MAGIDO® GROUP

THE BEST STAINLESS STEEL INDUSTRIAL CLEANING TECHNOLOGY

USER AND MAINTENANCE MANUAL

ULTRA SERIES

MODELS: U600 - U700 - U900 - U1100 - U1300

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ORIGINAL INSTRUCTIONS
REVIEW: ULTRA 2024 USA
ULTRA U700 – 25.278.102

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NOTES

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Summary

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ATTACHED DOCUMENTATION LIST

- CERTIFICATION OF COMPLIANCE
- WIRING DIAGRAM
- PNEUMATIC SCHEME
- LAY-OUT

1. GENERAL INFORMATION

This operation and maintenance manual refers to the ULTRA series machines and reflects the current state of the machines at the time of their delivery.

The manual serves to indicate the machine's intended use of design assumptions and technical characteristics; provides instructions for moving, proper and safe installation, assembly, adjustment, and use; provides information to direct maintenance work; facilitates ordering of spare parts; and provides guidance about any residual hazards.

In particular, the following information must be constantly available for consultation:

- Expected conditions of use for the machine;
- workplace occupied by the operator;
- instructions related to:
    - commissioning;
    - utilization;
    - transportation;
    - installation;
    - assembly and disassembly;
    - regulatory interventions;
    - maintenance and repair.
    - Including a list of spare parts.

MAGIDO GROUP SRL shall not be liable for any tampering with this manual or any changes made on the machine by the User, after delivery of the machine, and not provided for in this document.

The manual should be stored in a protected, dry place, out of sunlight, and should always be available for reference near the machine.

The manual is considered an integral part of the machine and must be kept in good condition until the final disposal of the machine.

In the event of damage that renders the copy of the manual in your possession unusable, you may request a copy from customer service, specifying the type of machine and the serial number on the machine's nameplate.

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The Manufacturer reserves the right to update production and manuals, with no obligation to update previous production and manuals.

Material characteristics may be changed at any time, according to technical development, without prior notice.

It will be possible, upon request, to find information on upgrades that **MAGIDO GROUP SRL** has made to the machines.

MAGIDO GROUP SRL is held harmless from any liability for damage caused by:

- Misuse of the machine
- Use by unqualified and/or trained personnel
- Use contrary to the Regulations and Legislation in force
- Incorrect installation
- Primary power supply defects
- Inadequate maintenance or cleaning of the machine
- Unauthorized modifications or interventions
- Incorrect maneuvers
- Use with use of spare parts that are not original or not specifically defined by model
- Use of accessories not intended or not authorized in writing
- Total or partial non-compliance with instructions
- Exceptional events

The general sales warranty is void in the event of:

- poor storage
- inconveniences due to misuse
- inexperience of use
- exceeding performance limits
- excessive mechanical and/or electrical and pneumatic stresses
- Use under the suboptimal conditions described in the previous points

In case of defects found on the machine, the customer shall notify in writing the presence of the defect on the machine within 15(fifteen) days from the date on which such defect occurs. **MAGIDO GROUP SRL** reserves the right to accept or reject the claim after verifying the presence of the defect on the component.

Repair or replacement of the defective component or repair of the machine by **MAGIDO GROUP SRL** or a third party authorized by it is the sole and only warranty **MAGIDO GROUP SRL** grants to the customer.

Any kind of intervention carried out without **MAGIDO GROUP SRL**'s authorization relieves it from any responsibility, it will not reimburse any other direct or indirect costs, expenses or charges incurred by the customer in connection with defects on the machine and will not compensate any further direct or indirect damage to the customer as a result of the defectiveness of the machine or its component parts.

This manual was originally written in Italian and is the only official language for which the manufacturer is held responsible in case of discrepancies with translations.

GENERAL INFORMATION

SYMBOLOGY AND TERMINOLOGY USED IN THE MANUAL

Warning:
points out the instructions that only if properly followed avoid **situations that are hazardous** to people, informs about hazards and how to avoid them, suggests behavioral procedures.

Warning:
indicates situations that may cause risk to the machine and/or the product being processed and/or the environment.

Please note:
indicates useful information for consulting the manual and for the proper operation of the machine.

Operator(s):
operator without specific skills, capable of performing simple tasks, i.e., operating the machine with machine controls and loading/unloading operations and safety guards in place.

Mechanical maintenance:
indicates routine and scheduled mechanical maintenance to be performed safely. They are the responsibility of the person trained for such purposes.

Electrical maintenance:
indicates routine and scheduled electrical maintenance to be performed safely. They are the responsibility of the person trained for such purposes.

Qualified technician(s):
operator for complex and specific operations agreed, however, with the user.

MACHINE: ULTRA series piece washer;

MODELS: ULTRA series models U600; U700; U900; U1100; U1300

EPSOST PERSON: Any person who is internally or partially in a hazardous area;

HAZARD ZONE: Any area in or near the machine that poses a risk to personal safety and health;

I.P.D.: Personal protective equipment. (gloves, safety shoes, goggles, face mask);

CONDUCTORS: trained operators authorized to operate the machine (to be performed on the defined stations, general control panel and pushbuttons) in addition to visual checks for proper operation;

MAINTENANCE WORKERS: trained and authorized operators for routine machine maintenance each having their own skills (mechanical and d electrical);

QUALIFIED TECHNICIANS: operators employed by the manufacturer or technical service center, authorized and trained in extraordinary maintenance.

USER: the company that will use the machine for its own purposes.

ACCESSORIES: Optional equipment selected by customers according to their needs.

CYCLE: Time when the machine is executing its machining program.

PROGRAM: working setting of the machine software.

WASHING: This is the stage when the machine is in full operation, the ultrasound is running and the table performs is in agitation.

WASHING TANK: area where parts are washed.

PIECES: user objects that need to be washed.

OILSKIMMER: a system for removing oil from water, located in the tank of the machine**.**

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DUTIES OF THE STAFF

The duties of the staff are given below, only in case of particular anomalies or processing mishaps that are not resolved is corrective action by an Authorized Technician expected.

BY THE CONDUCTOR:

- Operations on button panel controls and the HMI (opt.) that relate only to normal use;
- Parts loading/unloading;
- Change of processing program;
- Visual inspection of the smooth operation of the machine;
- General cleaning of the machine at the end of the shift.

BY THE MECHANICAL MAINTAINER:

- Mechanical adjustments;
- Use of manual controls to verify operation;
- Routine and extraordinary maintenance operations, any replacement of failed parts (if authorized by the manufacturer);

BY THE ELECTRICAL MAINTAINER:

- Electrical adjustments;
- Periodic verification of the efficiency of security systems;
- Use of manual controls to verify operation;
- Routine and extraordinary maintenance operations, any replacement of failed parts (if authorized by the manufacturer);

BY THE QUALIFIED TECHNICIAN:

- Provide the various employees (handler and maintainer) with coaching for the time needed to understand the proper use and adjustments of the machine and the contents of the manual;
- Verify consistency of actions and tasks, following training, recorded with appropriate named certificate (thereafter, this task and related verifications are the responsibility of the user);

2. SAFETY REGULATIONS

It is the responsibility of the user of the machine to be familiar with the machine and the installed safety devices given in this manual before proceeding with installation, start-up, operation and maintenance or other work on the machine.

He designates personnel to operate the machine and provides training in its use with special reference to the safety regulations present.

The user is responsible for supervision and compliance with the following points:

- Do not allow unauthorized personnel to work on the machine.
- Do not start the machine in failure.
- Before using the machine, it should be ensured that any conditions hazardous to safety have been properly eliminated.
- Make sure that all guards or other protections are in place and that all safety devices are present and efficient.
- Make sure the operator's area is safe and no foreign objects are present.
- Any maintenance operation must be carried out with the machine isolated from power destruction networks (electrical, pneumatic or other).
- Personal protective equipment (PPE) should be used when prescribed.
- Connection work, commissioning, maintenance measures and adjustments of electrical equipment or its components should be carried out only by qualified personnel.

During normal operation, fixed or movable guards must remain in their seats, properly secured and in a condition of total integrity.

Should these guards be removed, for inspection and maintenance operations it is mandatory to restore their efficiency before putting the machine back into operation.

Also apply what is stated in the chapter "ENVIRONMENTAL CONDITIONS."

ELECTRICAL EQUIPMENT

Connection work, commissioning, maintenance measures and adjustments of electrical equipment or its components should be carried out only by qualified personnel. Please note that INVERTER frequency converters generate voltages that are hazardous to human life. Before working on these devices, if installed, the relevant documentation, provided by the manufacturer of the device, should be read.

For work to be performed with electrically live parts, the relevant regulations must be observed.

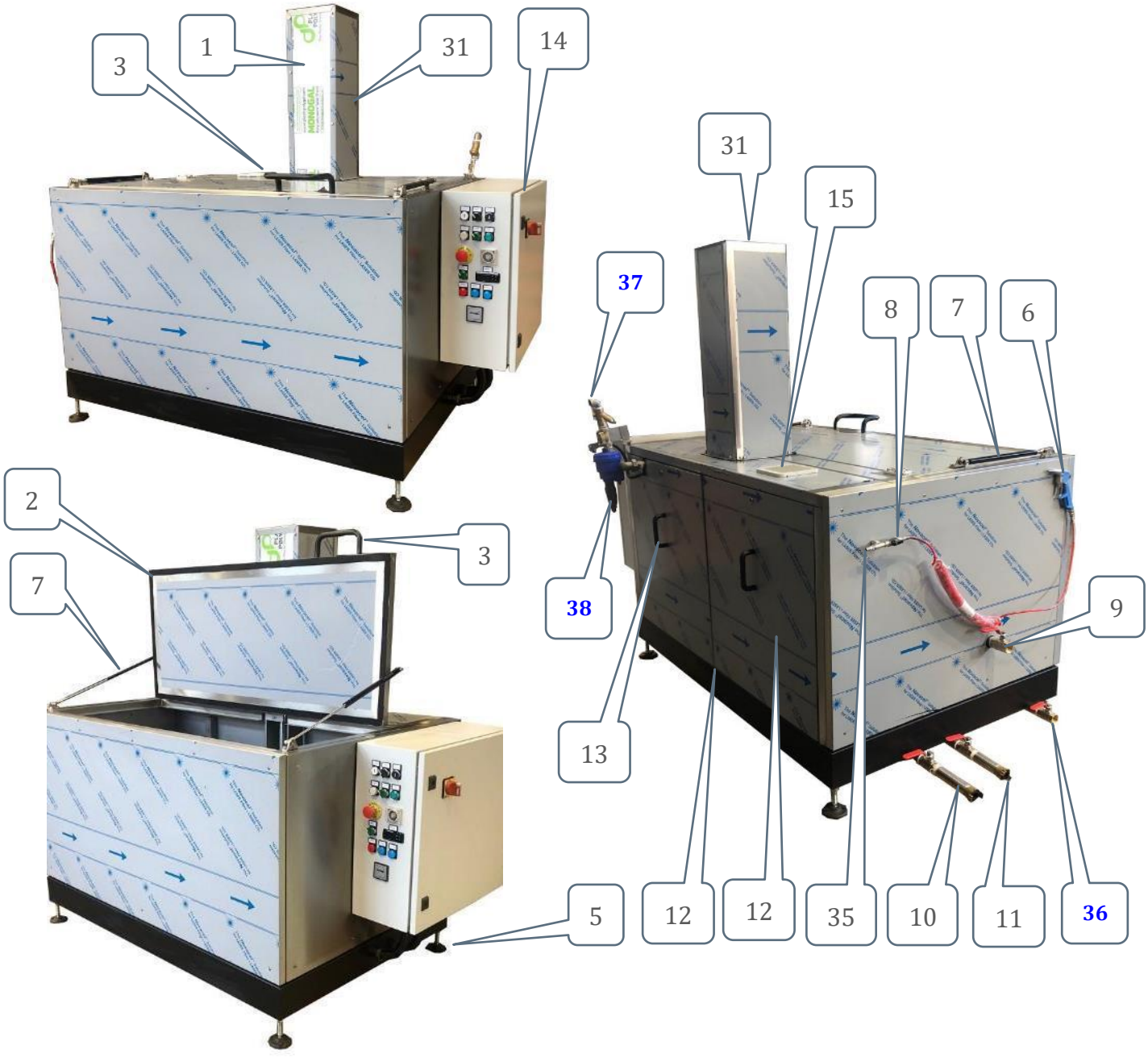
Any handling of the connecting wires such as bending or stretching could interrupt the conductors.

