

STPL - STPL/L

POLYMER PREPARATION STATION

VIII.I MACHINE DESCRIPTION

VIII.I.I STPL

Model STPL is a complete, skid mounted polymer preparation station for the automatic preparation of polymer solutions used as coagulants for the suspended particles in the wastewater. This system can be used both in the primary flocculation and in the sludge dehydration. The polymer powder, dosed by an adjustable speed screw feeder is discharged in a HDPE dissolutor with little humidity absorption. The dissolutor is fed by drinking water at the standard line pressure. The solution is discharged into the on board tank referred to as the dispersion stage transferred into a second compartment for curing and ultimately in a third compartment for storage.

The connection between compartments is achieved through siphons fitted with traps for the accumulation of solids. The solution is kept in suspension by the agitators and slowly rotating in the different compartments. The automatic control is assured by a control cabinet installed on-board the unit.

The control cabinet function includes:

- Automatic start and stop of the powder dosing and water supply (controlled by level indicators);

- Emergency stop;
- "Low" level alarm;
- Inlet water pressure gauge to verify the proper working pressure;
- Automated control of the system processes.



VIII.I.II STPL/LIQUID

The polymer preparation station, mod. STPL/L, is used for the preparation of solutions of flocculent polymer. The liquid polymer is dosed into the dissolution PE tank by a membrane dosing pump with manual dosing set-up.

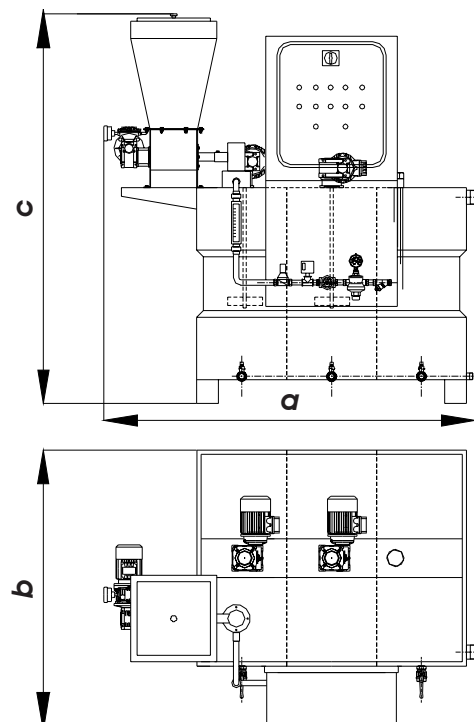
Contemporarily the water is pumped into the tank by a stainless steel pump, where an agitator mixes the liquid polymer with the water. The control of the water amount is made by the capacitive level indicator, while the control of the polymer dosing pump is made through a timer.

To assure complete mixing of the water and the liquid polymer it is required to have a 3 bars pressure on the main water line and mix together with the polymer in a mixing cyclon. The solution, held constantly in motion through the agitator, is dosed by a dosing pump for the successive dosage in system.

VIII.II TECHNICAL DATA

	a - mm (Length)	b - mm (Width)	c - mm (Height)	Hopper capacity (kg)	Capacity (l/h)	Installed power (kW)
STPL 10	1600	1300	1700	50	1000	1.28
STPL 12	1500	1300	1700	50	1200	1.28
STPL 15	2000	1300	1700	50	1500	1.28
STPL 20	2500	1300	1700	50	2000	1.28
STPL 25	3000	1300	1700	50	2500	1.28
STPL 30	3000	1500	1700	75	3000	1.68
STPL 40	3000	1500	2400	100	4000	1.68
STPL 50	3500	1500	2400	100	5000	1.68

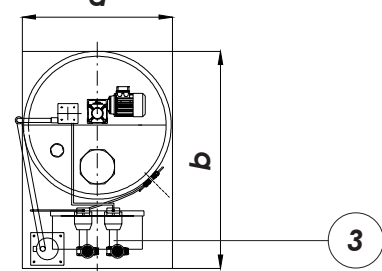
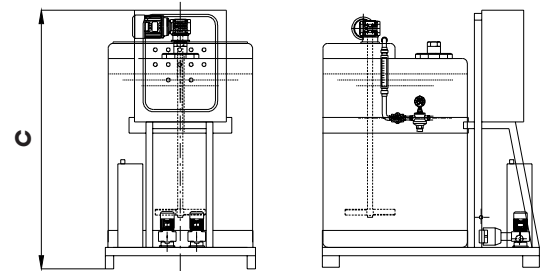
n.b.: the manufacturer may modify some dimensions or sizes without prior information!



