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Diamond
catering equipment

TANDEM MACHINES

INSTALLATION USE AND MAINTENANCE INSTRUCTIONS



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1. INTRODUCTION

This manual is addressed to explain industrial washing machine use.

It is written in compliance with actual EU directives.

The information here written is addressed to the installer and to the user, which must fully understand them before to work on the machine.

The user manual must always be available to be consulted. In case of missing or damaging of the manual, ask to the manufacturer for a new copy.

The manufacturer is not responsible for any consequence coming from a not correct use of the machine because of a misreading or a not complete reading of this manual.

The manufacturer reserves itself the right to modify the here written machine specification or characteristic without any previous notice. The pictures of this manual may differ from reality for some detail, which could be partially different from the one mounted on the machine. Diagram and technical data may be modified without any previous notice.

The manual and its attachment are part of the manual themselves, so they must be kept and they must follow the machine in case of sale to another user.

Attachments and exploded view with spare parts list can be retrieved in constructor web site restricted area. Before to access to the manufacturer technical area be sure that the machine serial number is available.



ATTENTION!

The manufacturer declines any responsibility about possible errors contained in this manual because of printing, translation or writing imprecision.

The manufacturer reserves itself the right to make any necessary modification to the machine without affecting any machine essential characteristic.

It is forbidden the copying, also partially, of the text or of the pictures of this manual without any previous manufacturer authorization.

2. SAFETY RULES

The missing observance of the below safety rules may cause damages to people, things and animals

The here described machines installation and maintenance must be done by authorized personnel, who know the product and in compliance with EU directives of sector.

Reparation made in a not correct way may be dangerous for the user.

Before to put in service the machine, this

instructions must be read with high attention. This document must be available to everyone is using the machine.

The here described machine are addressed to the professional washing of garments and linen: it is forbidden any other use of the machine if not previously authorized by the manufacturer.

Do not washed linen soaked with substances which are dangerous for the user health like poison or cancerous products.

Do not approach the machine with combustible or inflammable substances to avoid the risk of fire or explosion.

Always stick to the washing instructions of the linen label.

The use of this machine is forbidden to people under 16 years age.

Not properly done external connection to the machine release the manufacturer from any responsibility.

IMPORTANT NOTES

Working with opened sides is forbidden!



In order to avoid burnings or accident it is forbidden to remove, even temporarily, the protection panels and the safety systems!

It is forbidden to introduce bars, sticks or metallic objects inside the drum. In case of emergency, please refer always the here described procedures.

Each time the machine is started, check always the safety device correct working!

It is compulsory to know the machine and how its safety devices are working!



BURNS DANGERS

The machine, because of its nature, presents burns danger.

Burns may be caused by:
A long contact with door during a high temperature program;
The contact with the fluxing steam parts.

On the machines are fixed the following labels, if one of them should be damaged, the user must replace it with a new identical one.



HIGH TEMPERATURE SURFACES
Near the door



RISK OF BURNS

Machine must always be used by trained personnel and with at least one other operator in the room!

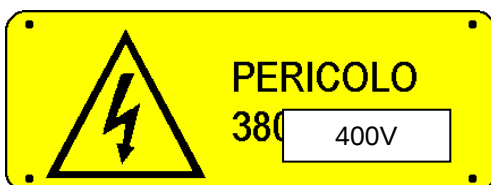
READ CAREFULLY THE INSTRUCTION FOR OPERATING IN CASE OF BLACK OUT, AND INFORM ALL THE USERS ABOUT THEM.



Any service on the electrical parts must be operated only by qualified personnel. Before to work on the machine, cut off the electrical supply.

Power and controlled circuits can be modified only by manufacturer personnel, on the contrary the warranty condition empire.

On the electric board, the here below warning label was stuck. If this label should be damaged or unstuck, it needs to be replaced by an identical one.



OPERATOR PSYCHO-PHYSICAL CONDITIONS

People using the machine must be in a perfect psycho-physical condition; during the working cycle, the user must always assume a vertical posture in front of the machine.

Suddenly or not controlled movement must be avoided because of the risks of dangerous knocks against the washer chassis, i.e.: during the dryer unloading.

The other people in the laundry room do not have to distract the operator, who is working on the dryer.

While working, the operator does not have to be distracted by TV, radio or any source of distraction.



LIGHTING

In the room where the machine is installed, the lighting must be at least of 300-500 lux intensity; unpleasant flashing must be avoided.



ATTENTION!

These instructions do not cover all possible risks. User must always pay high attention and respect carefully the rules.

3. MANUFACTURER RESPONSABILITY

The instructions written in this manual are not replacing, but completing the duties deriving from the safety and accident prevention laws. With reference to what is written in this manual, the manufacture is not responsible for:

- a use of the machine against the safety and accident prevention laws in force.
- not correct machine installation.
- missing of periodical and programmed maintenance.
- not observance, or not correct observance, of this manual instructions.
- electrical supply fault.
- not authorized modification of the machine.
- use of the machine by not authorized personnel.

4. UNPACKING

The machine must be controlled at the delivery moment, any external or inside damage dues to the transport, must be reported immediately to the forwarder.

The machine must be completely unpacked next to the installation position. The packing material must not be spread on the environment, but must be collect in the appropriate collecting place as per the environmental directives.

Using a monkey spanner, take off the bolts fixing the machine to the pallet.

**ATTENTION!**

Check the technical data sheet, which is sent together with the machine documents, to control the net and gross weight: check if they meet the data of the available lifting means.

**ATTENTION!**

The pallet must not be used as a normal machine support! Always take down the machine from the pallet. Install the machine as described in the opposite paragraph.

**ATTENTION!**

The machine must be moved only when it is still fixed on its pallet and, in case of forklift truck, only by authorized personnel.

During the transport, the high spin washing machines basement and cradle are blocked with locks in order to avoid shock absorber stress.

**ATTENTION!**

Transport locks need to be removed once the machine is positioned and before it is supplied.

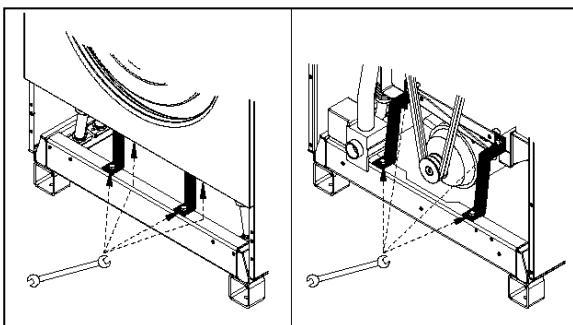
To take off the transport locks, follow the next instructions. Pictures indicate the lock type, not the machine.

Remove frontal and rear panels.

Unscrew the bolts fixing the transport locks.

Remove the transport locks

Mount again the panels in the original position.



Each panel must be mounted again in the original position before the machine is switched on.

When removed, the locks need to be kept and used again each time the machine needs to be moved.

Transport locks are not present in hard mounted machines.

5. INSTALLATION AND PLACING

Machine placing and installation must be operated only by qualified personnel in the maximum respect of the instruction written in this installation manual.

To assure the correct machine use and working, as well as an easier maintenance, a free space of at least 600mm must be left all around the machine.

In case of in-line mounting, i.e. Coin Op Shop, the space between the machines can be reduced to 10 mm.

Room temperature must be between +5°C and +40°C. The room where the machine is installed need to have a sufficient air recycle.

**ATTENTION!**

Do not use or stock near the machine petrol, oil or any other inflammable stuff. Fire or explosion may be caused.

**ATTENTION!**

In case of machines equipped with a tilting system, external elements could move during the load and unload operation.

For the overall dimensions of the machine and of the moving elements in different positions, refer to the data sheet.

6. MACHINE IDENTIFICATION

The machine is identified by a sticker reporting the machine serial number, model, power and technical characteristics. The label is stuck on the machine back.

Be sure that the electric, hydraulic, steam and compressed air connection are satisfying the data written on the label

Spare parts and / or servicing need the correct model individuation.

Warranty automatically expires if the sticker is damaged, removed, missing or not readable. In one of these condition installation and servicing operation may be difficult because of the machine cannot be correctly identified.

7. NOISE

The air noise produced by the machine gives an acoustic pressure continued and weighted of level "A" below 72 dB.

8. GROUND FIXING

High spin washing machine do not need a ground fixing. This machine are free standing and supplied with rubber feet which must be screwed

using the threaded holes.

The not correct adjusting of the rubber feet can origin strong vibration of the machine external structure. The machine must be installed perfectly level on a ground without elastic reaction.



ATTENTION!

Do not insert any elastic stuff between the machine base and the floor.

9. ELECTRIC CONNECTION

The electric connection must be operated only by qualified personnel and must be in compliance with the local and national regulation in force.



ATTENTION

Be sure that the supplied tension matches with the one indicated on the machine label.

To connect the machine use a H05 VV – F cable or superior, it must be correctly dimensioned following the data label.

Install before the machine a omnipolar disconnecting device (i.e.: a circuit breaker) which need to have a contact opening that allows the complete disconnection in case one of the conditions of the over tension III category is verified. This device must comply with the subject regulation in force.

Check the main switch, it must be in position "0". Open the electric supply door. Pass the electric supply cable through the cable holder supplied with the machine. The cable must be correctly dimensioned (check the following table).

The electric supply cables must be operated on the knife switch mounted on the machine.

Following the kind of supply required by the machine serial number plate, connect the cable to the knife switch as indicated below:



: Ground bolt

L1, L2, L3: Phases

N: neutral

At the installation, or in case of replacing, the ground cable must be at least 5 cm longer than the others.



ATTENTION!

The machine must be connected to an efficient ground system: the manufacturer refuse all responsibility in case this connection is not made following the subject regulation in force.

Before to start any service, cut the electric supply to the machine: for maintenance refer to the electric diagram inside the machine. The electric diagram can be retrieved from manufacturer web site



ATTENTION!

The machine connection must always be done on the base of the serial number label (power, supplied tension, frequency). For supplied tension different from the one provided, please contact the manufacturer.



ATTENTION!

All washing machines are equipped by a speed control operated by an inverter: a protection through RCD – B kind device must be provided (sensitive to average current value).



ATTENTION!

In case the electrical supply come from a diesel generator, then the inverter ask for the application of an additional inductor.

10. HYDRAULIC CONNECTION: LOAD

The washing machines are equipped with electrovalve for the cold and hot water loading (in case it is requested, the machine is equipped with a third electrovalve for hard water). Each water inlet is identified, for connection quotes refer to technical data sheet.

At the beginning of each hydraulic supply a gate valve must be provided to cut the water supply to the machine at any moment, in case of emergency or in case of service.

At the beginning of each water inlet an inspect filter must be provided. It is necessary, also, to control the machine inlet valve filter after a short time of use, overall the hydraulic system is old or not used from a long time.



ATTENTION!

All the inlet valve must always be connected! If in the supply system it is not available the hot water, connect cold water also to the inlet valve called "HOT WATER".

When more washing machine are connected to the same water line, the water line must have a diameter sufficient to grand a water flow enough to supply all the machine in case all of them are loading water.

A minimum pressure of 0,4 atm is necessary to

load the water: if the supplied pressure is lower, the water loading time are longer.

Maximum water loading pressure is 8 Atm (the minimum and maximum values are taking in consideration all the kind of valve mounted on the different machine size).