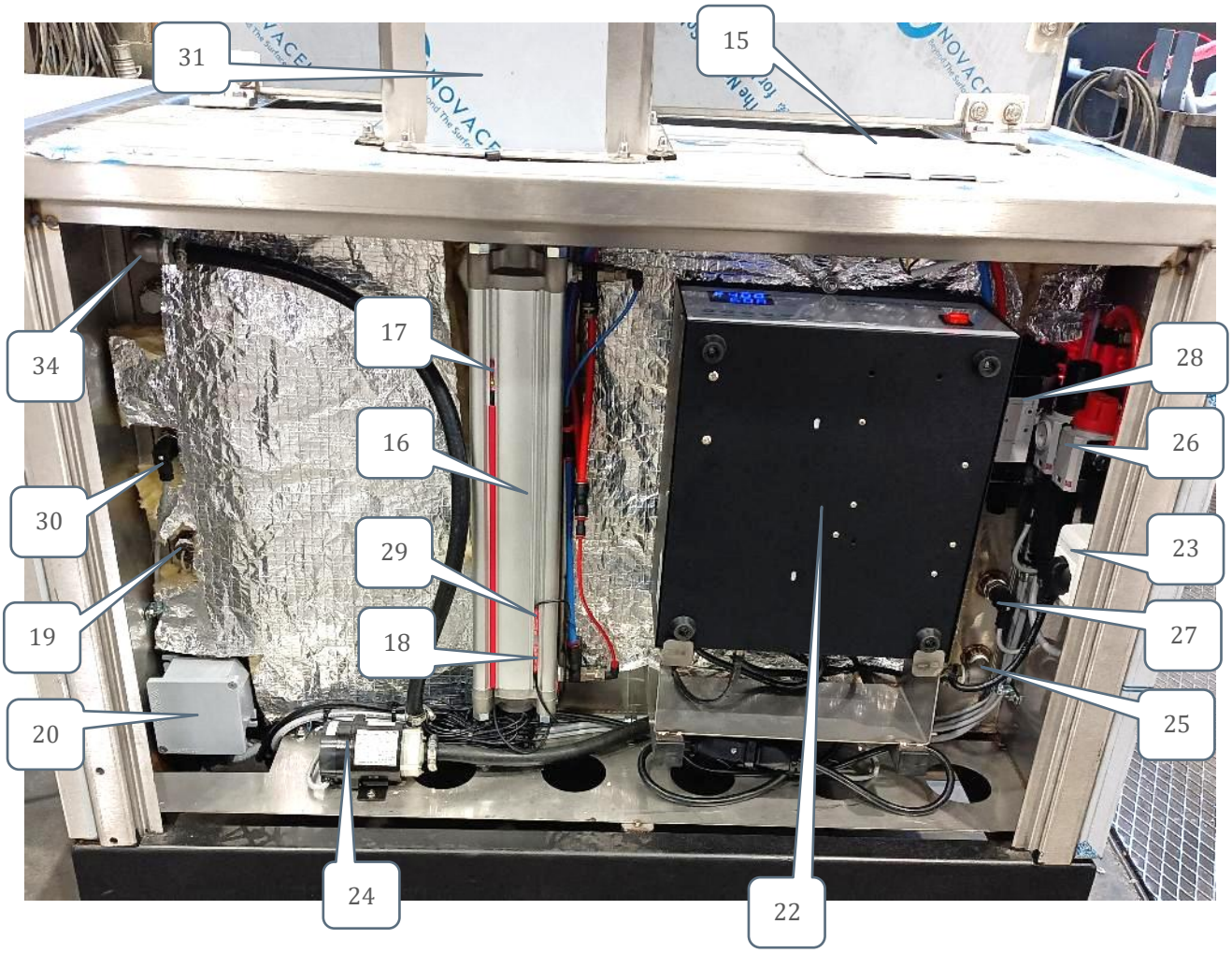
MACHINE PRESENTATION

ULTRA Magido U600, U700, U900, U1100; U1300 series machines are ultrasonic parts washing tanks for degreasing mechanical parts with hot water and biodegradable detergents. Ultrasound and aqueous solution at a temperature of 140-170°F, ensure an optimal degree of cleanliness, thanks also to the Deoiling system that allows complete removal of oil from the water surface at the end of the washing cycle. Ultrasound combined with the temperature and chemical action of the detergent allow the removal of all types of fouling. The heat accumulated by the parts during the washing cycle allows them to dry quickly once the lid is opened.

MAIN COMPONENTS

Each machine essentially consists of:

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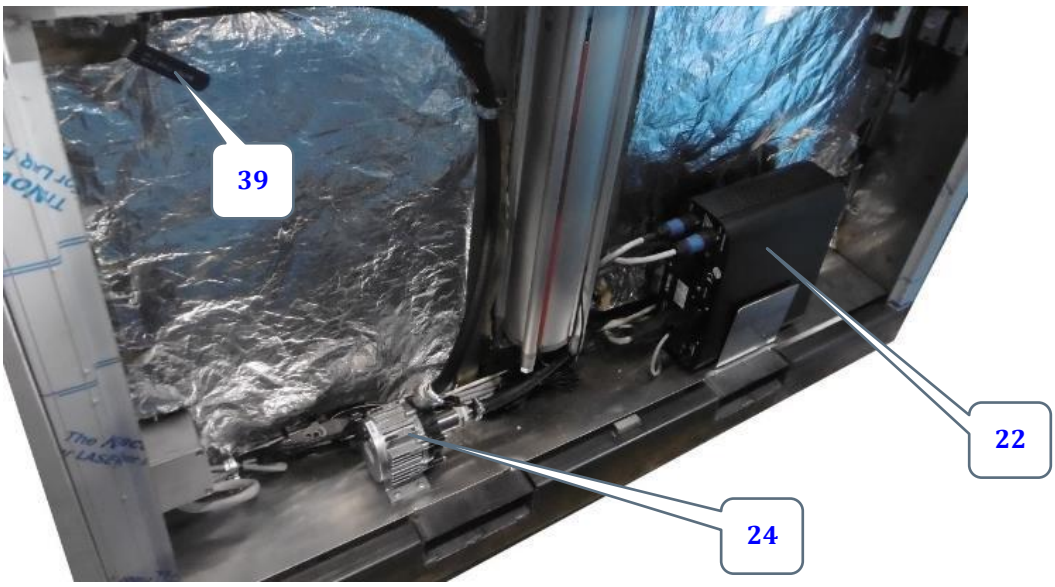
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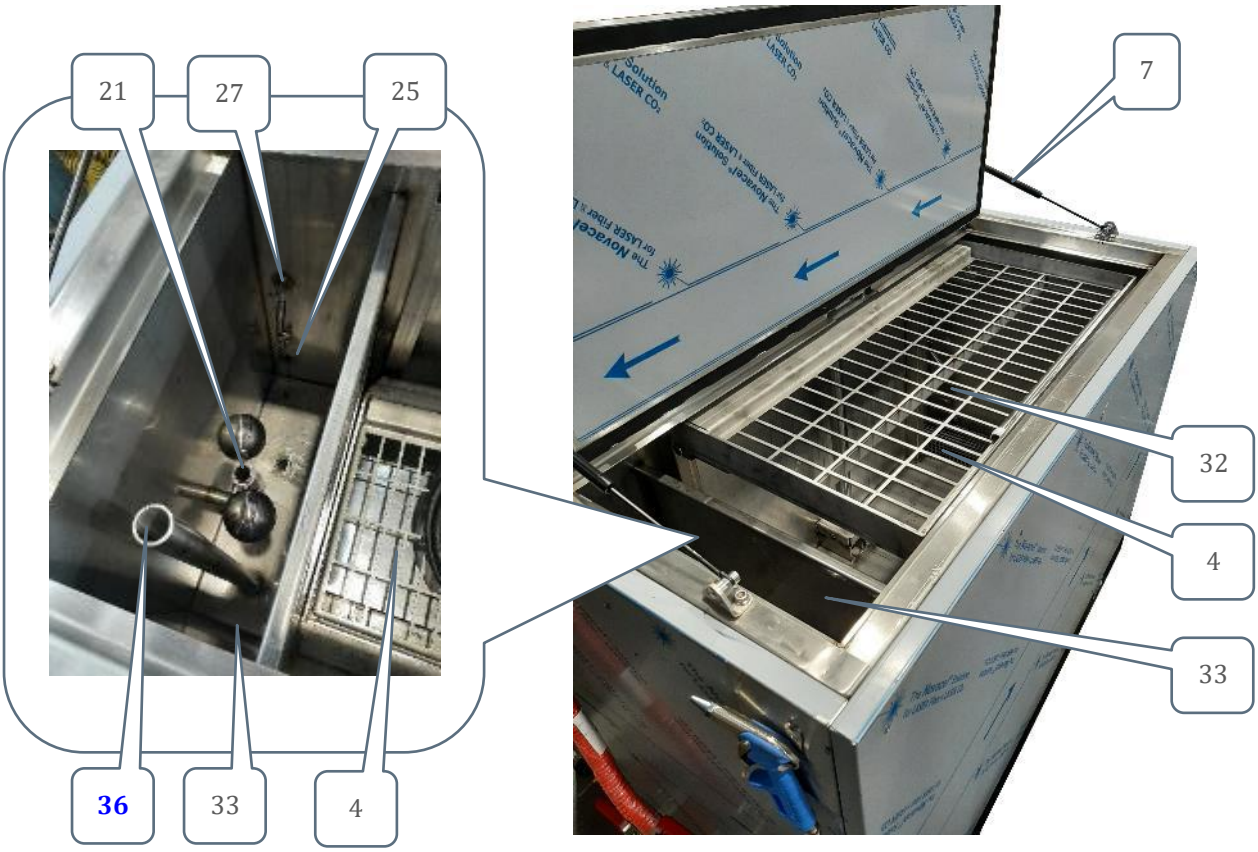


1- Shaft for board ascent/descent
2- Manual lid
3- Lid handle
4- Washing tank
5- Adjustable feet
6- Compressed air gun
7- Gas Springs
8- Compressed air valve
9- Oil drain 1 "gas
10- Wash tank drain 1 "gas
11- Drain tank deoiler 1 "gas
12- Removable protection
13- Protective handles
14- Control panel
15- Cooling fan
16- Table up/down cylinder
17- High table position sensor
18- Low table position sensor
19- Temperature probe
20- Resistor connection box
21- Float for oil overflow
22- Ultrasonic Generator
23- Power supply box Generator
24- De-oiler pump
25- Suction deoiler pump
26- Air treatment unit
27- Oil skimmer tank level float
28- Pneumatic valve
29- Table oscillation sensor
30- Wash tank level float
31- Crankcase shaft protection
32- Pneumatic table
33- De-oiling tank
34- De-oiler pump discharge
35- Compressed air connection
36- Overflow 1 "gas (optional)
37- Mains water connection 3/4 "gas (optional)
38- Detergent Dispenser (optional)
39- De-oiler pump discharge valve 1/2 "gas (optional)

DEVICES STANDARD AND OPTIONAL

Tank drain with pump (optional)

A push-button-controlled electric pump allows the water to be drained.

Weekly programmer from PLC (standard)

The function, is to schedule the heating to come on at set times. Refer to the manual for instructions.

SAFETY REGULATIONS

INTENDED USE

The piece washer is intended for industrial use under normal environmental conditions.

The use environment should be enclosed (or covered) and protected from the weather.

The ideal use environment should have the following characteristics:

Temperature: +10/+45 °C→ (+50/113°F)

Temperature values exceeding from those above can seriously damage the components.

