

INSTRUCTION MANUAL FOR DISHWASHING

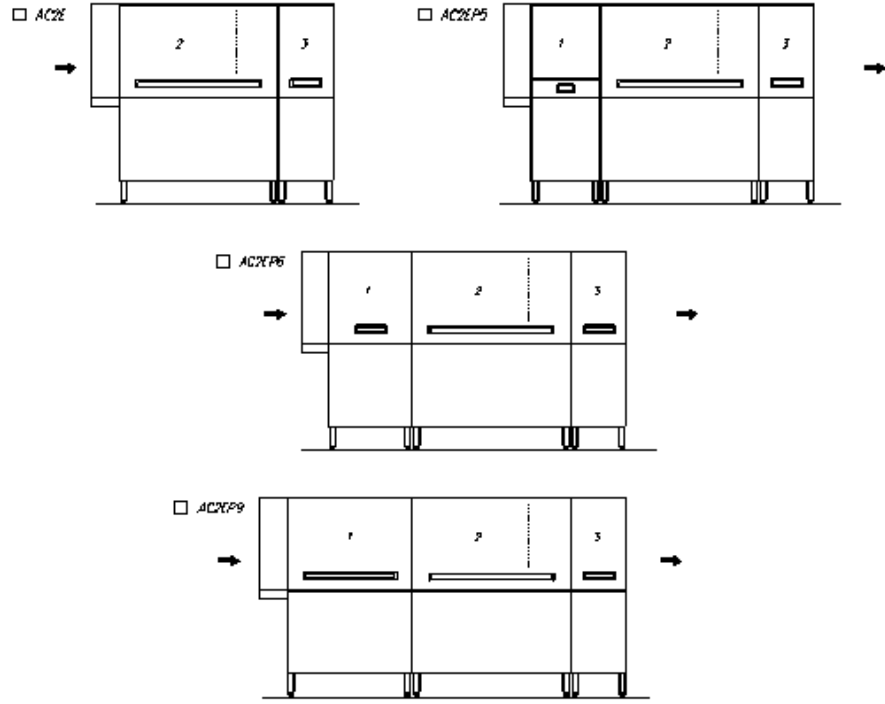
MOD. _____

AC2E

AC2E P5

AC2E P6

AC2E P9



LEGEND

- 1 = PREWASH
- 2 = WASH
- 3 = ECORINSE

HEATING

- ELECTRIC
- STEAM
- _____

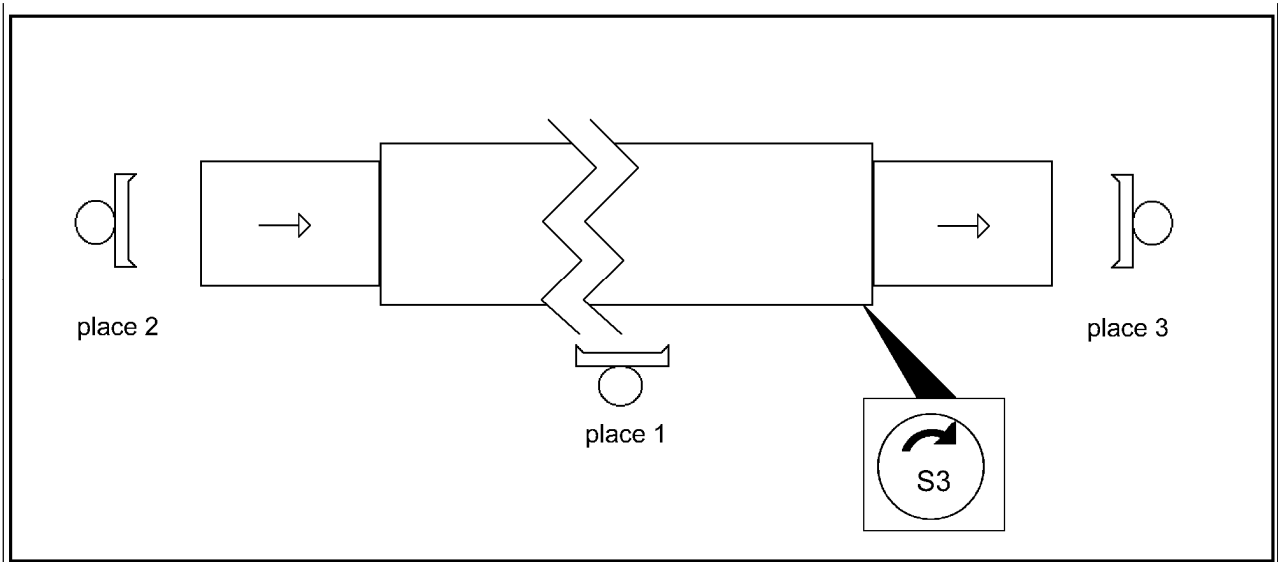
OPTIONALS

- | | |
|---------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> DRYER | <input type="checkbox"/> SPLASH HOOD |
| <input type="checkbox"/> STEAM CONDENSER | <input type="checkbox"/> SPLASH HOOD WITH COLLAR |
| <input type="checkbox"/> HEAT RECOVERY UNIT | <input type="checkbox"/> SPLASH HOOD WITH VENT DUCT |
| <input type="checkbox"/> DRAIN WATER HRU | <input type="checkbox"/> CORNER VERSION |
| <input type="checkbox"/> SANITIZING SYSTEM | <input type="checkbox"/> DHM |
| <input type="checkbox"/> AUTOTIMER | <input type="checkbox"/> _____ |
| <input type="checkbox"/> RINSE BOOSTER PUMP | <input type="checkbox"/> _____ |

TOTAL POWER	_____	kW
ELECTRICAL ABSORPTION	_____	A
CABLE DIMENSIONS	_____	mm ²
NOMINAL CURRENT OF THE MAIN CIRCUIT BREAKER (I _n)	_____	A
SHORT CIRCUIT CURRENT OF THE MACHINE: I _{cc} = 6kA		

