

BIOREACTOR X10 1.5

**SPECIFIC EQUIPMENT TO ENSURE
OPTIMAL REHYDRATION OF DRY YEAST
AND BIOMASS PROPAGATION**



BENEFITS

**GUARANTEES OF PROPER YEAST
REHYDRATION AND SUBSEQUENT BIOMASS
PROPAGATION WITHOUT CELL STRESS**

**NO ANALYSIS
REQUIRED PRIOR
TO INOCULATION**

**AUTOMATIC LOADING OF
NUTRIENTS AND "SUGARS"**

**AUTOMATIC
WASHING**

**EASE OF
USE**

THE IMPORTANCE OF PROPER YEAST MULTIPLICATION

Yeast represents the first technological step in producing quality wines, starting of course in the vineyard. This is true provided that the selected yeast can take over and complete the fermentation, with adequate and rational nutrition.

Yeast, as a microorganism, is very rapid in multiplying, and thus in **propagating biomass**, which is why it is easy to assume that a biomass can be created easily. This assumption is theoretically true, however, the metabolic qualities of it, **if not properly propagated** (under ideal aerobic conditions and with the right carbon and trace elements supply) may then lack the strength to complete fermentation, and in worse cases create unwanted metabolites in the wine that could compromise its quality. This is true whether we just do 2/4 generations or take this technique to the extreme.

AEB ENGINEERING's team of experts has been able to well interpret the needs in this field by designing an ad hoc equipment: **BIOREACTOR X10 1.5**, which, thanks to its extreme simplicity of use, guarantees an excellent rehydration of yeast and the subsequent propagation of biomass without having stressed cells. The secret to proper biomass propagation lies in working in batch feed and in safe aerobiosis, all combined with a judicious supply of amino acids and trace elements. These aspects ensure that the **multiplied biomass is propagated in the best way possible**.



COMPONENTS

BIOREACTOR X10 1.5 CONSISTS OF:

- 1500-liter closed tank
- Integrated cooling system operated by solenoid valves, with plates
- Radar level sensor for liquid/ volume addition management
- PT 100 temperature probe
- Additional vortex breaker
- Specific agitator built by AEB engineering, with flanged gear motor
- 15 Kw resistor
- Aeration system with sintered stainless steel cartridges
- 3-stage water filter, PP 5 prefilter, activated carbon cartridge and nylon 66 0.22
- Pneumatic air regulation system
- Feed batch dosing system with pump for sugar and nutrient
- Stainless steel framework
- Dual washing system with detergent dosing with 2 spray balls
- Two connectors for external ON-OFF and timed control for pump or agitator and air solenoid valve.



OPERATION

1. YEAST PREPARATION	<ul style="list-style-type: none"> • Adding water by presetting yeast dose up to 5 kg • 38 °C water heating set • Adding sugar at the beginning of the rehydration cycle
2. REHYDRATION CYCLE	<ul style="list-style-type: none"> • Cycle end rehydration injection water for biomass cooling • Start batch feed propagation • Proportional dosing of sugar and specific nutrient FERMOPLUS Biomassa • Cycle end 6-18-24 hours depending on the desired degree of propagation
3. AUTOMATIC WASHING CYCLE	<ul style="list-style-type: none"> • Rinsing with microfiltered water • Cleansing with sanitizing detergent • Rinsing with microfiltered water

The plant, being designed on the basis of specific cell multiplication, **does not require analysis to control any parameters before deciding on inoculation.**