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DRYERS

INSTRUCTIONS FOR USE MAINTENANCE AND INSTALLATION

TRANSLATION OF THE ORIGINAL INSTRUCTIONS
KEEP FOR FUTURE REFERENCE

INDEX SERVICE: 03

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CE

The manufacturer's data are shown on the envelope that contains the documentation of the machine. The envelope is an integral part of documentation

Table of Contents

1. CONTENTS OF THE MANUAL

This manual is dedicated to the use of industrial dryers. It is drawn up in consideration of the Community directives in force. The information is addressed to the installer and the user, who must be sure that they have fully understood it before working on the machine. The user manual must always be available for reference. In case of loss or damage, ask the manufacturer for a new manual. The manufacturer is not responsible for the consequences deriving from careless use of the machine due to a failure to read or incomplete reading of this manual. The manufacturer reserves the right to modify the specifications mentioned in this manual or the characteristics of each machine. Some figures in this manual may show parts that are partially different from those assembled on the machines. Drawings and technical data may be modified without notice.
This manual is supplemented by the following annexes: EU declaration of conformity, technical data sheet and wiring diagram. All documents are contained in an envelope that accompanies the machine. The wiring diagram, depending on the versions of the machine, is contained inside the electrical panel
The manual and its attachments are an integral part of the device; therefore, they must be kept and accompany the appliance, even in the case of transfer to another user.
The manual, the same attachments and the exploded view with the relative spare parts, can be found in the technical area of the manufacturer's website. Before accessing the site, it is essential to have the serial number of the machine available.


WARNING!

The manufacturer declines all responsibility for possible inaccuracies contained in this manual attributable to printing or transcription errors. It reserves the right to make any changes to its products that it deems necessary or useful, without affecting their essential characteristics. It is forbidden to reproduce, even partially, texts or images of this manual, without the prior authorization of the manufacturer.

This manual is also available in electronic format on the manufacturer's website (technical area)

2. SAFETY RULES


WARNING!

Failure to comply with the following safety regulations may result in damage to people, property and animals.


WARNING!

The installation and maintenance of the machines described in this manual must be carried out by authorized personnel who are familiar with the product and compliance with industry standards.
Repairs carried out incorrectly may seriously endanger the safety of the user.


WARNING!

Before using the machine, read these instructions carefully: make the instructions accessible to all persons in charge of using the washing machine.


WARNING!

The intended use of the dryers described here is the professional drying of clothing and linen: any other intended use is therefore prohibited unless it has been previously authorized in writing by the manufacturer.


WARNING!

Before removing the garments from the dryer, always make sure that the drum is stopped. Never put your hands in a basket that is still moving.


WARNING!

Objects other than to be dried must not be introduced into the machine.

WARNING!
It is forbidden to dry garments that are soaked in substances harmful to the health of operators, poisons or carcinogenic products.

WARNING!
Do not approach or dry fabrics soaked in combustible or flammable substances, including oils and greases, with this machine, as this may cause fire and explosion.

WARNING!
Always follow the drying instructions on each item of laundry with great care.

WARNING!
It is forbidden to use the machine for children under 16 years of age.

WARNING!
Keep children and pets away from the appliance door when it is open and the machine is running.

WARNING!
Do not let children play with or in the dryer. Children should be kept under close supervision when near the dryer.

WARNING!
Keep packaging materials out of the reach of children. Keep detergents out of the reach of children.

WARNING!
Additional connections to the machine from the outside, not carried out in a workmanlike manner, relieve the manufacturer of any liability.

WARNING!
Machines with heating systems pose a potential risk of fire. All precautions related to this risk must therefore be taken: the environment must be free of combustible materials; provide a suitable and easily accessible fire extinguisher near the machine.

WARNING!
It is forbidden to work with the machine guards open! Risk of crushing.

WARNING!
In order to avoid burns or crushing of limbs, only trained and authorized personnel may remove, and only temporarily, the machine's protection panels.

WARNING!

It is forbidden to introduce bars, slats or metal objects inside the basket. In case of emergency, always carry out the procedures described below.

WARNING!

Always check that the safety devices are working correctly every time the machine is started!
It is mandatory to know the operation of the machine and its emergency systems!

BURN HAZARD

The machine, by the very nature of the activity for which it is intended, presents the risk of burns.
Any burns can be caused:

- From contact with the fabric coming out of the machine;
- From contact with the door following its opening;
- Contact with heating elements during maintenance operations carried out "hot";
- By contact with the components that convey the steam.

The outer walls of the machine can reach high temperatures during operation.

The machine must only be used by suitably trained personnel at all times and in the presence of at least one other operator!

CAREFULLY READ AND INFORM ALL OPERATORS ABOUT THE INTERVENTION SYSTEMS IN THE EVENT OF A SUDDEN POWER FAILURE

ELECTROCUTION HAZARD

Any work on the electrical parts of the machine must be carried out only by the maintenance technician and after having removed the electrical power supply to the machine.
The power and control circuits may only be tampered with by the manufacturer's personnel, otherwise the warranty conditions will be voided.

On the electrical panel there is the following monitor plate which must be replaced with an identical one if it has been damaged or removed.

PSYCHOPHYSICAL CONDITIONS OF THE OPERATOR

The operator in charge and the user of the machine must be in perfect psychophysical condition; During work, the vertical posture in front of the machine must be assumed. Sudden movements or uncontrolled gestures, for example when picking up and inserting the fabrics to be dried, must be avoided in order to avoid dangerous collisions with the machine frame.
If other operators or other personnel are present, they must not be a source of distraction for the operator in charge of the machine.

When using the machine, the operator or user should not be distracted by televisions, radios, etc., or be subject to any other source of distraction.
The appliance is not intended for use by persons with reduced physical or mental capabilities, or lack of experience and knowledge.

 LIGHTING

In the room where the machine is installed, there must be uniform illumination of 300-500 lux intensity, and disturbing glare must be avoided.

 WARNING!

These warnings do not cover all possible risks. The user must therefore proceed with the utmost caution in compliance with the regulations.

3. MANUFACTURER'S LIABILITY

The instructions in this manual do not replace but supplement the obligations for compliance with current legislation on safety and accident prevention regulations. With reference to what is reported in this manual, the manufacturer declines all responsibility in the event of:

- use of the machine contrary to the laws in force on safety and accident prevention.
- incorrect installation of the machine.
- Lack of periodic and scheduled maintenance
- failure or incorrect observance of the instructions provided by the manual.
- voltage and mains power supply defects.
- unauthorized modifications to the machine.
- use of the machine by unauthorized personnel.

For the purposes of responsibility, other figures involved are defined:

- OCCASIONAL USER: This is the user who is preparing to use the equipment through the simplest interaction with the control device with which it is equipped. It carries out the minimum operations required to carry out the production process envisaged by the machinery.
- TRAINED/MANAGER USER: This is the user who, through knowledge of the manual, is able to program, customize, and better manage the production process envisaged by the machinery. It is able to provide routine maintenance and cleaning, as described in the appropriate chapter.
- TECHNICAL MAINTENANCE TECHNICIAN (AUTHORIZED/QUALIFIED PERSONNEL): This is the figure trained and responsible for the maintenance of the machinery. The more in-depth knowledge of the machinery and the training recognized by the manufacturer allow him to carry out, safely and in compliance with the rules on accident prevention, extraordinary maintenance and assistance as described in the appropriate chapter. This figure is responsible for the installation and first start-up of the machine.
- INSTALLER OR PROFESSIONALLY QUALIFIED FIGURE: This is the figure who carries out, according to the rules of the art, the systems and works necessary for the correct functioning of the machinery. In addition to possessing the requirements of the professional field for which he or she practices, he interfaces with the TECHNICAL MAINTENANCE TECHNICIAN to meet the installation requirements set out in the relevant chapters of this manual. He is not involved in the production and maintenance process of the machinery.

4. TRANSPORT AND UNPACKING

During transport, and any storage, the equipment must remain within the following environmental conditions:

- Temperature: -25°C÷55°C
- Humidity: 0%÷90% (non-condensing)

Upon receipt, it is recommended to check the machine, taking care to report to the carrier any damage caused, during transport, both to the internal components and to the external bodywork.
Inside the basket of the machine, the installer finds, placed in an envelope:

- this technical documentation of the machine;
- For models that provide it:
  - the feet to be placed under the machine;
  - the triangular key for opening the guards;

- the keys of the locks of the machines with payment system;
- the handle of the disconnector;
- LPG/LPG nozzles with their identification label.


WARNING!

During the handling phase, remember that the center of gravity of these machines is in the last third of the height. Be aware of the risk of tipping over at all stages of handling.
The center of gravity is identified by the following symbology:

The machine must be completely unpacked near the installation site.
The straps must be cut, and the cover wrap removed.
The packaging materials must not be dispersed in the environment and must be placed in the appropriate collection spaces according to current regulations.
Use a wrench to remove the pallet fixing bolts, which are visible at the base of the machine (front and rear).


WARNING!

Check the net and gross weight on the technical data sheet, attached to the machine documentation: check compatibility with the available lifting equipment.


WARNING!

The pallet must not be used as a normal machine stand! The machine must always be taken off the pallet and positioned as described in the relevant paragraph.


WARNING!

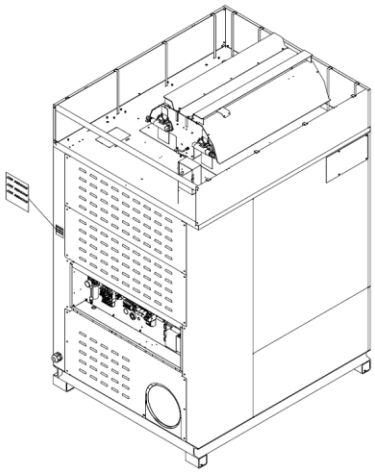
The machine must be moved only when it is fixed to its pallet: handling and lifting by forklift must be carried out only by qualified and competent personnel.


WARNING!

If the machine is to be moved from the operating site, it must be moved only when any cycle has been completed, and the machine has completed the entire cooling cycle.

5. MACHINE IDENTIFICATION

The equipment can be identified by an adhesive plate bearing the serial number, model, power and technical characteristics. Make sure that the power supplies present (electrical, hydraulic, steam, gas, compressed air) correspond to the data on the rating plate.
Spare parts and/or interventions presuppose the exact identification of the model for which they are intended.



Tampering, removal, lack of identification plates or anything else that does not allow the safe identification of the machine, makes any installation and maintenance operation difficult and automatically voids the warranty.

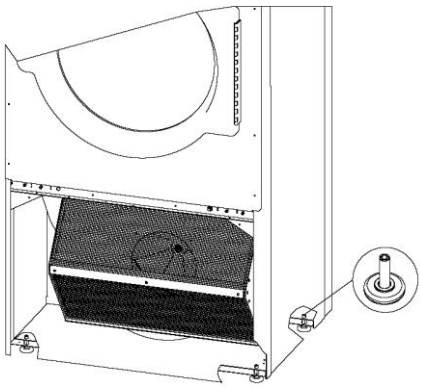
Rotary dryers are intended exclusively for drying textiles and are intended for commercial, professional and industrial sectors.

MODELS AND MAXIMUM LOAD CAPACITY MODELS AND MAX LOAD CAPACITY (dry clothes)		
ROTARY DRYERS TUMBLE DRYERS	1:18 LOAD CAPACITY LOAD CAPACITY	1:20 LOAD CAPACITY LOAD CAPACITY
11....,	11 kg (*)	-
14....,	14 kg (*)	-
18....,	18 kg (*)	-
23....,	23 kg	-
36....,	36 kg	-

Models with capacities marked with (*) can be produced and accessorized for installation in self-service shops with coin, token or other automatic payment systems.

6. INSTALLATION AND PLACEMENT

All installation operations must be carried out by professionally qualified personnel. Place the machine on a flat surface in a stable and horizontal manner using the adjustable feet located at the base (if present). The feet are adjusted from the outside, screwing or unscrewing them until they reach level positioning.
For models that require it, the adjustment can be made from inside the machine, after opening the filter door and backrest, using a 5mm Allen key.



Check that the floor capacity is compatible with the weight of the machine which can be detected from the data sheet. The load of the machine can be considered totally static. To calculate the static load, remember to add the net weight of the machine to the weight of the wet laundry that will be loaded.
Make sure the floor is clean and heat-resistant.

For proper use, operation and maintenance, leave a clearance of at least 500mm around the 55/75kg machines.
The ambient temperature should be between +5°C and +40°C and the relative humidity should be 50%.
The degree of protection is IP24.
The environment in which the machine is installed must have sufficient air exchange. In fact, it should be remembered that the machine draws air from the environment in which it is installed and must discharge the humid process air outside.
For the sizing of the air intakes, refer to national regulations.
Consider 9cm2/kW which brings the different models to the following minimum sections:

BASKET CAPACITY Ratio 1:18	MINIMUM CROSS-SECTION cm2
11 kg	270
14 kg	270
18 kg	270
23 kg	340
26 kg	340
32 kg	450
36 kg	450
BASKET CAPACITY Ratio 1:20	MINIMUM CROSS-SECTION cm2
55 kg	950
75 kg	1200

Remember that grates and curtains reduce the flow rate of the air vents.

The appliance must not be installed behind a lockable door, sliding door or door with hinges on the opposite side of the tumble dryer.

Do not install or operate the machine if it is damaged.

Do not install the machine in a position where it is not possible to fully open the door (with the appropriate kit, in some models, it is possible to rotate the front and make the door left or right (refer to the relevant paragraph).

Correct operation is guaranteed up to altitudes of 2000 m above sea level.

WARNING!

Ensure the supply of clean air to the machine and not air contaminated with chlorine, fluorine or other solvent vapors.


WARNING!

Do not use or store petrol, petroleum or other flammable materials in the vicinity of the machine. This may cause fire or explosion.


WARNING!

Provide a fire extinguisher near the machine chosen and maintained according to current regulations.


WARNING!

The machine MUST NOT be installed outdoors, but in a CLOSED environment specifically built and used as a laundry.


WARNING!

Check the cleanliness of the basket. Sheet metal processing residues may be present on the inside of the basket sheet.


WARNING!

In the case of tilting machines, provide the necessary spaces to avoid the risk of crushing between the machine and elements contained in the installation environment: other machines, walls, ceilings, doors or windows (open and closed), etc.

The extent of the displacements envisaged by the tilting phases are shown in the technical data sheet.

7a. INSTALLATION: SPECIFICATIONS FOR GAS MACHINES

Any professional equipment with gas heating must be considered, regardless of the flow rate, a gas appliance.
The following requirements must be observed during installation:

- municipal and/or territorial building regulations and fire regulations
- Applicable accident prevention regulations
- CENELEC provisions concerning electrical installations
- the "Regulations for the safety of the use of combustible gas"
- the "Standards for gas systems fuelled by the distribution network or LPG gas"
- regulations of the entity or company that supplies or supplies the gas
- provisions of the electricity supplier
- any other local requirements.

Openings for ventilation and ventilation of the room may only be closed if the opening condition is controlled and if the operation of the fire sources of gas appliances is only possible in the open condition. The ventilation of the room is optimal, even if the flue gases are mechanically extracted, when the nominal heat pollution of these gas appliances does not give rise to any depression in the room. This ensures regular gas combustion and complete exhaust of the flue gases.
To size the ventilation grilles, check the data shown in the technical data sheet and refer to the regulations in force on the subject.
In the case of installation of liquid gas-fired dryers in rooms located below ground level, adequate forced ventilation devices must be provided (not permitted in the UK).
Data on gases are collected in paragraph 49.


WARNING!

Never install gas-heated machines in the same room as there are machines using solvent solutions (e.g. dry-cleaning machines).
The combination could generate substances that are hazardous to the health of operators and is also corrosive to steels.
If you place gas-heated dryers and machines using solvents in two separate rooms, make sure there is no air exchange between the two rooms.


WARNING!

In the case of machines equipped with a tilting system, fix the machine to the ground with dowels. The machines must be installed perfectly level on a floor that has no elastic reaction.


WARNING!

In the case of tilting machines, there are external elements of the machine itself, in motion during the loading and unloading phases of the linen.
For the overall dimensions of the machine and the moving elements in the different positions, refer to the technical data sheet.

7b. INSTALLATION: SPECIFICATIONS FOR HEAT PUMP MACHINES

The machine is equipped with a heat pump system that uses R134A refrigerant gas, a non-flammable and non-toxic fluorinated compound (each compressor unit contains 800gr.)