11. WASHING MACHINE HYDRAULIC CONNECTION: DRAIN

The electric drain valve used are a normally open kind, it means that the water is drained in case of black out.

In case of more washing machines connected to the same drain line, it must be enough to allow the correct water flow in case all the machines are draining water at the same time.

Drain collector must avoid that the water drained by one machine enter in the next one.

The washing machine drain is for gravity, the drain tube must not present sinking or counter slope. A 2% slope must be provided to allow a correct water flow.

The drain system must satisfy the local or national laws and regulation in force.

12. WASHING MACHINE STEAM CONNECTION

In case of machine steam heated a steam connection must be provided.

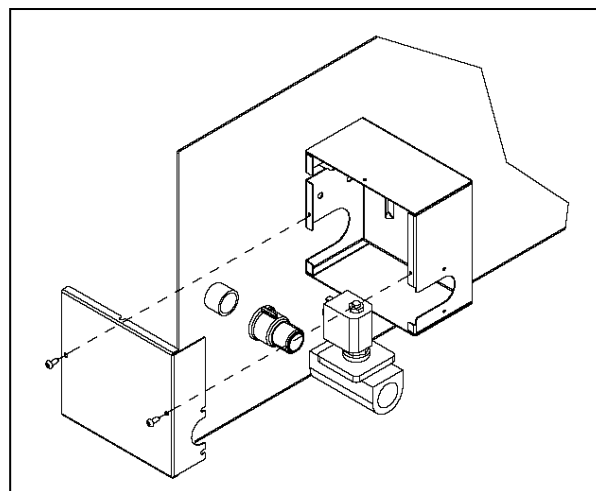
The steam connection must be operated by qualified personnel and must satisfy the local and national rules in force. Check that the steam has the same characteristics written in the technical data sheet and that all the system parts are certified.

The steam trap is delivered with the machine, but not mounted on the machine: the steam trap electrical and hydraulic connection is at installer charge.



ATTENTION!

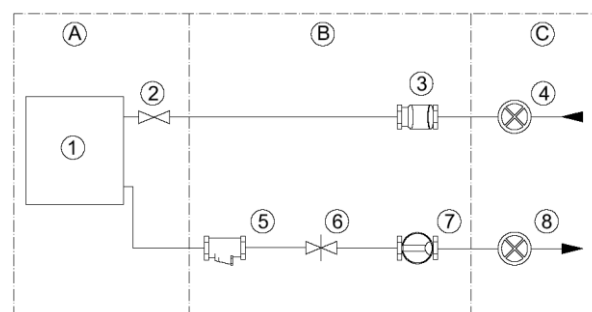
Once the steam trap is connected to the machine, it must be protected by the supplied iron box: see the following picture



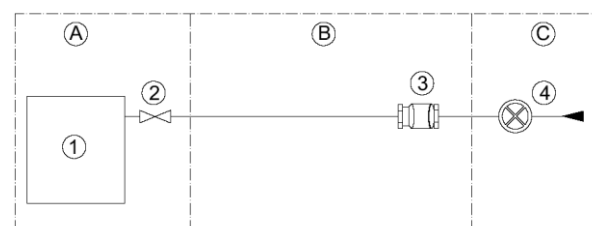
The supply steam system must be realized following the next diagram.

Each connection between the system and the equipment must be tightness tested.

machine
external system
steam supply system



Heating: undirect steam



Heating: direct steam

System elements are identified as follow:

washing machine
inlet steam valve(supplied with the machine)
filter
inlet steam gate valve
steam trap
check valve
flow control
exit gate valve



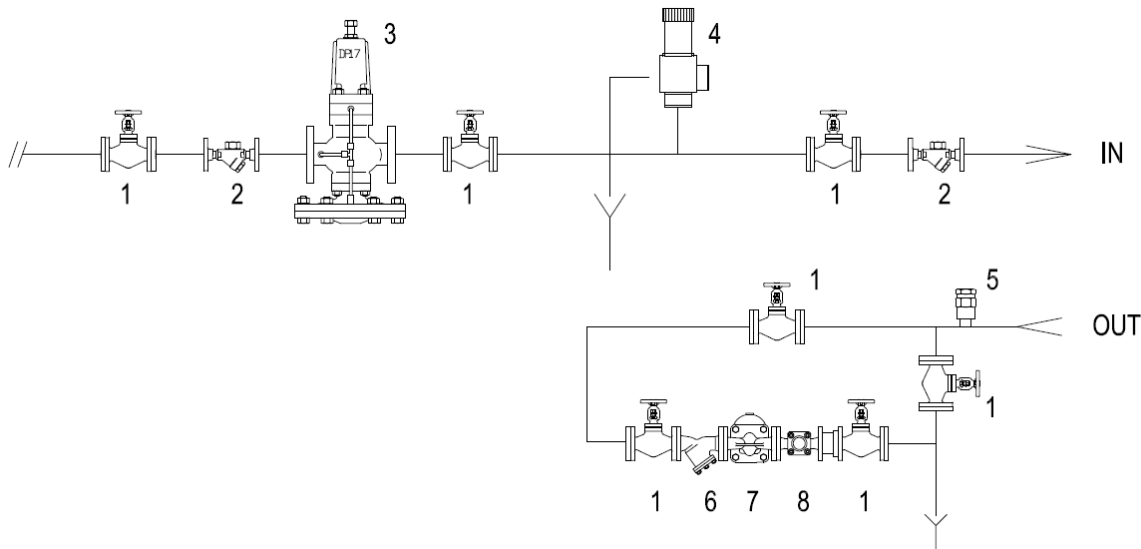
ATTENTION!

The machine can work with a steam pressure between 0,5bar and 4,5 bar. Lower is the steam pressure, longer is the heating time.

compliance with the national and local rules in force must perform a connection. Steam must satisfy the minimum requirement written in the technical data sheet; all component in the system must be certified. The steam system must be realized following the below diagram:

12. DRYER STEAM CONNECTION

Only for steam-heated fryers, personnel in



Elements are identified in the system as below:

On – Off Valve;

Filter;

Pressure reducing valve (if necessary);

Safety valve

IN) Machine steam exchanger inlet



ATTENTION!

In order to be efficient, the safety valve must be of an adequate size to provide to the maximum steam system rate.

Vacuum breaker valves

Filter

Inverted bucket steam trap

Flow indicator

OUT) Machine steam heater outlet



ATTENTION!

Drying productivity depends on the steam heater efficiency.

Dryer can work within the steam pressure range referred in the technical data sheet, anyway lower is the pressure, poorer are the machines performance. In order to avoid too much longer drying time, the pressure should be at least 5bar.

13. INSTALLATION: GAS HEATED DRYERS SPECIFICATIONS

Independently from the capacity, every gas-heated machine must be considered as a gas equipment.

During the installation must be respected the following rules:

Territorial building and fire-prevention rules;

Accident prevention rules;

CENELEC rules /electric system);

Rules about the combustible gas use

Rules about gas system supplied by public net or LPG gas

Rules coming from the gas company

Rules coming from the electricity company

Other possible local rules.

Air inlet and ventilation openings can be closed only if the opening condition is controlled and if the flame of the gas-heated equipment has opened air inlet and ventilation.

The room must be correctly ventilated, even when the gas exhaust is mechanically operated, if the nominal thermal pollution of this gas equipment does not cause depression in the room. In this way, a regular gas combustion and the complete exhaust of the burn gas are guaranteed.

To dimension the air grating, please refer to the data written on the machine technical sheet and to the rules in force. In this way, a regular gas combustion and the complete gas exhaust are guaranteed.

Air inlet dimensions must comply with the technical sheet requirements and with the subject rules in force.

In case the dryer is supplied with liquid gas and is installed in a basement, forced ventilation system must be provided.



ATTENTION!

Never install a gas-heated machine in the same room where there are machines that use solvents (example: dry cleaning machine). This combination could produce dangerous substances for the operator and it can cause steel corrosion.

If a gas-heated machine and a machine using solvents are installed in two separate rooms, be sure that there is no possibility of air exchange between these two rooms.

14. DRYER GAS CONNECTION

If the machine is gas heated, the necessary connection with the distribution system must be made: check the machine serial number plate data, especially check supply gas pressure.



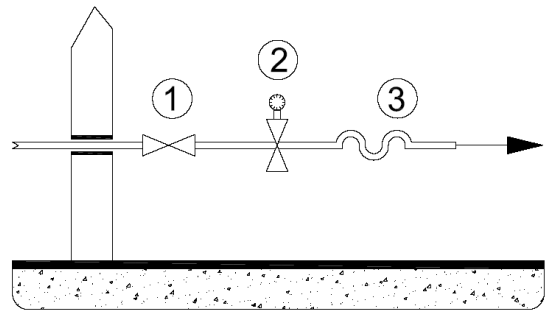
ATTENTION!

The maximum gas pressure admitted is 50mbar. To supply the gas with a higher pressure, even for short time, may damage the valve.

The gas distribution system must be realized in compliance with the rules in force and it must respect the sections and the pressure suitable for the installed equipment, as per tables at the end of this manual.

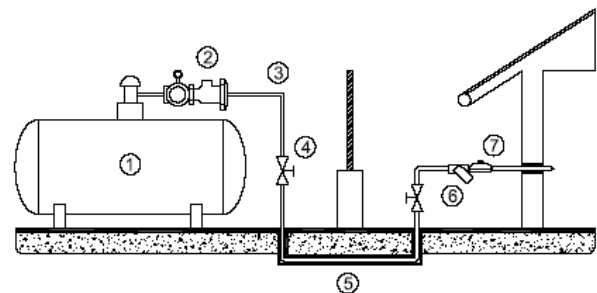
Look to the following picture: back to the machine must be installed a rapid gas interceptor valve (1): the gas cock must be near the dryer and in an easily reachable position. The cock must comply with the rules in force and must be an approved model.

A low point pressure switch must be provided (2). The connection to the gas system must be made using a no-vibration joint (3); if flexible tubes are used, these must be in stainless steel DIN 3384 or DIN 3383.



The gas system must be realized in compliance with the rules in force. Respect dimension of the dryer gas-connection written in the technical data sheet; this dimension must not be reduced.

The next picture shows how the machine should be connected in case of gas cylinder with high pressure. In this case, a two-step reduction system is necessary; it must be realised in compliance with the rules in force.



At first 1.5mbar governor must be connected after the high pressure gas cylinder (1), after that a safety valve with the appropriate dimension must be installed (2).

The high pressure tube (3) is interrupted by an interceptor cock (4) and then it follows protected (5) below the compartments division area border. Before entering the room where the machine is installed, a second interceptor valve must be provided and then a filter (6) and a second governor (7) which brings the pressure to the correct working value.

All the joints between system and dryer must be tightness tested.

To make this test, use a leak finder spray; otherwise, the joints can be covered with foamy substances, which must not be corrosive. In both cases, bubbles must not appear.



ATTENTION!

It is forbidden to use free flame for tightness test!

15. GAS CONNECTION: THERMAL POWER

Each dryer tested in the factory is prepared for a kind of gas that is written in the sticker near the serial number plate.

If the machine is predisposed for a gas that does not correspond to the kind available in the installation place, then it is compulsory to make the dryer adaptation. In this case, the authorized after sales center must be informed.

A dryer that is working with the expected thermal power depends on the inlet pressure and the gas calorific power, but also depends on the nozzle, the gas pressure arriving to the nozzle and from a correct supply of primary air.

