

Declaration of conformity

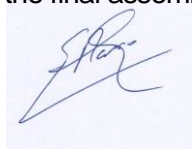
The product: _____
Model no: _____
Serial no: _____
Year of manufacture: _____

Described in the enclosed documentation is in conformity with:

- Directive 2006/42/CE of 29 December replacing the Directive 98/37/EC of 22 June 1998 relating to the approximation of the laws of the Member States relating to machinery, combining in a single text Directives 89/392/EEC of 14 June 1989, 91/368/EEC of 20 June 1991, 93/44/EEC of June 14, 1993 and 93/68/EEC of 22 July 1993. Directive used law EN ISO 12100-1 and EN ISO 12100-2, relative to safety of the machines, law EN ISO 14121-1, relative Safety of the machines. Evaluate of risk, law UNE-EN 60204-1, relative to Safety of machines. Electric equipment of the machines, law UNE-EN 61310-1, UNE-EN 61310-2 y UNE –EN 61310-3, relative to Safety in machines. Indication, marking and actuation.
- Directive 2014/35/UE of April, relating to electric equipment.
- Directive 2014/30/UE of April, relating to electromagnetic compatibility.
- Directive 93/68/EEC of 22 July 1993, amending Directive 73/23/EEC, and Directive 89/336/EEC.

within the scope of the specifications indicated in the chapter describing the equipment with a B1 risk level. Since it is intended to form part of a set of machines which, to obtain a result, are arranged and connected to perform together, it cannot be operated until the set of machines has been declared in conformity with the applicable Directives by the person responsible for the final assembly.

Orcoyen, on :



Signed: _____

Gonzalo Marco, Managing Director.



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IMPORTANT!

THIS INSTRUCTION MANUAL SHOULD BE KEPT IN AN ACCESSIBLE PLACE KNOWN TO ALL OPERATORS AND MAINTENANCE PERSONNEL.

READ THE INSTRUCTIONS CAREFULLY BEFORE OPERATING THE MACHINE AND FOLLOW THEM WHILE THE MACHINE IS IN OPERATION.

FOLLOW THE SAFETY INSTRUCTIONS PROVIDED IN THIS MANUAL WHEN USING AND HANDLING THE MACHINE.

IF YOU FAIL TO FOLLOW THE SAFETY INSTRUCTIONS, THIS MAY GIVE RISE TO BURNS, INJURIES AND EVEN IRREVERSIBLE DAMAGE. YOU MAY ALSO DAMAGE THE EQUIPMENT OR OTHER MATERIALS.

WARNING:

If you alter the function, performance or safety aspects of the machine, replacing original parts with other similar but not identical components (substantial alterations), without the authorisation of MELTON and as specified in Directive 89/392/EEC, you will be classified as a manufacturer and therefore become liable for the alterations made.



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CHAPTER 1 SAFETY INSTRUCTIONS



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1.1. SYMBOLS AND TERMS:



Miscellaneous prohibitions



European Community markings



Danger: hot surface



Note of special interest



Miscellaneous precautions



Use of goggles required



Precaution: electric current



Use of safety gloves required



Precaution: flammable liquid



Precaution: risk of fluid leakage under high pressure



Precaution: risk of entrapment between mobile parts



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Burns:



Burns can be caused by the uncovered parts of the applicator, such as the guns or by splashes of hot melt.

The hot adhesive under pressure in the nozzles can cause serious injuries to the skin.

Qualified personnel:

This is personnel (technical staff) who has acquired sufficient know-how in a specific field, either through training or from experience.

This personnel must be familiar with safety and accident prevention standards, and have general knowledge of the technical aspects of the machine.

Protective clothing:

This clothing will be compliant with EN510 and EN340 standards, protecting against fast-moving particles and high temperatures.

It will be as tight as possible to prevent it from catching on mobile machine parts, and the sleeves, waist, legs, etc. will be adjustable to the size of the wearer.

Goggles and face shields:



They will be compliant with the EN 166 standard, protecting against fast-moving particles and high temperatures.

Goggles only protect the eyes. Face shields are therefore preferable, since they protect the entire face.

Protective gloves:



They will be compliant with EN 407 and EN 420 standards, protecting the hands against the burns caused by external thermal masses at temperatures of above 100 °C.



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1.2. PURPOSE:



This unit has been manufactured according to current safety standards.

This unit has been designed for the purpose described in chapter 2 of this manual, Description.

To use the machine correctly, follow the instructions provided in the Operating Manual, particularly:



- The machine should only be installed and used by qualified personnel, previously familiarised with the operating instructions (contacting the manufacturer whenever necessary) and the risks involved, the safety measures required, including adjustment and maintenance, and expressly forbidden operations.
- This unit has not been manufactured to operate in hazardous, explosive and/or flammable atmospheres
- When working with this machine, wear protective clothing, gloves and face shields and remove rings, bracelets and watches.
- Since the machine is designed to form part of a series of machines, arranged to work together, the hot melt applicator cannot be operated until the entire series has been declared in compliance with applicable directives.
- This machine should never work without the guards provided (which should not be removed). These guards should be checked and maintained with the specified frequency.
- Make sure that the equipment is properly grounded.
- Never operate the machine if you are aware that there is a leak in the glue circuit.
- Maintenance operations and/or repairs should be performed by personnel with basic knowledge of the machine and the mechanical, pneumatic and electric circuits involved.
- Maintenance operations and/or repairs should always be performed with the machine switched off at the mains, and with the main switch blocked.
- Maintenance operations and/or repairs should always be performed with the machine de-pressurised and disconnected from the pressure circuit.



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1.3. FIRST AID:

In case of burns:



Immerse affected part in cold clean water as quickly as possible until the adhesive has cooled.

Do not attempt to remove the adhesive from the skin even when it has cooled as this may cause more serious injury.

Seek qualified medical attention immediately.

In case of an accident with the solvent:



CONTACT WITH THE SKIN: Wash with soap and water and discard all contaminated cloths.

CONTACT WITH EYES: Wash in an eye bath for at least 15 minutes.

INHALATION: In case of overexposure take patient to fresh air and let them rest.

INGESTION: Do not attempt to induce vomiting. Seek medical attention at once.



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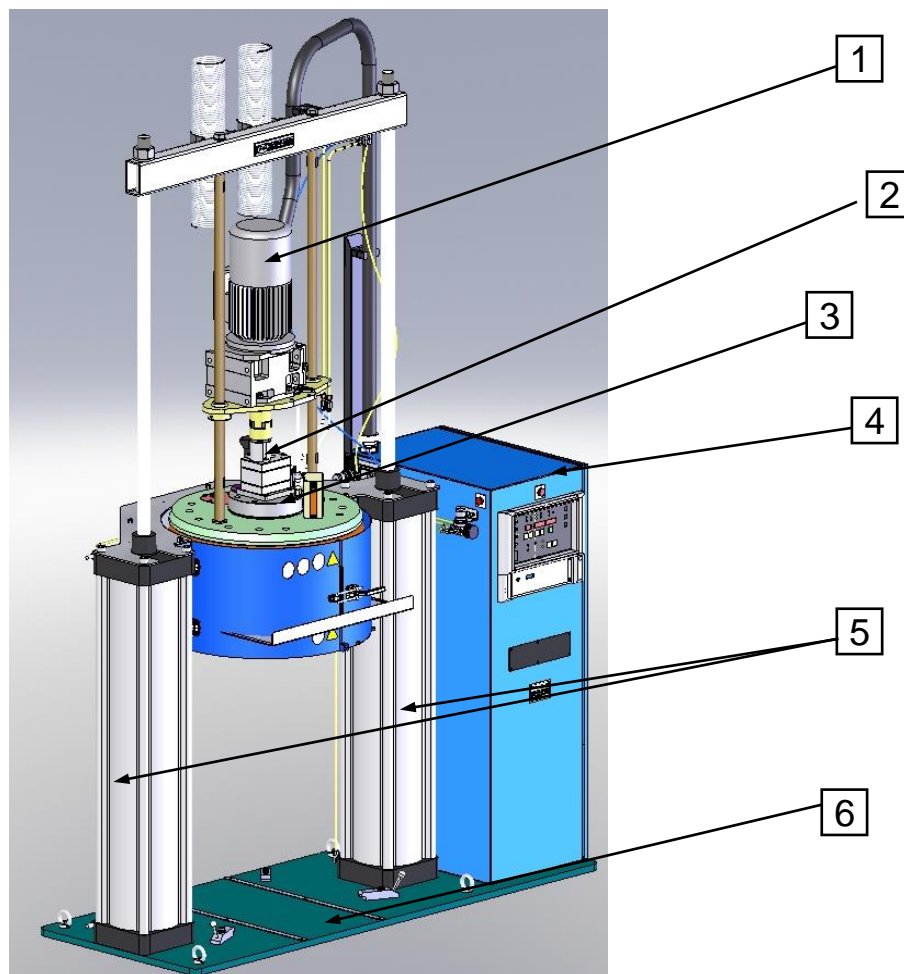
CHAPTER 2 DESCRIPTION

2.1. INTRODUCTION:

This machine heats hot-melt adhesive (or similar materials in a drum) until it goes from solid to liquid state in a heated container. A pump absorbs the glue at a certain pressure through heated hoses and transfers it to where it is applied.

2.2. MAIN PARTS:

The main parts of the machine are shown on the following figure:



N.	DESCRIPTION
1	Motor
2	Pump
3	Manifold
4	Electric cabinet
5	Cilinders
6	Frame

2.2.1. Structure:



The structure consists of a base plate on which pneumatic cylinders are installed. These cylinders raise and lower the melt plate by means of bars.

The drum is secured to this base plate.

2.2.2. Melt plate:

This is the part that melts the hot-melt product. It consists of a cast aluminium plate heated by electric heating elements. This process is controlled by the control board. The melt plate is lowered as the adhesive melts, and keeps the drum sealed, preventing air from entering or hot melt material from leaking.

2.2.3. Pump-distribution system:

It transfers the adhesive from the drum to the distributor.

Pump:



The pump pushes the hot-melt or other heated product at a certain pressure from the melt system to the hoses and guns.

The pump is located on one side of the melt system and driven by an alternate current geared motor.

Pump speed is shown on the display on the front of the control cabinet.

Distributor:

The distributor carries the hot-melt to the hoses and guns.



It is made out of aluminium, and installed on the bottom of the melt system. It is heated by internal heating elements.

Each distributor has 2 hose connection outlets.

The distributor also contains a filter, a bleed valve, a safety valve regulator, a distributor crank assembly and a pressure transducer (optional)



Geared motor:

The geared motor controls the pump. It is an alternate current motor controlled by a vector frequency shifter which transmits power through a pump connection.



Motor speed can be adjusted manually or automatically, depending on the power required for the main machine, which should never exceed 80 rpm.



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2.2.4. Electric system:

It consists of one electric cabinet:



Electric cabinet:

At the top it contains all the control and power electronics required for the machine to operate.

2.2.5. Pneumatic system:

It consists of two independent circuits. The first is used to control the vertical movement of the melt plate and the pressure of the melted adhesive to the pump.



The second circuit controls the fill valve that injects air into the drum before the melt plate is removed.

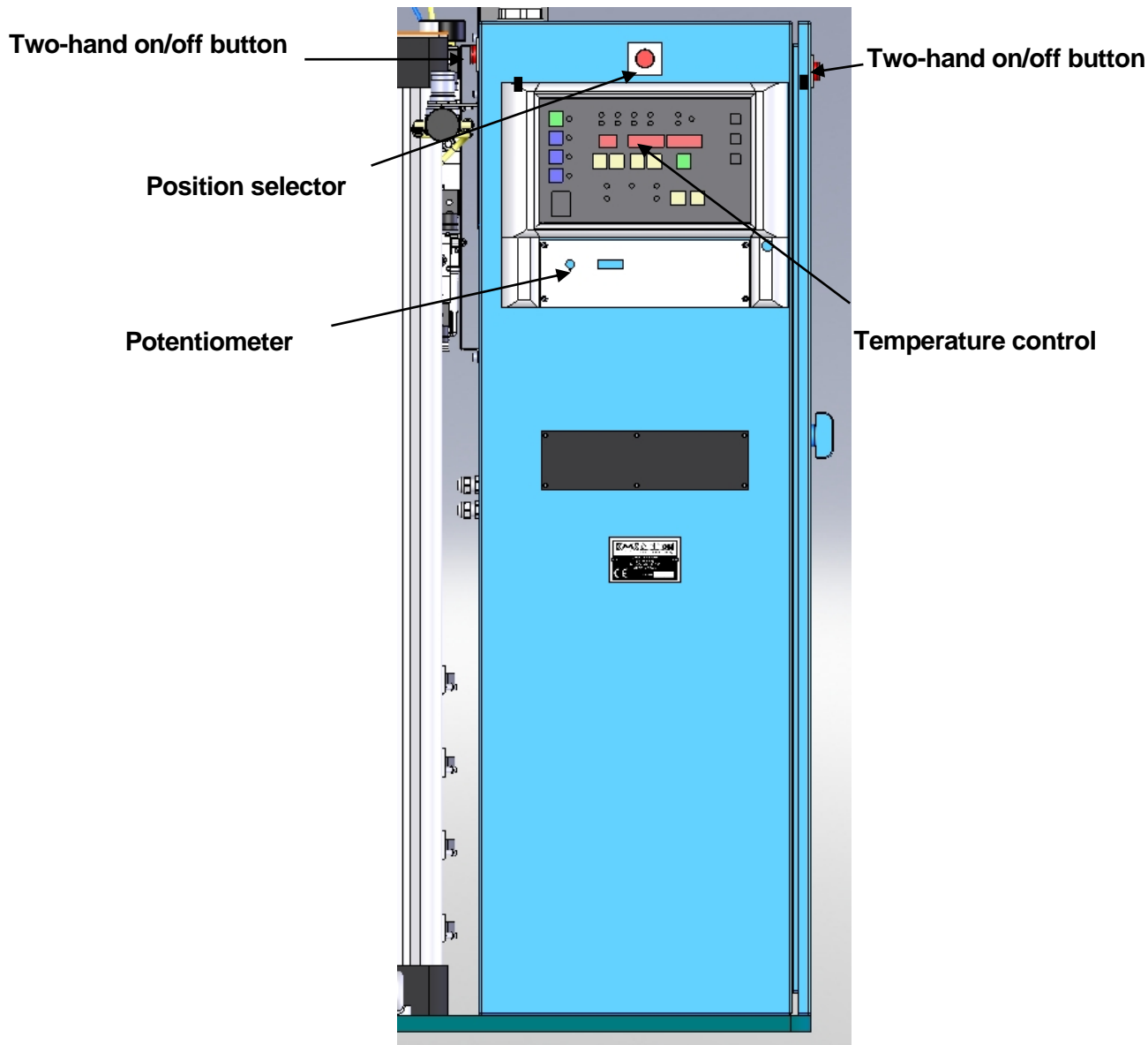
It is situated at the outside electric cabinet.

Cleaning tank (optional):

This element contains the cleaning material used to remove the adhesive from the manifold, pump, hoses and guns. The aluminium tank is Teflon-coated to prevent scaling or cinders. It is heated by heating elements, with temperatures controlled by a probe (PT-100 or nickel, depending on the temperature control model) from the main machine. It is fitted with a rapid release electric connector.

2.2.6. Control panel:

The control panel containing the machine's operating and adjustment switches is on the front of the electric cabinet.



Two-hand on/off button:

This sets the plate in movement. The two buttons have to be pressed at the same time.



Potentiometer:

This unit is provided with a potentiometer which allows to set the pump speed.

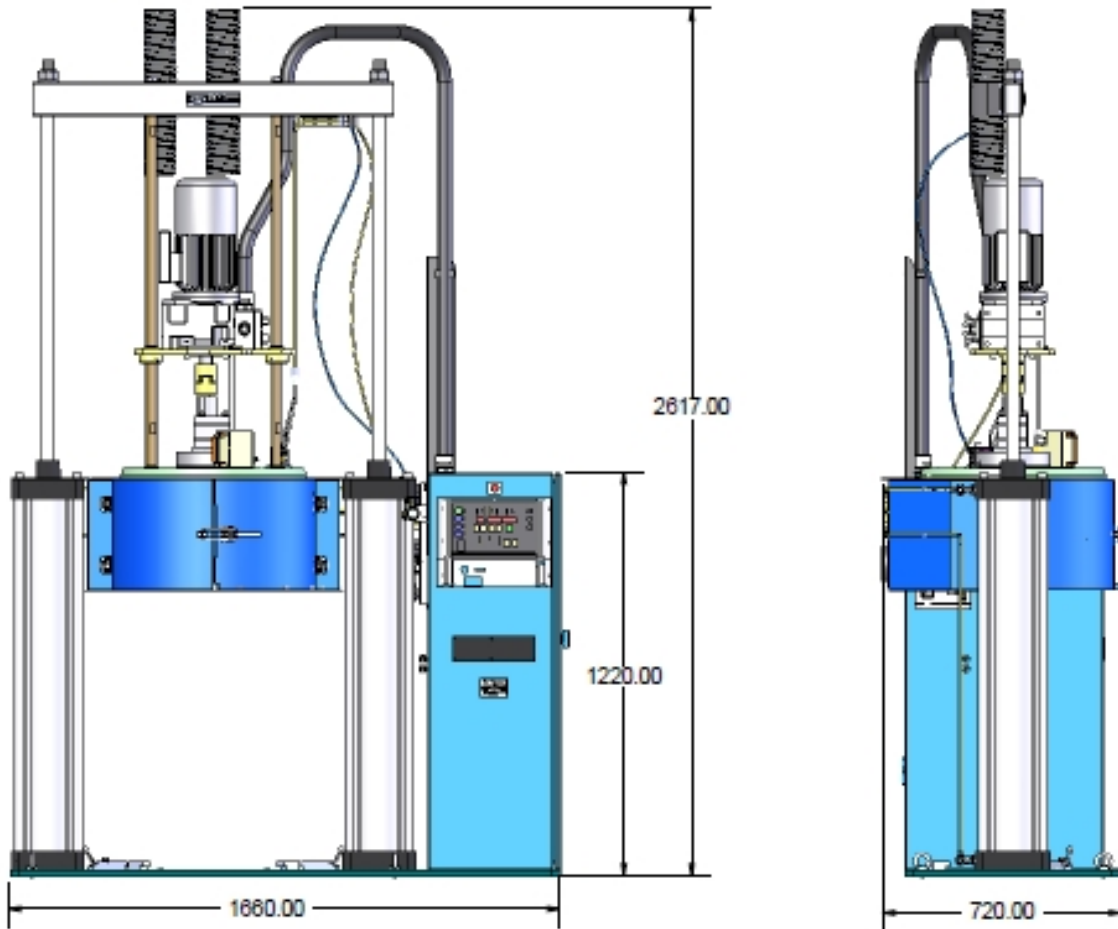
Position selector:

It is for moving the melt plate (downward or upward).

Temperature control:

It lets the user of the unit to control the unit temperatures.

2.3. OVERALL DIMENSIONS OF THE B-DRUM UNIT:





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CHAPTER 3 INSTALLATION OF THE MACHINE

3.1. INTRODUCTION:



This chapter explains how to install the machine correctly.

WARNING: The operations described in this chapter should be performed by qualified personnel, following safety instructions.

3.2. TRANSPORT:

The equipment is supplied palletised with a wooden frame (approx. dimensions: 1750x1050x1750 mm), with a approximate weight of 754 kg.

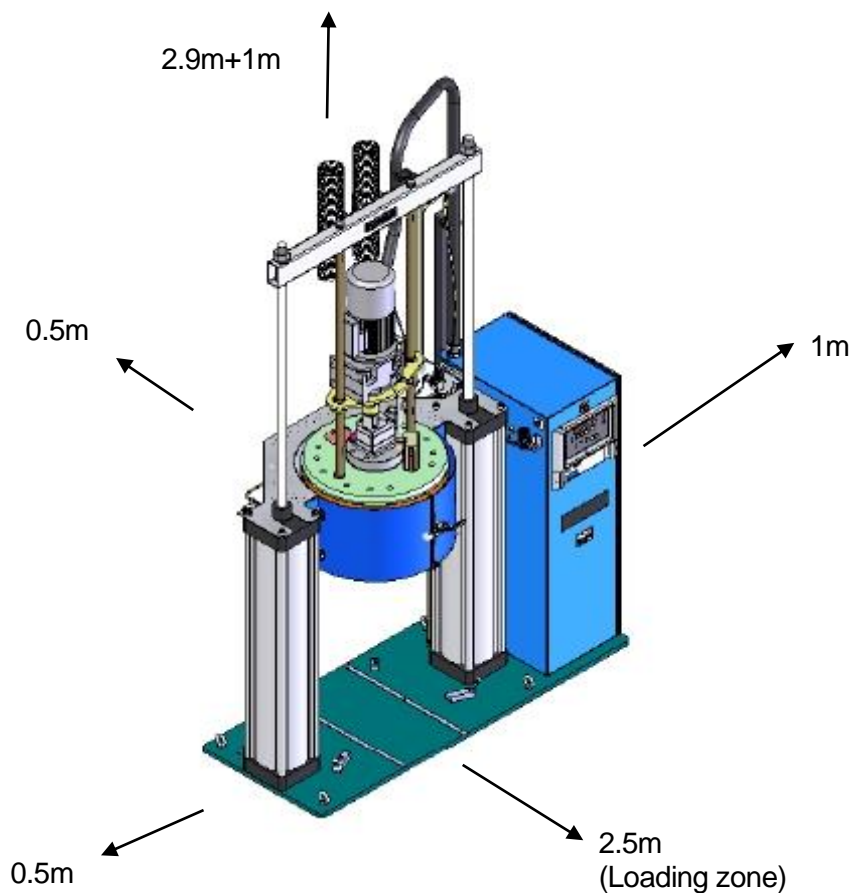
Remove the top and front covers to unpack.



Unpack carefully to prevent damage to the machine. Inspect the equipment for damages caused during transport.

3.3 INSTALLATION REQUIREMENTS:

Install the unit leaving enough space for the equipment to be accessed during operations.





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The distances are indicated for the equipment to be handled manually or by lift-truck.

Avoid extreme temperatures (below -10 C and above +50 C).

Try to avoid installing the equipment where there are draughts. If this is not possible, the guns will need protecting because if the temperature falls rapidly they may not work properly.

3.4. MECHANICAL INSTALLATION:

The mechanical installation includes the following:

- Positioning the equipment.
- Connecting the hoses.

Positioning the equipment:

Remove from the pallet using a forklift or travelling crane, and position according to installation requirements (chapter 3.3)

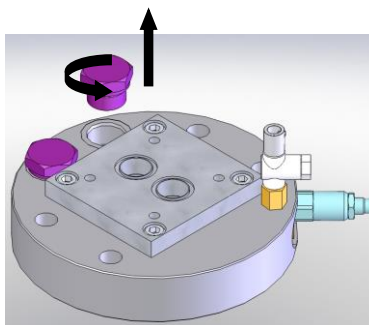
Connecting the hoses:

Proceed as follows:

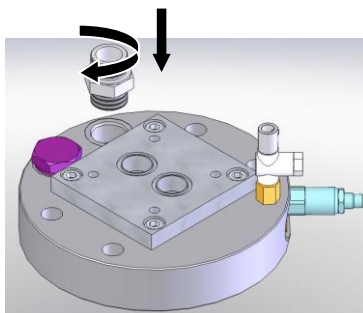


Make sure that the equipment is depressurised before connecting the hose. Set the motor control selector to zero and bleed with bleed valves. Heat the machine to melt any adhesive that may be present.

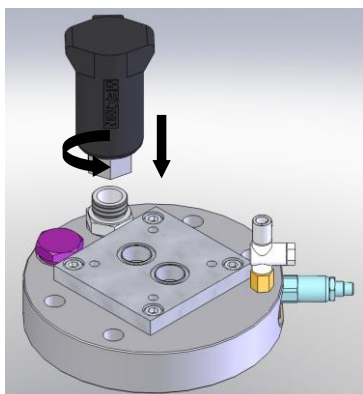
- 1^o Remove the distributor cap.



2º Screw on the male-male plug, as per hose diameter.

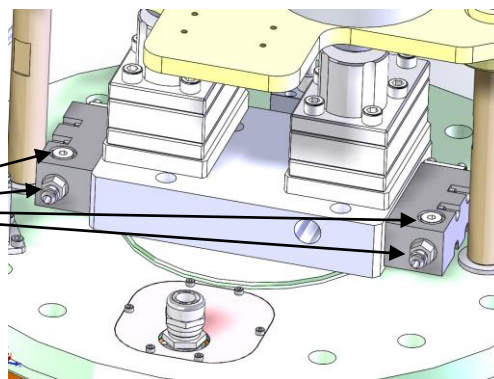


3º Screw the hose to the plug.



For equipment with 2 pumps, the hoses can be installed in the following connection points:

Hose connection points for equipment with 2 pumps



4º Connect the machine electrically to the electric panel.

5º Insert the hose through the upper spring and install as indicated.

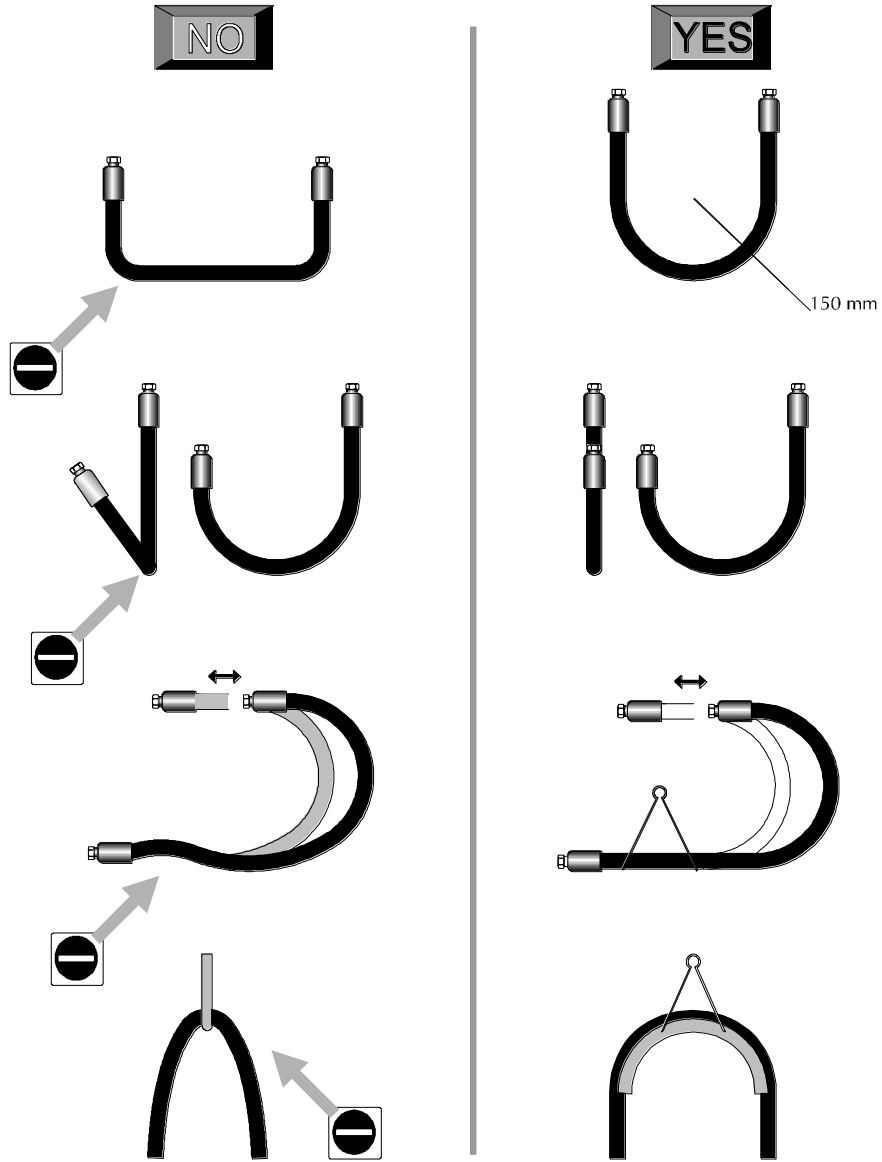
6º When the hose is at the relevant temperature, re-tighten the male-male plugs and the hose.



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Hose placement:

Never bend the hoses to angles with a radius of less than 150 mm.

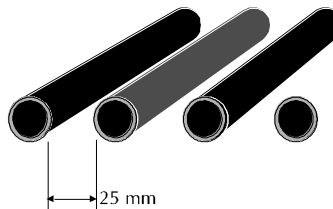
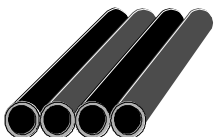


Hoses should not be allowed to lie on cold surfaces such as factory floors.

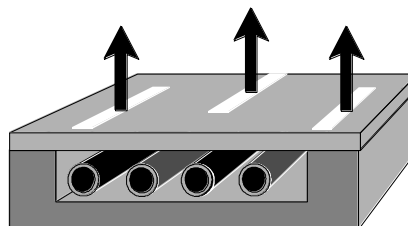
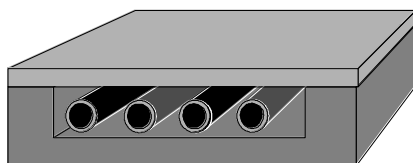


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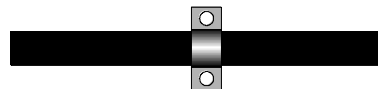
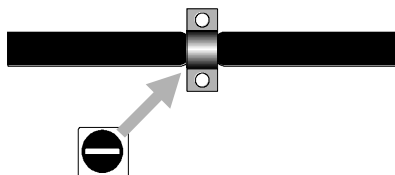
Do not bunch hoses together. Leave at least a 25 mm gap between them.



Do not cover hoses. If it is necessary to cover your hoses ensure that there are vents to allow heat to be dissipated.



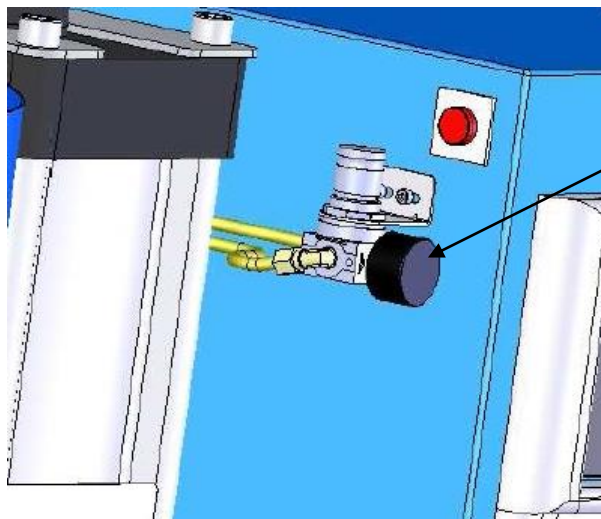
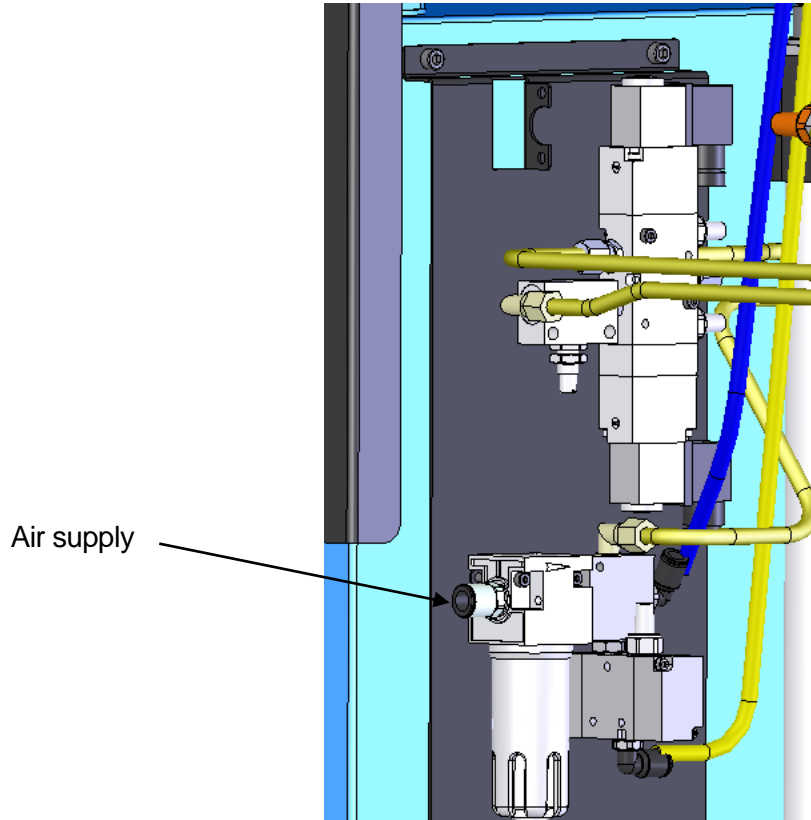
Do not install hoses with clamps smaller than the hoses.



3.5. PNEUMATIC INSTALLATION:



Connect the air supply to the pressure adjustment inlet. The minimum pressure required by the equipment is 4 kg.



Input regulador
(cylinders
circuit)

3.6. ELECTRIC INSTALLATION:



The electric installation depends on the model. See electric diagrams.



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3.7. CLEANING TANK INSTALLATION:

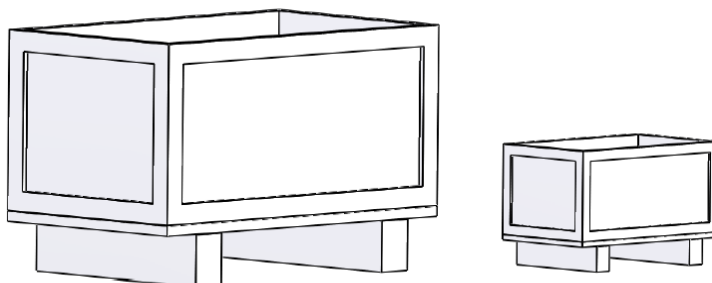
➤ **Components Sent:**

The cleaning tank is shipped as an assembly apart from the unit, along with the corresponding hose.

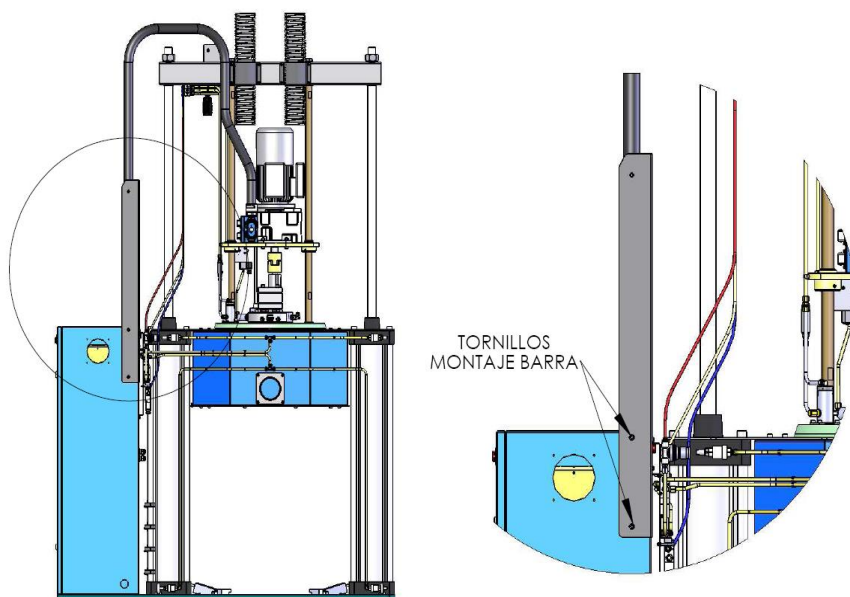
➤ **Installing the cleaning tank on the unit:**

It is only necessary to follow a few steps upon receipt of both items.

1. The first step is to unpack the unit and unpack the box that contains the cleaning tank and the hose.



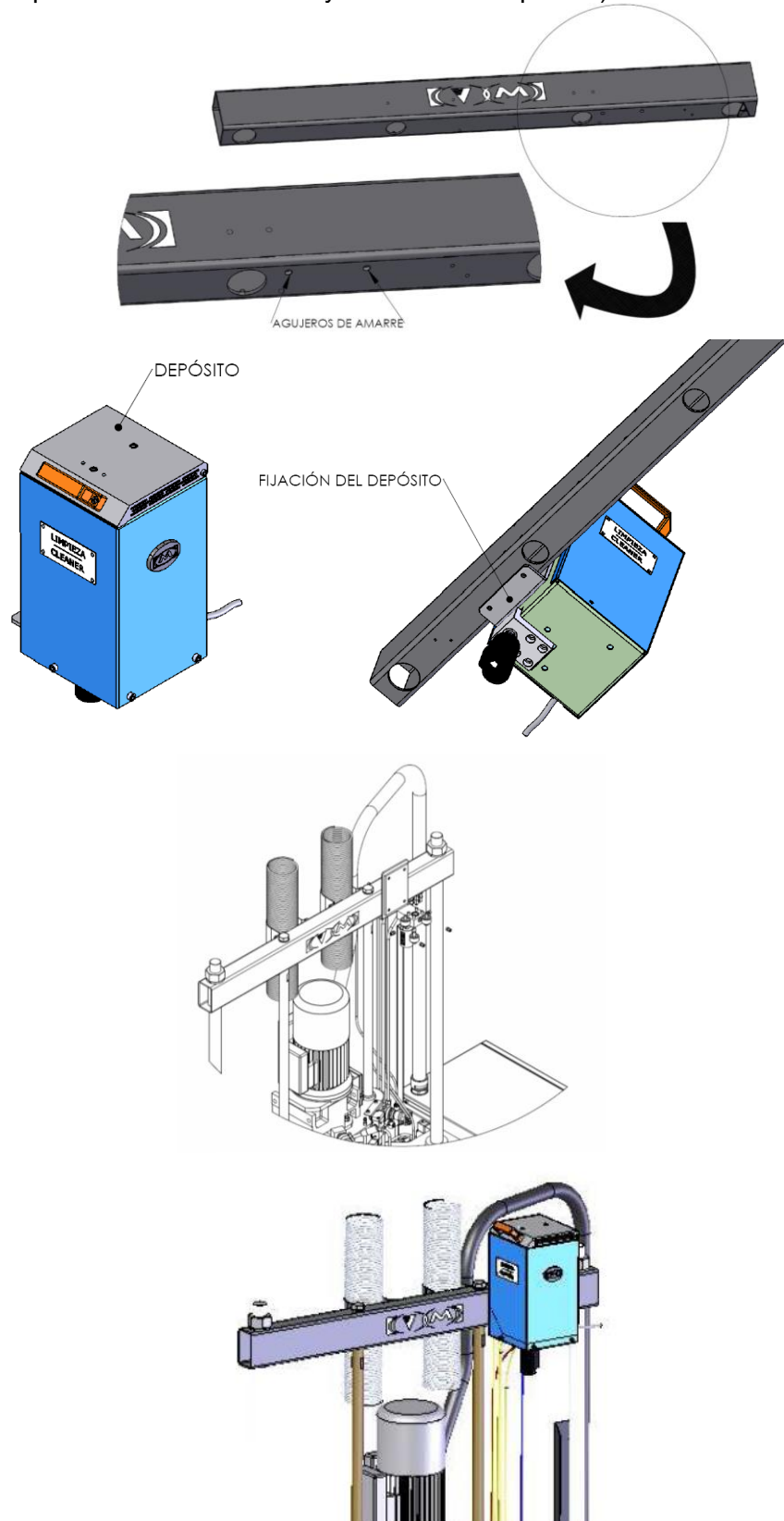
2. After placing the equipment in a stable position, use the two screws indicated in the figure below to mount the bar to the electrical cabinet. The top of the bar contains a mounting hole for a clamp that is used to secure the flexible conduit as it enters the top of the electrical cabinet.





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- The next step is to secure the cleaning tank assembly to the unit. There are two mounting holes in the underside of the crossbar that are used to secure the cleaning tank bracket. Assemble the cleaning tank to the crossbar as shown in the following figures (because of the weight of the cleaning tank, it is recommended that the cleaning tank is positioned and secured by more than one person).





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4. Finally, connect the hose. Connect one end of the hose to the fitting in the manifold as shown in the first figure. Connect the other end of the hose to the fitting in the cleaning tank as shown in the second figure.

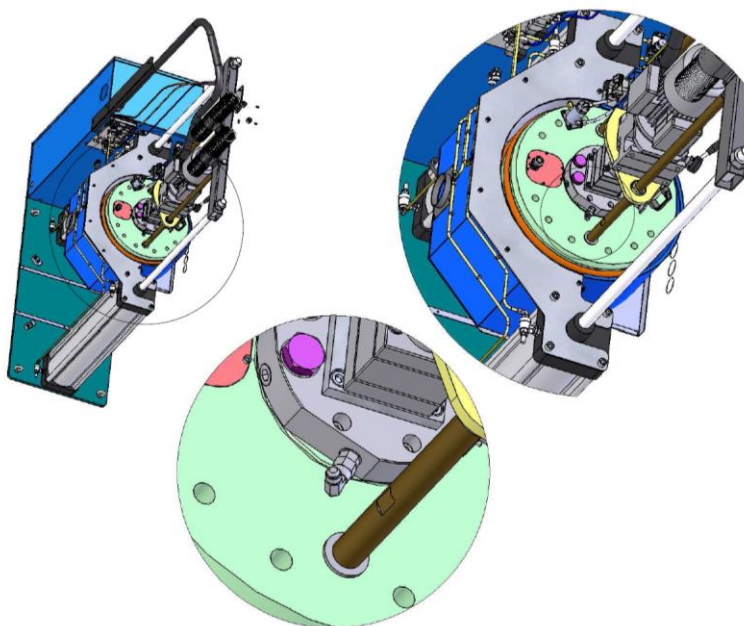


Figure 1: Hose connection fitting on the manifold.

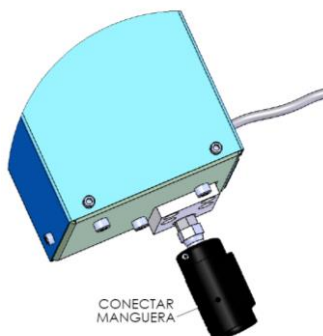
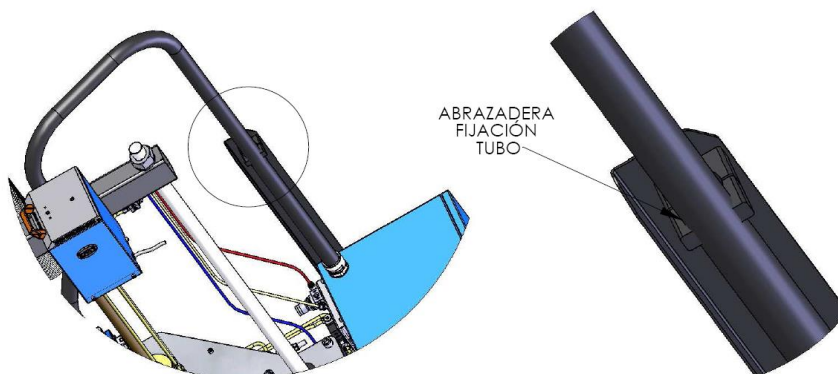


Figure 2: Hose connection fitting on the cleaning tank.

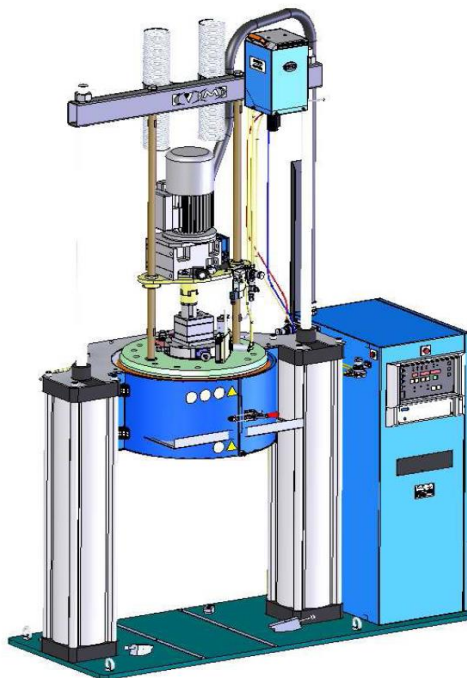
5. Secure the corrugated flexible conduit to the crossbar using a clamp as described in the second step of these instructions.





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6. The cleaning tank installation is now complete.





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CHAPTER 4 MACHINE ADJUSTMENT

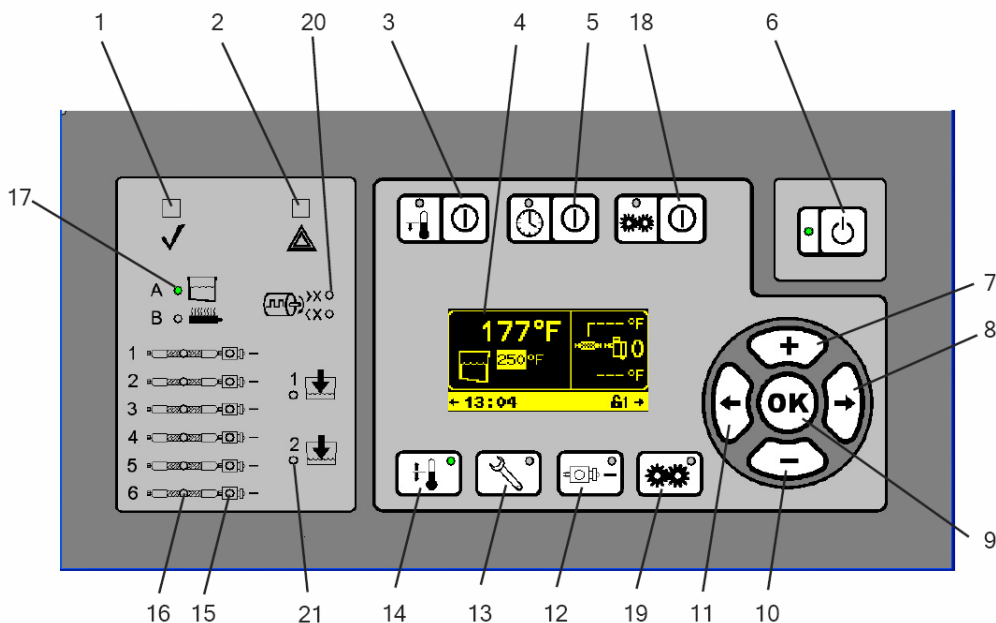


4.1. INTRODUCTION:

The following adjustments should be made before the machine is switched on or while it is working. They will ensure that the machine works properly and safely.

4.2. CONTROL PANEL

The control panel is equipped with a time clock to control connections and automatic disconnections.
The equipment allows temperature control of the cartridge heaters connected to double channels hose - gun and two channels for tank and manifold heating, with menus to programming parameters.
In the control panel you can see operation parameters and alarms produced by the sensor signals.
Also LED's show the output status of the regulation of cartridge heaters, pressure pump, temperature and safety alarms, and low-maintenance conditions.
The equipment control panel has 11 keys to access to control menus and overall operational management.





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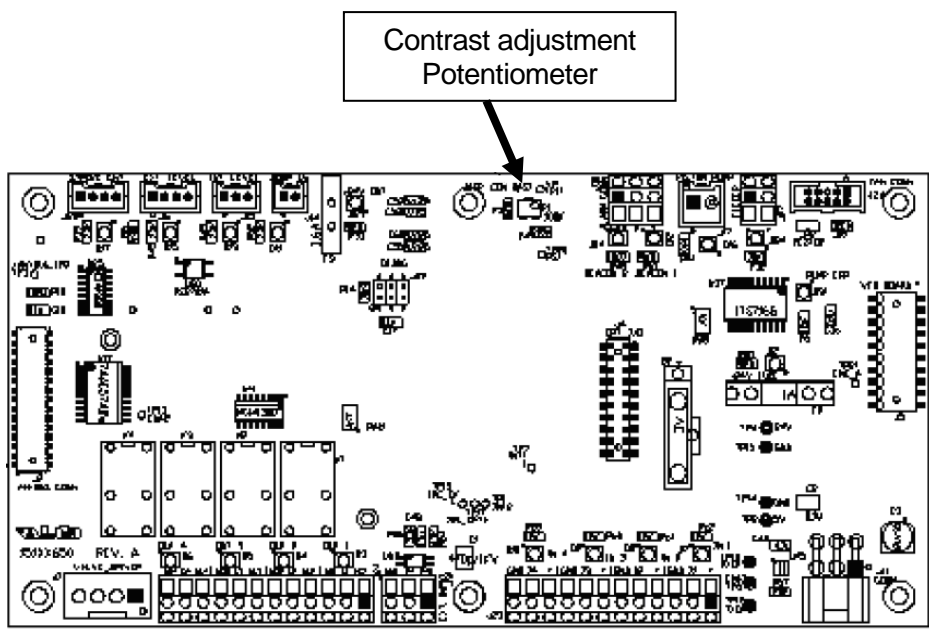
NÚ.	NOMBRE	DESCRIPCIÓN
1	LED System Ready	Lights green when the system reaches the set temperature
2	LED Alarm	Lights red when an alarm jumps
3	Button Cooling / Regression On/Off	Active the unit on cooling / regression mode or deactivate it. Lights yellow when the unit enters cooling / regression mode
4	Adjustment display	Shows main display
5	Clock button On/Off	Turns the clock function. Lights green when it's activated..
6	Heating button ON/OFF	To switch on/off the equipment. Lights green when it's on and red when it's off. Lights orange when it's on stanby mode..
7	"+" button	Increases the value of the selected parameter
8	Right arrow button	Moves right through editable fields in the selected menu
9	OK button	Enter or exit a screen where the selected field can be edited
10	"-" button	Decreases the value of the selected parameter
11	Left arrow button	Moves left through editable fields in the selected menu
12	Shooting control button	Enable and disable shoot control, and set the functions..
13	Settings button	Shows settings display. Lights green when the system goes into the settings display.
14	Temperature button	Shows displays to control temperatures. Lights green when the system goes into temperature display.
15	Gun Zone LED	Lights green when the gun is on, and red when any alarm is activated
16	Hose Zone LED	Lights green when the hose is on, and red when any alarm is activated
17	Tank Zone LED	Lights green when the tank is heating, and red when any alarm is activated
18	Pump ON/OFF button	Switch on/off the pump. LED lights green when the pump is activated
19	Pump settings button	Shows pump settings display. Lights green when the system goes into the pump settings display.
20	Minimum speed LED's	The light switches on depending if the speed is above or below the minimum established value
21	Level LEDs	Switches on when the level is below the minimum

4.3. DISPLAY CONTRAST ADJUSTMENT

Display contrast adjustment is necessary for a good visualization in the manufacturing plant.

Follow the procedure below to adjust the contrast:

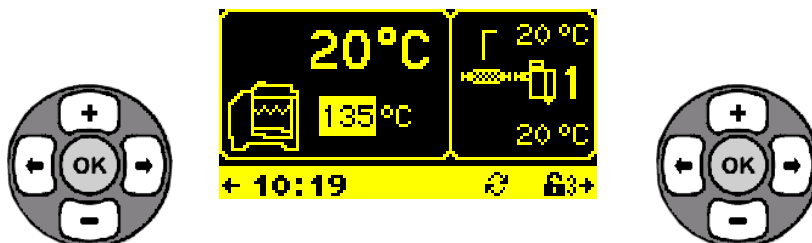
1. While holding down the 'SETUP' key on the front panel keyboard, simultaneously press the "+" and "-" keys to change the contrast on the display. This will make the characters on the display brighter and dimmer, and is considered the fine adjustment.
2. If this does not work, or is not enough to see the display, open the electrical enclosure door to view the rear of the CPU board.
3. Adjust the Display Contrast Adjustment Pot on the rear of the CPU board using a small screwdriver. (this requires a very small slotted screwdriver)
4. This is the course adjustment and small incremental turns of this pot will make drastic changes in the brightness of the display.



4.4. USER INTERFACE:

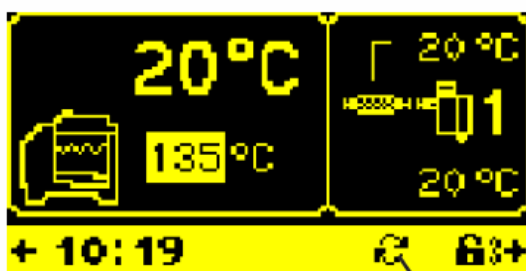
Browse

Browse symbols on top of the screen indicate that additional menus are available. Use next buttons to browse:



Memory storage

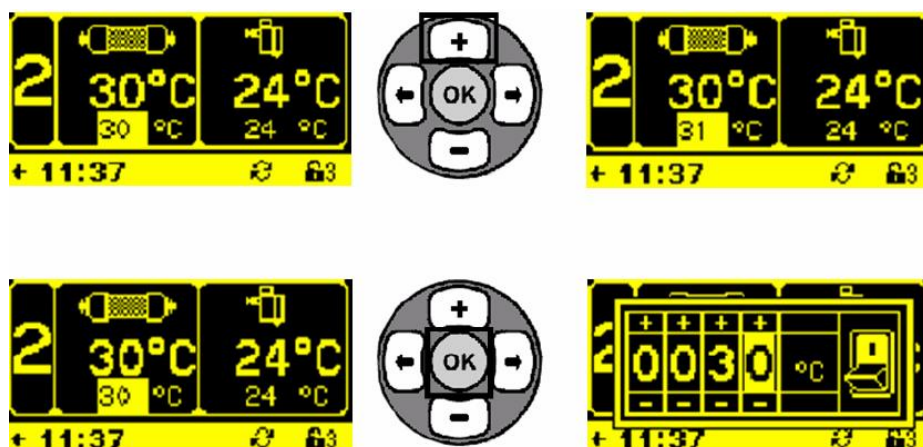
The symbol consisting of two arrows in a circular pattern indicates that a value has been changed but the change is not yet stored in the flash memory.



Memory Storage Icon

Edit numeric digits:

When the editable information is numeric, it can be edited with “+/-” buttons, to edit only one digit, or it’s possible to push “OK” button to go into another display for a detailed edition. Use arrows keys to select the editable digit. Some screens of detailed edition have a button to switch on/off the function.

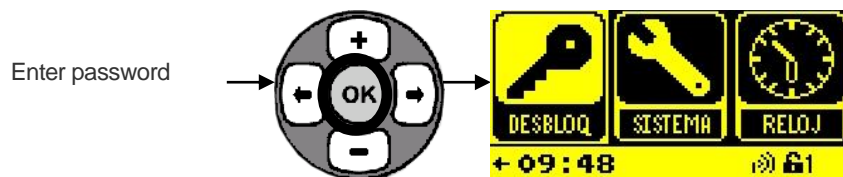
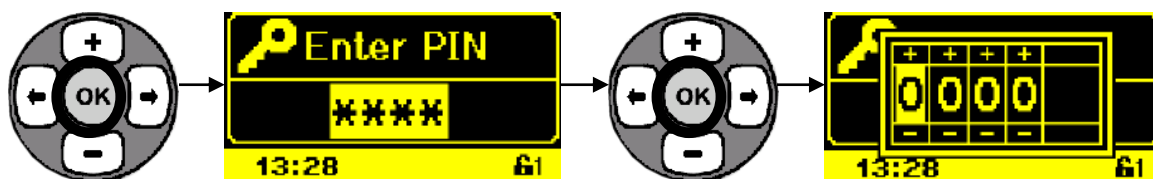
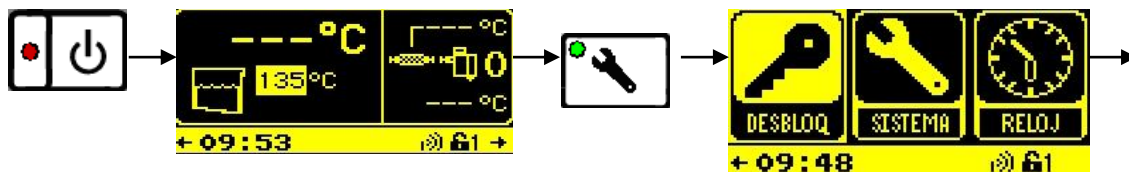




4.5. PIN CODES INTRODUCTION:

Passwords are required to prevent unauthorized access to some important parameters of configuration. For more information, see Appendix A .

To enter a password:





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4.6. LANGUAGE SETTING:

To set the language you want to work with the system, perform the following steps:

Set Language

The sequence of steps is as follows:

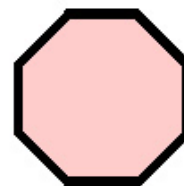
- Step 1:** A small icon of a wrench with a green dot is shown.
- Step 2:** The main menu screen with three options: LOCK (key icon), SYSTEM (wrench icon), and CLOCK (clock icon). The time is 13:58. A lock icon is in the bottom right.
- Step 3:** The SYSTEM option is selected, and the wrench icon is highlighted.
- Step 4:** The language selection screen is shown with 'Language' at the top and 'English' selected in a yellow box. The time is 13:59.
- Step 5:** The language selection screen is shown with 'Español' selected in a yellow box. The time is 14:01.
- Step 6:** A small icon of a wrench with a green dot is shown.
- Step 7:** The main menu screen with three options: asegurar (key icon), sistema (wrench icon), and reloj (clock icon). The time is 14:01. A refresh icon and a lock icon are in the bottom right.
- Step 8:** The idioma option is selected, and the wrench icon is highlighted.
- Step 9:** The language selection screen is shown with 'Español' selected in a yellow box. The time is 14:01.

Navigation arrows on the right side of the screenshots indicate the sequence: right arrow for Step 2, up arrow for Step 3, left arrow for Step 4, down arrow for Step 5, right arrow for Step 7, and down arrow for Step 8.

CONTINUED NEXT PAGE

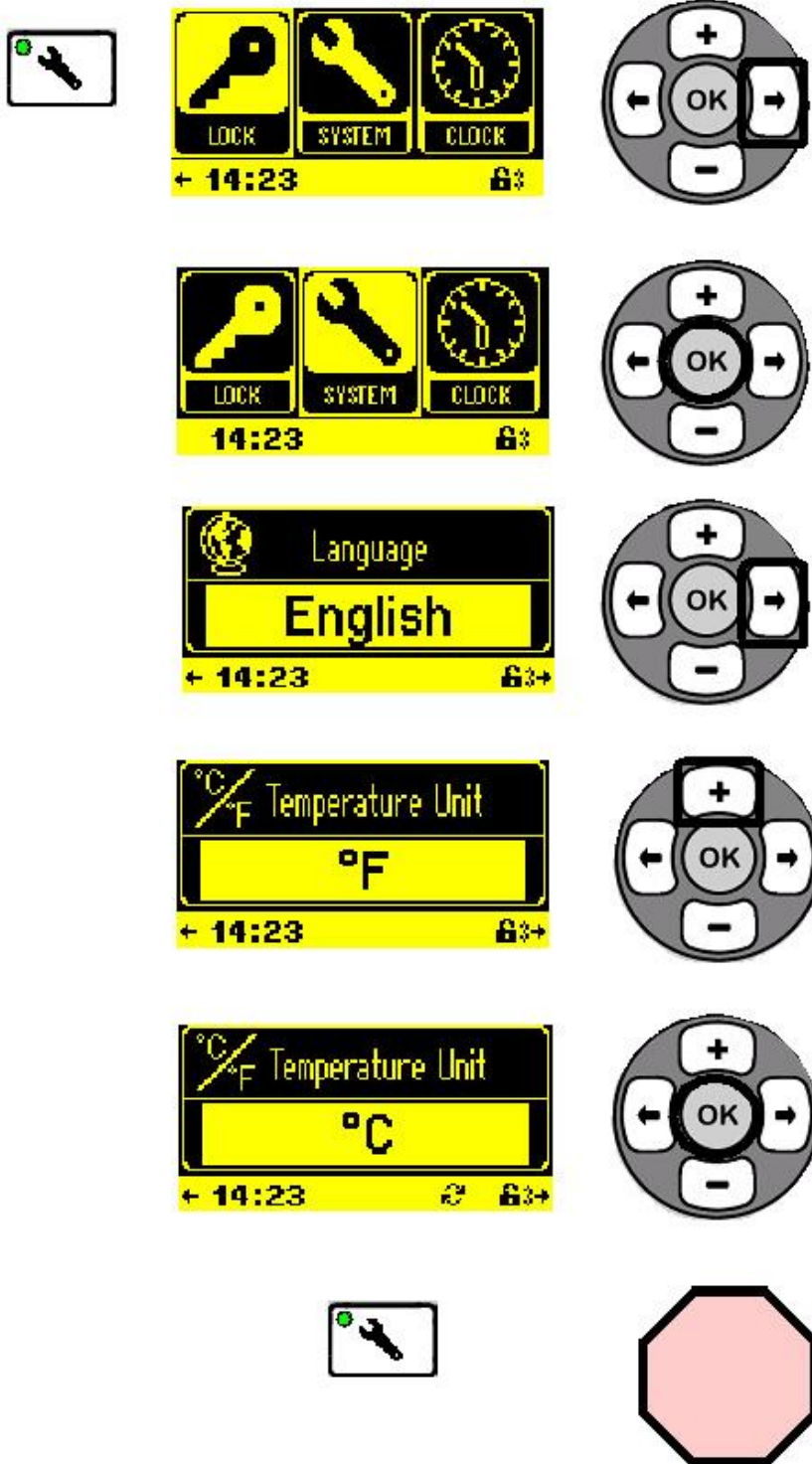


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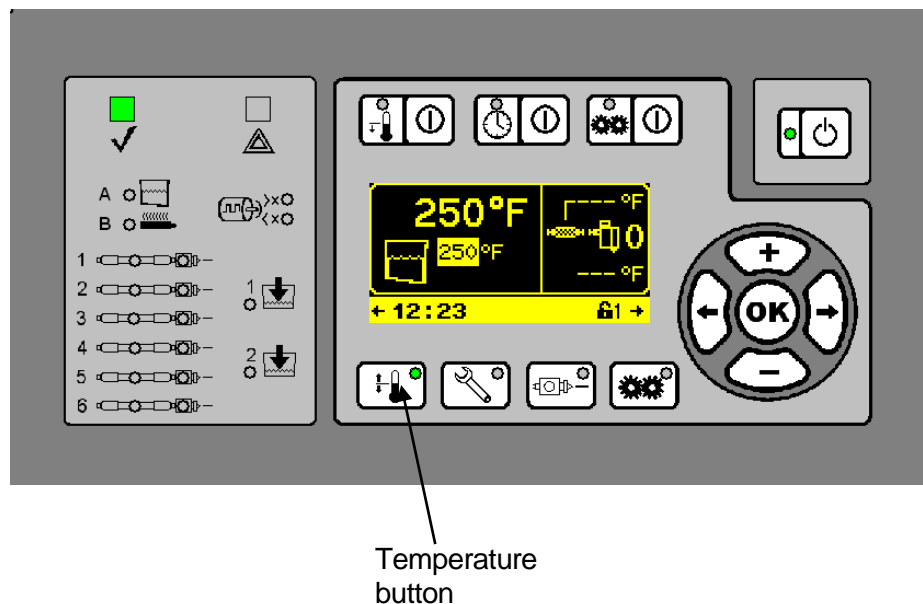
4.7. TEMPERATURE SCALE SETTING:

The system has two options of scale for the temperature. To set the temperature scale, perform the following steps:



4.8. TEMPERATURE SETTINGS:

Press temperature button (if LED isn't green) to show the first temperature display.



The control panel has LED's to indicate the status of each zone. When the zone is on heating mode, the corresponding green LED will be continuously illuminated. Once this area reaches the set temperature, the LED will flash.

If the LED turns red, it indicates that there is a failure in the area. In the status bar it will appear an error message with detailed information. If it appears a temperature alarm, the LED will turn red (see over-temperature or low temperature).