WARNING!

Safety precautions: Never attempt to directly manipulate R134A refrigerant without the necessary technical skills. In the event of a leak, ventilate the room and contact a qualified technician. R134A can contribute to the greenhouse effect if released into the atmosphere, so it is essential to avoid leaks.


WARNING!

Periodic maintenance and checks: It is recommended that the system be checked regularly by a certified technician to check for any leaks or drops in performance. If necessary, gas refilling should be carried out using specialised equipment.


WARNING!

Disposal and end of life. At the end of the machine's service life, the refrigerant must be recovered and disposed of in accordance with local and international regulations. Never dispose of the machine without properly removing the coolant.

As you will see in the paragraph relating to memory programs, this type of machine reaches a maximum cycle temperature of 56°C.
Please note that the electronics may allow you to set a temperature value even higher than that actually achievable by the machine).

8. INFORMATION ON NOISE EMISSION

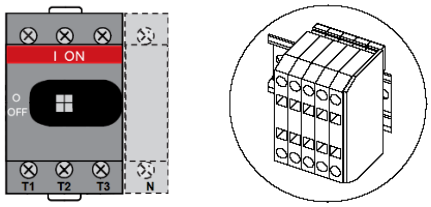
Airborne noise produced by the machine produces a weighted continuous sound pressure level of less than 70 dB.

9. ELECTRICAL CONNECTION


WARNING!

The electrical connection must be carried out by professionally qualified personnel and must meet the requirements of current local and national rules and/or regulations. Check that the supply voltage corresponds to that indicated on the rating plate (voltage tolerance ±10%, frequency tolerance ±1Hz).

For the connection, use a cable of the type H05 VV – F or higher, sized according to the data on the rating plate and in the technical data sheet. Insert upstream of the appliance an omnipolar disconnection device interlocked with a padlock (e.g. a residual current circuit breaker) with an opening between the contacts that allows complete disconnection in the conditions of overvoltage category III, and in compliance with the regulations in force on the subject.
The breaking capacity of the circuit breaker must be at least 10 kA. The capacity In of the circuit breaker is described in the tables at the end of this paragraph.
Make sure the main switch is in the "0"/OFF position.
Open the power input panel.
Pass the suitably sized power cable (see table below) through the cable press supplied with the machine.
Before entering the electrical power cord, check that it performs a dead neck lower than the inlet, so that any drops of condensation cannot come into contact with the electrical connections.
The electrical supply cables must be connected to the main disconnect switch or, if provided, to a series of terminals marked and visible below.



Depending on the type of power supply provided on the machine's rating plate, connect the wires to the terminals marked as follows:

PE: ground clamp, yellow-green color

L1/T1, L2/T2, L3/T3: Phase terminals, brown or grey

N: Neutral clamp, blue color (if any)

When installing or replacing the power cable, the earth conductor must be at least 5 cm longer than the others.
A copy of the wiring diagram is contained in an envelope inside the electrical panel.

Inside the electrical panel of the machine there is a terminal for equipotential bonding to be carried out according to the legal regulations.

The tables below refer to the nominal current values "In" relating to the magnetic protection operated by the circuit breaker (thermal) or by fuses. The sizing of the line upstream and downstream of this protection must be carried out according to the length, type of conductor, degree of selectivity of the main electrical panel and the conditions of cable laying.

ELECTRIC HEATING ROTARY DRYERS (NOMINAL POWER)	In 3ph380V-480V(+N)	In 3ph220V-240V	In 1ph230V
11..., 14..., 18..., 23..., 36...,	20 20 32 40 50	40 40 50 80 80	63 63 100 125 160

ROTARY DRYERS FOR GAS OR STEAM HEATING (RATED POWER)	In 3ph380V-480V(+N)	In 3ph220V-240V	In 1ph230V
11..., 14..., 18..., 23..., ---------- ---------- 36..., ---------- ----------	6	6 10	6 10


WARNING!

Check the direction of rotation of the fan: it must rotate in such a direction as to expel the air from the exhaust: the fan motor must rotate in the direction of the arrow shown on the cap of its motor. Therefore, check that the power supply phases are connected in the correct sequence.


WARNING!

The appliance must be connected to an effective earthing system: the manufacturer declines all responsibility in the event that this connection is not made in accordance with the provisions of the regulations in force on the subject.
Before any maintenance operation, disconnect the power supply: for maintenance, refer to the machine's wiring diagram, inserted inside the machine or available on the manufacturer's website.
The minimum cross-sections for the power and earth cables, expressed in mm2, refer to the attached technical data sheet.


WARNING!

The minimum cross-sections shown may vary depending on the length of the connection. For lengths longer than 5 meters, increase the section proportionally to the additional length.


WARNING!

The machine must always be connected according to the serial number data (power, supply voltage, frequency). For supply voltages other than those provided, ask the manufacturer for information.


WARNING!

For machines equipped with speed regulation (of the basket or fan) and therefore equipped with a frequency variator, it is specifically necessary to provide protection by means of a type B RCD device (sensitive to the value of the average current).


WARNING!

For machines equipped with a power cord: if the power cord is damaged, it must be replaced by the manufacturer or by the technical assistance service or in any case by a person with similar qualifications, in order to prevent any risk.


WARNING!

Before switching on equipment that has undergone a temperature change, wait for any condensed moisture to evaporate to avoid possible damage to the electronic components.

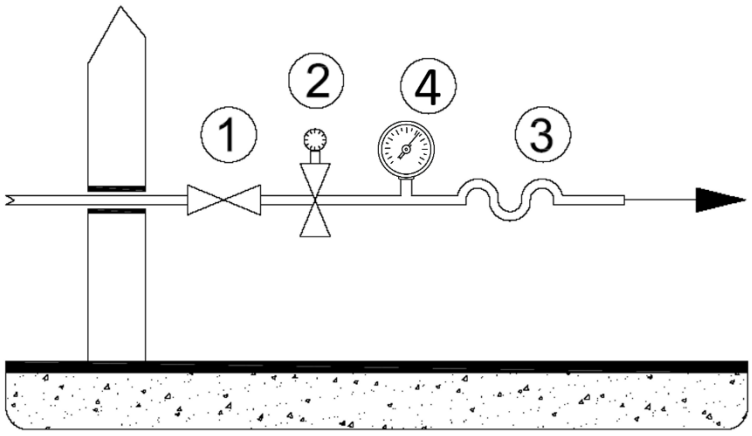
10. GAS CONNECTION

If the machine is operated with gas heating, make the appropriate connections with the distribution system: check the data on the machine's nameplate, and in particular the type and pressure of the supply gas.


WARNING!

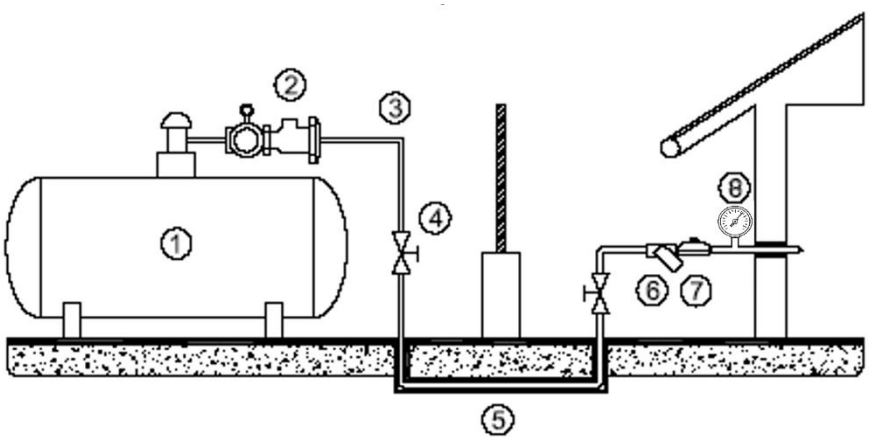
Please note that the maximum pressure for the gas valve is 50mbar. The gas supply even for a short time at higher pressures can damage the valve.

The gas distribution system must be made in accordance with the regulations in force and with sections and pressures suitable for the appliance, see tables.
See the following figure: a gas shut-off valve of the type with rapid shut-off (1) must be available upstream of the appliance; The gas shut-off valve must be located in the vicinity of the appliance and be in a position that is easily accessible by the user. This must absolutely comply with the applicable regulations and be approved.
A minimum pressure switch (2) must also be provided.
The connection to the gas supply system must be made with an anti-vibration joint (3); if flexible hoses are used, they must be made of DIN 3384 or DIN 3383 stainless steel (not required by UK standards).
A pressure gauge (4) for measuring mBar, with adequate full scale, must be provided downstream of the shut-off valve and upstream of the connection point of the machine.



The system must be designed and built in accordance with current regulations. The gas connection on the dryer has a section defined in the technical data sheet; This section must not be reduced under any circumstances.

Finally, a principle diagram for connection to the machine is reported below, in the case of high-pressure gas supply in cylinders: in this case, a two-stage reduction system is required, carried out in accordance with current regulations.



Downstream of the high-pressure cylinder (1) that acts as a tank, a first-stage regulator (1.5 bar) must be connected, followed by a suitably sized safety valve (2).
The high-pressure hose (3) is interrupted by a shut-off valve (4) and continues, protected (5) under the boundary of the compartmentation area.
Before entering the compartment for use, a second shut-off valve must be provided, followed by the filter (6) and the second-stage stabilizer/regulator (7) which brings the pressure to the value required for use. (not required by UK regulations).
A pressure gauge (8) for measuring the pressure in mbar, with adequate full scale, must be provided downstream of the second-stage pressure reducer and upstream of the connection point of the machine.

11. GAS CONNECTION: LEAK TEST

All connections between the system and the device must be leak tested. For this operation, the use of leak detection sprays is recommended; otherwise the connection points can be brushed with other foaming substances, which do not cause corrosion; No bubbles should occur with either solution.


WARNING!

It is absolutely forbidden to use open flames for the leak test!

12. GAS CONNECTION: HEAT OUTPUT

All equipment during final factory testing is prepared for the type of gas shown on the adhesive plate located near the rating plate.

If the appliance is not prepared in accordance with the gas family available on site, it is mandatory to carry out a conversion of the appliance to adapt it to the type of gas present. In this case, it is absolutely necessary to inform the authorized technical service center.

The commissioning of the device with the specified heat output depends on the inlet pressure and calorific value of the gas as well as the nozzle, the nozzle pressure and the correct supply of primary air.

The inlet pressure that allows the appliance to operate is within the limits shown in the following table for the various types of gas. Outside these limits, the device may not be put into operation. If you find a pressure different from what is shown in the table, it is advisable to contact the body or company that supplies the gas or the company that carried out the system.

The lower calorific value of gas is requested from the body or company that supplies the gas and must correspond to what is reported in the technical data sheet.

13. GAS CONNECTION: INLET PRESSURE CONTROL

The inlet pressure must be measured with a liquid or digital measuring instrument (resolution of at least 0.1 mbar).

- Close the shut-off device.
- Loosen the gas valve pressure tap sealing screw identified with "Pin".
- Connect the pressure gauge.
- Open the shut-off device.
- Operate the appliance in accordance with the operating instructions.
- Measure the inlet pressure, with the burner on.
- Switch off the appliance.
- Close the shut-off device.
- Unplug the pressure gauge.
- Close the gas valve pressure tap sealing screw and check the tightness.
- Open the shut-off device and check for tightness.

The gas appliance may not be put into operation outside the pressure ranges shown in the table.

14. GAS CONNECTION: TESTING

As soon as the connection work is completed, the device and the entire installation must be checked. In particular, check:

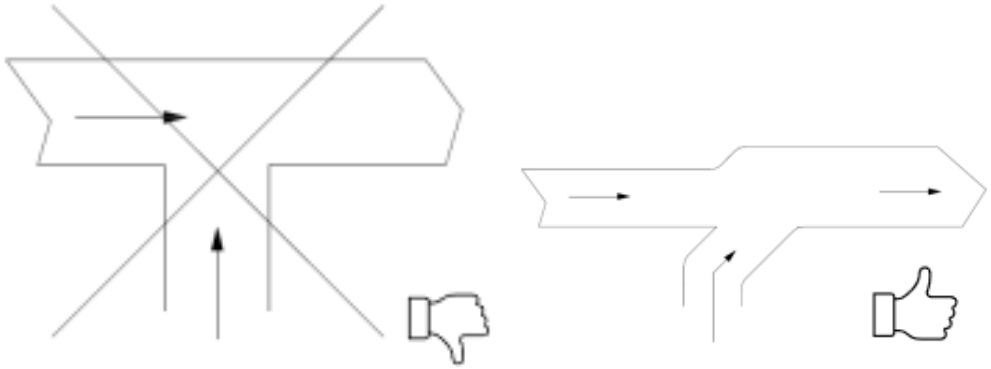
- that the connections are made in accordance with the instructions and indications of this manual.
- that all safety requirements of the applicable standards, laws and directives are met.
- that the gas connections made are watertight.

The appliance is then lit according to the instructions in the user manual, checking the progressive ignition of the burners and the appearance of the flame.

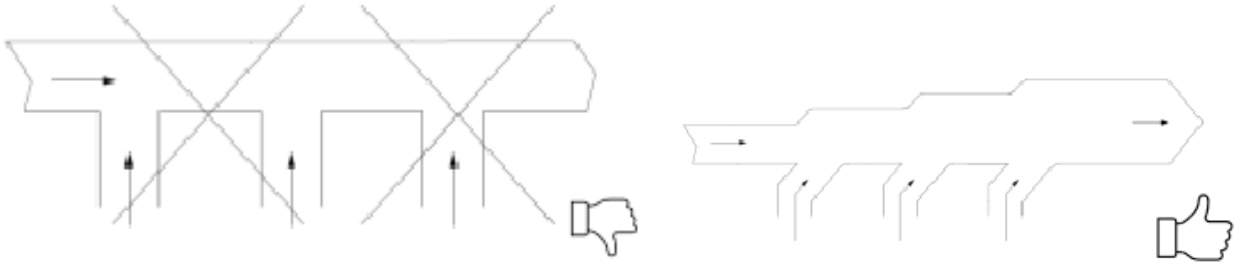
Carry out a gas consumption check using the volumetric method. By detecting through the meter how much gas has been consumed in a given unit of time: the resulting value is to be compared with the values shown in the table.

15. EXHAUST DUCT FOR HUMID AIR AND FLUE GASES

The smoke and humid air exhaust duct must be made in accordance with current regulations.
To avoid leakage of humid air and noise, the joints of the exhaust from the machine to the outside must be made hermetic, with materials (fillers, mastics, silicone preparations, aluminum tape) resistant to high temperatures.
To avoid pressure drops, avoid the use of spiral ducts: therefore use smooth and rigid metal pipes. The material used must be compatible with the discharge temperatures of the machine.
Gas-operated dryers are gas appliances of type B22P, i.e. gas appliances dependent on a ventilated environment without wind protection device with blower behind the combustion chamber.
The flue gases from a gas dryer must be conducted outdoors through the chimney.
The flue gas and moist air duct, which is as short as possible, should be inclined upwards towards the exhaust chute.
To reduce pressure drops, avoid 90° bends, preferring compositions of 45° or 30° bends.
A steam trap shall be provided at the lowest point and the diversion of this trap shall comply with local regulations for the connection to the water drain.
The duct must resist crushing.
In the case of entering a manifold, do not make "T" connections and consider the correct value of the collector section. If necessary, provide for an increase in the collector section.



The manifold for multiple machines is not recommended for gas machines.
For machines with electric or steam heating, it is possible to provide a manifold: do not make "T" connections and consider the correct value of the manifold section. If necessary, provide for an increase in the collector section.



The dryer is equipped with an exhaust fan that produces its typical noise during operation.
To reduce the noise level, a silencer (available from specialist shops) can be fitted to the exhaust.

The silencer must be of the straight circular type, with nominal insulation thicknesses between 100 mm and 150 mm.
The attenuation material is generally mineral wool. The silencer must be made of steel with small openings in order to withstand mechanical cleaning and at the same time not interfere by generating loss of head. The silencer must be able to be cleaned with rotating nylon brushes, vacuum cleaners or damp cloth

If a non-return bulkhead (air flap) is applied to the exhaust, evaluate the relative pressure drop: check compatibility with the available head (for the pressure drop, consider at least 1 linear meter).

