tanks up to 1000 liters.

**LINI**

Injection lance for chemical dosing in hoses. Automatic cleaning system, available with and without tap.

**MFKT**

Multifunction valves for: pressure, safety, anti-siphon, bleed. Safety valve adjustment range: 1 to 18 bar. Pressure valve adjustment range: 1 to 5 bar. Delivery and connection fittings adaptable to different hose diameters. PVDF body and FKM B or EPDM o-rings.

**SEFL**

Flow sensors to control the actual dosing of the chemical. They allow automatic pump re-priming.

# PULSE OUTPUT METERS

High efficiency products

---

## CWFA



Woltmann pulse-emitter water meter with dry dial for cold water.

## CTFI



Pulse-emitter water meter for cold water.

**CATFI** - dry dial version

## CWCA



Woltmann pulse-emitter water meter with dry dial for hot water.

## CATCI



Pulse-emitter water meter for hot water.

## CWFAT



Woltmann dry dial pulse-emitter water meter with Teflon-coated inside and outside.

## CTFIT



Pulse-emitter water meter for cold water with Teflon-coated inside and outside.

**Note:** for full technical characteristics please refer to the corresponding product data sheet.



## METERS - PULSES PER LITRE TABLE

| CTFI / CTCI            |                           |                     |                          |                          |                    |           |
|------------------------|---------------------------|---------------------|--------------------------|--------------------------|--------------------|-----------|
|                        | Nominal size              |                     |                          |                          |                    |           |
|                        | 15 - 1/2"                 | 20 - 3/4"           | 25 - 1"                  | 30 - 1 1/4"              | 40 - 1 1/2"        | 50 - 2"   |
| Pulses per litre       | 1 - 2 - 4 - 35 - 70 - 140 | 1 - 2 - 4 - 22 - 90 | 1 - 2 - 4 - 12 - 24 - 48 | 1 - 2 - 4 - 12 - 24 - 48 | 1 - 2 - 4 - 9 - 18 | 1 - 2 - 4 |
| Pulses per 10 litres   | 1 - 2 - 4                 | 1 - 2 - 4           | 1 - 2 - 4                | 1 - 2 - 4                | 1 - 2 - 4          | 1 - 2 - 4 |
| Pulses per 100 litres  | 1 - 2 - 4                 | 1 - 2 - 4           | 1 - 2 - 4                | 1 - 2 - 4                | 1 - 2 - 4          | 1 - 2 - 4 |
| Pulses per 1000 litres | 1 - 2 - 4                 | 1 - 2 - 4           | 1 - 2 - 4                | 1 - 2 - 4                | 1 - 2 - 4          | 1 - 2 - 4 |

| CATFI / CATCI          |                |                     |           |             |             |           |
|------------------------|----------------|---------------------|-----------|-------------|-------------|-----------|
|                        | Nominal size   |                     |           |             |             |           |
|                        | 15 - 1/2"      | 20 - 3/4"           | 25 - 1"   | 30 - 1 1/4" | 40 - 1 1/2" | 50 - 2"   |
| Pulses per litre       | 1 - 2 - 4 - 35 | 1 - 2 - 4 - 22 - 90 | 1 - 2 - 4 | 1 - 2 - 4   | 1 - 2 - 4   | 1 - 2 - 4 |
| Pulses per 10 litres   | 1 - 2 - 4      | 1 - 2 - 4           | 1 - 2 - 4 | 1 - 2 - 4   | 1 - 2 - 4   | 1 - 2 - 4 |
| Pulses per 100 litres  | 1 - 2 - 4      | 1 - 2 - 4           | 1 - 2 - 4 | 1 - 2 - 4   | 1 - 2 - 4   | 1 - 2 - 4 |
| Pulses per 1000 litres | 1 - 2 - 4      | 1 - 2 - 4           | 1 - 2 - 4 | 1 - 2 - 4   | 1 - 2 - 4   | 1 - 2 - 4 |

| CWFA / CWCA             |              |             |           |           |           |           |           |           |
|-------------------------|--------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                         | Nominal size |             |           |           |           |           |           |           |
|                         | 50 - 2"      | 65 - 2 1/2" | 80 - 3"   | 100 - 4"  | 150 - 6"  | 200 - 8"  | 250 - 10" | 300 - 12" |
| Pulses per 10 litres    | 1 - 2 - 4    | 1 - 2 - 4   | 1 - 2 - 4 |           |           |           |           |           |
| Pulses per 100 litres   | 1 - 2 - 4    | 1 - 2 - 4   | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |           |           |           |
| Pulses per 1000 litres  | 1 - 2 - 4    | 1 - 2 - 4   | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |
| Pulses per 10000 litres |              |             |           | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 | 1 - 2 - 4 |

# Modem and external communication modules

For LD, MTOWER, WD and CENTURIO controller series

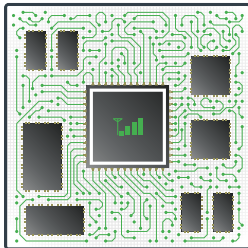
## Internal PCB Module



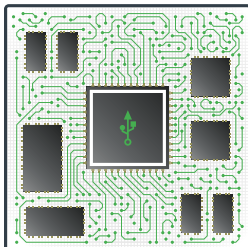
**ETHERNET MODULE**  
for standard RJ45 network.



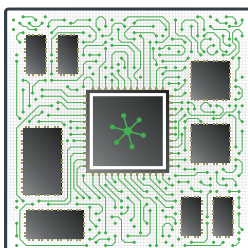
**WIFI MODULE**  
for WIFI network.



**4G MODULE**  
for mobile network.



**USB MODULE**  
for USB datalog recording.



**MODBUS MODULE**  
Serial communication module for PLC connection.

## External IP65 Module



**BT ETH**  
Ethernet controller for standard RJ45 network. IP65.



**BT WIFI**  
Module for WIFI connection. IP65.



**BT CEL**  
Modem for mobile network. IP65.



**BT USB**  
USB module for USB datalog recording. IP65.



**BT MODBUS**  
Serial communication module for PLC connection.



# CENTURIO Series | PRO - TOWER - POOL

Up to 10 channels water treatment controllers

## CENTURIO BASIC (USB, ETH, MODBUS, WIFI) | GSM



MODBUS



ETHERNET



WIFI



USB PORT



DIGITAL SERVICES



ONLINE STATS



CUSTOMIZABLE



### ONLINE REMOTE CONTROL

ONLINE PARAMETER READING AND SETTING

UPLOADING AND DOWNLOADING OF SETTINGS AND DATALOGS

REMOTE SOFTWARE UPDATE

### POWER SUPPLY

12 | 24 VDC  
24 | 100 - 240 VAC

### HARDWARE FEATURES

- Full color LCD touch display
- Large storage capacity for logs
- Configurable channels with add-on modules
- High-performance ARM A5 microprocessor

#### INPUTS

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

### SOFTWARE FEATURES

- NIMBUS remote control
- Multi-language LINUX operating system
- Communication (standard) USB - ETHERNET - MODBUS - WIFI
- Communication (optional) GSM

#### OUTPUTS

- 8 proportional outputs
- 6 on/off outputs
- 2 "free contact" on/off outputs
- 6 current outputs (0/4 - 20 mA)



CENTURIO is the digital controller series designed by EMEC to give you the best work experience in the multiparameter control of dosing systems. High-performance hardware and software of CENTURIO makes possible a simultaneous and complete control over all the main measurement parameters, while you have access to a rich set of functions and connection options that really enhance and simplify your work.

