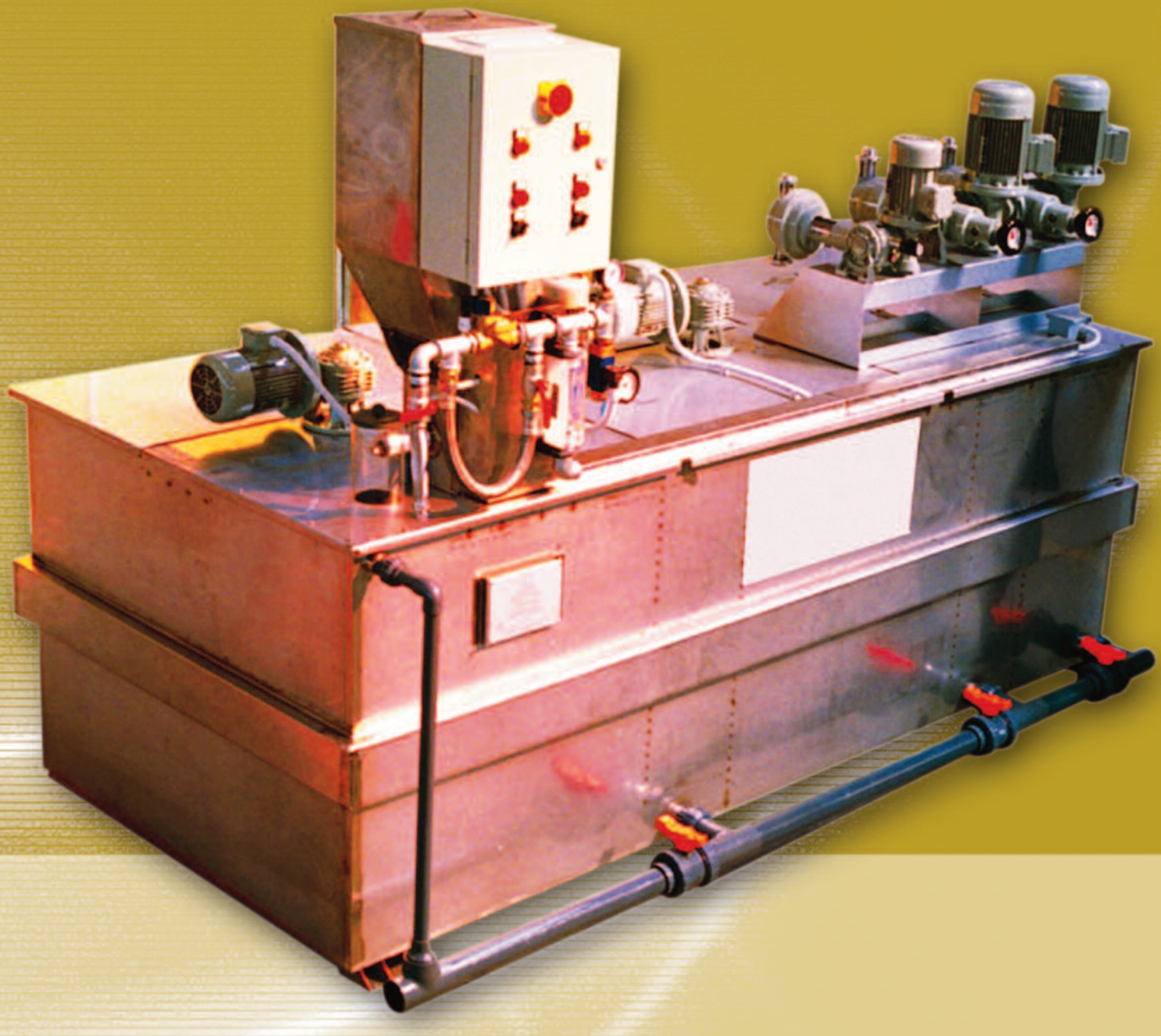
Dry material feeding and Preparation Systems



ISO 9001:2000 CERTIFIED COMPANY

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innovation > technology > future