WARNING!
The efficiency of the exhaust ducts of electric and gas dryers is controlled by a safety pressure switch. The maximum allowed back pressure for each type of dryer is shown in the relevant technical data sheet.

WARNING!
The exhaust ducts of gas dryers should never be shared with the exhaust ducts of electrically heated or steam dryers, let alone with the exhaust ducts of other types of machines.

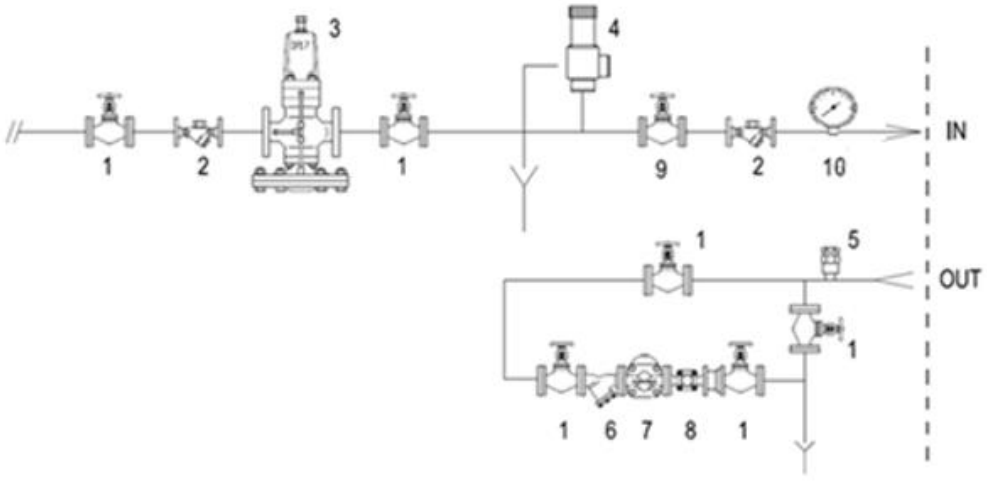
WARNING!
The outlet of the drain pipe must not flow at eye level and/or be directed towards residential units.

WARNING!
Instruct the user on the danger of tampering with the exhaust ducts and/or modifying, plugging, obstructing or reducing the ventilation openings of the installation room.

WARNING!
Do not insert your hands, objects into the drain. Only the smoke and humid air exhaust chimney must be connected to this connection.

16. STEAM CONNECTION

Only for machines equipped with steam heating, a connection to the steam mains must be made. The connection must be carried out by professionally qualified personnel and must meet the requirements of current local and national rules and/or regulations. Check that the steam has the minimum characteristics indicated in the technical data sheets, and that all system components are certified.
The system must be built according to the following scheme:



The elements of the system are identified as follows:
1. Shut-off valve
2. Filter
3. Pressure reducer (where required)
4. Safety valve
9. Plug valve (truncated-conical through-hole plug)

10. Pressure gauge with adequate full scale.


WARNING!

For the safety valve to be efficient, it must be sized to meet the maximum flow rate of the steam supply line (consult the technical data sheet of the machine to identify the maximum pressure allowed by the heating unit).

5. Vacuum break valve
6. Filter
7. Inverted bucket steam trap
8. Passage indicator

IN Inlet to the steam exchanger of the machine
OUT Exit from the machine exchanger


WARNING!

Drying performance depends on the performance of the steam exchanger.
The machine can operate in a steam pressure range (see data sheet): but the lower the steam pressure, the lower the performance of the machine. To prevent drying times from being too long, it is recommended to operate with a minimum steam pressure of 5 bar.


WARNING!

The shut-off valves in point 1 of the diagram must be opened slowly, so as to minimize the effects of water hammer. Their presence serves to ensure the possibility of disconnecting the system during the maintenance of the steam control and regulation devices.


WARNING!

The valve described in point 9 of the diagram must be of the male type (truncated-conical shutter with through hole) that can be easily reached to be closed when needed, during a safety stop and in any case during maintenance. Its installation must be as close as possible to the exchanger.


WARNING!

The steam line MUST NOT be shut off by electric or pneumatic valves for regulating the temperature of the machinery. Temperature control is already carried out by the machine damper. The use of valves shortens the life of the exchanger and the warranty must be considered automatically void.


WARNING!

Do not touch the fittings or the steam inlet and outlet piping when the system is on or the machine is running. Before intervening, make sure that the machinery is turned off and that the system has been closed and completely drained of condensation, waiting for the time necessary for the area to be maintained to cool down. The pressure gauge indicated in point 10 of the system diagram confirms that it has been closed: proceed with maintenance only when the value indicates 0 bar.

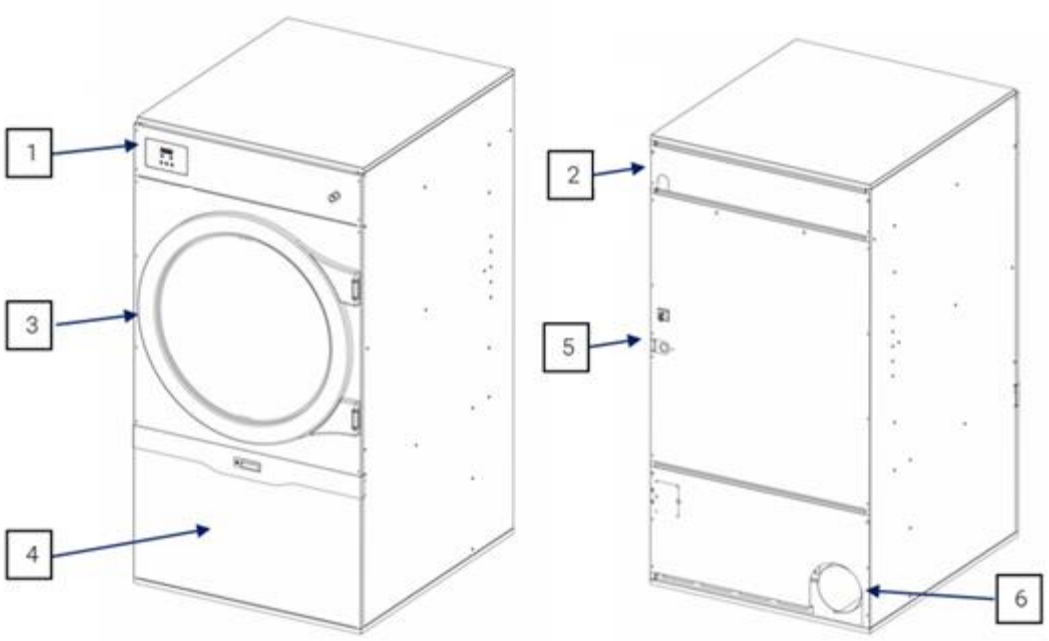
17. COMPRESSED AIR CONNECTION

Connection to the compressed air system is only necessary for certain machine models: check the technical data.
The system must be carried out by professionally qualified personnel and must meet the requirements of current local and national standards and/or regulations.

All connections between the system and the device must be leak tested. For this operation, we recommend the use of leak detection sprays. If there are any joints, remove them.

18a. DESCRIPTION OF THE MACHINE 11/36

The dryer is characterized by some elements that you need to know right away, before starting to use the machine:



1. Control area: there you can find the microprocessor or an electromechanical system of the double timer type.
2. Access flap to the heating coil, in case of maintenance. Access to the heating coil may only be granted to qualified and competent personnel.
3. Machine loading door.
4. Filter access port. It must be opened every time it is necessary to perform filter cleaning: access must be allowed only by the format/manager user.
5. Electrical connection panel and part of the electrical system. Access to the electrical panel must only be allowed to specialized and competent personnel.
6. Exhaust of humid air (always) and flue gases (in the case of a machine with gas heating).

WARNING!

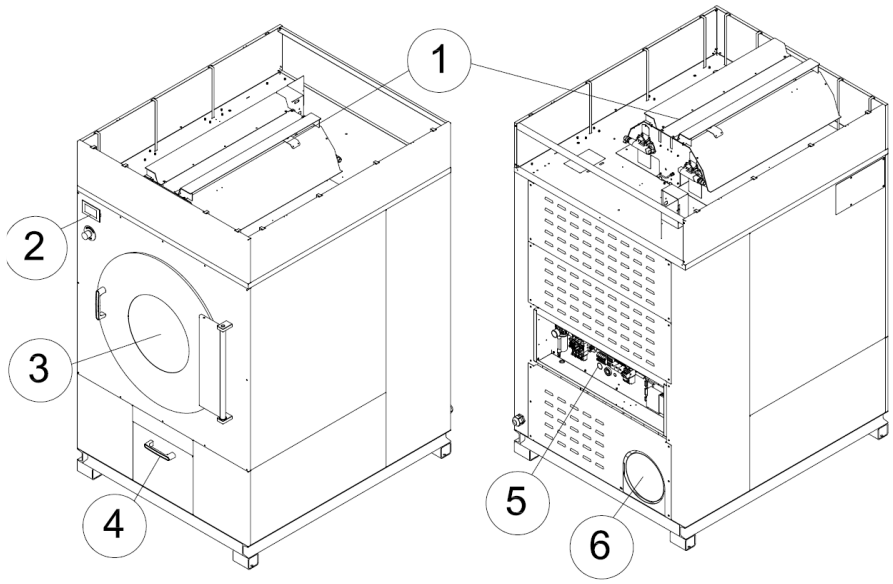
The air openings in the backrest of the machine must always remain clear. The passage of air through the louvers must not be restricted in any way.

WARNING!

Do not insert hands or objects into the drain (position 6). Only the smoke and humid air exhaust chimney must be connected to this connection.

18b. DESCRIPTION OF THE MACHINE 55/75

The dryer is characterized by some elements that you need to know right away, before starting to use the machine.



1. Heating coil, Access to the heating coil must only be granted to qualified and competent personnel.
2. Control area: there you can find the microprocessor or an electromechanical system of the double timer type.
3. Machine loading door.
4. Filter access port. It must be opened every time it is necessary to perform filter cleaning: access must be allowed only by the format/manager user.
5. Electrical connection panel and part of the electrical system.
6. Exhaust of humid air (always) and flue gases (in the case of a machine with gas heating).

WARNING!

The air openings in the backrest of the machine must always remain clear. The passage of air through the louvers must not be restricted in any way.

WARNING!

Do not insert hands or objects into the drain (position 6). Only the smoke and humid air exhaust chimney must be connected to this connection.

18c. DESCRIPTION OF RESIDUAL RISKS

WARNING!

Make sure that this paragraph is explained and well understood by those who install, use and maintain the machine!

If it is necessary to remove machine panels (for handling, installation, maintenance), always use special cut-resistant gloves (PPE). The residual risk is the possibility that there are sheets with edges that, despite being deburred, may still have parts with sharp profiles.

If the machine is equipped with anti-intrusion rubber walls (e.g. machines equipped with tilting), always check their integrity. The residual risk is the possibility of inserting your hands through any chips and reaching areas of the machine at risk of crushing!

To maintain the tilting machine in the raised position, the personnel authorized to carry out the activity must lock, with appropriate spacers, the lifting cradle from the base. The residual risk is the possibility that the compressed air system may be emptied suddenly (e.g. due to a breakdown in the hydraulic circuit) and that the cradle may fall back onto the base: risk of crushing!

It is assumed that the exhaust of humid air must always be connected to an exhaust pipe. Consider the residual risk that the machine will be operated without a hose. The residual risk is to insert your hands into the discharge pipe reaching areas at risk of crushing and shearing!

19. PREPARE THE GARMENTS

The machine must be loaded according to the characteristics described in the serial label: it must not be loaded with a weight greater than the nominal load provided for in the technical data sheet and the serial plate.
Before deciding on the most appropriate program, divide the laundry according to the fabrics and fibers, in order to achieve uniform drying of the entire load.
In addition, avoid loading dripping water: they must be previously centrifuged with high-spinning machinery.
Always check that there are no dispensers or balls between the laundry.
Make sure that fabric softeners (and similar products) have been used in accordance with their instructions during the previous washing step.
Before loading, make sure that the garments have the label with the authorization to dry in the machine (and that they have been washed in water) and always follow the instructions of the fabric manufacturer.
Here we recall the meaning of some international symbols:

Dry at normal temperature

Dry at a low temperature

Do not dry in a rotary dryer

WARNING!

The machine must not be used if washing chemicals other than detergents certified for washing textiles in water have been used.

WARNING!

The machine must not be used with fabrics that can ignite themselves.

WARNING!

The garments to be dried must not have been in contact with hazardous substances such as explosives, detonating or flammables.

For items soiled with substances such as cooking oil, acetone, alcohol, petrol, kerosene, stain removers, turpentine, wax and substances to remove it: make sure that they have been washed in hot water with a sufficient amount of detergent to completely eliminate these substances.
These fabrics must then be thoroughly rinsed and aired before being placed in the machine.

WARNING!

Items such as foam rubber (latex foam), shower caps, waterproof textiles, items with a rubber side and clothes or pillows that have latex foam parts, and in general all fabrics containing rubber parts, must not be dried in the tumble dryer.

WARNING!

Do not dry items that have not been previously washed.

WARNING!
Make sure that fabric softeners and similar products have been used in accordance with their instructions.

WARNING!
Check garments with padding: Do not load the machine with garments whose padding is damaged.

WARNING!
Close zippers; button the closures of duvet covers; Fasten laces and ribbons. Empty your pockets.

WARNING!
Metal elements such as buckles, hooks, fasteners must be wrapped in a cloth before drying, in order to protect the drum from damage such as scratches or bumps, which could in turn damage the garments.

20. END OF WORKING DAY

At the end of the working day, the machine must be brought to the end of the cycle and turned off: the basket must be emptied and cleaned.
Turn off all power supplies by operating the relevant line switches/disconnectors: electric, gas, steam and compressed air. Finally, leave the door open.

21_S. CONNECTION TO THE INTERNET (only SMART and PREMIUM version)

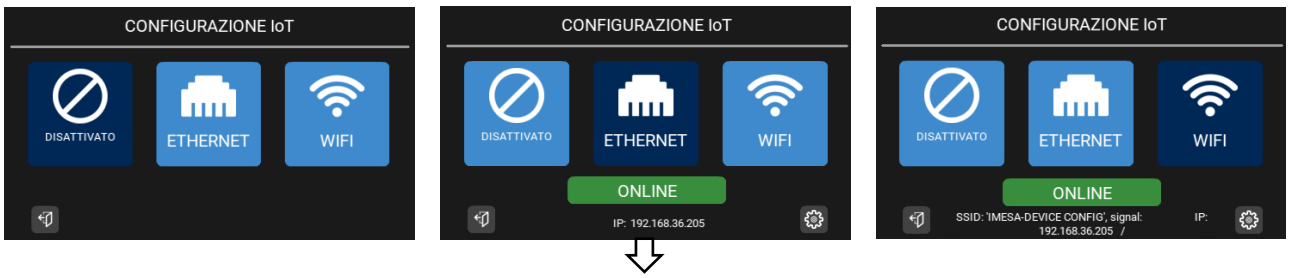
On some models or on request, an internet connection device is available to allow remote monitoring of the machinery.
It is possible to connect the machine via ETHERNET (with a special RJ45 cable) or via WI-FI (without cable). The router can be reached by opening the rear panel of the machine and each connection must be made with the machine completely disconnected from the mains.

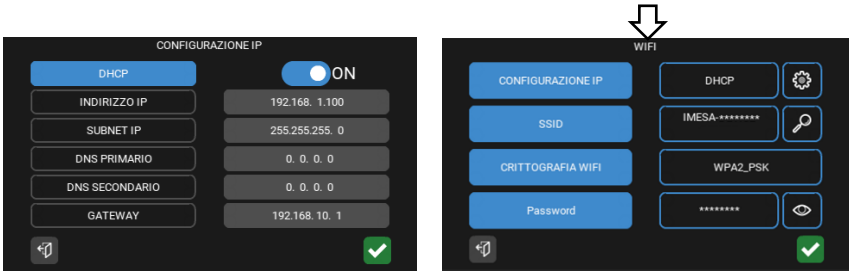
WARNING!
Before you can connect, you must have the necessary permissions from your network operator. Always rely on a qualified technician for the necessary checks and preparations of the system.

For the ETHERNET connection, it is necessary to connect the network cable to the RJ45 connector provided on the machine's router. No special configurations of the IM10 device are required as pairing is automatic if the DHCP setting is set to ON.

