MAGIDO® GROUP

THE BEST STAINLESS STEEL INDUSTRIAL CLEANING TECHNOLOGY

OPERATION AND MAINTENANCE MANUAL

HP25 - HP30

TRASLATION OF ORIGINAL INSTRUCTIONS
REVISION: HP25-HP30-2018 EN

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GENERAL INFORMATION REGARDING THE OPERATING MANUAL

Introduction

This manual is a valuable aid towards understanding and properly using your machine: it must be carefully read before using the machine.

This instruction manual has been compiled by MAGIDO GROUP Srl and is an integral part of the machine shipment.

Each machine is sold with its own instruction manual. The User is responsible for conserving this manual for the machine's entire lifetime: the manual can only be destroyed with the machine's final dismantling.

MAGIDO GROUP Srl shall not be held liable for any tampering with this manual, or modifications to the machine brought about by the user, after the machine's delivery, and not covered in this document.

Reference standards and terminologies used

The information contained in the following documents was used in the preparation of this manual:

- Directive 2006/42/EC Machinery Directive;
- Directive 2014/30/UE EMC Directive;
- Directive 2014/35/UE Low Voltage Directive;

This machine is built according to the following regulatory standards:

- EN ISO 12100-1 Machinery Safety;
- EN ISO 13857:2008 Machinery safety - Safety distances for preventing danger zones from being reached by upper and lower limbs;
- EN ISO 14121:2007 Machinery Safety - Risk Assessment - Part 1: Principles;
- EN 1037:1996+A1:2008 Prevention against accidental start-ups;
- EN ISO 14159:2008 Machinery Safety - Hygiene requirements relating to machinery design.

Scope of this document

The scope of this manual is to provide the User with directions and information **to strictly adhere to for the machine's correct use, as well as for the machine operator's protection and safety**. The User is therefore urged to:

- make this document available in the workplace, illustrate it and ensure that all operators are aware of its existence;
- transmit the manual to subsequent owners of this machine.

Personnel qualifications

The machine must be used by trained personnel only in accordance with the following levels of qualification:

Skilled worker: an operator without specific skills, capable of performing simple tasks, i.e. is able to use the machine with loading/unloading controls and with the safety guards in operation.

Skilled technician: an operator capable of using the machine under normal operating conditions with the protection systems disabled, intervening on mechanical and electrical parts for controls, repairs and maintenance.

Manufacturer's technician: Operator for complex operations and specifications agreed, however, with the user.

Use and conservation of the manual

This manual is addressed to the Machine User and to all coordinators responsible for the machine's handling, installation, operation, monitoring and final dismantling.

This manual indicates the machine's usage as intended by its engineering design and technical specifications, providing instructions for the machine's handling, proper and safe installation, assembly, adjustments and use; the manual provides information targeting maintenance interventions, facilitates the ordering of spare parts and provides information on any residual risks.

In particular, the operating manual must be constantly consulted concerning the following information:

- operating conditions prescribed for the machine;
- the workplace occupied by the operator;
- instructions related to:
    - the machine's start-up;
    - operation;
    - transportation;
    - installation;
    - assembly and disassembly;
    - regulatory measures;
    - maintenance and repairs.

Respect for legislation

In addition to the rules and instructions outlined in this manual, specific legal provisions in the field of injury prevention in the workplace must be followed.

Storing the manual

This user manual is considered an integral part of the machine and must be kept in good condition until the machine's final dismantling and disposal.

The manual should be kept in secure dry place, away from direct sunlight, and should always be available and accessible for consultation, in the machine's vicinity.

User information

1 - This manual reflects the machine's current state of the art and as such cannot be considered inadequate simply because it is updated based on new information.

2 - The Manufacturer reserves the right to update products and manuals, without any obligation to update previous products or manuals.

3 - The characteristics of materials can be modified at any time without prior notice in light of technical developments.

4 - In the event that the machine is supplied without electrical controls and protection systems (electrical panel on board the machine), the manufacturer assumes no responsibility regarding safety issues arising from electrical parts that do not comply with the recommendations and/or instructions. In all cases, compliance with laws and regulatory standards for electrical equipment supplied with the machine shall be the sole responsibility of the customer, who shall implement such measures in a workmanlike manner and suitable for their use.

5 - The manufacturer shall be exempt from any possible liability in the event that the machine is subjected to:

- improper use;
- use by untrained personnel;
- use contrary to the terms of this manual;
- use contrary to regulatory standards and legislation in force;
- use with the absence of primary power;
- use with serious deficiencies in maintenance;
- use with modifications or unauthorized changes unless explicitly provided in writing by the Manufacturer;
- use with non-original spare parts or not specifically defined for the machine model;
- use with a total or partial non-observance of the instructions contained in this manual.

6 - The general warranty shall be void in the case of:

- poor storage and maintenance;
- inconveniences due to misuse;
- use by unskilled persons;
- exceeding of performance limits;
- excessive mechanical and/or electric and pneumatic stress;
- use in non-optimal conditions described in Section 5.

Any requests for additional copies of this document must be made through a purchase order submitted to Magido Group Srl.

MACHINE DESCRIPTION AND SAFETY FEATURES

The Magido HP25 and HP30 are a parts washers designed for degreasing and cleaning mechanical parts at a medium pressure. The washing is achieved manually with a detergent solution at 45°C, which ensures the highest level of cleaning. The mechanical action of the high pressure jet (at 30 bar), in combination with the temperature and the detergent action, allows for the elimination of incrustations from the parts being processed.

Residual risks

In order to work in conditions of maximum safety and avoid creating dangerous situations, the following list of behavioural rules must be adhered to by the machine operator to avoid injury.

a) Residual risks relating to sect. 9 "OPERATING THE MACHINE"

- If it becomes necessary to immediately disarm the machine for any reason, press the red emergency button mushroom, or set the yellow/red selector on the control panel door to the 0 position.
- During the machine's operation, it is absolutely forbidden to remove the safety systems designed and assembled by the manufacturer in order to ensure the operator's safety.
- The machine must be operated by qualified and experienced personnel only.
- Never leave the machine unattended.

Wear protective gloves when using the machine.

Wear safety footwear when using the machine.

Wear protective clothing when using the machine.

b) Residual risks relating to sect. 5 "MACHINE HANDLING AND TRANSPORT"

Machine handling and transport operations must be carried out using protective gloves.

Machine handling and transport operations must be carried out using appropriate safety footwear.

Machine handling and transport operations must be carried out using protective clothing.

Residual risk labels

Warning labels are affixed to the machine concerning residual risks:

MANDATORY USE OF GLOVES

DANGER: ELECTRICAL HAZARD

CAUTION: HOT SURFACE

DO NOT REMOVE OR TAMPER WITH THE WARNING LABELS.

Protection and safety measures

The following safety measures have been installed to protect the operator from injury caused by contact with moving mechanical parts, heated parts and live electrical components or wiring:

DESCRIPTION	POSITION	FUNCTION
1 Emergency stop button	Electrical cabinet exterior	Cuts off all electrical and pneumatic power
2 Tank level control	Tank	Turns off the resistance and pump
- Temperature probe	Tank	Temperature regulation
4 Safety Switches	Machine panel	in case of sudden opening of the covers Turns off the pump and pneumatic power

The machine guards and safety panels have been designed by the manufacturer to ensure the operator's safety while working.

The protection systems must not be removed for any reason whatsoever during the machine's operation.

Even if experienced, the operator must follow the instructions and warnings contained in this manual.

Check the proper operation of the safety devices on a daily basis.

