

Declaration of conformity

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

Described in the enclosed documentation is in conformity with:

- Directive 2006/42/EC of 29 December 2009 which replaces Directive 98/37/EC of 22 June 1998 on *the approximation of the laws of the Member States relating to machinery*, which regroups Directives 89/392/EEC of 14 June 1989, 91/368/EEC of 20 June 1991, 93/44/EEC of 14 June 1993 and 93/68/EEC of 22 July 1993. Directive applicable to standard EN ISO 12100-1 and EN ISO 12100-2, related to *safety of machinery*; standard EN ISO 14121-1 and EN ISO 14121-2, related to *safety of machinery. Risk assessment*; standard UNE-EN 60204-1, related to *safety of machinery. Electrical equipment of machines*; standard UNE-EN 61310-1, UNE-EN 61310-2 and UNE-EN 61310-3, related to *safety of machinery. Indication, marking and actuation*.
- Directive 2006/95/CE of 12 December 2006 which replaces Directive 73/23/EEC of 19 February 1973 on electrical equipment.
- Directive 2004/108/EC of 20 July 2007 which replaces Directive 89/336/EEC of 3 May 1989 on Electromagnetic Compatibility.
- Directive 93/68/EEC of 22 July 1993 which modifies 73/23/EEC and Directive 89/336/EEC.
- Hoses are factory tested at 100 bars and at 220°C.

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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ORCOYEN, NAVARRA (SPAIN)

CONTROL REGISTRATION

CONTROL NUM:

DATE:

ELECTRIC CHECK:

CONTROL BOARD CHECK:

TEMPERATURE CONTROL CHECK 150°/180°:

HYDRAULIC CHECK (100 bar):

PNEUMATIC CHECK:

APPLICATOR SERIAL NUMBER:

GUARANTEE CARD

DISTRIBUTOR:

CONTACT:

ADDRESS: TELEPHONE:

OEM:

ADDRESS:

TYPE: BRAND: MODEL:

USER: CONTACT:

ADDRESS:

SYSTEM LOCATION:

TELEPHONE: DATE OF INSTALLATION:

GARANTEE UNTIL:

APPLICATOR SERIAL NUMBER:



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.

FAILURE TO FOLLOW SAFETY INSTRUCTIONS MAY RESULT IN BURNS, INJURY OR PERMANENT PHYSICAL 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

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



Elements susceptible to electrostatic discharge

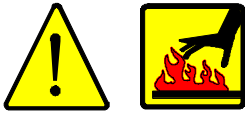


Precaution: risk of fluid leakage under high pressure



Precaution: risk of entrapment between mobile parts

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 skin injury.

Qualified personnel:

Qualified personnel are technical staff members who have acquired sufficient knowledge in a specific field, through either training or experience.

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

Protective clothing:

Clothing will be compliant with EN510 and EN340 standards, protecting against flying debris and high temperatures.

Clothing 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:



Goggles will be compliant with the EN 166 standard, protecting against flying debris and high temperatures.

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

Protective gloves:



Gloves will be compliant with EN 407 and EN 420 standards, protecting the hands against burns caused by external, heated substances at temperatures above 100 °C.

Elements susceptible to electrostatic discharge:



When handling equipment, avoid contact with electronic components and metal pins on the connectors.

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 trained in correct operation (contacting the manufacturer whenever necessary), the risks involved and required safety measures, including adjustment and maintenance, and expressly-forbidden operations.
- This unit is not designed 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 provided guards in place (do not remove). These guards should be checked and maintained according to the maintenance schedule.
- 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 a basic knowledge of the machine, and of the mechanical, pneumatic and electrical circuits involved.
- Maintenance operations and/or repairs should always be performed with the machine switched off at the mains, and with the main switch locked and tagged out.

1.3. FIRST AID:

In case of burns:



Immerse the 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 after 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 the site with soap and water and discard all contaminated cloths.

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

INHALATION: In case of exposure to fumes, take the patient to fresh air and let them rest.

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

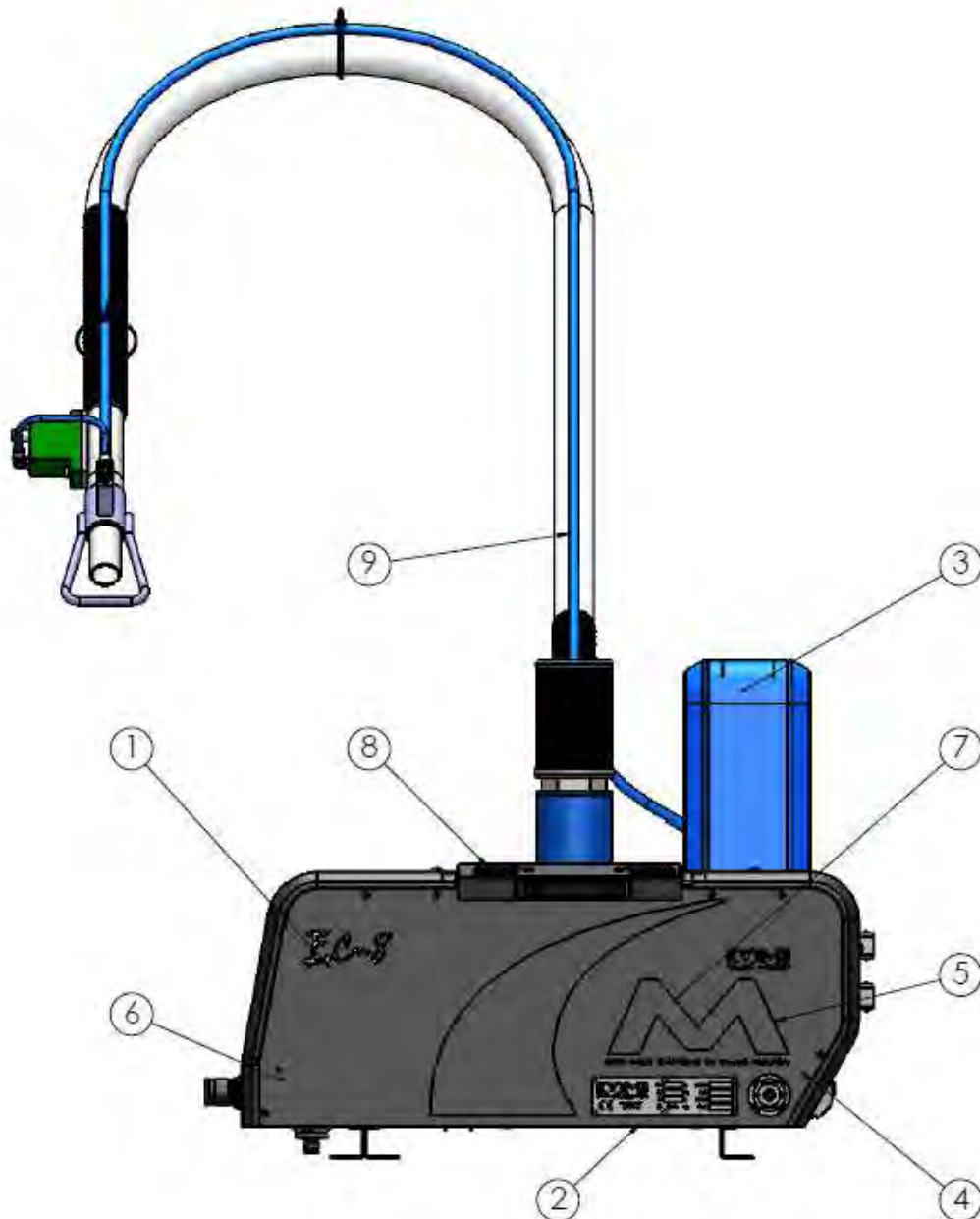
CHAPTER 2 DESCRIPTION

2.1. INTRODUCTION:

This machine is designed to melt hot-melt adhesive, or similar materials, in a heated reservoir. A pump then pressurizes the adhesive and transfers it to a manifold, where it flows through heated hoses to the application point.

2.2. MAIN PARTS:

The main machine parts are shown in the following figure:



Basic equipment description (**opción A**):

N.	DESCRIPTION
1	Electrical cabinet
2	Frame
3	Pump
4	Manifold
5	Tank
6	Control panel
7	Discharge module

Optional equipment description:

Nº	DESCRIPTION	Intermediate (option B)	Full (option C)
8	Level sensor	Y	Y
9	Vacuum feeder		Y

2.2.1. Electrical cabinet:

The cabinet contains the temperature control interface and related electrical components.

2.2.2. Frame:

The frame consists of a base plate on which the equipment is installed.

2.2.3. and 2.2.4. Pump-distribution system:

This system transfers adhesive from the tank to the manifold.

Manifold:



The manifold distributes the Hot-Melt, once filtered, to the hoses and guns.

Made of aluminium, it is located on the lower part of the tank so the tank heaters can heat it indirectly.

The manifold filter consists of a core and a fine, in-line filter screen to filter crystal particles or dirt that could be present in the adhesive.

The manifold has six outlet holes to connect the Hot-Melt hoses: three on the top row and three on the bottom row.

Pump:

The pump delivers the Hot-Melt, or other molten product, at a set pressure, from the tank to the substrate (or material to be glued), after passing through a manifold, filter, hoses and guns.

The pump system consists of an electrovalve, a pneumatic cylinder and a double-acting hydraulic pump with a pressure compensator, to avoid a drop in the flow produced when changing pump direction, and enabling uniform Hot-Melt discharge.

Do not disassemble the manifold. This operation should only be done if there is a Hot-Melt leak between the tank and the distributor.

2.2.5. Tank:



The Tank is where the Hot-Melt or other similar material is melted (the other material can be in the form of pellets or blocks). The cast aluminium tank is lined with Teflon to avoid carbon deposits and crystal formation, and incorporates a resistance heating system.

A sensor with a micro-controller controls resistance heating, and can be programmed up to 240°C.

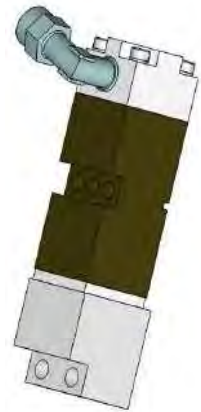
2.2.6. Control Panel

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

2.2.7. Discharge module

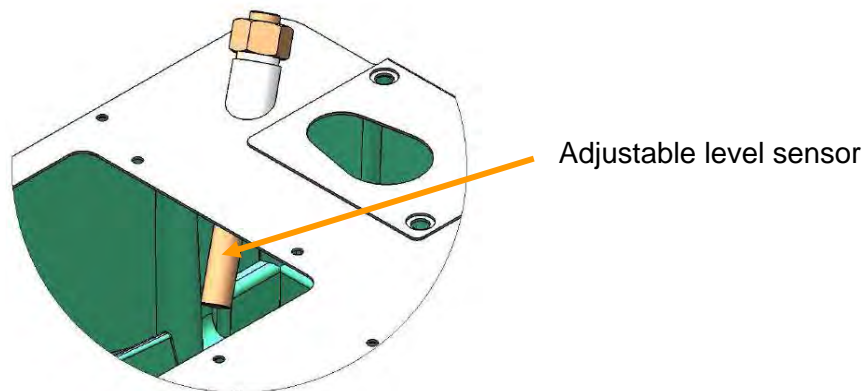
The discharge module actuates like a flow valve. When the system is operating normally, the module stays closed, but if there is an electric failure, the module will open immediately (the air to maintain it closed has been stopped due to the electric failure), so that pressure in the hoses and guns will go to the tank.

The purpose of this module is to avoid dangerous situations, due to residual adhesive pressure, when electrical failures occur.



2.2.8. Level sensor:

The level sensor measures the adhesive level in the tank. With this, it is possible to determinate acceptable high and low adhesive levels in the tank. After adhesive reaches the top level, the sensor sends the signal to stop filling. When it reaches the lowest level, it sends the low signal and the vacuum feeder is automatically activated.



2.2.9. Vacuum Feeder:

The purpose of the vacuum feeder is to automatically fill the tank with adhesive from an external container. This system is controlled by sensors that automatically detect a need for adhesive. It must be set as STATED in the settings section.

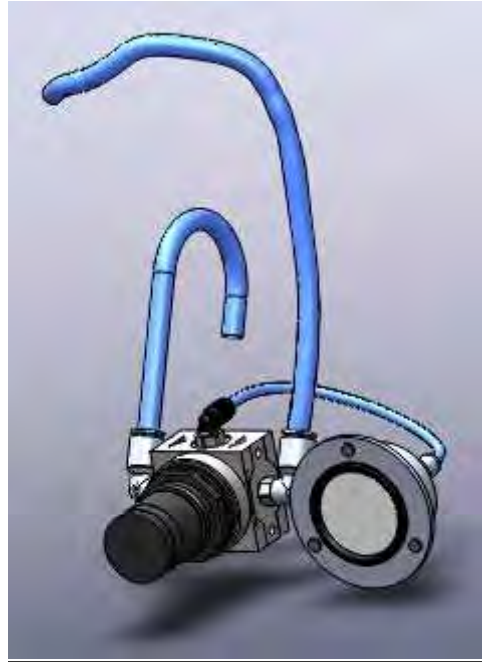
If the sensor detects a low level of adhesive, the electrovalve opens and the vacuum feeder will supply adhesive until it detects high adhesive level. If the adhesive does not load before 200 seconds, an amber-colored light will blink and an alarm will sound.

When the vacuum feeder lid is opened, it will deactivate. To reactivate it, close the lid and lock it properly.

2.2.10. Other key elements

Pressure regulator:

This is the element used to raise or lower the pressure to the piston pump. It is regulated dependent on the application. It includes an air filter to prevent impurities entering the machine.



Bleed electrovalve:

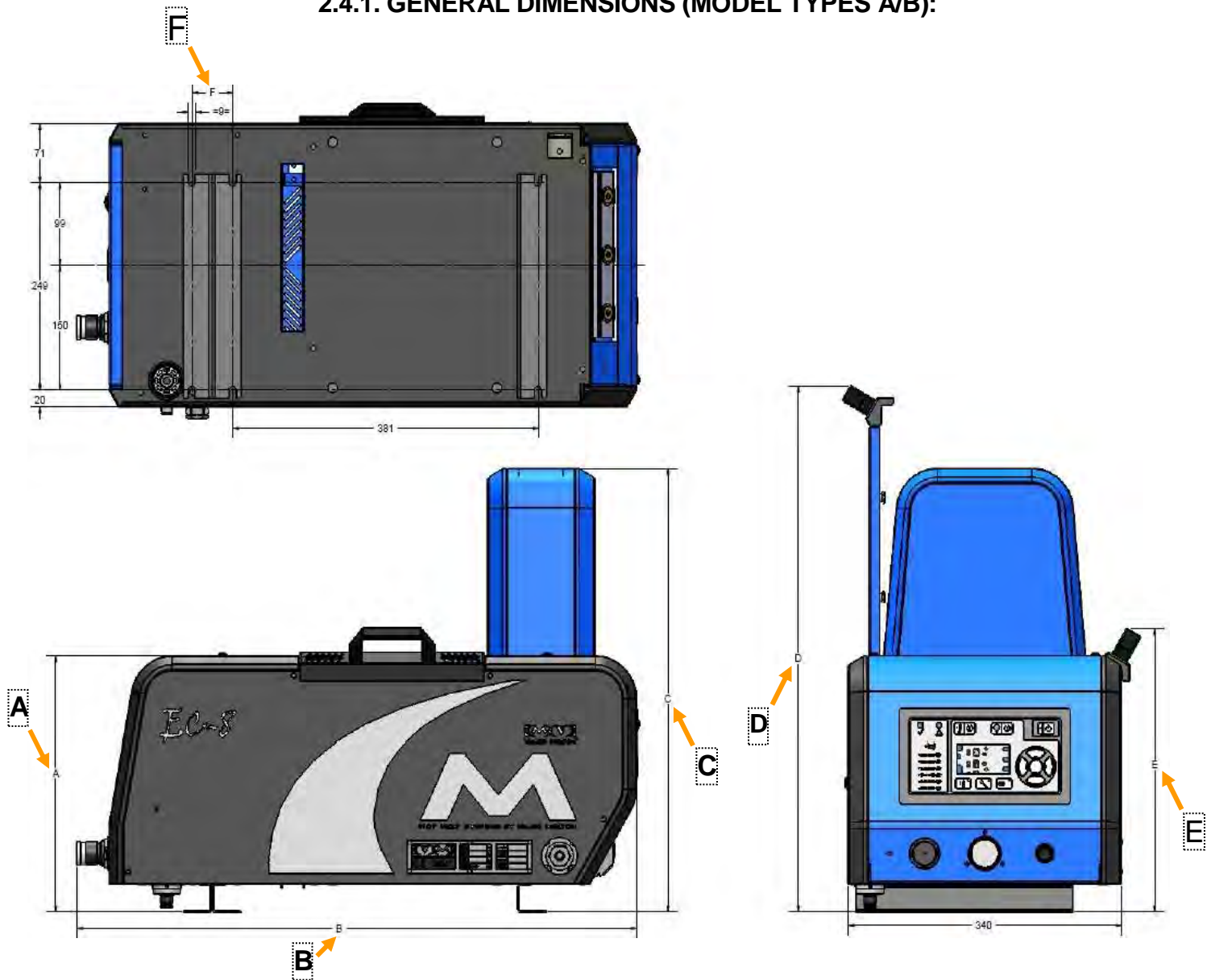
This is the element that controls air passage to the pump. It is electrically connected to the electrical control system. This allows the applicator to adapt to the main machine speed.

2.3. TECHNICAL CHARACTERISTICS:

<i>ELEMENT</i>	<i>DATA</i>		
GENERAL			
Power supply	I 220V+N+T (50/60Hz), III 220V+T (50/60 Hz), III 380V+N+T (50-60Hz)		
Hoses (max.)	6		
Hydraulic pressure (maximum working)	2.8 – 80 bar (40 – 1138 psi)		
Noise level	63 dB		
Working temperature	-10 – 50 °C (32 – 122°F) HR 20% to 80% non-condensed		
CONTROL			
Working temperature	15° - 230° C (59° - 446° F)		
Temperature control precision	+/- 0.5° C (+/- 1° F)		
Type control	PID Control		
PUMP	LOW FLOW	HIGH FLOW	
Pumping capacity (Kg./h)	35	100	
Pump compression ratio	1:14	1:13	
Pneumatic working pressure	0.5 to 6 bar		
TANK	EC4	EC8	EC14
Volume (litres)	4	8	14
Melting capacity (Kg./h)	4.2	7.9	13.5
Tank electrical consumption (W)	1700	2800	4000
VACUUM FEEDING			
Compressed air input	2 - 6 bar (29 up to 87PSI) - 350 l/min (92 gallon/minute)		
Hose length	3m (43,5PSI)		

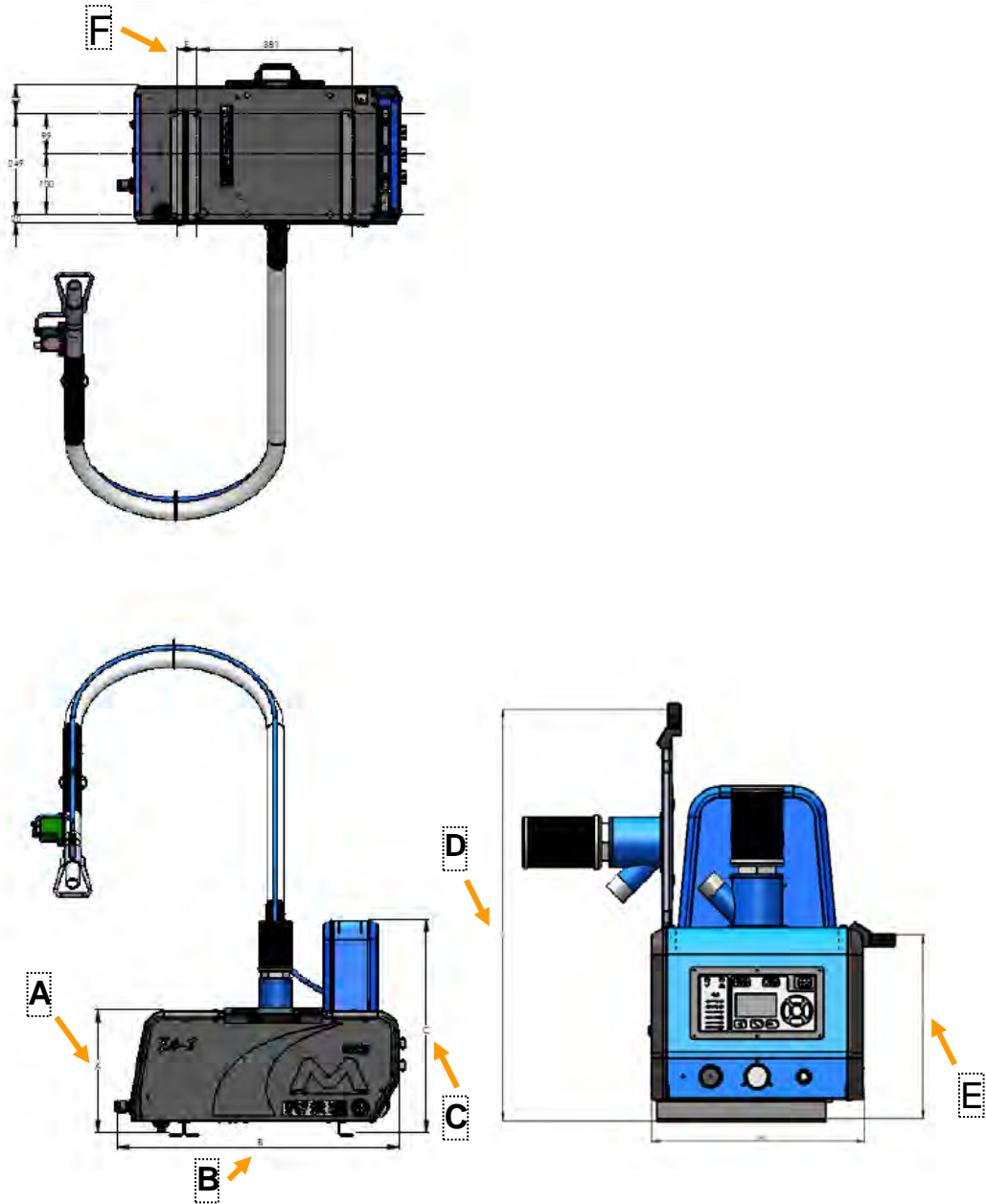
2.4. DIMENSIONS:

2.4.1. GENERAL DIMENSIONS (MODEL TYPES A/B):



Dimensions (mm)	EC4	EC8	EC14
A	307	307	367
B	583	658	658
C	532	532	592
D	631	631	691
E	340	340	398
F	0	51	51

2.4.2. GENERAL DIMENSIONS WITH VACUUM FEEDING
(MODEL TYPE C):



Dimensions (mm)	EC4	EC8	EC14
A	307	307	367
B	583	658	658
C	532	532	592
D	662	662	724
E	296	296	358
F	0	51	51

CHAPTER 3 MACHINE INSTALLATION

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 unit is supplied packed in a cardboard box.

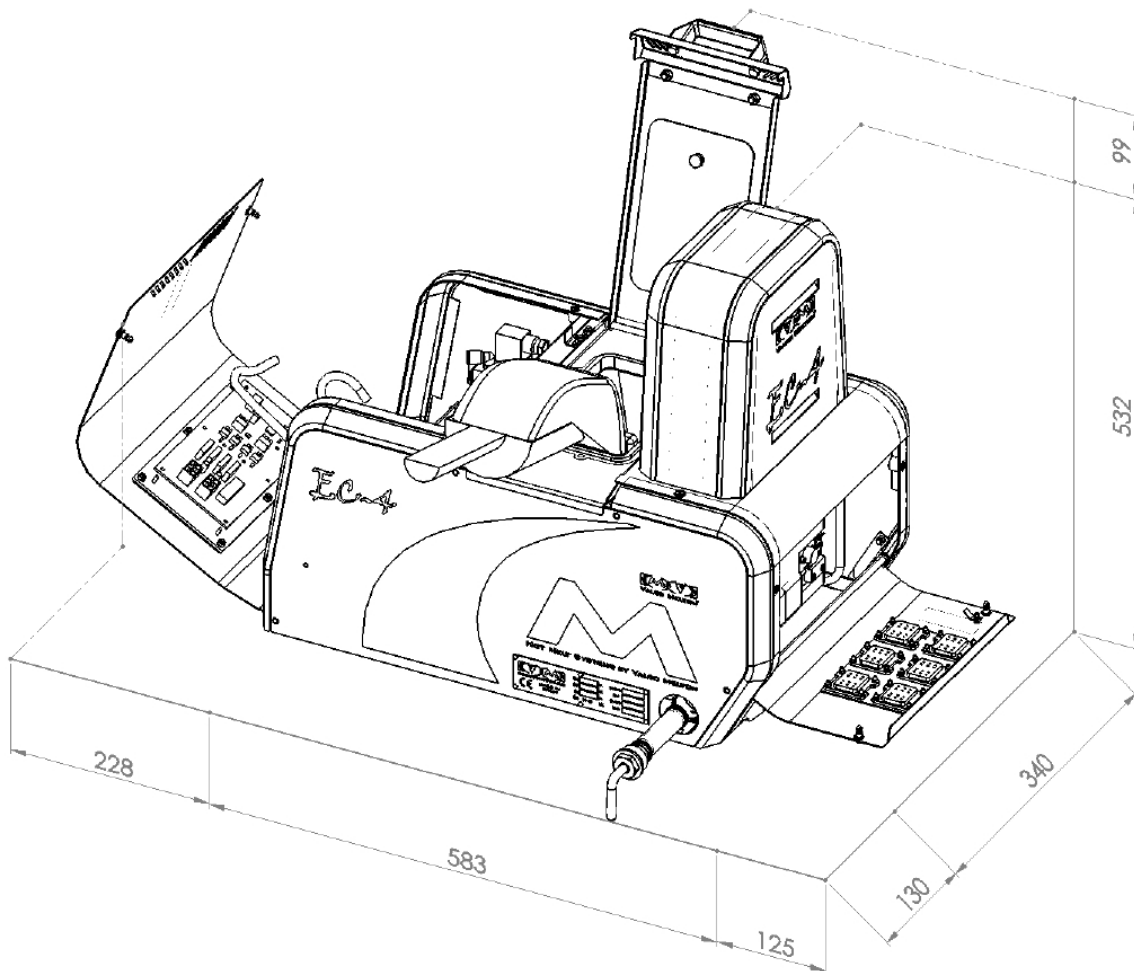
Remove the top and sides to unpack it.



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

3.3. INSTALLATION REQUIREMENTS:

Install the following equipment, leaving enough space for access during operations.



Avoid extreme temperatures (below -10°C and above $+50^{\circ}\text{C}$).

Avoid installing the equipment where there are drafts. If this is not possible, the guns will need protection; if the temperature falls rapidly they may not work properly.

3.4. MECHANICAL INSTALLATION:

Mechanical installation includes the following:

- Positioning the equipment.
- Connecting the hoses.
- Connecting the Vacuum feeder (model type C only)

Positioning the equipment:

Remove the equipment from the box, and position it according to installation requirements (chapter 3.3)

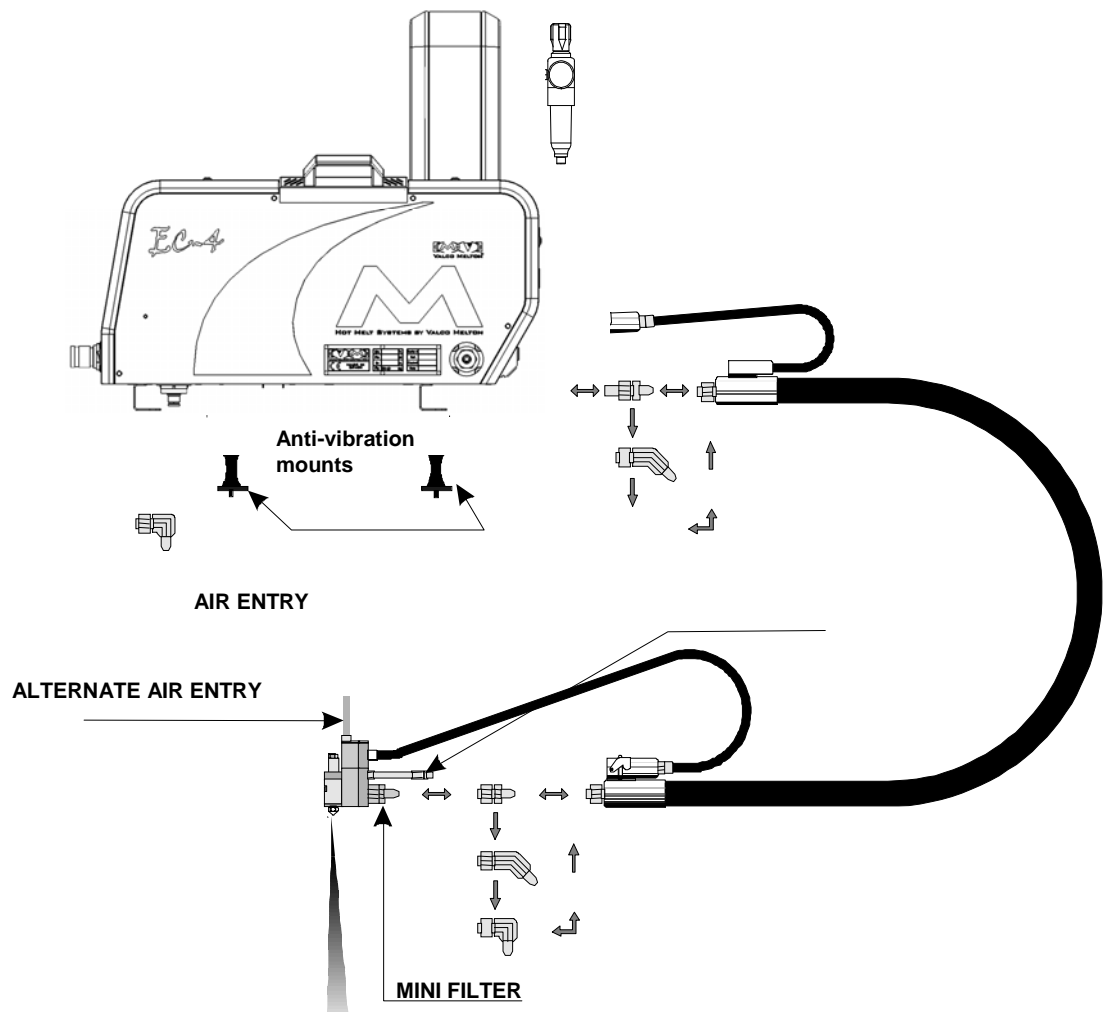
Connecting the hoses:

Proceed as follows:

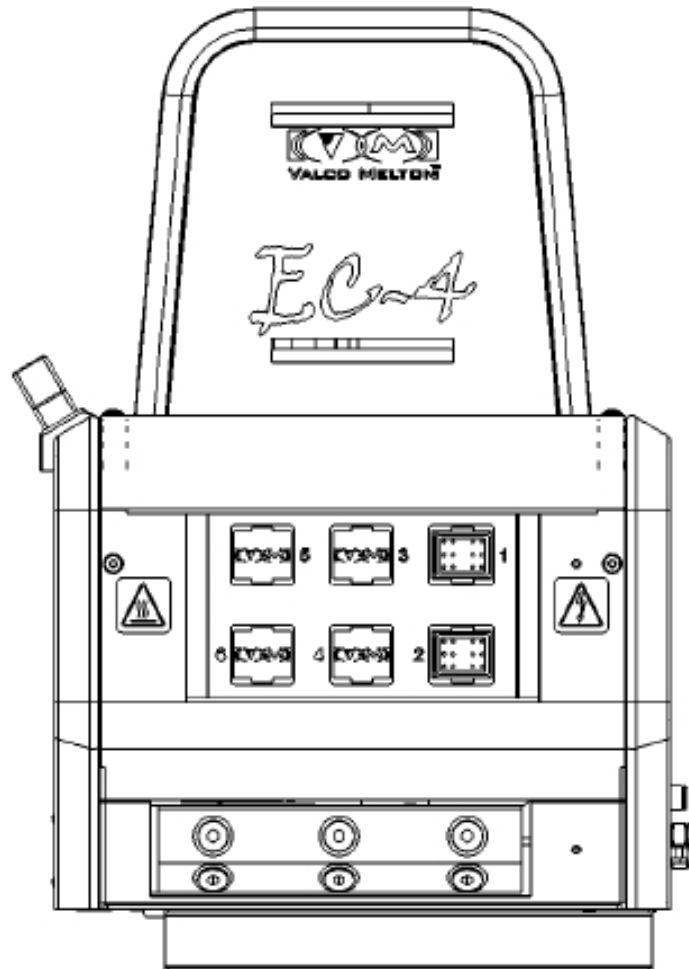


Make sure the equipment is depressurised before connecting the hose. Set the air pressure regulator to zero and activate valves to bleed pressure. Heat the machine to melt any adhesive that may be present.

Remove the appropriate hose outlet plug from the manifold (see below):



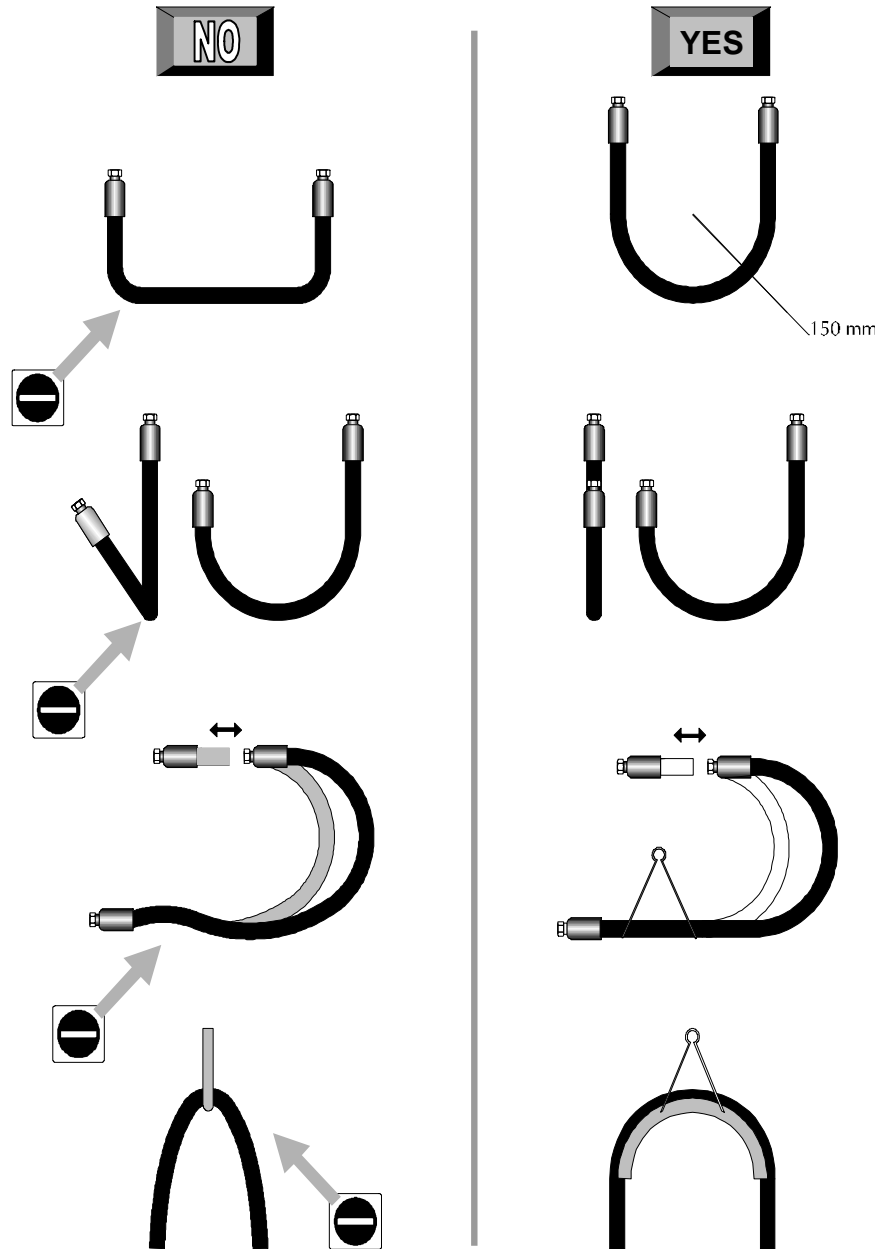
Connect the hoses from right to left. Failing to do so will create a dead spot where carbon deposits accumulate, increasing nozzle blockage problems.



For the hydraulic connection: If the unit is full of adhesive, heat the tank before removing the manifold cap.

Hose Installation:

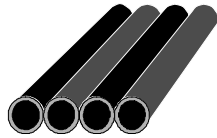
Never bend the hoses to a radius less than 150 mm.



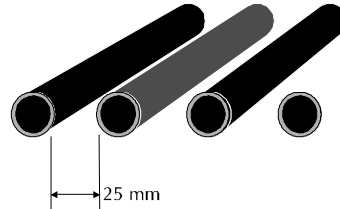
The hoses should not be in contact with very wide, cold surfaces.

Do not install hoses side-by-side; leave a minimum separation (25 mm) between them so heat can dissipate.

NO

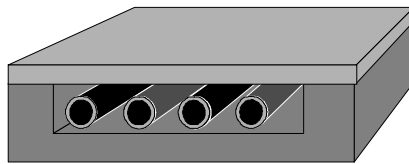


YES

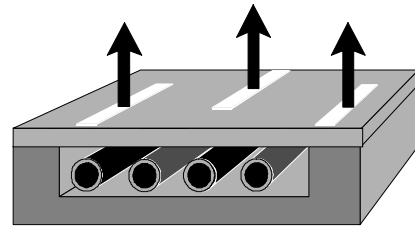


Do not cover the hoses. If it is necessary to do so, leave ventilation holes for heat dissipation.

NO

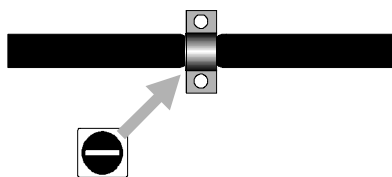


YES

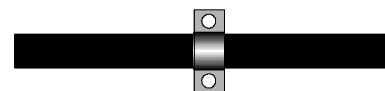


Do not install hoses with tight clamps.

NO



YES

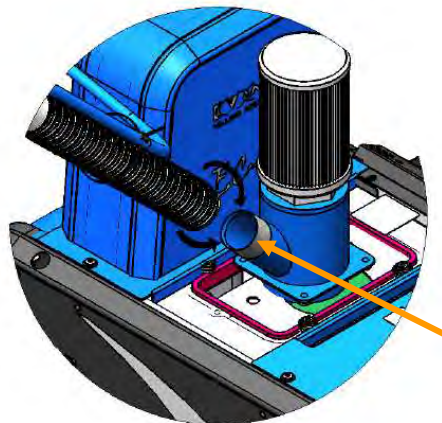
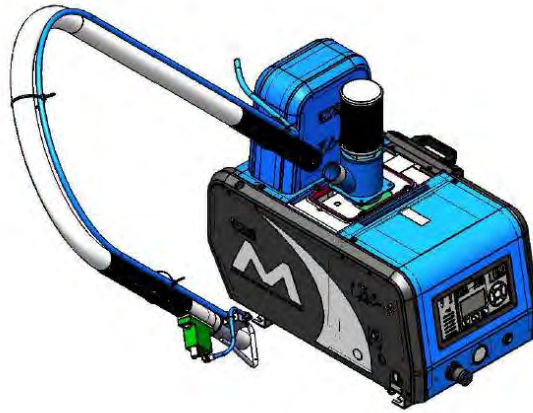


Installing the Vacuum Feeder:

Proceed as follows to connect the vacuum feeder:

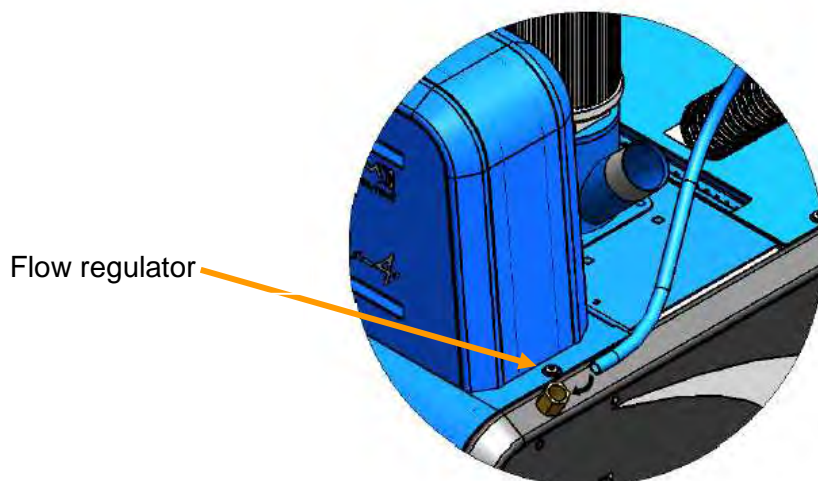
1. Remove the vacuum feeding kit from the packaging. This kit includes all of the tubes needed to install the feeder, as well as other components to be explained later.

2. Use a clamp to connect the lower tube to the part of the chimney (located above the tank cover) reserved for the feed outlet, as shown in the picture.



Secure with a clamp

3. Connect the air line (provided in the vacuum feeder kit) to the flow regulator, visible on the upper part of one of the sides, as shown in the picture.

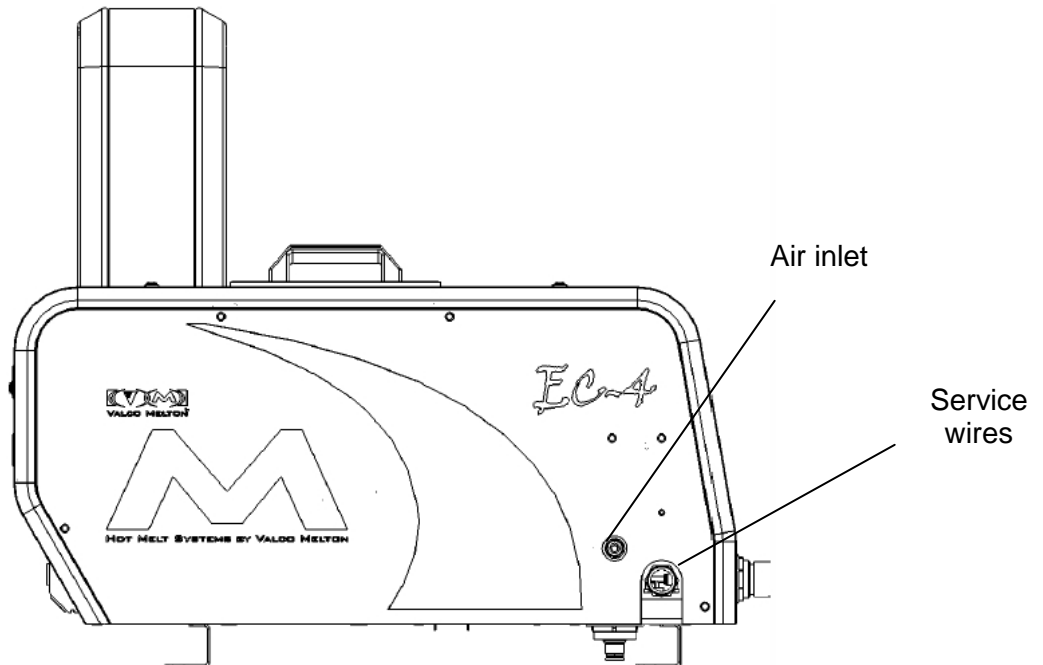


Flow regulator



3.5. PNEUMATIC INSTALLATION

Connect the air line to the regulator. Make sure the air-connection line has the capacity necessary for proper pump operation.



3.6. ELECTRICAL INSTALLATION

3.6.1 Routing Low-Voltage Leads

Warning: Failure to observe could result in personal injury, death, or damage to equipment.

When routing low-voltage leads, follow these guidelines:

- Do not route low-voltage leads in the same conduit as wires carrying a high-current load.
- Do not route low-voltage leads adjacent to, or across wires carrying a high-current load. If low-voltage leads must cross or run parallel to wires carrying high current, keep the leads at least 6" (152 mm) from high-current wires.
- Do not splice or solder leads.
- Trim leads to the required length. Leads should be only as long as necessary for installation.
- All wiring should be in conduits or wireways.



3.6.2 Connecting the Electrical Power

Warning: *Electrical connections should be made only by experienced service personnel! Failure to observe could result in personal injury, death, or damage to equipment.*

When connecting the supply of electrical power, follow these guidelines:

- Connect the unit to a “clean” supply of electrical power. Use a dedicated circuit if possible.