If the set temperature isn't correct or is necessary it's adjustment, select the zone and set the temperature. The system is ready (and the green LED of ready system turns on) when all zones reach their operating temperature.

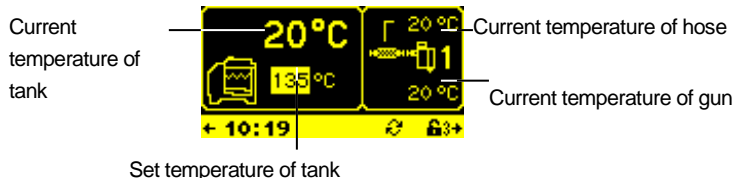
The system ready signal enables the motor pump. This prevent the pump is activated before the adhesive has melted. Consult adhesive characteristics to find the melting point.



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Temperature screens

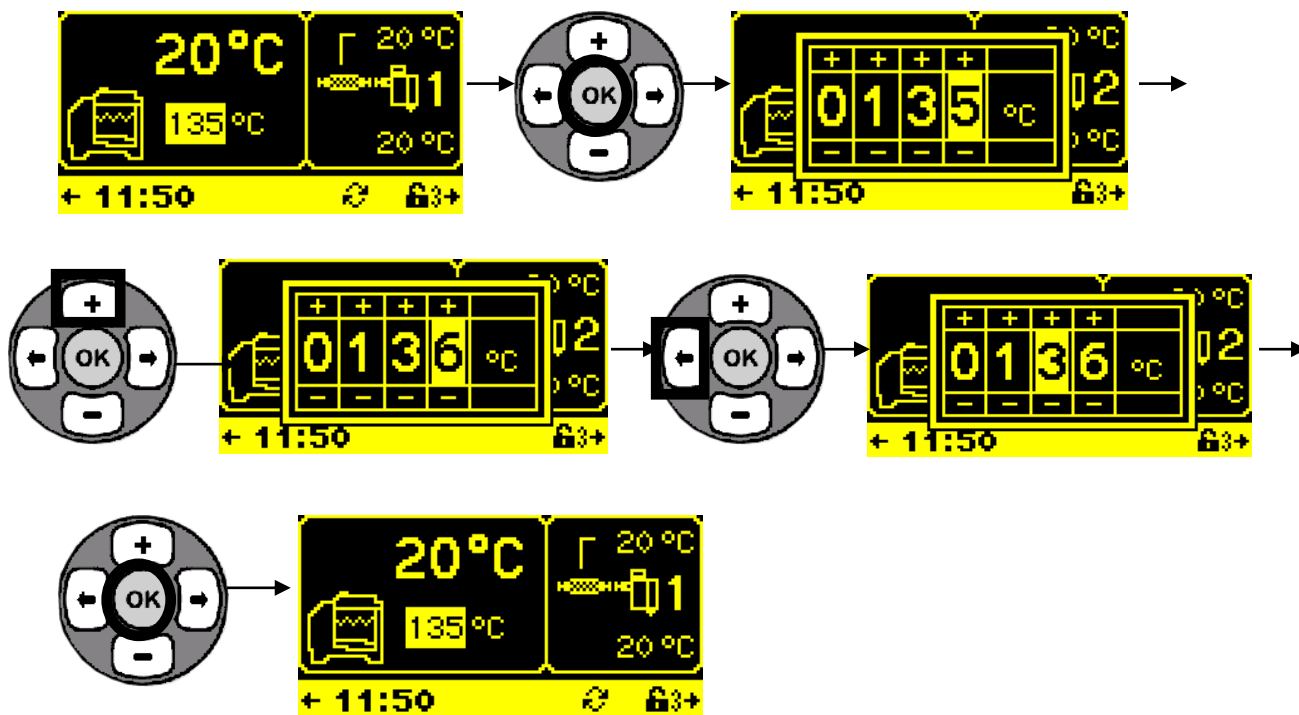
The tank temperature screen shows the current temperature and the set. At the right side of the screen display shows the temperature of output 1 and output 2, and show the current temperature.



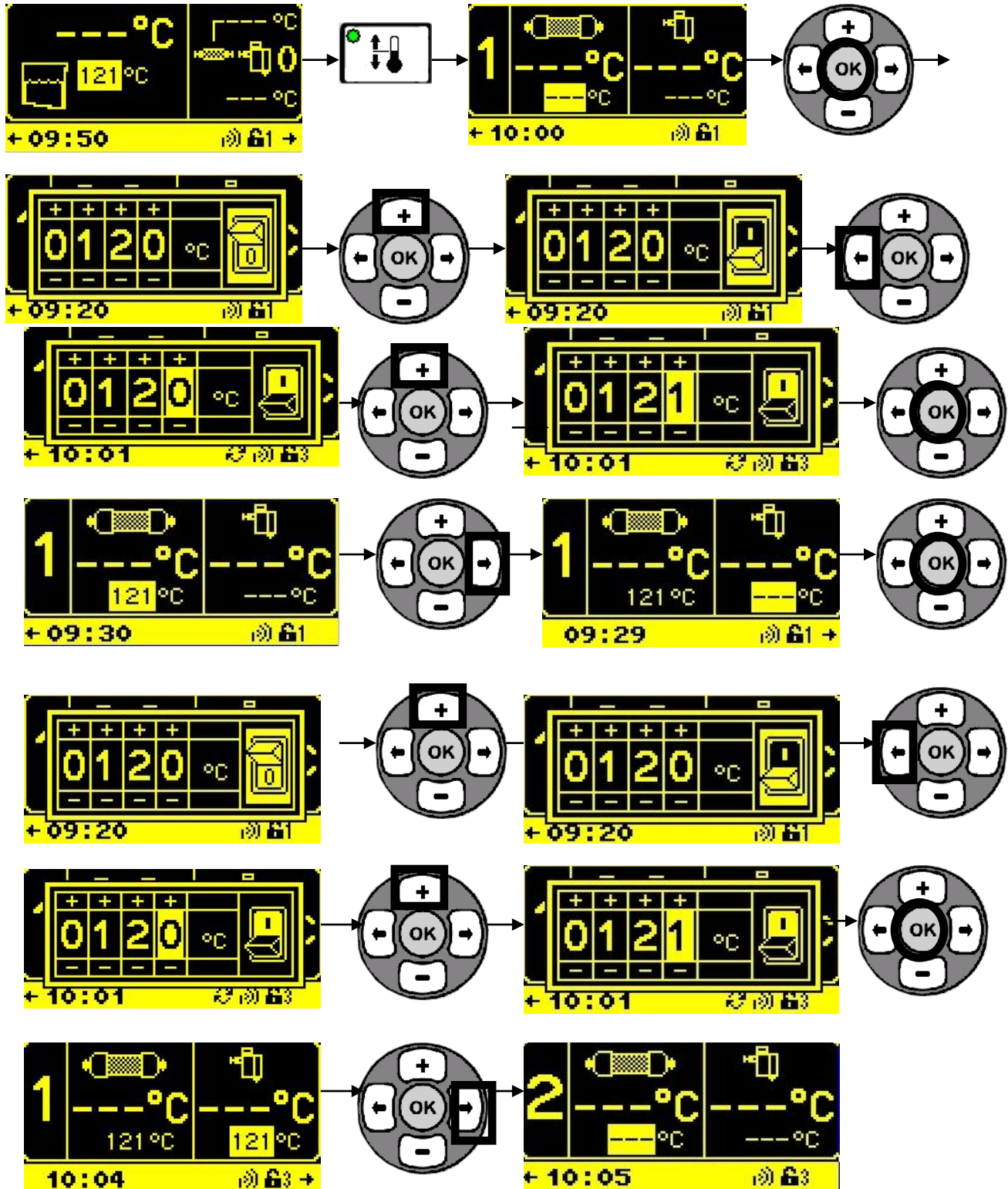
Use browse keys to select the temperature you want to see on the display.



Tank temperature



Hose/gun temperature



For set the hose/gun 2, repeat the same process.



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4.9. SYSTEM / PUMP READY TEMPERATURE OFFSET

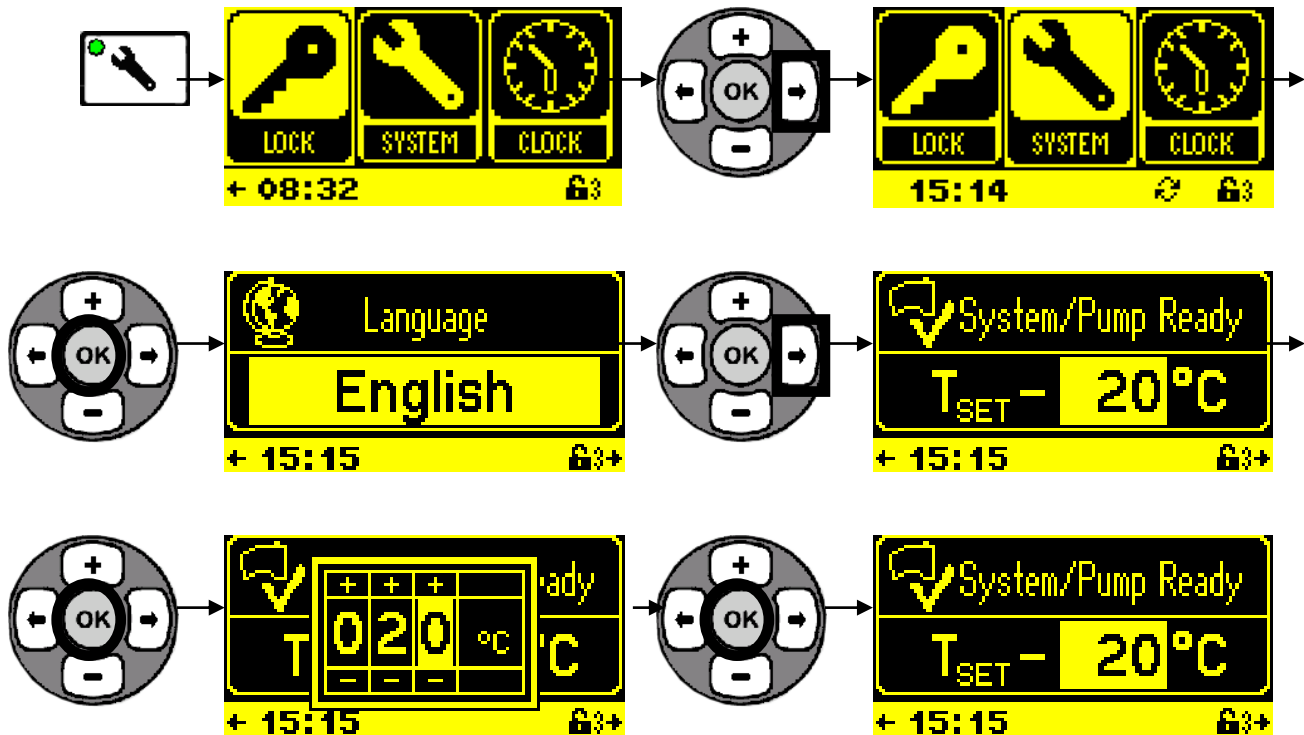
It is relative to the set temperature of each zone. The system indicates it is ready (and LED of ready system lights green) when all zones reach its set temperature minus the offset temperature of ready system

The ready system signal enables the pump motor. This prevents the pump from being activated before the adhesive has melted.

Consult the adhesive characteristics to find the melting point. The preset temperature must be at least -5°F (-3°C).

If set temperature is closest to the point (ex, -1 ° F), the pump stops momentarily until the temperature reached again.

The parameter range is from 0 ° F to 36 ° F (0 ° C to 20 ° C) and the default value is 5 ° F (3 ° C). You can access this parameter with a password level 2 or higher (see Appendix A - Levels of password).





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4.10. READY DELAY TIME:

When ready delay time option is enabled, the LED of ready system will be illuminated a preset time after all zones reach their set temperatures. This feature allows the adhesive to be heated an extra time before activating the pump motor.

Once the temperature has reached the start time, time remaining before the equipment is ready, is shown in the status bar at the bottom of the screen.

The range time is from 1 minute to 120 minutes. It becomes from factory enable and with a time of 15 minutes.

To prolong the life of pump seals, this time of 15 minutes should not be reduced.

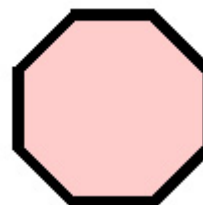
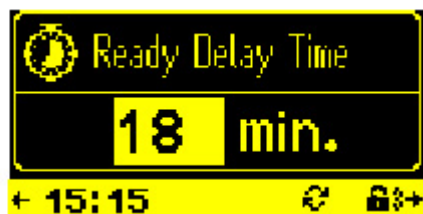
This parameter can be modified at password level 2 or higher (see Appendix A - Levels of password).



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4.11. OVER-TEMPERATURE ALARM:

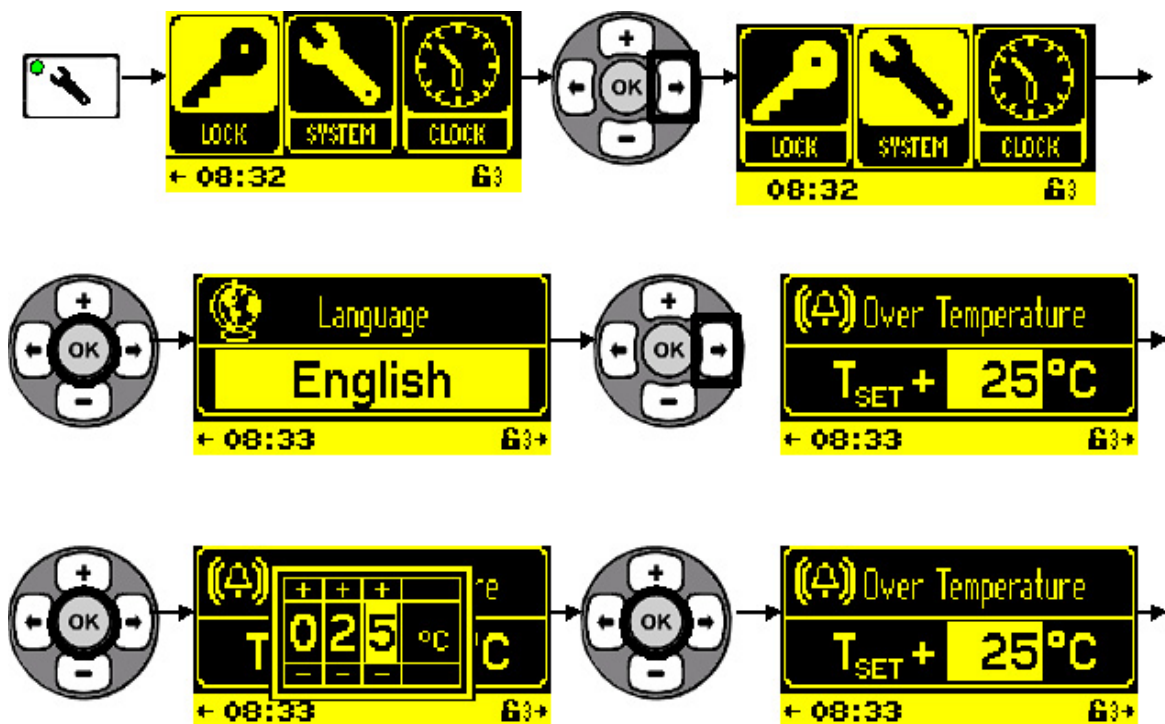
The over-temperature alarm refers to the temperature adjustment of all zones of the equipment.

The number entered on this display, is the amount of degrees that temperature can increase above the set temperature before the activation of the over-temperature alarm.

If any zone goes into the over-temperature alarm zone, the heating system of this zone will be switched off automatically. Display will show a message "over-temperature", to clear it push "OK" button.

The tolerance range of the alarm is 9 ° F to 108 ° F (5 ° C to 60 ° C). The default value is 45 ° F (25 ° C).

This parameter can be modified at password level 2 or higher (see Appendix A - Levels of password).



4.12. UNDER TEMPERATURE ALARM:

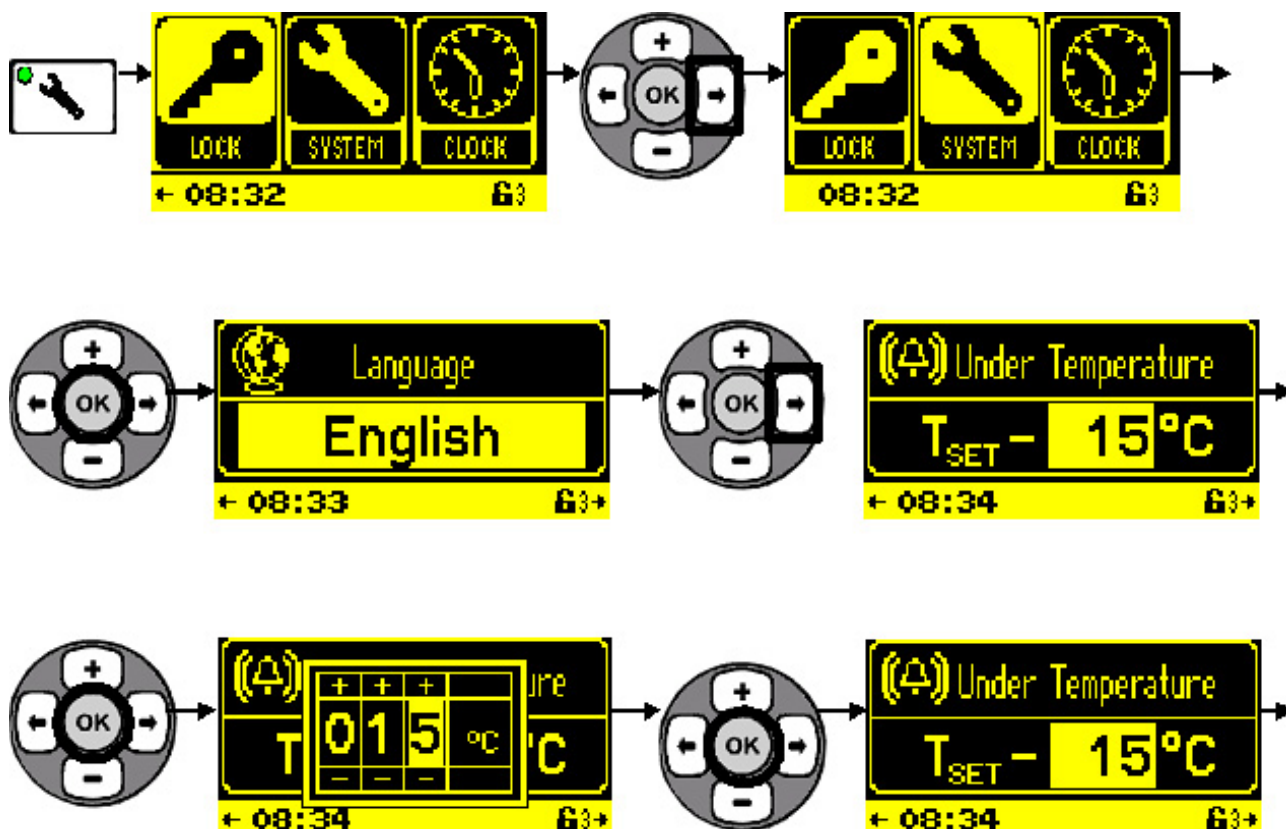
Under temperature alarm refers to adjustment temperatures of all zones of the system.

The number entered on this screen, is the amount of degrees that temperature can decrease below the set temperature before the activation of the under-temperature alarm.

If any temperature goes into the under-temperature alarm zone, the heating system of this zone will be switched on automatically. Display will show a message “under-temperature”, to clear it push “OK” button.

The tolerance range of the alarm is 9 ° F to 108 ° F (5 ° C to 60 ° C). The default value is 27 ° F (15 ° C).

This parameter can be modified at password level 2 or higher (see Appendix A - Levels of password).



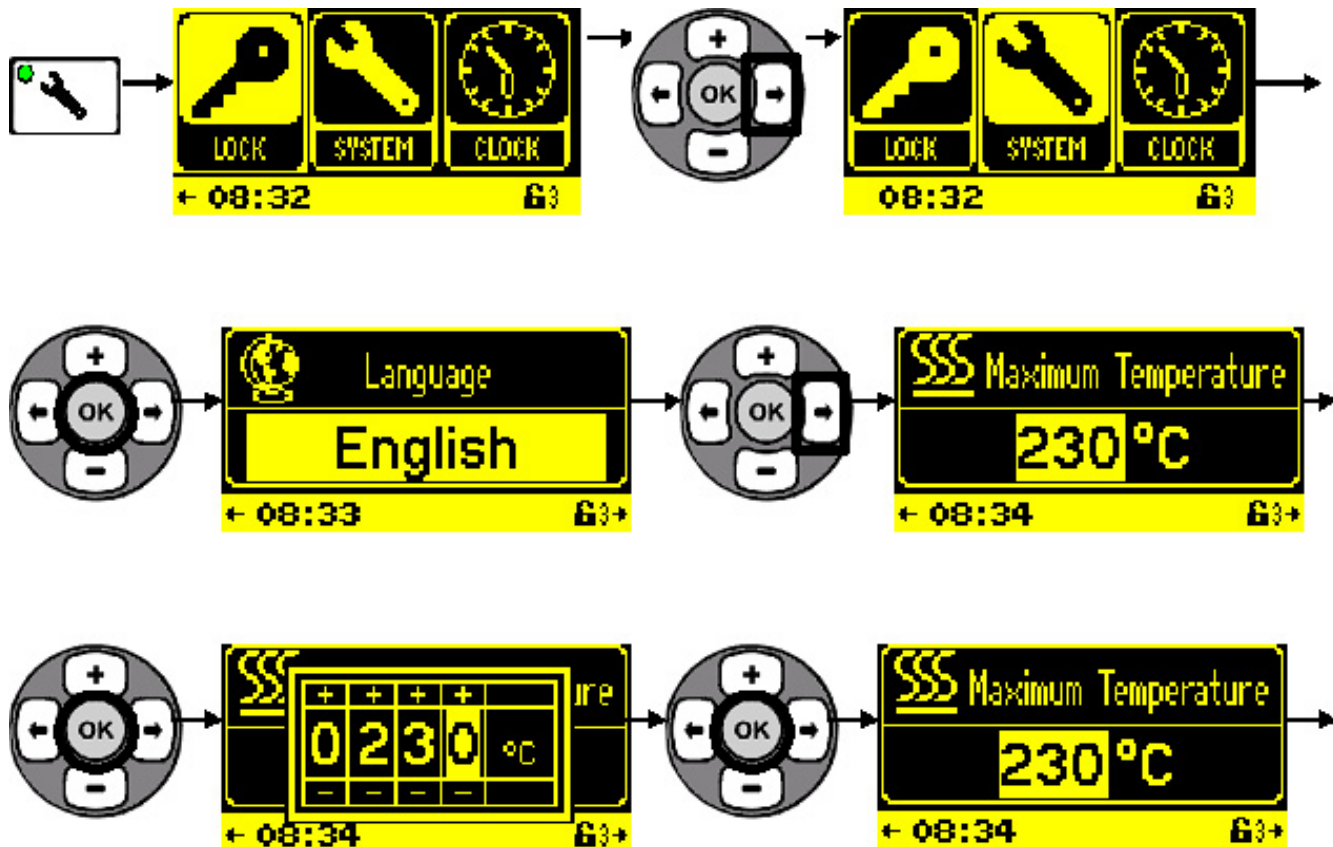
4.13. MAXIMUM TEMPERATURE:

The maximum temperature is the maximum value of the adjustment temperature of each zone.

The maximum temperature range is from 32° F to 446° F (0° C to 230° C).

The default value is 446° F (230° C).

This parameter can be modified at password level 3 or higher (see Appendix A - Levels of password).





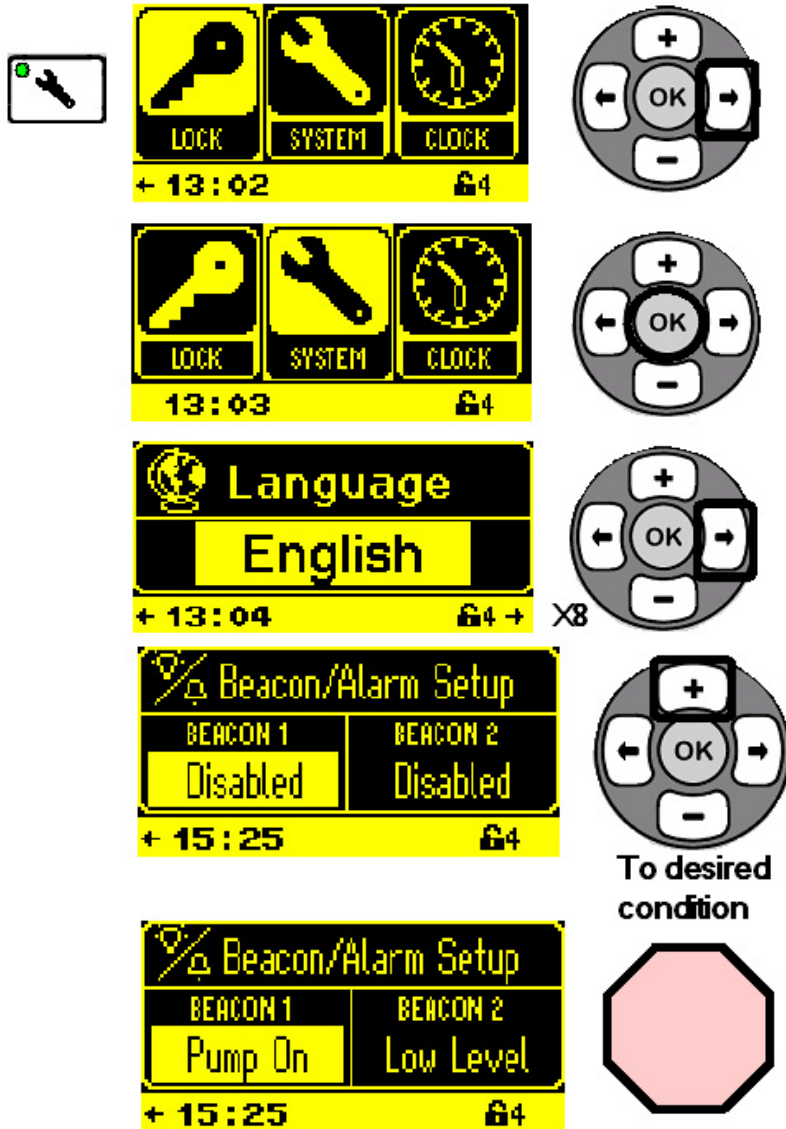
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4.14. BEACON ALARM SETUP:

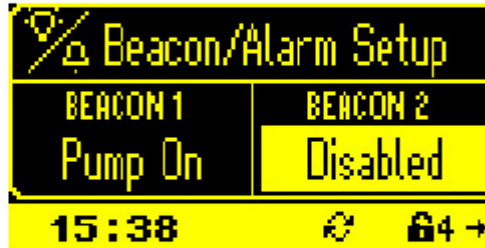
The Beacon/Alarm Setup allows a specific Beacon, designated by number, to be set to indicate one of four conditions:

- Pump On
- Ready
- Zone Fault
- Low Level

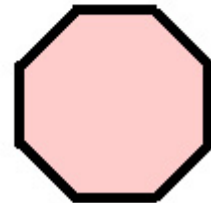
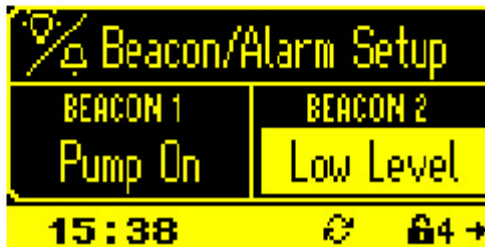
The alarm may also be set to "Disabled," which is the factory default setting. J30, on the New CPU, provides a +24VDC - GND connection for each beacon/alarm desired. This output is +24VDC, 0.5A
This parameter can be modified at password level 2 or higher (see Appendix A - Levels of password).



BEACON 2



To desired condition

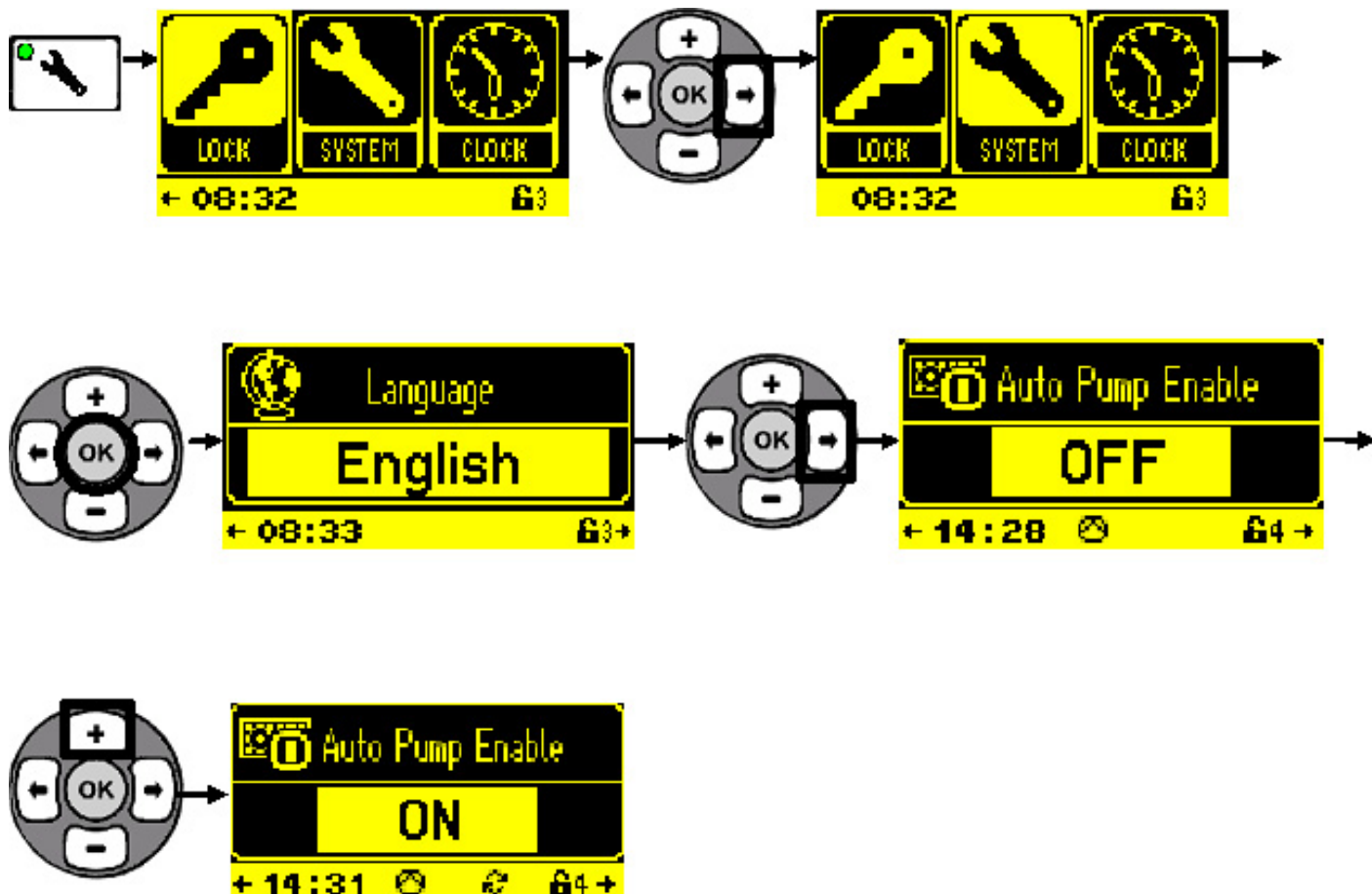


4.15. AUTOMATIC PUMP MODE:



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When the automatic pump mode is enabled, pump will be activated automatically when the system reaches the set temperature and the LED "System Ready" lights. If the relay Delay Time is enabled, pump will not be activated and System will not be ready until this time has passed since the temperature reached. By default this parameter is sent to off. This parameter can be modified at password level 2 or higher (see Appendix A - Levels of password).





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4.16. POT FILL MODE:

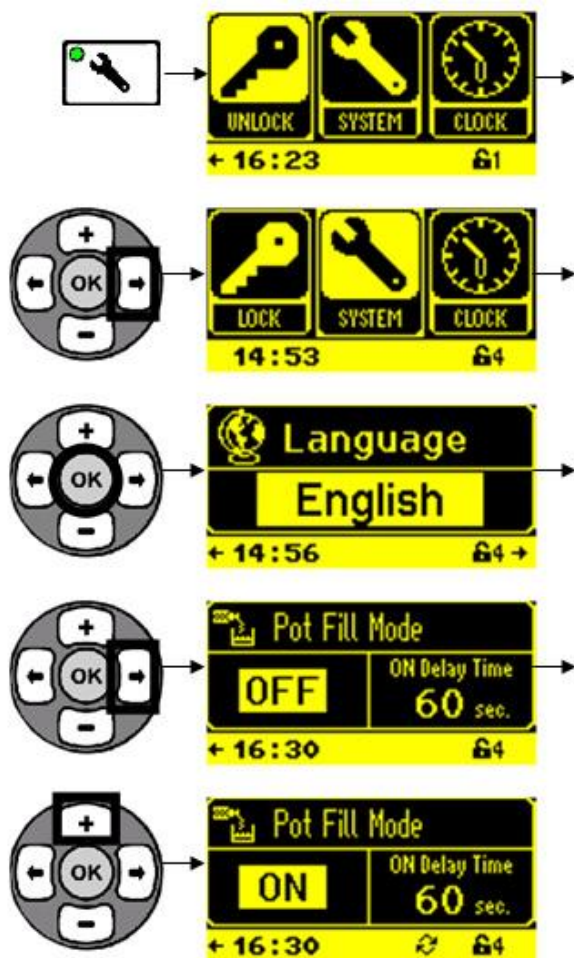
In this mode of operation, the molten adhesive is pumped to an external unit when the level falls below the set level. The external level signal is wired to the connector J16 of the control board.

Thus, the pump is activated only when it receives the input signal externally, and the unit is ready. For this, the automatic pump mode should be enabled.

The normal operation of the pump is ignored in this mode. The shoot control is not used in this mode. The ready delay time is set by the operator to delay the activation of the pump "x" seconds after the externally input is activated.

When this time expires, the pump will be automatically activated and begin to run until the external signal is disabled, and therefore the external tank is at the required level, then the pump will stop working.

This parameter can be modified at password level 2 or higher (see Appendix A - Levels of password).





4.17. LEVEL SENSORS SETUP:

Pot fill – external low level detection:

The filling of adhesive is used when the equipment is being used to heat adhesive and remotely fill another external unit. Using the pot filling mode, the system requires to control the level of the external unit and filling it depending on the signal of the external level sensor.

The external level sensor controls the level of adhesive in the external tank and it's wired into the control board of the unit. When the sensor detects low level, the sensor sends a signal to the control board to activate the pump and transfer adhesive to the external tank. When the level of adhesive reaches the level sensor, the signal returns to the control board and the pump is deactivated.

The filling mode should be “enabled” from the pot filling mode display, and the delay time, it should be established for delaying the starting of the pump after the low level signal of the sensor.



The entry on / off pump can also be used to activate the pump from a remote location through a switch contact closure. If no level sensor is used, the client can use its own signal to remotely activate the pump at a filling application.

Internal level detection – pellets charger:

Pellets charger option is used to fill the tank when the level of adhesive of the tank is below the level sensor. This option eliminates the need to require an operator to open the lid and add the adhesive into the tank.

The internal level sensor is mounted into the tank so when the adhesive drops below the sensor, the solenoid valve activates the charger for charging the tank with adhesive. With this option it's placed a microsensor in the lid of the tank, so if the tank lid is open the solenoid valve of the pellet charger is enabled. The microsensor, the internal level sensor and the solenoid valve of the charger must be connected to the control board, for operating correctly.

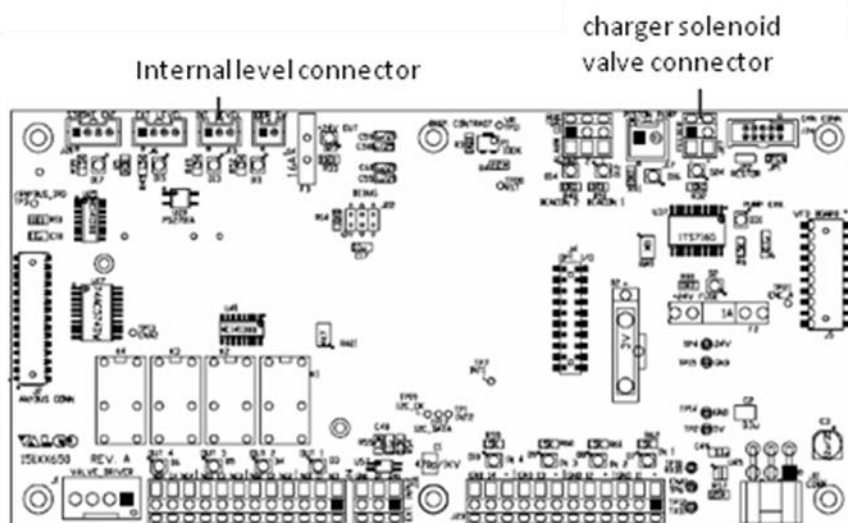
The internal sensor of low level is wired to the J15 connector of the control board. This feature doesn't need to be configured in the software. If the pellet charger and their components are correctly connected, the solenoid valve is activated when the tank lid is closed and the sensor indicates low level of adhesive.

Microsensor:

The microsensor of the tank lid must be wired to the J14 connector of the control board. The microsensor must be in closed position so that the solenoid activates the charger and add adhesive to the tank. When you open the lid of the tank, the valve turns off the charger.

Charger solenoid valve:

The pellet charger solenoid valve is wired on the J27 connector of the control board.



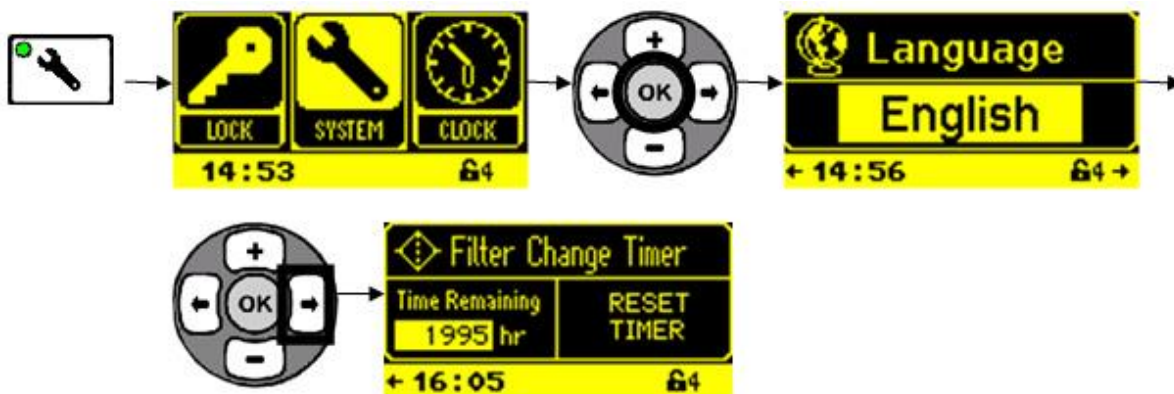


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4.18. FILTER CHANGE TIMER:

The counter display for the filter change is a countdown timer showing the time remaining before the filter must be changed.

When the timer arrives to zero (0), and alarms appears on display, it indicates that the filter must be changed or cleaned. Once the filter has been changed, the timer can be reset by setting a time up to 2000 hours.

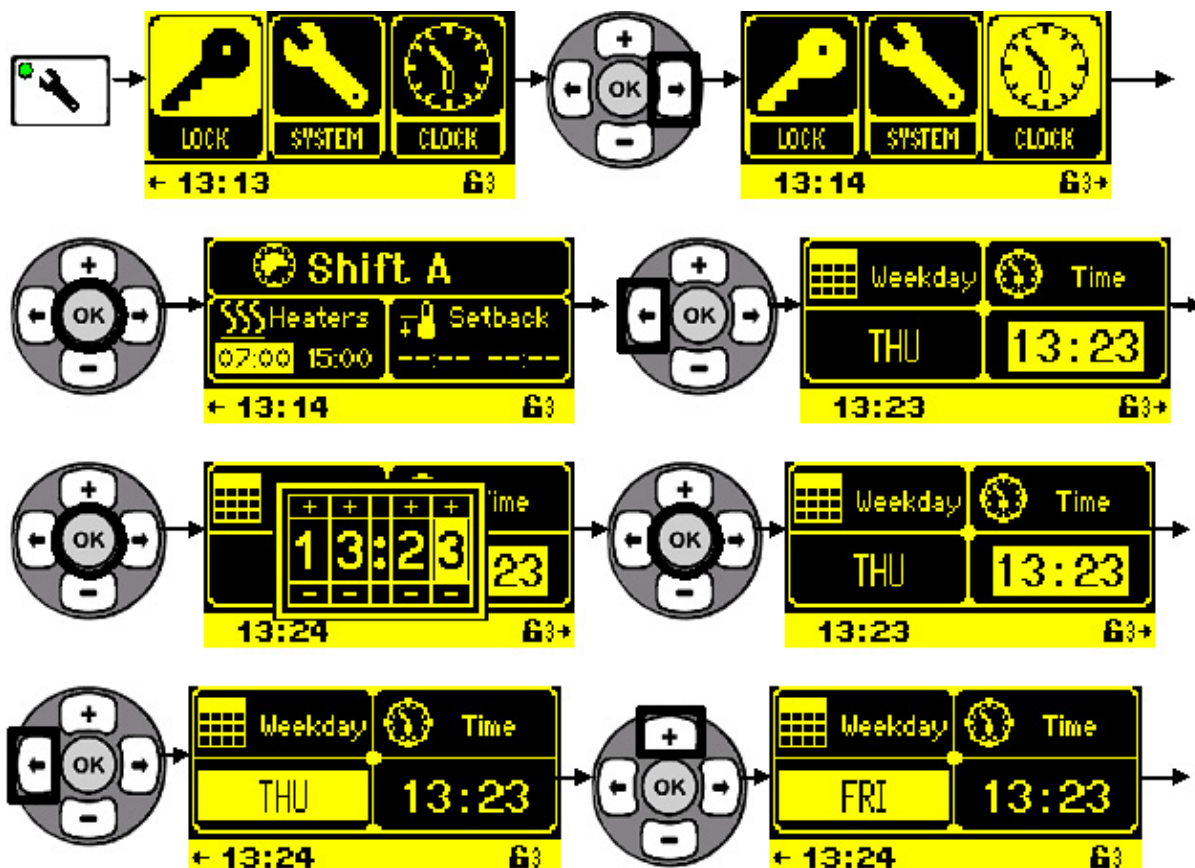


4.19. CLOCK AND SEVEN DAYS TIMER:

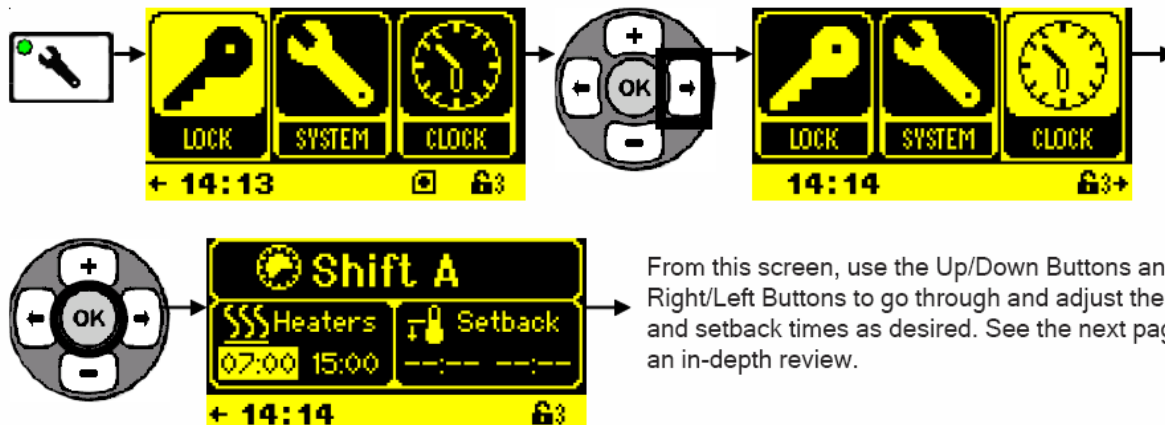
The clock menu is used to configure the date and the time, and to establish work shifts with switching on/off and cooling / regression / repose time, so that the system will automatically run.

Set day and time:

The clock menu is used to configure the current day and the time.



Shift times / setback times:



From this screen, use the Up/Down Buttons and the Right/Left Buttons to go through and adjust the shifts and setback times as desired. See the next page for an in-depth review.

Work shifts scheduling:

Three shifts can be programmed into the unit. Start shift, end shift, and setback times can be pre-programmed for each shift to reduce downtime. Make certain all desired temperatures are set first (see Programming Temperatures, this section).

First program the time the heaters will be on, off, and in setback for each of the three shifts. Use the Right/Left Arrow Buttons to move through the times and shifts and the OK Button to get a thumbwheel to set the times and turn on the setback feature with a “switch” on the thumbwheel. (The heaters can be set with or without using the setback times.)

Set the start, stop, and setback times for all shifts. Leave the unused shifts / times blank (— —).



This screen states that for Shift A, heaters will turn on at 7:00 AM to the setpoint temperatures (set on the Temperature Screens, previously shown) and off at 3:00 PM, with all heaters going to the setback temperatures from 11:30 AM to 12:00 PM.

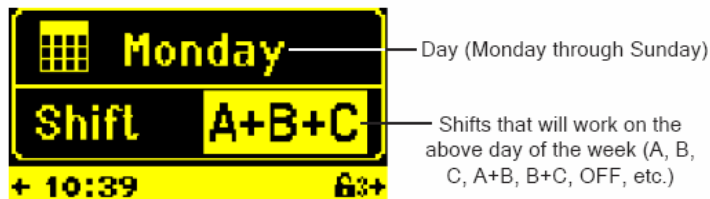


This screen states that for Shift C, nothing will be on, since there is no Shift C working. After setting all shift times, program the shifts that will be enabled for each day of the week. The Up/Down Arrow Buttons cycle through the different

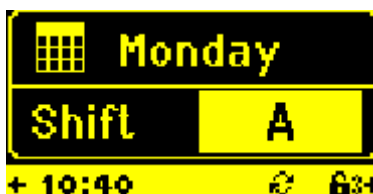


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combinations of shifts, and the Left/Right Arrow Buttons cycle through the days of the week.



This screen states that on Mondays all three shifts (A, B, and C) will be working.

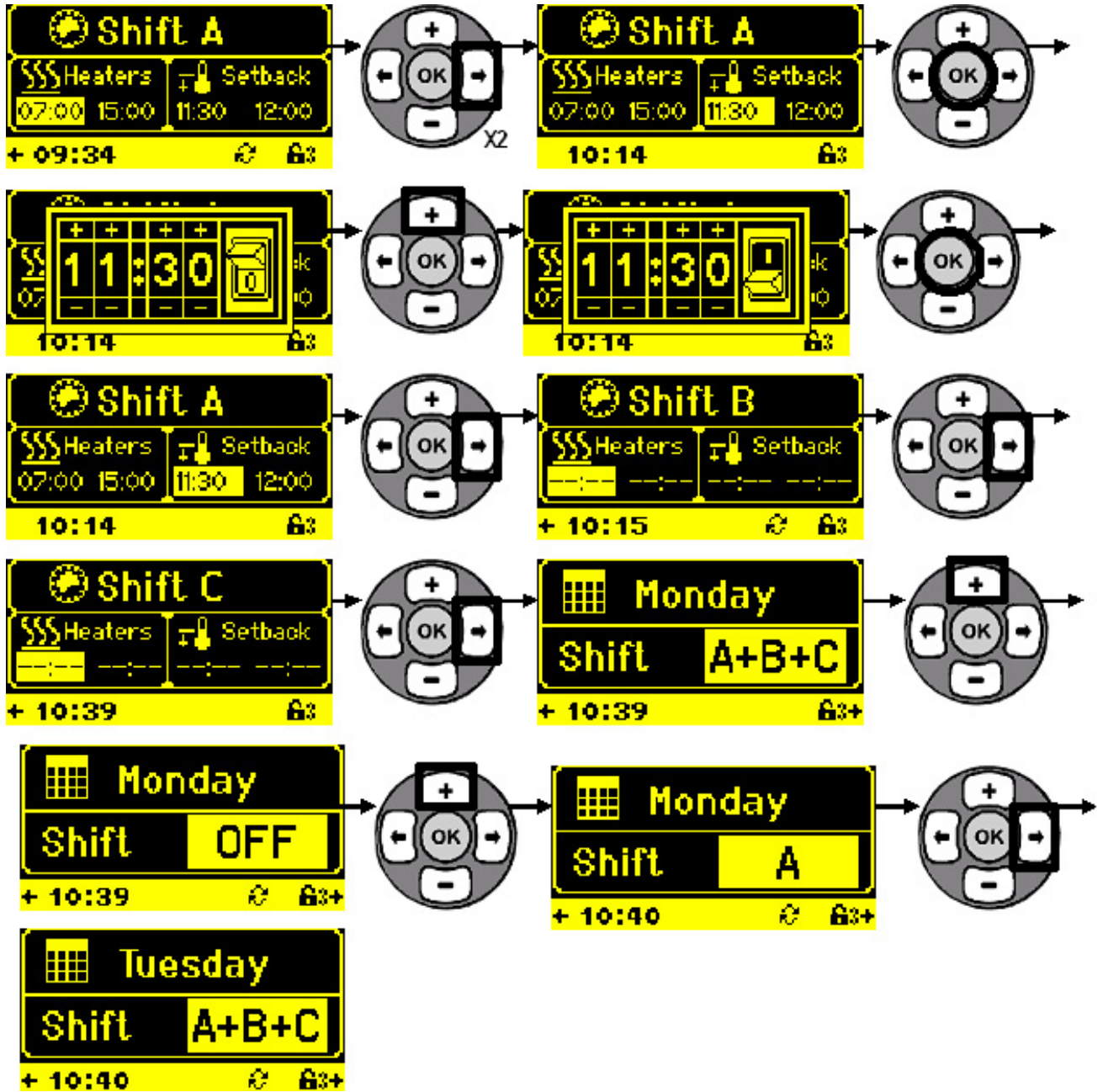


This screen states that on Mondays only Shift A will be working. After setting all shift times (previous page) and programming the shifts that will be working for each day of the week (this page), be sure the Clock Function is On and is set properly.



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MOVING THROUGH THE SHIFT TIME / DAY SCREENS:

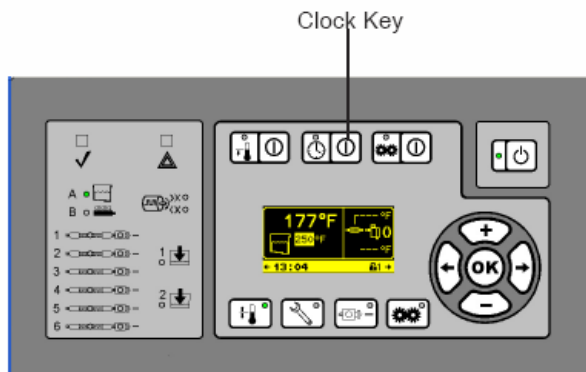


Continue to use the Right/Left, Up/Down, and OK Buttons to set all shift times and what shifts work on each day. Turn the Clock On and your unit is set to work with your shift times and days.



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Press the Clock Button to enable all shift settings (the 7-Day Timer)

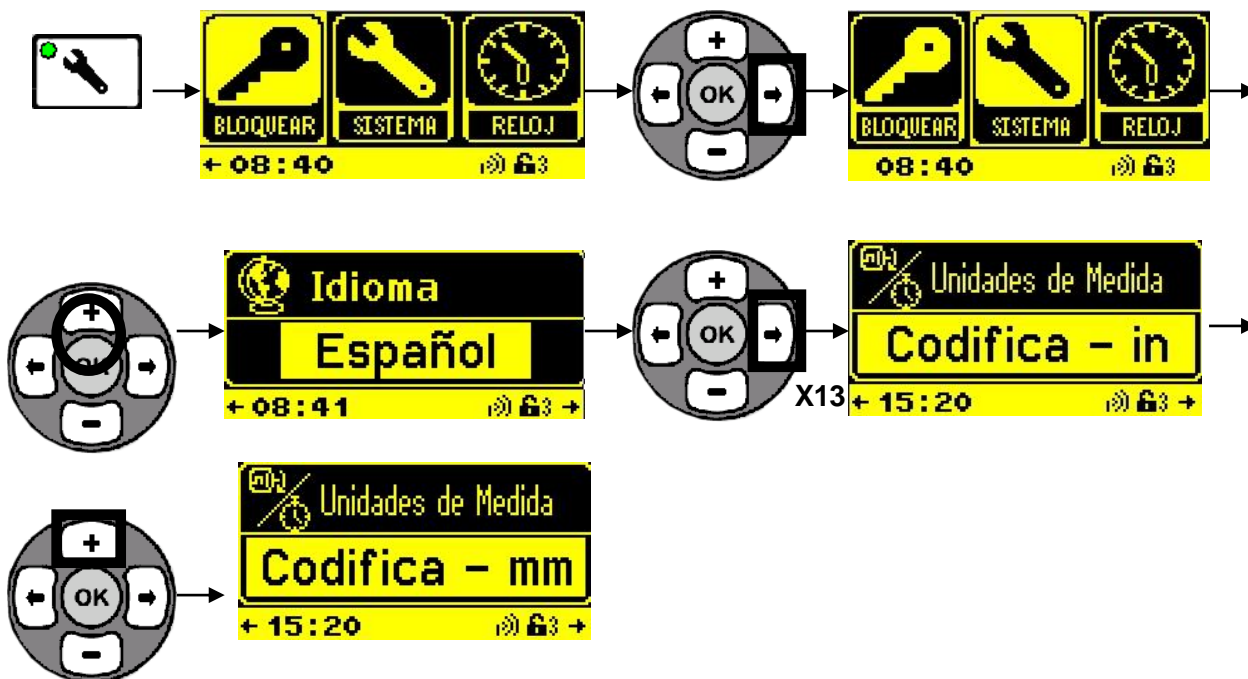


Do not turn off the main power to the control. The clock/timer will not operate if the power is off.

If the unit is set to 'Standby', the clock/timer will operate properly. In Standby, the display will show the status bar with the correct time of day.

4.20. UNITS OF MEASUREMENT:

The equipment has the option of choosing between two units of measurement. To set the unit of measure in which you want to work with your equipment, perform the following steps:



4.21. STANDBY:

Standby temperature:

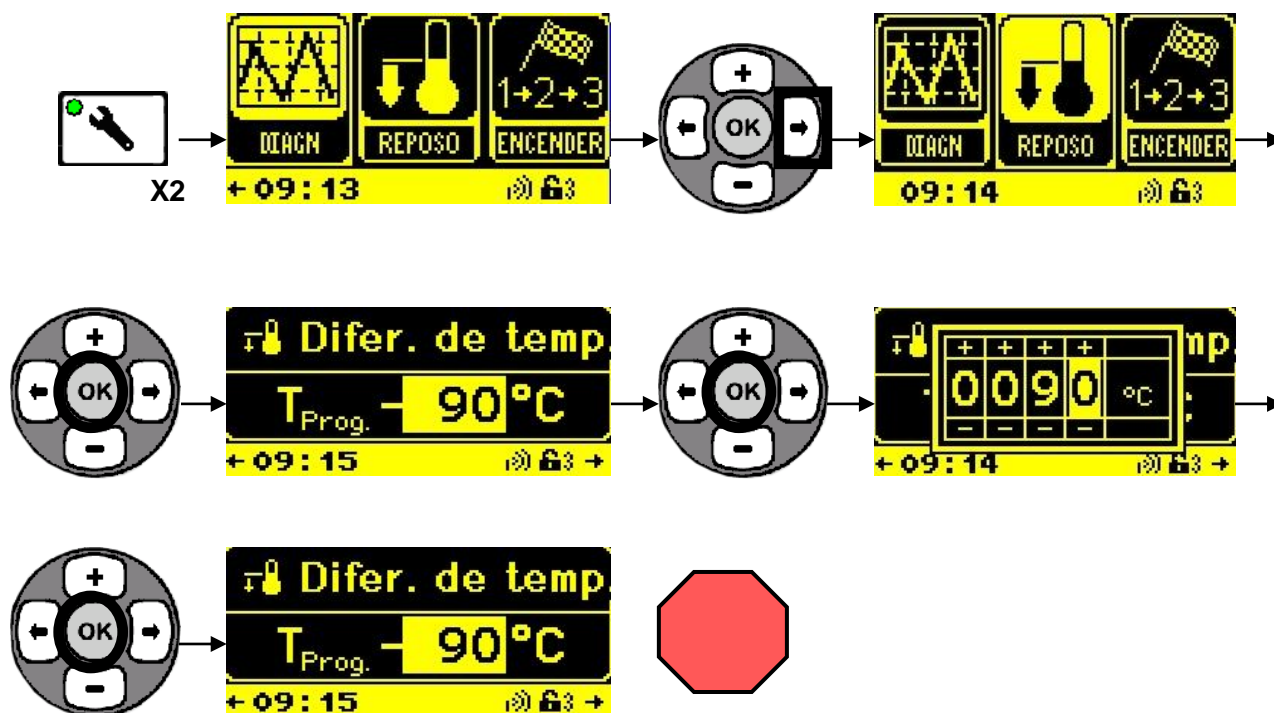
The standby time option is used to reduce the temperature of all zones establishing a difference of temperatures which allows the adhesive to be soft but not melted. It is used for inactivity periods.

The temperature differential is relative to the set temperature in each zone.

The range of the temperature differential is from 45°F to 342°F (from 25°C to 190°C).

The default value is 90°F (50°C).

This parameter can be modified at password level 2 or higher (see Appendix A - Levels of password).



Automatic standby time:

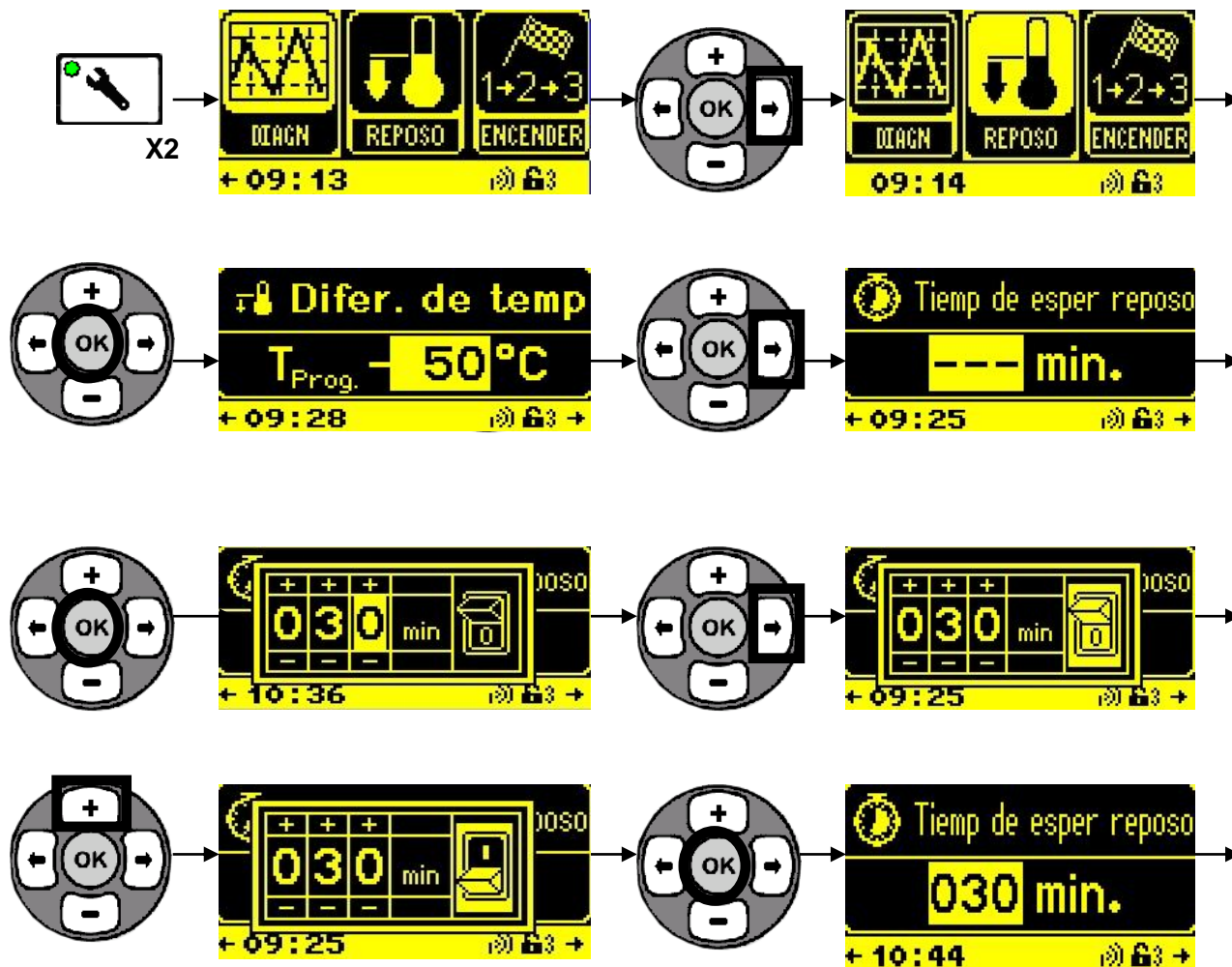
If the automatic standby time is enabled and there isn't any external signal in the period of automatic regression of the repose time, the equipment will go automatically to repose mode.

The timeout of automatic standby is used only with an external input of automatic repose. It isn't used manually or with scheduled standby modes.

The range of the automatic standby time is from 1 minute to 120 minutes. The default automatic standby time is 30 minutes.

When the automatic standby time is enabled, the automatic standby symbol will flash in the status bar two minutes before going to sleep. This is the signal that tells the operator that the unit will go to standby if no external signal is applied to reset this time.

