

**“POLYCENDOS”** are an automatic systems for continuous preparation of polyelectrolyte solutions; Polyelectrolytes are synthetic organic polymers characterised by high molecular weight and a long linear structure, and equipped with electropositive charges (cationic flocculants) and electronegative charges (anionic flocculants). Polyelectrolytes are added to the water to be treated in the form of diluted aqueous solutions that can agglomerate suspended particles with view to obtaining larger sized floccules and therefore a more rapid solid/liquid separation. Preparation of the solution very often has to be done continuously and automatically and must also be remotely controllable. The POLYCENDOS range of continuous preparators is a reliable response to these requirements. Constructed in different versions and with different capacities, these systems can satisfy a multiplicity of needs with polyelectrolytes in both powder and emulsion.

### Technical characteristics

Each system consists of:

- Variable capacity powder dosing unit, hopper
- Water inlet and regulation unit, solenoid valve, pressure switch, disperser nozzle
- Preparation tank with covers, divided in two or three sectors of dissolving, maturing and storage
- Control and command electrical switchboard including the automatisms and indicators for fully automatic plant running.
- Solution dosage system, generally consisting of dosing pumps selected from the numerous versions available from our range (ask for the specific catalogue)

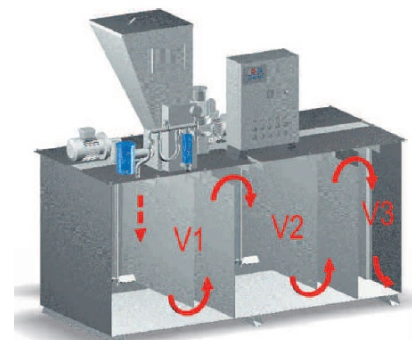
The preparation tank is divided into three sectors (with exception at PL 5 that is divided in two sectors): dissolving V1, maturing V2 and storage V3, interconnected by siphons that form a preferential path necessary for the formation of a top quality solution. The powder from the dosing unit comes into contact with the 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 favouring 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 plant automatic functions:

**High and normal level switch LSH:** 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 LSL:** when the solution falls to minimum level this switch stops the dosing pump and lights up an alarm indicator on the electrical switchboard

### Automatic plant for continuous preparation of polyelectrolyte solutions from emulsion

Among the various types of polyelectrolyte available on the market, emulsions have an important place and require plant that has been suitably built for correct use of these products in the preparation of solutions. The constructional features of the PL “E” (for emulsion) series are similar to those



described above for the PL "P" (for powder) line, with the powder dosing section replaced by an emulsion dosing pump. The system is completed by a static mixer hooked up to the water inlet.

### General Features

Max Flow: 3000 l/h@60 min. maturation

Volumetric metering (Hopper) : Capacity 60 l. - gear box drive MOTOVARIO

N°3 Mixer with high efficiency propellers – type "M"