Caution: *If a dedicated circuit is not available, do not connect the unit to a circuit that supplies high-amperage equipment—use another circuit such as a lighting circuit. Otherwise, equipment may not function properly.*

Warning: *The external power source must be turned off before connecting power to the unit! Failure to observe could result in personal injury, death, or damage to equipment. Only experienced service personnel should connect power to the unit! Failure to observe could result in personal injury, death, or damage to equipment. The use of an earth-leakage or ground-fault power breaker is recommended with this unit. This unit must be earthed or grounded. Failure to observe could result in personal injury, death, or damage to equipment.*

The EC hot melt unit can be set up to use one of the following power sources:

Incoming Electrical Service		Power Connector Terminals					Voltage Plug	Connector Label	Power Cable
		A	B	C	D	PE	Part No. / Color	Part No. / Color	Part No. / Size
380VAC 3-phase with Neutral (4 wire service)	3/N/PE AC 400/230V	L1	L2	L3	N	PE	029XX437 Blue	782XX262 Blue	029XX345 12 AWG/5 COND
200 to 240VAC 3-phase w/o Neutral (3 wire service)	3/PE AC 200-240V	L1	L2	X	L3	PE	029XX435 Black	782XX260 Black	029XX344 12 AWG/4 COND
200 to 240VAC 1-phase w/o Neutral (2 wire service)	1/PE AC 200-240V	L1	X	X	L2	PE	029XX436 White	782XX261 White	029XX346 8 AWG/3 COND

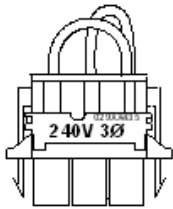
The system should be connected via a suitable type of flexible conduit from a supply isolator and ground-fault power breaker. The supply should be clean and free from excess interference from other machines.

Warning: *You MUST follow these steps to connect power to the unit, or personal injury and/or damage to the unit may result.*

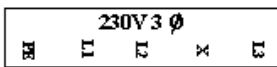
1. Open the electrical enclosure door.
2. Route the power cable through the cable clamp in the chassis of the unit. The power cable must meet the minimum requirements given in the chart above.

3. Referring to the chart above, locate the appropriate voltage selector plug and power connector label corresponding to the incoming electrical service.
4. Adhere the appropriate power connector label to the power connector on the 12 zone board (see illustration).

Warning: The label must be correctly oriented on the power connector.

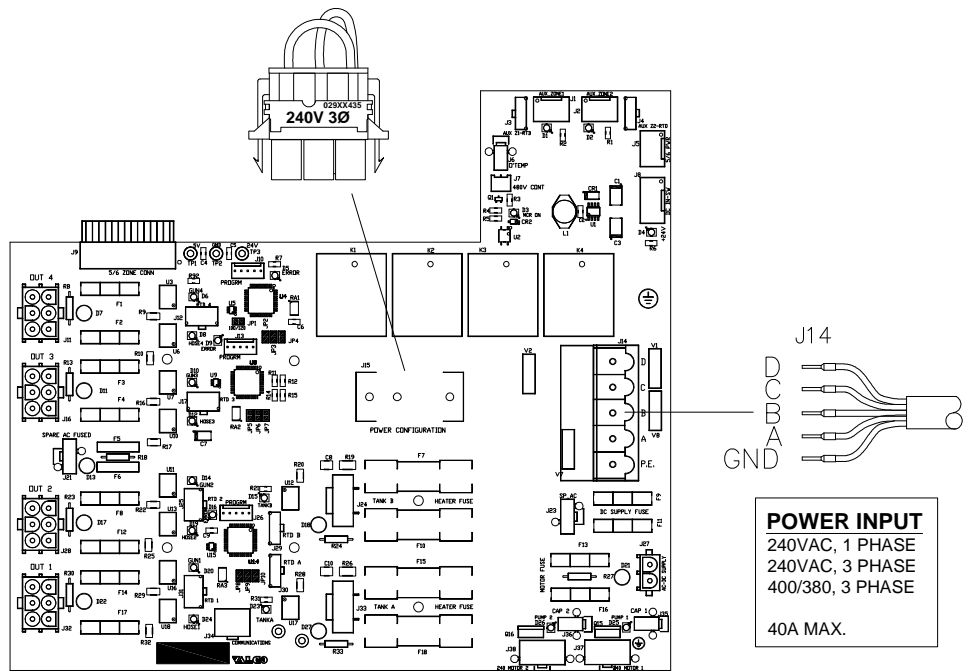


029XX435 Selector Plug



Matching Black Label

5. Remove the power connector from the 12 zone board and connect the power cable leads to the power connector terminals as shown in the chart above.
6. Install the appropriate voltage selector plug into the connector marked J15 on the 12 zone board (see illustration).
7. Plug the power connector into the 12 zone board (see illustration).
8. Verify that all connectors are fully seated and the power connector terminal screws are secure.
9. Close the electrical enclosure door.



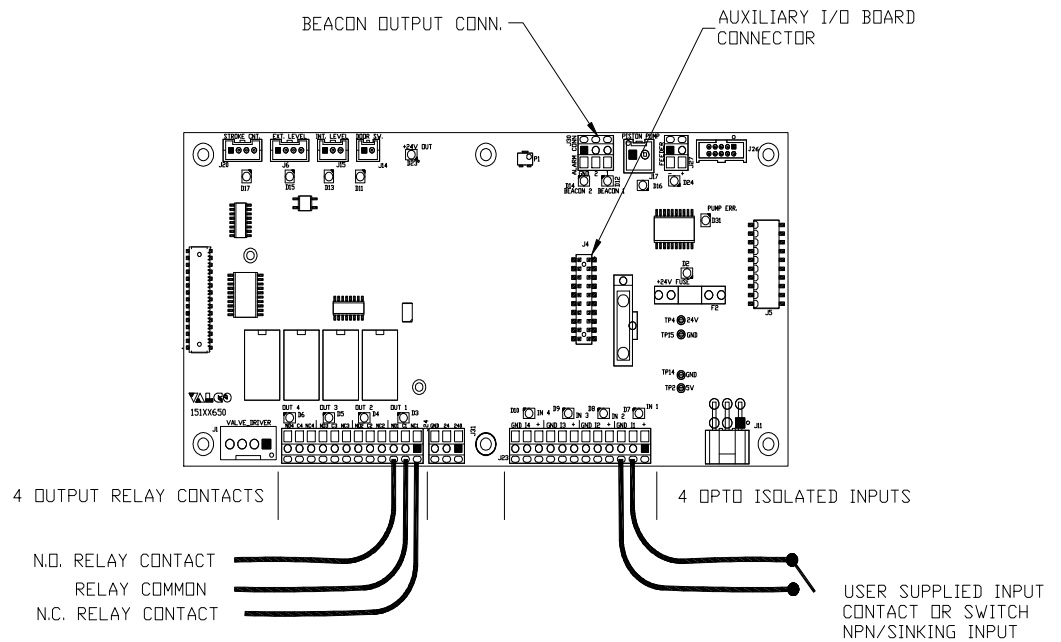
12 Zone Power Board

3.6.3 Input/Output Connections

The Input/Output connection interface is on the J-23 & J-24 terminals, on the bottom of the CPU Board. The CPU Board is located directly behind the Keypad.

There are four opto isolated inputs rated for +24VDC @ 15mA each, that can be programmed by the user for a variety of options. See the chart below.

There are also, four dry contact user selectable outputs rated for 250V @ 5A each.



CPU Board Showing Input & Output Connectors

Inputs and Outputs can be programmed for the following functions:

Input and Output Functions	
Inputs 1-4 (523)	Outputs 1-4 (524)
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

The diagrams show the functions of the CPU Board Connectors and Wiring Connections.

CHAPTER 4 MACHINE ADJUSTMENT

4.1. INTRODUCTION:

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

4.2. TEMPERATURE CONTROL:

4.2.1. Introduction:

Tank, hose and gun temperature for the Hot-Melt application equipment is regulated by a precision, electronic temperature control. It is equipped with a timer that features a seven-day clock.

Regulation is proportional, with factory-set, separate, heating-inertia parameters for the tank, hoses and guns.

Temperature is measured by the RTD sensor on each heating device. These sensors can be programmed individually, and on each output channel, between 14° - 240° C (57, 2°F – 464°F).

The controller range (measurement range) is between -20°C(-4°F) and 240°C(464°F).



Below -20°C(-4°F), the equipment will display a probe-short-circuit fault. Above 220°C(454°), the display reports an open-probe fault.

4.2.2. Brief description of unit operation:

The machine regulates the power supplied to the various hose/gun channels and tank channel, based on parameters and inputs/outputs, described later.

The control panel displays the current status of the unit, as well as the alarms generated by the probe signals. LEDs also display the status of the heater outputs, high-or-low temperature alarms, safety and maintenance status.

Preheat function:

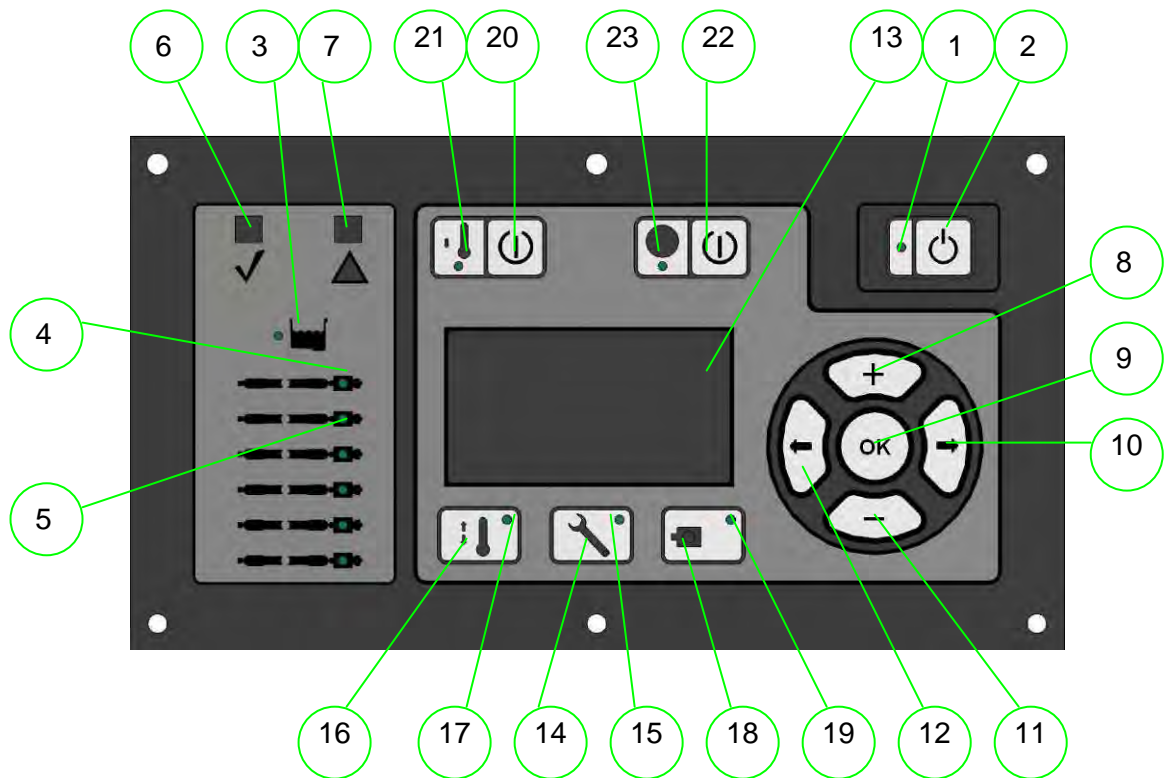
Since the tank has greater thermal inertia than the peripherals (hoses and guns), the latter will reach the programmed temperature more quickly. This quick-warming process has a marked effect on the heater and insulation. At the same time, this process creates excessive pressure, which flows through the hoses.

To correct this situation, the equipment features a pre-warming system that will heat the peripherals sequentially while the tank is heating. In other words, when the tank reaches a temperature of 41°C below the programmed temperature, the pre-heating system will begin to heat the hoses; and when the tank reaches a temperature of 14° below the programmed temperature, the system will begin to heat the guns.

4.2.3. Control panel:

4.2.3.1 Keyboard:

The unit control panel has 11 control keys that provide access to the program menus and general operating processes.



Comp.	Name	Description
1	Standby On / Off LED	Green when the unit is on and orange when in Standby mode.
2	Heat On / Off	Puts the unit in or out of Standby mode.
3	Tank Zone LED	Green when the tank is warming and red when there is an alarm.
4	Hose Zone LED	Green when the hose zone is on and red when there is an alarm.
5	Gun Zone LED	Green when the gun zone is on and red when there is an alarm.
6	System Ready LED	Green when the system reaches the programmed temperature.
7	Alarm LED	Red when there is an alarm.
8	Plus Button	Increases the selected parameter value
9	OK Button	Enter or exit a screen where the selected field can be edited
10	Right Arrow Button	Moves to the right through editable fields on the selected menu
11	Minus Button	Decreases the selected parameter value
12	Left Arrow Button	Moves to the left through editable fields on the selected menu
13	Settings Screen	Displays the menu screens
14	Configuration Button	Displays the configuration screens
15	Configuration LED	Green when the equipment enters the configuration screen
16	Temperature Button	Displays the temperature screens
17	Temperature LED	Green when the equipment enters the temperature screen
18	Pattern Control Button	Displays the Pattern Control Screens (optional)
19	Pattern Control LED	Illuminates green when the equipment enters the Pattern Control Screen
20	Setback On/Off Button	This button switches the equipment in or out of Setback mode. (This mode reduces the temperature so that the adhesive stays soft, but is not molten when not in operation, so the adhesive does not degrade)
21	On/Off Cooling/Regression LED	Yellow when the unit is in Setback mode.
22	Clock On/Off Button	Turns the timer function on or off
23	Clock On/Off LED	Green when the timer function is activated.

4.2.3.2 On/Off Switch and Standby Mode:

The On/Off switch is at the bottom of the front casing (see photo).



Power On/Off Switch

The Standby button controls power to the heater circuits. Pressing the Standby button turns the screen on. The LED will be green, indicating the unit is on. Pressing the Standby button again causes the screen to go blank, and the Standby LED will be orange, indicating the unit is in Standby mode.

Note: When the unit is in Standby mode, the internal timer is still working. When in Timer mode, the timer will turn the unit off and on according to the programmed shifts. If the switch is turned off, however, the internal timer will not work.



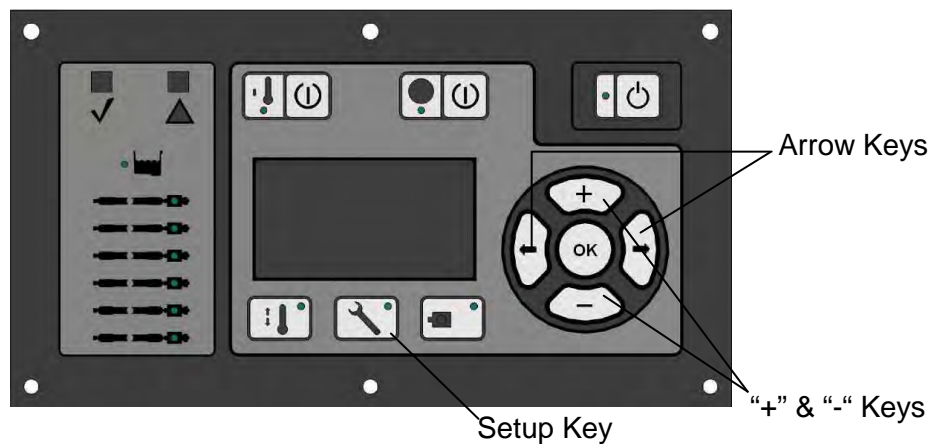
Standby On/Off Button

4.2.3.3 Display Contrast Adjustment

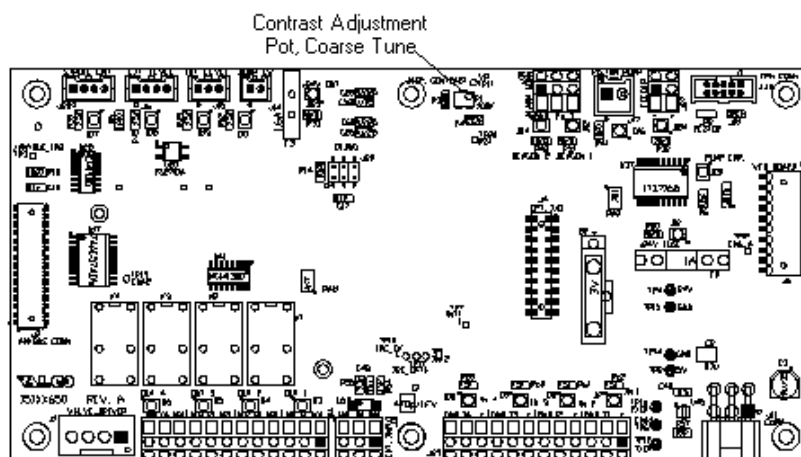
The display contrast is adjusted for optimal viewing at the factory. If the display is not visible when the Hot Melt Controller powers up, the contrast may need to be adjusted.

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.




Contrast Adjustment – Fine Adjust



Contrast Adjustment – Coarse Adjustment

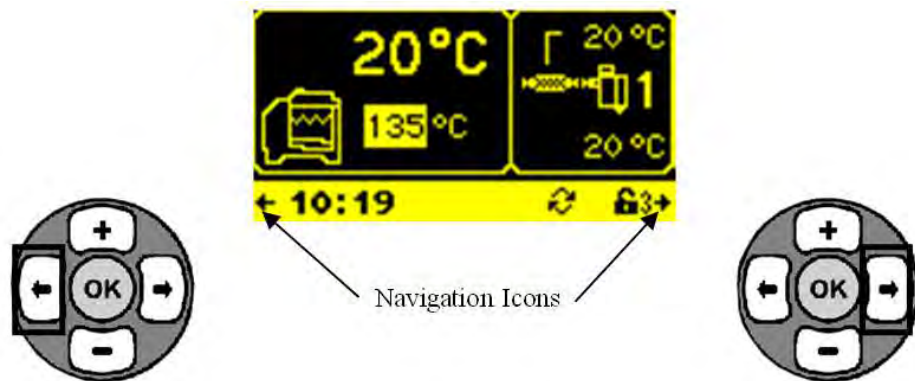
4.2.3.4 Vacuum Feeder:



Amber light: when this blinks, it means a low level has been detected in the tank for a programmed time of 200 seconds. A buzzer will sound as a Warning. It can be reset by pressing the Enter  key, but the amber light will continue to blink until the tank adhesive level is adequate.

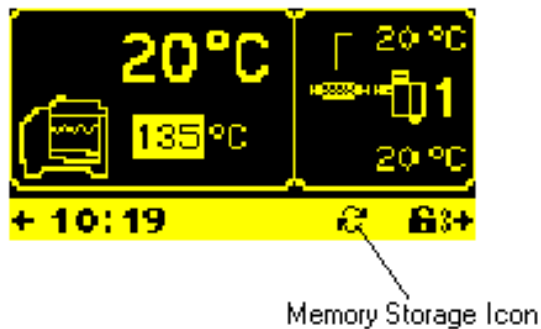
4.2.3.5 Navigation

Navigation symbols on the bottom of the display screen indicate that additional menus are available. Use the indicated button(s) to navigate as follows:



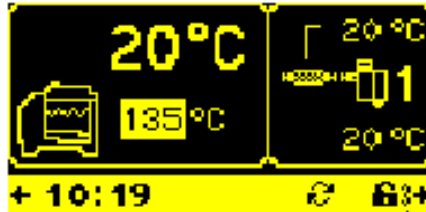
4.2.3.6 Memory Storage

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.



4.2.3.7 Editing

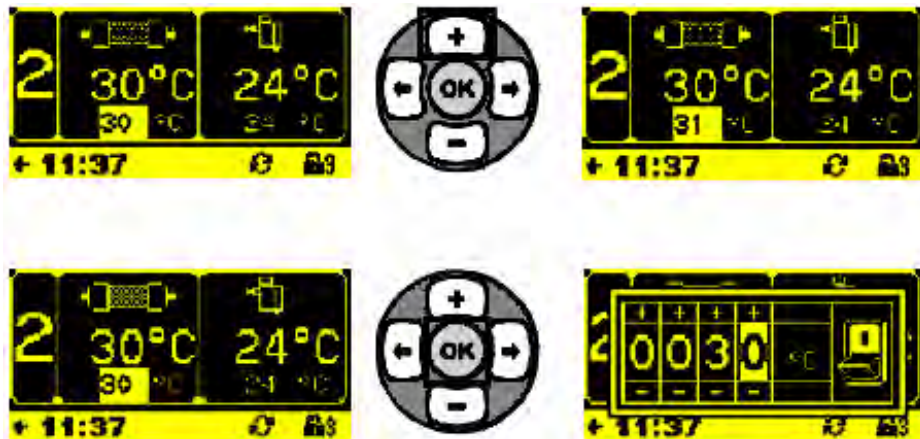
Highlighted information is editable. Use the appropriate buttons (depending on the navigation symbols shown) to navigate through the editable (highlighted) information.



Password Level

4.2.3.8 Thumbwheel vs. Single Digit Edit

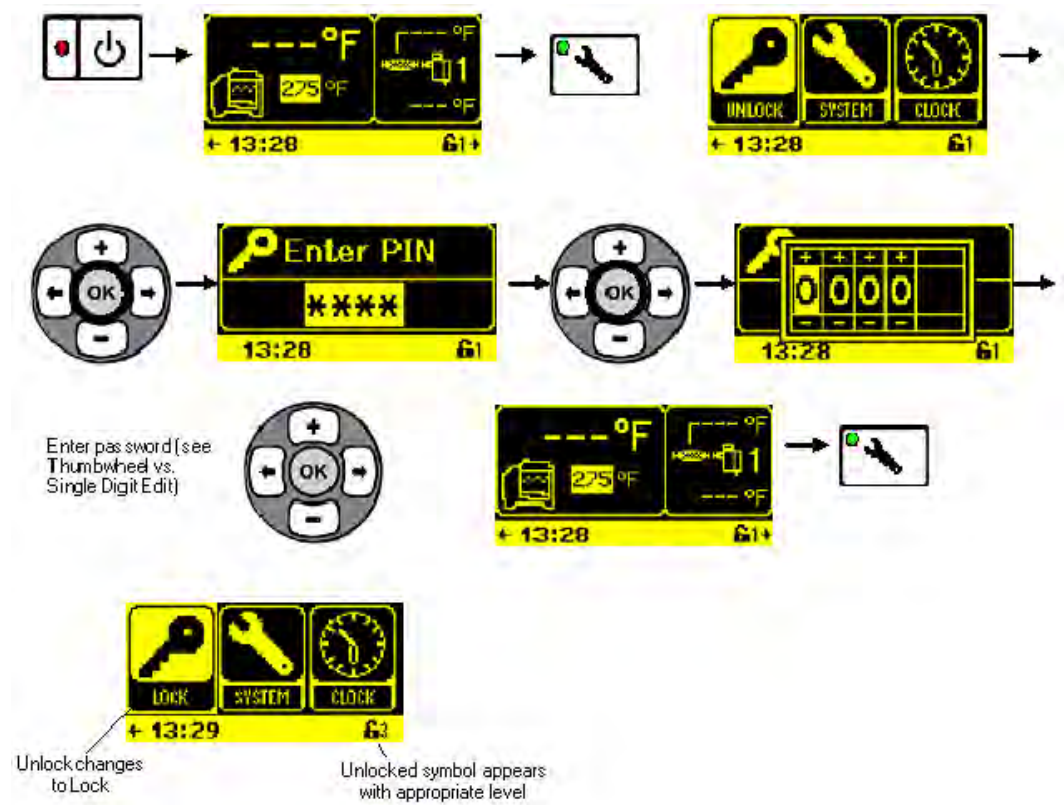
When editable information is numerical, the information may be edited with the Plus/Minus Buttons for single digit editing, or the OK Button may be pressed to bring up a thumbwheel for more detailed editing.



Note: In Thumbwheel Edit, use the Right/Left Arrow Buttons to select the digit position, and the Plus/Minus Arrow Buttons to increase/decrease the value of the selected digit. Some thumbwheel screens contain a switch that can be used to turn the selected function ON or OFF. Common examples would be turning a hose or gun zone ON or OFF, making a schedule change to turn on setback during a shift, or enabling Sequential Start. Use the Right/Left Arrow Buttons to select the switch, then use the Plus/Minus Buttons to toggle the switch ON or OFF.

4.3 ENTERING PASSWORDS

Passwords are required to prevent unauthorized access to unit programming. Please see *Appendix A - Password Levels* for more information. To enter a password:



4.4 SET LANGUAGE



Continued on next page.

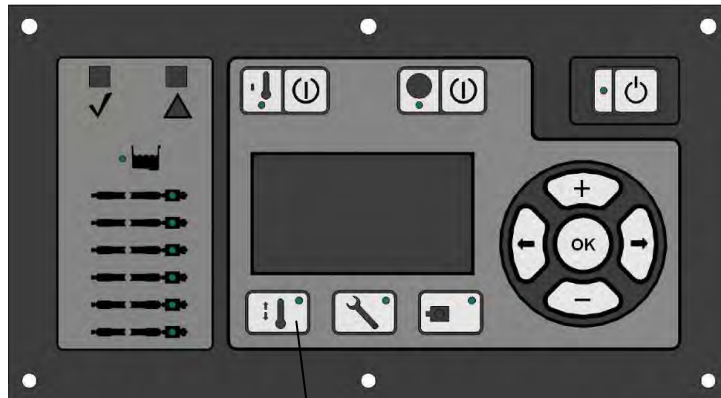


4.5 SET TEMPERATURE UNITS

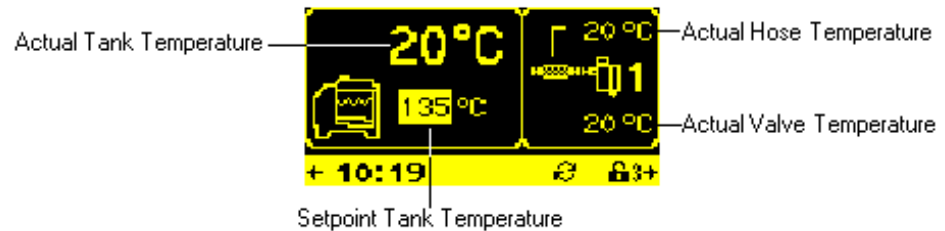
4.5.1 Programming Temperatures

Press the Temperature Button (if the Temperature LED is not illuminated green) to show the first temperature screen.

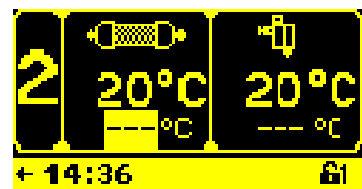
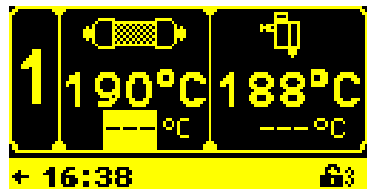


Temperature Key

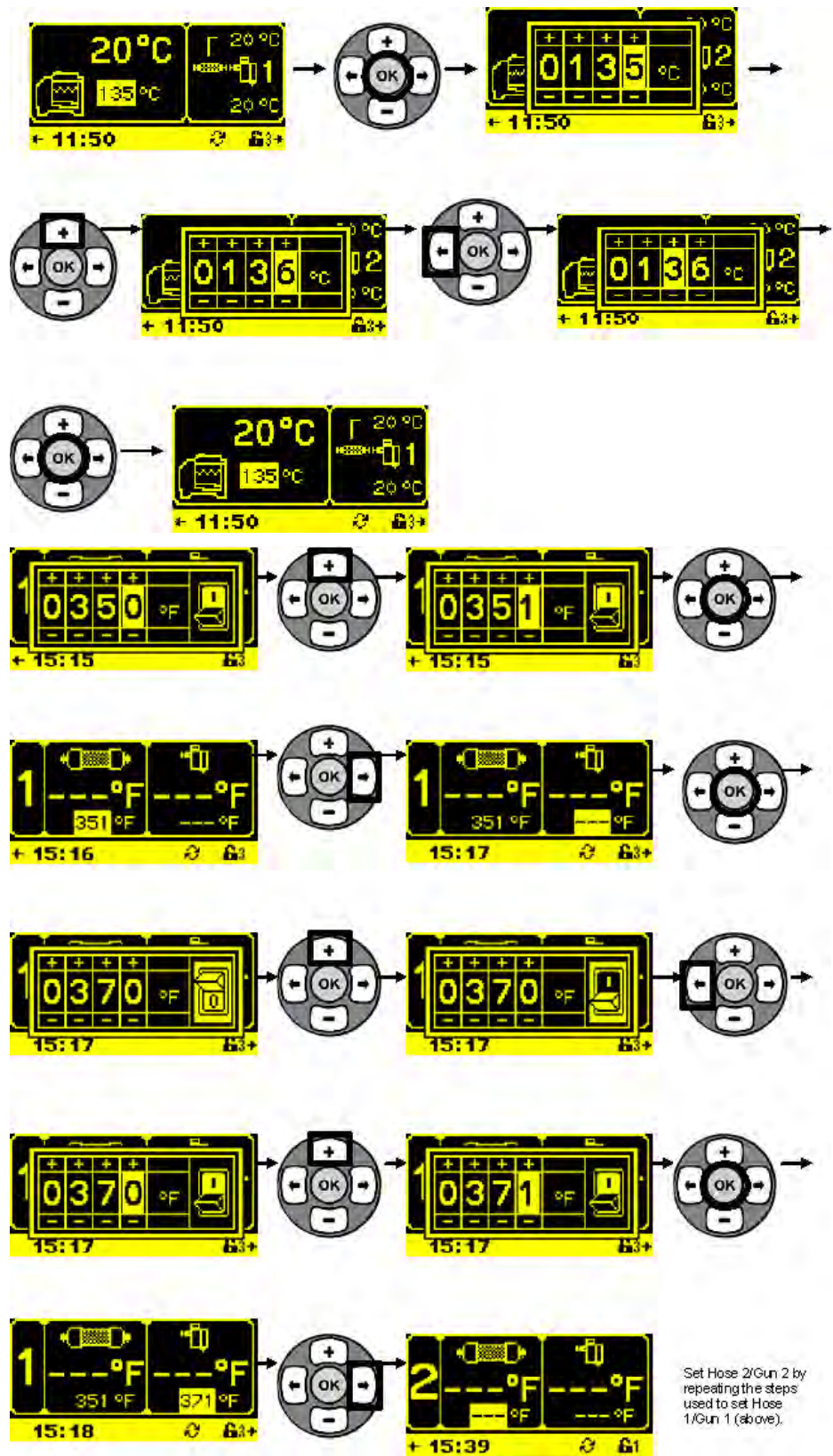
4.5.2 Temperature Screens



Press the Temperature Button repeatedly (or use the navigation keys) to cycle through the temperature screens until you reach the desired screen.



4.5.3 Tank Temperature



4.6 SYSTEM/PUMP READY TEMPERATURE OFFSET

The System Ready Temperature is relative to the temperature setpoint of each zone. The system is ready (and the System Ready LED illuminates green) when all zones reach their respective temperature setpoints minus the System Ready Temperature Offset.

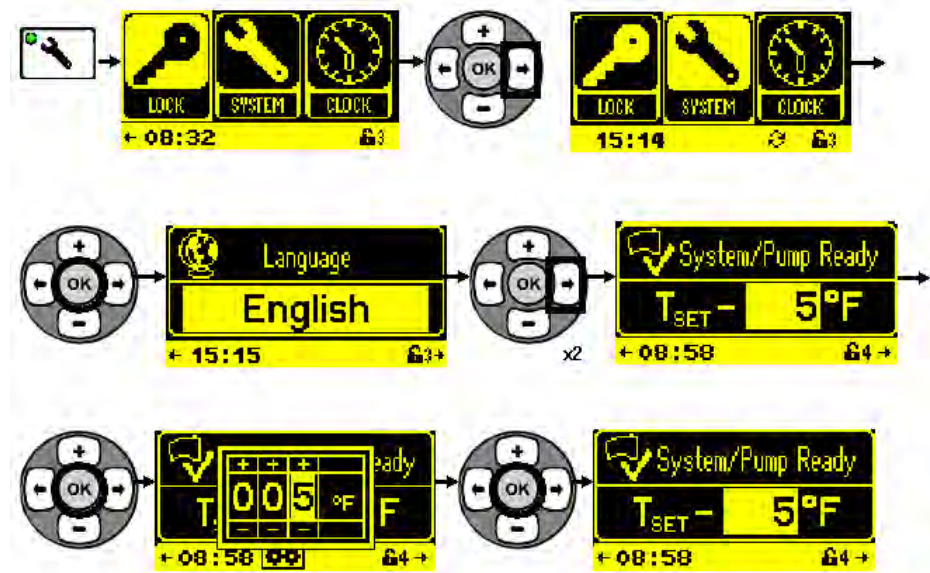
The system ready signal enables the pump motor. This prevents the pump motor from being activated before the adhesive in the pump has softened.

Consult the adhesive data sheet to find the softening point temperature.

The System Ready Temperature Offset must be set to at least -5°F (-3°C). If it is set too close to the setpoint (for example, -1°F), the pump motor will stop during momentary drops in temperature of any zone until the zone is again within 1°F of the setpoint.

The System Ready Temperature Offset parameter range is 0°F to 36°F (0°C to 20°C) and the default factory setting is 5° F (3°C).

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



4.7 READY DELAY TIME

When the Ready Delay Time is used, the System Ready LED will illuminate a preset time after all of the zones reach their respective temperature setpoints minus the System Ready Temperature Offset. This feature allows the adhesive in the system to heat for an additional period of time before the pump motor is enabled.

Once the zones have reached the System Ready Temperature, the time remaining before the system is ready is displayed on the status bar at the bottom of the screen.

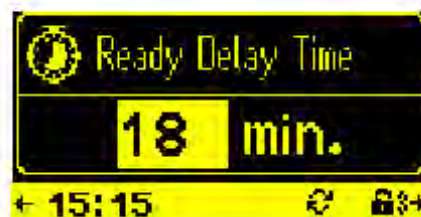
The ready delay range is 1 minute to 120 minutes. The default factory setting is **ON at 15 minutes**.

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

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



X3



4.8 Over Temperature Alarm

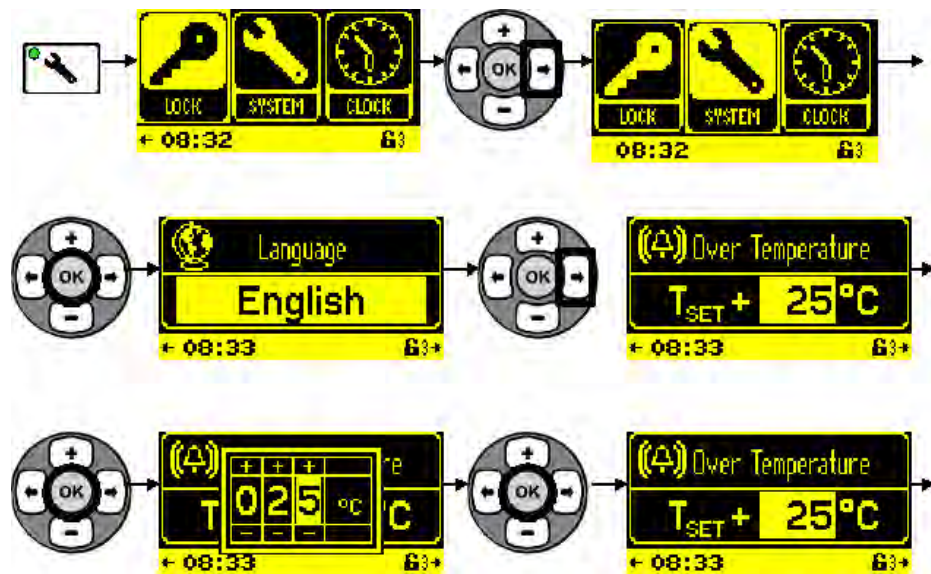
The Over Temperature Alarm setting pertains to all active zones.

The number entered on this screen, is the amount of degrees ABOVE each zone's set temperature that a zone can heat to before activating the Over Temperature Alarm.

If any zone goes into Over Temperature Alarm, the heaters of the affected zone are automatically shut off. If the Over Temperature Alarm message appears, it can be cleared by pressing the 'OK' key.

The over temperature alarm tolerance range is 9°F to 108°F (5°C to 60°C). The factory default setting is 45°F (25°C).

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



4.9 UNDER TEMPERATURE ALARM

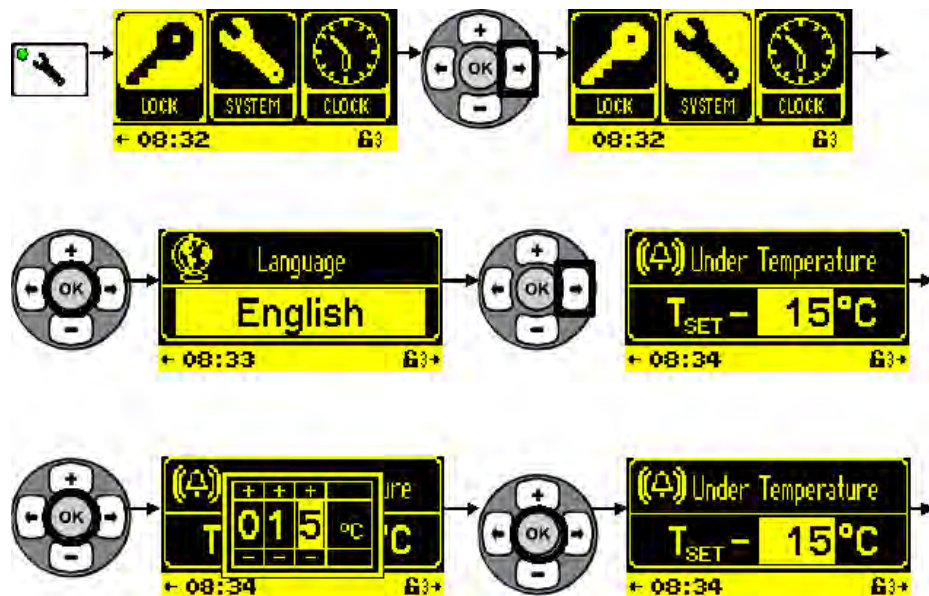
The Under Temperature Alarm setting pertains to all active zones.

The number entered on this screen, is the amount of degrees BELOW each zone's set temperature that a zone can cool to before activating the Under Temperature Alarm.

If any zone goes into Under Temperature Alarm, the heaters of the affected zone will remain on to compensate for the drop in temperature. If the Under Temperature Alarm message appears, it can be cleared by pressing the 'OK' key.

The under temperature alarm tolerance range is 9°F to 108°F (5°C to 60°C). The factory default setting is 27°F (15°C).

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



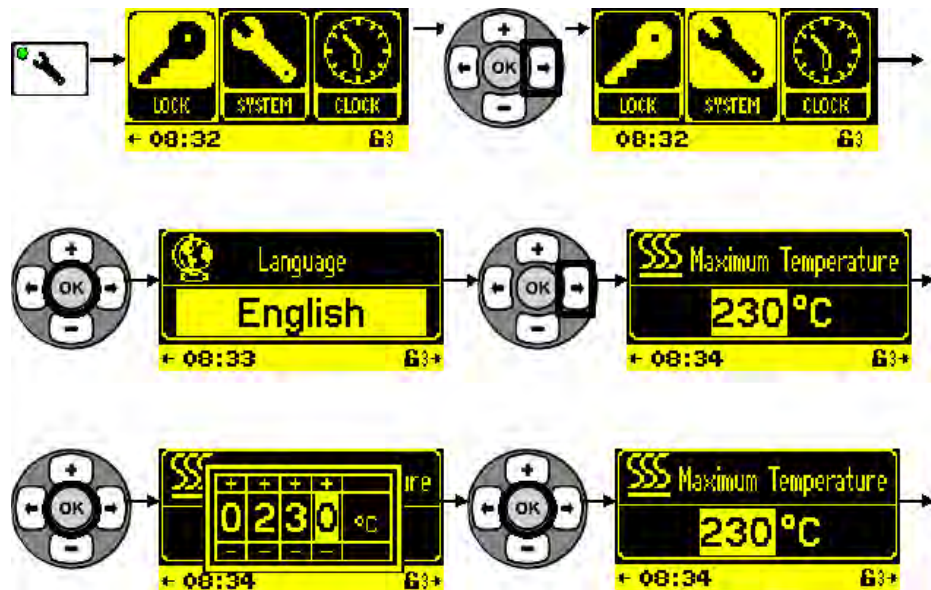
4.10 MAXIMUM TEMPERATURE

The Maximum Temperature setting is the maximum value for the setpoint of any zone.

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

The factory default setting is 446°F (230°C).

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



4.11 BEACON/ALARM SETUP

The Beacon/Alarm Setup allows a specific Beacon, designated by number 1 or 2, to be set to indicate one of four conditions:

- Low level
- Alarm
- Ready
- Pump on
- Setback on
- Feeder alarm

J30, on the New CPU, provides a +24VDC - GND connection for each beacon/alarm desired. This output is +24VDC, 0.5A (see Installation, 4-19). This parameter can be accessed in Password Level 2 or higher.



In C models, Alarm 1 is program to Feeder Alarm, so this alarm indicates that the vacuum feeding is not working.

In all models, Alarm 2 is program to Alarm, which it will indicate when we should change the filter (see page 51).

4.12. FILTER CHANGE TIMER

The Filter Change Timer Screen is a count down timer that shows the time remaining on the currently installed glue filter. When the counter gets down to zero (0), an alarm can be sounded and the filter needs to be changed or cleaned. Once the filter has been serviced, the timer can be reset for a user set time of up to 2000 hours.



We have to programm Beacon 2 (see page 50) to *Alarm*, in this way the screen will show a message when we should change the filter.

After replacing the filter, we should reset the counter.

4.13 AUTOMATIC PUMP MODE

When the Automatic Pump Mode is on, the pump will automatically start when the system reaches temperature and the System Ready LED illuminates.

If the Ready Delay Time is enabled and set for a preset time (15 minutes), the pump will not start and the unit will not be ready until 15 minutes AFTER the control has gotten to temperature.

The factory default setting is OFF.

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



4.14 POT FILL MODE

In this mode of operation, melted glue is pumped into an external pot when the external lever control falls below a set level. The external level control is wired to the external level input on the CPU, J6.

In this mode, the pump turns on ONLY when it receives a signal from the external level input, and the unit is ready. Normal pump operation is ignored in this mode. The automatic pump mode should be 'On.' Pattern control and valves are typically not used in this operating mode.

On-delay time is set by the operator to delay pump activation 'x' seconds after the external level input calls for glue.

After the delay time expires, the pump will turn on and run until the external pot level triggers the level sensor that the pot is full, and the pump then turns off.

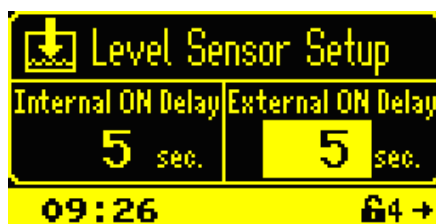
This parameter can be accessed in Password Level 2 or higher



4.15 LEVEL SENSOR SETUP

4.15.1 Internal Level / External Level

There are two types of level control typically used with the Units, an internal level sensor and an external level sensor. The internal level sensor can be used inside the tank of the unit to trigger an auto-fill device (see hopper feeder below), or an alarm state. The external level sensor is used for pot fill mode (see Pot Fill Mode). The delay for these sensors to activate can be set in this screen.



4.15.2 Hopper Feeder – Internal Low Level Detection

The Hopper Feeder option is used to refill the hot melt control's tank with fresh adhesive when the tank level drops below the set level sensor. This eliminates the need for the operator to manually open the tank lid and add adhesive to the tank.

The internal low level sensor is mounted in the hot melt control tank so that when the adhesive drops below the sensor, a feeder valve is energized to feed glue into the tank to be melted. This feature has a safety door switch that will disable the feeder if the tank door is opened. The door switch, internal level sensor and feeder valve need to be connected to the CPU board, to operate properly.

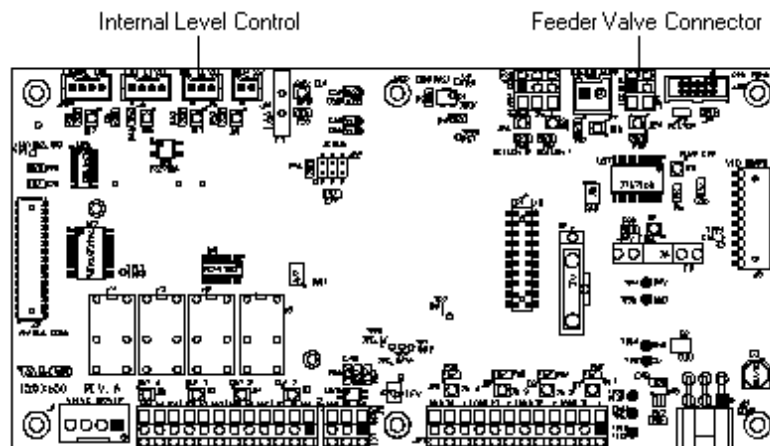
The internal low level sensor plugs into J15 on the CPU board. This feature does not need to be set up in the software. If the Hopper Feeder and it's components are connected as described above, the valve will energize when the door switch is closed and the sensor calls for glue.

4.15.2.1 Door Switch

The tank lid door switch will be wired to J14 on the CPU. The switch must be in the closed position for the feeder valve to energize and add adhesive to the tank. When the tank lid is opened, the feeder valve will turn off.

