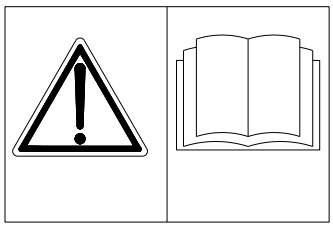
INSTRUCTION AND MAINTENANCE MANUAL

SELF-EMPTYING SPIRAL MIXER

MODEL: LYNX 120 T
Serial number: 08559
Year of construction: 2024



This instruction and maintenance manual forms an integral part of the machine; it must be preserved for the full life of the machine and must be passed on to any subsequent users.
The manual contains all the instructions necessary for the transport, installation, start-up, use, maintenance and disposal of the machine and must therefore be read and understood before proceeding with any of these operations. It must be handled with care and stored where it is readily available for consultation both by the machine operators and the technicians. . The observance of the contents of the manual ensures the safe, correct and optimal operation of the machine itself, as well as the safety of the machine operator and other persons authorised to come into contact with the machine.correct and optimal operation of the machine itself, as well as the safety of the machine operator and other persons authorised to come into contact with the machine

MACHINE SPECIFICATION SHEET

Mixer reference:	I01109
Machine Description:	SELF-EMPTYING SPIRAL MIXER MODEL LYNX 120 T, 400V/50HZ, 3PH COMPOSED OF: 1 X 120 KG FIXED BOWL MIXER, MAX. FLOUR CAPACITY: 75 KG, FITTED WITH TWO ELECTRO-MECHANICAL TIMERS SITEC 72X72, BOWL SPEED VARIATOR WITH POTENTIOMETER AND STAINLESS STEEL GRID AND 1 X HYDRAULIC LIFTER WITH SPECIAL DISCHARGE TO THE LEFT AT 1700 MM
Serial number:	08559
Year of construction:	2024
Number of speeds:	2
Voltage (V):	400
Frequency (Hz):	50
Number of phases:	3
Total power absorbed (kW):	5.75
Total current absorbed (A):	15.26
Conformity:	CE/EAC
Manufacturer:	LP group s.r.l. 36010 Carrè (VI) info@lpgroup.it www.lpgroup.it

CONTENTS

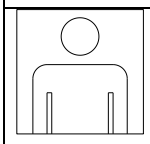
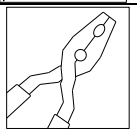
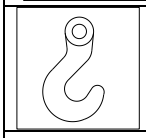
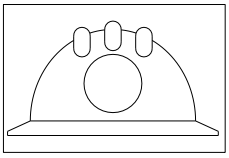
APPENDICES

N.B.
(i) The technical data is not binding. The data can be changed in order to improve the product.
(ii) Drawings and illustrations are only indicative.

1 SYMBOLS AND PERSONNEL QUALIFICATIONS

The person responsible for safety in the company and in the production department, when selecting the personnel to operate the machine, must select someone suitable for the job according to local law and must, furthermore, take into consideration the person's training, physical and psychological conditions (stability, sense of responsibility, etc.). Furthermore, once selected, the personnel assigned to operate the machine must be suitably trained (based on personal aptitude and capacity), which includes the full comprehension of this manual to ensure that the operator knows the machine, its functions, its behaviour and how to correctly execute each procedure pertinent to the machine operation in absolute safety.

The following table indicates the symbols and corresponding, required qualifications for the personnel operating on the plant, which are used throughout this manual to specify the qualification necessary to implement a specific task.

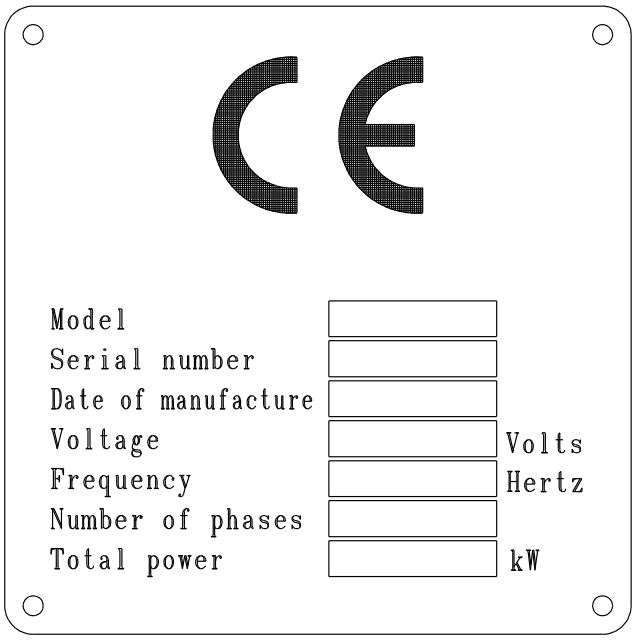
Symbol	**Description**	**Characteristics/Qualifications**
	MACHINE OPERATOR	A person in good health, that has been suitably trained to operate the machine (i.e. that has a good knowledge of: the machine functions, the machine regulations, the safety devices and protections installed on the machine, the possible work cycles, how to program a work cycle, the type of ingredients which can be used, as well as the corresponding maximum quantities allowed). The person must have carefully read and understood this manual for the use and maintenance of the machine.
	ELECTRICAL SERVICE ENGINEER	A person in good health, with the qualification of electrical service engineer, that has carefully read and understood this manual for the use and maintenance of the machine.
	MECHANICAL SERVICE ENGINEER	A person in good health, with the qualification of mechanical service engineer, that has carefully read and understood this manual for the use and maintenance of the machine.
	PERSON RESPONSIBLE FOR MATERIAL/EQUIPMENT HANDLING	A person in good health, qualified to handle loads, that has carefully read and understood this manual for the use and maintenance of the machine.
	CLIENT ASSISTANCE: c/o MANUFACTURER	Addresses the following requests for: • updates of the manual; • telephonic assistance regarding machine functions, start-up and failures; • spare parts; • machine repairs; • system overhaul;

The following table indicates the warning and safety labels present on the machine and in this manual, which point out possible dangers related to the machine and/or to a specific task being implemented.

Warning and Safety Label/Symbol	**Description**
ATTENTION	This type of warning invites the competent person implementing a specific task to pay attention while carrying out the required manoeuvres. Non-observance of this warning can damage the machine and/or injure the persons assigned to the machine.
	This symbol indicates the presence of live parts. Before carrying out any type of intervention on the machine, interrupt the power supply to the machine by first turning off the main switch and then removing the plug from the socket!
	This symbol indicates the presence of moving members and, therefore, the risk of entrapment.
	This symbol indicates the risk of being crushed.

2 IDENTIFICATION OF THE MACHINE

Machine conforming to CE standards



A serial plate, similar to the one illustrated above, is located on the machine. It specifies:

- the type of conformity (CE)
- the details of the manufacturer
- the type of machine
- the serial number
- the year of construction
- the voltage, frequency and number of phases
- the total power absorbed (kW).

The electrical characteristics (voltage, frequency, number of phases and power absorbed) are specified in this manual in Appendix 2, as well as on the motor serial plates.

The weight and dimensions of the machine (with and without packaging) are also specified in this manual (refer to Appendix 2).

3 SAFETY INSTRUCTIONS

The obligatory safety measures, which must be adopted in order to ensure the safe use of the machine, are listed below. The symbols and signs appearing in the various sections of the manual indicate the qualifications required by the persons assigned to a specific task and the corresponding risk level. The plant manager is personally responsible for the training of suitably qualified personnel assigned to a specific task.

Safety measures

- The space surrounding the machine and related devices must be well illuminated, clear and clean.
- The personnel assigned to operate the machine must be physically well, psychologically stable and must wear suitable clothing (anti-slip safety shoes, close-fitting sleeves with closed shirt cuffs, gloves, mask and safety glasses, as required for the assigned task). It is absolutely forbidden to wear loose-fitting garments, materials or accessories (ties, torn garments, open jackets, loose pieces of materials etc.) to avoid the risk of entrapment.
- The operator must maintain an adequate safety distance from the machine while it is in operation.
- It is absolutely forbidden to climb onto the machine and use it as a lift for persons.
- It is necessary to respect the maximum quantity of dough which can be kneaded for the specific machine, which can vary, depending on the percentages of the ingredients used.
- Before proceeding with any maintenance or cleaning operations, the personnel assigned to these tasks must ensure that the mixer is in the “Down” position then turn off the main switch and disconnect the machine from the electrical supply (by removing the plug from its socket).
- It is obligatory to respect the standards in force relative to the use of cleaning and lubricating products as well as the instructions of the producer/supplier of these products.
- Before carrying out any operation on the machine, ensure that the machine work area, in particular, near the moving members, is free of foreign objects which could be dragged and/or thrown out by the moving members themselves.
- The service engineer must wear protective clothing suitable for the task to be carried out; clothing which must offer protection against organic, chemical, biological, mechanical and/or electrical risks.
- When working with the machine, it is always necessary to observe the safety warnings and signs on the machine itself, in the work environment and on the products used, which point out, for example:
  - electrical, mechanical or thermal risks
  - the risk of slipping on wet or greasy surfaces
  - the risk of allergies to substances or irritations which can arise from products used in the production process or cleaning procedures.

  Non-observance of the safety warnings and signs can lead to minor or major injuries.

Safety devices

The machine is equipped with safety devices which protect both the operator and the machine itself. Under no circumstances must they be removed, tampered with or modified in any way. It is necessary to periodically check that they function correctly.

- *Main switch (external)*: Turned off, it interrupts the electrical supply to the machine, permitting maintenance operations to be carried out in absolute safety.
- *Thermal switch (internal)*: It interrupts the electrical supply when the electric motor overheats.
- *Thermal overload switch (internal)*: It interrupts the electrical supply to the motor when excessive electrical current is absorbed.
- *Emergency buttons (external)*: They interrupt the electrical supply to the machine, guaranteeing the complete safety of the machine and operator.
- *Fixed protective covers (external)*: All the fixed covers (fastened with screws or mechanical blocks) protect against heat and access to the moving mechanical members of the machine and must not be removed, except by suitably qualified personnel carrying out maintenance operations in the specified manner and according to the safety standards in force. After any maintenance procedures, all the protective covers must be correctly re-positioned and securely fastened, before starting up the machine again.
- *Mobile protective bowl cover (external)*: Protects the access to the mixer bowl. The opening of the mobile protective bowl cover activates microswitches which interrupt the mixer functions and do not allow it to operate unless the mobile protective cover is completely closed. However, the opening of the mobile bowl cover does not interrupt the lift functions.

- *Bowl cover safety microswitch (internal):* It interrupt the electrical supply to the machine when the movable bowl cover is opened during a mixing cycle, guaranteeing the complete safety of the machine and operator.

- *Lift ascent and descent limit switches (internal):* They interrupt the electrical supply to the machine when the lift has reached the maximum ascent/descent position, guaranteeing the complete safety of the machine and operator.

- *Lift hydraulic unit safety valve (internal)*: This valve is located at the base of the valves which adjust the speed of ascent and descent of the hydraulic arm and prevents the mixer from accidentally falling down the lift in the case of a sudden loss of oil in the hydraulic unit, thus guaranteeing the complete safety of the machine and operator.

Accident prevention

Before starting up the machine:
Read this manual carefully. Ensure no children, animals or unauthorised persons are in the vicinity of the machine. Carefully check that the machine and external safety devices function correctly.

During machine operation:
Never leave the machine unattended. Pay attention to abnormal noises or machine behaviour. Keep away from moving members. Never open the mobile protective cover before the spiral tool has completely stopped rotating.

Upon completion of a work cycle:
Empty the contents of the machine bowl completely then ensure that the mixer is in the “Down” position. Turn off the main switch. Clean the machine, as per the procedures specified in this manual.

Machine tests carried out by the manufacturer

The manufacturer, before placing a machine on the market, carries out a series of tests to ensure that the machine functions correctly:

- Functional tests to check the electrical system and grounding.
- Functional tests to check the mixer and lift functions.
- Tests to check the AERIAL NOISE level: 80 dB (A) under normal conditions of use.

4 RISKS, PROHIBITIONS, OBLIGATIONS

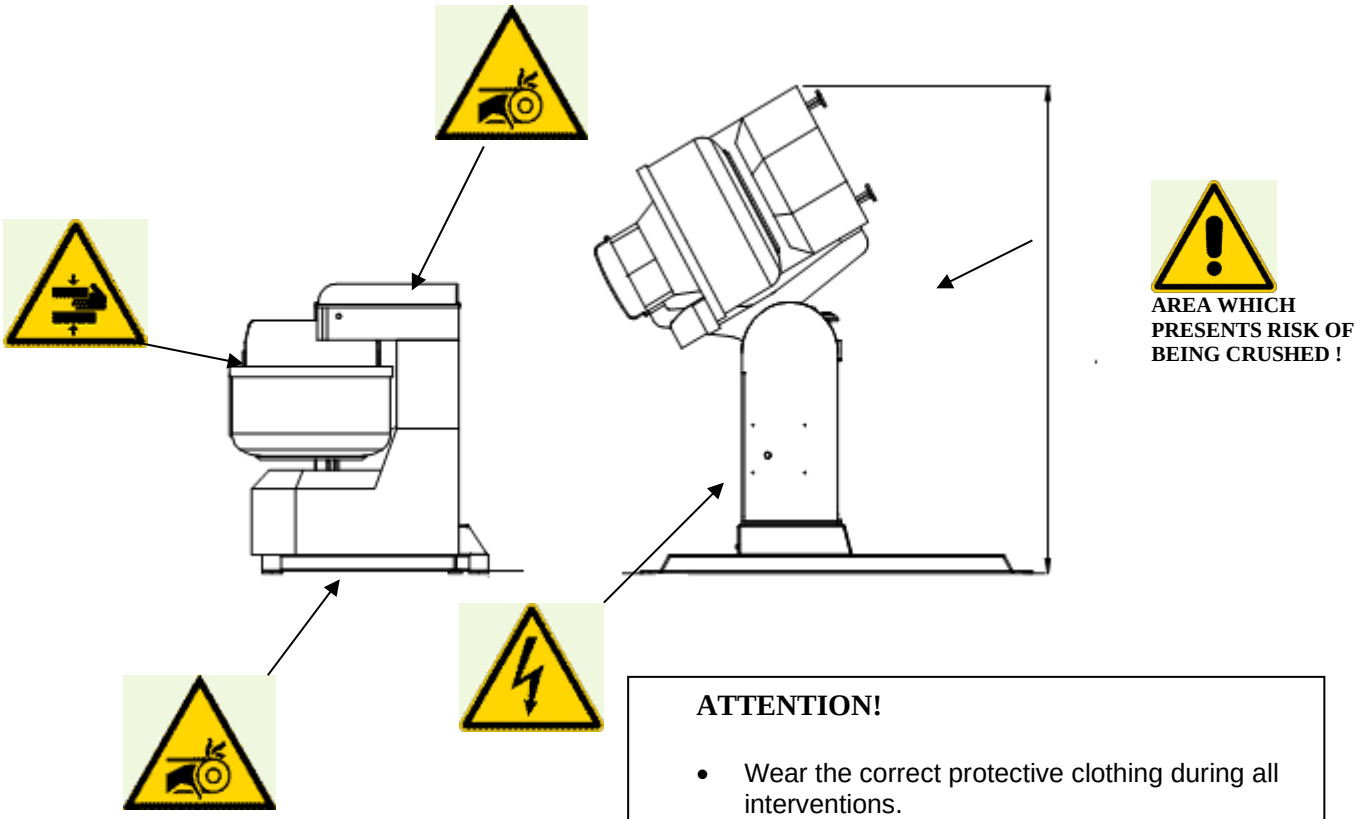
It is prohibited to put out fires with water

It is prohibited to start up the machine before having checked the safety devices

It is prohibited to clean the machine in the presence of moving members

It is obligatory to disconnect the machine before carrying out any intervention on the machine itself.

It is obligatory to ground the machine.



AREA WHICH PRESENTS RISK OF BEING CRUSHED !

ATTENTION!

- Wear the correct protective clothing during all interventions.
- Carefully clean the machine; the products used in the production process can cause allergies or infections.
- Do not place heavy or dangerous objects on top of the machine.
- Do not place objects or accessories through the opening in the protective bowl cover.
- Do not remove the safety devices and the protective covers.

