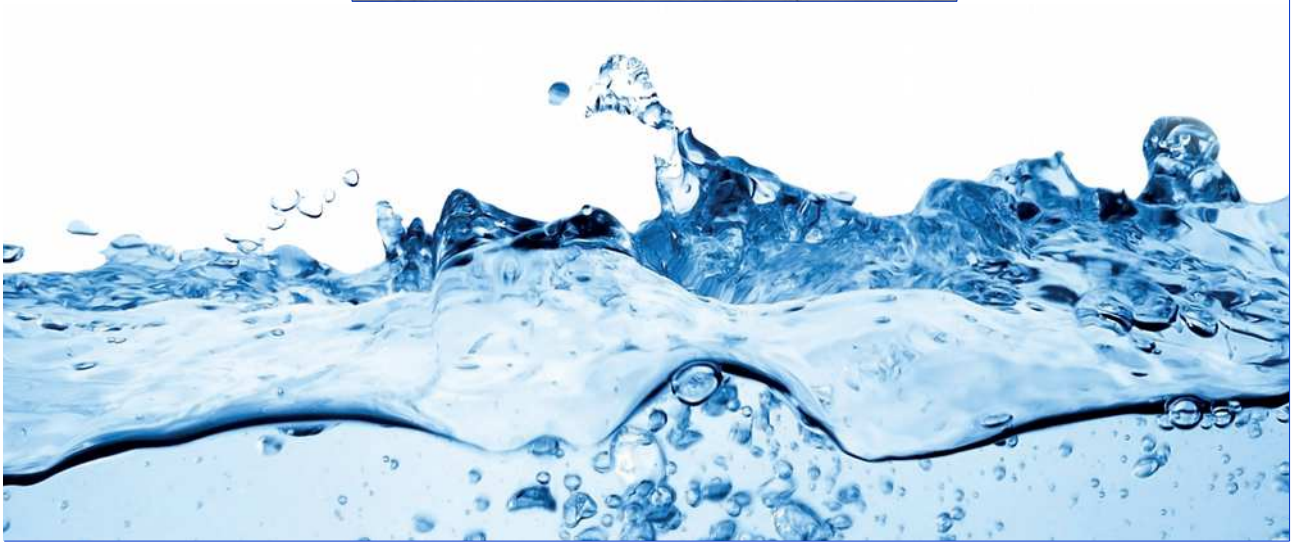
Polymer preparation system

„liquid“, type Inline



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Features

- Automatically polymer preparation system
- Producing the solution in an „Inline“-process
- Suitable for all types of liquid polymers, regardless of manufacturer
- Accurate and consistent solution concentration
- Low maintenance with static mixer
- As a compact module easily transportable
- Fully automatic and manually operated
- Various designs and numerous options

Technical description and process

The polymer preparation system type Inline was developed for controlled preparation of liquid polyelectrolyte in water. The system is suitable for all types of polymers and so regardless of manufacturer. The preparation concentration is on average 0,8 %. Depending on the polymer, other concentrations can be operated.

With continuously variable eccentric screw pump the liquid polymer is sucked from the container and is conveyed to the static mixer. The necessary amount of water is adjusted to a **manual valve.** Then it will be mixed with inline method in the static mixer. And so the connection associated with this solution comes into optional storage tank or into your existing storage tank, to achieve the maturation and the 100 % activation and efficiency.

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Technical description and process

The polymer preparation system type Inline is designed for fully automatic operations. Of course it can be operated in manual mode. Because of the few mechanical components, the system is very low maintenance. A long-term availability is guaranteed.

The polymer preparation system type Inline is basically built in two different versions. The standard version is primarily intended for stationary operation. The construction is located on a **machine base frame.** The compact system consists of three separable modules and is suitable for wall mounting or mobile use at the operational tests at construction sites.

Polymer preparation system Inline compact

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Types and options

For an optimal adaptation and integration into your process are numerous types and options available:

Types performance/throughput
• Diameter pipeline 1“ DN25, (data see „technical data“)
• Diameter pipeline 11/2“ DN40, (data see „technical data“)

Types construction
• Liquid polymer preparation system standard
• Liquid polymer preparation system compact (3 removable modules)

Types control/operation
• Control with touch panel 4,5“
• Control with Siemens S7-1200 and touch panel

Types material pipelines
• Stainless steel V2A
• Stainless steel V4A

Options
• Stainless steel control cabinet
• Float switch for storage tank
• Storage tank PE-plastic, volume 1000 litres gross
• Storage tank PE-plastic, volume 1500 litres gross
• Storage tank PE-plastic, volume 2000 litres gross

Many options of customer-specifically adaptations are also available. We can aquip your individual system with other conrollers such as Siemens S7-300, S7-1500 or Rockwell SPS. For the mechanical connection we have special designs, flange connections or integrated systems already implemented in a new or existing system.

For delivery of your polymer product in the form of loose containers in a tanker truck a storage tank offers ideally. There is a possibility by waterprocesstec to create a GFK-tank according to your requirements and set-ups. From the truck deliver station (see datasheet truck deliver station) to the optimal dosage in your process (for example with a controlled redundant transfer and dosing pump) results a complete system. Also for this waterprocesstec is your ideal partner.

