CONCEPT 505 DW PROCESSOR

USER'S MANUAL

MACHINE DESCRIPTION:

Manufacturer’s address:.....3
Range of application:.....3
Maximum capacity of the unit:.....3
Principle description: 3
Safety Warnings:.....4

USER'S MANUAL:

Technical datas :.....5
Crate dimension:.....5
Floor space requirement: 5
Connections Location :.....6
Accessories needed for the connections:.....7
Initial Operation of the machine:.....8
Machine configuration: 9
Value modification:.....10
Modify plate parameters:.....11
Select the plate to process:.....12
Start a Washout cycle : 13
Process visualisation:.....13
Processing plate after plate:.....14
Alarms:.....15
To switch off the machine:.....15

Manufacturer's address:

DEGRAF Srl
"Il Girasole" - Palazzo Donatello 8/03b
20084 Lacchiarella (MI)
Italy

Range of application:

This unit is a part of a full range dedicated for the treatment of flexographic printing plates. This range includes Exposure, Processor, Dryer and light finisher.
Thi unit is designed for washout of solvent washable printing plates with dedicated "digital section" to remove the black layer of digital plates.

All the other steps of the process are made with the other equipment of the range.

Maximum capacity of the unit:

	305 DW	**505 DW**
Number of plates:	3	3
Minimum plate size:	A4	A4
Maximum plate size:	36 x 48 inches 900 x 1 200 mm	52 x 80 inches 1320 x 2032 mm

Warning: *This unit is designed to work with solvent and has been tested with conventional product. Always ask your dealer before trying to change the type of solvent. This may result in major damages and safety issues. This machine has not been designed as an explosion proof unit.*

Principle description:

- This unit is designed to wash and clean printing plates after the exposure process.
- The machine is divided in major sections
  - Entrance table and control panel: allow the operator to place the plate on the machine and select the correct parameters to process it.
  - Digital washout section: to remove the black layer of digital plate preventing the contamination of the main washout tank.
  - Washout section: designed to provide high quality and even washout of the plates.
  - Cleaning section: Designed to ensure the cleaning and the wiping of the plate.
  - Exit section.
- The operator interface is made by a colour touch screen which ensures a very easy interface.

Safety Warnings:

To use this unit safely, it is essential that operators and maintenance people follow the safety instructions and safety precautions and warnings specified in the manuals.

The unit is equipped with emergency switches which allow the operators to stop the machine in case of an emergency.

These emergency switches cut off the power supply of the entire machine.

Make sure that the risk or the problem has been eliminated before restoring the power on the unit.

To release the emergency switches, turn clockwise. The unit has to be re-started following the "Initial Operation"- procedure.

Safety Interlocks
For the safety of operators, interlocks exist for the following:

- *Opening of the top covers during operation,*
- *Overheating*
- *Safety Level Switches*

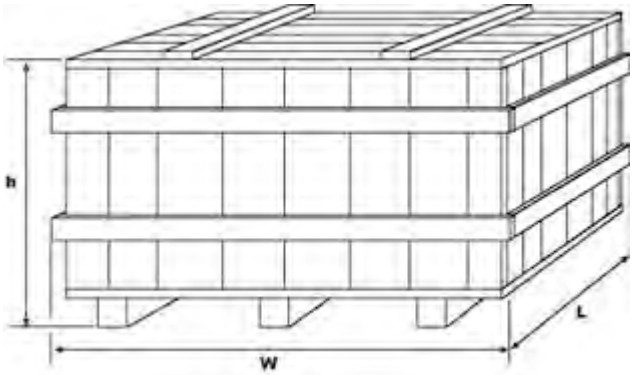
Technical datas :

	305DW				
Dimensions (w x l x h) :	1 680 x 3 830 x 1000 mm				
Net Weight :	1 070 Kg				
Compressed air supply:	6 bars minimum				
Exhaust :	600 m3/h minimum				
Power supply :	400V	3Ph / N / PE	50/60Hz	8,5 KW	13 A
	230V	3Ph / PE	50/60Hz	8,5 KW	24 A

