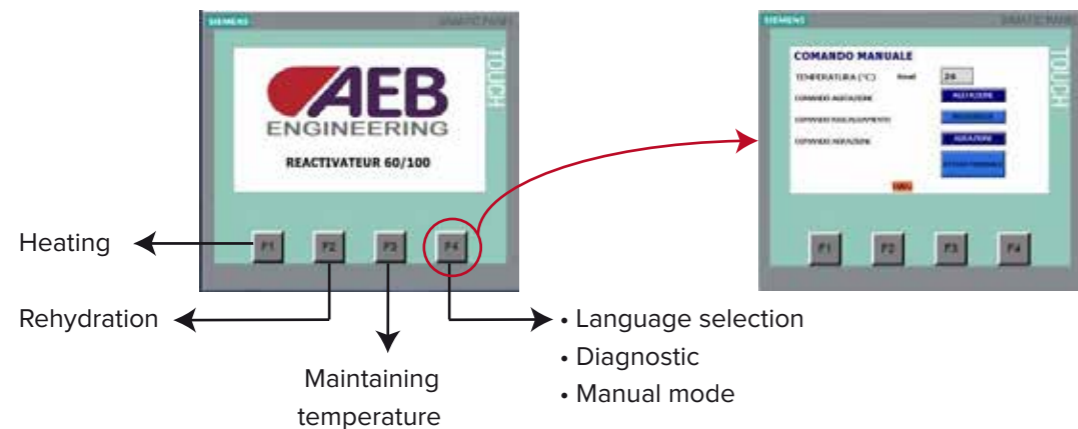


Reactivation procedure of Malolact Acclimatée

To reactivate, whilst simultaneously promoting the growth of selected malolactic bacteria, it is necessary to take a part of the wine which needs to be inoculated (250 liters for the treatment of 250 hectoliters), disacidify it down to a pH of 3,5-4, add 5 g/L of **Fermoplus® Malolactique** (i.e. 1250 g) and, after having introduced the most suitable Malolact culture, maintain a temperature of 24°C for 24 hours. **Reactiveur 60** assists the acclimatization process, making it more effective, and increases the malolactic bacteria population.