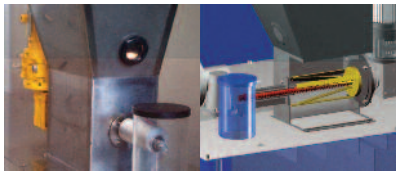
POLY

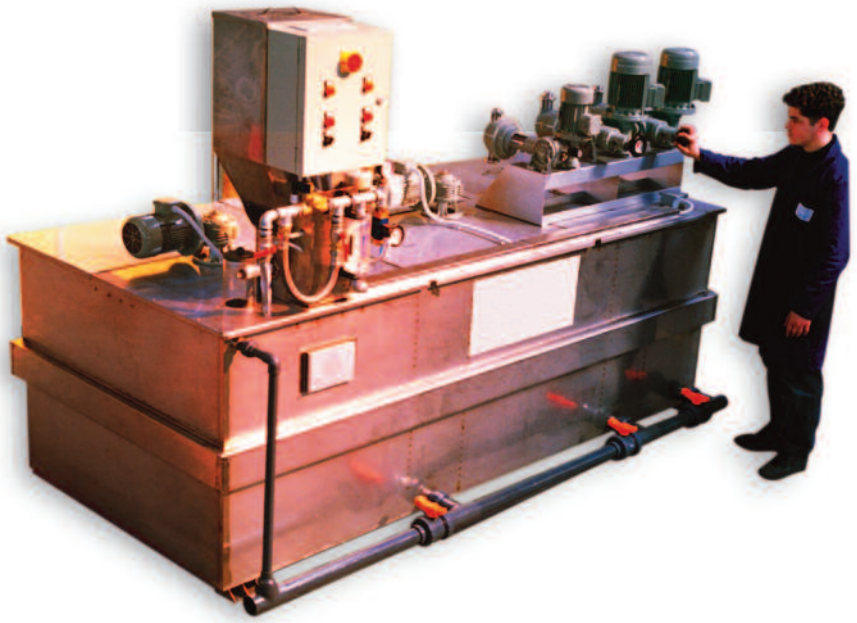
Automatic polyelectrolyte preparation systems

Construction Features

- Variable capacity powder dosing unit, hopper with powder level indicator, worm screw with bridge breaker scrapers
- Water inlet and adjustement unit, solenoid valve, pressure switch, disperser nozzle
- Preparation tank with covers, divided into three sectors for dissolving, maturing and storage
- Control and electrical command switchboard including the automatisms and indicators for fully automatic plant operation
- Solution dosing system, generally consisting of dosing pumps selected from the numerous versions available from our range (ask for the specific catalogue)

- **Automatic functioning**
- **Separate dasage of water and powder**
- **Stainless steel construction**
- **Compact size**
- **Ready to be anchored to the floor if required**
- **No foundations necessary**





Operating principles

The preparation tank is divided into three sectors: dissolving V1, maturing V2 and storage V3, interconnected by siphons that form a preferential path necessary for the formation of a top quality solution. The powder from the dosing unit is mixed with water, which, appropriately sprayed, from a nozzle, carries out the important action of dispersion.

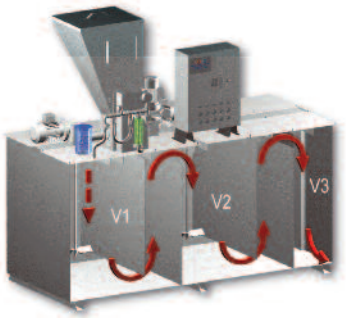
The water/powder mixture then drops into the tank below where the dissolving phase begins. In dissolving sector V1 a slow agitator keeps the contents of the tank in movement, thus favoring homogenization of the solution.

The siphon transfers the solution to the maturing sector V2 where another slow agitator keeps it homogeneous until maturing is complete. Then the solution is transferred to storage sector V3 from which it can be transferred for use.

The level switches installed in this sector control the systems automatic functions:

High and normal level switch: when the solution reaches the high level this switch stops the powder dosing unit and closes the water inlet solenoid valve. In the normal level position it enables dosing unit functioning and opens the water solenoid valve.

Low level switch: when the solution falls to minimum level this switch stops the dosing pump and lights up an alarm indicator on the electrical switchboard.



Options

- **Heating of dosing unit discharge pipe**
- **Overflow and drain header**
- **Water pressure reducer**
- **Third agitator in the storage section**
- **Automatic dosing pump adjustment**
- **Powder minimum level switch**
- **PLC programmable electrical switchboard**
- **Pneumatic powder loading**

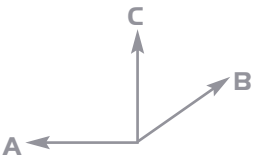
PL Systems for preparation of solutions from powder

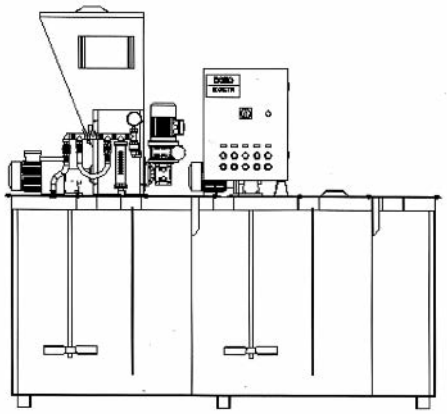
PLE Systems for preparation of solutions from emulsion

