

General









- Use P2 “standard” program for daily use.
- The dishwasher should only be used for laboratory glass
- The machine has a steam condenser to disinfect and dry the glassware at the end of a cycle
- Tall or heavy items should be placed towards the middle of the basket if possible to facilitate washing
- Make sure that nothing is blocking the arms and that they can turn freely
- Always wear gloves when unloading and loading the machine
- Unload the dishwasher when it has finished a program, do not use the dishwasher as a storage place
- Never use chemical products based on chlorides (bleaches, sodium hypochlorite, hydrochloric acid and so on)
- Residues of acids, particularly “hydrochloric acid”, can damage steel. Acid residue in the glassware should be thoroughly rinsed from the glass before loading into the machine
- The machine uses automatic dosing, there is no need to load washing detergent
 - The chemical connected to dose1 is an alkaline cleaner, we use DES-1000 (blue container)
 - The chemical connected to dose2 is a neutralizing agent, we use ASSA (white container)
 - If the detergent level is low it will display a message of lack of product
- To open the door during a wash cycle, interrupt the cycle and remember that:
 - The items inside the machine may be very hot, the machine reaches a temperature of 93°C
 - The entire wash cycle must be repeated

Reset procedure

In the event of a shutdown or when the stop key is presses with a cycle in progress, the door remains locked.

To open the door the door release sequence must be carried out from the keyboard as follows:

1. Press the STOP and START button together and keep pressed for 5sec
2. LCD display indicating switch procedure
3. Press the program P2 button followed by the program P1 button.
4. The machine is reset and returns to standby

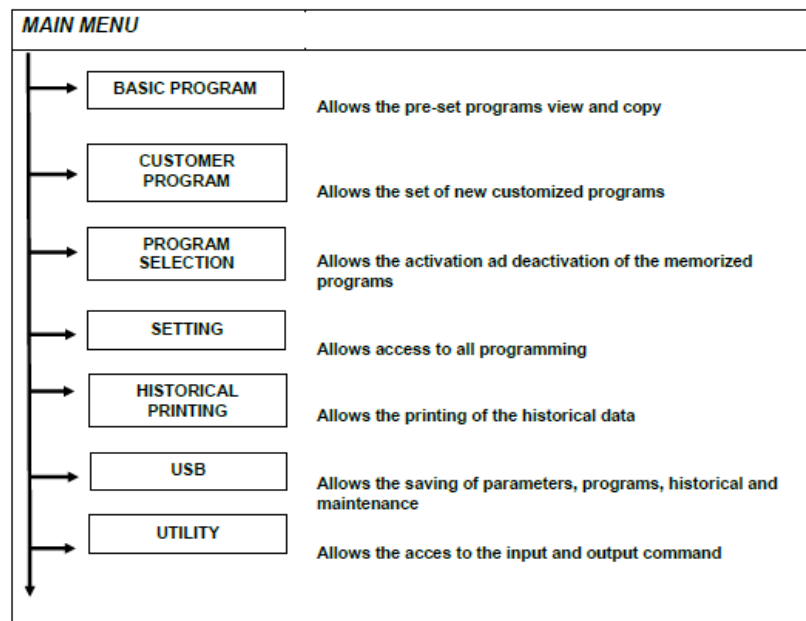
SWITCH		DESCRIPTION
P1		Select "SHORT" cycle.
P2		Select "STANDARD" cycle.
P3		Select "INTENSIVE" cycle.
P+		By pushing button P+ you select other programs; each pressure corresponds to a new program.
PRG		Keep pressed for five seconds during Wait or Shutdown to display the Menu. The programming menu access is reserved to specialized technician in possession of the password.
START		Select the program required and press the relative switch to start the cycle.
STOP		This switch interrupts the cycle in progress, the card interrupts the process, displays a message indicating that disinfection did not take place, keeps the door locked and if necessary indicates a high temperature inside the chamber. To return the machine to normal conditions the reset procedure must be carried out.
DRYING		It functions in machine equipped with drying. This switch allows the exclusion of drying forced phase from selected cycle.
USB		On the control panel board there is an USB port that allows the machine programming and data saving.

Menu

To enter the menu keep the PRG key pressed for 5sec

Press P1 and P2 buttons to scroll through the menu

Press START to confirm a selection and press STOP to exit the menu and return to Wait or Shutdown mode



