

DosiOx SX-1

Reliable and precise oxygen-dosing equipment



Measures

600 x 400 x 230 mm.

from 4 to 16 outputs dosage

Introduction

Micro-oxygenation is a technique used to add a user-defined quantity of oxygen to wine in a slow and controlled manner.

The aim is to maximize the grapes' colour potential during vinification and ageing, thereby ensuring that colouring is preserved as much as possible.

It is a highly versatile technique and may be applied at any stage of the winemaking process between the start of vinification and bottling:

- **When applied between the end of alcoholic fermentation and the start of malolactic fermentation:**

It favours colour stabilization and polymerization prior to malolactic fermentation, thereby preserving colour levels.

- **When applied after malolactic fermentation:**

Depending on the wine treated and its characteristics, micro-oxygenation can, among other functions:

- Structure and pre-age.
- Stabilize colour.
- Smoothen aggressive tannins.
- Enhance aromatic complexity.
- Re-establish electrochemical potential.
- Enhance herbaceous aromas' quality.
- Remove reduction aromas.

Characteristics

- Specifically designed for highly precise oxygen dosing.
- Easy to operate, with full digital control of all parameters.
- Windows programming environment accessed via a full-colour touch screen.
- Individual programming of macro-oxygenation, micro-oxygenation and “Cliqueur” treatments.
- Dosing ranges for macro- and/or micro-oxygenation from 100 litres to 15.000 hl.
- Dosage determined according to oxygen mass (mg of O₂).
- Non-volatile memory. In the event of electrical failure, the equipment will either continue the process from the point of failure (if pre-defined by the user) or await further instructions.
- Double independent protection of the main microprocessor. Electrical or mechanical failures are detected by an auxiliary microprocessor, which immobilizes the apparatus and displays the corresponding error on screen, thereby avoiding dosing errors.
- On-screen display showing remaining oxygen to be added, flow rate necessary to keep dosing constant, and dosing time remaining.
- Diffuser silting detector, with automatic pressure re-programming to ensure the pre-determined dose is administered.
- Automatic pressure control to detect lack of start-up pressure or blockages in oxygen pipes.
- Performance unaffected by apparatus position in relation to the oxygen tank (including tank height).
- Ethernet port. If assigned an IP address, the equipment can be connected to a network and operated remotely. It can also be programmed remotely over the Internet.
- 4-digit password protection to ensure the equipment is only operated by authorized personnel.
- Temperature monitoring system to prevent oxygen dosing occurring outside the selected temperature range (temperature probes not included).

Construction details

- High-strength type-304 stainless-steel case internally reinforced with protection bars.
- Food-grade fittings.
- Sintered steel diffuser.
- Electronic boards protected against moisture-derived corrosion.
- Operating voltage: 220 V.

Optional equipment

- Control and programming software.
- Ceramic diffuser.
- Retractable extension to insert the diffuser via the treated vat's ball valve.
- Temperature probes to monitor wine temperature and stop treatment if the temperature falls outside the desired range.
- Electrochemical potential probes.

User interface

The user interface comprises a 6" touch-screen with the following characteristics:

- Small size and high resolution.
- 6" 1024-colour backlit LCD.
- 4 internal status LEDs.
- 22.1-MHz microprocessor.
- Buzzer.
- 256-Kb RAM and 1-Mb Flash memory.
- 1 x RJ-45 Ethernet port (TCP/IP).
- 2 serial ports (1 x RS-232 and 1 x RS-485).
- Internal lithium back-up battery for the RTC and SRAM.
- CPU watchdog timer.
- IP65-compliant front enclosure.

Each case can house up to 4 units (4 independent electronic boards, each with its own microprocessor) with 4 outputs each.

Therefore, the basic set-up will comprise the user interface and 1 unit (4 dosing outputs), and can be extended to a maximum of 4 units (16 dosing outputs).

