

seko

Poly Series

Polymer Preparation Unit



Your Choice,
Our Commitment

SEKO's Poly Series has been specifically designed to provide effective solutions to the needs of Water Treatment Customers.

The Poly Series of Polymer Preparation Units provides a wide range of options, with 5 ranges to pick from, they encompass all application needs and have been designed especially with flexibility and compact footprints in mind.

A complete range of polymer batching and metering systems.

A polymer preparation unit is designed to effectively and efficiently prepare polymer solutions which are used as coagulants for the removal of suspended particles in water treatment processes of a number of applications from swimming pool maintenance through to the various stages of waste water treatment, as well as oil recovery, color removal, paper production and mineral processing.

The Poly Series of PPU's can accommodate both liquid or powder polymer base materials and offers the following benefits:

- Considerable savings in terms of polymer usage and running costs
- Precision in the preparation and batching stages, optimising the processes
- Space saving and system centralisation





Function

The polymer preparation tank is divided into three chambers: dissolving (V1), maturing (V2) and storage (V3), interconnected by siphons that form a perfect flow between the chambers necessary for the formation of high quality solution.

The dosed polyelectrolyte comes into contact with water. The water/polyelectrolyte mixture then drops into the tank below where the dissolving phase begins. In this first chamber V1, a slow agitator keeps the contents of the tank moving ensuring thorough homogenization of the solution. The siphon transfers the solution to the maturing chamber, V2, where another slow agitator keeps the solution uniform until maturing is complete. Then the solution is transferred to storage chamber V3 from where it can be transferred for use.

The level switches installed in this final chamber control the automatic functions:

Max and normal level: when the solution reaches the maximum level, this switch stops the powder dosing unit / liquid polymer dosing pump and closes the water inlet solenoid valve. Whilst level is normal, the switch enables the dosing unit to function and opens the water solenoid valve.

Minimum level: when the solution falls to minimum levels and below, this switch stops the dosing pump and sets off an alarm indicator on the electrical control panel.

Overflow level: when the solution reaches the overflow point, this switch stops the powder dosing unit/ liquid polymer dosing pump and closes the water inlet solenoid valve preventing delivery of mixed polymer solution to the drain.

Construction characteristics

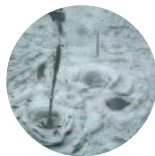
The following are the key elements used in the construction of the Poly Series of PPU's, all selected and designed for maximum durability, efficiency and reliability from a maintenance and from a production point of view.

- An automatic water supply system comprising a shut-off valve, filter, safety pressure switch, pressure gauge, pressure reducer valve, solenoid valve, water meter with pulses, control valve, flow meter (with flow switch for minimum level flow rate) and special dispensing nozzle (for units that work with powder polymers).
- Tanks made entirely in PPH, with inspection covers and emptying valves for each chamber.
- Customized mixers, optimized to ensure a homogeneous mixture, are made of stainless steel.
- Batching screw made entirely of stainless steel, with batching adjustment managed using a precise speed regulator.
- Electrical protection and control panel, with built-in buttons and controls or touchscreen panel, designed for manual/automatic operation and equipped with emergency stop and wiring to all system components.
- Conductivity level probes for high, low and very low levels with emergency light warning.
- Separate safety level switch for overflow levels (General Fault alarm warning).

Applications

Using polymers and flocculants considerably facilitates the processes of removing particles and solids suspended in liquid in the following applications:

- Treating potable and industrial processing water
- Purifying waste water
- Treating sludge, in order to improve the performance of centrifuges and filter presses
- Processes for the paper, chemical, petrochemical, mineral processing, canning industries





PolyCendos

Effective polymer metering

Triple continuous flow system is designed as a batch flocculation aid for the preparation of polymer solutions featuring a storage tank subdivided into three chambers.

6 models to choose from to fit every application need.

- Processing of **liquid polymer (0.05–1.0 %)** and **powdered polymers (0.05–0.5 %)**.
- Minimal product carry-over.
- Extraction of the polymer solution and drainage of the chambers via the front of the storage tank.
- User-guided input of the solvent concentration as well as calibration of the powder metering unit and liquid concentrate pump.

Optional equipment

- Automatic powder hopper loading.
- Minimum level probe in the powder hopper.
- Stirrer in the batching tank.
- Vibrator for hopper.
- Prefabricated post-dilution systems.



- Optional PIC Programmable logic.
- Controller with PROFIBUS module.
- Version with terminal box available on request.
- **Extraction rate up to 8000 l/h.**

PolyMan

Batching of polymer solutions in batch quantities

PolyMan batching stations are used for manual batching of liquid and powdered polymers.