	505 DW				
Dimensions (w x l x h) :	2 080 x 4 595 x 1 000 mm				
Net Weight :	1340 Kg				
Compressed air supply:	6 bars minimum				
Exhaust :	600 m3/h minimum				
Power supply :	400V	3Ph / N / PE	50/60Hz	8,5 KW	13 A
	230V	3Ph / PE	50/60Hz	8,5 KW	24 A

Crate dimension:

- Please ensure the handling of the crate will be compatible with the building configuration: doors dimensions, load capacity of the floor …



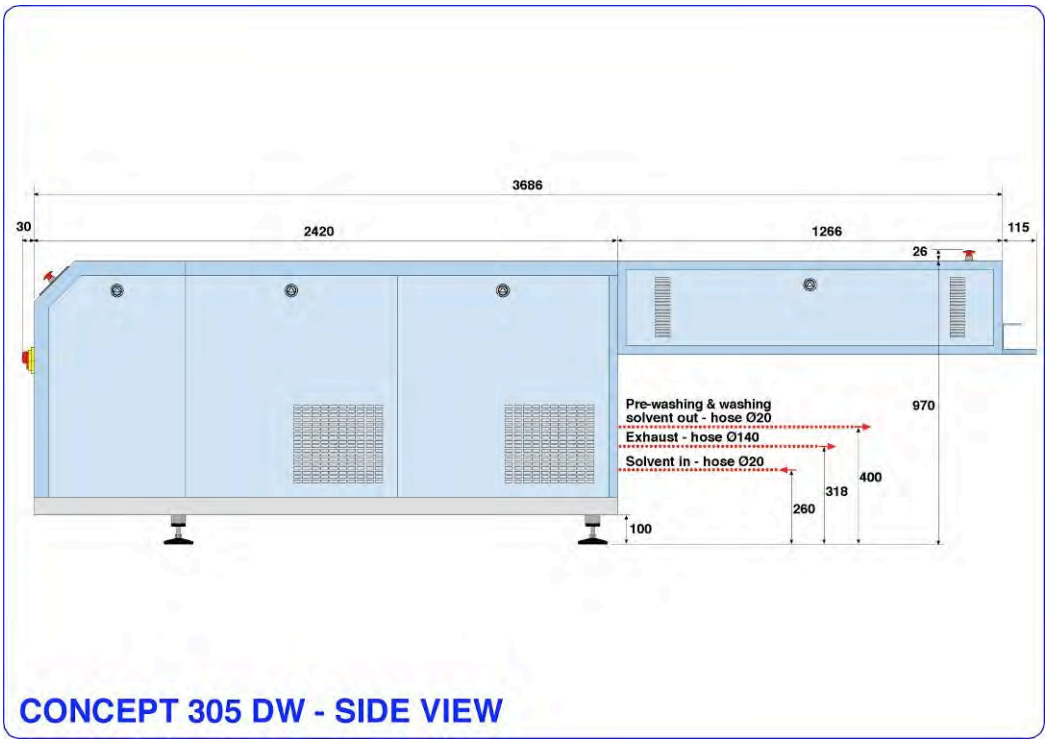
	305DW	505DW
W:	1 950 mm.	2 400 mm.
L:	2 900 mm	3 000 mm
H:	1 750 mm.	2 000 mm.
Weight (crate included):	1 400 Kg	1 650 Kg