USE NOT ALLOWED

Any other use of the machine or the product being processed, is considered improper, unintended use, as the resulting risks cannot be evaluated. Therefore, the manufacturer is exempt from liability arising from noncompliance with these requirements.

The machine should be used only for the purposes expressly stated in the preceding paragraphs and as detailed below.

In particular, it is prohibited to use it in the following ways:

Any use other than that for which the machine was built is an abnormal condition and can cause damage to the working equipment and pose a serious danger to the operator.

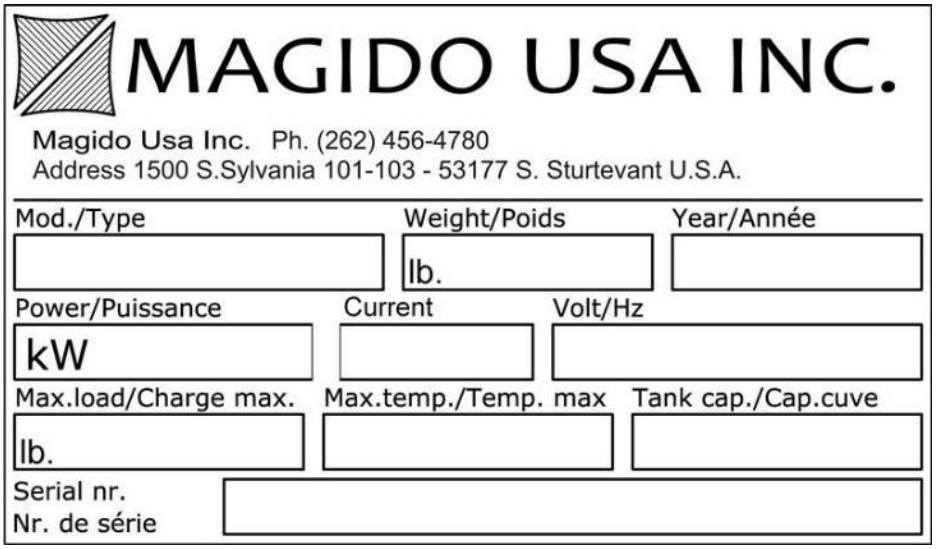
- **With different energy and performance values.**
- **Without or more intact and functioning guards.**
- **If not properly installed according to the directions in the following manual.**
- **Use of machine surfaces as footings or tops for other bodies.**
- **Environments in potentially explosive atmospheres.**
- **For food use.**
- **Outdoor (outdoor) use.**
- **The position of the kinematics should not be varied with the intention of changing the sequence of operation of the machine.**
- **IT IS ABSOLUTELY FORBIDDEN TO USE FLAMMABLE PRODUCTS (use only cleaning products or detergents intended for sprinkler washing machines).**

MACHINE IDENTIFICATION DATA

The machine's identification data can be found on the appropriate nameplate, which is positioned and riveted on the right side of the Electrical Panel on the machine.

TECHNICAL DATA

Each machine has an identification plate with the items shown in the figure below.



The nameplate shows the data entered indelibly.

N.B. under no circumstances can the data on the nameplate be altered.

TECHNICAL FEATURES

ULTRA SERIES MACHINES STANDARDS	UNIT OF MEASURE MENT	U600	U700	U900	U1100	U1300
Table size	Inch	23.6x11.8	27.6x15.7	35.4x15.7	43.3x19.7	51.2x23.6
Useful height	inch	13	13	15.7	15.7	15.7
Max. washing temperature.	°F	170°	170°	170°	170°	170°
Maximum table load	Lbs	180	180	550	550	770
Tank capacity	Gal.	53 (40+13*)	71 (55+16*)	102 (84+18*)	140 (119+21*)	187 (166+21*)
Heating with heating elements	kW	4	**4**	8	10	12
Ultrasonic Power	W	1500	2000	3000	4000	5000
Ultrasound frequency	kHz	25	**40**	25	25	25
Overall dimensions	Inch.	57x35xh59	**60x38xh62**	68x38xh65	76x42xh65	84x46xh70
Machine weight	Lbs	620	660	770	880	1320

*deoiler tank

SUPPLY

ULTRA STANDARD SERIES MACHINES	UNIT OF MEASUREMENT	U600	U700	U900	U1100	U1300
Supply voltage	V	**230**	**220**	**230**	**230**	**230**
Phases	Ph	3	**1**	3	3	3
Frequency	Hz	**60**	**60**	**60**	**60**	**60**
Power consumption	kW	5,5	**6**	11	14	17
Current consumption	A	18	**32**	36	46	56
Min. air pressure required	Psi	87	87	87	87	87

Do not deviate from the values or processing limits described in the technical data in this manual and those attached. Any other use not intended, as not in accordance with the design and technical specifications, is to be considered "NOT ALLOWED."

SAFETY REGULATIONS

ENVIRONMENTAL CONDITIONS

The machine should operate only where there is no danger of explosion or fire because it is not made of explosion-proof material.

Therefore, it is forbidden to install and operate it in rooms with a risk of deflagration

The machine workplace must have sufficient natural light and be equipped with adequate artificial light and ventilation to safeguard the safety and health of the operator.

It is the responsibility of the user to assess the need for adequate extraction equipment to eliminate the presence of vapors created during the machining process.

The lighting of the room must comply with the laws in force in the country where the machine is installed, must ensure good visibility of the product and every point of the system, not create dangerous reflections, and allow the clear reading of the control panels, not that the emergency buttons can be identified; therefore, an illumination value of not less than 400 Lux/mt. is expected.

WARNING: The floor must be level, well leveled, of adequate bearing capacity and with the required signage for spaces dedicated to pallet storage, raw material and cart circulation.

It is the responsibility of the user to apply vertical and horizontal signage to identify these areas.

The area referred to as the "operator's buffer area," must remain dry, clean and free of encumbrances.

Spaces required for use (and maintenance) must adhere to the distances shown in the figure on page 41

VIBRATIONS

Under conditions of use in accordance with the directions for proper use, vibrations are not present. The machine must be properly positioned on the ground and the operator is not in contact with the machine or the product being processed.

ELECTROMAGNETIC ENVIRONMENT

The machine is made to operate properly in an industrial-type electromagnetic environment, is within emission limits and is protected against induced noise.

EMITTED NOISE.

As a result of the tests performed, the valoros are according to the expected typical/frequent use and with the following test methods on the workstation:

With the machine in machining cycle: the equivalent continuous sound pressure level <75dBA.

3. MACHINE STARTUP AND OPERATION

FOREWORD

With reference to the components installed and indicated in Chap. "MAIN COMPONENTS" the operation of the machine by means of the controls in the control panels is described below.
Information on using the HMI terminal (menu description, data entry, programming procedures) is given in the section "LOADING A PROGRAM."

DESCRIPTION OF THE OPERATION CYCLE

Washing of mechanical parts, is an operation to clean components that have persistent dirt.

This is done through the use of ultrasound and hot water, plus non-foaming biodegradable detergents that meet current standards **(see data sheet provided with the detergent)**.

To achieve a satisfactory result, it is also possible to select the appropriate wash time and water temperature to achieve the desired degree of cleanliness.

In addition, the machine is equipped with a system for swinging the table on which the pieces to be washed are placed, which by moving up and down inside the tank ensures a higher degree of cleanliness.

PROCEDURE FOR TURNING ON THE MACHINE

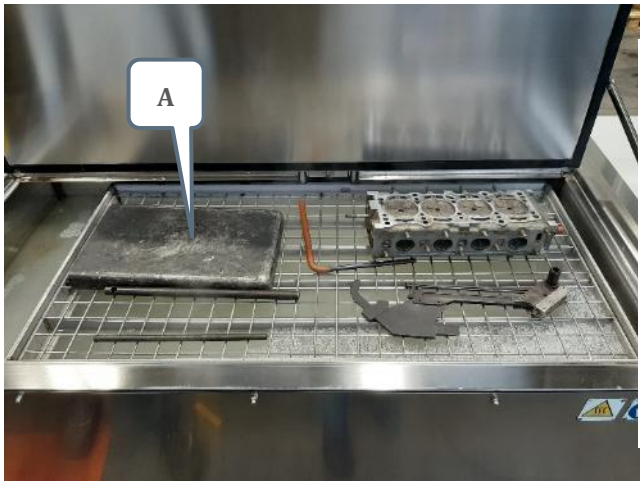
IGNITION:

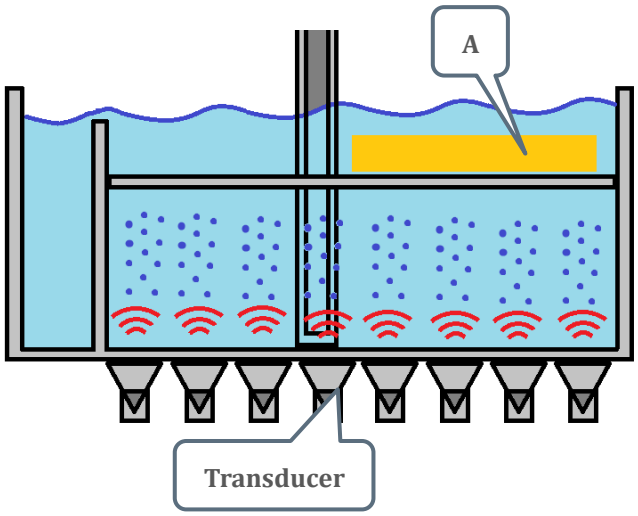
- Turn the switch (14) located on the cabinet to the right of the machine. Make sure that the emergency mushroom button (8) is turned off.
- Press the white button (4) on the control panel to turn on the auxiliary voltage and wait for the operator panel to turn on completely.
- If the machine is started for the first time or the minimum level of wash water in the 2 tanks is not sufficient, 2 blue lights on the panel will come on, one for the wash tank and one for the de-oiling tank. The operator should restore the optimal level, at which point the blue lights on the panel will turn off.
- Add the detergent to be used for washing following the usage specifications given to you by the supplier of the detergent. When using the supplied detergent powder, dissolve it in a container with cold water before pouring into the machine. Use a maximum of 3% detergent to the amount of water.
- Once the blue light is off, it will be possible to turn on the wash water heater, select the desired temperature on the thermostat (10).
- Turn the green heater selector switch from OFF to ON (9).
- The green switch will remain on until the water has reached the temperature set on the thermostat.

LOADING UNLOADING OF THE PARTS BASKET:

- Open the cabin cover by means of the handle on it;
- Hold down the board rise button (3), until it emerges completely;
- Arrange the pieces that need to be washed on the table;

In the case where the parts to be washed have large flat surfaces (A), the user is reminded that the cleaning effect of ultrasound will be greatest on the surface facing the transducers and slight on the top of it, so it is recommended to wash the part from both sides to ensure an even level of cleaning.





- Hold down the down button of the board (1), until it is fully submerged.
- If possible, close the lid of the wash tank.
- Use the "Agitation" switch (2), if you want to wash with agitation on or off.

For basket loading/unloading operations, the use of PPE protection such as gloves and safety shoes is recommended.

MACHINE STARTUP AND OPERATION

STARTING THE MACHINE:

On the machine there is a control station located in front of the electrical panel and a workstation located in front of the machine for loading-unloading the parts to be washed. Both workstations can be occupied by a single operator.

To start the machine safely, certain starting conditions must be met:

- The water level in the washing and de-oiling tanks must be sufficient for proper operation of the tank, the blue lights on the control panel ***should be off to indicate that the correct amount of water is present in the tanks.***

- The workpiece loading table must be in the low position.

When these conditions are met, the illuminated green "START CYCLE" button (6) will flash, indicating that the machine is ready to start the washing cycle.

IF THE ABOVE CONDITIONS ARE NOT MET, THE MACHINE WILL NOT ALLOW THE OPERATOR TO START THE CYCLE.

STANDARD CYCLE**:** Standard cycle of ULTRA series piece washing machines in sequence:

- Ultrasonic Washing and Shaking Table
- Water surface de-oiling.