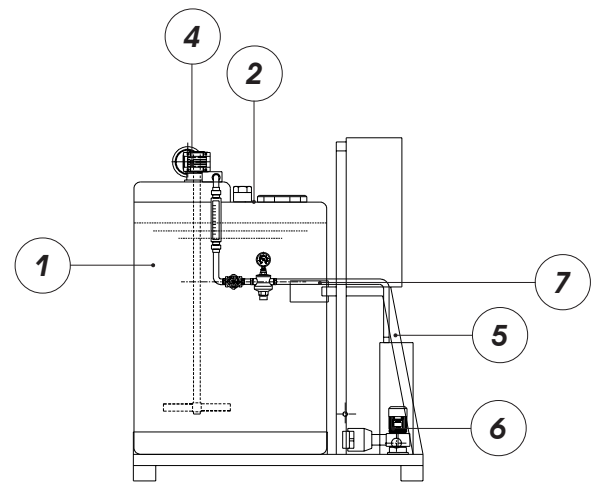
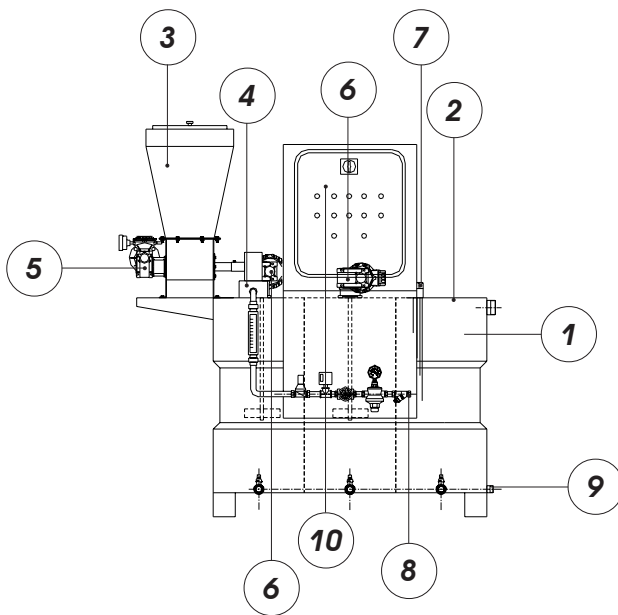
Polymer Preparation Station

	Ø - mm (diam.)	Øa - mm (Length)	b - mm (Width)	c - mm (Height)	Net volume (l)	Rate (l/h)	Liquid height (mm)
STPL/L 12	480	900	1300	1550	120	2	650
STPL/L 25	590	900	1300	1550	250	5	800
STPL/L 30	670	900	1300	1550	300	10	900
STPL/L 50	760	900	1300	1550	500	15	1100
STPL/L 100	1100	900	1300	1550	1000	20	1150

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VIII.III SUPPLY COMPONENTS



Automatic Polymer Preparation Station - STPL

- 1 AISI304 stainless steel tank divided in stages and fitted with adjustable supports
- 2 AISI304 stainless steel covers
- 3 Hopper including Braker
- 4 High density polypropylene dissolutor
- 5 AISI304 screw feeder and fitted with adjustable speed gearbox ranging from 10% to 100%
- 6 AISI304 agitators (186-140 rpm) (2)
- 7 Dosing pump level
- 8 Level indicator
- 9 Inlet pipe including: filter, pressure control system, flowmeter, pressure gauge, pressure meter, electrovalve and control valve
- 10 Pump connection
- 11 Control cabinet

Liquid Polymer Preparation Station - STPL/L

- 1 Polypropylene tank with inlet opening and discharge valve
- 2 Stainless steel support for agitator and dosing pump
- 3 Dosing pump solution (membrane, piston or monoscrew model, depending on capacity) with regulation ranging from 10% to 100%
- 4 AISI304 agitator (140 rpm)
- 5 Water inlet pump
- 6 Flocculent dosing piston pump
- 7 Inlet assembly: filter, pressure gauge, flowmeter, control valve

VIII.IV ACCESSORIES

VIII.IV.I STPL accessories

- Powders level control;
- Storage chamber agitator.

VIII.IV.II STPL/L accessories

- Control cabinet.