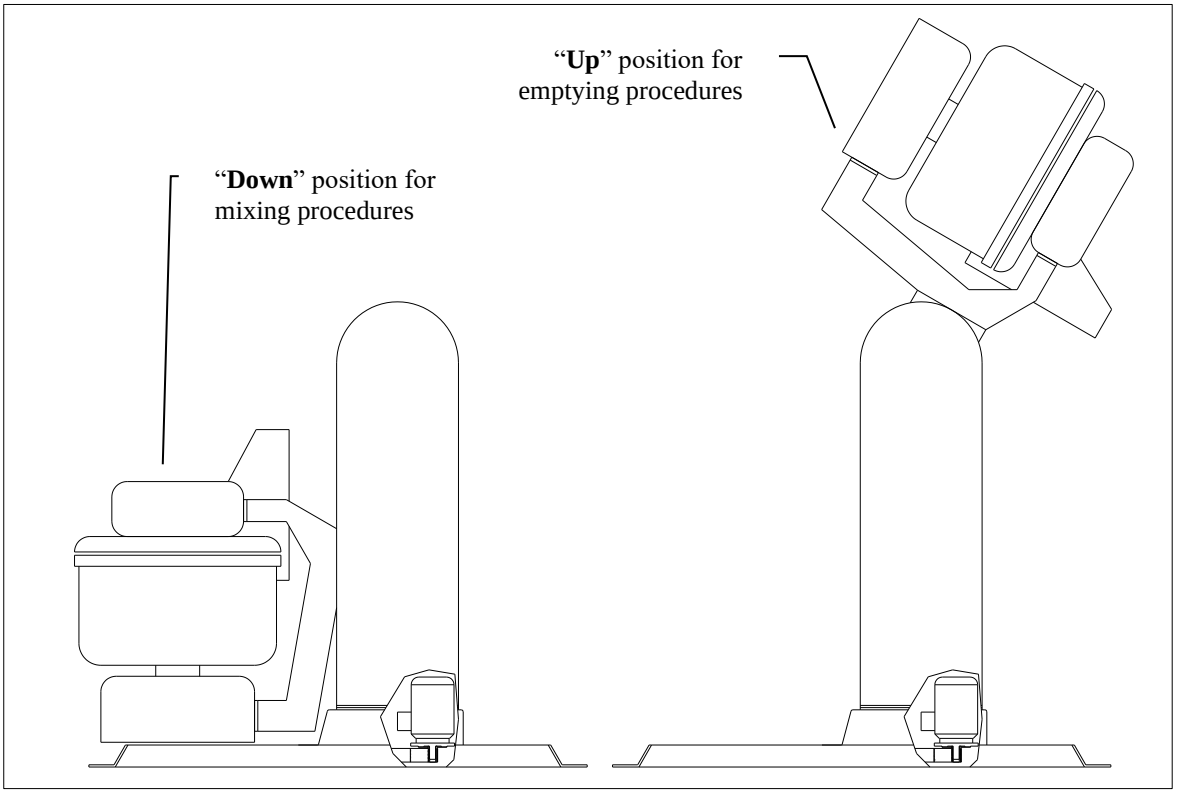
5 DESCRIPTION OF THE MACHINE AND ITS USE

Intended use of the machine

This line of self-emptying spiral mixers is composed of an hydraulic lift and of a spiral mixer:

- The hydraulic lift has been designed for the purpose of lifting the spiral mixer from the “Down” position where the mixing process takes place to the “Up” position where the mixer is tilted over to empty the dough from the bowl into a divider. The maximum total weight which can be lifted is 1.500 kg
- The spiral mixer has been designed for the purpose of kneading food dough, which has as primary ingredients flour and water. A rotating spiral tool, as a result of the powerful mechanical action of the mixer, rapidly and efficiently amalgamates, mixes, refines, kneads and incorporates air into the dough contained in the bowl. Originally conceived for the preparation of bread dough, the mixer has subsequently been found to be also suitable for all leavened dough and bakery products composed of the following ingredients: any type of flour, water, yeast, fats-butter, sugar, legally-approved food essences and food colourings, salt, liqueurs and other ingredients suitable for bread and confectionery products. This line of mixers is not suitable for mixtures with less than 55% humidity.

Any other, unauthorised use of the machine constitutes a violation of the intended use and furthermore constitutes a safety hazard.



Percentages of ingredients

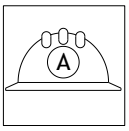
Based on the percentage of each ingredient, there is a maximum quantity of each ingredient which can be introduced into the bowl in order to respect the maximum dough capacity specified for the mixer.

For additional information on the maximum dough capacity and percentage of flour for a specific mixer, refer to Appendix 2.

Machine structure

The machine is composed of a spiral mixer and of an hydraulic lift.
The ***spiral mixer*** is composed of the following components:

- A robust, steel body (reinforced with metal profiles where the mechanical stress is greater) contains and supports the various machine components.
- The upper transmission group (located under the head cover) rotates the spiral tool. This movement is executed by means of a robust, forged shaft carried by a support with ball bearings.
- The spiral tool, as a result of its shape and movement, mixes and refines the ingredients by pushing them against the breaking column and the sides of the bowl.
- The bowl (6), as a result of its rotation, constantly brings dough still to be kneaded under the spiral tool.
- The lower transmission group (located inside the base) rotates the bowl. This movement is executed by means of a robust, forged shaft carried by a support with ball bearings.
- The fixed safety covers for the bowl, upper transmission group and lower transmission group (not visible because located under the base) serve to protect persons from accidentally coming into contact with the moving members of the machine.
- The mobile safety cover, if opened during a mixing cycle, stops the machine by means of a microswitch.



The adjustment of the minimum opening of the mobile safety cover required to activate the microswitch is carried out by the manufacturer, in the manufacturing location, during the machine test phase. Any subsequent modification to the original manufacturer settings can only be carried out by the manufacturer's authorised personnel.

- The mixer control panel (either located on the mixer head cover or on the special arm for the lifter control panel) contains all the control and program logic for the execution of the dough kneading cycle. It executes each programmed work cycle and, by means of servomechanisms in the electrical panel, located at the back of the mixer itself, drives the various motors in the programmed manner for the programmed time.

The ***lift*** is composed of the following components

- A robust, steel body (reinforced with metal profiles where the mechanical stress is greater) contains and supports the various machine components.
- The control panel located on the arm fitted to the base of the lift column structure contains all the control and program logic to control:
  a) the ascent of the mixer to the "Up" discharge position
  b) the impulsive bowl rotation (bowl jog function) to facilitate the emptying of the dough and
  c) the decent of the mixer to the "Down" mixing position
  once the mixing work cycle has been completed.
- A hydraulic unit connected to:
  - two cylinders in the version with discharge into divider (one for the ascent and descent movements and another one for the tilting movement);
  - one cylinder in the version with discharge onto table (for the ascent/descent/discharge movements)

General machine operation

After having correctly installed the machine, it is necessary to select the work cycle required (i.e. the type of operating mode and the corresponding operating times - refer to Appendix 1). Place the water, flour and the other ingredients necessary for the dough into the bowl in the required quantities (not exceeding the maximum quantities allowed – refer to Appendix 2). Lower the mobile bowl cover and start the machine by pressing the Start button. The machine carries out the work cycle in the selected manner for the set time. It is possible to stop the machine at any time by pressing the Emergency/Stop button and to start it again by pressing the Start button. Upon completion of the mixing cycle and after having opened the mobile bowl cover/s, the mixer can be lifted to the discharge position to empty the dough, simply by pressing simultaneously the two “Up” buttons. Once the dough has been emptied from the bowl, the mixer must be lowered to the ground simply by pressing simultaneously the two “Down” buttons and the mobile bowl cover closed, so that it is in the correct position to start another mixing cycle. The description of the control panel and its use is described in detail in Appendix 1.

6 PRESERVATION OF THE MACHINE

Preservation of the machine before a long period of disuse

- Disconnect the machine from the power supply.
- Clean the machine thoroughly.
- Protect the machine from atmospheric agents, dust and dirt.

Storage of the packed machine

The machine must be stored in a hygienically clean, closed, covered environment, positioned on a flat and solid surface and protected from atmospheric agents, dust and dirt.
The temperature of the environment must be between –20 and +40°C, while the humidity of the environment must not exceed 90%.

Storage of the unpacked machine

When the machine has already been unpacked, in addition to the above specified conditions, it must also be raised from the ground (fastened to a suitable pallet or other secure platform) and carefully covered to protect it against humidity, dust and dirt. If the machine is wrapped in cellophane or other plastic coverings, then it is absolutely necessary to ensure that it is not hermetically sealed, in order to avoid corrosion due to condensation. If possible, preserve the original packaging.

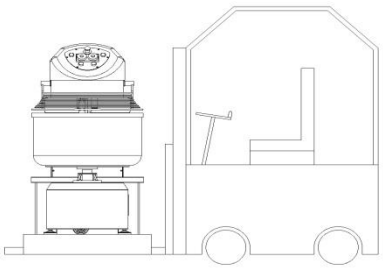
ATTENTION! It is absolutely forbidden to store the machine outdoors!

7 HANDLING THE MACHINE

When lifting and/or moving the machine, it is absolutely necessary to respect the instructions in this section, all the safety instructions and local safety standards and regulations in force.

ATTENTION! Before starting any handling procedure, check the total weight of the machine with and without packaging and then use appropriate, correctly positioned equipment to lift the packed/unpacked machine as per the procedures specified below.

Lifting the packed machine (by means of a fork lift truck or transpallet)



Insert the forks into the pallet in the provided lifting points.

Primary equipment handling regulations:

- Ensure that the lifting device is suitable for the load to be handled.
- Open the lifting forks to the width required to correctly position them without damaging the pallet and/or the machine itself.
- Place the forks in the barycentric position, which does not always correspond to the centre of the packed machine.
- Before lifting the packed machine, ensure that the end of the forks protrude from the pallet.
- While moving the machine, keep it close to the ground.
- Ensure that the area across which the load is moved is clear of objects, persons and animals.
- Wear suitable, protective clothing.

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UNPACKING THE MACHINE

Unpacking the machine :

The machine rests on a wooden pallet.
The machine is held in place by 6 screws fastened onto the 6 feet of the machine;
The machine always rests on a pallet and can then be packed in one of the following ways:

- machine placed in a wooden crate;
- machine placed in a wooden box.

The information concerning the gross weight appears on the outside of the packaging.

Once the outer packing material has been removed, in order to unpack the machine, it is necessary to remove the 6 screws fastened to the 6 feet of the machine.

Then, by the means of a fork lifter inserting the forks underneath the unit frame on one of the sides where there is more load and lifting the unit for a couple of centimeters in order to remove the wooden pallet. At this point, the feet shall straighten out by themselves since they have some backlash.
Then placing the unit to the floor still by means of the fork lifter and fastening it by putting 6 pcs of M12 expansion inserts in the corresponding feet external fxing holes.

All the material used for the packaging can be recycled or disposed of as ordinary urban waste.

8 INSTALLATION OF THE MACHINE AND POSITION OF THE OPERATOR

Operating conditions

Environmental conditions: The machine must be installed on a solid and level surface, inside a well lit and ventilated building. The floor must have a minimum cement strength of Rbk 200 kg/cm^2.
The temperature of the environment must be between 5 and 40°C and the humidity of the environment must not exceed 55% in this temperature range or must not exceed 90% at 20°C.

Illumination: The light available for the person operating on the machine must be suitable for the type of task being executed, according to current legislation. The lighting must be sufficient to clearly read the machine controls and warning/danger signs, without blinding the operator.

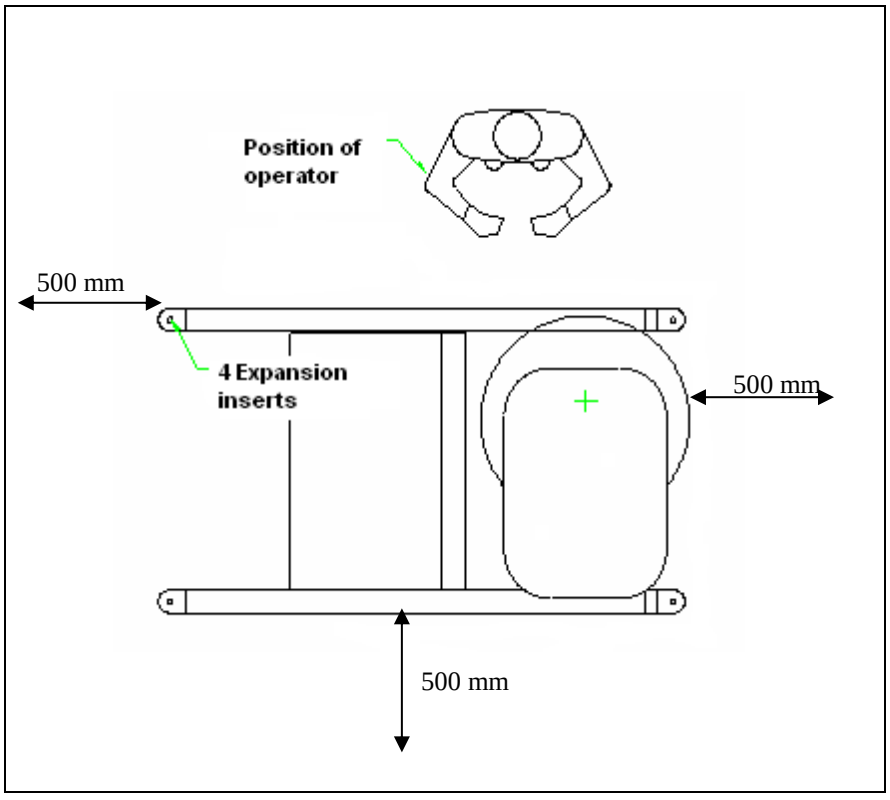
Vibrations: If the machine is used correctly, then the vibrations present during the operation of the machine do not constitute any type of danger.

Electromagnetic interference: The machine referred to in this manual has been designed to operate correctly in an industrial type of electromagnetic environment.

Cleanliness of the work environment: The machine may only be used in environments suitable for the storage and production of food products. Furthermore, it is necessary to respect the following operating conditions:

- The absence of ventilation while loading the ingredients and during the initial phase of the work cycle (amalgamation of the ingredients), to prevent excessive food powder emissions.
- The use of containers and tools which are suitable for handling food products.

Position of the machine and of the operator



Carefully select the location for the machine in the workplace, ensuring that the floor is smooth and level and that there is enough space to allow for the ingredient-loading and dough-unloading procedures. Furthermore, provide sufficient space around the machine for the cleaning and maintenance procedures (as per the figure alongside).
The machine has been designed for use in bakeries or confectioneries and, therefore, in environments with extremely variable temperatures and humidity (as specified in the above section *Environmental conditions*).
Avoid an excessive ventilation of the work environment which could lead to flour emissions from the bowl during the loading and initial phase of the work cycle.

The above figure illustrates the correct position of the operator with respect to the machine, i.e. facing the mixer, in front of the control panel located:

on the special arm: for the dough mixing functions in the “Down” position and for the lift and dough emptying functions.

Fixing the machine in place

Machine stability

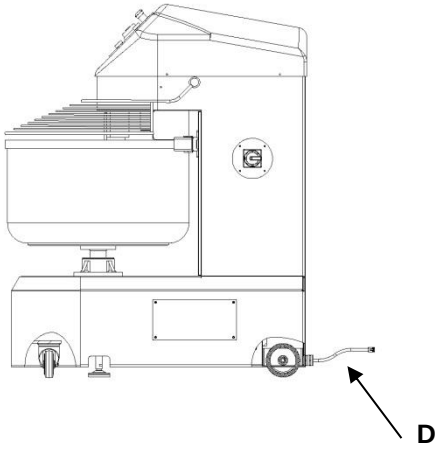
The machine must rest on a horizontal, smooth, solid surface without level changes. Once the machine has been correctly positioned in the selected location, it must be levelled by adjusting the supporting feet of the structure.

N.B.

- **The floor where the machine is positioned must be level.**

9 ELECTRICAL SYSTEM

Connection to the power supply



ATTENTION!

1. **GENERAL INSTRUCTIONS**
   - Any type of intervention on the machine must be carried out by suitably qualified personnel, using suitable clothing and equipment and in strict accordance with the local safety standards and regulations in force.
   - It is absolutely forbidden to allow unauthorised personnel to open the electrical panel.
   - Never leave the machine unattended when the electrical panel is open.
   - Only suitably qualified personnel carrying out a necessary intervention on the machine can operate the machine with the electrical panel open, under their own responsibility and this only for the brief time necessary to effect the repair/maintenance procedure.

2. **ELECTRICAL CHARACTERISTICS OF THE POWER SUPPLY**
   Ensure that the voltage (V), frequency (Hz) and number of phases of the power supply correspond to those specified on the serial plates of the machine and of the motor; an incorrect connection will damage the machine and will invalidate the guarantee. It is obligatory and the responsibility of the client to ensure that an appropriate safety circuit breaker device has been installed upstream of the machine.

3. **DIRECTION OF ROTATION OF THE MOTOR**.
   It is the responsibility of the personnel assigned to connect the machine to the power supply to ensure that the electrical connections respect the correct direction of rotation of the motor. In particular, after the connection has been effected, press the “Up” button to raise the mixer (refer to Appendix 1) and ensure that the mixer actually moves upwards. If this is not the case, then it is necessary to invert the two wires from the power supply cable at the machine terminal box, in order to correct the direction of rotation of the motor. It is absolutely essential that the connection be correct, otherwise the limit switches which control the “Up” and “Down” limit points will not stop the motor causing serious damage to the transmission and constituting a safety hazard.

4. **GROUND CONNECTIONS**
   It is obligatory to check the efficiency of the machine grounding system. An incorrect connection can cause serious injury and even death.

Connect the power cable to a socket having all the required characteristics.

Turn on the main switch.

Before disconnecting the plug from its socket, first turn off the socket switch.