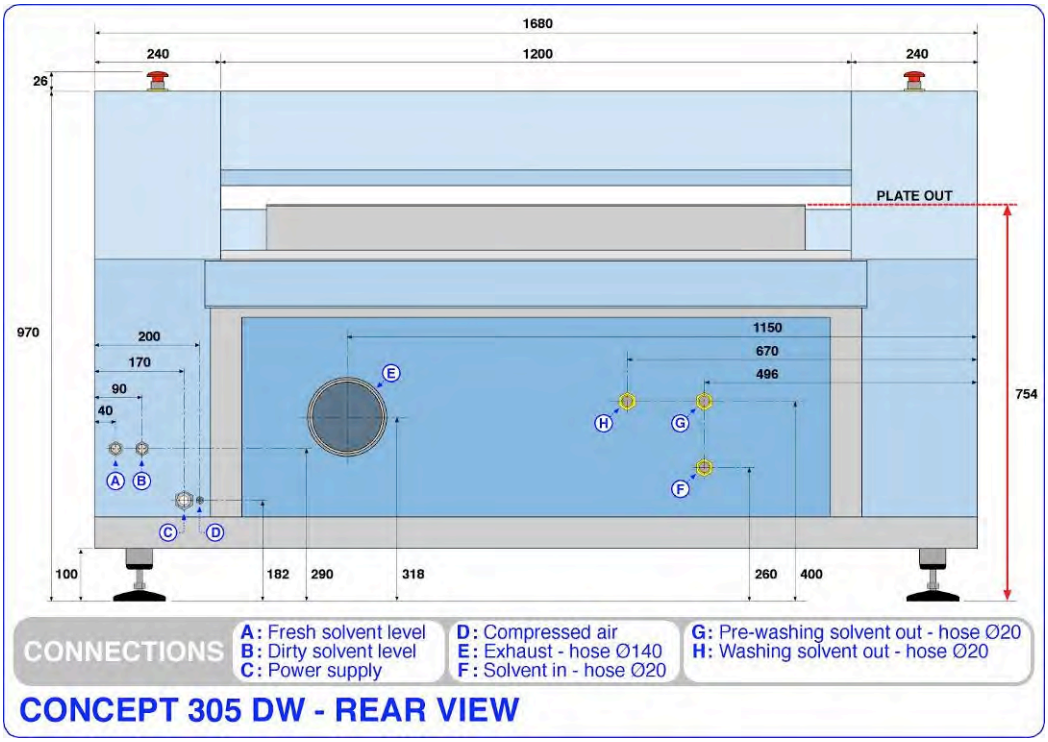
Floor space requirement:

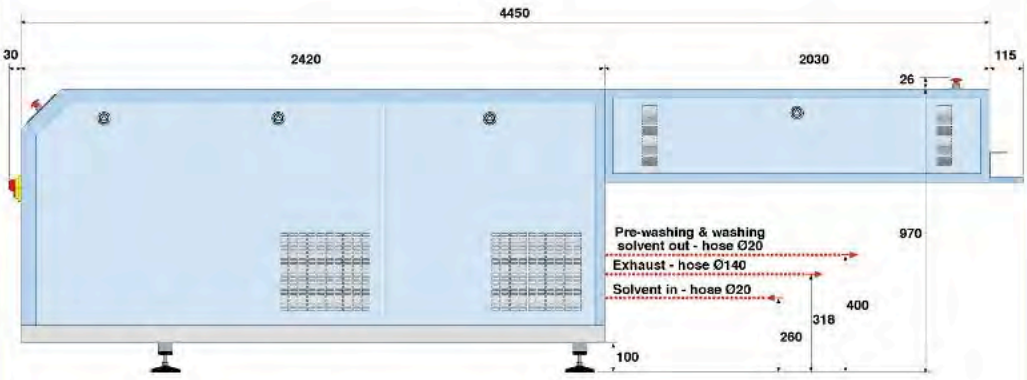
- Please ensure there will be sufficient space around the machine for safe use as well as easy access for maintenance. 1.5 meter free space is needed in front and at the back of the machine to give an easy access. On the sides of the unit 750 mm are requested to allow the access.

Connections Location :