TECHNICAL SPECIFICATIONS

PARAMÈTRES		HP 25M	HP 25T	HP 30M	HP 30T
Tank capacity	Litre	100		170	
Maximum permissible load	kg	50			
Washing capacity (WxDxH)	mm	800x600x500		1200x700x500	
Machine weight	kg	140		180	
Drain valve diameter	Inches	1”			
Maximum washing temperature	°C	45			
Heating power	kW	3		4	
Wash pump pressure	Bar	Max 60			
Wash pump capacity	L/min	14			
Wash pump rated power	kW	2,2	4	2,2	4
Light	W	6			
installed electric power	kW	5,2	7	6,2	8
Current consumption	A	26,2	13,6	30,6	15,2
Power supply voltage	V	230 V+ T	400 V+ N+T	230 V+ T	400 V+N+ T
Number of phases	Ph	1	3+N	1	3+N
Frequency	Hz	50 Hz			
Degree of protection of electrical equipment		IP55			

Machine label with CE marking

A label is affixed to the machine bearing the name and address of the manufacturer, MAGIDO GROUP Srl, as well as the machine's code and serial number, and the CE marking.

All other information relative to the machine's CE marking are indicated in the EC declaration annexed to this manual.

Machine noise emission level

The machine's maximum noise emission level, measured at the operator position, is less than 80 dB (A).

INTENDED AND NON-INTENDED USAGE

The HP25 end HP30 are designed for degreasing and cleaning mechanical parts at medium pressure using hot water and biodegradable detergents.

Any usage which differs from the uses foreseen by the manufacturer and described in this manual are considered improper and dangerous use, and may cause severe damage to the equipment and operators.

Counter indications and risks for unforeseen usage

- The machine is not designed for working in explosive atmospheres. **The machine's use in an environment with a danger of explosion is strictly prohibited**.
- The user should contact the manufacturer for any machine use differing from those expressly set forth in this manual, **for information on possible counter indications or hazards**.
- The user is required to contact the manufacturer in order to apply any changes to the machine subsequent to its delivery; **any risks generated by the changes must be determined, and their compatibility must be verified with the safety standards established by current regulatory legislation**.
- **In altering the machine's operating cycle, its kinematics must absolutely not be modified in any way.**
- **It is absolutely forbidden to apply and make use of flammable products inside the machine.** Only use products and/or specific detergents for washing manufactured for this class of machines**. Always follow the instructions specified in the data sheet and Material Safety Data Sheet of the product/detergent used**.

MACHINE HANDLING AND TRANSPORT

The use the following personal protective equipment is mandatory during the machine's transport and/or handling operation:

Machine handling and transport operations must be carried out using protective gloves.

Machine handling and transport operations must be carried out using appropriate safety footwear.

Machine handling and transport operations must be carried out using protective clothing.

The machine's transport and handling must be carried out by means of a forklift or pallet lifter after having properly secured it to a supporting pallet (see handholds shown below).

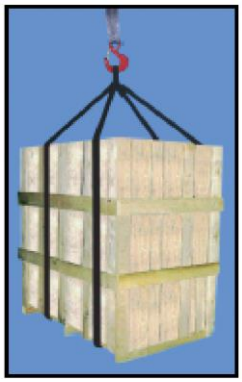
This involves the intervention of a skilled operator, assisted by a second handling operator on the ground making certain the route is clear of obstructions.

When lifting the machine, use straps appropriately sized to support its weight, slinging the machine on its 4 support feet.

Use cardboard to pack the machine after it has been secured to the pallet.

At the customer's request, the machine should be packed in wooden crates or suitably sized cases for long haul transportation over long distances.

Lift the crates using a forklift or crane, suitably securing and slinging them.



If a crane is used for lifting the crate, anyone not involved in the lifting and handling operations must not be allowed to transit the area or stand in its vicinity, whereas handling personnel are required to keep at a safe distance to avoid being struck by the load in motion.

Lift the machine using straps or steel cables only that are adequately sized to bear its weight.

Use safety latches to lift the machine.

Anyone not involved in the lifting and handling operations must not be allowed to transit the area or stand in its vicinity, whereas handling personnel are required to keep at a safe distance to avoid being struck by the load in motion.

Pay utmost attention to ensure that no one is allowed to transit in the handling area, in order to avoid any possibility of injury to personnel during the movement of the suspended load.

Do not perform abrupt manoeuvres during the machine's lifting and handling, to avoid its striking any persons or objects in the area.

A person outside the handling area must follow the lifting operations to signal any obstacles not visible to the crane operator.

Especially in the event of transport by sea, it is advisable to protect the machine's various parts by covering them with a protective anti-rust lubricant, inserting bags of hygroscopic salts in the packaging to protect the machine from moisture.

If the machine is shipped packed in a wooden crate or case, the packaging must be appropriately slung during handling.

Once the machine has been set onto the truck or freight carrier, it must be counter-balanced using straps, ropes, steel cables or wooden wedges suitably sized for the machine's weight.

MACHINE INSTALLATION

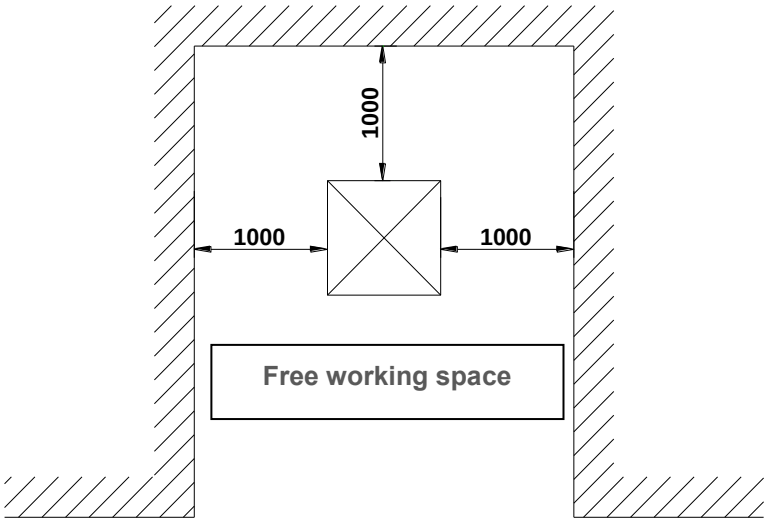
The machine must be installed in a location whose temperature and humidity conditions are optimal for the operator's well being, so as to minimize the possibility of fatigue and allow the operator to work in conditions of maximum safety.

The machine's installation environment must be well ventilated and free of explosive gases.

The machine's installation temperature must be comprised between 10°C and 40°C.

Clearance requirements

It is advisable to install the machine in a location that meets the minimum distance, in millimeters, from any walls or large obstructions, as shown in the figure, in order to allow for its proper use and easy maintenance in safe conditions.