10 HYDRAULIC SYSTEM

ATTENTION!

GENERAL INSTRUCTIONS

- Any type of intervention on the machine must be carried out by suitably qualified personnel, using suitable clothing and equipment and in strict accordance with the local safety standards and regulations in force.
- An incorrect connection of the electrical phases causes the lifter pump to rotate in the incorrect direction, thus preventing the lifter from functioning.
- Before carrying out any intervention on the hydraulic system, ensure that the machine is in the “Down” position then switch off the machine by turning the main switch to the “O” position and disconnect the machine from the power supply.
- It is absolutely forbidden to allow unauthorised personnel to access the hydraulic system.
- Never leave the machine unattended when the hydraulic system is exposed.

The hydraulic system of the machine lift is composed of:

- a hydraulic unit equipped with solenoid valves to control the lift movements
- two hydraulic cylinders (for the version with higher discharge into divider) or one hydraulic cylinder only (for the version with lower discharge onto table)
- hydraulic valves for the adjustment of the work pressure.

In order to ensure that the hydraulic system functions correctly it is necessary to set the work pressure at approximately:

- 160 bar for mixers with a maximum dough capacity of 120 kg and
- 200 bar for mixers with a maximum dough capacity of 160-200-250 kg.

The hydraulic lifting system will not function with a work pressure less than 50 bar.

Adjustment of the speed of ascent of the lift

The speed of ascent of the lift can only be adjusted on the hydraulic unit (PHOTO A) which controls the tilting movement.

Set the speed of ascent by adjusting the lower valve (PHOTO B) in the following manner:

1. Turn this valve:
   - clockwise to decrease the ascent speed and
   - anti-clockwise to increase the ascent speed,

   until the required speed has been reached.

PHOTO A

HYDRAULIC UNIT

PHOTO B

SPEED REGULATOR OF THE ASCENT

Adjustment of the speed of descent of the lift

The speed of descent of the lift can be adjusted on the hydraulic unit (PHOTO A) which controls the tilting movement.

Set the speed of descent by adjusting the valve (PHOTO C) in the following manner:

1. Turn this valve:
   - clockwise to decrease the speed of the descent and
   - anti-clockwise to increase the speed of the descent,
   until the required speed has been reached

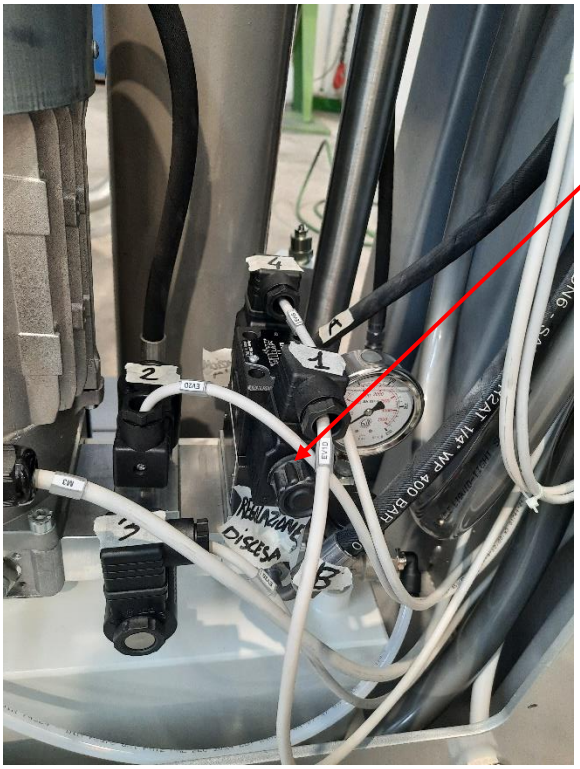


PHOTO C

SPEED REGULATOR OF THE DESCENT

N.B. The speed of ascent and descent of the lifter is set by the manufacturer during the assembly and test phases in accordance with the limits set by the EC Machine Directive. For safety reasons, under no circumstances must this speed be altered without prior authorisation from the manufacturer in writing. Any unauthorised modification relieves the manufacturer of all responsibility for damages or injuries incurred as a consequence of this action.

11 CLEANING THE MACHINE

The machine has been designed for the production of food products and, therefore, it is indispensable that it be thoroughly cleaned and sanitised every day, as per local sanitation requirements for food production environments.

Cleaning the outer body of the machine

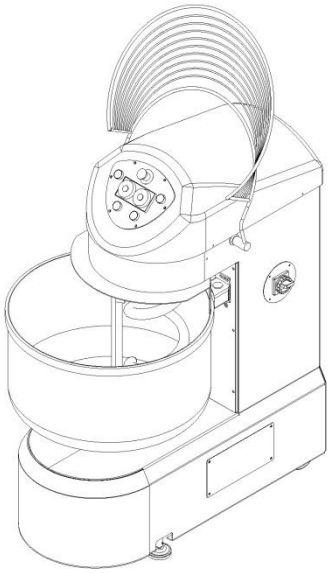
It must only be cleaned using a damp cloth which has been soaked in water and sufficiently wrung out. The cloth must be selected and sanitised as specified by local sanitation requirements for food production environments. It is absolutely forbidden to use cleaning tools which can scratch or damage the machine.

Cleaning the inside of the bowl and the mixing tools

Remove all dough residue using a suitable tool which will not scratch or damage the internal surface of the bowl and the mixing tools. Use water and, if necessary, a food grade soap, to clean the bowl. Rinse the bowl thoroughly. Sanitise the bowl as specified by local sanitation requirements for food production environments.

12 OPERATING PROCEDURES

ATTENTION! Strict observance of the safety procedures specified in this manual and of the local safety standards and regulations is indispensable when carrying out any operation on the machine.



General instructions

- The machine can only be used by one operator at a time.
- The machine operator must be selected and trained as specified in the section “Symbols and Personnel qualifications”.
- It is the responsibility of the operator to control the work area of the machine. In particular, ensure that no children, animals or unauthorised persons are in the vicinity of the machine.
- The operator must never leave the machine unattended when it is switched on. If it is necessary to leave the work position, then the main switch must be turned off and the machine disconnected from the power supply.

Preliminary machine check-up

Before starting the work cycle, check that:

- the machine is in a stable position on a flat, smooth and solid surface;
- the machine has been correctly connected to the power supply;
- the machine parts are clean.

Loading the ingredients to be kneaded into the mixer

With the machine turned off, it is possible to gain access to the bowl simply by lifting the protective, mobile bowl cover (A).
Check that there are no foreign objects in the bowl and that the bowl is clean.
Load the ingredients (exclusively those suitable and allowed for the production of bread and confectionery products) into the bowl, respecting the maximum quantities allowed for the specific machine (Appendix 2).

The recommended sequence for loading the ingredients is as follows:

1. Pour the required quantity of water into the bowl.
2. Pour the flour into the bowl (in the correct proportion with respect to the water).
3. Subsequently, add the other ingredients for the dough (salt, leavening agent, butter, margarine etc.), by lifting the mobile protective bowl cover and pouring them into the bowl. If the mobile bowl cover is lifted while the machine is operating, then the machine will stop; it is therefore necessary to close the mobile bowl cover and restart the machine to complete the work cycle by pressing the required start button. Small quantities of ingredients can be added to the dough by pouring them directly through the opening/s in the mobile bowl cover, without opening the cover itself.

The operator is strongly advised against loading the flour into the bowl before the water as this creates high density lumps in the dough which cause the machine to function irregularly, thus leading to sudden increases in power which reduce the life of the transmission belts and wear and tear parts in general.

Executing a mixing cycle

It is only possible to start the mixer when the mobile protective bowl cover (A) is closed.
Appendix 1 contains a detailed description of the control panel, its functions and how to program and execute a work cycle.
All the machine commands required to carry out a work cycle are located on the control panel located on the special arm.

- The Start button starts the set work cycle.
- The time countdown of the work cycle being executed is displayed on the control panel on a digital display or by means of LEDS (depending on the type of control panel).
- If the mobile protective bowl cover is opened, then the work cycle is interrupted; to resume the work cycle, close the bowl cover and press the Start button again.
- The Stop/Emergency button stops and resets the work cycle; the time display returns to the initial setting of the last work cycle executed.
- The BOWL JOG function impulsively rotates the bowl without rotating the spiral tool, even when the mobile protective bowl cover is open. It is used either to move the dough to the front of the machine in the “Down” position or to facilitate its removal from the bowl in the “Up” position.

Warnings relative to repeated interruptions of a work cycle

Once the work cycle has been started by pressing the Start button, the machine continues to knead the dough until the set work time has elapsed, unless the operator interrupts the work cycle. Avoid repeated interruptions of the work cycle as this leads to the overheating of the motor which, in the long term, can compromise the efficiency of the machine itself.

Stopping the mixer

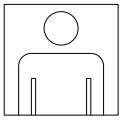
The timers automatically stop the work cycle and hence, the machine, once the programmed time has elapsed. The machine can be stopped at any time by pressing the STOP/EMERGENCY button; however, it is strongly recommended that the operator avoid repeated interruptions. To switch off the machine, turn the main switch to the “O” position.

Unloading the kneaded dough

Upon completion of the mixing cycle, it is possible to empty the dough from the bowl after having opened the mobile protective bowl cover, simply by simultaneously pressing the “UP” buttons to raise the mixer to the discharge position and then by pressing the button which impulsively jogs the bowl to remove the dough from the bowl. (Refer to Appendix 1 for a detailed description of the control panel functions). It is strictly prohibited to use any utensil which can scratch or damage the bowl and the mixing tools. Once the dough has been emptied out of the bowl, it is necessary to simultaneously press the “DOWN” buttons to lower the mixer to the ground.

13 PERIODICAL INSPECTIONS, CLEANING AND MAINTENANCE OF THE MACHINE

ATTENTION! Before carrying out any operation related to periodical inspections, cleaning or maintenance procedures, switch off the machine by turning the main switch to the “O” position and disconnect the machine from the power supply.



Cleaning procedures and periodical inspections

The first and most efficient form of preventive maintenance is keeping the machine clean; regular and thorough cleaning prevents the build-up of dough residue which, in the long term can damage the moving members.

Before carrying out any inspection or cleaning procedure, the operator must:

- wear protective clothing suitable for the task to be carried out; clothing which must offer protection against organic, chemical, biological, mechanical and/or electrical risks
- switch off the machine and remove the plug from its socket.

Daily cleaning procedures and inspections, before using the machine:

- Clean the bowl, spiral tool, breaking column and fixed and mobile protective bowl covers, as described in the section *Cleaning the Machine*.
- Visually check that the machine and external safety devices (described in the section *Safety Instructions*) function correctly.

Inspection of the safety devices

The safety devices installed on the machine need to be inspected periodically.

Legend of the frequency of an inspection (FREQUENCY)	Legend of the manner in which an inspection must be carried out (MANNER)
d = daily w = weekly m = monthly a = annually	O = Observation: visual inspection (e.g. check that alarm lights/LEDS function correctly) E = Execution: an action is required to check the response (e.g. when the Emergency button is pressed, the machine must stop) M = Measurement: the inspection requires instrumentation to measure values that need to be checked (e.g. grounding values).

Main switch

Purpose: interruption of the power supply.

Function: This component disconnects the machine from the power supply. Turn it to the various positions and check that it functions correctly in each position. Turn off the main switch and check that there is no current downstream of the component.

Inspection	
Frequency	Manner
a	E

Lights on the control panel

Purpose: display of the machine status.

Different functions on the machine have a corresponding light which comes on when the function is activated. The lights are not necessary for the machine functions, however, they indicate the status of the machine (i.e what task is being executed) and therefore have an important role in the safe use of the machine.

Activate each machine function and check that the corresponding light comes on.

Inspection	
Frequency	Manner
m	O

Stop-Emergency Circuit

Inspection	
Frequency	Manner
m	E

Purpose: Disactivation of all the machine functions.
By pressing the red, mushroom-head Stop-Emergency push button the power supply to all the electrical machine components is interrupted and, therefore, all the machine functions are disactivated. The machine function being executed stops in the position it has reached at the time of the interruption, except for those parts subject to inertia (e.g. the spiral tool). To restart the machine, the Stop-Emergency push button must be rotated clockwise until it is unblocked.
Check that the Stop-Emergency push button functions in the above described manner.

Electrical panel automation

Inspection	
Frequency	Manner
a	E, M

It is necessary to periodically check the machine automation and grounding. The following components must be checked: motor protectors, electrical motors, connectors between control panel and electrical panel, grounding. Switch on the machine and check the behaviour of the described components (first with the machine operating in manual mode and then with the machine operating in automatic mode).

WEEKLY, MONTHLY, ANNUAL Maintenance procedures

DAILY MAINTENANCE:

- Check the proper operation of the control panel (see Appendix 1).
- Check that all the operation controls and the external safety devices (Emergency push-button and mobile bowl cover) work properly with empty bowl.

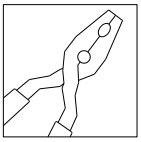
- start the machine and push the Emergeny button; the machine has to stop and it could start again only once the push-button has been released.
- start the machine and lift the mobile bowl cover; the machine has to stop and it could start again only once the mobile bowl cover has been closed and the start push-button pressed.

- Check the braking action: with empty bowl, start the machine in second speed and lift the mobile boel cover; the parts subject to inertia (like the spiral tool) will have to stop by 4 (four) seconds.
- While a working cycle has been executing, check the physical stability of the machine and adjust the feet position if necessary.

N.B.

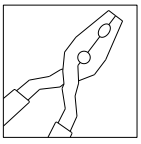
- **In case one or more of the above-mentioned checks have a negative result, then it will be absolutely necessary to ask for the intervention of a mechanical engineer and/or an electrical one to fix the problem. Any operation carried out by the operator to this subject is strictly forbidde.**
- **In case the all the parts subject to inertia do not stop by 4 seconds on the 160-200 models, it is necessary to check the possible fault of the fuses (réf. Appendix 4 referring to the electrical system of the machine for the components identiifcation);; the fault research will have to be carried out by qualified personnel in order to protect the safety of the engineer and the operator, as well as the proper operation and reliability of the machine itself.**

WEEKLY MAINTENANCE:



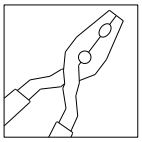
- Clean the machine thoroughly.
- Check that the operating controls and external emergency devices (Stop-Emergency buttons and protective mobile bowl cover) function correctly.
- Check the external components of the mixer: spiral tool, breaking column, bowl.

MONTHLY MAINTENANCE:



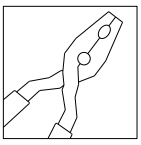
- Lubricate the bearings, if necessary.
- Check the tension of the belts. The tension of the mixer transmission belts must be adjusted when the rotation of the spiral tool/bowl slows down or is not smooth during the execution of a work cycle
- Check the transmissions for irregular noises.
- Check the tightness of the breaking column bolts (refer to the table of bolt tightening torque below).

EVERY TWO MONTHS:



- Check that the work pressure of the lift hydraulic unit is within the allowed tolerance interval (refer to section 11 on the adjustment of the hydraulic work pressure).
- Visually check the state of the hydraulic tubes and connections ensuring that there is no oil loss.
- Lubricate, if necessary, the hydraulic cylinder of the lift which controls the lifting movement and the tilting movement of the machine at each of the two greasing nipples, using an appropriate grease for cylinders.
- Check the overall state of the lift structure.

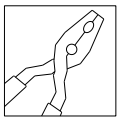
EVERY FOUR MONTHS:



- Thoroughly check the state of all the hydraulic components (tubes, connections, seals, etc.) ensuring that there is no oil loss. The inspection of the hydraulic lift components must be carried out by persons specialised in the maintenance of hydraulic systems.

ANNUAL MAINTENANCE:

- Check the electrical system.

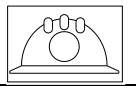
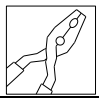


- Clean the machine and check it thoroughly (both externally and that it functions correctly).
- Thoroughly check the transmission members.
  - The transmission belts must be replaced when they start to fray or when under excessive tension, *before* they actually break. It is necessary to replace the entire set of belts relative to a transmission, even if only one of the belts requires replacement. Note: Before replacing the belts, ensure that the new belts have the same characteristics as the original belts installed on the machine by the manufacturer
  - The bearings are subject to wear, especially under the following conditions: poor cleaning procedures, excessive use of the machine in first speed in the reverse direction, poor use of the machine which can lead to food products being deposited inside the group of bearings therefore reducing the life of the bearings themselves. The replacement of the bearings must be carried out by a suitably qualified technician using appropriate equipment and in full observance of the safety measures and local safety regulations.
  - Check the tightness of the bolts on the entire machine.