4.15.2.2 Feeder Valve Operation

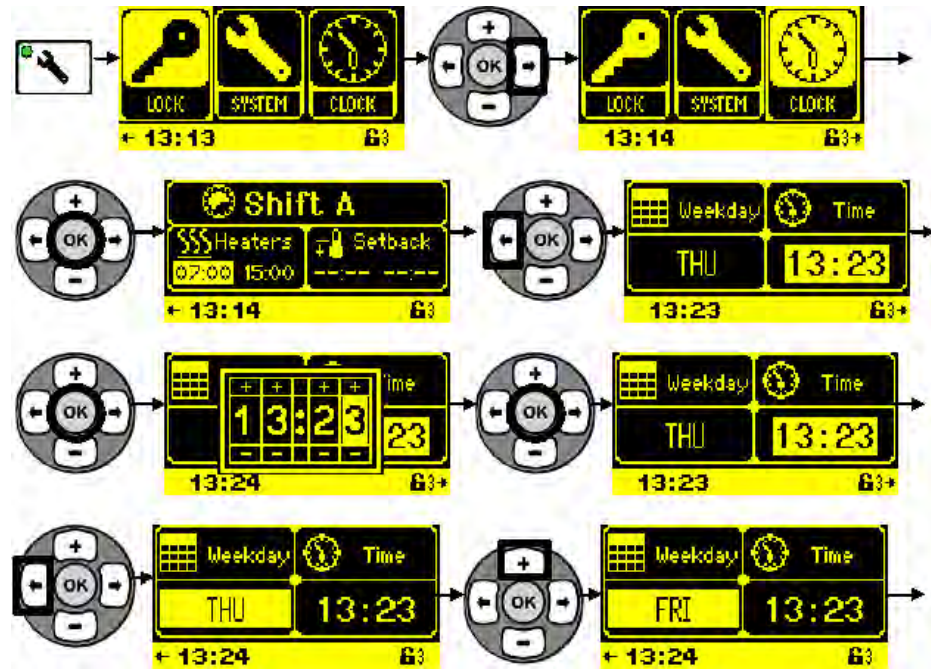
The feeder valve is a dedicated +24VDC @ 0.5A output that will energize when the internal low level sensor calls for glue and the door switch is closed. This is J17 on the CPU board; pin 1 is +24V, pin 2 is ground.



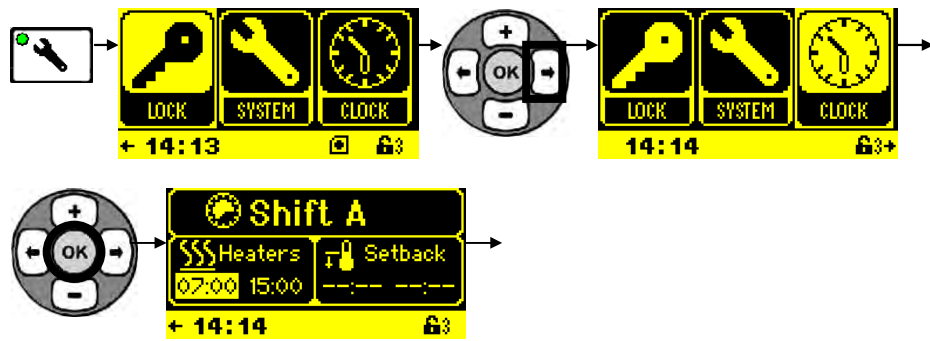
4.16 CLOCK AND 7-DAY TIMER

4.16.1 Set Day and Time

The Clock sub menu is used to set the current day and time and to setup shifts with on, off, and setback times/temperatures that are automatically run by the internal clock.



4.16.1.1 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.

4.16.1.2 Programming Shifts

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 (— —).

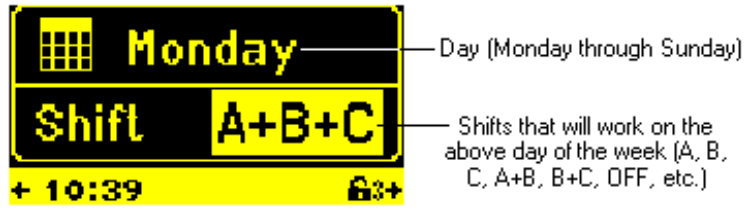


This screen states that for Shift A, heaters will turn on at 7:00 AM to the setpoint temperatures (set on the Temperature Screens, previously shown) and off at 3:00 PM, with all heaters going to the setback temperatures from 11:30 AM to 12:00 PM.



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 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.

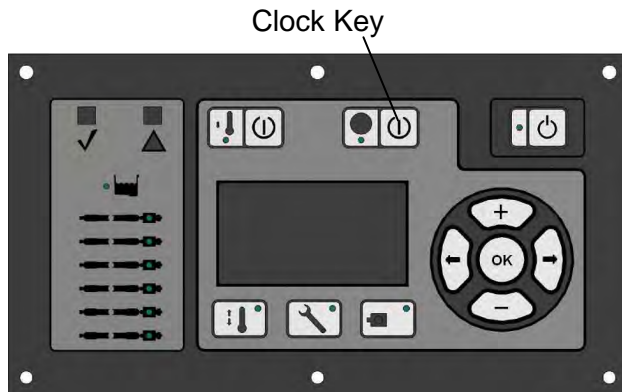
After setting all shift times (previous page) and programming the shifts that will be working for each day of the week (this page), be sure the Clock Function is On and is set properly.

4.16.1.3 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.

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

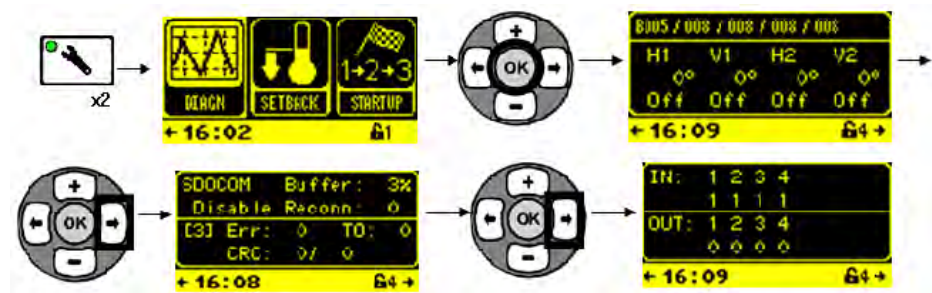


Note: Do not turn off the main power to the control. The clock/timer will not operate if the power is off.

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.

4.17 DIAGNOSTICS

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



4.18 SETBACK

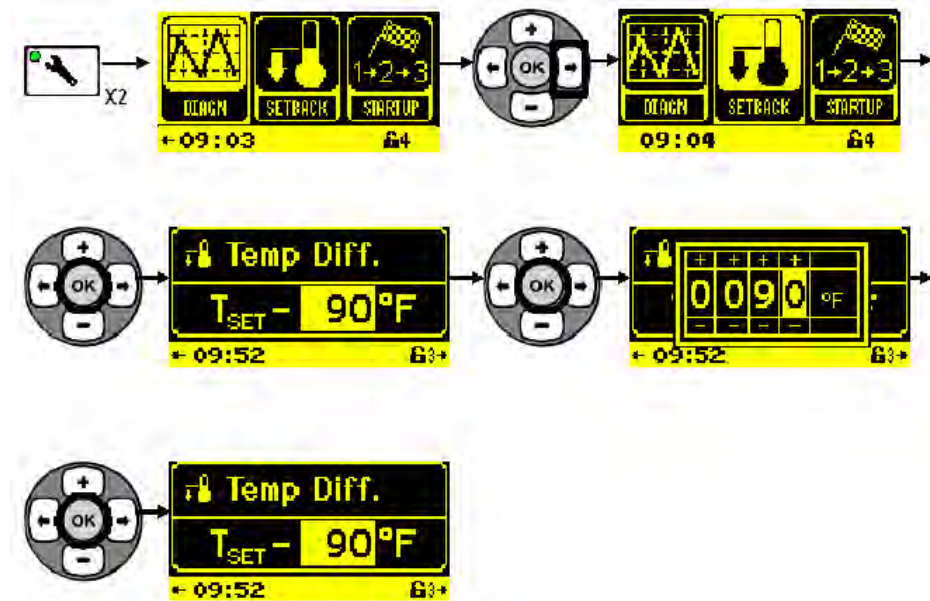
4.18.1 Setback Temperature

The setback feature is used to reduce the temperatures of all zones by a given temperature differential to allow the hot melt to remain soft but not molten during periods of inactivity.

The setback temperature differential is relative to the temperature setpoint of each zone.

The setback temperature differential range is 45°F to 342°F (25°C to 190°C). The default factory setting is 90°F (50°C).

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



4.18.2 Automatic Setback Timeout

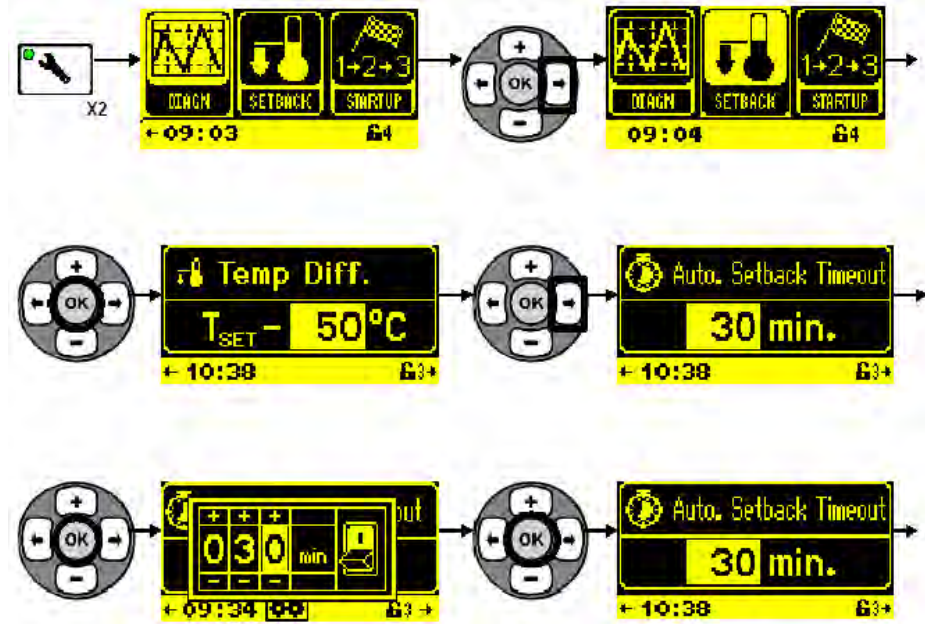
If the Automatic Setback Timeout input is enabled and the unit does not see an external input within the automatic setback timeout period, the unit will automatically go into setback.

The Automatic Setback Timeout feature is used only in conjunction with the Automatic Setback External Input. It is not used in manual or scheduled setback modes.

The automatic setback timeout range is 1 minute to 120 minutes. The default factory setting is 30 minutes.

When the Automatic Setback is enabled, the Auto Setback symbol will start to flash in the status bar 2 minutes prior to going into setback. This will be the signal to the operator that the unit will go into setback if an external signal is not applied to the control that resets this feature.

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



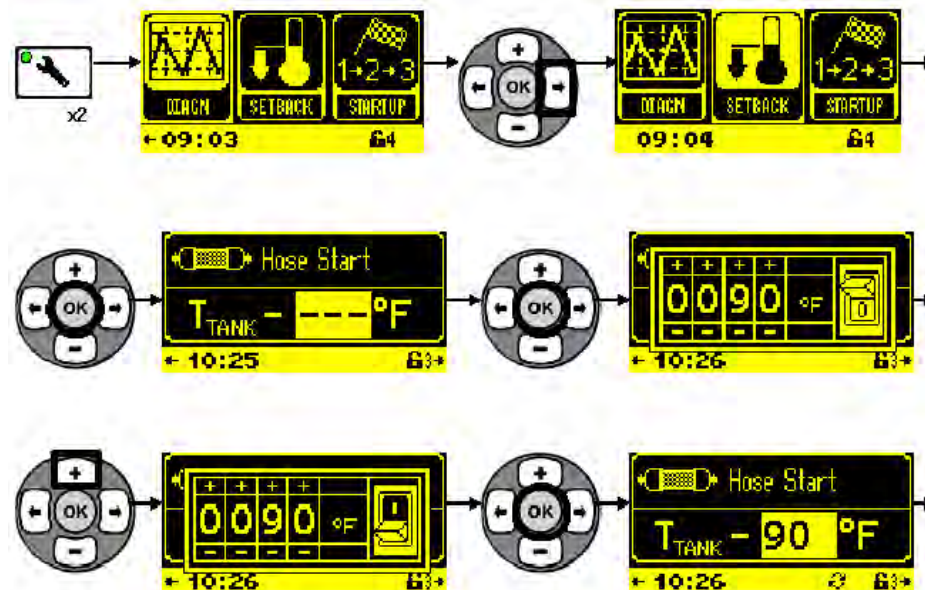
4.19 STARTUP SETUP

4.19.1 Sequential Start – Hose

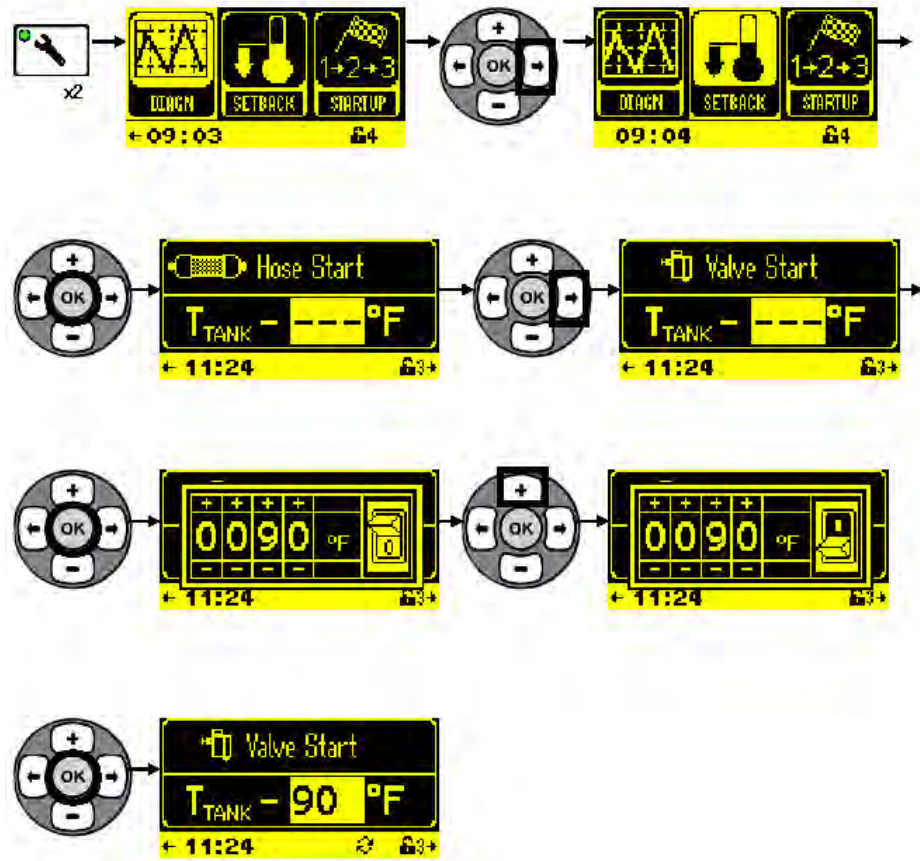
The Sequential Start function allows the hoses and the valves (guns) to begin heating after the tank reaches a specified temperature offset below the setpoint temperature. This feature is used to reduce adhesive degradation caused from heating adhesive in the hoses and valves for long periods while waiting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



4.19.2 Sequential Start – Valve

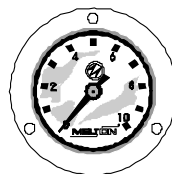


4.20 ADJUSTING THE OUTPUT PRESSURE:

The adhesive output pressure is controlled by the pressure regulator and electrovalve unit. It is located at the front of the unit.

Pressure gauge:

This is the element that indicates pressure, in bar and psi, at which the pneumatic pump and the compensating valve are operating.



Pull the knob out to set and push it down to lock.
Set the pump pressure to 40 Psi (2.5 bar)
The pump will operate and pressurize the system.



Adjustment
Knob



This pressure is a starting point setting. You may need to change the pressure setting, depending on application.

The ratio between pneumatic and hydraulic pressure is 1:14. This means that, for each pneumatic bar indicated on the pressure gauge, there will be 14 hydraulic bar at the pump.

4.21 PASSWORD LEVELS

The EC series has several security levels to protect important information against unauthorized access. The levels are enabled with different PIN codes when entering the “Setup menu”. The following list includes the PIN codes for the different levels, and describes the difference between them.

Level 1- Operator (no password required)

- Can view most information with only basic editing available
- Can adjust temperature setpoints
- Can turn zones on and off

Level 2 - Advanced Operator (PIN Code: 1234)

- Can access all Level 1 features
- Can access most system setup parameters
- Can access all Clock, Setback, Startup, History, and Diagnostics menu groups.

Level 3 – Supervisor (PIN Code: 6550)

- Can access all Level 1 and 2 features
- Can access Maximum Temperature parameter in System Setup menu.
- Can access Peripherals (Inputs/Outputs) and Temperature Control (PID) menu groups.

4.22 MELTON-RECHNER LEVEL PROBE

This is a capacitive level probe that controls the vacuum feeder system.

It detects the level of adhesive and orders activation. There is a three-second disconnect delay when going from a low to a high level, in order to ensure that the system performs minimum, effective loads.

Visual Indications:



Green Light → Full; Output not activated



Red-Yellow blinking light → Full; Output activated, delay at disconnect



Red Light → Empty; Output activated

- **Green Light: Positive Detection.**

The probe interprets that the tank is full. It does not activate the output that orders the feeder to load adhesive.

- **Red Light: Negative Detection.**

The probe interprets that the tank is not full and orders the adhesive feeder to be loaded.

- **Red/Yellow Intermittent Light: Positive Detection, Disconnect Delay.**

NOTE: After switching from a negative detection to a positive detection, the probe maintains the feeder load signal for three seconds. This ensures a minimum effective load. This delay does not apply to the initial transition; in other words, when the probe is turned on.

PRECAUTIONS:

- Do not modify the probe position; the correct height is obtained by securing it as closely as possible to the end of the probe.
- The high-level detector must be situated at the level where the adhesive covers the tip of the probe slightly. If the probe is re-calibrated to the level with the probe fully covered, there may be a risk of adhesive overflow and high air filter wear due to adhesive splash during the filling process.

4.23 ADJUSTING THE LEVEL SENSOR

It is possible to adjust the adhesive level reading with the tank level probe. Loosen the screws securing the probe until you can move it.



NOTE: HOLD THE PROBE WHILE YOU ARE LOOSENING THE SCREWS SO IT DOES NOT FALL INSIDE.

To increase the adhesive level inside the tank, move the probe up slightly. To reduce the adhesive level, move it down slightly.



NOTE: NEVER MODIFY THE PROBE LEVEL ABOVE OR BELOW 1 CM.

In order for the level probe to be calibrated properly, it must be done with the tank completely empty, or with the least amount of adhesive possible.



For more information on the level sensor, call our toll-free assistance number.

CHAPTER 5 OPERATION

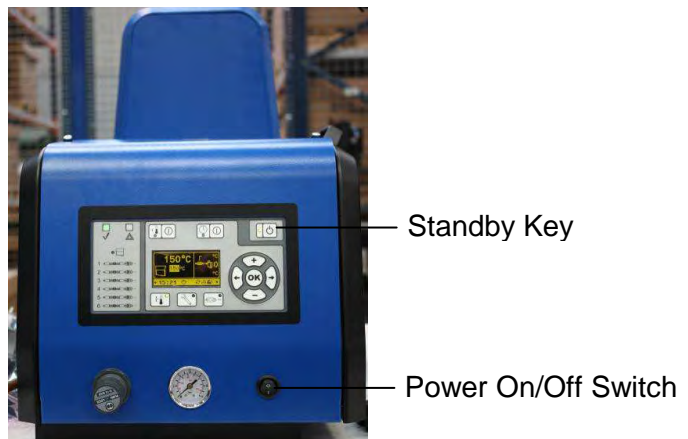


Warning: It is recommended that the Machine Adjustment Section is read, understood, and followed before attempting to read this Section and operate the Universal Temperature Control unit. OTHERWISE, DAMAGE TO EQUIPMENT AND PERSONAL INJURY COULD OCCUR.

5.1 START THE UNIT

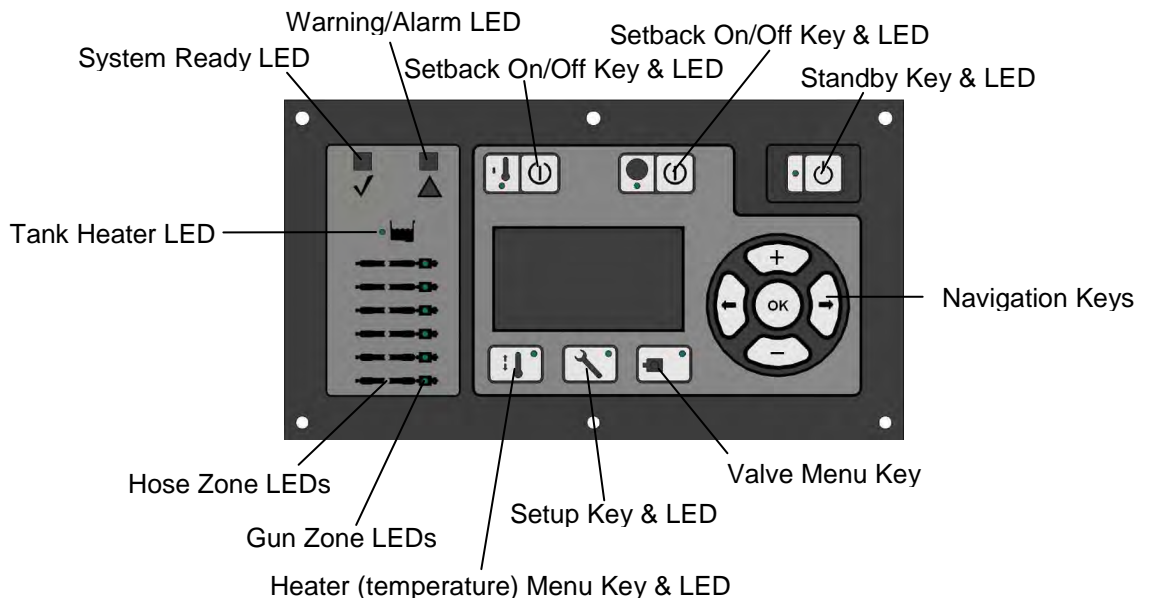
To start the unit, do the following:

1. Toggle the Power On/Off Switch to the "On" position to power up the system.



Note: The Standby LED will illuminate green when the power to the unit is on. If the Standby LED illuminates orange, the unit is in Standby Mode. Press the Standby Button to turn the unit on.

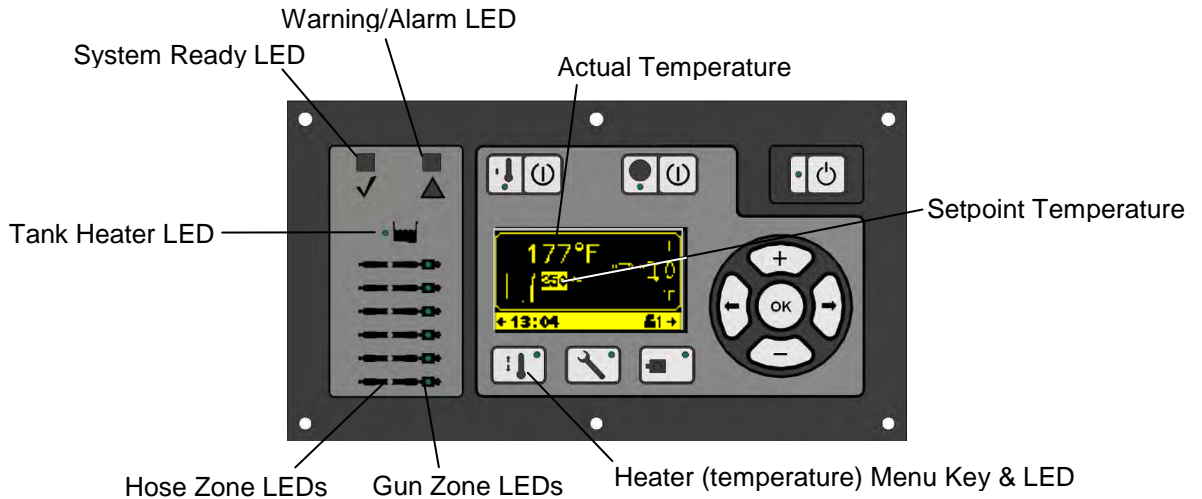
Once the unit has completed its start-up sequence, it will turn on the heaters in the tank and all active hoses and guns. The heater's corresponding Zone LED will illuminate green when the heater is on.



5.2 TEMPERATURE

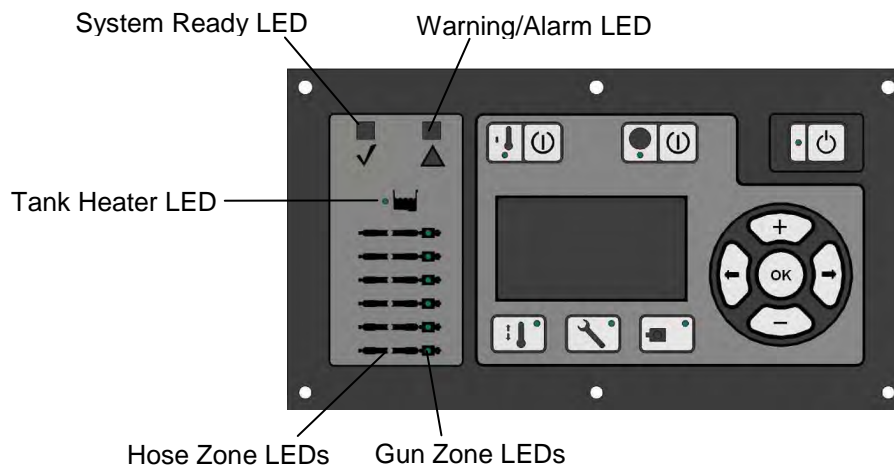
The tank temperature screen will show the actual tank temperature and the tank temperature setpoint. For operator convenience, the right side of the display screen alternately displays the Hose & Gun temperatures (see the *Machine Adjustment* section for setting zone temperatures). Press the Heater Key (or use the Navigation Buttons) to cycle through the temperature screens until you reach the desired screen.

5.2.1 Setpoint and Actual Temperature



5.2.2 Temperature Status LEDs

The Control Panel contains LEDs that indicate the status of each heated zone. When the zone is in warm-up mode, the zone LED will illuminate green and stay on continuously. Once the zone reaches its setpoint temperature, the LED will blink on and off indicating that the heaters are switching on and off to maintain the setpoint temperature. If the LED illuminates red, it indicates a fault for that zone. The status bar will provide a more detailed explanation of the fault. Also, if the fault triggers a temperature alarm, the Temperature Alarm LED will illuminate red (see the *Machine Adjustment* section, “Over Temperature Alarm” and “Under Temperature Alarm,” for details).



If the temperature set points are not correct or need to be adjusted, select the appropriate zone and adjust the temperature setting (see the *Machine Adjustment* section for setting temperatures). The system is ready (and the System Ready LED illuminates green) when all zones reach their respective temperature setpoints minus the System Ready Temperature Offset.

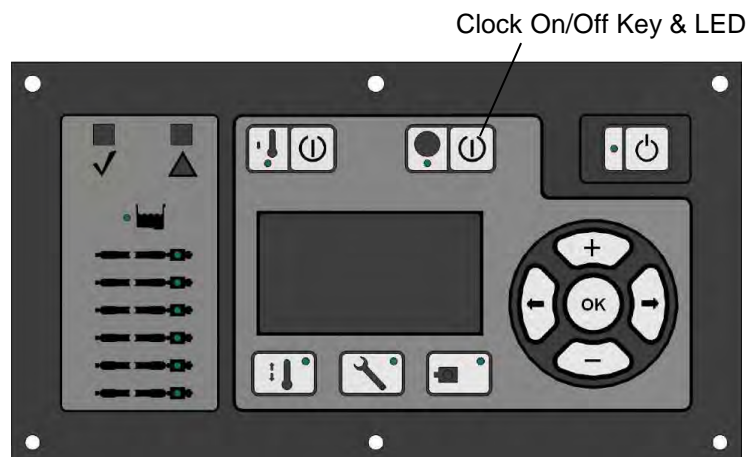
The system ready signal enables the pump motor. This prevents the pump motor from being activated before the adhesive in the pump has softened.

Consult the adhesive data sheet to find the softening point temperature of the adhesive.

5.3 CLOCK ON/OFF

The Clock must be On (Clock LED illuminated green) for all of the programmed scheduled shifts to run, unless the unit will be operated manually (no pre-programming).

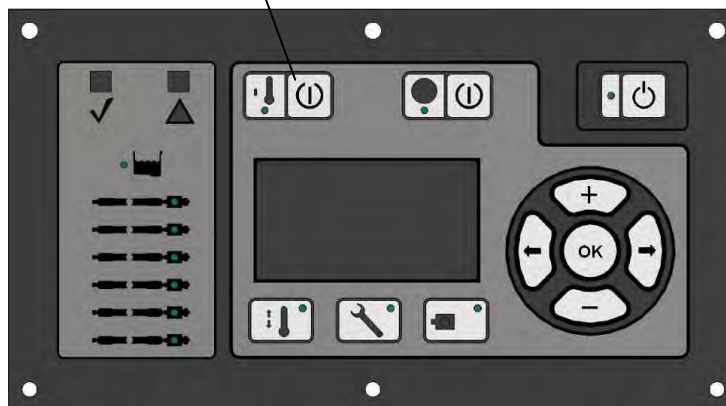
To turn the clock on or off, press the Clock On/Off Button. When the clock is on, the Clock LED illuminates green. See the *Machine Adjustment* section for detailed information on setting the clock.



5.4 SETBACK

The Setback Temperatures are pre-programmed (see “Setback Temperatures”, *Machine Adjustment* section). When setback times are set (See “Clock - Shift Times/Setback Times,” *Machine Adjustment* section) and the clock is on, the unit automatically enters setback during each shift as programmed. If, however, an unscheduled break occurs, the Setback Button can be pressed (Setback LED illuminated yellow) to put the unit into setback manually. To exit setback mode, press the Setback Button again (LED not illuminated). The setback time and temperature can be set manually by using the arrow navigation keys to access the temperature and time set screens and entering values on these screens (see the *Machine Adjustment* section).

Setback On/Off Key & LED



5.4.1 Automatic Setback

Automatic setback can be programmed through one of the remote inputs from the input screen. When an input is set for Auto. Setback, AND the Auto Setback Timeout is enabled, the control will AUTOMATICALLY go into set back if the input has not been triggered for the timeout set by the user.

For instance, if a valve fire signal is connected to Input #2, Input #2 is programmed for Auto. Setback and the Auto. Setback Timeout is enabled and set for 30 minutes, the control will automatically go into set back if the valve has not been fired for 30 minutes. Each valve fire within that 30 minute time period will reset the Timeout timer to start back at 30 minutes. The setback symbol will start to flash 2 minutes prior to the control going into setback.



Flashing Setback Symbol

5.5 POT FILL – EXTERNAL LOW LEVEL DETECTION

Pot Fill is used when the hot melt control is being used to heat the hot melt adhesive and remotely fill a pot. Using the *Pot Fill* mode, the hot melt control can precisely monitor the pot level and fill the pot on demand from the low level sensor mounted in the pot.

For setup details, refer to Section 4.

5.6 HOPPER FEEDER – INTERNAL LOW LEVEL DETECTION

The Hopper Feeder option is used to refill the hot melt control's tank with fresh adhesive when the tank level drops below the set level sensor. This eliminates the need for the operator to manually open the tank lid and add adhesive to the tank.

For setup details, refer to Section 4.

5.7 BEACON ALARM

The Beacon / Alarm output connector is provided as a dedicated +24VDC @ 0.5A output for a visual or audio alarm. This can be set up to alert the operator of one of 4 fault conditions (see *Section 5 – Setup* for description).

The installer can connect the “+” lead of the alarm to Beacon 1 (pin 3) and the “-” lead to GND (pin 1) of J30 on the CPU board. When the Beacon / Alarm screen is set up for an alarm condition, the +24VDC output will enable the alarm device to signal that the condition on the control has been met (eg. Low Level).



5.8 EXTERNAL INPUT

The External Input can accept 230VAC, 24VAC or +24VDC to reset the Setback Timeout when the control is in Auto. Setback. This is used in special applications and the programmable inputs should be used for this feature (see *Automatic Setback*, above). The pin out for this connector on the CPU board is critical (see Section 4 for this connector location).

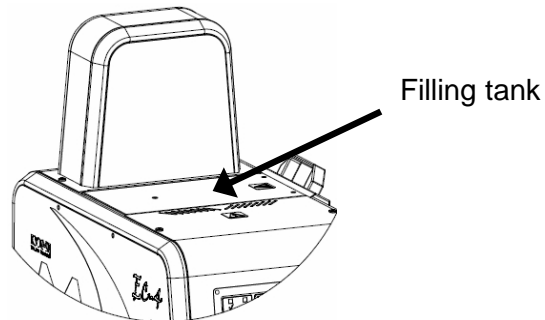
5.9 FILLING THE TANK



Before filling the tank, put on goggles, gloves and long sleeves to avoid possible burns from splashes of hot adhesive.

➤ **Models type A / B (Without Vacuum Feeding):**

1. Ensure that the tank is clean and free of foreign particles.
5. Fill the heated tank with the hot-melt material, to a maximum of 10mm below the edge of the tank.

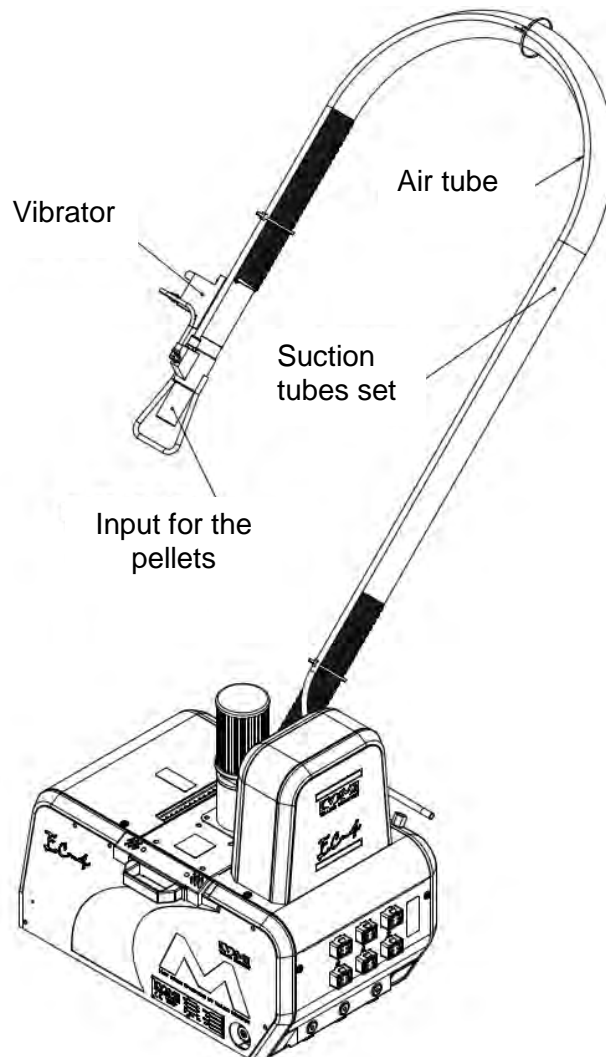


6. Close the tank cover immediately after filling the tank.

➤ **Models type C (With Vacuum Feeding):**

1. Make sure that the tank is clean and free of foreign particles.
2. In this case, the equipment is fed automatically by the installed vacuum feeder. The sensors detect when the tank needs adhesive, as well as when it is no longer needed. This way, the person handling the equipment does not have to worry about anything except making sure the vacuum feeder is always supplied with adhesive, in the container used to hold it. Said container must be placed near the equipment so the tubes comprising the vacuum feeder are not pulled, which might cause damage.





Warning: When you wish to check the tank adhesive level, you can do so while the equipment is loading, without any problem, as the micro (sensor) installed on the cover allows the equipment to detect when the cover is opened and stops the vacuum feeding. Once the cover is closed, it will begin loading again automatically.



Note: Never operate the applicator if the tank is empty. If the quantity of hot-melt material is very small, the adhesive may degrade, leading to the carbonisation of the HOT-MELT material, and the formation of deposits inside the unit. This may lead to unnecessary downtimes later on.

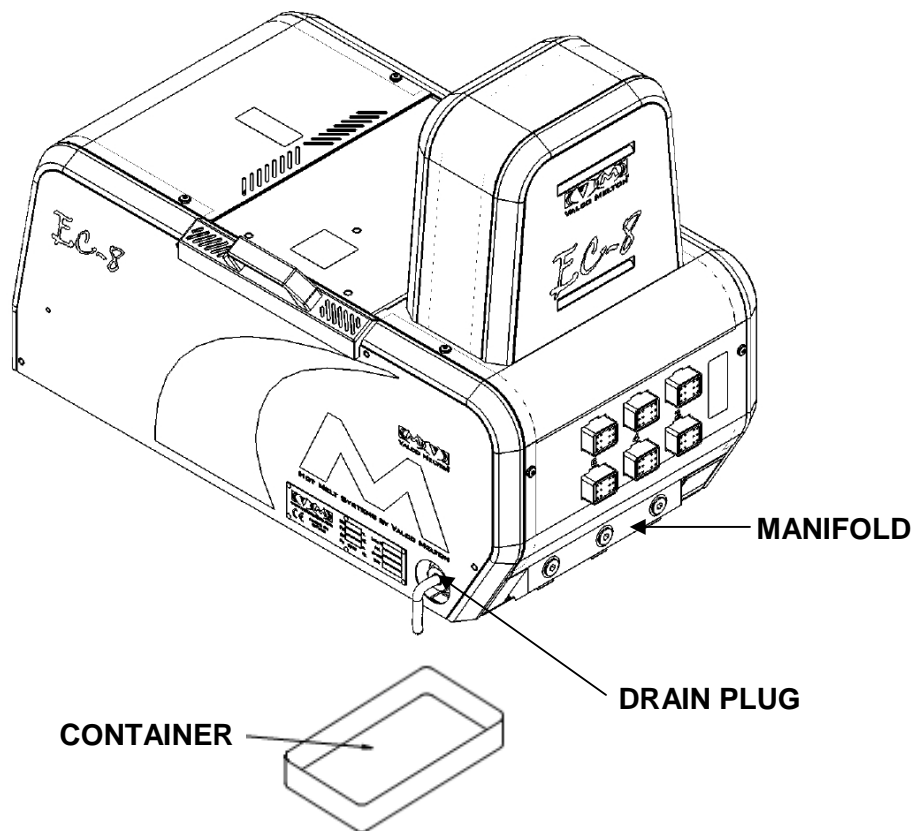
Emptying the Tank:

Before emptying the tank, put on a face shield, gloves and long-sleeve shirt to prevent possible burns caused by hot adhesive splashing.



1. Warm the equipment to the working temperature.
2. Reduce the air pressure to zero.

3. Eliminate system pressure by releasing the manual guns or opening the bleed valve.
4. Place an appropriate container under the manifold to collect the adhesive.
5. Unscrew the purging valve with a screw driver.
6. Increase the pressure gradually until adhesive flows through the purging valve and the manifold, and the tank empties.
7. Changing the filter and seals on the dismantled parts is recommended once the tank is empty.



Bleed Process:

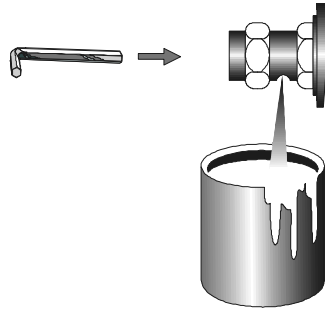
The bleed process is done to sweep away small crystallisations that may be produced in the filter, and to depressurize the system.

Before purging the filter, put on goggles, gloves and a long-sleeve shirt to prevent possible burns caused by hot adhesive splashing.

1. To purge the filter, the applicator must be at the operating temperature.
2. Reduce the air pressure of the applicator to "0".
3. Place a container below the equipment to collect the adhesive from the manifold.
4. Open the bleed valve with a screw driver..



Tip:
Bleed the equipment once a week, or every 40 hours of operation.



5. Increase the air pressure until the adhesive flows through the bleed hole and leaves the filter free of any contaminating particles.
6. Close the bleed valve with a screw driver.
7. Return the pressure to the appropriate working pressure.

5.10 STOPS:

There are two cases:

Pump stop:

If you wish to stop pumping, you must turn the pressure regulator to 0.

The temperature control will maintain the equipment temperature.

If the stop is to be for an extended period, activating the Setback function is recommended. (See Section 4, 4.18 and Section 5, 5.5)



Total stop:

To power down the equipment, switch the unit off.

CHAPTER 6 MAINTENANCE



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

6.1. INTRODUCTION:

This chapter contains the procedures involved in the maintenance of the EC equipment. These maintenance procedures guarantee safe operation and increase machine life. Before starting a maintenance operation, read chapter 1. “Safety” carefully.

General recommendations for proper maintenance:

- Keep the tank as full of adhesive as possible. This will reduce the formation of charred adhesive on the tank's inner walls.
- Keep the tank cover closed. (Any contamination in the tank will increase the possibility of low performance. Humidity, dirt and charred adhesive are the main causes of nozzle obstruction).
- Use cheesecloth to remove material leaking from the seals and other connectors when the machine is hot, but not in operation.
- Empty and clean the system completely when there are frequent obstructions, due to dirt and char.

Make sure that you are properly protected and follow all pertinent safety measures:



1. Switch off the air at the mains.
2. Switch off the main switch.
3. Lock and tag out the main switch.
4. Make sure power is off.
5. Follow all applicable safety standards.

6.2. MAINTENANCE RECOMMENDATIONS:

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

Frequency	Maintenance
Weekly (40 hours)	Clean the outer surface of the equipment. Use a liquid cleaner, following the instructions for the adhesive being used.
	Inspect all the electric, pneumatic and hydraulic connections. Replace or repair when necessary
	Bleed the drain valve.
6 Months (2000 hours)	Change the air regulator filter.
	Clean the tank filter.

Operation frequency depends on the type of adhesive used and the environmental conditions where the equipment is placed.

6.3. MAINTENANCE PROCESSES:

6.3.1. Cleaning the equipment



Vacuum the dust or glue remnants, or remove them with a soft cloth, especially from the manifold and bleed valves.

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

Use a soft cloth to remove dust and glue remnants from the cylinder, valve and exhaust mufflers.



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

When in doubt, contact the adhesive manufacturer.

6.3.2. Bleeding the pressure regulator air filter:

Bleed the air-regulation unit by pushing the lower button on the filter.

Change the regulator filter as necessary, depending on the contaminants that accumulate in the pneumatic system.

6.3.3. Removing the Pump Casing

To remove the pump casing, follow these steps:

1. Unscrew the two screws on the pump casing one-quarter turn.



2. Release the fast-on terminal on the inside.



3. To reinstall the cover, do the steps in reverse order.

6.3.4 Changing Adhesive



To replace one adhesive with another, empty the system (See 5.2 "Emptying the Tank").

Emptying the system is important when changing the adhesive. Not doing so may cause equipment damage.