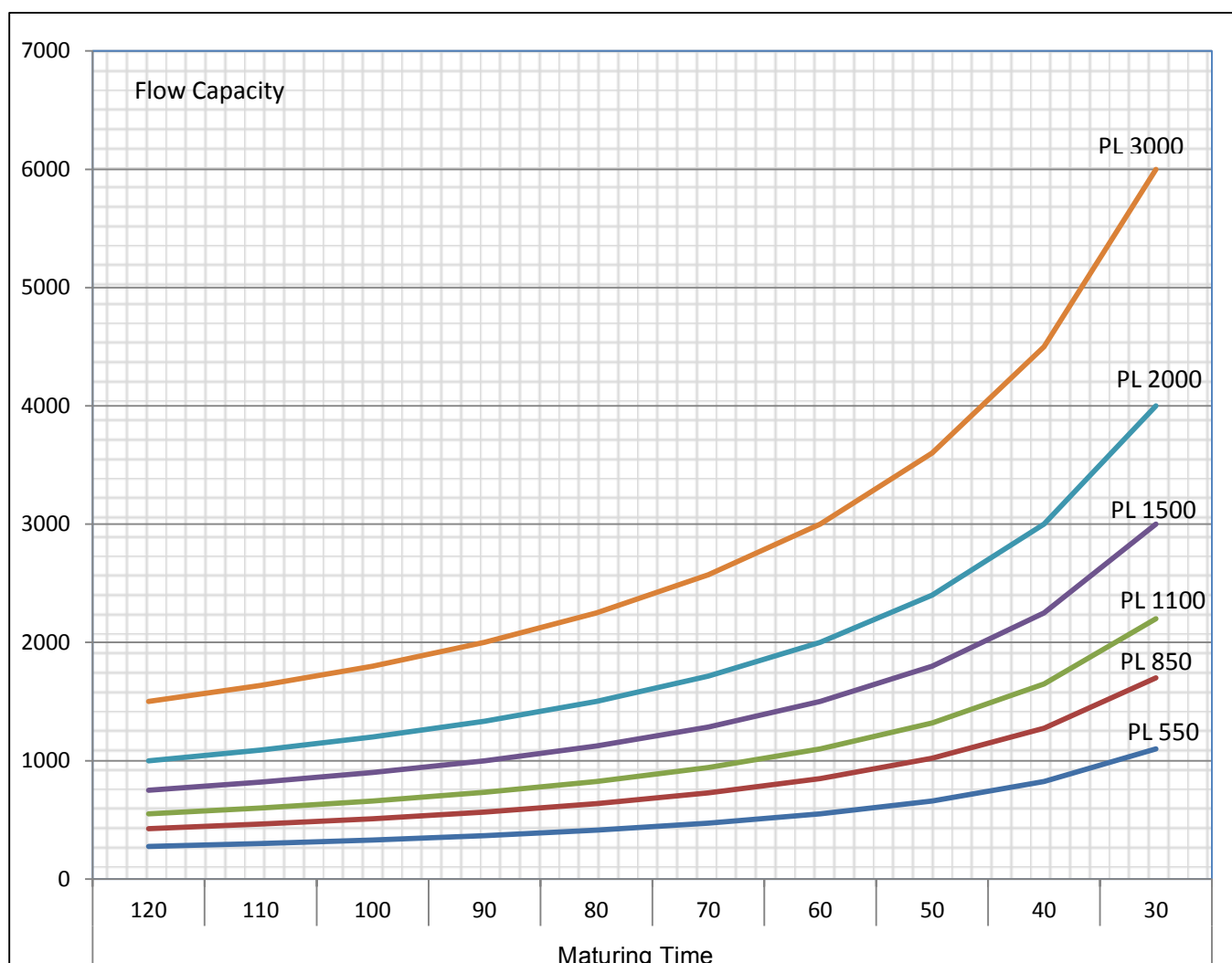
Water Inlet Collector System completed with pressure check valve, check valve, flow control valve, flowmeter and solenoid 24 V.)

Low and high Level Switch

Electric Control Panel: IP65 protection

### Choice of Plant

The correct choice of plant and the full automation of the system mean that solutions can be prepared in the correct concentration without waste and without in-line post dilution systems. Polyelectrolytes are available in both powder and liquid form and are considerably different, especially with regard to maturing time which can vary from about 30 to 120 minutes. So it would be a mistake to set capacity values without taking effective maturing time into consideration.



### POLYCENDOS KEY CODE

#### Polyelectrolyte preparation system.

P L

#### Description

	Maturing time 30 minutes	Maturing time 60 minutes	Maturing time 90 minutes	Maturing time 120 minutes
0 5 *	1100 l/h	550 l/h	375 l/h	275 l/h
0 8	1700 l/h	850 l/h	575 l/h	425 l/h
1 1	2200 l/h	1100 l/h	750 l/h	550 l/h
1 5	3000 l/h	1500 l/h	1000 l/h	750 l/h
2 0	4000 l/h	2000 l/h	1335 l/h	1000 l/h
3 0	6000 l/h	3000 l/h	2000 l/h	1500 l/h