For the WI-FI connection, it is necessary to know the access credentials of the network (SSID and PASSWORD) to which the machine is to be connected. The device is capable of connecting to 2.4Ghz WI-FI networks, other frequency networks are not supported.

To configure it, go to the "SETTINGS" and "IoT CONNECTION" menus, available only within the technical area of the IM10 computer, and choose the type of connection you want.





The connection status will be visible on the main screen through a cloud icon that can take on four different colors, each of which expresses a status:

-  Connected to the network and reachable cloud: GREEN icon with checkmark;
-  Connected to the network but cloud unreachable: YELLOW with question mark;
-  NOT connected to the network: RED with X;
-  In all other cases, including communication timeout between IM10 and router: GREY with exclamation mark.

22_S. STARTING A PROGRAM

Turn on the main switch that powers the machine.

 WARNING!

Before switching on equipment that has undergone a temperature change, wait for any condensed moisture to evaporate to avoid possible damage to the electronic components.

For machines equipped with steam heating: open the gate valve to allow steam to enter. To limit water hammer, perform the opening operation slowly: from the closed position to the open position, over 1 minute.
For machines equipped with gas heating: open the gas shut-off valve.

Make sure that the emergency mushroom (for models that have it) is in the rest position, and that it has not been activated during transport or before the machine was last switched off.

 WARNING!

Before starting the machine, always carry out the safety check procedure (check the relevant paragraph).

Before loading with wet laundry, make sure the drum is completely empty and clean.
The machine must be loaded with linen that is as homogeneous as possible and with a weight that does not exceed that described in the technical data sheet and serial label. The capacity of the machine refers to the maximum dry laundry load. Only introduce super-spun linen. After loading the machine, close the door.

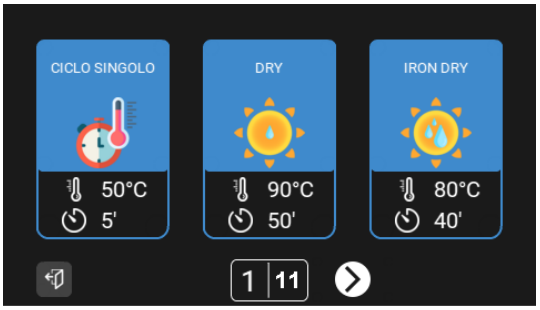
 WARNING!

Make sure that when closing the door, no flaps of fabric are pinched between the door and the front of the machine.

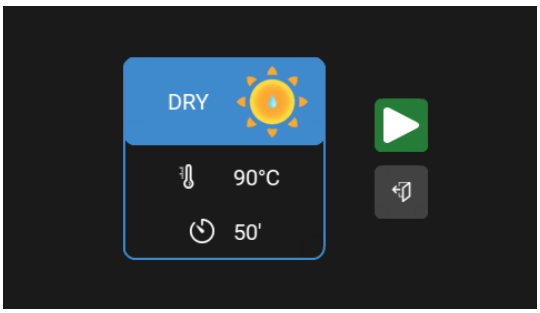
After closing the door completely, the selection mask appears on the display.
On each screen there are program selection icons:

To select a program, simply tap on the desired icon.

To view additional programs on the other pages in the memory, tap one of the two arrows on the left or right.



When a program is selected, its name appears on the display (editable: see the relevant paragraph), its graphic icon (editable) and, if this is not present, the progressive archive number. The temperature and time characteristics of the program are summarized at the bottom.
For example:



Below is a detailed description of the programming parameters that may appear in the preview phase:

- *ICON – TEMPERATURE – DURATION:*

They are respectively the icon that characterizes the program, the drying temperature and the duration of the drying cycle.

- *HEATING DURATION:*

This is the duration for which the temperature set by the program will be maintained. It can be increased or decreased during the operation of the cycle.

- *COOLING TIME*

After having used up the time defined in HEATING DURATION, the dryer will perform a cooling cycle characterized by a duration appropriate to reach a low temperature that guarantees easy removal of the garments. If the cooling temperature is reached before the COOLING DURATION has expired, the machine will stop the cycle automatically.

The total duration of the cycle is given by the sum of the HEATING DURATION + COOLING DURATION.

- *POWER LEVEL* (only electrically heated machines equipped with the "split power" function):

Highlights the heating power set in the selected program. The choice of the heating power level must be made according to the type of fabrics to be dried. The higher the selected level, the faster the temperature will rise inside the drum.

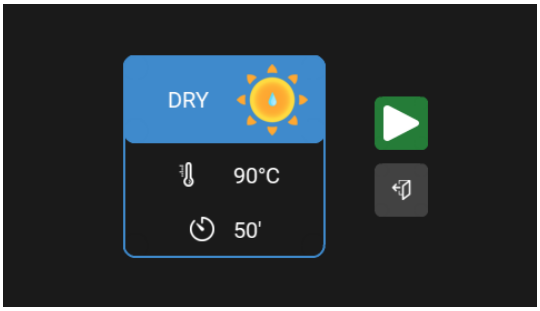
- *BASKET SPEED* (only for machines that are equipped with basket speed adjustment).

This is the rotation speed of the basket set for the program. It can be modified during the cycle.

- *FAN SPEED* (only for machines that are equipped with fan speed adjustment).

This is the rotation speed of the intake fan. The selection of the fan speed is related to the speed of the air in the basket: the higher the selected level, the higher the speed of the air passing through the basket. It can be modified during the cycle.

When the desired program is shown on the display, simply press the START button described in the following image:



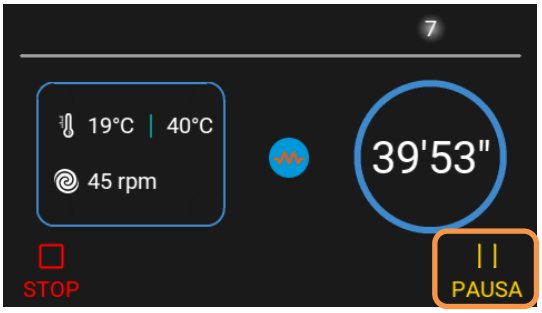
WARNING!
To allow for proper ironing afterwards, be sure to select a program that will return dry fabrics but contain 10-20% residual moisture.

WARNING!
In the event of a fault or malfunction, switch off the appliance immediately and call an authorised service centre!

WARNING!
At the end of the program, do not leave the clothes inside the machine stationary: you could incur a phenomenon of self-combustion!

23_S. PAUSE A PROGRAM

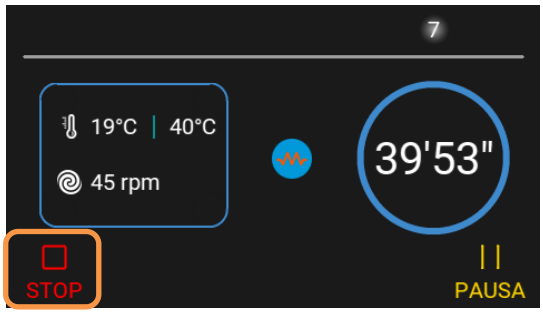
While the program is running, you can pause it for a break or stop it permanently.
To pause it, and then pause, simply press the PAUSE button.
The following screen appears on the display:



WARNING!
In these phases of pause and opening of the door, remember that the temperature of the fabrics may be high!

24_S. STOP A PROGRAM

At any stage of the program, you can stop it permanently by pressing the STOP button:

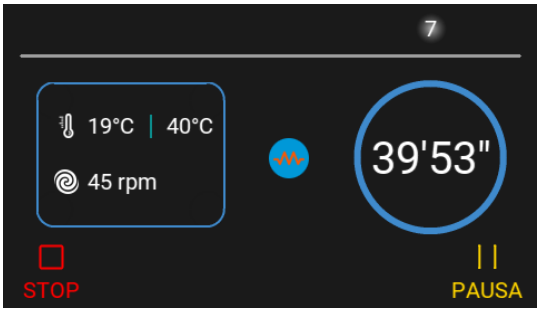


WARNING!
Never stop a tumble dryer before the end of the drying cycle unless all items are quickly withdrawn and laid flat to dissipate heat.
The cycle must always end with a cooling phase that is already preset in all the original programs supplied by the manufacturer!

WARNING!
Do not leave warm clothes inside the machine stationary: you could incur a phenomenon of self-combustion!
The cycle must always end with a cooling phase. Do not change this programming parameter.

25_S. PROGRAM PHASES

The program of a dryer consists of two phases: the heating phase and the final cooling phase.
Each of these two phases has two characteristic values: temperature and time.
During heating, the machine dries for the expected time at the predetermined temperature.
During the cooling phase, the machine proceeds to cool the laundry: the completion of the cycle is reached when the first of the two characteristic parameters, the maximum cooling time or the cooling temperature, is reached.
While the program is running, it is possible to check the progress of all the characteristic parameters.
During heating, the set point temperature is described on the right (in the example: 40°C): the actual temperature in the basket is described on the left of it (in the example: 19°C).
On the right is the time remaining at the end of the heating cycle (in the example: 39' and 53").
In the center, the heating activation status is visible. The graphic image depicting the heating activation status varies depending on the type of system installed in the machine (in the example, the symbol of a resistance represents electric heating).



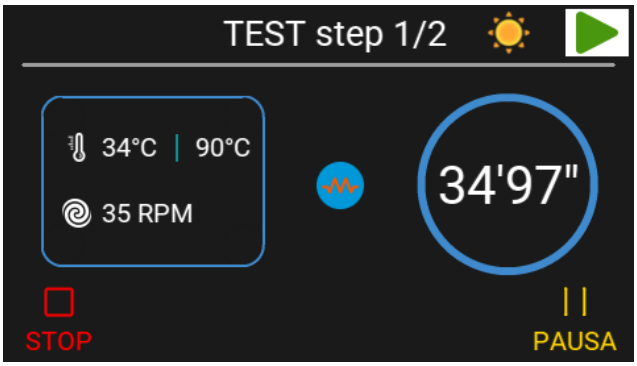
The final part of a cycle takes place without heating (cooling phase) to ensure that the items are subjected to a normalization temperature before being removed from the machinery.

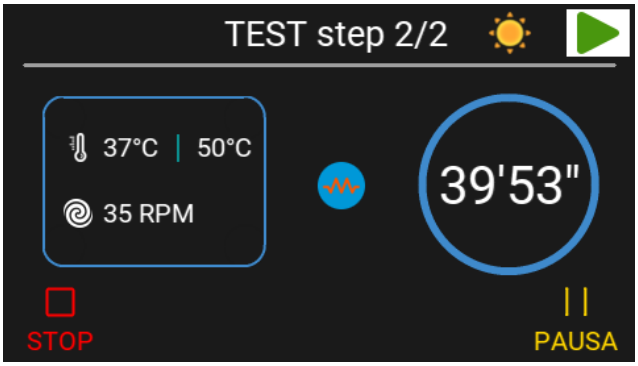
When the cycle is completed a buzzer sounds. The end of cycle indication appears on the display.

If the STOP button is not pressed or the door is opened, and the anti-wrinkle phase is activated (see the relevant paragraph), the basket will resume movement according to the expected values.
The anti-wrinkle phase can be interrupted by pressing the STOP button or opening the door. It will still end at the end of the scheduled time or until the end of the anti-wrinkle phase.

NOTE: You can add a pre-drying step to the program by activating the INITIAL COOLING function.

NOTE: If the MULTISTEP functions and the FAST FORWARD function are enabled, with the ► button visible at the top right, it is possible to perform a fast forward that allows you to interrupt the current phase and go directly to the next step, if programmed.





26_S. CHANGING PARAMETERS DURING THE CYCLE

While the program is running, it is possible to change all the characteristic parameters: however, these changes do not remain in the program's memory.
To edit the program while it is in progress, press the icon of the parameter you want to edit and change its value.
Once the desired changes have been completed, simply press the green confirmation button.
Changes can be made as many times as desired and at any stage of the cycle.

WARNING!
Program modifications should only be performed by the format/manager user.

27_S. MANUAL PROGRAM – SINGLE CYCLE

It is possible to run a cycle manually, setting only the main values of the drying cycle immediately after loading.
To run this program, select the "SINGLE CYCLE" icon, set the required data, and press START.
The data entered remains in memory as default values for the subsequent use of the manual cycle.
During the execution of the cycle it is possible to modify the parameters, as in the case of standard programs (see the relative paragraph).
The engine times of the SINGLE CYCLE are 40 seconds of rotation in both directions, interspersed with a 5-second pause.

28_S. PROGRAMS IN MEMORY

The machine has thirty programs already configured with all their characteristics in memory.
Below is a table that summarizes them, in the three variants: standard machine, machine with payment system and machine with heat pump heating.
See in the relevant paragraph how to modify these default programs to your liking.

The default rotation times for machines equipped with reversal are:

- clockwise rotation: 20 seconds
- Pause: 5 seconds
- counterclockwise rotation: 20 seconds

Rotation and pause times can be reprogrammed (see relevant paragraph).
For machines that are equipped with the relevant options, the other default values are the same for all programs:

- Heating power: MAX level
- Basket speed: 40 rpm

- Fan Speed: Speed 2


WARNING!

The temperature to be used must comply with the temperatures allowed by the labels characteristic of the laundry to be dried.


WARNING!

The formation of yellow stains on dried fabrics indicates the presence of detergent that has not been thoroughly removed during rinsing or a temperature of use of the machine higher than that required for the fabric!


WARNING!

The formation of wrinkles on dried fabrics can be generated by a too long waiting time in the machine, after the end of the cycle. If the event occurs often, activate the anti-wrinkle system or extend its activation time.


WARNING!

Significant differences in the thickness of the fabrics to be dried (due to seams, for example), can give rise to incomplete drying.


WARNING!

Carefully avoid drying fabrics that have plastic buttons or fabrics that have synthetic seams.
Too high a temperature could cause it to melt and the consequent soiling of the basket.

		DRYING		COOLING	
PROG.	TYPE	°C	Min.	°C	Min.
01	RESIDUAL MOISTURE	90	DRY	40	3
02	RESIDUAL MOISTURE	80	IRON DRY	40	3
03	RESIDUAL MOISTURE	75	DRY	40	3
04	RESIDUAL MOISTURE	60	DRY	40	3
05	TIMED	50	50	40	3
06	TIMED	40	50	40	3
07	TIMED	90	40	40	3
08	TIMED	80	40	40	3
09	TIMED	70	40	40	3
10	TIMED	60	40	40	3
11	TIMED	50	40	40	3
12	TIMED	40	40	40	3
13	TIMED	90	30	40	3
14	TIMED	80	30	40	3
15	TIMED	70	30	40	3
16	TIMED	60	30	40	3
17	TIMED	50	30	40	3
18	TIMED	40	30	40	3
19	TIMED	90	20	40	3
20	TIMED	80	20	40	3
21	TIMED	70	20	40	3
22	TIMED	60	20	40	3
23	TIMED	50	20	40	3
24	TIMED	40	20	40	3
25	TIMED	90	15	40	3
26	TIMED	80	15	40	3

		DRYING		COOLING	
PROG.	TYPE	°C	Min.	°C	Min.
27	TIMED	70	15	40	3
28	TIMED	60	15	40	3
29	TIMED	50	15	40	3
30	TIMED	40	15	40	3

Payment Machines					
HIGH	TIMED	90	10 (*)	40	3
MEDIUM	TIMED	80	10 (*)	40	3
LOW	TIMED	70	10 (*)	40	3

(*) = the basic program purchase time and the increment time can be changed by the system operator. The actual duration of the program varies depending on the credit entered by the user.
Machines with heat pump heating reach a maximum temperature of 56°C, so drying times are longer:

Machines with heat pump heating:					
		DRYING		COOLING	
01	FAST	56	50	40	3
02	TIMED (GREEN)	56	60	40	3
03	RESIDUAL MOISTURE	55	DRY	40	3
04	RESIDUAL MOISTURE	50	DRY	40	3
05	TIMED	56	40	40	3
06	TIMED	50	40	40	3
07	TIMED	40	40	40	3
08	TIMED	40	30	40	3
09	TIMED	45	30	40	3
10	TIMED	56	30	40	3
11	TIMED	56	30	40	3
12	TIMED	56	30	40	3
13	TIMED	40	30	40	3
14	TIMED	40	20	40	3
15	TIMED	50	20	40	3
16	TIMED	55	20	40	3
17	TIMED	56	20	40	3
18	TIMED	50	20	40	3
19	TIMED	40	20	40	3
20	TIMED	50	15	40	3
21	TIMED	40	15	40	3
22	TIMED	45	15	40	3
23	TIMED	56	15	40	3
24	TIMED	50	15	40	3
25	TIMED	40	15	40	3

29_S. PAID MACHINE: OPERATION

After selecting the program, the cost for running the program appears on the display.
If the payment system provides for it, as the coins are inserted, the missing value for the purchase of the cycle is updated on the display.