This parameter can be modified at password level two or higher (see Appendix A – levels of password)



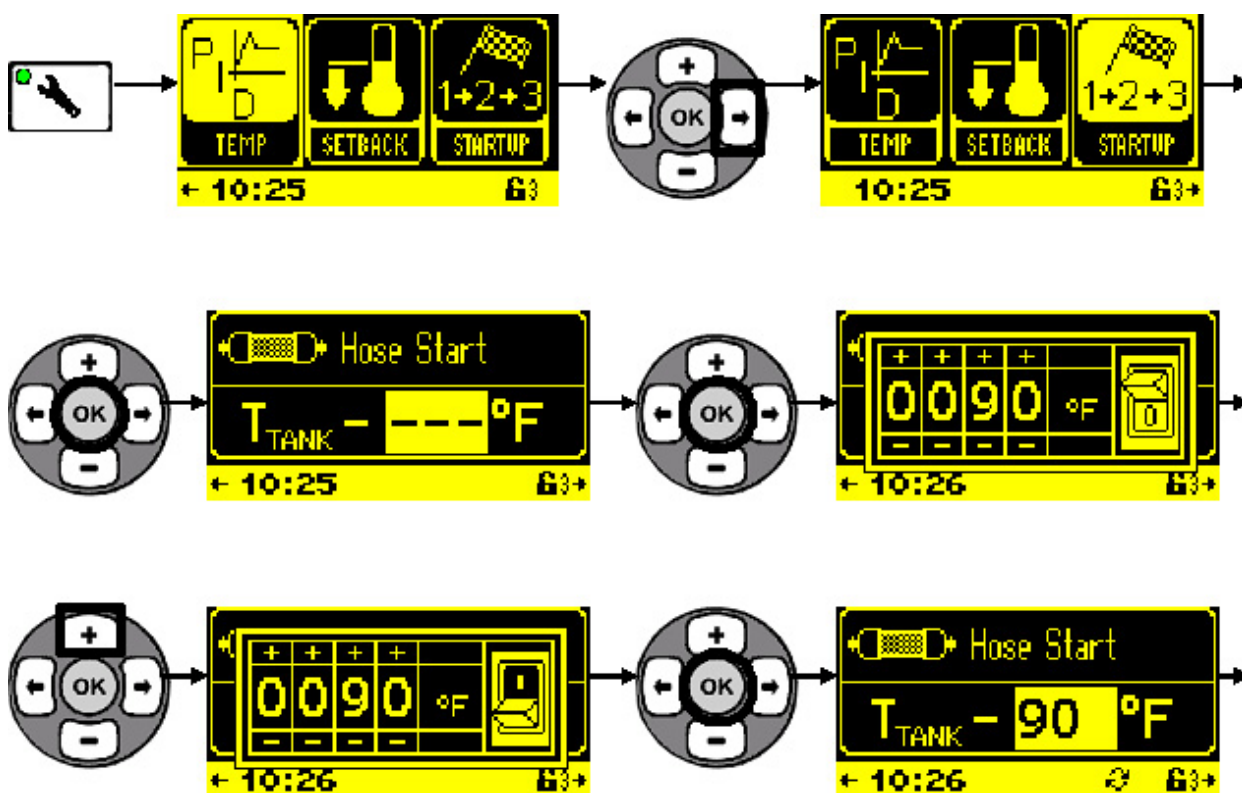
4.22. STARTUP SETUP:

SEQUENTIAL START - HOSE:

The Sequential Start function allows the hoses and the valves (guns) to begin heating after the tank reaches a specified temperature offset below the setpoint temperature. This feature is used to reduce adhesive degradation caused from heating adhesive in the hoses and valves for long periods while waiting for the tank to reach temperature.

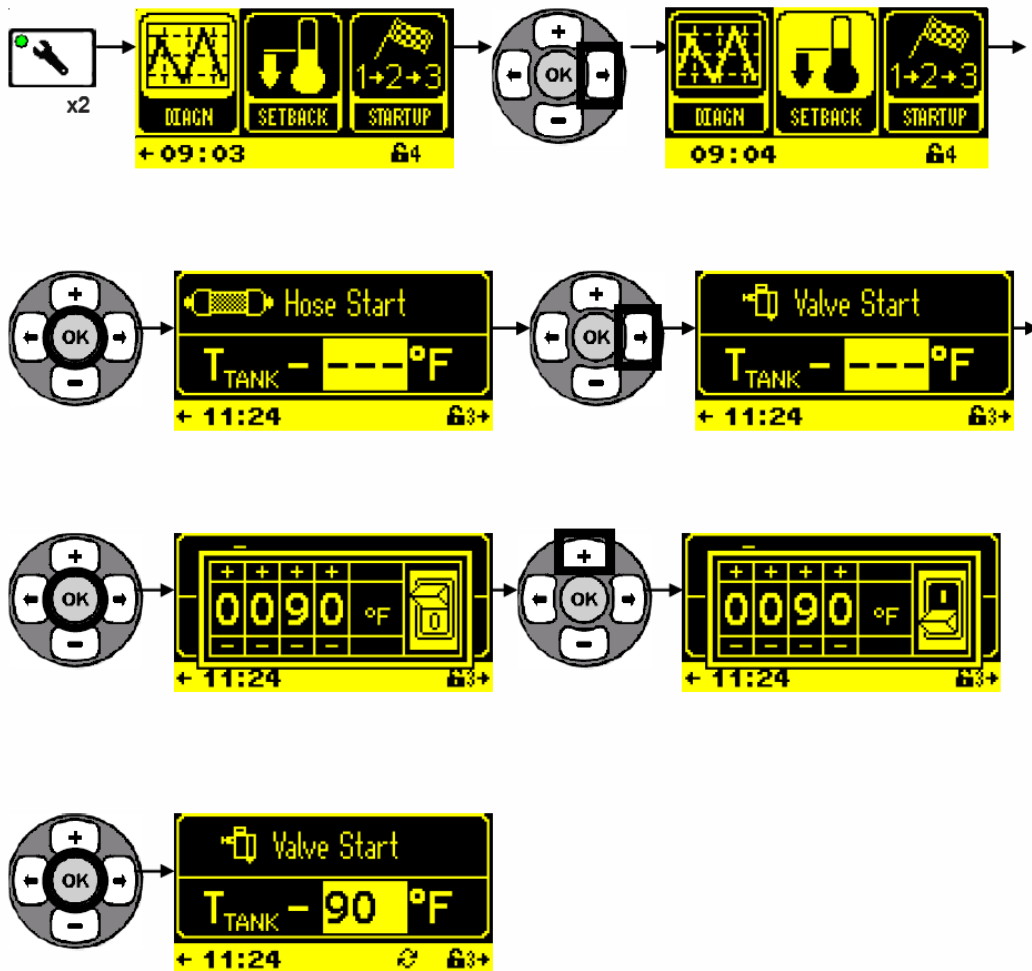
The sequential start range is 0°F to 450°F (0°C to 250°C). The default factory setting is OFF.

This parameter can be accessed in Password Level 2 or higher.



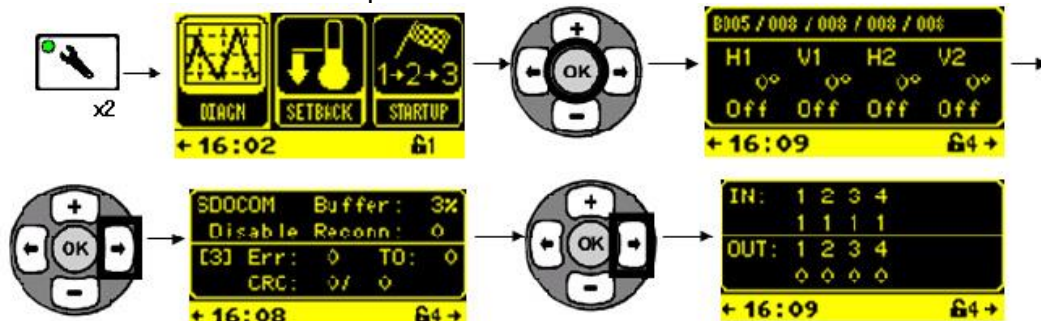
SEQUENTIAL START - GUN:

The Sequential Start function allows the hoses and the valves (guns) to begin heating after the tank reaches a specified temperature offset below the setpoint temperature. This feature is used to reduce adhesive degradation



4.23. DIAGNOSTIC:

The Diagnostics Screen shows the current software version as well as the current temperature and status of each zone.



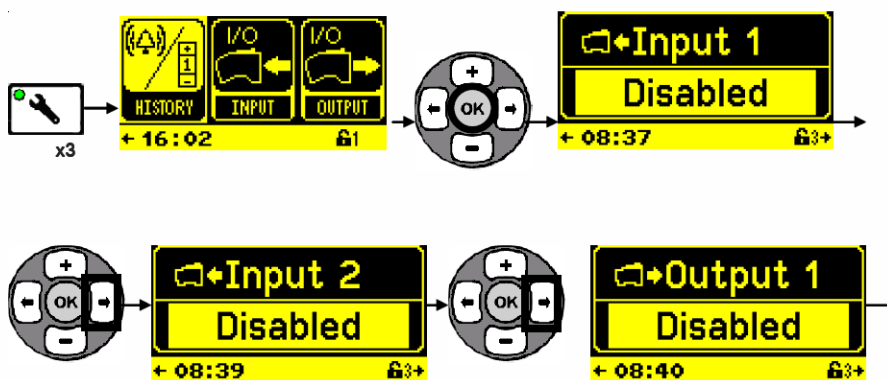
4.24. USERS INPUTS AND OUTPUTS:

There are 4 individual outputs that can be configured to control remote devices as set up by the user. An output relay will turn on when the conditions of the selected feature are met. For example, if Output #1 is programmed for "System Ready", the output relay will energize when the control reaches temperature and is ready to glue. See the chart below for user selectable output features.

There are also 4 individual inputs that can be configured to control something on the hot melt control when the control receives an dry contact input. For example, if Input #3 is programmed for "Pump On/Off", the pump will remain off until input #3 receives a signal for it to turn on. This can be used to remotely control the glue pump.

See "Connections" in Section 4 - Installation for a detailed description of these features.

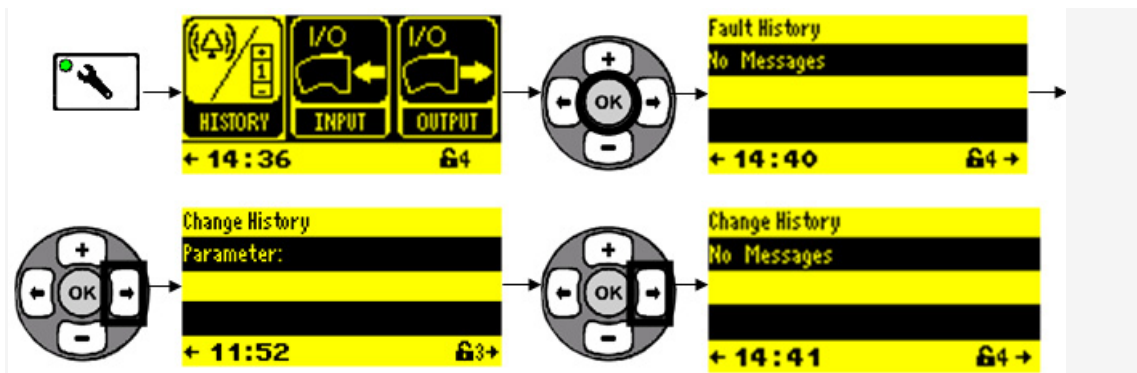
This parameter can be accessed in Password Level 3 or higher.



Input and Output Functions	
Inputs 1-4	Outputs 1-4
Disabled	Disabled
Hose and Gun #1 thru #6 On/Off	Setback On
All Heaters On/Off	Alarm
Pump On/Off	Ready & Pump On
Auto Setback	System Ready
Setback	Power On
	External Level
	Internal Level

4.25. HISTORY:

The Fault History Screen keeps a log of all faults that occur with any zone.
 The Change History Screen keeps a log of all parameter and setting changes.
 The Fault History and the Change History are cleared when the unit is turned off.



4.26. CONFIGURATION:

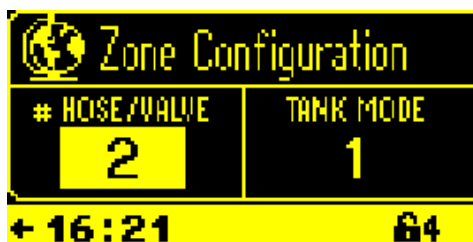
The Configuration Menu of screens allows the user to set up global parameters for the hot melt control. These configurations are shown below.



• ZONE CONFIGURATION:

The Zone Configuration is used to set the control for how many hose/gun pairs are being used by the operator and if 1 or 2 tank zones will be enabled.

This screen will need to be modified if the user purchases the 5/6 Zone Board Option to enable Hose/Valves 5 & 6.





• **AUXILIARY ZONES:**

If so equipped with the full 12 Zone Power Board, there will be circuitry for Zones 15 &16. These are the Auxiliary Zones and need to be enabled on this screen to read and control temperatures. Details and instructions on how to set this up will be included in the documentation with the Hot Melt Control.



• **AUXILIARY I/O:**

When the Auxiliary I/O is set to “Enabled,” auxiliary I/O devices will be activated.

When the Auxiliary I/O is set to “Disabled,” auxiliary I/O devices will be deactivated.

The factory default setting is “Disabled.”

An Auxiliary I/O Board (151xx661) can be ordered separately as an option to allow the operator four more user inputs and four more outputs. Once the board is installed, the Auxiliary I/O must be enabled.

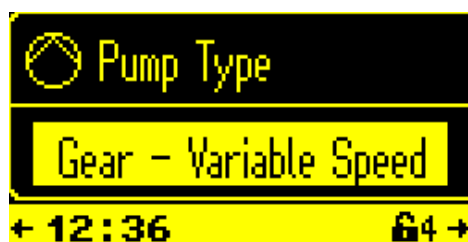
This parameter can be accessed in Password Level 2 or higher (see Appendix A Password Levels).



• **PUMP TYPE:**

For pump type selection, this unit will be configured for Variable Speed Gear Pump or Fixed Speed Gear Pump. Variable Speed can only be chosen if the unit is equipped with a Motor Speed Board, a VFD, and a 3 phase motor.

This setting will be set at the factory before shipment.



• **PATTERN CONTROL:**



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The Pattern Control configuration screen is used to enable or disable the pattern controller option that can be added to the hot melt control. If this option is in the hot melt control, or it is added at a later date, this option needs to be “Enabled”. All supporting documentation for set up and operation of the Valve Driver pattern control will be included with the Valve Driver Option Kit.



- **GRAMAGE ENABLE:**

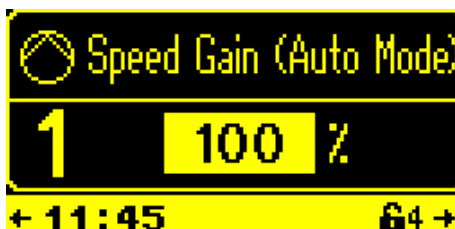
Gramage is ONLY enabled in coating applications where the user wants the unit automatically calculate the pump speed to achieve a desired coat weight.

It requires the user to enter the Pump Displacement (cc), Adhesive Density (gram/cc), speed reference values if tach mode is used, coating width (mm), and the desired coating weight (gram/square meter). See Gramage Setup, in this section, for more information.



- **PUMP SETUP MENU:**

Available with Variable Speed units only. The Speed Gain value is adjustable from 0-200%. It scales the pump speed when using Automatic Pump Mode, when the pump speed is determined by the Auto Speed Input.



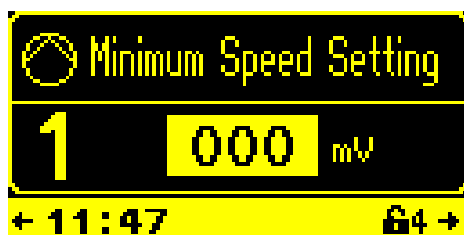
Available with Variable Speed units only. The Creep Speed Setting is the speed that the pump will run when the Auto Speed Input is below the Minimum Speed Setting. This setting is generally used to maintain pressure while the production line is stopped.



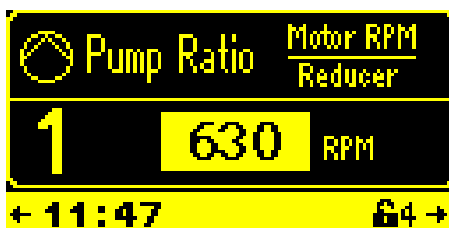
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Available with Variable Speed units only. The Minimum Speed Setting determines the minimum line speed input that you want the pump to stop turning or turn the creep speed setting. The units are in either milli-volts or ft/ min depending on the Auto Speed Input type (Tach or Encoder).



The Pump Ratio is generally set at the factory. It is the motor RPM divided by the reducer size (pump rate when the motor runs at 100%). It is used to calculate and display the actual speed of the pump on the Pump Status Screens.



Available with Variable Speed units only. The Auto Speed Input setting is the type of linear speed input used to adjust the pump speed. It can be set to Tach 0-10V, Tach 0-2.8V, or Encoder. See the Motor Speed Board connections (Section 4) to find the input connectors for the Auto Speed Input.

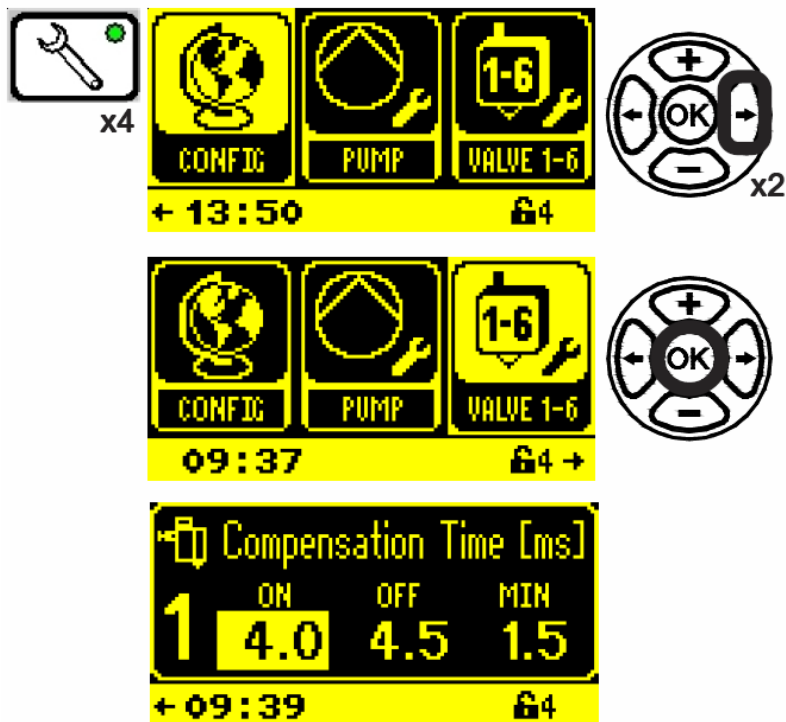




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4.27. VALVE SETUP MENU (PATTERN CONTROL ONLY):


There are 4 individual outputs that can be configured to control remote devices as set up by the user. An output relay will turn on when the



1. Set up the Valve Compensation Times: Ton, Toff and Tmin.
 - a. Use left/right keys to select time.
 - b. Use up/down keys to change values.



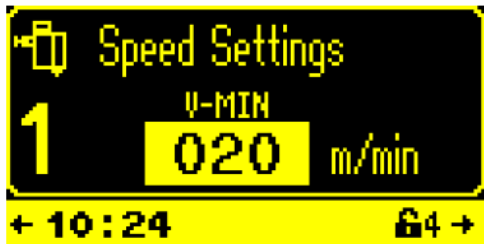
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 Increasing the "ON" Compensation Time will move the pattern start forward.

Increasing the "OFF" Compensation Time will make the glue line shorter.

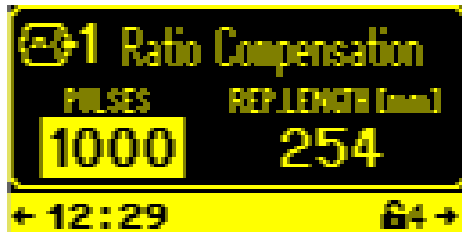
Tmin is the Minimum Valve Activation Time.

Scroll right to set the Minimum Product Speed; Vmin; the minimum speed for this valve to operate.

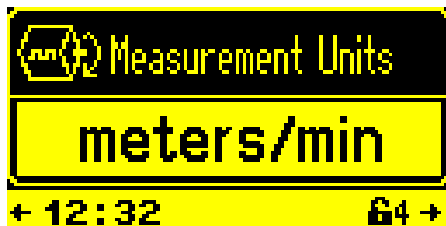


4.28. ENCODER SETUP MENU:

If an Encoder is used for the Auto Speed Input, then the Encoder parameters need to be set in this menu. Enter the Pulses per Revolution of the encoder and the encoder when circumference in this screen.



The measurement units for the encoder are selected in this screen. This is only available when the encoder is used.

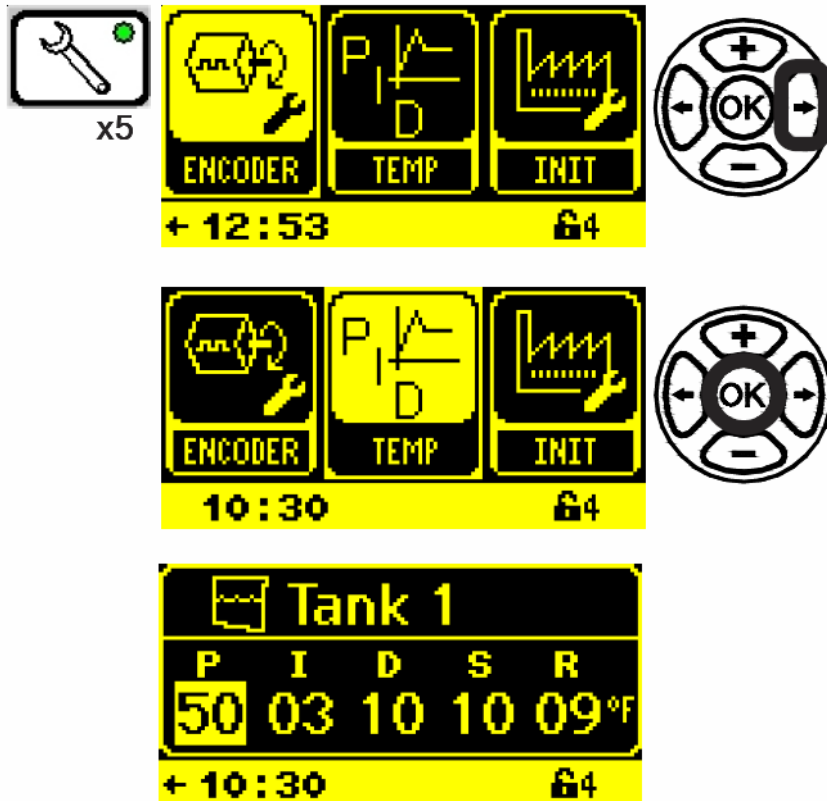




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4.29. PID SETUP MENU:

• **PID SETTINGS:**



The PID settings are factory set for each zone. The factory PID settings complement Valco Melton's Tank, Hose, and Gun watt densities (Tank 1 screen shown. Use left/right keys to access other screens).

Caution!



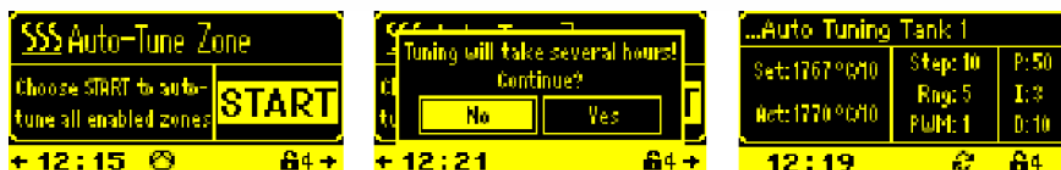
Changing these settings is not recommended. Changes should be made only by authorized ValcoMelton personnel.

In the case where a special temperature zone is used (example: coating head) and its temperature does not regulate properly, the Auto Tune function can be used to set the PID settings.

• **AUTOTUNE FEATURE:**

The Auto Tune feature will optimize the PID settings for each zone that is enabled when the Auto Tune is started. The Auto Tune feature can take up to eight hours to complete and the power must not be turned off during this process. It is recommended to only enable zones that need their PID values adjusted to reduce the time taken for tuning.

The AutoTune Feature is located in the PID Screen and can ONLY be accomplished under the password Level 3!

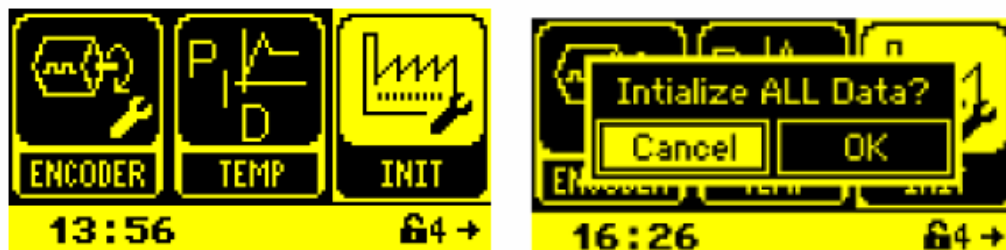


i Changing out gun/hose pairs or moving a gun or hose from it's original AutoTune position, will require that AutoTune be run again to optimize the PID settings again.

The Auto Tune feature will optimize the PID settings for each zone that is

4.30. INITIALIZE SCREEN:

The Init or Initialize Screen is used to reset ALL of the control parameters back to the factory settings. When “OK” is selected to Initialize ALL Data, the set up wizard will take the user through the control initialization to reconfigure the hot melt control as if it were a brand new installation. From this point, the user will be able to select number of hose / gun pairs, piston or gear pump, etc.



4.31. RESTORING FACTORY DEFAULT SETTING:

To restore the factory default settings, follow these steps:

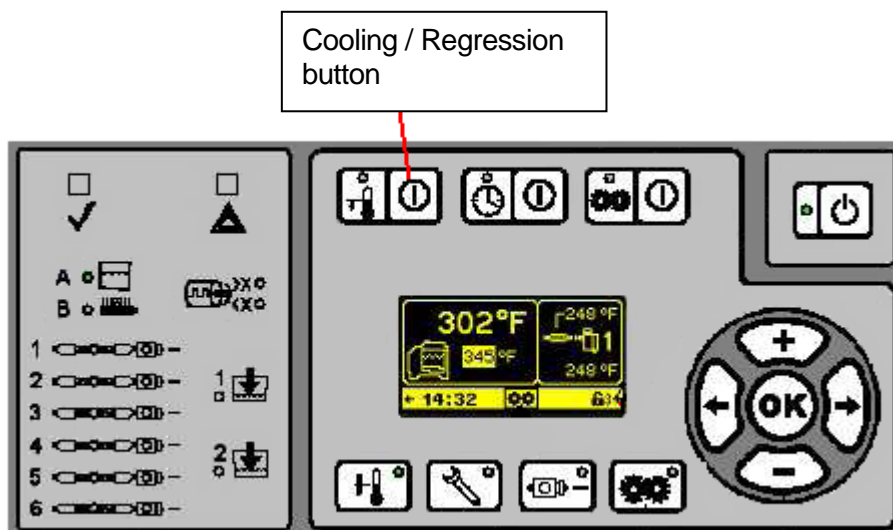
Caution!



Restoring the factory default settings will permanently erase changes made to any parameter or setting!

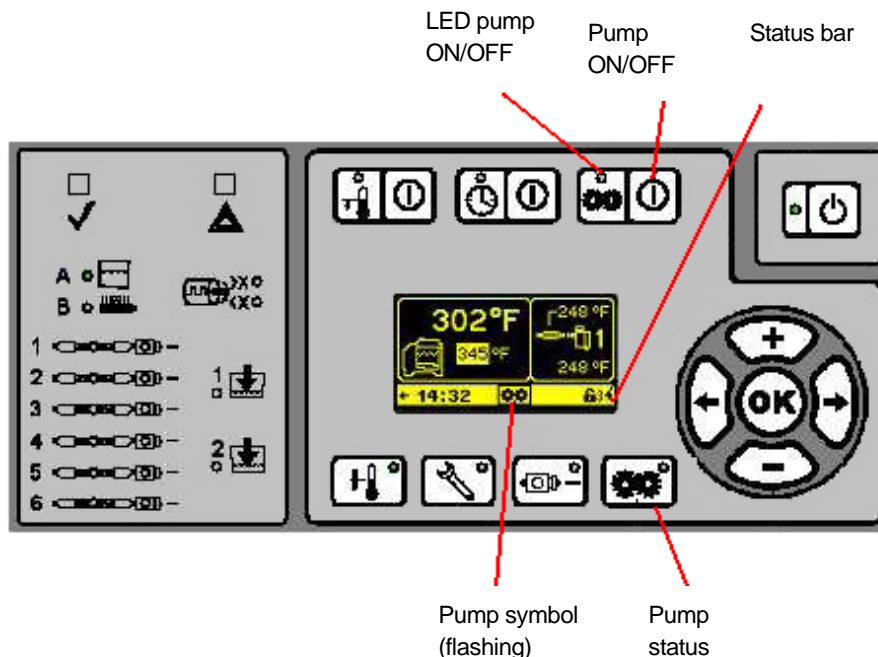
1. Switch off power to the unit.
2. Power the unit back up while pressing and holding the Setup Button and the OK Button on the keypad. The buttons can be released once the start-up screen appears.

4.32. COOLING / REGRESSION BUTTON:



In addition to work shifts and rest, we can use the Cooling / Regression button to send the unit to cool down manually. To exit this mode, press the button again (LED will switch off). The delay time and temperature can be adjusted manually using the left / right arrow keys to access to the setting screens of temperature and time.

4.33. PUMP MENU:



Pump ON/OFF:

With the pump button ON/OFF it's possible to enable the pump(s). It can be adjusted to start automatically the pump when the system is ready. Note that all temperatures should reach the set temperature and the "Ready System" LED should be illuminated green to start the pump.

Pump status key:

Fixed speed system: The pump status key give us access to the screen which shows the speed (RPM) of the pump and each pump can be enabled individually.

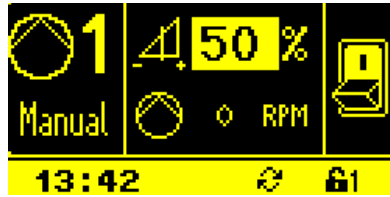


Variable speed system: in a variable speed system, the pump status menu allows us to choose the operating mode of the pump, manual or



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automatically. Also allows us to see the value of the input speed of the pump, the pump RPMs and individually enable the pump.



In Manual mode, it's possible to change the pump speed from 0 to 100%. Also, it's possible to see the speed of the pump and individually enable the pump.



In Automatic mode it's possible to see the automatic speed input. These units will be in volts or ft / min depending on the speed input used (tachometer or encoder). It's possible to see the speed of the pump and individually enable the pump.



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4.34. GRAMAGE FEATURE:

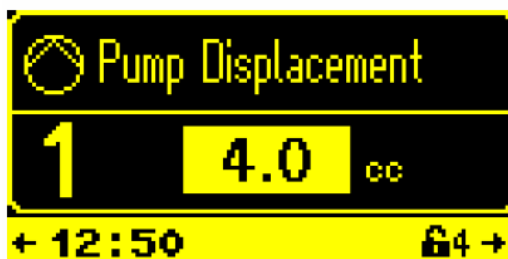
The Gramage Feature is ONLY enabled in coating applications where the user wants the unit automatically calculate the pump speed to achieve a desired coat weight. If this feature is used then the following parameters must be set.



The width of the coating application in millimeters. Press the pump status Key and scroll right to get this setting.



The desired Application Weight (Gramage) in grams per square meter for the application. Press the pump Status Key and scroll right to get to this setting.



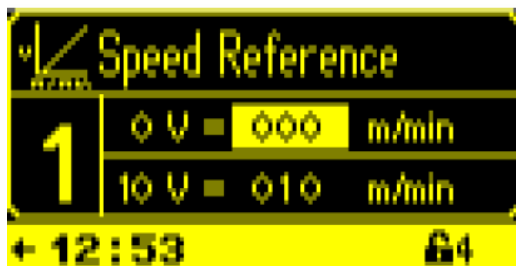
The Pump Displacement in cubic centimetres. Enter the Pump Setup Menu from the Tools Key, then scroll right to access this screen.



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The Adhesive Density in grams per cubic centimetre. Enter the Pump Setup Menu from the Tools Key, then scroll right to access this screen.



If tach mode is used as the auto speed input for gramage mode, then these speed reference values must be entered for the control to know how the 0-10V input translates to an actual speed in meters per minute.

Enter the Pump Setup Menu from the Tools Key, then scroll right to access this screen.



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4.35. PASSWORD LEVELS:

The system has multiple levels of security to protect unauthorised Access to important information. Security levels are activated with different PIN Codes in the settings menu. The following list shows the different levels with their characteristics and PIN Codes.

Level 1- Operator (no PIN Code required)

- Can view most information with only basic editing available.
- Can adjust temperature setpoints.
- Can switch on/off different heating zones.

Level 2 – Advanced Operator (PIN Code: 1234)

- Can access all level 1 features.
- Can access most system setup parameters..
- Can access, cooling/regression, start, historic, and menu diagnosis.

Level 3 - Supervisor (PIN Code: 6550)

- Can access all levels 1 y 2 features.
- Can access to the settings display of the maximum temperature parameters in the system configuration menu.
- Can access to peripheral menus (Inputs/Outputs) and to the temperature controls (PID).

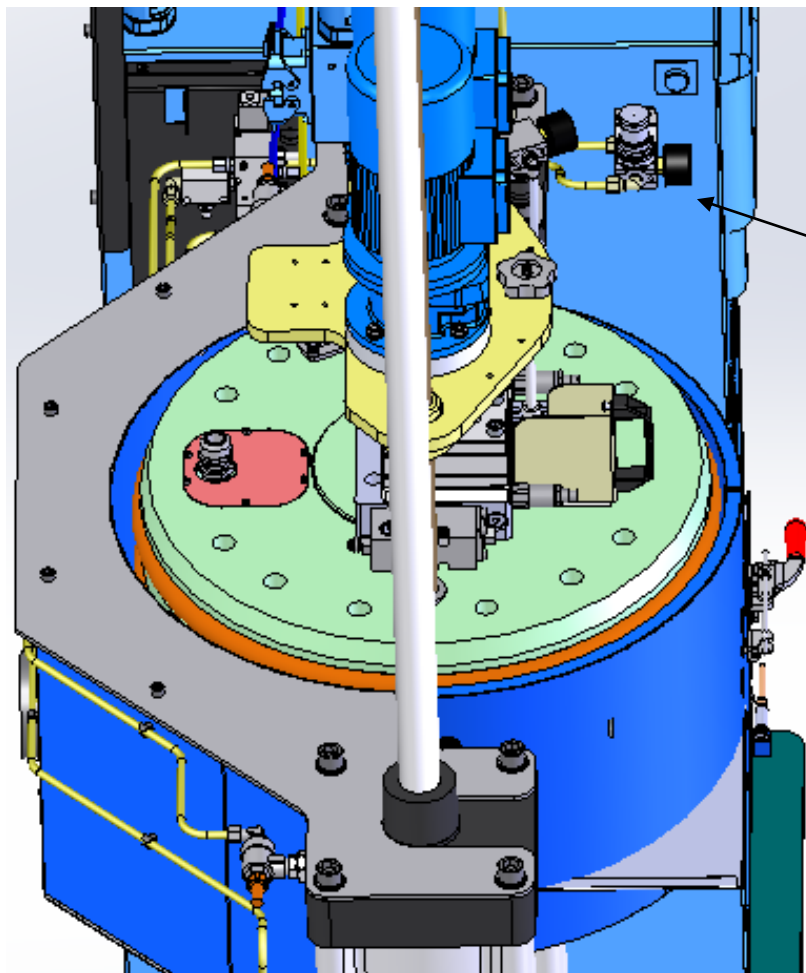
4.36. PNEUMATIC ADJUSTMENT:



The circuit controlling the vertical movement of the melt plate, and the pressure with which it pushes the melted adhesive, can be adjusted. The injection pressure of air into the drum is factory set and should not be changed.

NOTE:

The melt plate may oscillate slightly when in movement. This can be solved by increasing the operating pressure.



Cylinders input regulator

Cylinders pressure of work adjustment

The minimum pressure of operation is 3 bar. The control is achieved with a regulator.



If the hose issues air and/or the pump cavitates, this is because the pressure of the melt plate is too low. Increase operating pressure until the problem is solved.

Piston movement adjustment:



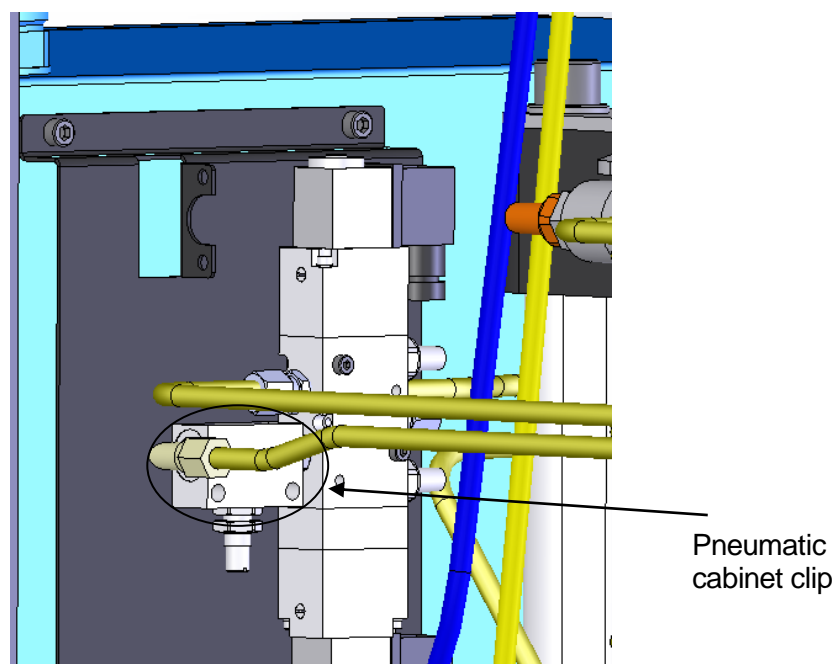
If one of the pistons moves faster than the other when the plate is switched on, immediately set the plate movement selector to 0 and adjust the cylinders. Before, baiance the structure by pushing the higher piston inwards.

This adjustment will be made during an upward movement:

Upward movement adjustment:



- 1 Adjust the air pressure to 0 bar.
- 2 Turn the position selector as indicated by the ↑ arrow.
- 3 Press the two ON buttons at the same time.
- 4 Slowly increase the pressure until the melt plate starts to move upwards.
- 5 If the left-hand piston rises at a faster speed, slowly close pneumatic cabinet clip until both pistons are rising at the same speed.





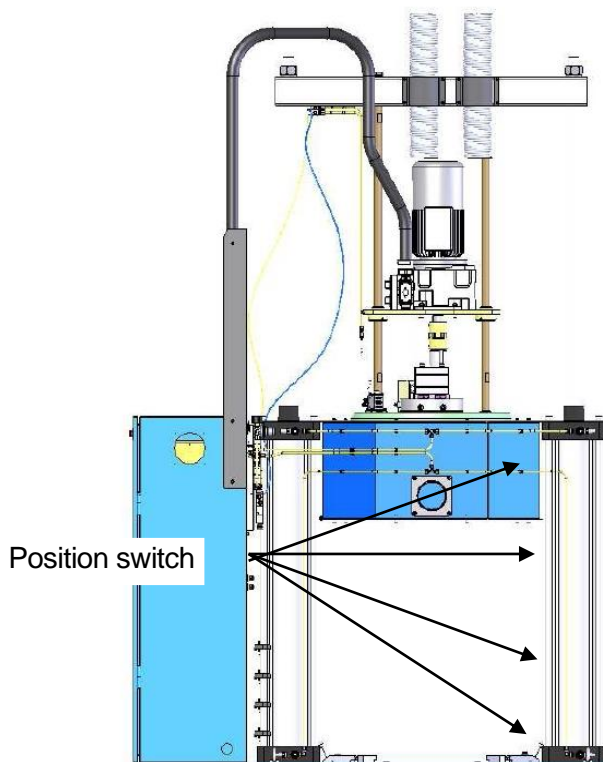
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4.37. MELT PLATE POSITION ADJUSTMENT:

The position of the melt plate is controlled by four position micro-switches connected to a guide:

- Upper stop. It is activated when the plate reaches its maximum height (non-adjustable).
- Drum entry. It is activated when the melt plate has entered the drum. It can be adjusted according to the type of drum.
- Minimum level. When this level is reached, the drum needs to be changed. It can be adjusted according to consumption.
- Lower stop. It is activated when the plate reaches the bottom of the drum. It can be adjusted according to the type of drum.

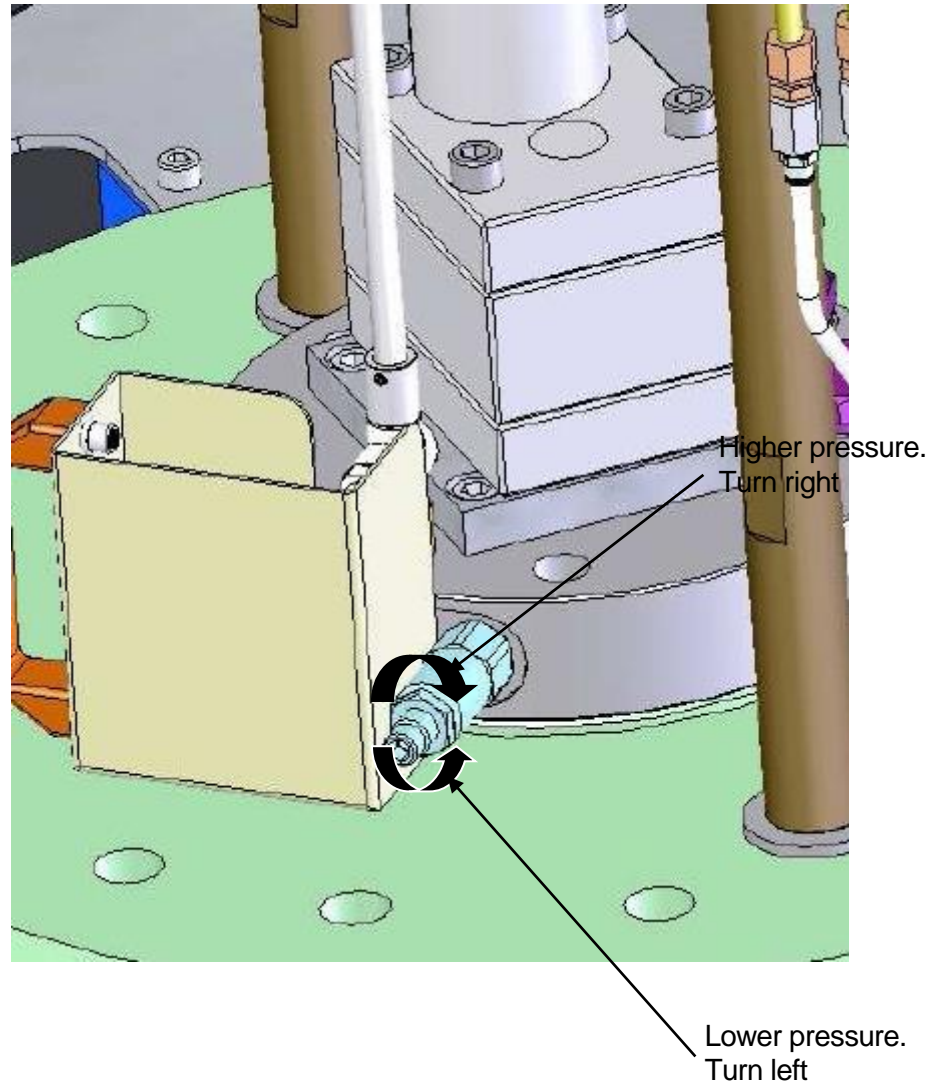
To adjust the position of the melt plate, loosen the screws and move the position switch to the desired position.



4.38. PUMP PRESSURE ADJUSTMENT:



The pump pressure will vary depending on the application's requirements. It is adjusted by a nut on the top of the distributor.





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CHAPTER 5 OPERATION



WARNING: This equipment should only be used by qualified personnel who understand all the procedures and are familiar with the necessary safety measures.

5.1. INTRODUCTION:



This chapter explains how to use the equipment.

First of all, make sure that the person operating the machine is duly protected and that all safety instructions are followed. All safety equipment should be in perfect condition.

5.2. UNIT INSTALLATION AND START-UP:



Preparation:

- 1 Turn the direction selector as indicated by the ↑ arrow and press the two ON buttons at the same time.
- 2 Set the drum in position and secure to the base plate anchoring points.
- 3 Turn the direction selector as indicated by the ↓ arrow.
- 4 Press the two ON buttons at the same time. Keep them pressed until the melt plate enters the drum.
- 5 Perform the bleed process (see next page)
- 6 Set the motor to either the Automatic or Manual operating mode.
- 7 Check that the equipment is correctly adjusted. Readjust if necessary (see Chapter 4)
- 8 The system is ready to run when the ON signal is received.
- 9 The system has two terminals in the main electric cabinet for external on/off signals.



These terminals are factory short-circuited.

The ON order is given by a potential-free contact connecting the two terminals. When the contact is on, the pump will start to run if:

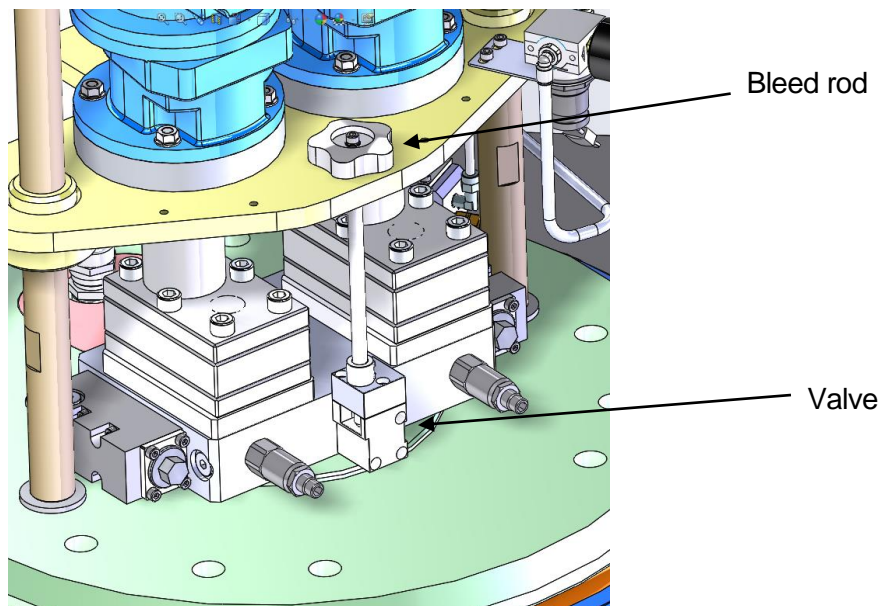
- The equipment is at the correct temperature, the selector is set to manual position and a speed other than zero has been selected.
- The equipment is at the correct temperature, motor control is set to automatic, a speed other than zero has been selected and there is a value in the external line speed 0-5 V input.

There is also a normally open contact and a normally closed contact, both potential-free, to inform the external systems that the equipment is at the correct temperature (see electric diagrams)

The unit will operate automatically until it is either switched off or the drum is emptied.

If the drum is emptied, the unit signals that the drum needs to be changed.

Bleed process:



Make sure the equipment is at operating temperature before opening the bleed valves.



- 1 Place a container to collect the glue.
- 2 Set the motor selector to Manual operation.
- 3 Open bleed valve and wait for the hot melt to come out.
- 4 As soon as it does, close bleed valve 1.
- 5 Turn the motor selector to 0.

Now there is no air in the adhesive circuit.



The pump only works when the position selector is set to ↓ and the equipment has reached the minimum operating temperature.



If the adhesive used reacts to air (PUR, for instance), cover bleed valves 1 and 2 with high-temperature lubricant to prevent air from entering, degrading and blocking them.

5.3 DRUM CHANGE:



Change the drum as follows:

- 1 Turn the position selector as indicated by the ↑ arrow.
- 2 Press the two ON buttons at the same time.
- 3 The plate moves upwards. Air is introduced in the drum to prevent a vacuum from forming.
- 4 When the plate reaches the top, the system shuts down and the drum can be changed.
- 5 Position the tray to collect drops of glue and protect against burns.
- 6 Change the drum and repeat procedure 5.2 “Unit installation and start-up”

5.4. SHUT-DOWNS:

There are two possible types of shut-down:

Pump shut-down:

If you wish the pump to shut down, set the motor selector to 0.

The temperature control will maintain the machine’s temperature.



If the pump is to be shut down for some time, we recommend switching on the Low Maintenance function.

Total shut-down:

To shut down the entire machine, switch off at the main switch.



If the machine is to be shut down for some time, we recommend removing the drum and cleaning the equipment. Leave the melt plate in its lowest position.

Daily procedure:



At the end of the day, before the machine is switched off, bleed the equipment following the instructions provided in the “Bleed process” section (see pages 52-53)



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CHAPTER 6 MAINTENANCE



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WARNING: The maintenance operations described in this chapter should only be performed by qualified personnel understanding the processes and familiar with the safety measures involved.

6.1. INTRODUCTION:

This chapter contains the procedures involved in the maintenance of the follower plate. These maintenance procedures guarantee safe operations and increase the life of the follower plate. Before starting a maintenance operation, carefully read chapter 1 Safety.



First of all, make sure that you are duly protected and follow all pertinent safety measures:

- | |
|---|
| <ul style="list-style-type: none"> 1º Switch off the air at the mains. 2º Switch off the main switch. 3º Lock the main switch in place. 4º Make sure that the power is off. 5º Follow all applicable safety standards. |
|---|

6.2. MAINTENANCE RECOMMENDATIONS:

The following table shows the frequency with which maintenance operations should be performed:

Frequency	Maintenance
Daily	Clean the outer surface of the unit
	Inspect all the electric, pneumatic and hydraulic connections. Replace or repair when necessary
	Check the condition of the melt plate gasket. Make sure it is free from glue
	Check the condition of the position micro-switches. They should be clean and free from glue.
	Bleed the air filter
	Check the condition of the pneumatic cylinders and the drum melter structure
Weekly	Clean the motor ventilation cover
When necessary	Change the air regulator filter

6.3. MAINTENANCE PROCESSES:

Cleaning the equipment



Vacuum the dust or glue remains or remove with a soft cloth, especially from the distributor, bleed valves and melt plate.

After bleeding, clean the distributor to prevent glue from entering the electric connection box.



Clean the control panel periodically with a soft cloth. Do not use solvents which could rust the controls.

Use a soft cloth to remove dust and glue remains from the position micro-switches



If you use a cleaning agent, make sure that it is compatible with the adhesive being employed.

In case of doubt, contact the glue manufacturer.

Motor:

Remove dust from the motor ventilation cover with a cloth.

Bleeding the air filter:

Press the button at the bottom of the air filter.

The pneumatic system will soil the filter; change whenever necessary.

Melt plate:



Check that the melt plate gasket is in good condition; if not, change it (see 8.5)

If the melt plate is soiled with glue, clean with a cloth or a cleaning agent to prevent adhesive from entering the electric connection box.

The fins of the melt plate radiator must be cleaned with a cloth once the drum is removed.

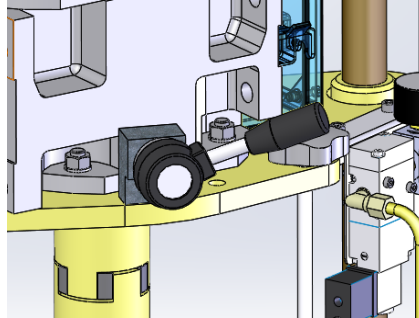


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Cleaning tank:

For cleaning the adhesive circuit it's necessary to do the next steps:

1. The equipment must be at the operating temperature (this temperature depends on the cleaning product).
2. Turn the handle shown on the next picture. Then the pump will take the fluid of the cleaning tank.



3. Put the pump on until the cleaning product fill the system.



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CHAPTER 7 EQUIPMENT REPAIR GUIDE



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WARNING: The maintenance operations described in this chapter should only be performed by qualified personnel understanding the processes and familiar with the safety measures involved.

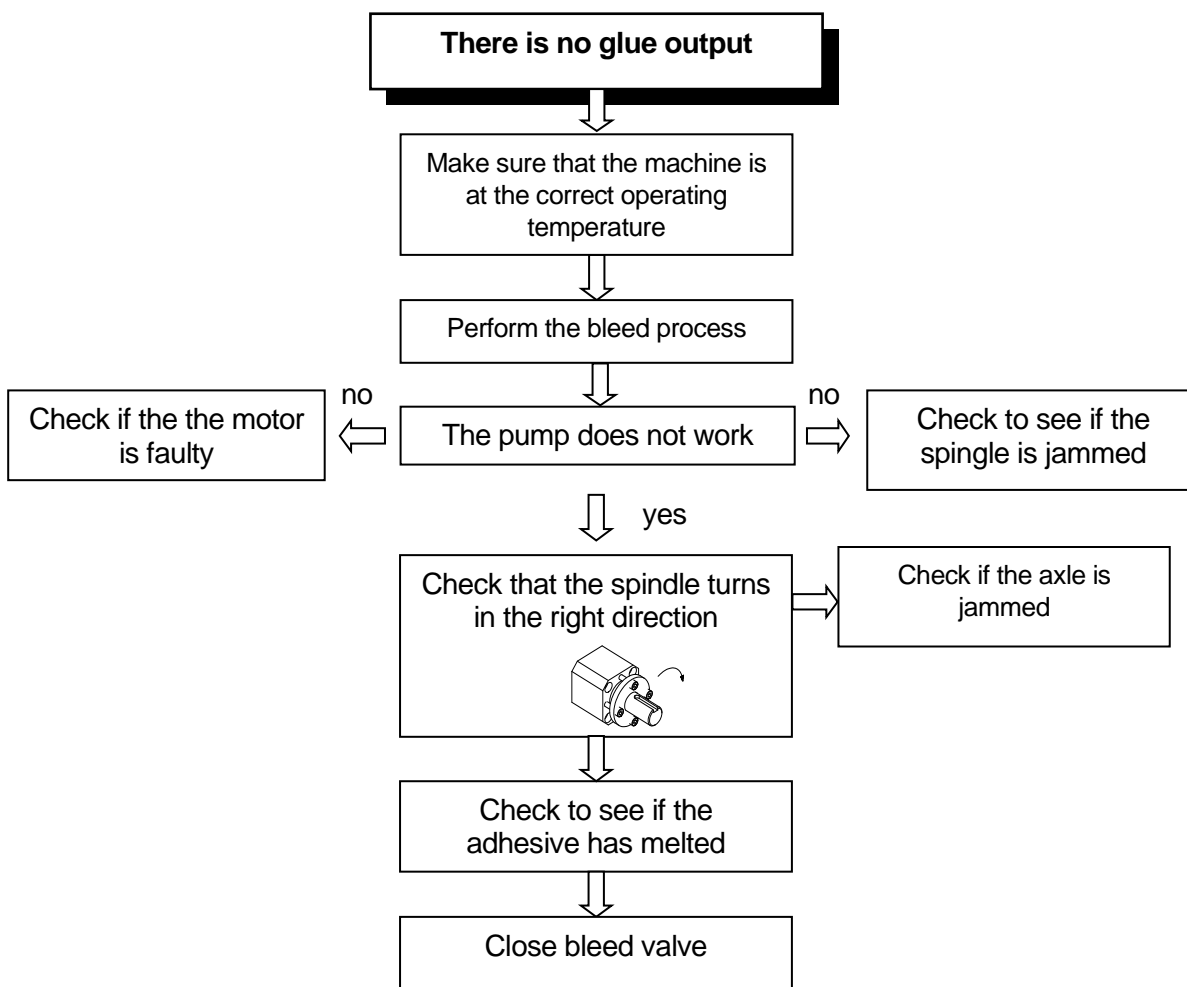
7.1. INTRODUCTION:

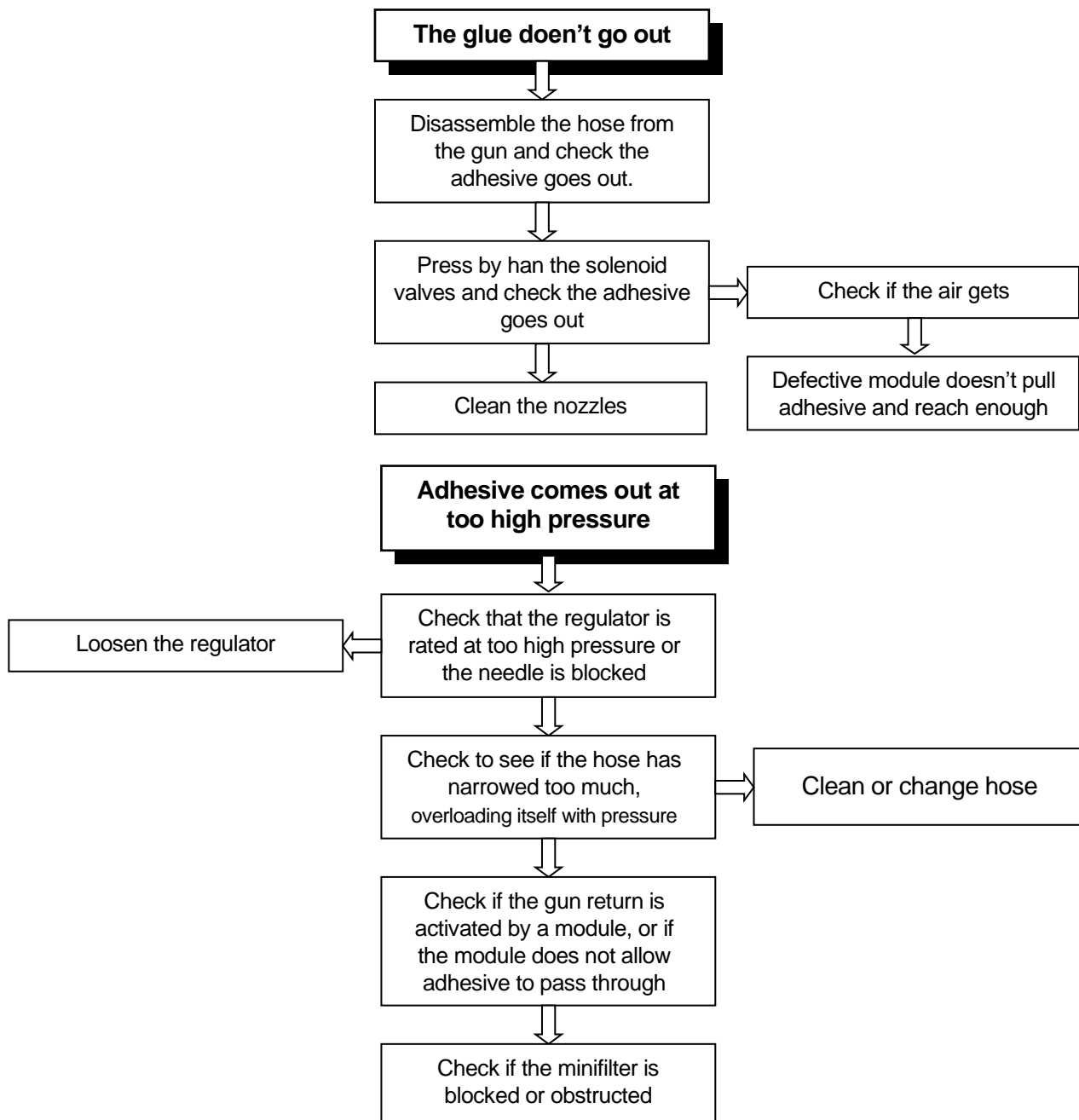
This chapter refers to the most common faults in your equipment.

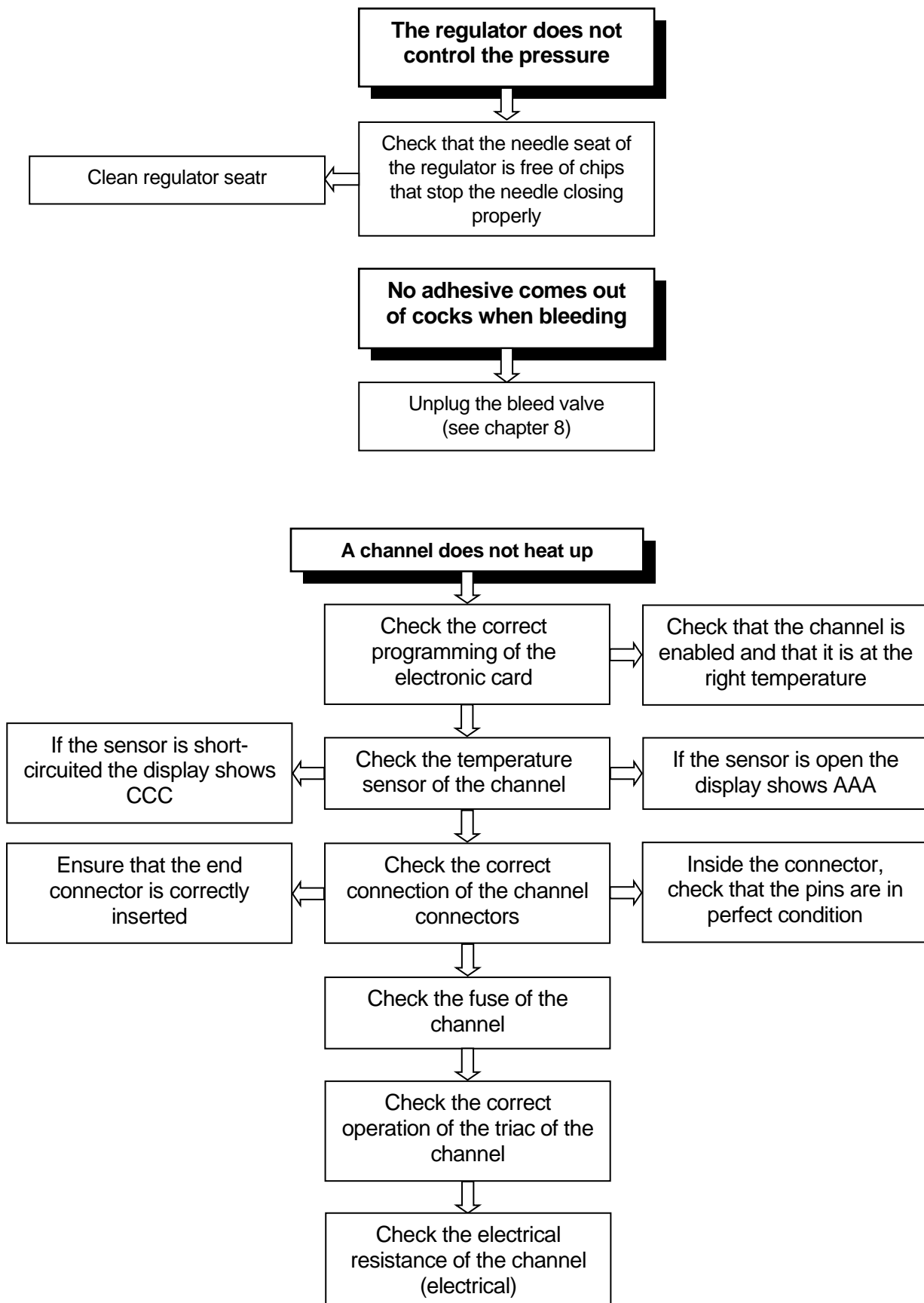
Breakdowns occur when the flow of glue is reduced or stops, or the alert system informs of a fault. Try to solve the problem with the help of this manual.

If the problem cannot be solved with the information provided here, contact your Melton representative.