CENTURIO is compatible with NIMBUS, EMEC's proprietary online remote control system.

The CENTURIO series includes: CENTURIO PRO, the most complete solution for every application; CENTURIO TOWER, a control system specifically designed for cooling water treatment; CENTURIO POOL, specifically designed for swimming pool water treatment.

## TOUCHSCREEN DISPLAY

### LARGE 4" LCD FULL COLOR DISPLAY



#### DASHBOARD

Quick data visualization on the dashboard



#### REAL-TIME STATS

Real-time graphs and graph history



#### CHANNELS SETTINGS

Quick data visualization on the dashboard



#### LOG MANAGEMENT

Large storage and download options

Centurio does not suffer data loss when disconnected from the power supply

## UP TO 10 CHANNELS (6 ANALOG)

CONDUCTIVITY INDUCTIVE CONDUCTIVITY

pH ORP OPEN AMPEROMETRIC CELLS

TRACERS mA INPUT TURBIDITY

POTENTIOSTATIC (BROMINE/CHLORINE)

DISSOLVED OXYGEN LASER LEVEL SENSOR

CORROSION

### CLOSED AMPEROMETRIC CELLS

CHLORINE DIOXIDE  
FREE CHLORINE  
TOTAL CHLORINE  
HYDROGEN PEROXIDE

OZONE  
PERACETIC ACID  
BROMINE  
CHLORITES

# LD Multichannel Series | LD MULTICHANNEL - LD MULTICHANNEL PLUS

## Up to 2 channels plus temperature water treatment controllers

**LD BASIC (MODBUS) | USB | ETH | GSM | WIFI**



DIGITAL SERVICES

LD Multichannel is the digital multi-parameter controller designed by EMEC capable of regulating two independent parameters with PID adjustment. The LD Multichannel controller is perfect for a wide range of applications including: general water treatment, cooling tower control, industrial chemical dosing, purification, agricultural use, and swimming pool disinfection.

### OPTIONAL

- mA output
- power supply 12 VDC or 24 VDC



DOSING  
Green



STAND-BY  
White



WARNING  
Yellow



ALARM  
Red

### PARAMETERS

pH ORP BROMINE/CHLORINE CONDUCTIVITY INDUCTIVE CONDUCTIVITY CHLORINE DIOXIDE  
HYDROGEN PEROXIDE OZONE PERACETIC ACID TURBIDITY CHLORITES

### HARDWARE FEATURES

- LCD RGB display

### SOFTWARE FEATURES

- NIMBUS remote control
- Multi-language
- Communication (optional)  
ETHERNET - MODBUS - WIFI - GSM - USB

### LD MULTICHANNEL PLUS FEATURES

- 5 relays (2 setpoints; alarm; probe cleaning; circulation relay)
- Probe cleaning
- PID
- Feed forward
- Proportional + meter reading
- "Line"

### POWER SUPPLY

12 | 24 VDC  
24 VAC  
100-240 VAC

### ALARMS

- General
- No flow
- Threshold exceeded
- Product level
- Maximum dosage
- Probe damaged

### INPUTS

- Product level
- Flow
- Temperature probe
- Stand-by

### OUTPUTS

- Alarm
- Probe cleaning with ETORB2
- Proportional
- Relay
- Flocculant pump (LDPHCL)
- mA



## LDS Series | LDS - LDS PLUS

1 channel water treatment controllers with setpoints (LDS) or PID regulation (LDS PLUS)

**LD BASIC (MODBUS) | USB | ETH | GSM | WIFI**



DIGITAL SERVICES

LDS is the single-read digital controller designed by EMEC and is perfect for a wide range of applications including: general water treatment, cooling tower control, industrial chemical dosing, purification, agricultural use, and swimming pool disinfection.

### OPTIONAL

- USB for LOG logging
- Current output (0/4 - 20 mA)
- Ethernet
- 4G modem
- WIFI module
- MODBUS protocol



### PARAMETERS

pH | ORP | BROMINE/CHLORINE | CONDUCTIVITY | INDUCTIVE CONDUCTIVITY | CHLORINE DIOXIDE  
 HYDROGEN PEROXIDE | OZONE | PERACETIC ACID | TURBIDITY | DISSOLVED OXYGEN | CHLORITES

### HARDWARE FEATURES

- LCD RGB display

### SOFTWARE FEATURES

- NIMBUS remote control
- Multi-language
- Communication (optional)  
ETHERNET - MODBUS - WIFI - GSM - USB

### LDS PLUS FEATURES

- 5 relays (2 setpoints; alarm; probe cleaning; circulation relay)
- Probe cleaning
- PID
- Feed forward

### POWER SUPPLY

12 | 24 VDC  
 24 VAC  
 100-240 VAC

### ALARMS

- General
- No flow
- Threshold exceeded
- Product level
- Maximum dosage
- Probe damaged

### INPUTS

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

### OUTPUTS

- Alarm
- Proportional
- Relay
- mA (optional for LDS)
- Set points (only LDS PLUS)
- Opto coupled (only LDS PLUS)

# MTOWER Series | MTOWER - MTOWER PLUS

Up to 3 channels cooling towers controllers

## M TOWER BASIC | USB | ETH | GSM | WIFI | MODBUS



MTOWER PLUS manages three parameters simultaneously: pH or ORP, chlorine, conductivity or inductive conductivity (to specify on order) and temperature.

MTOWER 2CH manages two parameters simultaneously: pH or ORP or chlorine, conductivity or inductive conductivity (to specify on order) and temperature.

MTOWER 1CH manages one parameter: conductivity or inductive conductivity (to specify on order) and temperature.

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

### OPTIONAL

- inductive conductivity probe
- USB for log logging
- Current output (0/4 - 20 mA)
- Ethernet
- 4G modem
- WIFI module
- MODBUS protocol



### MTOWER PLUS 3 CH

**MTOWER PLUS CD/PH/CL** Conductivity, pH and chlorine

**MTOWER PLUS CD/PH/RH** Conductivity, pH and ORP



### MTOWER 2 CH

**MTOWER CD/PH** Conductivity, pH

**MTOWER CD/RH** Conductivity, ORP

**MTOWER CD/CL** Conductivity, chlorine

### MTOWER 1 CH

**MTOWER CD** Conductivity

### PARAMETERS

- pH
- ORP
- CHLORINE
- CONDUCTIVITY OR INDUCTIVE CONDUCTIVITY
- TEMPERATURE
- TRACERS

### MTOWER FEATURES

- Conductivity for "blowdown"
- 2 Timers for biocides
- Pre-bleed
- Lockout

### ALARMS

- > No water flow
- > 3 product level
- > Bleed timeout

### INPUTS

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

### OUTPUTS

- > mA

### POWER SUPPLY

- 115 VAC
- 230 VAC



# RACK MOUNT Series | JA - J DIGITAL - DIN DIGITAL

## 1 channel plus temperature water treatment controllers



### JA PRO RACK (96x96 mm)

|                      |                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------|
| <b>JA PRO</b>        | Single reading                                                                                          |
| <b>JA PRO PH</b>     | pH                                                                                                      |
| <b>JA PRO RH</b>     | ORP                                                                                                     |
| <b>JA PRO CL</b>     | Chlorine (Total - Free), Chlorine Dioxide, Hydrogen Peroxide, Ozone, Bromine, Peracetic Acid, Chlorites |
| <b>JA PRO CD</b>     | Conductivity                                                                                            |
| <b>JA PRO CD IND</b> | Inductive Conductivity                                                                                  |

