AGROVIN

TECHNICAL INFORMATION

CONTROL OF THE WINEMAKING PROCESS

ULISES TDR²

System for pumping, monitoring fermentation, temperature control and electrochemical values. Macro&Microoxygenation.

Introduction

AGROVIN has developed this system that allows any conventional tank to be converted into an automatic winemaker. Knowing specific values of determining parameters in the production process (density, temperature, electrochemical potential...), as well as their evolution over time, will allow the user to optimally manage this stage, so crucial for the final product.

Characteristics

The ULISES *TDR²* system offers the possibility of integrating different optional tools. The user can configure their ULISES *TDR²* system with the ones they prefer and add more later depending on their needs.

They can choose between the following components:

- Pumping system which works injecting air or any pressurised inert gas. This leads to the perfect homogenisation of the product contained in the tank and therefore helps with the extraction of polyphenolic and aromatic compounds.
- Density measurement system to immediately see how advanced the fermentation process is.
- Temperature measurement system for the optimal performance of the tank's cooling system.
- Electrochemical potential measurement system to predict whether the wine is at risk of oxidation or reduction.
- DosiOx macro&micro-oxygenation system which, coordinated with the previous tool, allows for intelligent management of the oxygen supply during the winemaking process.
- Level measurement system. Excellent tool for monitoring the capacity of the winery in real time.

All these tools can work individually or alongside the rest. The oenologist will be able to efficiently monitor the fermentation process as it is possible to intelligently manage multiple tanks from a single control point.

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Technical aspects

•The control panel integrates all the electronics for the operation of the different sensors as well as the PC panel.

•The control panel is supported by stainless steel AISI 304 in compliance with EC regulations. Double protection with door.

•Touchscreen PC panel of 10.4, 15 or 17" with control software. Capacitive display (optional).

•Technology developed using PAC. This panel efficiently combines the control reliability of an automaton or PLC with the monitoring, calculation and performance flexibility of an industrial computer.

•SCADA program for visualization and control.

•Monitors in each tank for the collection of the signals from the different sensors and the pumping system's diffusers.

•The diffusers for the injection of pressurised air are entirely made of AISI 304 and AISI 316 stainless steel.

•Pressure gas distribution pipe made of stainless steel. Includes pressure sensor, safety pressure switch and 63 mm ball diameter manometer, 1-10 bar.

•Continuous measurement control sensors with programmable frequency and 1 mV resolution.

•Record of programmed duration.

•Robust temperature probes type PT100 class A or B with a resolution of ± 0.15 and ± 0.3 ºC respectively and 3 or 4 wire connection with or without head, encapsulated in stainless steel AISI 316, with 4-20mA converter and thermowell.

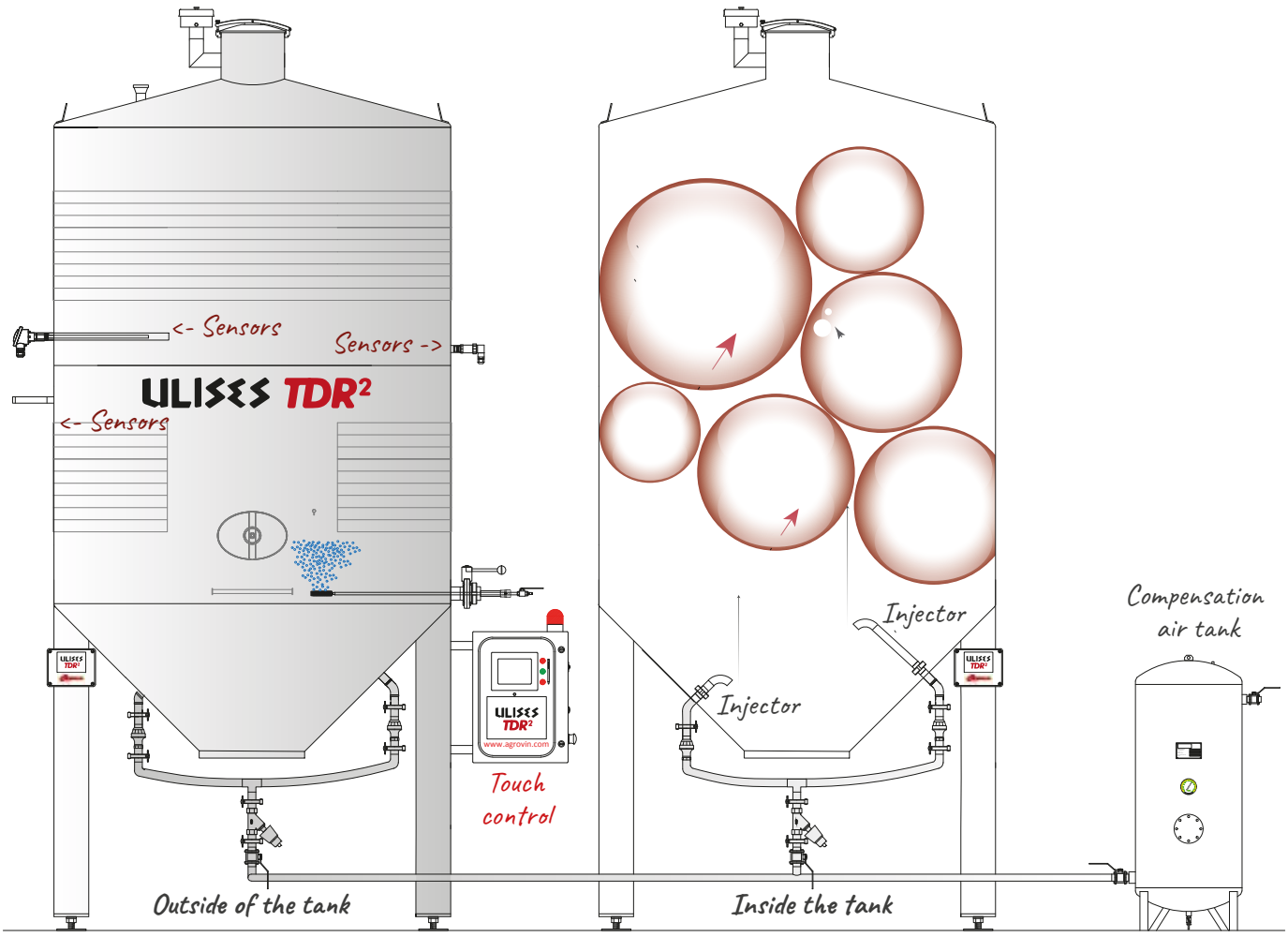
•The control panel is supported by stainless steel AISI 304 in compliance with EC regulations.

•Working voltage: 220 V.

•Compensation tank for pressurised gas. Capacity for 900, 1000, 2000, 5000 and 8000 litres. Maximum pressure 11 bar.

•DosiOx micro-oxygenation device with a variable number of oxygen dosage outlets, between 4 and 64.

•Level measurement system using probes based on laser technology or ultrasound technology.



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