



Sismat Uluslararası
Arıtma Makinaları
İnşaat Mühendislik
Sanayi ve Tic. A.Ş.



POLYMER DOSING UNITS

FACTS

Capacity from **500 L/hr to 10,000 L/hr**
Solution concentration can be arranged
between **0.1% and 0.5%**.



POLYMER DOSING UNITS

In most processes and applications, polymer dosing is required to have a better result at the end of process. Polymer dosing units are the equipment used for preparation and dosing of polymer solutions which are needed in treatment plants, most industrial processes or disinfection applications. They are generally composed of a polymer preparation tank manufactured by a material resistant to chemicals, a polymer dosage screw, and mixers.

Sismat Uluslararası offers standardized and ready-to-use polymer dosing units which can be operated manually, semi-automatically or full- automatically according to the customers' demands. They can be manufactured in different capacities depending on the requirements.

They are needed especially for automatically preparation of polymer solutions which are used as coagulants for suspended solids in the water treated in wastewater treatment plants. Polymer addition is a necessity to obtain a good result in water treatment both for the primary clarification-flocculation stage and the last sludge dehydration stage.

There are three main compartments of polymer dosing units: polymer solution preparation, ageing, and storage compartments. The incoming water is controlled by a pressure control mechanism. Dry polymer enters the feeding hopper and it is dosed to eductor. Dissolution process starts when the polymer in powder form which is dosed from eductor to the tank is mixed with water. The solution flows into the ageing compartment and it is made homogenized by means of the flash mixer. Finally, it comes to the storage compartment and dosing of solution is controlled by the sensitive level sensors.

Sismat Uluslararası Polymer Dosing Units are mainly made up of tank, dry polymer storage reservoir, dry polymer feeding screw, rapid mixer, slow mixer and drive units.

FEATURES AND BENEFITS OF SISMAT ULUSLARARASI POLYMER DOSING UNITS

- Reliable and efficient systems
- Compact design
- Available for continuous operation if required
- Safe and easy operation
- Economic solutions
- Fast and easy installation
- Low investment, operation and maintenance cost
- Low energy consumption

