

STABYMATI 500 SINGLE-COLUMN (AUTOMATIC)

AUTOMATIC CATION EXCHANGE PLANT
FOR TARTARIC STABILITY



ADVANTAGES

LIMITED WATER
CONSUMPTION
AND
FOOTPRINT

EASY MAINTENANCE
OF COLUMN
DIFFUSER AND
RESINS

USE OF THE SAME
COLUMN FOR BOTH
WHITE AND RED WINES
THANKS TO THE
BLEACHING CYCLE

AUTOMATIC, SEMI-AUTOMATIC AND
MANUAL WORKING MODES

Stabymatic is a revolutionary system for **tartaric stability** and **pH lowering** based on the use of **pH-Stab 2.0**, which reduces K^+ and Ca^{++} in wine and makes it stable.

The decrease in mineral ions contributes to the lowering of the pH in treated musts or wines. Ion exchange resins are obtained by a Styrene and Divinylbenzene polymerisation process at high temperatures - with a specific AEB formulation - with active sulphonic groups, which provide higher chemical-physical stability and a gel structure that does not permit absorption of organic substances.

This equipment can work in three modes: automatic, semi-automatic or manual.



Tartaric stabilization by resins is achieved by removing electropositive ions. The liquid passes through columns containing **pH-Stab 2.0**, exchanging cations and reducing wine conductivity, which leads to a lowering of the pH.

pH-Stab 2.0 retains cations by exchanging H^+ ions: consequently, regeneration is carried out with **Acid+**, a sulphuric acid-based activator that restores the resin to its acid form.

The system is designed to have the minimum organoleptic impact on treated musts or wines. The type of resin used, the liquid flow and the oenological pumps utilized guarantee a high-quality product. Tests show that there is no interaction with SO_2 in the entire process.

The process is optimized by AEB with perfect design ratio between height and diameter of the column with the diameter of the resin spheres, maximizing effectiveness of **pH-Stab 2.0** even at high turbidity levels.

The exchange performance is given by the regenerating product (**Acid+**), the concentration of use and the regeneration method.

The machine is equipped with a closed system that is used for in-must/wine exchange, enabling treatment in the most extreme conditions.

An **automatic alkaline wash, where the exchange performance of pH-Stab 2.0** is reduced, allows the resin to return to its original state by removing any organic substances that may have accumulated on the spheres.

The special **pH-Stab 2.0** formula allows easy transition from red wine to white wine using a specially programmed bleaching procedure, with a simple input by the operator.

FEATURES AND BENEFITS

- Backwash and inflow regeneration
- Special stainless steel columns
- **Easy replacement** of resins
- **Easy maintenance** of diffuser column
- Use of sulphuric acid products for regeneration
- Oenological pumps for wine handling
- **Use of the same column (pH-Stab 2.0) for both white and red wines** thanks to the bleaching cycle (Peracid)
- **Automatic, semi-automatic or manual operation**
- **Limited water consumption**
- Exchange possible with high NTU levels
- **Treatment possible in all stages of production**
- Both nitrogen or air can be used for emptying
- Processing can be scheduled **by both target pH or volume**

OPERATION

Stabymatic can work in **3 modes**: automatic, semi-automatic or manual.

<p>AUTOMATIC MODE</p>	<p>The machine operates automatically, both in the exchange and in the regeneration. By setting the target pH or the volume in litres to be treated, Stabymatic operates by alternating regeneration and exchange cycles until it has reached the set parameter. Other available options are the exchange flow rate and the quantity of wine you want to use to prime the resins.</p>
<p>SEMI-AUTOMATIC MODE</p>	<p>THE SYSTEM ALLOWS TO SELECT THE REQUIRED FUNCTION:</p> <ul style="list-style-type: none"> ● Wine exchange ● Solution recirculation ● H₂O/Regen. column drain with nitrogen ● Column rinse with H₂O ● Wine drain with nitrogen ● Wine tube rinsing with H₂O ● Column filling with H₂O ● Emptying wine inlet with nitrogen
<p>MANUAL MODE</p>	<p>By using the touch screen, individual procedures can be done of special cycles that allow more efficient operation of the pH-Stab 2.0.</p> <p>Stabymatic permits operation with varying flows in order to adapt to the type of wine must and to winery requirements.</p>

TECHNICAL CHARACTERISTICS

The equipment consists of the following components:

- A stainless steel box tube frame on feet.
- A flanged column at the top complete with star-shaped diffusers at the end, connected. The column can be inspected in the lower part via DIN 150 plugs and in the upper part via the flange and is complete with mechanical safety valve.
- Drain neutralization kit.