CHAPTER 7

TROUBLESHOOTING THE EQUIPMENT



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

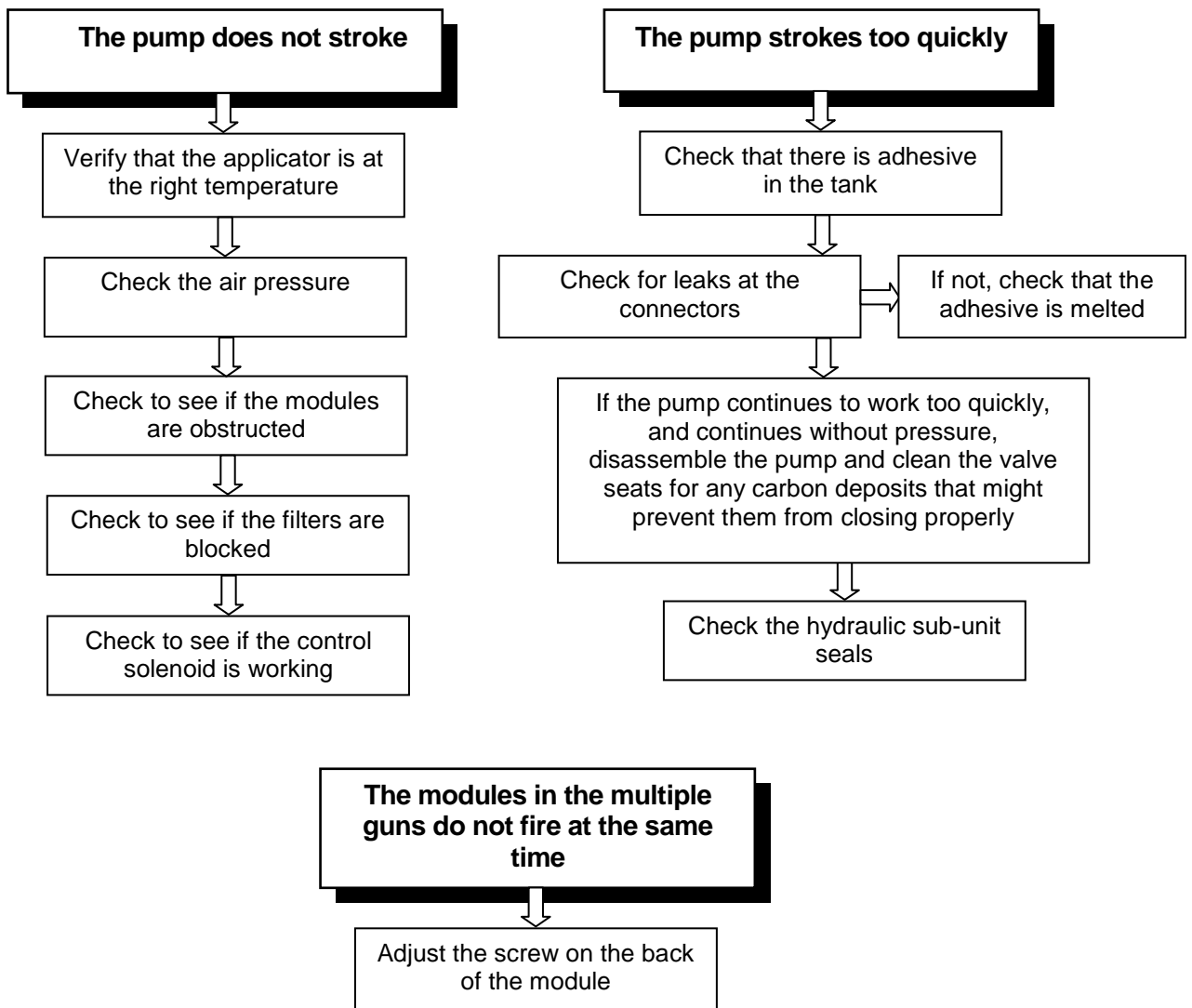
7.1. INTRODUCTION:

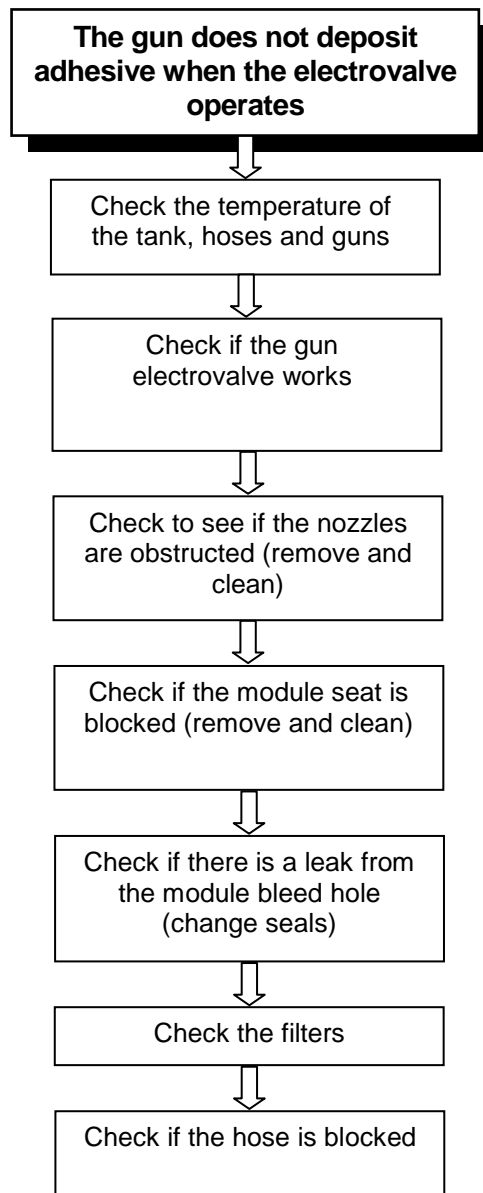
This chapter refers to the most common equipment faults.

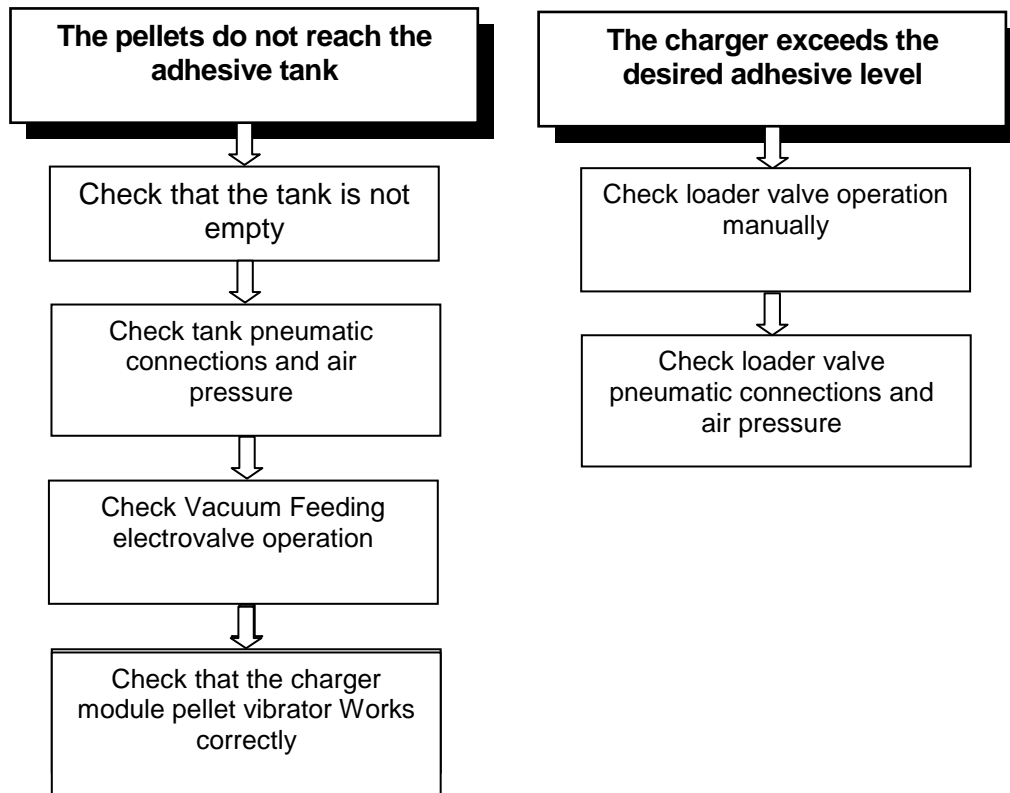
Problems may occur when glue flow is reduced or stopped, or when the alert system signals a fault. Many problems can be solved with the help of this manual.

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

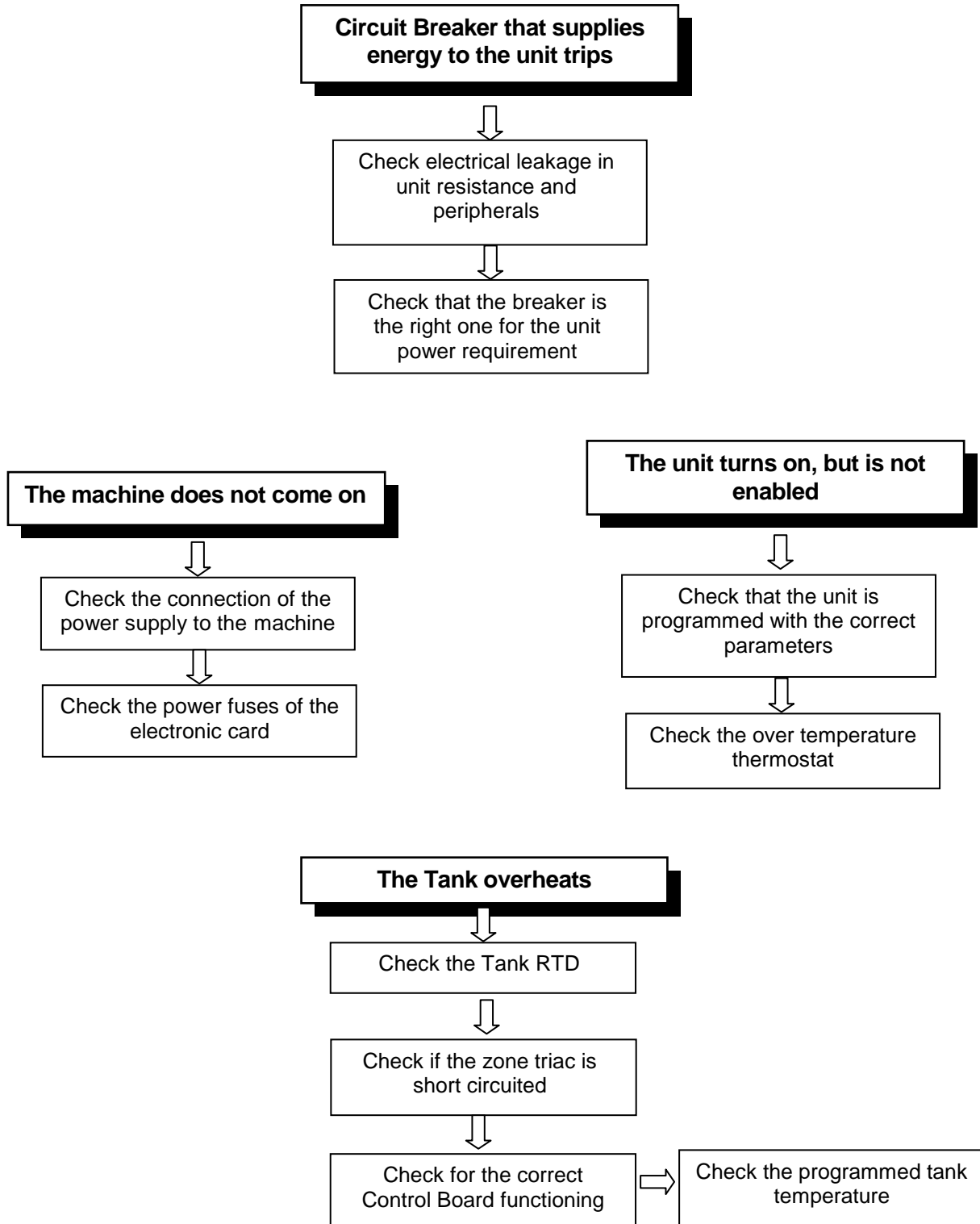
7.2. MECHANICAL FAULTS:

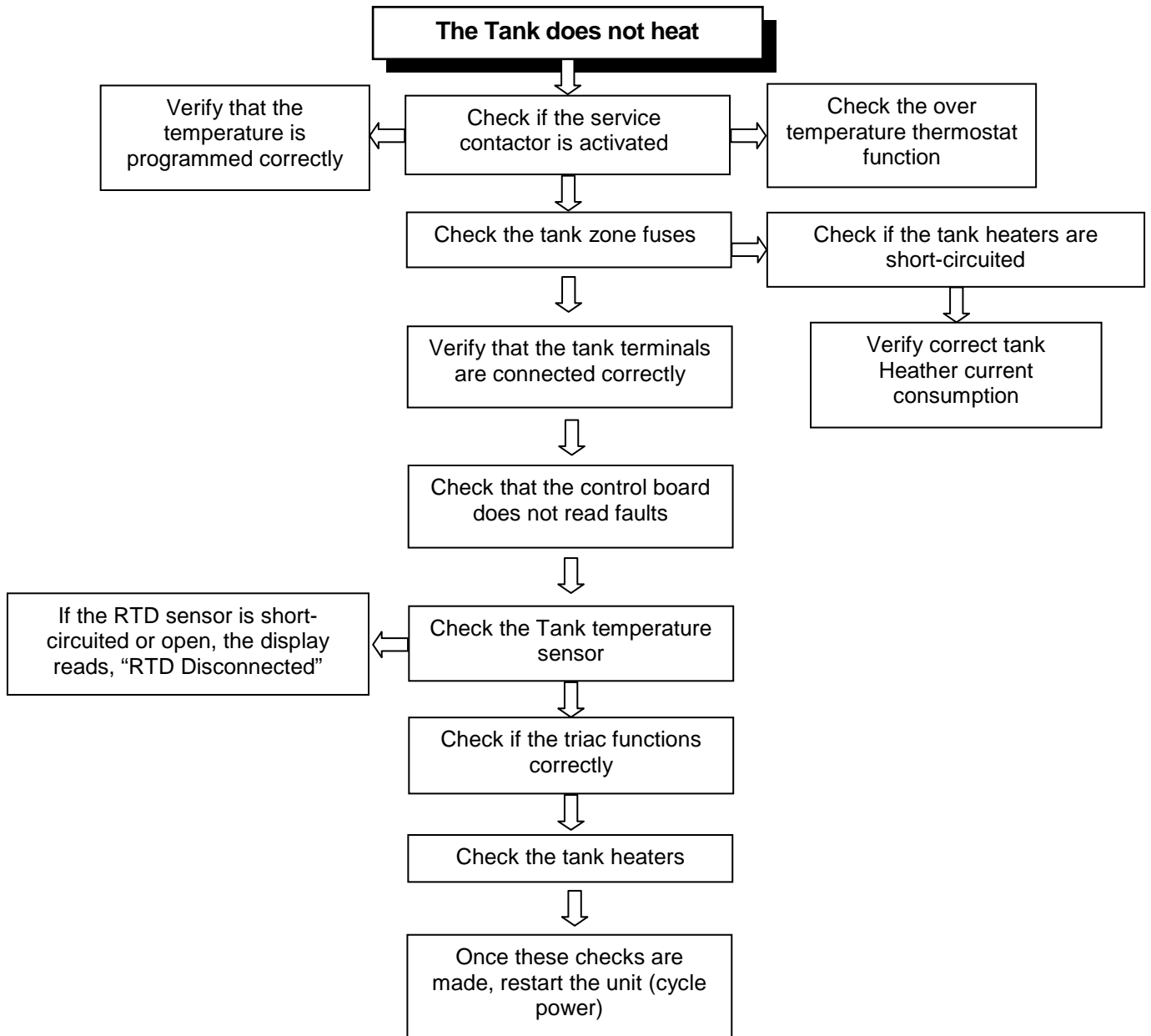


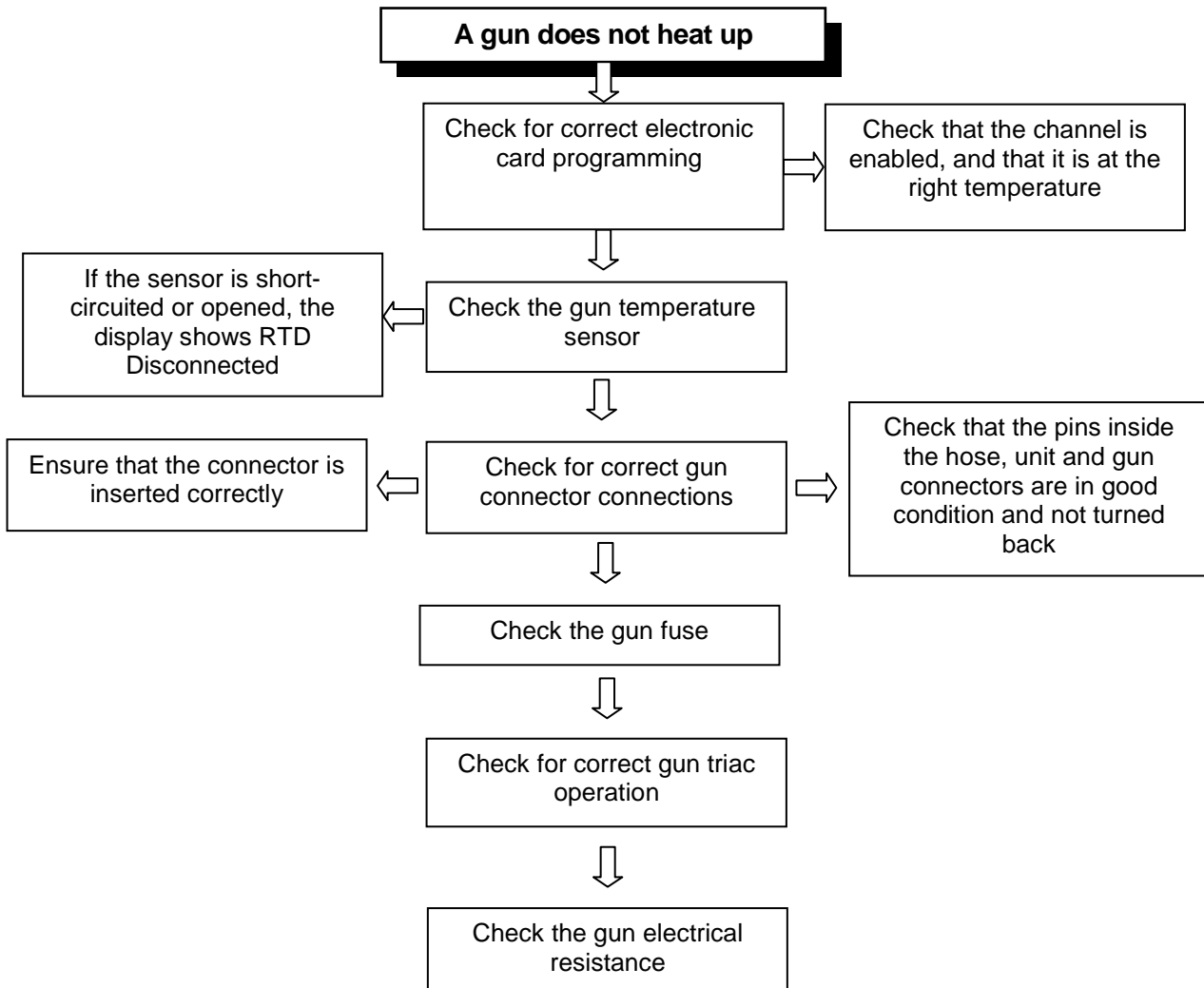
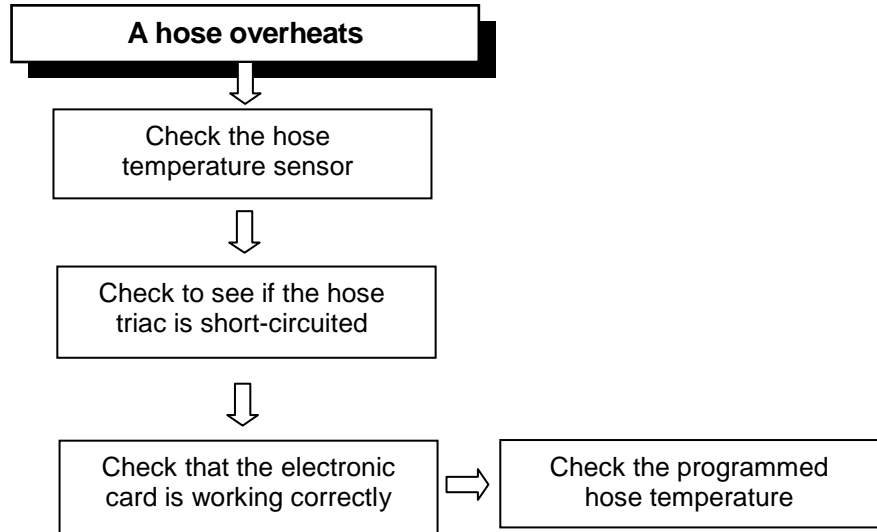


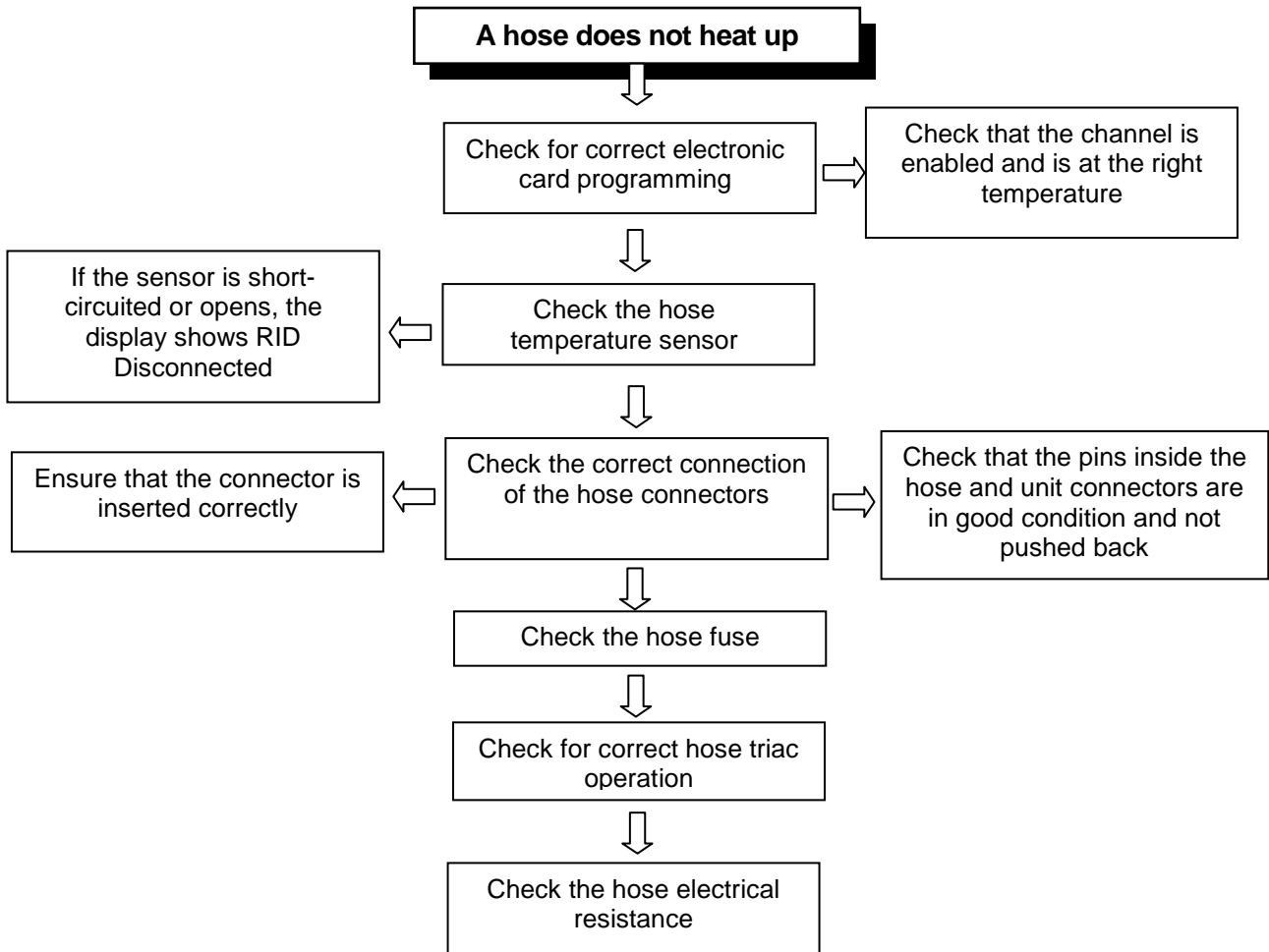


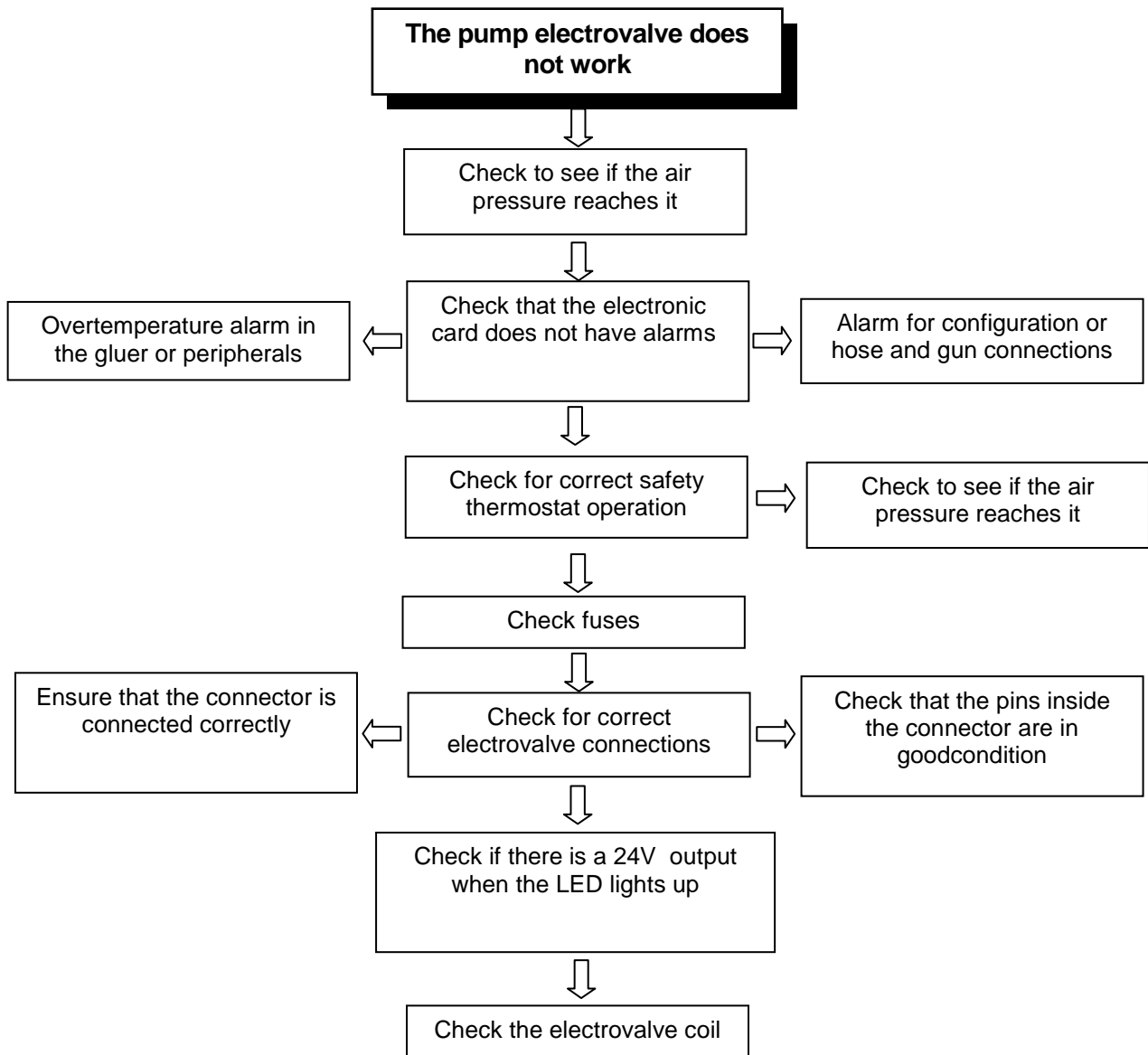
7.3. ELÉCTRICAL FAULTS:

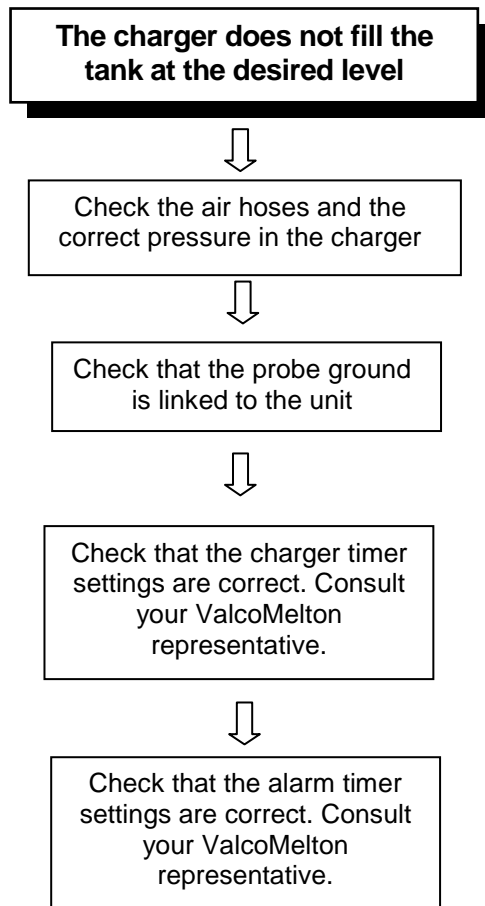
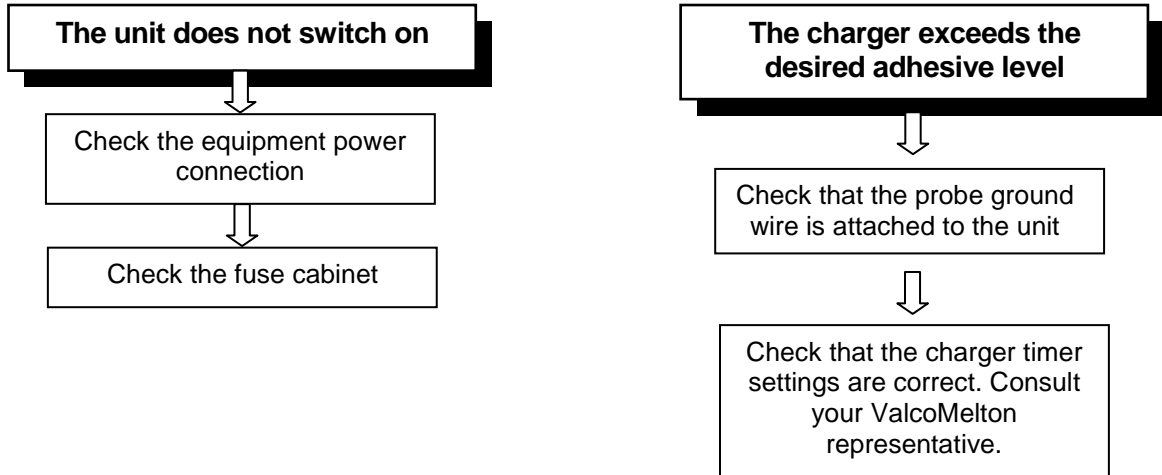




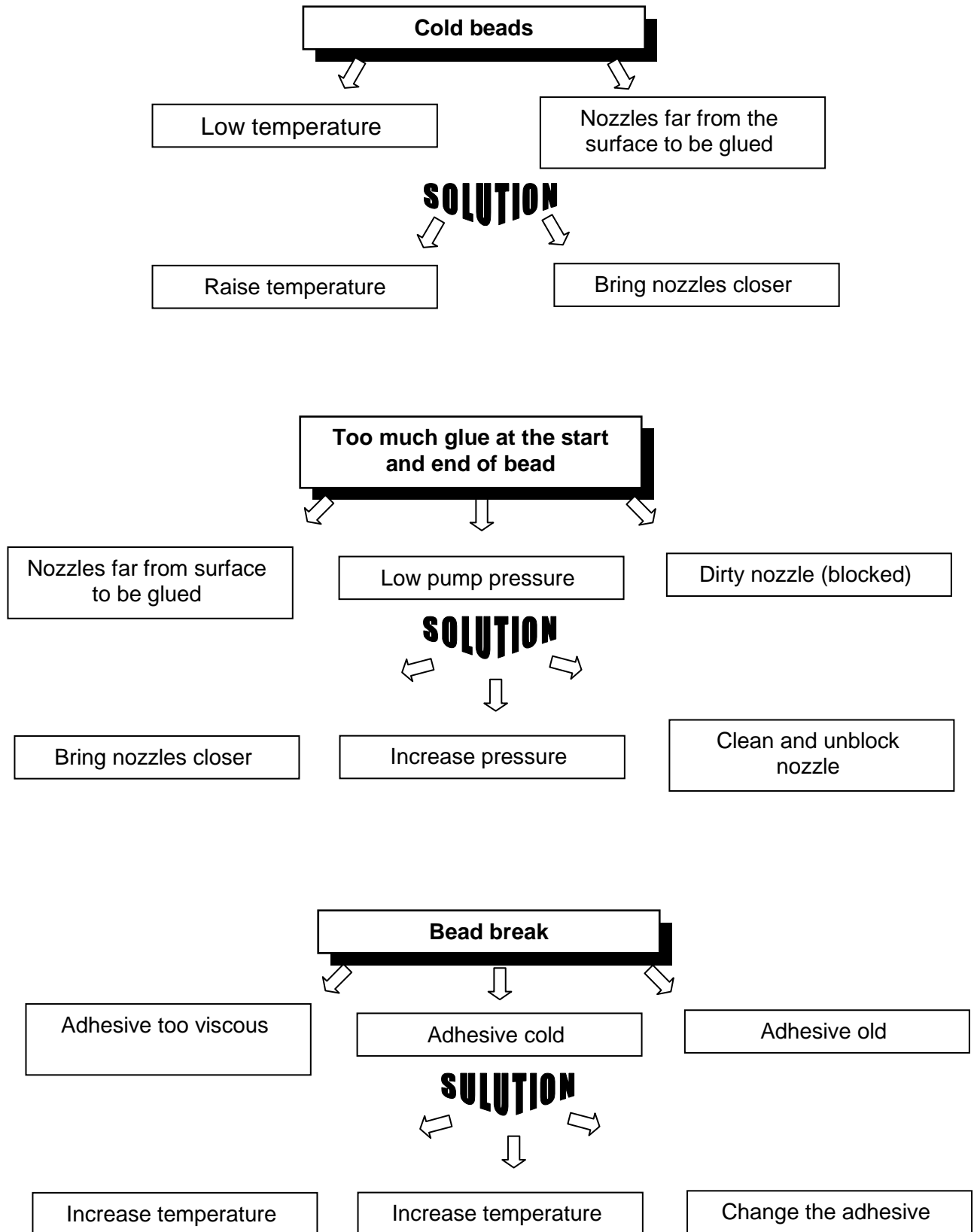


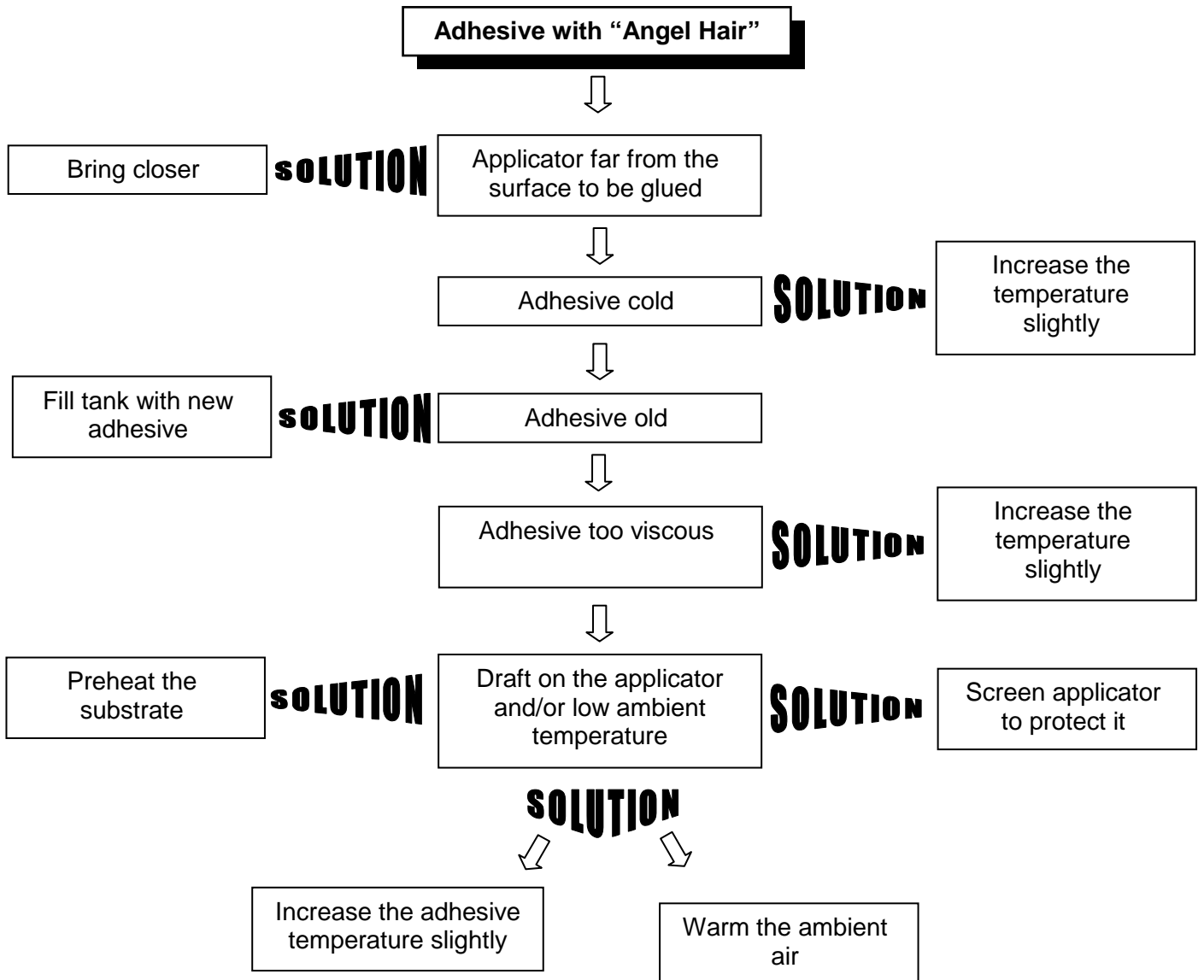






7.4. ADHESIVE APPLICATION PROBLEMS:





Drops of adhesive forming on the applicator nozzle

Hole blocked and/or seat worn or dirty

Incorrect adjustment

Incorrect air pressure to shut-off valves

SOLUTION

Clean and/or replace dirty and/or worn parts

Adjust the stroke opening

Adjust air pressure

Frequent nozzle obstructions

Rinse the system

SOLUTION

Increase in solids

SOLUTION

Clean filters

SOLUTION

Change adhesive type

Reduce temperature

Too much adhesive flow

Excessive pump pressure

Valve stroke opening too large

Nozzle outlet too large

SOLUTIONS

Reduce pump pressure

Close by twisting several times

Change to a smaller nozzle

Splashes of adhesive from the substrate

Adhesive temperature too high

SOLUCIONES

Reduce the temperature

Pump pressure too high

SOLUCIONES

Reduce pump pressure

Adhesive viscosity too low

SOLUCIONES

Reduce pump pressure

SOLUCIONES

Use smaller nozzle

SOLUCIONES

Reduce temperature

Use higher-viscosity adhesive

Open the regulator

Adhesive is smoking

Applicator is too far from the substrate

Adhesive too hot

SOLUCIONES

Reduce temperature

SOLUCIONES

Use more stable adhesive

Tank adhesive carbonisation



Tank temperature too high

SOLUTION

Reduce tank temperature



Readjust temperature control or replace card

SOLUTION

Temperature control fault



Adhesive level low

SOLUTION

Keep tank full



Keep tank cover closed

SOLUTION

Adhesive oxidation

Gelatinous adhesive



Empty the system and wash it thoroughly

SOLUTION

Overheating

SOLUTION

Reduce the temperature



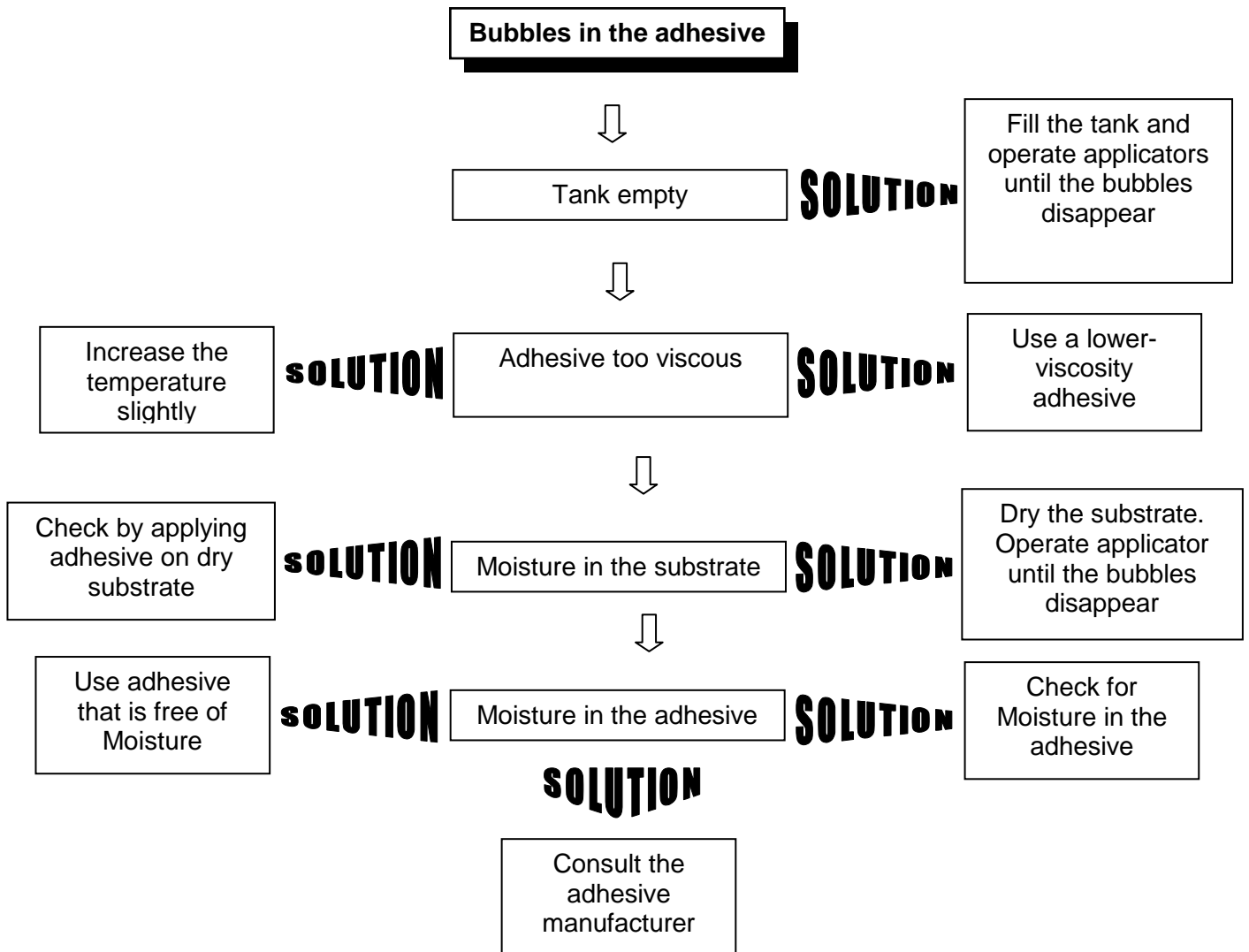
Empty the system and wash it thoroughly

SOLUTION

Incompatible adhesives mixed together

SOLUTION

Check adhesive compatibility



CHAPTER 8

EQUIPMENT REPAIR GUIDE



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

8.1. INTRODUCTION:



This chapter explains the procedures for dismantling and replacing some components. These procedures must be done during maintenance tasks, or when there is a failure.

Before beginning, make sure the operator is properly protected and all safety measures are being followed.

1. Switch off the air at the mains.
2. Switch off the main switch.
3. Lock and tag out the main switch.
4. Make sure the electricity is off.
5. Follow applicable safety and health standards.

Attached are the exploded views that illustrate the procedures.



8.2. CHANGING THE FILTER:

Before changing the filter, put on a face shield, gloves and a long-sleeve shirt to prevent possible burns caused by hot adhesive splashing.

Keeping a filter on hand, to replace when necessary, is recommended. This replacement is quick and improves equipment performance.

1. To change the filter, the applicator should be at working temperature.
2. Reduce the applicator air pressure to "0".
3. Place a receptacle below to collect the adhesive from the manifold.
4. Open the drain valve with a screwdriver to eliminate residual pressure.
5. Open the filter plug screw with a screwdriver, and take out the filter unit.
6. Place the filter into the manifold and screw it in with a screwdriver.
7. Close the drain valve with a screwdriver.
8. Set to the desired working pressure.

8.3. REPAIRING THE MANIFOLD:

The manifold is the element that distributes Hot-Melt, after it has been filtered, to the hoses and guns.

It is assembled at the bottom of the tank so that the tank heaters heat it indirectly.

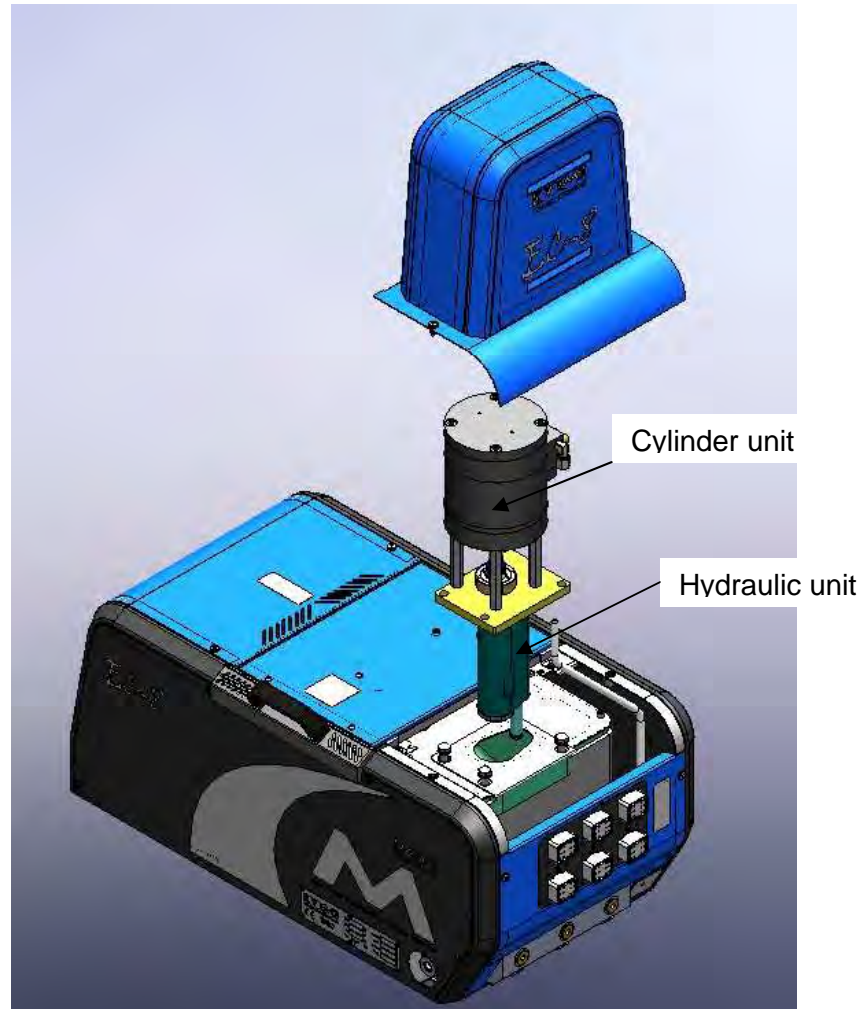
The manifold has six outlet ports to connect the Hot-Melt hoses; three at the bottom and another three at the front.