Bolt tightening torque

	M6	M8	M10	M12	M14	M16
Machine bolts (8.8) [Nm]	9.7	23	47	80	130	196
Breaking column bolts (10.9) [Nm]	13.6	33	6	113	180	275

14 TROUBLE SHOOTING

PROBLEM	POSSIBILE CAUSES	SOLUTION
When the main switch is turned to the “I” position, the lights on the control panel do not come on.	1) The machine has been connected incorrectly. 2) The plug has not been inserted correctly into the socket. 3) There is a disconnected wire in the plug. 4) There is a burnt control panel light. 5) The Emergency button has not been released.	1,2,3) Check the electrical connection.  4) Replace the light bulb.  5) Release the Emergency button, by rotating it clockwise.
When the Start button is pressed, the machine does not start.	1) The mobile bowl cover is open. 2) There is a fault in the safety microswitches.	1) Close the mobile bowl cover. 2) Replace the microswitches. 
Continuous noise.	1) The bearings are no longer efficient.	1) Check and, if necessary, replace the bearings. 
The spiral tool stops.	1) The transmission belts are loose. 2) The transmission belts are worn.	1) Tighten the belts. 2) Replace the belts. 
The bowl stops.	1) The transmission belts are loose. 2) The transmission belts are worn.	1) Tighten the belts. 2) Replace the belts. 
The lift functions do not work	1) The mobile bowl cover is closed. 2) Insufficient pressure in the hydraulic unit 3) The Emergency button has not been released	1) Open the mobile bowl cover. 2) Adjust the work pressure of the hydraulic unit as specified in the relative section 10 and check that the direction of rotation of the pump is correct.   3) Release the Emergency button, by rotating it clockwise.

15 DISASSEMBLING AND DISPOSING OF THE MACHINE

Main components

- Primary materials: Cast iron, steel, stainless steel, bronze, copper, rubber, plastic (e.g. PET, ABS, PST, polyurethane).
- Surface treatments: Painting (for metallic surfaces); pickling, polishing, satin finishing (for stainless steel parts).
- Forming processes: Rolling and drawing of steel profiles, welding, machining.

Disassembly and disposal of the machine

- The buyer is directly responsible for putting the machine out of service.
- The disassembly of mechanical and electrical components must be assigned to competent persons.
- The machine must be disposed of according to local standards and regulations. In any case:
    - Clean the machine thoroughly.
    - Assign the disposal of the electrical panel to a suitably specialised company.

APPENDIX 1: DESCRIPTION OF THE FUNCTIONS AND OPERATING MODES FOR THE CONTROL PANEL WITH TWO ELECTRO-MECHANICAL TIMERS

ATTENTION!:
The manufacturer reserves the right to modify its machine models as deemed necessary to improve the product. Therefore, when requesting technical assistance and spare parts, always specify:

- The model and type of machine;
- The serial number;
- The year of construction;
- The position, description, part number and quantity of the spare parts required.

For additional information on the machine operation, contact the manufacturer.

All the standard control functions for this line are located on the side control panel, located on a special arm in front of the machine. The control panel is movable for ergonomic reasons and contains both the controls for the dough mixing functions and the mixer head movements.

The specific function of each button and selector is clearly indicated by graphic symbols located on or next to each control.

DESCRIZIONE DEI PULSANTI DEL PANNELLO COMANDI DELLA MACCHINA

The control functions on this side panel can be divided into two units: one for the dough kneading functions and one for the mixer head movements.
The figure below shows the control panel for the two-speed model, located on a special arm in front of the machine.

CONTROL FUNCTIONS FOR THE DOUGH KNEADING PROCESS

All the control functions for the dough kneading process are located on the red control panel, which is located on the side front box located on a special arm in front of the machine

	**BOWL ROTATION SELECTOR** Selects the direction of rotation of the bowl in the *first speed* operating mode. In the anticlockwise direction, the bowl rotates in the same direction as the spiral. In the clockwise direction, the bowl rotates in the opposite direction to the spiral. It serves to accelerate the amalgamation of the ingredients. **N.B. The reverse (clockwise) bowl rotation function can only be used for a maximum time of 1 minute; the reason being that, after the dough has reached a certain consistency, it starts beating against the breaking column which can, with time, damage the breaking column itself and, in addition, place the machine under excessive stress.**
	**FIRST SPEED START BUTTON** Starts mixing the ingredients in first speed. The bowl rotation direction is selected using the Bowl rotation selector.
	**SECOND SPEED START BUTTON** Starts kneading the dough in second speed. The bowl rotation direction is "NORMAL" - anticlockwise direction (same direction of rotation as that of the spiral).
	**MANUAL, SEMI-AUTOMATIC, AUTOMATIC WORK CYCLE SELECTOR** • Manual cycle: the timers are disabled. • Semi-automatic cycle: allows the mixer to operate only in 1st speed or only in 2nd speed. • Automatic cycle: the machine automatically switches from the 1st to the 2nd speed and stops once the set time has elapsed.

	**STOP BUTTON** It serves to stop the machine. The timers are not reset. To resume the work cycle press the first or the second speed start button.
	**POWER ON LIGHT** Indicates that the power is ON.
	**EMERGENCY-STOP BUTTON** The rotation of the bowl and of the spiral tool can be stopped by pressing the Emergency button. To restart the machine, it is necessary to first remove the emergency condition, by rotating the same push button clockwise until it is released, then press the start button. The timers are reset.
	**MANUAL BOWL JOG BUTTON** Impulsively rotates the bowl, without rotating the spiral, even when the mobile bowl cover is open. The direction of rotation of the bowl is selected using the *Bowl rotation selector.* It serves to bring the dough to the front of the machine to facilitate its extraction from the bowl.
	**BOWL POTENTIOMETER** It permits to increase or decrease the speed of bowl rotation in first or second speed. To increase the bowl speed in first speed, simply turn the potentiometer located in the right of the control panel, to the right side, while to decrease the speed just turn it towards left. To increase the bowl speed in second speed, simply turn the potentiometer located in the right of the control panel, to the right side, while to decrease the speed just turn it towards left.

CONTROL FUNCTIONS FOR THE LIFTER MOVEMENTS

	**"DOWN" BUTTON** **- LOWERS THE MIXER TO THE GROUND** Lowers the mixer from the discharge position, after the dough has been emptied out. For safety reasons these two push-buttons are located on the sides of the control panel (one on the right side and one on the left side) so that the operator is forced to use both hands to lower the mixer head. For safety reasons this function is only active when the button is kept pressed in at the same time
	**"UP" BUTTON** **- RAISES THE MIXER TO THE EMPTYING POSITION** Once the kneading cycle has been completed and the bowl cover has been opened, this button is used to raise the mixer to the discharge position to allow the dough to be emptied out. For safety reasons this function is only active when the button is kept pressed in.

Note:

- For safety reasons, the "up e down" push buttons are only active when they are pressed in at the same time
- ATTENTION: THE FUNCTIONS OF THE LIFTERS ARE ONLY ACTIVE WHEN THE MOBILE BOWL COVER IS COMPLETELY OPEN.

OPERATING MODES

The mixer can run in three modes, when the mobile bowl cover is closed:

- Manual mode;
- Semi-automatic mode;
- Automatic mode.

Relationship between the timer settings and the operating modes:

- *If the pointer of the first speed timer is set below the zero marking*, then this timer switches off (only the green LED indicating that the units of measurement are minutes remains on). With this setting, if the first speed start button is pressed, then the machine works in manual mode in the first speed, even if the *Work cycle selector* has been set to automatic mode.

- *If the pointer of the second speed timer is set below the zero marking*, then this timer switches off (only the green LED indicating that the units of measurement are minutes remains on). With this setting, if the first speed start button is pressed, then the machine carries out the first speed cycle for the time set on the first speed timer, after which the machine stops. If the second speed start button is pressed, then the machine will work in manual mode in second speed, even if the *Work cycle selector* has been set to automatic mode.

- *If the pointers of both timers are set below the 0 marking*, then both timers switch off (only the green LEDs indicating that the units of measurement are minutes remain on). With this setting, the machine works only in manual mode, even if the *Work cycle selector* has been set to automatic mode.

Manual Mode

- Turn the WORK CYCLE SELECTOR to the MANUAL position (as per the above figure).
- Press the FIRST SPEED START BUTTON on the control panel to start running in first speed, in order to amalgamate and pre-mix the ingredients. It is possible to select the reverse bowl rotation direction using the BOWL ROTATION SELECTOR, to accelerate the amalgamation of the ingredients. Before changing the bowl rotation direction, wait 1 second with the selector in the central position (0), in order to stop the rotation
- Press the SECOND SPEED START BUTTON on the control panel to start running in second speed to complete the mixing process.
- Press the EMERGENCY-STOP BUTTON to end the manual cycle.

Semi-automatic Mode

- Turn the WORK CYCLE SELECTOR to the SEMI-AUTOMATIC position (as per the above figure).
- Programme the first and/or second speed timer, according to the required speed for the work cycle.

To work in first speed:

- Press the FIRST SPEED START BUTTON on the control panel to start running in first speed, in order to amalgamate and pre-mix the ingredients. It is possible to select the reverse bowl rotation direction using the BOWL ROTATION SELECTOR, to accelerate the amalgamation of the ingredients. Before changing the bowl rotation direction, wait 1 second with the selector in the central position (0), in order to stop the rotation
- The end of cycle is determined by the first speed timer. Once the time set on the first speed timer has elapsed, the machine stops automatically.
- If the SECOND SPEED START BUTTON is pressed, then the machine switches to the second speed. The end of cycle will then be determined by the second speed timer; once the time set on the second speed timer has elapsed, the machine stops automatically.

To work in second speed:

- Press the SECOND SPEED START BUTTON to start running in second speed. The end of cycle is determined by the second speed timer; once the time set on the second speed timer has elapsed, the machine stops automatically.

Automatic Mode

- Turn the WORK CYCLE SELECTOR to the AUTOMATIC position (as per the above figure)
- Programme the first and second speed timers.

To work both in first and second speed:

- Press the FIRST SPEED START BUTTON on the control panel to start running in first speed, in order to amalgamate and pre-mix the ingredients. It is possible to select the reverse bowl rotation direction using the BOWL ROTATION SELECTOR, to accelerate the amalgamation of the ingredients. Before changing the bowl rotation direction, wait 1 second with the selector in the central position (0), in order to stop the rotation.
- The first end of cycle is determined by the first speed timer. At the end of this first cycle, the machine automatically switches to the second speed and the second end of cycle is subsequently determined by the second speed timer; once the time set on the second speed timer has elapsed, the machine stops automatically
- If the SECOND SPEED START BUTTON is pressed during a first speed cycle, then the machine will switch to the second speed. The end of cycle will then be determined by the second speed timer.

To work in second speed:

- Press the SECOND SPEED START BUTTON to start running in second speed. The end of cycle is determined by the second speed timer; once the time set on the second speed timer has elapsed, the machine stops automatically.

Remarks

- If the movable protective bowl cover is opened while a work cycle is being carried out, then the machine will stop and the timers will not be reset but will maintain the time reached. To restart the mixer, it is necessary to close the movable bowl cover and press the required speed START button.

- It is only possible to reverse the bowl rotation (using the BOWL ROTATION SELECTOR) in first speed; this function is automatically disabled when the machine is running in second speed. **N.B. The reverse (clockwise) bowl rotation function can only be used for a maximum time of 1 minute; the reason being that, after the dough has reached a certain consistency, it starts beating against the breaking column which can, with time, damage the breaking column itself and, in addition, place the machine under excessive stress.**

- It is always possible to switch to the second speed when the machine is running in first speed, simply by pressing the SECOND SPEED START BUTTON.

- In automatic mode, when the time set for the first speed cycle has elapsed and the bowl rotation direction is reverse (i.e. in the direction opposite to the normal direction of rotation of the spiral), then the bowls stops for approximately 1,5 seconds, before the machine switches to the second speed (where the number of revolutions of the spiral increases and the bowl rotates in the normal direction, i.e. in the same direction as the spiral). This pause is necessary to allow the bowl rotation direction to be changed and to avoid sudden changes in the direction of rotation of the bowl motor, which in the long term, will damage the motor and hence the machine itself.

- Once the work cycle has been completed, it is possible to move the dough to the front extraction area, by using the BOWL ROTATION SELECTOR and the JOG BOWL push button, thereby simplifying the extraction of the dough. The JOG BOWL push button, which only rotates the bowl, also functions when the protective movable bowl cover is open; however, for safety reasons, the bowl only rotates while the button is kept pressed in.

- N.B. In the case of a fault in the timer, it is possible to continue working in a backup mode until the fault is repaired In particular, it is possible to work in MANUAL mode as described below.

-Turn the WORK CYCLE SELECTOR to the MANUAL position

- Press the FIRST SPEED START BUTTON on the control panel to start running in first speed, in order to amalgamate and pre-mix the ingredients. It is possible to select the reverse bowl rotation direction using the BOWL ROTATION SELECTOR, to accelerate the amalgamation of the ingredients. Before changing the bowl rotation direction, wait 1 second with the selector in the central position (0), in order to stop the rotation

- Press the SECOND SPEED START BUTTON on the control panel to start running in second speed to complete the mixing process.

- Press the EMERGENCY-STOP BUTTON to end the manual cycle.

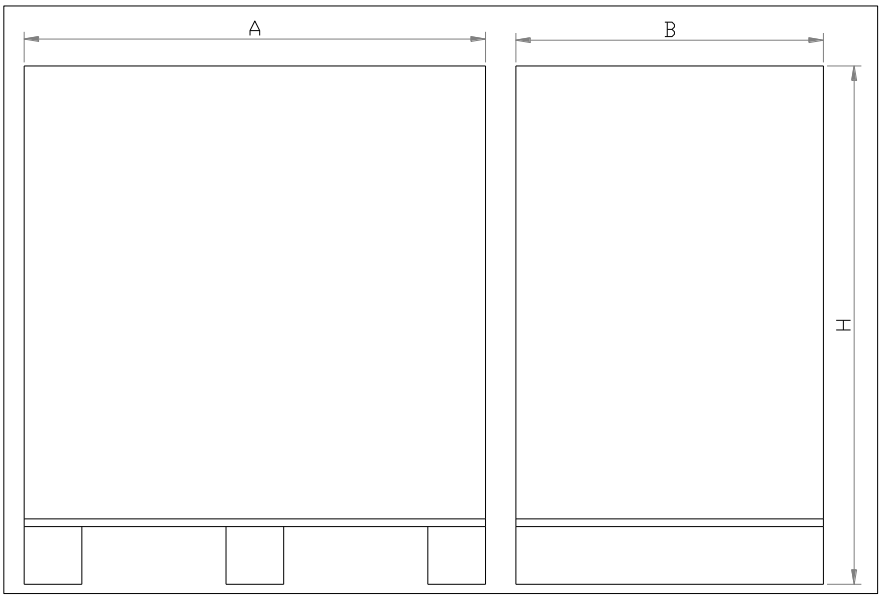
APPENDIX 2: TECHNICAL CHARACTERISTICS: SFRT/LYNX-R LINE

The table below contains the main technical characteristics of the machine.

MACHINE TECHNICAL DATA	120 LYNX	160 LYNX	200 LYNX	250 LYNX
Maximum Dough capacity (kg)	120	160	200	250
Maximum Flour capacity (kg)	75	100	125	150
Bowl volume (l)	188	266	306	378
Bowl diameter (mm)	750	850	910	998
Lenght (mm)	1760	1935	1935	1955
Width(mm)	1760	1780	1815	1860
Height (mm) LYNX B	1510	1615	1615	1620
Max. height in tilting position (mm) LYNX B	2460	2620	2660	2850
Height(mm) LYNX T	1730	1730	1730	1730
Max. height in tilting position (mm) LYNX T	2985	3150	3200	--
Net weight (kg) LYNX-B	1045	1235	1245	1300
Net weight (kg) LYNX-R B	1085	1285	1295	1350
Net weight (kg) LYNX-T	1175	1365	1375	1425
Net weight (kg) LYNX-R T	1215	1415	1425	1475
Spiral motor power LYNX(kW)	2,06/5.2	5,9/10,3	5,9/10,3	6/12
Spiral motor power LYNX-R (kW)	3.7/6.2	6/12	6/12	6/12
Bowl motor power (kW)	0,55	0,75	0,75	1,1
Lifter motor power (kW)	1,5	1,5	1,5	1,5
Lifting time:	dependent on discharge height	dependent on discharge height	dependent on discharge height	dependent on discharge height

ATTENTION !
LYNX mixers are only suitable for kneading mixtures with a humidity greater that 55% while LYNX-R mixers are suitable for kneading mixtures with a humidity greater than 45%.

