



MOD : DSR154/33A-TS/N

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CALENDERS

INSTRUCTIONS FOR USE MAINTENANCE AND INSTALLATION

TRANSLATION OF THE ORIGINAL INSTRUCTIONS
KEEP FOR FUTURE REFERENCE

SERVICE INDEX:02

- DSR154/33A-TS/N
- DSR188/33A-TS/N
- DSR207/33A-TS/N



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

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1. CONTENTS OF THE MANUAL

This manual is dedicated to the description of the use, maintenance and installation of industrial ironing machines for flat linen called calenders. 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 appliance: therefore they must be kept and accompany the appliance, even in the event 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.



ATTENTION!

The manufacturer declines all responsibility for possible inaccuracies contained in this manual due to printing or transcription or translation 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



ATTENTION!

Risk of suffocation, permanent injury or disability!

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

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 the European standards of the sector. Repairs carried out incorrectly may seriously endanger the safety of the user.

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

The intended use of the calenders described here is the professional ironing of flat linen: any other intended use is therefore prohibited unless it has been previously authorized in writing by the manufacturer.

Never put your hands between the lower chute and the roller with the machine on or when the machine is still hot.

Objects other than ironing must not be placed in the machine.

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

Do not approach or iron fabrics soaked in combustibles or flammable substances, including oils and greases, with this machine to avoid the risk of fire and explosion.

Always follow the ironing instructions on each item of laundry with great care.

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

Do not allow children to play with the equipment.

Keep packaging materials out of the reach of children.

Keep detergents or ironing chemicals out of the reach of children.

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

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

IMPORTANT WARNINGS



DANGER OF CRUSHING

It is forbidden to work with the side doors open or with the machine guards removed!

It is forbidden to insert your hands under the roller, even when the machine is stationary!

In order to avoid burns or crushing of the limbs, it is absolutely forbidden to remove the protective panels and safety systems, even temporarily!

Always check that the safety devices are working correctly every time the machine is started! At each start-up, carry out the control procedure indicated in the relevant paragraph.

It is mandatory to know the operation of the machine and its emergency systems!

The operator, when introducing the fabric into the machine, must not accompany it under the hand protection bar. The fabric must be flattened on the entrance board, where any wrinkles or folds must be removed. Then the fabric must be accompanied on the roller that will drag it into the heating bed.

It is strictly forbidden to iron fabrics folded in several layers or several layers of overlapping fabric.

It is forbidden to introduce bars, splints or metal objects between the ironing trough and the roller. In case of emergency, always carry out the procedures described below.



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 upper edge of the conch during tissue insertion;
- From contact with the basin following its opening;
- From contact with the trough during maintenance operations carried out "hot";
- From contact with the extracted tissues after being trapped between the cylinder and the heating bed;

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 OR IN THE EVENT OF ENTRAPMENT: CHECK THE POSITION OF THE RELEASE SYSTEMS!

**ELECTROCUTION HAZARD**

Any work on the electrical parts of the machine must only be carried out by qualified personnel and after the power supply to the machine has been removed.

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.

**ATTENTION**

Even when the position of the main switch is "0", the cables upstream of the switch are live!

**PSYCHOPHYSICAL CONDITIONS OF THE OPERATOR**

The operator in charge 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 ironed, 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 operating the machine, the operator should not be distracted by televisions, radios, etc., or be subject to any other source of distraction.

**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.

**ATTENTION!**

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.
- use of the machine other than fabric labeling

4. TRANSPORT AND UNPACKING

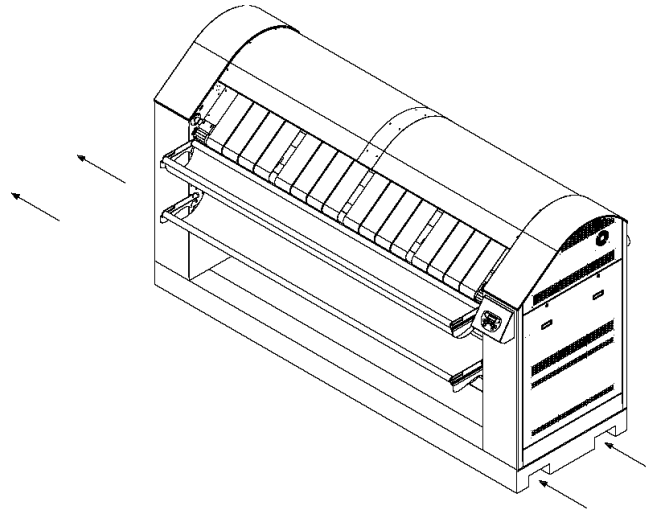
During transport, and any storage, the equipment must remain within the following environmental conditions:

- Temperature: $-25^{\circ}\text{C} \div 55^{\circ}\text{C}$
- Humidity: $0\% \div 90\%$ (non-condensing)

It is recommended to check the machine upon receipt, taking care to report to the carrier any damage caused, during transport, both to the internal components and to the external bodywork.

4a. TRANSPORT AND UNPACKING mod. MCM

Until the installation site is reached, the ironer can also be moved in the direction of its length, using two manual forklifts as shown in the image below.



ATTENTION!

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

To lower the calender from the pallet:

- Open both side doors with the wrench provided.
- Remove the pallet fastening bolts, visible at the base of the right and left shoulder of the machine, with a wrench
- pass the forks of the forklift over the dedicated attachments. (taking care to avoid scratching the paint)
- Lift the machine with the forklift: remove the pallet from underneath and position the machine:



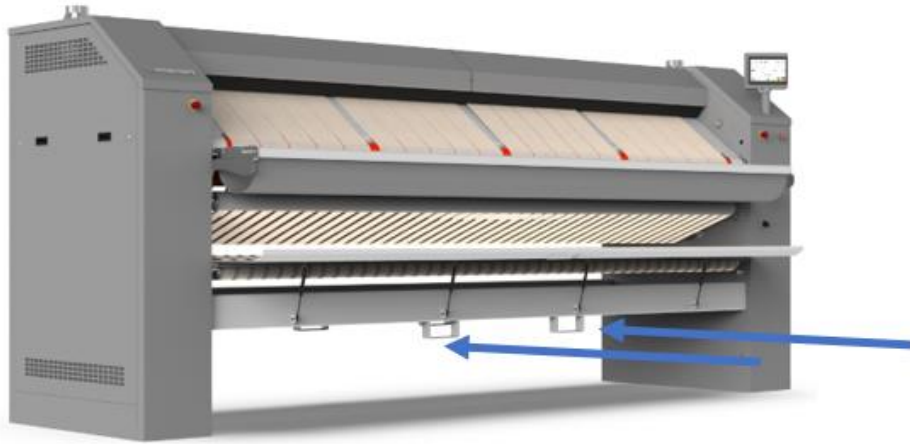
ATTENTION!

In case lifting straps are used, make sure that they do not touch the feed rollers while the ironer is being lifted or moved!



ATTENTION!

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.

**ATTENTION!**

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.

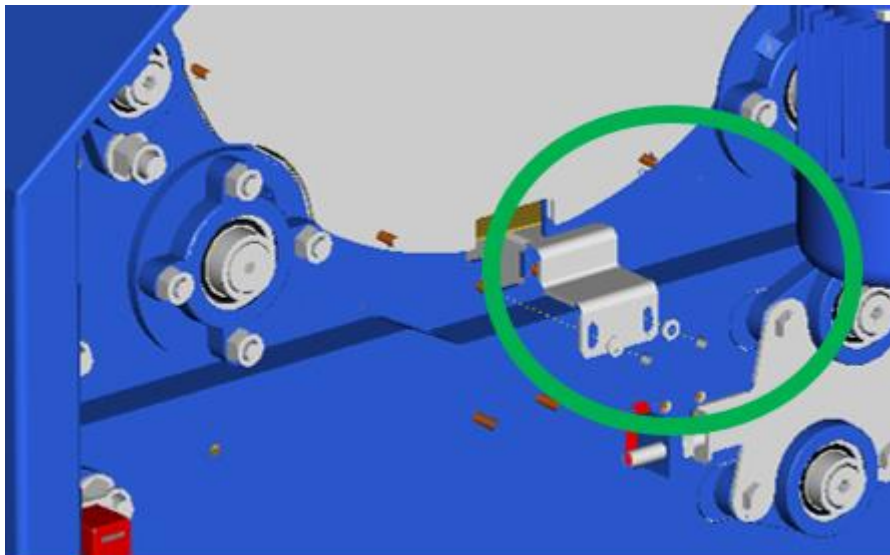
The machine must finally be completely unpacked.

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.

**ATTENTION!**

Remove the transport clamps carefully following the instructions inside the machine side. Pallets and clamps should be stored in case the ironer needs to be moved in the future.