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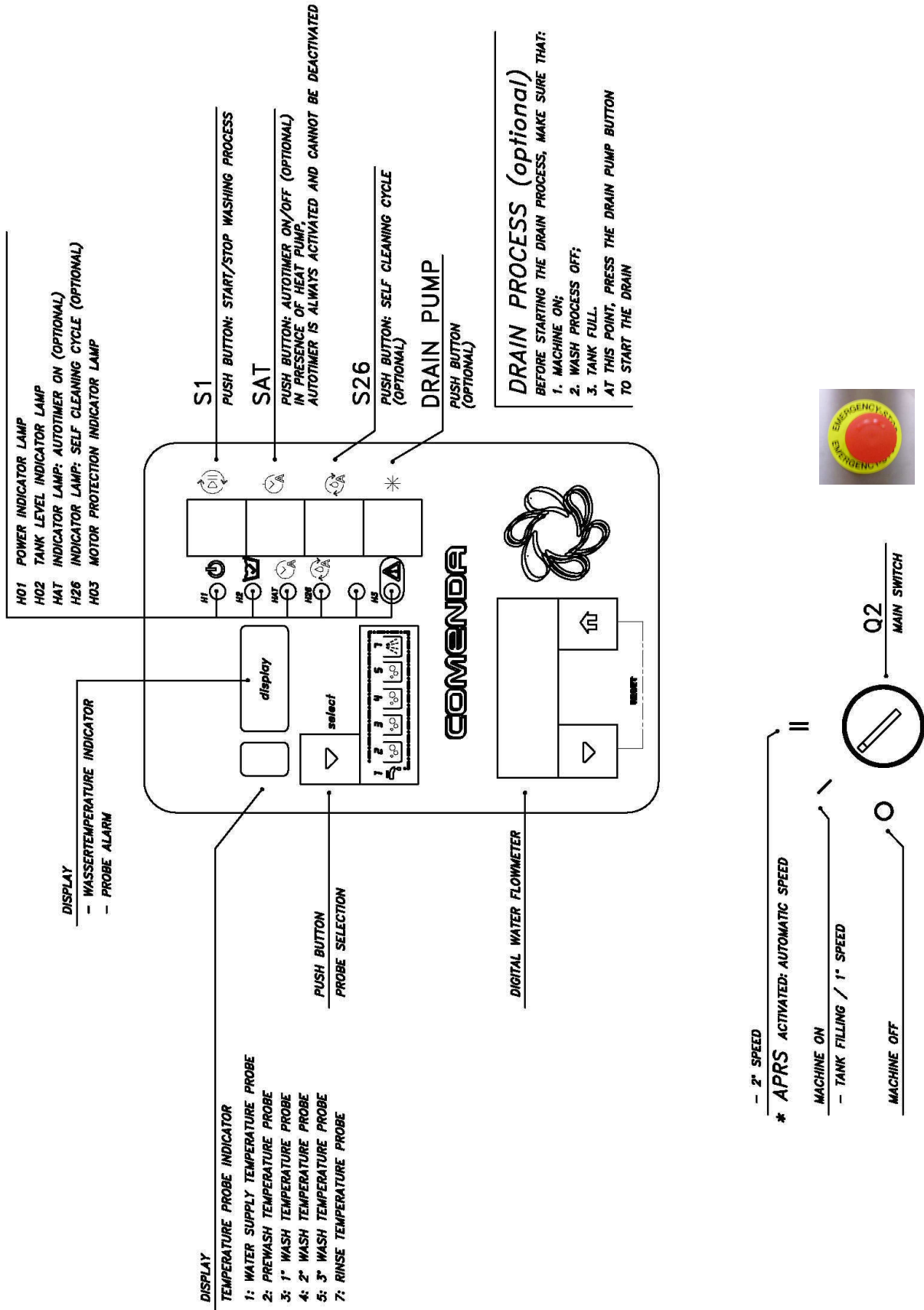


INTRODUCTION

1. Please read carefully the remarks contained in this manual, as they confirm important information for the correct installation, use and maintenance. Keep this manual for future reference by the staff.
2. After removal of the packing, check the machine is not damaged and is complete. In case of any doubt, do not use the machine and contact the service technician. The packing case (plastic bags, expanded polystyrene, nails etc.) must not be left on site as they are a potential danger source and must be disposed of carefully.
3. Before connecting the machine to services, check that the details on the data plate correspond to the services provided on site.
4. The installation has to be completed by qualified staff in accordance with all relevant regulations and the manufacturers instructions.
5. This machine must only be used for the purpose designed: washing of dishes such as plates, glasses, cups, cutlery, trays etc. Any other use such as washing of machine parts or objects with higher dimensions than the working passage of which the machine allows is not recommended and will cause damage to the machine and danger to the operators.
6. The machine must be used only by trained staff.
7. The staff handling the objects after the washing cycles must comply with hygiene regulations.
8. Do not keep the machine in places with temperatures below 0°C.
9. The protection degree of the machine is IPX4 and it must therefore not be washed with water jets.
10. After isolating the electrical supply, only qualified staff are allowed access to the control panel.
11. The machine is built according to EEC 2004/108 Directive relating to the elimination of radio interferences and to the electromagnetic compatibility.
12. In conformity with I.E.C.-standard our dishwashers are manufactured according to the standard of excellent technical level valid in Italy and abroad.
13. Noise of empty machine operation, measured at the working places (fig. 1) at 1.6 m height, are as follows:

	place 1	place 2	place 3
LeqA level equivalent to the acoustic pressure dB(A)			

The peak of the acoustic pressure level is not indicated, as far below 130 dB(A):