DIMENSIONS AND GROSS WEIGHT OF THE PACKED MACHINE



	WOODEN CRATE	
MODEL	**AxBxH (cm)**	**GROSS WEIGHT (kg)**
120 LYNX - B	200x195x180	1175
120 LYNX -R B	200x195x180	1215
120 LYNX - T	200x195x180	1305
120 LYNX - R T	200x195x180	1345
160 LYNX - B	200x200x190	1365
160 LYNX - R B	200x200x190	1405
160 LYNX - T	200x200x200	1495
160 LYNX - R T	200x200x200	1545
200 LYNX - B	200x200x200	1375
200 LYNX - R B	200x200x200	1425
200 LYNX - T	200x200x200	1505
200 LYNX – R T	200x200x200	1555
250 LYNX - B	200x200x200	1425
250 LYNX – R B	200x200x200	1475
250 LYNX - T	200x200x200	1605
250 LYNX – R T	200x200x200	1655

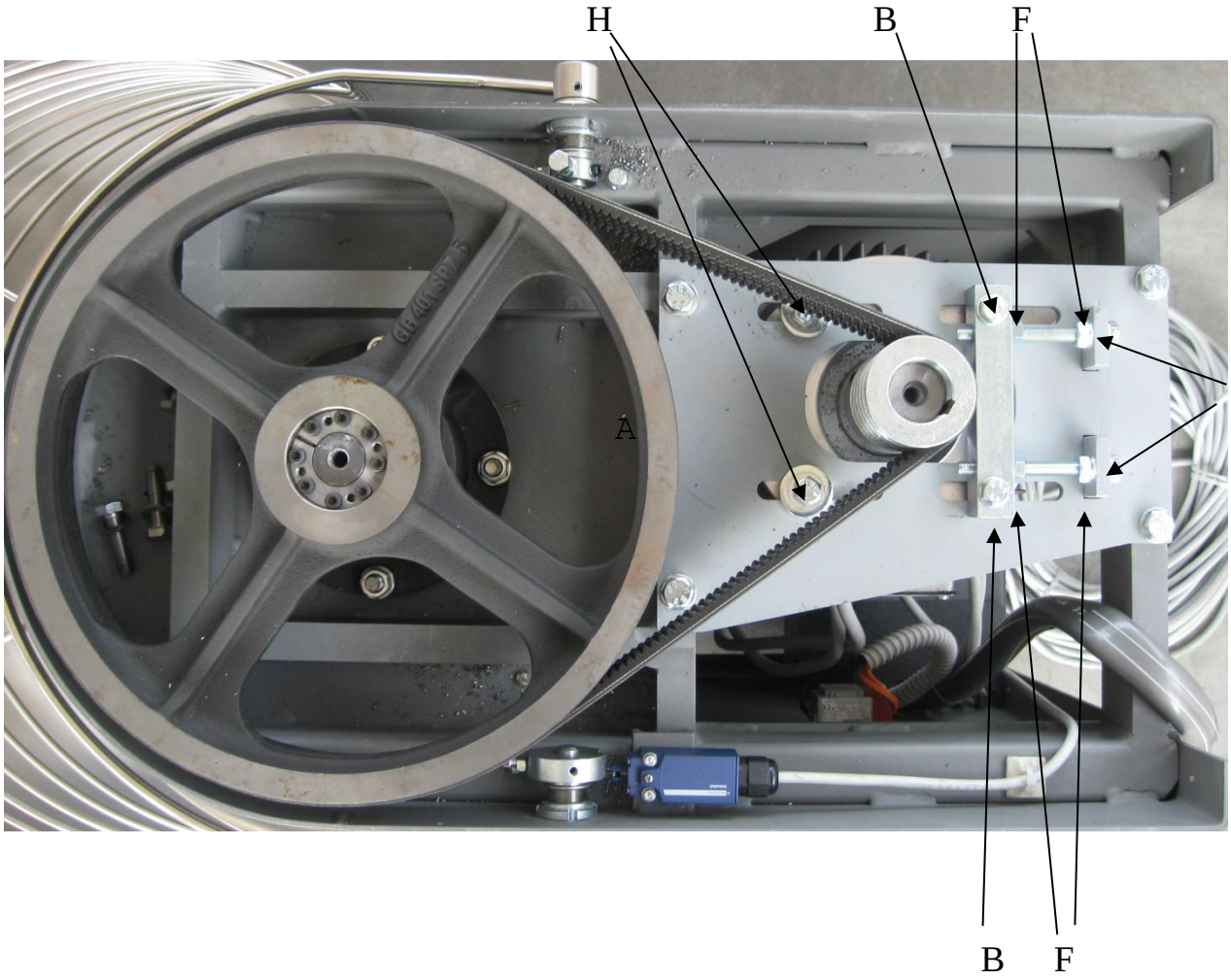
APPENDIX 3: ADJUSTMENT OF THE TENSION AND REPLACEMENT OF THE SPIRAL TOOL TRANSMISSION BELTS

Any type of intervention on the machine must be carried out by suitably qualified personnel, using suitable equipment and in accordance with the local safety standards and regulations in force!

Before carrying out any operation on the machine, it is obligatory to:

- wear protective clothing suitable for the task to be carried out,
- switch off the machine (by turning off the main switch) and disconnect the machine from the power supply, ensuring that the electrical panel on the machine and the machine power cable are isolated from the main power supply in a safe manner for the entire duration of the intervention, without accidental risk of re-energising of the power supply.

Figure A

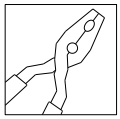


(Refer to Figure A)

The belt tension must be adjusted when it is noticed that the rotation of the spiral tool tends to slow down or is not smooth during the execution of a work cycle.

1. Lift the head casing by loosening the screws located on the head cover, which hold it in place.
2. Disconnect the connector from the head cover.
3. Loosen the 4 nuts in pos. F.
4. Loosen the nuts in pos. B and pos. H just enough to permit the spiral tool motor to move backwards and forwards without falling.
5. If it is necessary to replace the belts, then move the spiral tool motor as close as possible to the spiral tool belt pulley to allow them to be replaced.
6. To tension the belts, proceed in the following manner:
   • With the nuts B and H in the position described in point 4, tighten both the nuts in pos. A so as to move the motor away from the spiral tool belt pulley, parallel to the head, until the required tension has been reached.
7. Tighten the nuts B and H of the spiral tool motor securely and test the belt tension once again, as this may change slightly once these nuts have been tightened. If the tension is as required, then tighten the nuts in pos. F, bringing them up against the corresponding plates.
8. Reconnect the connector, paying attention to the numbering present on the two connectors (socket and plug).
9. Place the head cover back in the correct position, so that it closes onto the head, by fastening the corresponding head cover screws accordingly.

Note: When replacing the belts, it is first necessary to ensure that the new belts have the same characteristics as those installed by the manufacturer of the machine.



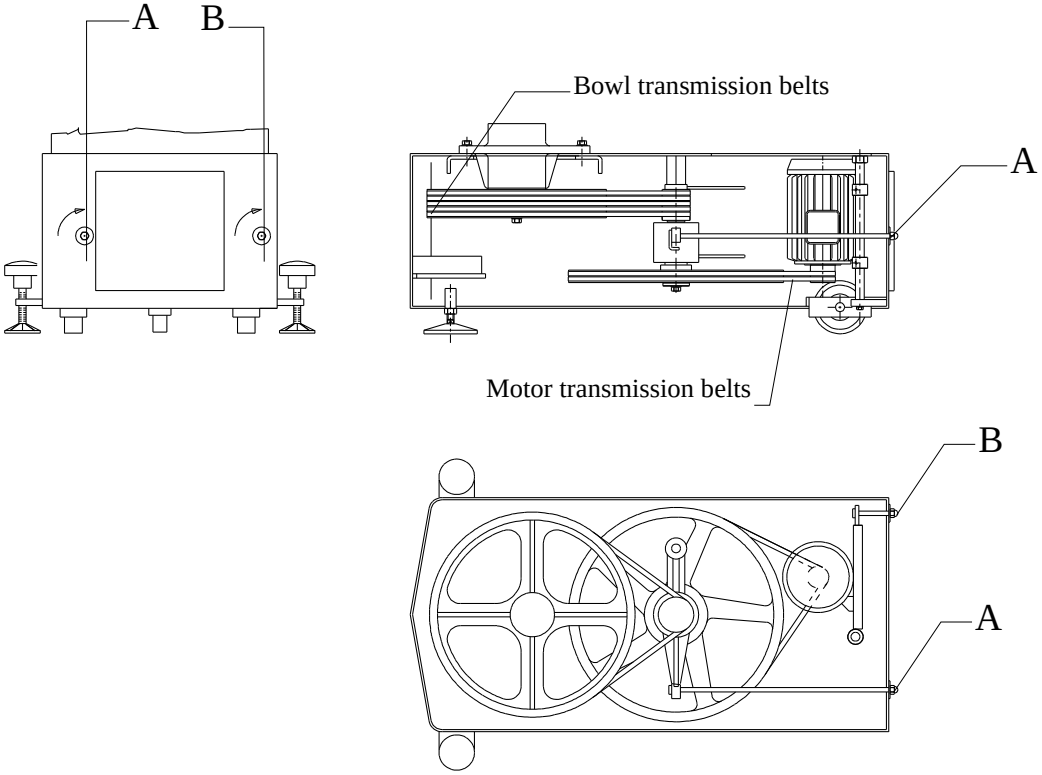

ADJUSTMENT OF THE TENSION AND REPLACEMENT OF THE BOWL TRANSMISSION BELTS

The belt tension must be adjusted when it is noticed that the rotation of the bowl tends to slow down or is not smooth during the execution of a work cycle.

Any type of intervention on the machine must be carried out by suitably qualified personnel, using suitable equipment and in accordance with the local safety standards and regulations in force!

Before carrying out any operation on the machine, it is obligatory to:

- wear protective clothing suitable for the task to be carried out,
- switch off the machine (by turning off the main switch) and disconnect the machine from the power supply, ensuring that the electrical panel on the machine and the machine power cable are isolated from the main power supply in a safe manner for the entire duration of the intervention, without accidental risk of re-energising of the power supply.



Adjustment of the belt tension:

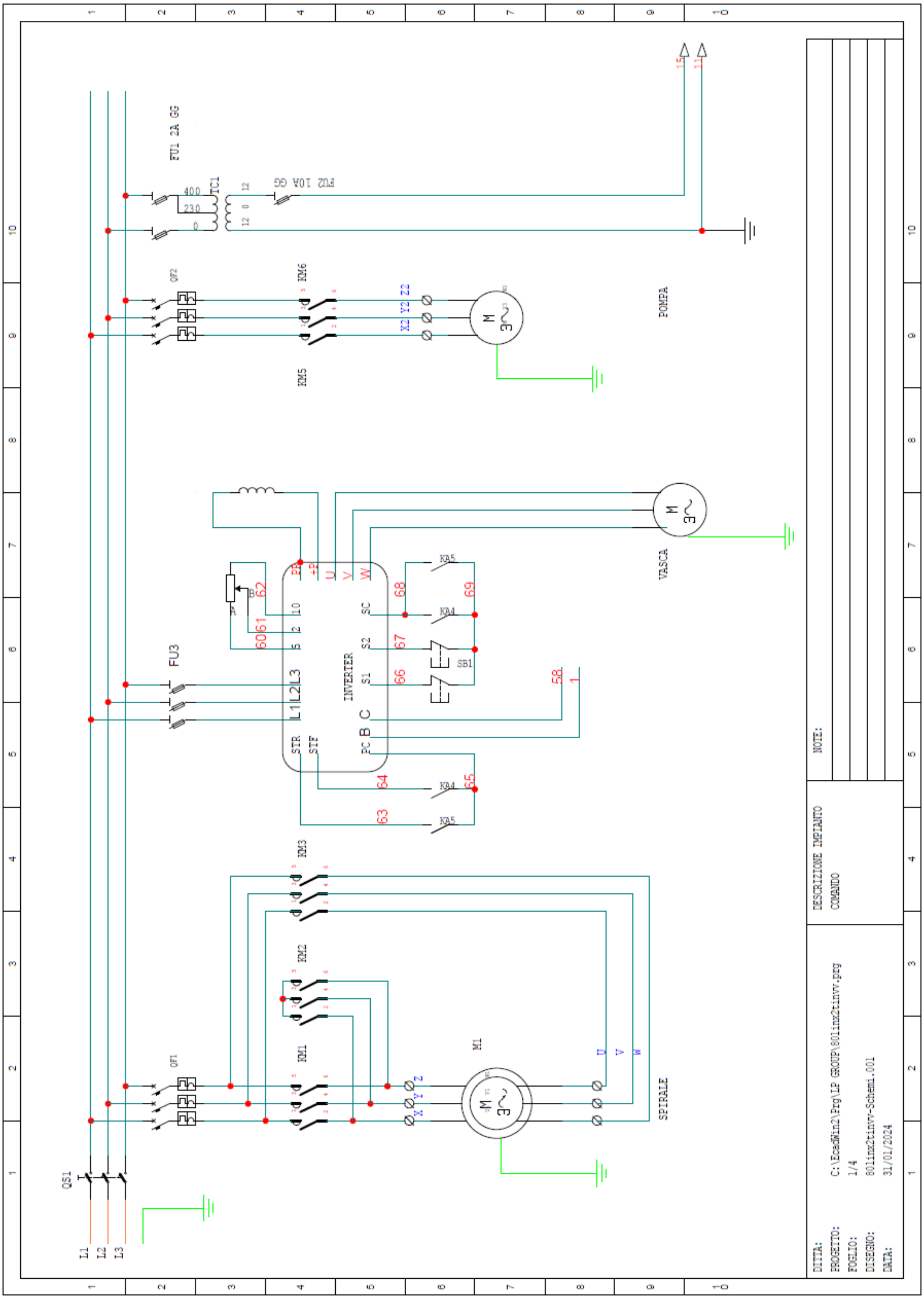
- To tension the bowl transmission belts, turn the nut (pos. A) clockwise using the appropriate spanner.
- To tension the motor transmission belts, turn the nut (part. B) clockwise using the appropriate spanner.

Replacement of the belts:

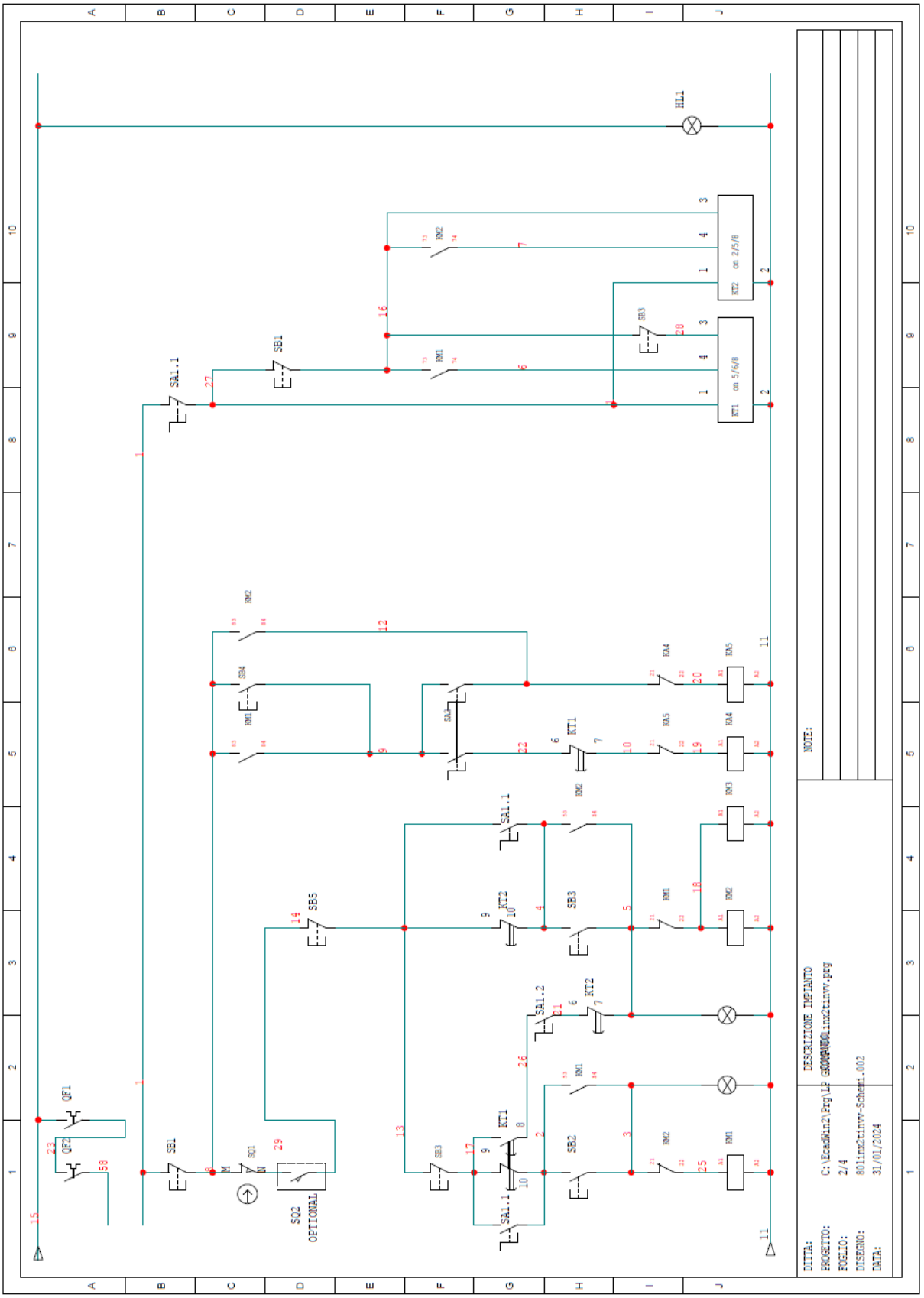
To replace the belts, it is first necessary to turn the nut (pos. B) anticlockwise and then the nut (pos. A) in the same direction (anticlockwise). In this manner, the belts are loosened and can be replaced.