7.2. MECHANICAL FAULTS:



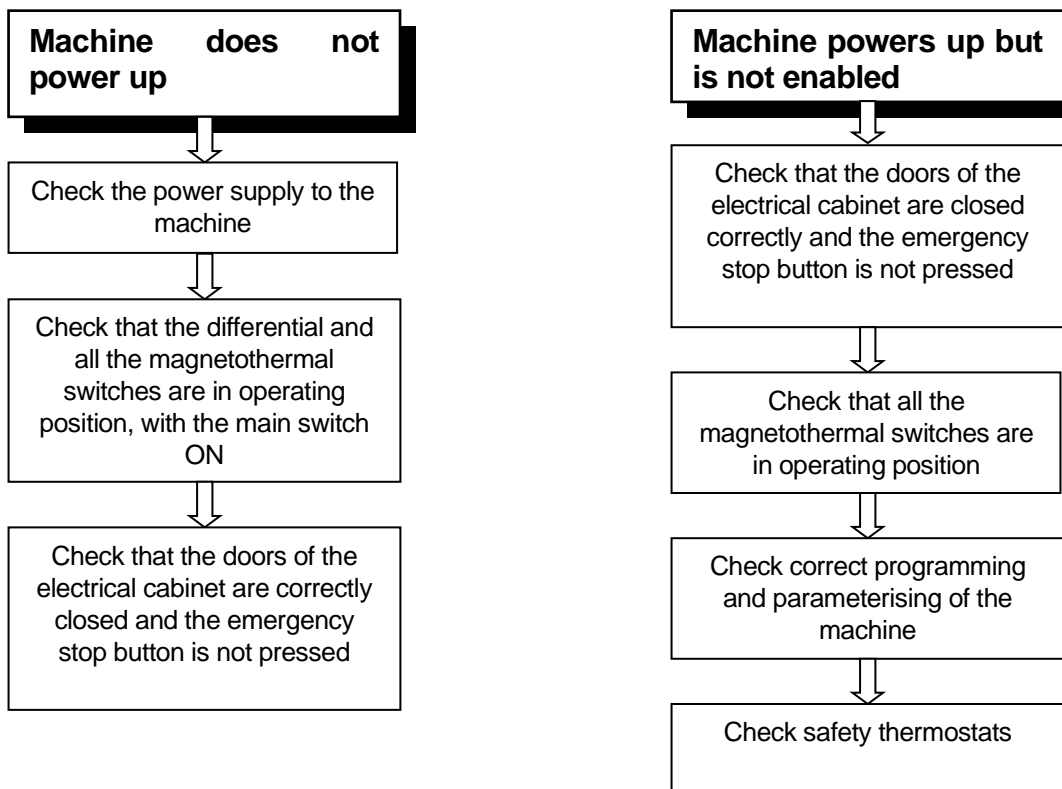






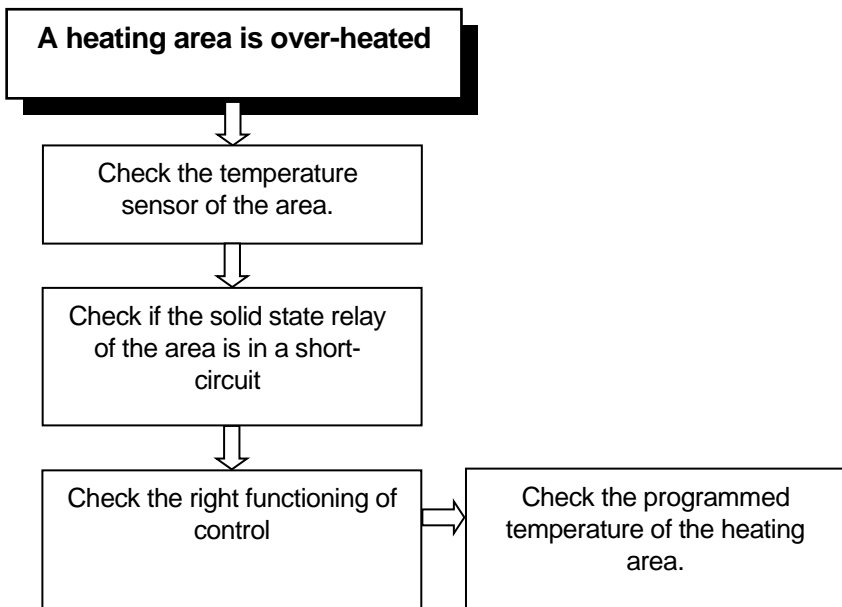
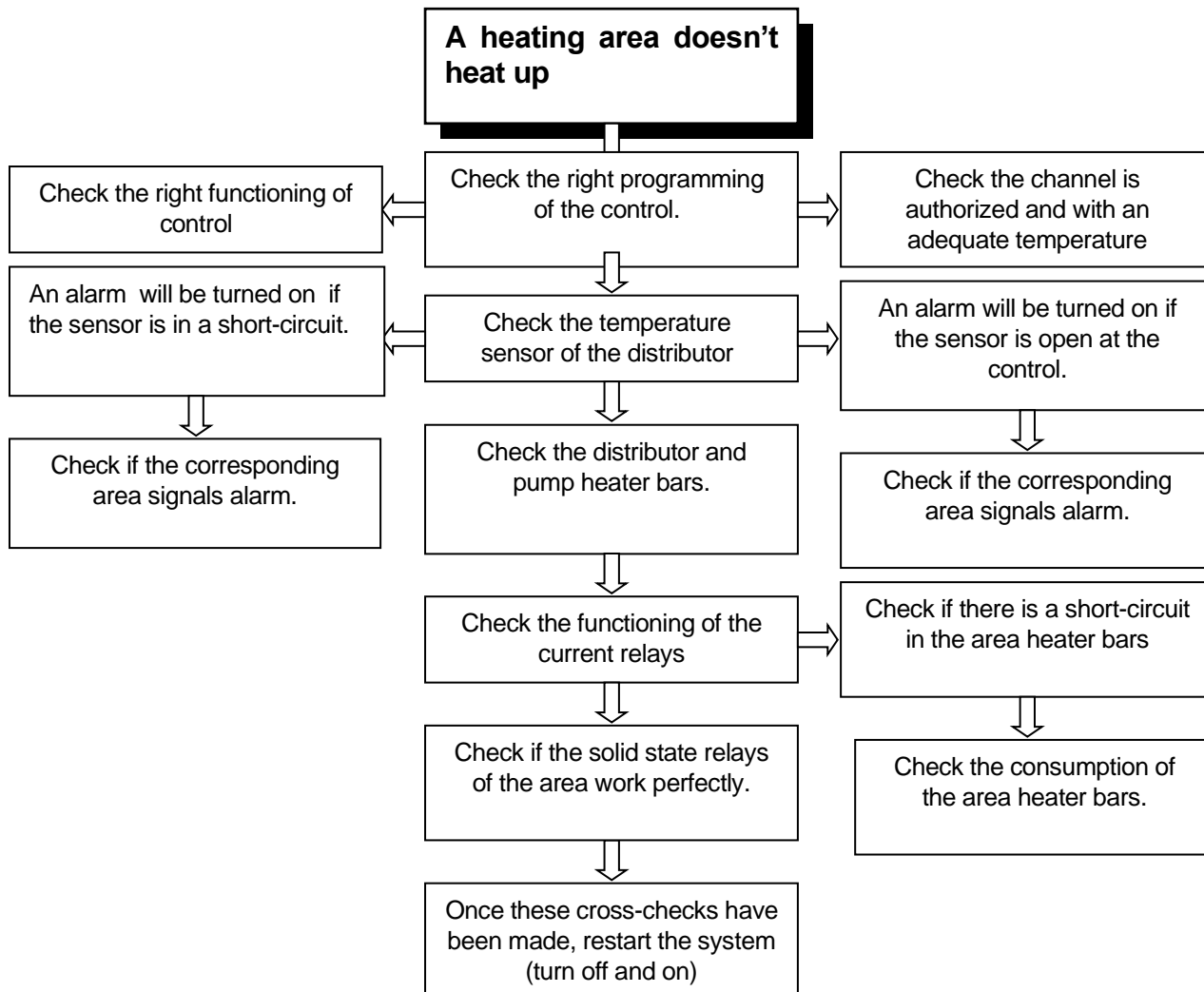
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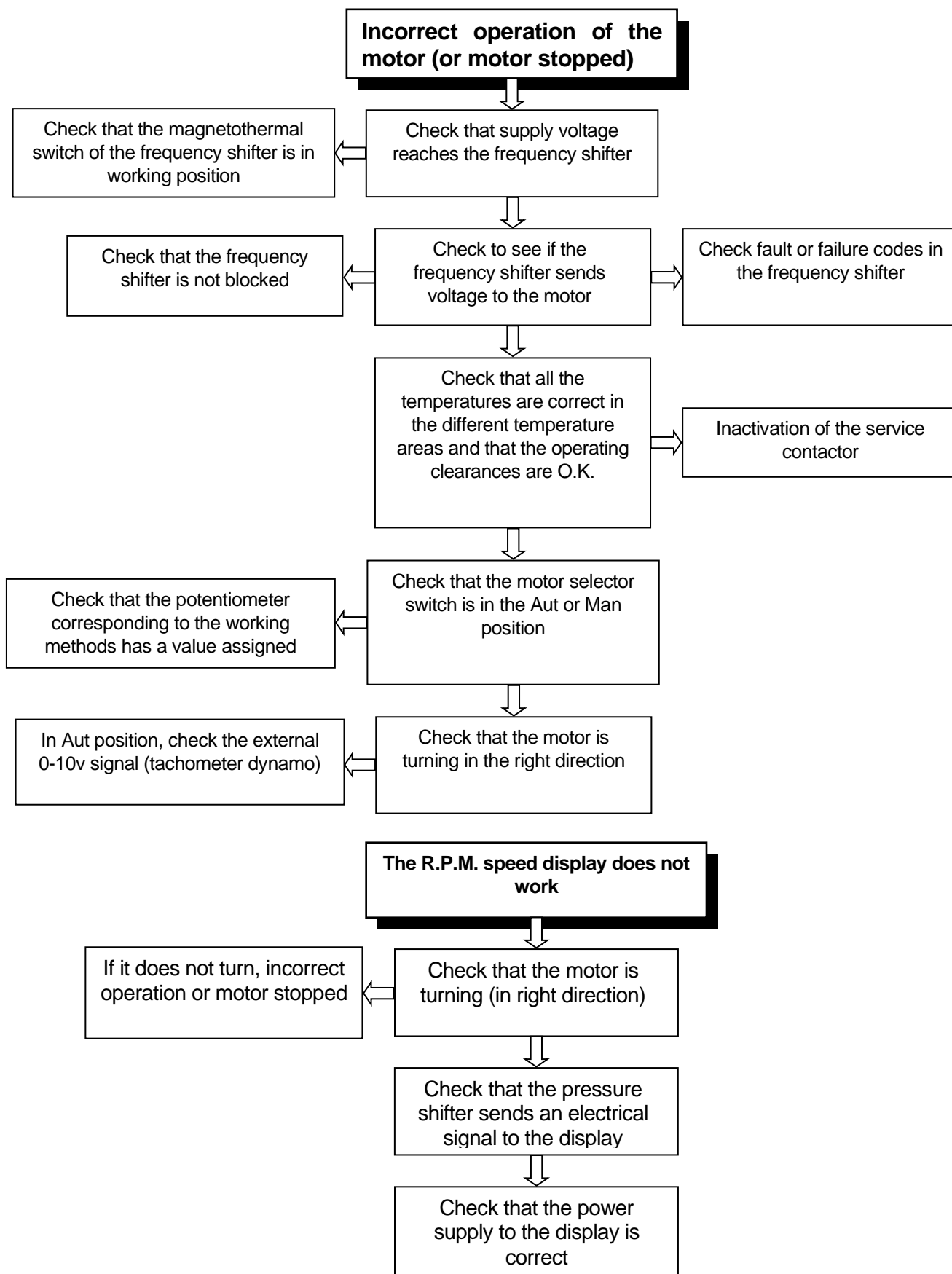
7.3. ELECTRICAL FAULTS:





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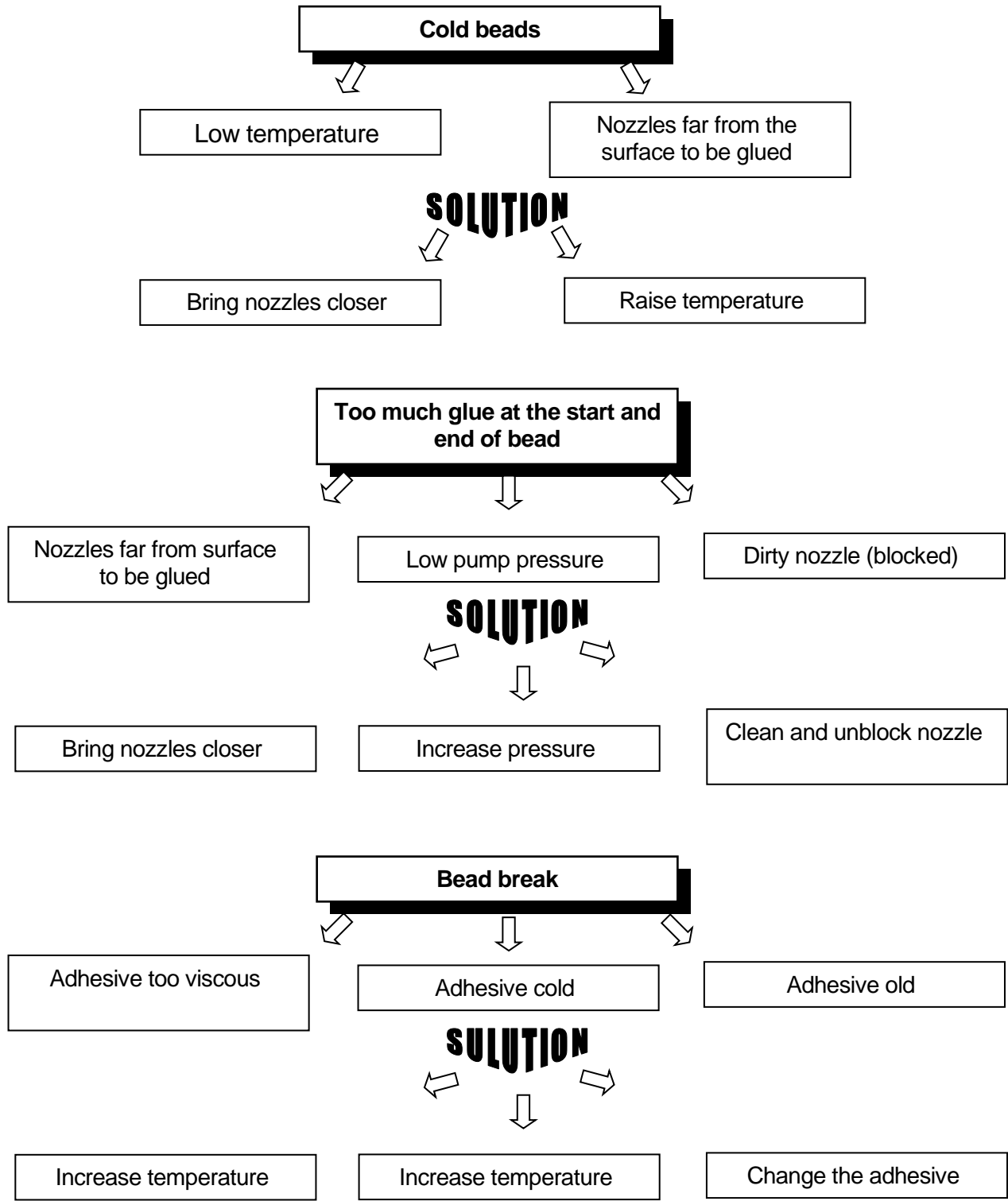






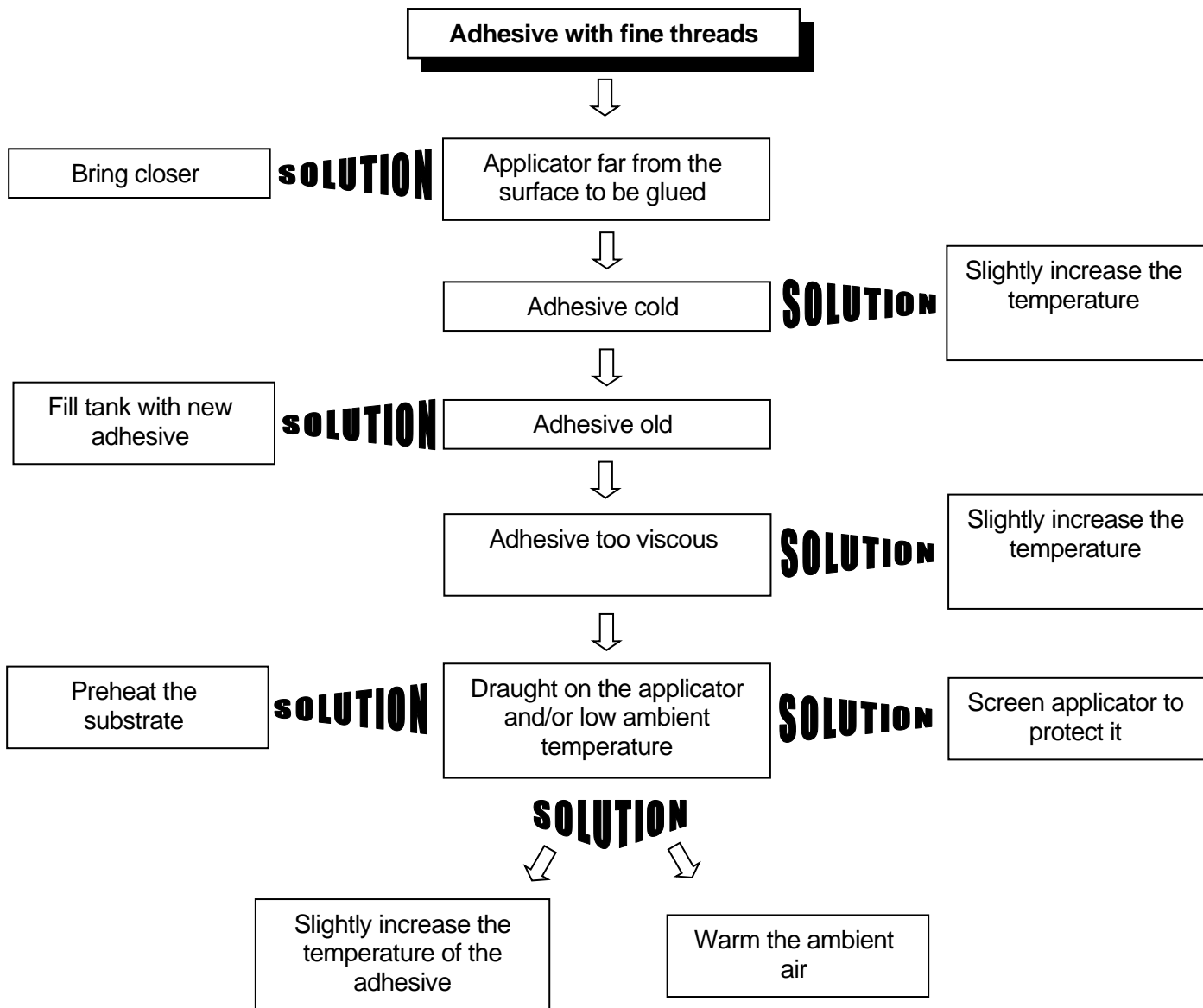
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7.4. ADHESIVE APPLICATION PROBLEMS:





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Drops of adhesive in the applicator nozzle

Hole blocked and/or seat worn or dirty

Opening of obturators not correctly adjusted

Incorrect air pressure to obturator drive valves

SOLUTION

Clean and/or replace dirty and/or worn parts

Regulate the opening of the obturators

Adjust air pressure

Frequent obstruction of nozzles

Rinse the system

SOLUTION

Increase in solids

SOLUTION

Clean filters

SOLUTION

Change type of adhesive

Reduce temperature

Too much adhesive flow

Excessive pump speed

Flow control valve too open

Nozzle outlet too large

SOLUTIONS

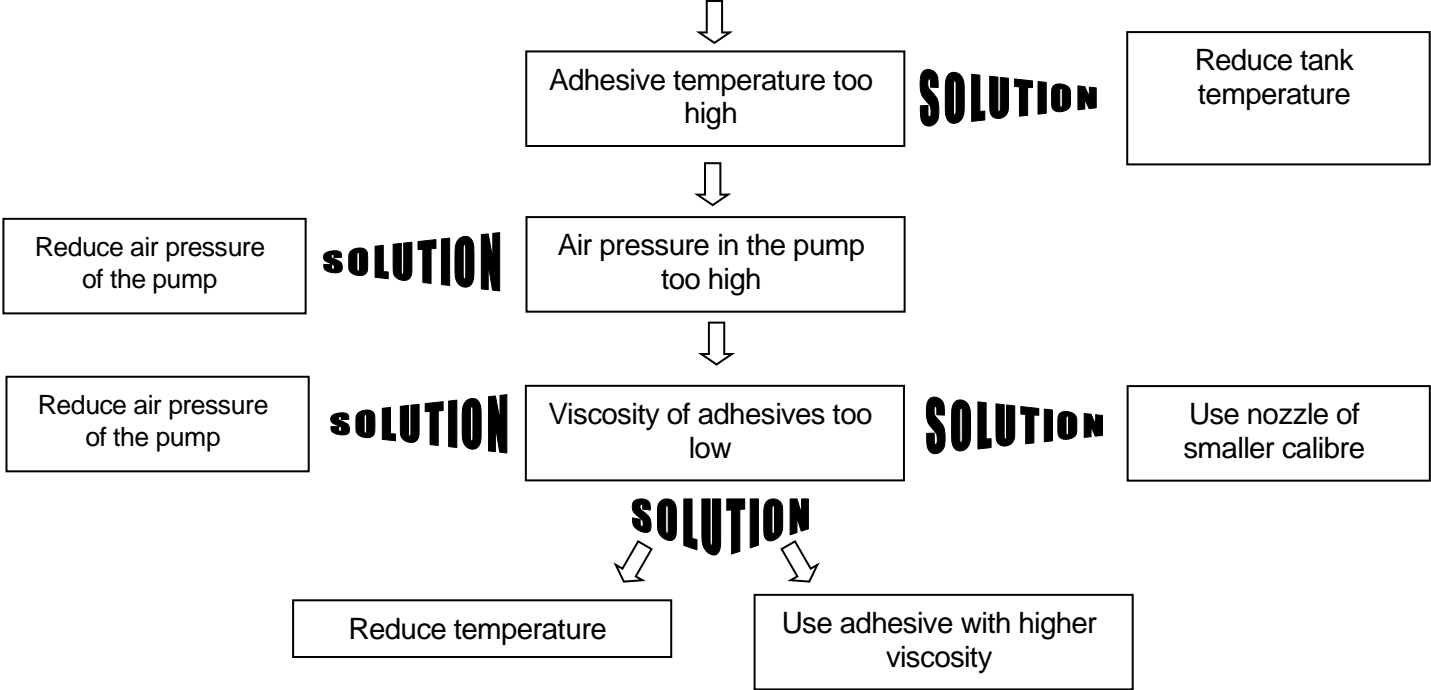
Reduce pump speed or open regulator

Change to a smaller nozzle

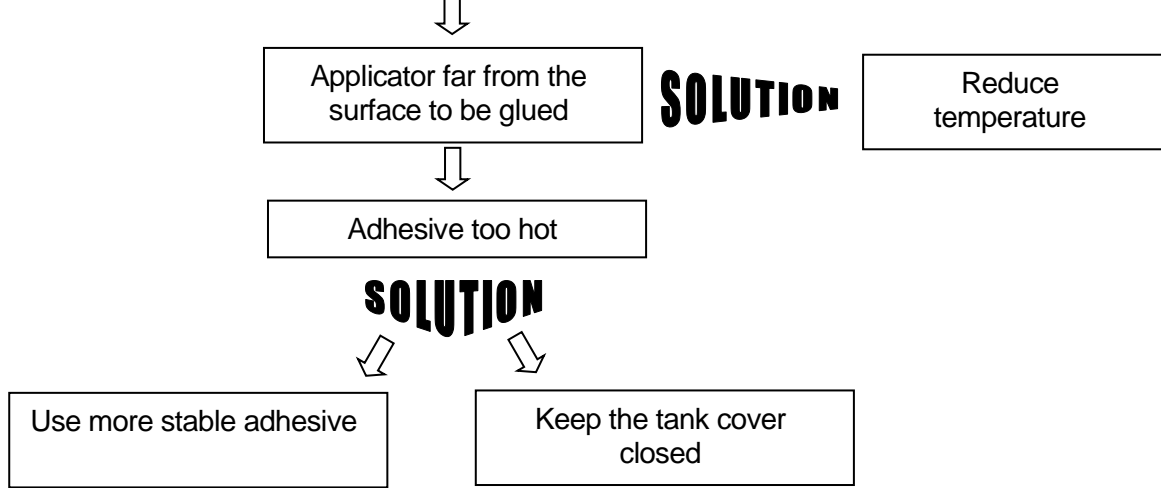
Close by twisting several times



Rebounds or splashes of adhesive from the substrate



Adhesive smoking





Carbonisation of adhesive in the tank



Tank temperature too high

SOLUTION

Reduce temperature of the tank



Readjust temperature control or replace card

SOLUTION

Temperature control fault



Level of adhesive low

SOLUTION

Keep tank full



Keep tank cover closed

SOLUTION

Oxidation of the adhesive

Gelatinous adhesive



Empty the system and wash it thoroughly

SOLUTION

Overheating

SOLUTION

Reduce the temperature



Empty the system and wash it thoroughly

SOLUTION

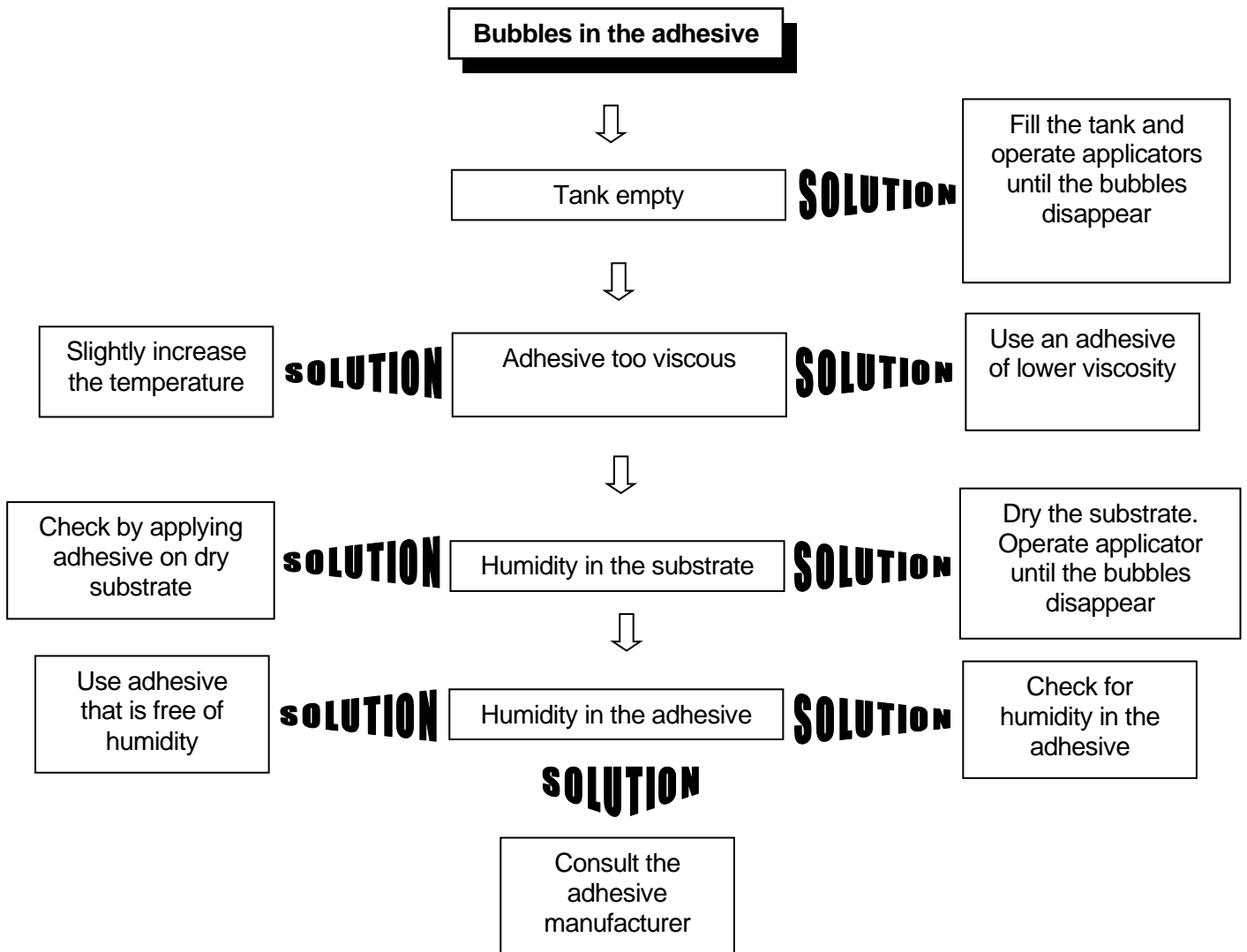
Incompatible adhesives mixed together

SOLUTION

Check the compatibility of the adhesives



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CHAPTER 8 EQUIPMENT REPAIR GUIDE



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WARNING: The maintenance operations described in this chapter should only be performed by qualified personnel understanding the processes and familiar with the safety measures involved.

8.1. INTRODUCTION:



This chapter describes the procedures to remove and change some components. These procedures should be followed during maintenance or repair operations.

First of all, make sure that you are duly protected and follow all safety instructions:

- 1º Close the air supply to the unit.
- 2º Switch off and isolate the unit.
- 3º Check that the unit is not energized.
- 4º Follow applicable safety and health standards.

Chapter 9 includes lists of the parts to which the procedures refer.

8.2. CHANGING THE PUMP:

Pump removal:



Wear long sleeves and protective gloves and use a face shield, to prevent burns from the hot glue.

- 1 Heat the equipment, with the motor control set to zero, until the glue has melted. Then switch off the machine.
- 2 Use the bleed valves to bleed the system, removing all residual pressure.



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- 3 Loosen the screws to remove the cardan casing.
- 4 Loosen the screw attaching the pump to the cardan and remove the cardan.
- 5 Remove the screws attaching the pump to the distributor.
- 6 Take the pump to a clean table for dismantling.
- 7 Clean all parts carefully.



***If you use a cleaning agent, make sure that it is compatible with the adhesive being used.
In case of doubt, contact the glue manufacturer.***



Gear pump assembly instructions:

***Follow the assembly instructions carefully.
The position and alignment of some of the parts are critical for the pump operation.***

- 1 Inspect all the pump parts for wear or damage. Change the pump if necessary.
- 2 Attach the pump assembly to the distributor with the M8 screws.
- 3 Place the cardan and tighten screw.
- 4 Position and screw down the cardan casing.

8.3. REPAIRING THE DISTRIBUTOR:



Proceed as follows to change the heating element and/or temperature sensor.

First of all, clean the outside of the distributor to prevent adhesive from entering the electric system (see 6.3)

- 1^o Unscrew the electric cap and remove, taking care not to damage the electric wiring.
- 2^o Remove the heating element and/or temperature sensor. If it is stuck, push from the other side of the housing.
- 3^o Disconnect the heating element and/or temperature sensor from the terminal.
- 4^o Connect the new heating element and/or probe according to the electric diagram. Assemble in reverse order.

8.4. REPAIRING THE PRESSURE REGULATOR:



Proceed as follows to remove / install the regulator.

- 1º Open the bleed valves to remove all residual pressure.
- 2º Loosen the regulator screws with a number 5 Allen key and remove the cover.
- 3º Remove the regulator with pliers.
- 4º Dismantle the regulator by pushing the spring needle system from the hole in the tip.
- 5º Clean all the components and replace faulty ones.



***If you use a cleaning agent, make sure that it is compatible with the adhesive employed.
In case of doubt, contact the adhesive manufacturer.***

- 6º Assemble in reverse order. Change the O-rings and install new ones covered in high temperature lubricant.

8.5. REPAIRING THE MELT PLATE:

Melt plate repairs include electric parts such as the heating element, temperature sensor and/or safety thermostat, and replacement of the plate gasket.

Electric repair:



Before starting to repair the melt plate, clean it to prevent adhesive from entering the electric connection box (see 6.3)



- 1º Switch off the machine at the mains.
- 2º Unscrew the electric cover and remove.
- 3º Remove the heating element and/or temperature sensor. If it is stuck, push from the other side. You will need to remove the radiator from the melt plate. It is attached by screws located inside the electric connection box. The radiator will fall if it is not secured.
- 4º Disconnect the heating element and/or temperature sensor from the terminal.
- 5º Connect the new heating element and/or sensor according to the electric diagram.
- 6º Assemble in reverse order. If you have removed the radiator, re-install ensuring that the air injector is correctly positioned.



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Replacing the lower melt plate gasket:

- 1^o Switch off the machine at the mains.
- 2^o Take a M12 key and unscrew the all the screws (12) in order to remove the radiator.
- 3^o When the radiator has been removed it is easily possible to separate the plate gasket from its place. So remove it
- 4^o To install the new gasket, lubricate with high-temperature grease. Moreover be carefull not to damage either the gasket or the plate.
- 5^o Follow the previous instructions in reverse mode to assemble the new gasket.

Replacing the upper melt plate gasket:

- 1^o Switch off the machine at the mains.
- 2^o The plate has to be supported by a wooden wedge
- 3^o Disconnect the air circuit from the air injector plugs.
- 4^o Loosen the screws securing the gasket.
- 5^o Loosen the gasket.
- 6^o Loosen the screws and lift the crossbar enough to insert the gasket over the ba
- 7^o Grease the gasket with high-temperature lubricant and install
- 8^o Put the ring in position and screw down.
- 9^o Slowly and carefully lower the crossbar over the cylinders until the bars are positioned and screw down.
- 10^o Connect the air circuit to the air injector plugs.



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8.6. REPAIRING THE PNEUMATIC REGULATION SYSTEM:



The equipment has two independent circuits. One controls the movement of the melt plate and the other controls the valve injecting air into the drum when the melt plate is going to be removed from the drum.

If one of these parts becomes worn and needs replacing, see the part listings in chapter 9 and the pneumatic circuit diagrams in chapter 10.

All these operations should be performed with the machine disconnected from the main air system, and only after bleeding and depressurising the equipment.

Remember that when there is no pressure in the pneumatic cylinders, the melt plate will fall, and it may fall faster on one side, stopping before reaching the bottom, if the movement is not correctly adjusted (see chapter 4 on machine adjustments).

8.7. REPAIRING THE AIR INJECTION SYSTEM:



Below are the instructions for the assembly / disassembly of the air injector.

Disassembly:

- 1º Disconnect the machine from the air circuit.
- 2º Release the air intake pipes from the plugs.



Be careful with air release. The system is under 1 bar of pressure (this pressure is adjusted by a regulator located inside the pneumatic cabinet; it is adjusted when supplied and should not be modified, since it would inject air with too much pressure and could destroy the drum)

- 3º Loosen the screws and remove the air injector.
- 4º The injector consists of a cut-off module which closes on a seating located at the end of a telescopic tube. To disassemble for cleaning, remove the tip from its position and unscrew both the telescopic tube and the cut-off module air plugs.
- 5º Clean all the components and replace if faulty.

Assembly: Follow the above procedure in reverse order. Use new O-rings lubricated with high-temperature grease.

8.8. REPAIRING THE BLEED VALVE:

If the bleed valve is blocked, proceed as follows:



1^o Heat the machine, with the motor control set to zero, until the glue has melted. Then switch off the machine.



2^o To prevent glue from splashing when you clean the valve, make sure that there is no pressure in the circuit. Work with the pressure adjusted to the lowest value, with no pressure in the drum.

3^o Open the blocked valve. Check that the operating mechanism is in working order and that it opens when the key is turned.

4^o Insert a rod, with a maximum diameter of 6 mm, and remove the obstruction. (Usually, it will be degraded glue. Break it with the rod)

5^o Continue until all the glue has been removed.

If the valve is faulty, it will need to be removed.



1^o Heat the machine, with motor control set to zero, until the glue has melted. Then switch off the machine

2^o Loosen and remove the key screw.

3^o Loosen the lower socket of the key rod and then unscrew the rod with a 7 mm spanner.

4^o Release the cock with a 17 mm spanner.

5^o Clean all the components and replace if faulty.

6^o Assemble in reverse order

8.9. REPAIRING ELECTRIC COMPONENTS:



If one of the electric components needs to be repaired, proceed according to the part listings in chapter 9 and the electric diagrams in chapter 10.

All these operations should be performed with the machine switched off at the mains and disconnected from the main air circuit, making sure that the system has been duly bled and depressurised.



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CHAPTER 9 LOG SHEETS



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<i>DATE</i>	<i>INCIDENCE</i>

**DESPIECE / PART LISTING
EQUIPO E-DRUM 1 BOMBA /
1PUMP E-DRUM EQUIPMENT**

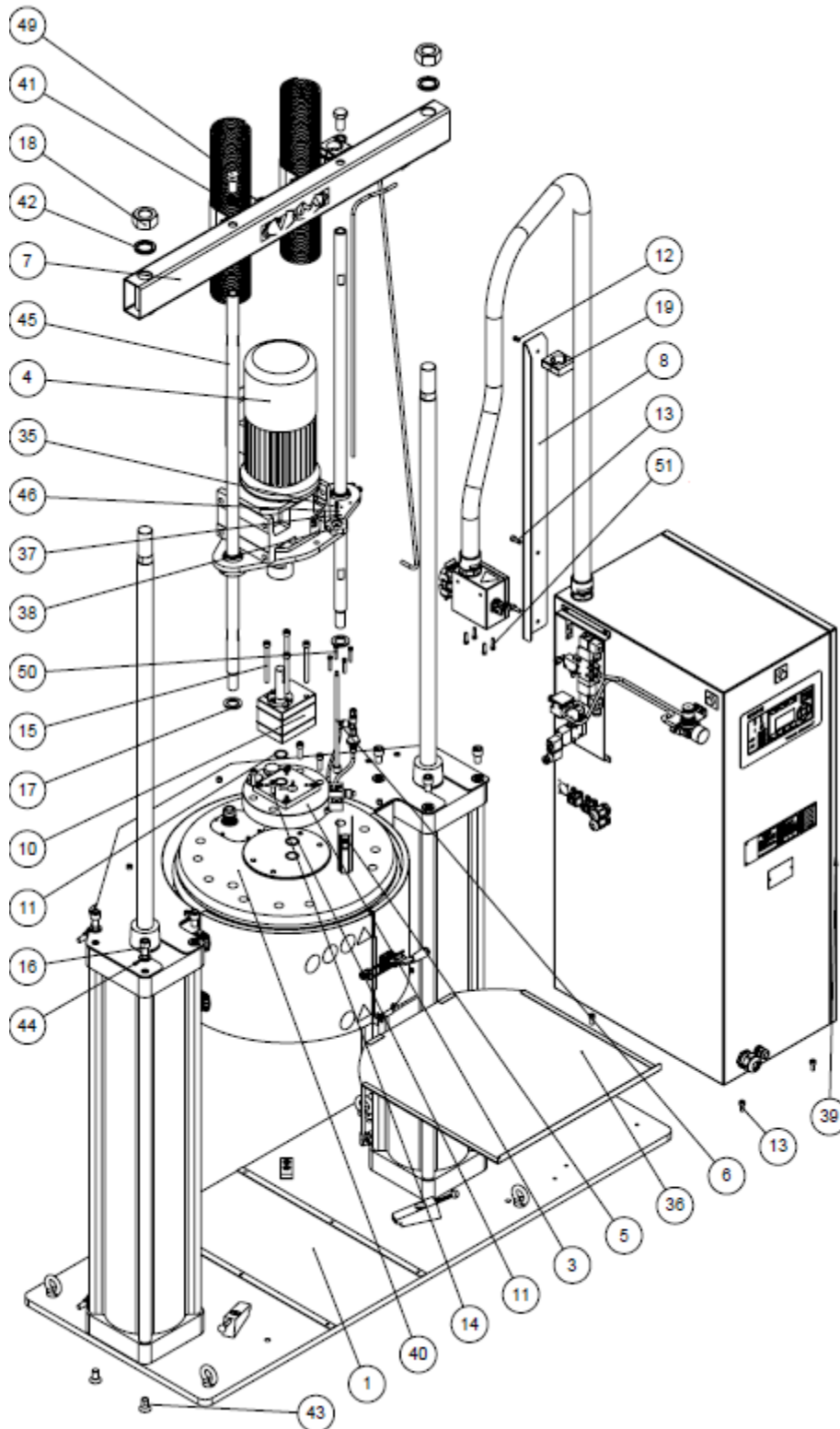
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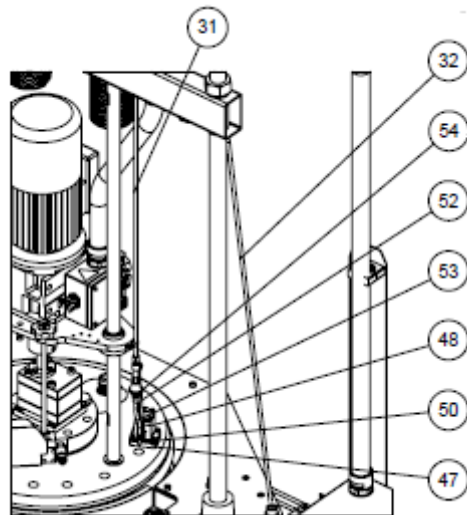
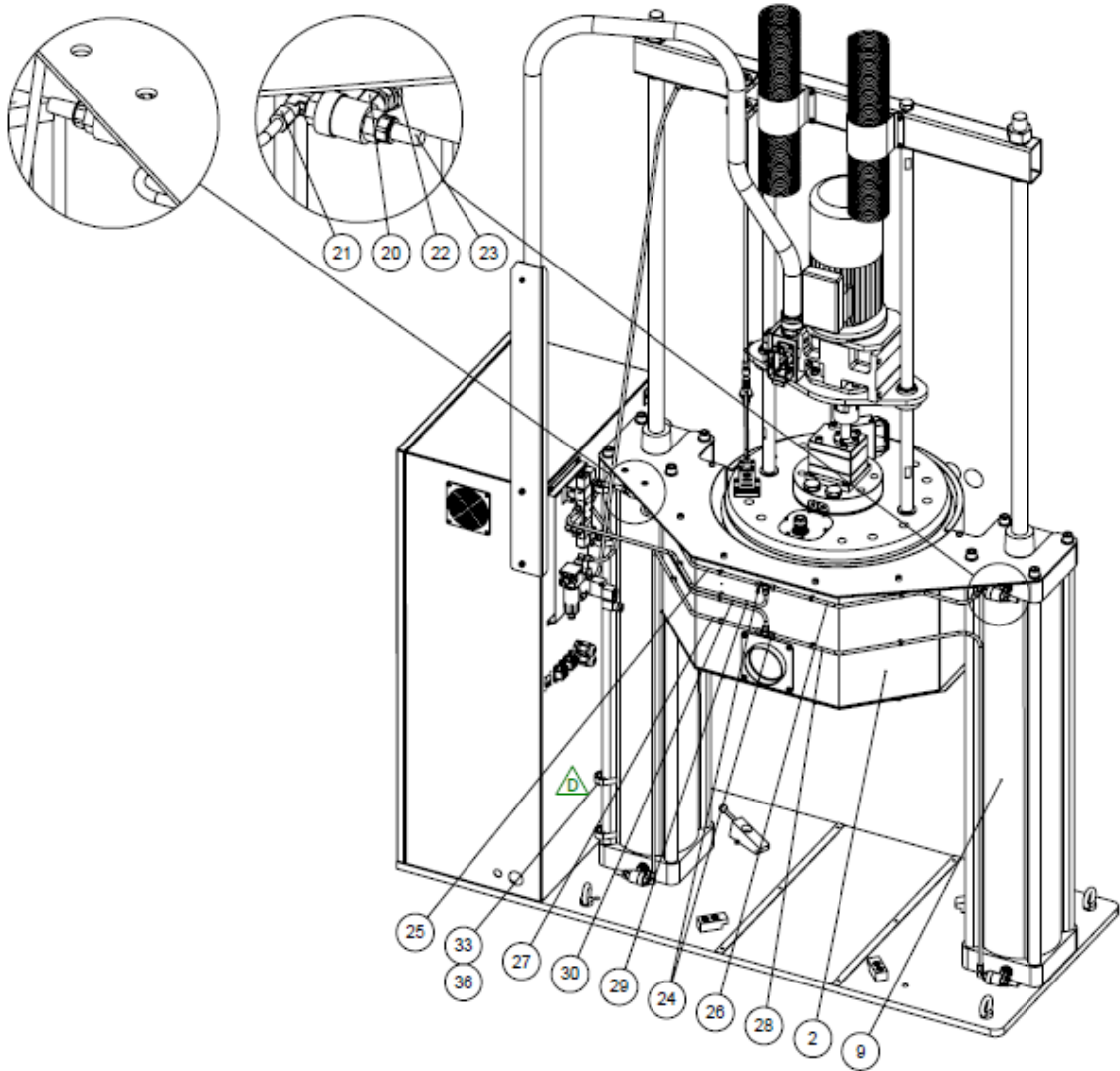
**Check Manual to suit your
machine, more than one melter
manual as follows**

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1. EQUIPO E - DRUM / E - DRUM EQUIPMENT:





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1	SUBCONJUNTO PLACA BASE	BASE PLATE ASSEMBLY	PAG 8	1
2	SUBCONJUNTO TRASERO	REAR ASSEMBLY	DEPENDING MODEL	1
3	CONJUNTO DISTRIBUIDOR	MANIFOLD ASSEMBLY	PAG 20	1
4	SUBCONJUNTO MOTOR	MOTOR ASSEMBLY	PAG 22	1
5	SUBCONJUNTO RECOGEDOR	DUSTPAN ASSEMBLY	PAG 23	1
6	SUBCONJUNTO VARILLA PURGADOR	DRAINVALVE ROD ASSEMBLY	PAG 24	1
7	SUBCONJUNTO TRAVESAÑO	BUNK ASSEMBLY	PAG 33	1
8	MASTIL TUBO	TUBE MAST	917XX774	1
9	CILINDRO NEUMATICO Ø200	Ø200 PNEUMATIC CYLINDER	917XX522	2
10	BOMBA ENGRANAJES	GEAR PUMP	DEPENDING MODEL	1
11	JUNTA TORICA VITON 26X2,5	26X2,5 VITON O'RING	917XX742	3
12	TORNILLO ALLEN M6X10 INOX	STAINLESS M6X10 ALLEN SCREW	915XX082	1
13	TORNILLO ALLEN M8X20 INOX	STAINLESS M8X20 ALLEN SCREW	915XX190	6
14	TORNILLO ALLEN M10X35 INOX	STAINLESS M10X35 ALLEN SCREW	911XX103	4
15	TORNILLO ALLEN M10	STAINLESS M10	DEPENDING MODEL	4
16	TORNILLO ALLEN M16X25 INOX	STAINLESS M16X25 ALLEN SCREW	917XX523	8
17	ARANDELA PLANA M24	M24 FLAT WASHER	917XX550	2
18	TUERCA HEXAGONAL M36X2 INOX	STAINLESS M36X2 HEX NUT	917XX551	2
19	ABRAZADERA JIR M40	JIR M40 CLAMP	917XX705	1
20	VÁLVULA ESCAPE RAPIDO 3/8"	3/8" FAST ESCAPE VALVE	917XX777	4
21	RACOR 90° 3/8"G – TUBO 8 C/OVALILLO	3/8 "G 90° FITTING	917XX778	4
22	UNION MACHO-MACHO ¼" -3/8"	¼" – 3/8" MALE-MALE JOINING	917XX779	4
23	SILENCIADOR BRONCE CONO 3/8"	3/8" SILENCER	917XX780	4
24	RACOR T TUBO 8 CON OVALILLO	8 PIPE T FITTING	910XX245	2
25	TUBO SUPERIOR CILINDRO IZDO.	LEFT CYLINDER UPPER TUBE	917XX772	1
26	TUBO SUPERIOR CILINDRO DCHO.	RIGHT CYLINDER UPPER TUBE	917XX771	1
27	TUBO INFERIOR CILINDRO IZDO.	LEFT CYLINDER LOWER TUBE	917XX770	1
28	TUBO INFERIOR CILINDRO DCHO.	RIGHT CYLINDER LOWER TUBE	917XX769	1
29	TUBO ENTRADA SUPERIOR CILINDRO	CYLINDER UPPER ADMISSION TUBE	917XX768	1
30	TUBO ENTRADA INFERIOR CILINDRO	CYLINDER LOWER ADMISSION TUBE	917XX767	1
31	TUBO ENTRADA SUPERIOR VALVULA PLATO	PLATE VALVE UPPER ADMISSION TUBE	917XX766	1
32	TUBO ESPIRAL POLIURETANO 8X6 AMARILLO	YELLOW 8X6 POLYURETHANE SPIRAL TUBE	917XX739	1
33	BRIDA PORTASENSOR ST200	ST200 BRIDLE	917XX559	4
34	SENSOR MAGNETICO	MAGNETIC SENSOR	917XX580	4
35	TORNILLO ALLEN M5X12 INOX	STAINLESS M5X12 ALLEN SCREW	917XX406	1
36	BANDEJA	TRAY	DEPENDING MODEL	1
37	ARANDELA PLANA 5 INOX	STAINLESS 5 PLAIN WASHER	918XX533	1
38	MANDO LOBULADO	LOBED CONTROL	918XX537	1
39	SUBCONJUNTO ARMARIO ELECTRICO	ELECTRIC CABINET ASSEMBLY	PAG 25	1
40	SUBCONJUNTO PLATO COMPLETO	FULL PLATE ASSEMBLY	PAG 15-17	1
41	ARANDELA GROVER M20	M20 GROVER WASHER	917XX775	2
42	ARANDELA GROVER M36 INOX	STAINLESS M36 GROVER WASHER	917XX561	2
43	TORNILLO AVELLANADO ALLEN M16X30 INOX	STAINLESS M16X30 ALLEN REAMER SCREW	914XX553	8

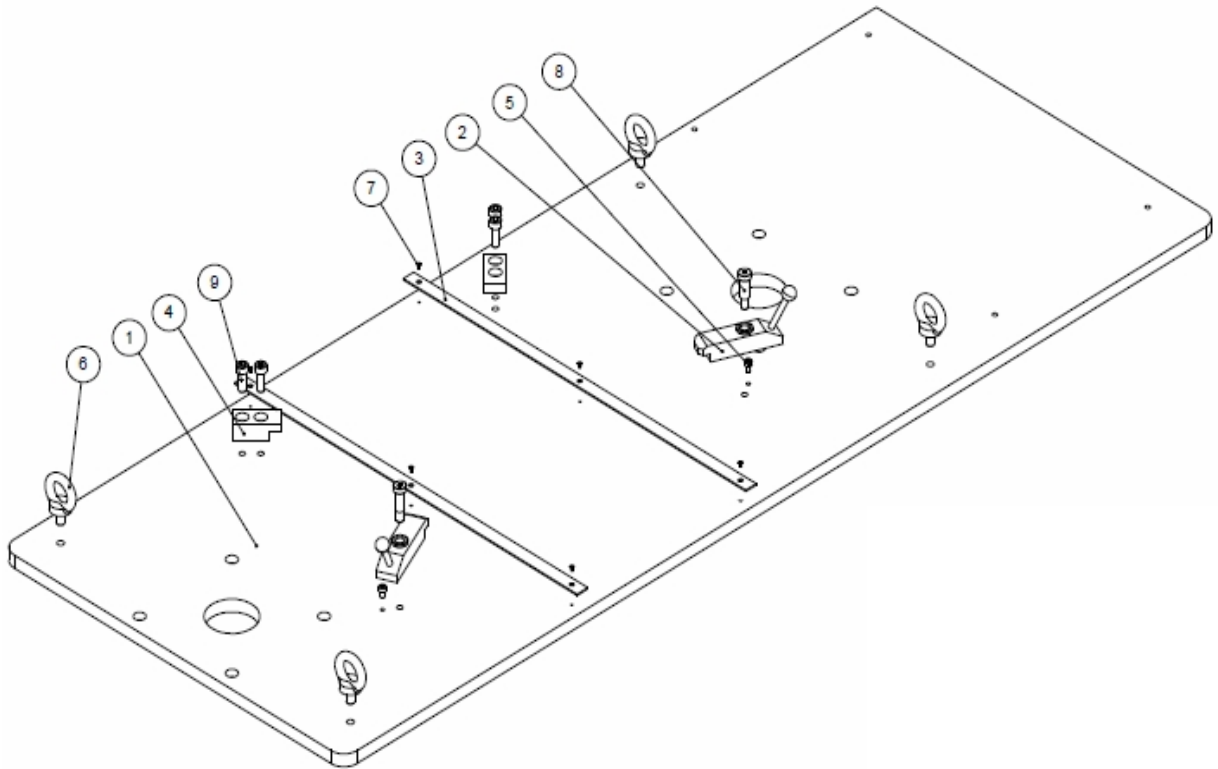
44	ARANDELA PLANA M16 INOX	STAINLESS M16 WASHER	-	8
45	BARRA SOPORTE MOTOR	MOTOR BRACKET BAR	DEPENDING MODEL	2
46	ARANDELA GROVER 5 INOX	STAINLESS 5 GROVER WASHER	910XX085	1
47	PLACA DISTANCIAL VÁLVULA SOPLADO	BLOWING VALVE SPACER PLATE	-	1
48	CONJUNTO VÁLVULA V-DRUM (LISO)	FLAT V-DRUM VALVE ASSEMBLY	PAG 31	1
49	TORNILLO HEXAGONAL M20X40	M20X40 HEX SCREW	912XX180	2
50	TORNILLO ALLEN M6X35 INOX	STAINLESS M6X35 ALLEN SCREW	914XX955	4
51	TORNILLO ALLEN M6X25 INOX	STAINLESS M6X35 ALLEN SCREW	914XX175	4
52	TUBO TEFLÓN 6X4 LONGITUD	6X4 TEFLON TUBE	988XX020	0.3
53	TUBO TEFLÓN 8X6	8X6 TEFLON TUBE	988XX019	0.2
54	KIT REGULADOR DE PRESION 1BAR EDRUM	1 BAR EDRUM PRESURE REGULATOR KIT	PAG 34	1

Nº47 SOLO PARA RADIADOR DE ALETAS / ONLY WITH FINNED HEATER

Nº	Descripción	Descripción	Ref.	Qty.	
10	LISO / ALETAS FLAT / FINNED	BOMBA ENGRANAJES 30C.C.	30C.C. GEAR PUMP	914XX968	1
15	LISO / ALETAS FLAT / FINNED	TORNILLO ALLEN M10X110 INOX.	STAINLESS M10X110 ALLEN SCREW	915XX579	4
45	LISO FLAT	BARRA SOPORTE MOTOR BDRUM 1 BOM. LISO	FLAT BDRUM 1 PUMP MOTOR SUPPORT BAR	918XX829	2
	ALETAS FINNED	BARRA SOPORTE MOTOR BDRUM 1 BOM. ALETAS	BDRUM 1 PUMP MOTOR SUPPORT BAR	917XX773	
31	LISO / ALETAS FLAT / FINNED	TUBO ENTRADA SUPERIOR VALVULA PLATO	PLATE VALVE UPPER ADMISSION TUBE	917XX766	1

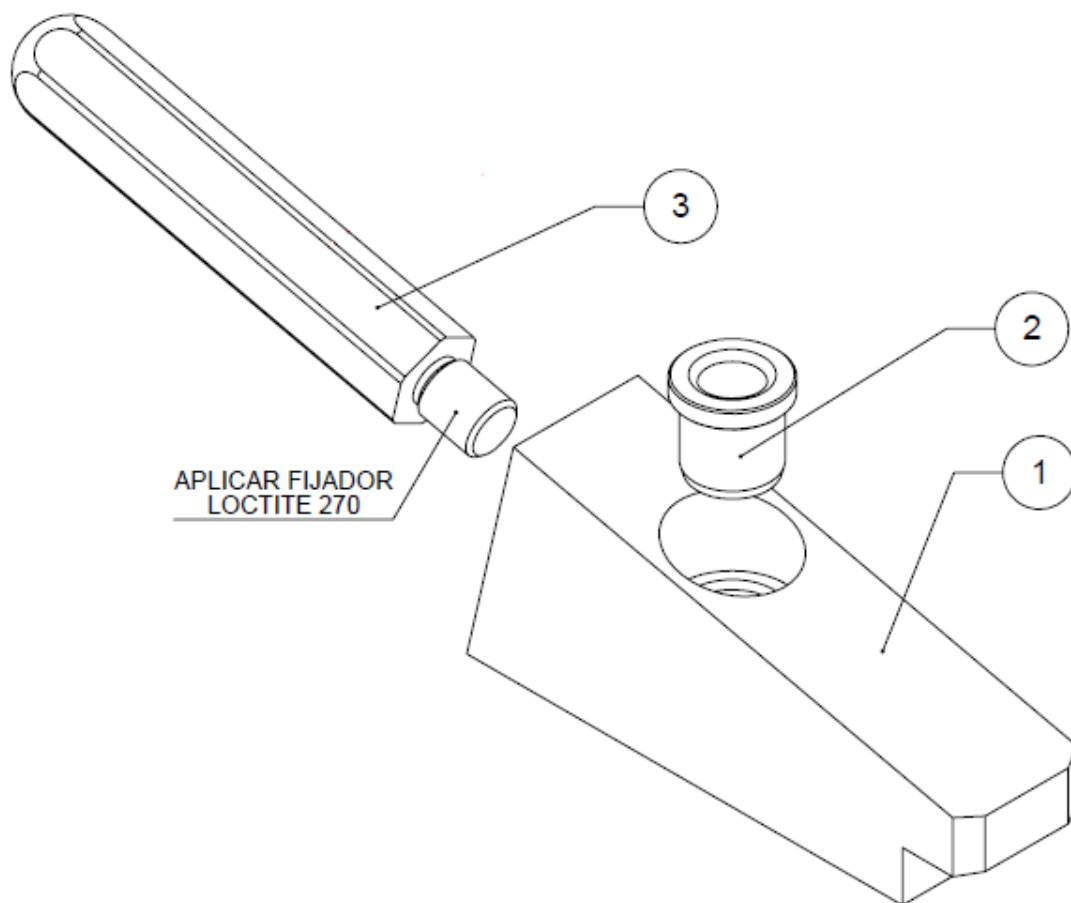
Nº	Descripción	Descripción	Ref.	Qty.	
10	LISO / ALETAS FLAT / FINNED	BOMBA ENGRANAJES 15C.C.	15C.C. GEAR PUMP	918XX174	1
15	LISO / ALETAS FLAT / FINNED	TORNILLO ALLEN M10X90 INOX.	STAINLESS M10X90 ALLEN SCREW	915XX018	4
45	LISO FLAT	BARRA SOP. MOTOR BDRUM 1BOM.15GR LISO	FLAT BDRUM 15C.C. 1 PUMP MOTOR SUPPORT BAR	-	2
	ALETAS FINNED	BARRA SOP. MOTOR BDRUM 1BOM.15GR ALETAS	BDRUM 15C.C. 1 PUMP MOTOR SUPPORT BAR	-	
31	LISO / ALETAS FLAT / FINNED	TUBO ENTRADA SUP. VALVULA- LISO-BOMBA	FLAT-PUMP- VALVE UPPER ADMISSION TUBE	-	1

2. CONJUNTO PLACA BASE / BASE PLATE ASSEMBLY: (916XX890)



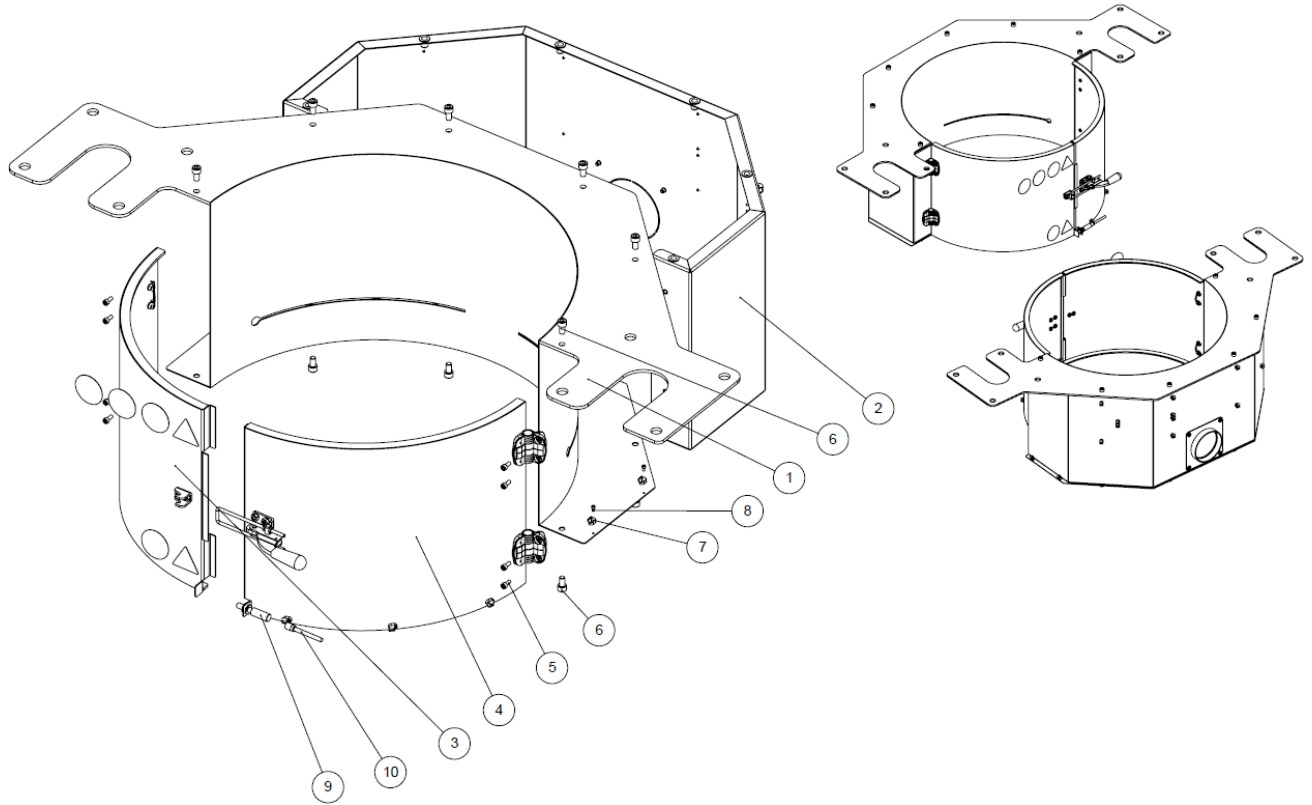
Nº	Descripción	Description	Ref.	Qty
1	PLACA BASE	BASE PLATE	917XX754	1
2	CONJUNTO CUÑA ANCLAJE BIDON	CAN ANCHORAGE CHOCK ASSEMBLY	PAG 9	2
3	BANDA APOYO BIDON	CAN SUPPORT BAND	917XX761	2
4	CUÑA TRASERA	REAR CHOCK	917XX762	2
5	TORNILLO ALLEN M6X10 INOX	STAINLESS M6X10 ALLEN SCREW	915XX082	2
6	TORNILLO DE CANCELLO M12	M12 SCREW	915XX997	4
7	TORNILLO AVELLANADO ALLEN M3X6 INOX	STAINLESS M3X6 ALLEN REAMER SCREW	917XX763	6
8	TORNILLO ALLEN CON GUIA M10X30	M10X30 ALLEN SCREW WITH GUIDE	917XX764	2
9	TORNILLO ALLEN M10X30 INOX	STAINLESS M10X30 ALLEN SCREW	910XX912	4