Do not disassemble the manifold. This operation should only be done if there is a Hot-Melt leak between the tank and the manifold.

8.4. REPAIRING THE PNEUMATIC PUMP UNIT:

The pump unit consists of a valve, a shifter valve, a pneumatic cylinder and a double-acting hydraulic pump, equipped with a pressure compensator to avoid a drop in flow rate that occurs when changing pump direction, and to enable maximum uniformity in Hot-Melt flow.



Before disassembling the hydraulic unit, put on goggles, gloves and long sleeves to avoid possible burns from splashes of hot adhesive.

1. Warm the tank until the adhesive is melted.
2. Reduce the air pressure to zero.
3. Eliminate system pressure by releasing the guns manually or by opening the bleed valve.
4. Disconnect the electricity.
5. Disconnect the regulator unit electrically and mechanically.
6. Loosen the two pump cover screws 1/4 turn and lift the pump casing.



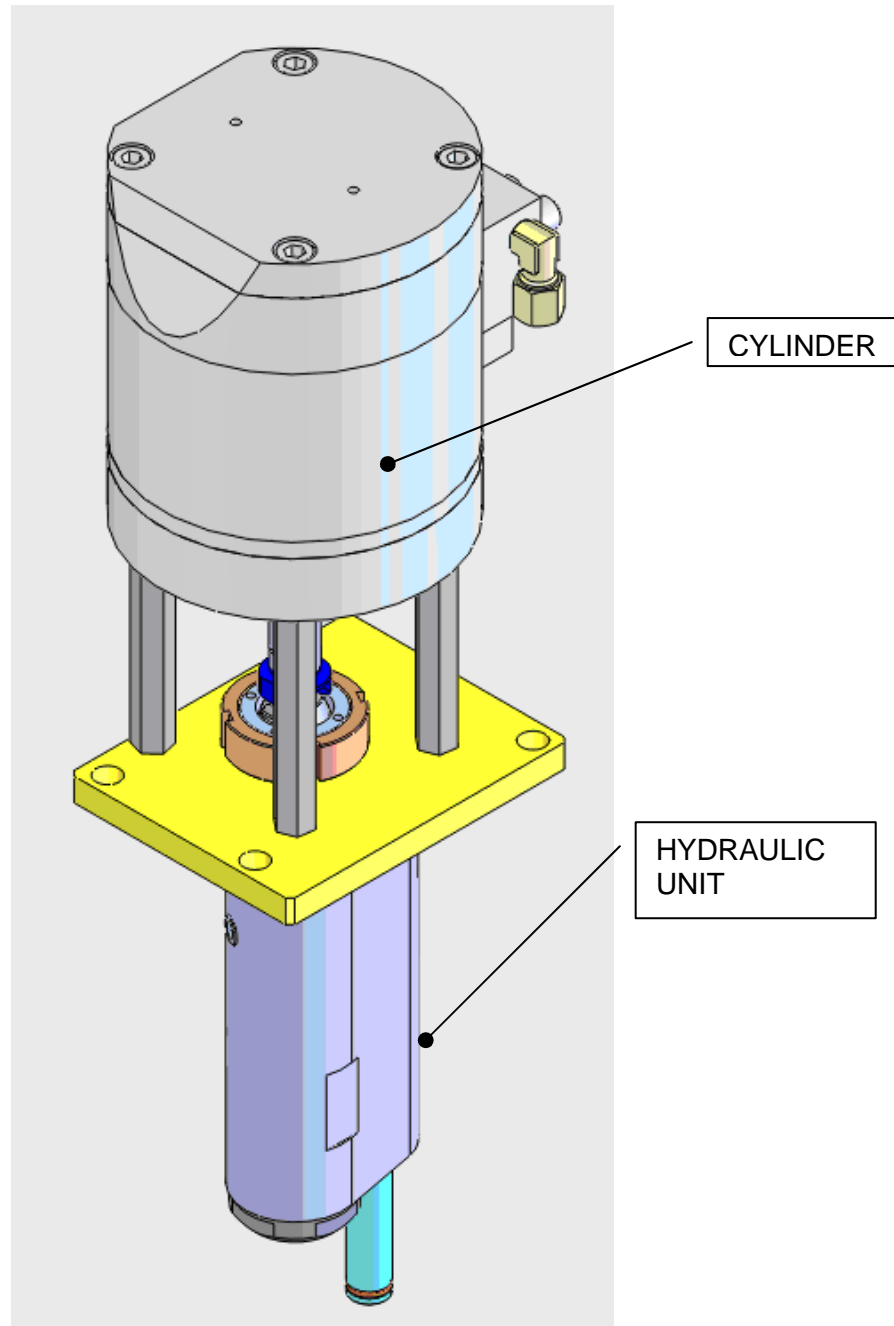
Follow the assembly procedure instructions carefully.

Positioning and alignment of some elements are critical to perfect pump operation.

In the event the pump not working correctly, carry out the following checks.

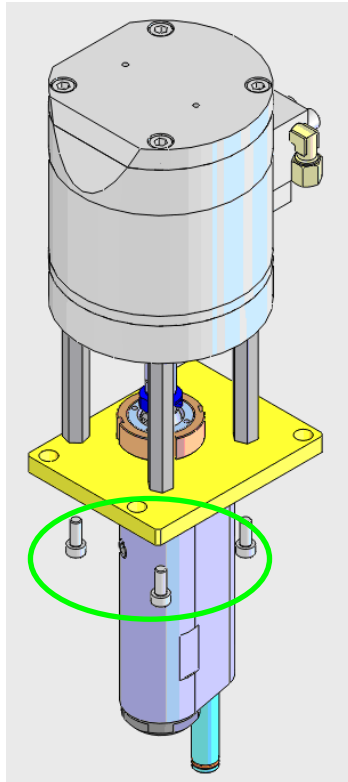
<p>Is the air pipe connected? Does the electrovalve work? Is the equipment at the right temperature? Is the regulator working at the right pressure? Are the filters clean? Are the modules blocked? Is the shaft aligned correctly?</p>
--

8.4.1 High Flow Pump:

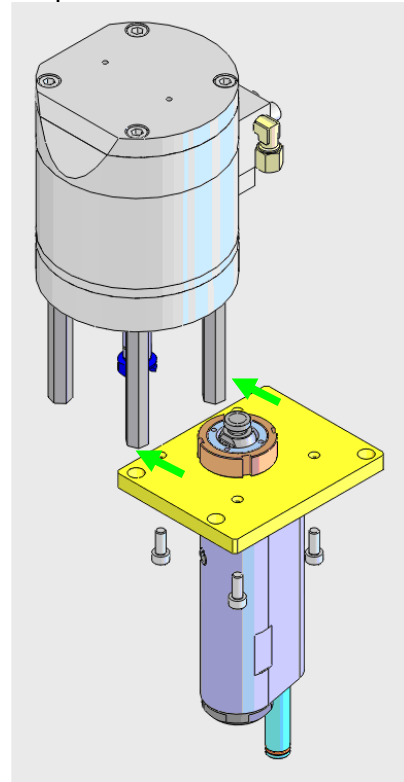


8.4.1.1 CYLINDER:

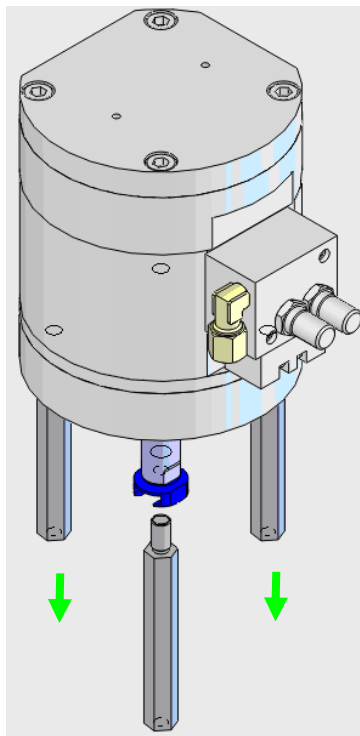
1. Loosen the screws.



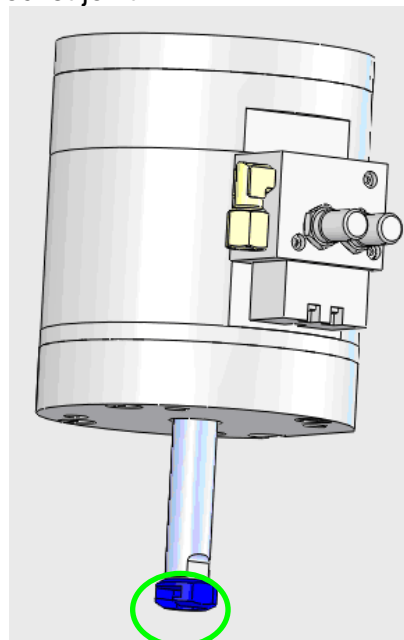
2. Separate the units.



3. Loosen the four standoffs.

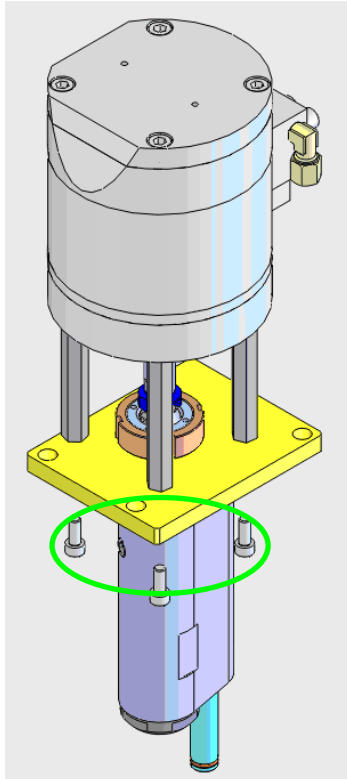


4. Loosen the shaft knob and socket joint.

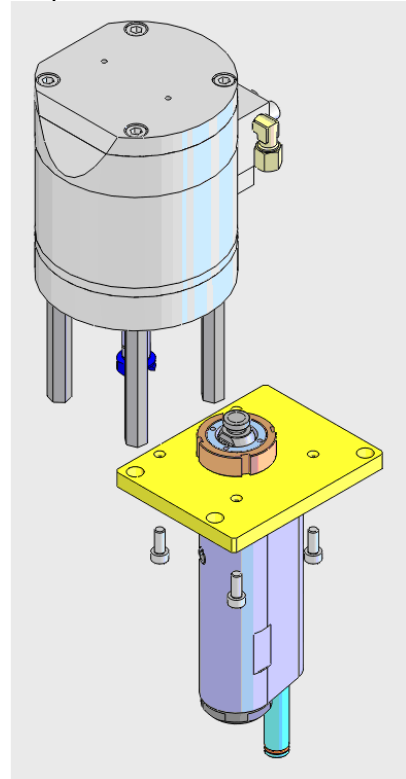


8.4.1.2 HYDRAULIC UNIT:

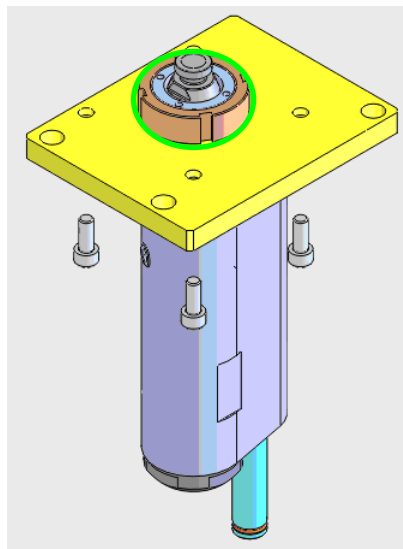
1. Loosen the screws.



2. Separate the units.



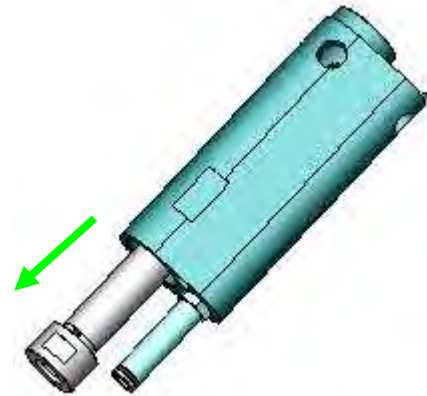
3. Turn and separate the nut.



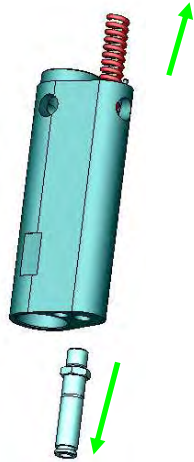
4. Loosen.



5. Remove the shaft.



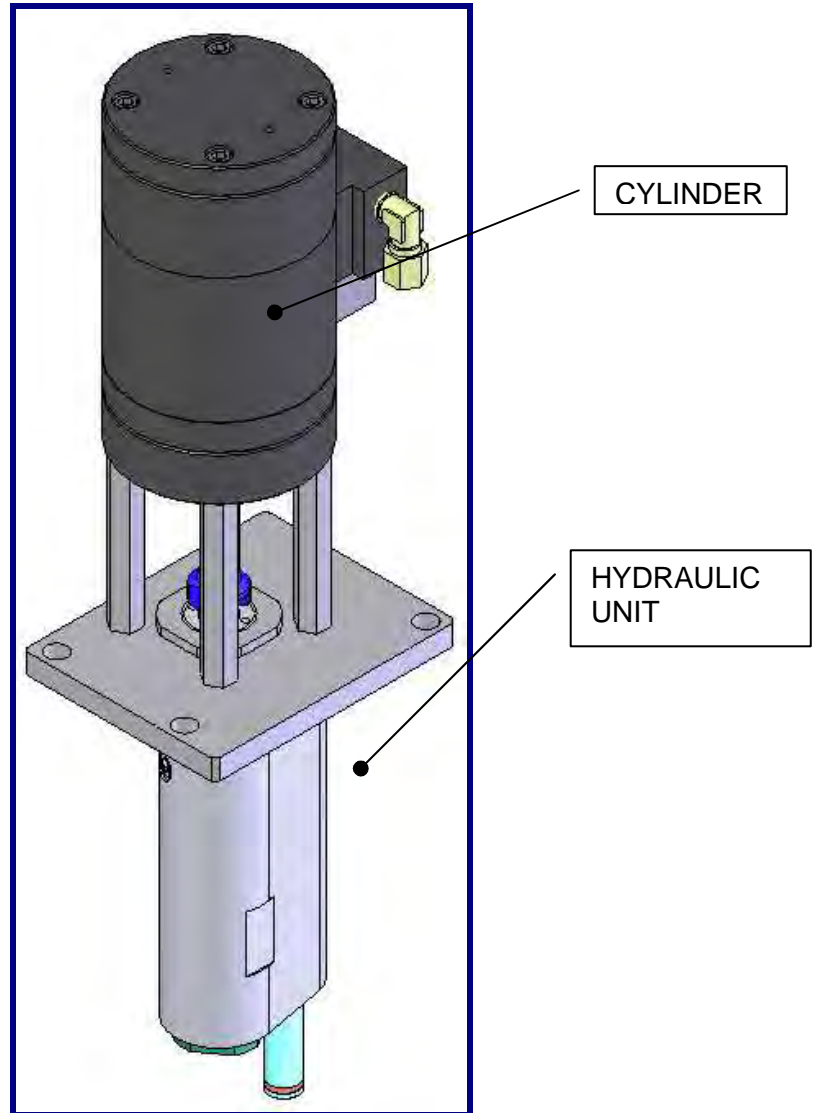
6. Remove the spring and inlet tube.



7. Remove the spring guide.

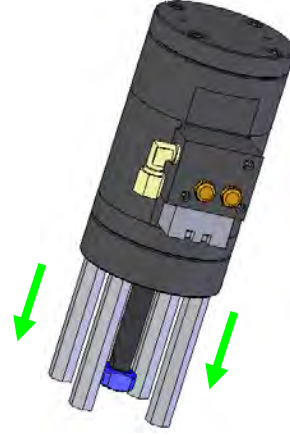
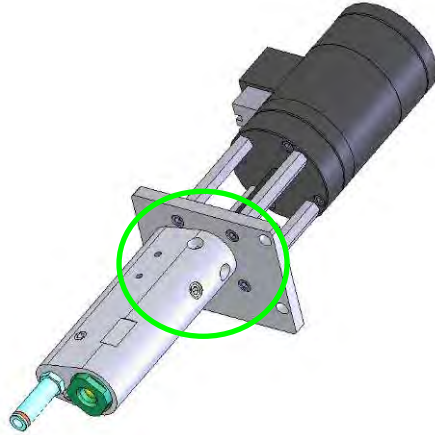


8.4.2 Low Flow Pump:

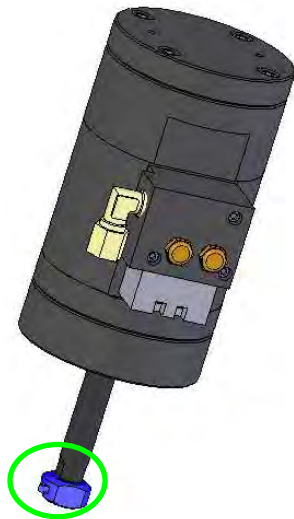


8.4.2.1 CYLINDER:

1. Loosen the four screws on the bottom.
2. Loosen the four standoffs.

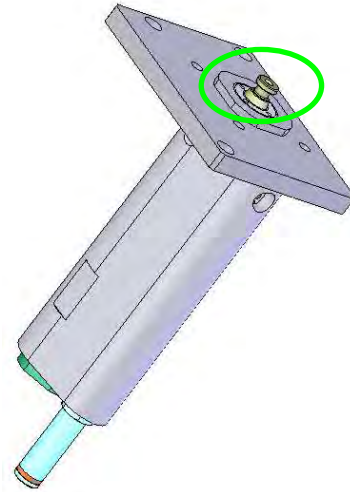
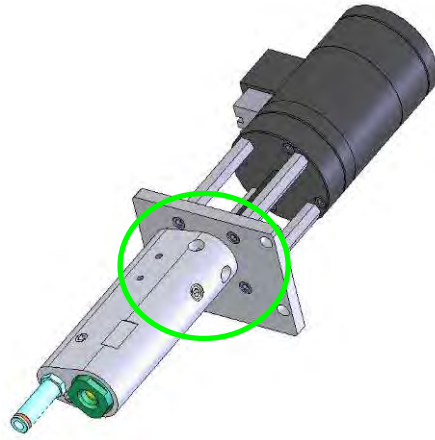


3. Loosen the shaft knob and socket joint.



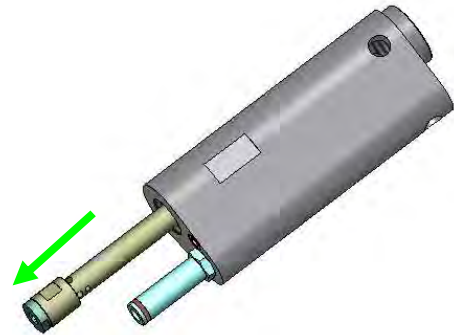
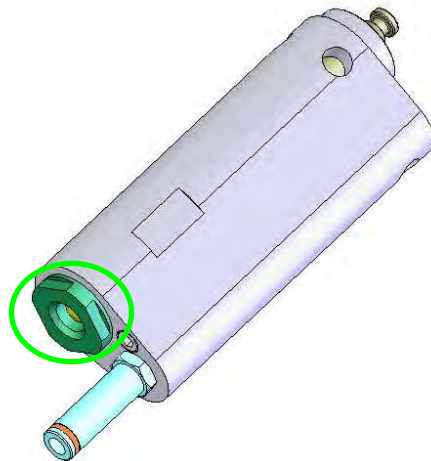
8.4.2.2 HYDRAULIC UNIT:

1. Loosen the four screws on the bottom. 2. Loosen.

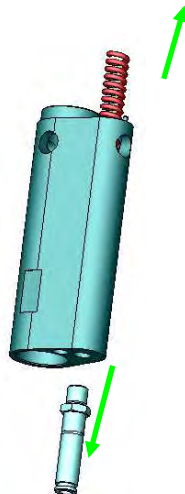


3. Loosen.

4. Remove the shaft.

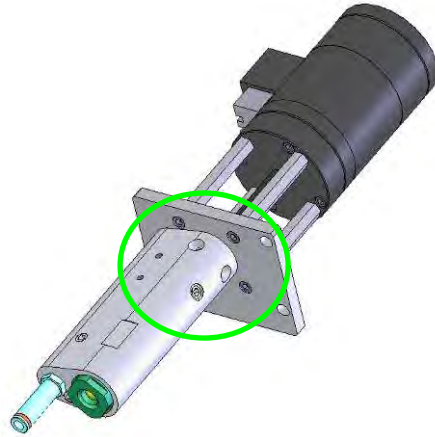


5. Remove the spring and inlet tube. 6. Remove the spring guide.

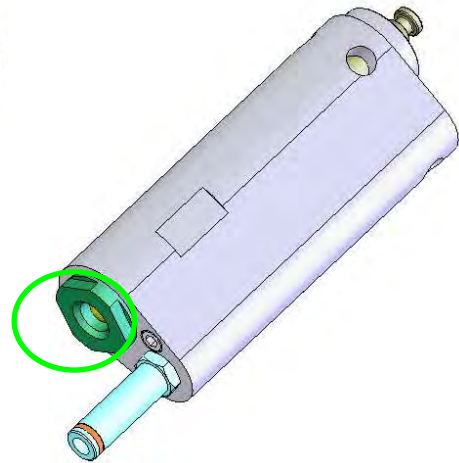


8.5. CLEANING VALVES

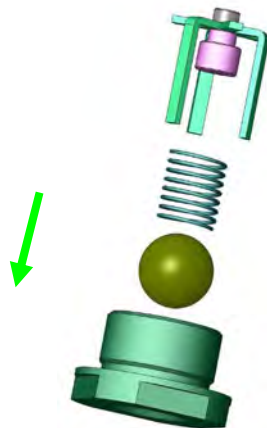
1. Loosen the four screws on the bottom.



2. Loosen.



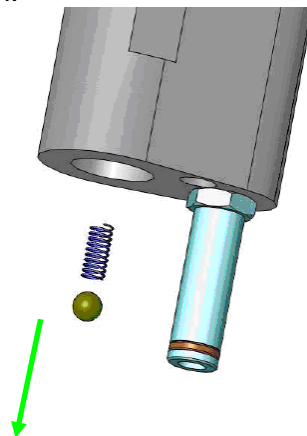
3. Clean the valve.



4. Use the M6 Allen wrench to remove the compression valve.



7. Remove the ball and spring and clean.



8.6. REPAIRING ELECTRIC COMPONENTS:



If one of the electric components needs to be repaired, proceed according to the part listings in Addendum A and the electric diagrams in Addendum B.

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 properly bled and depressurised.



WARNING: When a fuse is blown, it is essential to replace it with fuses supplied with the equipment.

If fuses are not available, use ULTRAFast fuses with the same characteristics.

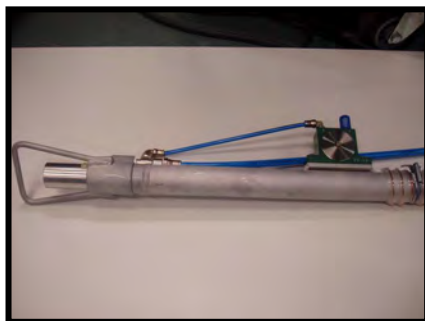
ELECTRONIC CARD WARNING

During equipment manipulation, avoid contact with electronic elements and connector metallic parts; elements susceptible to electrostatic discharge.

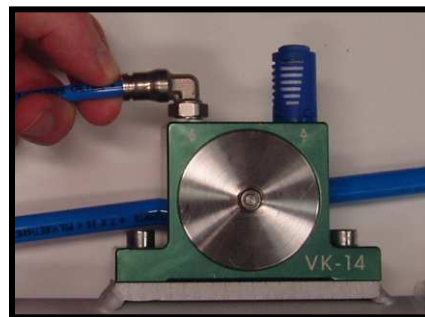
8.7. REPAIRING VACUUM FEEDER

For any electrical part requiring replacement, contact your Melton dealer. For mechanical, stress the following:

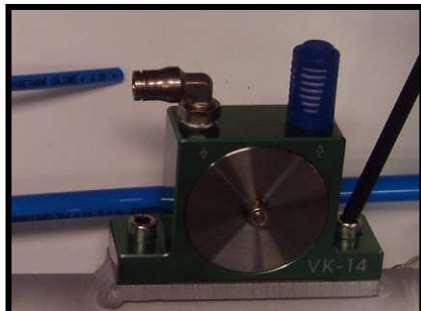
Changing the vibrator module



Locate the vibrator module, mounted on the loader arm



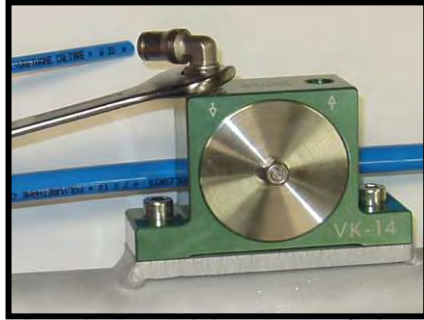
Remove the air hose fitting.
Press the plunger



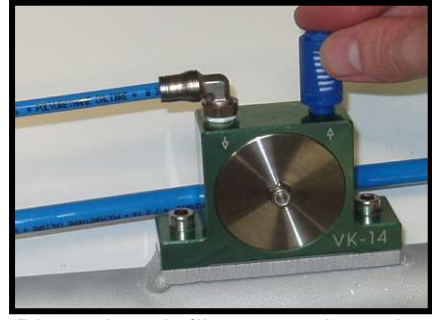
Remove the two screws and remove the module



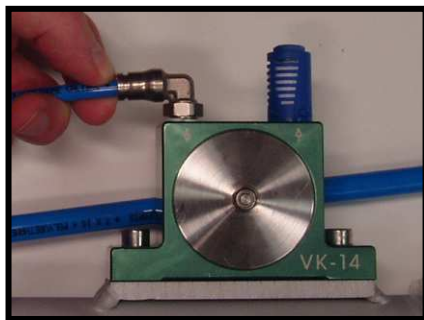
Install the new module with the screws



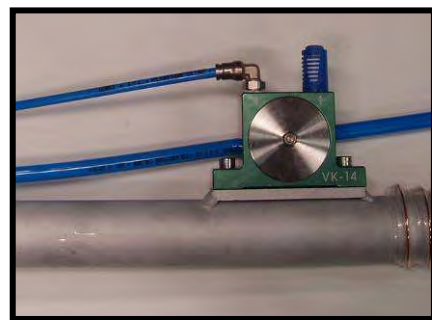
Attach the quick connect fitting to the air inlet



Place the air filter onto the exhaust module



Press the end of the cable and insert the air hose



Vibrator module mounted

Open the main air inlet.
Turn on the equipment.

The equipment is ready again!

CHAPTER 9 LOG SHEETS

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

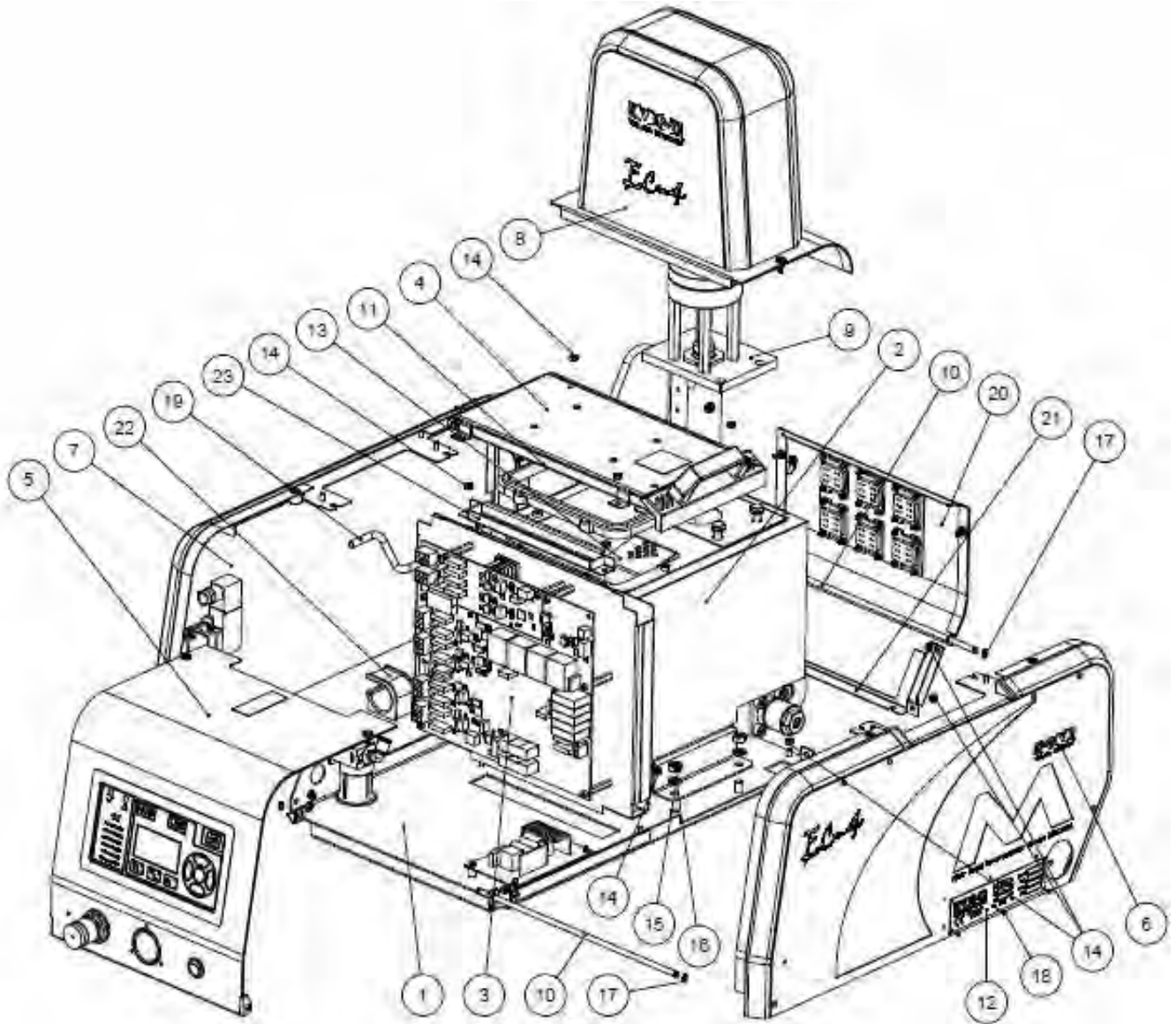
**DESPIECE / PART LISTING
EQUIPO EC /EC EQUIPMENT**

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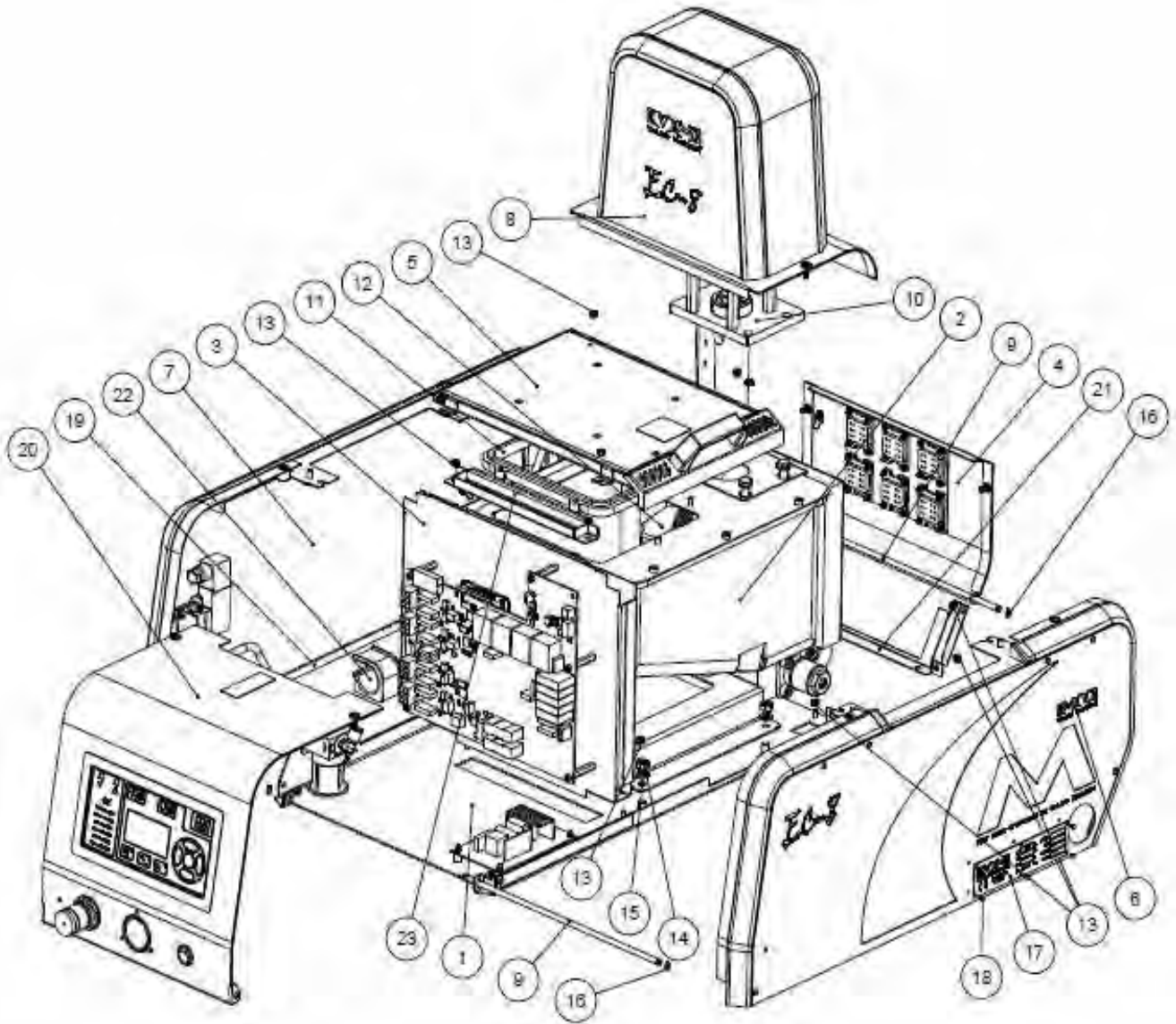
1. A) CONJUNTO ENCOLADOR EC4 / EC4 EQUIPMENT ASSEMBLY:



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cuna serie EC	EC series support assembly	X	X		PAG 16	1
2	Subconjunto deposito EC	EC tank assembly	X	X		PAG 22	1
3	Subconjunto tabique térmico EC	EC thermal wall assembly	X	X		PAG 18	1
4	Subconjunto tapa	Lid assembly	X	X		PAG 43	1
5	Subconjunto frontal	Right front assembly	X	X		PAG 45	1
6	Subconjunto lateral dcho.	Right lateral assembly	X	X		PAG 47	1
7	Subconjunto lateral izdo.	Left lateral assembly	X	X		PAG 49	1
8	Subconjunto carcasa bomba	Pump cover assembly	X	X		PAG 53	1
9	Conjunto bomba	Pump assembly	X	X		PAG 33	1
10	Eje bisagra portones	Door axle	X	X		917XX578	2
11	Junta boca deposito EC	EC tank gasket	X	X		917XX324	1
12	Chapa matricula	ID plate	X	X		917XX326	1
13	Rejilla deposito	Tank grille	X	X		915XX367	1
14	Tuerca hexagonal M5 inox.	Stainless M5 hex nut	X	X		910XX359	16
15	Tuerca hexagonal M8 Inox.	Stainless M8 hex nut	X	X		911XX120	4
16	Arandela grover 8 inox.	Stainless 8 grover washer	X	X		910XX135	4
17	Anillo elástico eje 6	6 elastic axle ring	X	X		914XX952	4
18	Remache pop 2.4x5.1	2.4x5.1 pop rivet	X	X		915XX249	6
19	Tubo teflón Ø8-Ø6 L=600mm	L=600mm Ø8-Ø6 Teflon tube	X	X		988XX019	1
20	Subconjunto panel trasero	Rear cover assembly	X	X		PAG 54	1
21	Subconjunto chapa distribuidor	Manifold cover assembly	X	X		PAG 56	1
22	Moldura tabique térmico EC	EC thermal wall molding	X	X		917XX327	1
23	Conjunto Rejilla carenaje EC	EC grid assembly	X	X		PAG 57	1

Salidas / Outputs	EC4 A	EC4 B
2	941XX609	941XX612
4	941XX610	941XX617
6	941XX611	941XX623

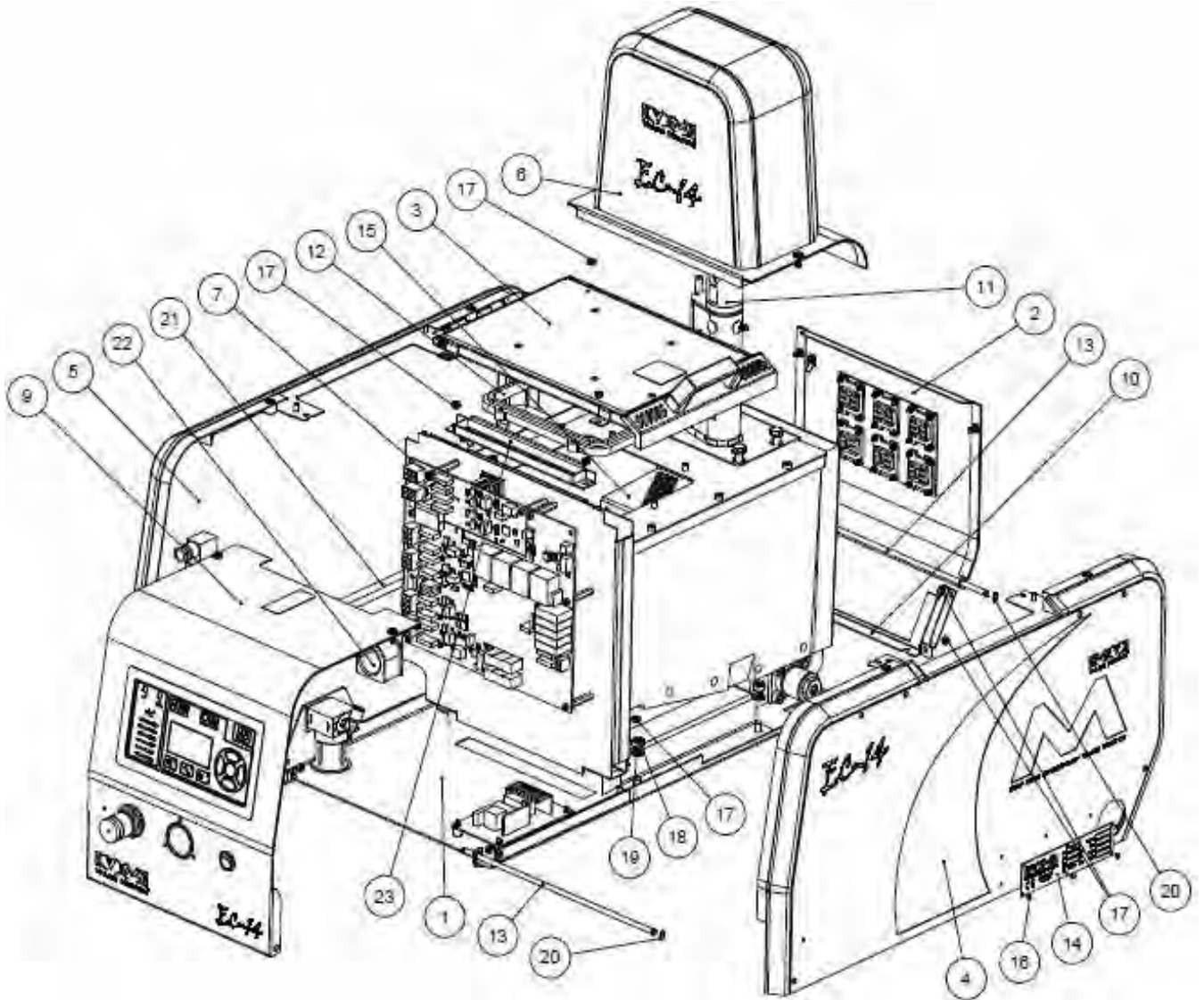
1. B) CONJUNTO ENCOLADOR EC8 / EC8 EQUIPMENT ASSEMBLY:



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cuna serie EC	EC series support assembly	X	X		PAG 11	1
2	Subconjunto deposito EC	EC tank assembly	X	X		PAG 17	1
3	Subconjunto tabique térmico EC	EC thermal wall assembly	X	X		PAG 13	1
4	Subconjunto panel trasero	Rear cover assembly	X	X		PAG 47	1
5	Subconjunto tapa	Lid assembly	X	X		PAG 38	1
6	Subconjunto lateral dcho.	Right lateral assembly	X	X		PAG 42	1
7	Subconjunto lateral izdo.	Left lateral assembly	X	X		PAG 44	1
8	Subconjunto carcasa bomba	Pump cover assembly	X	X		PAG 46	1
9	Eje bisagra portones	Door axle	X	X		917XX578	2
10	Conjunto bomba	Pump assembly	X	X		PAG 28	1
11	Junta boca deposito EC	EC tank gasket	X	X		917XX579	1
12	Rejilla deposito	Tank grille	X	X		910XX982	1
13	Tuerca hexagonal M5 inox.	Stainless M5 hex nut	X	X		910XX359	16
14	Tuerca hexagonal M8 Inox.	Stainless M8 hex nut	X	X		911XX120	4
15	Arandela grover 8 inox.	Stainless 8 grover washer	X	X		910XX135	4
16	Anillo elástico eje 6	6 elastic axle ring	X	X		914XX952	4
17	Chapa matricula	ID plate	X	X		917XX326	1
18	Remache pop 2.4x5.1	2.4x5.1 pop rivet	X	X		915XX249	6
19	Tubo teflón Ø8-Ø6 L=675mm	L=675 mm Ø8-Ø6 Teflon tube	X	X		988XX019	1
20	Subconjunto frontal dcho.	Right front assembly	X	X		PAG 40	1
21	Subconjunto chapa distribuidor	Manifold cover assembly	X	X		PAG 49	1
22	Moldura tabique térmico EC	EC thermal wall molding	X	X		917XX327	1
23	Conjunto rejilla carenaje	Grid assembly	X	X		PAG 50	1

Salidas / Outputs	EC8 A (Bajo caudal / Low flow)	EC8 A (Alto caudal / High flow)	EC8 B (Bajo caudal / Low flow)	EC8 B (Alto caudal / High flow)
2	941XX650	941XX660	941XX654	941XX663
4	941XX652	941XX661	941XX655	941XX665
6	941XX653	941XX662	941XX656	641XX666

