# 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

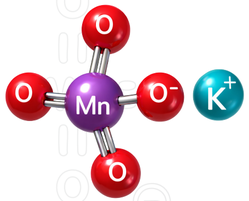
- DRINK. WATER TREAT. PLANTS
- ENVIRONMENTAL REMEDIATION
- IRON AND MANGANESE OXIDATION
- INDUSTRIAL
- GROUND-WATER

# 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

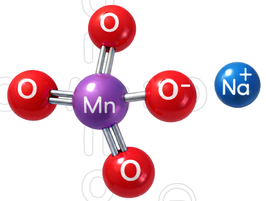
### *Potassium Permanganate*




**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)<br>· Remote Start/Stop<br>· Level alarm |
| Operating temperature | 0 ÷ 40 °C |

# SYSTEM COMPONENTS

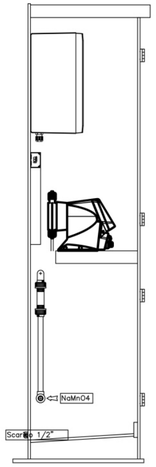
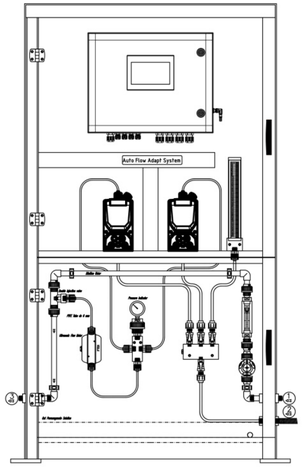
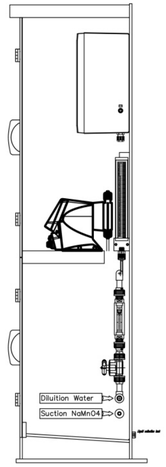
Dosing pumps (solenoid, stepper, motor-driven)

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