

Automatic Preparers **Polymaker - PM**

Up to
12000 l/h

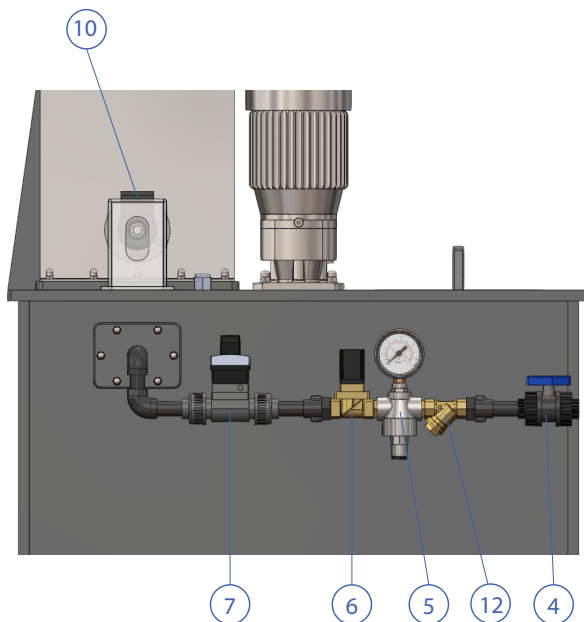
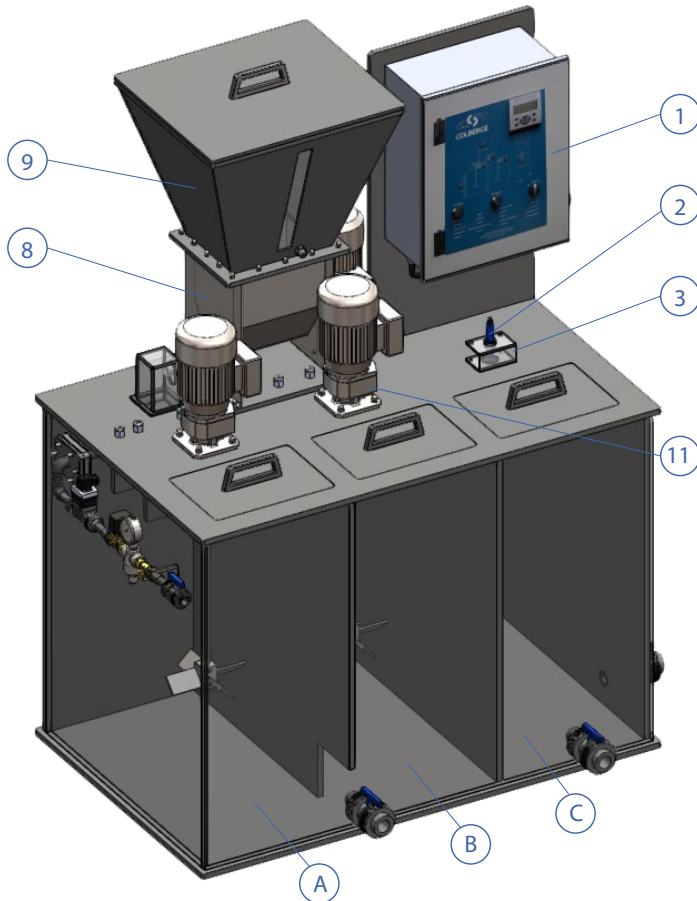
No
corrosion

Ultrasonic
level

Instant
flow

Console
PCL

Variable
speed



Polymaker - PM

Colberge developed Polymaker-PM series, a continuous preparation systems of polyelectrolyte powder, fully automatic, allowing to obtain a final product of high quality.

The range extends up to 12000 l/h in concentrations from 1 to 5 g/l. The Polymaker-PM systems includes, as standard, a large number of accessories and automation, for complete monitoring of the process.

The control panel (1) has a general security button, individual operating switches and a graphic synoptic, allowing the operator the full control of the unit in a intuitive way.

Process description

Each system is constituted by a three-chamber deposit (A) - preparation, (B) - maturation, (C) - dosage, built with high-density polyethylene (very resistant to aggressive atmospheres).

The ultra-sonic level probe (2) (no contact with the liquid), installed in the last chamber in an acrylic holder (3), commands the water entrance by the solenoid valve (6) into the preparation chamber when it has reached the minimum level and stops when it has reached the maximum level. It also allows the activation of a maximum and minimum level alarm, with information on the console, luminous signal and respective external contact in the power supply board.

The flow meter (7), the pressure reducer valve (5) and control/shut off valve (4), allow the continuous regulation of water entrance guaranteeing a dilution flow that is convenient for the preparer's proper functioning inside the established parameters. The water is sprayed in order to guarantee a previous mixture with the powder to avoid the formation of clots and to allow a fast dissolution of the product.

The Y filter (12) allows filtering the impurities at the entrance of the water line so that this work in perfect conditions of use, without any obstruction of the same.