During the cycle, it will not be possible to change the swing mode of the table; to change the operation, it will be necessary to wait for the end of the cycle and act on the "swing" switch.

DISCUSSION:

Such a device makes it possible to remove the oils, or most of them, in the water.
Proceed as follows:

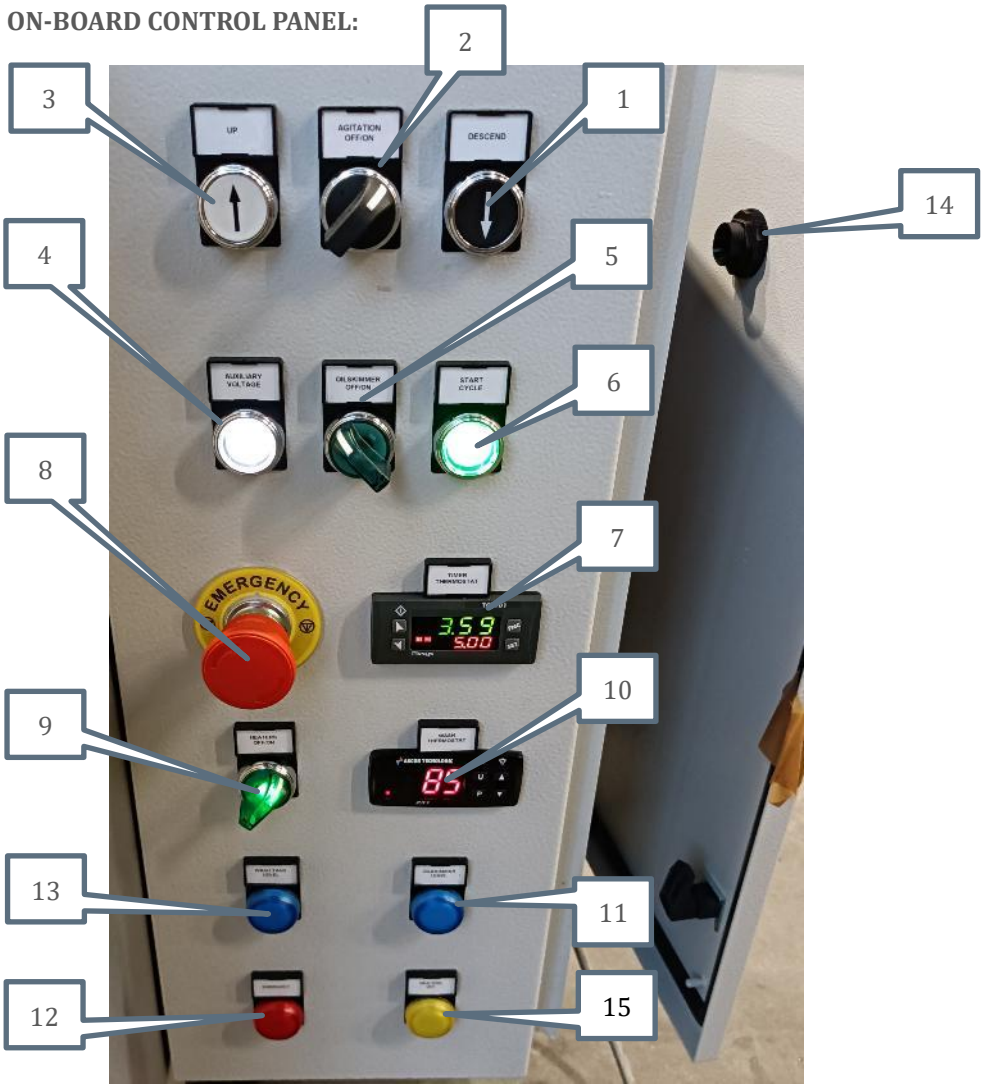
- Whenever the machine finishes a wash cycle, the deoiler will automatically start at the end of the cycle.
- Place a collection container under the oil drain tap;
- Open the drain tap;

You can also use the deoiler manually:

- Recommended: Wait at least one hour until water and oil separate;
- Activate the oil deoiler.
- Wait for the end of the process.

4. COMMANDS

ON-BOARD CONTROL PANEL:



1. **Black button (1) with arrow "Descent board"**
   This button, when held down, allows the wash table to descend.
2. **Black selector switch (2) "AGITATION ON/OFF" - Shaking Table**
   By turning the dial, you can Enable or Disable table agitation, during the wash cycle.
3. **White button (3), with arrow "Table ascent"**
   This button, held down, allows the washing table to rise.
4. **Bright white button (4) "AUXILIARY VOLTAGE"**
   Lights up when pressed, signals the presence of switchboard control voltage (24V).
5. **Bright green selector switch (5) "OILSKIMMER ON/OFF"**
   Turning the selector switch allows the oil skimmer to be started manually.
6. **Bright green button (6) "START CYCLE"**
   Pressing the button starts the wash cycle, and pressing the button again stops the cycle, restarting the timer. (see "MACHINE STARTING").

7. **"TIMER adjustment knob" (7)**
   Timer for adjusting the washing/cleaning time. The user is referred to the "MACHINE PROGRAMMING" section for programming the timer.
8. **Emergency button (8) "EMERGENCY STOP"**
   Causes the machine to stop immediately. Should be pressed only in case of immediate danger and not to stop the normal operating cycle.
   To restore operation after pressing the emergency button, the following steps should be taken:

- Unlock the mechanical latch of the emergency button by turning it counterclockwise;
- Wait for 1 minute;
- Press the bright white button **(4)** "AUXILIARY VOLTAGE"

REGULARLY CHECK THE PROPER OPERATION OF THE EMERGENCY BUTTON.

9. **Bright green manual switch (9) "HEATERS ON/OFF"**
   Acting on the selector switch activates/deactivates the heating elements in the wash tank for heating the water. This control is disabled if the water level in the wash tank is not sufficient (see chap. STARTING AND USING THE MACHINE).
10. **"WASH THERMOSTAT" (10)**
    Thermostat for controlling the water temperature of the wash tank.

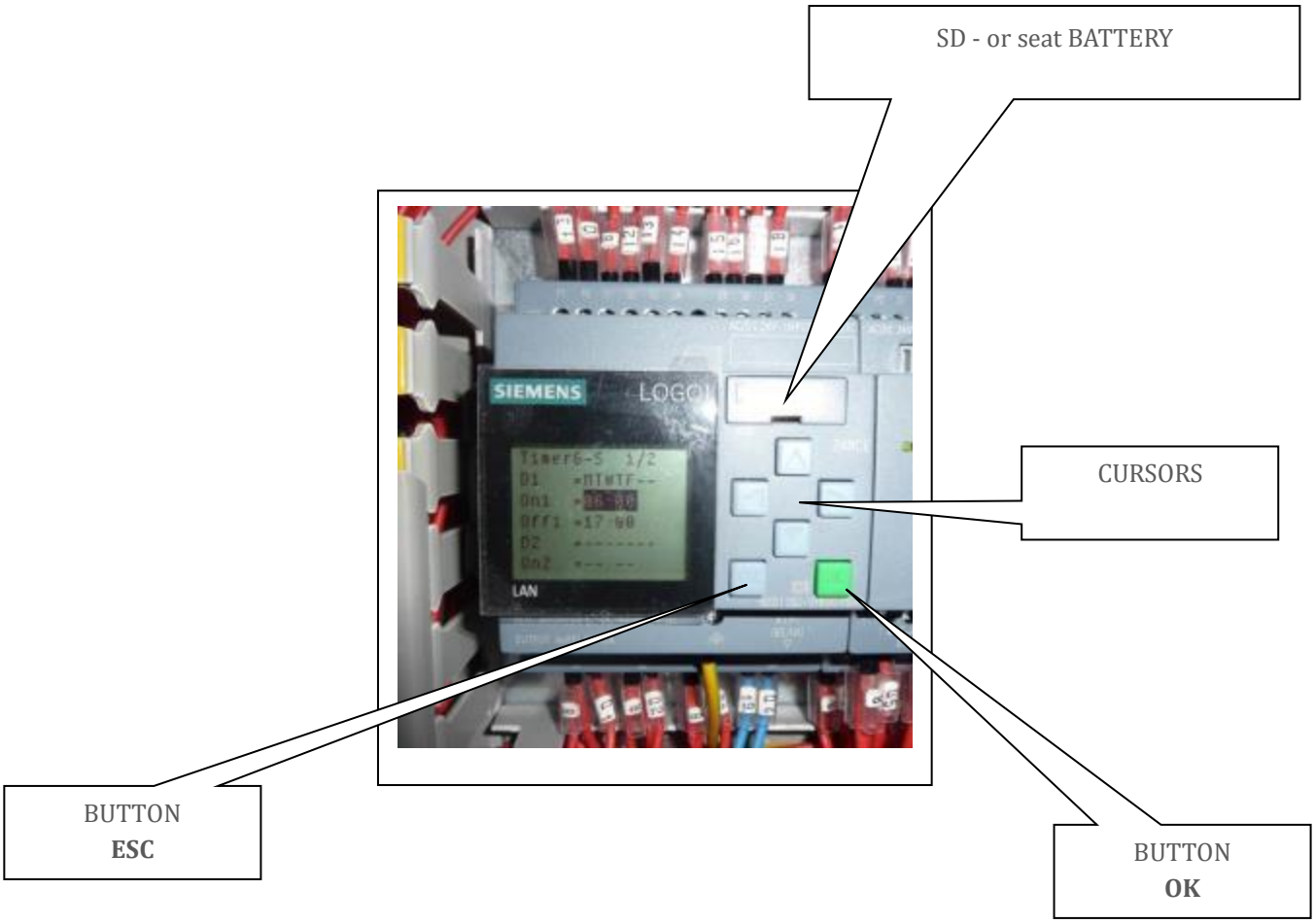
For thermostat programming, the user is referred to the thermostat manufacturer's manual that comes with the machine documentation.

The maximum temperature that can be reached by the wash water is 75°C and is the maximum temperature that can be programmed on the thermostat, for safety reasons.

replacement or tampering with the thermostat implemented to change the maximum attainable temperature of the water and Any other use not intended, as not in accordance with the design and technical specifications, is to be considered "NOT ALLOWED.

11. **Blue indicator light (11) "OILSKIMMER LEVEL"**
    Turns on when there is not enough water in the Deoiling tank, turns off when the water reaches the optimal level.
12. **Red indicator light (12) "EMERGENCY"**
    Lights up when the emergency button is pressed.
13. **Blue indicator light (13) "WATER TANK LEVEL"**
    It comes on when the water level inside the machine tank is not sufficient for the machine to work properly, when the level is sufficient the light is off.
14. **MAIN SWITCH**
    The machine's electrical panel is turned on.
15. **Yellow indicator light (15) "HEATER OFF"**
    It lights up when the circuit breaker for the heating element has tripped.

HEATING TIMER PROGRAMMING

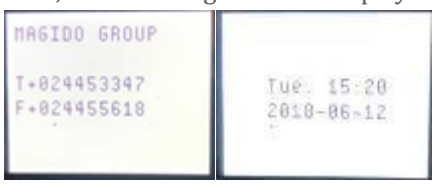


The work described below must be carried out with the electrical panel open and energized.

Note that this work can only be done by people trained to work on live electrical panels.

ADJUSTMENT PROCEDURE

1) After turning on the machine, the following screen is displayed on the PLC:



2) Press ESC several times until the following screen appears:

3) Select "Program" with the arrow keys and confirm with OK,
the following menu is displayed:

4) Use the arrow keys to select the parameter to be changed, in this case WEEKLY TIMER.

5) Select in parameter **D1** the days on which the weekly timer is to be active.
Monday **M,** Tuesday **T,** Wednesday **W,** Thursday **T,** Friday **F,** Saturday, Sunday.

Enter in parameter **On1** the time when the heating is activated (e.g. 07:00).
In parameter **Off1** enter the time when the heating will be turned off (e.g. 18:00).

When you have completed the settings, press **ESC** to exit the menus.

TROUBLESHOOTING

A number of possible inconveniences that may occur on the machine are listed below.