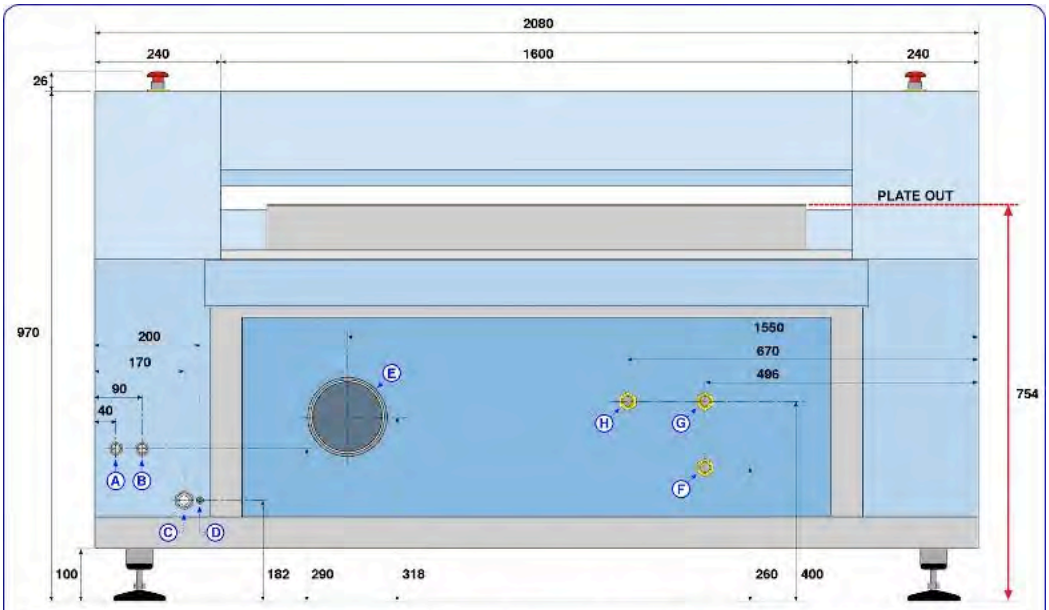
- All the connection points are located on the rear side of the machine.







CONCEPT 505 DW - SIDE VIEW



CONNECTIONS

A: Fresh solvent level
B: Dirty solvent level
C: Power supply
D: Compressed air
E: Exhaust - hose Ø140
F: Solvent in - hose Ø20
G: Pre-washing solvent out - hose Ø20
H: Washing solvent out - hose Ø20

CONCEPT 505 DW - REAR VIEW

Accessories needed for the connections:

Compressed air supply:	6 mm diameter hose
Exhaust :	140 mm. hose
Power supply :	5 x 6mm2 cable for the 400V configuration
	4 x 6mm2 cable for the 230V configuration
Solvent :	Hose, solvent resistant, diameter 20 mm

Initial Operation of the machine:

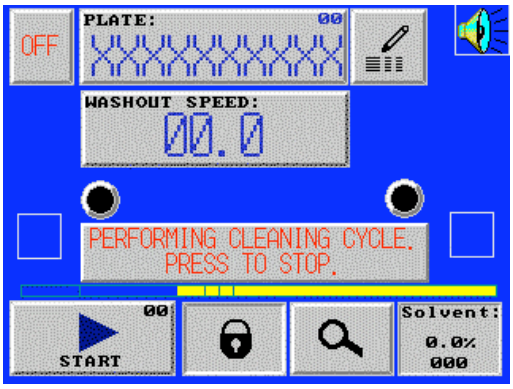
Before switching the machine on make sure that the working area around the machine is clean and free for easy movement.

Check if there are any leaks of solvent as well as all the needed supplies:

- ✓ Electrical power supply : cable connected and not damaged.
- ✓ Compressed air: filter clean and pressure correct.
- ✓ Exhaust: hose connected and not damaged.

- You are now ready to switch the machine on.
- Turn the main switch of the machine, located at the front of the machine (right side). The following standby screen is then displayed.

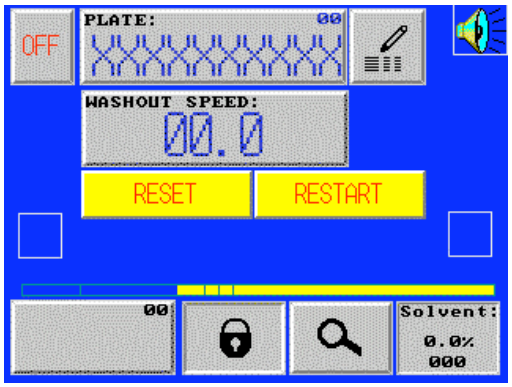
- Verify that all emergency stop buttons are released. If not, release them by turning them clockwise.
- Switch On the machine by pressing the ON/OFF button located below the control panel of the machine.
- At the switch ON of the machine different screens can be displayed on the touch screen :



➢ The machine is running an automatic cleaning cycle at the switch ON.

This screen disappears as soon as the cleaning cycle is finished.

To cancel the cleaning cycle at the switch ON press on "PERFORMING CLEANING CYCLE PRESS TO STOP" and confirm.



➢ The machine has been stopped with at least 1 plate in process.