- **Ideal for use where there is no need for continuous operation**
- Manual addition of flocculants in batch quantities
- Robust design
- Cost-effective
- Batching tank manufactured from polypropylene including flushing system
- **Gentle mixing for constant performance** (electric stirrer)
- Terminal box



PolyTower

Compact double-decker

The compact double-deck PolyTower systems are subdivided into two storage tanks stacked on top of each other and are used as batch flocculation aids for the preparation of polymer solutions. The PolyTower product system is especially designed for confined areas thanks to its space saving design.

- **Processing of liquid polymer (0.05 – 1.0 %) and powdered polymers (0.05 – 0.5 %)**
- Offers user-guided input of the solvent concentration, as well as **calibration of the powder metering unit**. Comes with liquid concentrate pump water apparatus, with flow meter and fitting set for the dilution water
- **Gentle mixing for constant performance** (electric stirrer)
- Optional PIC Programmable logic
- Controller with **PROFIBUS module**
- Version with terminal box available on request



PolyKompact

Super Compact High Performance

PolyKompact are super compact emulsion polymer preparation units where even the PolyTower might not fit. Available in 3 sizes, the PK series covers a wide range of applications ranging from water purification, chemical treatment, biological to mineral treatment.

- For such systems, **concentrations of 0.05 to 1.0% can be defined**. The viscosity of the polymer solution produced must not, however, **exceed 1500 mPas**.
- Flow rate of the preparation water **can be adjusted to fully utilize** the desired preparation range. Concentrations greater than **0.5% may reduce the performance of the preparation**.
- The maturation time required depends on the polymer and will depend on the extraction rate and the volumetric capacity of the PolyKompact system.
- The system capacities range **from 200 litres for the PK200 up to 600 litres for the PK600**.

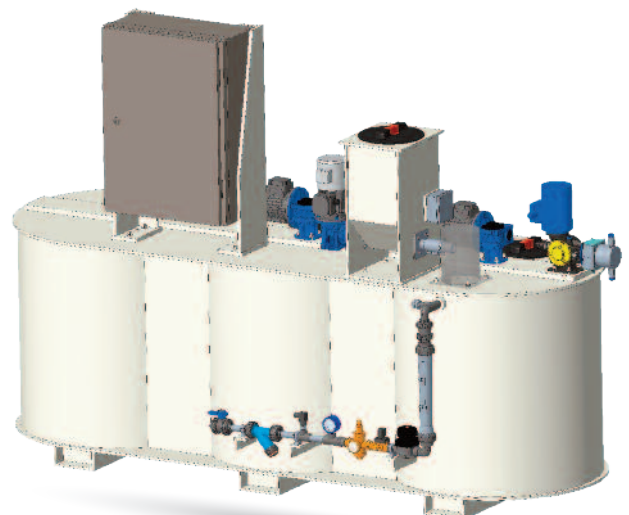


PolyMaster

Polymer batching systems ready for operation

PolyMaster are automatic triple chamber batching systems for powdered flocculant, suitable for the preparation of 0.05 to 0.5% polymer solutions

- Systems assembled ready for operation.
- Three **individual cylindrical polypropylene storage tanks** serve as batching, maturing and storage tanks.
- Cylindrical storage tanks are hydraulically coupled via overflow channels.
- **Dry feeder with drive motor**, dosing pipe heating and powder funnel with seal tight lid.
- **Flushing system for flushing and wetting of the powder**.
- **Gentle mixing with two electric stirrers** for constant performance.
- **Control cabinet** for automatic control of the entire system.



Your Choice, Our Commitment

In the modern Globalised world, being a privately owned Company has significant benefits especially for our Customers, our Partners. For over 40 years, SEKO has developed a Global organisation able to take the longer view, manage the pressure of the now, and to plan for the long term, delivering true Partnership for our Customers, with transparency and mutual respect for each other.

Whether it's for our reknown flexibility, our attention to detail, the high-quality products, or just the way we do business, we understand that it's Your Choice to do business with us. It is Our Commitment to fulfill your needs wherever you, our Customers are.



For more information about our portfolio, worldwide locations, approvals, certifications, and local representatives, please visit www.seko.com

As part of a process of on-going product development, SEKO reserves the right to amend and change specifications without prior notice. Published data may be subject to change.

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The SEKO logo, consisting of the word "seko" in a bold, blue, lowercase sans-serif font. The letters are closely spaced, with the 'e' and 'k' being particularly prominent.