2.1. CONJUNTO CUÑA ANCLAJE BIDON / CAN ANCHORAGE CHOCK ASSEMBLY: (916XX904)



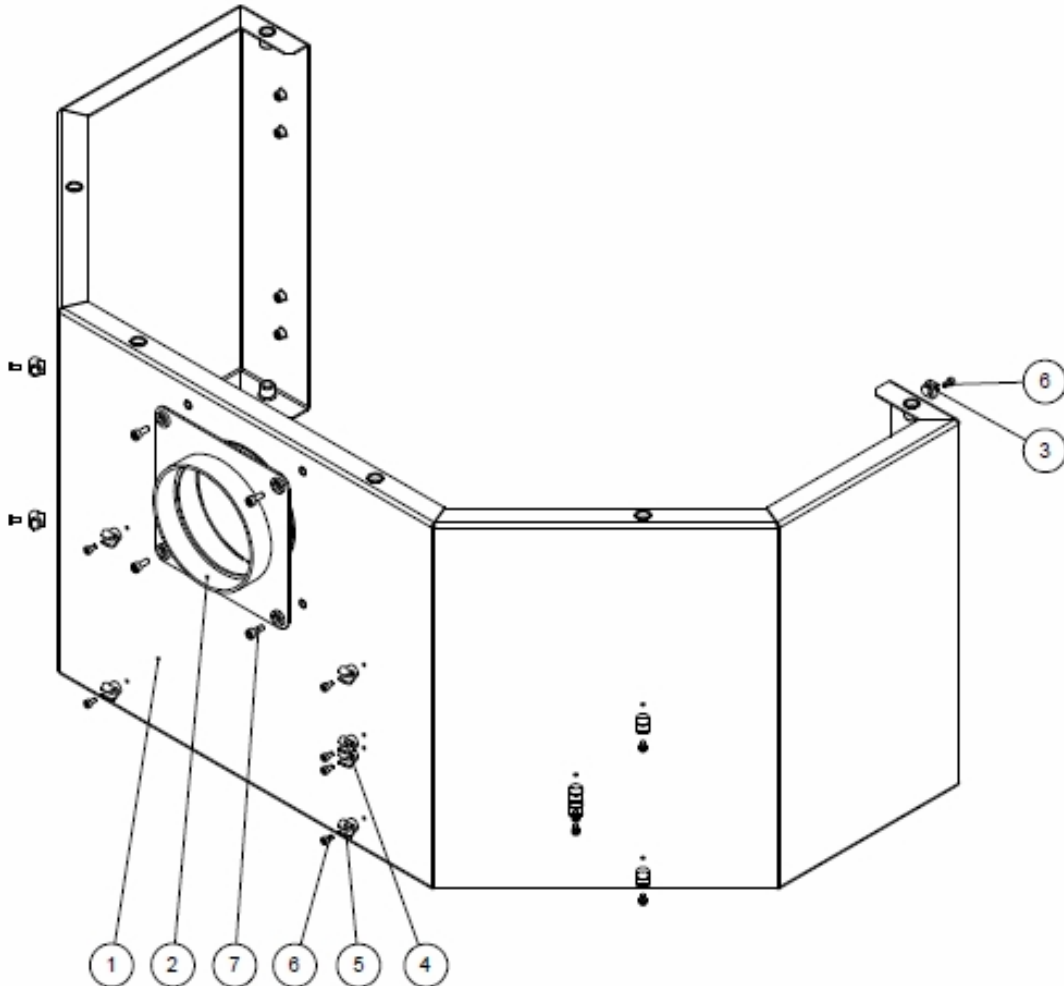
Nº	Descripción	Description	Ref.	Qty
1	CUÑA ANCLAJE BIDON	CAN ANCHORAGE CHOCK	917XX783	1
2	CASQUILLO GUIA	GUIDE BUSHING	917XX784	1
3	BARRA CUÑA	BAR WEDGE	-	1

3.1. CONJUNTO PROTECCION TRASERA / REAR PROTECTION ASSEMBLY: (916XX896)



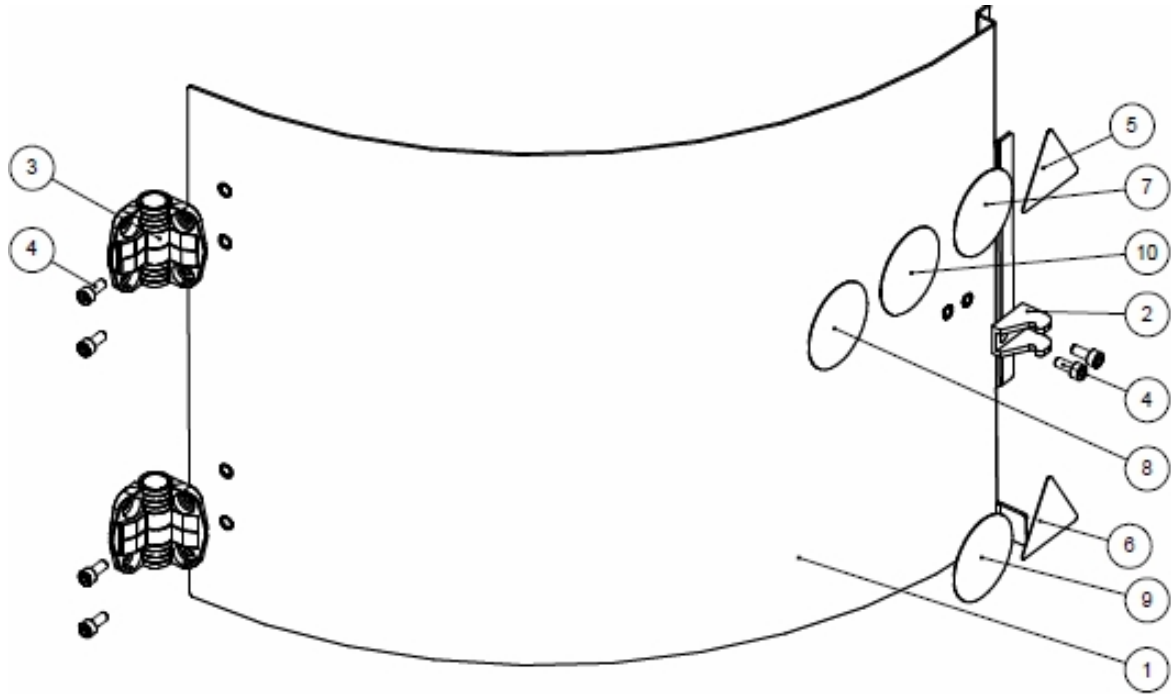
Nº	Descripción	Description	Ref.	Qty
1	CHAPA SOPORTE PROTECCION TRASERA	REAR PROTECTION SUPPORT PLATE	917XX760	1
2	SUBCONJUNTO CHAPA TRASERA	REAR PLATE ASSEMBLY	PAG 11	1
3	SUBCONJUNTO CHAPA DELANTERA DCHA.	RIGHT FRONT PLATE ASSEMBLY	PAG 12	1
4	SUBCONJUNTO CHAPA DELANTERA IZDA.	LEFT FRONT PLATE ASSEMBLY	PAG 13	1
5	TORNILLO ALLEN M5X15 INOX.	STAINLESS M5X12 ALLEN SCREW	917XX406	8
6	TORNILLO ALLEN M8X15 INOX.	STAINLESS M8X15 ALLEN SCREW	914XX067	12
7	CLIP PARA TUBO Ø6	Ø6 CLIP FOR TUBE	917XX750	2
8	TORNILLO ALLEN M3X6 INOX.	STAINLESS M3X6 ALLEN SCREW	911XX132	2
9	SENSOR INDUCTIVO DE PROXIMIDAD M8	INDUCTIVE SENSOR DE PROXIMITY M8	910XX792	1
10	CONECTOR PICO RECTO C/CABLE 3P HEM (5M)	STRAIGHT PICO CONNECTOR C/CABLE 3P FEMALE (5M)	913XX372	1

3.1.1. CONJUNTO CHAPA TRASERA / REAR PLATE ASSEMBLY: (916XX870)



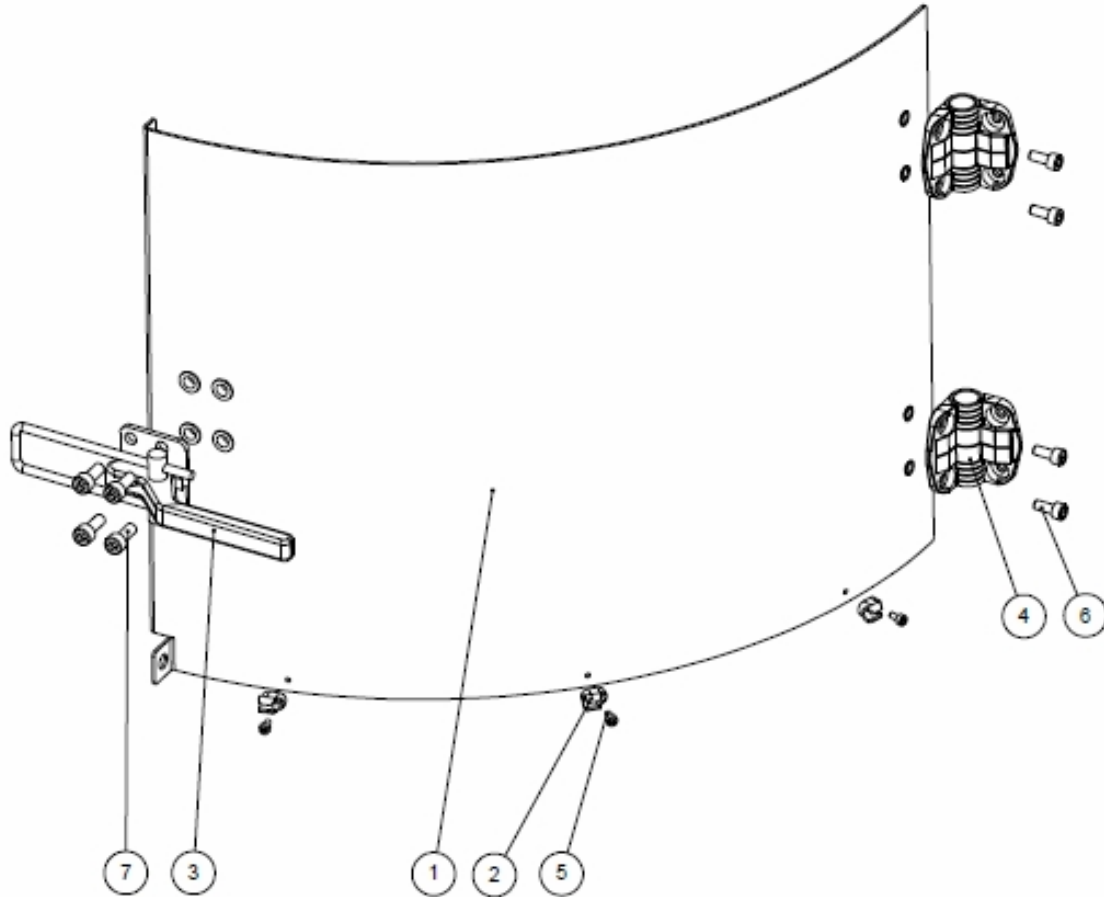
Nº	Descripción	Description	Ref.	Qty
1	CHAPA LATERAL PROTECCION TRASERA	REAR PROTECTION LATERAL PLATE	917XX758	1
2	TOBERA	ADJUSTAGE	917XX759	1
3	CLIP PARA TUBO Ø6	CLIP FOR Ø6 TUBE	917XX750	1
4	CLIP PARA TUBO Ø8 DE 2 PASOS	CLIP FOR Ø8 TUBE OF 2 PITCH	917XX735	2
5	CLIP PARA TUBO Ø8 DE 1 PASO	CLIP FOR Ø8 TUBE OF 1 PITCH	917XX735	8
6	TORNILLO ALLEN M3X6 INOX	STAINLESS M3X6 ALLEN SCREW	911XX132	13
7	TORNILLO ALLEN M4X10 INOX	STAINLESS M4X10 ALLEN SCREW	910XX129	4

3.1.2. CONJUNTO CHAPA DELANTERA DERECHA / RIGHT FRONT PLATE ASSEMBLY: (916XX901)



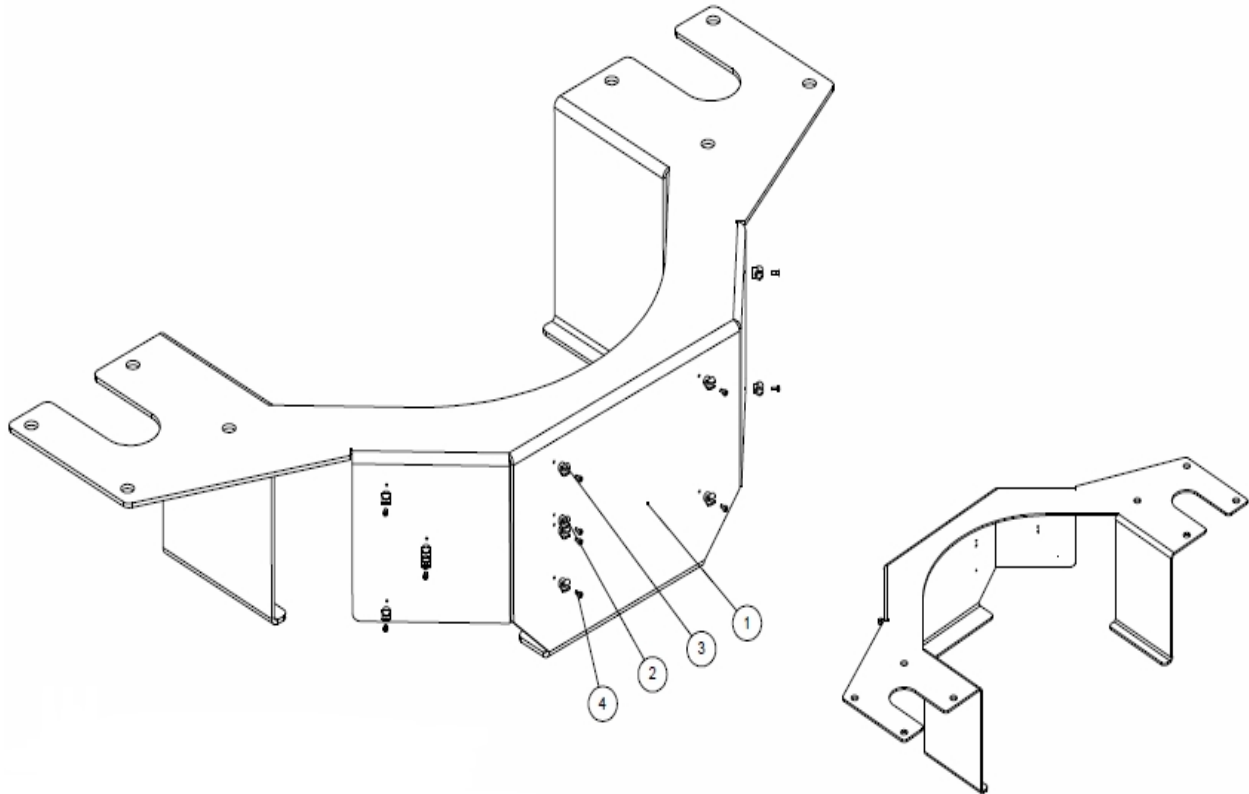
Nº	Descripción	Description	Ref.	Qty
1	CHAPA DELANTERA DERECHA	RIGHT FRONT PLATE	917XX753	1
2	UÑA DE LA BRIDA CIERRE	CLOSURE BRIDLE NAIL	917XX751	1
3	BISAGRA SOUTHCO C6-6	C6-6 SOTHCO HINGE	917XX752	2
4	TORNILLO ALLEN M5X12 INOX	STAINLESS M5X12 ALLEN SCREW	917XX406	6
5	PEGATINA TEMPERATURA	TEMPERATURE STICKER	917XX755	1
6	PEGATINA ATRAPAMIENTO	ENTRAPMENT STICKER	917XX756	1
7	PEGATINA CARETA	MASK STICKER	917XX757	1
8	PEGATINA GANTES	GLOVES STICKER	917XX723	1
9	PEGATINA BOTAS	BOOTS STICKER	917XX724	1
10	PEGATINA TRAJE	SUIT STICKER	917XX722	1

3.1.3. CONJUNTO CHAPA DELANTERA IZQUIERDA / LEFT FRONT PLATE ASSEMBLY: (916XX902)



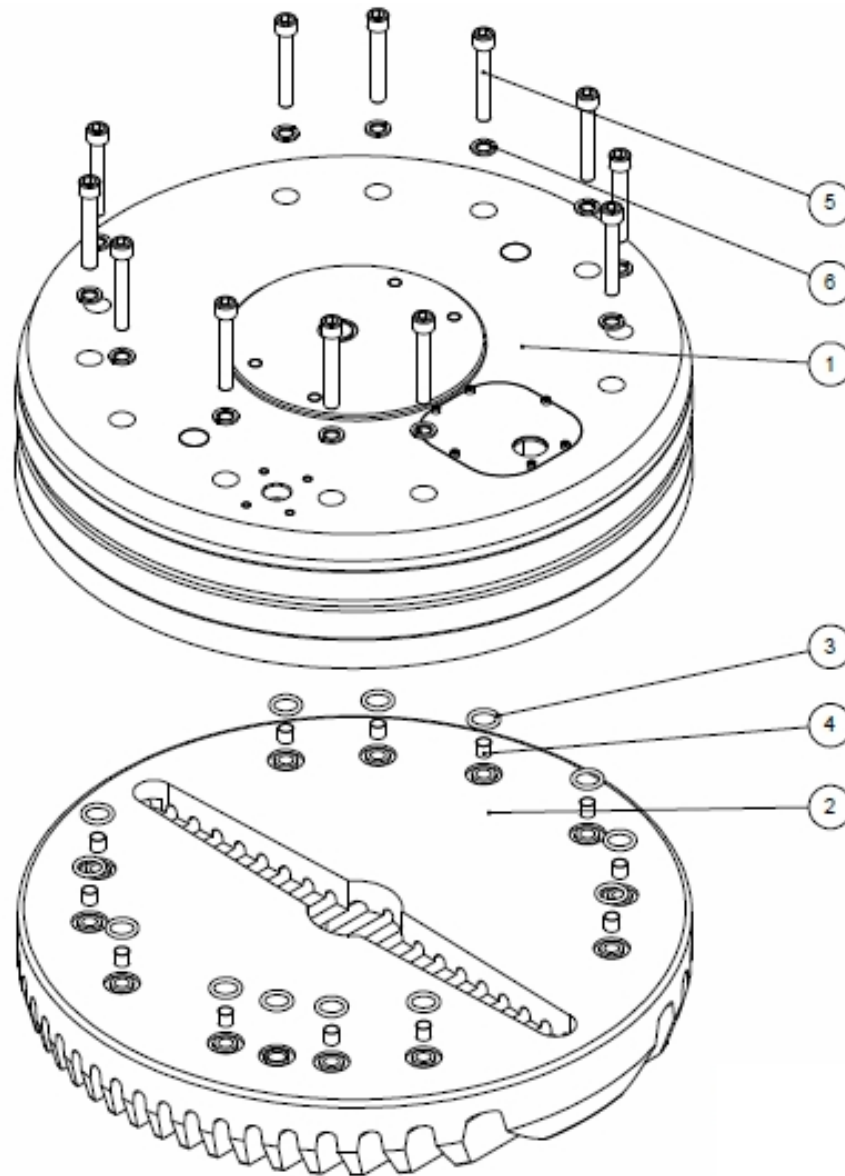
Nº	Descripción	Description	Ref.	Qty
1	CHAPA DELANTERA IZQUIERDA	LEFT FRONT PLATE	917XX749	1
2	CLIP PARA TUBO Ø6	CLIP FOR Ø6 TUBE	917XX750	3
3	BRIDA CIERRE 331-SS-M-50	CLOSURE BRIDLE	917XX751	1
4	BISAGRA SOUTHCO C6-6	HINGE	917XX752	2
5	TORNILLO ALLEN M3X6 INOX	STAINLESS M3X6 ALLEN SCREW	911XX132	3
6	TORNILLO ALLEN M5X12 INOX	STAINLESS M5X12 ALLEN SCREW	917XX406	4
7	TORNILLO ALLEN M6X15 INOX	STAINLESS M6X15 ALLEN SCREW	915XX090	4

3.2. CONJUNTO CHAPA SOPORTE TRASERA / REAR SUPPORT PLATE ASSEMBLY: (916XX898)



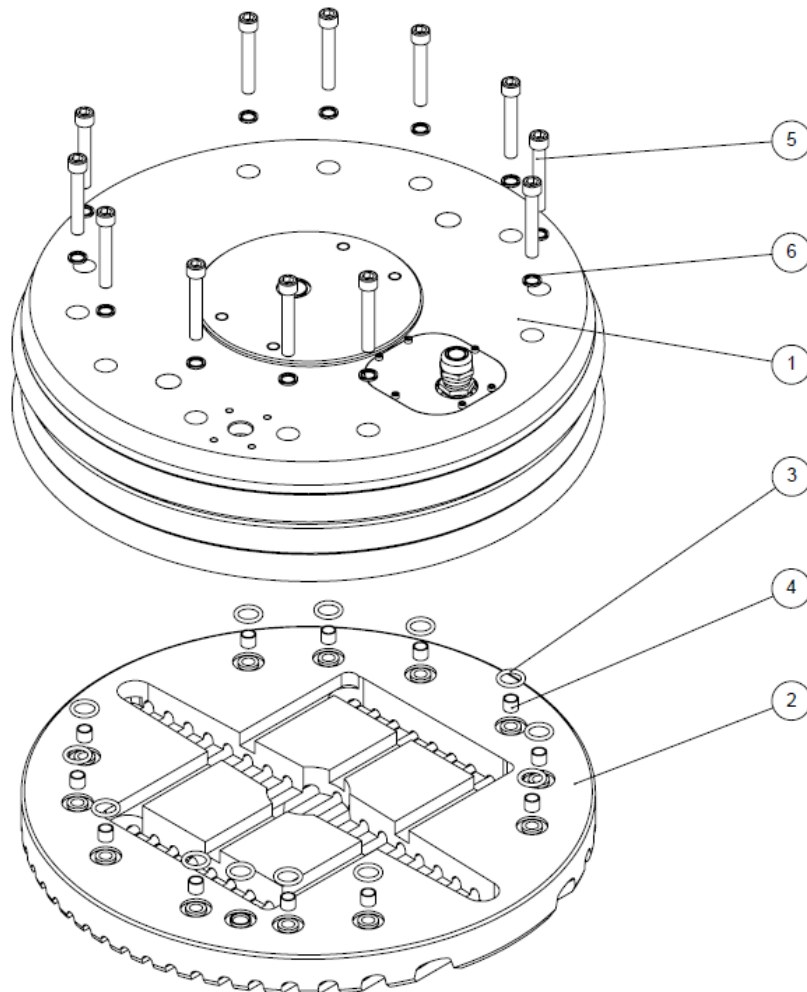
Nº	Descripción	Description	Ref.	Qty
1	CHAPA SOPORTE TUBOS	TUBE SUPPORT PLATE	917XX748	1
2	CLIP PARA TUBO Ø8 DE 2 PASOS	CLIP FOR Ø8 TUBE OF 2 PITCH	917XX735	2
3	CLIP PARA TUBO Ø8 DE 1 PASO	CLIP FOR Ø8 TUBE OF 1 PITCH	917XX735	8
4	TORNILLO ALLEN M3X6 INOX	STAINLESS M3X6 ALLEN SCREW	911XX132	12

4.1. CONJUNTO PLATO COMPLETO RADIADOR DE ALETAS / FULL PLATE ASSEMBLY: (916XX891)



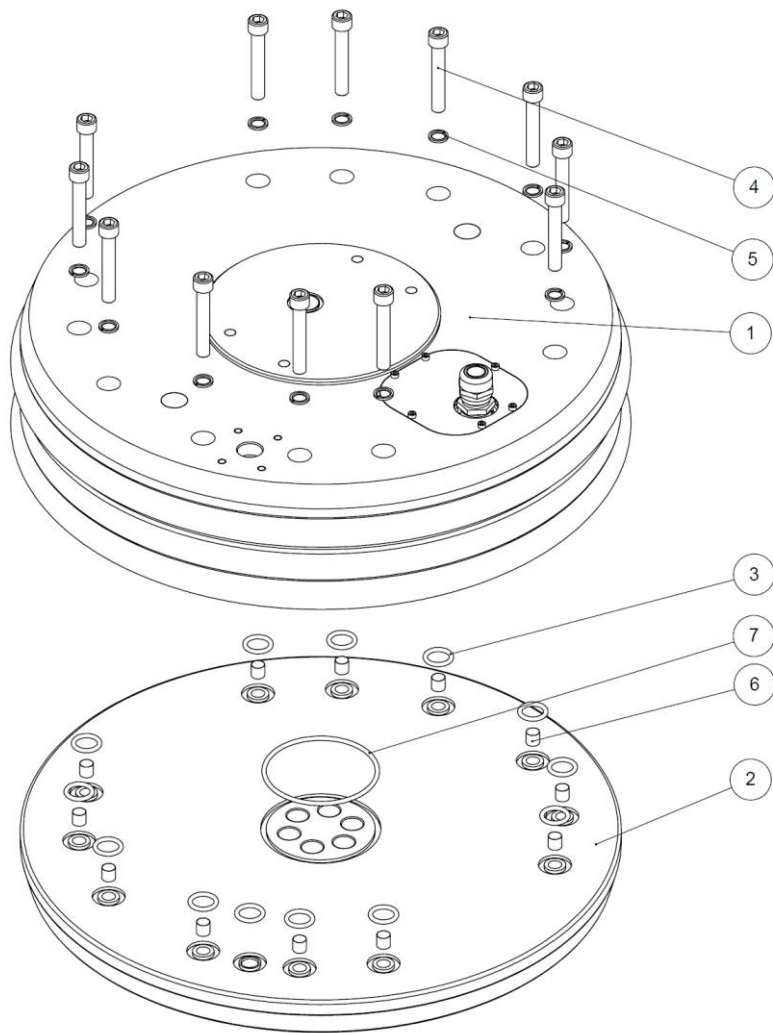
Nº	Descripción	Description	Ref.	Qty
1	CONJUNTO PLATO CALEFACTADO	HEATER PLATE ASSEMBLY	PAG 18	1
2	RADIADOR	HEATER	917XX746	1
3	JUNTA TORICA VITON 20X4	20X4 VITON O´RING	914XX971	13
4	HELICOIL M12X12	M12X12 HELICOIL	915XX172	12
5	TORNILLO ALLEN M12X75 INOX	STAINLESS M12X75 ALLEN SCREW	915XX581	12
6	ARANDELA GROVER M12 INOX	STAINLESS M12 GROVER WASHER	917XX515	12

4.2. CONJUNTO PLATO COMPLETO RADIADOR DE ALETAS REBAJADO / FULL PLATE ASSEMBLY:



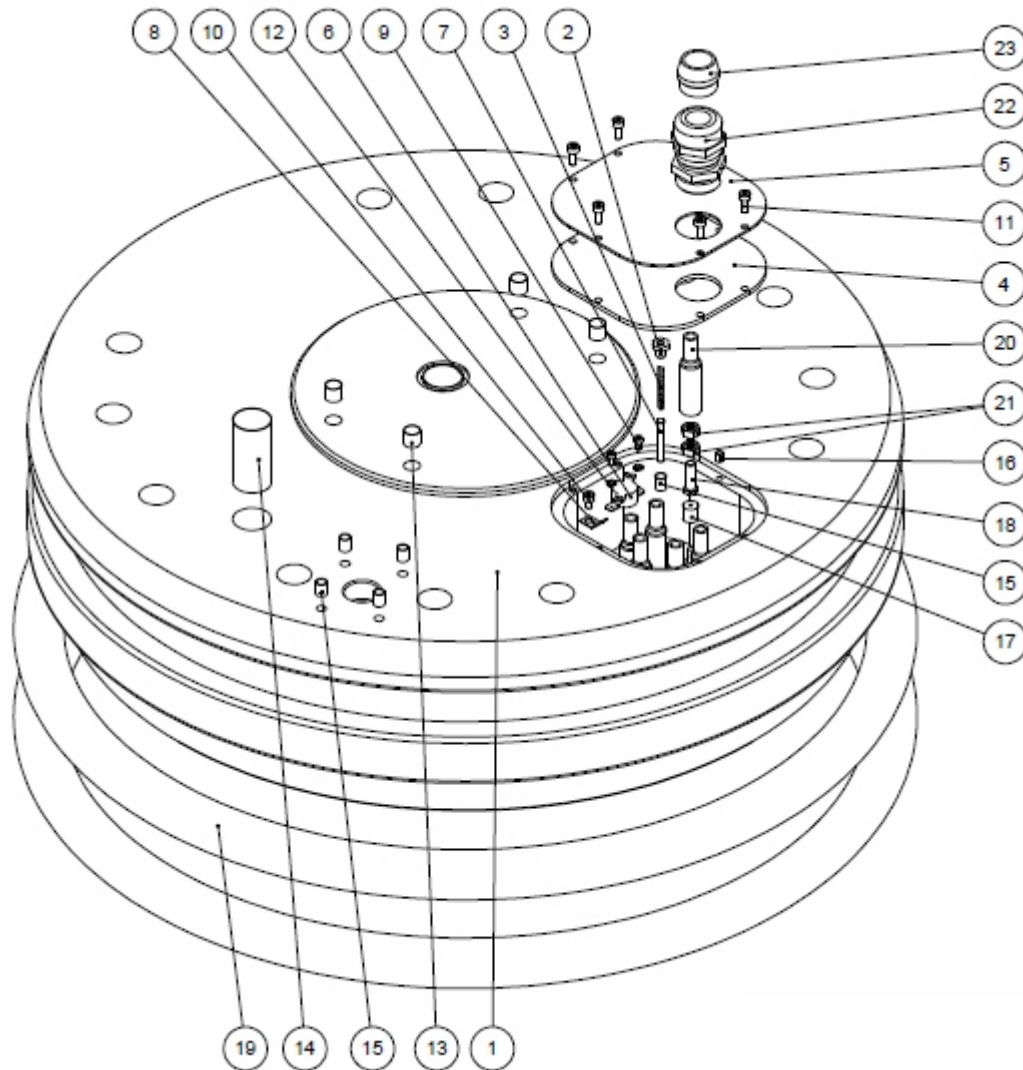
Nº	Descripción	Description	Ref.	Qty
1	CONJUNTO PLATO CALEFACTADO	HEATER PLATE ASSEMBLY	PAG 18	1
2	RADIADOR ALETAS REBAJADO V2	V2 LOWERED FINNED HEATER	919XX656	1
3	JUNTA TÓRICA VITON 20X4	20X4 VITON O´RING	914XX971	13
4	HELICOIL M12X12	M12X12 HELICOIL	915XX172	12
5	TORNILLO ALLEN M12X75 INOX	STAINLESS M12X75 ALLEN SCREW	915XX581	12
6	ARANDELA GROVER M12 INOX	STAINLESS M12 GROVER WASHER	917XX515	12

5. CONJUNTO PLATO COMPLETO RADIADOR LISO / FULL PLATE ASSEMBLY: (913XX298)



Nº	Descripción	Description	Ref.	Qty
1	CONJUNTO PLATO CALEFACTADO	HEATER PLATE ASSEMBLY	PAG 18	1
2	RADIADOR BDRUM LISO CON RANURAS 200 L	HEATER BDRUM SMOOTH	917XX746	1
3	JUNTA TÓRICA VITON 20X4	20X4 VITON O´RING	914XX971	13
4	TORNILLO ALLEN M12X75 INOX	STAINLESS M12X75 ALLEN SCREW	915XX581	12
5	ARANDELA GROVER M12 INOX	STAINLESS M12 GROVER WASHER	917XX515	12
6	HELICOIL M12X12	M12X12 HELICOIL	915XX172	12
7	JUNTA TÓRICA VITON 100X4	100X4 VITON O´RING	-	1

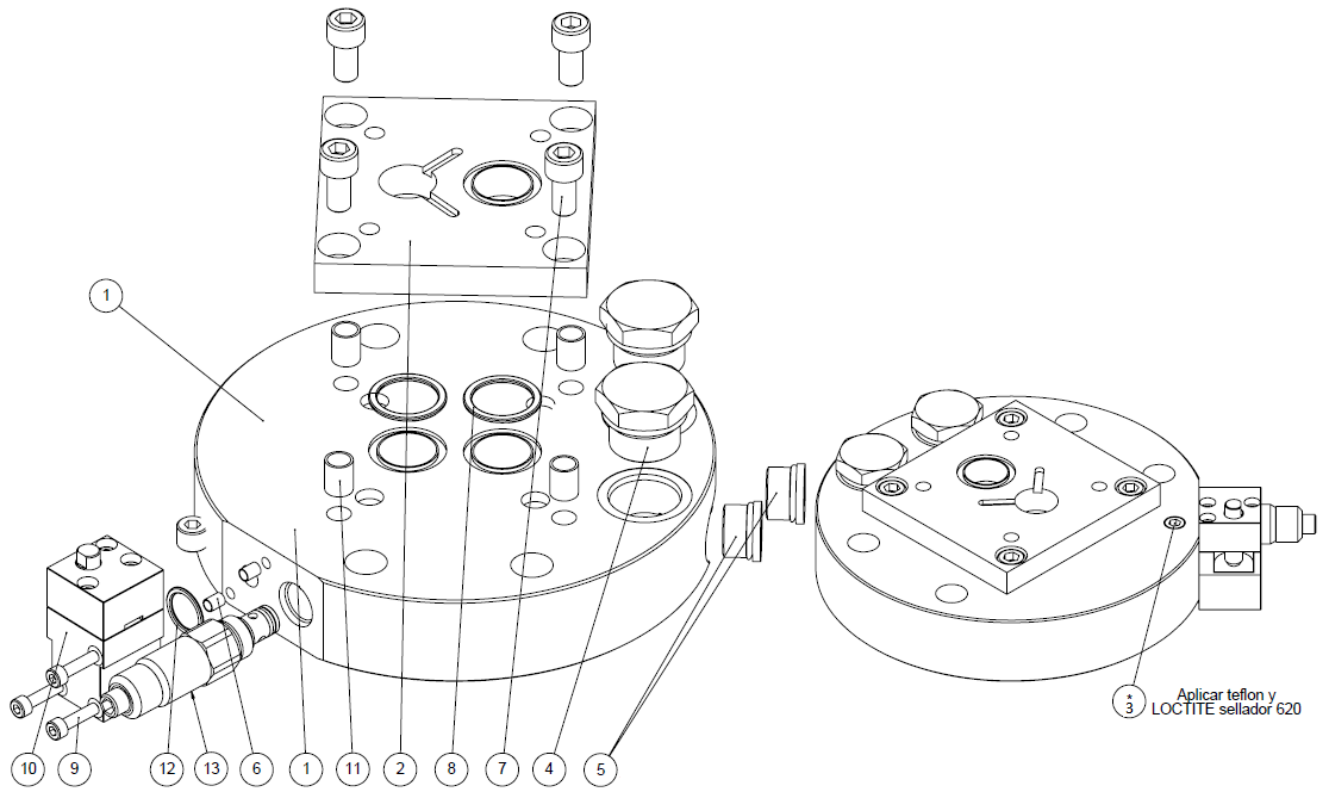
5.1. CONJUNTO PLATO CALEFACTADO / HEATER PLATE ASSEMBLY: (916XX903)



<i>Nº</i>	<i>Descripción</i>	<i>Description</i>	<i>Ref.</i>	<i>Qty</i>
1	PLATO	PLATE	917XX743	1
2	TOPE SONDA	LIMITER PROBE	917XX747	1
3	MUELLE ANTIRETORNO	SPRING	917XX745	1
4	CHAPA ELECTRICA PLATO	PLATE ELECTRIC PLATE	917XX564	1
5	MAZO TERMOSTATO	THERMOSTATE GUN	915XX585	1
6	JUNTA PLATO 200L	200L PLATE GASKET	915XX005	2
7	SONDA DE TEMPERATURE NI	TEMPERATURE PROBE NI	916XX002	1
8	SONDA TEMPERATURA PT 100	TEMPERATURE PROBE PT 100	916XX003	
	TERMINAL FASTON M-PANEL TE938	TERMINAL FASTON M-PANEL TE938	915XX158	1
9	TORNILLO ALLEN M3X6 INOX	STAINLESS M3X6 ALLEN SCREW	911XX132	2
10	TORNILLO ALLEN M4X6 INOX	STAINLESS M3X6 ALLEN SCREW	910XX981	1
11	TORNILLO ALLEN M4X10 INOX	STAINLESS M3X6 ALLEN SCREW	910XX129	6
12	ARANDELA DENTADA M3	M3 TOOTHED WASHER	910XX397	2
13	HELICOIL M10X110	M10X10 HELICOIL	915XX582	4
14	HELICOIL M24X48	M24X48 HELICOIL	915XX583	2
15	HELICOIL M6X9	M6X9 HELICOIL	915XX223	5
16	HELICOIL M4X6	M4X6 HELICOIL	911XX425	6
17	TAPON BORNES RESISTENCIA	HEATER BAR TERMINALS PLUG	918XX532	6
18	EXTENSION BORNES RESISTENCIA	HEATER BAR TERMINALS EXTENSION	918XX533	6
19	JUNTA	JOINT	Depending model	2
20	CAPUCHON AISLAMIENTO BORNAS	TERMINALS INSULATION	914XX999	6
21	TUERCA HEXAGONAL M6	M6 HEX NUT	917XX048	12
22	RACOR PG-21	PG-21 FITTING	918XX531	1
23	JUNTA SILICONA	SILICONE JOINT	918XX530	1

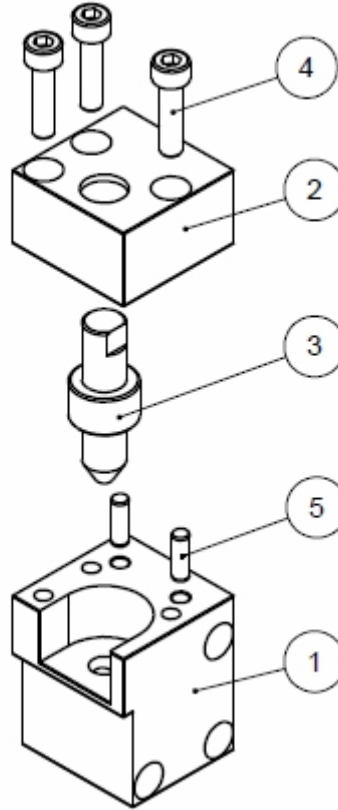
<i>Nº</i>	<i>Descripción</i>	<i>Description</i>	<i>Ref.</i>	<i>Qty</i>
19	TEFLON	TEFLON	917XX562	1
	SILICONA	SILICONE	915XX005	1

6. CONJUNTO DISTRIBUIDOR / REGULATOR ASSEMBLY: (916XX892)



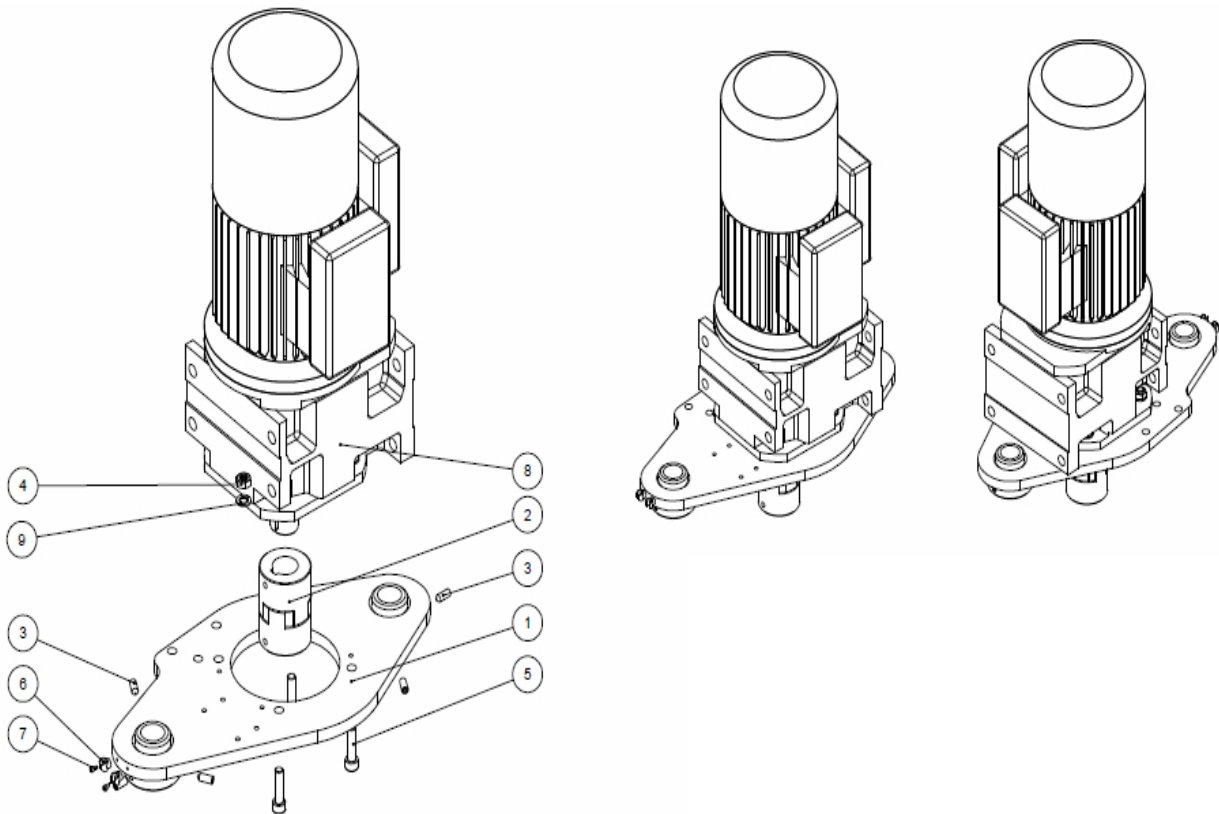
Nº	Descripción	Description	Ref.	Qty
1	CUERPO DISTRIBUIDOR	MANIFOLD BODY	917XX737	1
2	PLACA INTERMEDIA BOMBA-DISTRIBUIDOR	MANIFOLD-PUMP INTERMEDIATE PLATE	917XX738	1
3	TAPON 1/4" GAS BSP	PLUG 1/4" GAS BSP	915XX264	1
4	TAPON M30X1,5 CON JUNTA	M30X1,5 PLUG WITH JOINT	911XX428	2
5	TAPON TRANSDUCTOR PRESION 7/8 14H UNF	7/8 14H UNF PRESSURE TRANSDUCTOR PLUG	799XX146	2
6	HELICOIL M5X7,5	M5X7,5 HELICOIL	915XX261	3
7	TORNILLO ALLEN M10X20 INOX	STAINLESS M10X20 ALLEN SCREW	910XX908	4
8	JUNTA TORICA VITON 26X2,5	26X2,5 VITON O´RING	917XX742	2
9	TORNILLO ALLEN M5X20 INOX	STAINLESS M5X20 ALLEN SCREW	910XX065	3
10	CONJUNTO VÁLVULA DE PURGA	BLEED VALVE ASSEMBLY	PAG 21	1
11	HELICOIL M10X15	M10X15 HELICOIL	915XX174	4
12	JUNTA TORICA VITON 17X2	17X2 VITON O´RING	910XX500	1
13	KIT REGULADOR DE PRESION TARADO A 80BAR V1	PRESSURE REGULATOR 80 BAR V1	912XX169	1

6.1. CONJUNTO VALVULA PURGA / BLEED VALVE ASSEMBLY: (916XX998)



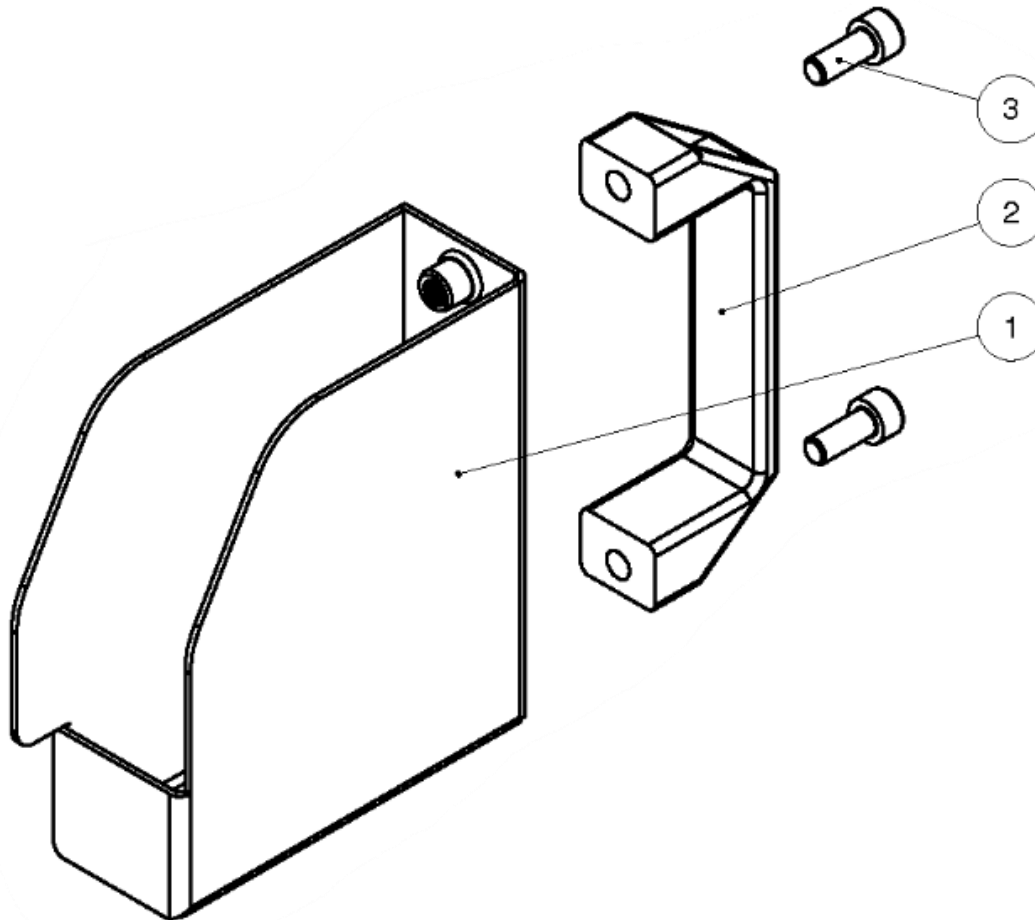
Nº	Descripción	Description	Ref.	Qty
1	CUERPO VALVULA PURGA	BLEED VALVE BODY	918XX538	1
2	TAPA VALVULA PURGA	BLEED VALVE LID	918XX539	1
3	AGUJA VÁLVULA PURGA	BLEED VALVE NOZZLE	918XX540	1
4	TORNILLO ALLEN M5X20 INOX	STAINLESS M5X20 ALLEN SCREW	910XX065	3
5	PASADOR CILINDRICO 4X12	4X12 CYLINDER PIN	911XX716	2

7. CONJUNTO MOTOR / MOTOR ASSEMBLY: (916XX893)



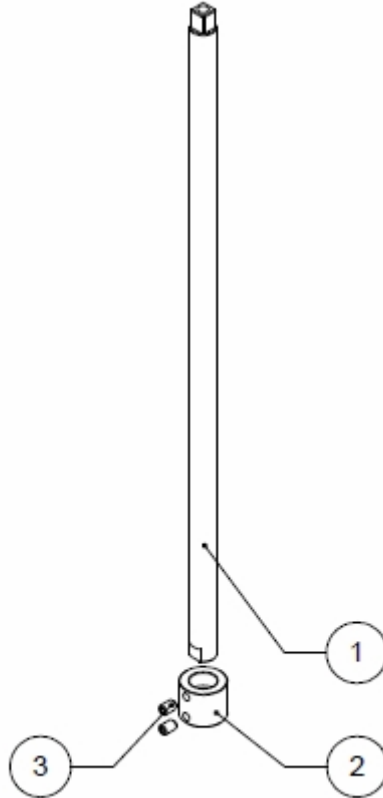
Nº	Descripción	Description	Ref.	Qty
1	SOPORTE MOTOR	MOTOR BRACKET	917XX734	1
2	ACOPLAMIENTO	COUPLING	915XX887	1
3	ESPARRAGO ROSCADO M8X20 INOX C/PUNTA	STAINLESS M8X20 THREADED STUD	913XX003	6
4	ARANDELA GROVER M10 INOX	STAINLESS M10 GROVER WASHER	915XX578	4
5	TUERCA HEXAGONAL M10 INOX	STAINLESS M10 HEX NUT	914XX216	4
6	TORNILLO ALLEN M10X40 INOX	STAINLESS M10X40 ALLEN SCREW	911XX213	4
7	CLIP PARA TUBO Ø8 DE 1 PASO	CLIP FOR Ø8 TUBE OF 1 PITCH	917XX735	2
8	TORNILLO ALLEN M3X6 INOX	STAINLESS M3X6 SCREW	911XX132	2
9	MOTOREDUCTOR	MOTOREDUCER	912XX343	1

8. CONJUNTO RECOGEDOR / DUSTPAN ASSEMBLY: (916XX894)



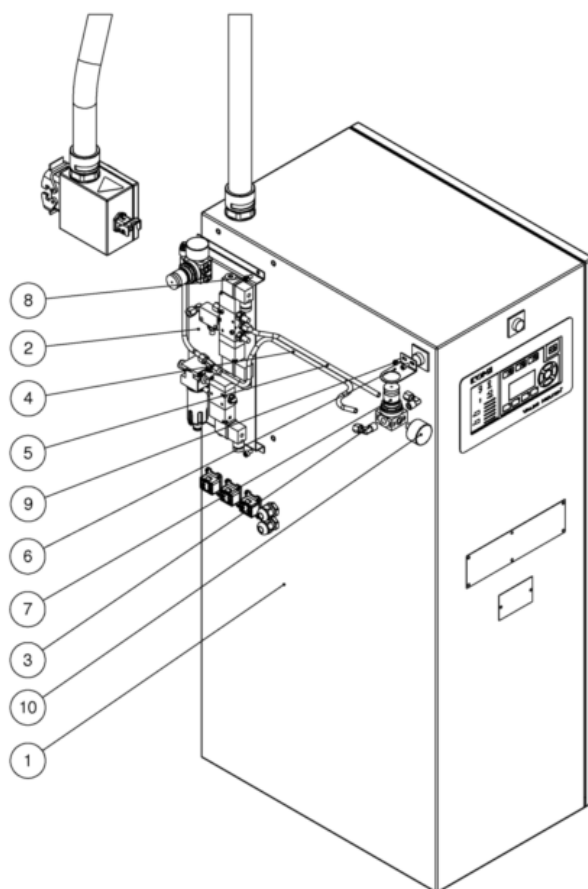
Nº	Descripción	Description	Ref.	Qty
1	RECOGEDOR	DUSTPAN	917XX732	1
2	ASA PEQUEÑA NEGRA	BLACK SMALL HANDLE	917XX733	1
3	TORNILLO ALLEN M6X15 INOX	STAINLESS M6X15 ALLEN SCREW	915XX090	2

9. CONJUNTO VARILLA PURGADOR / DRAINVALVE ROD ASSEMBLY: (916XX895)



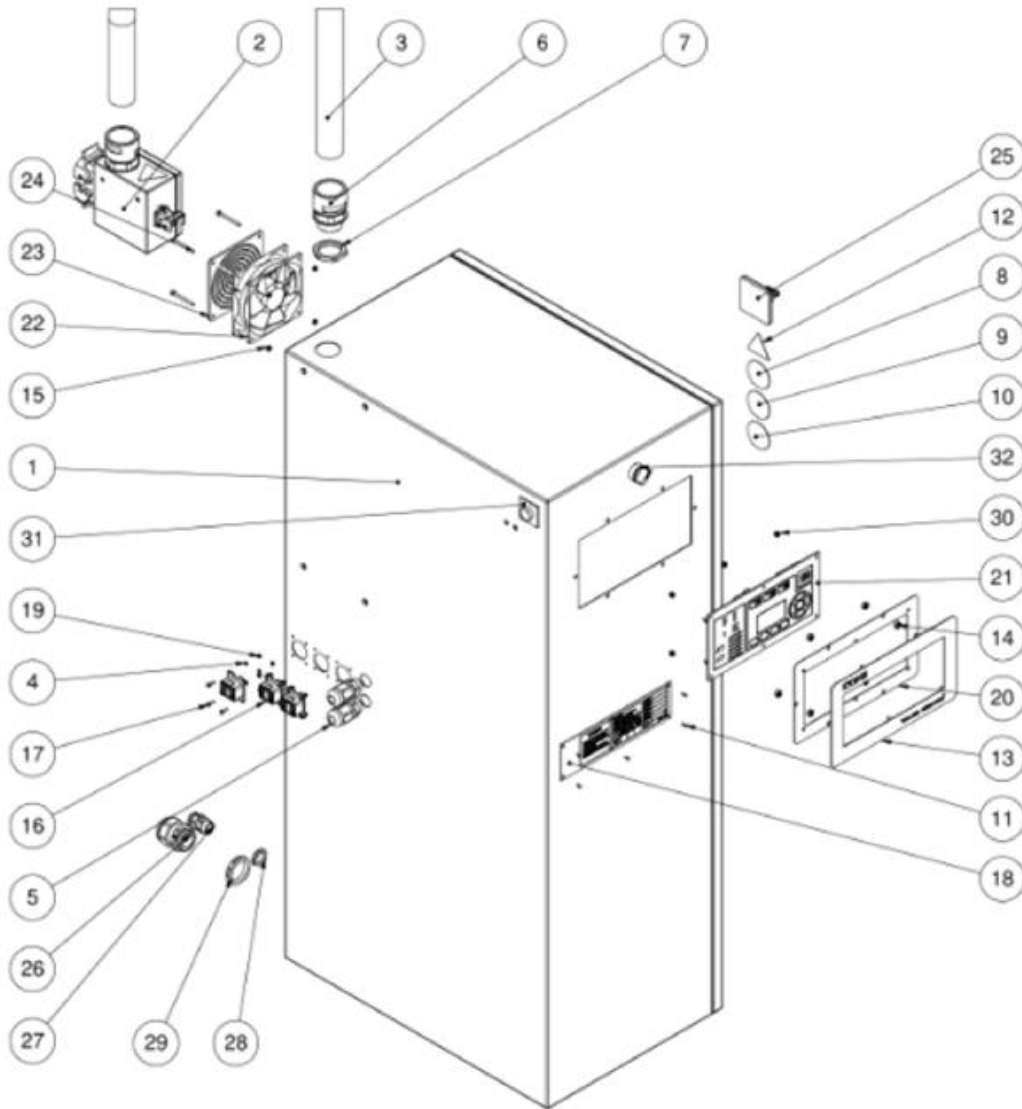
Nº	Descripción	Description	Ref.	Qty
1	VARILLA LLAVE	KEY ROD	917XX731	1
2	CASQUILLO VARILLA	ROD BUSHING	917XX740	1
3	ESPARRAGO ROSCADO M4X6 INOX	STAINLESS M4X6 THREAD STUD	910XX774	2

10. CONJUNTO ARMARIO ELECTRICO / ELECTRIC CABINET ASSEMBLY:



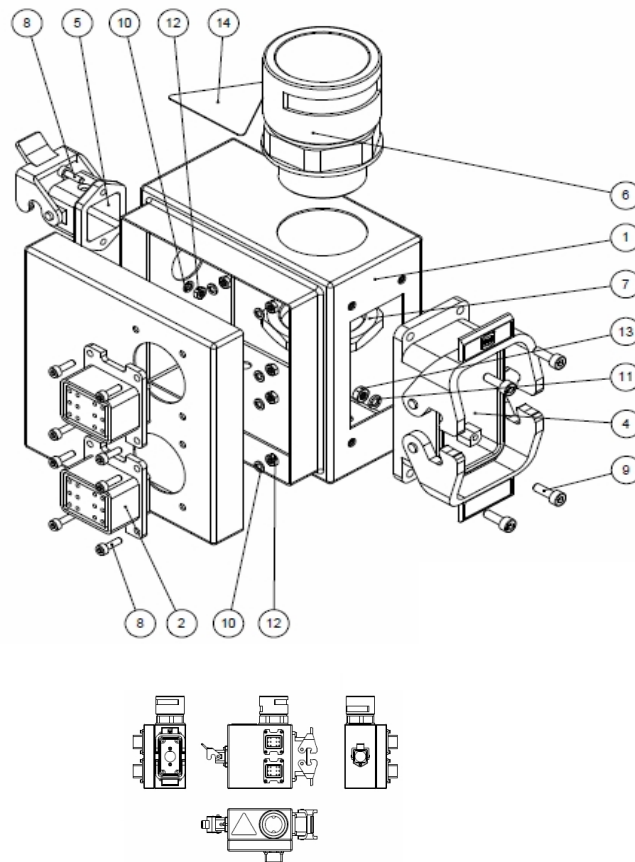
Nº	Descripción	Description	Ref.	Qty
1	SUBCON MONTAJE ARMARIO NUEVA ELECTRONICA	NEW ELECTRONIC CABINET ASSEMBLY	PAG 26	1
2	SUBCJTO BANDEJA ELEMENTOS NEUMATICOS	PNEUMATIC ELEMENTS TRAY ASSEMBLY	PAG 29	1
3	RACOR 90º R1/4 / O8-B	90º FITTING R1/4 / O8-B	910XX240	2
4	TUBO FILTRO-MANOMETRO DELANTERO E-DRUM	FRONT EDRUM FILTER-MANOMETER PIPE	917XX729	1
5	TUBO MANOMETRO DELANTERO--VALVULA 5/3 E-	FRONT EDRUM MANOMETER PIPE	917XX730	1
6	SOPORTE REGULADOR E/B-DRUM	E/B-DRUM REGULATOR SUPPORT	918XX529	1
7	REGULADOR DE PRESION 0-10 Y SOPORTE	PRESSURE REGULATOR AND BRACKET	910XX229	1
8	TORNILLO ALLEN M6X10 INOX.	ALLEN SCREW M6X10 STAINLESS	915XX082	4
9	TORNILLO ALLEN M5X10 INOX.	ALLEN SCREW M5X10 STAINLESS	910XX968	2
10	MANOMETRO C D.40 0-6KG. (SIN MARCO)	C D.40 0-6KG MANOMETER (WITHOUT FRAME)	910XX230	1

10.1 CONJUNTO MONTAJE ARMARIO NUEVA ELECTRONICA / NEW ELECTRONIC CABINET ASSEMBLY:



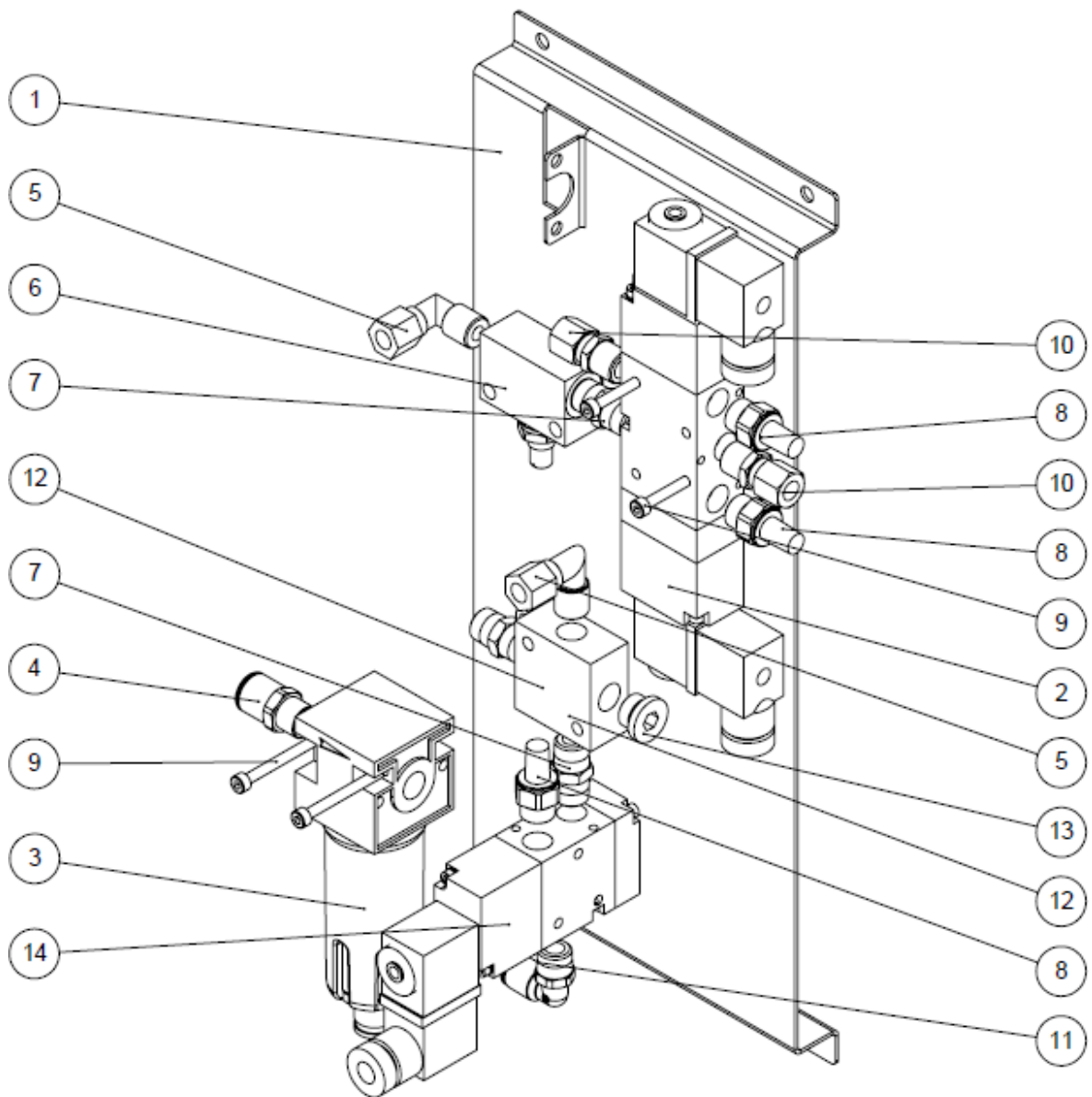
Nº	Descripción	Description	Ref.	Qty
1	ARMARIO ELEC SUP 5 SAL NUEVA ELECTRONICA	NEW ELECTRONIC CABINET	-	1
2	SUBCJTO CAJA ELECTRICA	ELECTRIC BOX ASSEMBLY	PAG 28	1
3	TUBO CORRUGADO POLIAMIDA PA6 PG-36	POLYAMIDE CORRUGATED PIPE PA6 PG-36	913XX478	1
4	ARANDELA GROWER M3 INOX.	GROVER WASHER M3 STAINLESS	910XX328	12
5	PRENSA PVC PG-16 GRIS	PVC PG16 GREY PRESS	918XX805	2
6	RACOR POLIAMIDA	POLYAMIDE FITTING	917XX716	1
7	TUERCA POLIAMIDA M40X1.5	POLYAMIDE NUT M40X1,5	917XX717	1
8	PEGATINA TRAJE	SUIT BUMPER	917XX722	1
9	PEGATINA GUANTES	GLOVE BUMPER	917XX723	1
10	PEGATINA BOTAS	BOOT BUMPER	917XX724	1
11	REMACHES POP 2,4X8	POP RIVET 2,4 X 8	915XX154	6
12	PEGATINA ELECTRICO	ELECTRIC BUMPER	917XX718	1
13	MARCO TARJETA CONTROL	CONTROL BOARD FRAME	918XX814	1
14	TUERCA HEXAGONAL M6 INOX	HEXAGONAL NUT M6 STAINLESS	910XX195	6
15	TUERCA HEXAGONAL M4 INOX.	HEXAGONAL NUT M4 STAINLESS	915XX159	4
16	MAZO NI120 MANG-PIST Nº2	NI120 HOSE-GUN Nº2 WIRING HARNESS	Depending model	
17	TORNILLO ALLEN M3X10 INOX	ALLEN SCREW M3X10 STAINLESS	910XX084	12
18	CHAPA MATRICULA	REGISTRATION SHEET	914XX975	1
19	TUERCA HEXAGONAL M3 INOX.	HEXAGONAL NUT M3 STAINLESS	914XX982	12
20	JUNTA MARCO GRANDE	BIG FRAME JOINT	914XX506	1
21	CPU OVERLAY ASSY UTC20 6CH	CPU OVERLAY ASSY UTC20 6CH	137XX029	1
22	VENTILADOR A 220V 50HZ 120X120X	FAN 220V 50Hz	915XX730	1
23	REJILLA DE PVC C/FILTRO	FILTER PVC GRID	918XX573	1
24	TORNILLO ALLEN M4X45 INOX	ALLEN SCREW M4X45 STAINLESS	917XX385	4
25	INTERRUPTOR MANUAL GENERAL III 40A KC	MANUAL SWITCH	915XX731	1
26	PRENSA PVC PG-29 GRIS	GREY PG-29 PVC PRESS	988XX717	1
27	PRENSA PVC PG13 GRIS	GREY PG-13 PVC PRESS	915XX235	1
28	TUERCA PVC PG13	PG13 PVC NUT	915XX233	1
29	TUERCA PVC PG29	PG29 PVC NUT	912XX173	1
30	TUERCA HEX. AUTOBLOCANTE M4 DIN 985	M4 DIN 985 SELF-LOCKING HEX NUT	912XX441	6
31	PULSADOR "MARCHA"	"START" BUTTON	914XX421	2
32	SELECTOR 3 POSICIONES FIJAS	3 FIXED POSITIONS SELECTOR	914XX422	1