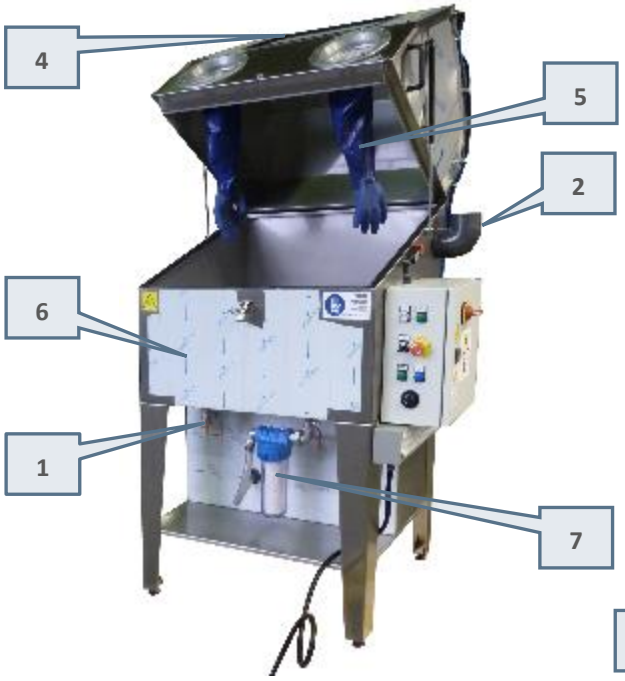
Positioning the machine

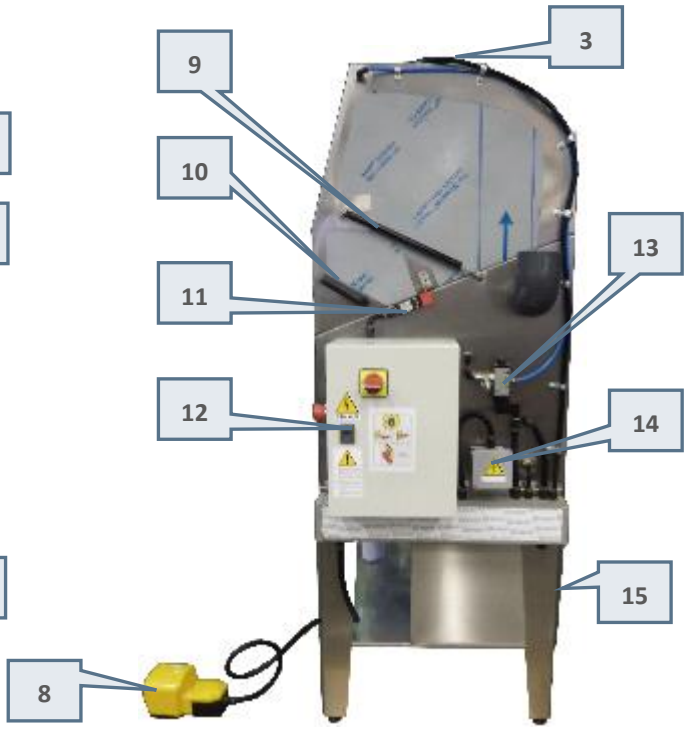
The machine must be installed on a smooth industrial type floor to allow its movable guard (cover) to close uniformly.

Floor anchors are required.

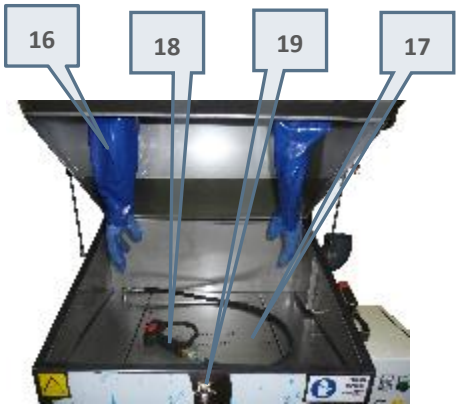
The machine is designed to capture any vapours that may be produced during the washing process. The user must use of an existing vapour collection system, or build one if it is lacking.

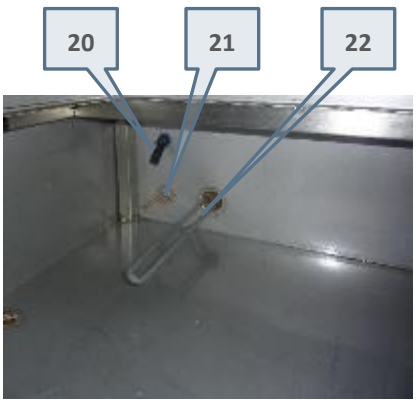
Main machine views





1 Tank water drainage
2 Vapour exhaust
3 **L**ighting
4 Safety inspection glass pane
5 Dry-box gloves
6 Tank
7 polypropylene filter
8 Foot pedal
9 Gas spring
10 Handle
11 Limit switch
12 Electrical panel
13 Compressed air solenoid
14 Electrical resistance junction box
15 Removable protective panel, pump housing
16 Dry-box gloves
17 Removable support, washing surface
18 High pressure gun
19 lever closure
20 Level probe
21 Temperature probe
22 Resistance