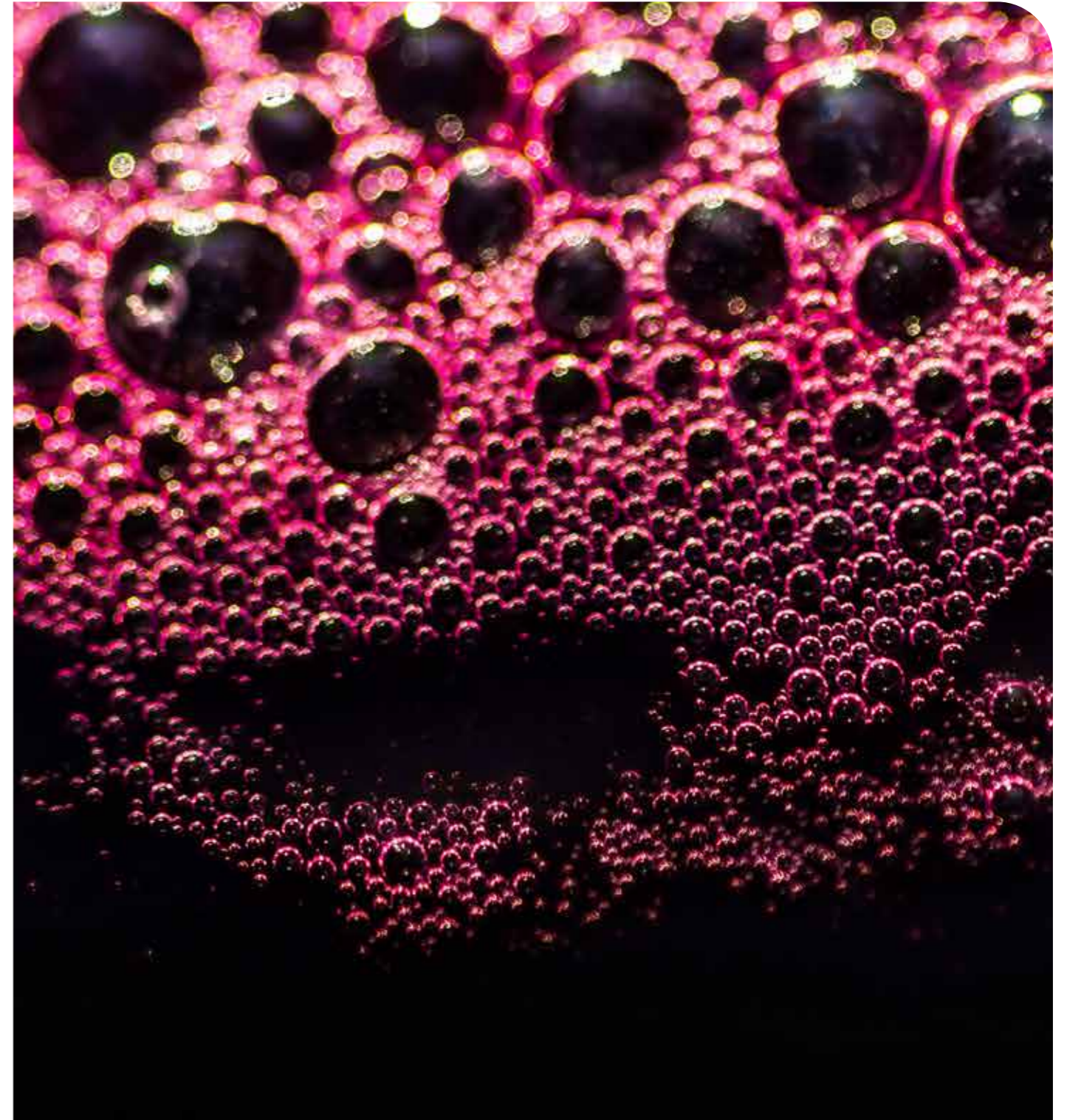
Touch screen: total control on hand

The operation interface is very simple, it is based on the navigation between pages selectable through the buttons on the control panel (F1, F2, F3, F4). The setting of the working parameters is carried out by pressing directly above the values to be modified on the touch screen display. All fields in gray are read-only, while the white fields can be set at will. Pages F1, F2, F3 are dedicated to the automatic cycles. From Page F4 it is possible to select the display language, enter the page dedicated to diagnostic; select the manual processing mode, which consists in the Start/Stop activation of the functions of aeration, mixing and heating.



The reactivation of yeasts

To reactivate the yeast just 2 simple steps are needed: once loaded the liters of water in the tank, based on the amount of yeast that you want to rehydrate, it is sufficient to press a button to activate the heating phase, which continues until reaching the set temperature. An acoustic signal will alert the operator, who will be able to add the yeasts to start the rehydration phase. The water and the yeasts will then be subjected to alternating phases of mixing, stop and ventilation. An acoustic signal will alert the operator again, once reached the rehydration time, in order to proceed with the operations of emptying and inoculation of the rehydrated mass.



Reactiveur 60/100

EQUIPMENT FOR THE REACTIVATION OF YEASTS AND MALOLACTIC BACTERIA

Reactivateur 60/100

Focus on the prevalence



In order to improve the fermentative process of musts, as well as the refermentation and malolactic fermentation of wines, **selected yeasts and bacteria** must promptly prevail over the indigenous microorganisms, lest the selection of strains with improved characteristics is rendered totally futile.

AEB has made of the concept of prevalence the focal point of its research for biotechnologies.

The alcoholic fermentation with selected yeasts

The competition that takes place between natural and inoculated yeasts, hinges on their quantitative ratio. The must's indigenous microflora consists mainly of yeasts unsuitable for a good fermentation and varying in quantity from a few tens of thousands to millions of cells per millilitre, depending on the time needed for bringing in and crushing the grapes, on the general sanitary-hygienic conditions and on pre-fermentation temperatures. **To ensure that the selected yeasts will prevail, it is necessary to inoculate yeasts at a concentration at least 20 times higher than that of indigenous yeasts.**

Therefore, 20 grams per hectolitre of active dry yeast, if correctly hydrated and reactivated, will supply an adequate yeast charge, ensure prevalence in musts containing a high microbial charge and finally render the effect of indigenous yeasts irrelevant.