Complete the positioning of the machine by mounting the following parts:

- Laundry drip trays
- Front and rear exit tables (only for machines equipped with folding system)
- touch screen (only for machines equipped with a folding system)
-

**ATTENTION!**

Handle the touch screen carefully during all unpacking, assembly and connection operations!

4b. TRANSPORT AND UNPACKING mod. MCA

Until the installation site is reached, the calender must be used using the pallet on which it is delivered.

The machine must be completely unpacked.

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.

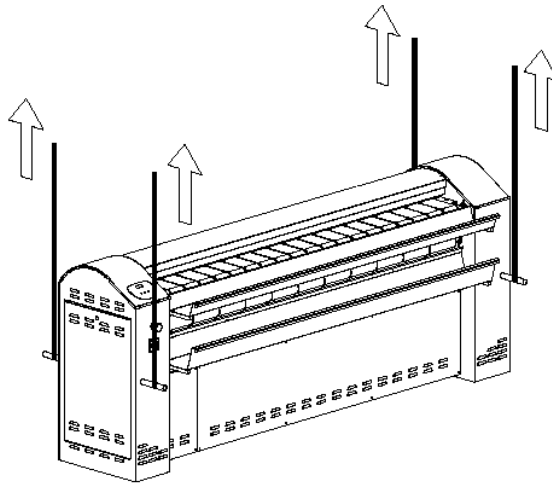


ATTENTION!

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

To lower the calender from the pallet:

- Open both side doors with the wrench provided.
- Remove the pallet fastening bolts, visible at the base of the right and left shoulder of the machine, with a wrench
- unscrew the caps from the shoulders to pass bars suitably sized for lifting (the caps will be reassembled when the operation is completed):



- Lift the machine: Pull the pallet out from underneath and position the machine:



ATTENTION!

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.



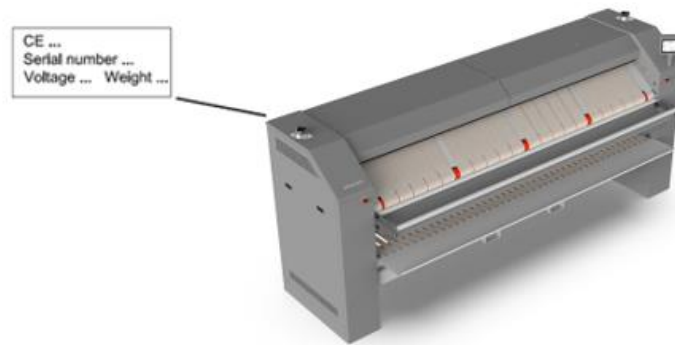
ATTENTION!

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.

Complete the positioning of the machine by fitting the upper and lower laundry collection trays

5. MACHINE IDENTIFICATION

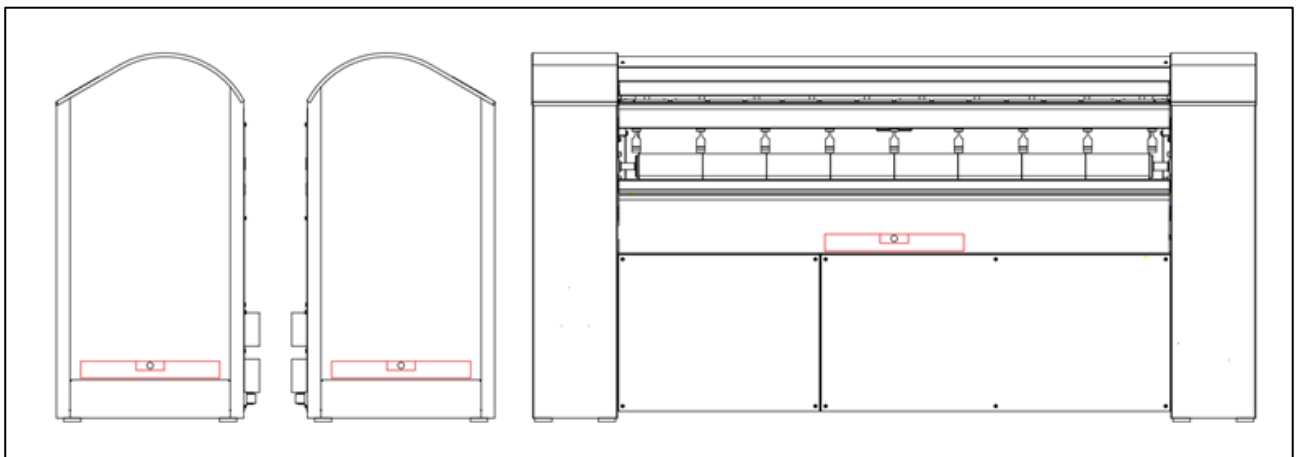
The equipment can be identified by an adhesive plate bearing the serial number, model, power and technical characteristics. Spare parts and/or interventions presuppose the exact identification of the model for which they are intended.



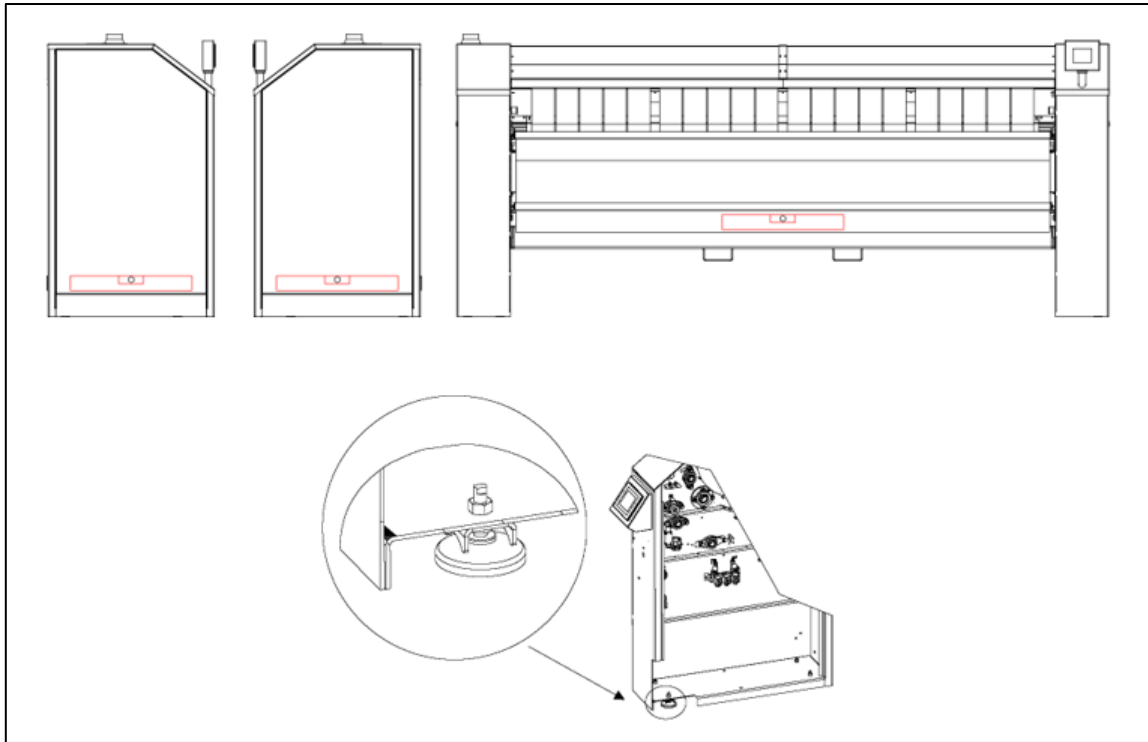
Tampering, removal, lack of identification plates or anything else that does not allow the safe identification of the machine, makes any installation and maintenance operation difficult and automatically voids the warranty. Calenders are intended exclusively for ironing fabrics and are intended for the professional and industrial sector.

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 of the hips. The feet are adjusted from the outside, screwing or unscrewing them until they reach level positioning.



MCA



MCM

Check that the floor capacity is compatible with the weight of the machine which can be detected from the attached data sheet. The load of the machine can be considered totally static. Make sure the floor is clean and heat-resistant.

For proper use, operation, and maintenance, leave a clearance of at least 500 mm around the machine. The ambient temperature should be between +5°C and +40°C and the relative humidity should be 50%. The environment in which the machine is installed must have sufficient air exchange.

The degree of protection is IP24.

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

Correct operation is guaranteed up to altitudes of 1000 m above sea level.



ATTENTION!

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

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

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



ATTENTION!

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

7. INFORMATION ON NOISE EMISSION

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

8. ELECTRICAL CONNECTION



ATTENTION!

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 $\pm 10\%$, frequency tolerance $\pm 1\text{Hz}$).

The license plate data is visible on the rear of the machine. For the connection, use a cable of the type H05 VV – F or higher, sized according to the data on the nameplate. 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.



ATTENTION!

Provide electrical protection by means of a type B RCD interrupting device (sensitive to the average current value).

