

AUTOMIX



POLYELECTROLYTE DISSOLUTION SYSTEMS

GENERAL FEATURES

Sodi Scientifica has been operating for many years on the market with its line of automatic powder dissolution systems having high level of quality and performance indexes. AUTOMIX systems, besides having a highly professional operation, fully controlled by microprocessors, allow for considerable savings in economic terms, as regards the consumption of polymer and for the operational costs and maintenance.

MAIN COMPONENTS

AUTOMIX is a packaged plant consisting of two main sections:

1. Polymer metering unit;
2. Dissolving, aging and dosing tank;

The first section is made up of a stainless steel hopper which contains the powdered polyelectrolyte and is provided with antibrigde vibrator, powder's minimum level probe, timer-operated constant-flowrate screwfeeder, pressure switch - solenoid valve - water intake flowmeter, instantaneous powder-scattering water jet-disperser and a computerized control box housing all the electric and electronic devices for a fully automated operation of the system. The second part, instead, consists of a stainless steel tank with a nominal capacity of 1000 – 2000 -3500 or 5000 liters of solution, divided into two or three sectors by bulkheads. Each sector is equipped with low-speed stirrer, level probes and lumps-retaining end filter.



- Stainless steel construction.
- Computerized control.
- Very low polymer consumption.
- Minimum cost for maintenance.
- Ease of use.
- Absolute reliability.

AUTOMIX is available in two main versions:

- **Automix Max 40/c** with complete automatic operation
- **Automix S** with semi-automatic operation

AUTOMIX Max 40/c – Automatic Operation

In this version, the operation is fully automated thanks to the electronic control unit. In particular, Automix can be suitably run according to the physical-chemical characteristics of the polyelectrolyte used and to environmental factors as well.

A preliminary test on the powder, prior to dosing, allows to calibrate the system according to the particle size and bulk density of the type of polymer used, resulting in accuracy of dosage. The intake water flowrate measurement makes it possible to automatically adjust the screwfeeder's timing and consequently its flowrate so as to keep the water/polymer ratio absolutely constant. The level probes, installed in the last sector of the tank, operate in an automatic way, with a start-stop system, the solenoid valve and the screwfeeder, reactivating both functions to the achievement of the minimum level.

The control box is provided with a keyboard operator interface pad where are also allocated functioning light indicators for all the components of the plant. The same signals can be relayed, either by individual or cumulative contacts, from the terminal board to a remote site for acoustic or visual alarms. Moreover, there is also the provision for the connection of two dosing units including the necessary electrical wiring from the control box. Finally the stainless steel end-filter, represents an additional safety feature to prevent non-perfectly dissolved flocs which might endanger the process efficiency.

The control box is also predisposed with a connection to an autoloader to feed the hopper with powder when it reaches its minimum level.

AUTOMIX S – Semi-Automatic Operation

In this version Automix provides a synthesis of accuracy of metering, ease of use and automation. The ease of use is one of the distinctive features of this system, without sacrificing the main features, typical of more sophisticated equipment.

Sturdiness and reliability complete the profile of this plant. Accuracy in metering is achieved by keeping the intake flow rate steady so that, by knowing the screwfeeder capacity, a constant water/powder ratio can be obtained as well. The concentration of the solution is set using the knob in front of the electrical panel. Contrary to Automix Max 40/c, this version requires a separate control panel for the dosing units and is not provided with an end-filter.

SPECIFICATION COMPARISON

SPECIFICATIONS	AUTOMIX S	AUTOMIX MAX 40/C
Hopper and cover in stainless steel AISI 304L (130 dm ³ cap.)	✓	✓
Antibridge electrical vibrator	✓	✓
Capacitive sensor minimum powder level	✗	✓
Screwfeeder's 40 dm ³ max metering capacity	✓	✓
Pressure switch	✓	✓
Pressure reducer	✓	✗
Contactors for control and metering pumps (n. 2)	✗	✓
Pulse emitting flowmeter	✗	✓
Control box	✓	✗
Control box with electronic panel allowing 0,05 - 0,50% concentration setting	✗	✓
Tank cover in stainless steel AISI 304L	✓	✓
OPTIONAL		
Electromagnetic meter	✗	✓
Screwfeeder heater	✓	✓
Predisposition for two additional metering pumps	✗	✓
Powder loader	✓	✓
Extension for hopper	✓	✓

ACCESSORIES ON DEMAND

A number of accessories are available on demand, such as, just to name a few:

Screwfeeder heater: resistance for heat power of 210 W - 24V voltage, provided with thermal switch set at a fixed temperature. It prevents the polyelectrolyte to become packed in damp and cold environments.

Static Mixer: PVC mixer for spirally feeding the solution of the two metering pumps into one water flow and ensuring a uniform distribution thereof.