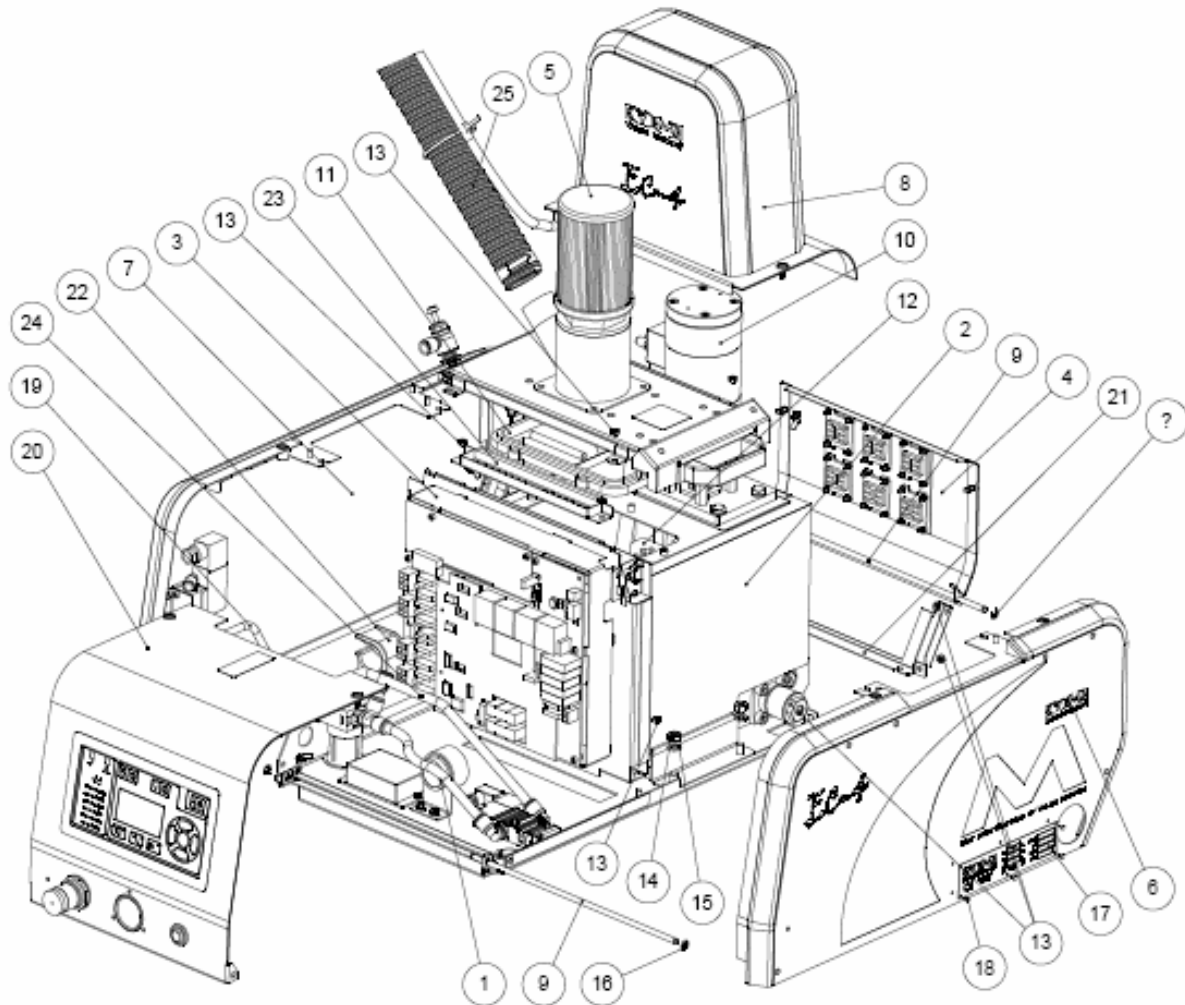
1. C) CONJUNTO ENCOLADOR EC14 / EC14 EQUIPMENT ASSEMBLY:



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cuna serie EC	EC series support assembly	X	X		PAG 11	1
2	Subconjunto panel trasero	Rear cover assembly	X	X		PAG 47	1
3	Subconjunto tapa	Lid assembly	X	X		PAG 38	1
4	Subconjunto lateral dcho.	Right lateral assembly	X	X		PAG 42	1
5	Subconjunto lateral izdo.	Left lateral assembly	X	X		PAG 44	1
6	Subconjunto carcasa bomba	Pump cover assembly	X	X		PAG 46	1
7	Subconjunto tabique térmico EC	EC thermal wall assembly	X	X		PAG 13	1
8	Subconjunto deposito EC	EC tank assembly	X	X		PAG 17	1
9	Subconjunto frontal tarjeta Serie EC	EC series board front assembly	X	X		PAG 40	1
10	Conjunto chapa distribuidor	Manifold cover assembly	X	X		PAG 49	1
11	Conjunto bomba	Pump assembly	X	X		PAG 28	1
12	Junta boca deposito EC	EC tank gasket	X	X		917XX579	1
13	Eje bisagra portones	Door axle	X	X		917XX323	2
14	Chapa matricula	ID plate	X	X		917XX326	1
15	Rejilla deposito	Tank grille	X	X		917XX328	1
16	Remache pop 2.4x5.1	2.4x5.1 pop rivet	X	X		915XX249	6
17	Tuerca hexagonal M5 inox.	Stainless M5 hex nut	X	X		910XX359	16
18	Tuerca hexagonal M8 Inox.	Stainless M8 hex nut	X	X		911XX120	4
19	Arandela grover 8 inox.	Stainless 8 grover washer	X	X		910XX135	4
20	Anillo elástico eje 6	6 elastic axle ring	X	X		914XX952	4
21	Tubo teflón Ø8-Ø6 L=750mm	L=750mm Ø8-Ø6 Teflon tube	X	X		988XX019	1
22	Moldura tabique térmico EC	EC thermal wall molding	X	X		917XX327	1
23	Conjunto rejilla carenaje EC	EC grid assembly	X	X		PAG 50	1

Salidas / Outputs	EC14 A (Bajo caudal / Low flow)	EC14 A (Alto caudal / High flow)	EC14 B (Bajo caudal / Low flow)	EC14 B (Alto caudal / High flow)
2	941XX692	941XX684	941XX695	941XX686
4	941XX693	941XX683	941XX696	941XX687
6	941XX694	941XX685	941XX697	941XX688

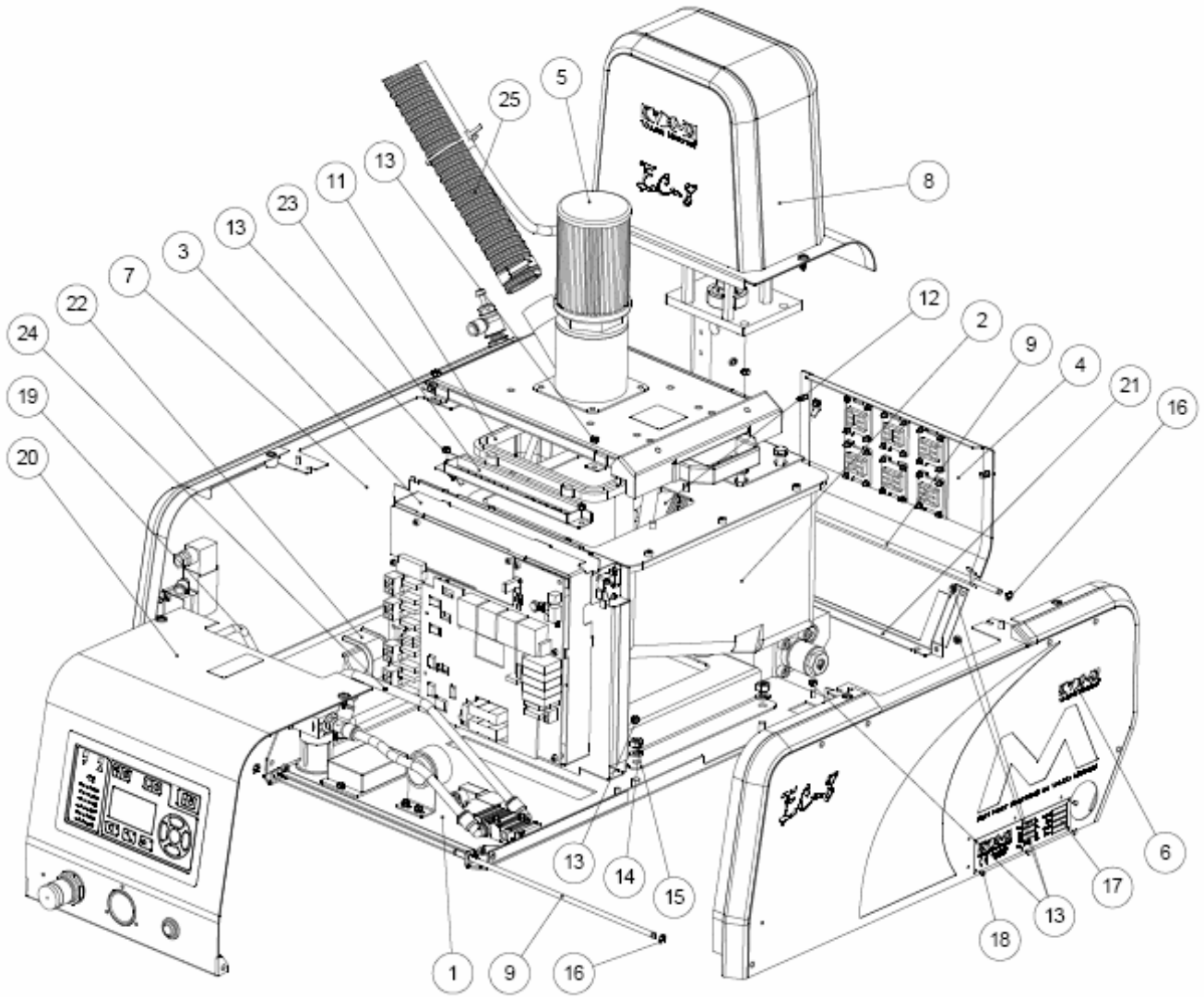
1. D) CONJUNTO ENCOLADOR EC 4 CON CARGADOR / EC4 WITH FEEDER EQUIPMENT ASSEMBLY:



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cuna serie EC	EC series support assembly			X	PAG	1
2	Subconjunto deposito EC	EC tank assembly			X	PAG	1
3	Subconjunto tabique térmico EC	EC thermal wall assembly			X	PAG	1
4	Subconjunto panel trasero	Rear cover assembly			X	PAG	1
5	Subconjunto tapa con cargador	Lid assembly with feeder			X	PAG	1
6	Subconjunto lateral dcho.	Right lateral assembly			X	PAG	1
7	Subconjunto lateral izdo.	Left lateral assembly			X	PAG	1
8	Subconjunto carcasa bomba	Pump cover assembly			X	PAG	1
9	Eje bisagra portones	Door axle			X	917XX578	2
10	Conjunto bomba	Pump assembly			X	PAG	1
11	Junta boca deposito EC	EC tank gasket			X	917XX324	1
12	Rejilla deposito	Tank grille			X	915XX367	1
13	Tuerca hexagonal M5 inox.	Stainless M5 hex nut			X	910XX359	16
14	Tuerca hexagonal M8 Inox.	Stainless M8 hex nut			X	911XX120	4
15	Arandela grover 8 inox.	Stainless 8 grover washer			X	910XX135	4
16	Anillo retención lateral 5	Ring lateral retention 5			X	914XX254	4
17	Chapa matricula	ID plate			X	917XX326	1
18	Remache pop 2.4x5.1	2.4x5.1 pop rivet			X	915XX249	6
19	Tubo teflón Ø8-Ø6 L=600mm	L=600mm Ø8-Ø6 Teflon tube			X	988XX019	1
20	Subconjunto frontal tarjeta	Front board cover assembly			X	PAG 40	1
21	Conjunto chapa distribuidor	Manifold rear cover assy			X	916XX762	1
22	Moldura tabique termico	Thermal wall holding			X	917XX327	1
23	Conjunto rejilla carenaje EC	EC grid assembly			X	PAG 50	1
24	Tubo teflón Ø10-Ø8 longitud: 715mm	Ø10-Ø8 teflon tube length 715 mm			X	915XX543	1
25	Tubos cargador de granza	Vacuum feeding tubes			X	916XX363	1

Salidas / Outputs	EC4 C
2	941XX625
4	941XX626
6	941XX627

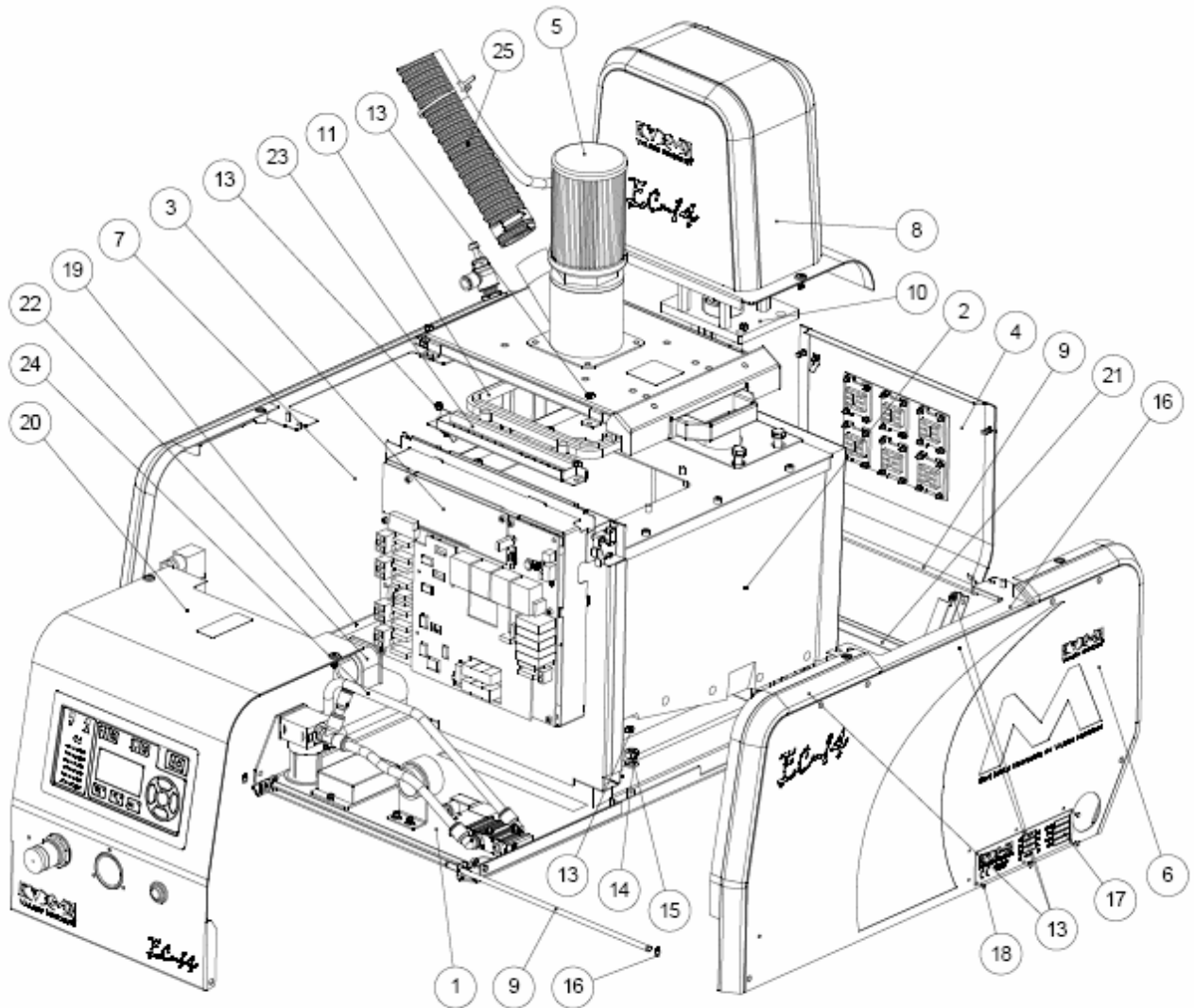
1. E) CONJUNTO ENCOLADOR EC 8 CON CARGADOR / EC8 WITH FEEDER EQUIPMENT ASSEMBLY:



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cuna serie EC	EC series support assembly			X	PAG 11	1
2	Subconjunto deposito EC	EC tank assembly			X	PAG 17	1
3	Subconjunto tabique térmico EC	EC thermal wall assembly			X	PAG 15	1
4	Subconjunto panel trasero	Rear cover assembly			X	PAG 47	1
5	Subconjunto tapa con cargador	Lid assembly with feeder			X	PAG 51	1
6	Subconjunto lateral dcho.	Right lateral assembly			X	PAG 42	1
7	Subconjunto lateral izdo.	Left lateral assembly			X	PAG 44	1
8	Subconjunto carcasa bomba	Pump cover assembly			X	PAG 46	1
9	Eje bisagra portones	Door axle			X	917XX578	2
10	Conjunto bomba	Pump assembly			X	PAG 28	1
11	Junta boca deposito EC	EC tank gasket			X	917XX579	1
12	Rejilla deposito	Tank grille			X	910XX982	1
13	Tuerca hexagonal M5 inox.	Stainless M5 hex nut			X	910XX359	16
14	Tuerca hexagonal M8 Inox.	Stainless M8 hex nut			X	911XX120	4
15	Arandela grover 8 inox.	Stainless 8 grover washer			X	910XX135	4
16	Anillo retención lateral 5	Ring lateral retention 5			X	914XX254	4
17	Chapa matricula	ID plate			X	917XX326	1
18	Remache pop 2.4x5.1	2.4x5.1 pop rivet			X	915XX249	6
19	Tubo teflón Ø8-Ø6 L=675mm	L=675mm Ø8-Ø6 Teflon tube			X	988XX019	1
20	Subconjunto frontal tarjeta	Front board cover assembly			X	PAG 40	1
21	Chapa trasera distribuidor	Manifold rear cover			X	917XX321	1
22	Moldura tabique termico	Thermal wall holding			X	917XX327	1
23	Conjunto rejilla carenaje EC	EC grid assembly			X	PAG 50	1
24	Tubo teflón Ø10-Ø8 longitud: 815mm	Ø10-Ø8 teflon tube length 815 mm			X	915XX543	1
25	Tubos cargador de granza	Vacuum feeding tubes			X	916XX363	1

Salidas / Outputs	EC8 C (Bajo caudal / Low flow)	EC8 C (Alto caudal / High flow)
2	941XX651	941XX668
4	941XX657	941XX669
6	941XX658	941XX670

1. F) CONJUNTO ENCOLADOR EC 14 CON CARGADOR / EC14 WITH FEEDER EQUIPMENT ASSEMBLY:

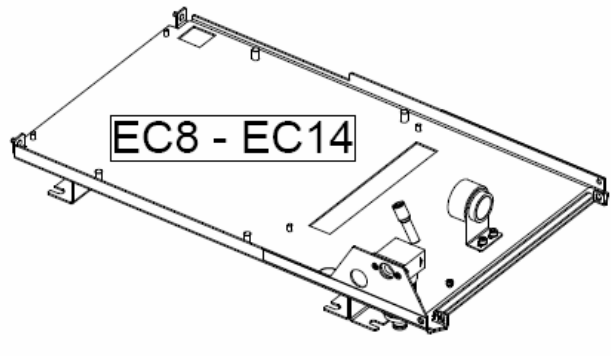
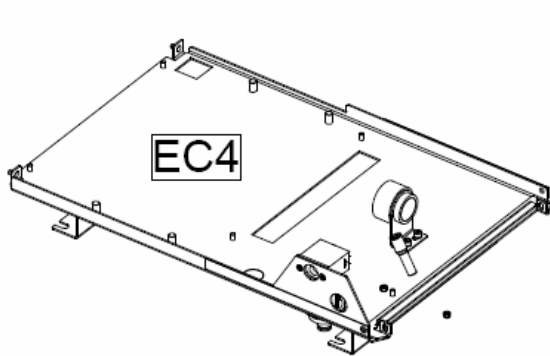
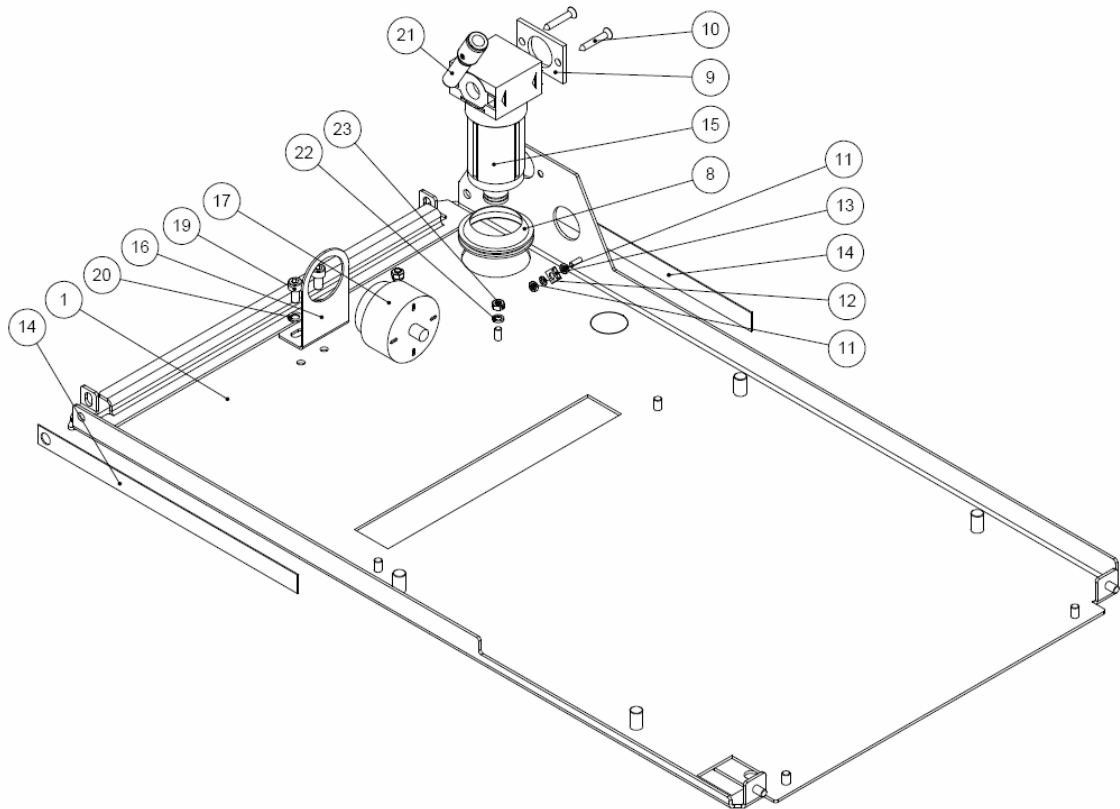


Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cuna serie EC	EC series support assembly			X	PAG	1
2	Subconjunto deposito EC	EC tank assembly			X	PAG	1
3	Subconjunto tabique térmico EC	EC thermal wall assembly			X	PAG	1
4	Subconjunto panel trasero	Rear cover assembly			X	PAG	1
5	Subconjunto tapa con cargador	Lid assembly with feeder			X	PAG	1
6	Subconjunto lateral dcho.	Right lateral assembly			X	PAG	1
7	Subconjunto lateral izdo.	Left lateral assembly			X	PAG	1
8	Subconjunto carcasa bomba	Pump cover assembly			X	PAG	1
9	Eje bisagra portones	Door axle			X	917XX578	2
10	Conjunto bomba	Pump assembly			X	PAG	1
11	Junta boca deposito EC	EC tank gasket			X	917XX579	1
12	Rejilla deposito	Tank grille			X	917XX581	1
13	Tuerca hexagonal M5 inox.	Stainless M5 hex nut			X	910XX359	16
14	Tuerca hexagonal M8 Inox.	Stainless M8 hex nut			X	911XX120	4
15	Arandela grover 8 inox.	Stainless 8 grover washer			X	910XX135	4
16	Anillo retención lateral 5	Ring lateral retention 5			X	914XX254	4
17	Chapa matricula	ID plate			X	917XX326	1
18	Remache pop 2.4x5.1	2.4x5.1 pop rivet			X	915XX249	6
19	Tubo teflón Ø8-Ø6 L=675mm	L=675mm Ø8-Ø6 Teflon tube			X	988XX019	1
20	Subconjunto frontal tarjeta	Front board cover assembly			X	PAG 40	1
21	Chapa trasera distribuidor	Manifold rear cover			X	917XX321	1
22	Moldura tabique termico	Thermal wall holding			X	917XX327	1
23	Conjunto rejilla carenaje EC	EC grid assembly			X	PAG 50	1
24	Tubo teflón Ø10-Ø8 longitud: 815mm	Ø10-Ø8 teflon tube lenght 815 mm			X	915XX543	1
25	Tubos cargador de granza	Vacuum feeding tubes			X	916XX363	1

Salidas / Outputs	EC14 C (Bajo caudal / Low flow)	EC14 C (Alto caudal / High flow)
2	941XX698	941XX689
4	941XX699	941XX690
6	941XX700	941XX691

2. CONJUNTO CUNA / BASE ASSEMBLY:

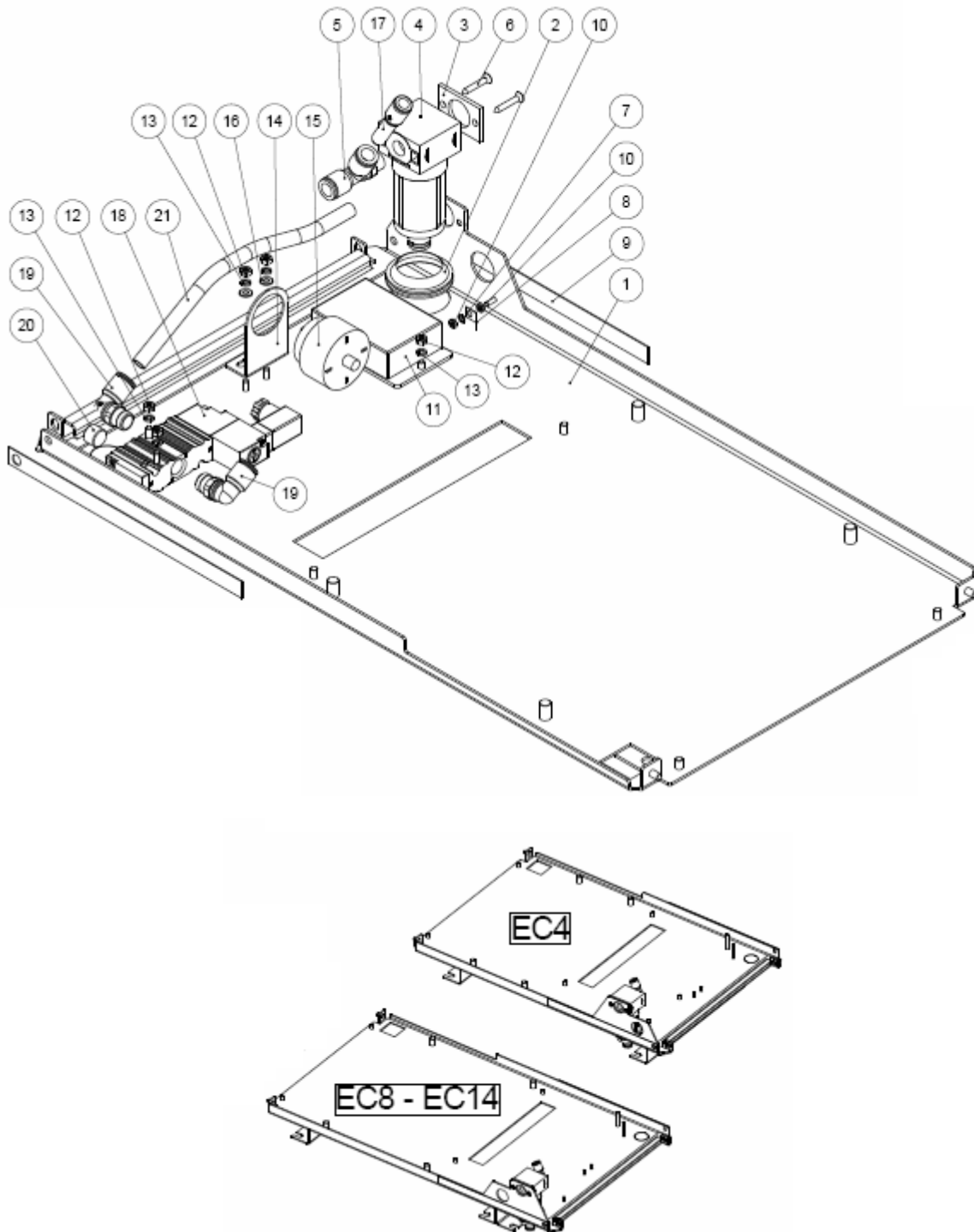
Nota: Valido para equipos hasta número de serie 15206
/ Note: Valid for equipments with serial number up to 15206



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Cuna EC4	EC4 base	X	X	X	914XX978	1
	Cuna EC8/EC14	EC8/EC14 base	X	X	X	914XX979	1
8	Junta filtro	Filter gasket	X	X	X	914XX980	1
9	Junta lateral filtro aire	Air filter lateral gasket	X	X	X	914XX981	1
11	Tuerca hexagonal M3 Inox	Stainless M3 hex nut	X	X	X	914XX982	2
	Racor 90° 1/8 T/8 E/R	E/R 1/8 T/8 90° fitting	X	X		988XX051	1
	Racor T orientable rosca lateral 1/4"	¼" lateral thread T fitting			X	918XX449	1
15	Filtro tomas ¼"	¼ " Tomas filter	X	X	X	918XX450	1
10	Tornillo avellanado rosca chapa 3.9x19	3.9x19 self tapping countersunk screw	X	X	X	918XX633	2
12	Arandela dentada M3	M3 threaded washer	X	X	X	910XX397	1
13	Terminal faston M-panel TE938	M-panel TE938 faston terminal	X	X	X	915XX158	1
14	Junta estanqueidad cuna	Base watertight seal gasket	X	X	X	914XX985	2
16	Soporte zumbador	Regulatory support E/B-Drum			X	918XX529	1
17	Zumbador cuna EC	EC cradle buzzer			X	918XX850	1
20	Arandela grover 5 inox.	Steel lock washer 5			X	910XX085	2
19	Tornillo allen M5x10 inox.	Allen screw M5x10 steel			X	910XX968	2
22	Arandela grower M4	Grover washer m4		X	X	910XX332	
23	Tuerca hexagonal M4 inox	Stainless M4 hex nut		X	X	915XX159	2
21	Reductor tubo 10 / tubo 8	Tube 10 / tube 8 reducer			X	918XX451	1

Descripción	Description	Ref.
Conjunto Cuna EC4 A,B	A,B EC4 base assembly	916XX751
Conjunto Cuna EC4 C	C EC4 base assembly	916XX134
Conjunto Cuna EC8/EC14 C	C EC8/EC14 base assembly	916XX135
Conjunto Cuna EC8/EC14 A,B	A,B EC8/EC14 base assembly	916XX766

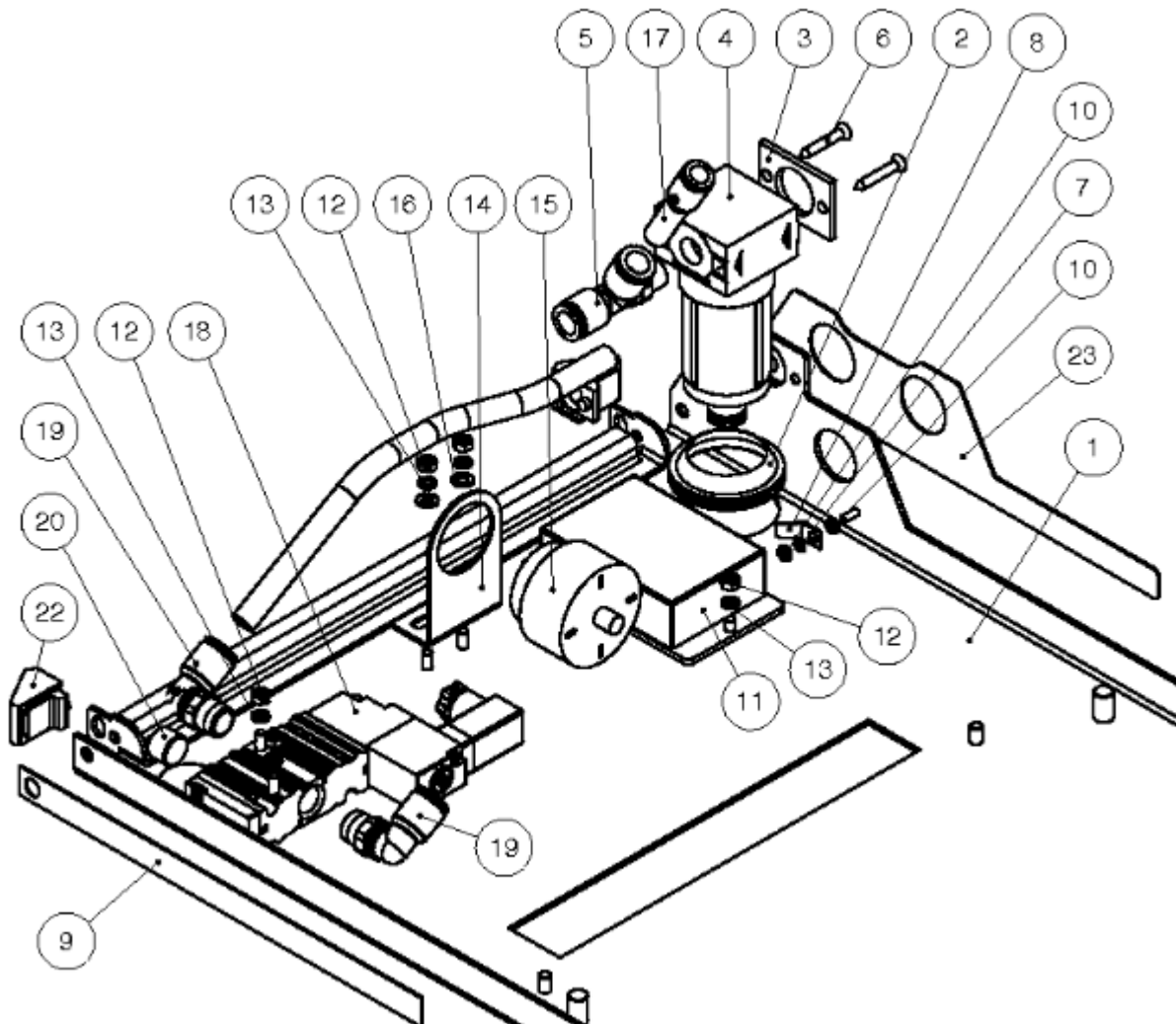
Nota: Valido para equipos desde número de serie 15207 hasta 16537
/ Note: Valid for equipment with serial number from 15207 to 16537



Nº	Descripción	Description	Modelo			Ref.	Qty.		
			A	B	C		A	B	C
1	Cuna EC4	EC4 base	X	X	X	914XX978	1	1	1
	Cuna EC8/EC14	EC8/EC14 base	X	X	X	914XX979	1	1	1
2	Junta filtro	Filter gasket	X	X	X	914XX980	1	1	1
3	Junta lateral filtro aire	Air filter lateral gasket	X	X	X	914XX981	1	1	1
4	Filtro tomas 1/4"	1/4" Tomas filter	X	X	X	918XX450	1	1	1
5	Racor 90° 1/4" tubo 8 E/R	Air fitting 1/4"-T8-90°	X	X		988XX051	1	1	0
	Racor T orientable 1/4"	1/4" Lateral thread fitting			X	918XX449	0	0	1
6	Tornillo avellanado rosca chapa 3.9x25	Screw countersunk thread cap 3,9x25	X	X	X	918XX633	2	2	2
7	Arandela dentada M3	Washer jagged M3	X	X	X	910XX397	1	1	1
8	Terminal faston	Faston terminal	X	X	X	915XX158	1	1	1
9	Junta estanqueidad cuna	Base watertight seal gasket	X	X	X	914XX985	2	2	2
10	Tuerca hexagonal M3 inox.	Stainless M3 hex nut	X	X	X	914XX982	2	2	2
11	Mazo sonda RECHNER	Rechner level sensor cable assy		X	X	914XX327	0	1	1
12	Tuerca hexagonal M4 inox.	Stainless M4 hex nut		X	X	915XX159	0	2	6
13	Arandela grover M4 inox.	Grower washer M4 BO		X	X	910XX332	0	2	6
14	Soporte	Support			X	918XX529	0	0	1
15	Zumbador	Buzzer			X	918XX850	0	0	1
16	Arandela plana 4 inox.	Washer flat M4 SS			X	914XX330	0	0	2
17	Reductor tubo 10 / tubo 8	Tube 10/Tube 8 reducer			X	918XX451	0	0	1
18	Electroválvula 3/2 vias 24VDC 5,4W	3/2 ways 24VDC electric valve			X	915XX032	0	0	1
19	Racor 90° 1/4" E/R tubo 10	Gas BSP 1/4" 90° fitting			X	918XX630	0	0	2
20	Tapon 1/4" GAS BSP	Plug 1/4" Gas BSP			X	915XX264	0	0	1
21	Tubo poliuretano 10x7 azul	Polyurethane blueg 10x7 pipe			X	918XX878	0	0	1

Descripción	Description	Ref.
Subconjunto cuna EC4 modelo A	EC4 type A base assembly	916XX751
Subconjunto cuna EC4 modelo B	EC4 type B base assembly	917XX885
Subconjunto cuna EC4 modelo C	EC4 type C base assembly	916XX134
Subconjunto cuna EC8/EC14 modelo A	EC8/EC14 type A base assembly	916XX766
Subconjunto cuna EC8/EC14 modelo B	EC8/EC14 type B base assembly	917XX886
Subconjunto cuna EC8/EC14 modelo C	EC8/EC14 type C base assembly	916XX135

**Nota: Valido para equipos desde número de serie 16538
/ Note: Valid for equipment with serial number from 16538**



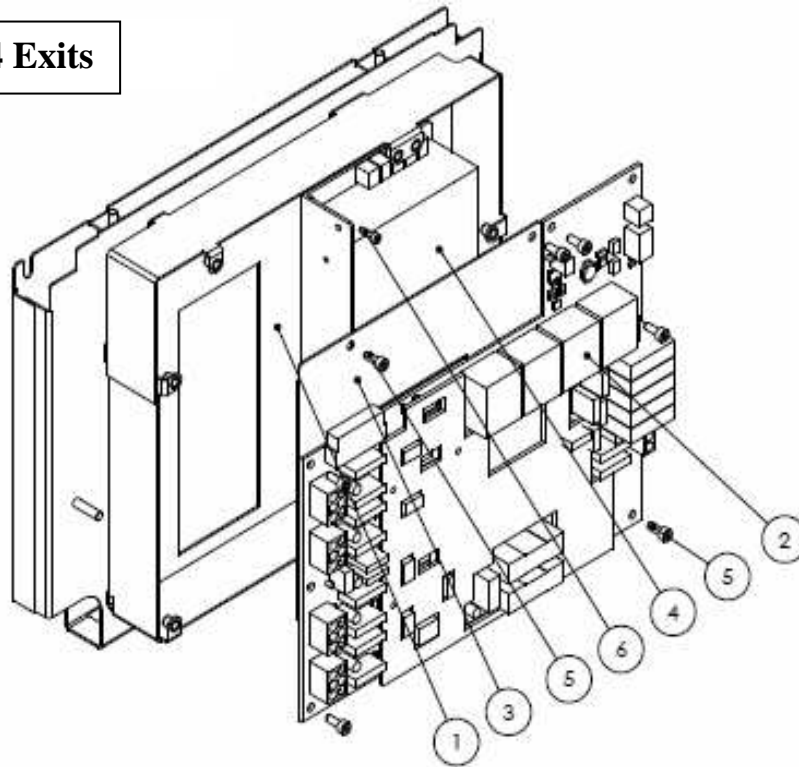
Nº	Descripción	Description	Modelo			Ref.	Qty.		
			A	B	C		A	B	C
1	Cuna EC4	EC4 base	X	X	X	914XX978	1	1	1
	Cuna EC8/EC14	EC8/EC14 base	X	X	X	914XX979	1	1	1
2	Junta filtro	Filter gasket	X	X	X	914XX980	1	1	1
3	Junta lateral filtro aire	Air filter lateral gasket	X	X	X	914XX981	1	1	1
4	Filtro tomas 1/4"	1/4" Tomas filter	X	X	X	918XX450	1	1	1
5	Racor 90° 1/4" tubo 8 E/R	Air fitting 1/4"-T8-90°	X	X		988XX051	1	1	0
	Racor T orientable 1/4"	1/4" Lateral thread fitting			X	918XX449	0	0	1
6	Tornillo avellanado rosca chapa 3,9x25	Screw countersunk thread cap 3,9x25	X	X	X	918XX633	2	2	2
7	Arandela dentada M3	Washer jagged M3	X	X	X	910XX397	1	1	1
8	Terminal faston	Faston terminal	X	X	X	915XX158	1	1	1
9	Junta estanqueidad cuna	Base watertight seal gasket	X	X	X	914XX985	2	2	2
10	Tuerca hexagonal M3 inox.	Stainless M3 hex nut	X	X	X	914XX982	2	2	2
11	Mazo sonda RECHNER	Rechner level sensor cable assy		X	X	914XX327	0	1	1
12	Tuerca hexagonal M4 inox.	Stainless M4 hex nut		X	X	915XX159	0	2	6
13	Arandela grover M4 inox.	Grower washer M4 BO		X	X	910XX332	0	2	6
14	Soporte	Support			X	918XX529	0	0	1
15	Zumbador	Buzzer			X	918XX850	0	0	1
16	Arandela plana 4 inox.	Washer flat M4 SS			X	914XX330	0	0	2
17	Reductor tubo 10 / tubo 8	Tube 10/Tube 8 reducer			X	918XX451	0	0	1
18	Electroválvula 3/2 vias 24VDC 5,4W	3/2 ways 24VDC electric valve			X	915XX032	0	0	1
19	Racor 90° 1/4" E/R tubo 10	Gas BSP 1/4" 90° fitting			X	918XX630	0	0	2
20	Tapon 1/4" GAS BSP	Plug 1/4" Gas BSP			X	915XX264	0	0	1
21	Tubo poliuretano 10x7 azul	Polyurethane blueg 10x7 pipe			X	918XX878	0	0	1
22	Moldura cuna	Base trim	x	x	x	913XX542	2	2	2
23	Junta estanqueidad acometidas cuna	Base sealing joint	x	x	x	913XX543	1	1	1

Descripción	Description	Ref.
Subconjunto cuna EC4 modelo A	EC4 type A base assembly	916XX751
Subconjunto cuna EC4 modelo B	EC4 type B base assembly	917XX885
Subconjunto cuna EC4 modelo C	EC4 type C base assembly	916XX134
Subconjunto cuna EC8/EC14 modelo A	EC8/EC14 type A base assembly	916XX766
Subconjunto cuna EC8/EC14 modelo B	EC8/EC14 type B base assembly	917XX886
Subconjunto cuna EC8/EC14 modelo C	EC8/EC14 type C base assembly	916XX135

3. CONJUNTO TABIQUE TERMICO / THERMAL WALL ASSEMBLY:

Nota: Valido para equipos hasta número de serie 15206
/ Note: Valid for equipments with serial number up to 15206

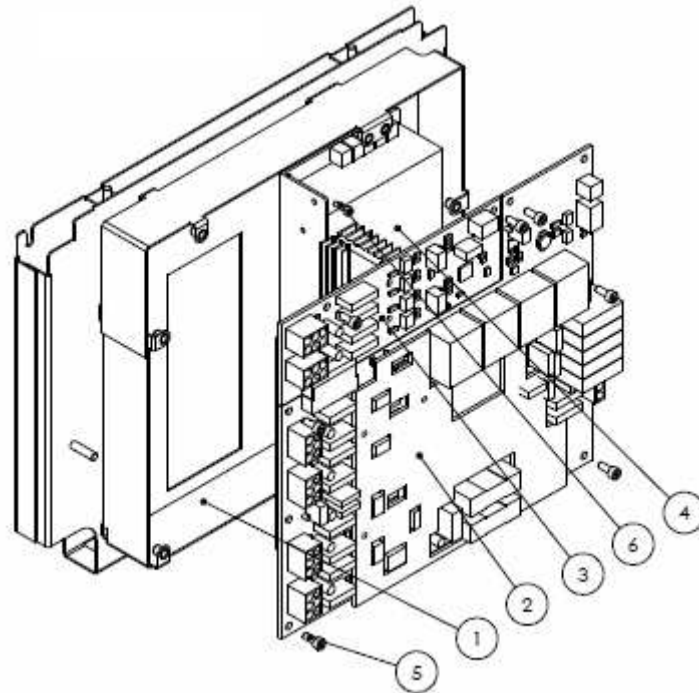
4 Salidas / 4 Exits



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Tabique térmico EC4/EC8	EC4/EC8 thermal wall	X	X		918XX641	1
	Tabique térmico EC14	EC14 thermal wall	X	X		914XX987	
	Tabique térmico EC4/EC8 con cargador	EC4/EC8 thermal wall with feeder			X	914XX988	
2	PCB ASSY 12 zone	PCB ASSY 12 zone	X	X	X	151XX651	1
3	Chapa sustitución tarjeta 6 salidas	6 outputs board substitution plate	X	X	X	918XX642	1
4	Fuente alimentación 75W 24VDC	75W 24VDC power supply	X	X	X	918XX643	1
5	Tornillo allen M4x10 inox	Stainless M4x10 allen screw	X	X	X	910XX129	7
6	Tornillo allen M3x10 inox	Stainless M3x10 allen screw	X	X	X	910XX084	2

Descripción	Description	Ref.
Subconjunto Tabique térmico EC4/EC8 A,B	A,B EC4/EC8 thermal wall assembly	916XX752
Subconjunto Tabique térmico EC14 A,B	A,B EC14 thermal wall assembly	916XX753
Subconjunto Tabique térmico EC4/EC8 C	C EC4/EC8 thermal wall assembly	916XX767
Subconjunto Tabique térmico EC14 C	C EC14 thermal wall assembly	916XX631