Only after the payment is completed, when the START button is pressed, the cycle is started.

If you want to change the selected programme during the drying phase, simply press the corresponding button: the selection will be automatically updated without the machine stopping.

WARNING!
In the event of a change during the execution of the cycle, if the costs of the programs are different, the credit times will be proportionally modified.

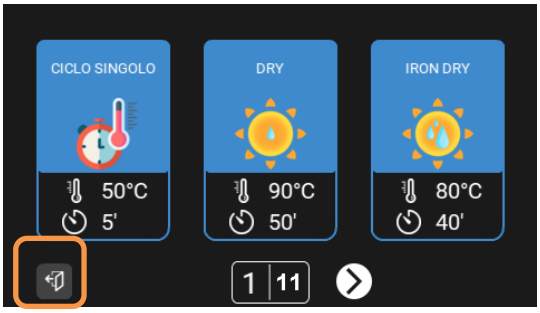
If the door is opened during operation or the PAUSE or STOP button is pressed, the machine pauses.
The countdown of the credited time continues even during this pause in the cycle.

WARNING!
If the break lasts for more than 5 minutes (which can be changed by the installer), the credit is automatically lost.

WARNING!
If the door is opened during the cooling phase, the cycle is definitively interrupted and brought to an end. No credit is lost because the payment made is used to buy only the time of the drying phase, and not that of the cooling phase.
Please note that during the cooling phase it is not possible to select a program other than the current one.

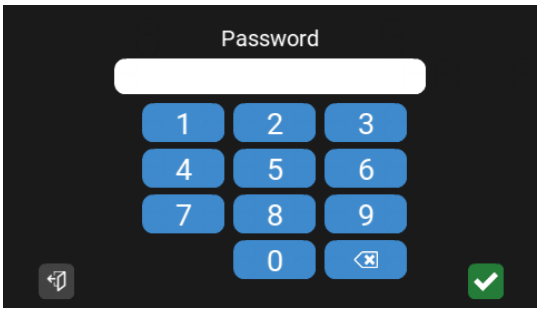
30_S. THE PROGRAMMING

It is possible to perform a series of changes to the default parameters of the programs by entering the dedicated area.
To access, with the machine on and in stand-by, press the menu icon that depicts the output port at the bottom left.



The following screen appears on the display, press on the icon that depicts the three dots.

The following screen appears, type the password 123456



This screen is the gateway to the user programming area.
By browsing it you can access the configuration of:

- SETTINGS;
- RECORDINGS;
- PROGRAMS.

By entering SETTINGS you can choose the following functions:

- CHANGE LANGUAGE: You can select the language of the user interface dialog.
- SET DATE: To set the date.
- SET TIME: To set the local time.
- TEMPERATURE °C/°F: allows you to select the unit of measurement of the temperature.
- ANTI-WRINKLE ON/OFF: Enables the anti-wrinkle cycle automatically at the end of the program, see the appropriate chapter below.
- FAST FORWARD: allows, for TIMED and MULTISTEP programs, to be able to perform the rapid advance by jumping to the next step.
- DISABLE TOUCH: if activated, it only allows the selection of the program and the pressing of the START button, as well as the entrance to the menu.
- USER PASSWORD: allows the user password to be changed, default = 123456.
- UPLOAD/DOWNLOAD PROGRAMS: allows you to export and import programs from one dryer to another via USB device.
- BEEP KEYBOARD: Enables or disables keyboard sound effects.
- PANEL MANAGEMENT: allows you to change the icons of the programs and the presentation of each individual page.
- LOAD ICONS FROM USB: allows you to import new icons for customizing programs.
- CREDIT RESET TIME (only for machines configured to self-service): defines a time within which any remaining credit, generated by an extra payment, is zeroed.
- AUTOMATIC START (only for machines configured to self-service): allows you to start a cycle automatically if the credit has been reached, without having to press the START button. Closed door is required.

By entering REGISTRATIONS you can check the machine diagnostics:

- WORKING HOURS: the total working hours of the machine can be verified.

- PROGRAM STATISTICS: you can check the total number of programs performed and the repetitions of each individual program.

- DOWNLOAD RECORDINGS: you can download the entire content of the recordings menu on USB.

- ENERGY STATISTICS: It is possible to consult the electricity consumption referred to the last ironing cycle, referring to the entire working day and referring to the total.

By entering PROGRAMS you can change the default settings of a program. It is also possible to access this submenu directly through the appropriate button on the main screen.

To modify a program, do the following:

- Select the program number to be modified;

- NAME: The name of the program will appear above the program icon.

- PROGRAM TYPE:
  - A TEMPO = the program will last a time defined by the user;
  - AUTOMATIC = the program will last a variable time depending on the desired residual moisture. See appropriate chapter.

- ICON: allows you to choose a graphic or numeric icon to distinguish the program. If a graphic icon is not selected, the program will be automatically numbered with the index number assigned and visible in this manual. Please pay attention because, if you want to change the position of the program, it will be moved to the indicated position but the identification number will remain the original one (as it is an icon).

- POSITION: allows you to choose the position in which to place the program. If the program is identified by a numeric icon, the above applies.

- MULTISTEP (only if PROGRAM TYPE = TIMED): allows you to manage several drying steps, at different temperatures, within the same program. For each step, the temperature and duration can be decided independently. The overall duration of the program is the sum of all the durations of each step.

- HEATING DURATION (only if PROGRAM TYPE = TIMED): This is the duration of the program defined by the user.

- HUMIDITY (only if PROGRAM TYPE = AUTOMATIC): allows you to select three residual moisture values from those already configured: IRON DRY (dry to be ironed) / DRY (dry to be stored) / EXTRA DRY (perfectly dry, wearable/usable immediately).

- CYCLE TEMPERATURE: This is the maximum temperature of the drying cycle

- COOLING DURATION: At the end of the time defined in HEATING DURATION, a cooling cycle is carried out (with heating off), for which the maximum duration can be defined. Default = 3 min.

- END OF COOLING TEMPERATURE: this is the temperature at which the cooling cycle must reach during its execution. Default = 40°C. If this temperature is reached before the COOLDOWN DURATION has expired, the cycle will automatically stop.

- ROTATION REVERSAL (PRESENT/ABSENT): for machines equipped with basket reversal it is still possible to exclude rotation in both directions. For machines not equipped with basket reversal, this parameter is always set to ABSENT.

- BASKET FORWARD MOVEMENT TIME: clockwise rotation time.

- BASKET MOVEMENT TIME BACKWARDS (only if ROTATION REVERSAL = PRESENT): counterclockwise rotation time.

- BASKET MOVEMENT TIME PAUSE (only if ROTATION REVERSAL = PRESENT): pause time between clockwise and counterclockwise rotation.

- INITIAL COOLING: it is possible to set an initial cooling cycle with respect to the programmed drying phase, defining its duration. During this phase, the heating will remain off.

- SPECIFIC PARAMETERS FOR SELF-SERVICE; The following parameters are only visible on machines configured for a fee. An example of programming will be dealt with in a subsequent chapter of this manual:
  - BASIC TIME ON SALE (only for self-service machines): this is the unit of time that is sold to the customer when the machine is still on stand-by, i.e. before the program is selected and started.
  - PRICE OF THE BASIC TIME ON SALE (only for self-service machines): it is the cost of the unit of time defined above.
  - INCREMENT TIME ON SALE (only for self-service machines): this is the unit of time that is sold to the customer when the machine is already in operation. It is usually a fraction of the BASE TIME defined above and corresponds to an increase in the total time of the program that the customer is using.
  - INCREMENT VALUE FOR SALE (for self-service machines only): This is the cost of the time increment defined above.

- SPECIFIC PARAMETERS FOR MACHINES EQUIPPED WITH SPEED REGULATION: the following parameters are visible only on machines equipped with a speed regulator on the basket motor or fan motor:
  - BASKET SPEED (only for machines with basket speed control): this is the rotation speed of the basket, expressed in revolutions per minute.
  - FAN SPEED (only for machines with fan speed control): this is the rotation speed of the fan, expressed in Hertz.

- PARTIALIZED POWER (only for machines with electric heating and equipped with the optional partialized power): Allows you to decide whether and how to reduce the heating power made available by the heating element. Three different heating capacities can be controlled:
    - MIN (1st set of heating elements)
    - MED (2nd set of resistors)
    - MAX (1st + 2nd set of heating elements)

31_S. PROGRAMMING: ANTI-WRINKLE

Allows you to enable, deactivate, or change the anti-wrinkle phase. By definition, the cycle promises, at the end of the drying program, to keep the laundry moving without the use of ventilation and heating. It is set by default to PRESENT and affects all programs.

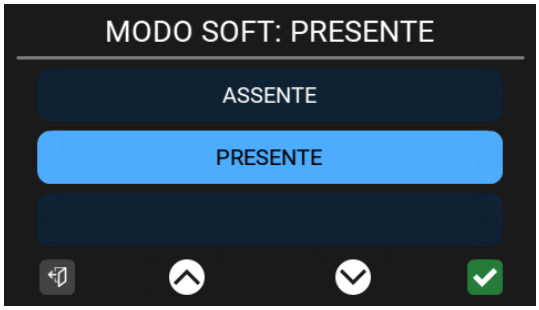
- ANTI-WRINKLES: can take on the following values:
    - PRESENT: means that the anti-wrinkle phase will be activated after the end of the cycle, if the door is not opened, according to the values defined below
    - ABSENT: means that the anti-wrinkle phase will not activate after the end of the cycle, even if the door is not opened

- END OF CYCLE PAUSE: this is the waiting time after the end of the cycle, expressed in minutes and seconds, after which the anti-wrinkle phase is activated.
- FORWARD: this is the time the basket rotates clockwise, in minutes and seconds, during the anti-wrinkle phase.
- PAUSE: this is the pause time of the drum, expressed in minutes and seconds, during the anti-wrinkle phase between clockwise and counterclockwise rotation.
- REVERSE: this is the time the basket rotates, counterclockwise, expressed in minutes and seconds, during the anti-wrinkle phase.
- MAX CYCLE TIME: it is the duration of the anti-wrinkle phase before the definitive stop of the cycle or before the door is opened.

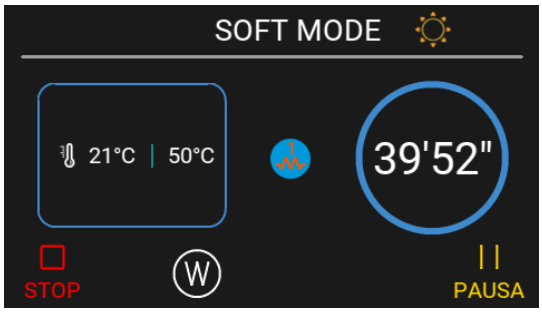
32_S. PROGRAMMING: SOFT MODE

The function can be activated individually in each programme, regardless of the type of heating of the dryer. It allows you to adjust the temperature of the hot air entering the drum, ensuring a more delicate drying for fabrics typically treated in the WET CLEANING system.
To activate log in with the user password, select CHANGE PROGRAM.

Choose the program to be converted to SOFT MODE and scroll down the parameters until you find the SOFT MODE item (default: ABSENT). Set the parameter to PRESENT. Then exit the programming menu.



To distinguish the program enabled for the SOFT MODE function from programs with traditional temperature control, the symbol will be displayed  on both the preset and operating screens:



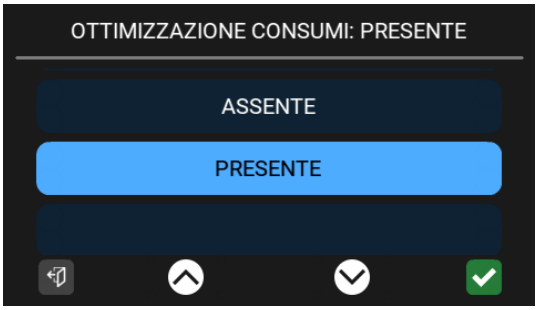
NOTE: The SOFT MODE function cannot be deactivated while the cycle is running.

33_S. PROGRAMMING: CONSUMPTION OPTIMIZATION

The function can be activated individually in each program, exclusively on machines equipped with electric heating. It allows you to reduce the waste of electricity and to moderate the over-temperature elongations when the machine reaches the set point set by the drying program.

To activate it, enter with the user password and select EDIT PROGRAM.

Choose the program on which you want to enable CONSUMPTION OPTIMIZATION and scroll down the parameters until you find the item CONSUMPTION OPTIMIZATION (default: ABSENT). Set the parameter to PRESENT. Then exit the programming menu.



To distinguish the program enabled for the CONSUMPTION OPTIMIZATION function from the programs without this function, the symbol will be displayed 

on both the preset and operating screens.

The target temperature will be reached using all the available power [fig_S_1].
When the setpoint is reached, only a part of the power will remain on for a defined and non-modifiable time. At this juncture, the temperature may continue to rise by a few degrees or fall depending on the humidity present in the clothing. When the only trio of resistors left on is turned off, the temperature will inevitably drop [fig_S_2].
The heating will be completely switched back on when the temperature drops by at least 2°C compared to the program setpoint [fig_S_3].
When the setpoint temperature is exceeded again, the optimization process will resume, until the end of the program.

[fig_S_1]

[fig_S_2]

[fig_S_3]

The FUEL OPTIMIZATION function can also be used with SOFT MODE active. It cannot be deactivated while the cycle is running.

34_S. PROGRAMMING: MACHINE WITH PAYMENT SYSTEM

For paid machines, access to programming is done by turning on the machine and pressing the three dots that appear on the top right corner of the screen. This button will only be present for 30 seconds from the machine to be turned on, after which it will disappear, effectively preventing access to the password typing page.
In the event that the machine is equipped with a payment system, there are dedicated programmable parameters, not present in standard machines, described above.
The following parameters can be reached by consulting the REGISTRATIONS menu:

- TOTAL CREDIT: adds the total credits from the day of installation of the machine.
- TOTAL CREDIT RESET: allows the TOTAL CREDIT to be reset. The action is irreversible.
- PARTIAL CREDIT: adds the total of credits in the last day (from 00:00).
- PARTIAL CREDIT RESET: allows the PARTIAL CREDIT to be reset. The action is irreversible.

35_S. PROGRAMMING: PAYMENT SYSTEM MENU

The "PAYMENT SYSTEM" menu is present only in machines equipped with a payment system and access is reserved for the maintenance technician with his own dedicated password.
The PAYMENT SYSTEM menu is located within SETTINGS only for machines already configured to self-service and consists of the following parameters:

- ACTIVATION / DEACTIVATION: allows the activation and deactivation of the payment system. If deactivated, the machine can be started without entering any credits.
- PAYMENT TYPE: allows you to select the payment system by COIN MECHANISM or by CENTRALIZED CASH.
- MONETARY UNITS: allows you to select the symbol of the currency with which the payment is made.
- CUSTOM CURRENCY: allows you to describe a currency not present in the list provided in MONETARY UNITS.
- COIN MECHANISM INPUT VALUE 1: This is the monetary value that is given to the impulse coming from the payment system intended for the first input of the acquisition of the payment at the machine's electronic board.
- COIN MECHANISM INPUT VALUE 2: This is the monetary countervalue that is given to the impulse coming from the payment system intended for the second payment acquisition input at the machine's electronic board. It is usually represented by a second coin mechanism or a second payment system alternative or complementary to the first.
- MAXIMUM PAYMENT PULSE TIME: describes the maximum duration of the pulse that is delivered to the GETTONIERA1 or GETTONIERA2 input of the machine's electronic board. If the pulse has a duration longer than set here, the control board will return the alarm "TOKEN TRAPPED".

36_S. EXAMPLE PAYMENT SETTINGS FOR A SELF-SERVICE PROGRAM

The example below is to build a typical program for self-service operation. Please interpret the values expressed below as a guide only. The selling price of the program and the subsequent time increases must be calculated according to the real market trend and the consumption of the laundry.
For the configuration of the temperature and other parameters that regulate the progress of the program, refer to the PROGRAMMING chapter.