The powdered polyelectrolyte is simultaneously dosed with the water entrance. According to the selected level of concentration, directly adjusted on the console and the instantaneous flow, the electronic variable speed transmission positions the powder doser (8) in order to obtain the exact concentration of solution intended.

The low speed mixers (11) with stainless steel 316 shaft and propeller, installed in the preparation and maturation chambers, confer total homogeneity to the final solution (3rd mixer, for the dosage chamber, is optional).

Accessories included as standard

- Removable covers in all chambers;
- Heating sleeve (10) on the powder dosing exit;
- Detector of absence of powder in the hopper (9) and respective alarm, with information on the console, luminous signal and free contact in electrical panel for remote signaling;
- Protection acrylic glass in dosing output;
- Window watch in hopper;
- Configurable timer operation of mixers.

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Process control panel of the prepurer

Automatic graphical console - PLC

With the automatic graphical console installed as part of command allows the operator to continuously view the autonomy of the polymer preparation, the flow of water, the concentration of the solution selected, the state of operation and active alarms.

Alarms

The available alarms are detected visually in LED process control panel and in the graphical console, coupled with an explanation available in the alarm list, and a change of state of the contacts available on the terminal block NO / NC.

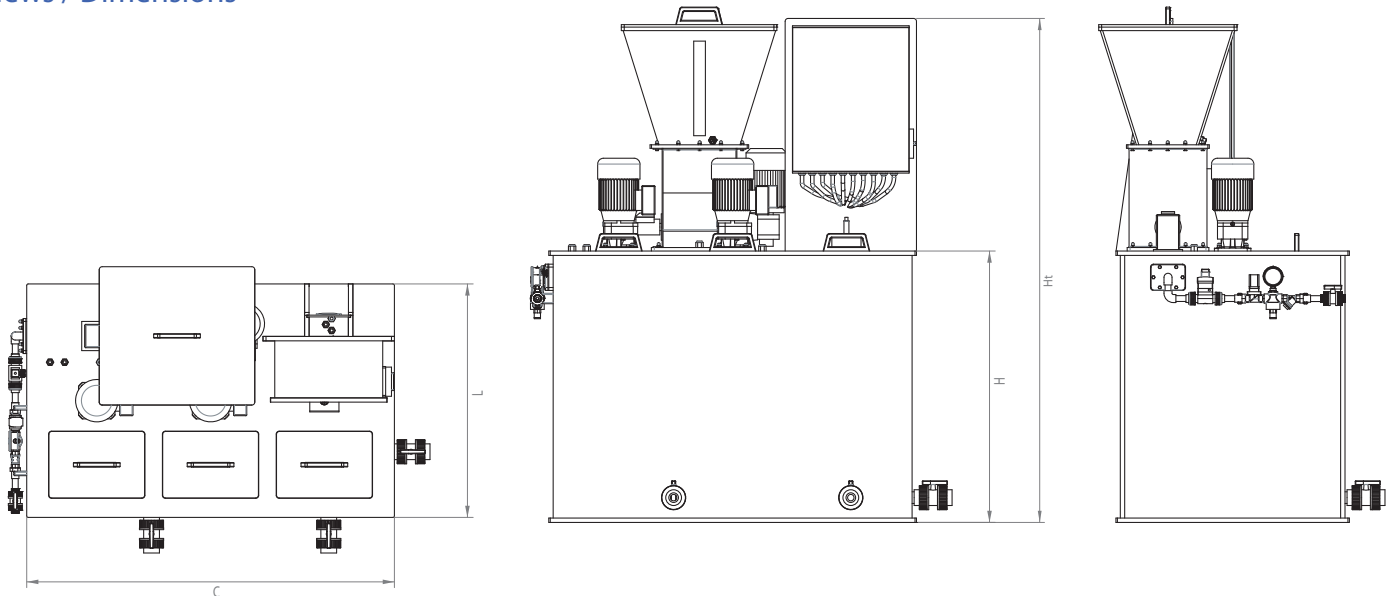
Active alarms - stop working

- Flow of water very low or very high;
- Level too high or too low.

Passive alarms

- Lack of powder;
- Thermic of the dilution shaker;
- Thermic of the preparation shaker;
- Thermic of the feeder.

Views / Dimensions



Polymaker PM	Model	Total Dimensions				Volume (L) Geometric	Max. Capacity (L/h)		Mixers (2)	
		Ht (mm)	H (mm)	L (mm)	C (mm)		30 min	45 min	Power. (kW)	ø mm
	PM8	1700	900	850	1300	800	800	530	0,25	200
PM12	1800	1000	950	1550	1200	1200	800	0,25	200	
PM18	1800	1000	1050	2050	1800	1800	1200	0,37	350	
PM25	1900	1100	1200	2300	2500	2500	1700	0,37	350	
PM34	2000	1200	1300	2500	3200	3400	2300	0,55	500	
PM52	2150	1350	1500	2800	4800	5200	3500	0,55	500	
PM75	2300	1500	1600	3100	6300	7500	5000	1,1	550	
PM120	2516	1740	1780	3580	10470	12000	8000	1,1	550	