#### ALARMS

- No water flow

#### INPUTS

- Flow
- Temperature probe
- Probe
- Stand-by

#### OUTPUTS

- 1 proportional
- 2 set points outputs / Free contact
- 1 alarm
- 1 current

#### POWER SUPPLY

|     |     |
|-----|-----|
| 115 | VAC |
| 230 | VAC |



### J DIGITAL RACK (96x48 mm)

|                       |                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| <b>J DIGITAL</b>      | Single reading                                                                                          |
| <b>J DIGITAL PH</b>   | pH                                                                                                      |
| <b>J DIGITAL RH</b>   | ORP                                                                                                     |
| <b>J DIGITAL CL</b>   | Chlorine (Total - Free), Chlorine Dioxide, Hydrogen Peroxide, Ozone, Bromine, Peracetic Acid, Chlorites |
| <b>J DIGITAL CD</b>   | Conductivity                                                                                            |
| <b>J DIGITAL O3</b>   | Ozone                                                                                                   |
| <b>J DIGITAL CLO2</b> | Chlorine Dioxide                                                                                        |
| <b>J DIGITAL TEMP</b> | Temperature                                                                                             |

#### POWER SUPPLY

|           |     |
|-----------|-----|
| 12   24   | VDC |
| 115   230 | VAC |

#### J DIGITAL / DIN DIGITAL INPUTS

- Flow input
- Temperature probe input
- Probe input



### DIN DIGITAL DIN RAIL (6 modules)

|                         |                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------|
| <b>DIN DIGITAL</b>      | Single reading                                                                                          |
| <b>DIN DIGITAL PH</b>   | pH                                                                                                      |
| <b>DIN DIGITAL RH</b>   | ORP                                                                                                     |
| <b>DIN DIGITAL CL</b>   | Chlorine (Total - Free), Chlorine Dioxide, Hydrogen Peroxide, Ozone, Bromine, Peracetic Acid, Chlorites |
| <b>DIN DIGITAL CD</b>   | Conductivity                                                                                            |
| <b>DIN DIGITAL O3</b>   | Ozone                                                                                                   |
| <b>DIN DIGITAL CLO2</b> | Chlorine Dioxide                                                                                        |
| <b>DIN DIGITAL TEMP</b> | Temperature                                                                                             |

#### POWER SUPPLY

|           |     |
|-----------|-----|
| 12   24   | VDC |
| 115   230 | VAC |

#### J DIGITAL / DIN DIGITAL OUTPUTS

- Current output
- 2 set point / relay / free contact outputs

# PROBES

## SCL - Closed amperometric cells



Chlorine dioxide (hot/cold water), Free chlorine (organic/inorganic), Total chlorine, Hydrogen peroxide, Ozone, Paracetic acid, Bromine, Chlorites for fresh water.

## ECL - Open amperometric cells



Free chlorine (organic and inorganic) for fresh and salt water.

## EPH - pH / ERH - ORP



Working temperature max 100° C (max 135° C for EPHSN6/GK pH probes).  
Max working pressure 7 bar.

## EOLUM - Dissolved oxygen



Max working temperature 50° C.  
Max working pressure 10 bar.

## ETORB2 - Turbidity



Working temperature max 40° C  
Max working pressure 2 bar

## ETRC2 - Tracers



Max. working temperature 50° C  
Max working pressure 7 bar

## EFL - Fluorine, Ion Selective



Working temperature max 70° C  
Max working pressure 7 bar

## ECDHL - Conductivity, platinum electrodes



Working temperature max 70° C  
Max working pressure 7 bar

**Notes:** see the relevant product data sheet for complete technical characteristics.

**ECDC - Conductivity, graphite electrodes**

Working temperature max  
60° C  
Max working pressure 7  
bar

**ECDI - Conductivity, stainless steel electrodes**

Working temperature max  
60° C  
Max working pressure 7  
bar

**EICD - Conductivity, stainless steel body**

Working temperature max  
130° C  
Max working pressure 15 bar

**ECDIND PT - Inductive conductivity**

Reading scale up to 300  
mS  
Working temperature max  
85° C  
Working pressure max 8  
bar

**ECDSIND PT - Inductive conductivity**

Readout scale 0-3 or 0-10  
mS  
Working temperature max  
85° C  
Working pressure max 8 bar

# PROBES ACCESSORIES

## NPED



Outflow electrode holder.  
Working temperature  
0°/50° C  
Maximum pressure 5 bar

## PEF



Electrode holder for pH,  
ORP and closed amperometric cell probes.

## PEL



In-line electrode holder.  
Max. working temperature  
60° C  
Working pressure max 7 bar

## NFIL



Filters.  
Working temperature max  
60° C  
Working pressure max 7 bar

## PEC



Immersion electrode holder.  
Options for Compressed air and probe cleaning system (automatic or manual control).

## MANIFOLD



Conductivity electrode holder with flow sensor and optional motorized valve with two injection points.

Maximum pressure 8 bar  
Maximum temperature  
75° C

## BUFFER SOLUTIONS



Buffer solutions of reference for probe calibrations.

**Notes:** see the relevant product data sheet for complete technical characteristics.



# PRE-CONFIGURED SOLUTIONS, SKIDS, CABINS AND DOSING STATIONS

## 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 solutions 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 assembled solution.

The final product includes electrical and piping hook-ups ready for installation.





## Chlorine dioxide disinfection systems

 **LOTUS** BASIC | USB | ETH | GSM | WIFI | MODBUS



DIGITAL SERVICES

### RELIABLE AND SAFE

The use of chlorine dioxide in the treatment of water has been driven by an increased awareness of biological related health issues. **EMEC LOTUS** chlorine dioxide generators can be used in a variety of industries for control of micro-organisms in water systems and are especially recommended for Legionella reduction, control and prevention in cold and hot water systems. **Micro-organisms are killed in 5 minutes in a safe way.**

**LOTUS** chlorine dioxide based biological control systems are reliable and safe, being designed so there is no requirement to handle  $\text{ClO}_2$  as a gas: two liquid chemicals, Hydrochloric Acid (HCl) and Sodium Chlorite ( $\text{NaClO}_2$ ), react together to form the chlorine dioxide required, so there is no  $\text{ClO}_2$  gas or concentrated solutions outside of the process application.

Thanks to EMEC online control system NIMBUS, you will also be able to monitor and interact with **LOTUS** systems from anywhere and through a simple but powerful web interface.