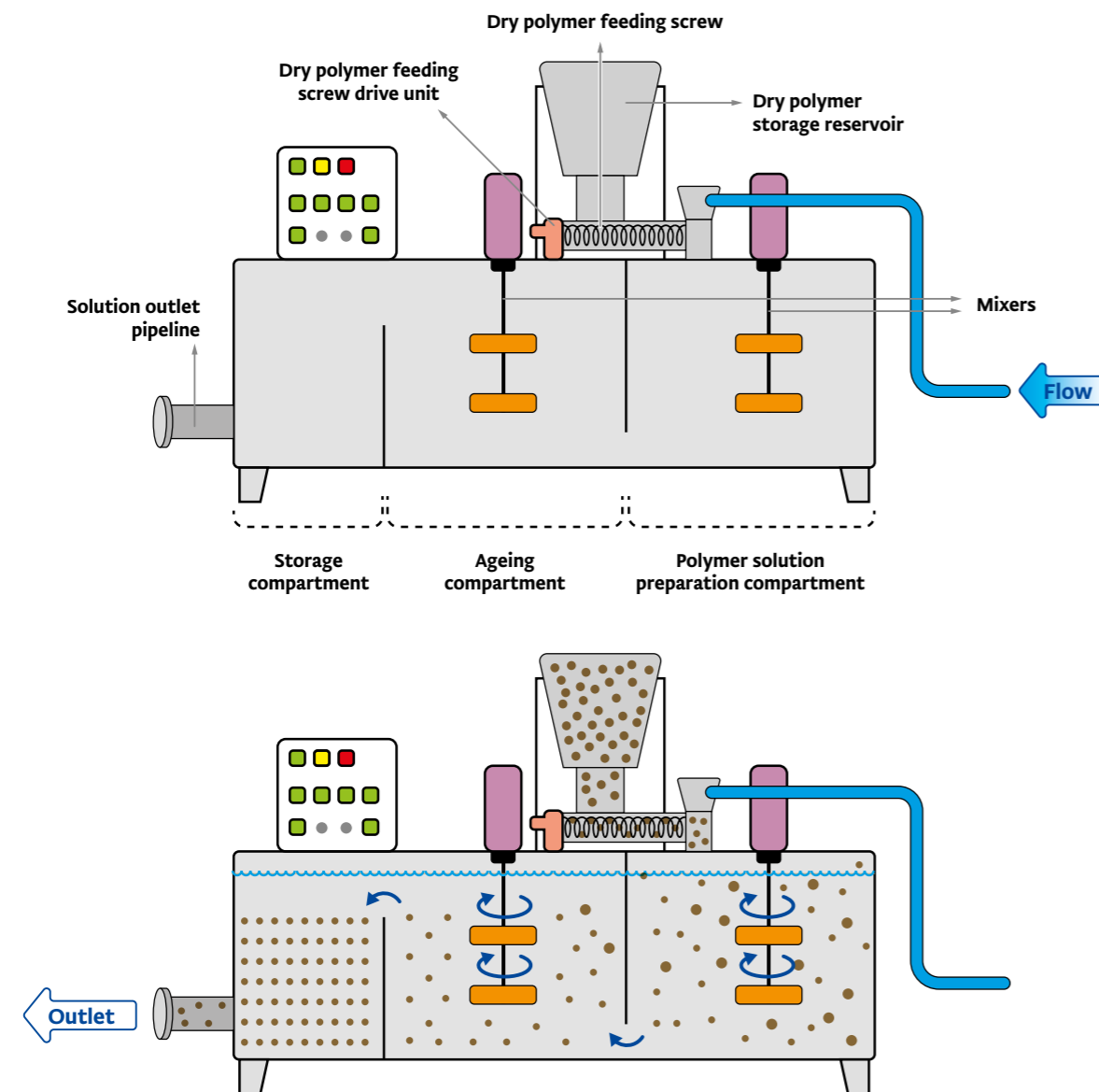
APPLICATIONS

- Water treatment
- Municipal wastewater treatment
- Industrial wastewater treatment
 - Food industry,
 - Cosmetic industry,
 - Pulp and paper industry,
 - Chemical industry,
 - Leather industry,
 - Textile industry,
 - Marble industry, etc.
- Boiler feed treatment
- Cooling water treatment
- Reverse osmosis
- Ultrafiltration

WORKING PRINCIPLE

Sismat Uluslararası Polymer Dosing Units are commonly preferred in water and wastewater treatment plants to prepare polymer solutions used for further treatment processes.

Dry polymer is stored in a reservoir which has a feeding screw at the bottom. The feeding screw doses needed amount of dry polymer to eductor which has a conical shape. Water also enters the eductor, mixes with the dry polymer, and directly flows through the tank. The solution in the tank is mixed by a flash mixer. The polymer is kept suspended by means of the low-speed mixer placed in the second tank (ageing compartment).