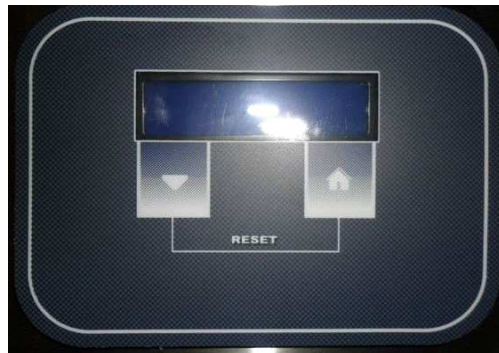
EOR function (*option*)

manual machine override in case of failure of control boards

In order to operate the machine, turn the key-switch on position 1 (key will return on position 0).



In order to stop the machine, push the EMERGENCY STOP push-button or open a door.



Flow meter

Press ▼ to show following parameters:

Total water consumption (m³)

Partial water consumption (l)

HPS EASY / HPS EASY PLUS (with USB) - OPTIONAL

(Alarms and counters: ON time, wash- and rinse time, energy and water consumption)

Press ▼ to show following parameters:

- Water consumption (m³)
- Partial water consumption (l)
- Total energy consumption (kWh)
- Partial energy consumption (kWh)
- Partial ON time (h)
- Total ON time (h)
- Rinse time (h)
- Wash time (h)
- Rinse temperature alarm
- Wash temperature alarm
- Rinse water alarm (flow)
- Rinse temperature
- Wash temperature

Press „HOME“ to go back to normal machine operation.

INSTRUCTIONS FOR USE

NOTES BEFORE WASHING

1) Make sure that:

- wall isolating switch is connected
- water and steam taps* are open
- there is no lack of water and steam* in the supply net
- tank and pump suction filters are clean and are located correctly and the overflow pipe is in position and closed
- curtains are correctly placed
- inspection doors are closed
- detergent and rinse aid dispensers are full
- dimensions of the dishware do not exceed those prescribed

OPERATION AND USE

Switching on

In order to turn the machine on simply rotate the main switch "Q2" to the right on to position "I". Lamp "H01" will illuminate.

Close all machine doors.

Wait for lamp "H02" to turn on indicating tank is full.

Every time the button "SELECT" is pushed the display show:

- 1 : water supply temperature probe (55°C)
- 2 : prewash temperature probe (40-45°C)
- 3,4,5,6 : wash temperatures probes (55-60°C)
- 7 : rinse temperature probe (80-85°C)

Wait until the wash tank temperature reaches 55/60°C; at this point the machine is ready for use.

Select the machine speed, using the main switch " Q2":

- position **I** - for heavily soiled dishes;
- position **II** - for lightly soiled items;
- position **II** - automatic speed change witch **APRS -IF REQUIRED**.

Push switch "S1" to start or stop washing process.

The lamp "H03" indicates that the pump is overheating, technical assistance required

Push switch "SAT" to start the autotimer function; lamp "HAT" will illuminate.

The **autotimer** function with **automatic reset** temporarily stops the operation, if no racks have been introduced into the machine. Placing a rack into the machine, this restarts automatically.

(*)this applies only to machines with steam heating

WASHING

- 1) Before starting the wash operations remove from the dishes all possible food leftovers and grease.
- 2) Pre-soak cutlery and also any dishes before washing, if they have been left for some time after being used.
- 3) Place the items to be washed in the baskets.
- 4) Make sure that the plates are turned towards the exit of the machine.
- 5) If the operator using the machine does not remove the racks from the exit table, a limit switch ensures the conveyor and rinse cycle is stopped. Removing the rack from the limit switch re starts the washing sequence.