Make sure that the main switch of the system is in the "0" (OFF) position when connecting the machine.

Open the left side door using the key that is delivered with the machine documentation.

Remove the door by rotating it at the base.

Feed the power cord through the strain relief located inside the shoulder of the machine.

Depending on the type of power supply provided on the machine's rating plate, connect the wires, with the help of the tip of a screwdriver, to the terminals (or poles of the disconnecter) marked as follows:



: Ground Clamp

L1, L2, L3: Phase connections

N: Neutral connection

When installing or replacing the power cable, the earth conductor must be at least 5 cm longer than the others.

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 carrying out any maintenance operation, disconnect the power supply: for maintenance, refer to the machine's wiring diagram, inserted in the left side door or available on the manufacturer's website.

The cross-sections for power cables expressed in mm² are as follows:

Mod.	GAS/STEAM		ELECTRIC	
	3ph230V	3PH400V	3ph230V	3PH400V
1500	6 mm ²	2.5 mm ²	16 mm ²	10 mm ²
1800	6 mm ²	2.5 mm ²	16 mm ²	10 mm ²
2100	6 mm ²	2.5 mm ²	16 mm ²	10 mm ²
2500	6 mm ²	2.5 mm ²	50 mm ²	25 mm ²
2800	6 mm ²	2.5 mm ²	50 mm ²	25 mm ²
3200	6 mm ²	2.5 mm ²	50 mm ²	25 mm ²



ATTENTION!

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.



ATTENTION!

Even when the position of the main switch is "0", the cables upstream of the switch are live!



ATTENTION!

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.



ATTENTION!

After making the electrical connection, check the correct direction of rotation of the air and smoke intake fans. If necessary, swap the position of two feeding phases.



ATTENTION!

In case the machine is heated by gas, please check the correct phase and neutral position. Incorrect connection causes the ionization sensor to be detected missing.

9. HUMID AIR EXHAUST DUCT

The humid air exhaust duct must be made in accordance with current regulations.

The drain duct can have a maximum linear length of 15 meters and must be equipped with a condensate collection system, in order to prevent water from returning to the vacuum cleaner.

To avoid spillage of humid air and noise, the exhaust joints from the machine to the outside must be made hermetic, with materials (grouts, mastics, silicone preparations) resistant to high temperatures.

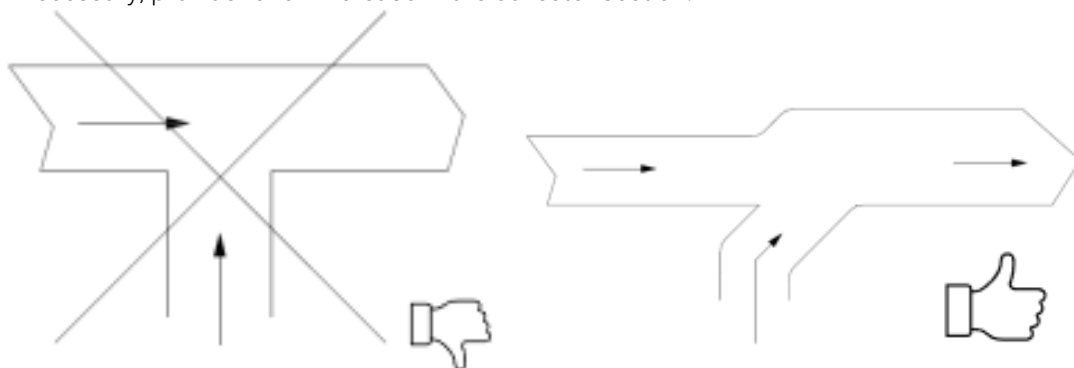
To avoid pressure drops, avoid the use of spiral ducts: therefore use smooth and rigid metal pipes. The material used must be compatible with the discharge temperatures of the machine.

To reduce pressure drops, avoid 90° bends, preferring two 45° bends.

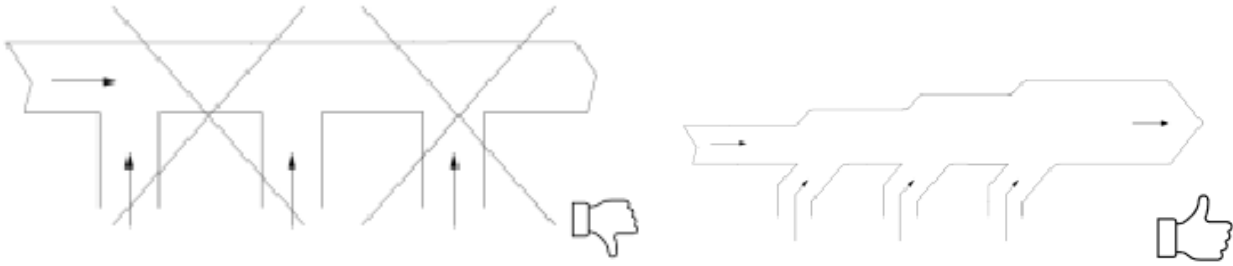
A steam trap shall be provided at the lowest point and the diversion of this trap shall comply with local regulations for the connection to the water drain.

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 exhaust manifold for several calenders cannot be shared with other types of machinery, even more so it cannot be shared with the exhaust fumes from gas combustion.



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



ATTENTION!

Do not insert your hands, objects into the drain.
Only the moist air evacuation chimney must be connected to this connection.

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.



ATTENTION!

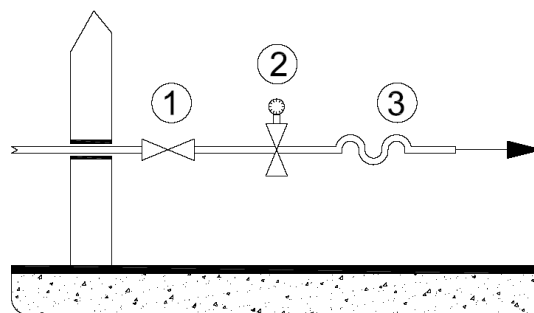
Please note that the maximum pressure for the gas valve is 50mbar. The gas supply even for a short time at higher pressures can damage the valve.

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.

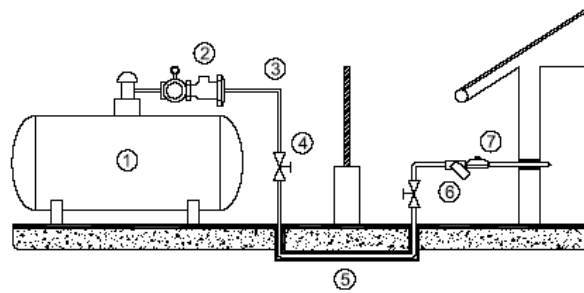
A minimum pressure switch (2) must also be provided.

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.



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.

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.



ATTENTION!

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 (last pages).

14. GAS CONNECTION: TESTING

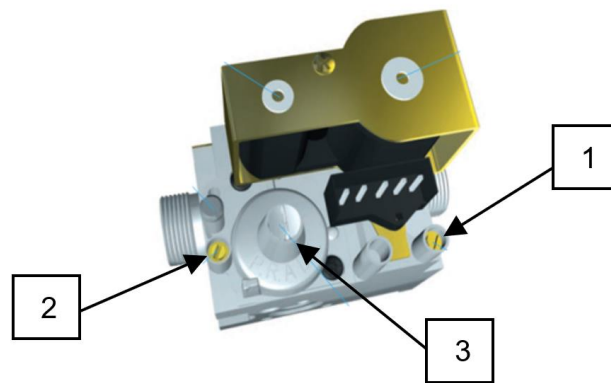
As soon as the connection work is completed, the device and the entire installation must be checked. In particular, check:

- 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.

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.



ATTENTION!

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

15. GAS CONNECTION: FLUE GAS EXHAUST DUCT

The smoke exhaust duct must be made in accordance with current regulations.

To prevent fumes from escaping, the exhaust joints from the machine to the outside must be made airtight, with materials (grouts, mastics, silicone preparations) 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.

Flue gases must be conducted outdoors through the chimney.

The flue gas line, 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.

**ATTENTION!**

The manifold for multiple machines cannot be made for gas machines.

