MADE IN ITALY

TetraMix

POLY-PREPARATOR

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SIMPLE AS WATER

TetraMix

EMEC POLY-PREPARATOR
COMPACT AND AUTOMATIC EFFICIENCY

TetraMix (EMEC poly-preparator) is a modular and expandable, fully automatic system designed for the continuous preparation of polyelectrolyte solutions from dry polymers. Indispensable in civil and industrial wastewater treatment plants, it guarantees high performance in sedimentation, clarification and sludge dewatering processes through the use of advanced technologies (such as brushless motors) and high-quality construction materials (HDPE, PPH, PVC, AISI 304).

APPLICATIONS

- **Civil and industrial purification plants**
- **Sludge and wastewater treatment**
- **Food and beverage sector**
- **Chemical and pharmaceutical industry**
- **Processes with flotation units, decanters, filter presses**

The TetraMix model is equipped with HDPE tanks and a PPH powder dosing unit with hopper, connected to an expandable and hermetically sealable container, which guarantees maximum safety for operators, inside which a plastic-coated screw conveyor is housed. The four-blade propeller agitator, driven by a brushless motor, ensures precise speed control and a significant reduction in energy consumption. The system is completed by a hydraulic circuit with a meter, solenoid valves and control valves. The system is fully automated thanks to radar level probes and integrated safety devices.

ADVANTAGES

- **Automatic preparation:** reduced manual labour and errors, ready-to-use solution
- **Maximum effectiveness:** Hydration and activation of polyelectrolyte (in powder or emulsion form)
- **Maximum efficiency:** solution optimisation and polymer activation
- **Flexibility:** modular configurations for different requirements
- **Savings:** reduced waste, lower energy consumption and simplified maintenance
- **High performance:** continuous process and consistent quality
- **Maturation times:** powder 30–60 min
- **Drain fittings:** 2”

PROCESS

1 MIXING
Initial dosing and homogenisation of reagents

2 MATURATION
Reaction and stabilisation of the mixture

3 STOCKING
Controlled storage awaiting use

4 WITHDRAWAL
Precise and regular dispensing of the solution

FEATURES

- **PPH powder dosing unit**
  - Adjustment via brushless motor with electronic variation from HMI
  - 35-litre loading hopper with vibrator
  - Radar powder level control (minimum level)
  - Powder concentration adjustment from 0.05 to 0.5%
- **Preparation water supply device consisting of**
  - Electronic water flow meter (4-20 mA)
- **Radar level controller (solution)**
- **Mixer agitator**
  - L1000 three-phase brushless motor – 400 W
  - 4-blade propeller Ø 400 mm
- **Electrical control panel**
  - Utility management via 7” touchscreen HMI
  - Ethernet TCP/IP communication
  - IP65 ABS casing to protect electronic components

MAIN ALARMS

- **Emergency stop**
- **Low water flow**
- **Minimum solution level**
- **Maximum level (H)**
- **Overflow level (HH)**

EXPANDABLE MODULAR SYSTEM

The system includes an independent master tank, which can be expanded with additional modules to adapt to different dosing and storage requirements. Assembly using rectangular flanges with gaskets and M8 screws ensures solidity and quick installation.

Tank dimensions in mm: 1400x1400xh1200

Type / Model		PLD-1500-1	PLD-3000-2	PLD-4500-3	PLD-6000-4
Tot. volume Tank litres		1.702	3.404	5.106	6.808
Tank material		PEHD	PEHD	PEHD	PEHD
Maximum hourly production l/h	45′	1.875	3.750	5.625	7.500
	60′	1.500	3.000	4.500	6.000
Power consumption		200 W	100 W	100 W	100 W