INSTRUCTION DURING WASHING

- 1) Do not put your bare hands in the hot and detergent water in the tanks, as this may cause burns and skin irritations. Should this happen rinse your hands immediately under fresh water.
- 2) When the machine is functioning do not open inspection doors quickly.
- 3) Use only commercial non-foaming detergents for industrial dishwashers, supplied by well-known and reputable companies.
- 4) Isolate the electrical supply to the machine in the case of a breakdown or defective operation. For all repair work, rely exclusively on a Technical Assistance, approved by the manufacturer and request that original spare parts be used.
- 5) At periodic intervals stop the machine, remove tank filters and remove the residues which have accumulated. Do not remove the pump suction filters when the tank is full.
- 6) If the rack advancing system has stopped due to the safety device (slip clutch) operating, stop the machine by pressing the mushroom-shaped emergency push-button "S3" and remove the obstruction which caused the problem.
- 7) Ensure the detergent and rinse aid levels, in the respective dispensers are kept topped up.
- 8) Make sure that water temperatures maintain their regulated values: prewash (probe 2) 40/45°C, wash (probe 3,4,5,6) 50/60°C, rinse (probe 7) 75/85°C.

The non-observance of the above mentioned points may compromise the safety of the machine and the staff.

INSTRUCTION AFTER THE WASHING SESSION

When the wash operations are complete:

1. Press button "S1" and turn switch "Q2" into position "O" to switch off the machine.
2. Isolate the machine by means of the wall switch and close the water valve and steam supply (this applies only to steam heating machines).
3. Lift the inspection doors and make sure that they are perfectly hooked onto the support.
4. Take off the overflow pipe in order to empty the tanks.
5. Take out the anti -splash curtains and the filters for cleaning.
6. Check and, if necessary, clean the wash and rinse nozzles. Clean out the wash tanks with a wash spray hose assembly.
7. Clean the external surface of the machine with a damp cloth; do not use jets of water, as, apart from being dangerous, damage to electric components may occur; do not use abrasive detergents or those containing chlorine.
8. Reassemble all devices into their locations, taking care that:
 - the curtains are turned with the short side towards the entry of the items being washed
 - the wash nozzles are turned towards the items being washed
9. Keep doors open in order to avoid unpleasant odours, when not in use.

USEFUL ADVICE

Maintenance

IMPORTANT: Before undertaking cleaning and maintenance work, isolate the machine from the electric supply by switching off the wall switch or the disconnecting switch "Q1".

ATTENTION: do not unplug the disconnecting switch "Q1" when machine is switched on.

Regular check and cleaning of the nozzles is advisable. The frequency of cleaning depends on the quantity of leftovers and foodsoiling left on the crockery, insufficient cleaning of nozzles will give poor wash results. Do not use corrosive products such as hypochloride sodium (bleaching products), acids in general, steel wool and steel brushes for cleaning the machine inside and outside.

To ensure the machine is kept in a perfect hygienic condition, it is advisable to carry out the following periodic operations.

Ensure the procedures and frequency recommended by the detergent supplier are followed, also ensure that the correct products and equipment are used. In order to avoid damages to the machine, do not exceed the recommended dosing and at the end of the procedures, rinse thoroughly.

Hygienic care

A thorough cleaning of the machine is essential. For this operation the use of sanitizing detergent/disinfectant is advisable. The use of such a product offers the following advantages:

- guarantee for perfect hygienic conditions, as it is composed of active detergents and disinfectants.
- maintenance of perfect hygienic conditions, also if the machine is not used.

After completion of above procedures the machine has to be rinsed by completing a short washing cycle without load or by using the sanitizing cycle (optional).

Removal of lime scale encrustation's

In case of hard water a periodic descaling should be carried out to ensure hygiene and proper operation.

Optimum results

Traces of dirt or marks are the result of a possible deficiency in the wash operation. If this problem occurs ensure that the wash nozzles are clean and that there is an adequate water supply/pressure available. Also check the following points

- wash nozzles are not blocked
- water supply temperature (probe 1) is 50/55°C (excluding machines with heat recovery unit or machines functioning with cold water feed)
- prewash temperature (probe 2) is 40/45°C
- wash temperatures (probes 3....6) is 55/60°C
- rinse temperature (probe 7) is 80/85°C
- detergent is used in the correct concentration
- filters are clean
- water is not too dirty
- dishes are not stacked one upon or inside the other, as the water needs to circulate freely and directly contact all surfaces.