10.1.1 CONJUNTO CAJA ELECTRICA / ELECTRIC BOX ASSEMBLY: (916XX872)



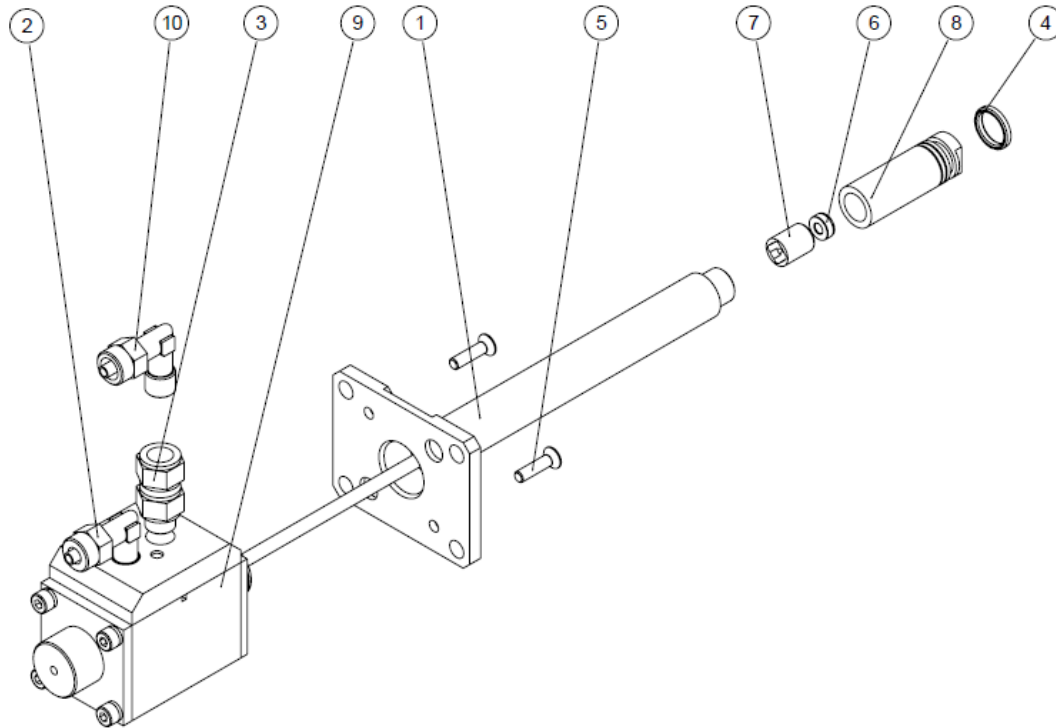
Nº	Descripción	Description	Ref.	Qty
1	CAJA CONECTORES	CONNECTORS BOX	917XX712	1
2	MAZO NI120 MANG-PIST Nº1	GUN-HOSE 1 WIRING HARNESS	916XX868	1
3	MAZO NI120 MANG-PIST Nº2	GUN-HOSE 2 WIRING HARNESS	-	1
4	BASE ABIERTA EMPOTRAR 10 POLOS	10 POLES EMBED OPEN SUPPORT	917XX715	1
5	BASE 3A. HARTING	BASE 3A. HARTING	915XX479	1
6	RACOR POLIAMIDA	POLYAMIDE FITTING	917XX716	1
7	TUERCA POLIAMIDA M40X1.5	POLYAMIDE NUT M40X1,5	917XX717	1
8	TORNILLO ALLEN M3X10 INOX	ALLEN SCREW M3X10 STAINLESS	910XX084	10
9	TORNILLO ALLEN M4X12 INOX.	ALLEN SCREW M4X12 STAINLESS	910XX378	4
10	ARANDELA GROWER M3 INOX.	GROVER WASHER M3 STAINLESS	910XX328	10
11	ARANDELA GROWER M4 INOX.	GROVER WASHER M4 STAINLESS	910XX332	4
12	TUERCA HEXAGONAL M3 INOX.	HEXAGONAL NUT M3 STAINLESS	914XX982	10
13	TUERCA HEXAGONAL M4 INOX.	HEXAGONAL NUT M4 STAINLESS	915XX159	4
14	PEGATINA ELECTRICO	ELECTRIC BUMPER	917XX718	1

10.2 CONJUNTO BANDEJA ELEMENTOS NEUMATICOS / PNEUMATIC ELEMENTS TRAY ASSEMBLY: (916XX871)



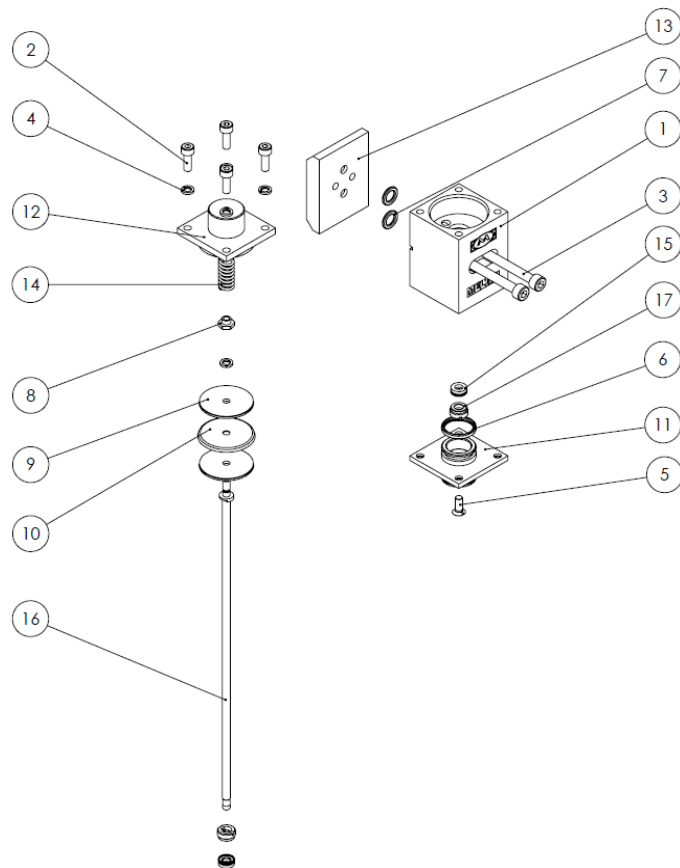
<i>Nº</i>	<i>Descripción</i>	<i>Description</i>	<i>Ref.</i>	<i>Qty</i>
1	CHAPA ELEMENTOS NEUMATICOS	PNEUMATIC ELEMENTS SHEET	917XX706	1
2	CONJUNTO DISTRIBUIDOR 5/3 N	5/3 N MANIFOLD ASSEMBLY	915XX208	1
3	FILTRO G1/4" 25M M107	25M M107 G1/4" FILTER	915XX568	1
4	RACOR RECTO 1/4 TUBO 10 E/R	STRAIGHT FITTING 1/4 PIPE 10 E/R	943XX049	1
5	RACOR 90° R1/4 / O8-BN	90° FITTING R1/4 / O8-BN	-	2
6	REGULADOR CAUDAL RFL-U-1/4	FLOW REGULATOR RFL-U-1/4	917XX710	1
7	RACOR RECTO M-M 1/4"	STRAIGHT FITTING M-M 1/4"	914XX069	3
8	SILENCIADOR 1/4" CORTO 14TR CONICO SERI	SHORT 1/4" SILENCER 14 TR	915XX179	3
9	TORNILLO ALLEN M4X40 INOX.	ALLEN SCREW M4X40 STAINLESS	917XX535	4
10	RACOR RECTO R1/4 / O8-B	STRAIGHT FITTING R1/4 / O8-B	910XX244	3
11	RACOR 90° R1/4 / ER8-P	90° FITTING R1/4 / ER8-P	988XX051	2
12	REGLETA DISTRIBUCION G1/4"	DISTRIBUTION STRIP G1/4"	-	1
13	TAPON HEXAGONAL INTERIOR 1/4" BSP CON JUNTA TÓRICA	CAP HEX. INTERIOR 1/4" BSP WITH JUNT. T	917XX423	1
14	DISTRIBUIOR 3/2 NC - 1/4"	MANIFOLD 3/2 NC 1/4"	915XX206	1

11. CONJUNTO VÁLVULA V-DRUM LISO / VDRUM FLAT VALVE ASSEMBLY: (916XX585)



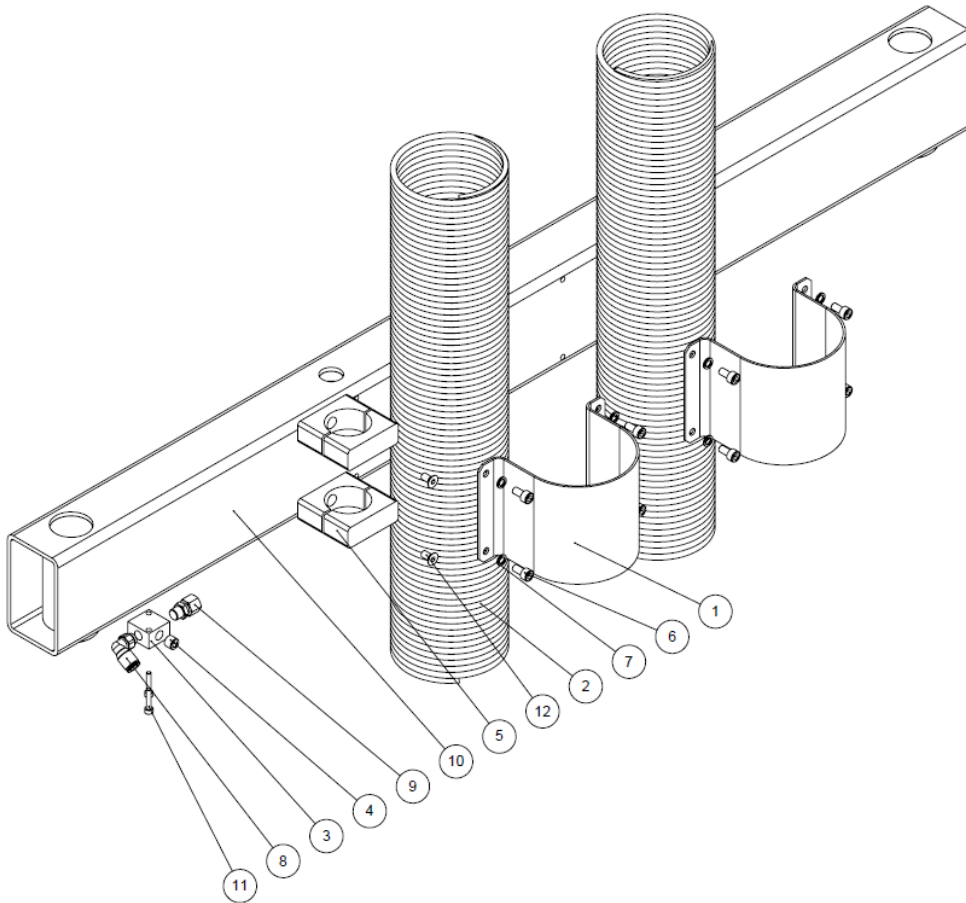
Nº	Descripción	Description	Ref.	Qty
1	BASE TUBO	TUBE BASE	913XX001	1
2	RACOR 90° R1/8 / SR6-BN	90° FITTING R1/8 / SR6-BN	910XX057	1
3	ADAPTADOR M 1/8 BSP CILINDRICA - H 1/8	ADAPTER M 1/8 BSP CYLINDRICAL - H 1/8	943XX006	2
4	JUNTA TORICA VITÓN 12X2	VITON O-RING Ø12X2	910XX049	2
5	TORNILLO AVELLANADO ALLEN M4X16 INOX.	ALLEN COUNTERSUNK SCREW M4X16 STAINLESS	918XX542	2
6	LENTEJUELA BOLA 4.5	BUSHING BALL 4.5	-	1
7	GUIA AGUJA MÓDULO	MODULE NEEDLE GUIDE	900XX244	1
8	CASQUILLO PUNTA PLATO LISO 200L	BUSHING WITH HEAD FOR FLAT PLATE	-	1
9	VÁLVULA PLATO SEGUIDOR L=215	DRUM UNLOADER VALVE	Page 32	1
10	RACOR 90° 1/8 T/8-4 SEMIRA. NI	SEMI-QUICK 90° FITTING 1/8 T/8-4	-	1

11.1. CONJUNTO VALVULA PLATO SEGUIDOR / DRUM UNLOADER VALVE ASSEMBLY:



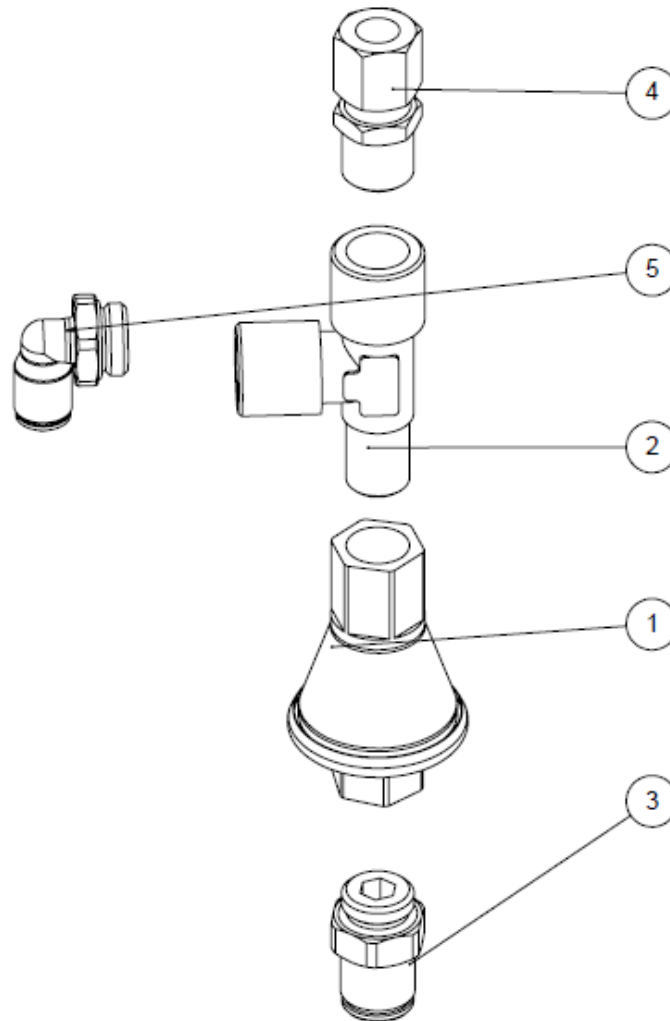
Nº	Descripción	Description	Ref.	Qty
1	CUERPO MÓDULO ALTO CAUDAL	HIGH FLOW MODULE BODY	915XX763	1
2	TORNILLO ALLEN M4X12 INOX.	ALLEN SCREW M4X12 STAINLESS	910XX378	4
3	TORNILLO ALLEN M5X40 INOX.	ALLEN SCREW M5X40 STAINLESS	918XX675	2
4	ARANDELA GROVER M4 INOX.	GROVER WASHER M4 STAINLESS	910XX332	5
5	TORNILLO GOTA SEBO RANURADO M4X10	FILLISTER HEAD SLOTTED SCREW M4X10	914XX881	2
6	JUNTA TÓRICA VITON 16X2	VITON O-RING Ø16X2	914XX082	2
7	JUNTA TÓRICA VITON 7.65X1.78	VITON O-RING Ø7.65X1.78	910XX324	2
8	TUERCA ÉMBOLO	PISTON NUT	910XX333	1
9	PLATILLO ÉMBOLO ALTO CAUDAL	HIGH FLOW PISTON PLATE	915XX767	2
10	JUNTA ÉMBOLO ALTO CAUDAL	HIGH FLOW PISTON JOINT	915XX764	1
11	PUNTA VÁLVULA PLATO SEGUIDOR	VALVE TIP	917XX536	1
12	TAPA TRASERA ALTO CAUDAL	HIGH FLOW BACK COVER	915XX766	1
13	ADAPTADOR VÁLVULA	VALVE ADAPTOR	911XX219	1
14	MUELLE DANLY AZUL Ø5XØ10X25	BLUE DANLY SPRING Ø5XØ10X25	914XX221	1
15	JUNTA CIERRE BALSEAL PARA MODULOS MI	BALSEAL JOINT FOR MI MODULES	910XX978	2
16	AGUJA VÁLVULA INYECTORA (L=215)	INJECTION VALVE NEEDLE	913XX953	1
17	TORNILLO FIJACIÓN JUNTAS	JOINT SETSCREW	910XX326	2

12. CONJUNTO TRAVESAÑO / BUNK ASSEMBLY: (916XX897)



Nº	Descripción	Description	Ref.	Qty
1	SOPORTE MANGUERA	HOSE BRACKET	917XX532	2
2	MUELLE MANGUERA	HOSE SPRING	917XX533	2
3	REGLETA DE DISTRIBUCIÓN G1/8	G1/8 CONNECTOR OF DISTRIBUTION	917XX534	1
4	TAPON 1/8" GAS BSP	1/8" GAS BSP PLUG	910XX001	2
5	ABRAZADERA JIR M40	M40 JIR CLAMP	917XX705	2
6	TORNILLO ALLEN M6X12	M6X12 ALLEN SCREW	910XX089	8
7	ARANDELA GROVER INOX M6	STAINLESS M6 GROVER WASHER	910XX131	8
8	RACOR 90º G1/8 / ER8-P	90º FITTING G1/8 / ER8-P	913XX991	1
9	RACOR RECTO 1/8" E/R TUBO 8	1/8" E/R 8 TUBE STRAIGHT CONNECTOR	917XX419	1
10	TRAVESAÑO	BUNK	917XX531	1
11	TORNILLO ALLEN M4X20	M4X20 ALLEN SCREW	914XX304	2
12	TORNILLO AVELLANADO ALLEN M6X15 INOX	STAINLESS M6X15 ALLEN REAMER SCREW	918XX415	2

13. KIT REGULADOR DE PRESION 1BAR EDRUM / 1BAR EDRUM PRESURE REGULATOR:



Nº	Descripción	Description	Ref.	Qty
1	REGULADOR DE PRESIÓN EN LÍNEA	PRESSURE REGULATOR	912XX181	1
2	T HEMBRA MACHO LATERAL 1/4 METÁLICO	METALIC T FEMALE MALE LATERAL 1/4	915XX864	1
3	RACOR RECTO M 1/4" BSP - TUBO Ø8 ER	STRAIGHT FITTING G1/4 / ER8-P	913XX982	1
4	RACOR RECTO 1/4"G-TUBO 8 OVALILLO	AIR FITTING STRAIGHT 1/4 TUBE 8	910XX244	1
5	RACOR 90º G1/4 / ER06-P	90º FITTING G1/4 /ER06-P	-	1

S060550202

EDRUM-6 OUTPUTS NI120-1 PUMP/CE



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COVER PAGE

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	SCHEME
1	18/08/2020	oelizalde	PM19383 Change CPU board	01
0	01/08/2017	fcasedas		

1-Document book

Drawing	Function	Location	Revision	Date	Created by	Description
01	F1	P1				Cover page
02	F1	P1				Drawing list
03	F1	P1				Drawing list
04	F1	P1				Wiring line diagram
05	F1	P1				SERVICE WIRES
06	F1	P1				POWER SUPPLY
07	F1	P1				RELAYS
08	F1	P1				CHANNELS 1 AND 2
09	F1	P1				CHANNELS 3 AND 4
10	F1	P1				CHANNELS 5 AND 6 LP
11	F1	P1				DRUM HEATERS
12	F1	P1				VFD BOARD
13	F1	P1				MOTOR 1
14	F1	P1				SAFETY
15	F1	P1				MOVEMENT
16	F1	P1				COMMUNICATION
17	F1	P1				CONTROL BOARD
18	F1	P1				PNEUMATIC
19	F1	P1				Electrical cabinet
20	F1	P2				Electrical box
24	F1	P1	0	01/08/2017	fcasedas	-XA--XN
25	F1	P1				XPE-(1/1)
26	F1	P1				XCC-(1/1)
27	F1	P1				OX1-(1/1)
28	F1	P1				Bill of materials
29	F1	P1				Bill of materials
30	F1	P1				Bill of materials
31	F1	P1				Bill of materials
32	F1	P1				Bill of materials
33	F1	P1				Bill of materials
34	F1	P1				List of wires



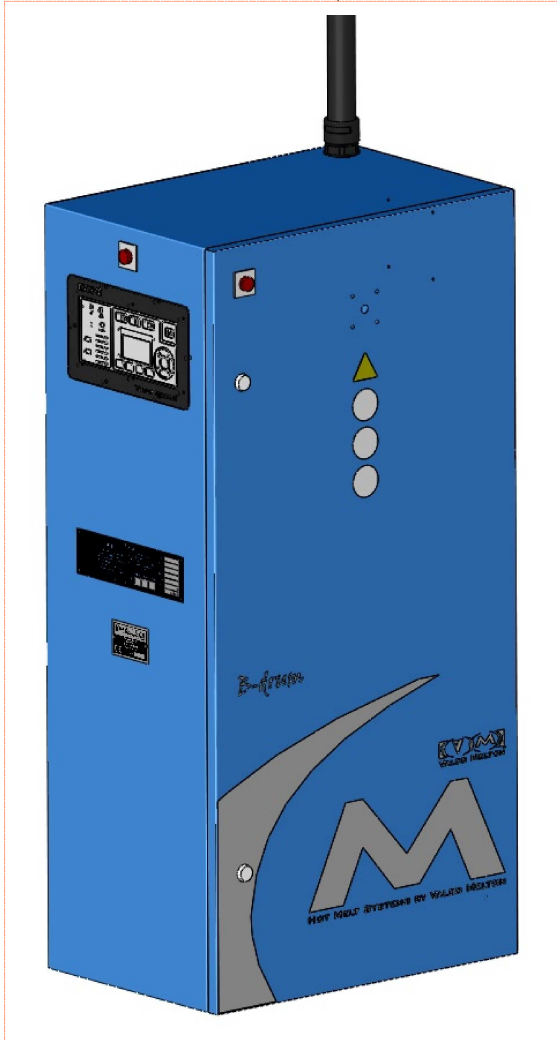
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DRAWING LIST

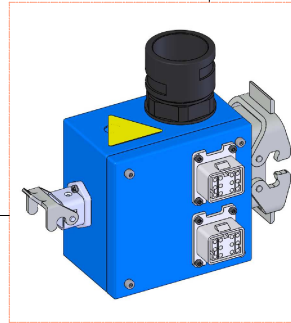
PROJECT: S06055020 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 02
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasedas		

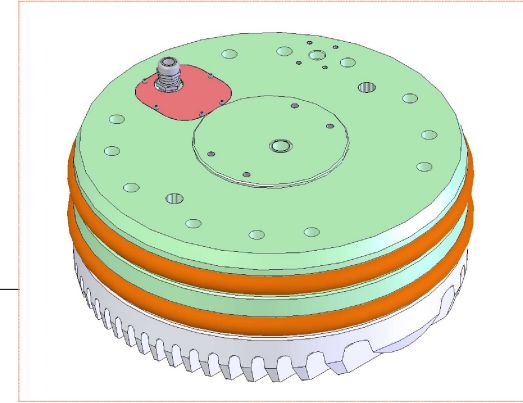
+P1 - Electrical cabinet



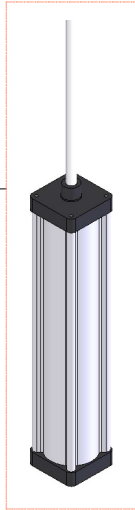
+P2 - Electrical box



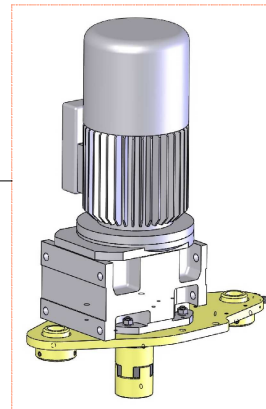
+P3 - Drum



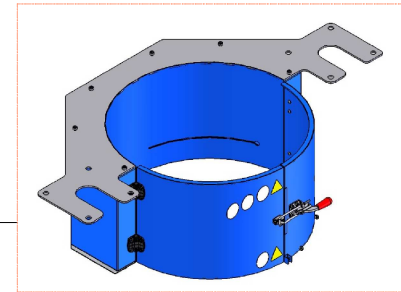
+P14 - Cylinder



+P12 - Motor



+P15 - CE

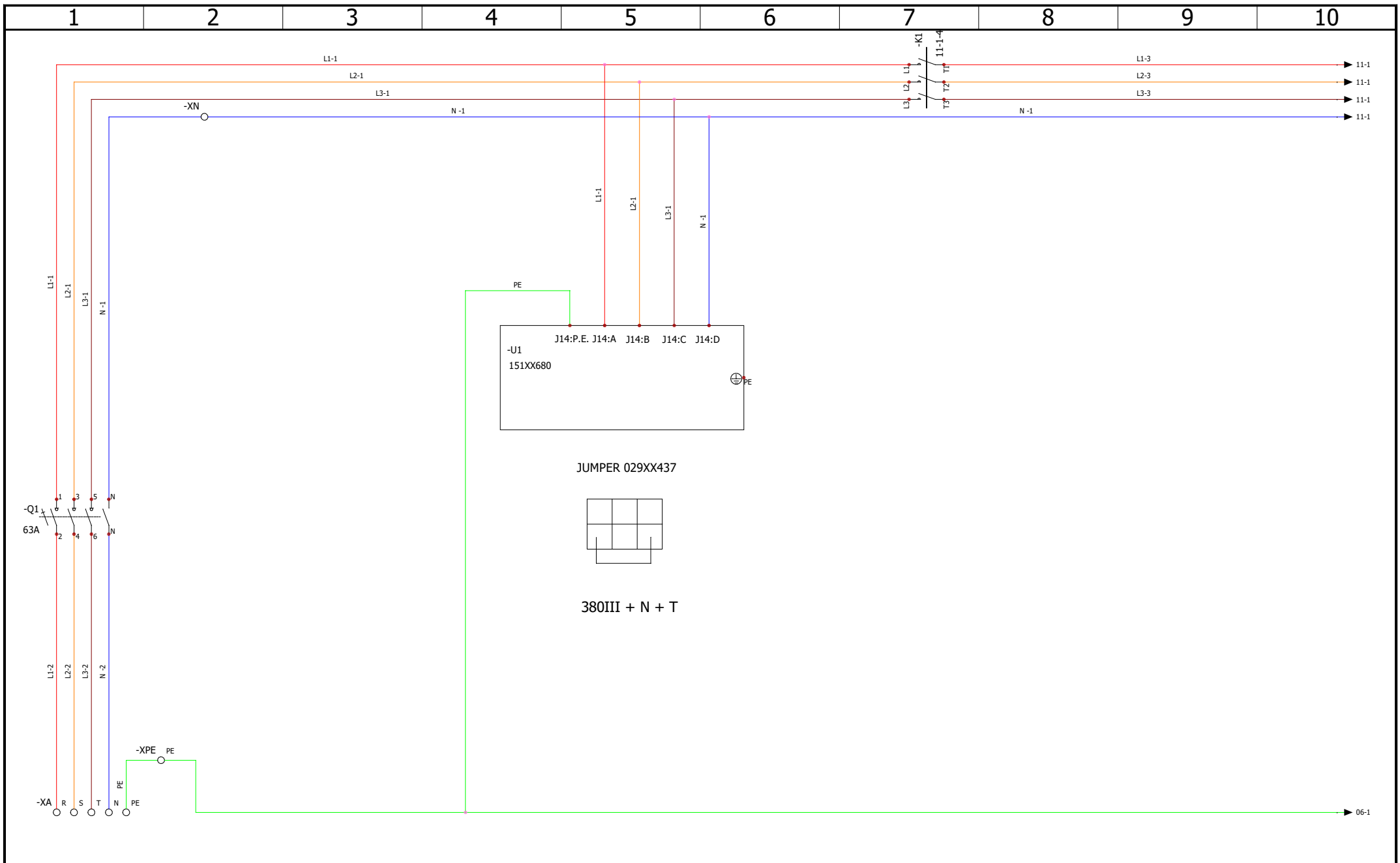


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WIRING LINE DIAGRAM

PROJECT: S06055020 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	SCHEME
1	18/08/2020	oelizalde	PM19383 Change CPU board	04
0	01/08/2017	fcasadas		

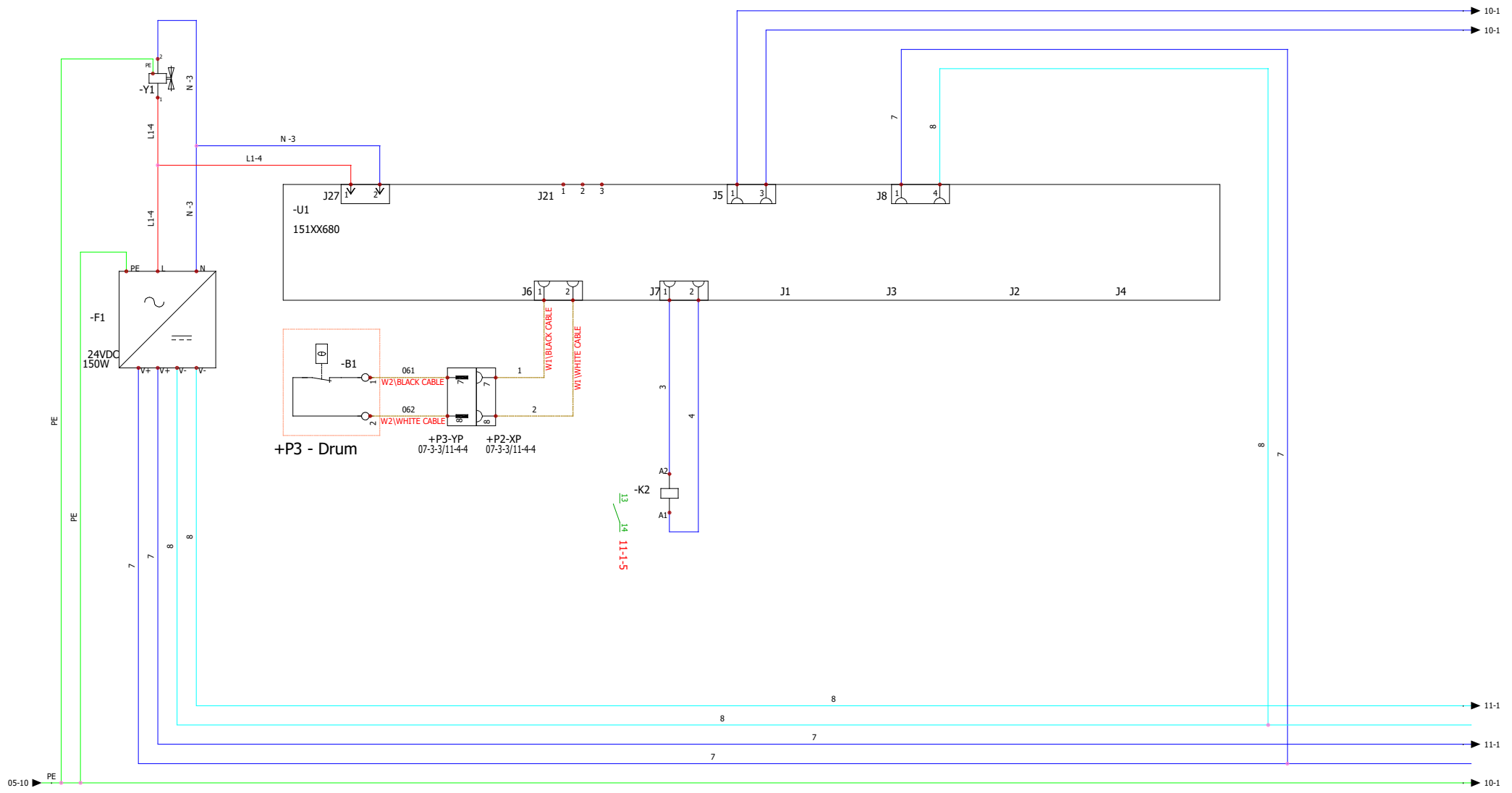


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SERVICE WIRES CONNECTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

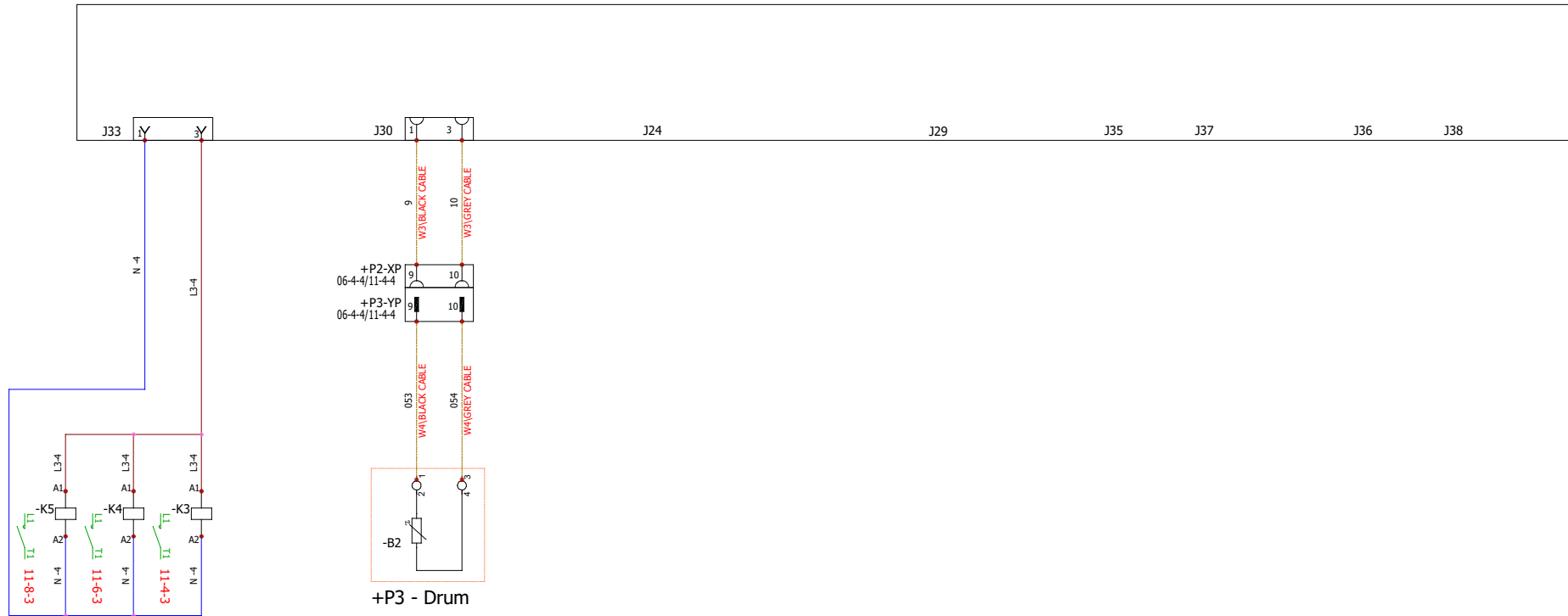
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3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 05
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		



**POWER SUPPLY, THERMOSTAT
 AND CONTACTOR ACTIVATION**

PROJECT: S06055020 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 06
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		

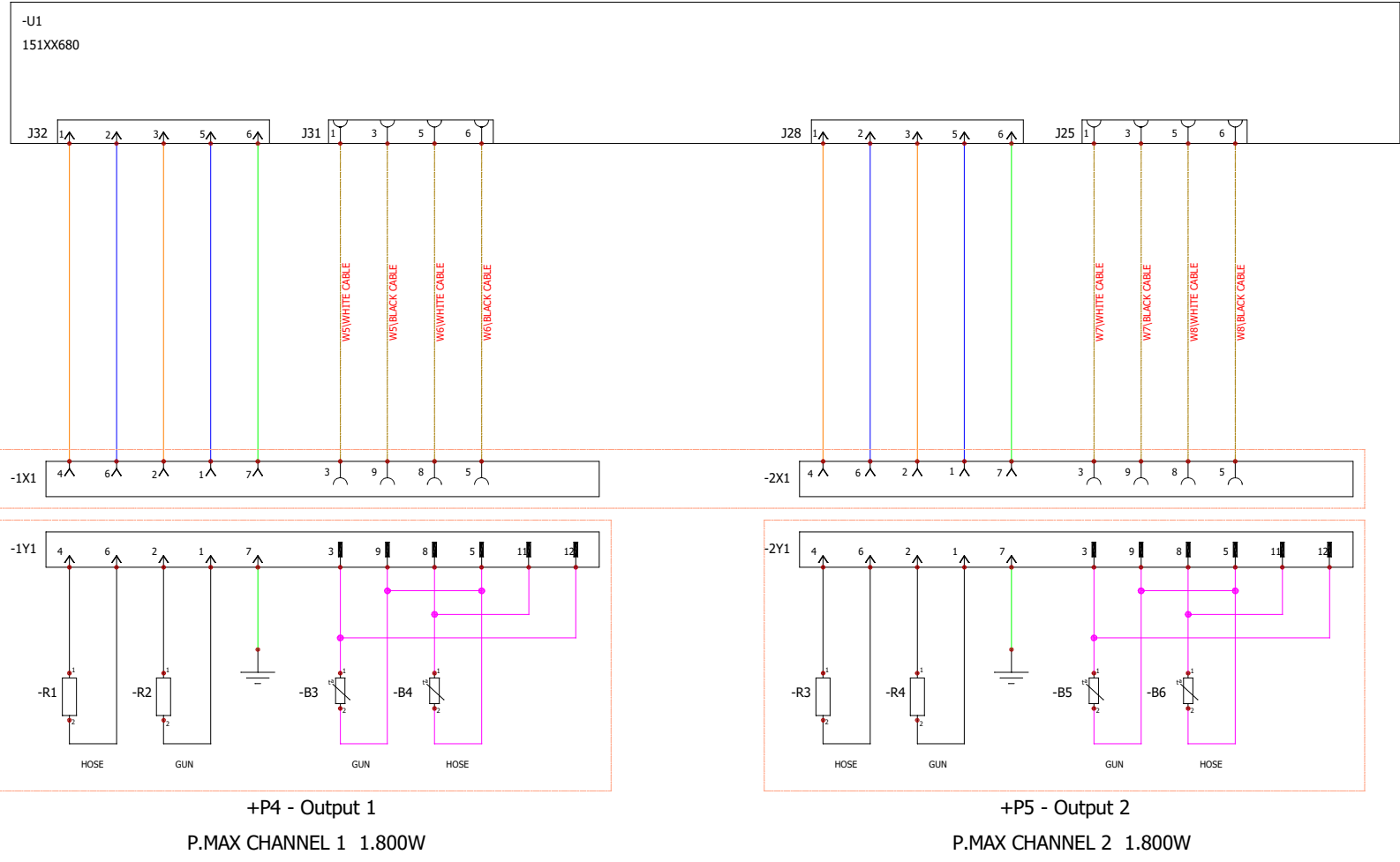


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STATIC RELAYS CONNECTION AND DRUM RTD

PROJECT: S06055020 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 07
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		

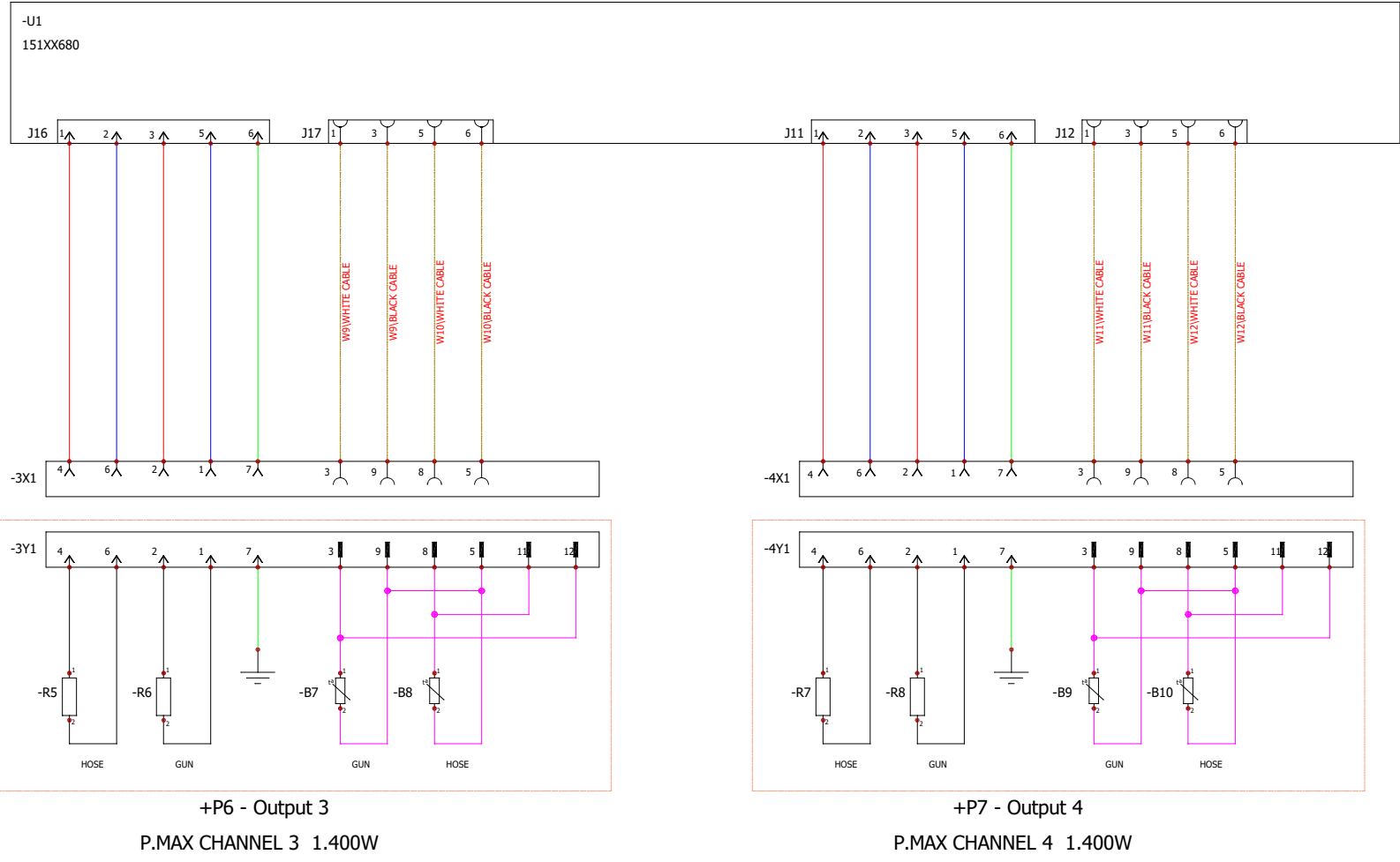


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CHANNELS 1 AND 2 NI120 OUTPUTS CONNECTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	SCHEME
1	18/08/2020	oelizalde	PM19383 Change CPU board	08
0	01/08/2017	fcasadas		



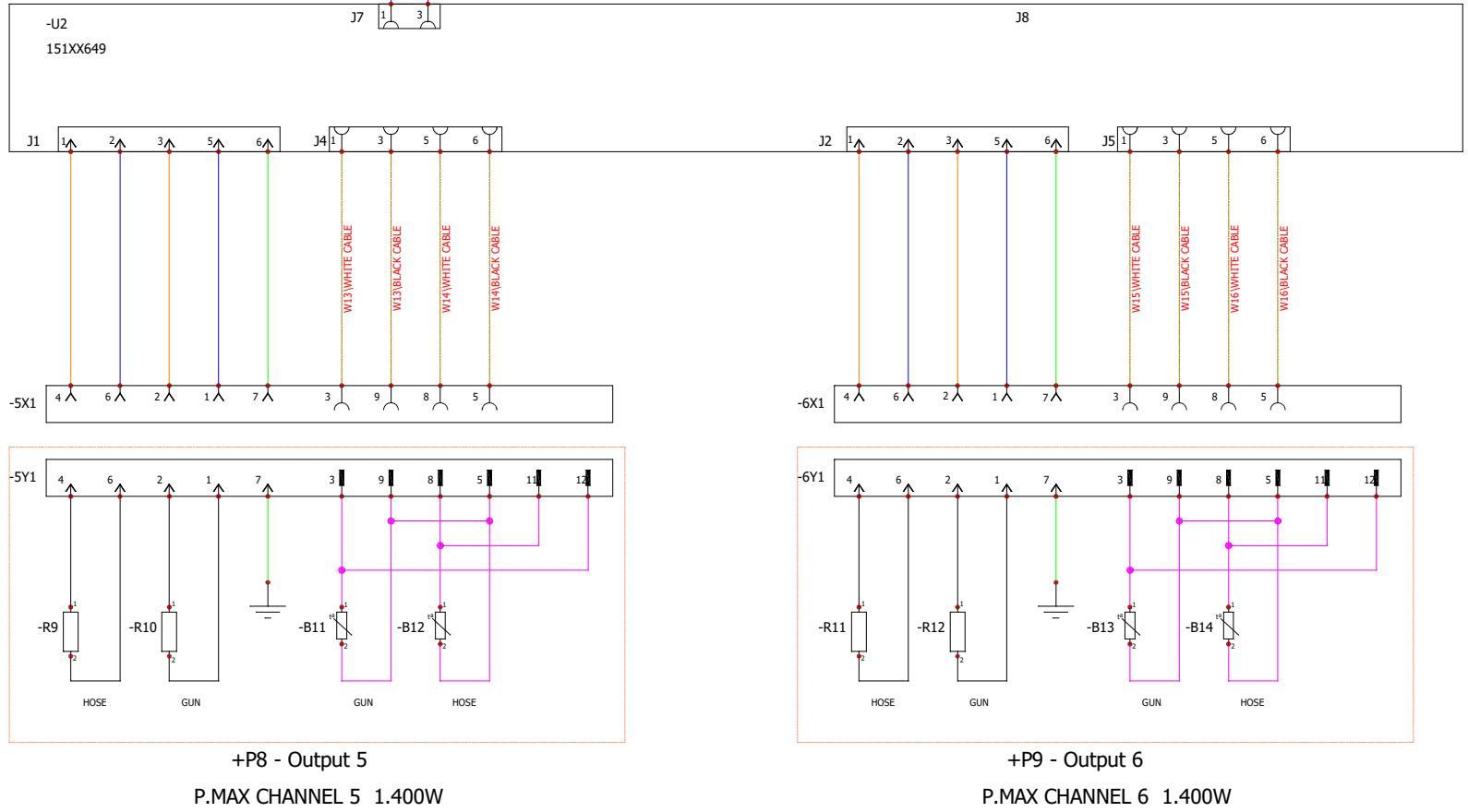
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CHANNELS 3 AND 4 NI120 OUTPUTS CONNECTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 09
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		
REV.	DATE	NAME	CHANGES	

06-10
06-10



06-10 PE 11-1

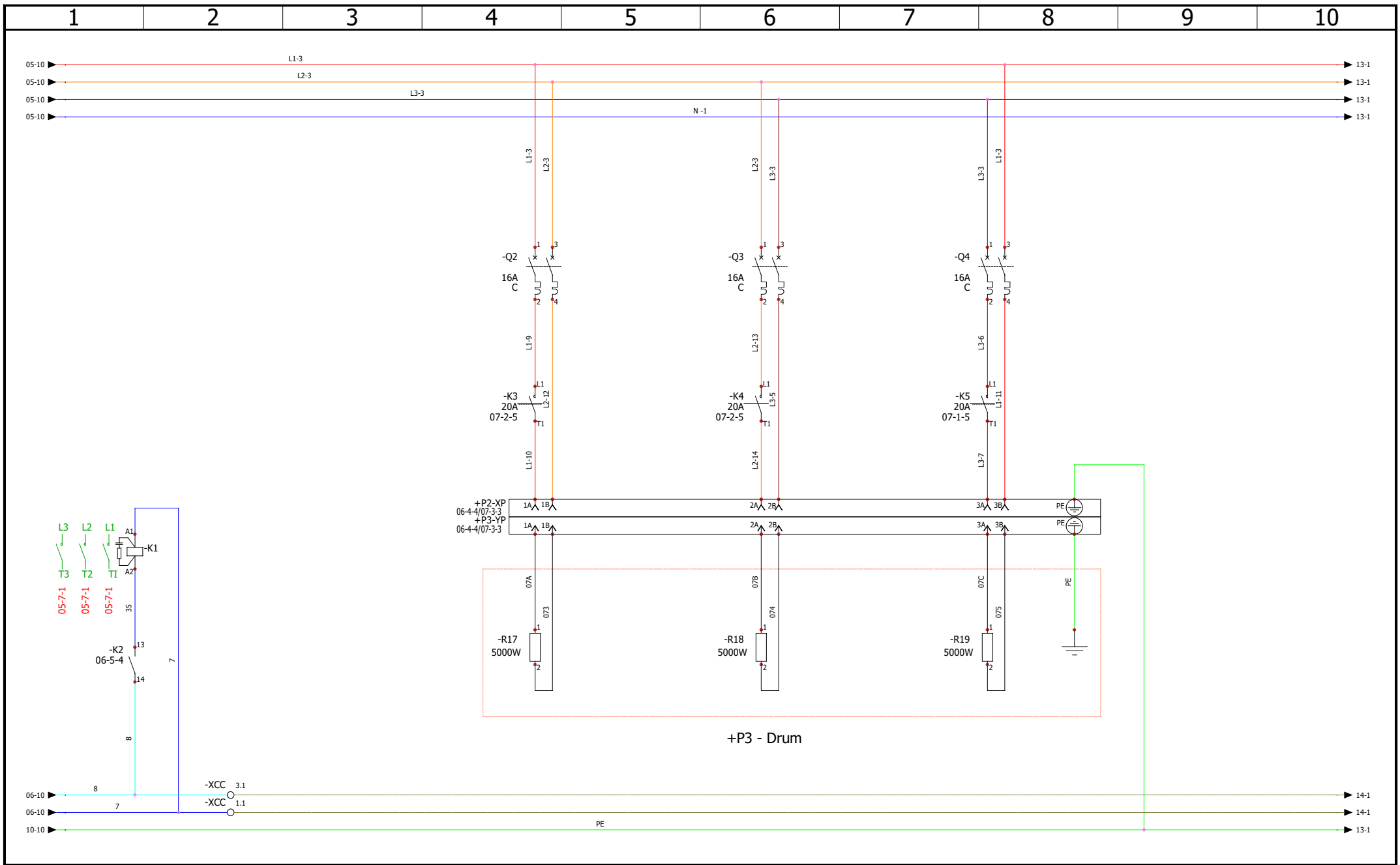


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CHANNELS 5 AND 6 LP NI120 OUTPUTS CONNECTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 10
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		
			CHANGES	

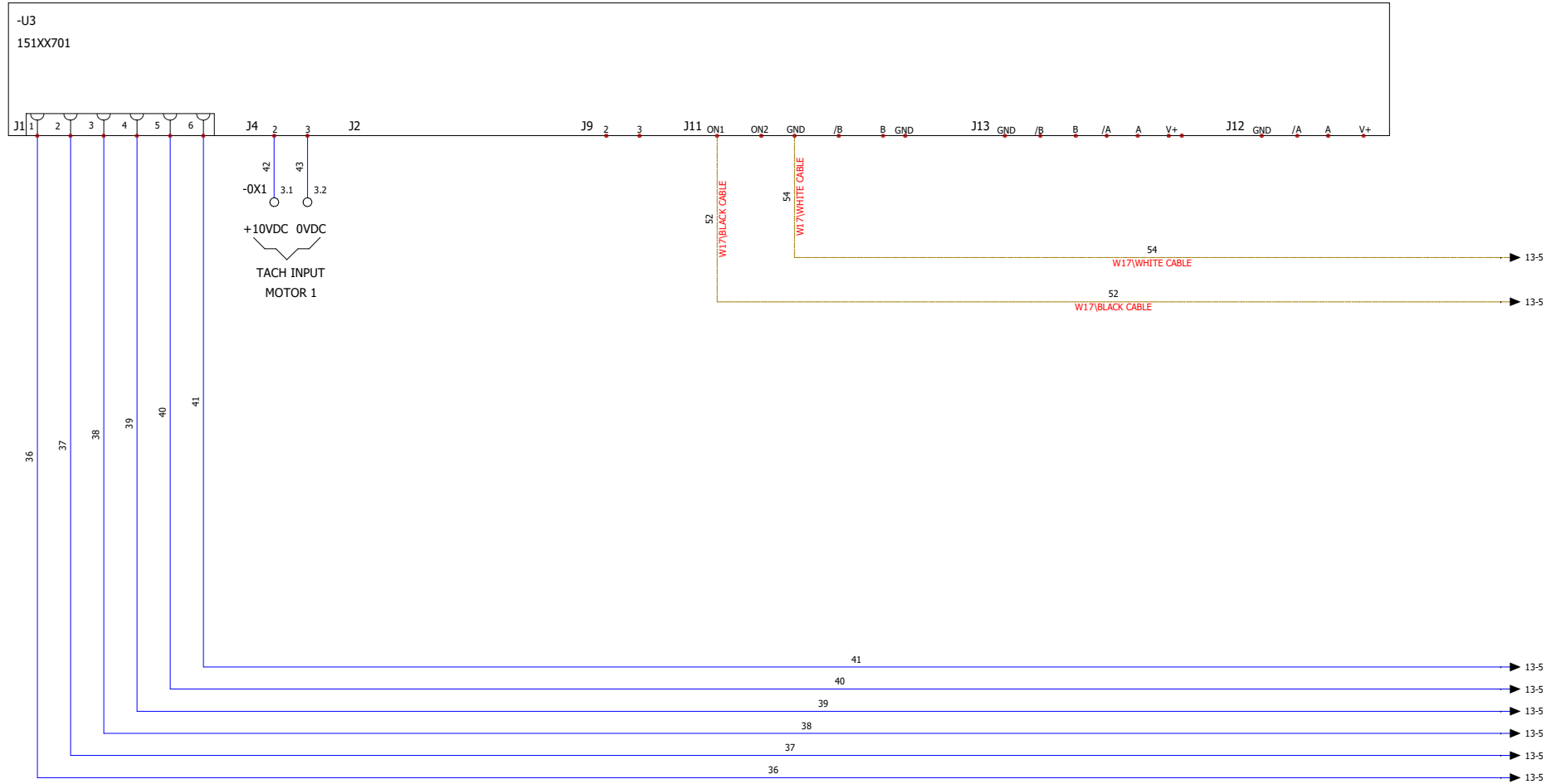


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CONTACTOR AND DRUM HEATERS

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 11
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		
			CHANGES	

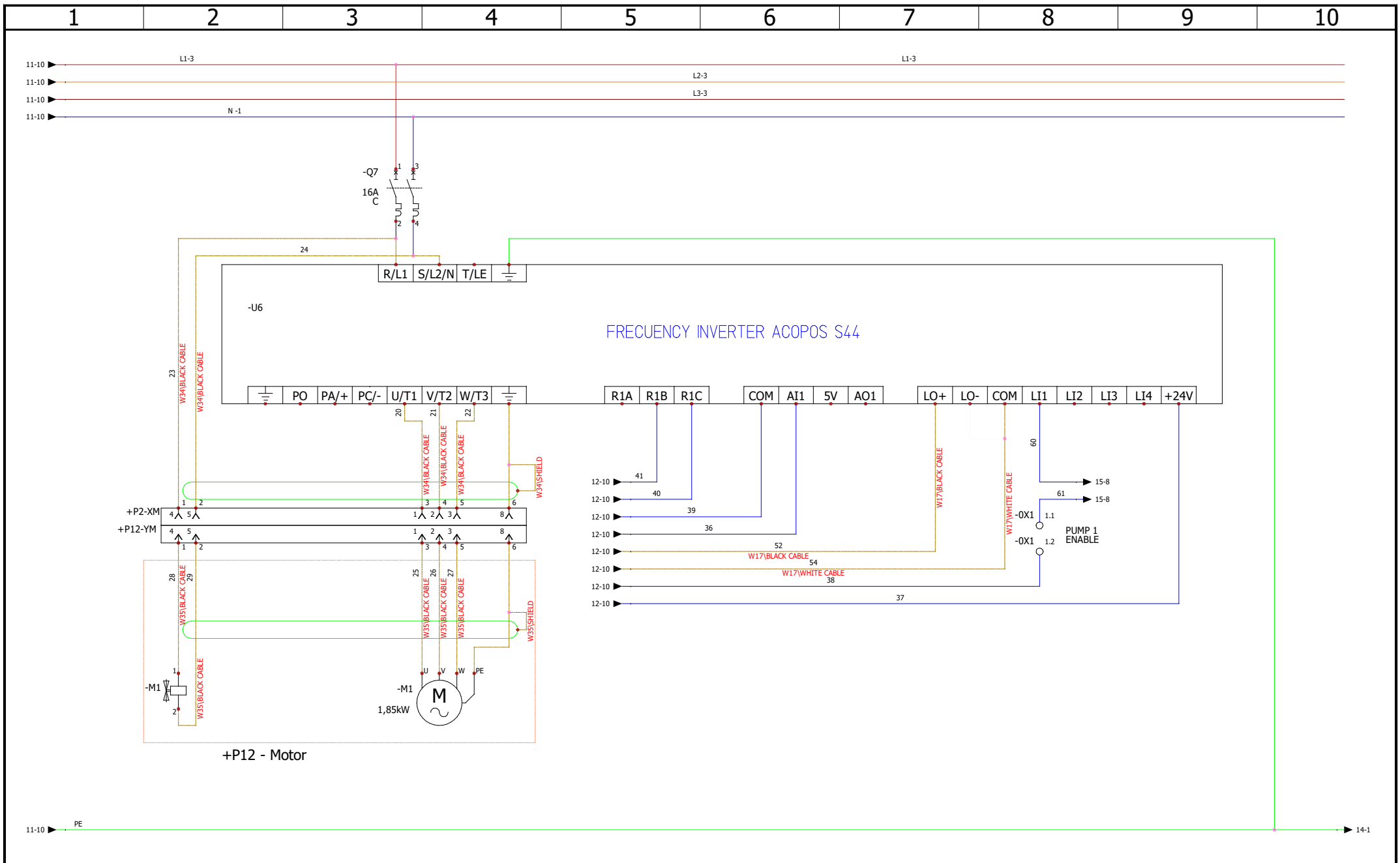


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VFD BOARD CONNECTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	SCHEME
1	18/08/2020	oelizalde	PM19383 Change CPU board	12
0	01/08/2017	fcasadas		



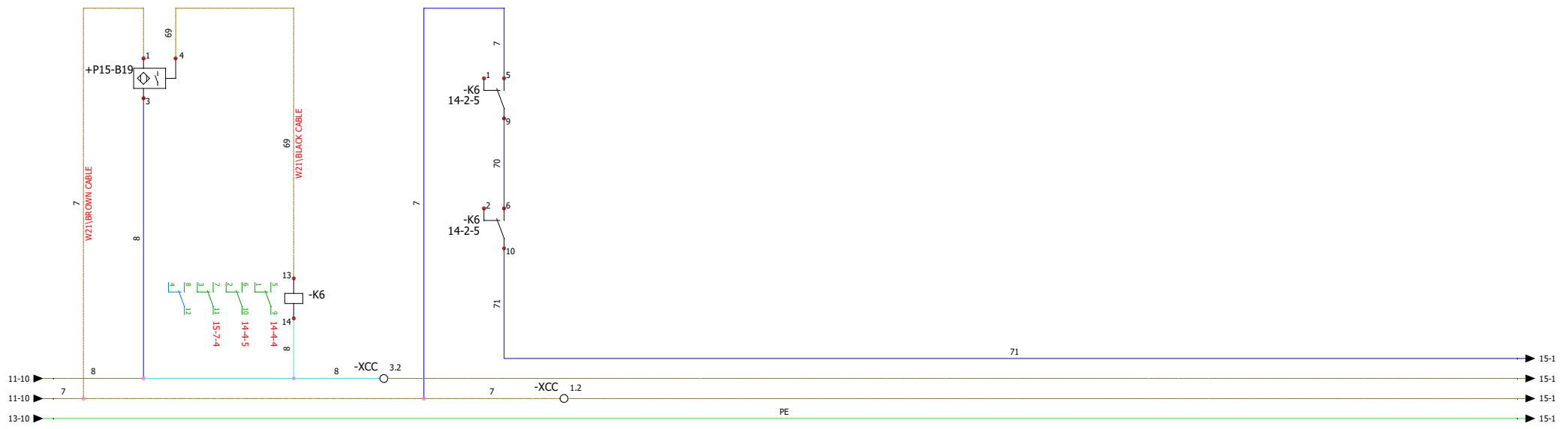
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MOTOR 1 CONNECTION

PROJECT: S060550202

EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	SCHEME
1	18/08/2020	oelizalde	PM19383 Change CPU board	13
0	01/08/2017	fcasadas		