**ATTENTION!**

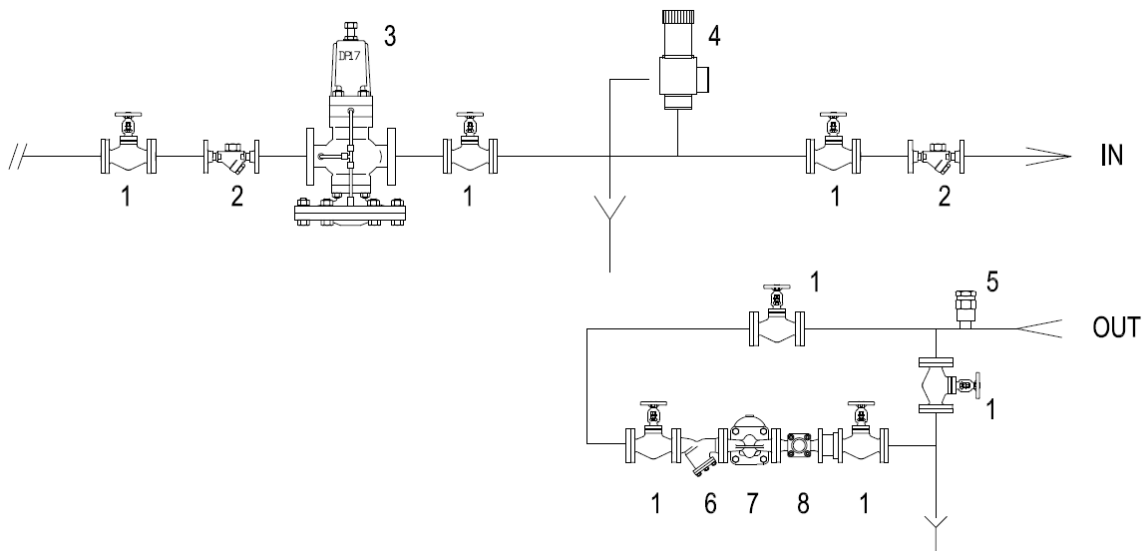
Do not insert your hands, objects into the drain.

Only the smoke evacuation 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

**ATTENTION!**

For the safety valve to be efficient, it must be sized to meet the maximum flow rate of the steam supply line.

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

**ATTENTION!**

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, we recommend having a minimum steam pressure of 5bar.



ATTENTION!

The shut-off valve (1) must be opened slowly in order to minimise the effects of water hammer.



ATTENTION!

The steam line **MUST NOT** be shut off by electric or pneumatic valves for regulating the temperature of the machinery.



ATTENTION!

Do not touch the steam inlet and outlet pipes!

17. "PED" INSTRUCTIONS FOR STEAM ROLLERS (MCM only)

In the steam-heated ironer, the roller is subject to the European Community Directive 2014/68 on pressurized equipment, usually called PED, because the cylinder is a category IV pressure vessel.

Each roller is CE marked to confirm that it has been assessed for compliance: a metal label explains its characteristics (as well as the corrosion top thickness value) and serial number. This label is attached to a side cover of the roller.

Roller mounting is handled by the manufacturer.

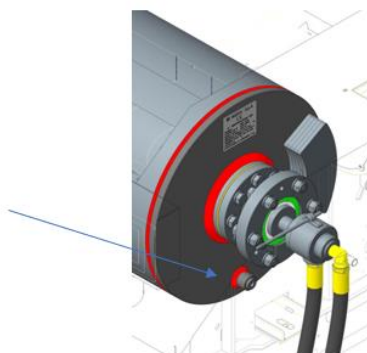


ATTENTION!

Starting the roller is the responsibility of the installer. The installer must apply for approval.
Safety devices are not included in the scope of delivery of the machine.

It is necessary to remember that:

- The maximum working pressure of the roller is 12 bar
- The entire system must be equipped with a safety valve, which must be sized with respect to the to the entire system in which the ironer is installed: the installer is responsible for starting the valve and maintaining the safety valve. Hazardous situations must be avoided by providing appropriate safety equipment.
- The installer must provide a proper control system to check for any operating problems immediately.
- The installer must check whether gases or vapours in the installation room can cause fires if they are to come into contact with the heated surface.
- Every two years, check the inner surface of the roller for corrosion. The fiber optic camera can be inserted using the air hole of the roller, as shown in the image below:



- Referring to any opening of a locking device, change the seal, if necessary, after opening: check for damage on the contact surface of the seal.
- The installer must provide adequate tools to avoid the hazards caused by the air intake and exhaust obstacles.
- Each connection should be secured using suitable locking elements and controllers each year.
- At the beginning of the work shift, the pressure must gradually increase, the steam must be opened slowly (see the relevant paragraph)
- During the long resting period, the outer surface of the roller must be protected from rust with suitable substances



ATTENTION!

The programmed service life of the roller is 10 years: after this time, the machine must be re-qualified.

Hazards can be caused by:

- Steam leaks due to the breakage of torques: these losses are contained inside the machine. Following any steam melts, all power to the machine must be cut off and proper maintenance must be performed.
- At the end of the roller's life, pairs can cause steam melts. This loosening may occur near the sides of the machine. If this occurs, stop the machine and check whether the roller needs to be changed.

18. COMPRESSED AIR CONNECTION (MCM only)

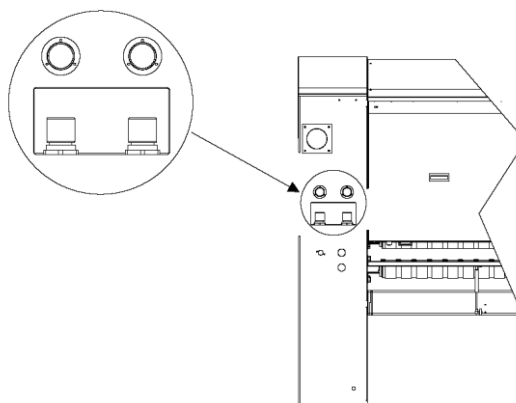
Connection to the compressed air system is only necessary for certain machine models: check the technical data. The system must be carried out by professionally qualified personnel and must meet the requirements of current local and national standards and/or regulations.

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.

The compressed air supplying the circuit must have the following specifications:

- Minimum pressure: 6 bar
- Default air-blown pressure: 2.9 bar
- Air connection: 12mm quick connection
- Condensate outlet: 6mm quick connection
- Minimum flow rate: 12,000 litres/h

At the end, close the side panels, start the machine and using the two pressure gauges on the back check the correct air pressure.



ATTENTION:

The adjustment of the air pressure depends on the weight of the fabrics that need to be ironed and folded. The heavier the fabric, the higher the air blowing pressure you need.

The air pressure adjustment for the first and second fold is different. For the first fold, in fact, the weight to be moved is double!

19. USING THE EMERGENCY BUTTON

In case of emergency and need to stop the machine quickly, press one of the emergency mushrooms on the sides of the machine.

When the emergency mushroom is pressed, the ironing roller stops.

When the emergency has been resolved, reset the emergency mushroom by rotating it according to the instructions on the mushroom itself.

Press the SAFETY RESET button to re-enable the operation of the machine.

Category 1 Stop: Controlled shutdown with power available for actuators to achieve shutdown and then power removal when shutdown is reached.

20. WHAT TO DO IN CASE OF ENTRAPMENT

In the event of an emergency, such as limb entrapment, the emergency crank can be used to rotate the roller manually and in the opposite direction to that in which the laundry is introduced.

The crank is stored on the backrest of the machine and must be inserted (after rotating the yellow rotating cover) until the roller motor shaft engages.



ATTENTION!

It is important that the Laundry Manager is aware of the unlocking procedures listed above and that he or she ensures that the personnel who will use the machine are aware of the dangers of the machine and are familiar with the emergency procedures.

Periodic tests should be carried out on the personnel using the machine to ensure that the procedures have been correctly understood.

21. WHAT TO DO IN THE EVENT OF A BLACKOUT

In the event of an emergency, such as a blackout, you can use the emergency crank to turn the roller manually and in the same direction as the laundry.

The crank is stored on the backrest of the machine and must be inserted (after rotating the yellow rotating cover) until the roller motor shaft engages.

To avoid the risk of fire, continue to rotate the roller manually until any fabrics left inside the machine are ejected.



ATTENTION!

If the roller temperature is high (above 80°C), continue to insert wet fabrics along the entire length of the roller, and continue to rotate the roller by hand, to avoid burning the ironing bands.



ATTENTION!

To ensure that all personnel using the machine have a thorough understanding of the procedure for freeing a trapped limb, perform six-month drills to verify proper understanding of the procedure.