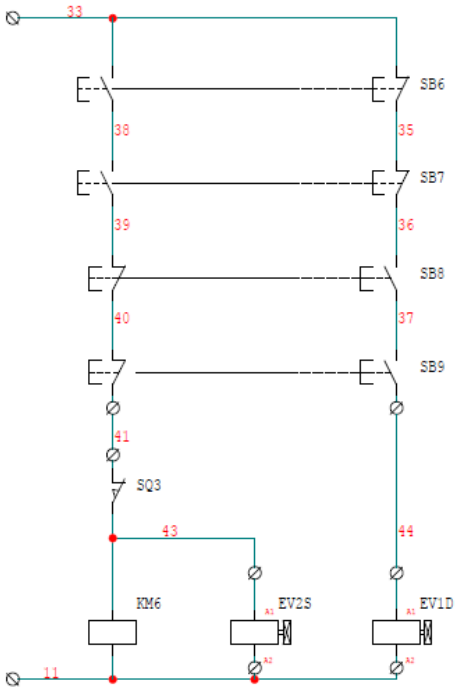
Note: Before replacing the belts, ensure that the new belts have the same characteristics as the original belts installed on the machine by the manufacturer.

APPENDIX 4: WIRING DIAGRAMS LYNX 120 T IN 400V/50HZ WITH with two electro-mechanical timers SITEC 72x72



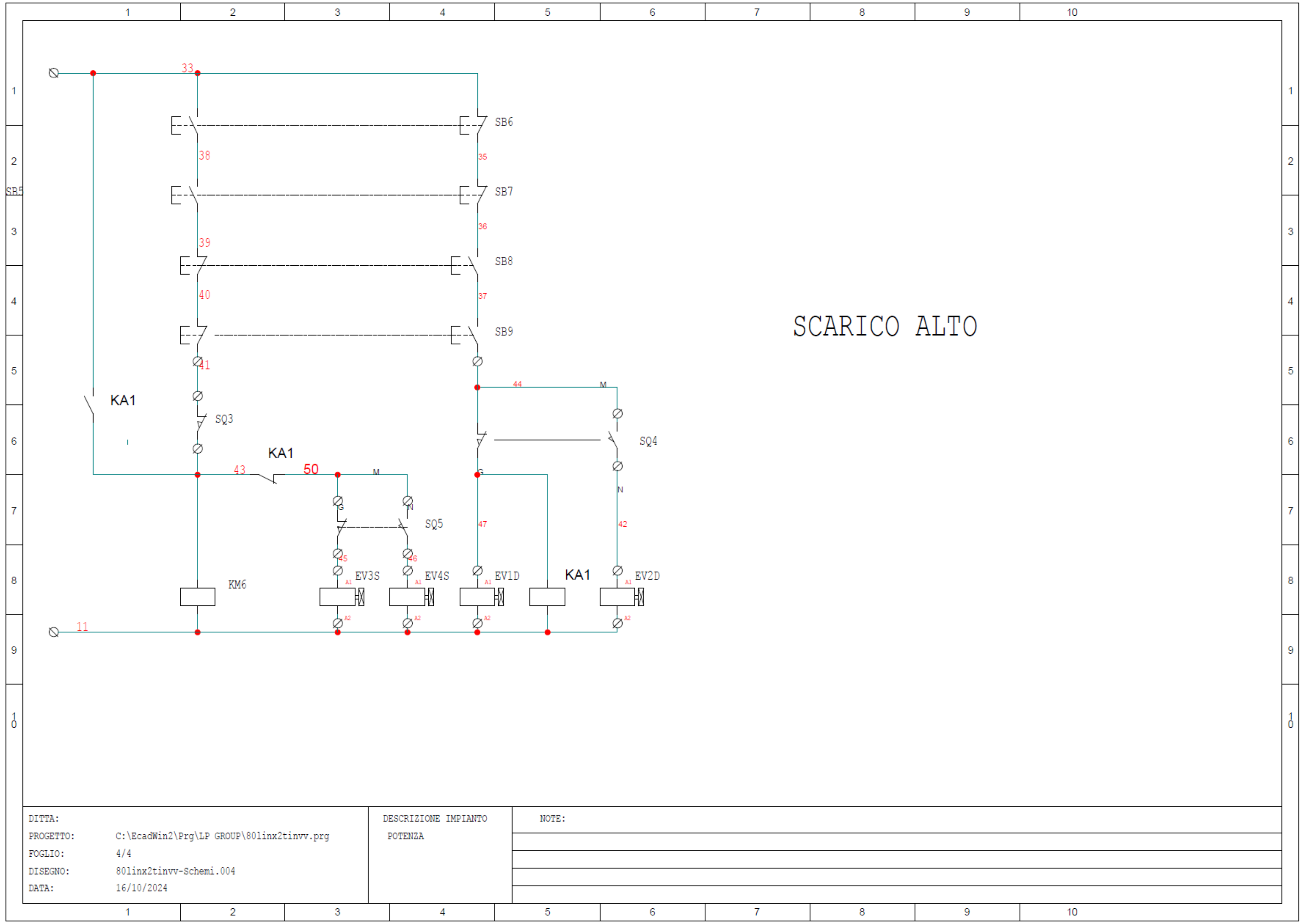
L1
L2
L3
QS1
QF1
KM1
KM2
KM3
M1
SPIRALE
FU3
INVERTER
KA4
KA5
SB1
VASCA
QF2
KM5
KM6
POMPA
FU1 2A GG
TC1
FU2 10A GG
DITTA:
PROGETTO: C:\EcadWin2\Prg\LP GROUP\801inx2tinvv.prg
FOGLIO: 1/4
DISEGNO: 801inx2tinvv-Schemi.001
DATA: 31/01/2024
DESCRIZIONE IMPIANTO
COMANDO
NOTE:


HL1
SA1.1
SB1
KM2
KM1
KT2 con 2/5/8
KT1 con 5/6/8
SB3
SB4
SA2
KA4
KA5
KT1
SB5
KT2
SA1.2
SB2
SB6
QF1
QF2
SQ1
SQ2
OPTIONAL
NOTE:
DITTA:
PROGETTO:
FOGLIO: 2/4
DISEGNO: 80linx2tinvv-Schemi.002
DATA: 31/01/2024



SCARICO BASSO

DITTA:		DESCRIZIONE IMPIANTO	NOTE:
PROGETTO:	C:\EcadWin2\Prg\LP GROUP\80linx2tinvv.prg	POTENZA	
FOGLIO:	3/4		
DISEGNO:	80linx2tinvv-Schemi.003		
DATA:	31/01/2024		


SCARICO ALTO
SB5
SB6
SB7
SB8
SB9
KA1
SQ3
SQ4
SQ5
KM6
EV3S
EV4S
EV1D
EV2D
33
35
36
37
38
39
40
41
42
43
44
45
46
47
50
11
DITTA:
PROGETTO: C:\EcadWin2\Prg\LP GROUP\80linx2tinvv.prg
FOGLIO: 4/4
DISEGNO: 80linx2tinvv-Schemi.004
DATA: 16/10/2024
DESCRIZIONE IMPIANTO
POTENZA
NOTE:

LIST OF ELECTRICAL COMPONENTS FOR LYNX 120 T with two electro-mechanical timers
SITEC 72x72 400/50

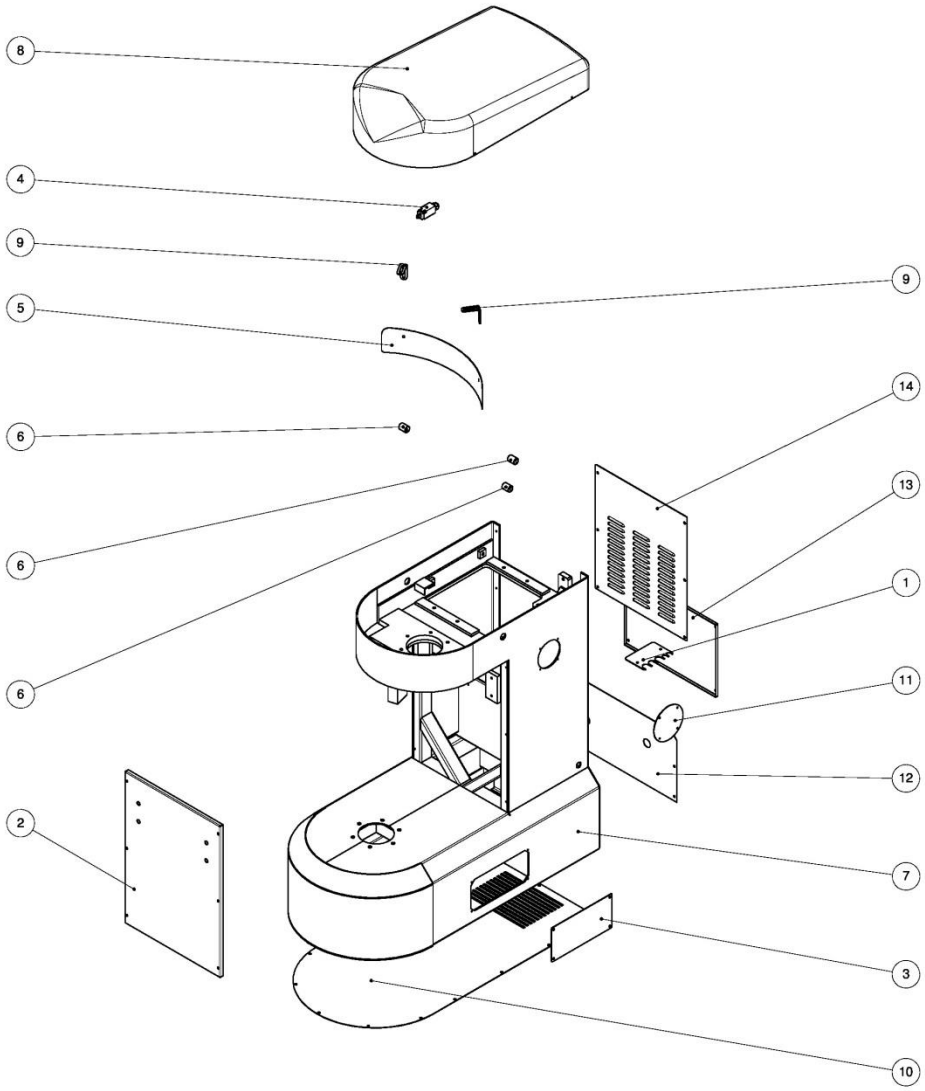
ID	Description	Qty	Code
BUILT-IN PANEL			
M1	Spiral tool motor	1	
M2	Bowl motor	1	
M3	Hydraulic unit motor	1	
QS1	Main switch ILME ZQE323+ ILME ZR3280	1	
TC1	Transformer ITALWEBER 160VA 0.230.400.420-12.0.12	1	
KT3	Timer cdc TN80+ Base Finder 90,26		
KM1	Contactor EATON DILM901	1	
	Aux contact EATON DILAXHI11	1	
KM2	Contactor EATON DILM701	1	
	Aux contact EATON DILAXHI20	1	
KM3	Contactor EATON DILM1201	1	
	Bridge EATON DILM12XSL	1	
KM4	Contactor EATON DILM701	1	
	Bridge EATON DILM12XRL	1	
KM5	Contactor EATON DILM701	1	
KM6	Contactor EATON DILM701	1	
QF1	Magneto thermal EATON PKZM0-20	1	
	Aux contact EATON NHI-PKZ0	1	
QF2	Magneto thermal EATON PKZM0-2.5	1	
	Aux contact EATON NHI-PKZ0	1	
QF3	Magneto thermal EATON PKZMO-6,3	1	
	Aux contact EATON NHI-PKZ0	1	
FU1	Fuse LEGRAND 4A GL	2	
FU2	Fuse LEGRAND 10A GL	1	
FU3	Fuse LEGRAND 25A AM	1	
FU4	Fuse LEGRAND 25A AM	1	
	Bridge SEMIKRON 25	1	
	Fuse holder LEGRAND 0508	5	
KA1	Relay FINDER 553248	1	
	Socket FINDER 9482	1	
KA1	Relay FINDER 5532 24VAC + Socket 9482	1	
KT3	Timer CDC TN80	1	
	Socket FINDER 90,26	1	
SQ1	Limit switch SCHNEIDER XCKN2103P20	1	
SQ2	Limit switch SCHNEIDER XCKN2103P20	1	
SQ3	Limit switch SCHNEIDER XCKN2118P20		
SQ4	Limit switch SCHNEIDER XCKN2118P20	1	
SQ5	Limit switch SCHNEIDER XCKN2118P20	1	
J1	24-pole connector MOLEX	1	
	MORSETTI /TERMINAL BLOCKS 2,5 MMQ CABUR CBC2GR	19	

	MORSETTI TERRA/TERMINAL BLOCKS EARTH 4 MMQ CABUR TEO4	9	
	MORSETTI/TERMINAL BLOCKS 4 MMQ CABUR CBC4GR	15	
	CASSETTA ELETTRICA ZANARDO 700X500X200/ELECTRICAL BOX ZANARDO 700X500X200	1	
CONTROL PANEL			
	1st speed timer SITEC 72X72	1	
	2nd speed timer SITEC 72X72	1	
SB1	Emergency push-button EATON M22-PVT+ EATON M22-A + M22-K01	1	
SB2	First speed button EATON M22-DL-W-X1 + EATON M22-A + EATON M22 – K10 + EATON M22-LED-W	1	
SB3	Second speed button EATON M22-D-X + EATON M22-XDL-W-X2 + EATON M22-A + EATON M22 – K10 + 2 X EATON M22 – K01+ EATON M22-LED-W	1	
SB4	Bowl jog button EATON M22-D-X+ EATON M22-XD-S-X11 + EATON M22-A+ EATON M22-K10	1	
SB5	Stop button EATON M22 –DH-SX-0 + EATON M22-A + EATON M22-K01	1	
SB6	Up push-button EATON M22-D-X + EATON M22-A + M22-K10 + EATON M22-K01	1	
SB7	Up push-button EATON M22-D-X + EATON M22-A + M22-K10 + EATON M22-K01	1	
SB8	Down push-button EATON M22-D-X- + EATON M22-A + M22-K10 + EATON M22-K01	1	
SB9	Down push-button EATON M22-D-X- + EATON M22-A + M22-K10 + EATON M22-K01	1	
SA 1	Work cycle selector EATON M22-WRK3 +3 X EATON M22-K10 +2 X EATON M22-K01+ EATON M22-A	1	
SA2	Bowl rotation selector EATON M22-WRK3 + EATON M22-A + 2 X EATON M22-K10	1	
HL1	Power on light EATON M22-L-W + EATON M22-A + EATON M22-LED-W	1	

N.B. (i) The technical data is not binding. The data can be changed in order to improve the product.
(ii) Drawings and illustrations are only indicative.