Automatic powder loader: fully operated through the electronic panel of Automix, thanks to the loading system equipped with steel lance for the drilling of the bag, has made it possible to solve the problem linked to the danger of possible dusting of the product.

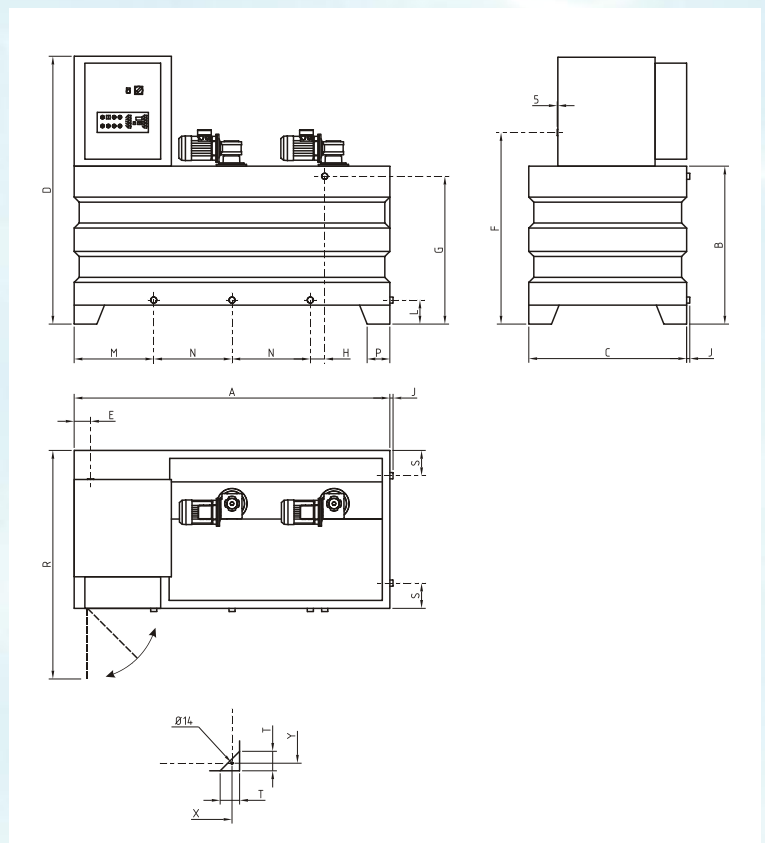
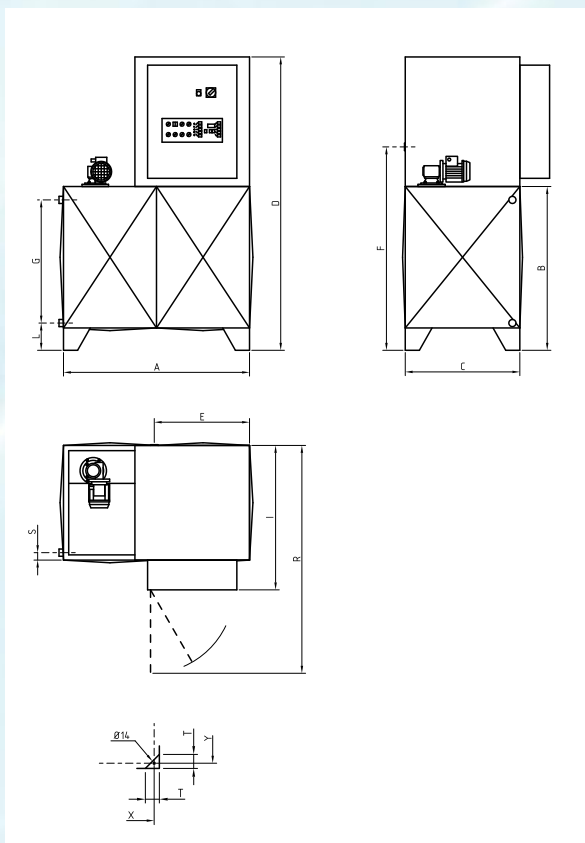
Pumps support: stainless steel AISI 304 support for housing the metering pumps.

230 dm³ Hopper

Outlet and discharge piping

SCHEMES AND MAXIMUM OVERALL DIMENSIONS

As an example, for a rough estimation of the dimensions, here below are two schemes related to the smallest and the largest equipment available in the Automix range.



- Automix Max 40/c 1000 with two sectors tank
Maximum overall dimensions cm 128 x 97 x 197

- Automix Max 40/c 5000
Maximum overall dimensions cm 303 x 153 x 212

For additional information, to be contacted by the area agent or to receive the technical data sheet of the above instrument please contact the sales department of Sodi Scientifica at the e-mail address info@sodi.com