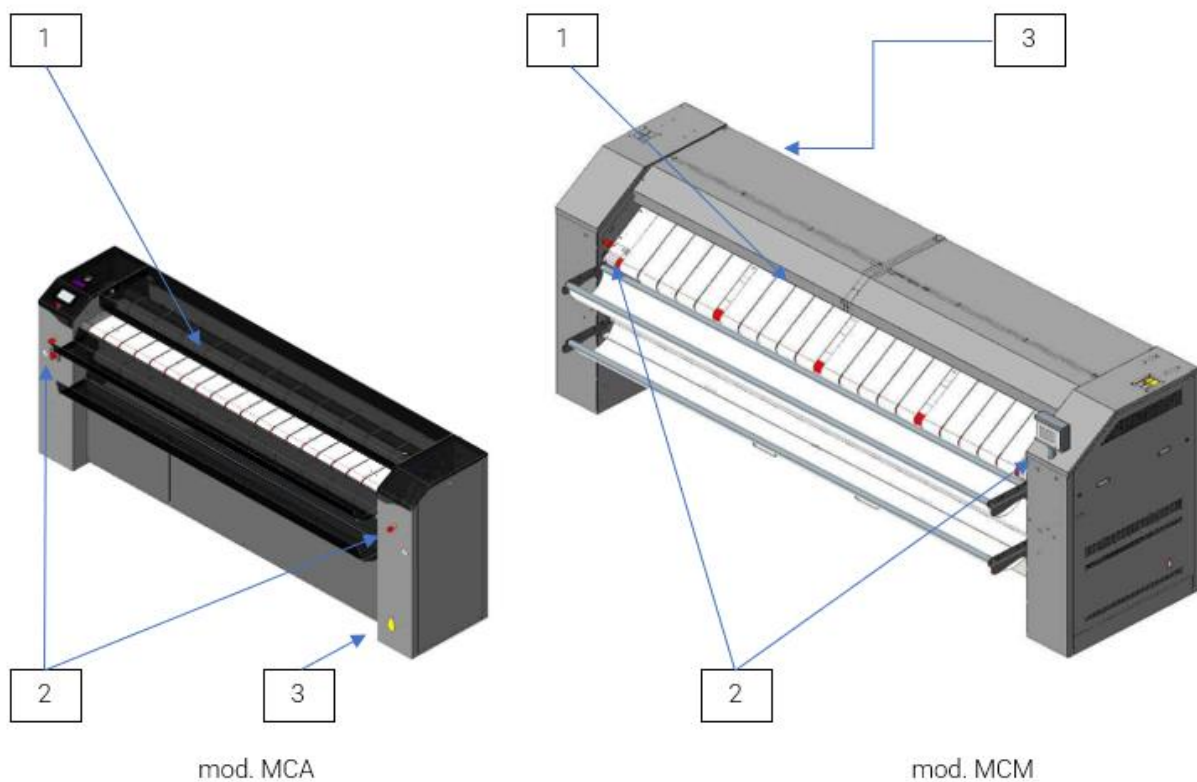
22. VERIFICATION OF SAFETY SYSTEMS

After switching on the machine and before starting work, it is always necessary to check that the safety devices are working properly. The operator must perform the following procedure each time the machine is started.

ACTION to be performed		REACTION to be achieved
Press the ON/OFF button on the digital keypad ...	→	... the cylinder MUST begin rotating.
Press the ON/OFF button on the digital keypad ...		... the cylinder MUST stop rotating.

ACTION to be performed		REACTION to be achieved
Start the rotation of the roller: push the handguard bar. Repeat the operation of pushing the handguard bar in at least three points: in the center and 50 cm from the right end and from the left end ...	→	... in all three tests, the home trainer MUST stop: the SAFETY RESET button MUST be on.
Start the roller rotation: alternatively try the emergency mushrooms ...	→	... the home trainer MUST stop: the SAFETY RESET button MUST light up.
Move the yellow cover to insert the emergency crank ...	→	... The SAFETY RESET button MUST light up.

Once the preliminary operations to check the efficiency of the safety systems have been completed, the ironing cycle can start.



- 1) Handguard bar
- 2) Emergency Mushrooms
- 3) Crank insertion point



ATTENTION!

All users must be informed of this procedure and be aware of the operation of the machine's safety systems.

23. IRONING AND IRONING DEFECTS

During operation, remember to use the entire length of the roller, in order to keep the temperature uniform over the entire length of the machine.

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

The maximum set point temperature is 180°C.

Remember that at the end of the work, the machine cannot be stopped, at least until the temperature has dropped below 80°C.

At the end of the ironing cycle and the cooling phase, turn off the machine and turn the main switch to position "0".

Finally, please note that the residual humidity conditions of the fabrics to be dried and ironed must not exceed 50%.

In case there are poor results in the stretched fabrics, check the following trouble shooting.

PROBLEM detected	Probable SOLUTION
The fabric struggles to slide towards the ironing roller	a) Clean the roller. Cleaning of the roller must be carried out by passing a thin fabric folded once, covering the entire length of the roller, and containing powdered paraffin inside. By stretching the folded fabric, the paraffin melts and is spread over the basin. b) Check for any deposits on the roller: clean with a brass brush
The fabrics come out with yellowish spots.	a) Check that the rinses performed with the washing machine are accurate and completely eliminate detergent residues. PH must be between 5 and 6 b) Check the selected temperature: it may be too high
The fabrics come out yellowed.	a) Check that the ironing temperature is compatible with the temperatures provided for the fabric: it is possible that the ironing temperature is too high b) Check that the ironing speed is not too low
Black lines form on the fabrics.	a) Check that there are no punctual residues on the roller due to the melting of buttons or nylon seams. b) If the roller is chrome-plated (MCA), check that the chrome plating has not been affected by zips or metal elements
The tissues come out with irregular folds, neither parallel nor perpendicular	a) Check the degree of residual moisture when inserted. Fabric that is too dry may not be ironed properly b) Significant differences in the thickness of the fabrics to be ironed (due for example to seams or hems), can give rise to the formation of wrinkles, creases and low ironing quality. Even the passage of a double-ply or folded fabric can be the source of creases or puckering and sometimes the introduction is not possible or easy.

PROBLEM detected	Probable SOLUTION
The fabrics come out still wet.	a) Check the degree of residual humidity at introduction, which must not be about 50%. b) Check the ironing speed: too high a speed may prevent complete drying. c) Check the selected temperature: it may be too low. d) Check the humid air extractor: a clog could limit its efficiency.
The fabrics come out with apparently unstretched areas	a) Check the degree of residual moisture at introduction, which must not exceed 50%. b) Check the selected temperature: it may be too low c) Check the goodness of the ironing bands: consistency and draw

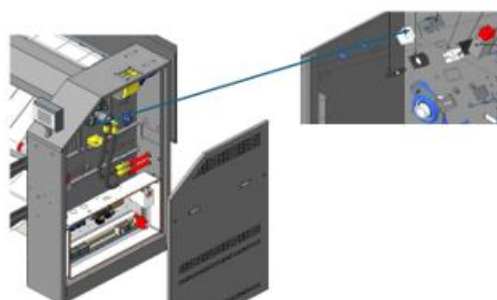
24. TRIPPING THE SAFETY THERMOSTAT

The safety thermostat intervenes when the temperature of the ironing roller exceeds 230°C, turning off the heating of the machine. When the thermostat has tripped, the machine no longer heats up. In this case, it is necessary to rearm it.

The safety thermostat is reset by pressing the button that can be reached by unscrewing the small black cap that protects it:



Mod. MCA



Mod. MCM

25. USING THE MACHINE

When switching on, during use of the machine, and when switching off, strictly observe the following instructions:



ATTENTION!

The garments to be treated with the calender must have a residual moisture of 50%, to allow correct ironing.



ATTENTION!

Before stopping ironing, make sure that the roller temperature is below 80°C. By suspending work at a higher temperature, the ironing strips may burn out.



ATTENTION!

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



ATTENTION!

At the end of the program, do not leave the garments inside the machine stationary or above the collection compartment: this could cause self-combustion!



ATTENTION!

When the machine is not running, remember to disconnect all power supplies: electricity and gas, steam and compressed air.

26_IM10. "IM10" VERSION: START AND STOP

The basic machine, and its variant with motorized output (MCM only), is controlled by an "IM10" touch screen. Machines with bending or feeder variants (MCM only) are controlled by a PLC (see the relevant paragraph).

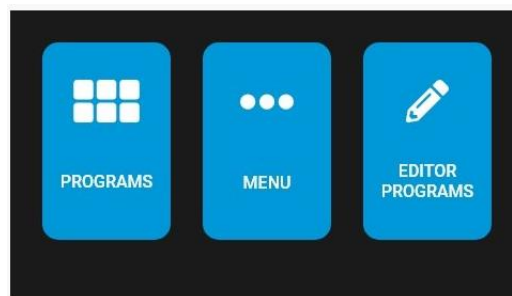
Switch on the machine by turning the main switch to the "I" (ON) position.

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.

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

When you turn on the machine, the display shows for a few moments the software version of the installed microprocessor and its release date.

Then display the selection menu:



Press on the "PROGRAMS" icon to view and select the programs in memory:

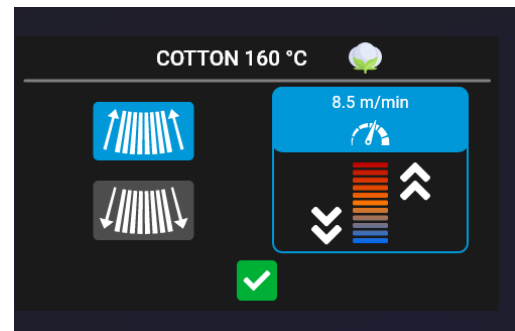
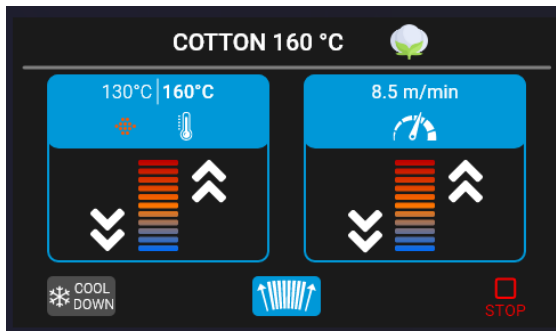


To select a program, simply tap on the desired icon.