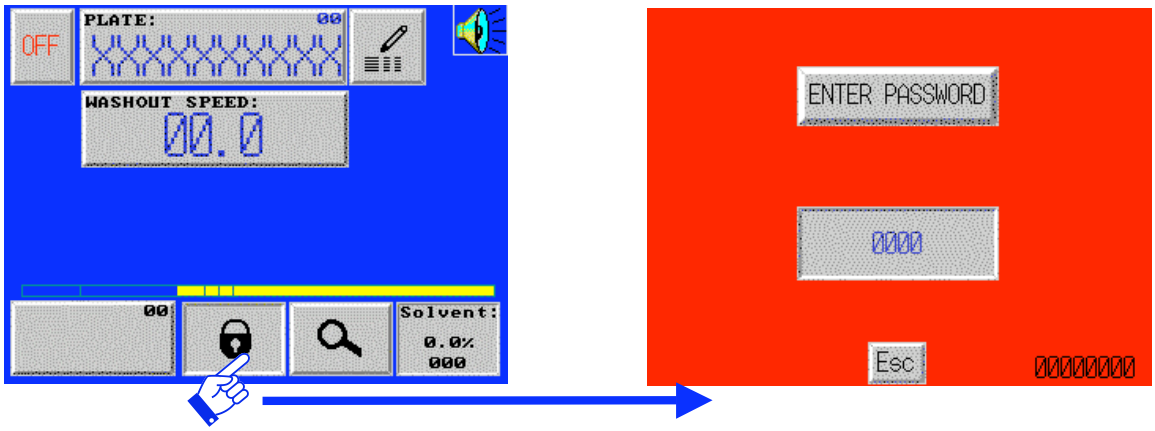
Press "RESET" and confirm to reset all the on going cycles.

Press "RESTART" and confirm to restart the machine at exactly the same status of the power switch OFF. This

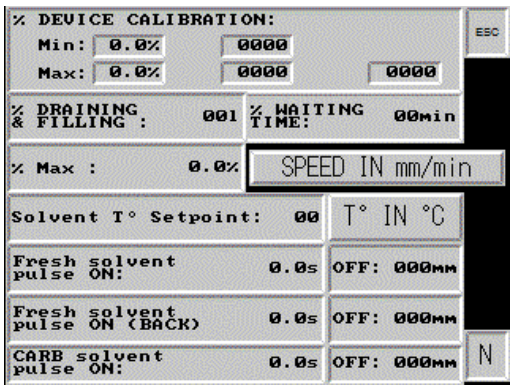
gives the possibility to continue the process of a plate remaining in the unit.

Machine configuration:

To access to the machine setup, press on the password touch.



Enter the password "1309" to display the machine configuration screen:

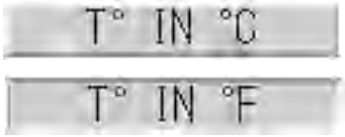


Calibration of the solvent analyser. Refer to the technical manual for detailed explanation.

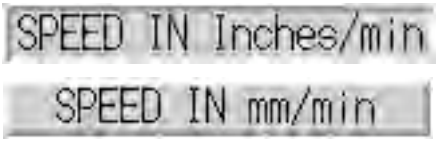
The length of the fresh solvent pulses during the cleaning of the plate as well as the distance between these pulses.

The length of the fresh solvent pulses during the back cleaning of the plate as well as the distance between these pulses.

The length of the washout solvent pulses during the pre wash of the plate as well as the distance between these pulses.



Set the display of the machine in "°C" or in "°F". Simply press on the touch to switch the machine to the desired mode.



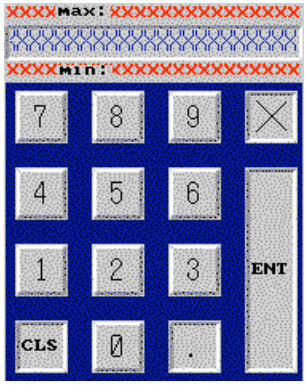
Switch the display from mm/min to Inches/min for the washout speed. Simply press on the touch to switch the machine to the desired mode.

Value modification:

- To change a value (numeric or alpha numeric) press directly on the value desired and the corresponding keypad will appear.