TYPE PROBLEMS ELECTRICAL	CAUSE	SOLUTION
The machine won't start	Blown wall fuses	Replace
	Cable between plug and machine poorly connected	Restore
	Blown transformer fuses	Replace
	Badly closed door	Close
The pump won't start	Magnetothermal disconnected*	Restore
	Badly closed door	Close
Heating doesn't work	Blown fuses	Replace
	Thermostat not adjusted or defective	Check
	Unprogrammed timer	Program
The table does not move	Lack of compressed air	Check
	Auxiliary voltage failure	Restore

In case of electrical overload, pumps and motors may stop. If this happens, reset the circuit breakers by pressing the ON button on the protection itself or turning the selector switch depending on the model.

PROBLEMS MECHANICS	CAUSE	SOLUTION
Incomplete washing	Saturated aqueous solution	Replace solution
	Unsuitable detergent	Change
The pump is leaking water	Worn OR	Replace

In case of continuous malfunction, have the cause investigated by a trained maintenance technician.

5. MACHINE PROTECTION AND SAFETY DEVICES

Safety devices and guards must never be tampered with.

Ensure their proper operation and positioning by checking their efficiency before commissioning the machine.

DEFINITION OF WORK ZONES

WORK AREA.

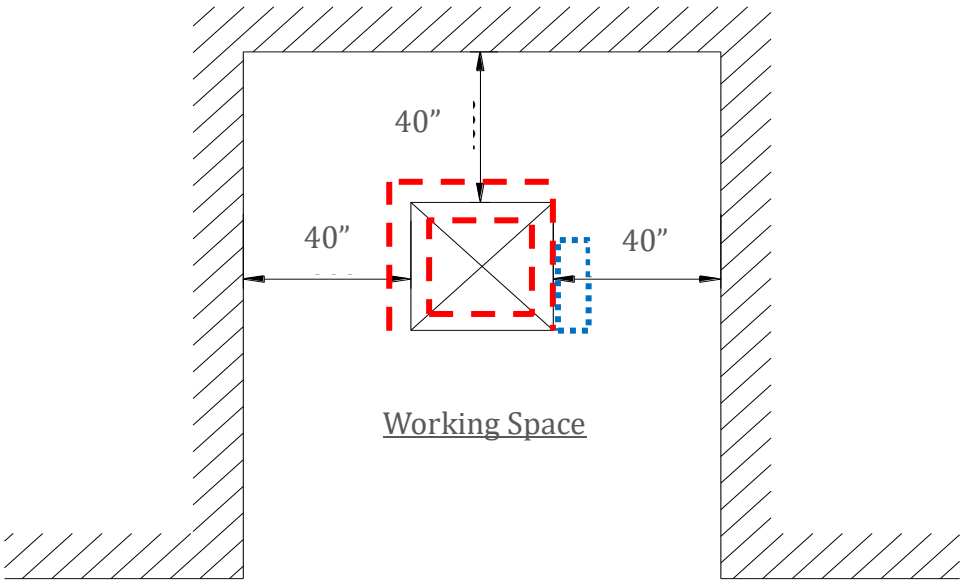
These are the zones within the frame, where the user and other operators have free access during normal operation. In these zones, the normal operation of the machine can be checked and/or quick action can be taken on the pushbuttons.
In this case, the work zones correspond to the perimeter of the machine and the indicated control stations with the minimum clearances for access by people and/or vehicles.

COMMAND AREA

Control station in front of the switchboard, and in areas where the operator is expected.

DANGER ZONE

Area reserved for maintenance personnel or Qualified Technician. **The areas inside the electrical cabinet and the machine are considered as such. In these areas it is forbidden to operate, (introduce limbs or other unauthorized tools), pass or stand during the operation of the machine.**



MACHINE PROTECTION AND SAFETY DEVICES

The pictures above are only indicative of the position of the operator.

INELIMIBNABLE RESIDUAL RISKS

ULTRA series machines are machines designed to be driven by only one operator at a time; simultaneous use by more than one operator could render some of the protections provided ineffective.

The machine, in order to work, requires only one operator. During its operation, no one other than the assigned operator should stand near the machine or worse intervene on it.

In the case of part handling carried out by two operators (over 55lbs and/or lifted by elevating systems), it is the responsibility of the handler to have the helpers move away before activating the start.

The minimum safety areas are given in the "DEFINITION OF MACHINE ZONES"

Do not violate this requirement so as not to put operators at risk of serious physical harm.

SAFETY AND SECURITY SYSTEMS

The machine is equipped with fixed and movable guards and guards to prevent contact with moving or dangerous internal parts (organs and materials). During the normal work cycle, the operator is only allowed to load and unload the parts to be washed. Any other operation is prohibited. In case of danger, press the emergency mushroom.

MACHINE PROTECTION AND SAFETY DEVICES

DISLOCATION OF THE EMERGENCY BUTTON

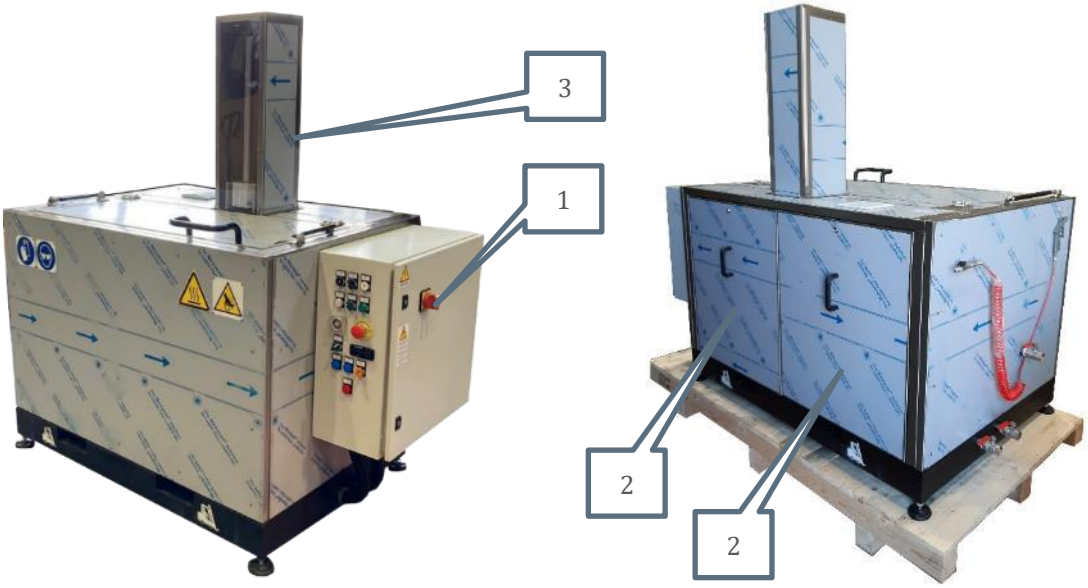
The "EMERGENCY" mushroom button causes the machine to stop immediately. It should be pressed only in case of immediate danger and not to stop the normal operating cycle of the machine. Once pressed, it must be turned counterclockwise to release it.

it is forbidden to unlock the emergency button until the dangerous situation that generated its activation has been removed.

DISLOCATION OF SHELTERS AND SAFETY DEVICES

In order to protect the operator from possible injury caused by contact with moving mechanical parts, hot parts, and current-carrying electrical components or wires, the following protections are provided:

1. No. 1 movable protection, interlocked by the main circuit breaker, located on the switchboard;
2. No. 2 rear lockable fixed guards covering: pump, ultrasonic generator, pneumatic cylinder, pneumatic unit and floats.
3. No. 1 fixed, nut-locked protection covering board up/down cylinder.



The guards on the machine have been provided by the manufacturer in order to safeguard the operator's safety while performing his duties.

During operation, the guards must not be removed for any reason.

The operator, even if experienced, should follow the instructions and warnings in this manual.

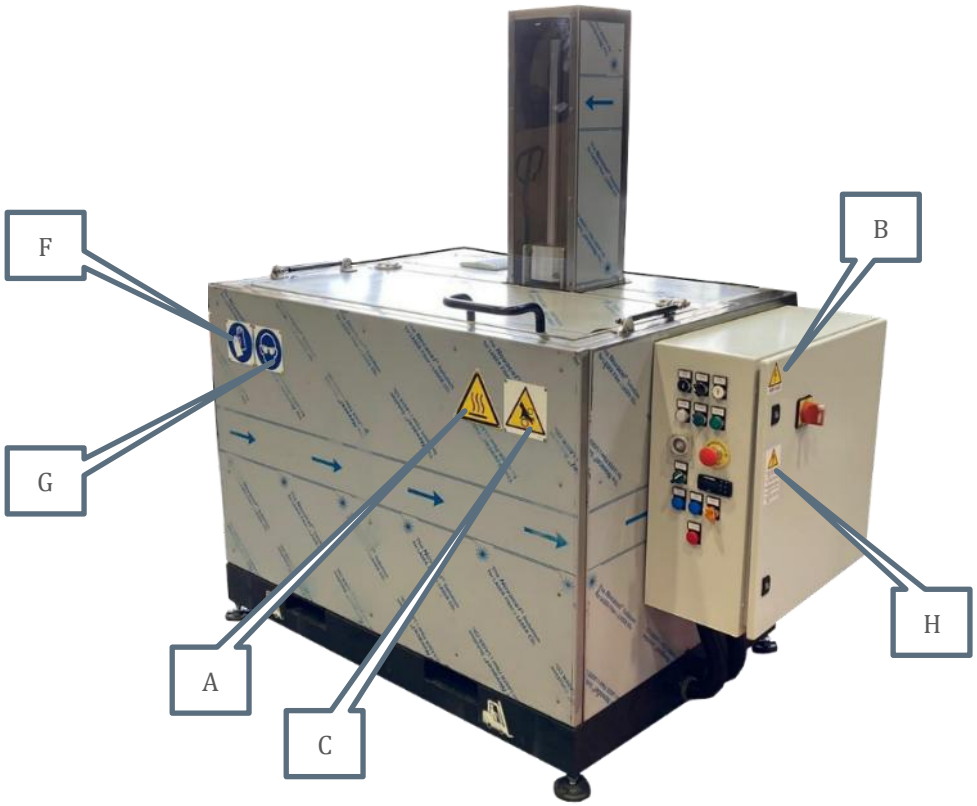
Carry out a daily check of the perfect functioning of safety devices.

RESIDUAL RISKS AND DISLOCATION OF PICTOGRAMS

Locations or areas of the machine that present residual hazards have adhesive safety pictograms (symbols) to draw operators' attention.

A		DANGER HOT SURFACE
B		ELECTRICAL HAZARD 400V electrocution
C		DANGER MOVING ORGANS Risk of limb dragging
D		DANGER OF CRUSHING HANDS
F		OBLIGATION TO WEAR GLOVES
G		OBLIGATION TO WEAR PROTECTIVE GOGGLES
H		WARNING Read the manual before using the machine

Warning plates and pictograms that perform safety functions must not be removed, covered or damaged. In case they become worn or are removed, it is necessary to restore their position by applying an identical one.



PICTOGRAM A - HOT SURFACE HAZARD

ULTRA series machines are fully insulated, however, the operator is advised to be careful not to lean on the machine or touch parts of the machine during the machining cycle.

PICTOGRAM B - ELECTRICAL HAZARD

Only electricians may open the doors and perform maneuvers or adjustments. Risk of electrocution (480V or 230V) Present indicated by specific pictograms.

- In the main switch
- In the power terminal block.

During operation and/or when the machine is under electrical voltage, it is prohibited:

Introduce hands, or other body parts, into the hazardous area (work area);
Perform operations that are not related to the production process and have not been expressly authorized by the department head.

Before working inside the main switchboard, de-energize via the main switch of the switchboard. However, in the power supply and/or main switch terminals, voltage remains. Keeping the key in custody, the authorized electrical maintainer under his own responsibility for himself and others can access the inside of the switchboard without removing voltage for maintenance functions.