The pressure of the gas arriving to the machine must be included in the limits written on the gas type tables. If the pressure is not included in the limits written in this manual, the dryer cannot be started.

If the verified gas pressure is different from the table values, please contact the gas company or the company that realized the gas system.

The GAS Lower Calorific Power, which must be asked to the gas company, must correspond to the one indicated in the technical data table.

16. GAS CONNECTION: GAS INLET PRESSURE CONTROL

The inlet gas pressure must be controlled using a digital or liquid measuring tool (resolution of 0.1 mbar at least).

Close the interception device.

Open the sealing screw on the pressure tube gas valve connection indicated as "Pin".

Connect the manometer

Open the interceptor device

Start the dryer following the user instruction

Check the inlet pressure, with the burner working.

Switch off the dryer.

Close the interception device.

Take off the monometre.

Close the screw of the gas valve pressure tube and control the tightness.

Open the interceptor device and control test the tightness.

The dryer must not be used if the gas pressure is out of the limit shown in the reference table.

17. GAS CONNECTION: FINAL TEST

Once the connection works are completed, the equipment and the installation must be tested. It is necessary to test:

That the connection are made respecting the instructions written in this manual;

That the safety rules and the laws about this subject are respected;

That gas connections are tightness tested.

Switch on the machine following the user manual instructions controlling the burner lighting on and the flame aspect.

Do a gas test with the volumetric method. Using the gas regulator, control how much gas was used in a fixed time unit: this value must be compared with the values in the tables.

18. HUMID AIR AND BURN GAS EXHAUST

The humid air and burns gas exhaust system must be realized following the rules in force.

To avoid lack of humid air and noise, the exhaust joints to the outside must be made tight with high temperature resistant material (filler, putty, silicone preparation).

Gas heated tumble dryer are B22 equipment, it means they are gas equipment which depend on an aired room without any wind protection device with blower behind the burning room.

Dryer burned gas must be brought outside through a chimney.

Burnt gas and humid air pipe must be the shortest possible one and it must be rising to the exhaust chimney.

A condenser drain must be provided in the lowest point. This drain derivation must observe local rules of water drain connection. The dryer is equipped with a suction fan that produces its typical noise while working.

To reduce the noise level, a muffler can be installed on the drain (it can be found in a specialized shop).

19. MACHINE START AND FINAL TEST

Once the machine is installed, and all connections are made, it must be started following the provided instructions. Each machine part must be tested: start a program and check at least one complete program. The machine must be fully loaded and, in case of high spin machines, the unbalance end switch position must be controlled.

20. WASHING MACHINE LANGUAGE CHANGE

When the machine is switched on for the first time, interface language could be different from the one wished by the user.

The following procedure explains how to change the interface language.

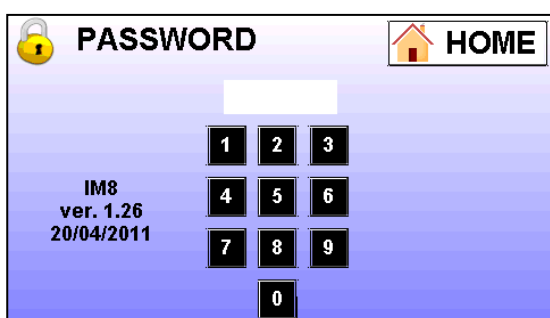
Touch the icon "MENU" of the home page.



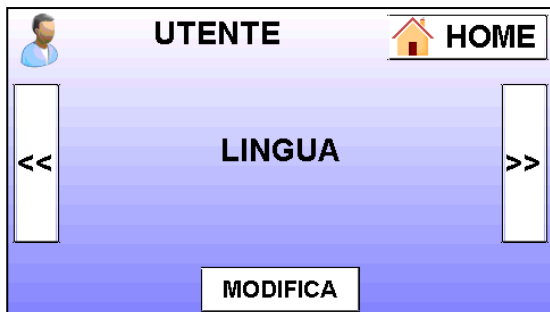
The display shows:



Touch the icon "PARAMETERS", the display shows:



Digit the code "111111" and the display shows:



Touch the icon MODIFICA and scroll the menu of the available languages using the keys "<<" and ">>". When the wished language appears on the screen, confirm touching the icon "OK". Exit the configuration menu touching the icon "HOME" as many time as necessary to reach the home page.

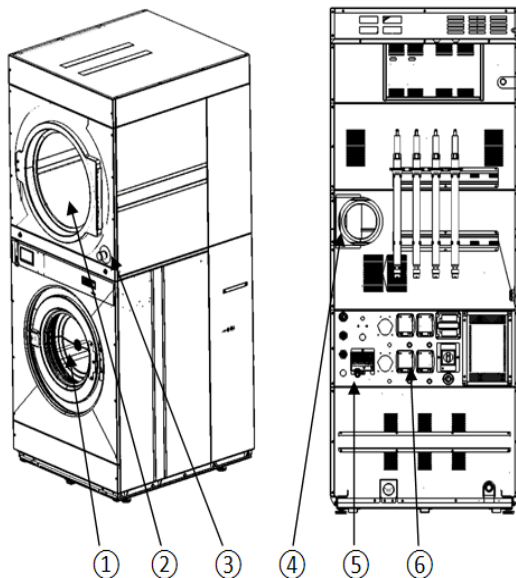
21. REMOTE ASSISTANCE SERVICE ACTIVATION

In case of models equipped with the remote assistance system, the connection to the service server must be activated. In order to do it, check the instructions sent with the machine.

22. HOW TO USE THE MACHINE

Some machine parts must be known before to use the machine for the first time.

The following generic pictures are resuming the possible configuration.



Point 1: washing machine door

Point 2: tumble dryer door

Point 3: emergency stop button



ATTENTION!

When the emergency stop button is pressed, the electrical supply to machine control is cut. The display switch off and the cycle is automatically interrupted: the turning drum is stopping because of inertia and the tank is emptied.

Emergency stop button must be pressed only in case of danger.

When the emergency situation is finished, the stop button need to be turned right to be armed again. The display switch one and the cycle stand by waiting for the START.

Point 4: dryer air outlet

Point 5: main switch.

When the main switch is in position "I", the machine is electrically supplied.

When the main switch is in position "0" the machine is not electrically supplied.

Point 6: detergente pumps

23. WASHING MACHINE: HOW TO PREPARE THE LINEN

Machine must be loaded on the base of the serial number plate: it must not be loaded with a weight higher than the one written in the technical data sheet or in the serial number plate.

Before to choose the most suitable program, the linen need to be sorted into groups homogeneous for fibers and fabrics, in order to have a uniform washing for the whole load.

Before to put the linen into the washing machine, be sure that the linen label is authorizing the machine washing; always stick to linen manufacturer indication.

Here below the meaning of the most common International symbols:



Maximum temperature: 70°;
Mechanical action: middle.



Maximum temperature: 60°C;
Mechanical action: soft



Maximum temperature: 40°C;
Mechanical action: very soft



Only hand washing



Do not clean with water

24. DRYER: PREPARE THE LINEN

Dryer must be loaded following data written on the serial number plate: the dryer must not be loaded with a weight exceeding the nominal load written on the serial number plate.

Before deciding the most adequate program, separate the linen into groups, which should be homogeneous for kind of fabrics or fibres, in order to reach a uniform drying inside the drum.

Avoid loading dripping linen: clothes must be spin-dry before.

Always be sure that measuring caps or other object are not among the linen.

Be sure that during washing, softeners and other similar products would be correctly used.

Before loading the dryer, always check that the

label shows the authorization for tumble dryer (and that the linen has been water treated); always stick to linen manufacturer indication. Here below the meaning of the most important international symbols:



Normal drying temperature



Low drying temperature



Do not tumble



ATTENTION!

Do not use the machine if chemical products were used to wash.

Do not use the machine in case of self-igniting fabrics.

Linen to be dried must not have been in contact with dangerous substances such as explosives, detonating or flammables.

In case of linen soiled with cooking oil, acetone, alcohol, petrol, kerosene, stain removers, turpentine, wax and substances to remove wax, it must be washed in hot water with an enough quantity of detergent to completely remove these substances. This linen must be well rinsed and aired before to be dried.

Subjects such as foam /latex foam, shower caps, waterproof textiles, items with at least one side of rubber, garments or pillows with latex foam parts, and each fabric containing rubber parts, must not be dried.

Do not dry linen that has not been washed before.

Be sure that softener and similar products are used in compliance with their instructions.

Check the padded garments: do not dry damaged padded garments.

Close zippers; button the down jackets, ties ribbons and laces. Empty the pockets.

Metallic elements such as buckles, hooks, closures, must be wrapped in a cloth to protect the dryer drum from scratches and shocks, which could also damage the linen itself.

25. HOW TO LOAD THE MACHINE AND CLOSE THE DOOR OF WASHING MACHINE

The machine must be loaded following the indication given in the serial number plate.

The label is stuck on the machine back.



ATTENTION!

Machine must be loaded with linen, which is the most homogeneous possible. The weight of the loaded linen must not be higher than the one indicated in the technical data sheet and in the serial number sticker.

Before to load the linen, be sure that the drum is completely empty. When the machine is loaded, close the door.



ATTENTION!

Be sure that no linen parts are taken between the door and the machine front panel, while the door is going to be closed.

In case of machine without door handle, just press the door against the machine until it is locked.

In case of machine with handle or motorized door lock, the door must just set ajar the machine front, in this way the closing pin enters in the correct position on the machine front.

When the machine is started the computer will give the command to lock the door.

26. DOOR MANUAL OPENING

While the cycle is running, it could be necessary to open the door manually, without using the unlock function of the touch screen.

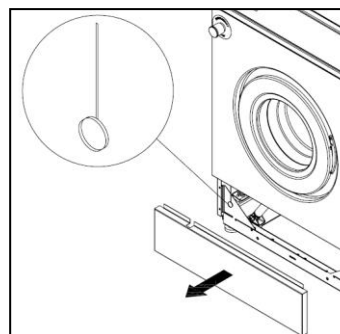


ATTENTION!

Before to open manually the door, cut the electricity supply to the machine using the main switch.

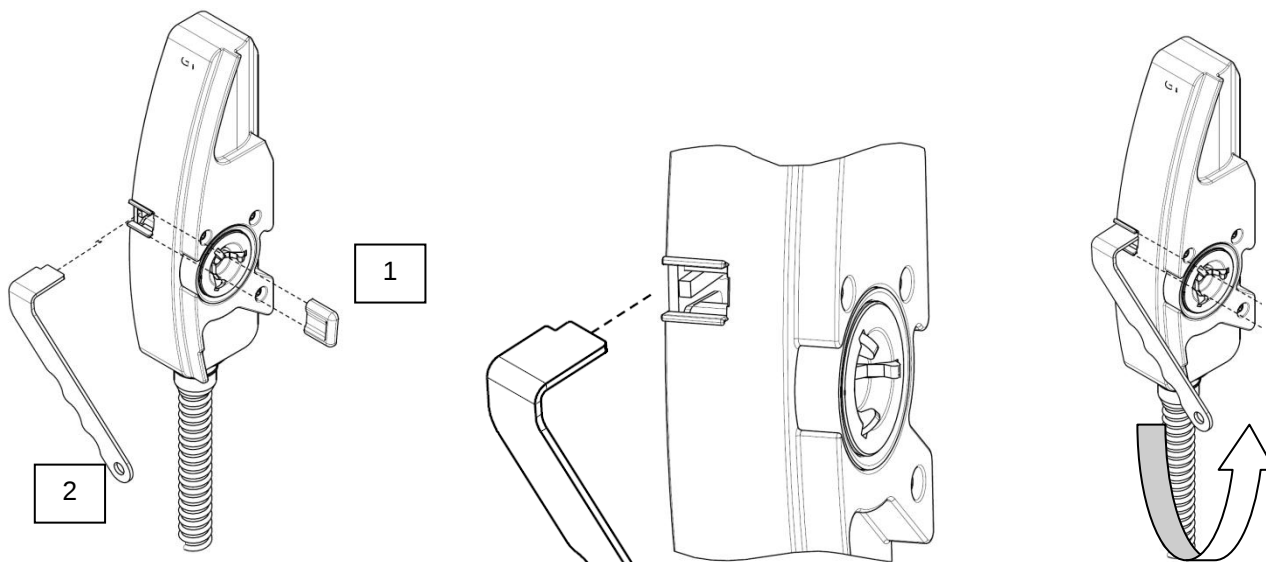
Machine with impulse closing

Open the below panel (the one shown in the picture). To unlock the door, pull the lanyard with the small ring.