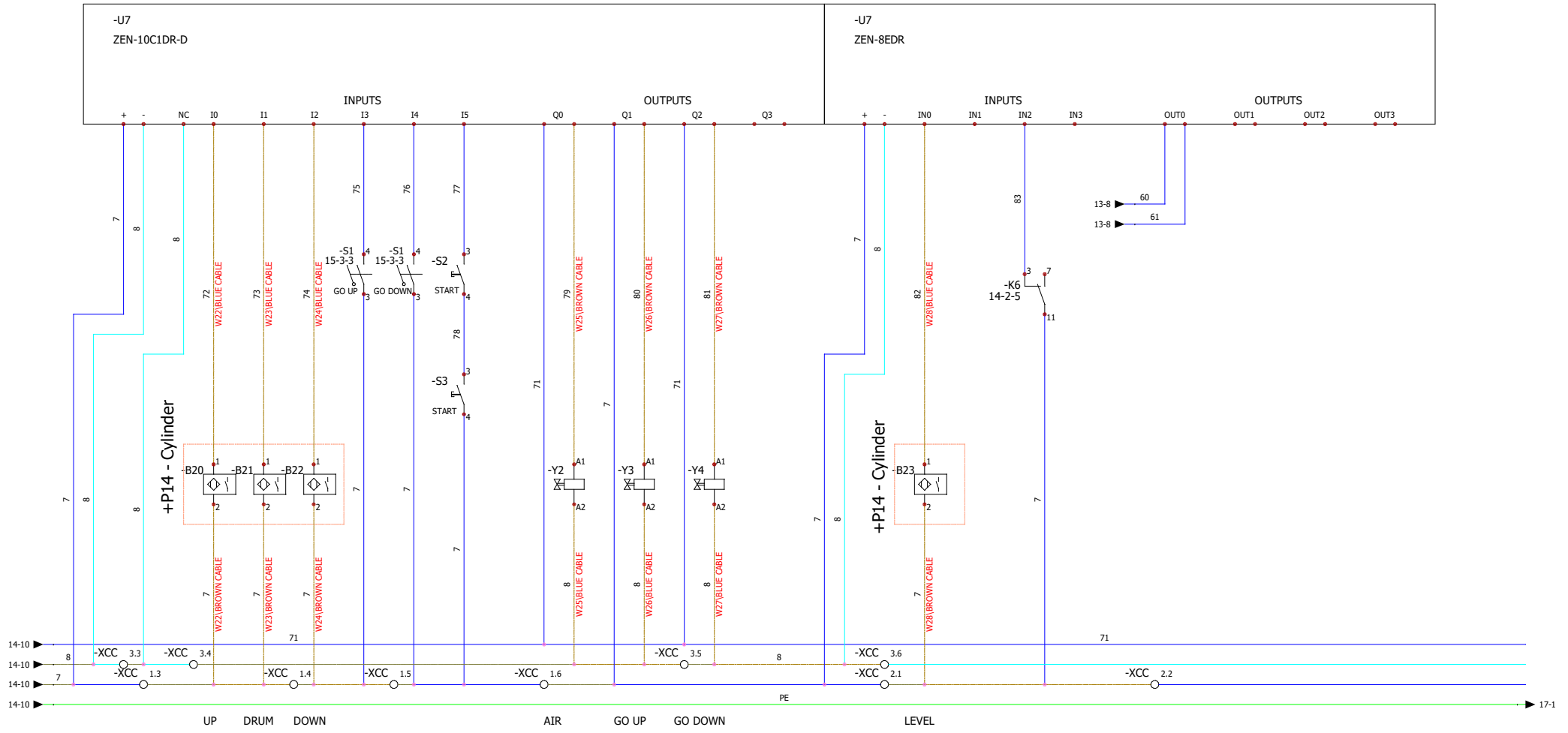


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SAFETY GUARD DETECTION CONNECTION

PROJECT: S06055020 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 14
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasedas		

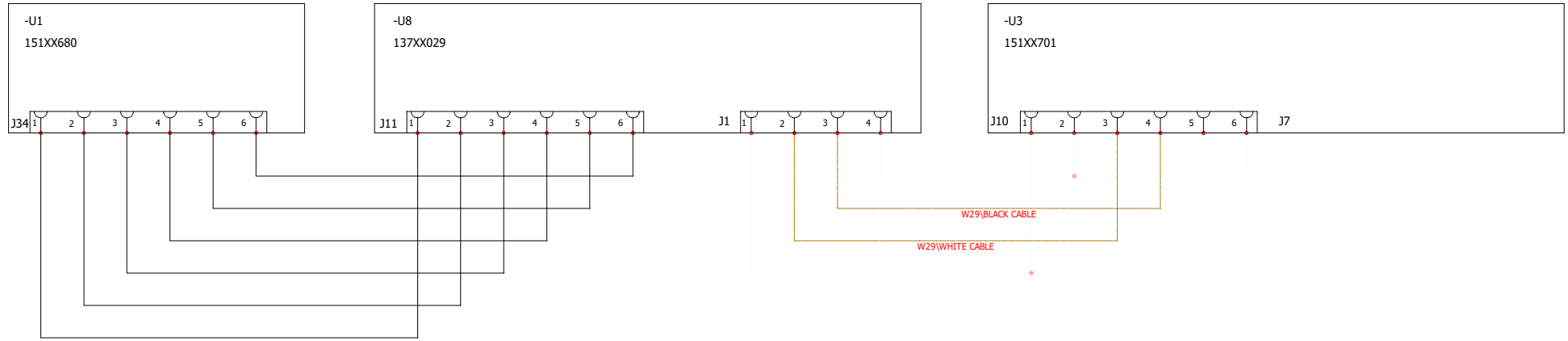


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**PROGRAMMABLE RELAY
 DRUM MOVEMENT**

PROJECT: S06055020 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 15
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		

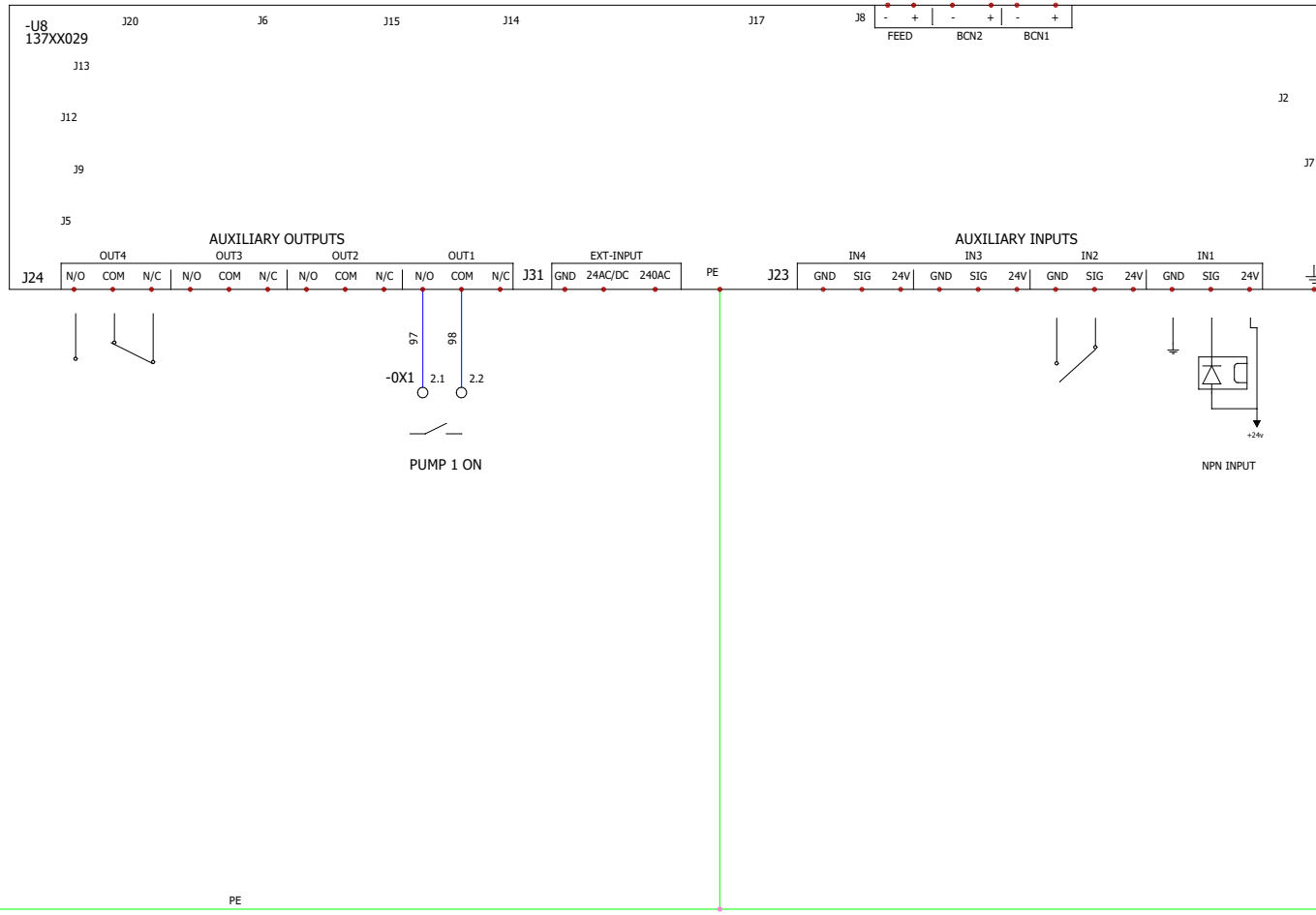


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**POWER, CONTROL AND VFD BOARDS
 COMMUNICATION**

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	SCHEME
1	18/08/2020	oelizalde	PM19383 Change CPU board	16
0	01/08/2017	fcasedas		



15-10



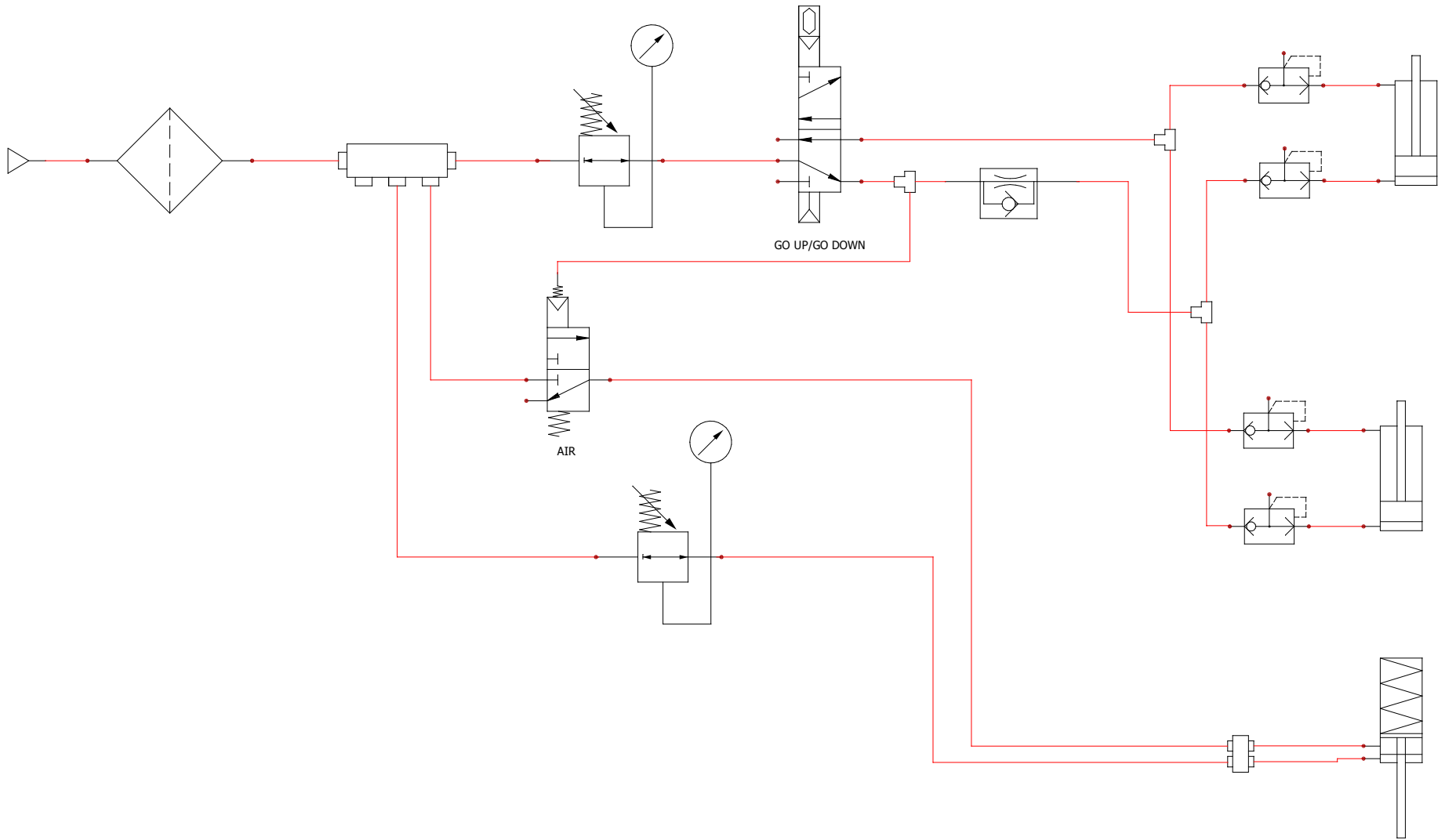
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CONTROL BOARD CONNECTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES
3	13/11/2020	oelizalde	PM19878 Change thermostat cables
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable
1	18/08/2020	oelizalde	PM19383 Change CPU board
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REVISION	3
SCHEME	17

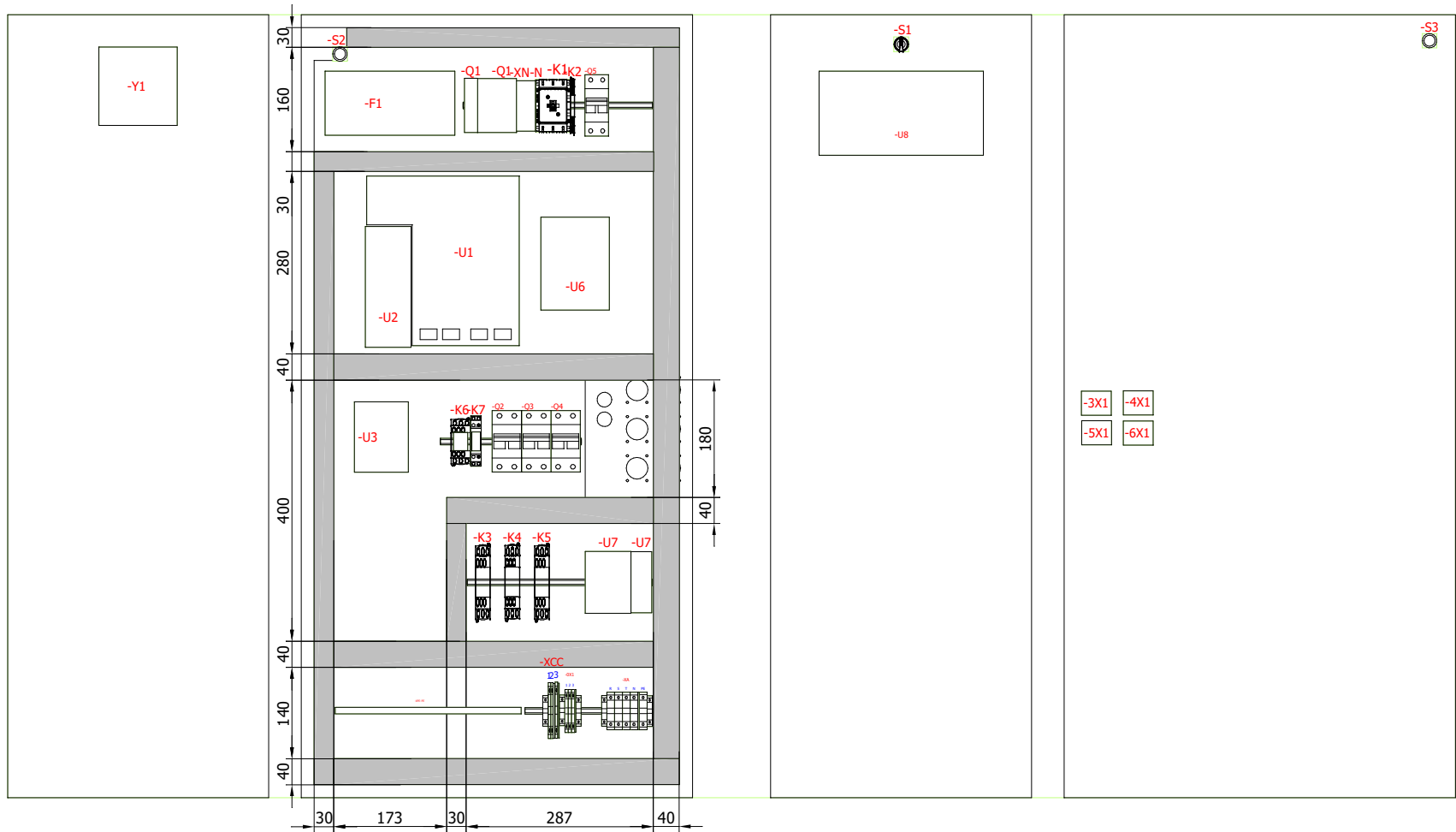


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PNEUMATIC DIAGRAM

PROJECT: S06055020 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	REVISION
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	3 SCHEME 18
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and 0vdc cable	
1	18/08/2020	oelizalde	PM19383 Change CPU board	
0	01/08/2017	fcasadas		



RIGHT LATERAL

MATERIALS PLATE

LEFT LATERAL

BACK

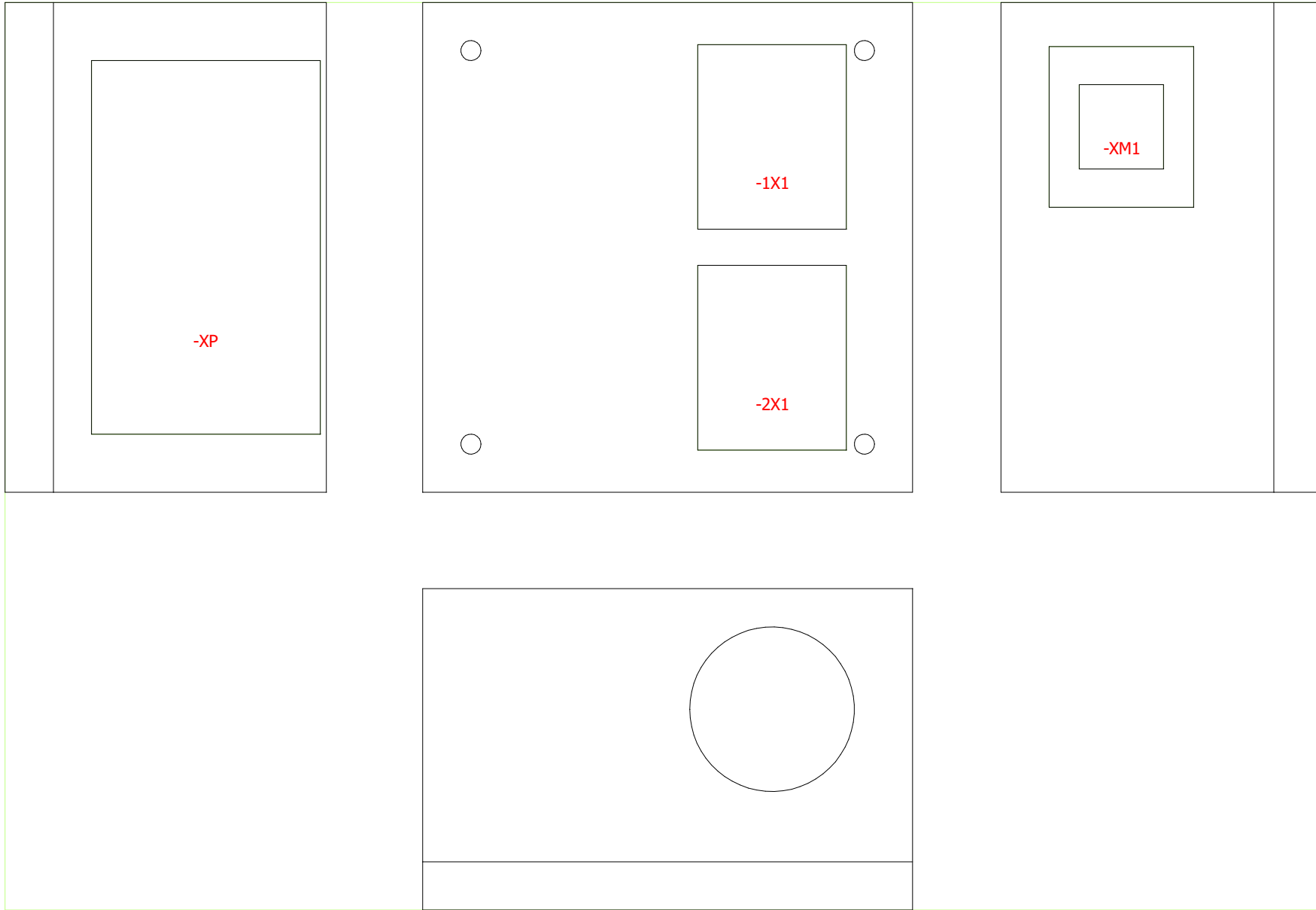


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ELECTRICAL CABINET
 CONSTRUCTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES	SCALE
3	13/11/2020	oelizalde	PM19878 Change thermostat cables	1 / 7
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and Overvoltage	REVISION
1	18/08/2020	oelizalde	PM19383 Change CPU board	3
0	01/08/2017	fcasedas		DRAWING
				19



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ELECTRICAL BOX CONNECTION

PROJECT: S060550202 EDRUM-6 OUTPUTS NI120-1 PUMP/CE

REV.	DATE	NAME	CHANGES
3	13/11/2020	oelizalde	PM19878 Change thermostat cables
2	09/09/2020	mayestaran	PG060 Change XCC terminal block and Overvoltage
1	18/08/2020	oelizalde	PM19383 Change CPU board
0	01/08/2017	fcasadas	

SCALE
1 / 1

REVISION
3

DRAWING
20

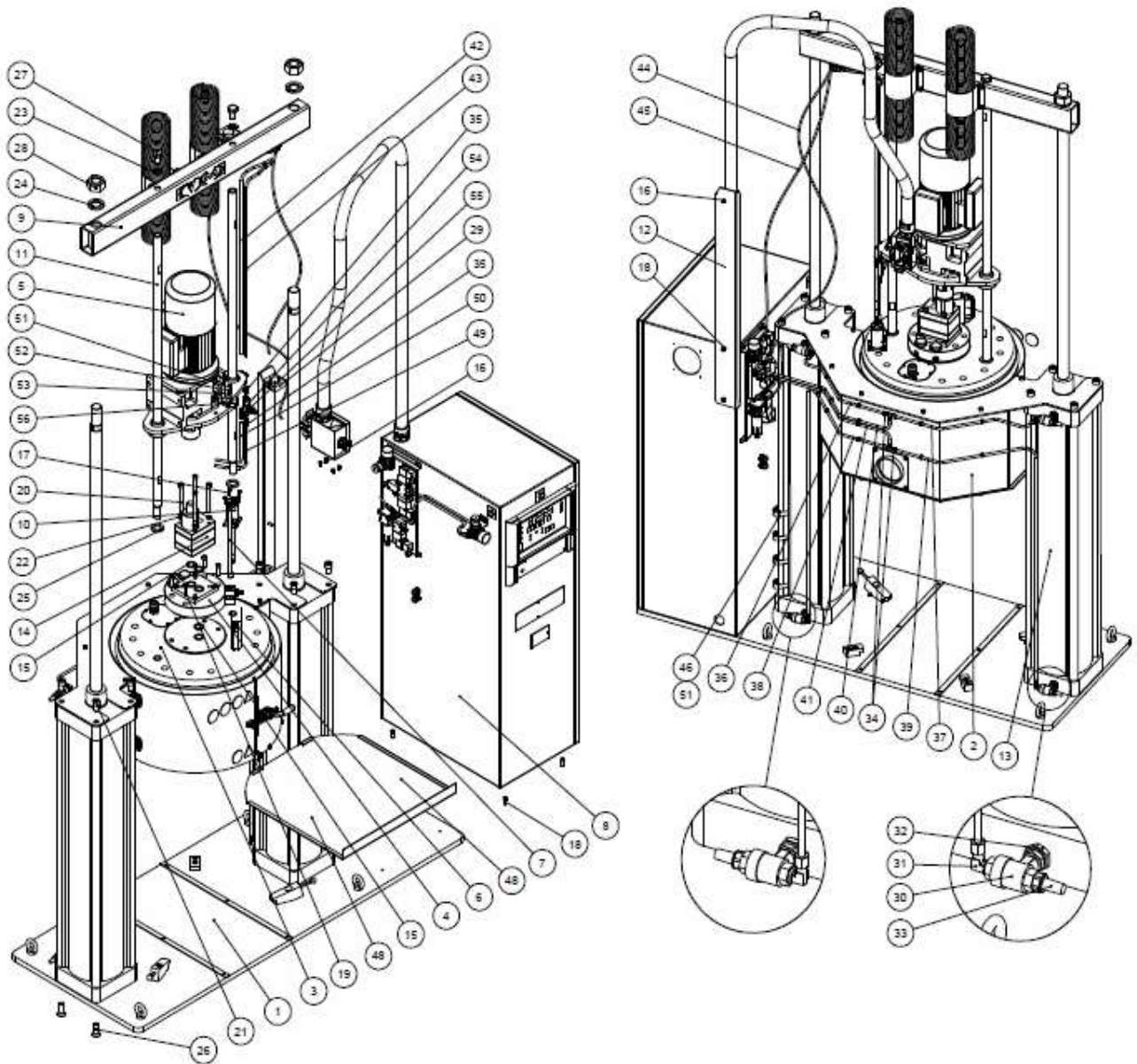
**DESPIECE / PART LISTING
EQUIPO E-DRUM 1 BOMBA /
1PUMP E-DRUM EQUIPMENT**

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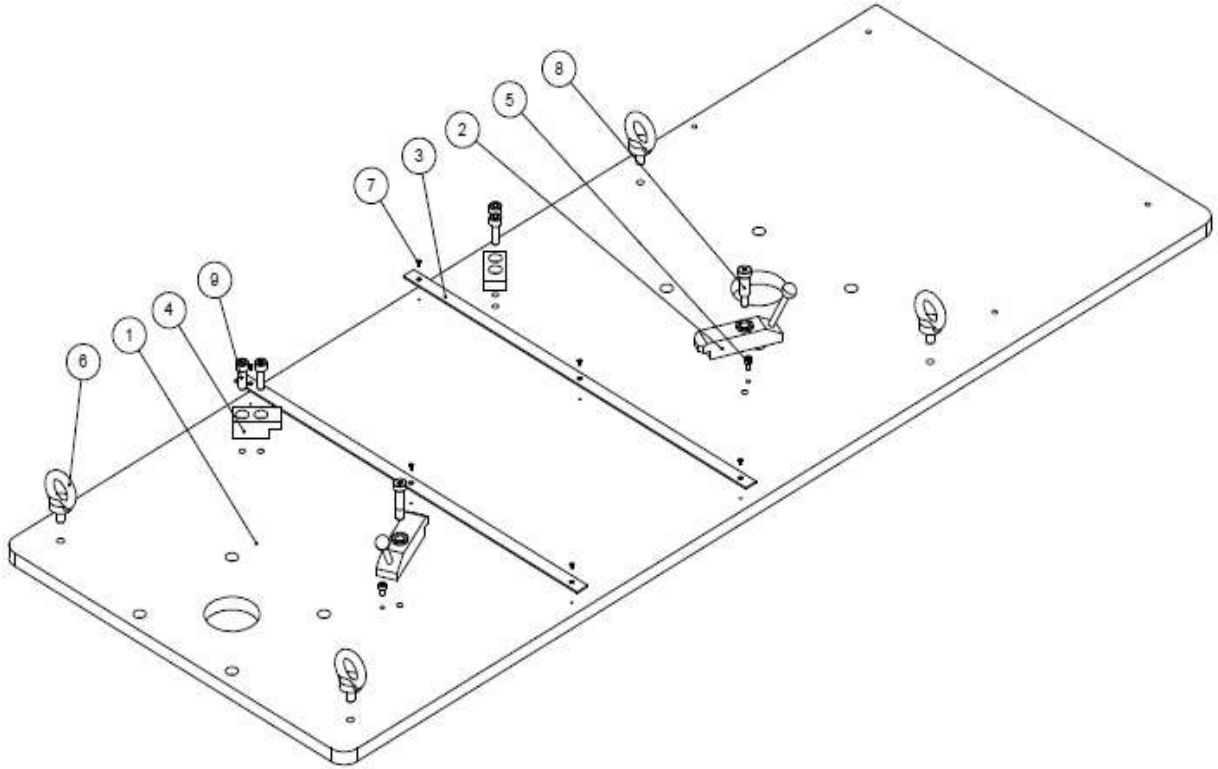
1. EQUIPO E - DRUM / E - DRUM EQUIPMENT:



Nº	Descripción	Description	Ref.	Qty
1	Subconjunto placa base	Base plate assembly	PAG 7	1
2	Subconjunto trasero	Rear assembly	Depending Model	1
3	Subconjunto plato completo	Full plate assembly	PAG 14	1
4	Conjunto distribuidor	Manifold assembly	PAG 18	1
5	Subconjunto motor	Motor assembly	PAG 20	1
6	Subconjunto recogedor	Dustpan assembly	PAG 21	1
7	Subconjunto varilla purgador	Drainvalve rod assembly	PAG 22	1
8	Subconjunto armario electrico	Electric cabinet assembly	PAG 23	1
9	Subconjunto travesaño	Bunk assembly	PAG 31	1
10	Conjunto válvula V-Drum	V-Drum valve assembly	PAG 29	1
11	Barra soporte motor	Motor bracket bar	917XX773	2
12	Mastil tubo	Tube mast	917XX774	1
13	Cilindro neumatico Ø200	Ø200 pneumatic cylinder	917XX522	2
14	Bomba engranajes 30cc /rev	30cc/rev gear pump	914XX968	1
15	Junta torica viton 26x2,5	26x2,5 viton o ring	917XX742	3
16	Tornillo allen M6x10 inox	Stainless M6x10 allen screw	915XX082	5
17	Tornillo allen M6x20 inox	Stainless M6x20 allen screw	910XX055	4
18	Tornillo allen M8x20 inox	Stainless M8x20 allen screw	915XX190	6
19	Tornillo allen M10x35 inox	Stainless M10x35 allen screw	911XX103	4
20	Tornillo allen M10x110 inox	Stainless M10x110 allen screw	915XX579	4
21	Tornillo allen M16x25 inox	Stainless M16x25 allen screw	917XX523	8
22	Arandela grover M10 inox	Stainless M10 grover washer	915XX578	4
23	Arandela grover M20	M20 grover washer	917XX775	2
24	Arandela grover M36 inox	Stainless M36 grover washer	917XX561	2
25	Arandela plana M24	M24 flat washer	917XX550	2
26	Tornillo avellanado allen M16x45 inox	Stainless M16x45 allen reamer screw	917XX776	8
27	Tornillo hexagonal M20x30	M20x30 hex screw	917XX555	2
28	Tuerca hexagonal M36x2 inox	Stainless M36x2 hex nut	917XX551	2
29	Abrazadera JIR M40	JIR M40 clamp	917XX705	1
30	Válvula escape rapido 3/8"	3/8" fast escape valve	917XX777	4
31	Racor 90° 3/8"G – tubo 8 c/ovalillo	3/8 " G 90° fitting	917XX778	4
32	Union macho-macho 3/4" -3/8"	3/4" – 3/8" male-male joining	917XX779	4
33	Silenciador bronce cono 3/8"	3/8" silencer	917XX780	4
34	Racor T tubo 8 con ovalillo	8 pipe T fitting	910XX245	2
35	Racor recto 1/8"G-tubo 8 ovalillo	G-tube 1/8" straight fitting	915XX262	2
36	Tubo superior cilindro izdo.	Left cylinder upper tube	917XX772	1
37	Tubo superior cilindro dcho.	Right cylinder upper tube	917XX771	1
38	Tubo inferior cilindro izdo.	Left cylinder lower tube	917XX770	1
39	Tubo inferior cilindro dcho.	Right cylinder lower tube	917XX769	1
40	Tubo entrada superior cilindro	Cylinder upper admission tube	917XX768	1
41	Tubo entrada inferior cilindro	Cylinder lower admission tube	917XX767	1
42	Tubo entrada superior válvula plato	Plate valve upper admission tube	917XX766	1
43	Tubo entrada inferior válvula plato	Plate valve lower admission tube	917XX765	1
44	Tubo espiral poliuretano 6x4 azul	Blue 6x4 polyurethane spiral tube	915XX530	1
45	Tubo espiral poliuretano 6x4 amarillo	Yellow 6x4 polyurethane spiral tube	917XX739	1
46	Brida portasensor ST200	ST200 bridle	917XX559	4
47	Sensor magnetico	Magnetic sensor	917XX580	4
48	Bandeja	Tray	Depending model	1
49	Tubo 1 valvula soplado	Blown valve tube 1	918XX520	1
50	Tubo 2 valvula soplado	Blown valve tube 2	918XX521	1
51	Tornillo allen M5x12 inox	Stainless M5x12 allen screw	917XX406	1
52	Arandela grover 5 inox	Stainless 5 grover washer	910XX085	1
53	Arandela plana 5 inox	Stainless 5 plain washer	918XX533	1
54	Union doble	Double join	915XX176	1
55	Reductor de presion recto	Straight pressure reducer	918XX536	1
56	Mando lobulado	Lobed control	918XX537	1

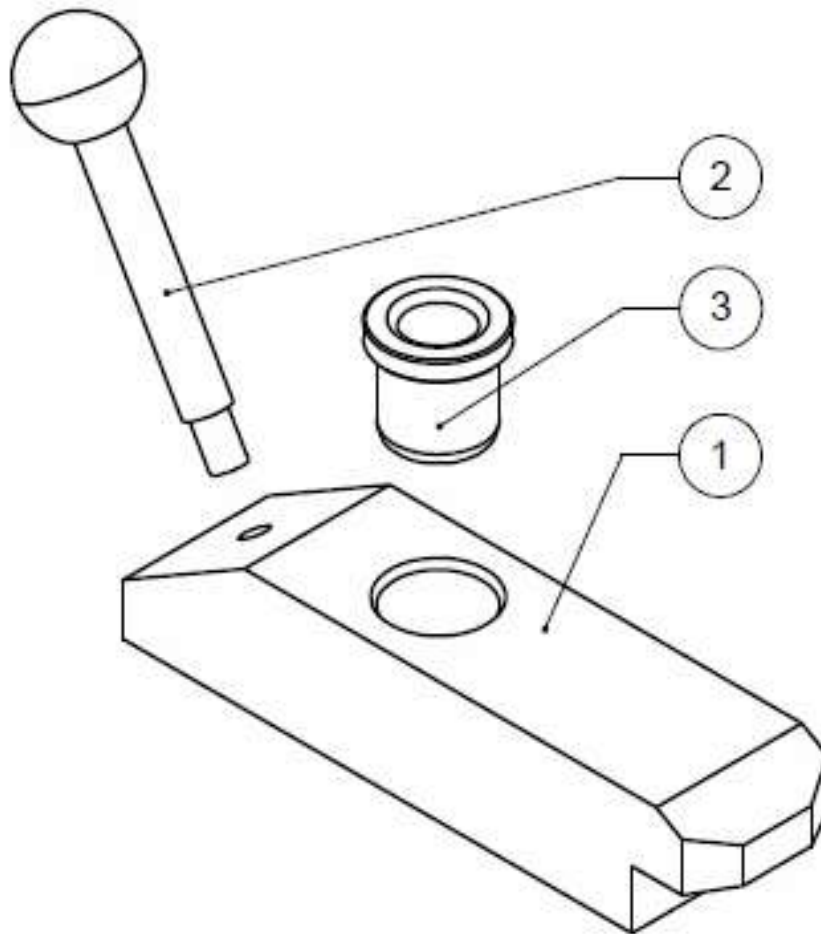
Nº	Descripción	Description	Ref.	Qty
2	E-Drum con protecciones	E-Drum with protection	PAG 9	1
48			917XX781	1
2	E-Drum sin protecciones	E-Drum without protection	PAG 13	1
48			917XX782	1

2. CONJUNTO PLACA BASE / BASE PLATE ASSEMBLY: (916XX890)



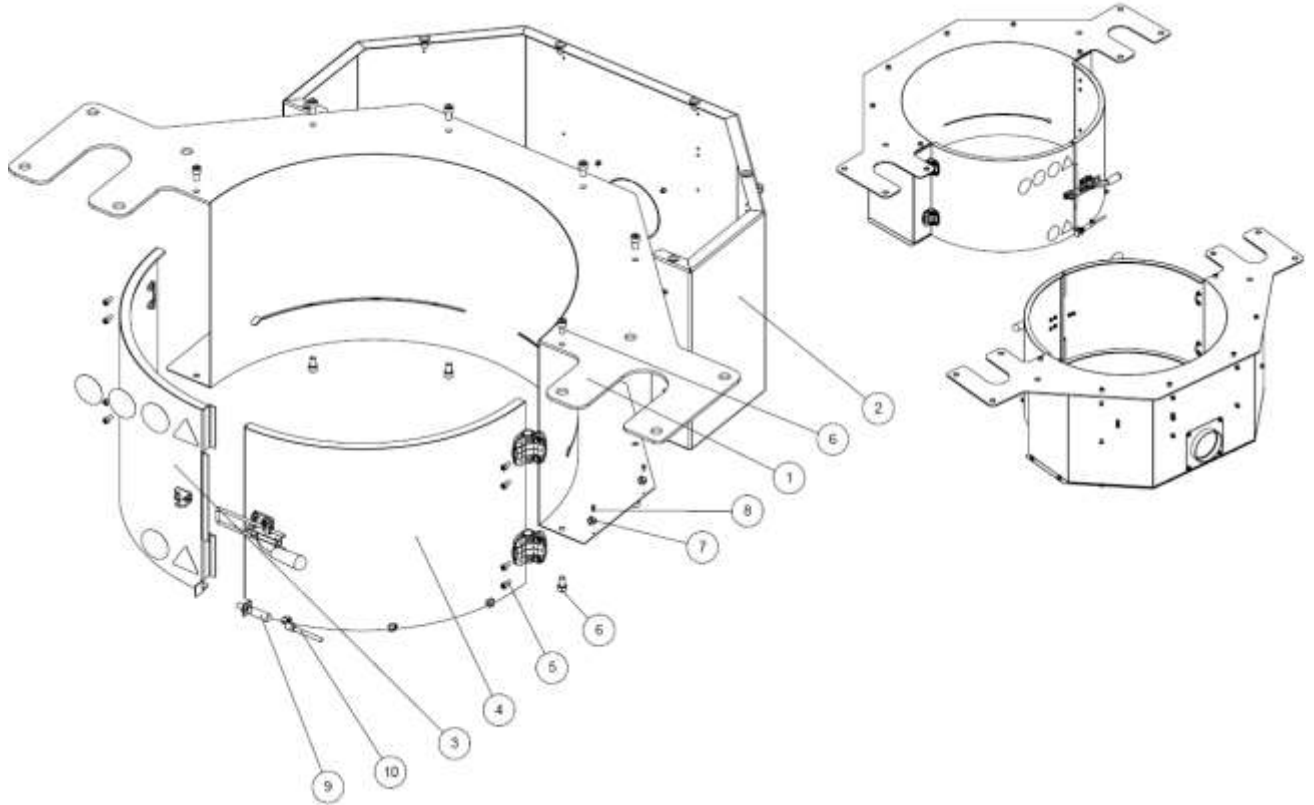
Nº	Descripción	Description	Ref.	Qty
1	Placa base	Base plate	917XX754	1
2	Conjunto cuña anclaje bidon	Can anchorage chock assembly	PAG 8	2
3	Banda apoyo bidon	Can support band	917XX761	2
4	Cuña trasera	Rear chock	917XX762	2
5	Tornillo allen M6x10 inox	Stainless M6x10 allen screw	915XX082	2
6	Tornillo de cancamo M12	M12 screw	915XX997	4
7	Tornillo avellanado allen M3x6 inox	Stainless M3x6 allen reamer screw	917XX763	6
8	Tornillo allen con guia M10x30	M10x30 allen screw with guide	917XX764	2
9	Tornillo allen M10x30 inox	Stainless M10x30 allen screw	910XX912	4

2.1. CONJUNTO CUÑA ANCLAJE BIDON / CAN ANCHORAGE CHOCK ASSEMBLY: (916XX904)



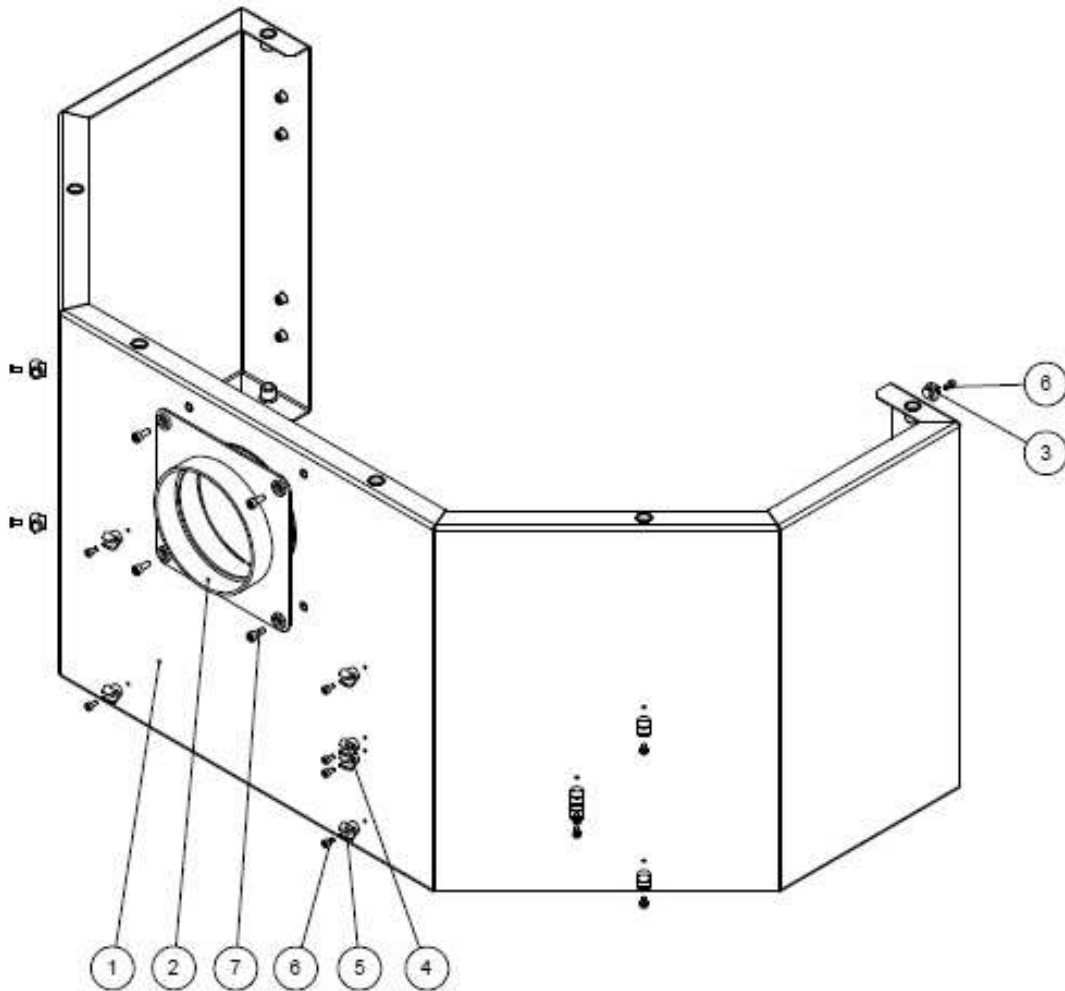
Nº	Descripción	Description	Ref.	Qty
1	Cuña anclaje bidon	Can anchorage chock	917XX783	1
2	Manivela	Crank	915XX710	1
3	Casquillo guía	Guide bushing	917XX784	2

3.A. CONJUNTO PROTECCION TRASERA / REAR PROTECTION ASSEMBLY: (916XX896)



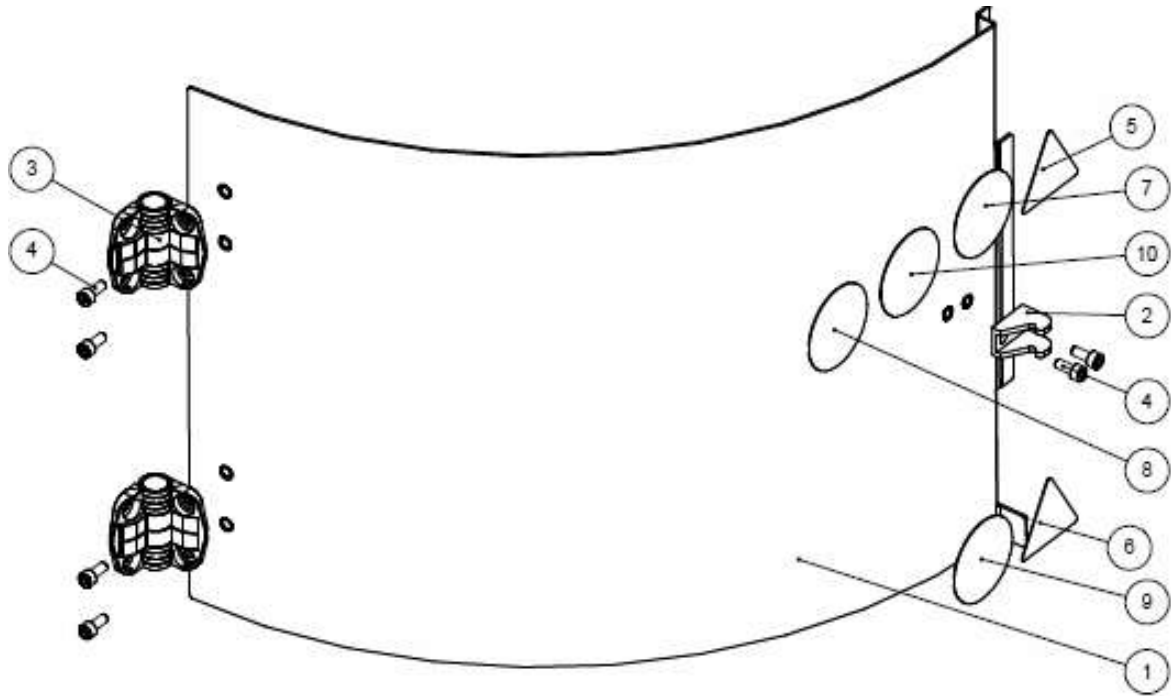
Nº	Descripción	Description	Ref.	Qty
1	Chapa soporte proteccion trasera	Rear protection support plate	917XX760	1
2	Subconjunto chapa trasera	Rear plate assembly	PAG 10	1
3	Subconjunto chapa delantera dcha.	Right front plate assembly	PAG 11	1
4	Subconjunto chapa delantera izda.	Left front plate assembly	PAG 12	1
5	Tornillo allen M5x15 inox.	Stainless M5x12 allen screw	917XX406	8
6	Tornillo allen M8x15 inox.	Stainless M8x15 allen screw	914XX067	12
7	Clip para tubo Ø6	Ø6 clip for tube	917XX750	2
8	Tornillo allen M3x6 inox.	Stainless M3x6 allen screw	911XX132	2
9	Sensor inductivo de proximidad m8	Inductive sensor de proximidad m8	910XX792	1
10	Conector pico recto C/cable 3P HEM (5M)	STRAIGHT PICO CONNECTOR C/CABLE 3P FEMALE (5M)	913XX372	1

3.A.1. CONJUNTO CHAPA TRASERA / REAR PLATE ASSEMBLY: (916XX870)



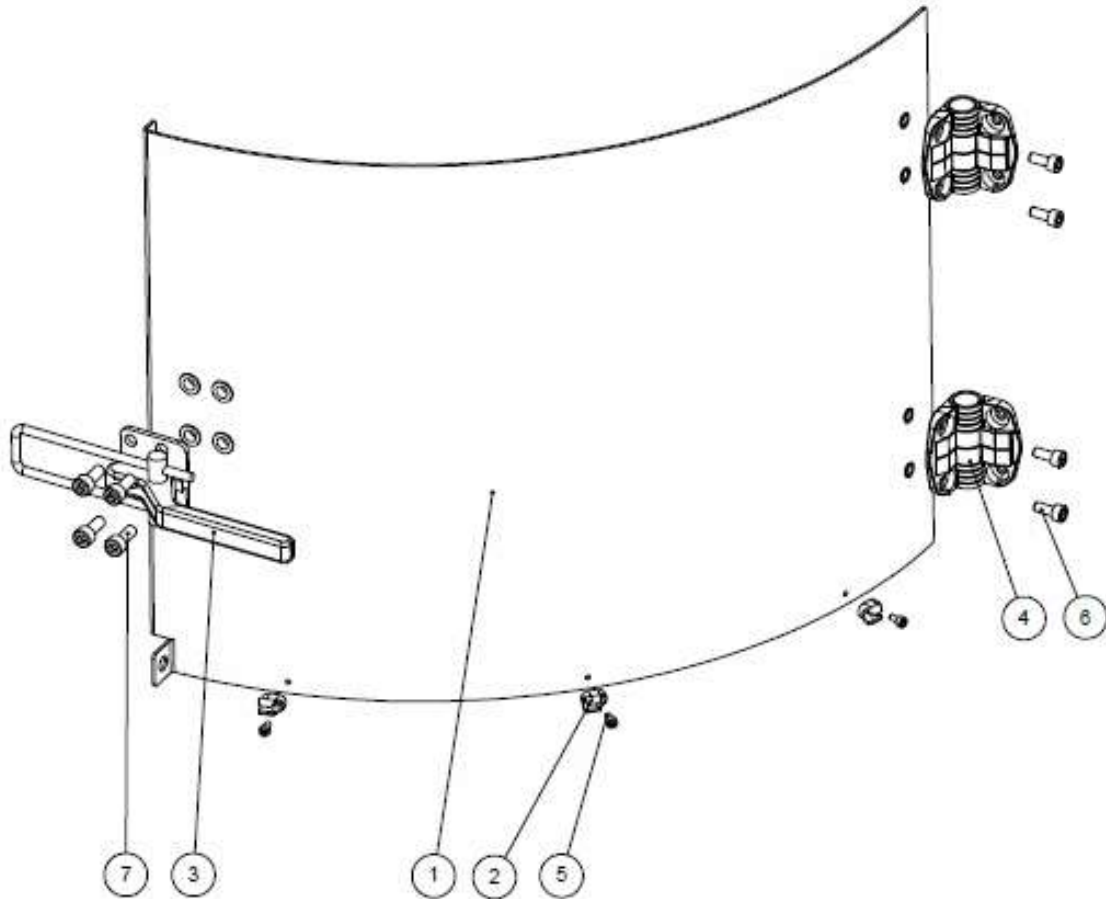
Nº	Descripción	Description	Ref.	Qty
1	Chapa lateral protección trasera	Rear protection lateral plate	917XX758	1
2	Tobera	Adjutage	917XX759	1
3	Clip para tubo Ø6	Clip for Ø6 tube	917XX750	1
4	Clip para tubo Ø8 de 2 pasos	Clip for Ø8 tube of 2 pitch	917XX735	2
5	Clip para tubo Ø8 de 1 paso	Clip for Ø8 tube of 1 pitch	917XX735	8
6	Tornillo allen M3x6 inox	Stainless M3x6 allen screw	911XX132	13
7	Tornillo allen M4x10 inox	Stainless M4x10 allen screw	910XX129	4

3.A.2. CONJUNTO CHAPA DELANTERA DERECHA / RIGHT FRONT PLATE ASSEMBLY: (916XX901)



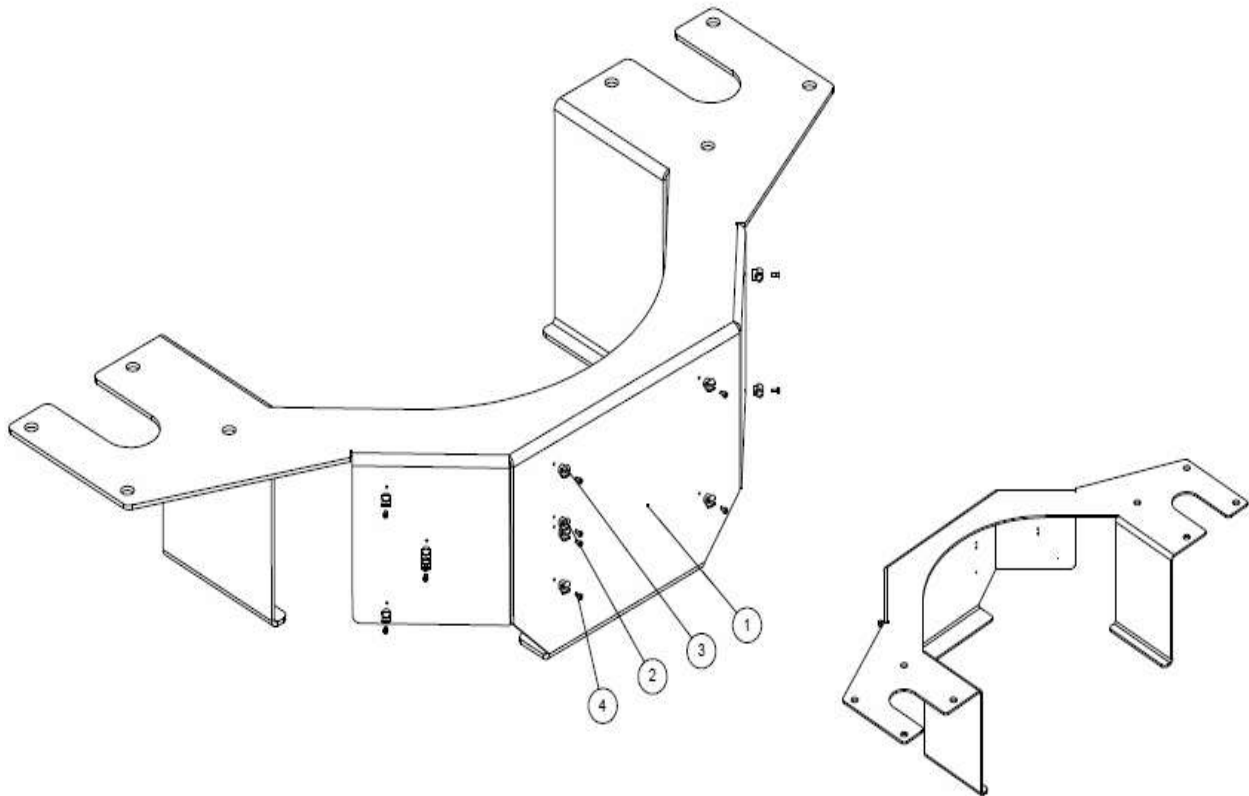
Nº	Descripción	Description	Ref.	Qty
1	Chapa delantera derecha	Right front plate	917XX753	1
2	Uña de la brida cierre	Closure bridle nail	917XX751	1
3	Bisagra southco C6-6	C6-6 sothco hinge	917XX752	2
4	Tornillo allen M5x12 inox	Stainless M5x12 allen screw	917XX406	6
5	Pegatina temperatura	Temperature sticker	917XX755	1
6	Pegatina atrapamiento	Entrapment sticker	917XX756	1
7	Pegatina careta	Mask sticker	917XX757	1
8	Pegatina guantes	Gloves sticker	917XX723	1
9	Pegatina botas	Boots sticker	917XX724	1
10	Pegatina traje	Suit sticker	917XX722	1

3.A.3 CONJUNTO CHAPA DELANTERA IZQUIERDA / LEFT FRONT PLATE ASSEMBLY: (916XX902)



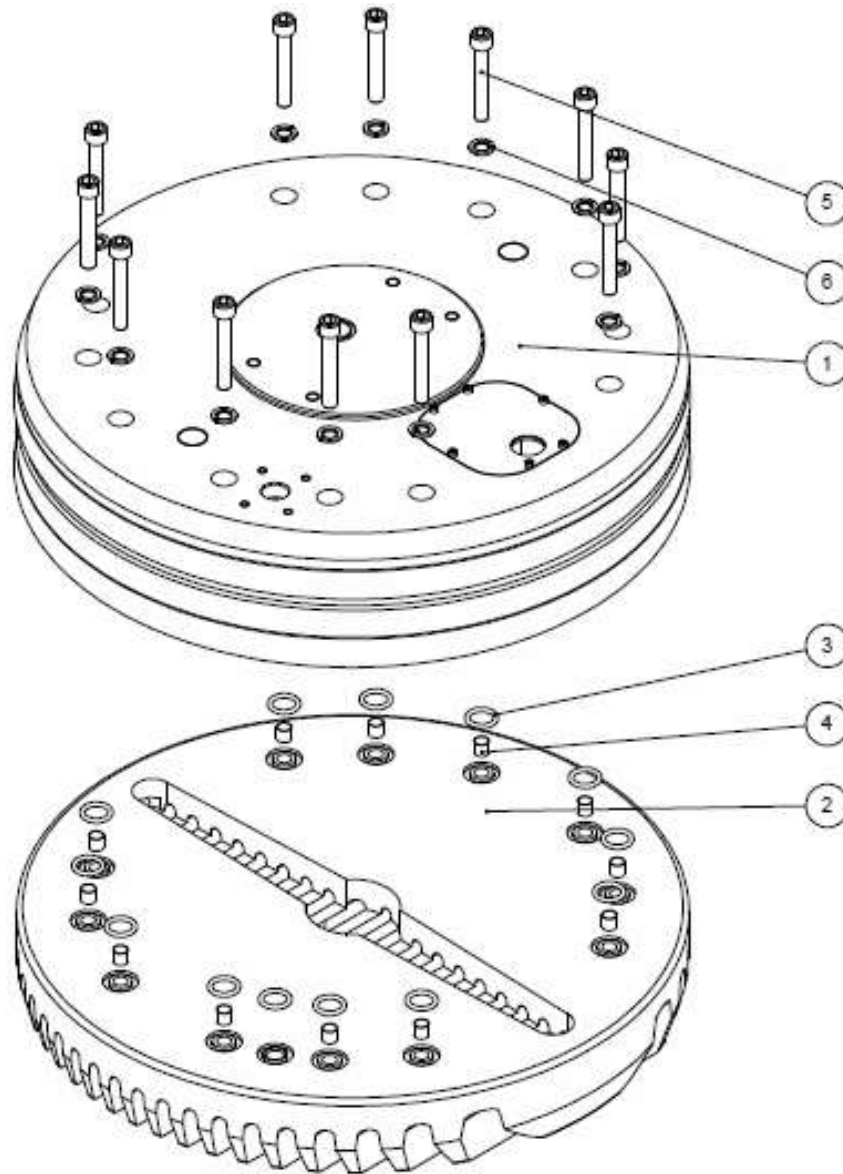
Nº	Descripción	Description	Ref.	Qty
1	Chapa delantera izquierda	Left front plate	917XX749	1
2	Clip para tubo Ø6	Clip for Ø6 tube	917XX750	3
3	Brida cierre 331-SS-M-50	Closure bridle	917XX751	1
4	Bisagra southco C6-6	Hinge	917XX752	2
5	Tornillo allen M3x6 inox	Stainless M3x6 allen screw	911XX132	3
6	Tornillo allen M5x12 inox	Stainless M5x12 allen screw	917XX406	4
7	Tornillo allen M6x15 inox	Stainless M6x15 allen screw	915XX090	4

3.B. CONJUNTO CHAPA SOPORTE TRASERA / REAR SUPPORT PLATE ASSEMBLY: (916XX898)



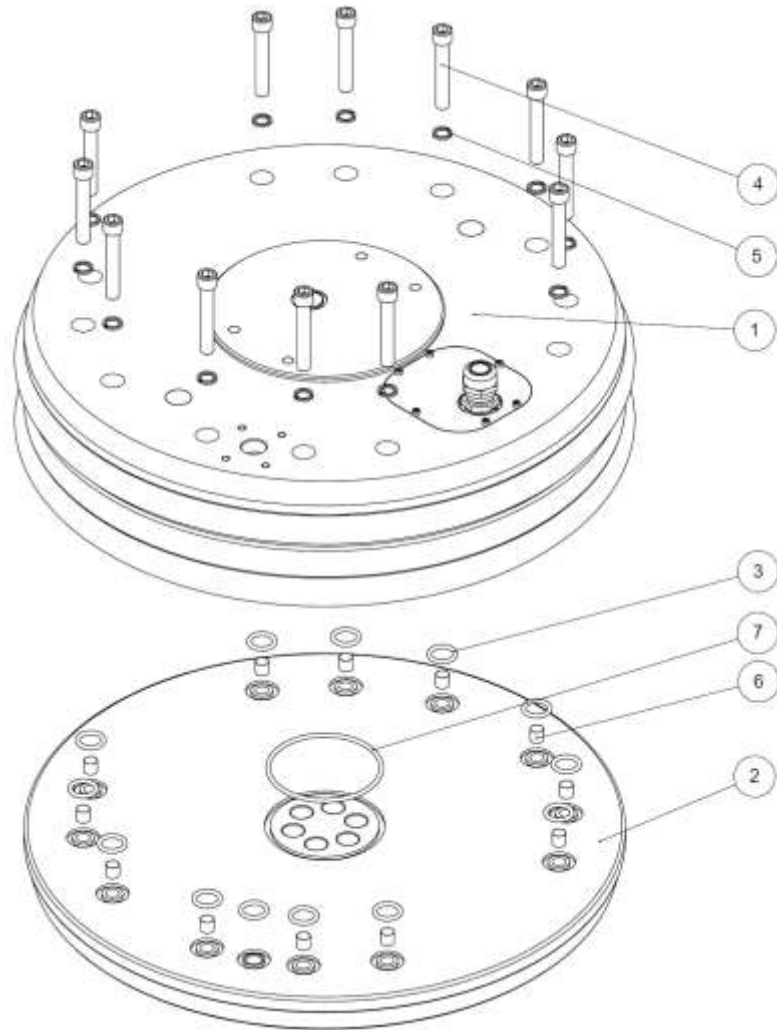
Nº	Descripción	Description	Ref.	Qty
1	Chapa soporte tubos	Tube support plate	917XX748	1
2	Clip para tubo Ø8 de 2 pasos	Clip for Ø8 tube of 2 pitch	917XX735	2
3	Clip para tubo Ø8 de 1 paso	Clip for Ø8 tube of 1 pitch	917XX735	8
4	Tornillo allen M3x6 inox	Stainless M3x6 allen screw	911XX132	12

4. CONJUNTO PLATO COMPLETO RADIADOR DE ALETAS / FULL PLATE ASSEMBLY: (916XX891)



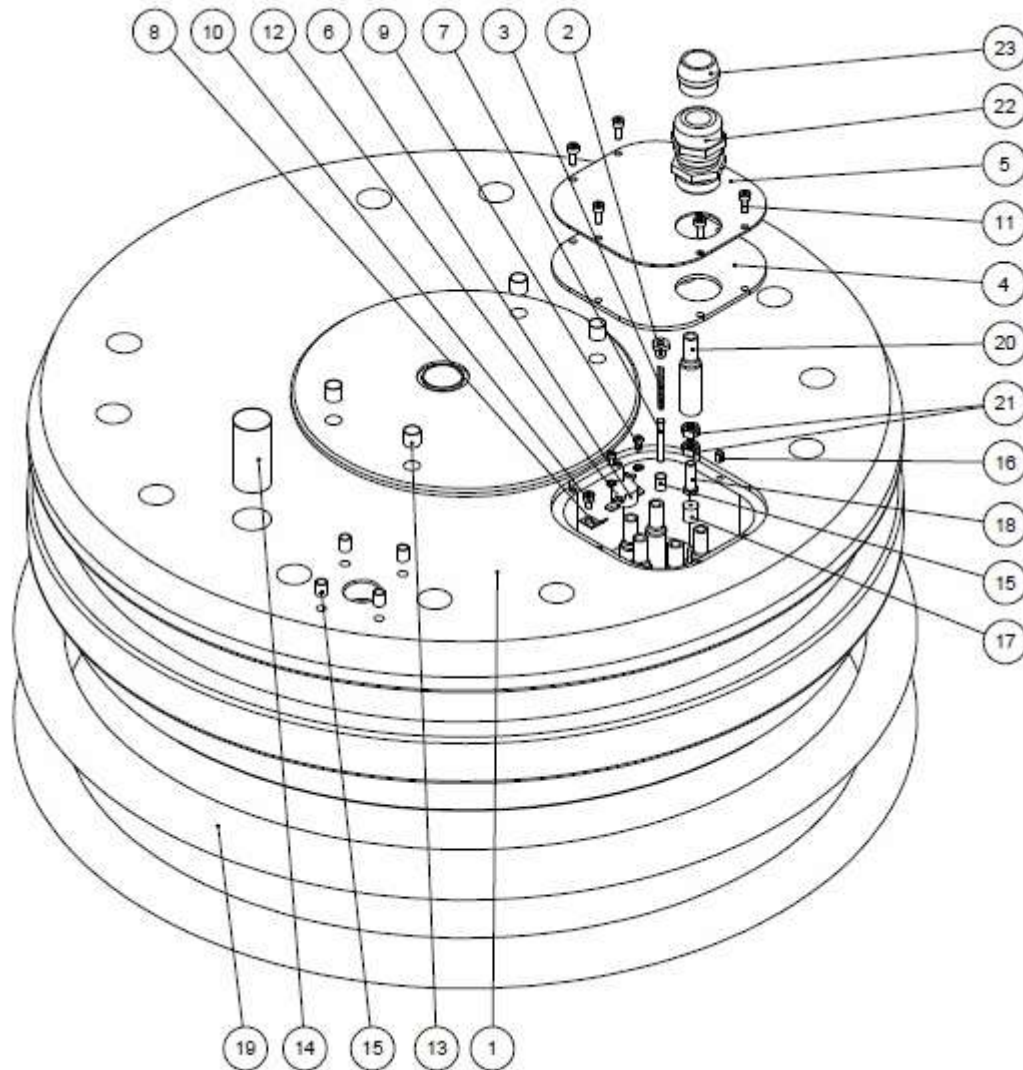
Nº	Descripción	Description	Ref.	Qty
1	Conjunto plato calefactado	Heater plate assembly	PAG 16	1
2	Radiador	Heater	917XX746	1
3	Junta torica viton 20x4	20x4 viton o´ring	914XX971	13
4	Helicoil M12x12	M12x12 helicoil	915XX172	12
5	Tornillo allen M12x75 inox	Stainless M12x75 allen screw	915XX581	12
6	Arandela grover M12 inox	Stainless M12 grover washer	917XX515	12