Application areas

The waterprocesstec polymer preparation systems type Inline are used in wastewater technology, in the sludge dewatering, in the clarification of raw and surface water for the production of industrial and drinking water. Other applications in chemical industry, in power stations or in paper industry are possible.

If you have any further questions, please do not hesitate to contact us.

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Technical data

Types performance/throughput

Version 1“	diameter pipeline DN25	approx. 3600 litres/h water pressure at 1 bar approx. 6700 litres/h water pressure at 2 bar approx. 8200 litres/h water pressure at 3 bar approx. 9400 litres/h water pressure at 4 bar
Version 1 1/2“	diameter pipeline DN40	approx. 17200 litres/h water pressure at 2 bar approx. 21100 litres/h water pressure at 3 bar approx. 24000 litres/h water pressure at 4 bar

(**Warning**: the informations are dependent from the water connection, the availability of the pressure and the downstream components such as valves, pipelines and tanks)

Design dosing pump

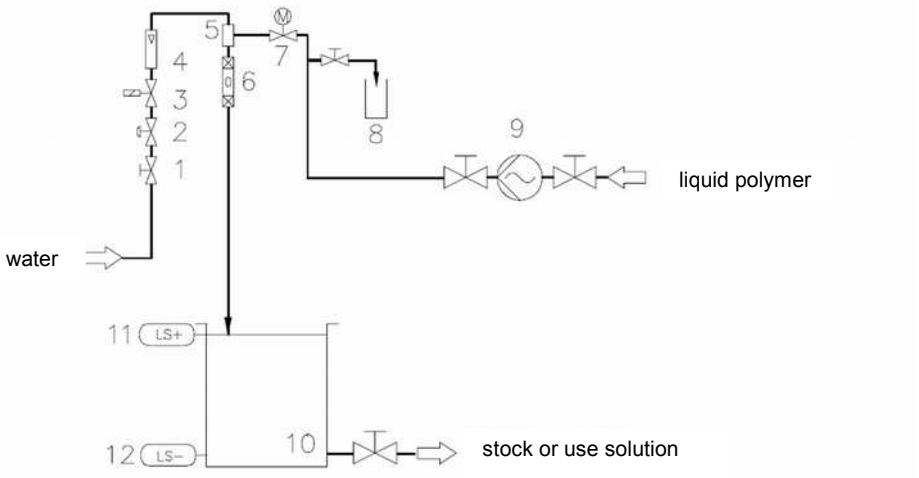
Version 1“	20...180 litres/h, pump with external fan
Version 1 1/2“	50...500 litres/h, pump with external fan

Electrical connection

Supply voltage	3 x 400VAC + N+ PE / 50Hz
Connected load	3 x 10A

Recommended water connection
pressure 2...3 bar
Cross-section as the system design

Process flow diagram



1. hand shut-off valve
2. control valve (hand operated)
3. solenoid valve for water
4. flowmeter for water
5. polymer feed point
6. nline static mixer
7. motorized ball valve for polymer
8. vessel for metering
9. polymer dosing pump
10. storage tank for stock or use solution (optional)
11. float switch max. (optional)
12. float switch min. (optional)

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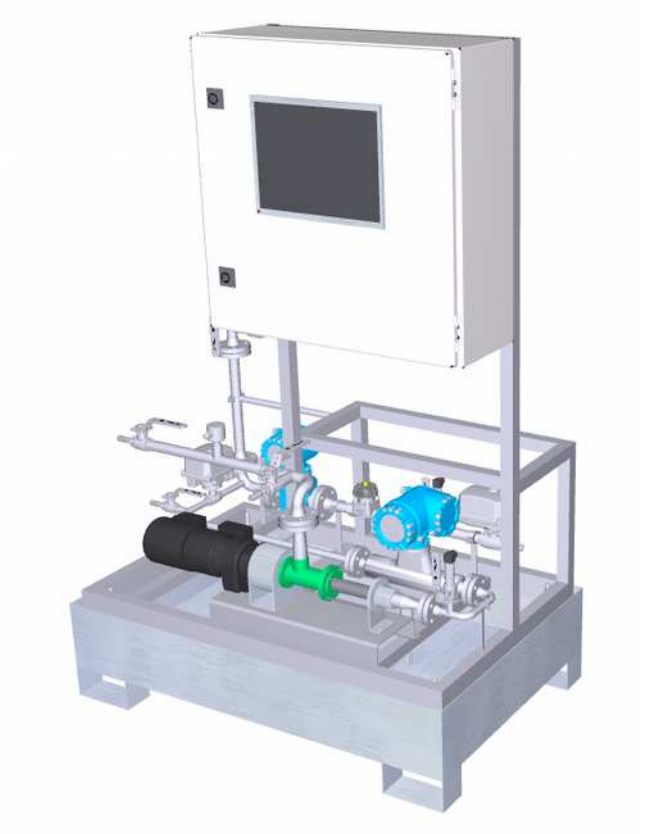
3D Ansicht



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