To view additional programs in memory, scroll the screen, or tap one of the two arrows.

When a program is selected, its name (editable: see the relevant paragraph), its numerical storage and its characteristics appear on the display.

For example,:



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

HEATING (symbols "blue and red thermometers")

This is the temperature set for the ironing cycle.

Please note that the choice of temperature must be made with reference to the specific characteristics of the fabric.

The definition of the temperature is also related to the choice of the roller speed.

ROLLER SPEED ("speedometer" symbol)

This is the rotation speed of the roller set for the ironing cycle.

Please note that the choice of speed must be made with reference to the specific characteristics of the fabric.

The definition of the speed is also related to the choice of the temperature of the stretching basin.

EXIT DIRECTION ("carpet of arrows" symbol)

Only for machines equipped with a motorized output, it is the icon whose pressure allows the outgoing tissues to be collected either on the front side of the machine (same side as the inlet) or on the back side of the machine (side opposite the inlet).

PLEASE NOTE

After the cycle has started, all the parameters described so far can be modified using the relative icons on the display: these changes, however, will not remain in the program's memory.

When the desired program is shown on the display, simply press the START button to start it.

Pressing the START button starts the heating system and the rotation of the roller.

While the machine is running, you can adjust the temperature and speed (see the relevant paragraphs).

When the set temperature value is first reached (after switching on), the buzzer emits a few beeps, to warn the user that the ironing temperature has been reached and that ironing can now begin.

In any case, do not start ironing until the minimum temperature of 80°C is reached.

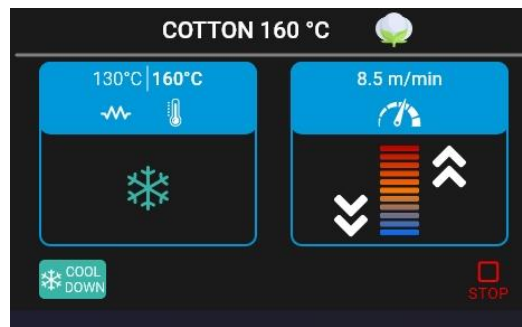
At the end of the ironing cycle, the machine can be stopped by pressing the *STOP* button.

The machine can also be stopped by pressing the *COOL DOWN* button (see the relevant paragraph).

27_IM10. HOW TO USE THE COOL DOWN

Cooling down is a function that saves and optimizes the thermal energy stored in the machine. When you are at the end of your shift, or when you need to stop ironing, you can use this function. Cooling is activated and deactivated by pressing the *COOL DOWN* button.

When the function is activated, the temperature control is interrupted: the display shows that cooling has been activated.



The roller continues to spin until the temperature drops below 80°C. When this temperature is reached, the machine comes to a complete stop.

If it is necessary to reactivate the temperature control, the cool down function can be deactivated before reaching 80°C by pressing the *COOL DOWN* button again. By doing so, the set point temperature is restored and the work cycle can be resumed. Once the cooling is finished, you can set the main switch to "0" (OFF).

28_IM10. HOUR METER MANAGEMENT

During the operation of the machine, a working hours counter is incremented and stored in memory between a shutdown and the next restart. The Installer is able to view the number of working hours by accessing a reserved area of the microprocessor.

29_IM10. SPEED TEMPERATURE COMPENSATION

You can control the ironer so that the speed changes automatically as the temperature changes. The variation changes the velocity value within a range of 1% to 20% from the set point value.

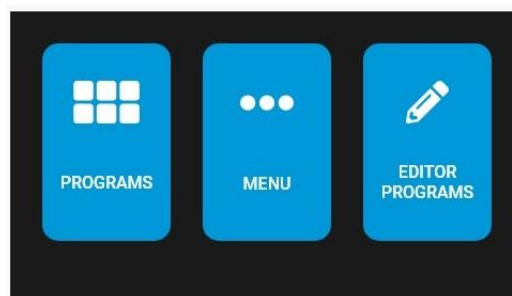
Based on the percentage difference between the current temperature value and the set value, the speed of the roller is also varied in direct proportion and by the same percentage amount compared to its set point value.

This management is optional: if you want to apply or remove it, request it from the Installer, who will reconfigure the microprocessor.

30_IM10. PROGRAMMING

It is possible to perform a series of changes to the default data by entering the user menu or in the PROGRAM EDITOR.

To access, while the machine is stationary, press the relative icon:



The screen appears on the display:

Password			
1	2	3	
4	5	6	⬅️❌
7	8	9	
❌	0		✅

Enter the 6-digit code for access to the user area (default password) "123456".
 Once the sequence is completed, the screen with the list of menus appears on the display.
 This screen is the gateway to the user programming area.
 By browsing it you can access the configuration of:

- PROGRAMS
- SETTINGS
- RECORDINGS

By entering PROGRAMS you can change the default settings of a program by choosing the following functions:

- Select the program number to be modified;
- NAME: The name of the program will appear above the program icon.
- CYCLE TEMPERATURE: the temperature of the program.
- ROLLER SPEED: the speed of the program.

By entering SETTINGS you can choose the following functions:

- CHANGE LANGUAGE: to define the communication language of the touch screen.
- SET DATE: To adjust the local date.
- SET TIME: To adjust the local time.
- TEMPERATURE °C/°F: To decide whether to display the temperature in °C or °F.
- DISABLE TOUCH: to decide that, while using the machine, the only active button on the keyboard remains the STOP button (it is therefore impossible to change the parameters of the program in progress).
- USER PASSWORD: to customize the user password (the current one will be requested)
- UPLOAD/DOWNLOAD PROGRAMS: to manage and copy sets of programs from one machine to another.
- BEEP KEYBOARD: to enable a beep with each type or selection.
- PANEL MANAGEMENT: to move program icons, delete programs, select program icons
- LOAD ICONS FROM USB: allows you to load custom program icons via a special USB interface.
- LOAD SYSTEM ICONS FROM USB: allows you to load new custom system icons via a special USB interface.

- **MACHINE ON:** allows you to manage the warning when the machine is not on when no ironing activity is in progress. The message "ARE YOU IRONING?" appears on the display when the temperature of the machine does not undergo changes typically caused by the ironing process and is designed to avoid periods of unattended heating that can lead to premature aging of the upholstery or ironing bands. The behavior of this parameter is related to the values of T1, T2, HYSTERESIS available and configurable within this parameter. The message "ARE YOU IRONING?" appears if within time T1, the machine does not return to the setpoint temperature subtracted by the HYSTERESIS value. If the user does not respond to the message within a time T2, the machine will start the COOLDOWN procedure autonomously, reaching the shutdown.

Example: A program with a set point temperature of 160°C is started. T1=10 min, T2=10 min, HYSTERESIS = 2°C. If after 10 minutes (T1) from reaching 160°C, the temperature has not fallen below 158°C (Tsetpoint - HYSTERESIS), then the message "ARE YOU IRONING?" appears. If no one responds to the message within 10 minutes of the message (T2) appearing, the machine will enter COOLDOWN.

- **TEMP/SPEED COMPENSATION:** allows you to activate or deactivate the speed reduction/increase according to the actual temperature of the machine.

- **MAX COMPENSATION %:** defines the TEMP/SPEED compensation in % value. As the actual temperature of the machine changes, the speed will be lowered or increased by a % value. The function has the purpose of slowing down the roller when the temperature of the machine drops significantly compared to the set point temperature of the program, vice versa to increase it when the temperature rises due to inertia phenomena.

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 contents 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.

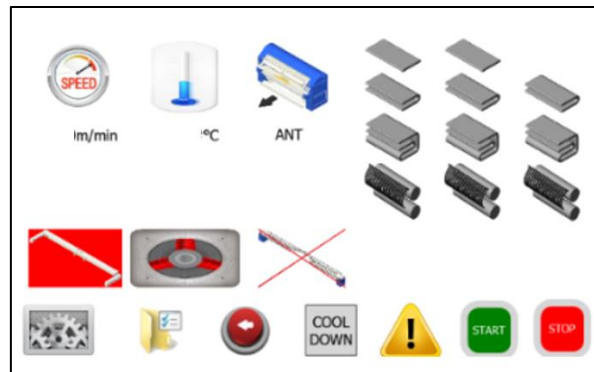
31_PLC. START AND STOP (PLC version, MCM only)

The machines with bending or introducer variants are controlled by a PLC.

