PDS

PERMANGANATE DOSING SYSTEM

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PDS

PERMANGANATE DOSING SYSTEM

PDS (**Permanganate Dosing System**) is a **compact**, **fully automatic system** designed for the preparation and continuous dosing of **Sodium Permanganate ($NaMnO_4$)** and **Potassium Permanganate ($KMnO_4$)** solutions, starting from **liquid solutions**, in drinking water or for industrial applications.

It is intended for applications where **reliability**, **dosing accuracy**, and **operational continuity** are required. The system allows **flow-proportional control** and automatic management of the oxidizing agent via a touchscreen panel.

The system can be integrated with **PermaTest**, a solution for continuous residual analysis, ensuring complete control of the oxidation process.

APPLICATION FIELDS

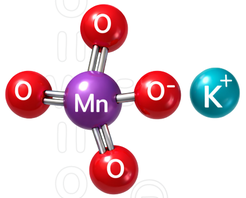
- DRINK. WATER TREAT. PLANTS
- ENVIRONMENTAL REMEDIATION
- IRON AND MANGANESE OXIDATION
- INDUSTRIAL
- GROUND-WATER

MAIN FEATURES

- Permanganate dosing setpoint in mg/L
- Automatic flow-proportional dosing
- Automatic calibration of dosing pumps
- Manual mode with preset flow rate
- Flow-proportional control via 4–20 mA signal
- PID control with integrated flow meter
- PID control of dosing pumps
- Flow monitoring and process alarms

AVAILABLE CONFIGURATIONS

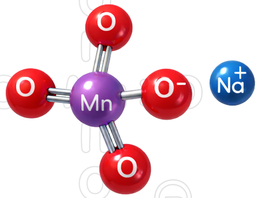
Potassium Permanganate



WHERE
- ✓ Removal of iron and manganese
- ✓ Oxidation of hydrogen sulfide (H_2S)
- ✓ Odor control and organic compound oxidation
- ✓ Pre-oxidation in drinking water treatment

WHY
- ✓ High chemical stability of the solution
- ✓ Lower aggressiveness toward certain materials
- ✓ Good long-term storage stability
- ✓ Lower maximum concentration in solution

Sodium Permanganate

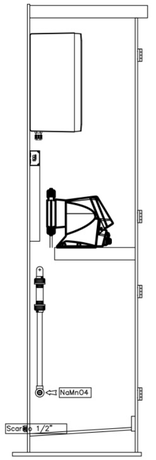
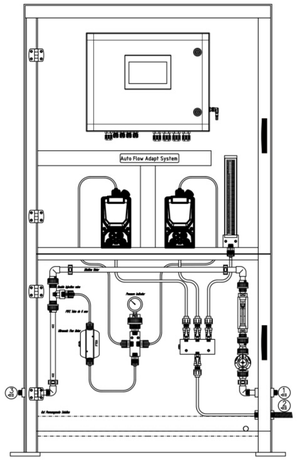
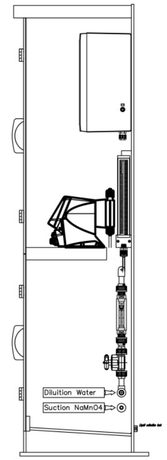


WHERE
- ✓ Industrial water treatment
- ✓ Environmental remediation and contaminated soil treatment
- ✓ Oxidation of complex organic compounds
- ✓ Systems with continuous and controlled dosing

WHY
- ✓ Much higher solubility
- ✓ Higher operating concentrations
- ✓ Greater fluidity and ease of pumping
- ✓ Higher oxidizing reactivity
- ✓ Particularly suitable for continuous systems

TECHNICAL SPECIFICATIONS

Power supply	230 Vac ±10% – 50/60 Hz
Power consumption	Approx. 100 W
Protection rating	IP65 / NEMA 4
HMI display	7" touchscreen
Inputs	· 4–20 mA analog signal (flow rate) · Remote Start/Stop · Level alarm
Operating temperature	32 ÷ 104 °F

SYSTEM COMPONENTS

- Dosing pumps (solenoid, stepper, motor-driven)
- Floor-mounted installation
- HMI Touch Screen 7"
- Integrated ultrasonic flow meter
- Communication Ethernet Modbus TCP/IP
- Reagent level sensor with automatic shutdown
- Structure with IP65 protection rating