PICTOGRAM C - HAZARD MOVING PARTS

Prohibited access to unauthorized personnel.

It is forbidden to remove safety guards.

It is forbidden to operate with organs in motion.

Danger moving organs and dragging. Risk of crushing hands.

It is prohibited to remove safety devices and guards designed to protect windings between belts and pulleys, sliding of wheels on guides, belt or chain drives.

During routine or extraordinary maintenance operations, the maintainer shall always restore any guards removed for maintenance or replacement of mechanical parts.

PICTOGRAM D - DANGER OF CRUSHING HANDS

Hand crushing hazard. Hand crushing hazard if placed in the working area of the wash booth door or in the area where the cart is hooked for unloading/loading into the basket.

During operation and/or when the machine is energized is prohibited:
Introduce hands or other body parts into the hazardous area (Work Area);
Perform operations that are not related to the production process and that have not been expressly authorized by the department head.

PICTOGRAM F - OBLIGATION TO WEAR GLOVES

The operator during the normal operating cycle of the machine is required to wear protective gloves to safeguard hands.

PICTOGRAM G - REQUIREMENT TO WEAR SAFETY GLASSES

The operator during the normal operating cycle of the machine is required to wear goggles to safeguard the eyes.

PICTOGRAM H - READ THE INSTRUCTION MANUAL

All persons in charge of the operation or routine/extraordinary maintenance of the machine are required to read this manual carefully before performing any d. operation.

6. UNPACKING, TRANSPORTATION, STORAGE

Per il trasporto della macchina sono previsti imballi di diverse tipologie.

It is necessary for workers in these operations to wear the following personal protective equipment:

- Unloading from the transport vehicle and unpacking, must be carried out by qualified user personnel.
- In unloading and handling operations, the presence of a helper is required for any signaling during transport.
- Lifting and carrying means should be chosen according to the size, weights, shape of the machine and its components. The capacity of the lifting means must exceed (with a safety margin) the own weight of the components to be transported.
- MAGIDO GROUP SRL assumes no responsibility for damage caused by improper operations, unqualified personnel, or the use of unsuitable means.
- **Lifting should be done continuously, without jerks or sudden movements and only on the indicated points.**

Lifting gripping points

During handling, no person should be in the maneuvering area; the entire surrounding area is to be considered a danger zone. It will be the responsibility of the handler to check the stability of the load before lifting and handling it.

PASSING AND STANDING UNDER SUSPENDED LOADS IS PROHIBITED.

UNPACKING, TRANSPORTATION, STORAGE

Before handling parts, check that there are no parts that are untied, unbalanced, or at risk of falling.

Upon receipt of the delivery make sure that the components have not been damaged during transportation, with any broken glass, sharp iron parts, oil and flammable liquids dispersed.

UNPACKING AND VERIFICATION OF CONTENTS

Upon receipt of the delivery make sure that the components have not been damaged in transit or that the packaging has not been tampered with resulting in the removal of parts inside.

Should damage of any kind be found**,** it is necessary to report it to the driver of the means of transport and immediately notify **MAGIDO GROUP SRL.**

MAGIDO GROUP LTD SHALL NOT BE LIABLE FOR DAMAGE CAUSED BY THE MACHINE WHEN IT IS TRANSPORTED AND PLACED INSIDE THE PLANT BY THIRD PARTIES.

Store packaging so that it does not pose a fire hazard and deliver it to waste collection centers.

LIFTING THE PACKED MACHINE

Lifting and transporting the packed machine on the pallet should be done carefully to avoid falling or tipping. A forklift of suitable capacity can be used for lifting. Taking into account the symmetry of the structure, the position of the center of gravity is easily determined and, therefore, it is easy to define the positioning of the lifting forks in relation to it.

Where a crane or overhead crane is used use ropes suitable for the purpose, do not rely on makeshift or emergency ropes. The machine must be properly slinged.

STORAGE

In the event that the machine will not be installed in a short period of time, but will have to be stored for an extended time, it is recommended that the components be kept in their original packaging, and storage should be in a sheltered environment commensurate with the required degree of protection.

Verify that the characteristics of the environment correspond to: See ch. ENVIRONMENTAL CONDITIONS.

7. INSTALLATION

LIABILITY BORNE BY THE USER

- Premises arrangements (masonry, foundations, ductwork). The customer must prepare suitable premises according to the requirements of the installation with the passages for workplace safety, in particular, he must allow the necessary space for operation and maintenance indicated by the manufacturer;
- Arrangements of electrical installations, up to the power points of the machine. The electrical system must be provided with a proper grounding and residual current circuit breakers and/or safety valves upstream of the machine itself;
- Arrangement of appropriate services (compressed air);
- Arrangement for possible extraction of vapors caused by water vaporization;
- Tools and consumables needed for assembly and installation;
- Lubricants required for machine commissioning;
- Handling routes, raw material storage and defined areas with signage.
- Verification of training of operation and maintenance operators and their qualification.
- All of what is stated in Sections 4.1. and 4.4. and the monitoring of what is stated in Section 5.
- In the event of a fire start, extinguishing media suitable for use on electrical equipment (powder or CO2 extinguishers within 25m) must be present and used by the user. The user shall also adapt the machine's contour area with planned horizontal and vertical signage and ensure escape routes for the operator's removal in case the emergency situation worsens. Provide stop by emergency button, and door lock disconnect switch to disconnect it from the power supply.

INSTALLATION AND COMMISSIONING

A helper must be present during the positioning of the machine at the destination for any signaling during transport.

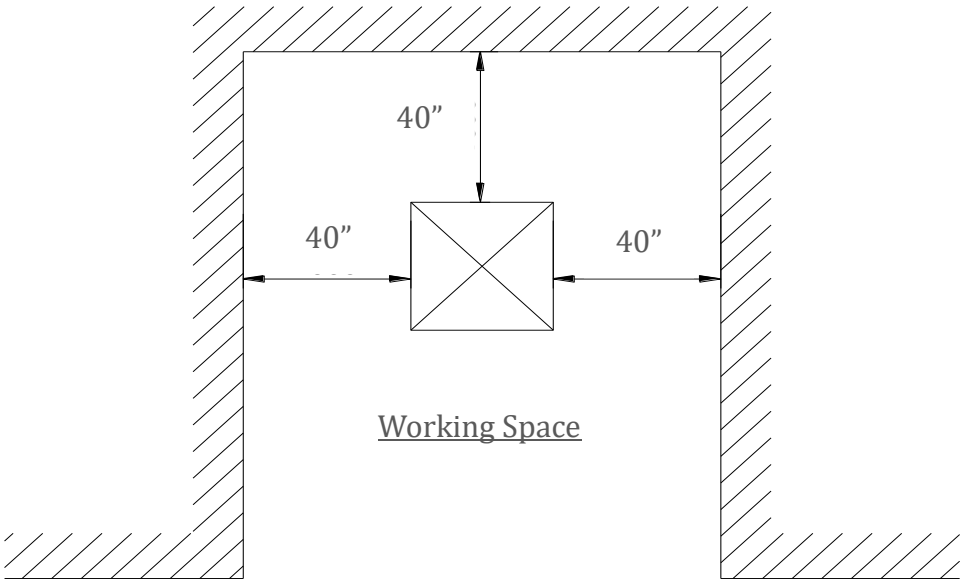
Verify, using the appropriate instruments, the conformity of the electrical distribution line and grounding.

Avoid acting on machine parts adjusted and/or preset at the time of testing. (ex: inverters).

Any technical changes that affect the operation and/or safety of the machine must be authorized by MAGIDO GROUP SRL or by technicians formally authorized by it. Otherwise, no responsibility is taken for any changes or damage that may result.

FREE SPACES RESPECTING

To enable proper use and allow easy maintenance of the machine, under safe conditions, it is recommended that it be installed in a position that respects the minimum distances, indicated in millimeters, from the walls or large obstacles shown in the figure.



MACHINE LEVELING

The machine should be installed on a smooth, level industrial-type floor in order to avoid vibration and to allow uniform closing of the movable guard (cover). No anchorage to the floor is required.

MACHINE FOUNDATION PLAN

The foundation dimensions of the machine are given in the following table.

DIMENSIONS	UNIT OF MEASUREMENT	U600	U700	U900	U1100	U1300
A	inch	40	44	52	60	68
B	inch	34	38	38	41	45

INSTALLATION

MOUNTING ACCESSORIES

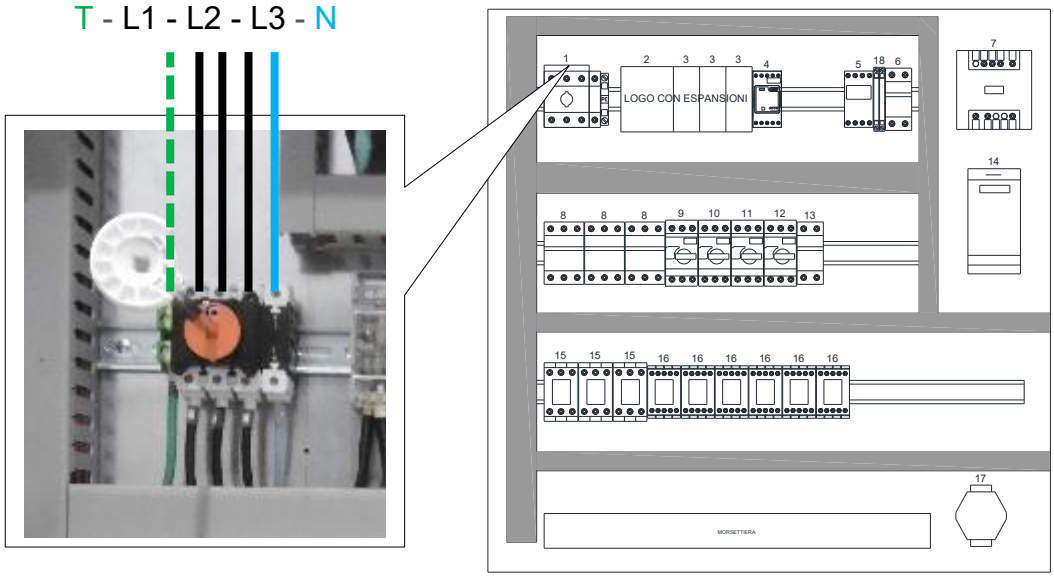
In order to safeguard some of the machine's accessories from damage during transport some of them may be disassembled, so it is necessary once the machine is placed in the place intended for use to mount the accessories supplied with it.

ELECTRICAL CONNECTION

All power connection operations must be carried out with the power supply line de-energized and by explicitly authorized qualified personnel, and always in full compliance with current regulations.

- Check that the data on the nameplate inherent in the supply voltage correspond to that in use in the establishment.
- Consult the wiring diagram, if any, in which all the features required for proper power supply to the electrical panel are specified.
- Grounding of adequate cross section is essential in all electrical panels to protect the operator from accidental contact of metal parts of the machine with live conductors or components.
- The cables used to supply power to the machine must be of sufficient size, and the insulation must be suitable for the voltage and temperature requirements related to the equipment.
- For such sizing, read in the general machine data the maximum power required.
- To avoid fire hazards, use only fuses ti suitable type and of exact voltage and voltage.

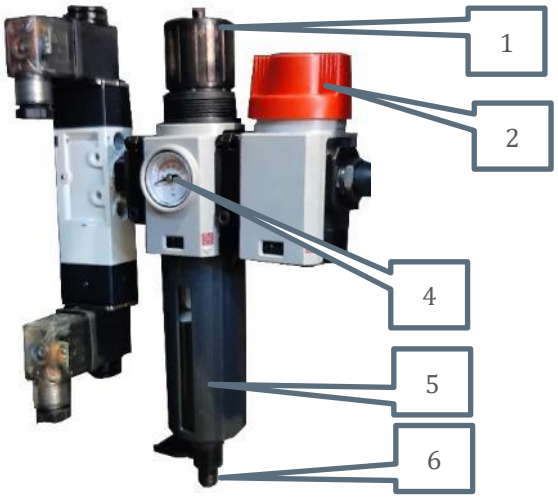
To connect the machine to the power line, simply open the electrical panel and and connect the cables as shown in the figure below.