Machines with motorized door lock

Remove the small plug (1) and insert the unlocking lever (2) in the door lock as show in the picture (on the above edge). The lever must be correctly positioned!



Turn the lever upward until the mechanism clicks.



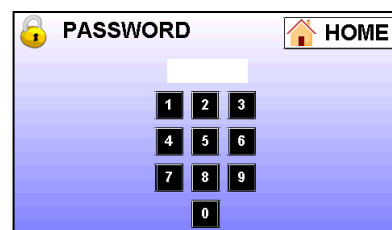
When the motorize door locking is manually opened, the mechanism alignment procedure must be done as soon as the electricity is came back.



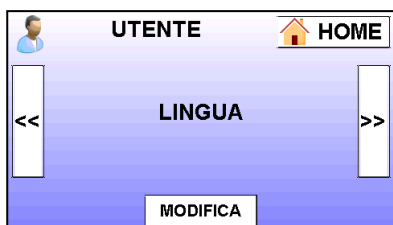
Touch "MENU"



Touch "PARAMETERS"



Touch: "111111"



Touch "<<"



Touch "MODIFY"



confirme with "OK"



ATTENTION!

Before to supply again energy to the machine, all the protection must be placed again in the original position.

27. HOW TO SWITCH ON THE MACHINE

Switch on the main switch, which supply the machine.

In case of steam heated machines: open the steam gate valve to allow the steam to enter.

To limit water hammering cases, the valve must be open slowly passing from the close position to open position in 1 minute time.

The emergency stop button must be in rest position; control that the emergency stop was not activated during the transport or before the machine was switched off last time.

Before to start the machine always check the safety system (refer to the related paragraph).

When the machine is switched on, the software version, as well as its release date, appear on the screen for a while.

The software loading could take a minute time, more or less.

The display shows:



Load the machine and close the door following the instruction given in the previous paragraphs.

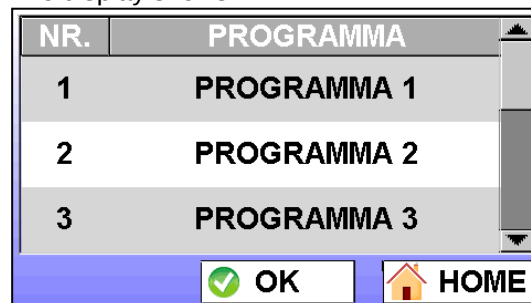
28. HOW TO SELECT A PROGRAM

When the machine is loaded and the door is closed, the touch screen shows:



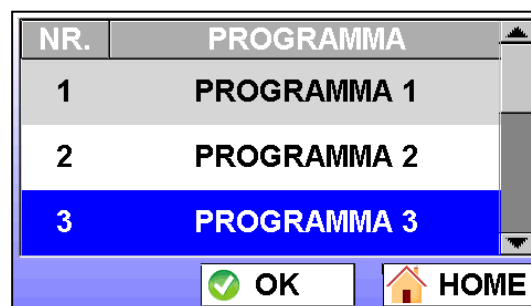
Touch the icon "PROGRAMS" to display the program list.

The display shows:

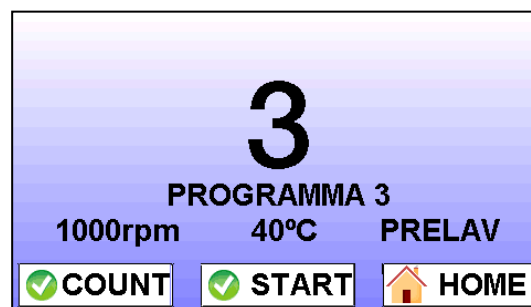


The program list can be scrolled up and down using the corresponding arrows.

When the wished program is visualized, just touch it to select it. The selected program has a blue background (in the example: program n. 3).



Touch "OK" to confirm the selection. The display shows the start window of the selected program:



Start the program touching "START".

29. PREFERRED PROGRAMS

From the main menu, touching the icon "PREFERED" it is possible to access to two programs list:

The list of the last executed programs

The list of the stored programs.

The program selection can be made as explained in the previous paragraph. To set the stored program, please look at the on-line manual.

30. DELAYED START

To delay a program start, first of all select the wished program as explained in the previous

paragraphs.

When the program is selected, do not touch the "START" icon but the "COUNT" icon.

The display shows:



It is possible to fix the starting time using the key "+" and "-". To exit from this menu touch the icon "BACK". When the wished time is visualized on the screen, confirm it touching OK.

The display shows:



Below the indication of delayed start, a countdown is showing how many hours and minutes are missing to the automatic start.

The countdown can be interrupted at any time touching the icon "STOP".

At the end of the countdown, the cycle will start automatically.

31. RUNNING THE PROGRAM

After the program was selected, as explained in the previous paragraph, the program can be started touching the icon "START".

In case the machine is equipped with a motorized closing system, the program starts with the door locking (it takes tens of seconds).

While the program is running, the display shows:



Displayed information enables the user to understand the machine working conditions while the program is running.

All parameters can be changed while the program is running just touching the relative icon.

These modifications stay valid only for the running program. For more information about this function, please refer to online documents.



ATTENTION!

In case of anticipated conclusion of the cycle, pay attention, the linen temperature may be very high!



ATTENTION!

In case of not correct machine working, switch off the equipment and call the authorized service center!

32. PROGRAM PAUSE

While the program is running, it is possible to put in stand by for a controlled pause. To interrupt the program for a certain time, touch the icon "PAUSE". The screen shows:



It is highlighting the soak step and its length.

Soak can be interrupted and the cycle started again touching the icon "START".

During the soak, the cycle can be interrupted at any moment touching "STOP".

33. RAPID ADVANCE

To move fast inside the cycle touch the icon ">>FFWD".

While the machine is in standby, the screen

shows:



Here below the symbol meaning:

- “|◀◀” Fast back per cycle
- “◀◀” Slow back per step
- “▶” Start again the cycle
- “▶▶” Slow advance per step
- “▶▶|” Rapid advance per cycle

The number written in the middle of the advancing bar represent the reached percentage of the program taking in consideration the program total length.

34. PROGRAM END

When a program is ended, please open the door and unload the machine.

Before to open the door, be sure that there is no water into the drum and that the temperature is not too high.

In case of barrier washer (double door), to unlock the door press the apposite key near the clean side display.

After the machine unloading and the inside door closing, on the dirty side display appears “CALL BACK DRUM”.

Touch the notice: the drum turn until the inside door is placed in correspondence of the dirty side door, ready for the next washing program.



ATTENTION!

In case of barrier washer (double door): before to close the outside door, be always sure that the drum door is correctly closed, as indicated on the notice on the machine.

In case the drum door is not correctly closed, the cycle MUST NOT be started.

Be sure that the operator perfectly understood the inside door closing instruction as per the notice on the machine.

35. END OF THE WORKING DAY

At the end of the working day, the machine must

be brought at the end of the cycle and switch off: the drum must be cleaned and no linen must be left inside.

Cut any supply to the machine using the suitable switch/knife switch: electricity, steam and compressed air.

Leave the door open.

36. PROGRAMMING

Program function allows to modified the existing program or to create new programs.

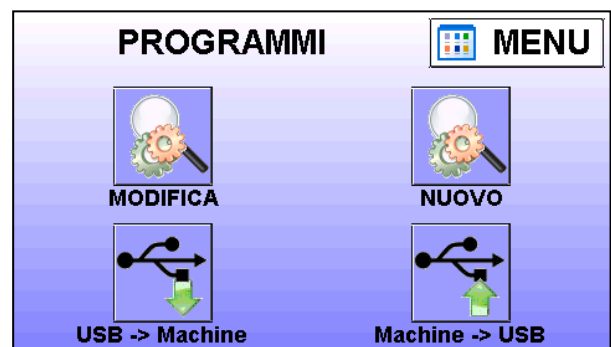
A program is composed by a sequence of steps, which can be modified in anyone of their parameters.

37. PROGRAM MODIFICATION

To modify an existing program, starting from the main menu, touch the icon “MENU”, the screen shows:



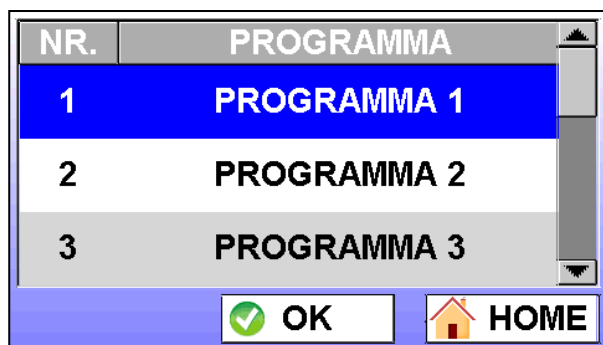
Touch the icon “PROGRAM” to enter into the program area. The screen shows:



NOTE: the USB communication icons appears only if a USB key is connected and recognized by the system.

To change an existing program touch the icon “MODIFICATION”.

The screen shows the programs list, scroll the list as explained in the paragraph referring to program selection. Select the wished program, the line background will become blue (example: PROGRAM 1).



When the wished program is selected, confirm the choice touching the icon OK.

The display shows the sequence of step making the program. The steps are sorted by line. At the same line are described the main characteristics of each step.

n.	step	°C	cm	mm:ss	rpm
1	SCARICO	-	5	-	40
2	SCARICO	-	-	00:10	40
3	CARICO	40	6	-	40
4	DETERGENTI	-	-	00:30	40
5	CARICO	40	13	-	40

PROGRAMMA 1

To change the characteristics of the step nr 5 (loading), touch the line corresponding to the step. The line background become blue and it is open a menu with all the action that can be executed from the highlighted step.

Possible actions are:

STEP BEFORE: it allows to insert a step before the selected one.

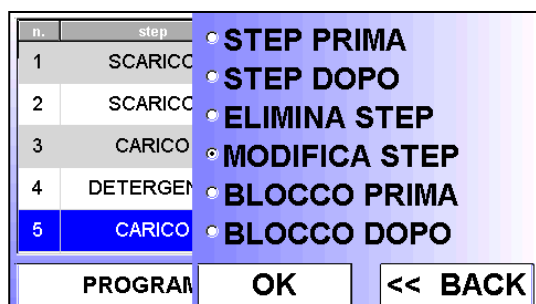
STEP AFTER: it allows to insert a step after the selected one.