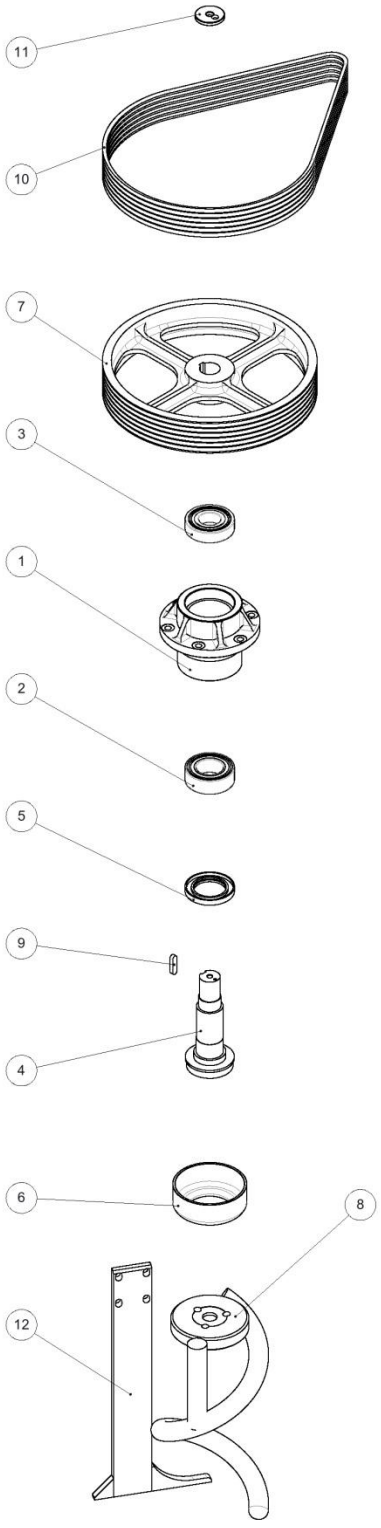
APPENDICE 5: ESPLOSO LYNX 120 T all V 50hz / APPENDIX 5: EXPLODED VIEWS OF LYNX 120 T MIXER AND PARTS LIST

ESPLOSO STRUTTURA MACCHINA - EXPLODED VIEW OF MACHINE STRUCTURE



Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Piastra fermacavi Cables holder plate	1	691005
2	Carter anteriore Front casing	1	700009
3	Chiusura laterale Side casing	1	700005
4	Microinterruttore Micro-switch	1	E48001
5	Parafarina Flour protection cover	1	704004
6	Eccentrico Eccentric	3	616009
7	Scocca Body	1	501004
8	Coperchio testa Head cover	1	625023
9	Staffa supporto parafarina Bracket for support flour protection cover	2	734005
10	Lamiera chiusura base Base closing plate	1	659223
11	Piastra Interruttore generale Main switch plate	1	691102
12	Chiusura posteriore inferiore Lower rear plate	1	659184
13	Carter posteriore cassetta elettrica Rear plate electrical box	1	700058
14	Lamiera chiusura posteriore superiore Upper rear plate	1	659183

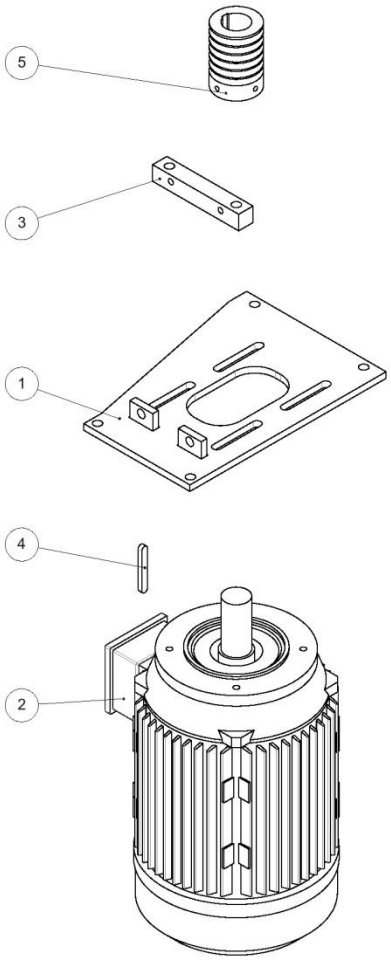
ASSIEME GRUPPO SPIRALE – EXPLODED VIEW OF SPIRAL TOOL ASSEMBLY



Posizione Position	Descrizione Description	Qtà Qty	Codice Code

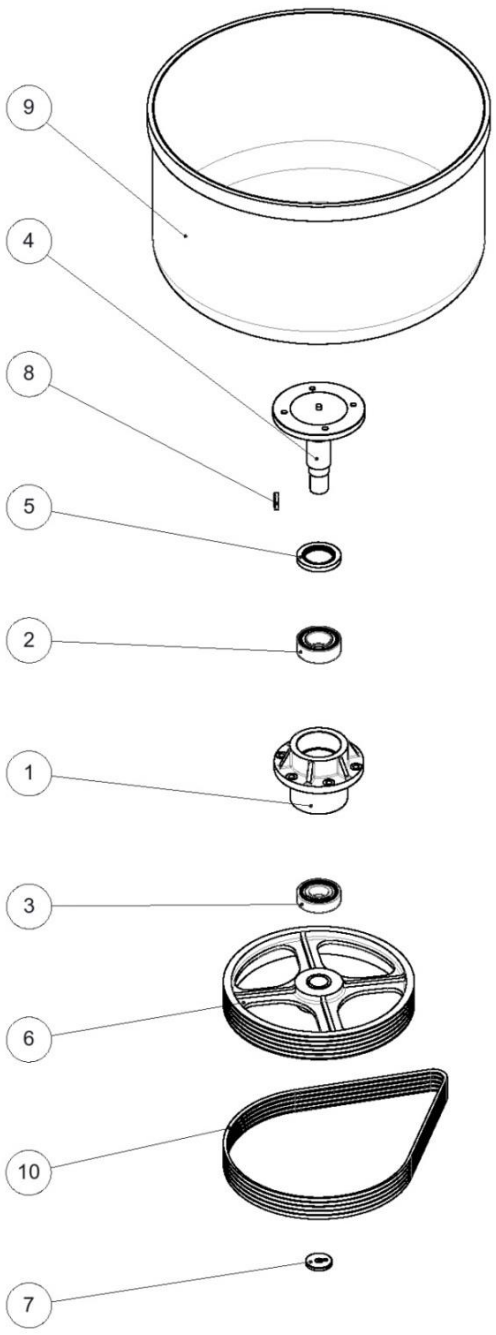
1	Supporto albero spirale Spiral shaft support	1	714009
2	Cuscinetto obliquo a due corone di sfere 3211 A-2RS1 Ball bearing 3211 A-2RS1	1	K10010
3	Cuscinetto radiale 6309-2RS1 Bearing 6309-2RS1	1	K10011
4	Albero spirale Spiral tool shaft	1	600006
5	Anello MIM 100X65X12 Sealing ring 100X65X12	1	A02004
6	Coppetta protezione spirale Spiral tool protection cup	1	635002
7	Puleggia SPZ 6 gole Øp 430- Øe=434 – Øf= 42 Pulley SPZ Z 6	1	680010
8	Spirale Spiral tool	1	720003
9	Linguetta 12x8 L=45 UNI 6604 Key 12x8 L=45 UNI 6604	1	B24004
10	Cinghia dentata XPZ 1637 Toothed belt XPZ 1637	6	K19005
11	Rondella Ø60 Washer Ø60	1	712004
12	Piantone Breaking column	1	675015

ESPLOSO GRUPPO MOTORE SPIRALE - EXPLODED VIEW OF THE SPIRAL TOOL MOTOR ASSEMBLY



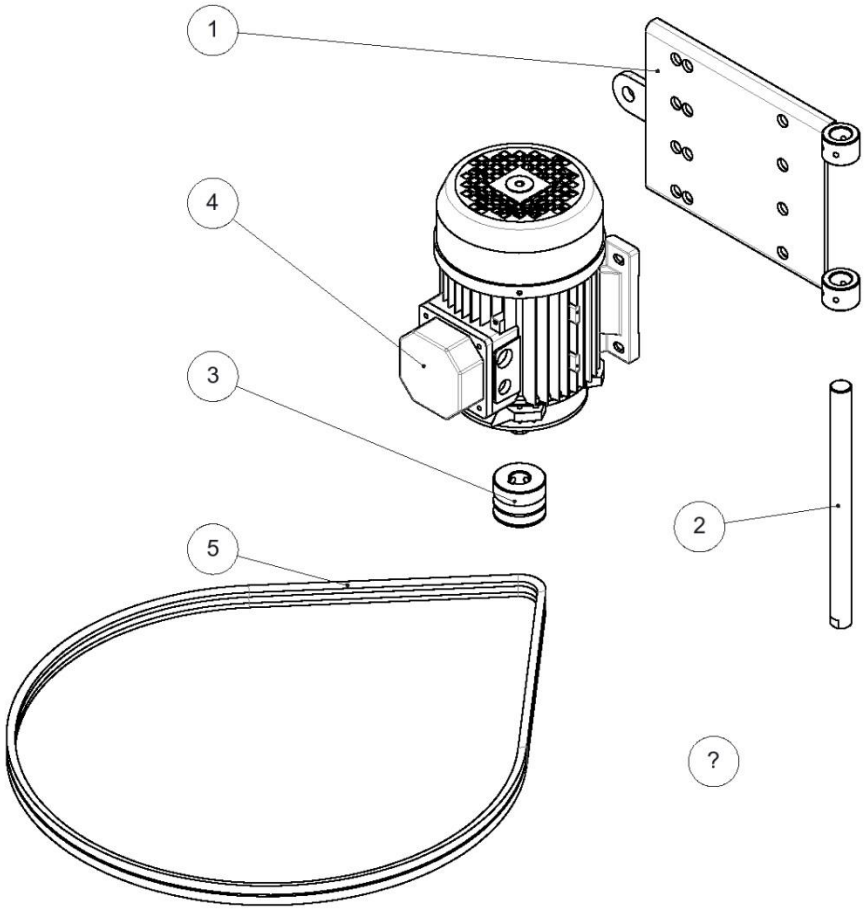
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Slitta motore spirale/Spiral motor plate	1	730018
2	Motore per VIS 120 kW 5.2/2.06 - 50 Hz - 400 V Spiral motor for VIS 120 kW 5.2/2.06 - 50 Hz - 400 V	1	M53014
3	Blocco tendicinghia/ Belt tightener block	1	613001
4	Chiavetta 10x6.5 L=70/ Key 10x6.5 L=70	1	B24001
5	Puleggia SPZ- 6 gole/ Pulley SPZ Z 6	1	680012

ESPLOSO GRUPPO VASCA – EXPLODED VIEW OF THE BOWL ASSEMBLY



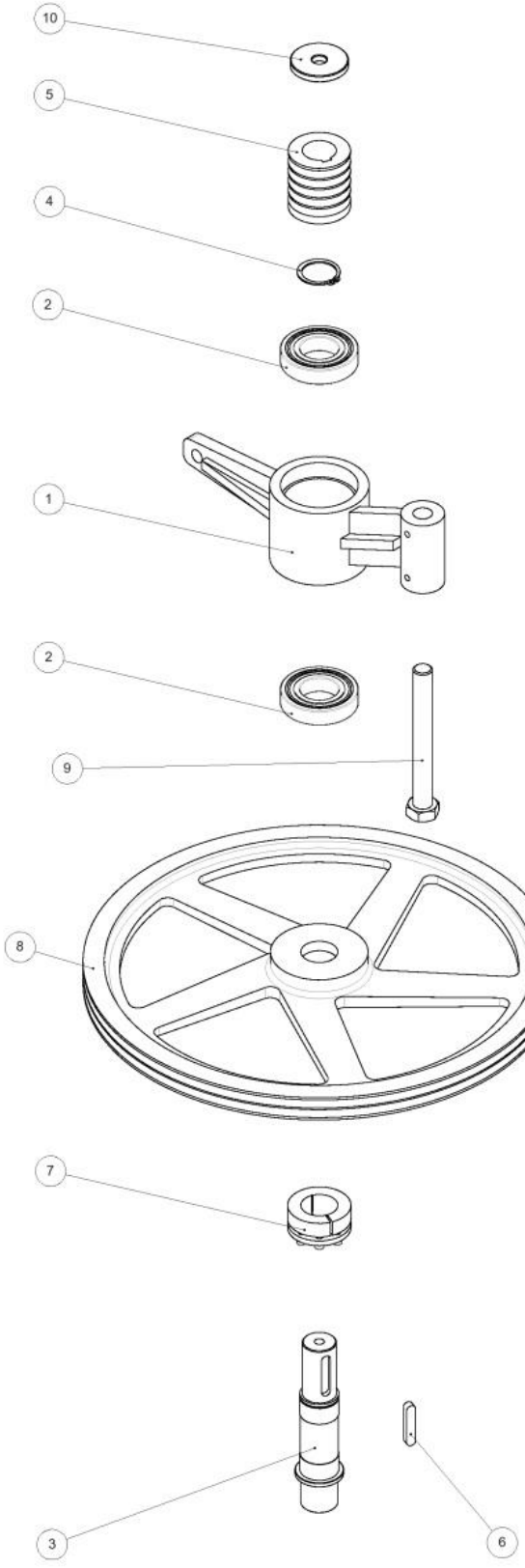
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Supporto albero vasca Bowl shaft support	1	714010
2	Cuscinetto obliquo a due corone di sfere 3211 A-2RS1 Bearing 3211 A-2RS1	1	K10010
3	Cuscinetto radiale 6309 -2RS1 Bearing 6309 -2RS1	1	K10011
4	Albero vasca Bowl shaft	1	600005
5	Anello MIM (100-65-12) Sealing ring MIM (100-65-12)	1	A02004
6	Puleggia SPZ - 5 gole – Ø p = 430 Øe=434 Øf=42 Pulley SPZ Z 5	1	680009
7	Rondella Ø60 Washer Ø60	1	712004
8	Linguetta 12x8 L=45 UNI 6604 Key 12x8 L=45 UNI 6604	1	B24004
9	Vasca VIS 120 Bowl VIS 120	1	760002
12	Cinghia dentata XPZ Svil. 1587 Toothed belt XPZ 1587	5	K19003

ESPLOSO GRUPPO MOTORE VASCA - EXPLODED VIEW OF THE BOWL MOTOR ASSEMBLY



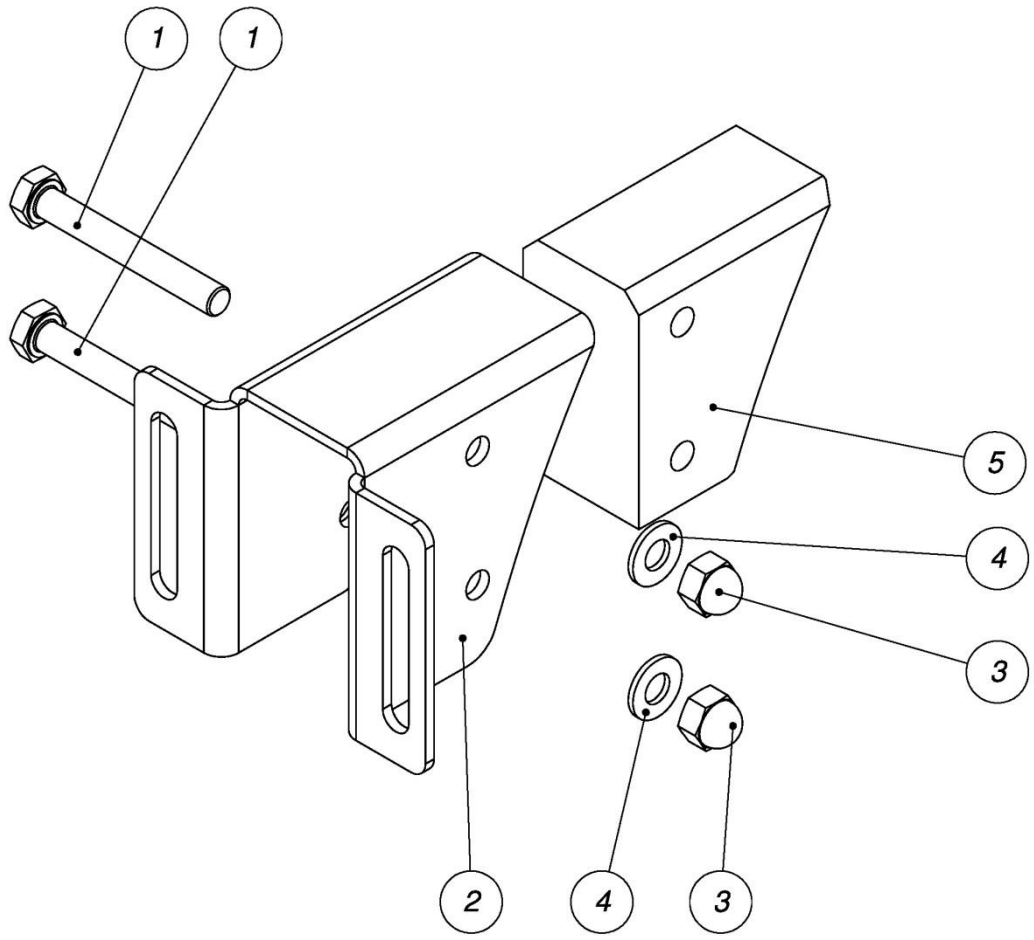
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Slitta motore vasca Bowl motor plate	1	730002
2	Perno slitta motore vasca Bowl motor plate pin	1	686001
3	Puleggia SPZ 2 gole Pulley SPZ Z 2	1	680004
4	Motore 080 - 6 POLI - kW 0.55 Bowl motor kW 0.55	1	M13001
5	Cinghia dentata XPZ 1637 Toothed belt XPZ 1637	2	K19005