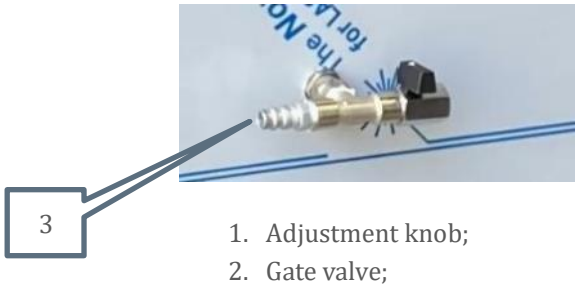


ALL ELECTRICAL CONNECTION OPERATIONS SHOULD BE CARRIED OUT WITH THE POWER LINE DE-ENERGIZED.

PNEUMATIC CONNECTION

Feed the filter-reducer assembly, located on the left side of the machine, with the compressed air distribution line. Insert the supply line, into the appropriate coupling (3).
The operating pressure should be about 6 bar.





1. Adjustment knob;
2. Gate valve;
3. Air connection (indicative);
4. Pressure gauge;
5. Air filter;

To adjust the air act as follows.

a. Pull the adjustment knob upward;
b. Turn the knob to set the desired pressure;
c. Push down the previously raised knob.

8. CLEANING AND MAINTENANCE

SAFE CONDITIONS DURING CLEANING AND MAINTENANCE

To ensure a sufficient safe working condition, it is necessary for the operator to observe the following points:

- AVOID, while the machine is turned on, touching exposed electrical components or connections as hazardous voltages are present in the machine
- When disassembling a protective panel or replacing an electrical component ALWAYS make sure that power has been previously removed from the ENTIRE line.
- ANY maintenance work on the machine must be performed by QUALIFIED and AUTHORIZED personnel.
- EVERY maintenance work on the machine must be carried out with the machine switched off, making sure that it has been previously disconnected from the power supply, that the water system has been shut off, and that the pneumatic system has been depressurized.
- DO NOT perform electrical maintenance work in the presence of water or in areas of high humidity.
- BE SURE that the area in which maintenance operations are carried out, is CLEAN and DRY.
- Always DRY any oil stains that may form on the floor to prevent spills.
- If the line is live, cover uncovered terminals and work safely by always adopting suitable protections for the case.
- NEVER INSERT your body, limbs or fingers into the cavities or openings of the machine when it is in operation.
- DO NOT WEAR watches, rings, jewelry; avoid wearing loose or dangling clothing such as ties, torn clothing, scarves, unbuttoned jackets, which could accidentally get caught in the moving parts of the machine. Uncombed hair can also be sucked in by the engine fans resulting in scalp laceration.
- WEAR only approved garments for ANTIFORTUNISTIC purposes regulated by current regulations.
- When there is a possibility of being affected by projections or falling solid parts or the like, use goggles with side blinders, hard hats or gloves if necessary.
- When working with the presence of heat on points, surfaces or materials, the use of gloves or other means of personal protection may be required to avoid burns in case of manual intervention.

When replacing spare parts, use only ORIGINAL SPARE PARTS.

To contact service see page 5 of this manual.

All repair work must be directed by a responsible person. Throughout maintenance and repair work on the machine, the main switch must remain off (in the zero position). To prevent commissioning by unauthorized persons **use padlock.**

CLEANING

The following cleaning operations can be carried out by handler provided he/she uses and wears PPE: Cut-resistant gloves, injury-proof shoes.

- Cleaning the area around the machine with a broom or damp rag.
- Dust removal from crankcases and electrical panel, controls.
- Removing any oily substances from the crankcases or controls with a rag.

OTHER CLEANING OPERATIONS (MECHANICAL AND ELECTRICAL) ARE SCHEDULED TO BE CARRIED OUT BY THE MAINTAINER IN THE COURSE OF OPERATIONS.

SCHEDULED MAINTENANCE

Routine maintenance involves a few simple operations that can be performed by the plant operator. For maximum service life and economy of operation, it is recommended that **the instructions** in this chapter be **scrupulously followed.**

Routine maintenance covers mechanical (adjustments, lubrication, cleaning) and electrical work to be carried out periodically on the machine by consulting the tables on the following pages.

In order to properly perform maintenance operations, special attention should be paid to the following general rules.

General standards for maintenance of mechanical components

- When disassembling components, avoid letting dust residue enter the working areas and the components themselves
- Do not use compressed aira to clean mechanical parts. Dust should be removed only by dust extractor or cloths.
- Do not use gasoline or flammable solvents as a cleaner, but always use non-flammable and non-toxic licensed commercial solvents.

General standards for lubrication

- Never exceed the limits of the prescribed intervals. The manufacturer recommends using lubricants recommended in the tables below.
- In case it is difficult to find them, lubricants of equivalent quality can be used. However, it is recommended not to mix two different lubricants together.
- Disposal of spent lubricant must be done in accordance with current regulations and local regulations.

General rules for the maintenance of electrical components

- Pay attention to the general standards given for electrical components.
- Do not drill holes in electrical cables or conduits when there are cables inside.
- Do not use water, sponge fragments, wet cloths and/or abrasives to clean the machine and electrical components.
- Do not use compressed air to clean electrical components. Dust should be removed only by dust extractor or with a cloth soaked in mild, nonconductive cleaning agents. It is important to avoid penetration of detergents into electrical parts.

MAINTENANCE WORK, LUBRICATION AND ADJUSTMENT OF MECHANICAL COMPONENTS

The following table lists the mechanical components on which maintenance work should be carried out periodically.

Details of the precise point of intervention are given in the next section.

A cross-reference system with the following symbols is adopted to indicate the type of operation to be performed on the various components.

Identifies a visual check on the wear condition or good functioning of a component.

Identifies a component cleaning operation on the machine.

Identifies mechanical work (general adjustments, repairs, replacements) to be done on the component.

Identifies a grease lubrication intervention.

Identifies a semi-fluid oil lubrication intervention.

Identifies a lubrication operation with synthetic oil or hydraulic oil.

Component	Symbol	Operation to be performed	Equipment, products, lubricants, tools to be used.	1st interv. after hours (H)	Interv. Success. After
Nameplates and pictograms		Perform a general visual check on the condition of the machine		8-12	Shift change
		Promptly remove dirt deposits (dust oil and grease residues), which could affect the proper operation and service life of the machines and its parts	Use cleaning agents suitable for the type of components installed; do not use compressed air.	8-12	Change turn
Pneumatic system		Check the correct air pressure. Check for impurities in air from compressor and condensed moisture. Check the condition of pipes and fittings.	Use tools of the appropriate type for the operation to be performed.	2nd month	6th month
Leakage control		Check the pump for water leakage	Remove the back panel and check for water coming out of the pump or connecting pipes	2nd month	6th month

CLEANING AND MAINTENANCE

MAINTENANCE OPERATIONS

Periodic daily maintenance

At the end of each workday, or each work shift, arrange for the work area to be cleaned.

MAINTENANCE WORK ON ELECTRICAL COMPONENTS

The following table shows the electrical components on board the machine and those in the electrical cabinet on which maintenance work should be carried out periodically.

A cross-reference system with the following symbols was adopted to indicate the type of operation to be performed on the various components:

Identifies a visual check on the wear condition or good functioning of a component.

Identifies a component cleaning operation on the machine.

Identifies an electrical intervention

CLEANING AND MAINTENANCE

Component	Symbol	Operation to be performed	Equipment, products, lubricants, tools to be used.	1st interv. after hours (H)	Interv. Success. After
Electrical cabinet		Perform cleaning. If the switchboard is located in a dusty environment carry out cleaning more frequently	Use vacuum cleaners or cloths; do not use compressed air or conductive liquid cleaners.	End of day	End of the week
		Verify proper tightening of all screws related to terminals, circuit breakers, relays, contactors, circuit breakers, and PLC input/output boards		1st year	Every year
Sensors and microswitches		Perform cleaning and check its operation	Use vacuum cleaners or cloths, do not use compressed air or conductive liquid cleaners.	1 time per month	1 time per month
Push-button panel		Perform cleaning. If the switchboard is located in a dusty environment carry out cleaning more frequently	Use vacuum cleaners or cloths, do not use compressed air or conductive liquid cleaners.	8-12	At the end of the week
Engine saver		Check the calibration.	Use appropriate tools for the purpose	1st year	Every year
Contactors		Check motor contactors subject to frequent activations.		1st year	Every year
Relay		Check the relays of those subject to frequent activations.		1st year	Every year
Lamps and buttons		Check and replace lamps or buttons if necessary.		1st year	Every year

Cables and connections		Check the attachment of cables to their respective holders or cable glands.		1st year	Every year
Warning plates and pictograms		Clean and check the condition of the nameplates located on the electrical panel and near the machine door.		8-12	End of day

EXTRAORDINARY MAINTENANCE

Extraordinary maintenance operations involve breakages of parts and components where specific knowledge of the failure is required. As a general rule such operations can be done by ordinary maintenance person, if authorized.

If the inconvenience is not remedied, contact MAGIDO GROUP SRL.

All the warnings described in CHAPTER 9 also apply to extraordinary maintenance work.

9. UNINSTALLATION AND DISPOSAL

UNINSTALLATION

When the working life of the machine is over, it is necessary to uninstall and dismantle it;

ALL MACHINE DISASSEMBLY OPERATIONS MUST BE CARRIED OUT BY QUALIFIED PERSONNEL AND IN COMPLIANCE WITH SAFETY REGULATIONS.

In disassembly operations, one must evaluate the RESIDUAL HAZARDS indicated below and others not foreseeable at the origin:

- Crushing between moved or disassembled parts
- Falls of materials from above or not stably supported
- Cuts from sharp edges or unprotected sheet metal
- Abrasions/burns from contact with rough parts or chemicals

Therefore, it is mandatory that personal protective equipment be worn during the phase that during the disassembly phase.

DISMANTLING

Decommissioning and disposal of the system can be done by the user by following the following procedures:

- Demarcate the danger zone for the duration of dismantling and lifting the machine, prohibiting the passage of persons not assigned to the work.
- Cut off the power supply through the main switch (located on the power panel) and dissect the energies at the designated points.
- Disconnect the machine edge power cables from the electrical cabinet terminal block.
- Disconnect the connections for the pneumatic and control system.
- Eliminate scraps or waste that may clutter the operations area and retrieve waste on board the machine, such as: emptying filters.

WARNING - During disassembly, repair or dismantling operations, especially using cutting equipment (which throws red-hot particles onto plastic parts or other flammable material nearby), fire starts can occur.

UNINSTALLATION AND DISPOSAL

Provide suitable equipment and means for:

- Lift the machine using only the points provided by the manufacturer and check that the load is balanced.
- The performance of lifting operations as instructed CHAPTER 6.
- After disassembly, it is necessary that a breakdown of the components of the machine itself take place, according to the materials of their composition; then arrange for disposal at ATUORIZED ENTITIES, in full compliance with current regulations regarding the waste itself.

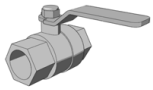
10. SPARE PARTS CATALOG

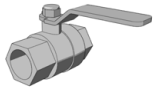
The Manufacturer guarantees the safety and reliability requirements of the machine in the event that original spare parts are used only. The Manufacturer disclaims any liability for damage resulting from the use of non-original spare parts.

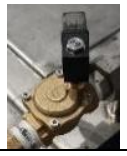
When ordering the replacement part list:

- the model of the machine;
- the serial number;
- description;
- code;
- quantity.