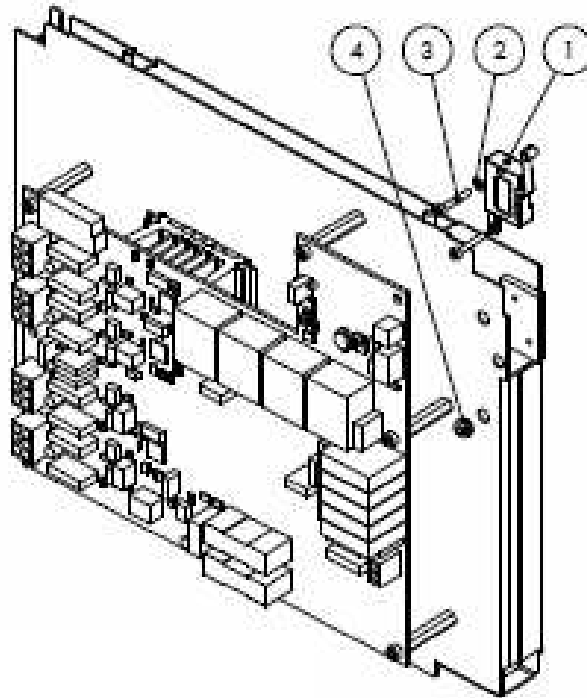
6 Salidas / 6 Exits



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Tabique térmico EC4/EC8	EC4/EC8 thermal wall	X	X		918XX641	1
	Tabique térmico EC14	EC14 thermal wall	X	X		914XX987	
	Tabique térmico EC4/EC8 con cargador	EC4/EC8 thermal wall with feeder			X	918XX988	
2	PCB ASSY 12 zone power board	PCB ASSY 12 zone power board	X	X	X	151XX651	1
3	PCB ASSY 12 zone	PCB ASSY 12 zone	X	X	X	151XX649	1
4	Fuente alimentación 75W 24VDC	75W 24VDC power supply	X	X	X	918XX643	1
5	Tornillo allen M4x10 inox	Stainless M4x10 allen screw	X	X	X	910XX129	7
6	Tornillo allen M3x10 inox	Stainless M3x10 allen screw	X	X	X	910XX084	2

Descripción	Description	Ref.
Subconjunto Tabique térmico EC4/EC8 A,B	A,B EC4/EC8 thermal wall assembly	916XX634
Subconjunto Tabique térmico EC14 A,B	A,B EC14 thermal wall assembly	916XX632
Subconjunto Tabique térmico EC4/EC8 C	C EC4/EC8 thermal wall assembly	916XX767
Subconjunto Tabique térmico EC14 C	C EC14 thermal wall assembly	

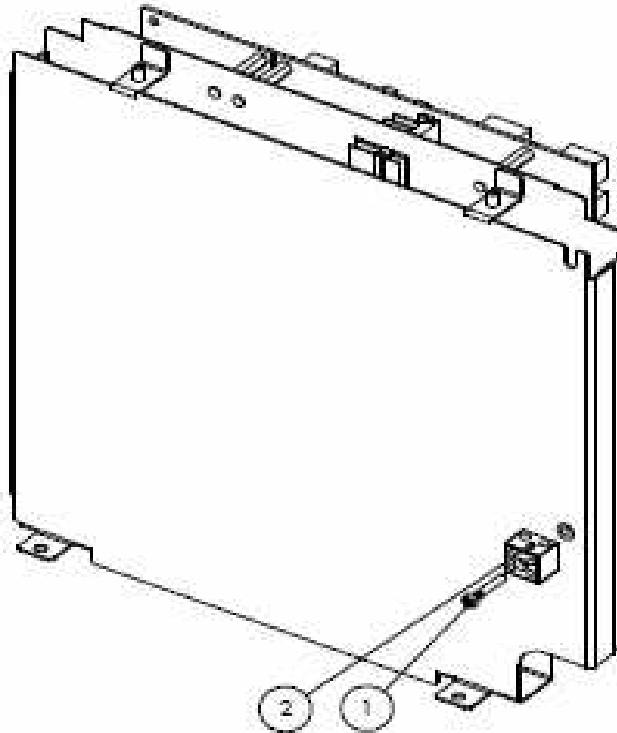
**Solo en equipos con
cargador / Only in units
with feeder**



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Micro cargador EC	EC feeder micro			X	914XX998	1
2	Arandela grover M3 Inox.	Stainless M3 grover washer			X	910XX328	2
3	Tornillo allen M3x20 Inox.	Stainless M3x20 allen screw			X	910XX166	2
4	Pasatabiques goma Ø4	Ø4 gum bulkhead			X	917XX574	1

Descripción	Description	Ref.
Subconjunto Tabique térmico EC4/EC8 4s con cargador C	C EC4/EC8 4 outputs thermal wall assembly with feeder	916XX767

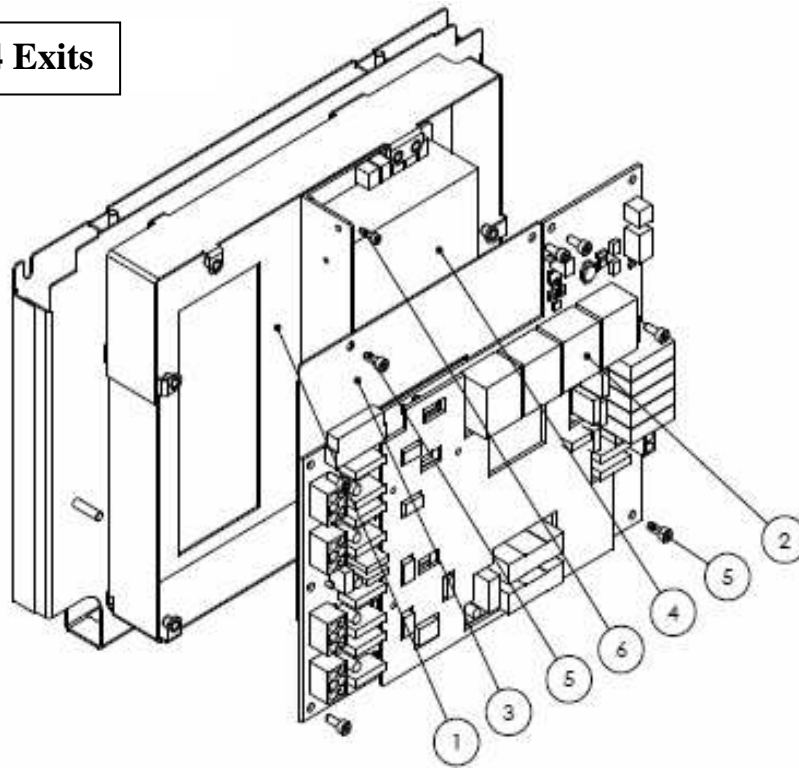
**Solo en equipo EC14 /
Only in EC14 units**



Nº	Descripción	Description	Ref.	Qty
1	Tornillo allen M4x25 inox	Stainless M4x25 allen screw	917XX407	1
2	Regleta ceramica 2 polos	2 poles ceramic connector	910XX390	1

Nota: Valido para equipos desde número de serie 15207
/ Note: Valid for equipments with serial number from 15207

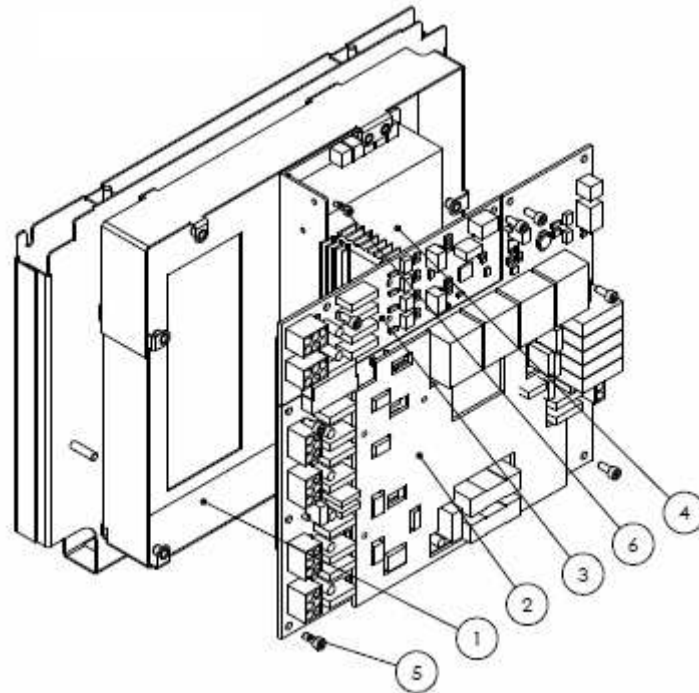
4 Salidas / 4 Exits



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Tabique térmico EC4/EC8	EC4/EC8 thermal wall	X	X	X	918XX953	1
	Tabique térmico EC14	EC14 thermal wall	X	X	X	918XX954	
2	PCB ASSY 12 zone	PCB ASSY 12 zone	X	X	X	151XX651	1
3	Chapa sustitución tarjeta 6 salidas	6 outputs board substitution plate	X	X	X	918XX642	1
4	Fuente alimentación 75W 24VDC	75W 24VDC power supply	X	X	X	918XX643	1
5	Tornillo allen M4x10 inox	Stainless M4x10 allen screw	X	X	X	910XX129	7
6	Tornillo allen M3x10 inox	Stainless M3x10 allen screw	X	X	X	910XX084	2

Descripción	Description	Ref.
Subconjunto Tabique térmico EC4/EC8 A,B	A,B EC4/EC8 thermal wall assembly	917XX864
Subconjunto Tabique térmico EC14 A,B	A,B EC14 thermal wall assembly	917XX865
Subconjunto Tabique térmico EC4/EC8 C	C EC4/EC8 thermal wall assembly	917XX866
Subconjunto Tabique térmico EC14 C	C EC14 thermal wall assembly	917XX867

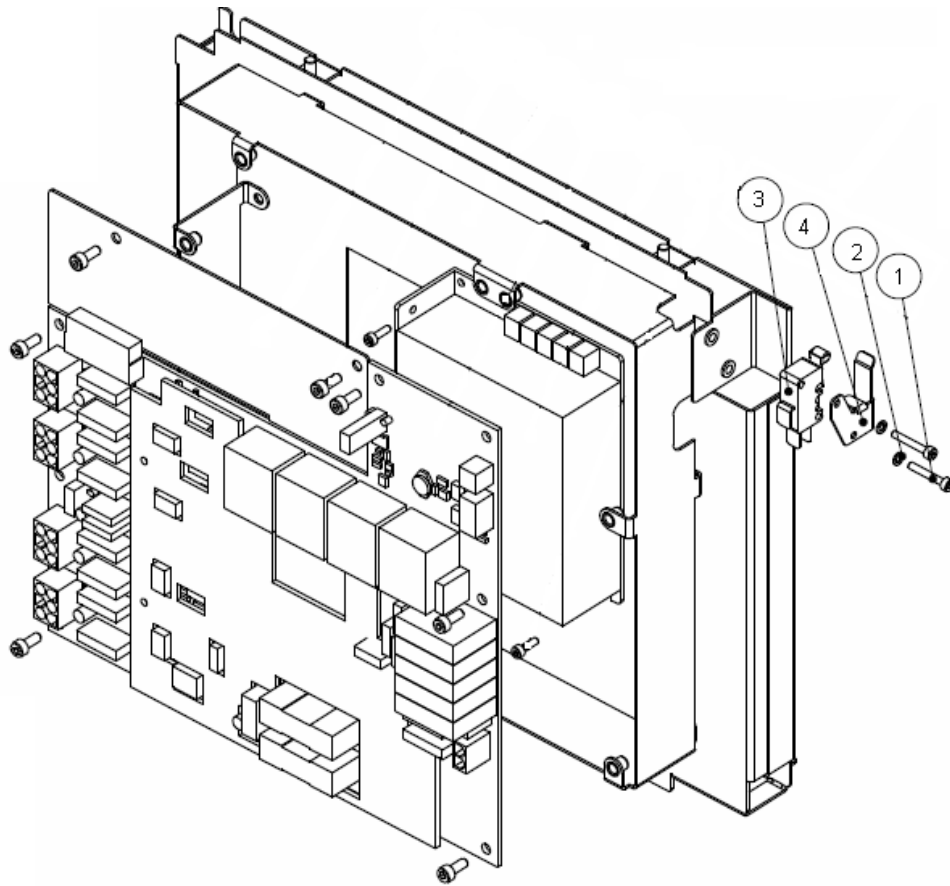
6 Salidas / 6 Exits



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Tabique térmico EC4/EC8	EC4/EC8 thermal wall	X	X	X	918XX953	1
	Tabique térmico EC14	EC14 thermal wall	X	X	X	918XX954	
2	PCB ASSY 12 zone	PCB ASSY 12 zone	X	X	X	151XX651	1
3	PCB ASSY 5/6 zone	PCB ASSY 5/6 zone	X	X	X	151XX649	1
4	Fuente alimentación 75W 24VDC	75W 24VDC power supply	X	X	X	918XX643	1
5	Tornillo allen M4x10 inox	Stainless M4x10 allen screw	X	X	X	910XX129	7
6	Tornillo allen M3x10 inox	Stainless M3x10 allen screw	X	X	X	910XX084	2

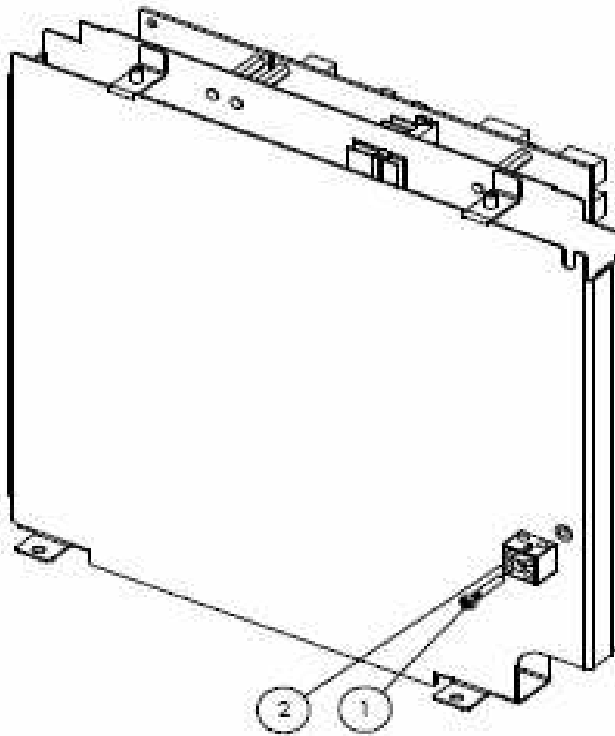
Descripción	Description	Ref.
Subconjunto Tabique térmico EC4/EC8 A,B	A,B EC4/EC8 thermal wall assembly	917XX868
Subconjunto Tabique térmico EC14 A,B	A,B EC14 thermal wall assembly	917XX869
Subconjunto Tabique térmico EC4/EC8 C	C EC4/EC8 thermal wall assembly	917XX870
Subconjunto Tabique térmico EC14 C	C EC14 thermal wall assembly	917XX871

**Solo en equipos con
cargador / Only in
units with feeder**



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Tornillo allen M3x20 Inox.	Stainless M3x20 allen screw			X	910XX166	2
2	Tornillo allen M3x20 Inox.	Stainless M3x20 allen screw			X	910XX166	2
3	Micro cargador EC	EC feeder micro			X	913XX918	1
4	Guía pivote micro	Guide pin micro			X	918XX952	1

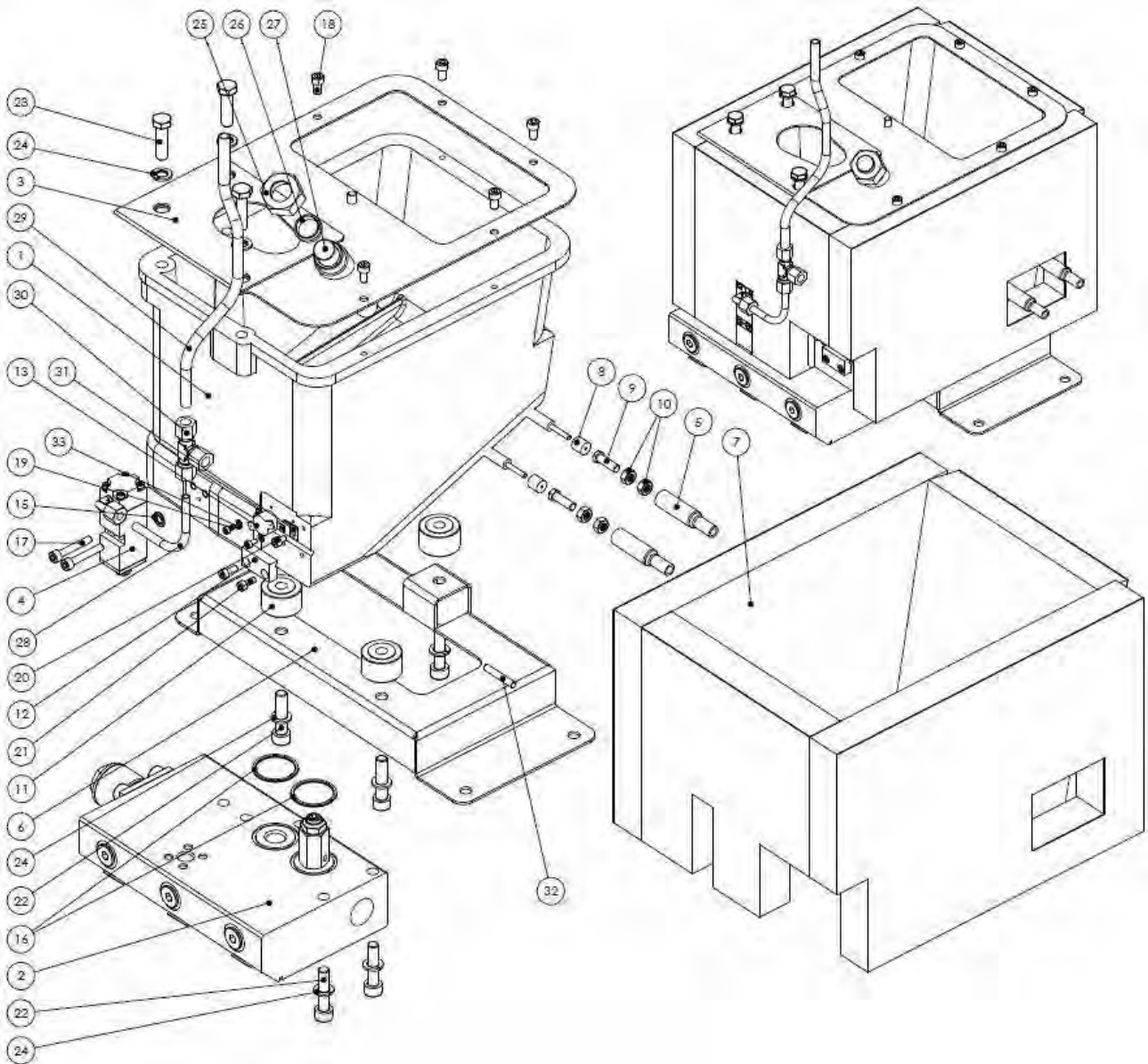
**Solo en equipos EC14 /
Only in EC14 units**



Nº	Descripción	Description	Ref.	Qty
1	Tornillo allen M4x25 inox	Stainless M4x25 allen screw	917XX407	1
2	Regleta ceramica 2 polos	2 polos ceramic connector	910XX390	1

4. CONJUNTO DEPOSITO EC / EC TANK ASSEMBLY:

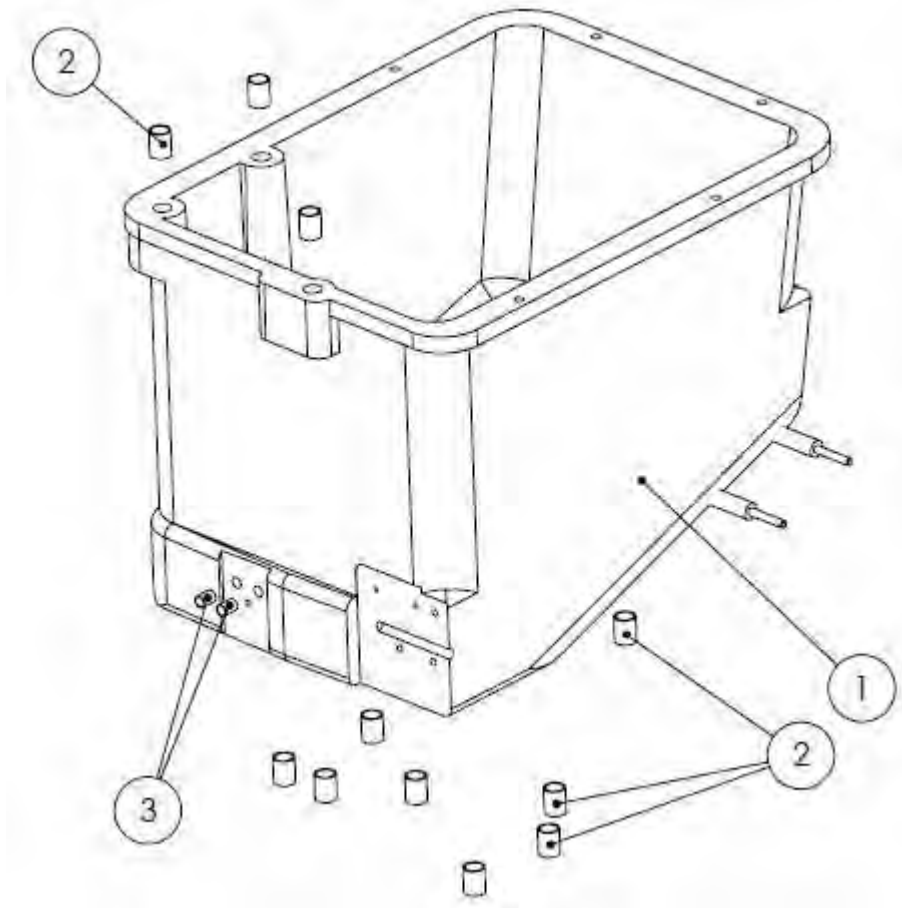
EC4



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Kit deposito EC4	EC4 tank kit	X	X	X	PAG 24	1
2	Subconjunto distribuidor serie EC	EC series manifold assembly	X	X	X	PAG 30	1
3	Chapa boca deposito EC4	EC4 tank top plate	X			917XX037	1
	Chapa boca deposito EC4	EC4 tank top plate		X	X		1
4	Conjunto modulo descarga	Download module assembly	X	X	X	919XX404	1
5	Capuchón aislamiento bornas	Terminals insulation cover	X	X	X	914XX999	2
6	Brida sonda	Sensor bridle	X	X	X	914XX169	1
7	Kit aislamiento deposito EC4	EC4 tank insulation kit	X	X	X	916XX836	1
8	Tapon bornes resistencia	Heater bar plug	X	X	X		2
9	Extensión bornes resistencia	Heater bar terminals extension	X	X	X		2
10	Tuerca hexagonal M6	M6 hex nut	X	X	X	917XX048	4
11	Aislante pata deposito	Insulation tank leg	X	X	X	910XX072	3
12	Brida sonda	Sensor bridle	X	X	X	914XX169	1
13	Mazo termostato EC4	EC4 thermostat connector	X	X	X	917XX021	1
14	Mazo resistencia depósito EC4	EC4 Tank heater connector	X	X	X	917XX046	
15	Junta torica viton 7,65x1,78	7,65x1,78 viton o´ring	X	X	X	910XX324	1
16	Junta tórica viton 30x2	30x2 viton o´ring	X	X	X	914XX090	2
17	Tornillo allen 10-32 UNF 1-1/4" inox	Stainless 10-32 UNF 1-1/4" allen screw	X	X	X	912XX368	2
18	Tornillo allen M5x10 inox.	Stainless M5x10 allen screw	X	X	X	910XX968	5
19	Tornillo allen 3x6 inox.	Stainless 3x6 allen screw	X	X	X	911XX132	2
20	Tornillo allen M4x6 inox.	Stainless M4x6 allen screw	X	X	X	910XX981	1
21	Tornillo allen M4x10 inox.	Stainless M4x10 allen screw	X	X	X	910XX129	2
22	Tornillo allen M8x35 inox.	Stainless M8x35 allen screw	X	X	X	915XX238	8
23	Tornillo hexagonal M8x30 inox	Stainless M8x30 hex screw	X	X	X	911XX125	3
24	Arandela grover 8 inox	Stainless 8 grover washer	X	X	X	910XX135	11
25	Tuerca racor ovalillo Ø16	Ø16 ovalillo fitting nut		X	X	918XX444	1
26	Ovalillo Ø16	Ø16 ovalillo		X	X	918XX445	1
27	Bulbo sonda	Probe bulb		X	X		1
28	Tubo modulo descarga EC4 – EC8	EC4 - EC8 download module tube	X	X	X	918XX446	1
29	Tubo acometida bomba LF	LF pump rush tube	X	X	X	918XX447	1
30	Racor T con ovalillo tubo 8 / salida lateral tubo Ø6	Tube Ø6 lateral output / tube 8 fitting T with ovalillo	X	X	X	918XX448	1
31	Terminal faston M-panel TE-938	Faston M-panel TE-938 terminal	X	X	X	915XX158	1
32	Sonda temperatura	Temperatura probe	X	X	X	918XX452	1
33	Arandela dentada M3	Stainless 8 grover washer	X	X	X	910XX135	2

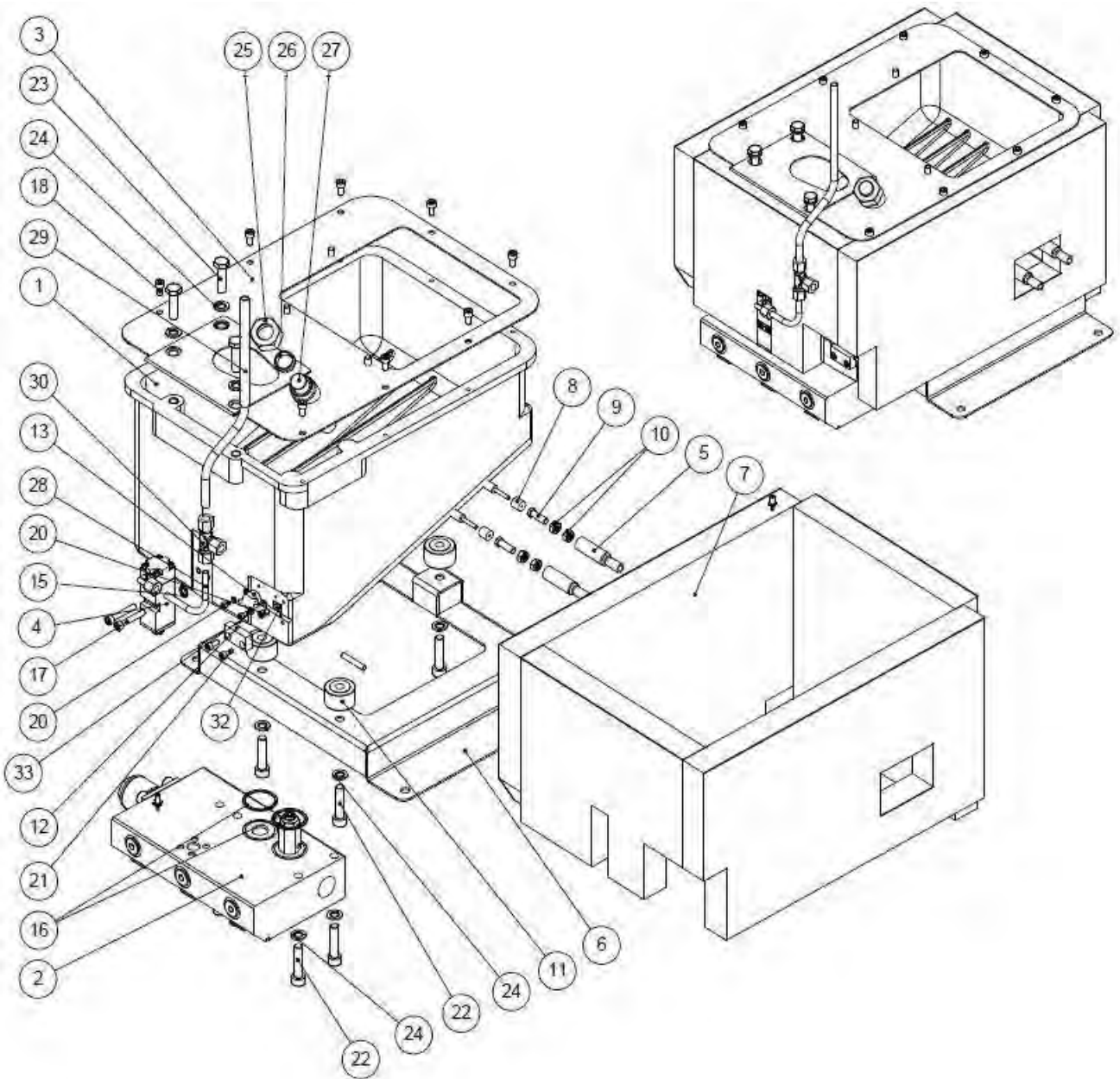
Nº	Descripción	Description	Ref.	Qty
1	Conjunto deposito EC4 A LF	EC4 A LF tank assembly	916XX754	1
2	Conjunto deposito EC4 B,C LF	EC4 B,C LF tank assembly	916XX635	1

Kit deposito EC4 / EC4 tank kit (916XX746):



Nº	Descripción	Description	A	B	C	Qty
1	Deposito EC4 mecanizado	EC mechanized tank	X	X	X	1
2	Helicoil M8x12	M8x12 Helicoil	X	X	X	11
3	Helicoil M5x7,5	M5x7,5 Helicoil	X	X	X	2

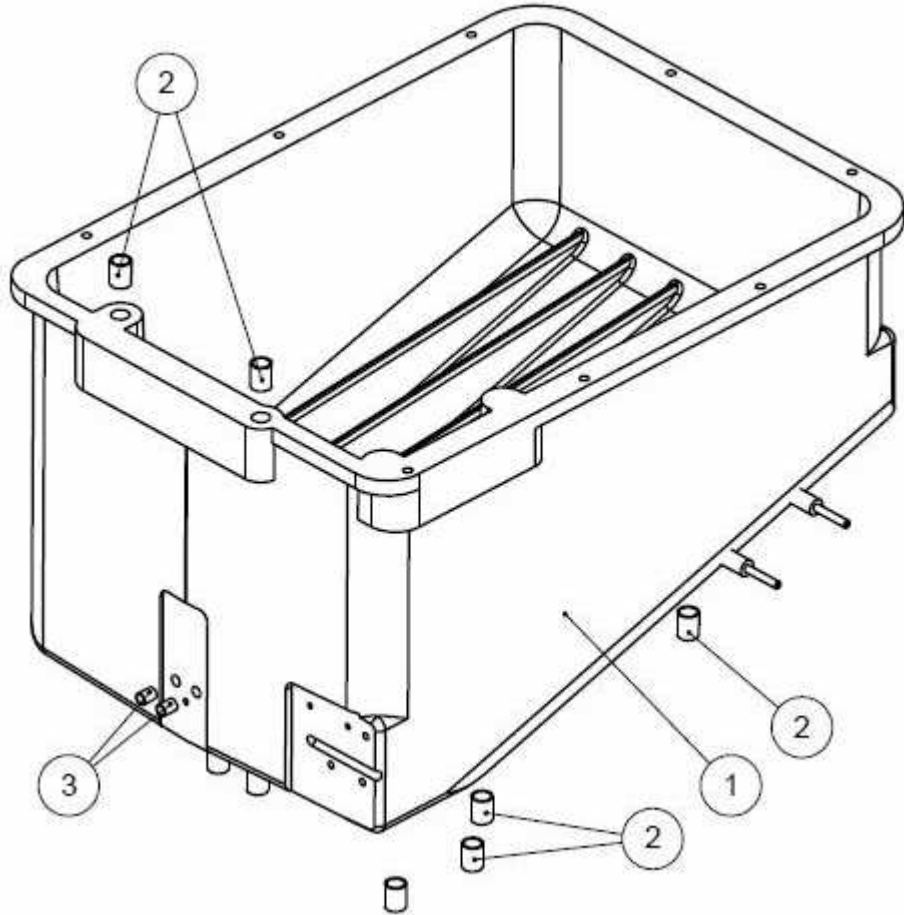
EC8



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Kit deposito EC8	EC8 tank kit	X	X	X	PAG 22	1
2	Subconjunto distribuidor serie EC	EC series manifold assembly	X	X	X	PAG 25	1
3	Chapa boca deposito EC8	EC8 tank top plate	X			917XX044	1
	Chapa boca deposito EC8	EC8 tank top plate		X	X	913XX759	1
4	Conjunto modulo descarga	Download module assembly	X	X	X	919XX404	1
5	Capuchón aislamiento bornas	Terminals insulation cover	X	X	X	914XX999	2
6	Soporte deposito EC8	EC8 tank support	X	X	X	917XX055	1
7	Kit aislamiento deposito EC	EC8 tank insulation kit	X	X	X	916XX836	1
8	Tapon bornes resistencia	Heater bar plug	X	X	X		2
9	Extensión bornes resistencia	Heater bar terminals extension	X	X	X		2
10	Tuerca hexagonal M6	M6 hex nut	X	X	X	917XX048	4
11	Aislante pata deposito	Insulation tank leg	X	X	X	910XX072	3
12	Brida sonda	Sensor bridle	X	X	X	914XX169	1
13	Mazo termostato EC8	EC8 thermostat connector	X	X	X	917XX041	1
14	Mazo resistencia depósito EC4	EC4 Tank heater connector	X	X	X	917XX046	1
15	Junta torica viton 7,65x1,78	7,65x1,78 viton o'ring	X	X	X	910XX324	1
16	Junta tórica viton 30x2	30x2 viton o'ring	X	X	X	914XX090	2
17	Tornillo allen 10-32 UNF 1-1/4" inox	Stainless 10-32 UNF 1-1/4" allen screw	X	X	X	912XX368	2
18	Tornillo allen M5x10 inox.	Stainless M5x10 allen screw	X	X	X	910XX968	8
19	Tornillo allen 3x6 inox.	Stainless 3x6 allen screw	X	X	X	911XX132	2
20	Tornillo allen M4x6 inox.	Stainless M4x6 allen screw	X	X	X	910XX981	1
21	Tornillo allen M4x10 inox.	Stainless M4x10 allen screw	X	X	X	910XX129	2
22	Tornillo allen M8x35 inox.	Stainless M8x35 allen screw	X	X	X	915XX238	8
23	Tornillo hexagonal M8x30 inox	Stainless M8x30 hex screw	X	X	X	911XX125	3
24	Arandela grover 8 inox	Stainless 8 grover washer	X	X	X	910XX135	11
25	Tuerca racor ovalillo Ø16	Ø16 ovalillo fitting nut		X	X	918XX444	1
26	Ovalillo Ø16	Ø16 ovalillo		X	X	918XX445	1
27	Bulbo sonda	Probe bulb		X	X		1
28	Tubo modulo descarga EC4 – EC8	EC4 - EC8 download module tube	X	X	X	918XX446	1
29	Tubo acometida bomba LF	LF pump rush tube	X	X	X	918XX447	1
	Tubo acometida bomba HF	HF pump rush tube	X	X	X		
30	Racor T con ovalillo tubo 8 / salida lateral tubo Ø6	Tube Ø6 lateral output / tube 8 fitting T with ovalillo	X	X	X	918XX448	1
31	Sonda temperatura	Temperatura probe	X	X	X	918XX453	1
32	Terminal faston M-panel TE-938	Faston M-panel TE-938 terminal	X	X	X	915XX158	1
33	Arandela dentada M3	Stainless 8 grover washer	X	X	X	910XX135	2

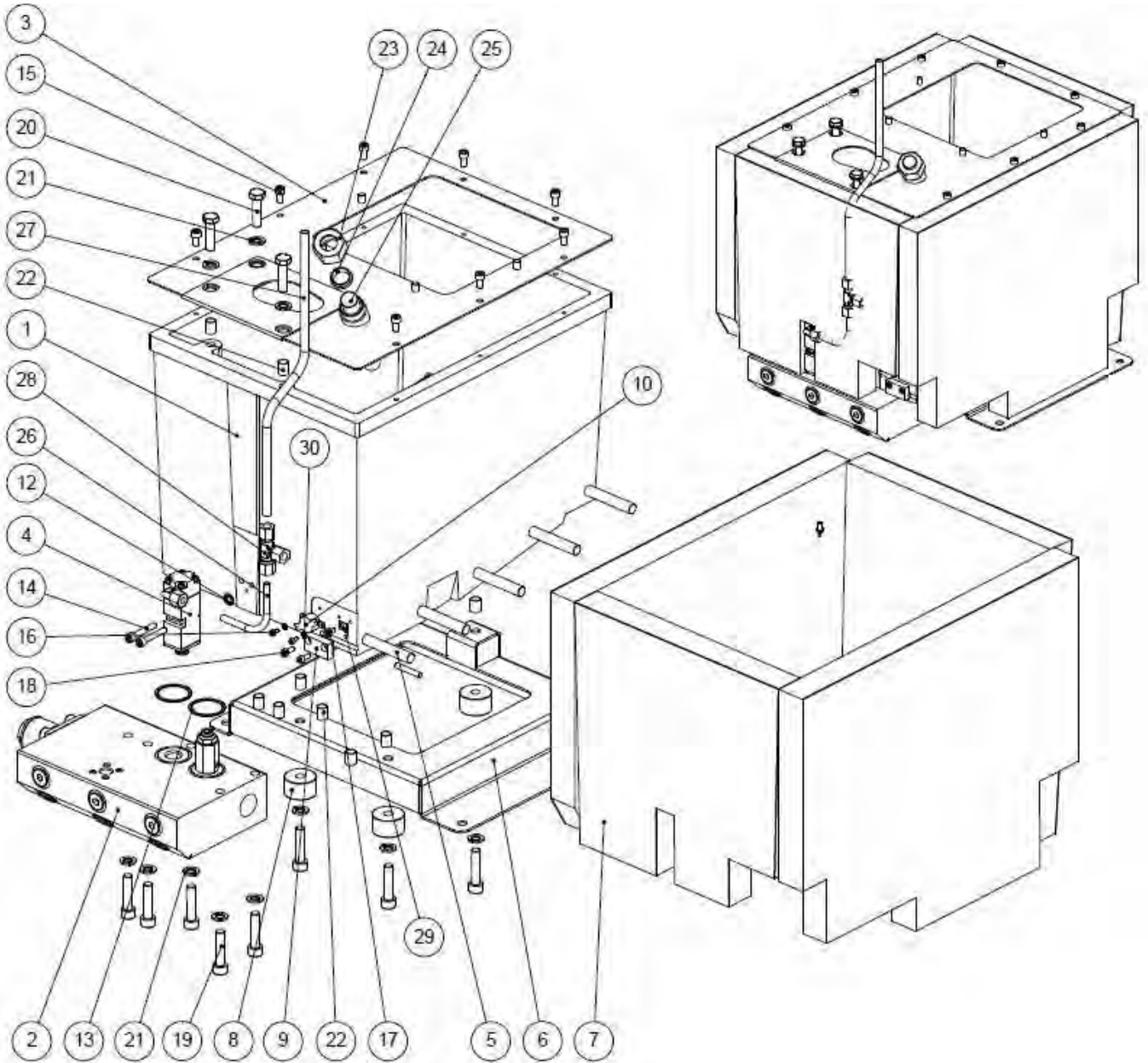
Nº	Descripción	Description	Ref.	Qty
1	Conjunto deposito EC8 A LF	EC8 A LF tank assembly	916XX755	1
2	Conjunto deposito EC8 A HF	EC8 A HF tank assembly	916XX628	1
3	Conjunto deposito EC8 B,C LF	EC8 B,C LF tank assembly	916XX629	1
4	Conjunto deposito EC8 B,C HF	EC8 B,C HF tank assembly	916XX630	1

Kit deposito EC8 / EC8 tank kit (916XX749):



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Deposito EC8 mecanizado	EC mechanized tank	X	X	X	917XX113	1
2	Helicoil M8x12	M8x12 Helicoil	X	X	X		10
3	Helicoil M5x7,5	M5x7,5 Helicoil	X	X	X		2

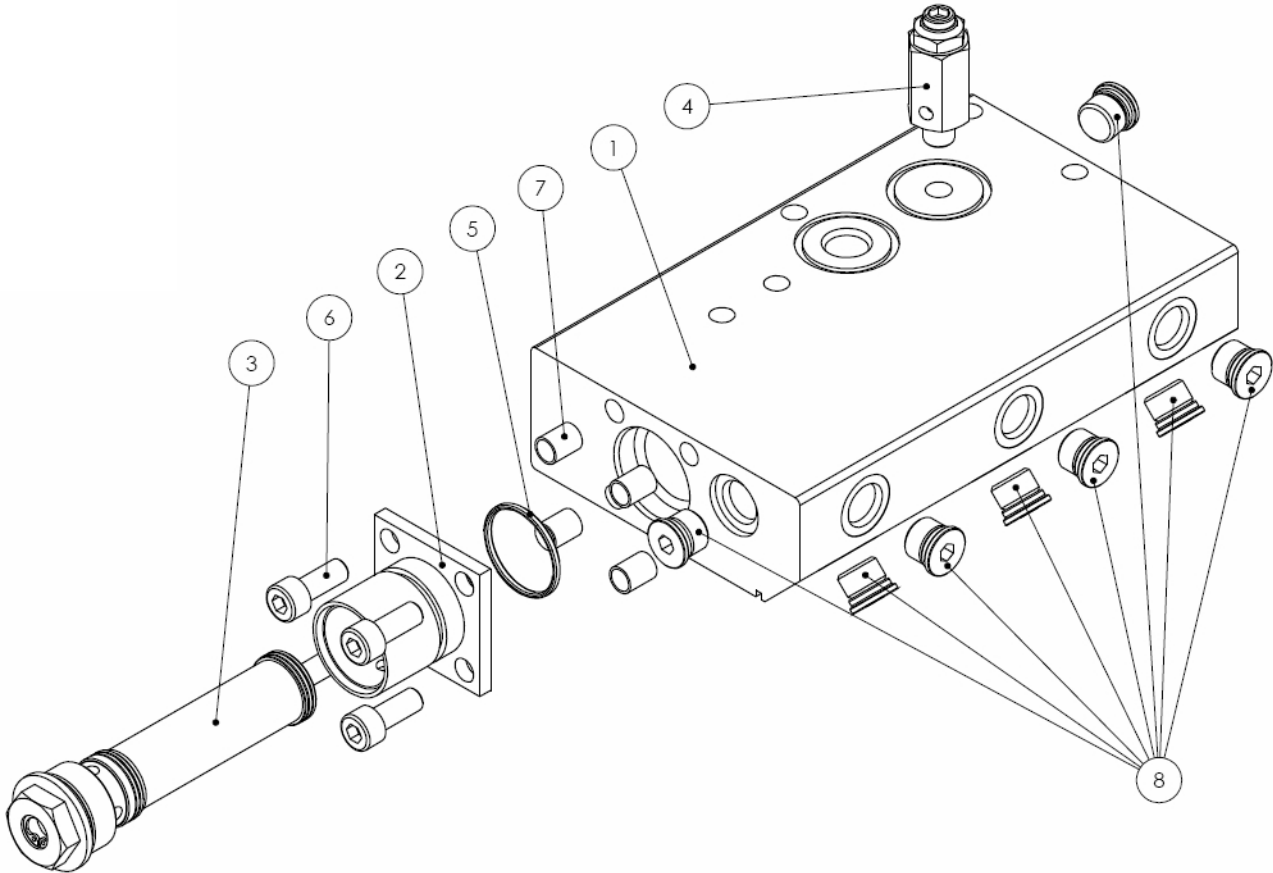
EC14



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Deposito 14 kg mecanizado EC	EC mecanized 14 kg tank	X	X	X		1
2	Subconjunto distribuidor serie EC	EC series manifold assembly	X	X	X	PAG 25	1
3	Chapa boca deposito EC14	EC8 tank top plate	X			917XX051	1
	Chapa boca deposito EC14	EC8 tank top plate		X	X	913XX760	1
4	Conjunto modulo descarga	Download module assembly	X	X	X	919XX404	1
5	Resistencia 10x220x800 W	10x220x800 W heater bar	X	X	X	911XX144	5
6	Soporte deposito EC8	EC8 tank support	X	X	X	917XX055	1
7	Kit aislamiento deposito EC14	EC14 tank insulation kit	X	X	X	916XX834	1
8	Aislante pata deposito	Insulation tank leg	X	X	X	910XX072	3
9	Brida sonda	Sensor bridle	X	X	X	914XX169	1
10	Mazo termostato EC14	EC14 thermostat connector	X	X	X	917XX091	1
11	Mazo resistencia depósito EC14	EC14 Tank heater connector	X	X	X	917XX090	1
12	Junta torica viton 7,65x1,78	7,65x1,78 viton o´ring	X	X	X	910XX324	1
13	Junta tórica viton 30x2	30x2 viton o´ring	X	X	X	914XX090	2
14	Tornillo allen 10-32 UNF 1-1/4" inox	Stainless 10-32 UNF 1-1/4" allen screw	X	X	X	912XX368	2
15	Tornillo allen M5x10 inox.	Stainless M5x10 allen screw	X	X	X	910XX968	8
16	Tornillo allen 3x6 inox.	Stainless 3x6 allen screw	X	X	X	911XX132	2
17	Tornillo allen M4x6 inox.	Stainless M4x6 allen screw	X	X	X	910XX981	1
18	Tornillo allen M4x10 inox.	Stainless M4x10 allen screw	X	X	X	910XX129	2
19	Tornillo allen M8x35 inox.	Stainless M8x35 allen screw	X	X	X	915XX238	8
20	Tornillo hexagonal M8x30 inox	Stainless M8x30 hex screw	X	X	X	911XX125	3
21	Arandela grover 8 inox	Stainless 8 grover washer	X	X	X	910XX135	11
22	Helicoil M8x12	M8x12 helicoil	X	X	X		9
23	Tuerca racor ovalillo Ø16	Ø16 ovalillo fitting nut		X	X	918XX444	1
24	Ovalillo Ø16	Ø16 ovalillo		X	X	918XX445	1
25	Bulbo sonda	Probe bulb		X	X		1
26	Tubo modulo descarga EC4 – EC8	EC4 - EC8 download module tube	X	X	X	918XX446	1
27	Tubo acometida bomba LF	LF pump rush tube	X	X	X	918XX447	1
	Tubo acometida bomba HF	HF pump rush tube	X	X	X		
28	Racor T con ovalillo tubo 8 / salida lateral tubo Ø6	Tube Ø6 lateral output / tube 8 fitting T with ovalillo	X	X	X	918XX448	1
29	Terminal faston M-panel TE-938	Faston M-panel TE-938 terminal	X	X	X	915XX158	1
30	Arandela dentada M3	Stainless 8 grover washer	X	X	X	910XX135	2
31	Sonda temperatura	Temperature probe	X	X	X	916XX152	1