DELETE STEP: delete the selected step.

CHANGE STEP: it allows to modify the selected step characteristics.

BLOCK BEFORE: it allows to insert a block of step before the selected step.

BLOCK AFTER: it allows to insert a block of steps after the selected step.



The selected function is marked by point (example: CHANGE STEP).

Programmable steps are:

DRAIN
LOAD
COOLING
HEATING
PREWASH
WASH
RINSE
DETERGENT
DISTRIBUTION
SPIN
GENERIC

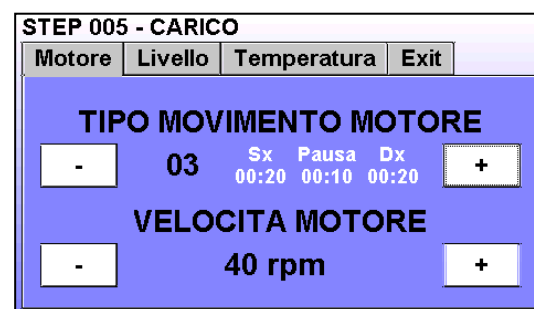
The single step characteristics appears only if they can be modified.

In the example the CHANGE STEP option is selected. To exit from the modification menu, touch "BACK". To proceed touch the icon "OK". In the previous example the step n. 5 (LOADING) was selected.

The steps parameters can be visualized touching the available labels (MOTOR, LEVEL, TEMPERATURE).

The following pictures are showing which options can be displayed according to the selection.

If the selected label is "MOTOR", the display shows the following screenshot. From here it is possible to select the kind of motor (it means the turn and pause rhythm) and the rotation speed expressed in RPM.



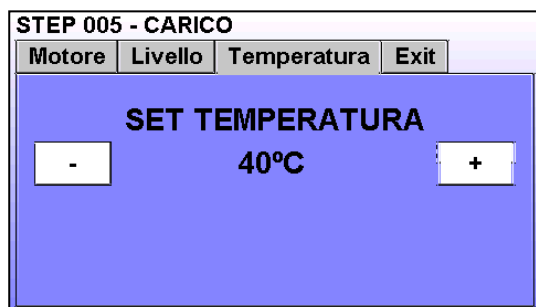
When the selected label is "LEVEL", the display shows the following screenshot, from which it is possible to set the water level expressed in centimeters and the load safety time (watchdog timer or WDT).

NOTE: in case the water level is "0", the "LOAD TIME" loose its meaning of WDT and indicate only how long the valve is activated.



At the same page it is possible to select the solenoid to activate during the water load: Cold, Warm, or balance load. In this last case the machine load 1cm of cold water and then complete the water load to the wished level and temperature.

When the selected label is "TEMPERATURE" the display shows the following screenshot. From here the water temperature can be used using the icons "+" and "-".



When all the changes are done, touch "EXIT", the display shows:



From this page the changes can be saved or aborted.

All the above described functions are available also in case of:

Insert a STEP BEFORE

Insert a STEP AFTER



On the screen appears the sequence of available steps: to scroll them use the key "-" and "+". Touch "OK" to confirm the wished step, or "HOME" to leave the modification page.

Steps added (before or after the selected step) have default values which can be modified as explained before.

It also possible to add block of steps (before or after the blue selected step). A block correspond to a complete cycle.

The above described operation to modify a step, are still available in case of:

add a "BLOCK BEFORE"

add a "BLOCK AFTER"



In effect, a block is composed by steps which can be modified.

38. EASY PROG

It is a simplified procedure for the construction of a new program.

To enter in this function select "MENU" among the home selections.

On the screen appears:



Touch the smile icon to select the function "EASY PROG". The display shows:



The above notice appear for a moment, after that some questions are asked to configure a new program.

The answer to each question can be selected from the screen. To pass to the following question the answer must be confirmed touching "OK".

The selected answer correspond to the clear icon; the blurred icons are not selected.

To exit the program sequence just touch the icon "HOME".

To move backward to a previous step just touch the icon "BACK".

The first question of the sequence ask for the prewash:

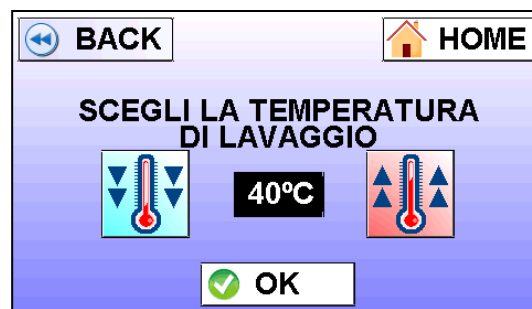


Select the wished icon and touch "OK". In the above example the Prewash was chosen.

The second question ask for the washing temperature. The temperature can be modified using the corresponding icons next to the set point (40°C in the example).

To confirm the temperature value touch "OK".

Once the washing temperature is confirmed, the prewash temperature is set accordingly. The prewash temperature is always half of the wash temperature (in our example 20°C).



The third question ask for the washing mechanical action strength (Medium, in our example).

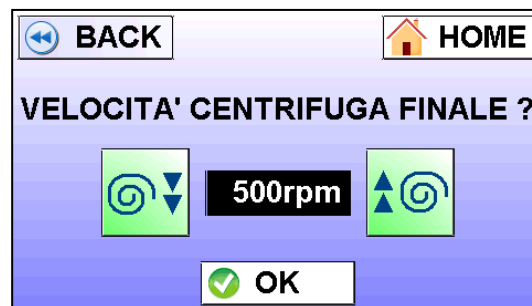
The chosen option effect the prewash, wash and rinse cycles as it determine the modality and spin of drum rotation.



To confirm the chosen option touch "OK".

The forth question ask for the final spin speed.

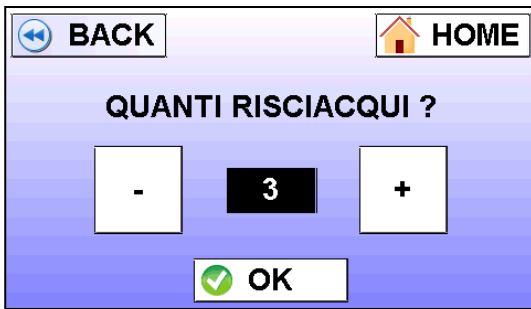
Use the icons "▼" and "▲" respectively to decrease and increase the program final spin speed.



Once the wished value is displayed, touch "OK" to confirm.

The final spin speed (500 RPM in our example) has effects also on the middle spin (the middle spin speed correspond to the half of the maximum speed).

The fifth question ask for the number of rinses:



The number of rinses can be changed using the keys “+” and “-”. Automatically the total number of spins is fixed. When the wished number of rinses is displayed, touch “OK” to confirm.

The last question of the program configuration sequence, ask for the drum load:



Please answer with full or half load (in the example full load).
Setting the kind of load, automatically the water and detergent level are set accordingly.
Touch OK to confirm.

The display shows:



The program procedure with EASY WASH is now completed. The program can be start immediately touching "START", in this case the program will not be saved.

A program delayed start can also be selected touching the "CLOCK" icon (see the procedure in

the relative paragraph). In this case the program will start at the fixed time, but it will not be saved. To save the program touch the icon "SAVE" and follow the saving procedure.

For updates on the function and for more information, please see the online documentation.

39. SELF DIAGNOSTICS

The computer supply a complete diagnostics both in case of not correct working and in case of simple reports.

The following table refer to a list of messages which could appear on the screen.

It is suggested to contact the authorized service center in case one of the following messages would appear.

C O D	DESCRIPTION	WHAT IS HAPPEN, WHAT TO DO
1	MOTOR OVERHEATING	The display shows: "ALARM !!! 01 Motor overheating". The machine stops, a buzzer is activated for 15 seconds. When the screen is touched, the alarm is reset and the door opens. A motor overheating occurred: wait until the motor cool down and start again the cycle. If the alarm appears often, please contact the authorized service center.
2	DOOR OPEN	The display shows: "ALARM !!! 02 Door open". The machine stops, a buzzer is activated for 15 seconds. When the screen is touched, the alarm is reset and the door opens. The door opens while the washing program was running, please contact the authorized service center.
3	TEMPERATURE PROBE	The display shows: "ALARM !!! 03 Temperature probe" (following the kind of temperature probe, the displayed temperature passed from 237°C to 0°C). The machine do not stop, but all the heating step are skipped. When the screen is touched, the alarm is reset. Temperature probe is damaged, contact the authorized service center.
4	LOAD WDT	The display shows: "ALARM !!! 04 Load timeout". The machine stops, a buzzer is activated for 15 seconds. When the screen is touched, the alarm is reset and the door opens. The maximum time fixed for water loading is expired. Control if the water taps are opened, the filters are clean and there are no water leakage. If the alarm appears often, please contact the Authorized Service Center.

C O D	DESCRIPTION	WHAT IS HAPPEN, WHAT TO DO
5	DRAIN WDT	The display shows: "ALLARM !!! 05 drain timeout". The machine stops, a buzzer is activated for 15 seconds. When the screen is touched, the alarm is reset and the door opens. The maximum time to drain the water is expired. Check if the drain system is clean. If the alarm appears often, please contact the Authorized Service Center.
6	COIN BLOCKED	If a payment input is longer than 6 second, the display shows: "ALLARME !!! 06 Coin blocked". The alarm stays until the payment system is unblocked. When the payment system works again correctly, the main screen appear.
7	UNBALANCE	During the spin cycle, the drum was gone out of balance. A balancing cycle starts and the machine attempt again the spin.
8	TRIPLE UNBALANCE	During the same spin, more unbalance occurs: the spin cycle is left and the program pass to the next cycle. If the problem occurs often, be sure that the drum is correctly load (nominal capacity, homogeneity of the load).
9	INVERTER LOCK	The display shows: "ALARM !!! 09 Inverter Lock". A inverter lock occurred. The cycle is not interrupted, but the drum does not turn. The alarm is reset when the screen is touched. NOTE: the message could contain the inverter alarm code. Please contact the Authorized Service Center
11	HEATING WDT	The display shows: "ALARM !!! 03 heating timeout". The maximum time to heat the water is expired. The cycle does not stop, but the heating steps are skipped. When the screen is touched, the alarm is reset. Please contact the Authorized Service Center.
12	WATER DURING THE SPIN	Even if the drum speed should increase, the value stops to 100rpm. In this case it is not a warning, but the intervention of a safety system when the water level at the spin start is not below the set point. Please contact the Authorized Service Center.
13	OVERHEATING	The display shows: "ALARM !!! 13 Overheating". The water temperature is above 110°C. The heating system is deactivate and the next heating steps are skipped. Please contact the Authorized Service Center.
14	MAINTENANCE	The display shows "Maintenance request". It is achieved the number of cycles necessary for the maintenance request. Please contact the Authorized Service Center.