SYSTEM

- Single-acting pneumatic valves with safety device and indicator light.
- Double-acting pneumatic valves with safety device and indicator light.
- Manual ball valve with safety lock (wine outlet), an additional valve on the wine mixing kit.
- Digital pressure switches
- Electronic flow detectors
- Two pH electrodes (inlet and outlet)
- Temperature probes PT100
- AISI 316 stainless steel tubing
- Sampling hatch (wine line inlet and outlet)
- Solenoid valves (for air/nitrogen supply management) electro-pneumatic valve and pump control unit
- Pressure regulator
- Air pressure indicator

PUMPS

- Pump with epdm impeller, for exchange, regeneration and rinsing functions
- Pneumatic regeneration pumps for Acid+, Alca- and Peracid with safety valves

ELECTRICAL PANEL

The electrical panel in stainless steel contains the following components:

- Main switch
- Emergency stop button
- Enable button
- Alarm silence button
- Alarm buzzer
- Motor circuit breakers
- 10" touch screen
- Mitsubishi PLC
- Modem for Internet connection via LAN
- Inverter
- pH-meters

OPTIONAL EXTRAS AVAILABLE ON REQUEST

- Stainless steel frame filter including 20" housing and 150 micron filter cartridges.

RANGE

MODELS IN THE STABYMATIC RANGE INCLUDE THE FOLLOWING:

LINE	MODELS
<p>STABYMATIC LINE Automatic models</p>	<p>STABYMATIC 500 up to 30 hL/h</p> <p>STABYMATIC 500 SINGLE-COLUMN (AUTOMATIC) up to 60 hL/h (discontinuous)</p> <p>STABYMATIC 1000 up to 60 hL/h</p> <p>STABYMATIC 1000 AUTO GF up to 60 hL/h</p> <p>STABYMATIC 2000 up to 120 hL/h</p>
<p>STABYMATIC ECO LINE Semi-automatic and manual models</p>	<p>STABYMATIC 30 ECO LINE up to 3 hL/h</p> <p>STABYMATIC 50+50 ECO C up to 6 hL/h</p> <p>STABYMATIC 200 ECO C up to 25 hL/h</p> <p>STABYMATIC 500 ECO C up to 60 hL/h</p>

For detailed information on each model, refer to the relevant technical data sheet.

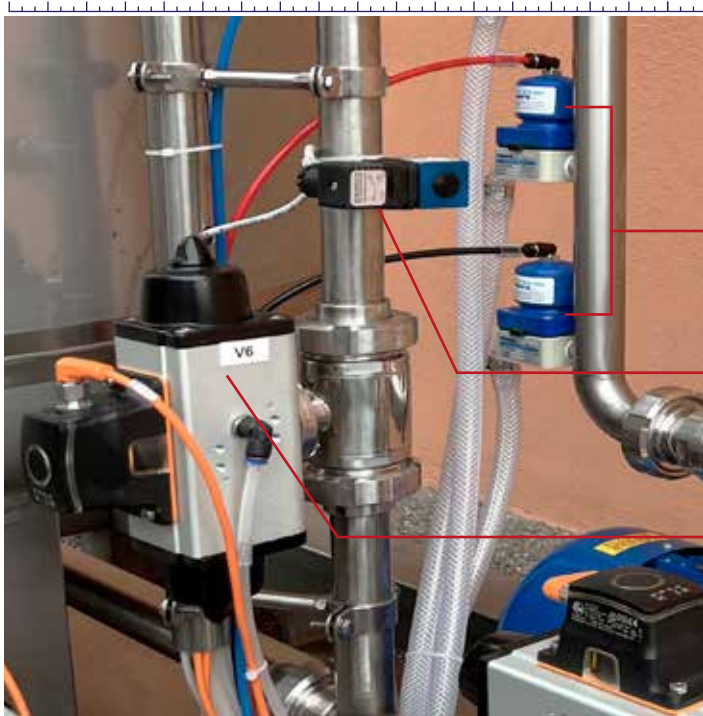
COMPONENTS



FEED PUMP (EXCHANGE, REGENERATION, RINSE)



DIGITAL FLOW SWITCH

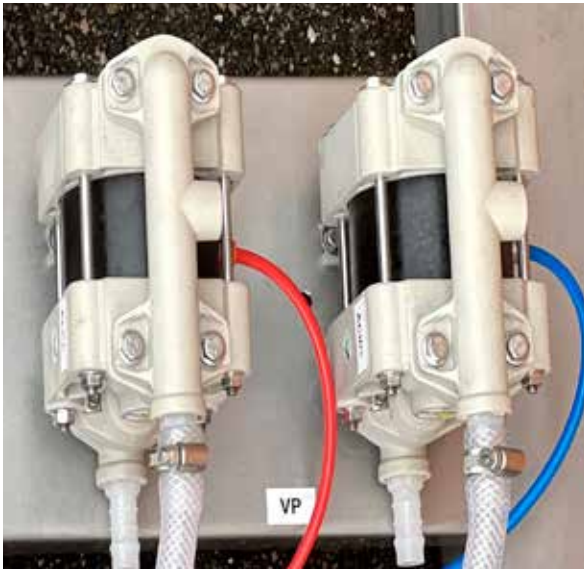


SAFETY VALVE

PRESSURE SWITCH

PNEUMATIC VALVE WITH
FUNCTION INDICATOR

COMPONENTS



**PNEUMATIC PUMPS FOR WASH
MANAGEMENT**



ELECTRODE HOUSING pH-METERS



RECOMMENDED PRODUCTS

pH-STAB 2.0



ACID+



ALCA-



PERACID



X-WASH

