



Global solutions for quality winemaking

Operator Interface E-panel for membrane presses





New operator interface for membrane presses:

- User-friendly;
- Attractive graphics;
- Meets all the requirements demanded by Industry 4.0;
- Flexibility in the modification of all phases of the pressing programs;
- Advanced diagnostics;
- Data upload and download;
- New program for difficult grapes;
- Latest program for intelligent filling;
- New program M.I.P.;



MANUAL MODE

After touching the «HOME» button the first displayed screen is the manual mode. In this page one can access all working modes through icon or alternatively by sliding the upper part of the screen:

- Manual mode;
- Filling;
- Maceration;
- Pressing;
- Discharge;
- Washing;





MANUAL MODE

In this area we order the opening and closing of the door and we can turn the pressing tank clockwise or anticlockwise.

Through icon the operator can choose the desired position of the door.

The figure at right shows the several position of the door and the operator can choose between:

- Door at left;
- Door upward;
- Door at right;
- Customized position;
- Door downward;
- Plus two positions for drainage;





After pressing the « Customized position » button, through the yellow cursor, the operator will determine the position.

Once the operator has turned the cursor and confirmed through the button, the pressing tank starts rotating till the desired position.





PRODUCT FILLING

The following screen is the filling mode.

In this area one can choose the filling methods from axial feed or from the door through the select box menu.





NEUTRAL 2

If the customer has one of the three options of pressing system in inert atmosphere: Neutral 2, Neutral 1 or system E, by touching the icon N2/CO2, it is possible to set up the saturation of the tank and the filling phases in inert atmosphere.





NEUTRAL 2

In this area one can manage nitrogen/carbon dioxide inlet and discharge of the juice either in automatic mode or in manual mode.





NEW INTELLING FILLING PROGRAM:

The intelligent filling can be used in case of axial load with pump.

In order to load a pneumatic press with closed door it is necessary to carry out rotation of the tank. The aim of rotation is to increase the drainage, mix up the product, clean the channels and release the over-pressure of air inside the press (when more than half of the press is filled and all channels are covered from the grape, the air inside the press has no more emission and it is trapped inside the tank, so the air compresses and increases the pressure during the rotation of the press).

The main negative effect of the rotation is the skin break, due to mechanical abrasion, this produces an increase in lees and oxidation in the grape and juice.



THE INTELLIGENT FILLING OPTIMIZES THE NUMBER OF ROTATION ACCORDING TO THE DESIRED RESULT with consequent decrease in lees and oxidation and increase in product's quality during the filling. The intelligent filling includes different programs according to the customer's requirements.

By selecting the wanted program it is possible to reduce the quantity of the lees generated during the filling.

FUNCTION – PAUSED FILLING

In the winery there are often pauses during the grape reception due to temporary lack of grape or problems to the pipes, full tanks etc. The intelligent filling is able to detect the pauses and the program automatically suspends or reduces the rotations, so smaller quantity of lees.

System pause grape: the press does not turn if not filled. Once the transducer detects the grape variation and inhibits the forced rotation, the press avoids even the forced rotations as long as the press is filled. The customer can set a parameter to detect the pause in the filling.



FULL PRESS

By using the pressure transducer, considering the reading during the rotation when the possible over-pressure of the air is discharged, the system calculates the quantity of grape inside the press. Different sets of pressure will be available according to the grape variety (for example red grape and white grape). The program includes different filling methods:

- LEES 0: it allows to load the press with no lees, the tank does not turn and the door is open upward.
- LEES 1: the machine turns the tank to place all the channels sideways to drain and, at the same time, to discharge the air, the tank will turn only if necessary in the last minutes of the filling if the inner pressure needs.
- LEES 2: the press loads grape in traditional position with variable number of rotations according to the pressure.
- LEES 3: the machine loads grape in traditional position with variable number of rotations according to the pressure and shorter pause time compared to the previous one.
- LEES 4: standard intermittent filling.



SKIN CONTACT MACERATION

The following phase is the option skin contact maceration that the customer can request. In this area the operator can set the contact time and the number of rotations of the tank to carry out a kind of repassing of must over the dregs and homogenization of the grape.



Human Machine Interface E-panel



PRODUCT PRESSING

The next screen is the pressing phase. In this section the operator can select the pressing program between the following:

- Standard
- Cremant
- Red grapes
- Flexible
- Intelligent F.I.P.
- Intelligent M.I.P.

	PRESSING	SEQUENCE OFF		10:15:53 17-08-2018
SELECTED PROGRAM FLEXIBLE FLEX 1	2200 2000 1800 1600 1400 1400 1200 1000 1000 1000 1000 10	JUICE PAN	Trend	@ C @
	400 200 0 -200 09:	45 09:55		15 -102 mb
	JUICE ISCHARGE	RESET	SATURATION	¢.



Through the select box menu one chooses the flexible program and press the « loading » button.

PROGRAM SELECTION				
PRESSING PROGRAM SELECTION	FLEXIBLE FLEX 1	RESET		
NEW SELECTION	FLEXIBLE -	PRESS TO CONFIRM		
	FLEX 1	LOAD		
STEP [N°] Start Stop 1 29	PRESSING END ACOUSTIC ADVICE PRESSING END ACOUSTIC ADVICE TIM	E [min] 0		
<	DIEMME Enologia	⇔		

Human Machine Interface E-panel



In this section one can see every stage and can modify the different pressing parameters: pressure, holding, rotations during the working.





OPTION NEW INTELLIGENT PROGRAM M.I.P. :

It allows to optimize the working pressures and reduce times. The program M.I.P. is able to modify autonomously times and pressing cycle for every level of pressure according to the juice flow coming out from the press. The times are therefore shortened and energy costs per pressing cycle diminished (air and power consumption). It increases the product's quality, the exposition to the oxidation is lesser and the quantity of lees is smaller.



NEW PROGRAM FOR DIFFICULT GRAPES:

This program was designed to process products which tend to obstruct the channels and reduce the draining capacities of the machine. The program modifies in a dynamic way the angle that determines the pressing position of the tank, so during the membrane inflation phase one channel is raised and uncovered to let the air inside the tank go out. Once the program reaches the target holding pressure of the current step, the machine turns the tank in the position of traditional pressing with all channels downward and maximizes the draining capacities of the machine.



PRODUCT DISCHARGE

By sliding the upper part the following phase is the product discharge. The operator can set up a few parameters: door opening, expresses in seconds, the number of rotations of the pressing tank clockwise and anticlockwise to optimize the drainage and pomace discharge.





WASHING

The next screen is the washing cycle consisting of two sequences:

- Vacuum wash: it is a rough very fast wash;
- Pressure wash: in this sequence the membrane inflates up to a certain pressure to create a counter-pressure in the water flowing inside the draining channels.





DIEMME Enologia through the area « general set-up » gives the possibility to the operator of customizing and controlling in real time the working modes and as well check the current status of every single valve, electrovalve and sensors.





DIAGNOSTIC

For that purpose DIEMME Enologia has built a platform Diagnostic to check any time the PLC status, this means digital input/output and analog inputs. Through this new platform DIEMME Enologia can execute a very rapid intervention, remote or helped by the customer in order to optimize the times for repair.





BACKUP & RESTORE

Back to the general set-up one can download or update the software and the data, previously customized, in the laptop.





Rooted in tradition, strong in innovation



Diemme Enologia SpA © - All Rights Reserved