C O D	DESCRIPTION	WHAT IS HAPPEN, WHAT TO DO
15	ZERO MOTOR WDT	The display shows "WDT Zero Motor". The maximum time for the door opening is expired, please contact the Authorized Service Center.
16	DOOR CLOSING WDT	The display shows "WDT Door closing". The maximum time for the door closing is expired, please contact the Authorized Service Center.
17	DOOR OPENING WDT	The display shows "WDT Door opening". The maximum time for the door closing is expired, please contact the Authorized Service Center.
18	WDT INFLATION SEAL	The display shows " ALLARM !!! 18 Expired WDT inflation seal" The maximum time to complete the inflation of the door seal is expired: please contact the Authorized Service Center.
19	WDT DEFLATION SEAL	The display shows " ALLARM !!! 18 Expired WDT deflation seal" The maximum time to complete the deflation of the door seal is expired: please contact the Authorized Service Center.
21 ... 28	TANK 1 ...8 FINISHED	The display shows "TANK 1... 8 FINISHED". One of the detergent tank (from 1 to 8) is finished. Replace or fill the relative tank.
-	POWER FAILURE	The display shows "POWER FAILURE". While a program was running, the electrical supply was interrupted. When the electrical supply come back, the machine wait for 40" while the alarm "POWER FAILURE" is flashing on the screen. Touching "START" the program resumes from the interruption point.

40. FACTORY PROGRAMS

The machine is delivered with a set of factory programs which can be freely modified.

NOTE: in case of hard mounted machines, the

maximum speed is always 450 rpm. The spin speed is indicative and can be modified according to the machine capacity (check the G Factor value on the technical data sheet).

Here below a short description of the programs.

	NAME	PREWASH	WASH	RINSES	SPIN
1	BIANCHI 90°C WHITE	5', 40°C	3', 90°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)
2	BIANCHI 75°C WHITE	3', 40°C	3', 75°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)
3	NORMALE 60°C NORMAL	3', 30°C	3', 60°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)
4	NORMALE 40°C NORMAL	3', 30°C	3', 40°C, 24"/6"/24", 40rpm	3	2+1 (5', max rpm)

5	LANA 30°C WOOL	3'	3', 30°C, 2"/20"/2", 30rpm	3	1 (1', ½ max rpm)
6	MICROFIBRA 60°C MICROFIBER	5'	5', 60°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)
7	MICROFIBRA 40°C MICROFIBER	5'	5', 40°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)
8	LAVAGGIO RAPIDO 40°C 40°C QUICK WASH	-	3', 40°C, 24"/6"/24", 40rpm	3	1 (5', max rpm)
9	LAVAGGIO RAPIDO 60°C 60°C QUICK WASH	-	3', 60°C, 24"/6"/24", 40rpm	3	1; (5', max rpm)
10	SINTETICO 40°C SYNTHETIC	-	3', 40°C, 15"/15"/15", 40rpm	3	2+1 (2', max rpm)
11	DISINFEZIONE 90°C DISINFECTION	5', 40°C	3', 90°C, 24"/6"/24", 40rpm	2+3	5+1 (5', max rpm)
12	DISINFEZIONE 60°C DISINFECTION	5', 40°C	3', 60°C, 24"/6"/24", 40rpm	2+3	5+1 (5', max rpm)
13	LANA 30°C WOOL DISINF	3'	3', 35°C, 2"/20"/2", 30rpm	1+3	1 (1', ½ max rpm)
14	FORTE 60°C STRONG	5', 40°C	10', 60°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)
15	FORTE 90°C STRONG	5', 40°C	10', 90°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)
16	COLORATI 60°C COLOR	-	3', 60°C, 20"/10"/20", 40rpm	3	2+1 (5', max rpm)
17	COLORATI 40°C COLOR	-	3', 40°C, 20"/10"/20", 40rpm	3	2+1 (5', max rpm)
18	INTENSIVO 90°C INTENSIVE	5', 40°C	10', 90°C, 24"/6"/24", 40rpm	3	3+1 (5', max rpm)

41. OTHER FUNCTION

There are a lot of other functions which are available and which are updated very often. Enter the manufacturer's website restricted area to download the software updating files and to control the new implemented functions.

42. WASHING MACHINE MAINTENANCE

Each ordinary or extraordinary maintenance must be operated by qualified personnel. Be sure that all the energy supply to the machine are cut before to operate on the washer.

Here below the ordinary and extraordinary maintenance with the corresponding time table.

EACH DAY

The machine must be kept clean using neutral detergent. Clean the machine external panel in order to eliminate any detergent stain, also from the detergent box.

Door gaskets need to be cleaned.

Air inlet and exhaust need to be cleaned.

The drum cleanness condition need to be checked: be sure there are no deposits.

At the end of the working day, the door must be left open to air the inside.

At the end of the day cut any supply (energy or water) to the machine.

EACH THREE MONTHS

Check the efficiency of the drum belts and the

drum clearing: be sure that there are no deposit on the drum surface.

Check the drain valve cleaning.

Check the inlet valve, and the corresponding filter, cleaning.

EACH YEAR

The authorized service center must be contacted to:

Clean the machine inside;

Check the wiring contacts efficiency;

Check the tightness and the integrity of the rubber parts;

Grease the mechanical parts, the one which ask for this treatment.

Clean the motor air inlet.



ATTENTION!

In case of tilting machines, before to start any maintenance, be sure that the air circuit is completely release and that the pneumatic action mechanism cannot move, even in case of no electricity supply.

In case of maintenance in no-rest position of some parts, be sure that the pneumatic action mechanisms are mechanically locked.

43. WASHING DEFECTS

In case the washing results is not satisfactory,

please check the following table.

PROBLEM	Possible SOLUTION
Garments are still wet	Check if the program ends with a spin. It is possible that some unbalance error occurred, load correctly the linen and start a spin.
Garments have visible marks from the drum	Check the spin speed, maybe it is too high.
Garments are felted	Check spin speed and the temperature of the used cycle. Check the linen washing instructions, as well as the program characteristics and if the washing machine use is allowed.

44. WASHING MACHINE SAFETY DEVICES CONTROL

Switch on the machine; before to start the program, always control the perfect safety devices work.

The user must always follow the procedure in the below table:

ACTION	REACTION
Start a cycle and press STOP...	... the machine must stop and wait for a new start.
Press the emergency stop button ...	... the drum must stop and the machine must switch off.



ATTENTION!

When the machine is switch on, before to start any program, alias control the perfect safety devices work.

45. START A PROGRAM OF DRYER

Switch on the main switch to supply the machine. In case of steam heated machines open the gate valve to let the steam enter. To limit water

hammering, open the gate valve slowly: from close to open position in one minute.

In case of gas heated machine open the gas interceptor valve.

Be sure that the emergency stop button (on the model equipped with this option) is in the correct position and that it has not been activated during last working cycle or during the transport.



ATTENTION!

Before starting the machine, safety devices must always be tested (see the corresponding paragraph).

Before loading the machine, be sure that the drum is completely empty.

The machines must be loaded with homogeneous clothes and with a weight not exceeding the limits on the data sheets. After loading the machines, close the door.

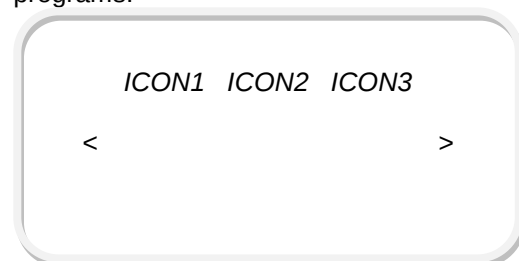


ATTENTION!

Before closing the door, be sure that pieces from linen do not stay closed between the door and the dryer front panel.

After the door is closed, on the display compares the selecting cover.

In every cover there are icons to select the programs:



To select the programs it is necessary to touch the icons.

To visualize other programs in the memory, scroll the display, or touch the arrows on the two sides.

When a program is selected, its name and its position in the list are displayed (the name can be modified: see the relative paragraph), its storage and characteristics,

Example:



The following description shows the programs parameters that can open on the preview phase:
DRYER: TEMPERATURE AND TIME

Are the temperature of drying and the time of the dryer cycle.

COOLING

The last part of the drying cycle is made without warm air (cooling cycle) to be sure that the items inside are not damaged. The panel shows the cooling temperature and the duration of the cooling cycle. The machine will complete the cycle as soon as the first of this set point is reached.

POWER LEVEL

The heating power level is activated during the dryer phase (only for machines that provides it).

The dry heating power are three:

level 1: minimum power

level 2: medium power

level 3: maximum power

The level must be selected according to the kind of fabric to be dried. Higher is the selected level, quicker will be the temperature increasing inside the drum.

DRUM SPEED

It is the speed drum spin (only for the machines that has the optional of speed regulation)

FAN SPEED

It is the speed spin of the vacuum fan (only for machines equipped of speed regulation).

The selection of the fan speed is correlated with the drum air speed: the higher the selected level, the quicker the temperature increases inside the drum.

When the desired program is displayed, press the START key to start.



ATTENTION!

For a correct ironing cycle, the selected program should assure a 10-20 %of linen residual humidity at the end of the cycle.



ATTENTION!

In case of damages or working anomalies, switch off the dryer and call the authorized

service center.



ATTENTION!

At the end of the program, the linen must never be left inside the machine: it may occur a phenomenon of spontaneous combustion.

46. PROGRAM START DELAYED

If you wish to start a delayed program, proceed as described below, and select the program. After the selection, instead of pressing START, press the clock icon:



It is displayed the following screen:



The time on the left is the current one, on the right the starting time is flashing.

The start can be delayed at maximum for 24 hours.

After you settle the started hour, press START.

Below the name of the program, a countdown shows how many hours, minutes and seconds are missing to the automatic start.

The countdown can be stopped at any time by pressing the key STOP or MENU.

Once the countdown ends, the cycle starts automatically.

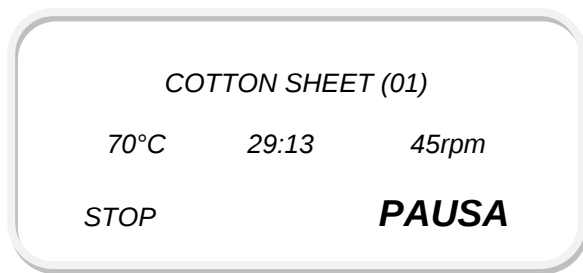
If the door is opened during the countdown and nobody close it, when the countdown ends the machine stays in pause (see the appropriate paragraph).

47. PROGRAM PAUSE

While the program is running, it can be temporary or definitely interrupted.

Pressing the key START / PAUSE and the program is temporary interrupted.

The display shows:

**ATTENTION!**

When the door is open during a dryer pause, please note that the linen temperature could be very high!

48. PROGRAM STOP

The program can be definitely interrupted at any moment, just pressing the STOP key:

**ATTENTION!**

Never stop a tumble dryer before the drying program ending, unless all the items are extracted and hung out to cool them down quickly.

**ATTENTION!**

Do not leave the hot linen inside the stopped machine: you could run into a phenomenon of spontaneous combustion.

49. PROGRAM STEPS

Two steps compose the drying program: heating and end cooling.

Each one of these two steps has two characteristic values: temperature and time.

During the heating step, the machine is drying for a certain time at the fixed temperature.

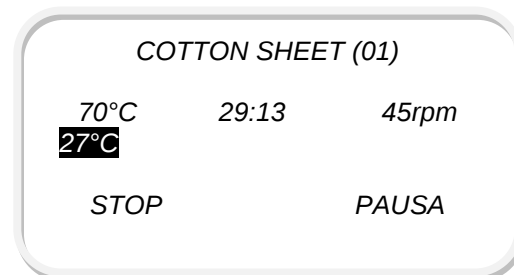
During the cooling time, the machine cools the linen for either the fixed time or when it arrives at the fixed temperature: the step finishes when one of the two parameters is reached.