Prolonged standstill of the machine

In case of a prolonged standstill lasting several weeks it is advisable, in order to avoid unpleasant odours and the accumulation of dirt, to empty the machine, refill and run with clean water.

If the standstill lasts for a very long time, it is recommendable to lubricate the stainless steel surfaces with Vaseline oil.

Self cleaning (optional)

At least once a week a thorough cleaning of the machine is necessary. For this purpose a specific detergent/disinfectant is advisable. The use of such a product offers the following advantages:

- guarantee of perfect hygienic conditions as it is composed of active detergents and disinfectants
- maintenance of the machine in perfect hygienic conditions, also if the machine is not used.

For starting the self cleaning sanitizing cycle, switch "Q2" has to be put into position "O". Empty the tanks by lifting and take off the overflow pipes, remove the curtains, close the inspection doors and press push-button "S26". The lamp "H26" is illuminated during the whole period of the cycle.

SAFETY DEVICE

This machine is provided with numerous devices for ensuring the safety of the staff and the machine.

Micro limit switch SS1

When the rack reaches the end of the exit table, the limit switch operates and stops the conveyor and consequently the breaking of the crockery. By removing above, the conveyor automatically restarts.

Doors micro switches SS2...SS20..

The door is provided with one safety micro switch.

If the doors is opened, the functioning of the pumps, the motor reduction gear of the conveyor unit and the rinse solenoid valve are interrupted. The operation is resumed only after the doors are closed again and by pressing the start push-button "S1". In case of dishwashers with a complex lay-out, several push-buttons near the working stations may be necessary.

Emergency stop push-button S3

The machine is provided with an emergency red mushroom-shaped push-button on yellow background which easy accessible from operator, if pressed, stops all motors on the machine. After elimination of the problem, the machine can only be started after turning and releasing the push-button and pressing again the start push-button "S1". In case of complex lay-out more push-buttons may require releasing near the work stations.

Slip clutch

The rack conveyor system is provided with a clutch-type mechanical torque control, which is fitted to the drive mechanism of the conveyor system. If something gets erroneously jammed in between the machine and rack or the rack is overloaded, the conveyor system quickly slows down to nearly zero. In this case it is necessary to switch off the machine by means of stop or emergency push-buttons, remove the obstacle and press again the start push-button. For adjustment of this safety device refer to paragraph MAINTENANCE.

Motor protection

Each motor is protected against overload by overload relays **QF1, QF2...** placed in the control box (see electric diagram).

Lamp "**H03**" is on, if one of the overload relays is activated. In this case the machine must be switched off and qualified staff are to be contacted for the repair work. (see paragraph MAINTENANCE).

Element protection

Each element is protected against short-circuits by the fuses (**FE3..**) or with automatics (**QFE10**). The tank elements are protected against operation without water in the tanks, by pressure switches and those in the boiler and dryer by safety thermostats which have to be manually reset.

In case of intermittent problems contact qualified and authorised staff. (see paragraph MAINTENANCE).

Other risks

Although the machine is provided with the above mentioned safety devices, there are still the risks listed below.

Risk of trapping the upper limbs

As previously pointed out above, the conveyor system is provided with a clutch-type mechanical torque control, the adjustment must be related to the mechanical torque required for the transport of the items being washed.

The mechanical risks of trapping the upper limbs have been eliminated by protecting and isolating the dangerous moving parts. When the machine is operating do not introduce your arms into the wash tunnel.

Risks of burning the upper limbs

Under the paragraph INSTRUCTION DURING THE WASHING we have previously advised that you must not put your hands into the hot and detergent water of the tanks. This might cause burns and skin irritations. In case this should happen immediately rinse under fresh water and follow the instructions of the product being used.