5. CONJUNTO PLATO COMPLETO RADIADOR LISO / FULL PLATE ASSEMBLY: (913XX298)



Nº	Descripción	Description	Ref.	Qty
1	Conjunto plato calefactado	Heater plate assembly	PAG 16	1
2	Radiador BDRUM Liso con Ranuras 200 L	Heater BDRUM smooth	917XX746	1
3	Junta tórica viton 20x4	20x4 viton o´ring	914XX971	13
4	Tornillo allen M12x75 inox	Stainless M12x75 allen screw	915XX581	12
5	Arandela grover M12 inox	Stainless M12 grover washer	917XX515	12
6	Helicoil M12x12	M12x12 helicoil	915XX172	12
7	Junta tórica viton 100x4	100x4 viton o´ring	-	

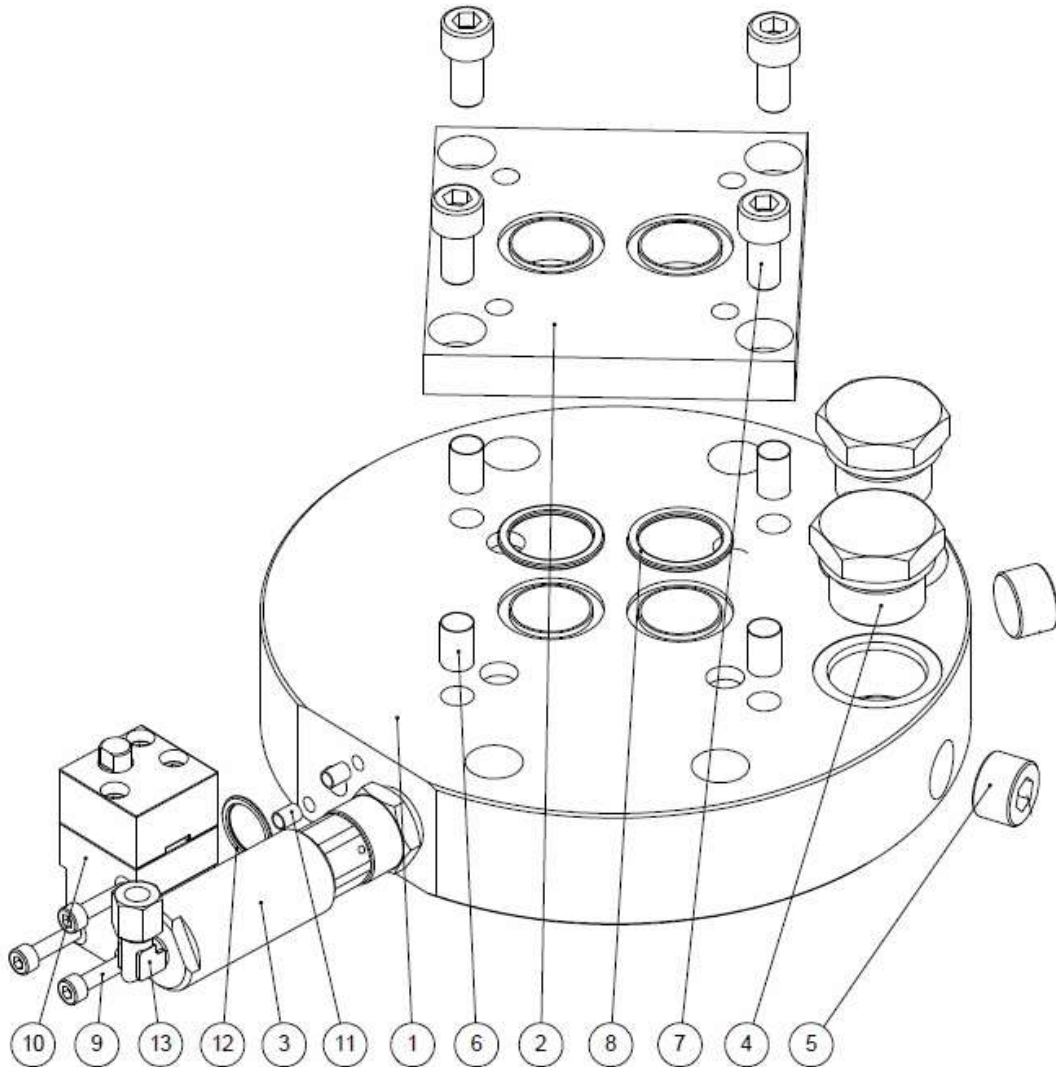
5.1. CONJUNTO PLATO CALEFACTADO / HEATER PLATE ASSEMBLY: (916XX903)



Nº	Descripción	Description	Ref.	Qty
1	Plato	Plate	917XX743	1
2	Tope sonda	Limiter probe	917XX747	1
3	Muelle antiretorno	Spring	917XX745	1
4	Chapa electrica plato	Plate electric plate	917XX564	1
5	Mazo termostato	Thermostate gun	915XX585	1
6	Junta plato 200L	200L plate gasket	915XX005	2
7	Sonda de temperature Ni	Temperature probe Ni	916XX002	1
8	Sonda temperatura PT 100	Temperature probe PT 100	916XX003	
	Terminal faston M-panel TE938	Terminal faston M-panel TE938	915XX158	1
9	Tornillo allen M3x6 inox	Stainless M3x6 allen screw	911XX132	2
10	Tornillo allen M4x6 inox	Stainless M3x6 allen screw	910XX981	1
11	Tornillo allen M4x10 inox	Stainless M3x6 allen screw	910XX129	6
12	Arandela dentada M3	M3 toothed washer	910XX397	2
13	Helicoil M10x110	M10x10 helicoil	915XX582	4
14	Helicoil M24x48	M24x48 helicoil	915XX583	2
15	Helicoil M6x9	M6x9 helicoil	915XX223	5
16	Helicoil M4x6	M4x6 helicoil	911XX425	6
17	Tapon bornes resistencia	Heater bar terminals plug	918XX532	6
18	Extension bornes resistencia	Heater bar terminals extension	918XX533	6
19	Junta	Joint	Depending model	2
20	Capuchon aislamiento bornas	Terminals insulation	914XX999	6
21	Tuerca hexagonal M6	M6 hex nut	917XX048	12
22	Racor PG-21	PG-21 fitting	918XX531	1
23	Junta silicona	Silicone joint	918XX530	1

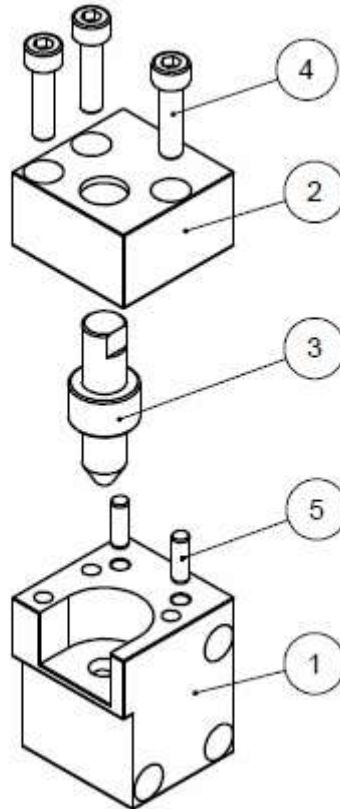
Nº	Descripción	Description	Ref.	Qty
19	TEFLÓN	TEFLÓN	917XX562	1
	SILICONA	SILICONE	915XX005	1

6. CONJUNTO DISTRIBUIDOR / REGULATOR ASSEMBLY: (916XX892)



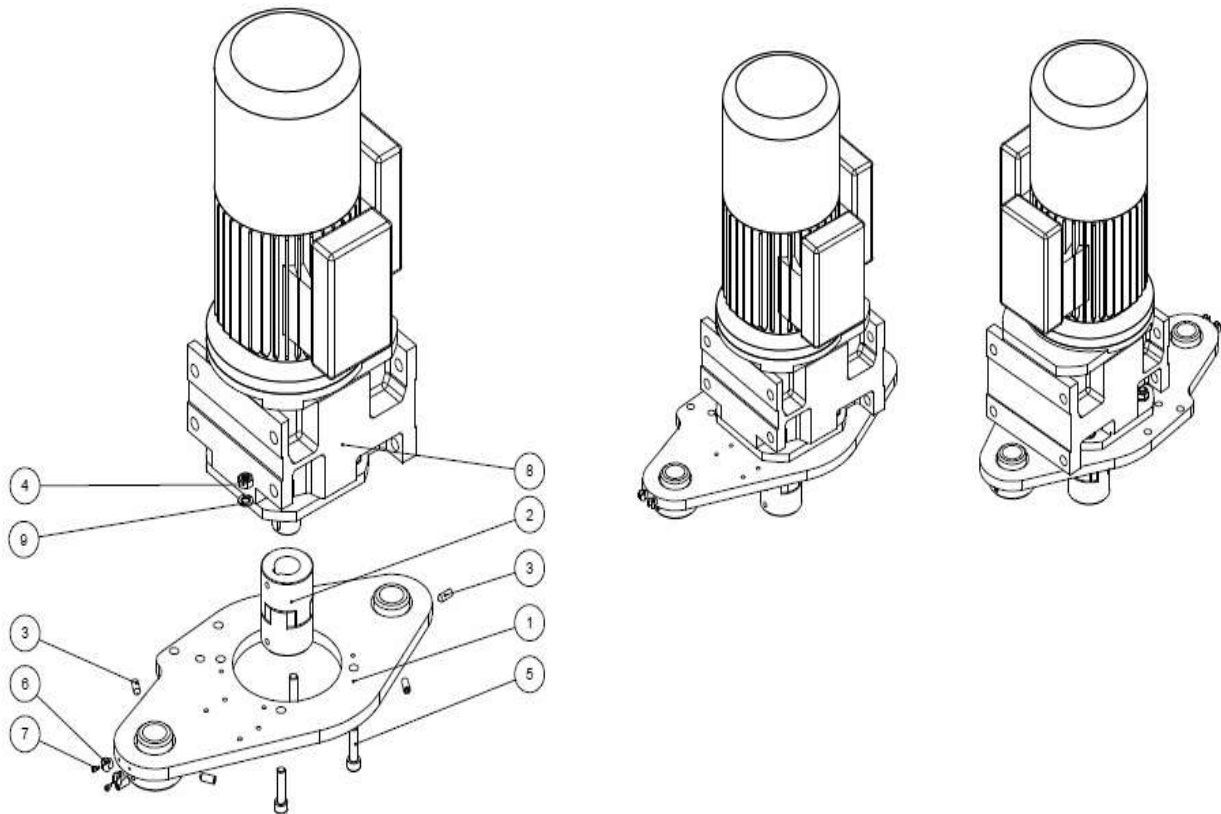
Nº	Descripción	Description	Ref.	Qty
1	Cuerpo distribuidor	Manifold body	917XX737	1
2	Placa intermedia bomba-distribuidor	Manifold-pump intermediate plate	917XX738	1
3	Valve, pressure relief	Valve, pressure relief	707XX211	1
4	Tapon M30x1,5 con junta	M30x1,5 plug with joint	911XX428	2
5	Tapon ½ GAS BSP	GAS BSP ½ plug	915XX167	2
6	Helicoil M10x15	M10x15 helicoil	915XX174	4
7	Tornillo allen M10x20 inox	Stainless M10x20 allen screw	910XX908	4
8	Junta torica viton 26x2,5	26x2,5 viton o´ring	917XX742	2
9	Tornillo allen M5x20 inox	Stainless M5x20 allen screw	910XX065	3
10	Conjunto válvula de purga	Bleed valve assembly	PAG 19	1
11	Helicoil M5x7,5	M5x7,5 helicoil	915XX261	3
12	Junta torica viton 17x2	17x2 viton o´ring	910XX500	1
13	Racor 90° 1/8" tubo 8	Tube 8 1/8" 90° fitting	910XX415	1

6.1. CONJUNTO VALVULA PURGA / BLEED VALVE ASSEMBLY: (916XX998)



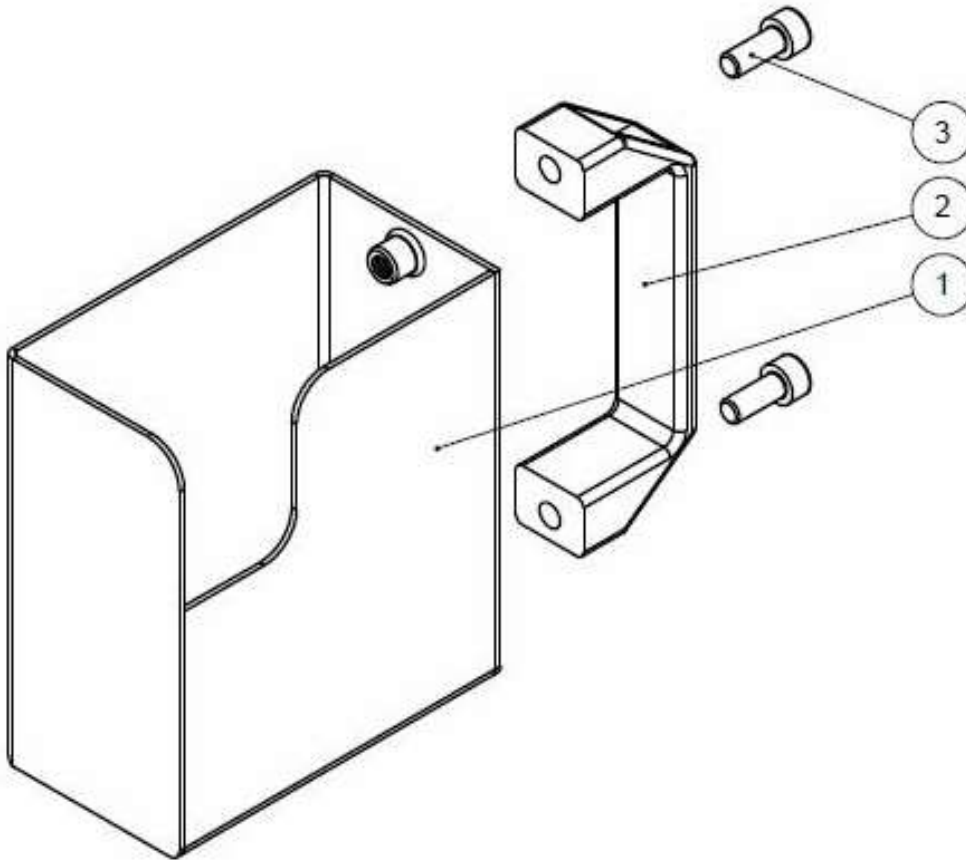
Nº	Descripción	Description	Ref.	Qty
1	Cuerpo valvula purga	Bleed valve body	918XX538	1
2	Tapa valvula purga	Bleed valve lid	918XX539	1
3	Aguja válvula purga	Bleed valve nozzle	918XX540	1
4	Tornillo allen M5x20 inox	Stainless M5x20 allen screw	910XX065	3
5	Pasador cilindrico 4x12	4x12 cylinder pin	911XX716	2

7. CONJUNTO MOTOR / MOTOR ASSEMBLY: (916XX893)



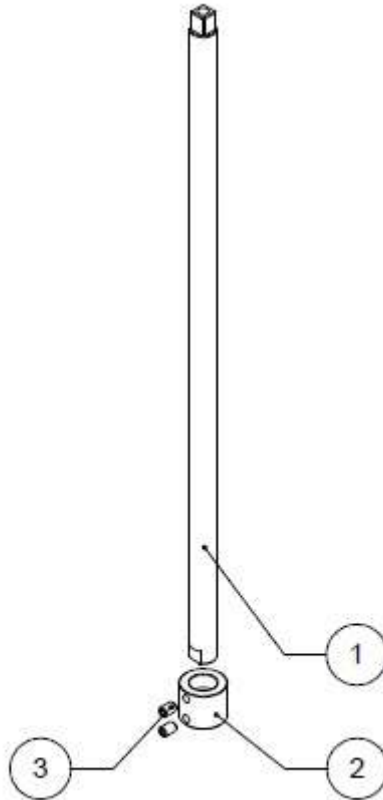
Nº	Descripción	Description	Ref.	Qty
1	Soporte motor	Motor bracket	917XX734	1
2	Acoplamiento	Coupling	915XX887	1
3	Esparrago roscado M8x20 inox c/punta	Stainless M8x20 threaded stud	913XX003	6
4	Arandela grover M10 inox	Stainless M10 grover washer	915XX578	4
5	Tuerca hexagonal M10 inox	Stainless M10 hex nut	914XX216	4
6	Tornillo allen M10x40 inox	Stainless M10x40 allen screw	911XX213	4
7	Clip para tubo Ø8 de 1 paso	Clip for Ø8 tube of 1 pitch	917XX735	2
8	Tornillo allen M3x6 inox	Stainless M3x6 screw	911XX132	2
9	Motoreductor	Motoreducer	912XX343	1

8. CONJUNTO RECOGEDOR / DUSTPAN ASSEMBLY: (916XX894)



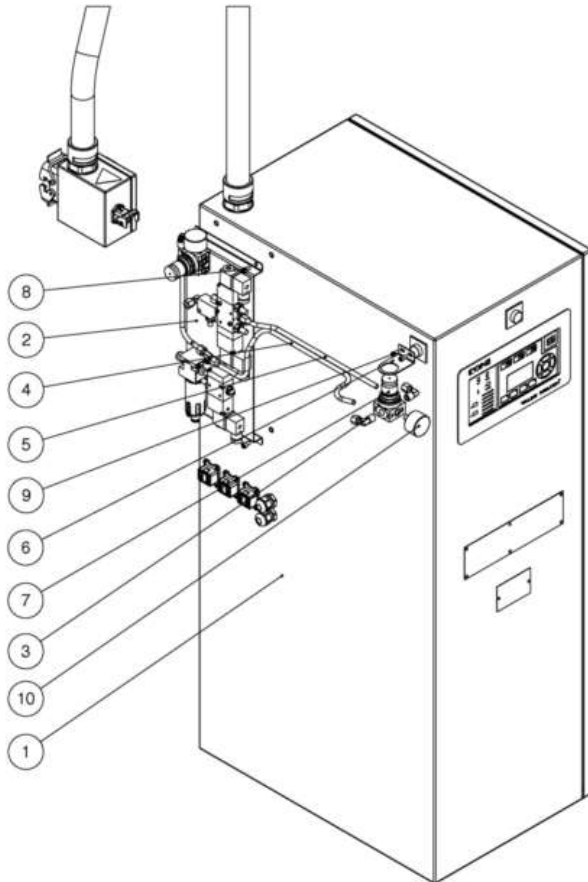
Nº	Descripción	Description	Ref.	Qty
1	Recogedor	Dustpan	917XX732	1
2	Asa pequeña negra	Black small handle	917XX733	1
3	Tornillo allen M6x15 inox	Stainless M6x15 allen screw	915XX090	2

9. CONJUNTO VARILLA PURGADOR / DRAINVALVE ROD ASSEMBLY: (916XX895)



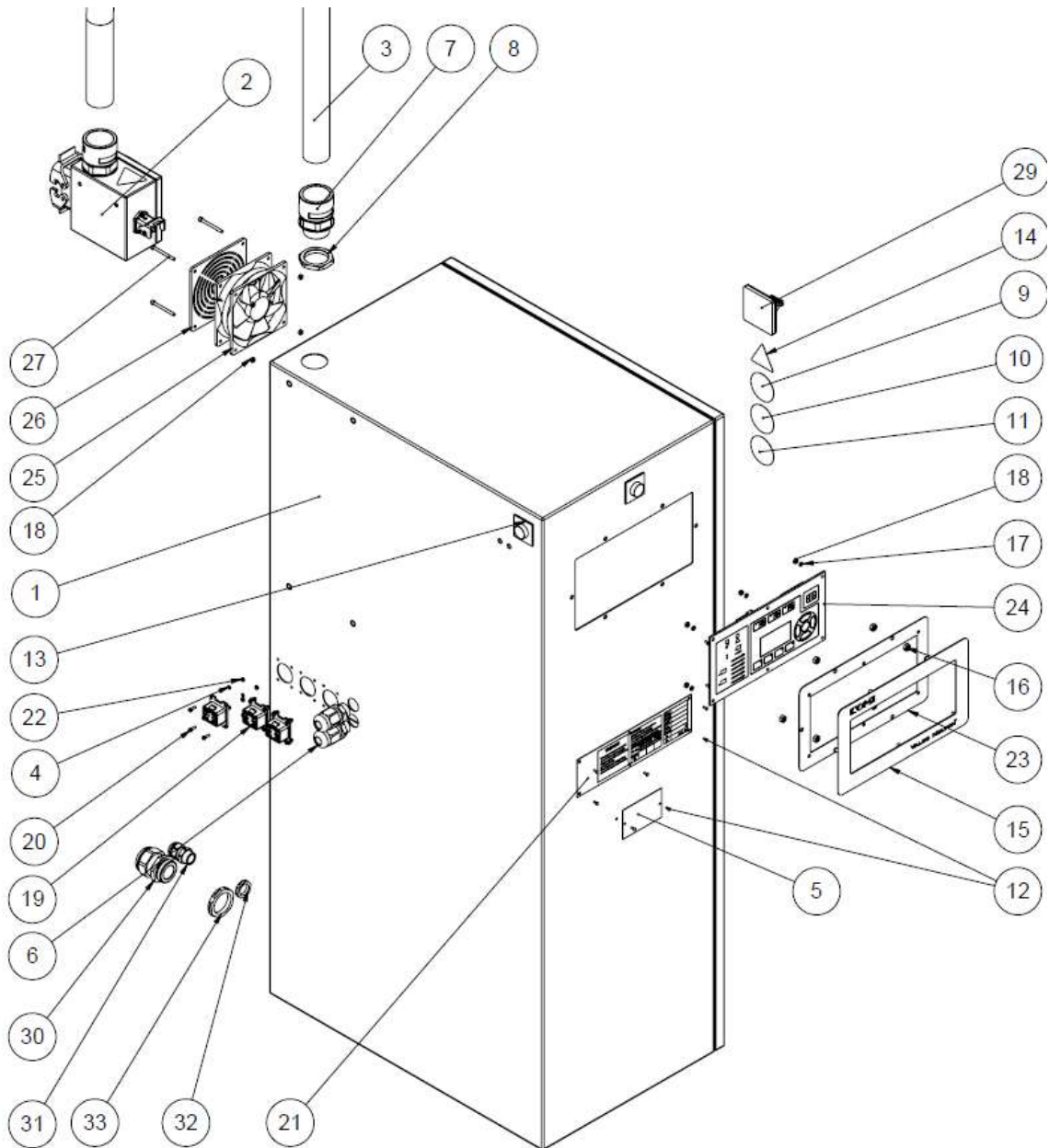
Nº	Descripción	Description	Ref.	Qty
1	Varilla llave	Key rod	917XX731	1
2	Casquillo varilla	Rod bushing	917XX740	1
3	Esparrago roscado M4x6 inox	Stainless M4x6 thread stud	910XX774	1

10. CONJUNTO ARMARIO ELECTRICO / ELECTRIC CABINET ASSEMBLY:



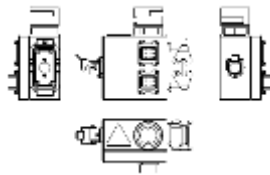
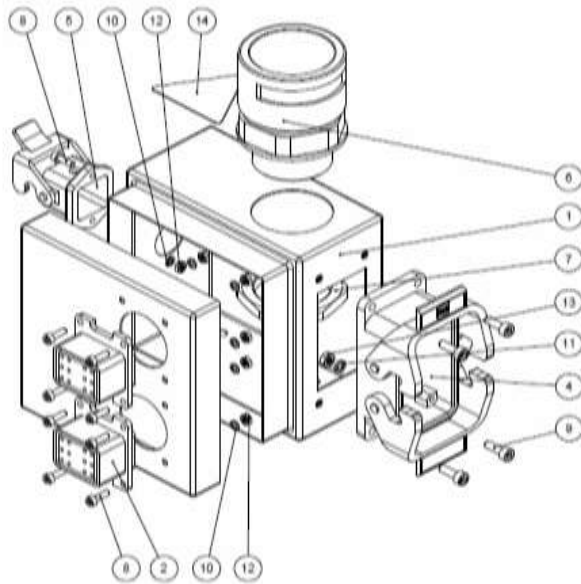
Nº	Descripción	Description	Ref.	Qty
1	SUBCON MONTAJE ARMARIO NUEVA ELECTRONICA	NEW ELECTRONIC CABINET ASSEMBLY	PAG 24	1
2	SUBCJTO BANDEJA ELEMENTOS NEUMATICOS	PNEUMATIC ELEMENTS TRAY ASSEMBLY	916XX871	1
3	RACOR 90º R1/4 / O8-B	90º FITTING R1/4 / O8-B	910XX240	2
4	TUBO FILTRO-MANOMETRO DELANTERO E-DRUM	FRONT EDRUM FILTER-MANOMETER PIPE	917XX729	1
5	TUBO MANOMETRO DELANTERO--VALVULA 5/3 E-	FRONT EDRUM MANOMETER PIPE	917XX730	1
6	SOPORTE REGULADOR E/B-DRUM	E/B-DRUM REGULATOR SUPPORT	918XX529	1
7	REGULADOR DE PRESION 0-10 Y SOPORTE	PRESSURE REGULATOR AND BRACKET	910XX229	1
8	TORNILLO ALLEN M6X10 INOX.	ALLEN SCREW M6X10 STAINLESS	915XX082	4
9	TORNILLO ALLEN M5X10 INOX.	ALLEN SCREW M5X10 STAINLESS	910XX968	2
10	MANOMETRO C D.40 0-6KG. (SIN MARCO)	C D.40 0-6KG MANOMETER (WITHOUT FRAME)	910XX230	1

10.1 CONJUNTO MONTAJE ARMARIO NUEVA ELECTRONICA / NEW ELECTRONIC CABINET ASSEMBLY:



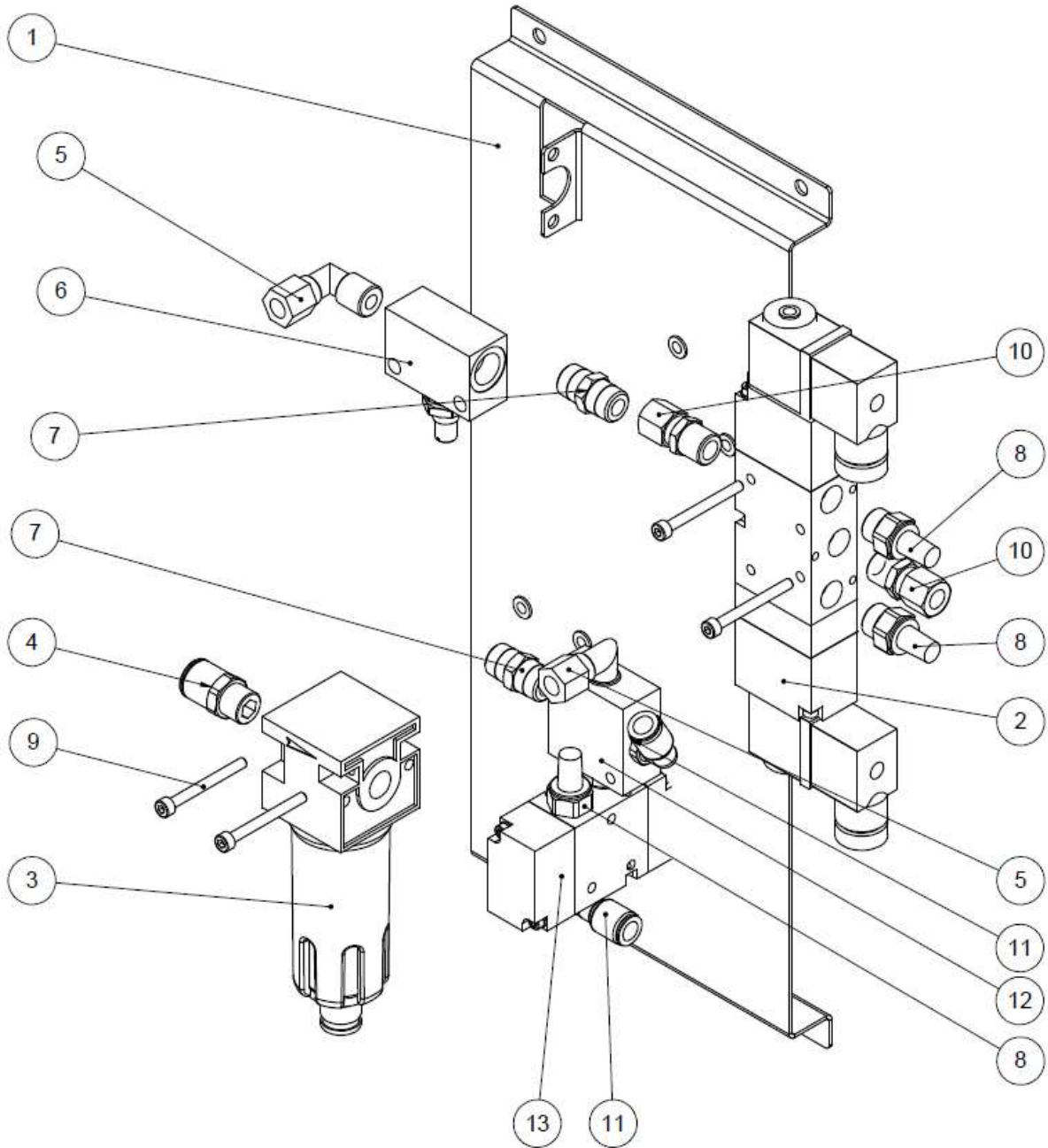
Nº	Descripción	Description	Ref.	Qty
1	ARMARIO ELEC SUP 5 SAL NUEVA ELECTRONICA	NEW ELECTRONIC CABINET		1
2	SUBCJTO CAJA ELECTRICA	ELECTRIC BOX ASSEMBLY	916XX872	1
3	TUBO CORRUGADO POLIAMIDA PA6 PG-36	POLYAMIDE CORRUGATED PIPE PA6 PG-36	913XX478	1
4	ARANDELA GROWER M3 INOX.	GROVER WASHER M3 STAINLESS	910XX328	12
5	CHAPA SIMBOLO CE	CE MARKING SHEET	917XX721	1
6	PRENSA PVC PG-16 GRIS	PVC PG16 GREY PRESS	918XX805	2
7	RACOR POLIAMIDA	POLYAMIDE FITTING	917XX716	1
8	TUERCA POLIAMIDA M40X1.5	POLYAMIDE NUT M40X1,5	917XX717	1
9	PEGATINA TRAJE	SUIT BUMPER	917XX722	1
10	PEGATINA GUANTES	GLOVE BUMPER	917XX723	1
11	PEGATINA BOTAS	BOOT BUMPER	917XX724	1
12	REMACHES POP 2,4X8	POP RIVET 2,4 X 8	915XX154	8
14	PEGATINA ELECTRICO	ELECTRIC BUMPER	917XX718	1
15	MARCO TARJETA CONTROL	CONTROL BOARD FRAME	918XX814	1
16	TUERCA HEXAGONAL M6 INOX	HEXAGONAL NUT M6 STAINLESS	910XX195	6
17	ARANDELA GROWER M4 INOX.	GROVER WASHER M4 STAINLESS	910XX332	6
18	TUERCA HEXAGONAL M4 INOX.	HEXAGONAL NUT M4 STAINLESS	915XX159	10
19	MAZO NI120 MANG-PIST Nº2	NI120 HOSE-GUN Nº2 WIRING HARNESS	Depending model	
20	TORNILLO ALLEN M3X10 INOX	ALLEN SCREW M3X10 STAINLESS	910XX084	12
21	CHAPA MATRICULA	REGISTRATION SHEET	914XX975	1
22	TUERCA HEXAGONAL M3 INOX.	HEXAGONAL NUT M3 STAINLESS	914XX982	12
23	JUNTA MARCO GRANDE	BIG FRAME JOINT	914XX506	1
24	OVERLAY ASSY, UTC20, 6 HOSE	OVERLAY ASSY, UTC20, 6 HOSE	137XX025	1
25	VENTILADOR A 220V 50HZ 120X120X	FAN 220V 50Hz	915XX730	1
26	REJILLA DE PVC C/FILTRO	FILTER PVC GRID	918XX573	1
27	TORNILLO ALLEN M4X45 INOX	ALLEN SCREW M4X45 STAINLESS	917XX385	4
29	INTERRUPTOR MANUAL GENERAL III 40A KC	MANUAL SWITCH	915XX731	1
30	PRENSA PVC PG-29 GRIS	GREY PG-29 PVC PRESS	988XX717	1
31	PRENSA PVC PG13 GRIS	GREY PG-13 PVC PRESS	915XX235	1
32	TUERCA PVC PG13	PG13 PVC NUT	915XX233	1
33	TUERCA PVC PG29	PG29 PVC NUT	912XX173	1

10.1.1 CONJUNTO CAJA ELECTRICA / ELECTRIC BOX ASSEMBLY: (916XX872)



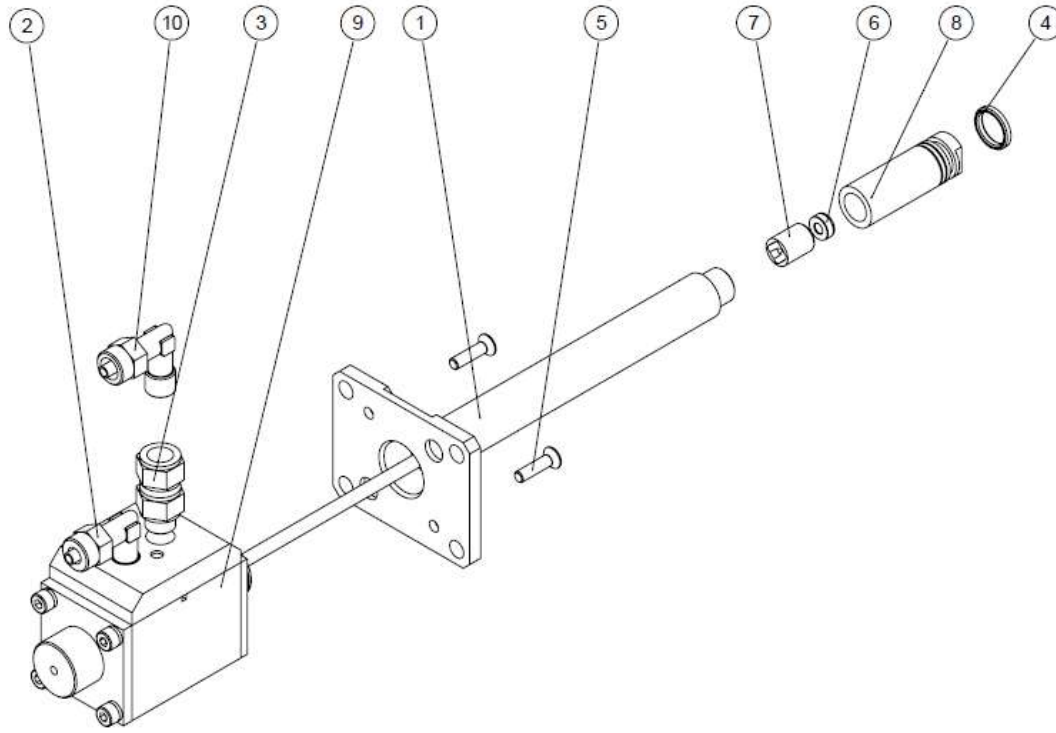
Nº	Descripción	Description	Ref.	Qty
1	CAJA CONECTORES	CONNECTORS BOX	917XX712	1
2	MAZO NI120 MANG-PIST Nº1	GUN-HOSE 1 WIRING HARNESS	916XX868	1
3	MAZO NI120 MANG-PIST Nº2	GUN-HOSE 2 WIRING HARNESS		1
4	BASE ABIERTA EMPOTRAR 10 POLOS	10 POLES EMBED OPEN SUPPORT	917XX715	1
5	BASE 3A. HARTING	BASE 3A. HARTING	915XX479	1
6	RACOR POLIAMIDA	POLYAMIDE FITTING	917XX716	1
7	TUERCA POLIAMIDA M40X1,5	POLYAMIDE NUT M40X1,5	917XX717	1
8	TORNILLO ALLEN M3X10 INOX	ALLEN SCREW M3X10 STAINLESS	910XX084	10
9	TORNILLO ALLEN M4X12 INOX.	ALLEN SCREW M4X12 STAINLESS	910XX378	4
10	ARANDELA GROWER M3 INOX.	GROVER WASHER M3 STAINLESS	910XX328	10
11	ARANDELA GROWER M4 INOX.	GROVER WASHER M4 STAINLESS	910XX332	4
12	TUERCA HEXAGONAL M3 INOX.	HEXAGONAL NUT M3 STAINLESS	914XX982	10
13	TUERCA HEXAGONAL M4 INOX.	HEXAGONAL NUT M4 STAINLESS	915XX159	4
14	PEGATINA ELECTRICO	ELECTRIC BUMPER	917XX718	1

10.2 CONJUNTO BANDEJA ELEMENTOS NEUMATICOS / PNEUMATIC ELEMENTS TRAY ASSEMBLY: (916XX871)



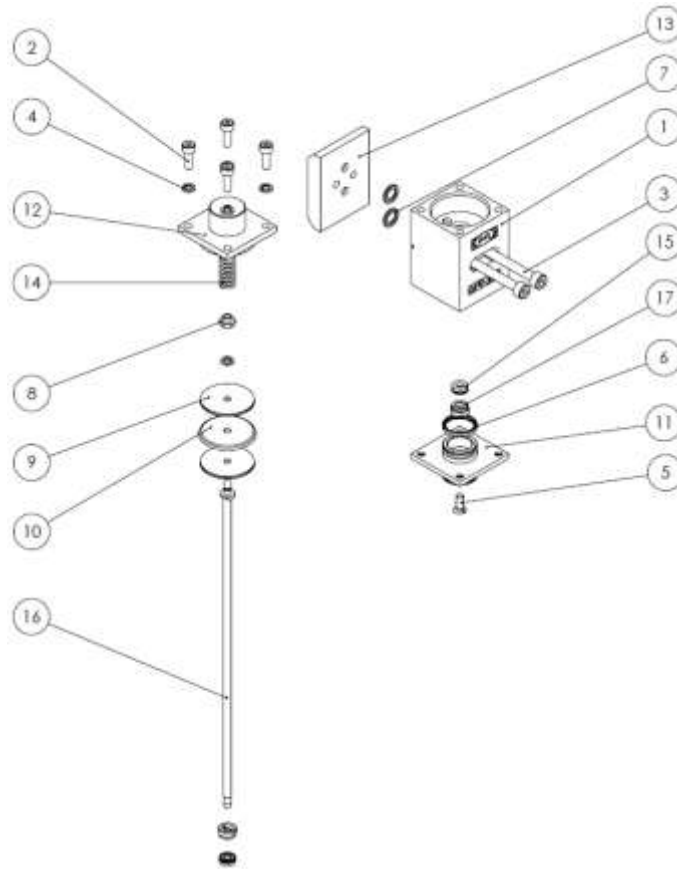
<i>Nº</i>	<i>Descripción</i>	<i>Description</i>	<i>Ref.</i>	<i>Qty</i>
1	CHAPA ELEMENTOS NEUMATICOS	PNEUMATIC ELEMENTS SHEET	917XX706	1
2	CONJUNTO DISTRIBUIDOR 5/3 N	5/3 N MANIFOLD ASSEMBLY	915XX208	1
3	FILTRO G1/4" 25M M107	25M M107 G1/4" FILTER	915XX568	1
4	RACOR RECTO 1/4 TUBO 10 E/R	STRAIGHT FITTING 1/4 PIPE 10 E/R	943XX049	1
5	RACOR 90° R1/4 / O8-BN	90° FITTING R1/4 / O8-BN		2
6	REGULADOR CAUDAL RFL-U-1/4	FLOW REGULATOR RFL-U-1/4	917XX710	1
7	RACOR RECTO M-M 1/4"	STRAIGHT FITTING M-M 1/4"	914XX069	2
8	SILENCIADOR 1/4" CORTO 14TR CONICO SERI	SHORT 1/4" SILENCER 14 TR	915XX179	3
9	TORNILLO ALLEN M4X40 INOX.	ALLEN SCREW M4X40 STAINLESS	917XX535	4
10	RACOR RECTO R1/4 / O8-B	STRAIGHT FITTING R1/4 / O8-B	910XX244	3
11	RACOR 90° R1/4 / ER8-P	90° FITTING R1/4 / ER8-P	988XX051	2
12	REGLETA DISTRIBUCION G1/4"	DISTRIBUTION STRIP G1/4"		1
13	ELECTROVALVULA 3/2 SE NC 1/4 PILOTADA	PILOT-ASSISTED SOLENOID 3/2 SE NC 1/4	911XX774	1

11. CONJUNTO VÁLVULA V-DRUM LISO / VDRUM FLAT VALVE ASSEMBLY: (916XX585)



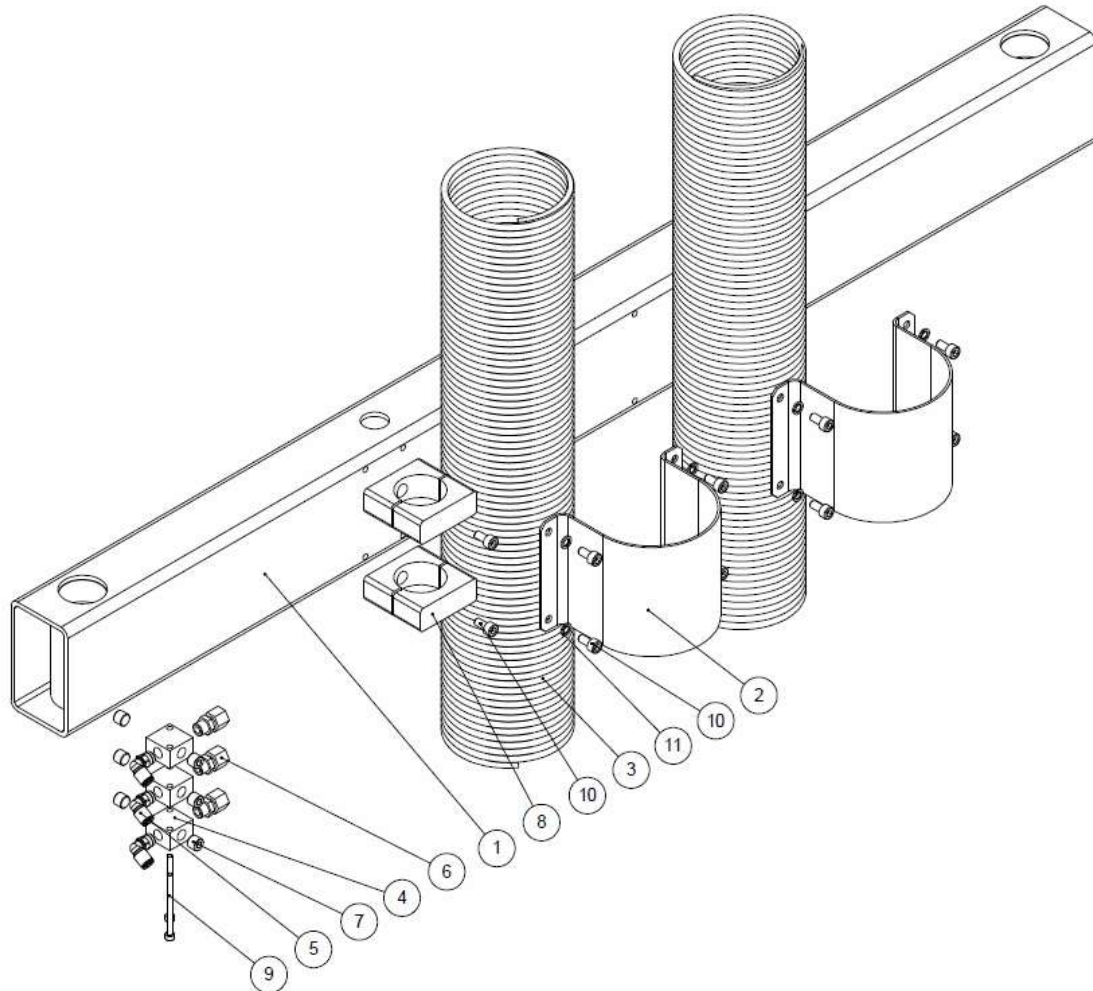
Nº	Descripción	Description	Ref.	Qty
1	BASE TUBO	TUBE BASE	913XX001	1
2	RACOR 90° R1/8 / SR6-BN	90° FITTING R1/8 / SR6-BN	910XX057	1
3	ADAPTADOR M 1/8 BSP CILINDRICA - H 1/8	ADAPTER M 1/8 BSP CYILINDRICAL - H 1/8	943XX006	2
4	JUNTA TORICA VITÓN 12X2	VITON O-RING Ø12X2	910XX049	2
5	TORNILLO AVELLANADO ALLEN M4X16 INOX.	ALLEN COUNTERSUNK SCREW M4X16 STAINLESS	918XX542	2
6	LENTEJUELA BOLA 4.5	BUSHING BALL 4.5		1
7	GUIA AGUJA MÓDULO	MODULE NEEDLE GUIDE	900XX244	1
8	CASQUILLO PUNTA PLATO LISO 200L	BUSHING WITH HEAD FOR FLAT PLATE		1
9	VÁLVULA PLATO SEGUIDOR L=215	FOLLOWER PLATE VALVE	Page 30	1
10	RACOR 90° 1/8 T/8-4 SEMIRA. NI	SEMI-QUICK 90° FITTING 1/8 T/8-4		1

11.1. VÁLVULA PLATO SEGUIDOR L=215 / FOLLOWER PLATE VALVE L=215: (913XX955)



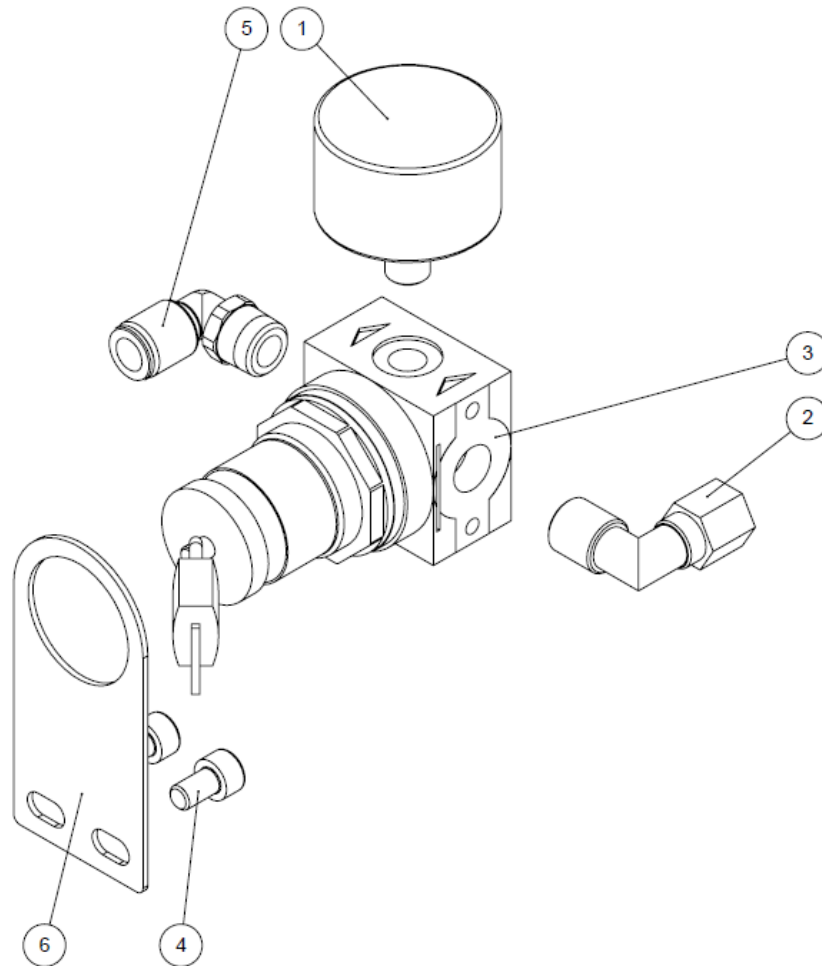
Nº	Descripción	Description	Ref.	Qty
1	CUERPO MÓDULO ALTO CAUDAL	HIGH FLOW MODULE BODY	915XX763	1
2	TORNILLO ALLEN M4X12 INOX.	ALLEN SCREW M4X12 STAINLESS	910XX378	4
3	TORNILLO ALLEN M5X40 INOX.	ALLEN SCREW M5X40 STAINLESS	918XX675	2
4	ARANDELA GROVER M4 INOX.	GROVER WASHER M4 STAINLESS	910XX332	5
5	TORNILLO GOTA SEBO RANURADO M4X10	FILLISTER HEAD SLOTTED SCREW M4X10	914XX881	2
6	JUNTA TÓRICA VITON 16X2	VITON O-RING Ø16X2	914XX082	2
7	JUNTA TÓRICA VITON 7.65X1.78	VITON O-RING Ø7.65X1.78	910XX324	2
8	TUERCA ÉMBOLO	PISTON NUT	910XX333	1
9	PLATILLO ÉMBOLO ALTO CAUDAL	HIGH FLOW PISTON PLATE	915XX767	2
10	JUNTA ÉMBOLO ALTO CAUDAL	HIGH FLOW PISTON JOINT	915XX764	1
11	PUNTA VÁLVULA PLATO SEGUIDOR	VALVE TIP	917XX536	1
12	TAPA TRASERA ALTO CAUDAL	HIGH FLOW BACK COVER	915XX766	1
13	ADAPTADOR VÁLVULA	VALVE ADAPTOR	911XX219	1
14	MUELLE DANLY AZUL Ø5XØ10X25	BLUE DANLY SPRING Ø5XØ10X25	914XX221	1
15	JUNTA CIERRE BALSEAL PARA MODULOS MI	BALSEAL JOINT FOR MI MODULES	910XX978	2
16	AGUJA VÁLVULA INYECTORA (L=215)	INJECTION VALVE NEEDLE	913XX953	1
17	TORNILLO FIJACIÓN JUNTAS	JOINT SETSCREW	910XX326	2

12. CONJUNTO TRAVESAÑO / BUNK ASSEMBLY: (916XX897)



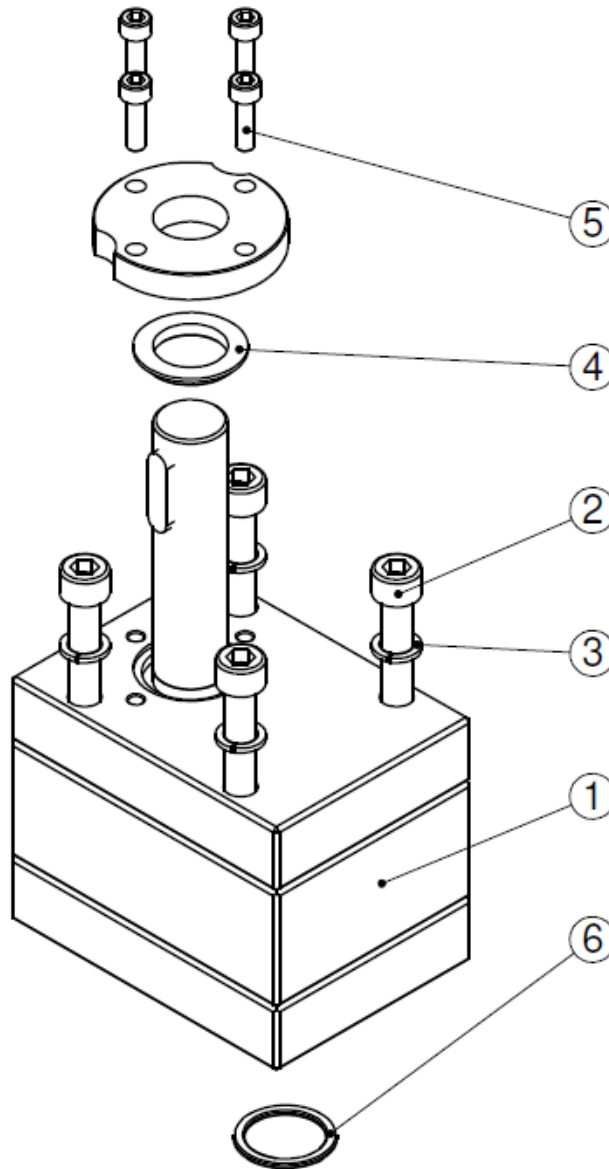
Nº	Descripción	Description	Ref	Qty
1	Travesaño	Bunk	917XX531	1
2	Soporte manguera	Hose bracket	917XX532	2
3	Muelle manguera	Hose spring	917XX533	2
4	Regleta de distribución G1/8	G1/8 connector of distribution	917XX534	3
5	Racor 90° 1/8" tubo 6 ER	1/8" 6 tube ER 90° connector	915XX694	3
6	Racor recto 1/8" E/R tubo 6	1/8" E/R 8 tube straight connector	917XX419	3
7	Tapon 1/8" GAS BSP	1/8" GAS BSP plug	910XX001	6
8	Abrazadera JIR M40	M40 JIR clamp	917XX705	2
9	Tornillo allen M4x55	M4x55 allen screw	918XX680	2
10	Tornillo allen M6x12	M6x12 allen screw	910XX089	10
11	Arandela grover inox M6	Stainless M6 grover washer	910XX131	8

13. CONJUNTO MANÓMETRO REGULADOR DISTRIBUIDOR / MANIFOLD MANOMETER REGULATOR ASSEMBLY:



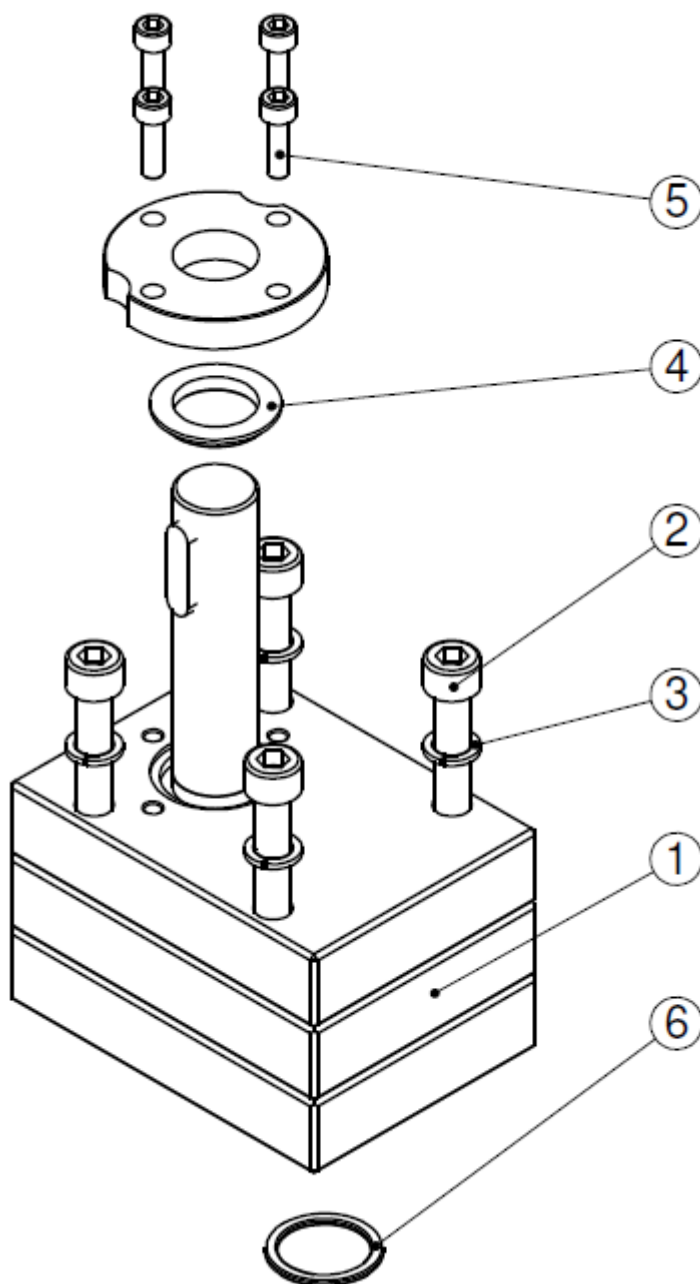
Nº	Descripción	Description	Ref.	Qty
1	MANOMETRO C Ø40 - 0-6 SIN BRIDA	MANOMETER C Ø40 - 0-6 WITHOUT BRIDLE	914XX070	1
2	RACOR 90º R1/4 / O8-BN	90º FITTING R1/4 / O8-BN	910XX240	1
3	REGULADOR DE PRESION 0-2 1/4" CON PRECINTO	PRESSURE REGULATOR 0-2 1/4" WITH SEAL	900XX237	1
4	TORNILLO ALLEN M6X10 INOX.	ALLEN SCREW M6X10 STAINLESS	915XX082	2
5	RACOR 90º R1/4 / ER8-P	90º FITTING R1/4 / ER8-P	988XX051	1
6	SOPORTE PLANO REGULADOR DE PRESIÓN E/B-DRUM	MANOMETER SUPPORT PLATE		1

1. CONJUNTO BOMBA 30 CC MVV / GEAR PUMP 30 CC MVV ASSEMBLY:



Nº	Descripción	Description	Ref.	Ref.	Qty
1	BOMBA ENGRANES 30CC/REV M.V.V.	GEAR PUMP 30CC/REV M.V.V.			1
2	TORNILLO ALLEN M10X110 INOX.	ALLEN SCREW M10X110 STAINLESS	915XX579	914XX968	4
3	ARANDELA GROWER M10 INOX.	GROVER WASHER M10 STAINLESS	915XX578		4
4	JUNTA COLLARIN EJE VARISEAL 24x31x36.5	VARISEAL AXLE JOINT 24x31x36.5	913XX880		1
5	TORNILLO ALLEN M6X20 INOX.	ALLEN SCREW M6X20 STAINLESS	910XX055		4
6	JUNTA TORICA VITON Ø26X2,5	Ø26X2,5 VITON O-RING	917XX742		1

2. CONJUNTO BOMBA 15 CC MVV / GEAR PUMP 15 CC MVV ASSEMBLY:

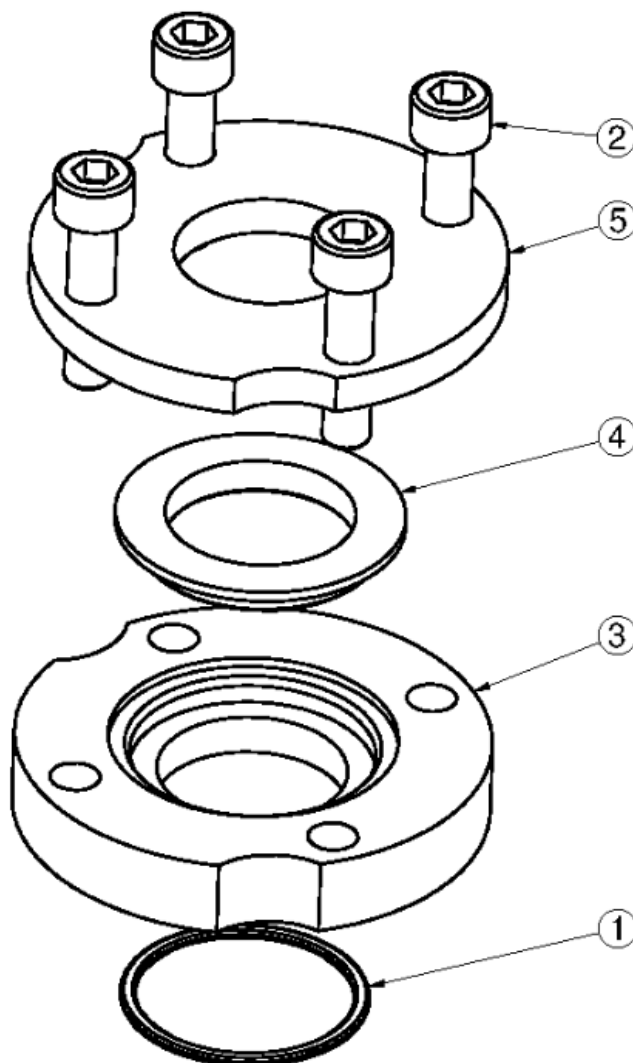


Nº	Descripción	Description	Ref.	Ref.	Qty
1	BOMBA ENGRANES 15 CC/REV M.V.V.	GEAR PUMP 15 CC/REV M.V.V.			1
2	TORNILLO ALLEN M10X90 INOX.	ALLEN SCREW M10X90 STAINLESS	915XX018	918XX174	4
3	ARANDELA GROWER M10 INOX.	GROVER WASHER M10 STAINLESS	915XX578		4
4	JUNTA COLLARIN EJE VARISEAL 24x31x36.5	VARISEAL AXLE JOINT 24x31x36.5	913XX880		1
5	TORNILLO ALLEN M6X20 INOX.	ALLEN SCREW M6X20 STAINLESS	910XX055		4
6	JUNTA TORICA VITON Ø26X2,5	Ø26X2,5 VITON O-RING	917XX742		1

3. KIT VARISEAL BOMBA 15-30 CC / 15-30 CC GEAR PUMP VARISEAL KIT (917XX981):

KIT DE ACTUALIZACIÓN DE LAS BOMBAS ANTIGUAS DE 15 Y 30 CC CON ANILLO DE GRAFITO

UPGRADE KIT FOR OLD 15/30 CC PUMPS WITH GRAPHITE RING



Nº	Descripción	Description	Ref.	Qty
1	JUNTA TORICA VITON Ø27X1,5	Ø27X1,5 VITON O-RING	914XX277	1
2	TORNILLO ALLEN M6X25 INOX.	ALLEN SCREW M6X25 STAINLESS	914XX175	4
3	TAPA INTERMEDIA BOMBA 15 Y 30CC	15-30 CC PUMP MIDDLE LID		1
4	JUNTA COLLARIN EJE VARISEAL 24x31x36.5	VARISEAL AXLE JOINT 24x31x36.5	913XX880	1
6	TAPA SUPERIOR BOMBA 15 Y 30CC	15-30 CC PUMP UPPER LID		1