While the program is running, it is possible to check all the fixed parameters.

During the heating step, the set point temperature is always highlighted (in our example: 70°C): the real drum temperature is flashing below (in our

example 27°C).

On its right it is indicated the time remaining to the end of the heating step (in our example: 49' and 59").



The final part of the program is a not heated cycle (cooling step) to ensure the linen will not be damaged.

During the cooling cycle, the set point temperature is always displayed and the real drum temperature flashes on the above line.

A buzzer that play for 10 seconds indicates the end of the cycle. The display shows the end of the cycle.

In case the STOP key is not pressed or the door is opened, if the no wrinkle function is on (look to the relative paragraph), the drum will start to turn again following the set value.

No wrinkle step can be interrupted pressing the STOP key or opening the door. Anyway, this step will stop at the programmed time or at the end of the programmed length.

NOTE: you can add a previous drying step to the program activating the INITIAL COOLING function.

NOTE: by the key ► it is possible to activate a rapid advance that allow stopping the heating step passing directly to the cooling step. Ask for this function to IMESA after Sales Service.

50. END OF A WORKING DAY

At the end of the working day, the dryer must be put at the end of the cycle and switched off: the drum must be emptied and cleaned.

Close all the energy supplies to the dryer using the appropriate line switches: electricity, gas, steam and compressed air.

The dryer door must be left open.

51. PARAMETERS MODIFICATIONS DURING THE CYCLE

While the program is running, the parameters can be modified: these changes are not saved.

To modify a program while it is running, press the icon of the parameters that you wish to change and modify it. It is not necessary to do anything else, after a couple of seconds, the views will revert to the normal sequence. The modifications can be done at any time in every phase of the cycle.

**ATTENTION!**

Only trained personnel must operate program modification.

52. MANUAL CONFIGURATION

Cycle can run also in a manual configuration: when the linen was loaded, set the main drying parameters.

To perform this program, select the icon "MANUAL", set the required data and press START.

The inserted data remains in the memory like default data for the following use of the manual program. During the cycle, it is possible to modify the parameters, like in the case of standard programs (look at the relative paragraph).

The motor times of the manual program are 40 seconds of spin and 5 seconds of pause.

53. DRYER SAVED PROGRAMS

The machine is already set with 30 configured programs. In the next page, a table is showing each program parameter.

Programs can be freely modified as explained in the relevant paragraph.

In case of dryers equipped with reversing drum option, the default reversing times are:

Rotation to the right: 40 seconds

pause: 5 seconds

Rotation to the left: 40 seconds

Rotation and pause times can be modified (see the relevant paragraph).

In case of machine equipped with other options, the default parameters are the same as in all the programs:

heating power: level 3

Drum speed: 40 rpm

Fan speed: speed 2

**ATTENTION!**

The temperature to be used must comply with the temperature indicated on the garments manufacturer instructions label.

**ATTENTION!**

Yellow stains on the linen means that the detergent is not well rinsed or the linen dried to a temperature higher than the one allowed!

**ATTENTION!**

Wrinkles on dried linen can be caused by a too much longer waiting time after the program end. If this event occurs often, the no wrinkle cycle should be activated.

**ATTENTION!**

Significant difference in the thickness of the fabrics (caused by stitching, for example) may cause an uneven drying.

**ATTENTION!**

Avoid drying garments with plastic buttons or fabrics with synthetics stitching. High temperatures may cause the plastic to melt and consequently the drum could be soiled.

PROG.	TYPE	DRYING		COOLING	
		°C	Min.	°C	Min.
01	RESIDUAL HUMIDITY	90	DRY	40	3
02	RESIDUAL HUMIDITY	80	IRON DRY	40	3
03	RESIDUAL HUMIDITY	75	DRY	40	3
04	RESIDUAL HUMIDITY	60	DRY	40	3
05	TIME	50	50	40	3
06	TIME	40	50	40	3
07	TIME	90	40	40	3
08	TIME	80	40	40	3
09	TIME	70	40	40	3
10	TIME	60	40	40	3
11	TIME	50	40	40	3
12	TIME	40	40	40	3
13	TIME	90	30	40	3

PROG.	TYPE	DRYING		COOLING	
		°C	Min.	°C	Min.
14	TIME	80	30	40	3
15	TIME	70	30	40	3
16	TIME	60	30	40	3
17	TIME	50	30	40	3
18	TIME	40	30	40	3
19	TIME	90	20	40	3
20	TIME	80	20	40	3
21	TIME	70	20	40	3
22	TIME	60	20	40	3
23	TIME	50	20	40	3
24	TIME	40	20	40	3
25	TIME	90	15	40	3
26	TIME	80	15	40	3
27	TIME	70	15	40	3
28	TIME	60	15	40	3
29	TIME	50	15	40	3
30	TIME	40	15	40	3
Coin Op dryers					
HIGH	TIME	90	50	40	3
MEDIUM	TIME	80	50	40	3
LOW	TIME	70	50	40	3

54. COIN OP DRYER: HOW IT WORKS

After the program is selected, on the display appears the costs of the program that is running.

If the payment system allows it, when the coins are inserted, the display shows the missing value to buy the cycle.

Only after the payment is done, press the button START to run the cycle.

If during the drying phase it is necessary to change the selected program, it is enough to push the corresponding button: the selection will be automatically updated without stopping the machine during these changes.



ATTENTION!

In case of changing while the cycle is running, if the programs values are different, credit time will proportionally modify.

If the door is opened during cycle, press the PAUSE or STOP key and the dryer will be in stand-by.

The credit time count down continues also during this pause.



ATTENTION!

If the pause is longer than 5 minutes, the credit is automatically lost.



ATTENTION!

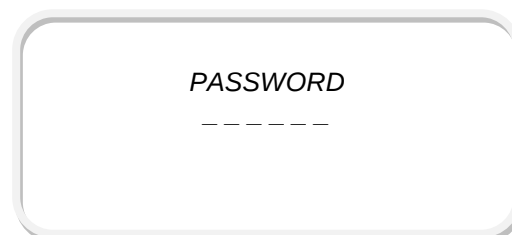
If the door is opened during the cooling step, the cycle is definitely stopped and brought to the end. The credit is not lost, because the payment needs only to buy drying time and not cooling time. While the cooling time is running, the selected program cannot be changed.

55. HOW TO ACCESS TO THE PROGRAM AREA

Default parameter values can be modified by entering in the user menu.

While the machine is stopped, press the icon menu “.” in the upper right.

The display shows:



Insert the 6 digits code to access in the user menu “159357”.

When the sequence is completed, on the display compares the menu list.

This display is the entry for the user programming area.

Browsing this area, you can reach the setting of:

LANGUAGE
DATE/TIME
TEMPERATURE
WRINKLE
QUICK ADVANCE
SWITCH OFF TOUCH
CHANGE PASSWORD
USB PROGRAM LOADING
REGISTRATION
ENERGY MENU
PROGRAMS

For the machines equipped with payment system, the list has also:

MACHINE NUMBER
ZERO CREDIT TIME
AUTOMATIC START

On the following paragraphs, description of every setting.

56. PROGRAMS

Enter into the programming area to modify setting programs or to add new ones.

Here below the programs that can be modified and their values.

PROGRAM NAME

It is the description of a program displayed during the selection and the execution. It can be maximum 16 characters long.

PROGRAM TYPE

Selecting this parameter, the user can decide to make the program working on an automatic way (deciding the residual humidity at the end of the cycle) or on a traditional way (deciding the cycle length).

HUMIDITY
TIME

RESIDUAL HUMIDITY AT THE CYCLE END

(Only programs with "RESIDUAL HUMIDITY")

Select the value of the residual humidity at the end of the cycle; once this value is reached, the cycle is ended:

IRON DRY
DRY
EXTRA DRY

WDT T SET

(Only programs with "RESIDUAL HUMIDITY")

This area can fix the safety time for the program stop and the set point temperature for the automatic cycle.

DRYING TIME OUT: 1' ÷ 120'
TEMPERATURE: 0°C ÷ 90°C

N. STEP

(Only programs "TIME")

A number of heating steps (or cooling steps) can be set:

1 ÷ 10

STEP 1

(Only programs "TIME")

For each step that compose the cycle, it is possible to set the drying temperature and length:

TIME: 1' ÷ 120'

TEMPERATURE: 0°C ÷ 90°C

STEP 2 ... 10

(Only programs STEP >1)

For each step that compose the cycle, it is possible to set the drying temperature and length:

TIME: 1' ÷ 120'

TEMPERATURE: 0°C ÷ 90°C

COOLING TIME

It corresponds to the length of the cooling cycle at the end of the drying cycle. This time is automatically reduced if the set point cooling temperature is reached before the end of the cycle:

0' ÷ 30'

COOLING TEMPERATURE SET POINT

The cooling temperature determines the end of the program. If the cooling time elapse before the temperature is reached, the program will end however.

0°C ÷ 90°C

REVERSING DRUM

(Only machine with reversing options)

In case the machine is equipped with reversing drum option, this function can be excluded from the program.

If the parameter "WITHOUT" is selected, the drum will always turn in the same direction (right).

WITH

WITHOUT

DRUM RIGHT ROTATION TIME

(Machines and programs WITH REVERSING DRUM)

It is the drum clockwise turning time:

0" ÷ 5'

DRUM STOP ROTATION TIME

(Machines and programs WITH REVERSING DRUM)

It is the drum rotation pause:

1" ÷ 5'

DRUM LEFT ROTATION TIME

(Machines and programs WITH REVERSING DRUM)

It is the drum counterclockwise turning time:

0" ÷ 5'

DRUM SPEED

(Dryers equipped with DSC option)

It is the drum speed in revolutions per minute:
20rpm ÷ 80rpm

FAN SPEED

(Dryers with reversing drum and FSC fan speed control)

POWER LEVEL CONTROL

(Dryers equipped with a power level control)

This parameter allows reducing the heating power of the electric heater, in case of needs:

MIN 1

MED 2

MAX 3

STARTING COOLING LENGTH

(Dryers where this function is activated)

Length of the initial cooling cycle before the drying cycle.

0' ÷ 30'

57. PROGRAM: LANGUAGE SELECTION

Allows modifying the language for communicating to the user.

58. PROGRAM: DATE/TIME

Allows modifying the calendar, date and time.

59. PROGRAM: ENERGY CONSUMPTION

Allows verifying all data the installer has configured on the machine during the test phase.

60. PROGRAM: NO WRINKLE

Allows activating, deactivating or modifying the no-wrinkle function.

The parameters that can be modified are the following:

NO WRINKLE: can be:

YES: no-wrinkle cycle will start after the end of the cooling cycle, if the door is not open and respecting parameters fixed below.

NO: no-wrinkle cycle will not start after the end of the cooling cycle, even if the door is not open.

END CYCLE PAUSE: it is the waiting time after the end of the cooling cycle before the no wrinkle cycle start established in minute: seconds.

FORWARD: it is the right rotation time established on minutes: seconds during the no wrinkle cycle.

PAUSE: how long the drum stopped established on minutes: seconds during the no wrinkle cycle between a right rotation and left rotation time.

BACK: it is the left rotation time established on minutes: seconds during the no wrinkle cycle.

MAX TIME CYCLE: it is the no wrinkle length before the dryer definitely stops.