INDEX

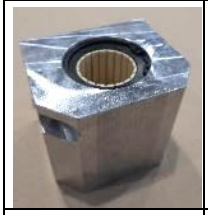
Tank Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Ball valve	01	Valve 1 "FF Brass Ni	3	Valve 1 "FF Brass Ni	3	Valve 1 "FF Brass Ni	3	Valve 1 "FF Brass Ni	3	Valve 1 "FF Brass Ni	3
	Resistance	02	2" L.370mm **4000W**	1	**2" L.335mm 4000W**	1	2" L.500mm **8000W**	1	2" L.550mm **10000W**	1	2" L.550mm **12000W**	1
	Temperature Probe	03	TG NTC TPE----A1 2 wires, 1.5m	1	TG NTC TPE----A1 2 wires, 1.5m	1	TG NTC TPE----A1 2 wires, 1.5m	1	TG NTC TPE----A1 2 wires, 1.5m	1	TG NTC TPE----A1 2 wires, 1.5m	1
	Temperature Probe Well	04	**15066** aisi 304	1	**15066** aisi 304	1	**15066** aisi 304	1	**15066** aisi 304	1	**15066** aisi 304	1
	Wash tank level float and oil skimmer	05	ILMN5PDIN Stainless	2	ILMN5PDIN Stainless	2	ILMN5PDIN Stainless	2	ILMN5PDIN Stainless	2	ILMN5PDIN Stainless	2
	Galvanized adjustable articulated foot	06	Foot d.80 M16x165 P903080.T M16X1300 1	4	-	-	Foot d.80 M16x165 P903080.T M16X1300 1	4	Foot d.80 M16x165 P903080.T M16X1300 1	4	Foot d.80 M16x165 P903080.T M16X1300 1	4
	Crankcase handle	07	Black handle L117xM8	2	Black handle L117xM8	2	Black handle L117xM8	2	Black handle L117xM8	2	Black handle L117xM8	2

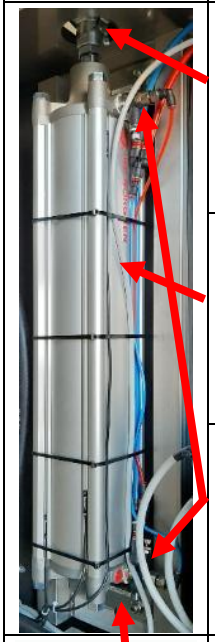
Oil Skimmer Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Oiling pump	08	PMD-221 15W SA2110002	1	**PMD-L0531G 15W SA2110002**	1	PMD-221 15W SA2110002	1	PMD-221 15W SA2110002	1	PMD-221 15W SA2110002	1
	Oiling pump (OPTIONAL)	08	PDE51IT6 86W 24V DC 21060045	1	PDE51IT6 86W 24V DC 21060045	1	PDE51IT6 86W 24V DC 21060045	1	PDE51IT6 86W 24V DC 21060045	1	PDE51IT6 86W 24V DC 21060045	1
	Rubber hose	09	Black tube 13x19 **L.800mm**	2	Black tube 13x19 **L.800mm**	2	Black tube 13x19 **L.900mm**	2	Black tube 13x19 **L.1000 mm**	2	Black tube 13x19 **L.1100 mm**	2
	Telescopic float	10	**17400** aisi 304	1	**17400** aisi 304	1	**17400** aisi 304	1	**17400** aisi 304	1	**17400** aisi 304	1
	Ball Valve (OPTIONAL)	11	Valve 1/2" FF Inox	1	Valve 1/2" FF Inox	1	Valve 1/2" FF Inox	1	Valve 1/2" FF Inox	1	Valve 1/2" FF Inox	1

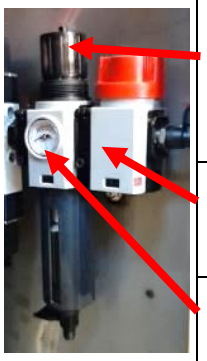
Water inlet Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Solenoid Valve (OPTIONAL)	12	NC 3/4 "gas FF, brass (cod18020-04-18-B-C)	1	NC 3/4 "gas FF, brass (cod18020-04-18-B-C)	1	NC 3/4 "gas FF, brass (cod18020-04-18-B-C)	1	NC 3/4 "gas FF, brass (cod18020-04-18-B-C)	1	NC 3/4 "gas FF, brass (cod18020-04-18-B-C)	1
	Y filter (OPTIONAL)	13	3/4 "gasFF brass 8029-034	1	3/4 "gasFF brass 8029-034	1	3/4 "gasFF brass 8029-034	1	3/4 "gasFF brass 8029-034	1	3/4 "gasFF brass 8029-034	1
	Detergent Dispenser (OPTIONAL)	14	Dosatron 0.8-5.5% AF	1	Dosatron 0.8-5.5% AF	1	Dosatron 0.8-5.5% AF	1	Dosatron 0.8-5.5% AF	1	Dosatron 0.8-5.5% AF	1

Ultrasound Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Transducer	15	**1500W** 25kHz **15790** 500x300x h.90mm	1	**2000W 40kHz CC001734 500x300x h.90mm**	1	**3000W** 25kHz **15736** 850x300x h.100mm	1	**4000W** 25kHz **15750** 900x400x h.90mm	1	**5000W** 25kHz **15725** 1100x500 x h.90mm	1
	Générateur	16	220V **1500W** 25kHz	1	**220V 1Ph 60Hz** **2000W 40kHz**	1	220V **3000W** 25kHz	1	220V **2000W** 25kHz	**2**	220V **2500W** 25kHz	**2**
	Cooling fan	17	GSV1500 220-1Z	1	GSV1500 220-1Z	1	GSV1500 220-1Z	1	GSV1500 220-1Z	1	GSV1500 220-1Z	1

Lid Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Hinge Aisi 316	18	Hinge 60x60 428701	2	Hinge 60x60 428701	2	Hinge 60x60 428701	2	Hinge 60x60 428701	2	Hinge 60x60 428701	2
	Lid handle	19	Black handle 200M8 GN.26961	1	Black handle 200M8 GN.26961	1	Black handle 200M8 GN.26961	1	Black handle 200M8 GN.26961	1	Black handle 200M8 GN.26961	1
	Gas spring	20	Spring **100N** open L.365mm fixing Ø8mm 082651 mod.	2	Spring **100N** open L.365mm fixing Ø8mm 082651 mod.	2	Spring **100N** open L.365mm fixing Ø8mm 082651 mod.	2	Spring **150N** open L.600mm fixing Ø8mm 198.600.15	2	Spring **150N** open L.600mm fixing Ø8mm 198.600.15	2
	Lid gasket	21	Rubber mousse N12 21x25mm	2,3 m	Rubber mousse N12 21x25mm	2,7 m	Rubber mousse N12 21x25mm	3,1 m	Rubber mousse N12 21x25mm	3,7 m	Rubber mousse N12 21x25mm	4,3 m
	Lid gasket	22	Rubber mousse 15x10mm	2,3 m	Rubber mousse 15x10mm	2,7 m	Rubber mousse 15x10mm	3,1 m	Rubber mousse 15x10mm	3,7 m	Rubber mousse 15x10mm	4,3 m

Table Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Tree	23	Shaft d.30 x 1200mm **15593**	1	Shaft d.30 x 1200mm **15593**	1	Shaft d.40 x 1320mm **15202**	1	Shaft d.40 x 1320mm **15202**	1	Shaft d.40 x 1500mm **15968**	1
	High Bushing	24	Bushing **d.30mm** RGA-03-30	1	Bushing **d.30mm** RGA-03-30	1	Bushing **d.40mm** RGA-03-40	1	Bushing **d.40mm** RGA-03-40	1	Tandem Bushing **d.40mm** RTA-03-40	1
	Pair of Low Bushings	25	Bushing **d.30** XUM-01-30	2	Bushing **d.30** XUM-01-30	2	Bushing **d.40** XUM-01-40	2	Bushing **d.40** XUM-01-40	2	Bushing **d.40** XUM-01-40	4
	Piece shelf	26	**16403** aisi 304	1	**16404** aisi 304	1	**16730** aisi 304	1	**16805** **aisi** 304	1	**16810** aisi 304	1
	Contrast roller	27	-	-	-	-	Roller d.50x36 Delrin **13992**	2	Roller d.50x36 Delrin **13992**	2	Roller d.50x36 Delrin **13992**	2
	Pin for Roller	28	-	-	-	-	Stud d.20x52 aisi 304 **14055**	2	Stud d.20x52 aisi 304 **14055**	2	Stud d.20x52 aisi 304 **14055**	2
	Seeger for Roller	29	-	-	-	-	Seeger E20 Inox	2	Seeger E20 Inox	2	Seeger E20 Inox	2
	Polyzene Profile	30	Green polyzene 20xh17x 80mm	2	Green polyzene 20xh17x 80mm	2	-	-	-	-	-	-

Pneumatic Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Cylinder fork	31	Galvanized fork **M20x1.5** QM/8080/25	1	Galvanized fork **M20x1.5** QM/8080/25	1	Galvanized fork **M20x1.5** QM/8080/25	1	Galvanized fork **M20x1.5** QM/8080/25	1	Galvanized fork **M27x2** QM/8125/25	1
	Pneumatic Cylinder	32	Cylinder **d.80x400** PRA 802080/M/0400	1	Cylinder **d.80x400** PRA 802080/M/0400	1	Cylinder **d100x500** PRA 802100/M/0500	1	Cylinder **d100x500 PRA** 802100/M/0500	1	Cylinder **d125x500** PRA 802125/M/0500	1
	Block valve with regulator	33	Valve d.8x1/4" C02GN0828	2	Valve d.8x1/4" C02GN0828	2	Valve d.8x1/4" C02GN0828	2	Valve d.8x1/4" C02GN0828	2	Valve d.8x1/4" C02GN0828	2
	Cylinder foot	34	Galvanized "C" foot **QA/8080/21**	2	Galvanized "C" foot **QA/8080/21**	2	Galvanized "C" foot **QA/8100/21**	2	Galvanized "C" foot **QA/8100/21**	2	Galvanized "C" foot **QM/8125/21**	2
	Cylinder sensor	35	M/50/LSU /5V sensor	3	**M/50/ EAP/5V sensor**	3	M/50/LSU /5V sensor	3	M/50/LSU /5V sensor	3	M/50/LSU /5V sensor	3
	Plexiglass Carter	36	Carter **15583** 585x220x 5 mm plexiglass	1	Carter **15583** 585x220x 5 mm plexiglass	1	Carter **15185** 685x220x 5 mm plexiglass	1	Carter **15185** 685x220x 5 mm plexiglass	1	Carter **15969** 785x220x 5 mm plexiglass	1

Pneumatic Group	Description	Location	U600	N	U700	N	U900	N	U1100	N	U1300	N
	Group FR ¼"	37	B82G-2GK-QP3-RMG	1	B82G-2GK-QP3-RMG	1	B82G-2GK-QP3-RMG	1	B82G-2GK-QP3-RMG	1	B82G-2GK-QP3-RMG	1
	Valve with padlock ¼"	38	T82T-2GA-B1N	1	T82T-2GA-B1N	1	T82T-2GA-B1N	1	T82T-2GA-B1N	1	T82T-2GA-B1N	1
	Manometer	39	820073-01KIT	1	820073-01KIT	1	820073-01KIT	1	820073-01KIT	1	820073-01KIT	1
	Electro valve ¼" 5/3 open centers	40	V51B711A-A2000	1	V51B711A-A2000	1	V51B711A-A2000	1	V51B711A-A2000	1	V51B711A-A2000	1
	Compressed air gun	41	Air gun PA/4AL-2	1	Air gun PA/4AL-2	1	Air gun PA/4AL-2	1	Air gun PA/4AL-2	1	Air gun PA/4AL-2	1
	Air gun hose	42	Orange spiral hose 4mt, R1/8, x hose 6x4 PU310600418	1	Orange spiral hose 4mt, R1/8, x hose 6x4 PU310600418	1	Orange spiral hose 4mt, R1/8, x hose 6x4 PU310600418	1	Orange spiral hose 4mt, R1/8, x hose 6x4 PU310600418	1	Orange spiral hose 4mt, R1/8, x hose 6x4 PU310600418	1
	Air valve	43	Valve 1/4 "MF	1	Valve 1/4 "MF	1	Valve 1/4 "MF	1	Valve 1/4 "MF	1	Valve 1/4 "MF	1