## Overview table

### Lotus configuration performances

| MODELS     | MAX FLOW RATE $\text{ClO}_2$ | MAX CHEMICAL CONSUMPTION* | CONCENTRATION OF CHEMICALS      | REACTOR | MAX PRESSURE (FEED WATER) | MAX WORKING PRESSURE*** |
|------------|------------------------------|---------------------------|---------------------------------|---------|---------------------------|-------------------------|
| AIR 10     | 10 g/h                       | 0,25 l/h                  | 9% HCl<br>7,5% $\text{NaClO}_2$ | PVC     | 2 bar                     | 8 bar                   |
| AIR 30     | 30 g/h                       | 0,75 l/h                  |                                 |         | 3 bar                     | 5 bar                   |
| AIR 60     | 60 g/h                       | 1,5 l/h                   |                                 |         | 3 bar                     | 5 bar                   |
| MINI 8     | 8 g/h                        | 0,2 l/h                   | 9% HCl<br>7,5% $\text{NaClO}_2$ | PVC     | 5 bar                     | 8 bar                   |
| MINI 20    | 20 g/h                       | 0,5 l/h                   |                                 |         | 5 bar                     | 8 bar                   |
| MAXI 80    | 80 g/h                       | 2 l/h                     | 9% HCl<br>7,5% $\text{NaClO}_2$ | PVC     | **                        | 8 bar                   |
| MAXI 160   | 160 g/h                      | 4 l/h                     |                                 |         |                           | 8 bar                   |
| MAXI 240   | 240 g/h                      | 6 l/h                     |                                 |         |                           | 8 bar                   |
| MAXI 400   | 400 g/h                      | 10 l/h                    |                                 |         |                           | 8 bar                   |
| MAXI 600   | 600 g/h                      | 15 l/h                    |                                 |         |                           | 8 bar                   |
| MAXI 800   | 800 g/h                      | 20 l/h                    |                                 |         |                           | 5 bar                   |
| MAXI 1000  | 1000 g/h                     | 25 l/h                    |                                 |         |                           | 3 bar                   |
| ULTRA 500  | 500 g/h                      | 3,15 l/h                  | 33% HCl<br>25% $\text{NaClO}_2$ | PVDF    | **                        | 5 bar                   |
| ULTRA 1000 | 1000 g/h                     | 6,3 l/h                   |                                 |         |                           | 5 bar                   |
| ULTRA 2000 | 2000 g/h                     | 12,6 l/h                  |                                 |         |                           | 5 bar                   |
| ULTRA 3000 | 3000 g/h                     | 18,9 l/h                  |                                 |         |                           | 3 bar                   |
| ULTRA 4000 | 4000 g/h                     | 25,2 l/h                  |                                 |         |                           | 2 bar                   |
| EASY 8     | 8 g/h                        | 0,2 l/h                   | 9% HCl<br>7,5% $\text{NaClO}_2$ | PVC     | **                        | 8 bar                   |
| EASY 20    | 20 g/h                       | 0,5 l/h                   |                                 |         |                           | 8 bar                   |
| EASY 40    | 40 g/h                       | 1 l/h                     |                                 |         |                           | 8 bar                   |
| EASY 80    | 80 g/h                       | 2 l/h                     |                                 |         |                           | 8 bar                   |

\* Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour

\*\* Depends on system pressure (max 8 bar)

\*\*\* For higher pressures use an external pump

# Lotus Air

Pressure-less chlorine dioxide generator from 10 to 60 g/h

 **LOTUS** AIR BASIC | USB | ETH | GSM | WIFI | MODBUS



DIGITAL SERVICES

**LOTUS AIR** is a pressure-less chlorine dioxide generator useful for those applications in which several injection points are required. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite (NaClO<sub>2</sub> 7,5%).

Chlorine dioxide produced by **LOTUS AIR** is stocked into a tank and then dosed in the pipeline.

Its elegant cover preserves the cleanliness of the inner components and their integrity.

## ADVANTAGES

- Reaction at ambient pressure
- Multi-point injection
- No emission
- Diluted chemicals

## OPTIONAL

Also available equipped with a ClO<sub>2</sub> probe (SVCL2 or SVCL17) or an ORP probe (ERH), a probe holder and a filter.

## PANEL



## COVER



## ALARMS

- product alarm
- product filling times alarm
- reactor levels alarm
- chlorine dioxide sensor alarm
- sepr alarm
- reading thresholds alarm

## INPUTS

- water meter input
- stand-by input
- levels inputs
- 0-4/20 mA input
- probes inputs

## OUTPUTS

- 0-4/20 mA output
- alarm output
- RS485 output



## MODELS

- AIR 10 / AIR 30 / AIR 60



ONLINE STATS



CUSTOMIZABLE



APP



REMOTE CONTROL

## GAS SENSOR

- LOTUS AIR with gas sensor detection (optional).

## FUNCTIONS

- BATCH chlorine dioxide production
- ClO<sub>2</sub> dosing in several mode
- Alarms: products, water, emptying
- Water meter input
- Stand-by input
- Real-time production data
- Pumps and SEFL flow sensors monitoring
- Service due date
- NIMBUS communication
- Flow control input (flow alarm)
- Tank level controls (level alarm)
- USB data log (optional)
- Ethernet module (optional)
- GSM internal modem (optional)
- MODBUS module (optional)
- WIFI module (optional)
- ClO<sub>2</sub> concentration in water measurement and control
- mA output

## FEATURES

- ClO<sub>2</sub> concentration: 2 g/l
- HCl (red), NaClO<sub>2</sub> (blue) and ClO<sub>2</sub> (green) metering pumps
- MFKT/V multifunction valve as pressure,
- Safety, anti-syphon and bleed
- Double chamber: reaction and storage
- Activated carbon filter
- ASA or fiberglass enclosure
- IP65 protection (NEMA4x) of LOTUS controller and pumps
- Wheel control for easy programming
- Working temperature: 0-45°C (32-110°F)

# Overview table

## Lotus Air configuration performances

| MODELS | MAX FLOW<br>RATE ClO <sub>2</sub> | MAX CHEMICAL<br>CONSUMPTION* | CONCENTRATION<br>OF CHEMICALS | REACTOR | MAX PRESSURE<br>(FEED WATER) | MAX WORKING<br>PRESSURE*** |
|--------|-----------------------------------|------------------------------|-------------------------------|---------|------------------------------|----------------------------|
| AIR 10 | 10 g/h                            | 0,25 l/h                     | 9% HCl                        | PVC     | 2 bar                        | 8 bar                      |
| AIR 30 | 30 g/h                            | 0,75 l/h                     | 7,5% NaClO <sub>2</sub>       |         | 3 bar                        | 5 bar                      |
| AIR 60 | 60 g/h                            | 1,5 l/h                      |                               |         | 3 bar                        | 5 bar                      |

\* Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour

\*\* Depends on system pressure (max 8 bar)

\*\*\* For higher pressures use an external pump

# Lotus Mini

Chlorine dioxide generator from 8 to 20 g/h

 **LOTUS** MINI **BASIC | USB | ETH | GSM | WIFI | MODBUS**



DIGITAL SERVICES

**LOTUS MINI** is an all-round solution for all your need for water disinfection. It is safe and solid. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite ( $\text{NaClO}_2$  7,5%).