Program	Phase													
	Prewashing		Washing		Washing		Neutralization		Neutralization		Rinsing	Rinsing	Rinsing	Drying
	Water Time	Chemical	Water Temp.-Time	Chemical	Water Temp.-Time	Chemical	Water Temp.-Time	Chemical	Water Temp.-Time	Chemical	Water Time	Water Temp.-Time	Water Temp.-Time	Temp. Time
SHORT			WARM 50 °C - 180 s	DOS.1 8 ‰			WARM 120 s	DOS.2 1.5 ‰					DEMI 60 °C - 60 s	120°C 900 s
STANDARD	COLD 120 s		WARM 60 °C - 360 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰					DEMI 60 °C - 60 s	120°C 900 s
INTENSIVE	COLD 120 s		WARM 50 °C - 180 s	DOS.1 5 ‰	WARM 65 °C - 360 s	DOS.1 5 ‰	WARM 120 s	DOS.2 1.5 ‰				DEMI 60 s	DEMI 60 °C - 60 s	120°C 900 s
PLASTIC			WARM 60 °C - 120 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰			WARM 60 s	DEMI 60 s	DEMI 60 °C - 60 s	100°C 1500 s
PREWASH	COLD 300 s	DOS.1 8 ‰												
NO CHEM.			DEMI 75 °C - 180 s		DEMI 60 °C - 180 s								DEMI 60 °C - 60 s	120°C 900 s
MICROBIOL.			DEMI 90 °C - 180 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰				DEMI 60 s	DEMI 75 °C - 60 s	120°C 900 s
E. COLI			DEMI 93 °C - 300 s	DOS.3 5 ‰	WARM 60 °C - 180 s	DOS.1 5 ‰	WARM 120 s	DOS.2 1.5 ‰				DEMI 60 s	DEMI 75 °C - 60 s	120°C 900 s
BLOOD	COLD 120 s		WARM 65 °C - 360 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰			WARM 60 s	DEMI 60 s	DEMI 60 °C - 60 s	120°C 900 s
MINERALOIL			WARM 75 °C - 120 s	DOS.1 5 ‰	DEMI 90 °C - 600 s	DOS.1 5 ‰	WARM 120 s	DOS.2 1.5 ‰	WARM 60 °C - 60 s	DOS.2 1.5 ‰	WARM 60 s	DEMI 60 s	DEMI 75 °C - 60 s	120°C 900 s
GREASE			WARM 75 °C - 120 s	DOS.1 5 ‰	DEMI 90 °C - 600 s	DOS.1 5 ‰	WARM 120 s	DOS.2 1.5 ‰	WARM 60 °C - 60 s	DOS.2 1.5 ‰	WARM 60 s	DEMI 60 s	DEMI 75 °C - 60 s	120°C 900 s
PIPETTE	COLD 120 s		WARM 50 °C - 180 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰				DEMI 60 s	DEMI 60 °C - 60 s	120°C 900 s
CELL.CULT.	COLD 120 s		WARM 50 °C - 180 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰					DEMI 93 °C - 60 s	120°C 900 s
ANALYTIC	COLD 120 s		WARM 50 °C - 180 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰				DEMI 60 s	DEMI 60 °C - 60 s	120°C 900 s
GLASSWARE	COLD 120 s		WARM 50 °C - 180 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰					DEMI 60 °C - 60 s	120°C 900 s
THERMODIS.	COLD 120 s		WARM 50 °C - 180 s	DOS.1 5 ‰			WARM 120 s	DOS.2 1.5 ‰					DEMI 93 °C - 60 s	120°C 900 s
CHEM.DISIN	COLD 300 s	DOS.3 3 ‰	COLD 40 °C - 600 s	DOS.3 3 ‰								DEMI 40 °C - 300 s	DEMI 40 °C - 300 s	120°C 900 s
CHEM.CLEAN			WARM 50 °C - 60 s	DOS.1 15 ‰	DEMI 60 s		WARM 50 °C - 60 s	DOS.2 15 ‰					DEMI 60 s	120°C 600 s
SELF CLEAN			WARM 50 °C - 60 s	DOS.1 15 ‰			WARM 120 s	DOS.2 1.5 ‰					DEMI 50 °C - 60 s	120°C 900 s
DRYING														120°C 1500 s

Periodic maintenance

- Fill salt
- Check drainpipes
- General state of washing chamber
- Refill detergent
- HEPA filter replacement (after 100hours ~100cycles)
- Cleaning of wash chamber drain filters (page73 user manual)
- Cleaning chamber thermostat probe (page74 user manual)
- Cleaning of wash rotors (page 75 user manual)
- Every week an anti-limescale treatment
- Cleaning of water inlet filters (page 77 user manual)

		SALVIS 1190							TIME	REFERENCE	
		Programmed maintenance scheme									
Components	Step	months							Activity		
	make every.....	3	6	9	12	15	18	24			
Tank filters	make every day								Take off filters and cleaning.	10'	M1
Water solenoid filter	make every.....		x					x	Check, clean and if necessary replace.	10'	M4
Dryer pre-filter	make every 100 hours								Replace.	2'	M5
Dryer HEPA filter	make every 300 hours								Replace.	2'	M5
Temperature probes	make every.....				x			x	During periodic validation, check the sensor status.	60'	M2
Safety thermostat	make every.....				x			x	Verify the sensor.	5'	M2
Chemical dosing pump	make every.....		x		x			x	Check the membrane pipe and the presence of lack.	5'	M6
Inner pipe and connection pipe of dosing pump	make every.....				x			x	Replace.	12'	M6
Chemical tank level sensor	make every.....		x		x			x	Check and clean the suction filter.	4'	
Connection pipe of dosing pump	make every.....		x		x			x	Check of crashing, any lacks or hardening.	10'	
Washing arms	every week								Check for free rotation. Open the cleaning caps and wash inside: check and in case cleaning the nozzle.	30'	M3
Door gasket	make every...		x		x			x	Verify the gasket and replace after 1000 cycles.	20'	
Washing pumps	make every...				x			x	Check for water leaks from the arm seal.	5'	
Water heating element	make every...				x			x	Check for water leaks fro the gasket.	1'	
Water solenoid valves	make every...				x			x	Check for any leaks, if necessary remove and clean the membrane seat.	3'	
Drain pump	make every...				x			x	Check for any leaks, if necessary remove and clean the membrane seat.	3'	
Pressure switches	make every...				x			x	Operation is checked by the control system. In case of defect of control system of water levels, go on by emptying the tank, blowing inside the black pipe connected to the pressure switch, in oder to free from obstructions.	10'	
Pipe of unloading water	make every...				x			x	Check the situation of pipe and the seal.	3'	
Pipes of loading water	make every...				x			x	Check the situation of pipe and the seal.	3'	

TABLE OF ROUTINE MAINTENANCE TASKS

Anti-limescale treatment every week

- Use an incrustation removal product when necessary during a dry run (usually once a week unless the amount of water requires daily use to prevent lime build-up and clogging of the water jets).
- This product should be applied using 100 ml of incrustation remover poured into a container of the same size located on an empty basket.
- Run this program without the drying cycle active (de-activate drying by pressing the drying On/Off button)