The basic machine, and its variant with motorized output, is instead controlled by an "IM10" touch screen (see the relevant paragraph).

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.

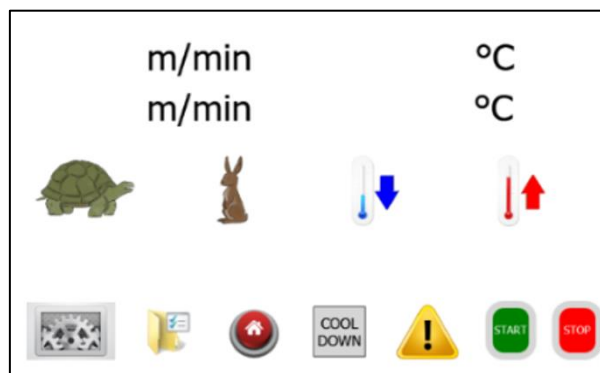
Before starting the machine, always carry out the safety check procedure (check the relevant paragraph). This is what the display looks like when it is turned on.



Use the "HOME" or "ARROW" icons to move from one menu page to another.

To activate the ironing cycle, press the RESET indicator  and then press the green START button. To stop the ironing cycle, press the red STOP button. Alternatively, click on the "COOL DOWN" icon: the machine will continue to work, without activating the heating system until the temperature has dropped to 80°C.

To set the desired ironing temperature or ironing speed, click on the relative icons and set the desired value. Use the blue arrow to decrease the temperature or the red arrow to increase the temperature. Use the symbols "turtle" to decrease the speed of the reel, or "hare" to increase it:



32_PLC. FRONT/REAR EXIT

This type of machine is always equipped with motorized output bands that allow the ironed and dried fabrics to come out on the front side (same side of introduction) and on the back side (side opposite the introduction). To change the configuration, click on the icon:



The following screen appears on the display that allows you to select one of the two configurations E, at the same time as the output speed.

The choice of speed and direction of exit must be confirmed by pressing the green "OK" button.



33_PLC. CREASE ADJUSTMENT

The machines equipped with PLC are equipped with a folding system for the outgoing fabrics.

The configuration involves a number of aspects:

1) Number of longitudinal folds.

When the fabric comes out of the ironing roller, the machine can fold it:

- a. 0 times -> is not bent
- b. 1 time -> is folded in half
- c. 2 times -> is folded to 1/4

WARNING: the possibility of folding a fabric several times depends on its size (see the technical data sheets)

2) Lanes of use of the machine.

The machine can be used:

- a. Stretching across its entire width
- b. stretching half its width into two separate lanes:
 - i. a left one that starts from the first left introduction band up to the center of the machine
 - ii. a right hand starting from the first right introduction band to the center of the machine

3) Width of the edge overlap.

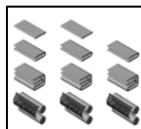
Fabrics, folded in two or four, can have edges that can be overlapped in a controlled way:

- a. on the top side
- b. on the underside

4) Using the bypass. The bypass consists of a grid that

- a. When it's open:
 - i. allows the execution of the first and second bends
 - ii. Drops the fabric from the output of the ironing roller directly onto the output bands, at the base of the machine
- b. When it is closed:
 - i. allows you to make a single fold on the back side of the machine (for very long fabrics)
 - ii. prevents small fabrics from falling out of the ironing roller directly onto the outlet bands (they will sag). In this case, the closed bypass accompanies them, without creasing, and thanks to the intermediate bands, up to a lower point of fall, thus reducing the risk of sagging

By clicking on the icon representing lanes/folds:

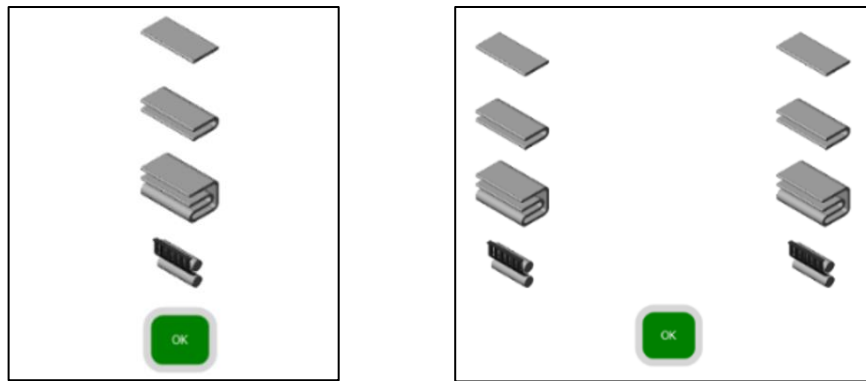


The menu is accessed to define:

- the number of lanes
- the number of bends for each lane
- whether or not bypass is used
- The amount of overlapping edges



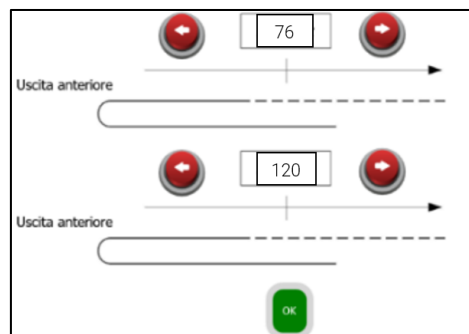
Choice to use the machine on a single central lane
or on two independent side lanes.



Choice of the number of bends in the case of a single center lane
or in the case of two independent side lanes



By clicking on the icon you can choose the extent of the overlapping of the edges of the fabric. The use of these parameters allows you to ensure that the often trapezoidal shape of sheets and tablecloths is hidden inside the fold, thus providing fabrics folded in the shape of a regular rectangle:



ATTENTION!

As far as the fold configuration is concerned, always check the data in the technical data sheets: there are in fact measurement limits in the length and width of the fabrics.

34_PLC. USING THE INTRODUCER

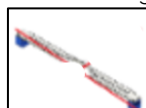
Only for machines equipped with an introducer, it is possible to use or deactivate this function by clicking on the relative icon:



When the feeder is deactivated, mechanically the structure moves away from the point of support of the fabrics and moves, in a resting position, close to the hand-saving bar.

When the introducer is activated, it sits close to the user, waiting to be loaded.

In this case it is also possible to set the speed of the widening brushes by clicking on the following icon:



To use the introducer, insert the corners of the flat ends under the white pliers:



Then press the green button to activate the introducer, which widens the fabric, advances it and deposits it on the bands of the introduction table.

As the fabric enters the machine, the operator must facilitate the passage of the fabric between the brushes of the spreader.

After unhooking the fabric, the feeder descends and returns to the waiting position, in front of the operator.

The green lamp only turns on again after the previous fabric has fully entered the machine. When the light comes on, the operator is enabled to activate the ascent and entry of the next fabric.



ATTENTION!

The introducer cycle can be aborted at any time by pressing the red button in the center of the introducer body.



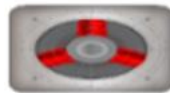
ATTENTION!

As far as the use of the introducer is concerned, always check the data in the technical data sheets: there are in fact measurement limits in the length and width of the fabrics.

35_PLC. USING THE VACUUM TABLE

While the machine is running and the feeder is operational, the feed table sucks air in from the room, making it easier to spread fabrics through the holes in the feed bands.

When the introducer is not in use, then the vacuum table function can be activated or deactivated, as desired, using the icon:



36_PLC. USER PASSWORD

Later we will explain how to perform some configurations of the machine, for which it is necessary to access the menus via the user password, "240768".

37_PLC. SAVE A RECIPE

The PLC allows you to save ironing recipes in the following mode. While the machine is working, configure all the parameters (speed, temperature, folding mode) and enter the recipe menu by clicking on the icon:



You can access the user area using the password above: here you can use the commands for managing and archiving recipes:



38_PLC. PROGRAMMING LANGUAGE, DATE AND TIME

You can choose the language in which the PLC communicates and set the date and time by clicking on the settings icon. Using a user password, you can then access the relevant configuration menus:



39_PLC. MALFUNCTION REPORTS

In the event of malfunctions, the PLC activates the alarm signal:



The alarm signal can only be reset after the alarm condition has been exceeded and eliminated. To check the alarm history, it is necessary to access the diagnostics menu via "technician" password. Below is a list of potential alarms that must be verified by authorized Technical Assistance centers.

- code 0000: FAULTY PROBE

There is a failure of the temperature probe. Have the component replaced

- code 0001: GAS CONTROL UNIT BLOCK

Only for machines with gas heating: in the event that the ignition of the gas does not take place or is not correctly detected, the gas safety control unit goes into non-volatile blockage. You can reset the control unit and try the ignition again.

- code 0002: LACK OF GAS PRESSURE

Only for machines with gas heating: in the event that the gas supply pressure is not sufficient, as proper combustion would not be guaranteed. Check the pressure and the regular flow rate of the gas provided for the machine.