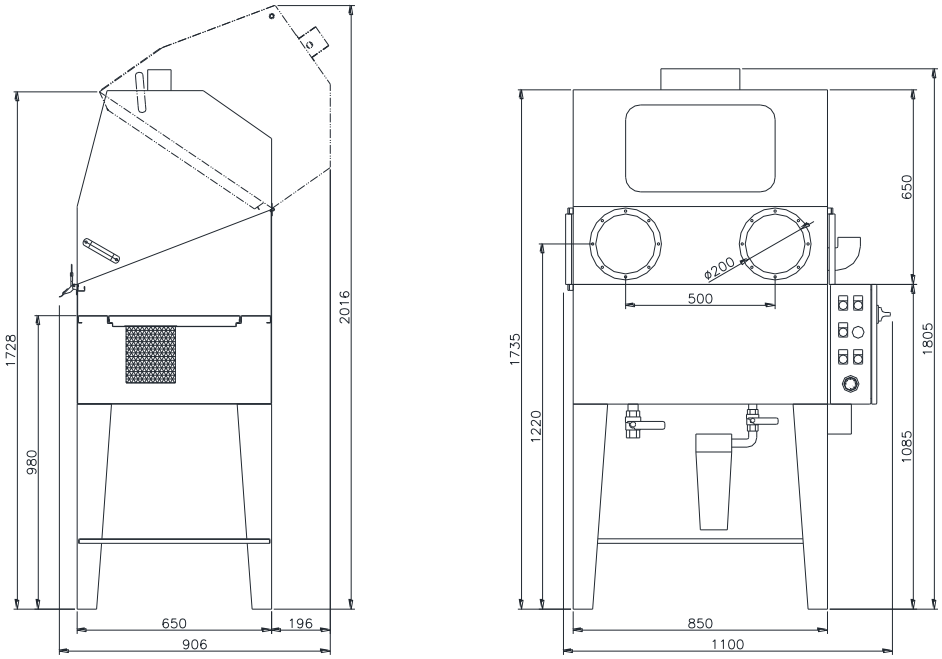




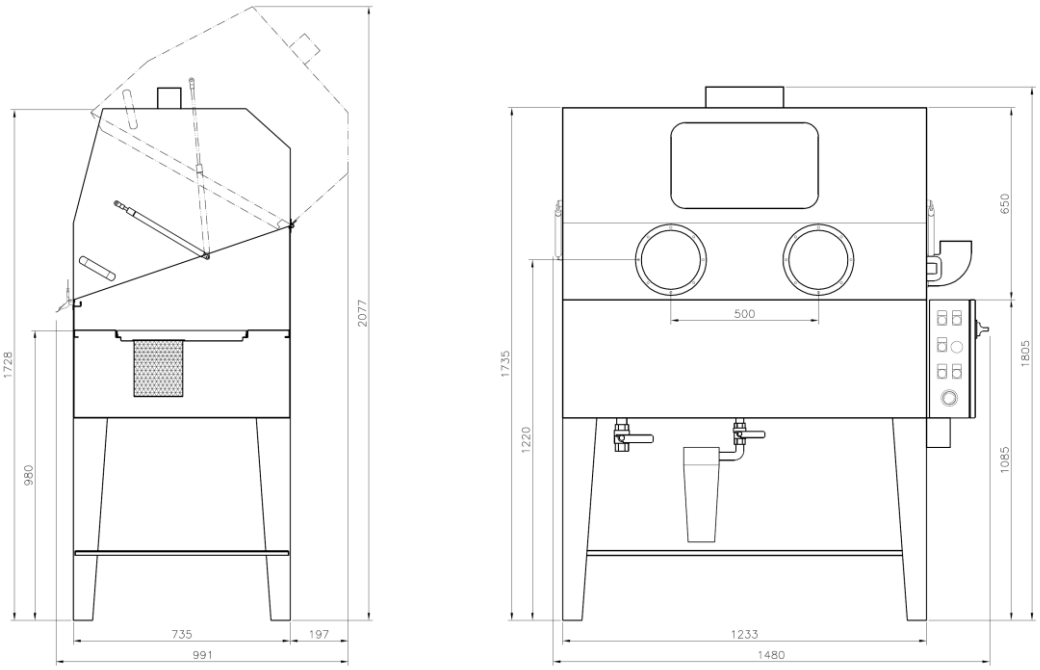
Machine overall dimensions

The machine's overall dimensions are shown in the table below.

Layout HP25



Layout HP30



ASSEMBLING AND PREPARING THE MACHINE

Setting up the machine for operation

Follow the instructions below for the machine's correct positioning upon its arrival at the User's production location:

- unpack the machine, removing any protective wrapping;
- lift the machine by following the instructions and warnings described in the sect. "Machine handling and transport";
- - set up the machine in the desired location.

Mounting accessories

The machine's adjustable support feet must be assembled according to its base; this procedure must be performed by qualified personnel to ensure that the machine is stable and level.

Controls and preventive checks

Upon receiving the machine, we recommend:

- verifying compliance with the purchase order;
- checking if all machine parts have been delivered at the User's production facilities;
- performing the inspections and preventive checks described below.

Checking for any machine damage suffered during transport

To identify any machine damage suffered during transport operations, it is advisable to check all projecting parts on the machine to ensure there has been no damage, in particular:

- check the control panel;
- check the microswitch on the cover;
- check the fixed and movable guards.

Cleaning and lubricating the machine

Carefully clean the machine upon its arrival at the User's production location, removing any dust or foreign substances and stains that might have deposited during transport.

Lubricate all mechanical parts exposed to dust with grease, especially if the machine was transported by sea.

Wear safety gloves and eye-goggles when cleaning the machine upon its arrival at the User's production location.

Electrical connection

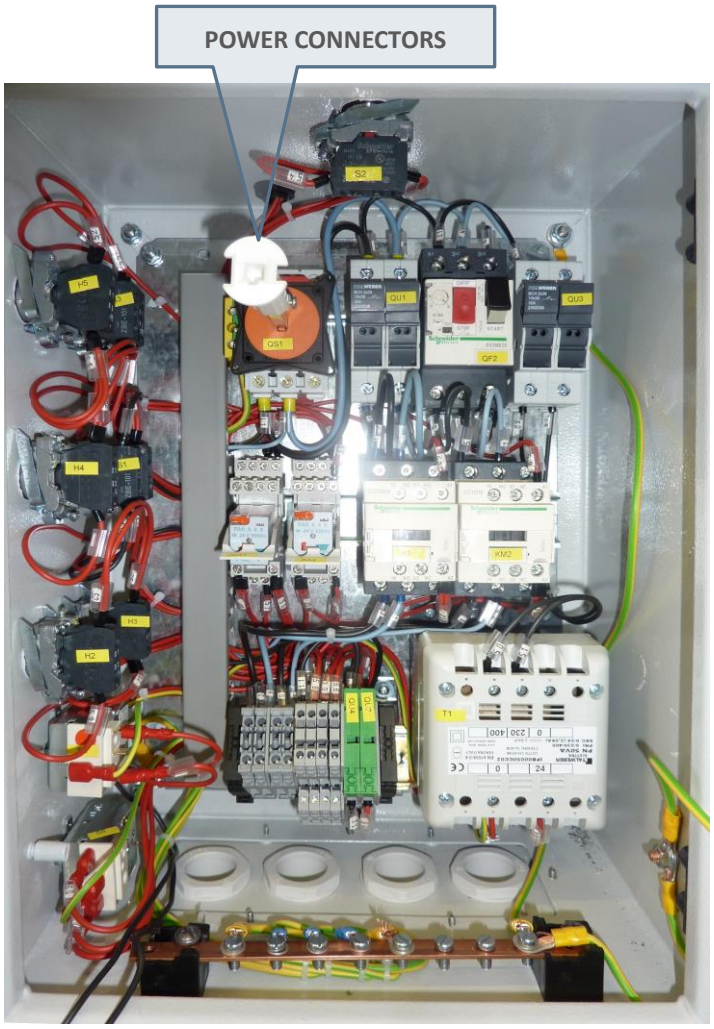
Check to make certain the User's power supply voltage corresponds to the machine's power rating; if it does not, contact the manufacturer.

The User is responsible for installing protections against short circuits and power overloads in compliance with local regulations, protecting the machine's power supply with differential circuit breakers.

Proceed as follows to provide electrical power to the machine:

- Open the cabinet door using the key supplied with the machine;
- Connect the power conductors to the terminals marked with:
- single-phase machine L1, L2, and the PE conductor
- three-phase machine L1, L2, L3, N, and the PE conductor

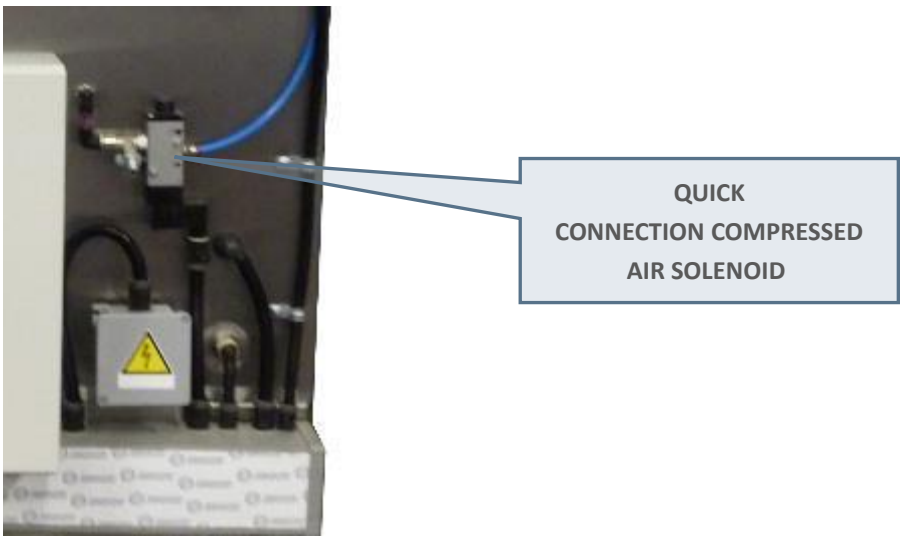
All connection operations to external power sources must be entrusted to a qualified technician.



Pneumatic system connection

Proceed as follows for the pneumatic system connection:

- Verify that the user's pneumatic pressure is approximately 6-7 bar;
- Connect the compressed air hose with a 6 mm inner diameter to the machine's quick connector.



Controls, adjustments settings

Contact the manufacturer or dealer's qualified personnel for any adjustments and replacements not covered in this manual.