Its elegant cover preserves the cleanliness of the inner components and their integrity. Chlorine dioxide produced by **LOTUS MINI** can be proportional to the circulating water flow or based on a measured setpoint.

There is no storage of chlorine dioxide therefore there is no chlorine dioxide gas or concentrated solutions outside of the process application.

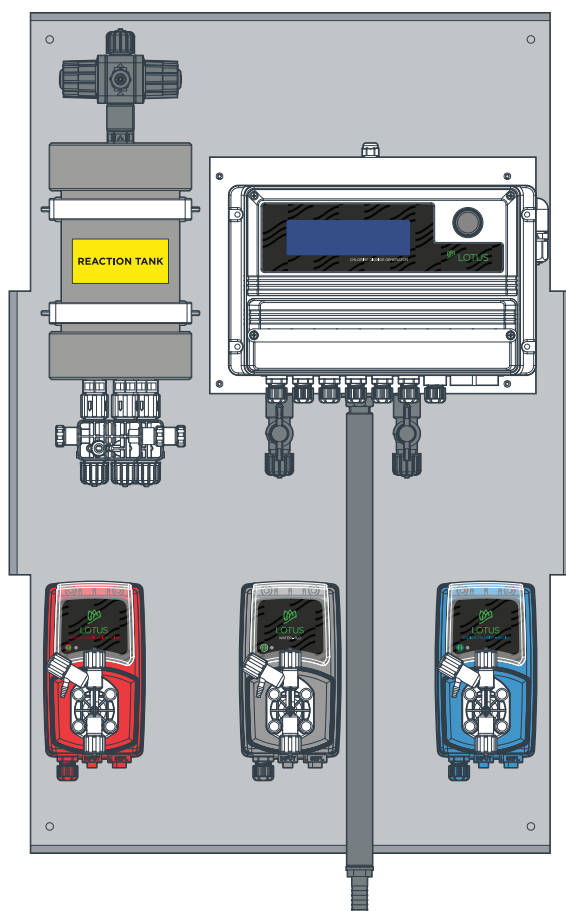
## ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No  $\text{ClO}_2$  loss due to closed reaction chamber
- Diluted chemicals

## OPTIONAL

Also available equipped with a  $\text{ClO}_2$  probe (SVCL2 or SVCL17) or an ORP probe (ERH), a probe holder and a filter.

## PANEL



## COVER



## ALARMS

- sepr alarm
- chlorine dioxide sensor alarm
- reactor leakage alarm

## INPUTS

- sefl input
- stand-by input
- levels inputs
- temperature input
- probes inputs

## OUTPUTS

- pumps output
- RS485 output
- 0-4/20 mA output
- alarm output



## MODELS

- MINI 8 / MINI 20

## GAS SENSOR

- LOTUS MINI with gas sensor detection (optional).



ONLINE STATS



CUSTOMIZABLE



APP



REMOTE CONTROL

## FUNCTIONS

- Instantaneous  $\text{ClO}_2$  production
- $\text{ClO}_2$  dosing in several mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real-time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook

- menu)
- NIMBUS communication
- USB data log (optional)
- Ethernet module (optional)
- GSM internal modem (optional)
- MODBUS module (optional)
- WIFI module (optional)
- Service due date
- mA output

## FEATURES

- $\text{ClO}_2$  concentration: 2 g/l
- Flow control input (flow alarms)
- Tank level control (level alarms)
- HCl (red),  $\text{NaClO}_2$  (blue) and dilution water (grey) metering pumps
- 3 SEFL pump dosing check
- Activated carbon filter
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed valve
- PVC reaction chamber
- ASA or fiberglass enclosure
- IP65 protection (NEMA4x) of LOTUS controller and pumps
- Wheel control for easy programming
- Working temperature: 0-45°C (32-110°F)

# Overview table

## Lotus Mini configuration performances

| MODELS  | MAX FLOW RATE $\text{ClO}_2$ | MAX CHEMICAL CONSUMPTION* | CONCENTRATION OF CHEMICALS | REACTOR | MAX PRESSURE (FEED WATER) | MAX WORKING PRESSURE*** |
|---------|------------------------------|---------------------------|----------------------------|---------|---------------------------|-------------------------|
| MINI 8  | 8 g/h                        | 0,2 l/h                   | 9% HCl                     | PVC     | 5 bar                     | 8 bar                   |
| MINI 20 | 20 g/h                       | 0,5 l/h                   | 7,5% $\text{NaClO}_2$      |         | 5 bar                     | 8 bar                   |

\* Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour

\*\* Depends on system pressure (max 8 bar)

\*\*\* For higher pressures use an external pump

# Lotus Maxi

Chlorine dioxide generator from 80 to 1000 g/h

 **LOTUS** MAXI **BASIC | USB | ETH | GSM | WIFI | MODBUS**



DIGITAL SERVICES

**LOTUS MAXI** is one of the largest product among EMEC Chlorine Dioxide generators and is used in all those cases in which high production capacity is required, such as large water treatment plants. Chlorine Dioxide is produced from diluted base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite (NaClO<sub>2</sub> 7,5%).

Chlorine dioxide produced by **LOTUS MAXI** is set to be proportional to the circulating water flow or based on a setpoint, it is then dosed into the water flow.

It can also be controlled remotely via the web application NIMBUS through a 2G/3G modem or a lan adapter, while Modbus is available as an option.

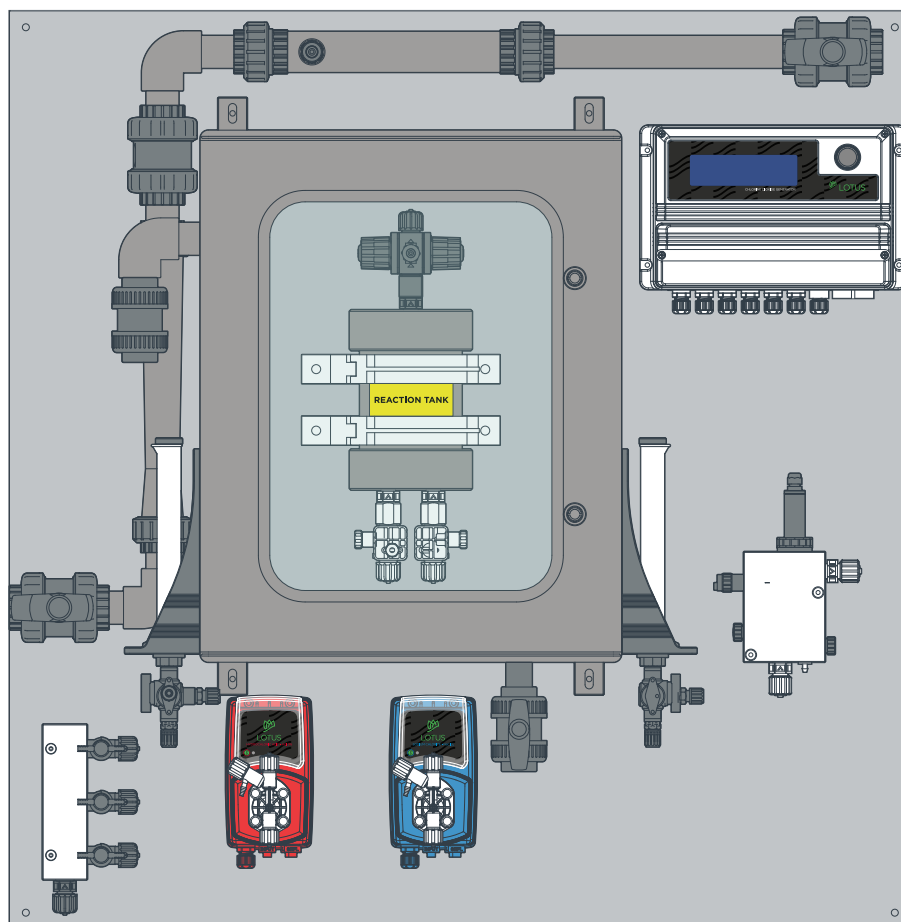
## ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No ClO<sub>2</sub> loss due to closed reaction chamber
- Diluted chemicals