- code 0003: OVERTEMPERATURE

The temperature of the roller has exceeded the safe limit. The alarm is automatically removed when the temperature falls below the safety threshold. To reset the safety thermostat, see the relevant paragraph.

- code 0004: MICRO PERIMETER

It occurs when one of the side doors is opened; The machine must only operate with the side doors closed.

- Code 0005: MICRO CRANK

Occurs when the crank cover is raised or out of position. If the crank was inserted, remove the crank, and close the flap again.

- Code 0006: LEFT EMERGENCY MUSHROOM

It occurs when the left emergency mushroom has been activated; Reset it by turning it clockwise.

- Code 0007: RIGHT EMERGENCY MUSHROOM

It occurs when the right emergency mushroom has been activated; Reset it by turning it clockwise.

- Code 0008: HAND BAR

Occurs when the handguard bar has been pushed forward. To take your own the bar must always return to an upright position. If the alarm does not reset, clear the handguard bar of any obstruction that is holding it up.

- Code 0009: ENGINE THERMAL

It occurs when one of the motors becomes thermally overloaded. You must have the source of this overload verified. The alarm can only be retracted after the engine has cooled down.

- Code 0010: SAFETY MODULE

The red "safety reset" button always lights up when one of the following events occurs:

- o intervention of the hand-saving bar;
- o Opening the micro crank door
- o pressure of one of the emergency mushrooms;
- o opening of the side doors;

Safety is restored by pressing the SAFETY RESET button.

If the light does not turn off, it means that the alarm has not returned.

It means that at least one of the elements listed above has not yet been restored, and that the machine is still in standby, waiting to return to safe conditions.

- Code 0011: COMPRESSED AIR

In case the compressed air supply pressure is not sufficient

40. MAINTENANCE OF THE GRILLE



ATTENTION!

There is a risk of injury or damage to the equipment.

Any ordinary or extraordinary maintenance work must be carried out by professionally qualified personnel.

Make sure that all power supplies are disconnected before performing any maintenance.



ATTENTION!

Perform any type of maintenance only when the machine has completed cooling and has reached, in all its parts, the room temperature.

Padlock the interlocked electrical switch.

Do not spray water or steam for cleaning.

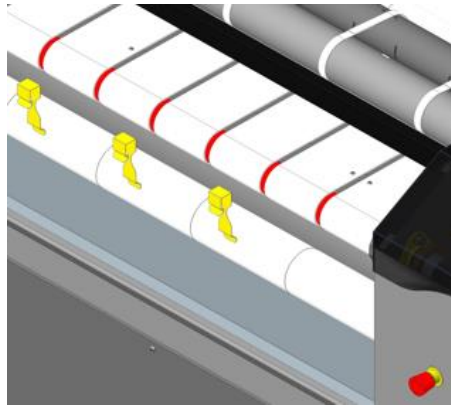
Ordinary and extraordinary maintenance is reported with the scheduled cadences.

Do not allow lint to accumulate around the machine.

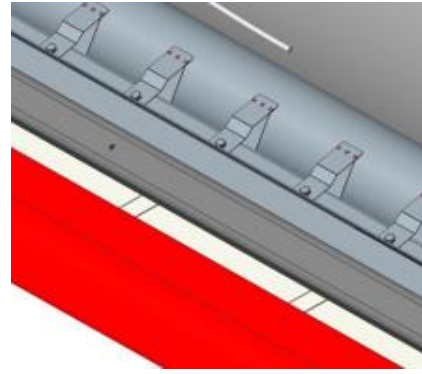
For daily cleaning, use a soft, damp cloth. Do not use abrasive products, scouring pads, solvents or metal objects.

- **EVERY DAY:**

- o At the end of each working day, clean the machine and its filters of any accumulated fluff
- o Clean the teeth of the detachers of any accumulated fluff, gently lifting them one by one:



Mod. MCA



Mod. MCM

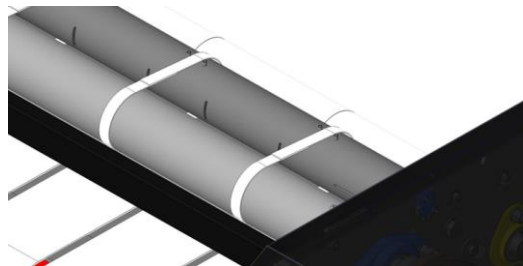
- Remove any dust or fabric residue that may have settled on the temperature probe holder, to maintain good contact between the support plate and the surface of the ironing roller

**ATTENTION!**

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

- **EVERY THREE MONTHS:**

- Check the cleanliness of the humid air extractor and the fume extractor. Check the tightness of the mechanical connecting screws and the impeller tightening screw on the shaft
- Proceed to vacuum the ends of the ironing roller, eliminating any residue of ferrous dust
- Check that the external surface of the roller has not been corroded, worn and that there are no glued fabric melts: if necessary, clean them with a brass brush
- Tensioning of the introducer bands
- MCA model only: check the release belts for goodness and, if necessary, replace them before the fabrics risk rolling around the pressure roller. Simply open the center cover:



- **EVERY SIX MONTHS**

- Checking the quality of the ironing bands: the ironing bands must always be sufficiently tensioned:
 - in the case of MCMs, each band can be tensioned individually by means of tensioning vanes with bolt clamping that can be added by opening the rear panels of the machine
 - MCA: To tension the ironing bands, open the two side panels of the machine and screw the pins connected to the pulling eye of the bands. Act symmetrically on the pin on the inside of the right shoulder and on the one on the inside of the left shoulder so that the draw of the ironing bands is even:



- **EVERY TWELVE MONTHS**

- o Keep all moving mechanical parts lubricated (sprockets, bearings, side satellite bearings). The geared motors are permanently lubricated and therefore maintenance-free.
- o Cleaning the gas burner (only for gas machines)



ATTENTION!

IN CASE OF PROLONGED INACTIVITY!

In the event that the ironing roller does not have protective surface treatments (standard chrome plating on MCA and optional on MCM) cover the external surface of the ironing roller. This can be done by dissolving powdered paraffin wax scattered inside an old sheet folded in two that contains it.

41. 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.

42. WARRANTY CONDITIONS

For warranty conditions, please refer to the manufacturer's price list.



ATTENTION!

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;

- use the machine to use suitably trained personnel;
- Use only original spare parts specified by the manufacturer

43. GAS PRESSURES

1500	DEVELOPING COUNTRIES	Nozzle pressure[mbar]	Nozzle diameter1/100	Primary diaphragm	PowerkW
G20	AL, BA, BG, HR, MK, UADK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RONOLU, PLNLES, GB, GR, IE, IT, PT, SKFR, BEDEAT, CHHU	7,5	440	C=20	22,41
G20	FR, BE	18,8	350	C=20	22,89
G25	DE	11	440	D=15	22,24
G25.3	NL	11	440	D=15	22,52
G30/31	CY, MT, NL, NO, HUAL, BA, BG, HR, MK, UADK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, ROPLAT, CHDE	27,7	235	B=25	22,32
G30/31	LU, FR, BEES, GB, GR, IE, IT, PT, SK	Regulator excluded	235	B=25	22.32

1800	DEVELOPING COUNTRIES	Nozzle pressure[mbar]	Nozzle diameter1/100	Primary diaphragm	PowerkW
G20	AL, BA, BG, HR, MK, UADK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RONOLU, PLNLES, GB, GR, IE, IT, PT, SKFR, BEDEAT, CHHU	8,5	440	A=30	24.79
G20	FR, BE	18,9	365	B=25	25,75
G25	DE	12,5	440	B=25	24,3
G25.3	NL	12,6	440	---	24,46
G30/31	CY, MT, NL, NO, HUAL, BA, BG, HR, MK, UADK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, ROPLAT, CHDE	28,1	245	open	25,81
G30/31	LU, FR, BEES, GB, GR, IE, IT, PT, SK	Regulator excluded	245	open	25,81

2100	DEVELOPING COUNTRIES	Nozzle pressure[mbar]	Nozzle diameter1/100	Primary diaphragm	PowerkW
G20	AL, BA, BG, HR, MK, UADK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, RONOLU, PLNLES, GB, GR, IE, IT, PT, SKFR, BEDEAT, CHHU	8	480	B=25	26,8
G20	FR, BE	18,6	380	B=25	26,89
G25	DE	11	480	C=20	25,86
G25.3	NL	11,1	480	C=20	26.16
G30/31	CY, MT, NL, NO, HUAL, BA, BG, HR, MK, UADK, FI, SE, BG, EE, LV, LT, CZ, SI, TR, HR, ROPLAT, CHDE	27,9	255	B=25	25,65
G30/31	LU, FR, BEES, GB, GR, IE, IT, PT, SK	Regulator excluded	255	B=25	25,65