The HIGH TEMP program has been configured as follows:

- Turn on the machine and press on the door icon at the bottom left (the maximum time to carry out this operation is 30 seconds, if necessary it will be sufficient to turn the machine off and on again to make the door icon reappear).
- Select the EDIT PROGRAMS icon and type the password: 123456.
- Select the HIGH TEMP program.

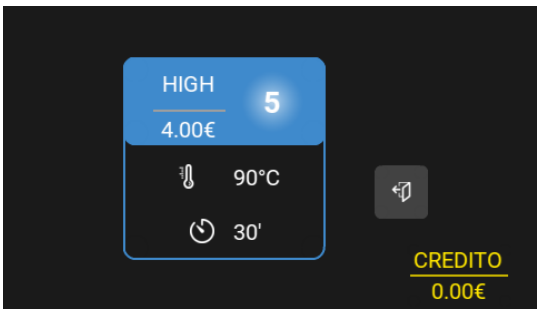
- For the sale of the program and the start of the program:
  - Set the BASE TIME ON SALE parameter to 30 min
  - Set the PRICE OF BASE TIME FOR SALE parameter to €4.00

The customer will be required to pay €4.00 to purchase 30 minutes of drying. The credit entered is visible just below the program icons. If the credit is not reached, it will not be possible to start the program.

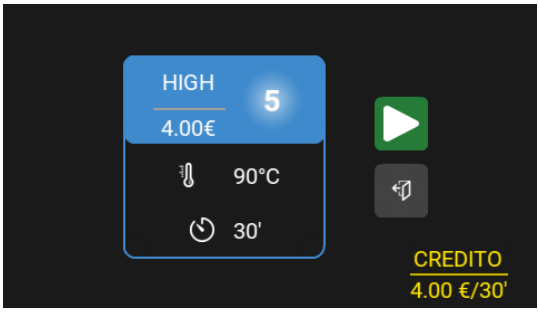
- To increment the time when the program has already started:
  - Set the INCREMENT TIME IN SALE parameter to 10 min.
  - Set the VALUE OF INCREMENT IN SALE parameter to €1.00.

That is to say that while the program is already in progress, it is possible to perform time increments of 10 minutes by entering €1.00.

If you press on the icon of the program, when the payment has not yet been made, you get the following summary screen:



Once the payment has been made, it will be possible to press the START button to start the cycle.



When the cycle is running, the screen appears as follows:

To increase the time, enter the additional credit until the value set to VALUE INCREASE IN SALE is reached. As soon as the credit is reached, the remaining time will be added to the time described in the parameter VALUE INCREASE IN SALE.

Any added credit that does not reach the minimum amount for the increase will still be kept in memory until the end of the cycle.

At the end of the cycle, at the end of the CREDIT RESET TIME (default = 5 min), any remaining credit will be reset. The parameter can be reached on SETTINGS after entering the 123456 password.

If the drying cycle is already completed, the customer will be required to pay the initial sales price again.

37_S. PROGRAM TYPE: AUTOMATIC – CYCLE CONTROL BY RESIDUAL HUMIDITY

For machines equipped with a humidity sensor, the cycle duration can be automatically controlled based on the achievement of the desired residual moisture level.
Three drying levels are available, preset by the manufacturer:

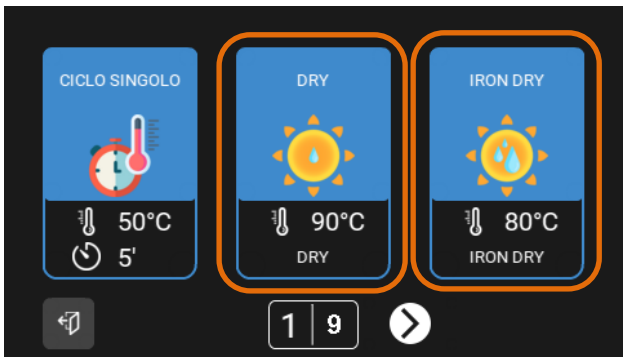
- IRON DRY: ideal for preparing laundry for the next ironing. The garments will still be slightly damp to the touch.
- DRY: dry to store. The laundry will come out almost completely dry, ready to be folded and arranged.
- EXTRA DRY: dry to wear. The garments will come out perfectly dry, ready to be used.

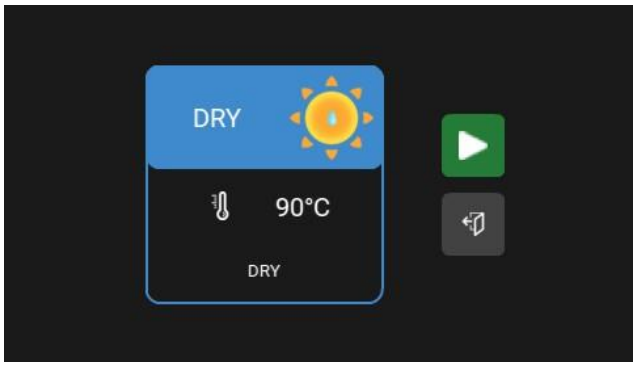
To create/edit a program with the automatic operation method, enter programming with the user password and select EDIT PROGRAM:

Select an existing program or create a new one. Scroll down and select PROGRAM TYPE. Select AUTOMATIC.

Then select the level of residual moisture you want to obtain at the end of the cycle.

Automatic programs differ from timed programs because the selected degree of humidity appears below the running temperature. The program name and icon can be customized.





The duration of the cycle can vary, as it depends not only on the initial humidity of the fabrics, but also on the degree of filling of the basket and external factors such as temperature and ambient humidity.
To optimize the efficiency of the automatic cycle, it is recommended to load at least 50% of the capacity of the machine. In addition, automatic cycles cannot be started at temperatures below 45°C. The SOFT heating mode is not selectable in automatic cycles, but it is still possible to select the OPTIMIZED heating for machines with electric heating.

During an automatic cycle run, if you press the PAUSE button or open the door, the cycle is temporarily suspended and can resume from the point where it was interrupted. On the other hand, if you press the STOP button or turn off the machine, you will have to start the cycle again from the beginning.

The maximum drying time for an automatic cycle is 180 minutes.

WARNING!

Set the most appropriate temperature according to the type of fabric to be treated.

It is important to differentiate fabrics correctly, selecting them according to their type. Avoid mixed loads containing synthetic and natural fabrics at the same time.

Only treat super-spinning fabrics that have reached a G factor ≥ 300. Short or low-speed spins do not guarantee optimal results.

Thanks to advanced programming, you can adjust the desired degree of humidity for each drying level. For further details, we recommend that you contact your dealer.

38_S. SIGNALS ON THE DISPLAY

The microprocessor provides complete diagnostics both in the event of malfunctions and in the case of simple signals.
Below is the list of signals that may appear on the display. In any case, the user is invited to contact an authorized service center for the solution of the problem occurred.
Please note that the activation of each of the following signals is accompanied by the intermittent and continuous sound of the buzzer.

- CLOSED AIR PRESSURE SWITCH:

It may appear if the pressure switch is closed at START. This situation occurs if you try to start the cycle while the vacuum is still running. It also appears if the air pressure switch breaks down. It can also appear when there is already an air flow in the exhaust duct driven by another machine. Have an authorized service center call in.

- PRESSURE SWITCH ALARM:

Appears if there is a problem installing the wet air exhaust. However, check the correct direction of rotation of the main fan, this alarm can also be caused by a switched electrical connection.
It can also be caused by clogging the filter, in this case turn off the machine, open the lower door and clean the filter: do not use sharp or pointed objects so as not to puncture or ruin it. Please note that the machine at the end of a series of operating cycles publishes the invitation to keep the filter clean.

- THERMAL FAN MOTOR:

Appears if the fan motor overheats. Switch off the machine and have an authorised technical service centre call in.

- DRUM ENGINE THERMAL:

Appears if the drum motor overheats. Switch off the machine and have an authorised technical service centre call in.

- EMBEDDED TOKEN:

It only appears on machines equipped with a payment system. It means that the payment signal from the coin mechanism or payment centre has been stuck inside the coin mechanism for more than 5 seconds. Check the configuration of the payment system and possibly request the intervention of an authorized technical assistance center.
The alarm may also appear in the event that the coin freeze occurs during the execution of the program in the case of purchasing additional minutes of work. In this case, the program is still completed, even if the alarm is left on the display. If the coin mechanism is unlocked, the alarm is automatically reset.

- PROBE FAILURE:

Appears if the temperature probe breakage occurs. The message continues to remain published on the display for the entire remaining duration of the cycle together with the operation of the fan and the basket. The heating will remain off until the probe is restored.
Have an authorized service center call in.

- GAS CONTROL UNIT BLOCK

For gas machines only, this signal may appear. With this indication on the display, the machine continues to work, but the heating system is blocked and waiting for a reset.

To restart the heating press the RESET button.
Check if the gas tap has been opened. If the report is repeated frequently, request a check from an authorized technical assistance center.

- OVERTEMPERATURE

If the temperature inside the drum exceeds the set point by 30°C, the flashing "OVERTEMPERATURE" message appears on the display.
In this case, the heating is suspended until the temperature falls below the signal threshold.

WARNING!

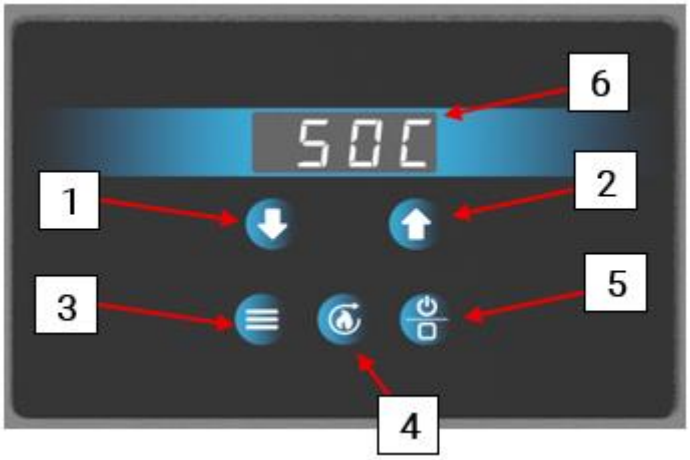
In this situation, the vacuum cleaner continues to work and the drum to turn, to proceed with the cooling of the laundry.
If the report is repeated frequently, request a check from an authorized technical assistance center.

- CARRY OUT MAINTENANCE

When the number of hours scheduled for maintenance is reached, the machine does not stop. However, the following screen "CARRY OUT" appears on the display at the first power off and subsequent power on.
The signal is deleted by pressing any button and the machine starts again without further signals. Routine maintenance must be requested from an authorized technical assistance center.

39_E. USE OF THE EASY VERSION

Here is what the EASY version of the machine keyboard looks like:



1) "↓ DOWN ARROW": decrement value key
2) "↑ UP ARROW": value increment key
3) "≡ MENU": button for selecting drying parameters
4) "GAS": button to reset the gas control unit (only for machines with gas heating)
5) "START/STOP": button for START/PAUSE/STOP drying cycle
6) DIGIT DISPLAY

Switch on the machine by turning the main switch, described in the previous paragraph, to the "I" (ON) position.
Make sure that the emergency button is in the home position, and that it has not been activated during transport or before the machine was last switched off.
Always carry out the safety check procedures before starting the machine.
For all machine loading/unloading information and warnings, use the same ones already listed for the machine in the SMART version.

When switched on, the display shows the software revision installed on board for 5 seconds; Displays the actual temperature in the drum for 2 seconds.

Immediately afterwards the program "P01" is displayed:

While a program is displayed, pressing the "≡ MENU" button can display the characteristics of the program (temperature and drying time).

After selecting the desired program, press the " START/STOP" button: the cycle is started.
During the cycle execution, the display alternates between the number of the selected program and the countdown of the remaining time (for example, program01, remaining time 31 minutes):

By pressing the "≡ MENU" button you can view, in order:
- the temperature inside the basket
- The set temperature set point
- The time remaining until the end of the cycle

When the heating is switched on, it is indicated by a dot appearing in the lower right corner of the screen.

FOR GAS HEATING ONLY: if the gas control unit does not detect the ignition of the flame in the burner, the "AL1" alarm will appear on the screen alternating with the word "rGAS", accompanied by an acoustic signal.
Press the " GAS" button to reset the control unit and proceed with a new burner ignition phase.

At the end of the cycle, the machine autonomously provides a cooling phase lasting 3 minutes.

During the cooling phase, the display with the program number alternates the countdown (e.g. 1 minute):

At the end of the cooling cycle, the word "END" appears on the display and a beep sounds for 20 seconds.

During operation, you can pause the cycle by opening the door or pressing the "START/STOP" button.
To stop the cycle, press the "START/STOP" button for more than 3 seconds. A beep will signal the end of the program, as described above.

40_E. USE OF EASY COIN OP VERSION

In the paid version, the EASY machine provides the customer with three programs that can be selected using the "↓ DOWN ARROW" and "↑ UP ARROW" keys and they are: HIGH, MEDIUM, LOW
While waiting for payment, the word "CoIn" remains on the display.
Once the payment has been made, the available programs will be displayed, which can be started via the "START/STOP" button.
To pause the program, open the door and keep it open. A signal will appear on the screen showing "door" alternating with "FILt", indicating the opening of either the door or the filter compartment.
To end the pause, close the door of the dryer and press the "START/STOP" button.
When the machine closes, it will resume activity.
To end the programme, open the door and press the "START/STOP" button for more than 3 seconds.
WARNING: if a pause is taken, the program time will NOT stop, but will continue to flow as if the pause were not active.
If the machine is configured with central speaker preparation, the busy machine signal is picked up by the fan activation and is a 230 VAC signal.

41_E. PROGRAMS IN MEMORY

The dryer has 10 preset programs.
For the P01 program only, the temperature and drying time can be changed both before the cycle starts and during the cycle run.
To change the parameters, once the P01 program has been selected, press the "≡ MENU" button. The drying temperature will be displayed that can be changed using the "↓ DOWN ARROW" and "↑ UP ARROW" buttons. If you press the "≡ MENU" button again, the drying time of the cycle will be displayed, which can be changed as for the temperature.
The list of available programs is shown below:

STANDARD CONFIGURATION		DRYING		COOLING	
PROG.	TYPE	°C	Min.	°C	Min.
P01	TIMED	80	20	40	3
P02	TIMED	70	20	40	3
P03	TIMED	80	20	40	3
P04	TIMED	75	25	40	3
P05	TIMED	70	30	40	3
P06	TIMED	70	45	40	3

STANDARD CONFIGURATION		DRYING		COOLING	
PROG.	TYPE	°C	Min.	°C	Min.
P07	TIMED	60	15	40	3
P08	TIMED	60	25	40	3
P09	TIMED	50	10	40	3
P10	TIMED	40	12	40	3

COIN OP CONFIGURATION		DRYING		COOLING	
PROG.	TYPE	°C	Min.	°C	Min.
HIGH	TIMED	70	20	40	3
MED	TIMED	55	20	40	3
LOW	TIMED	35	20	40	3

Programs 02 to 10 in the standard version cannot be modified.
The parameters of the cycles in coin op configuration can be reprogrammed from the USER menu (see the related paragraph).

42_E. ACCESSING THE USER MENU

To access the user menu, turn the machine off and on again (wait until the digit screen turns off completely).
When switching on again, press and hold the "↓ DOWN ARROW" and "START/STOP" buttons.

"PASS" will appear.

Press the following keys in sequence: "↓ DOWN ARROW", "↑ UP ARROW", "≡ MENU" and "START/STOP". The signal of the successful press of the key is made by the appearance of a character " - ". After entering the

password, the text "SYS" will appear.

The settings menu is composed as follows:

- SYS: System Parameters
- CYC: drying cycle parameters
- END: Exit the menu

To enter a parameter submenu, parameter values, or confirm a change, press the "START/STOP" button.
To change the parameters or scroll through the various items, press the "↓ DOWN ARROW" or "↑ UP ARROW" button.
To go back or not store the change of a parameter, press the "≡ MENU" button.