## OPTIONAL

Also available equipped with a ClO<sub>2</sub> probe (SVCL2 or SVCL17) or an ORP probe (ERH), a probe holder and a filter.

## PANEL



## ALARMS

- sepr alarm
- chlorine dioxide sensor alarm
- reactor leakage alarm

## INPUTS

- sefl input
- stand-by input
- levels inputs
- temperature input
- probes inputs

## OUTPUTS

- pumps output
- RS485 output
- 0-4/20 mA output
- alarm output



## MODELS

- MAXI 80 / MAXI 160 / MAXI 240 / MAXI 400 / MAXI 600 / MAXI 800 / MAXI 1600



ONLINE STATS



CUSTOMIZABLE



APP



REMOTE CONTROL

## GAS SENSOR

- LOTUS MAXI with gas sensor detection (optional).

## FUNCTIONS

- Instantaneous  $\text{ClO}_2$  production
- $\text{ClO}_2$  dosing in several mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)
- NIMBUS communication
- USB data log (optional)
- Ethernet module (optional)
- GSM internal modem (optional)
- MODBUS module (optional)
- WIFI module (optional)
- Service due date
- mA output

## FEATURES

- $\text{ClO}_2$  concentration: 2 g/l
- Flow control input (flow alarms)
- Tank level control (level alarms)
- HCl (red) and  $\text{NaClO}_2$  (blue) metering pumps
- 3 SEFL pump dosing check
- Activated carbon filter
- MFKT/V multifunction valve as pressure, safety, anti-siphon and bleed valve
- PVC reaction chamber
- ASA or fiberglass enclosure
- IP65 protection (NEMA4x) of LOTUS controller and pumps
- Wheel control for easy programming
- Working temperature: 0-45°C (32-110°F)

# Overview table

## Lotus Maxi configuration performances

| MODELS    | MAX FLOW RATE $\text{ClO}_2$ | MAX CHEMICAL CONSUMPTION* | CONCENTRATION OF CHEMICALS      | REACTOR | MAX PRESSURE (FEED WATER) | MAX WORKING PRESSURE*** |
|-----------|------------------------------|---------------------------|---------------------------------|---------|---------------------------|-------------------------|
| MAXI 80   | 80 g/h                       | 2 l/h                     | 9% HCl<br>7,5% $\text{NaClO}_2$ | PVC     | **                        | 8 bar                   |
| MAXI 160  | 160 g/h                      | 4 l/h                     |                                 |         |                           | 8 bar                   |
| MAXI 240  | 240 g/h                      | 6 l/h                     |                                 |         |                           | 8 bar                   |
| MAXI 400  | 400 g/h                      | 10 l/h                    |                                 |         |                           | 8 bar                   |
| MAXI 600  | 600 g/h                      | 15 l/h                    |                                 |         |                           | 8 bar                   |
| MAXI 800  | 800 g/h                      | 20 l/h                    |                                 |         |                           | 5 bar                   |
| MAXI 1000 | 1000 g/h                     | 25 l/h                    |                                 |         |                           | 3 bar                   |

\* Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour

\*\* Depends on system pressure (max 8 bar)

\*\*\* For higher pressures use an external pump

# Lotus Ultra

Chlorine dioxide generator from 500 to 4000 g/h

 **LOTUS** ULTRA **BASIC | USB | ETH | GSM | WIFI | MODBUS**



DIGITAL SERVICES

**LOTUS ULTRA** is the largest product among EMEC Chlorine Dioxide generators and is used in all those cases in which high production capacity is required, such as large water treatment plants.

Chlorine Dioxide is produced from concentrated base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 33%) and Sodium Chlorite ( $\text{NaClO}_2$  25%).

Chlorine dioxide produced by **LOTUS ULTRA** is set to be proportional to the circulating water flow or based on a setpoint, it is then dosed into the water flow.

## ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No  $\text{ClO}_2$  loss due to closed reaction chamber
- Diluted chemicals

SKID



PANEL



## ALARMS

- sepr alarm
- chlorine dioxide sensor alarm
- reactor leakage alarm

## INPUTS

- sefl input
- stand-by input
- levels inputs
- temperature input
- probes inputs

## OUTPUTS

- pumps output
- RS485 output
- 0-4/20 mA output
- alarm output



## MODELS

- ULTRA 500 / ULTRA 1000 / ULTRA 2000 / ULTRA 3000 / ULTRA 4000



ONLINE STATS



CUSTOMIZABLE



APP



REMOTE CONTROL

## GAS SENSOR

- LOTUS ULTRA with gas sensor detection (optional).

## FUNCTIONS

- Instantaneous  $\text{ClO}_2$  production
- $\text{ClO}_2$  dosing in proportional mode
- Flow control input (flow alarm)
- Tank level controls (level alarms)
- Water meter input
- Stand-by input
- Real-time production data
- Pumps and SEFL flow sensors monitoring
- Permanent data storage with system data log (on Logbook menu)

## FEATURES

- Service due date
- LOTUS controller
- HCl (red) and  $\text{NaClO}_2$  (blue) metering pumps
- 2 pumps for dilution water (grey)
- 4 SEFL flow sensors as security
- MFKT/V multifunction valve as pressure,
- Safety, anti-syphon and bleed valve
- PVDF reaction chamber
- IP65 protection (NEMA4x) of LOTUS controller
- ENCODER wheel control
- Working temperature: 0-45°C (32-110°F)
- mA output
- $\text{ClO}_2$  probe reading
- Temperature probe reading (probe and accessories not included)

# Overview table

## Lotus Ultra configuration performances

| MODELS     | MAX FLOW RATE $\text{ClO}_2$ | MAX CHEMICAL CONSUMPTION* | CONCENTRATION OF CHEMICALS | REACTOR | MAX PRESSURE (FEED WATER) | MAX WORKING PRESSURE*** |
|------------|------------------------------|---------------------------|----------------------------|---------|---------------------------|-------------------------|
| ULTRA 500  | 500 g/h                      | 3,15 l/h                  |                            |         |                           | 5 bar                   |
| ULTRA 1000 | 1000 g/h                     | 6,3 l/h                   |                            |         |                           | 5 bar                   |
| ULTRA 2000 | 2000 g/h                     | 12,6 l/h                  | 33% HCl                    | PVDF    | **                        | 5 bar                   |
| ULTRA 3000 | 3000 g/h                     | 18,9 l/h                  | 25% $\text{NaClO}_2$       |         |                           | 3 bar                   |
| ULTRA 4000 | 4000 g/h                     | 25,2 l/h                  |                            |         |                           | 2 bar                   |

\* Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour

\*\* Depends on system pressure (max 8 bar)

\*\*\* For higher pressures use an external pump

# Lotus Easy

Chlorine dioxide generator from 8 to 80 g/h

 **LOTUS** EASY **BASIC | USB | ETH | GSM | WIFI | MODBUS**



DIGITAL SERVICES

**LOTUS EASY** is the best solution if you want a simple but professional way to produce chlorine dioxide, thanks to an integrated All-in-One Controller equipped with two metering pumps. Chlorine Dioxide is produced from concentrated base chemicals: acid-chlorite process by Hydrochloric Acid (HCl 9%) and Sodium Chlorite (NaClO<sub>2</sub> 7,5%).

There is no storage of chlorine dioxide therefore there is no chlorine dioxide gas or concentrated solutions outside of the process application.

**LOTUS EASY** is designed so that the reaction to produce chlorine dioxide takes place in a reaction chamber. Multi function valves on injection points ensure security of the reaction chamber.

## ADVANTAGES

- Reaction at controlled pressure
- High degree of stability of the chlorine dioxide solution
- No ClO<sub>2</sub> loss due to closed reaction chamber
- Diluted chemicals

## PANEL



## ALARMS

- self alarm
- bypass alarm
- acid/chlorine level alarm
- acid/chlorine self alarm

## INPUTS

- mA input
- stand-by input
- acid/chlorine level input
- bypass input
- acid/chlorine self input
- water meter input

## OUTPUTS

- alarm output



## MODELS

■ EASY 8 / EASY 20 / EASY 40 / EASY 80



ONLINE STATS



CUSTOMIZABLE



APP



REMOTE CONTROL

## FUNCTIONS

- Instantaneous ClO<sub>2</sub> production
- ClO<sub>2</sub> dosing in proportional mode
- Level alarms
- Water meter input
- Stand-by input
- Real time production data
- Pumps and SEFL flow sensors monitoring
- Service due date
- By-pass flow detection
- mA (0-20mA) input

## FEATURES

- ClO<sub>2</sub> concentration: 2 g/l
- Level alarms
- 2 flow sensors
- MFKT/V multifunction valve as pressure, safety, anti-syphon and bleed
- Static mixer
- PVC reaction chamber
- Working temperature: 0-45°C (32-113°F)
- 600 x 800 mm panel mounting
- By-pass diameter: DN 40

# Overview table

## Lotus Easy configuration performances

| MODELS  | MAX FLOW RATE ClO <sub>2</sub> | MAX CHEMICAL CONSUMPTION* | CONCENTRATION OF CHEMICALS | REACTOR | MAX PRESSURE (FEED WATER) | MAX WORKING PRESSURE*** |
|---------|--------------------------------|---------------------------|----------------------------|---------|---------------------------|-------------------------|
| EASY 8  | 8 g/h                          | 0,2 l/h                   |                            |         |                           | 8 bar                   |
| EASY 20 | 20 g/h                         | 0,5 l/h                   | 9% HCl                     |         |                           | 8 bar                   |
| EASY 40 | 40 g/h                         | 1 l/h                     | 7,5% NaClO <sub>2</sub>    | PVC     | **                        | 8 bar                   |
| EASY 80 | 80 g/h                         | 2 l/h                     |                            |         |                           | 8 bar                   |

\* Max chemicals consumption value is referred to a single reagent, multiply by two to obtain the total consumption of liters/hour

\*\* Depends on system pressure (max 8 bar)

\*\*\* For higher pressures use an external pump

# POOLBRAVO

The swimming pool made smart

 **POOLBRAVO** BASIC | USB | ETH | GSM | WIFI | MODBUS



DIGITAL SERVICES

POOLBRAVO is a turnkey product available in a variety of configurations to manage the main measurement parameters involved in pool water treatment immediately and easily, optimizing accordingly the dosing and consumption of the chemicals needed to meet the chemical and physical requirements of the water. Chemical parameters that can be measured and adjusted include pH, chlorine, hydrogen peroxide, ozone and bromine.

## COVER



A **multi-color LED**, installed on the PEF probe holder and visible, through an aperture, signals system operating states or any alarms with different colored lights.

**GREEN** or **BLUE** (depends on version): indicates correct tuning of the device.

**RED**: indicates that the device is in a lock alarm state.



POOLBRAVO is an easy-to-use, high-precision all-in-one solution that eliminates the need for manual intervention on pool water and reduces chemical consumption. An elegant cover makes POOLBRAVO suitable for any installation context and, in addition to protecting against accidental leaks, at the same time preserves the cleanliness and integrity of its internal components.

### COMPLETE CONTROL

The LD digital multiple-reading system, which is easy to use thanks to the LCD display and ENCODER knob that allow easy navigation through its configuration menus, and the wide choice of installable probes (allowing accurate measurement of hydrogen peroxide, oxygen, bromine,

chlorine, ozone, peracetic acid, and chlorine dioxide) ensure POOLBRAVO's complete control over pre-set measurement parameters and chemical dosing. EMEC V-series metering pumps complete the dosing system.

### REMOTE CONTROL

POOLBRAVO can be controlled and set remotely via the web with any smartphone, PC or tablet, thanks to integration with the proprietary NIMBUS online system, so you have everything under control at any time.



### PANEL

- ACID PUMP
- CHLORINE PUMP



### PANEL

- ACID PUMP
- CHLORINE PUMP
- ANTI-ALGAE PUMP / FLOCCULANT

### ALARMS

- Main alarm

### POWER SUPPLY

|         |     |
|---------|-----|
| 12   24 | VDC |
| 24      | VAC |
| 100-240 | VAC |

### INPUTS

- Stand-by
- Flow
- pH level (+)
- pH level (-)
- Chlorine level
- pH probe
- Chlorine probe
- Temperature probe

### OUTPUTS

- pulses proportional for pH
- pulses proportional for Chlorine
- Anti-algae / Flocculant

# Preconfigured Solutions for Pools, Spas and Water Treatment Systems

## Multiparameter Control and Dosing System for Pools, Spas and Water Treatment

### PANELS BASIC | USB | ETH | GSM | WIFI | MODBUS



#### READING PARAMETERS

- pH
- ORP
- FREE CHLORINE
- TOTAL CHLORINE
- COMBINED CHLORINE
- TEMPERATURE
- TEMPERATURE
- TURBIDITY
- PERACETIC ACID
- CHLORINE DIOXIDE
- PEROXIDE

#### GENERAL FEATURES

- Multiparameter control with WN, Velon, WD, LD and CENTURIO instruments
- Fragrance dosing
- Disinfection: bromine, ozone, flocculant, algaecide
- Dechlorination and filter backwash systems
- Remote control
- K, Prisma, T, V, WN and Velon pumps