ESPLOSO GRUPPO RINVIO VASCA - EXPLODED VIEW OF BOWL TRANSMISSION ASSEMBLY



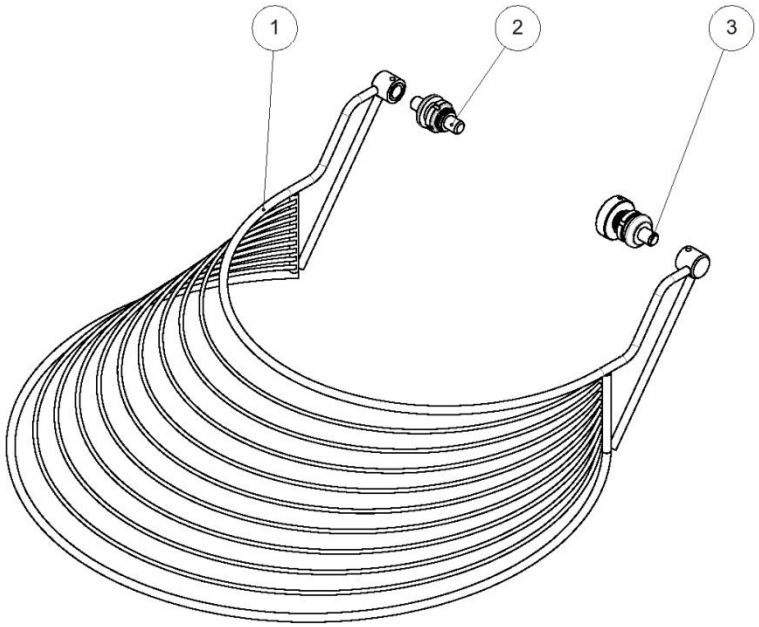
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Supporto fusione Thrust roller support	1	714004
2	Cuscinetto radiale a sfere 6208-2RS1 Ball bearing 6208-2RS1	2	K10005
3	Albero rinvio vasca Bowl transmission shaft	1	600011
4	Anello "Seeger" E40 UNI 7435 Seeger ring E40 Uni 7435	1	B23001
5	Puleggia "SPZ" - 5 gole - Øp=60 - Øe=64 - Øf=35 Pulley SPZ Øe=64 - Øf=35 Z 5	1	680011
6	Linguetta 10x8 L=50 UNI 6604 Key 10x8 L=50 UNI 6604	1	B24005
7	Calettatore Øf=38, Øe=65 Locking nut Øf=38, Øe=65	1	K40004
8	Puleggia "SPZ" - 2 gole - Øp=480 - Øe=485 - Øf=38 Pulley SPZ" - 2 gole - Øp=480 - Øe=485 - Øf=38	1	680013
9	Vite T.E. M20x170 UNI 5737 Screw M20x170 UNI 5737	1	B00001
10	Rondella Øi=15, Øe=60, Sp.=8 Washer Øi=15, Øe=60, Sp.=87	1	712003

ESPLOSO GRUPPO REGGISPINTA - EXPLODED VIEW OF THE BOWL THRUST ROLLER ASSEMBLY



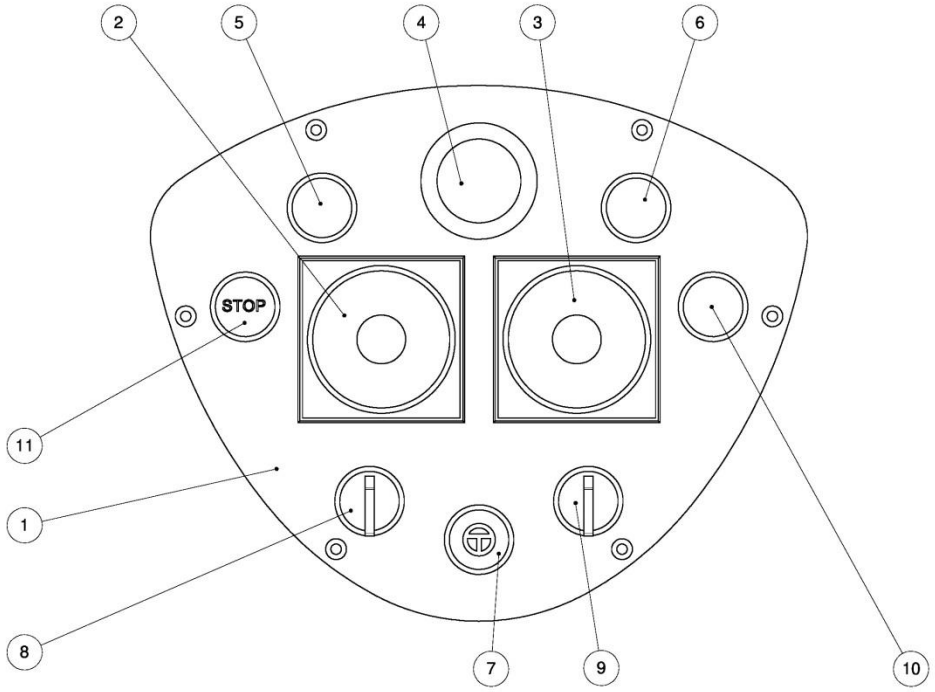
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Vite M8x60 UNI 5739 Screw M8x60 UNI 5739	2	B00018
2	Supporto rullo reggispinta VIS 60/80/120 Thrust roller support VIS 60/80/120	1	714005
3	Dado esagonale cieco M8 Hexagonal nut M8	2	B17002
4	Rondella M8 Washer M8	4	B45005
5	Blocco reggispinta Thrust roller block	1	613042

ESPLOSO RIPARO VASCA: GRIGLIA IN ACCIAIO INOX - EXPLODED VIEW OF THE BOWL COVER: STAINLESS STEEL GRID



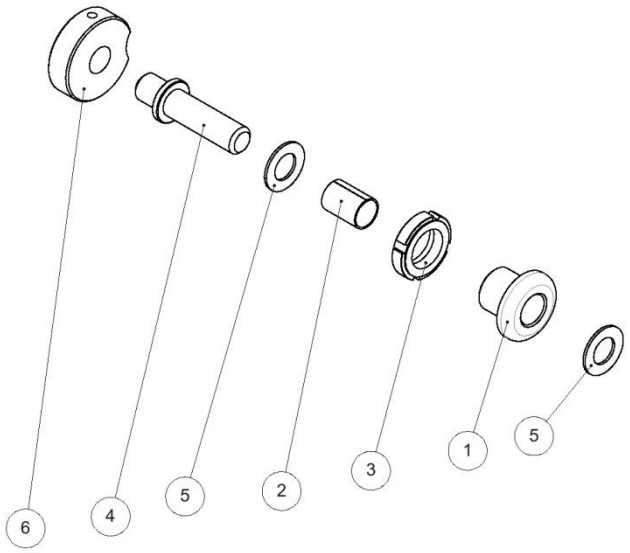
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Stainless steel grid / Griglia in acciaio inox Stainless steel grid with front hole/Griglia inox con foro frontale	1 1	702003 702028
2	Assieme snodo dx Right joint assembly	1	525001
3	Assieme snodo sx Left joint assembly	1	525002

ESPLOSO PANNELLO COMANDI - EXPLODED VIEW OF THE CONTROL PANEL



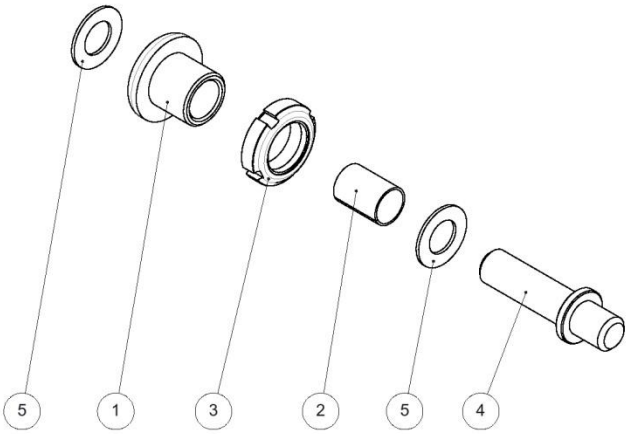
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Sinottico 2 timer 72x72/ Front control panel for SITEC 72x72 timers	1	740002
2	Timer 72x72 1° velocità scala 0-10/ 1st speed timer SITEC 72x72 scale 0-10	1	E50003
3	Timer 72x72 2° velocità scala 0-10/ 2nd speed timer SITEC 72x72 scale 0-10	1	E50004
4	Pulsante di emergenza/ Emergency push-button	1	E56001
5	Pulsante di "START" 1°velocità/ START 1st speed push-button	1	E60003
6	Pulsante di "START" 2°velocità/ START 2nd speed push-button	1	E60004
7	Pulsante impulsi vasca/ Bowl jog push-button	1	E60002
8	Selettore ciclo lavoro/ Work cycle selector	1	E59003
9	Selettore rotazione vasca/ Bowl rotation selector	1	E59002
10	Spia luminosa/ Power ON light	1	E61001
11	Pulsante STOP / Stop push button		

ESPLOSO GRUPPO PERNO DESTRO RIPARO MOBILE - EXPLODED VIEW FOR RIGHT MOBILE BOWL COVER JOINT ASSEMBLY



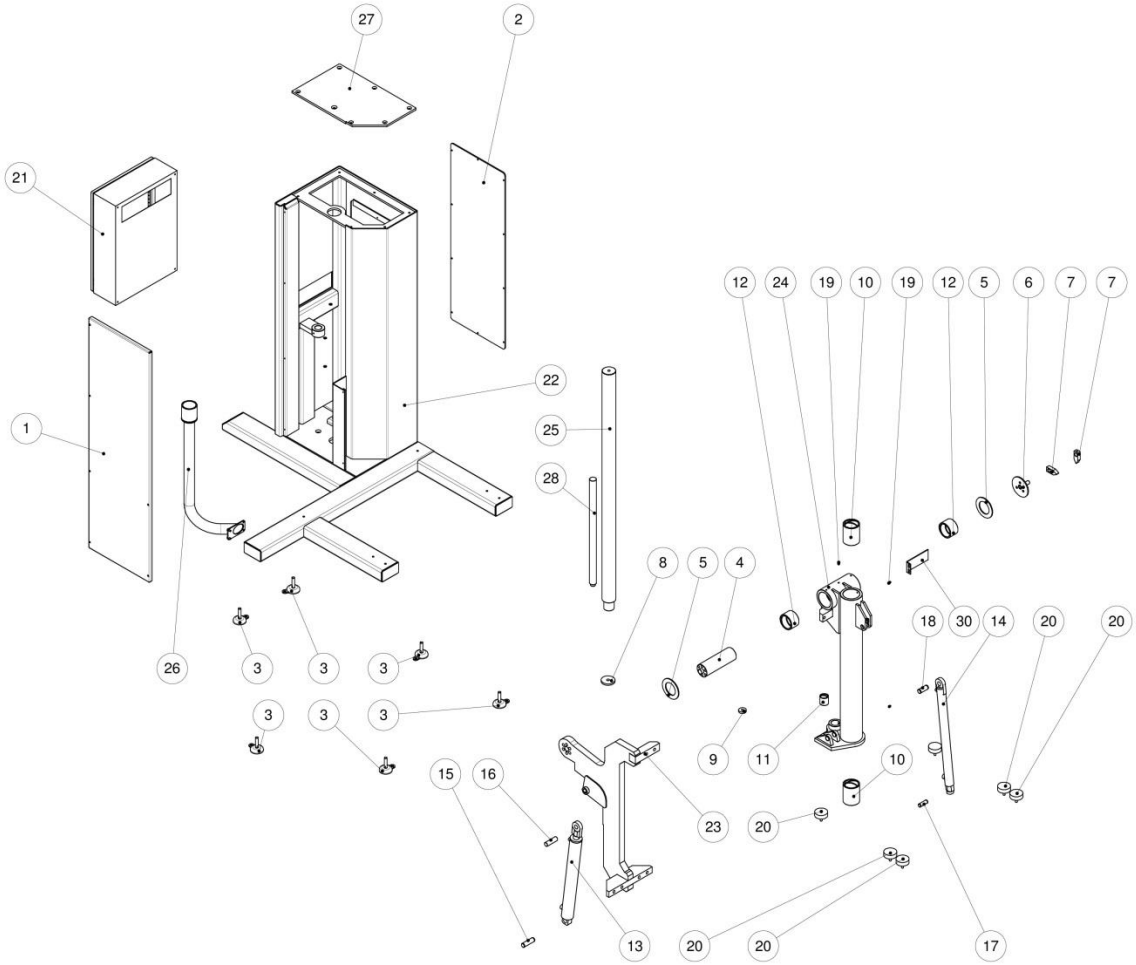
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Bussola filettata per testa Threaded bush	*1*	*616004*
2	Boccola DU 16/18x25 Bush DU 16/18x25	*1*	*K13001*
3	Ghiera autoblocc. GUK M25x1.5 Self-locking nut GUK M25x1.5	*1*	*V28001*
4	Perno per riparo mobile Mobile bowl cover pin	*1*	*686005*
5	Ralla Ø16 sp.=1.5 Fifth wheel Ø16	*2*	*K14001*
6	Camma micro Ø50 Micro cam Ø50	*1*	*631001*

ESPLOSO GRUPPO PERNO SINISTRO RIPARO MOBILE - EXPLODED VIEW FOR LEFT MOBILE BOWL COVER JOINT ASSEMBLY



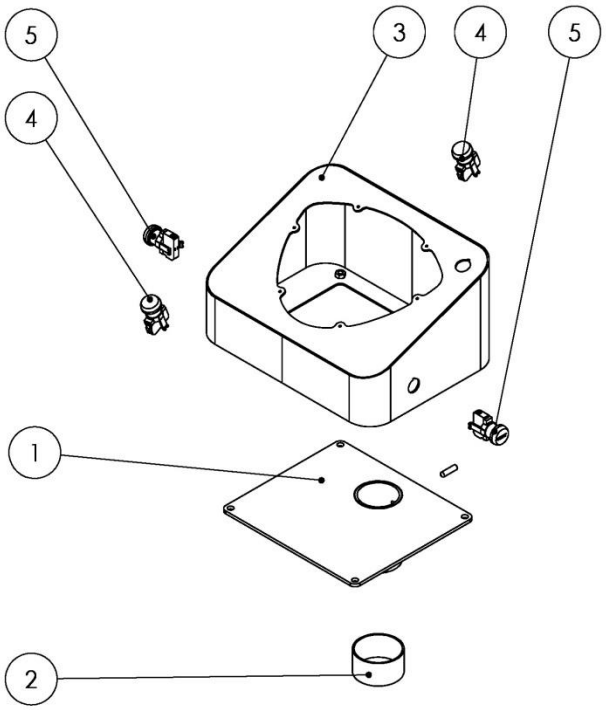
Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Bussola filettata per testa Threaded bush	*1*	*616004*
2	Boccola DU 16/18x25/ Bush DU 16/18x25	*1*	*K13001*
3	Ghiera autoblocc. GUK M25x1.5 Self-locking nut GUK M25x1.5	*1*	*V28001*
4	Perno per riparo mobile Mobile bowl cover pin	*1*	*686005*
5	Ralla Ø16 sp.=1.5 Fifth wheel Ø16	*2*	*K14001*

ESPLOSO SOLLEVATORE / EXPLODED VIEW FOR THE LIFTER



Posizione Position	Descrizione Description	Qtà Qty	Codice Code
1	Carter sinistro / Left case	1	700062
2	Carter destro / Right case	1	700063
3	Piedino M16 L=70 con fissaggio Foot M16 L=70 with fastening	6	P01004
4	Albero braccio / Shaft arm	1	600034
5	Anello in nylon / Nylon ring	2	604004
6	Braccio finecorsa / Control stop arm	1	618012
7	Braccio testatore finecorsa / stop arm	2	618013
8	Rondella Colonna di scorrimento Sliding column washer	1	712010
9	Rondella albero guida colonna Driving shaft column waher	1	712009
10	Bronzina d.i. 80 per colonna scorrevole Bush i.d. 80 for sliding column	2	615003
11	Bronzina d.i. 40 per colonna scorrevole Bush i.d. 40 for sliding column	1	615002
12	Bronzina d.i. 80 L=60 per colonna scorrevole Bush i.d. 80 L=60 for sliding column	2	615003
13	Cilindro oleodinamico corsa= 460 mm Hydraulic cylinder 460 mm	1	R05031
14	Cilindro oleodinamico corsa= 556 mm Hydraulic cylinder 556 mm	1	R05005
15	Perno attacco cilindro piastra colonna Pin for coumpling cylinder column plate	1	686027
16	Perno d. 25 fissaggio cilindro braccio Fastening pin d. 25 for cylinder arm	1	686026
17	Perno attacco cilindro base Fastening pin for cylinder base	1	686028
18	Perno attacco cilindro piastra colonna Pin for coumpling cylinder column plate	1	686029
19	Ingrassatore diritto M10/ Lubrificator M10	3	B35001
20	Piedino antivibrante d.75 h.25 Anti – vibration foot d.75 h.25	6	C04001
21	Cassetta elettrica Electrical box	1	--
22	Scocca di base sinistra Left base body	1	501030
23	Braccio di sollevamento/Lifting arm	1	618022
24	Colonna scorrevole ribaltatore Sliding column	1	622002
25	Colonna scorrimento ribaltatore Sliding column	1	622003
26	Supporto scatola comandi Control panel box support	1	714050
27	Piastra chiusura testa Head closing plate	1	691064
28	Albero guida Colonna Driving shaft column	1	600036
29	Scatola pannello sollevatore Control panel box	1	671007
30	Staffa fine corsa Braccio finecorsa / Control stop arm	1	734007
-	Centralina idraulica Control unit	1	R06007

ESPLOSO GRUPPO PANNELLO COMANDI SOLLEVATORE - EXPLODED VIEW OF CONTROL PANEL ASSEMBLY



Pos.	Description	Q.ty	Part no.
1	Braccio diritto / Straight arm	1	618006
2	Boccola DU d.i. 70, d.e. 75, L 40 Bushing DU d.i. 70, d.e. 75, L 40	1	K13001
3	Scatola pannello comandi Control panel box	1	671008
4	Pulsante sollevamento UP Lifting button	2	E60006
5	Pulsante DOWN abbassamento Lowering button	2	E60001
6	Vite STEI M8X30 Screw STEI M8X30	1	B08001