Alpha numeric Keypad:

Numeric keypad:



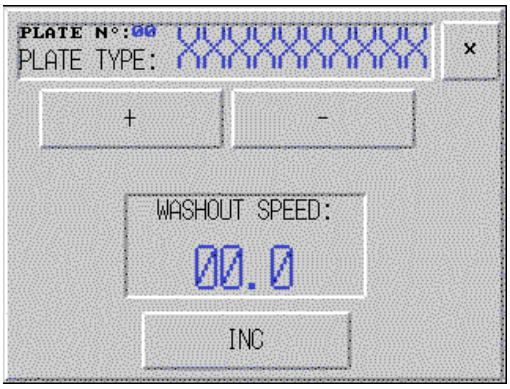
- In all cases, after typing in a new value, always confirm the input by pressing on "ENT". Not doing this may result in corrupted values memorisation.
- To close the keypad, press on .

The data's are automatically stored in memory as soon as the touch « ENT » is pressed.

Modify plate parameters:

25 channels (from 0 to 24) are available to store the plate name as well as back exposure, main exposure, UVA and UVC times.

To access to the plate parameters modification screen, press on . This touch is available on the main screen as well as on the plate selection screen.
The corresponding modification screen is then displayed.



For each memorised channel it is possible to modify the name of the plate as well as the dedicated parameters.
It is possible to scroll up or down the channels by pressing on "+" or "-".
When the correct channel is displayed, press on the plate type frame to change the plate name or on one of the 2 memorised times to change it.
An alphanumeric keypad for the plate name or a numeric keypad for the washout speed is then displayed.

Alphanumeric keypad:

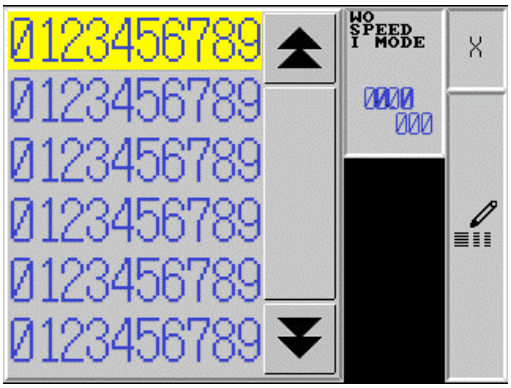
Numeric keypad:

In all cases, after typing in a new value, always confirm the input by pressing on "ENT". Not doing this may result in corrupted values memorisation.

Select the plate to process:

Press on

to access to the plate selection screen.



To select the plate to produce just scroll up or down until you the correct plate name is displayed. Then press on the desired plate to highlight it. It is then possible to check the plate parameters on the right to ensure the right plate has been selected.

If the plate parameters are not correct, press on to access to the plate parameters modification screen.

When the correct plate with the correct parameters has been selected, just press on "X" to come back to the main screen. The parameters are automatically transferred in the concerned section and the machine is now ready to start a process cycle.

Start a Washout cycle :

- Verify all the parameters are correct.
- Open the entrance cover.
- Place the transport bar on the entrance table and ensure it is well engaged in the locking devices located on each side: must have the 2 "OK" signs on the screen.

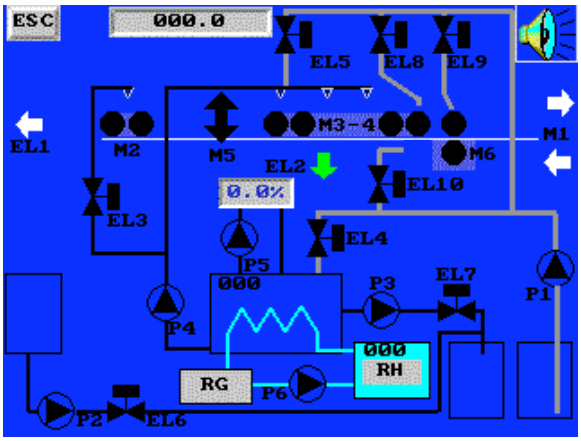
- Fix the plate on the middle of the transport bar to allow the plate length sensor (located in the middle of the entrance section) to detect properly the plate.
- Close the entrance cover.
- Press

to start the process cycle. This button is then blinking green till the plate is completely entered in the machine.