STARTING UP THE MACHINE

Setting up the machine for operation

The machine's control station is situated in front of the electrical panel, with a workstation at the front of the machine for loading and unloading the parts to be washed. Both stations can be occupied by a single operator.

The above images merely provide an indication of the operator's position.

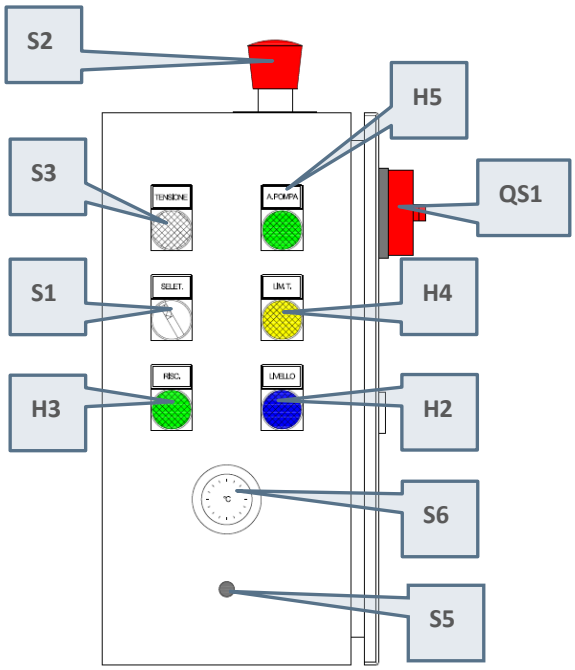
The machine requires a single operator for its operation. During the machine's operation, no one aside from the assigned operator must be allowed to stand near, or worse still, intervene on the machine.

Electric control panel

The following is a description of the different devices on the electrical panel and operator's work area.

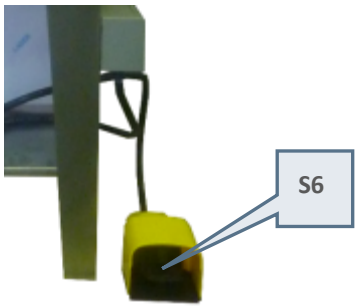
Devices on the electrical panel casing:

SYMBOL	DESCRIPTION
S2	**EMERGENCY BUTTON**
QS1	Door locking switch / main switch
S3	"Auxiliary Power" button/light
H5	“Pump On/Off" indicator
S1	"Lighting On/Off" selector
H4	Temperature limiter warning light
H3	"Resistance On/Off" indicator
H2	"Minimum Level" indicator
S5	Temperature limiter
S6	Adjustable thermostat up to 45°C



Devices in the operator's work area:

SYMBOL	DESCRIPTION
S6	"Pump start/stop washing" foot switch



The door locking switch / main switch**QS1** has two settings:

- ON: Machine powered on;
- OFF: Machine powered off.

The machine's emergency button is a red mushroom button on a yellow background **S2** situated on the control panel. Press the emergency button to cut off the machine's power completely.

To restore operation after pressing the emergency button, proceed as follows:

- release the emergency button's mechanical stopper by turning it counter-clockwise;
- Press the button **S3**.

PERIODICALLY CHECK THE EMERGENCY BUTTON'S CORRECT OPERATION.

Electrical system diagrams

See attached electrical diagrams.

MACHINE OPERATION

To immediately stop the machine for any reason whatsoever, press the red emergency push-button situated on the control panel.

During the machine's operation, it is absolutely forbidden to remove the safety systems designed and assembled by the manufacturer in order to ensure the operator's safety.

The machine must be operated by qualified and experienced personnel only.

Under normal user conditions, the machine operator must wear the following personal protection equipment:

Protective gloves

Safety footwear

Protective clothing

Preliminary operations before getting started

The operator must check the following every time before using the machine:

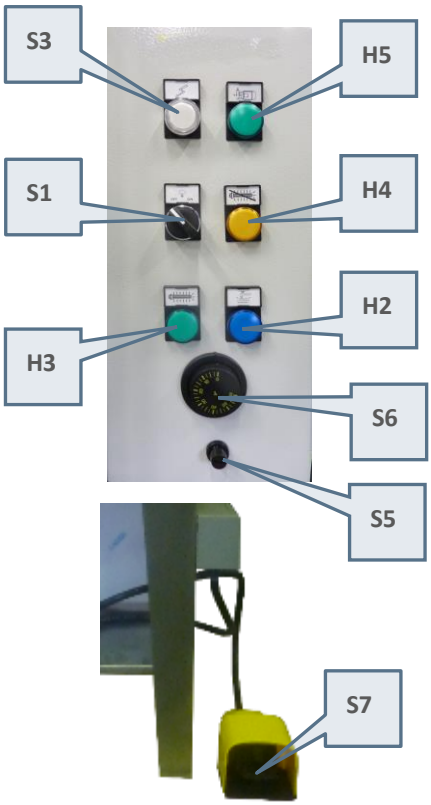
- the machine is properly levelled;
- the cover is properly closed;
- the filters are clean;
- the emergency stop button has not been pressed; if it has, rotate it clockwise to restore the correct power supply.

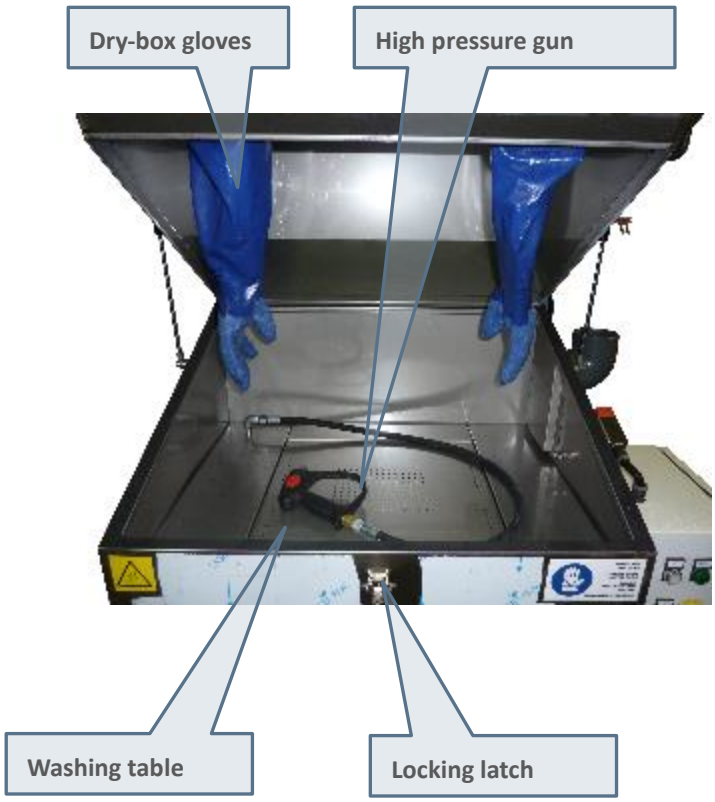
Description of the wash cycle

After making sure that all of the tests and preliminary operations described in the previous sections of this manual have been completed, the machine can be started up by following the steps outlined below:

1. Check to make certain the drain valve is closed. To do this, open the cover, then remove the wash top and cylindrical filter support, and fill the tank with a washing solution until slightly exceeding the level probe indicator (see sect. "Main machine views"). In carrying out this task, follow the specifications and user conditions provided with the washing solution, as applicable.
   (N.B. ALWAYS USE THE PERSONAL PROTECTIVE EQUIPMENT LISTED IN THE USER INSTRUCTIONS FOR ALL OPERATIONS)
   To avoid corrosion on the pump, check to make certain the wash solution pH is less than 12.