PLDUAL Systems for preparation of solutions from powder and from emulsion

Mod.	Flow rate (l/h)	Powder dosing unit (l/h)		Hopper		Mixers		Dimensions (mm)			Weight
		min	max	l	kW	N.	kW	A	B	C	kg
PL 5S	550	0.6	2.9	70	0.22	2	0.18	1020	740	1880	260
PL 5	550	0.6	2.9	70	0.22	2	0.18	1550	740	1880	260
PL 10	1100	1.2	5.9	70	0.37	2	0.18	1550	740	1880	260
PL 20	2100	1.6	7.8	70	0.22	2	0.18	2100	1030	1880	320
PL 30	3000	3.25	15.7	70	0.37	2	0.25	2610	1160	1880	450
PL 40	4200	3.25	15.7	70	0.37	2	0.37	2950	1380	1980	460
PL 50	5000	5.65	27.1	70	0.37	2	0.37	3210	1410	2040	500
PL 80	8000	5.65	27.1	70	0.37	2	0.37	3600	1570	2040	1600

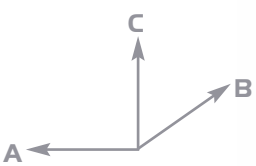
Mod.	Flow rate (l/h)	Mixers		Dimensions (mm)			Weight
		N.	kW	A	B	C	kg
PLE 5S	550	2	0.18	1020	740	1880	210
PLE 5	550	2	0.18	1550	740	1880	210
PLE 10	1100	2	0.18	1550	740	1880	210
PLE 20	2100	2	0.18	2100	1030	1880	270
PLE 30	3000	2	0.25	2610	1160	1880	400
PLE 40	4200	2	0.37	2950	1380	1980	410
PLE 50	5000	2	0.37	3210	1410	2040	450
PLE 80	8000	2	0.37	3600	1570	2040	1550

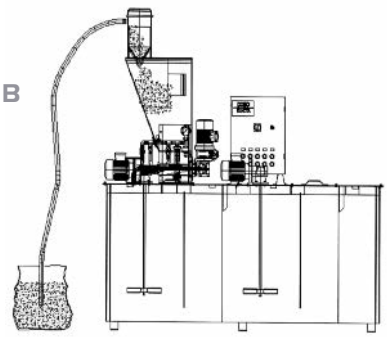




Mod.	Flow rate (l/h)	Hopper		Mixers		Dimensions (mm)			Weight
		l	kW	N.	kW	A	B	C	kg
PLDUAL 5S	550	70	0.22	2	0.18	1020	740	1880	290
PLDUAL 5	550	70	0.22	2	0.18	1550	740	1880	290
PLDUAL 10	1100	70	0.37	2	0.18	1550	740	1880	290
PLDUAL 20	2100	70	0.22	2	0.18	2100	1030	1880	350
PLDUAL 30	3000	70	0.37	2	0.25	2610	1160	1880	480
PLDUAL 40	4200	70	0.37	2	0.37	2950	1380	1980	490
PLDUAL 50	5000	70	0.37	2	0.37	3210	1410	2040	530
PLDUAL 80	8000	70	0.37	2	0.37	3600	1570	2040	1630

Mod.	Hopper with loader (mm)			Weight
	A	B	C	
PL 5S	1020	740	2610	290
PL 5	1550	740	2610	290
PL 10	1550	740	2610	290
PL 20	2100	1030	2610	350
PL 30	2610	1160	2610	480
PL 40	2950	1380	2710	490
PL 50	3210	1410	2770	530
PL 80	3600	1570	2770	1630





POLYMAN

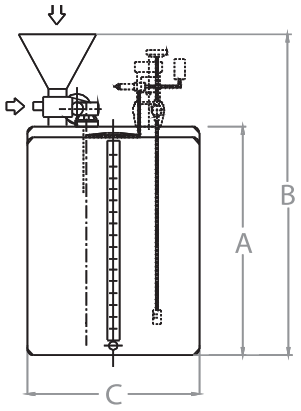
Plant for manual preparation of polyelectrolyte

Polyelectrolyte solution is not very stable and its efficiency decreases with time. So the solution must be prepared only when necessary in order to use the whole quantity prepared and avoid wastes.

The POLYMAN line has been designed to offer a complete system for manual preparation of polyelectrolyte solutions and is the ideal choice for occasional or discontinuous use.