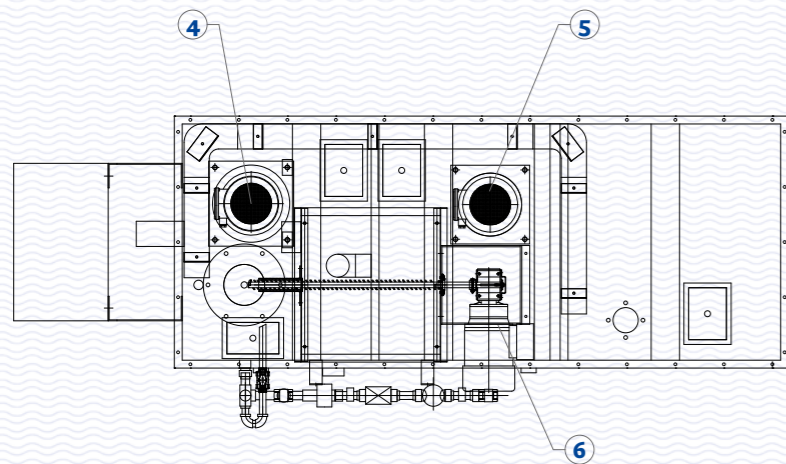
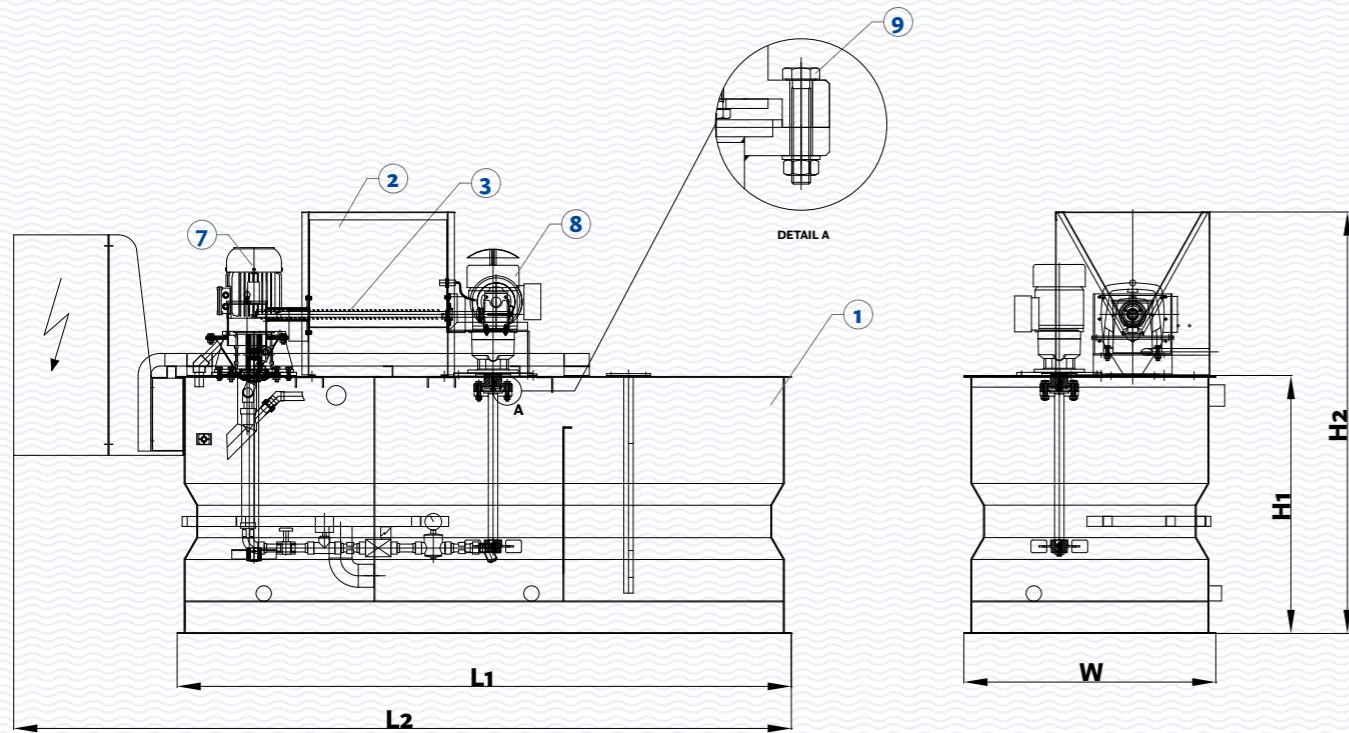
Dry polymer which is stored in the reservoir is dosed to the eductor. Water also enters the eductor, mixes with the dry polymer, and directly flows through the tank. The solution in the polymer solution preparation tank is mixed by a flash mixer. In the ageing compartment, the low-speed mixer keeps the polymer suspended. After these processes, the solution is stored in the storage compartment.

OUR POLYMER DOSING UNIT SPECIFICATIONS

Model	Dry Polymer Capacity (kg/hr)	Dry Polymer Storage Reservoir Volume (L)	Equipment Specifications				
			L1 (mm)	L2 (mm)	W (mm)	H1 (mm)	H2 (mm)
SPC.500	0.5-2.5	20	1500	2000	720	500	1000
SPC.1000	1.0-5.0	40	1950	2470	800	820	1350
SPC.2000	2.0-10.0	80	2050	2570	1050	1170	1900
SPC.3000	3.0-15.0	120	2700	3200	1160	1200	2050
SPC.4000	4.0-20.0	160	2700	3200	1160	1410	2280
SPC.5000	5.0-25.0	200	2700	3200	1500	1370	2200
SPC.10000	10.0-50.0	400	4600	5220	1800	1400	2300



Typical Polymer Dosing Unit & Components



OUR POLYMER DOSING UNIT COMPONENTS

	Polymer Dosing Unit Components	Materials Available
1	Tank	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
2	Dry polymer storage reservoir	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
3	Dry polymer dosing screw	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
4	Rapid mixer shaft & fan	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
5	Slow mixer shaft & fan	Carbon steel or stainless steel grade, AISI304, AISI304L, AISI316, AISI316L, AISI316Ti, DUPLEX or SUPER DUPLEX
6	Dry polymer dosing screw drive unit	-according to norm of manufacturer
7	Rapid mixer drive unit	-according to norm of manufacturer
8	Slow mixer drive unit	-according to norm of manufacturer
9	Fasteners	8.8, A2, A4





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