2. Turn the "*Door locking switch / main switch*" (QS1) of the electrical controls to the ON position.
3. Press the machine's Power button (S3). The power button lamp (S3) will light up.
4. Switch on the lights in the washing cabinet by turning the selector switch (S1).
5. The machine is equipped with a level probe designed to verify if a the tank contains a minimum amount of washing solution for the system's proper operation. Check that the yellow light (H2) is off; if it is not, top up with additional wash solution until it turns itself off.
6. Set the desired temperature by turning the thermostat (S6) (the maximum temperature setting is 45°C). The green light (H4) is turned on when the resistance is on.
7. Wait until the temperature set on the thermostat (S6) is reached. The set temperature has been reached when the green light (H4) turns itself off.
8. Load the parts to be washed on the washing table, distributing their weight as evenly as possible.
   To check the maximum weight allowance, see the table on p. 7 "Maximum allowable load."
   If the weight of a single piece exceeds 20 Kg, the operator must be assisted by another person to load it into the machine, as required by current legislation in force.
9. Close the cover on the washing compartment and secure it with the special "locking latch". The inspection glass cleaning blowing system will now start its operation.
10. Insert your hands into the dry-box gloves and enable the cleaning gun by pressing the pedal foot switch (S7) (H5 indicates the pump's operation by lighting up); to spray the cleaning solution. At the end of the washing operation, allow the solution to stand in order to re-homogenise it.
11. To complete the washing cycle, release the pedal foot switch (S7) so that the pump stops turning and the flow of pressurised solution to the cleaner gun stops.
12. Open the top cover on the tank and unload the washed parts **(N.B. ALWAYS USE THE PERSONAL PROTECTIVE EQUIPMENT PREVIOUSLY INDICATED)**.
13. Set the door locking switch / main switch (QS1) in the "Off" position, then set the thermostat to 0°C and close the washing tank cover





MAINTENANCE AND REPAIRS

Always remember to perform the following procedures prior to any maintenance or replacement interventions:

- **Turn the MAIN SWITCH to the OFF position;**
- **Disconnect the machine from all power sources.**
- **Maintenance, part replacements and repairs must be performed by a qualified technician who is familiar with the technologies applied to the machine.**

Do not power on the machine during cleaning, maintenance and repairs.

Always wear the following personal protective equipment when carrying out maintenance operations: gloves, safety footwear and eyeglasses.

Precautions for the machine's maintenance condition

Proceed as follows prior to setting the machine in a state of maintenance:

- disconnect the electricity power supply;
- affix a warning sign indicating the machine's maintenance status.

Maintenance operations

Proper maintenance is crucial towards ensuring a longer machine life under optimal performance conditions, and to guarantee the operability of the safety features provided by the manufacturer.

Operation	Machine part	Frequency
Check the tank level	Tank	Daily
Check the safety devices	Emergency button Level and temperature probes Top cover limit switch	Daily
Washing	Cylindrical filter High pressure gun	Daily
Visual inspection	Machinery Electrical components	Weekly
Washing	General and internal polypropylene filter	Weekly
Controls	Electrical controls (relays and contacts) Pump oil level	Monthly
Replace the washing solution	Tank	Weekly/Monthly
Washing	Tank Level and temperature probe Resistance	Monthly

Visual inspection of machinery

It is advisable to periodically carry out a visual inspection of the machine, particularly on all moving parts, to ensure the machine's reliability over time, and to prevent the emergence of any problems.

The following verifications should be carried out with all of the machine's power sources cut off.

Specifically, check that no machine parts come into contact abnormally, and that there are no loose fasteners.

General cleaning of the machine

Periodically check the cleanliness of the machine and in particular of the nozzle, the cylindrical filter and the polypropylene filter. Clean them whenever the need arises.

Clean the level sensor from possible incrustations. In case of heavy dirt, change the water.

Water that is too dirty will wear the pump seals quickly, resulting in water loss.

All cleaning operations of the machine must be carried out by wearing suitable gloves and goggles.

Do not wash the machine or with direct water jets, liquids or corrosive substances, solvents or gasoline. Clean the machine with a fabric slightly moistened with a cleaning solution

Checking the washing solution level

Check the water level daily; if it were dropped add more until the normal level is restored.

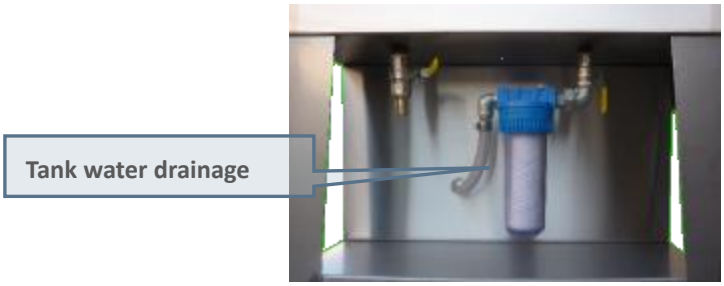
Replacing the washing solution

Weekly or monthly (depending on the use and concentration of dirt) perform the water replacement by operating as follows:

• place a water container under the drain cock;

• open the faucet located under the tub and wait for its complete emptying;

• close the drain cock

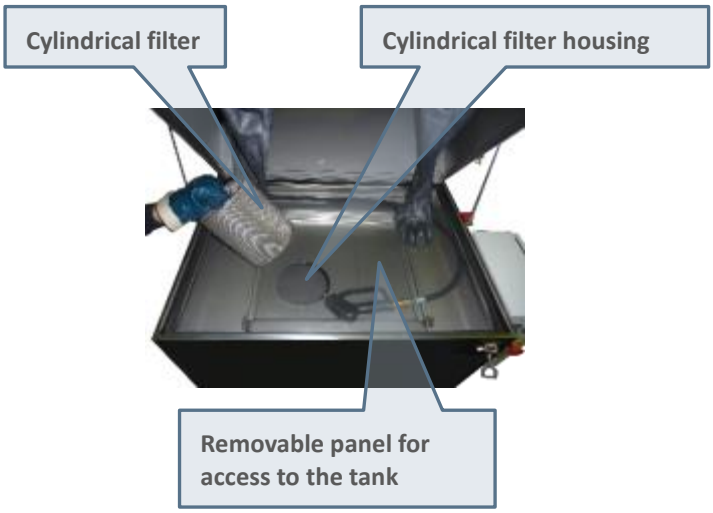


It is absolutely forbidden to discharge the liquid contained in the tank into the sewer system. Adhere to all legal provisions for the disposal of wastewater.

Cleaning the cylindrical filter

Clean the cylindrical filter daily. Proceed as follows:

1. remove to wash top to access the filter;
2. remove the cylindrical filter from its housing;
3. clean the filter thoroughly with soap and water;
4. after washing, place the filter back in its housing;
5. Replace the filter if it is damaged or still excessively dirty after washing.