POLYMAN systems are available between 200 and 1000 liters, and generally consist of:

1. Tanks in translucent high density polyethylene, UV stabilized, working temperatures -40 +60° C, built-in level gauge
2. Inspection cover with vent Ø 155 mm.
3. Disperser and water inlet in PVC
4. Powder loading filler in PVC
5. Slow agitator with shaft and rotor in AISI 316
6. Dosing pump (on request)



Mod.	Volume lt.	Mixers		Dimensions (mm)			Weight
		mod.	kW	A	B	C	kg
PLM2	230	MXR2	0.18	730	1260	640	32
PLM5	530	MXR5	0.18	875	1455	830	50
PLM10	1040	MXR10	0.37	1065	1805	1005	90

Fields of use

- Water clarification
- Biological treatment of urban and industrial waste water
- Filtering/decarbonation
- Sludge sedimentation and dehydration
- Scrubbing of blast furnace fumes
- Sulphuric acid production
- Neutralization of electroplating baths
- Oil industry
- Paper industry: treatment of cellulose water and recycled paper
- Sugar industry: treatment of sugar juices
- Extraction industries: marble quarries, flotation of minerals, treatment of mines, geothermic and oil wells
- drillings
- Tanning industry: water clarification and treatment

POWDER FEEDERS

Powder volumetric feeders are designed to provide a constant and accurate flow for any grains, fibers and powders. Powder feeders are completely made in stainless steel SS304.

VG100

Construction Features

Hopper: It was two vertical walls ensure even flow of the products; available in 50 and 100 liters versions; optional: supplementary mixer or vibration; internal polishing, level indicator.

Gearbox: motion transmission is carried out by a chain/pinion, which are connected to metering helix and to agitator rotates; optional: FPM seals-ring.

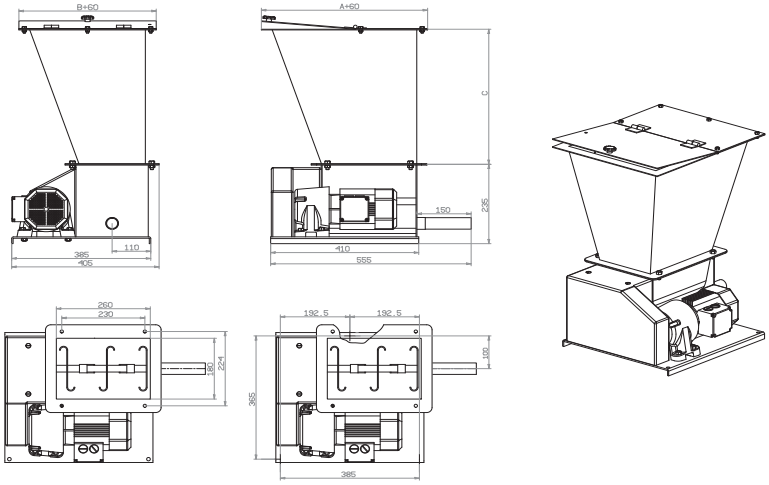
Speed variator: (manual adjustement) it provides capacity control, when feeder is running between 10 and 100% of maximum delivery; 3-phase motor, 0,18 kw, insulation class F; optional: coaxial gear for constant feeding, gravitation indicator.

Metering helix: the accuracy depending from characteristics of products, from 0,5% to 3%; optional: reinforced metering helix, solid metering helix, extended helix and discharge tube.

OPTIONAL:

Thermostat resistance: to avoid product agglomeration, caused by humidity.

Dissolver: to ensure a perfect dilution of product in water, thanks to a specific design and to a water-flow control.



	03	04	05
Flow rate min. (l/h)	0,7	3	
Flow rate max. (l/h)	3,7	17	65
Continuous Flow rate (l/h)	2,8	13	50

VG50

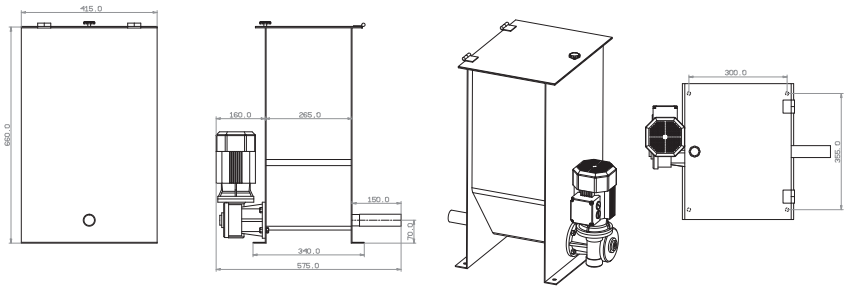
It is a simple and economical product, with a compact design, able to assure at the same time a constant and accurate dosing; it can be used with powders, flakes and fibers that are not subject to agglomeration and so it does not need to use the agitator rotates (example: polyelectrolyte).

OPTIONAL:

Thermostat resistance: to avoid product agglomeration, caused by wetness.

Plexiglas discharge: to canalize the product without useless wastages.

Dissolver: to ensure a perfect dilution of product in water, thanks to a specific design and to a water-flow control.



	03	04	05
Flow rate min. (l/h)	0,7	3	12
Flow rate max. (l/h)	3,7	17	65
Continuous Flow rate (l/h)	2,8	13	50

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