5 YEARS WARRANTY

MADE IN ITALY

MDS

MULTI-CHEMICAL DOSING SYSTEM

cod. 20210570

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emec®
SIMPLE AS WATER

MDS

MULTI-CHEMICAL DOSING SYSTEM

MDS is a compact, automatic system designed for the production and dosign of multi-chemical products in aqueous solution for water treatment purposes, within the scope of use specified in these instructions.

MDS simultaneously doses two chemicals into the water inside the reactor. Generation is monitored by the HMI and can be adjusted by a flow meter with the main water flow.

The system includes three protections:

- **A protection for the 1st chemical component**
- **A protection for the 2nd chemical component**
- **A protection from the minimum flow reading of the dilution water meter**

The generation of the solution occurs inside a reactor with external water flow to protect the reactor. Inside the reactor, the two reagents react with the dilution water at a concentration of approx. 2 g/l (2000 ppm).

TECHNICAL SPECIFICATIONS

- **HDPE box dim. 750 x 1500 Depth 560 mm**
- **7” colour touchscreen HMI controller**
- **Solution production: from 50 to 5000 g/h**
- **2 self-priming electronic dosing pumps with diaphragm, stepper motor controlled by electronic control system and dosing head with PTFE diaphragm and PVDF valves.**
- **2 pressure gauges for reading pump operating pressure with diaphragm separator**
- **Reagent minimum level sensors**
- **Leak collection tank**
- **Safety cover doors**
- **PVDF reactor**

ELEMENTS

DOSING PUMPS

MDS is equipped with two Prisma series pumps featuring extremely high precision and exceptional reliability. The versatile stepper motor and advanced multifunction software ensure absolute control over speed and dosing continuity. The wide flow rate range makes Prisma the ideal component for broad and diverse disinfection applications.

PRESSURE GAUGE

The pressure gauge enables accurate monitoring of the pump’s working pressure..

DIAPHRAGM LIQUID SEPARATOR

The diaphragm liquid separator ensures accurate pressure measurement when corrosive liquids are present, preventing damage to the pressure gauge.

BACK PRESSURE VALVE

The back pressure valve prevents spontaneous liquid flow (siphoning) when the suction tank level is higher than the discharge level.

ULTRASONIC FLOW METER (Control Flow)

Equipped with feedback control, the ultrasonic flow meter ensures accurate and fully automatic adjustment of the dosing process.

KEY FUNCTIONS

- **Homogeneous, continuous dosing**
- **Chemical concentration selection (%)**
- **Dosing mode:**
  - Automatic calculation of the two reagents based on the required quantity
  - Concentration setting in %
  - Proportional dosing setting via signal from the flow meter of the water to be treated (4-20 mA)
  - Manual dosing setting
- **Integrated dosing flow measurement**
- **Chemical flow control system**
- **Dilution system using ultrasonic flow meter**
- **Dosing pump calibration mode setting**
- **Setting of chemical parameters**
- **Alarms (all alarms are configured as remote alarms)**
- **Modbus TCP-IP Ethernet communication port**