

# STABYMATIC 500

## EQUIPMENT FOR THE TARTARIC STABILIZATION

**StabyMatic** is a revolutionary equipment for the tartaric stabilization; its functioning is based on the utilization of **pH-Stab**, enabling to decrease  $K^+$  and  $Ca^{++}$  salts in the wine, making it stable. The decrease of electro-positive ions enables to lower the pH value of the treated wines. Ion exchange resins are obtained by means of a polymerization process at high temperatures of Styrene and Divinylbenzene (in a specific % for AEB), with active sulphonic groups, giving a high chemical-physical stability and a physical structure in the form of a gel, not enabling the adsorption of organic matters.



### Operation principle of **pH-Stab**

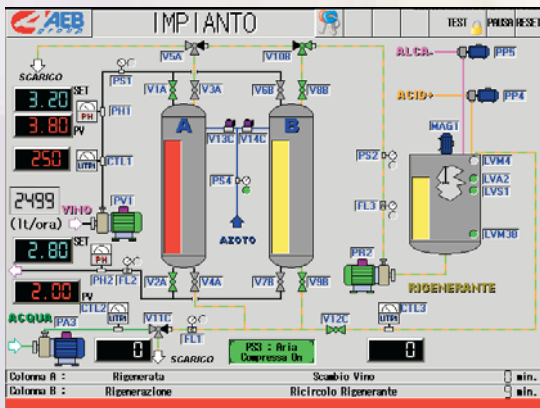
The tartaric stabilization by means of resins is obtained by removing mineral salts with positive charges; the liquid passes through the columns containing **pH-Stab**, exchanging ions and reducing their conductivity, with a consequent lowering of the pH value. **pH-Stab** retains cations by exchanging  $H^+$  ions, the regeneration is carried out accordingly with **Acid+**, activator based of sulfuric acid that brings the resin back into its acid form.

**StabyMatic 500 is composed as follows:**

- Tubular frame on wheels
- n. 2 x 246 kg inspectable columns, equipped with appropriate plates and diffusers containing the resins
- 800 L accumulation tank, equipped with overflow floaters, floaters for the dosing of regeneration agents, total discharge of the solution
- The equipment is built in AISI 316 steel
- n. 1 x 0,75 kW pump with adapter, operated by an Inverter for the wine exchange, with a max. flow rate of 6.500 L/h
- n. 1 x 0,56 kW pump for regeneration cycles, flow rate 1.750 L/h
- n. 1 x 0,37 kW pump for rinsing, flow rate 5.000 L/h
- n. 2 pneumatic pumps for taking regeneration agents and detergents (**Acid+**, **Alca-**), with a flow rate of 900 L/h
- n. 1 electric pump for taking the sanitizing agent **Peracid**, with a flow rate of 300 L/h
- n. 9 pneumatic valves with magnetic safety device and warning light
- n. 3 three-way double-effect with magnetic safety device and warning light
- n. 2 manual valves with security lock (wine in and out)
- n. 2 flow meter
- n. 2 digital pressure switch
- n. 3 electromagnetic flow detectors
- n. 2 electrodes for pH detecting (in and out)
- n. 2 temperature sensors PT 100
- n. 2 solenoid valves for the management of the air/nitrogen supply with pressure regulator (3 bar)
- n. 1 air pressure indicator for the management of consumers

On the stainless steel electric panel there are:

- Main switch
- Emergency stop button
- Enabling button
- Alarm silence button
- Alarm buzzer
- Motor protector
- 10" Touch Screen
- PLC Mitsubishi
- n. 2 Inverters
- n. 2 pH-meters



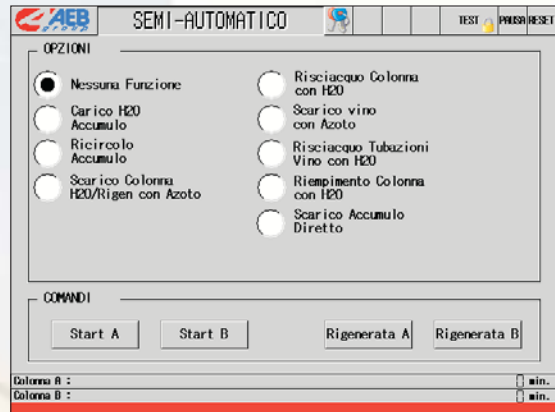
**StabyMatic 500** can work in 3 modes: automatic, semi-automatic and manual.

In the first option, the equipment works automatically, both in exchange and in regeneration; if the pH-value one wishes to reach or the litres one wants to treat are set up, **StabyMatic 500** works by alternating regeneration and exchange cycles, till when the setting is reached.

Among the options we have available in this stage, there is the exchange rate or the quantity of wine to be used to rinse the resins.

In the semi-automatic set up, the equipment allows to carry out all functions by selecting the desired one.

- Load H<sub>2</sub>O Accumulation
- Recirculation Accumulation
- Unloading column H<sub>2</sub>O/Regen. with Nitrogen
- Rinsing of column with H<sub>2</sub>O
- Wine Unloading with Nitrogen
- Rinsing of Wine Pipes with H<sub>2</sub>O
- Filling of Column with H<sub>2</sub>O
- Emptying Direct Accumulation



With the manual set up, the single users can be selected by acting on the touch screen.

Moreover, the equipment has a range of special cycles allowing to optimize the functioning of pH-Stab or to make the equipment more powerful.

**StabyMatic 500** enables to work from 2000 to 6400 L/h, the optimal exchange is of about 3000 L/h.

**Characteristics and advantages of StabyMatic**

- Separated lines for wine and regeneration agents.
- Counter-flow washing and regeneration in current.
- Specific stainless steel columns.
- Resins easy to be substituted.
- Easy maintenance of column diffuser.
- Utilization of products based on sulphuric acid for the regeneration.
- Oenological pumps for the handling of wine.
- Possibility of using the same columns (**pH-Stab**) for both white and red wines, thanks to the bleaching cycle (**Peracid**).
- Possibility of automatic, semi-automatic and manual work.
- Limited water consumption thanks to the recirculation tank.
- Possibility of exchange with high NTU values.
- Possibility of working in each production stage.
- Possibility of using both nitrogen and air for the emptying.
- Possibility of working according to both pH-value and litres to be treated.



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