61. PROGRAM: INITIAL COOLING

Activating this function there is the possibility to define the starting time for cooling on each program: it is an introducing phase that starts when the cycle starts and that anticipate the normal heating phase.

62. PROGRAM: PAYMENT SYSTEM

On machines equipped with a payment system, some special parameters are not available in the standard version. These parameters are the ones into the ADVERTISEMENT or COIN BOX menu, plus two additional read-only parameters:

TOTAL CREDIT: total amount of the credit, starting from the installation date.

DAILY CREDIT: total amount of credit of the day (starting from 00:00).

63. PROGRAM: COIN BOX MENU

The "COIN BOX MENU" is available only in Coin Op dryers.

Here below, the parameter list of this menu:

COIN: it identifies the currency that is displayed.

TOKEN 1: it identifies the value (expressed in parameter COIN) of each impulse given to the electronic board input (terminal identified by TOKEN 1).

TOKEN 2: it identifies the value (expressed in parameter COIN) of each impulse given to the electronic board input (terminal identified by TOKEN 2).

DECIMALS: number of decimals shown when the price is displayed:

XX: no decimal

XX,X: one decimale

XX,XX: two decimale

AUTOMATIC START:

if "YES": when the payment has been completed, the cycle automatically starts.

If "NO": when the payment is completed, the cycle starts only if START is pressed.

To exit the menu or to go back to the previous program level, just press STOP one or more time.

64. BLACK OUT

In case of black out, there is the possibility that one or more clothes inside the drum would catch fire.

In this case, open the door, unload the dryer and leave it opened.

The interrupter program number is displayed (the number one, on the example), by pressing START, it is possible to start it again.

Load the machine again and close the door: the cycle restarts from the point where it was interrupted.

65. WHAT MUST BE DONE IN CASE OF GAS SMELL

In case of smell of gas where the dryer has been installed:

Stop immediately the program;
Open immediately all doors and windows;
Close immediately the valve and the gas gate valve on the front of the machine;
Do not light on the room, matches or lighter;
Do not smoke.
Call the installer to check the gas leak.

66. DISPLAYED WARNING

The microprocessor reports a diagnostic both in case of failures and in case of simply highlight of a status.

Here below a complete list of displayed alarms. The manufacturer suggests anyway to call a center to solve the problem.

A buzzer also acoustically signals each one of the following alarms.

In case of a dual timer dryer, there is no possibility of warning: in case the machine should stop, ask directly to the authorized service center.

FIRE ESCAPE ALARM

It is displayed in case of risk of fire.

**ATTENTION!**

In this case, switch off the electricity and close immediately the hose that supplies the gas or the steam.

AIR SWITCH PRESSURE CLOSED

When the air switch pressure is closed when pushed START. This situation can be if you try to start the cycle while the vacuum is still turning.

It can be also if the air switch pressure is broken. Call for the intervention of an authorized assistance center.

INSUFFICIENT AIR DRAIN

It is displayed to identify problems during installation of the humid air drain, or a filter obstruction. Switch off the machine, open the below door and clean the filter: do not use sharpen or pointed object!

THERMIC MOTOR FAN

It is displayed if the motor fan is overheating. Switch off the machine and ask for intervention of an authorized assistance center.

THERMIC MOTOR DRUM

It is displayed if the motor drum is overheating. Switch off the machine and ask for intervention of an authorized assistance center.

STUCK COIN

It is displayed only on machines equipped with Coin Box system. It means that the credit get stuck inside the coin for more than 5 seconds. Verify the coin op box and eventually ask for the intervention of an authorized assistance center.

This alarm can be displayed also when the coin get stuck during a program is working and in a running of credits. In this case, the cycle is completed keeping the alarm displayed. If the coin op will be unlocked, the alarm is automatically resettled.

TEMPERARURE PROBE DAMAGE

It appears if the temperature probe is broken.

The machine works in the same way as per the overheating event seen before.

Ask for the intervention of an authorized assistance center.

CENTRAL STEAM BREAKDOWN

This signal appears only on steam-heated machines. When this message is displayed, the machine go on working, but the heating system goes in standby waiting for a reset.

To restart the heating push the button RESET.

Check if the steam valve is opened. If this signal repeats often, require the intervention of an authorized assistance center.

OVERHEATING

In case the temperature inside the drum is 30°C higher that the set point temperature, the display indicates the written "OVERHEATING".

In this case, the heating is stopped until the temperature goes below the safety value.

**ATTENTION!**

In this case, the suction continues working and the drum turning to cool the linen.

If this alarm is repeating very often, ask for a check to an authorized service center.

MAINTENANCE NEEDED

When the number of hours of maintenance is reached, the machine does not stop. At the first power off and the following power on the display is displayed: "MAINTENANCE NEEDED".

Pressing one key, the machine starts again without any other signal. Anyway, it is necessary to call the authorized service center for the ordinary maintenance.

67. DRYER MAINTENANCE**ATTENTION!**

Risk of injures or damaging the equipment.

Qualified personnel must operate each ordinary and extraordinary maintenance intervention. All the dryer supply connections must be unplugged before any maintenance intervention on the machine.

Do not use water or steam for cleaning.

Necessary ordinary and extraordinary maintenance and their schedule are listened here below.

Avoid the fluff backlog around the dryer (this note is not necessary in case of dryer with external exhaust).

For daily cleaning, a wet and soft cloth must be used. Do not use abrasive products, abrasive sponge, solvents or metallic object.

EACH CYCLE

At the end of each drying cycle, clean the filter from fluff.

To clean the filter, open the door or pull the drawer (for some models), in order to access to the filter.

In case of model with filter door, do not remove the filter.

For model with filter drawer, empty the filter bag paying attention not to damage the net.

In both cases, the fluff must be removed from the filter using hands, do not use sharpened object.



ATTENTION!

Never use the dryer without the fluff filter. If the filter is damaged, replace it immediately.

EACH WEEK

Check the drum cleanliness condition: there must be no deposit on the drum. Be sure that there are not stains due to melted nylon seams, buttons and other. Verify the integrity of the inside door.



ATTENTION!

To clean the drum, do not use a high pressure or a water continuously jet.

The drum must be cleaned with a dried and soft cloth.

EACH THREE MONTH

Check the fan and the suction cleanliness. Check the drum and the ventilator motor cooling fans cleanliness.

EACH YEAR

An authorized service center must be contacted to:

Cleaning of the burner or the heating element from fluff and other

Cleaning internal side of the dryer

The leakage the pneumatic circuit

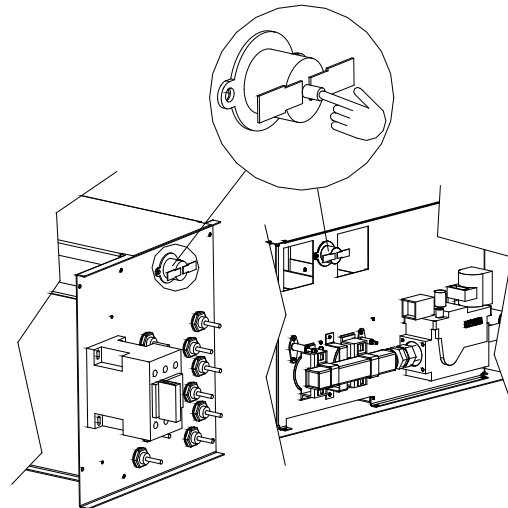
The leakage of the gas valve

WHEN NECESSARY

In case the temperature inside the burner reaches

too much higher values, a safety thermostatic paste stops the heating system: the drum continues to rotate, but the heating system stay deactivated.

The thermostatic paste needs to be manually rearmed, in this case, it is necessary to turn off the dryer, cut all the energy supply, open the above frontal door and press the brown colored push button near the thermostatic paste.



If the problem should repeat, switch off the dryer and call the authorized service center.



ATTENTION!

In case of tilting dryers, before starting any maintenance service, ensure that the air system is completely discharged and no pneumatic movement can be activated, even when if there is no electricity supply.
In case of maintenance with mechanism, which are not in the rest position, be sure to mechanically and safety block the pneumatic mechanism.

68. DRYING PROBLEMS

In case of not satisfying drying results, please check the following table to find a solution to the most usual problems.

PROBLEM	SOLUTION
The linen presents yellow stains.	Check if the linen is correctly rinsed and all the soap is washed away. The PH value must be included between 5 and 6.
The linen is turned yellow.	Check the drying temperature matches with the linen temperatures: the drying temperature is too high

PROBLEM	SOLUTION
At the end of the cycle, linen is still wet	Check the selected temperature; it could be too low. Check the air suction system, it could be blocked and its efficiency limited. Check the exhaust system: it could be blocked avoiding the air to pass through the linen.
At the end of the cycle, linen is hardened	Check the cycle temperature, especially in case of linen fabrics. If temperature is too high, the fabrics may harden.
At the end of the cycle linen is felted	Check clothing label and their conformity with the dryer use, especially in case of wool or mixed wool fabrics. To avoid a complete drying is suggested.
The drum is scratched. Some clothes are damaged, torn	Metallic object like buckle, hook, and fastenings must be covered with a cloth before drying, so the drum is protected from scratches or collisions, which could also damage the linen.

Before starting the tilting, always wait for the end of the running cycle. To activated or deactivated the keyboard use the key-switch (D).

When the keyboard is on, the microprocessor is off. When the keyboard is on, the green light is also on (A).

69. DRYER SAFETY DEVICE CONTROL

After the machine is turned on, before starting the drying cycle, it is necessary to control the safety device correct working. The user must always respect the following procedures:

ACTION SEQUENCE	REACTION
Starting a drying cycle and open the door...	... the dryer must stop and stay in pause.
Starting a drying cycle and open the filter door...	... the dryer must stop and stay in pause.

ACTION SEQUENCE	REACTION
Press (if present) the emergency stop button	... the drum must stops and the dryer must turn off.
Just supplied the electricity to the dryer ...	... the machine must be in stand-by waiting for a command (drum stopped, fan and heating deactivated)



ATTENTION!

Safety devices must always be tested when the machine is switched on and before starting the working shift.

70. SCRAPPING

When the machine life cycle arrives to the end, please proceed with the machine scrapping following the country rules, keeping separate the metallic, the plastic, the glass, the electric/electronic parts.

Under Article. 13 of Legislative Decree 25 "in July 2005, n. 151 "Implementation of Directives 2002/95 / EC, 2002/96 / EC and 2003/108 / EC on the use of hazardous substances in electrical and electronic equipment as well as waste disposal"



The above symbol on the appliance or on the package means that at the end of its life cycle this product must be collected separately from other waste material.

The appliance waste separated collection is managed and organized by the producer. The user who wants to dismantle that appliance must contact the producer and follow the system it decides to take when the appliance reaches the end of its life.

A correct waste separation avoid dangerous impact on the environment and make easier the material recycling.

Unlawful disposal may cause application of administrative sanction, following the rules in force in the Country where the dryer is installed.



ATTENTION!

In case the machine fall into disuse, before dismantling the dryer, make the door lock out of service to avoid that somebody close himself inside risking his life.

Electric supply cable must be disconnected and dismantled.

71. WARRANTY CONDITIONS

Please refer to the manufacturer official price list for the warranty conditions.



ATTENTION!

To benefit of the manufacturer warranty condition, the manual instructions must be carefully followed. In particular:

- Work always respecting the dryer use limits;
- Maintenance must be always correctly operated;
- The dryer must be used only by well trained personnel;
- Use only original spare parts.