#### Control pannel

- B Control pannel basic.
- T Control pannel with touch screen
- W Without control pannel, with connection box

#### Type polyelectrolyte.

- P Dry Polymers (powder)
- E Liquiq Polymer
- D Powder and Liquid polymers

#### Material construction plant

- S SS 304
- P PPH

#### Third mixer in storage tank.

- 0 Without third mixer
- 1 Tirh mixer in storage tank

#### Hopper

- 0 Standard hopper 60 liters with heating
- 1 Extension hopper 100 liters
- 2 Extension hopper 200 liters

#### Vibrator in hopper

- 0 Without vibrator in hopper
- 1 With vibrator in hopper

#### Sensor level in hopper

- 0 Without level sensor
- 1 With level sensor

#### Communications ( only in control pannel with touch screen )

- 0 Without communications port
- M Modbus
- P Profibus

#### Supplement

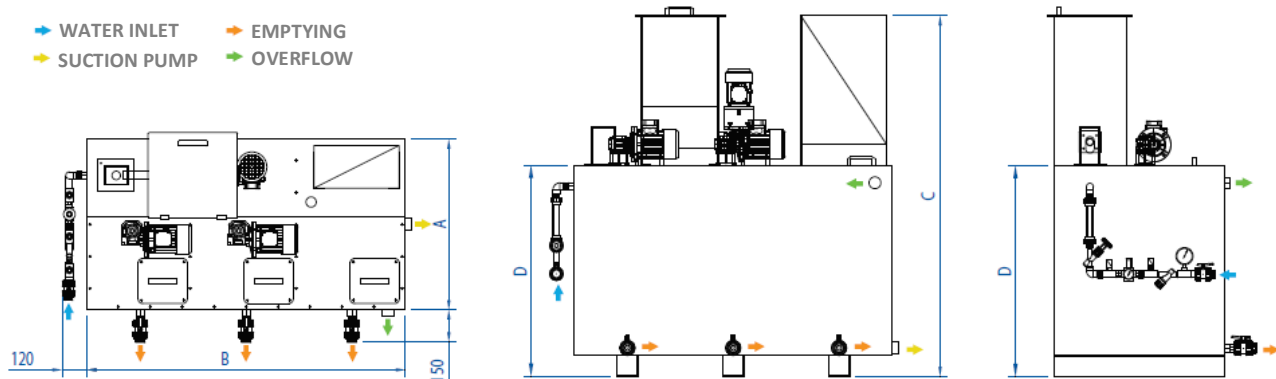
- 0 0 Standard plant

P L 0 5 B P S 0 0 0 0 0 0 0 0

COMPLET CODE

\* All polyelectrolyte preparation systems have 3 chamber ( preparation + maduration + storage ) except model 5, in this model only 2 chambers.

### DIMENSIONS



Model	Flow Capacity [l/h]	Volume [l]	A [mm]	B [mm]	C [mm]	D [mm]	Water Inlet [GAS]	Pump Inlet [GAS]	Drain [GAS]	Overflow [GAS]	Weight SS 304 [Kg]	Weight PPH [Kg]
PL5	550	700	800	1000	1690	990	3/4"	1 1/2"	1"	1 1/2"	350	100
PL8	850	1080	800	1500	1690	990	3/4"	1 1/2"	1"	1 1/2"	450	120
PL11	1100	1440	800	2000	1690	990	3/4"	1 1/2"	1"	1 1/2"	550	140
PL15	1500	1800	800	2500	1690	990	3/4"	1 1/2"	1"	1 1/2"	650	-
PL20	2000	2270	1150	2000	1800	1100	1"	2"	1"	2"	on request	180
PL30	3000	3400	1150	3000	1800	1100	1"	2"	1"	2"	on request	225

### ACCESSORIES (on request)

TOUCH SCREEN Control Panel  
 HOPPER - Extension to 100 or 200 Liters  
 THIRD mixer, on camera storage – Dosage  
 Automatic powder charging