SYS – SYSTEM PARAMETERS

The system parameters are:
- SF00: Buzzer time at the end of the cycle
  - Default: 20 seconds
  - Value range: 5-30 seconds
- SF01: Temperature measurement unit
  - Default: [°C]
  - Selectable values: [°C], [°F]
- SF02: Heating offset temperature. Indicates the degrees of temperature below the setpoint for which the machine should activate heating.
  - Default: 4 °C
  - Value range: 0-15 °C
- END: Return to the main menu

CYC – DRYING CYCLE PARAMETERS

Standard version
The parameters of the programs can be changed by selecting the desired cycle:
- CP01: Parameters related to the P01 program
- CP02: Parameters related to the P02 program
- …
- CP10: Parameters related to the P10 program

COIN OP version
The parameters of the programs can be changed by selecting the desired cycle:
- HIGH: parameters related to the HIGH program
- MEd: Parameters related to the MED program
- Lou: parameters related to the LOW program

The customizable parameters of the programs are:
- CF00: Temperature Setpoint
  - Default: see next table (characteristic value of the program)
  - Value range: 20-90 °C
- CF01: Drying cycle duration time
  - Default: see next table (characteristic value of the program)
  - Value range: 1-99 minutes
- CF02: Basket rotation time
  - Default: 24 s
  - Value range: 15-250 s
- CF03: Basket rotation pause time
  - Default: 6 s
  - Value range: 0-20 s
- END: Return to the cycle programming menu

43_E. DISPLAY SIGNALS
The microprocessor provides complete diagnostics both in the event of malfunctions and in the case of simple signals.
Below is the list of signals that may appear on the display. In any case, the user is invited to contact an authorized service center for the solution of the problem occurred.

"AL0":
The temperature inside the basket is below 0°C (this can happen if the installation is done in very cold environments) or the temperature probe is faulty. If the alarm appears when the cycle is in progress, the heating is turned off while the fan and drum continue to rotate.

"AL1 rGAS":
It appears on the display when it is necessary to reset the flame control unit: first check that the gas supply hose is open. If it occurs frequently, request the intervention of qualified technical assistance to check the correctness of the type of gas, its pressure and flow rate, and the good efficiency of the smoke evacuation system
"CLn":
It appears on the display when the air intake is insufficient: it is necessary to carry out a filter cleaning or have the flue cleaning checked. During the first installation, it may be necessary to check the correct direction of rotation of the fan or the correct sizing of the flue according to the maximum head provided for in the technical data sheet.
"door/FILt":
You are trying to start a cycle while the door or filter is open: close both and try to start the cycle again.
"AL6":
Message displayed when the pressure switch detects the presence of air outflow at the exhaust before starting the machine.
The condition can be caused by excessive draft or abnormal variations in the flow due, for example, to the ignition of other devices connected to the same pipe.

44. USING THE EMERGENCY BUTTON

In the event of an emergency and the need to stop the machine quickly, press the emergency button (if present) located on one side of the front of the machine
When the emergency button is pressed, the grass collector stops, and the machine switches off.
When the emergency has been resolved, reset the emergency button, turning it according to the instructions on the button.
Stop Category 0: Shutdown by immediate interruption of power to the machine actuators.
The E-stop button is not a disconnecting device and does not completely shut down the machinery.

Equipment used in self-service environments does not have an emergency button. The installer must supply and install an emergency stop device located remotely and connected to each machine.

45. WHAT TO DO IN CASE OF A POWER FAILURE

In the event that the power supply fails, it is possible that one or more items inside the drum may burn out. In this case, open the door and unload the basket while leaving the door open.
When the power supply is restored, the programmer remembers which phase has been interrupted and invites you to restart it by pressing "START/STOP". Reload the machine and close the door again: the cycle will then resume where it was interrupted.
In addition, you can exit by pressing the "START/STOP" button to select a program again.

46. WHAT TO DO IF YOU SMELL GAS

In the event that a smell of gas can be perceived in the environment where the dryer is installed:
- stop the execution of the program immediately;
- open all doors and windows immediately;
- immediately close the valve or gate valve upstream of the machine and the main manifold;
- do not light lights, matches, lighters;
- do not smoke;

Finally, call the installer to verify the origin of the gas leak.

47. MAINTENANCE OF THE DRYER

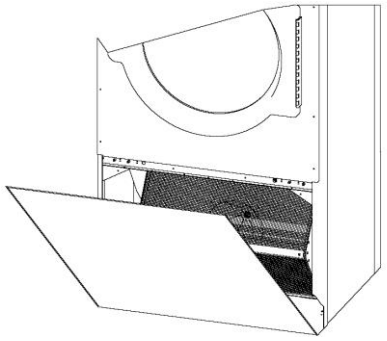
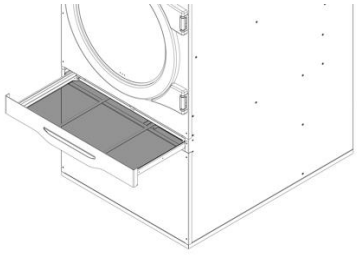
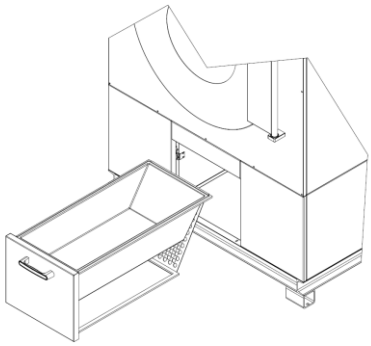
 WARNING!

There is a risk of injury or damage to the equipment.
Any extraordinary maintenance work must be carried out by the maintenance technician.
Cleaning and maintenance of the product may not be carried out by children even if they are supervised by an adult.
Make sure that all power supplies are disconnected before performing any maintenance.

Padlock the rear interlocked switch.
Do not spray water or steam for cleaning.
Ordinary and extraordinary maintenance is reported with the scheduled cadences.
Do not allow lint to accumulate around the tumble dryer.
For daily cleaning, use a soft, damp cloth. Do not use abrasive products, scouring pads, solvents or metal objects.

- AT EACH CYCLE (by the format/manager user)

At the end of each drying cycle, clean the machine filter of any accumulated fluff.

- To clean the filter, open the filter door or (in some models) pull the drawer, and access the filter compartment
- For models with door access, the filter does not need to be removed from its housing
- For models with drawer access, empty the bag filter, taking care not to damage the mesh

In all models, impurities must be removed from the filter with your hands: do not use sharp or pointed objects!

WARNING!
Never operate the dryer without the fluff filter. Replace the filter immediately if it becomes damaged.

- EVERY WEEK (by the format/manager user)

Check the cleaning condition of the drum – make sure there are no deposits. Make sure that there is no gluing of nylon seams, buttons or anything else that could damage the garments.
Check the integrity of the door seal.

WARNING!
Do not use a high-pressure cleaner or a continuous water jet to clean the drum. The basket should be cleaned with a soft, dry cloth.

- EVERY THREE MONTHS (by the maintenance technician)

Check the cleanliness of the intake fan. Check the cleanliness of the cooling fans of the basket and fan motors. Check the cleaning conditions of the air inlet filter at the exchanger (if present).

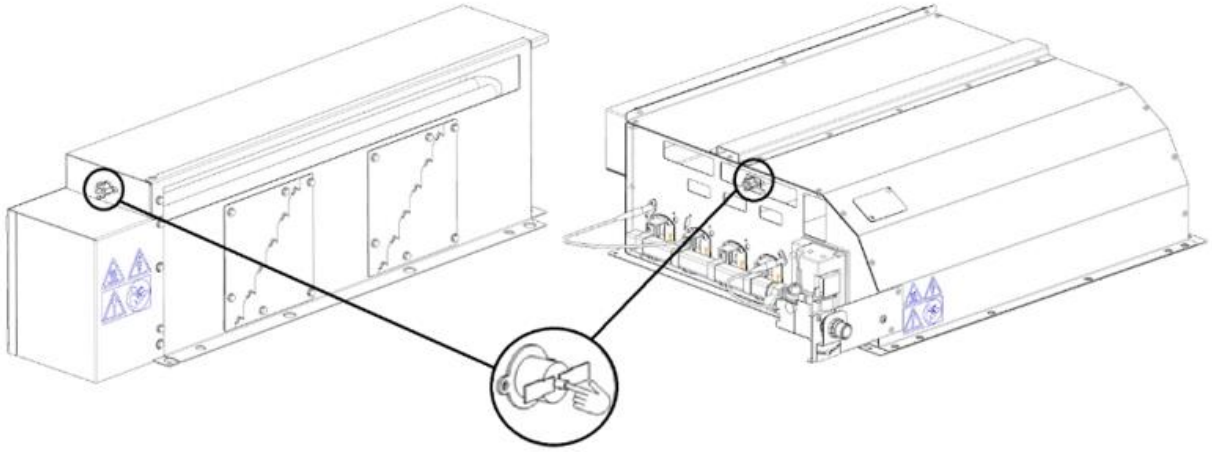
- EVERY YEAR (by the maintenance technician)

An authorised technical assistance centre must be consulted to perform:
- cleaning the burner or heating elements from dust, fluff and deposited impurities
- cleaning the internal compartment of the dryer
- Leak testing of the pneumatic circuit
- The gas ramp leak check

WARNING!
Cleaning the machine is extremely important. The accumulation of fluff could generate the risk of developing a fire!

- IF NECESSARY (by the trained user/manager or maintainer)

If the temperature inside the heating unit reaches too high, the safety thermostat stops the heating system from working: the drum continues to rotate but the heating system remains deactivated. The thermostatic tablet has manual reset, it is necessary to turn off the machine, turn off all power supplies, remove the rear guard located at the top of the dryer and press the brown button located close to the tablet itself.



If the problem should recur, switch off the machine, remove all power supplies and contact the manufacturer's after-sales service.

WARNING!

In the case of tilting machines, before starting any maintenance, make sure that the air circuit is completely unloaded and no movements of the pneumatic drives can occur, even in the absence of a power supply.
When servicing some drives in a non-rest position, be sure to mechanically and safely lock the pneumatic drives.

WARNING!

All extraordinary maintenance operations must be carried out only after disconnecting all power supplies (electrical, steam, gas, air). Any tests to be carried out after maintenance should only be carried out after all guards have been reassembled and secured.
For gas-powered machines, before carrying out maintenance, it is necessary to carry out the reclamation of the gas supply duct, described in the appropriate chapter below.
For steam engines, before carrying out maintenance, it is necessary to wait for the heating unit to cool down and the condensate to drain. Follow the recommendations as described in the chapter on steam connection.

RISK OF HOT SURFACES

The area of intervention can reach high temperatures. Before accessing or performing any operation, wait for the machine to cool down and be sure to wear the appropriate personal protective equipment for heat protection.

48. EXTRAORDINARY MAINTENANCE ON GAS-FIRED MACHINES: RECLAMATION OF BURNERS

The procedure described below must be carried out whenever it is necessary to carry out extraordinary maintenance on a machine equipped with a gas heating system. The aim is to eliminate any residual gas inside the machine and from the pipe that leads from the main valve upstream of the plant to the connection point of the machinery.
The operations to be carried out are summarized below:

a) Close the shut-off valve of the gas system or branch to which the machine is connected
b) Check the line pressure gauge for the presence of gas: the pressure gauge must be placed downstream of the shut-off valve that has just been disconnected.

c) Start the machine by selecting a 90°C cycle and wait for the "GAS CONTROL UNIT LOCK" error to appear, then press RESET to perform a further washing of the pipe and wait for the same error to reappear.
d) Check that the pressure gauge signals the lack of pressure in the gas line to which the machine is connected.
e) Turn off the machine by disconnecting the electrical supply.
f) It is now possible to carry out extraordinary maintenance.

49. DRYING PROBLEMS

In case there are poor results in the dried fabrics, check the following table.

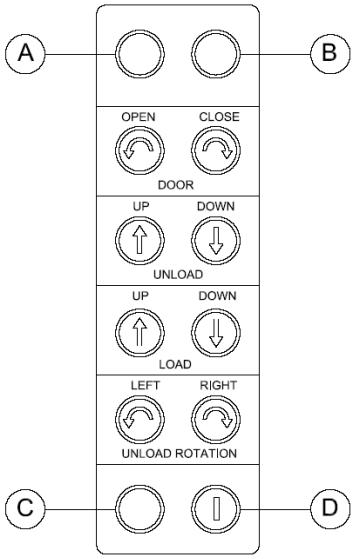
PROBLEM detected	Probable SOLUTION
The fabrics come out with yellowish spots.	Check that the rinses performed with the washing machine are thorough and completely eliminate detergent residues. The PH must be between 5 and 6.
The fabrics come out yellowed.	Check that the drying temperature is compatible with the temperatures expected for the fabric: it is possible that the drying temperature is too high
The fabrics come out still wet.	Check the selected temperature: it may be too low. Check the humid air extractor: a clog could limit its efficiency Check the load – it may be too much and not let the airflow pass through the laundry.
The fabrics come out hardened.	Check the temperature of the cycle, especially in the case of pure linen fabrics. If the temperature is too high, the fabric tends to harden.
The fabrics come out felted.	Check garment labels and compliance for use in dryers: especially for wool and wool blend garments. Avoid complete drying in this case.
The basket has scratches. Some fabrics come out ruined, torn.	Some metal elements such as buckles, hooks, fasteners must be wrapped in a cloth before drying, in order to protect the drum from damage such as scratches or bumps, which could in turn damage the garments

50. USE OF THE TILTING MACHINE

The following clarifications must be added to the description of the previous paragraphs, if the machine is equipped with a system for tilting the basket forward and/or backward. In this case, the commands are managed via a remote push-button panel.


WARNING!

When the machine is tilting, or equipped with a pneumatic door opening, the operator must stay out of reach of the machine and the door, using the appropriate remote control shown below.



Always wait for a program to end before tilting. The use of the hand control is enabled or disabled by operating the key switch (D).
When the hand control is active, the machine's microprocessor is deactivated. The activation of the push-button panel is indicated by the green light (A) coming on.

LOADING OPERATIONS (for machines that provide it)
Operate the key switch to activate the hand control. Open the door by pressing the enable button (bottom left) and the "DOOR OPEN" button at the same time. When the door is fully opened, turn the machine backwards by pressing the enable button (C) and the "LOAD UP" button at the same time. When the loading operation is completed, return the machine to a horizontal position by pressing the enable button (C) and the "LOAD DOWN" button at the same time.
Finally, close the door by pressing the enable button (C) and the "CLOSE DOOR" button at the same time. Turn off the hand control by operating the key switch (D).

UNLOADING OPERATIONS
Operate the key switch (D) to activate the hand control. Open the door by pressing the enable button (C) and the "DOOR OPEN" button at the same time. When the door opening is complete, tilt forward by pressing the enable button (C) and the "UNLOAD DOWN" button at the same time. When the machine is in the unloading position, it is possible to facilitate the exit of the laundry by rotating the drum slowly (to the right and/or left) by pressing the enable button (C) and the "UNLOAD ROTATION" BUTTON (RIGHT and/or LEFT) at the same time. When the unloading operation is complete, return the machine to a horizontal position by pressing the enable button (bottom left) and the "UNLOAD UP" button at the same time. Close the door by pressing the enable button (C) and the "CLOSE DOOR" button at the same time. Finally, deactivate the hand control by pressing the key switch at the bottom right.

51. PROCEDURE FOR THE INSPECTION OF SAFETY DEVICES

WARNING!
After switching on the machine and before starting work, it is always necessary to check that all safety devices are working perfectly.
The user must always scrupulously carry out the following procedure:

Sequence of ACTIONS	CONSEQUENT REACTIONS
Start a cycle and open the door	The machine must stop and pause.

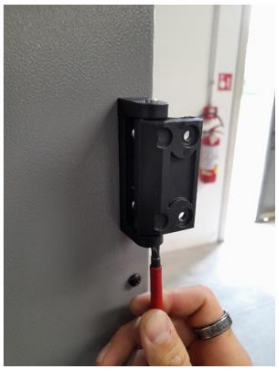
Sequence of ACTIONS	CONSEQUENT REACTIONS
Start a cycle and open the filter door	The machine must stop and pause.
Operate (if present) the emergency button	The grass collector must stop and the machine must switch off.
Just given power supply	The machine must remain in standby waiting for a command (drum stopped, fan and heating deactivated)

52. DOOR ROTATION

For machines that provide it, it is possible to rotate the door by 180° using the following procedure.
Remove the door (1): remove the door hinge screws (2) with a torx key.
Remove the hinge pin by pressing down with a screwdriver from underneath (3).
Remove the hinge fastening screws to the front of the machine (4).