### PA-CEDB



#### TOTAL CONTROL OVER PH, ORP, FREE CHLORINE, TOTAL CHLORINE, COMBINED CHLORINE AND TEMPERATURE FLOCCULANT AND ALGAECIDE DOSING

- CENTURIO multiparameter controller
- Acid dosing pump
- Chlorine dosing pump
- Flocculant dosing pump
- Algaecide dosing pump
- NFIL filter
- pH probe
- Redox (ORP) probe
- Temperature probe
- Free chlorine probe
- Total chlorine probe
- Probe holder

Pre-assembled panel, also available with custom color background

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*



## PA-WNPHRH

Pools & SPAS



### PROPORTIONAL CONTROL OF PH AND REDOX (ORP)

OUTPUT: RS485

- WNPHRH 0212 controller
- NFIL filter
- ERHS Redox (ORP) probe
- EPHS pH probe
- NPED4 electrode holder

Pre-assembled panel, also available with custom color background

## PA-LDSCL

Water treatment



### PROPORTIONAL CHLORINE CONTROL

- LDPHCL | LDSCL PLUS controller
- Chlorine dosing pump
- NFIL filter

- Temperature probe
- Chlorine probe
- Flow-through electrode holder

Pre-assembled panel, also available with custom color background

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*

# Preconfigured solutions for Cooling Towers

## Multi-parameter dosing and control system for Cooling Towers

### PANELS BASIC | USB | ETH | GSM | WIFI | MODBUS



#### READING PARAMETERS

CONDUCTIVITY INDUCTIVE CONDUCTIVITY pH ORP  
CHLORINE (TOTAL, FREE AND COMBINED) TEMPERATURE  
HYDROGEN PEROXYDE BROMINE OZONE  
CHLORINE DIOXIDE PARACETIC ACID TRACERS  
CORROSION TURBIDITY mA INPUT

#### GENERAL FEATURES

- Multiparameter control with LD, MTOWER and CENTURIO TOWER controllers
- Designed for industrial water treatment
- Conductivity control
- Automatic purging
- Remote control



### FEATURES

Panel with CENTURIO/MTOWER controller, featuring three measurements (CD, pH and Redox), measurement and dosing of make-up and bleed flow, complete with piping for measurement, 1", 1/2" bleed line and three injection points, equipped with 2 dosing pumps (expandable).

Available in 2 versions: Capacitive CD and Inductive CD.

**Optional:** also available with custom full-color 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 these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.*



## PA - TURBIDITY MEASUREMENT WITH CLEANING KIT



### FEATURES

**PANEL WITH CENTURIO CONTROLLER FOR TURBIDITY CONTROL, EQUIPPED WITH A CLEANING KIT FOR THE TURBIDITY PROBE.**

- Centurio controller (alternatively LD controller)
- Probe holder for turbidity probe, model NPED-E2-EV
- Turbidity probe, model ETORB2N
- Cleaning kit for turbidity probe, model ETORB2N

**Optionale:** Also available with LD controller  
Also available with custom full-color background

# Preconfigured solutions

## SKID multi-parameter dosing and control system

### SKID BASIC | USB | ETH | GSM | WIFI | MODBUS



DIGITAL SERVICES

The Skid System is a modular and autonomous system, built with specific characteristics, with the aim of assisting the operation of more complex industrial systems.

The advantage of this SKID comes from the fact that it is assembled and tested before arriving at the site of use. Integration with the main plant is therefore very rapid, and this allows interruptions to the production cycle to be minimised. An essential element of each Skid is the platform on which it is mounted. In addition to providing a solid and specific internal support, the platform must allow for easy and safe transport of the Skid after it has been assembled, and facilitate access by those responsible for its operation.

For this reason, each platform must be designed and built specifically for each individual Skid system.

#### READING PARAMETERS

CONDUCTIVITY

INDUCTIVE CONDUCTIVITY

pH ORP

CHLORINE (TOTAL, FREE AND COMBINED)

TEMPERATURE

HYDROGEN PEROXYDE BROMINE

OZONE CHLORINE DIOXIDE

PARACETIC ACID TRACERS

CORROSION TURBIDITY mA INPUT

## SKID SYSTEM MEDIUM

The MEDIUM size model designed with two **AMS MF** or **KMS MF** or **PRISMA MF** allows the complete treatment of products for medium-size industrial plants.



#### OVERVIEW

- PVC panel mounted in a PVC frame, 1 injection point, 2 pumps
- Always included: PVC valves and piping, bracket, safety valve, manifold, electrical box with switch
- DN 15 PN 16 with female thread for inlet and outlet
- Pump Head: PVDF or PP (no LPV)
- O-rings: VITON, DUTRAL, WAX

#### BASIC CONFIGURATION

- Structure + Panel (800 x 800 mm)
- No. 1 pump: (K CL PLUS, KMS MF, AMS MF, AMS CL PLUS, PRISMA)
- No. 1 pump: (K CL PLUS, KMS MF, AMS MF, AMS CL PLUS, PRISMA)

#### ACCESSORIES

- SOIM 3
- Calibration Cylinder
- Manometer
- Cover in PMMA
- Legs in steel
- Personalization: (the graphic of the panel)

The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order department or your sales representative.



## CUSTOMIZE YOUR SKID SYSTEM



## SKID SYSTEM SMALL

The SMALL size model designed with a **PRISMA MF** (Multifunction dosing stepper motor pump) allows the complete treatment of products for small-size industrial plants.



### OVERVIEW

- PVC panel mounted in a PVC frame, 1 injection point, 1 pump
- Always included: PVC valves and piping, bracket, safety valve, manifold, electrical box with switch
- DN 15 PN 16 with female thread for inlet and outlet
- Pump Head: PVDF or PP (no LPV)
- O-rings: VITON, DUTRAL, WAX

### BASIC CONFIGURATION

- Structure + Panel (600 x 800 mm)
- No. 1 pump: (K CL PLUS, KMS MF, AMS MF, AMS CL PLUS, PRISMA)

### ACCESSORIES

- SOIM 3
- Calibration Cylinder
- Manometer
- Cover in PMMA
- Legs in steel
- Personalization: (the graphic of the panel)

*The images on these pages are for illustrative purposes only; for more information on possible configurations, contact the order 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**



**DETAILS,  
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**



**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 configurable for each plant.

### **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 CHARTS

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



Hi, John Doe

MASTER Account

Device  
Configuration Wizard

Add  
New Profile

### Last Notifications



Alarm  
Level Alarm

95 min ago



Warning  
Level Warning

45 min ago

### Devices

All

Normal

Alert

Warning



### Prisma MF

Swimming pool Rieti Campoluniano/Small pool  
SN: 38490200105748391

Working mode: -

Working rate: --  
Slow mode: --



# My Emec

The app by EMEC

All your systems in your hand



Download on the  
App Store



GET IT ON  
Google Play

9:41

< Back



### Prisma MF

Swimming pool Rieti  
Campoluniano/Small pool

SN: 38490200105748391



Turn off

LABEL

Label Name

STATUS

Working Mode

Working Rate

Slow mode

WORKING MODE





www.emecpumps.com  
follow us



# Emec Tutorial

Find our installation videos and much more on YouTube