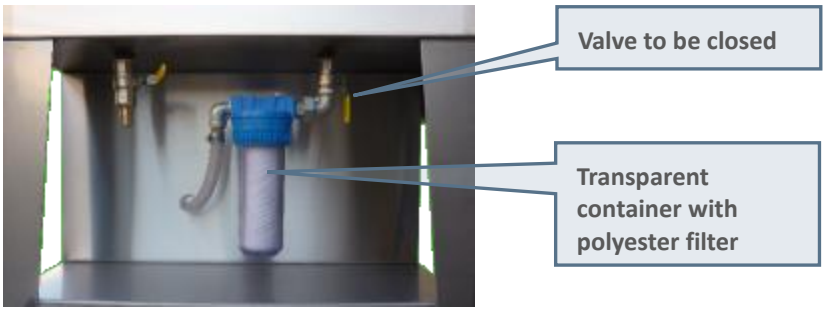
Cleaning the tank

Clean the polypropylene filter at least once a month, it is advisable to do so in conjunction with the replacement of the washing solution. Replace the polypropylene filter when, by checking through the transparent container, it is consistently dirty, it is advisable to do so concurrently with the replacement of the washing solution.

Polypropylene filter replacement

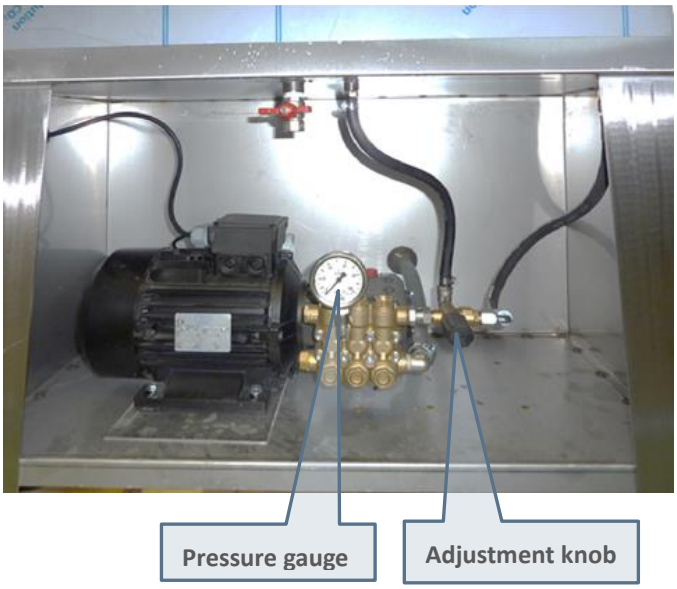
Clean the polypropylene filter at least once a month, it is advisable to do so in conjunction with the replacement of the washing solution. Replace the polypropylene filter when, by checking through the transparent container, it is consistently dirty, it is advisable to do so concurrently with the replacement of the washing solution.

1. 1.close the valve;
2. unscrew the transparent container to access the internal filtering element;
3. remove it from its seat;
4. Replace the filter if necessary.
5. At the end of the procedure, resume normal use of the machine
6. Adjustments and maintenance on the pump.



The pump pressure can be set to a maximum value of 60 bars.

To set the pressure, turn the black knob during the operation of the gun and adjust until the desired reading appears on the gauge.



Troubleshooting

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

PROBLEM	CAUSE	SOLUTION
1 - The machine won't start	Emergency button activated	Restore
	Cable between the plug and machine not connected correctly	Reconnect
	Power not available (the plug is unplugged or the switch is open)	Check and restore or rearm as required
2 - The pump won't start	Lid not closed well	Close and lock with the locking lever
	Circuit breaker disengaged QF2	Check the pump and restore
	Pump failure	Change the pump
3 - Gun won't spray	The gun nozzle may be clogged	Remove and clean the nozzle
4 - The pump flow is not constant	The pump requires adjustment and maintenance	Perform regular maintenance on the pomp
5 - The resistance won't heat up	Burnt fuse QU1	Replace
	Emergency button activated	Restore
	Thermostat defective or incorrectly set	Check and replace as required
	Burnt resistance	Replace
	Weekly programmer (optional) set incorrectly	Adjust
5 - Washing cycle incomplete	Saturated water solution	Replace solution
	Unsuitable detergent	Change

The pumps and motors may stop in the event of an electrical overload. In this case, reset the circuit breakers by pressing the ON button on the protection, or by turning the switch, depending on the machine model.

If this failure persists, contact a specialised maintenance technician.

MACHINE DEMOLITION

The User, according to EEC directives, or according to the Laws in force in the User's country, must see to the demolition, disposal and elimination of the various materials that make up the machine.

If the machine or a part of it is to be demolished, it is necessary to adopt preventative safety measures

in order to avoid the risks associated with the decommissioning of industrial machinery.

Be especially careful during the following phases:

- Disassembly the machine from its operating area.
- Transport and handling of the machine.
- Dismantling the machine.
- Separation of the various materials making up the machine.

In addition, in carrying out the demolition and disposal of the machine, it is necessary to observe basic norms

in order to safeguard public health and the environment:

Eliminate even the slightest traces of oil and grease on the machine; lubricating substances should not be thrown out into the environment, but should be recovered and treated by a plant specialised in the elimination of these products.

If the materials used for the production process, as well as lubricants and condensation water are not disposed of according to the Laws and Regulations in force, residual risks may subsist, such as:

1) Environmental pollution

2) Intoxication of persons carrying out disposal operations

For operations involving the separation of materials and their recycling or disposal, please refer to National or Regional Laws in force concerning the disposal of solid industrial wastes and toxic and hazardous waste:

Sheathing, hoses and plastic or non-metal components must be removed and disposed of separately.

Pneumatic and electrical components, such as valves, solenoid valves, pressure switches, switches, transformers, etc., should be disassembled to be re-used if still in good condition, or if possible, reconditioned and recycled.

The body, and all metal parts of the machine, should be dismantled and grouped according to type of material. The various parts thus obtained can then be scrapped and melted down to allow the recycling of the material forming the original machinery.

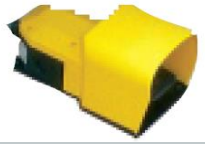
The disposal of toxic products considered harmful - should be carried out in accordance with National and Regional Laws, conferring waste materials to disposal firms belonging to an authorised consortium for the disposal of waste oils.

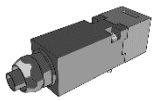
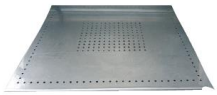
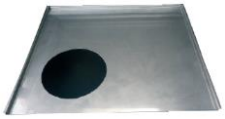
SPARE PARTS

The manufacturer guarantees the machine's safety and reliability solely if original spare parts are used. The Manufacturer declines all responsibility for damage resulting from the use of non-original spare parts.

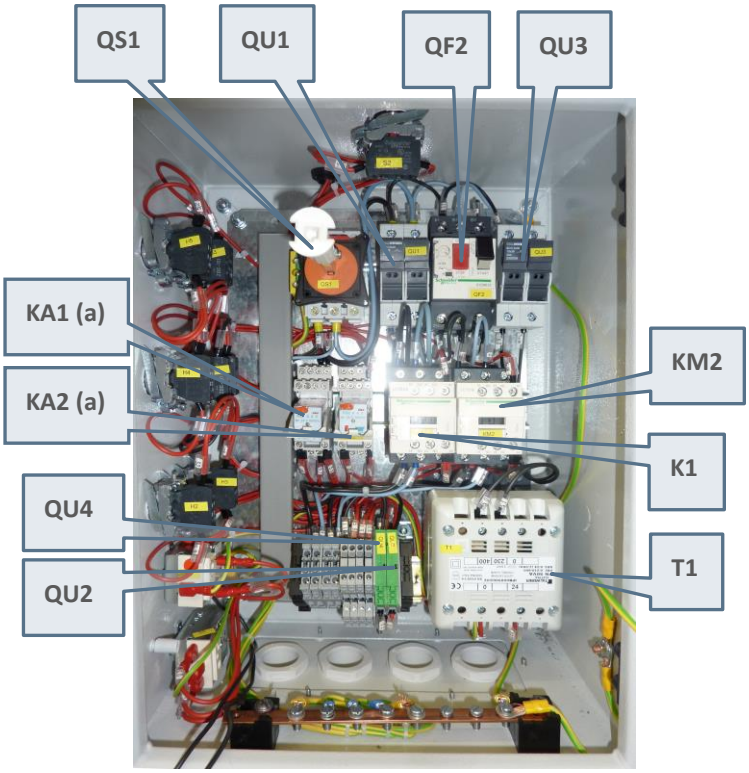
When ordering spare parts, list the following:

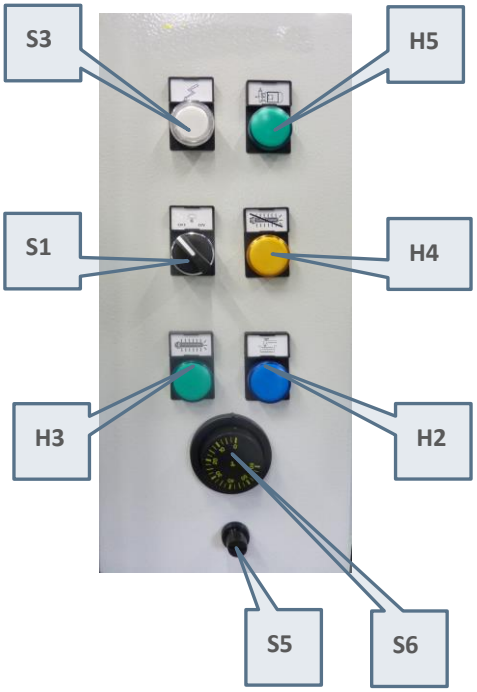
- the machine model;
- serial number;
- part description;
- code;
- quantity.

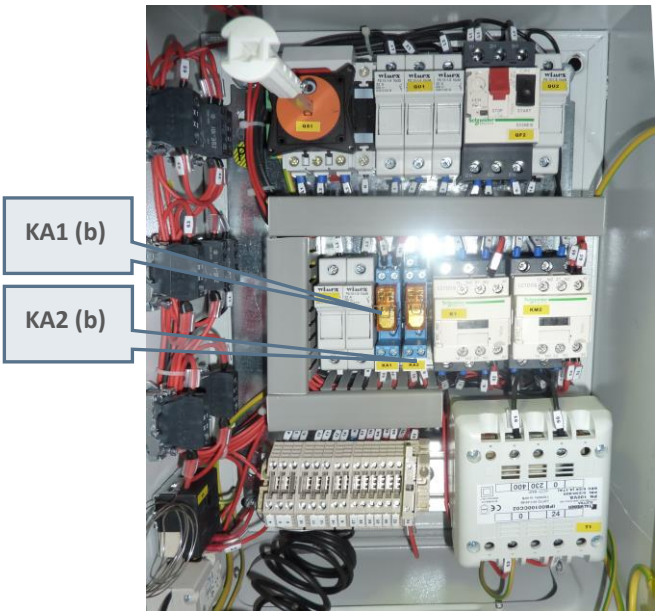
PART	DESCRIPTION	HP 25	Q.TÀ	HP 30	Q.TÀ
	HANDLE	M643/140	1	M643/140	1
	HIGH PRESSUSE GUN	MV920	1	MV920	1
	NOZZLE FOR HIGH PRESSURE GUN	1MC3E1025	1	1MC3E1025	1
	FOOT CONTROL PEDAL	PX10110	1	PX10110	1
	PAIR OF DRY-BOX GLOVES TYPE 1 (YELLOW)	GN6532	1	GN6532	1
	FLANGE FOR TYPE 1 (YELLOW)	563/01	2	563/01	2
Lampada LED 6W	CK-L6W	1	CK-L6W	1	Lampada LED 6W

PART	DESCRIPTION	HP 25	Q.TÀ	HP 30	Q.TÀ
	LIMIT SWITCH	FR992	1	FR992	1
	WORK TOP	30V0386	1	30V0386	1
	CYLINDRICAL FILTER SUPPORT	30V0388	1	30V0388	1
	HIGH PRESSURE PUMP UNIT (1Ph)	7301.0906.00	1	7301.0906.00	1
	HIGH PRESSURE PUMP UNIT (3Ph)	7301.0907.00	1	7301.0907.00	1
	HEATER (1Ph)	1TTL18912003 (3 kW)	1	1TTL18997002M (4 kW)	1
	HEATER (3Ph)	1TTL18997001 (3 kW)	1	1TTL18997001 (4 kW)	1
	ADJUSTABLE SUPPORT FEET	100.03020.55	4	100.03020.55	4
	CYLINDRICAL FILTER	FLDR 176x190	1	FLDR 176x190	1
	FILTER HOUSING + CARTRIDGE	A2020150 A4010340	1	A2020150 A4010340	1

PART	DESCRIPTION	HP 25	Q.TÀ	HP 30	Q.TÀ
	GAS SPRING	198.600.25	2	198.600.15 198.600.25	1 1
	1" DRAIN BALL VALVE	8810100	1	8810100	1
	LEVEL PROBE	ILMPU.5	1	ILMPU.5	1
	BLOWING UNIT SOLENOID	V51B417A-A2000	1	V51B417A-A2000	1
	PISTOL AIR COMPRESSED	PA/4AL	1	PA/4AL	1
	HIGH PRESSURE TUBES	P421SN-12	1	P421SN-17	1
	HIGH PRESSURE TUBES	P421SN-6	1	P421SN-6	1
	HIGH PRESSURE NIPPLE 3/8	6HMK4S	3	6HMK4S	3
TEMPERED GLASS	VT33X53X6	1	30Af0001	1	VETRO TEMPERATO


QS1
QU1
QF2
QU3
KA1 (a)
KA2 (a)
KM2
K1
QU4
QU2
T1


S3
H5
S1
H4
H3
H2
S5
S6


KA1 (b)
KA2 (b)

PIÈCES	DESCRIPTION	-	CODE
S3	"Auxiliary Power" button/light	Schneider	ZB4BW31
H5	"Pump On/Off" indicator	Schneider	ZB4BK1233
S1	"Lighting On/Off" selector	Schneider	ZB4BD2
H3	Temperature limiter warning light	Schneider	ZB4BV05
H4	"Resistance On/Off" indicator	Schneider	ZB4BV03
H2	"Minimum Level" indicator	Schneider	ZB4BV06
S5	Adjustable thermostat up to 45°C	Imit	(TR2) 9A20271
S6	Temperature limiter	Imit	(LS1) 541653
S2	EMERGENCY BUTTON	Schneider	XB4-BS542
QS1	Door locking switch	Schneider	VCCF0
QU1	FUSE CARRIER	Italweber	2302038 (1Ph) 2302038 (3Ph)
QF2	Pump circuit breaker	Schneider	GV2ME16 (1Ph) GV2ME14 (3Ph)
QU3	FUSE CARRIER	Italweber	2302038
KA1 (a)	Relay	Gavazzi	RMIA4524VAC
KA1 (b)	Relay	finder	405280240000
KA2 (a)	Relay	Gavazzi	RMIA4524VAC
KA2 (b)	Relay	finder	405280240000
K1	Contactor	Schneider	LC1D09B7
KM2	Contactor	Schneider	LC1D1810B7 (1Ph) LC1D1210B7 (3Ph)
QU2-QU4	FUSE CARRIER	Cabur	DS100
T1	Transformer	Legrand	LG642321