(1)


(2)

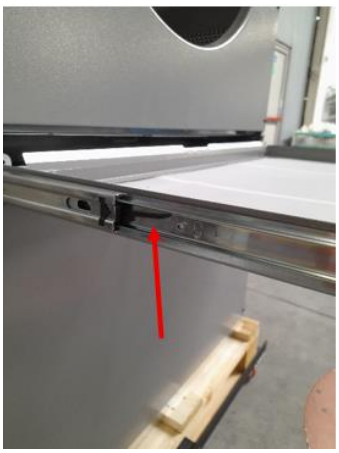

(3)


(4)

Where present, remove the filter drawer (5) by pressing the right plastic lever downwards (6) and the left lever upwards (7). Remove the drawer from the slides.

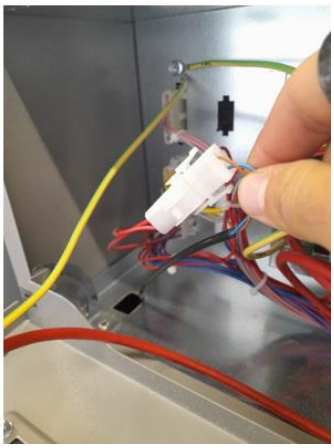

(5)

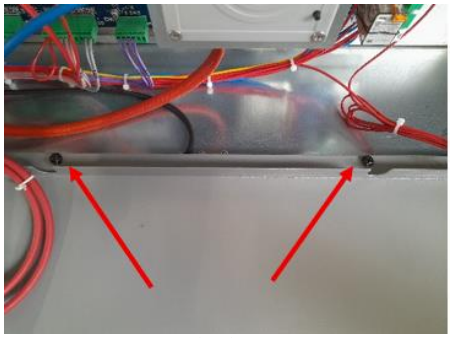

(6)


(7)

Unscrew the 4 screws on the upper front and open the panel (8).
Disconnect from the two-way plug on the left side of the electrical panel. Feed the face sensor plug into the cable entry hole (9).
Remove the two upper fixing screws of the front of the machine (10).


(8)


(9)


(10)

Remove the machine front fixing screws (11) and remove the face.
On the right side of the machine, near the drawer (12), is a 2-way connector with a bridge (13). Remove the connector with the bridge and connect it to the upper front of the machine (14).


(11)


(12)


(13)


(14)

Connect the door sensor cable to the plug where the bridge (15) was removed.
Reassemble the front of the machine, rotated 180°, by tightening the screws previously removed (16).
Fit the hinges of the door (17): pay attention to the reverse! The smaller hole (18) must be facing downwards!


(15)


(16)


(17)


(18)

Fit the hinges of the door hinges (19).
Secure the door in place by tightening the hinge screws (20).
Close the top panel of the machine with the screws removed earlier (21).
Secure the sensor wiring harness with cable ties to the red sheathed harness above the filter drawer on the right side of the machine (22).
Finally, refit the filter drawer into place.


(19)


(20)


(21)


(22)

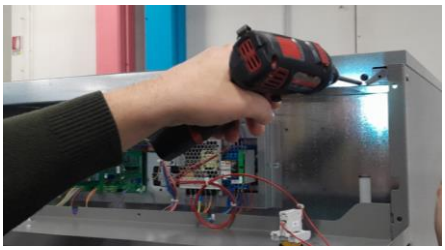
53. FROM "METHANE" VERSION TO "LPG" VERSION

The machines in the "gas" version are delivered configured to work with the contribution of methane gas (or natural gas), according to the supply conditions indicated in the appropriate paragraph.
An envelope containing the nozzles, gaskets and the "LPG/GLP" adhesive sticker is supplied with the documentation to carry out the conversion.
To convert the machine to LPG gas operation, according to the data provided in the appropriate paragraph, it is necessary to carry out the procedure described below.
The necessary tools are: screwdriver, 12mm wrench.
Remove the upper peak (1) and the upper backrest (2)


(1)


(2)

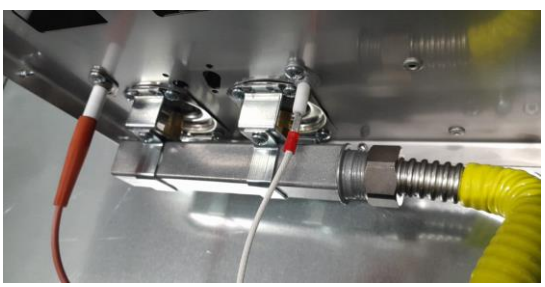
Remove the screws that lock the cover on the front (3) and rear (4) of the machine (3). Remove the cover (5).

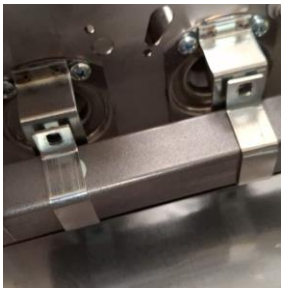

(3)


(4)


(5)

Identify the gas ramp on which you are going to act (6). Disconnect the ignition and flame detection cables so that you can work more comfortably (7). Unscrew the brackets that hold the ramp to the battery (8).





(6) (7) (8)

Pull out the ramp and view the gas injectors (9). Unscrew the nozzles from the ramp together with the aluminium seals (10). Prepare the replacement nozzles with the pre-assembled aluminium seal (11).

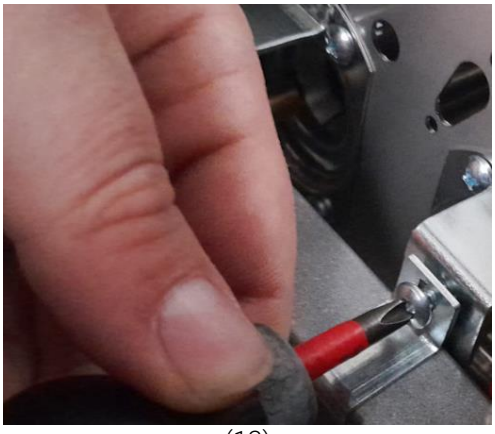

(9)

(10)


(11)

Finally, reassemble the ramp (12), screw the locking brackets back on (13), reconnect the cables (14)


(12)


(13)


(14)

After closing the lid, backrest and peak, apply the sticker that identifies the change in the gas type supply (15)

(15)

When the operations are completed, check that there are no gas leaks, the correct delivery pressure with the machine and stopped and the machine running (according to the procedure described in the appropriate paragraphs).

54. SCRAPPING

When the life cycle of the machine is completed, proceed with scrapping according to current regulations, separating the metal parts from the plastic parts, glass parts, electrical/electronic parts.
Pursuant to Article 13 of Legislative Decree no. 151 of 25 July 2005 "*Implementation of Directives 2002/95/EC, 2002/96/EC and 2003/108/EC, relating to the reduction of the use of hazardous substances in electrical and electronic equipment, as well as to the disposal of waste*"

The crossed-out wheeled bin symbol on the appliance or its packaging indicates that the product at the end of its useful life must be collected separately from other waste.
The separate collection of this equipment at the end of its life is organized and managed by the manufacturer. The user who wants to get rid of this equipment must therefore contact the manufacturer and follow the system that the latter has adopted to allow the separate collection of the equipment that has reached the end of its life. Adequate separate collection for the subsequent recycling, treatment and environmentally compatible disposal of the discarded equipment helps to avoid possible negative effects on the environment and health and promotes the reuse and/or recycling of the materials of which the equipment is composed.
The illegal disposal of the product by the holder involves the application of the penalties provided for by current legislation.

WARNING!

If the machine is put into disuse, before disposal, make the closure of the door unusable, so that no one can lock themselves inside at the risk of their life.

Unplug the power cord and dispose of it.

55. WARRANTY CONDITIONS

For warranty conditions, please refer to the manufacturer's price list or the signed sales contract.

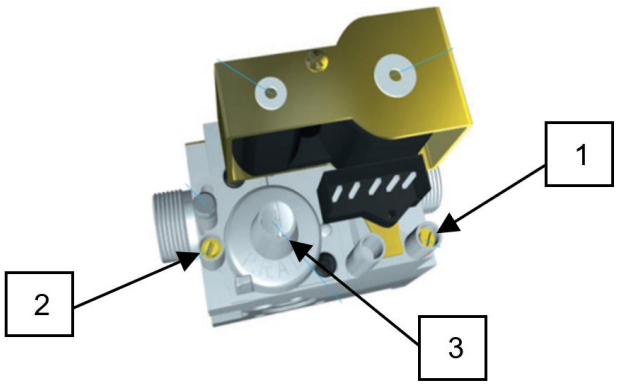
WARNING!

In order to take advantage of the manufacturer's warranty, the instructions contained in the manual itself must be scrupulously observed and in particular:

- always operate within the limits of use of the machine;
- always carry out constant and diligent maintenance;
- Allow the use of the machine to duly informed and/or instructed personnel;
- Use only original spare parts specified by the manufacturer.

56. GAS PRESSURE DATA

For gas machines only, the nominal pressure values and nozzle dimensions are shown below.
Below are the indications for any pressure checks using a pressure gauge:



1) Inlet Pressure Tap: Indicates the supply pressure.

2) outlet pressure tap: indicates the pressure at the burner.
3) pressure regulator.


WARNING!

Loose security screws for pressure measurement MUST ABSOLUTELY be retightened once the measurement has been performed.

TABLE COUNTRY - CATEGORIES - NOMINAL PRESSURE - MINIMUM and MAXIMUM pressure at valve inlet, pos. 1					
Category	Country	Gas	Pressure rating	Maximum pressure	Minimum pressure
			[mbar]	[mbar]	[mbar]
II2H3B/P	AL, BA, BG, HR, MK, UA	G20	20	20	17
II2H3B/P	DK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RO				
I2H	NO			25	
I2E	LU, PL				
I2EK	NL				
II2H3+	ES, GB, GR, IE, IT, PT, SK				
I2Er	FR, BE				
II2ELL3B/P	DE				18
II2H3B/P	AT, CH				
I2H	HU			33	
I2L	NL	G25	25	30	20
I2Er	FR, BE				
II2ELL3B/P	DE		20	25	18
I2EK	NL	G25.3	25	30	20
I3B/P	CY, MT, NL, NO, HU	G30/G31	28-30	35	25
II2H3B/P	AL, BA, BG, HR, MK, UA				
II2H3B/P	DK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RO				
I3B/P	PL		37	45	
II2H3B/P	AT, CH		50	57,5	42,5
II2ELL3B/P	DE				
I3+	LU, FR, BE		28-30/37	35	25
II2H3+	ES, GB, GR, IE, IT, PT, SK			35/45	20/25

11/14/18 kg std.

GAS TYPE	COUNTRIES	PRESSURE IN [mbar]	NOZZLE	Qn [kW]	NOTES
G20	IT-UK	20	260	23,5	No diaphragms
G20	H	25	245	23,5	No diaphragms
G25	DE	20	285	23,5	No diaphragms
G25.3	NL	25	265	23,5	No diaphragms
G30	IT-UK	29	160	21	2 diaphragms 11x57
G30	PL	37*	160	21	2 diaphragms 11x57
G30	CH-A-DE	50*	160	21	2 diaphragms 11x57

23/26 kg std.

GAS TYPE	COUNTRIES	PRESSURE IN [mbar]	NOZZLE	Qn [kW]	NOTES
G20	IT-UK	20	245	32	2 diaphragms 11x57
G20	H	25	230	32	2 diaphragms 11x57
G25	DE	20	270	32	2 diaphragms 11x57
G25.3	NL	25	255	32	2 diaphragms 11x57
G30	IT-UK	29	165	32	2 diaphragms 11x57
G30	PL	37*	165	32	2 diaphragms 11x57
G30	CH-A-DE	50*	165	32	2 diaphragms 11x57

32/36 kg std.

GAS TYPE	COUNTRIES	PRESSURE IN [mbar]	NOZZLE	Qn [kW]	NOTES
G20	IT-UK	20	245	42	2 diaphragms 11x57
G20	H	25	230	42	2 diaphragms 11x57
G25	DE	20	270	42	2 diaphragms 11x57
G25.3	NL	25	255	42	2 diaphragms 11x57
G30	IT-UK	29	165	42	2 diaphragms 11x57
G30	PL	37*	165	42	2 diaphragms 11x57
G30	CH-A-DE	50*	165	42	2 diaphragms 11x57

11/14/18 kg (reduced power)

GAS TYPE	COUNTRIES	PRESSURE IN [mbar]	NOZZLE	Qn [kW]	NOTES
G20	IT-UK	20	240	11	2 diaphragms 11x57
G30	IT-UK	29	160	11	2 diaphragms 11x57

23/26 kg (reduced power)

GAS TYPE	COUNTRIES	PRESSURE IN [mbar]	NOZZLE	Qn [kW]	NOTES
G20	IT-UK	20	245	23	2 diaphragms 11x57
G30	IT-UK	29	165	23	2 diaphragms 11x57

32/36 kg (reduced power)

GAS TYPE	COUNTRIES	PRESSURE IN [mbar]	NOZZLE	Qn [kW]	NOTES
G20	IT-UK	20	245	34	2 diaphragms 11x57
G30	IT-UK	29	165	34	2 diaphragms 11x57

55 Kg	COUNTRIES	Nozzle pressure[mbar]	Nozzle diameter1/100	Primary diaphragm	Secondary diaphragm	Power [kW]
G20	AL, BA, BG, HR, MK, UA DK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RO NO LU, PL NL ES, GB, GR, IE, IT, PT, SK FR, BE DE AT, CH HU	15,5	405	YES	NO	105
G25	NL FR, BE DE	15,5	405	NO	NO	105
G25.3	NL	15,5	405	NO	NO	105
G30/31	CY, MT, NL, NO, HU AL, BA, BG, HR, MK, UA DK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RO PL AT, CH DE	27	255	NO	YES	105
G30/31	LU, FR, BE ES, GB, GR, IE, IT, PT, SK	27*	255	NO	YES	105
* = pressure regulator not used; Fully screwed screw						

75 Kg	COUNTRIES	Nozzle pressure[mbar]	Nozzle diameter1/100	Primary diaphragm	Secondary diaphragm	PowerkW
G20	AL, BA, BG, HR, MK, UA DK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RO NO LU, PL NL ES, GB, GR, IE, IT, PT, SK FR, BE DE AT, CH HU	13	500	NO	NO	135
G25	NL FR, BE DE	13	500	NO	NO	110
G25.3	NL	13	500	NO	NO	110
G30/31	CY, MT, NL, NO, HU AL, BA, BG, HR, MK, UA DK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RO PL AT, CH DE	27	300	NO	YES	140
G30/31	LU, FR, BE ES, GB, GR, IE, IT, PT, SK	27*	300	NO	YES	140
* = pressure regulator not used; Fully screwed screw						

57. REPORT OF CORRECT INSTALLATION AND COMMISSIONING OF THE MACHINERY

This declaration must be kept together with this manual and shown at any request from the authorities or the manufacturer. It constitutes proof of the correct installation of the machinery. Failure to complete or partial completion of this document exempts the manufacturer from any responsibility for the correct functioning of the machinery and its safe use by the user:

A. USER COMPANY DATA

Corporate name: _____
Registered office: _____
VAT / Tax Code: _____
Company contact person: _____
Phone/Email: _____

B. SUPPLIER/INSTALLER DETAILS

Corporate name: _____
Registered office: _____
VAT / Tax Code: _____
Technical contact: _____
Phone/Email: _____

C. MACHINE DATA

Denomination: _____
Brand / Model: _____
Serial number: _____
Year of construction: _____
Installation Location: _____

D. INSTALLATION STATEMENT

The undersigned _____, as an authorized technician/installer of the company _____, declares that on _____ the installation of the above-mentioned machinery was completed at the premises of the user company, as required (mark with ✓):

☐ by the manufacturer's instructions.
☐ by the territorial legislative provisions regarding the correct construction of the electrical system that powers the machinery.
☐ by the territorial legislative provisions regarding the correct construction of the gas supply system
(only for machines that provide connection to a gas supply system)
☐ by the territorial legislative provisions regarding the correct construction of the steam supply system
(only for machines that provide connection to a steam supply system).

E. TEST RESULTS

☐ The machine has been correctly installed.
☐ Electrical/pneumatic/hydraulic connections have been verified.
☐ The safety devices are functional.
☐ The supporting technical documentation and the CE Declaration were delivered to the user.
☐ The personnel in charge of the use have been trained.

F. OBSERVATIONS / NOTES

_____
_____

G. SIGNATURES

Company manager in charge of the installation:

Name: _____
Signature: _____
Date: _____

User company manager:

Name: _____
Signature: _____
Date: _____