In order to standardize procedures and limit human error during the preparation of the yeast inoculum, the **Reactivateur 60 range** has been designed, equipment that during years changed its characteristics in order to satisfy more and more customers' needs.

Yeast behaviour during reactivation

The selected yeast, after its introduction into the reactivation solution, rapidly absorbs water and quickly reacquires its vital functions.

After 5-10 minutes, the yeast is already capable to multiply and cannot do without glucose and fructose, if it is to survive (photo 1).

To prevent interruption of the yeast's vital cycle, it is always advisable to prepare a sugary solution at 5-8% concentration.

The sugars found in the hydration solution are rapidly consumed by the actively multiplying yeasts and, after 10-15 minutes (photo 2), it becomes necessary to add grape must, preferably containing a low microbial charge. The must needs to be added gradually, in order to avoid temperature changes in excess of 5°C.

During the entire reactivation stage, it is necessary to allow an intermittent intake of air, in order to stimulate cell multiplication and prevent fermentation during this initial stage.

These operations which, if carried out manually would require considerable labour and attention, are carried out automatically and in perfect sequence by **Reactivateur 60**.



Photo 1 - In the first 5 minutes, the multiplying yeasts englobe water and produce a white foam with large bubbles.



Photo 2 - After 10-15 minutes, the yeasts begin to consume sugars and produce a very thick foam with fine bubbles.

Advantages

- ✓ It reduces yeast latency;
- ✓ Extremely regular alcoholic fermentations;
- ✓ It guarantees the fermentation prevalence;
- ✓ Improves the fermentation run even when the microbiological conditions of musts and cellar hygiene are not ideal;
- ✓ Ensures that the reactivation is always correctly carried out and that the inoculated mass is active and at the highest possible multiplication level;
- ✓ It is ideal to reactivate stuck fermentations and to produce the yeast starter for Charmat or Champenois refermentation methods.

Technical characteristics

- ✓ Tank: maximum capacity 130 Lt on three feet, inclusive of lid, total discharge and water inlet pipe;
- ✓ Lid: upper hatchway without hinge, it is possible to completely remove the lid after opening.
Bright lid, thickness 1,5 mm, including gasket, clamp for airtight and pickled frame;
- ✓ Production: rehydration from 1 to 5 kg of dry yeast;
- ✓ Touch screen display;
- ✓ Stainless steel electrical panel.

Reactivateur 60/100 enables, thanks to many installable programs and their immission facility, to personalize the equipment according to the customers' needs.

The importance of rehydration

The utilization of ADY in fermentation is a guarantee for the transformation of sugars and also for the final product quality. In order to obtain these results, it is necessary to carry out the rehydration scrupulously to minimize the lag phase, i.e. the time necessary for the yeast to begin to turn must sugars into alcohol. Fermentation will start faster, because the yeast cells have the time and the ideal conditions to reintegrate the water lost during the dehydration process; when the rehydration does not take place ideally, cells begin to hydrate directly in the must, delaying the start of the fermentation.

The utilization of **Reactivateur 60/100** allows to carry out the water heating and rehydration cycle automatically and impeccably. It is possible to customize all the process parameters, in order to optimize the cycle and to make it simple and repeatable, avoiding human error.



Reactivateur 60/100

Malolactic fermentation carried out with selected

Similarly to alcoholic fermentation, it is of the utmost importance that the selected malolactic bacteria immediately prevail over polluting indigenous bacteria.

The main aim of this reactivation is to protect the bacteria from being simultaneously attacked by unfavourable pH conditions, sulphur dioxide, alcohol, temperature and lack of nutritional factors.

The pH and temperature conditions ideal for their multiplication allow the selected bacterial cultures of **Malolact Acclimatée** to multiply.