Process visualisation:

- During the cycle, an action on displays the dynamic synoptic of the machine.

- All functions running are coloured in green.



Note: Some of the functions shown on the process visualisation screen are only available on the 305 DW or on the 505 DW.

Processing plate after plate:

- It is possible to run several plates in the same time in the machine if the washout speeds are the same. In this case, place the plate on the transport bar on the entrance and press

. The machine will automatically feed in the plate as soon as it is possible.

- If the washout speed of the plate is different, place the plate on the transport bar on the entrance and press

. The machine will automatically feed in the plate as soon as the previous plate is out of the cleaning section.

Note : *the machine can process a maximum of 3 plates in the same time.*

Note : *The sensor which measure the length of the plate is located on the middle of the unit. Be sure to place the plate in front of this sensor.*

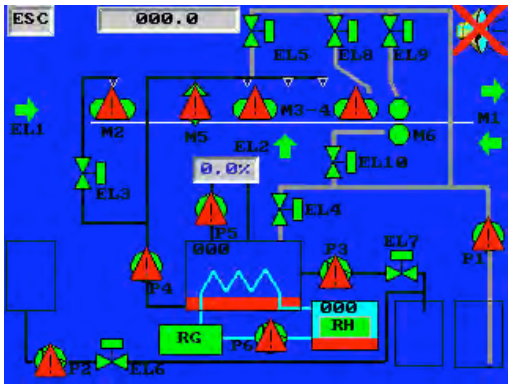
Alarms:

Two different kind of alarm can appear on the screen:

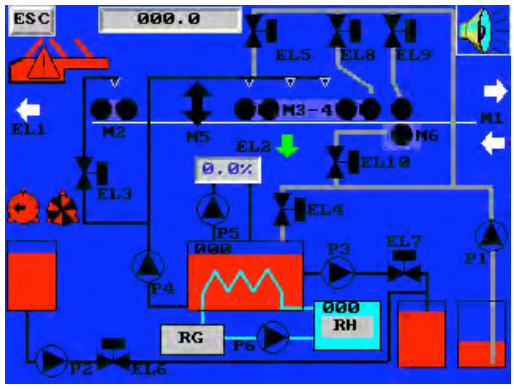
- Process alarm with the sign blinking and intermittent sound.
- Service alarm with the sign blinking.

To know which process alarm is ON press on the blinking sign to display the dynamic synoptic screen.

- A graphic alarm sign indicates the type of alarm (refer to following examples) :



Problem on a circuit breaker for the pumps or motors. The warning sign is blinking on the motor or the pump



Levels problem on the different solvent tanks. The level sign is blinking indicating a problem in a tank (low level or high level).

In addition to the motor/pump alarm and level alarms, specific alarm can be displayed:

: One of the top panels is open

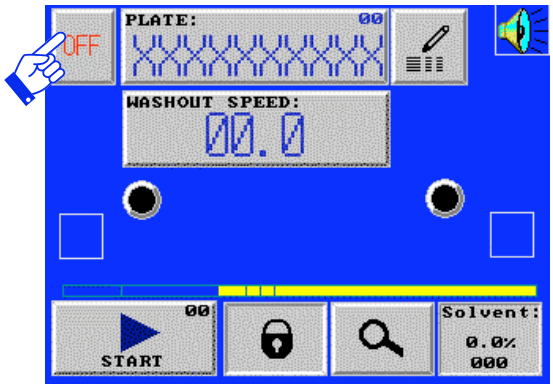
: Compressed air is too low

: Exhaust of the machine too low

Note: It is possible to stop the buzzer by pressing on *. The buzzer will automatically restart if another alarm occurs.*

Note: Some of the functions shown on the process visualisation screen are only available on the 305 DW or on the 505 DW.

To switch off the machine:



In order to allow the machine to perform the cleaning cycle when the machine is switched off, please use the "OFF" touch located on the main screen.
Press this touch and confirm in order to start the cleaning cycle. At its end the machine will automatically switch off.

The cleaning cycle performs the cleaning of all the brushes using fresh solvent (refer to the "*Technical Manual: Machine setup".*

Eng Version 3.0: 19/01/2010
Machine V3 (solvent circuit, drive motor, plc, touch screen)