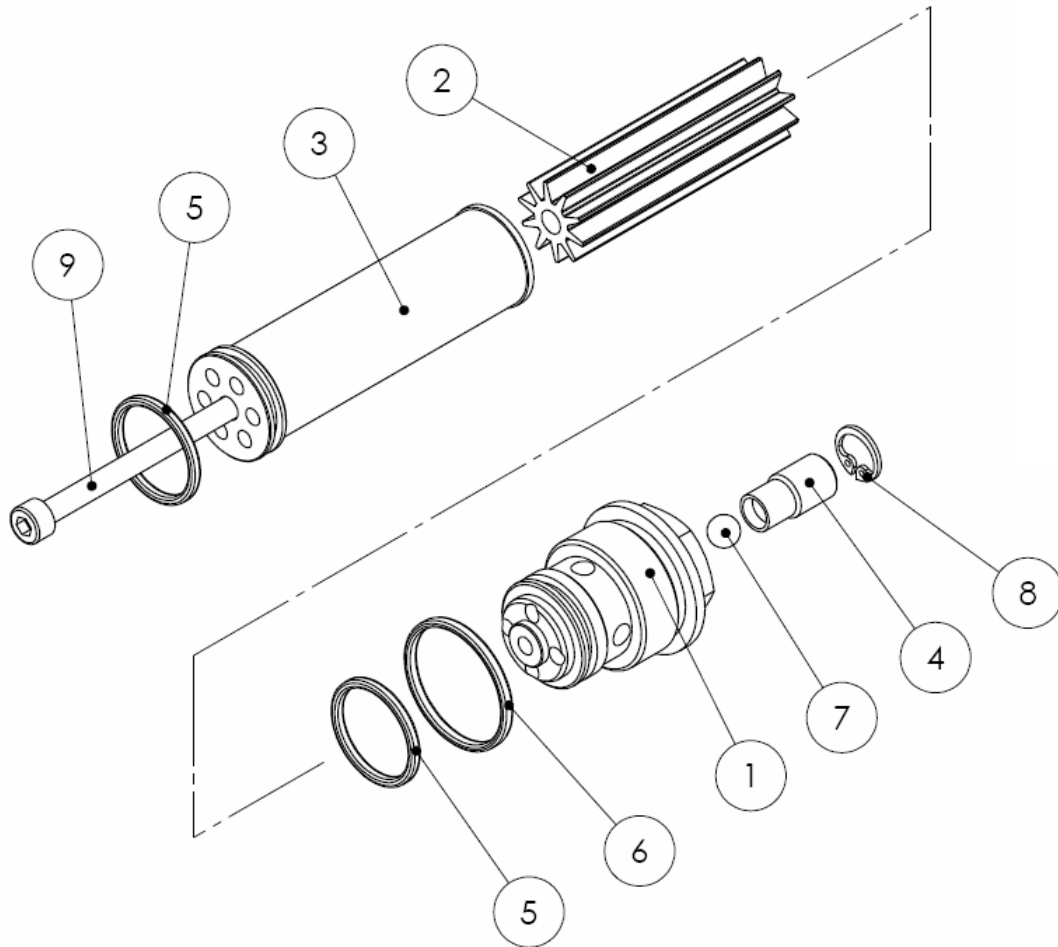
Nº	Descripción	Description	Ref.	Qty
1	Conjunto deposito EC14 A LF	EC14 A LF tank assembly	916XX756	1
2	Conjunto deposito EC14 A HF	EC14 A HF tank assembly	916XX162	1
3	Conjunto deposito EC14 B,C LF	EC14 B,C LF tank assembly	916XX161	1
4	Conjunto deposito EC14 B,C HF	EC14 B,C HF tank assembly	916XX179	1

4.1. CONJUNTO DISTRIBUIDOR SERIE EC / EC SERIES MANIFOLD ASSEMBLY (916XX127):



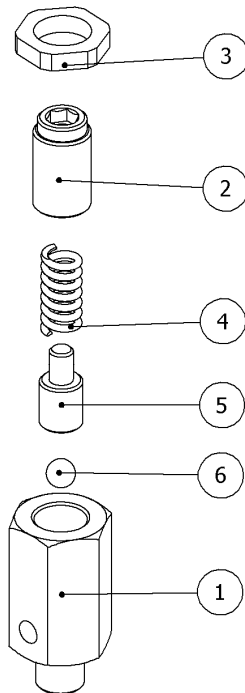
Nº	Descripción	Description				Ref.	Qty
			A	B	C		
1	Cuerpo distribuidor serie EC	EC series manifold body	X	X	X	917XX094	1
2	Brida rosca filtro	Filter threaded bridge	X	X	X	915XX820	1
3	Subconjunto filtro EC	EC filter assembly	X	X	X	PAG 31	1
4	Conjunto valvula de seguridad	Security valve assembly	X	X	X	PAG 32	1
5	Junta torica viton 30x2	30x2 viton o'ring	X	X	X	914XX090	1
6	Tornillo allen M8x20 inox.	Stainless M8x20 allen screw	X	X	X	915XX190	4
7	Helicoil M8x12	M8x12 Helicoil	X	X	X	915XX173	4
8	Tapon 9/16" con junta	9/16" plug w/gasket	X	X	X	917XX031	8

4.1.1. CONJUNTO FILTRO / FILTER ASSEMBLY: (916XX757)



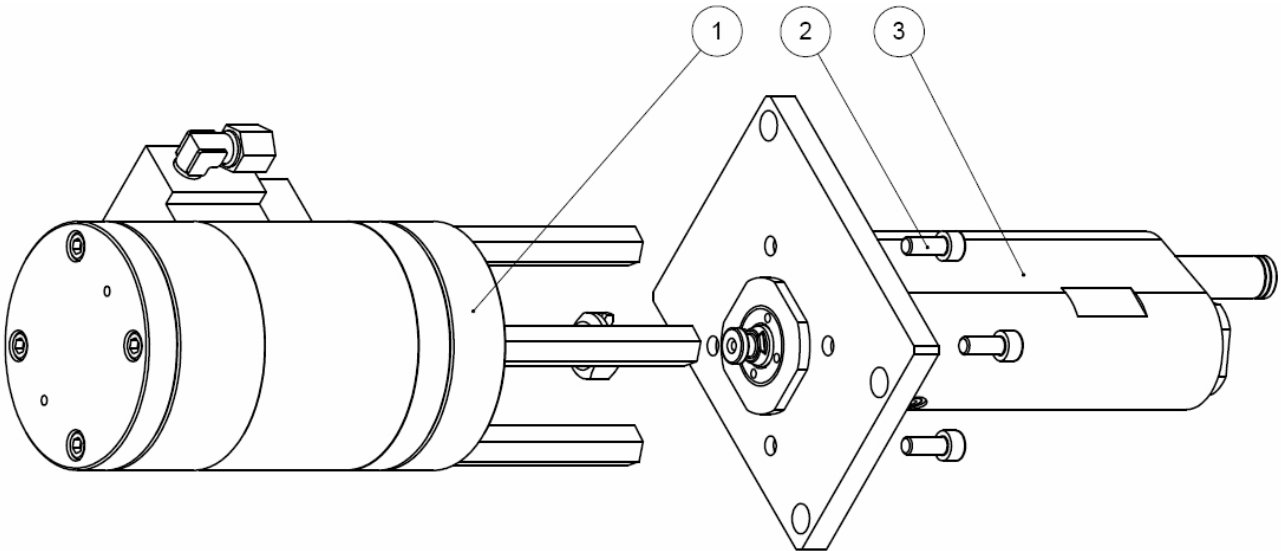
Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Tornillo filtro serie EC	EC serie filter screw	X	X	X	917XX571 917XX570	1
4	Tornillo purgador	Bleed screw	X	X	X		1
7	Bola acero 7	7 Steel ball	X	X	X		1
8	Anillo elastico agujero 12	Ø12 elastic ring	X	X	X	910XX765	1
2	Distancial interior filtro serie EC	EC series internal filter spacer	X	X	X	917XX117	1
3	Cartucho filtro 0.23 serie EC	EC series 0.23 Filter screen	X	X	X	917XX119	1
5	Junta torica Viton 20x2	20x2 viton o'ring	X	X	X	910XX047	2
6	Junta torica viton 26x2	26x2 viton o'ring	X	X	X	914XX177	1
9	Tornillo allen M5x80 inox.	Stainless M5x80 allen screw	X	X	X	917XX120	1

4.1.2. CONJUNTO VALVULA DE SEGURIDAD / SECURITY VALVE ASSEMBLY: (917XX087)



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Cuerpo válvula	Valve body	X	X	X	914XX097	1
2	Casquillo regulador muelle	Loading screw	X	X	X	910XX209	1
3	Tuerca trasera	Retaining nut	X	X	X	910XX208	1
4	Muelle	Spring	X	X	X	915XX388	1
5	Pivote centraje bola	Spring mount	X	X	X	910XX206	1
6	Bola acero 6	6 steel ball	X	X	X	914XX094	1

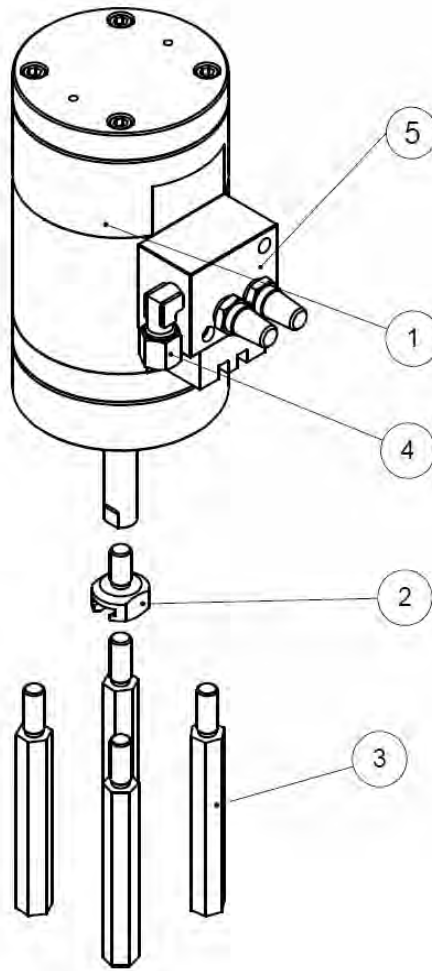
5. A) CONJUNTO BOMBA LF / PUMP ASSEMBLY LF:



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cilindro neumatico	Pneumatic cylinder assembly	X	X	X	PAG 29	1
2	Tornillo allen M6x15 Inox.	Stainless M6x15 allen screw	X	X	X	915XX090	4
3	Subconjunto grupo hidraulico	Hydraulic group assembly	X	X	X	PAG 30	1

Nº	Descripción	Description	Ref.	Qty
1	Conjunto bomba LF EC4/EC8	EC4/EC8 LF pump assembly	916XX656	1
2	Conjunto bomba LF EC14	EC14 LF pump assembly	916XX840	1

5.1. A) CONJUNTO CILINDRO LF / LF CYLINDER ASSEMBLY: (916XX662)

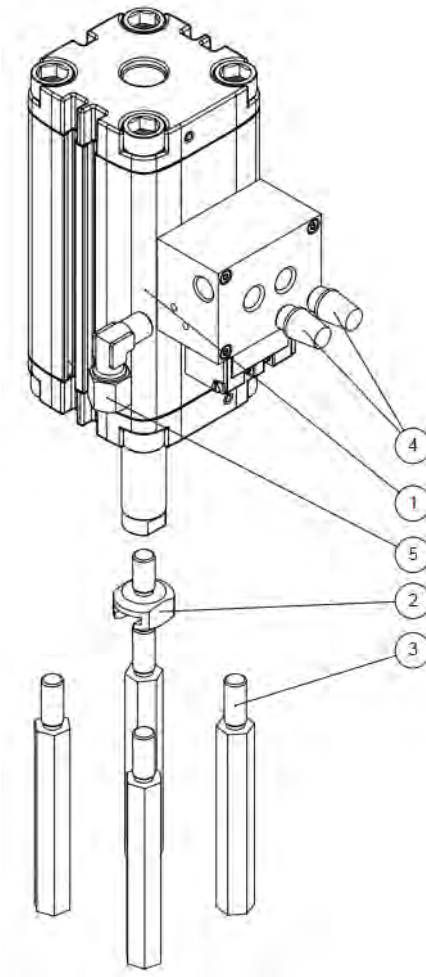


Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Cilindro neumatico Valco	Valco pneumatic cylinder	X	X	X	915XX373	1
2	Rotula cilindro G valco	Swivel G valco cylinder	X	X	X	915XX374	1
3	Distancial cilindro G Valco	G valco spacer cylinder	X	X	X	917XX122	4
4	Racor 90° 1/8-Tubo 8	1/8 90° Fitting-8 Tube	X	X	X	910XX415	1
5	Válvula neumatica	Pneumatic valve	X	X	X	914XX843	1

Nº	Descripción	Description	Ref.	Qty
	Kit juntas Seal	Seal Kit	769XX663	1

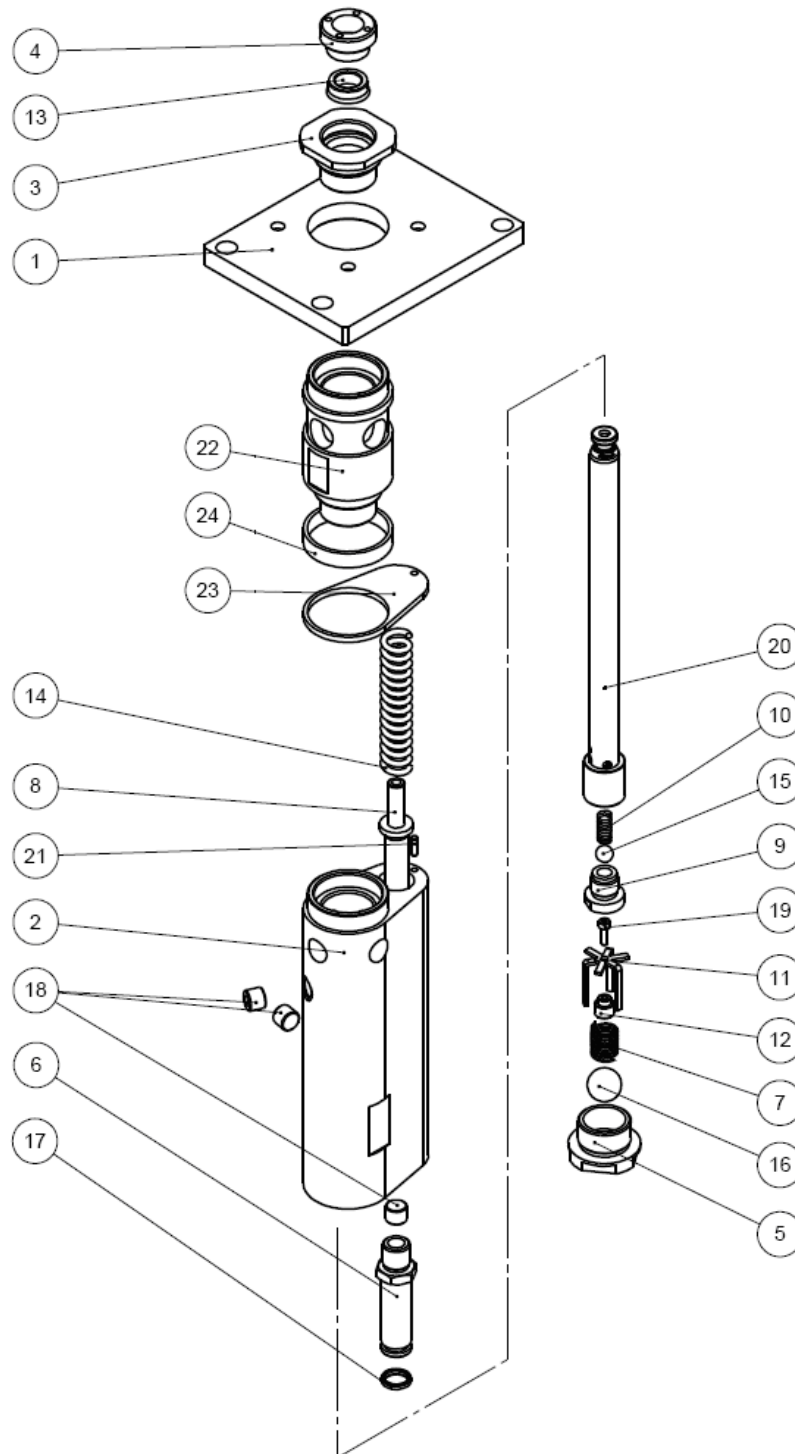
5.1.B) CONJUNTO CILINDRO LF NMT / LF NMT CYLINDER ASSEMBLY (913XX331)

(valido para equipos con S/N a partir del 16281 / valid for units with S/N from 16281)



Nº	Descripción	Description	Ref.	Qty
1	CILINDRO Ø50 ALTA TEMPERATURA NMT	NMT Ø50 HIGH TEMPERATURE CYLINDER		1
2	ROTULA CILINDRO VALCO NITRURADO GASEOSO	VALCO CYLINDER KNEECAP	915XX374	1
3	DISTANCIAL CILINDRO K LF NMT	K LF NMT CYLINDER SPACER	913XX890	4
4	SILENCIADOR LARGO G1/8-B	G1/8-B LARGE SILENCER	914XX041	2
5	RACOR 90° R1/8 / ER8-BN	90° FITTING R1/8 / ER8-BN	910XX415	1

5.2.A) CONJUNTO GRUPO HIDRAULICO LF / LF HYDRAULIC GROUP ASSEMBLY:



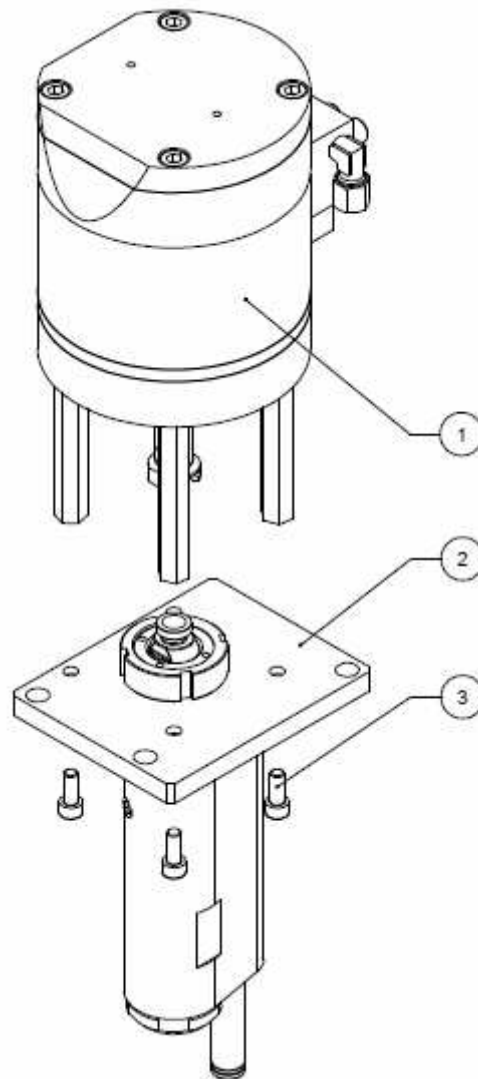
Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Placa base bomba K / C4 – L – V1	K / C4 – L – V1 pump base plate	X	X	X	917XX123	1
2	Cuerpo bomba LF – V1	LF – V1 pump body	X	X	X	917XX186	1
3	Tornillo portajunta bomba LF	LF pump seal screw	X	X	X	915XX468	1
4	Tuerca portajunta bomba LF	LF pump seal nut	X	X	X	915XX471	5
13	Junta collarin eje bomba	Axle pump variseal	X	X	X	915XX467	1
5	Valvula aspiracion	Aspiration valve	X	X	X	914XX034	1
7	Muelle valvula aspiracion	Aspiration valve spring	X	X	X	914XX032	3
11	Guia bola valvula aspiracion	Aspiration valve ball guide	X	X	X	914XX031	1
12	Tope bola valvula aspiracion	Aspiration valve ball limit	X	X	X	914XX938	1
16	Bola 16	16 ball	X	X	X	910XX119	1
19	Tornillo allen M3x10 Inox	Stainless M3x10 allen screw	X	X	X	910XX084	1
6	Tubo impulsión	Impulsion tube	X	X	X	914XX024	2
17	Junta torica viton 10x2	10x2 viton o'ring	X	X	X	914XX025	2
8	Eje guia valvula compensacion	Compensation valve axle guide	X	X	X	914XX022	8
9	Valvula compresion	Compression valve	X	X	X	914XX030	2
10	Muelle valvula compresion	Compression valve spring	X	X	X	914XX028	1
14	Muelle 8x16x76 rojo	Red 8x16x76 spring	X	X	X	910XX407	2
15	Bola 8	8 ball	X	X	X	910XX122	8
18	Tapon 1/8" GAS BSP	1/8" GAS BSP plug	X	X	X	910XX001	3
20	Eje bomba LF EC4 - EC8	EC4 – EC8 LF pump axle	X	X	X	917XX187	11
	Eje bomba LF EC14	EC14 LF pump axle	X	X	X	917XX188	9
21	Pasador cilindrico 3x10	3x10 cylinder pin	X	X	X	910XX581	1

SOLO PARA EQUIPOS EC14 / ONLY FOR EC14 EQUIPMENT

Nº	Descripción	Description	A	B	C	Ref.	Qty
22	Distancial cuerpo bomba LF	LF pump body spacer	X	X	X	917XX189	1
23	Tapa muelle bomba	Pump spring lid	X	X	X	910XX584	1
24	Anillo distancial	Spacer ring	X	X	X	910XX585	1

Descripción	Description	Ref.
Conjunto grupo hidraulico LF EC4/EC8	EC4/EC8 LF hydraulic group assembly	916XX758
Conjunto grupo hidraulico LF EC14	EC14 hydraulic group assembly	916XX765

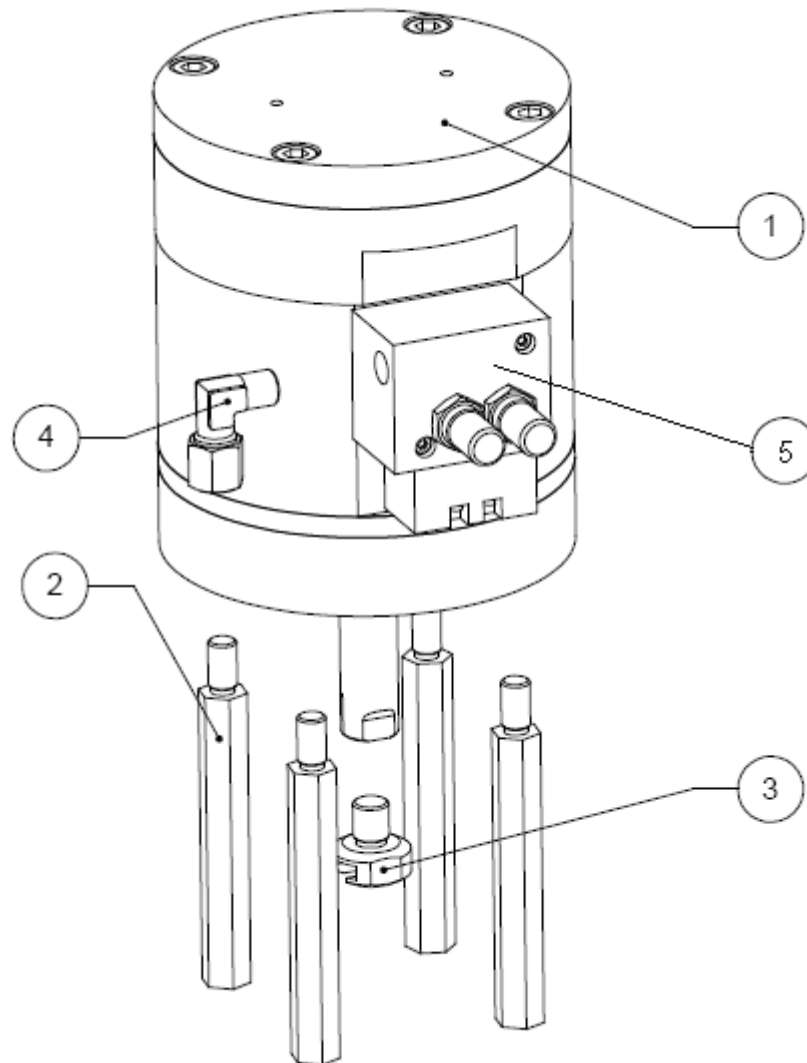
5. B) CONJUNTO BOMBA HF / PUMP ASSEMBLY HF:



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Subconjunto cilindro neumatico	Pneumatic cylinder assembly	X	X	X	PAG 33	1
2	Subconjunto grupo hidraulico	Hydraulic group assembly	X	X	X	PAG 34	1
3	Tornillo allen M6x15 Inox.	Stainless M6x15 allen screw	X	X	X	915XX090	4

Nº	Descripción	Description	Ref.	Qty
1	Conjunto bomba HF EC8	EC8 HF pump assembly	916XX839	1
2	Conjunto bomba HF EC14	EC14 HF pump assembly	916XX838	1

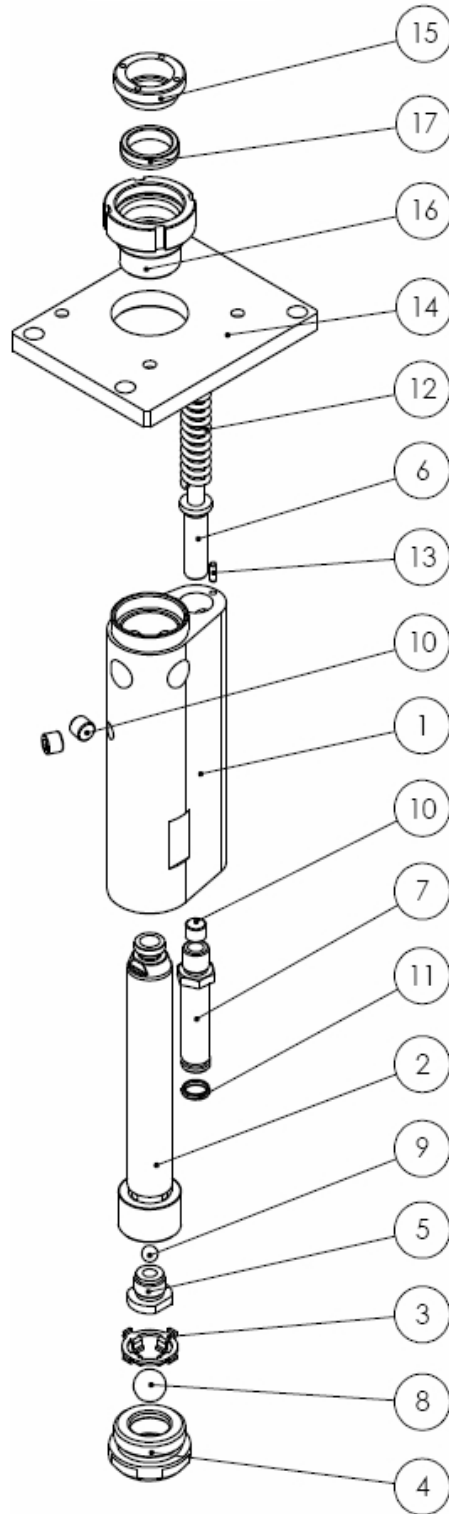
5.1. B) CONJUNTO CILINDRO HF / HF CYLINDER ASSEMBLY (916XX764):



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Cilindro neumatico Valco	Valco pneumatic cylinder	X	X	X	915XX373	1
2	Distancial cilindro G Valco	G valco spacer cylinder	X	X	X	915XX374	4
3	Rotula cilindro G valco	Swivel G valco cylinder	X	X	X	917XX122	1
4	Racor 90° 1/8-Tubo 8	1/8 90° Fitting-8 Tube	X	X	X	910XX415	1
5	Válvula neumatica	Pneumatic valve	X	X	X	914XX843	1

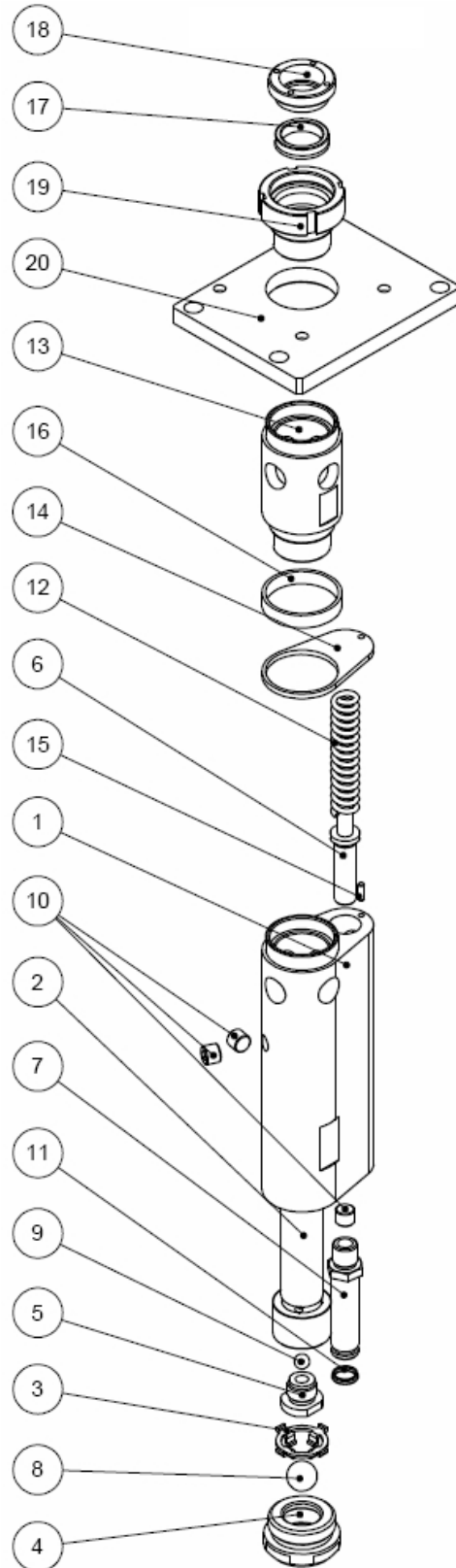
5.2.B) CONJUNTO GRUPO HIDRAULICO HF / HF HYDRAULIC GROUP ASSEMBLY:

EC8 HF (916XX430)



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Cuerpo bomba	Pump body	X	X	X	910XX579	1
2	Eje bomba HF EC8	EC8 HF pump axle	X	X	X	910XX580	1
3	Soporte bola aspiracion	Aspiration ball support	X	X	X	910XX120	1
4	Valvula aspiracion	Aspiration valve	X	X	X	910XX118 916XX281	1
8	Bola 16	16 ball	X	X	X	910XX119	1
5	Valvula compresion	Compression valve	X	X	X	910XX121	1
6	Eje guia valvula compensacion	Compensation valve axle guide	X	X	X	914XX022	1
7	Tubo impulsion	Impulsion tube	X	X	X	910XX990	1
9	Bola 8	8 ball	X	X	X	910XX122	1
10	Tapon 1/8" GAS BSP	1/8" GAS BSP plug	X	X	X	910XX001	3
11	Junta torica viton 10x2	10x2 viton o'ring	X	X	X	914XX025	1
12	Muelle 8x16x76 rojo	Red 8x16x76 spring	X	X	X	910XX407	1
13	Pasador cilindrico 3x10	3x10 cylinder pin	X	X	X	910XX581	1
14	Placa base bomba	Pump base plate	X	X	X	910XX091	1
15	Tuerca portajunta bomba	Pump seal nut	X	X	X	915XX502	1
16	Tornillo portajunta bomba	Pump seal screw	X	X	X	915XX503 910XX088	1
17	Junta collarin eje bomba	Axle pump variseal	X	X	X	915XX504	1

EC14 HF (916XX765)



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Cuerpo bomba	Pump body	X	X	X	910XX579	1
2	Eje bomba HF EC14	EC14 HF pump axle	X	X	X	910XX582	1

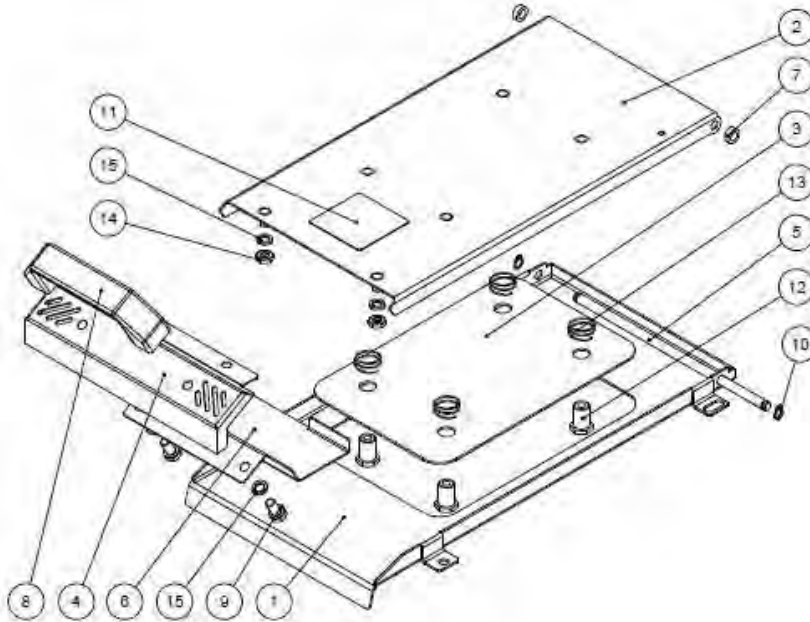
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3	Soporte bola aspiracion	Aspiration ball support	X	X	X	910XX120		1
4	Valvula aspiracion	Aspiration valve	X	X	X	910XX118	916XX281	1
8	Bola 16	16 ball	X	X	X	910XX119		1
5	Valvula compresion	Compression valve	X	X	X	910XX121		1
6	Eje guia valvula compensacion	Compensation valve axle guide	X	X	X	914XX022		1
7	Tubo impulsion	Impulsion tube	X	X	X	910XX990		1
9	Bola 8	8 ball	X	X	X	910XX122		1
10	Tapon 1/8" GAS BSP	1/8" GAS BSP plug	X	X	X	910XX001		3
11	Junta torica viton 10x2	10x2 viton o'ring	X	X	X	914XX025		1
12	Muelle 8x16x76 rojo	Red 8x16x76 spring	X	X	X	910XX407		1
13	Distancial cuerpo bomba	Pump body spacer	X	X	X	910XX583		1
14	Tapa muelle bomba	Pump spring cover	X	X	X	910XX584		1
15	Pasador cilindrico 3x10	3x10 cylinder pin	X	X	X	910XX581		1
16	Anillo distancial	Spacer ring	X	X	X	910XX585		1
17	Junta collarin eje bomba	Axle pump variseal	X	X	X	915XX504		1
18	Tuerca portajunta bomba	Pump seal nut	X	X	X	915XX502		1
19	Tornillo portajunta bomba	Pump seal screw	X	X	X	915XX503	910XX088	1
20	Placa base bomba	Pump base plate	X	X	X	910XX091		1

6. CONJUNTO TAPA SERIE EC / EC SERIES LID ASSEMBLY:

Nota: Valido para equipos hasta número de serie 15206

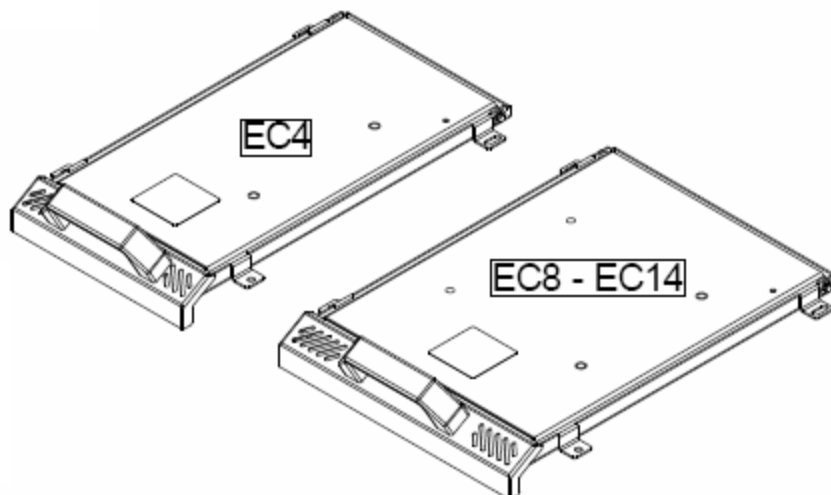
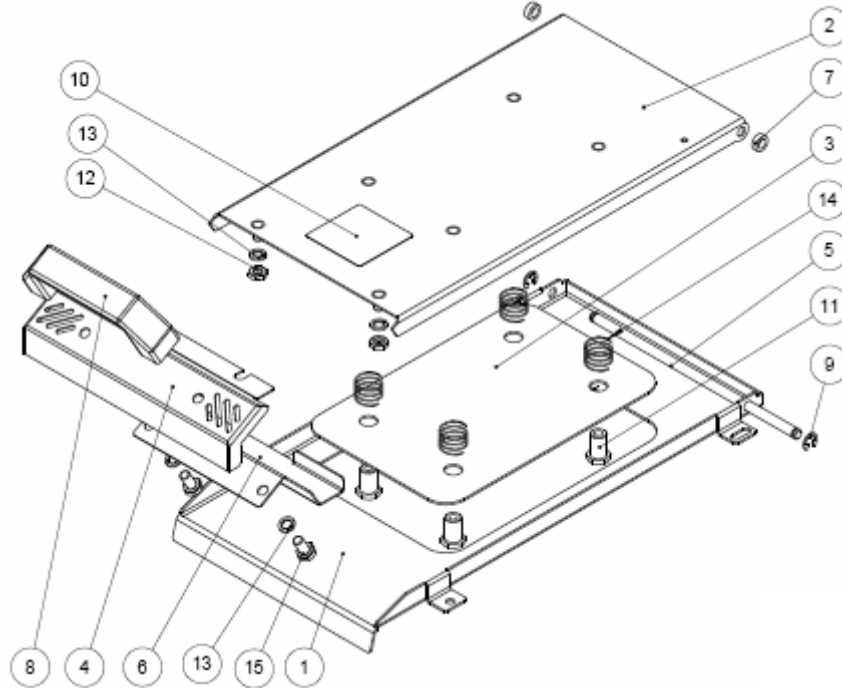
/ Note: Valid for equipments with serial number up to 15206



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Base tapa deposito EC4	EC4 Tank lid base	X	X		917XX190	1
	Base tapa deposito EC8/EC14	EC8/EC14 Tank lid base	X	X		917XX191	
2	Tapa deposito EC4	EC4 Tank lid	X	X		917XX192	1
	Tapa deposito EC8/EC14	EC8/EC14 Tank lid	X	X		917XX193	
3	Contratapa EC4	EC4 Lid	X	X		917XX194	1
	Contratapa EC8/EC14	EC8/EC14 Lid	X	X		917XX195	
4	Asidero tapa EC4	EC4 Lid handle plate	X	X		917XX196	1
	Asidero tapa EC8/EC14	EC8/EC14 Lid handle plate	X	X		917XX197	
5	Eje bisagra tapa EC4	EC4 Lid axle	X	X		917XX344	1
	Eje bisagra tapa EC8/EC14	EC8/EC14 Lid axle	X	X		917XX349	
6	Chapa interior tapa EC4	EC4 lid inside plate	X	X		917XX807	1
	Chapa interior tapa EC8/EC14	EC8/EC14 lid inside plate	X	X		917XX808	1
7	Casquillo tapa	Lid bushing	X	X		917XX335	2
8	Asa pequeña negra	Black small handle	X	X		917XX338	1
9	Tornillo hexagonal M6x12	M6x12 hex screw	X	X		912XX625	2
10	Anillo elastico eje 6	6 axle elastic ring	X	X		914XX952	2
11	Pegatina riesgo alta temperatura	High temperature risk sticker	X	X		917XX212	1
12	Tuerca contratapa	Lid nut	X	X		917XX259	2
13	Muelle tapa deposito	Tank lid spring	X	X		915XX546	2
14	Tuerca hexagonal rebajada M6	M6 lowered hex nut	X	X		917XX809	2
15	Arandela grover M6 Inox.	Stainless M6 grover washer	X	X		910XX131	4

Descripción	Description	Ref.
Conjunto Tapa EC4	EC4 lid cover assembly	916XX759
Conjunto Tapa EC8/EC14	EC8/EC14 lid cover assembly	916XX775

Nota: Valido para equipos desde número de serie 15207
/ Note: Valid for equipments with serial number from 15207

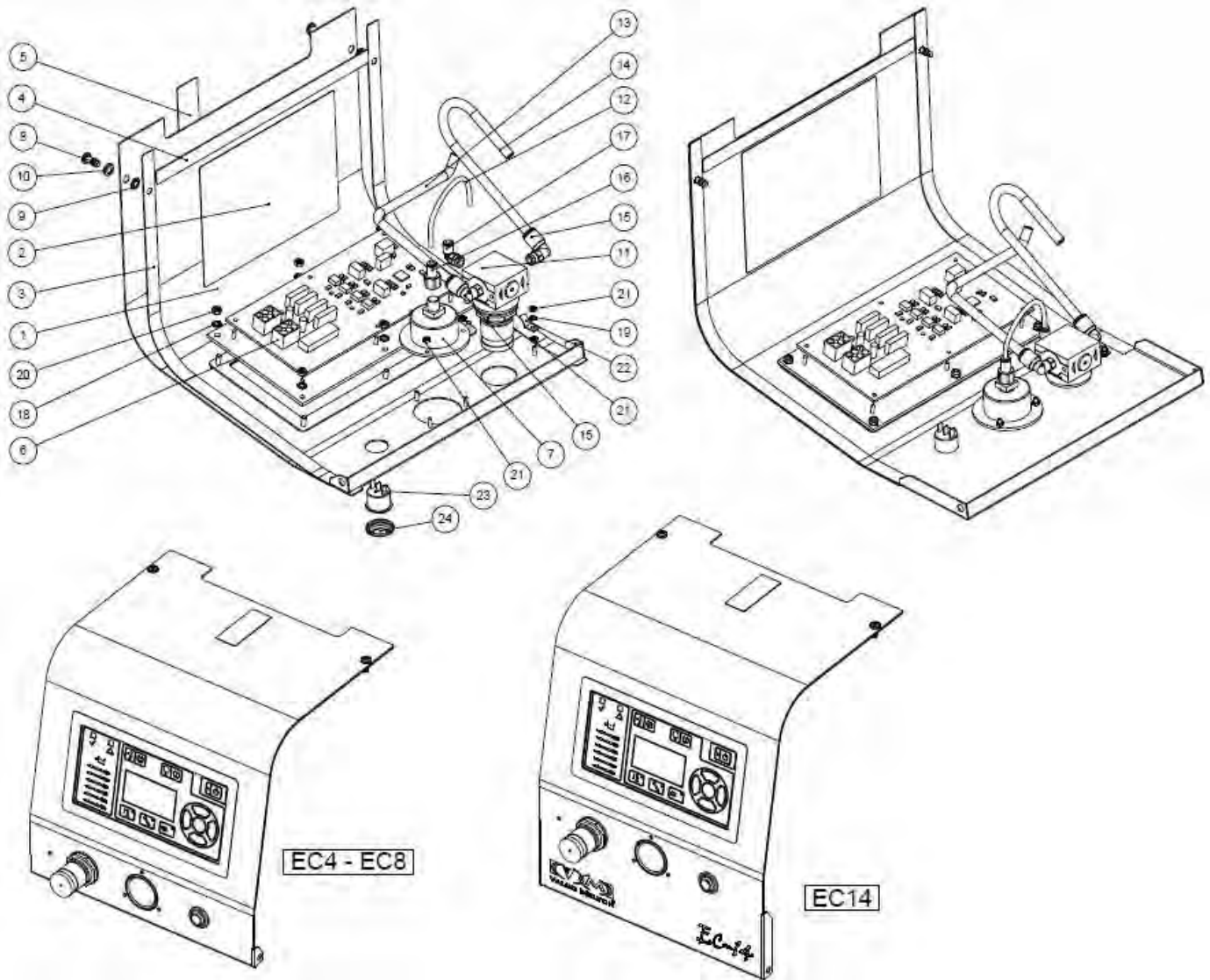


Nº	Descripción	Description	Ref.	Qty.
1	Base tapa depósito EC4	EC4 tank lid base	917XX190	1
	Base tapa depósito EC8/EC14	EC8/EC14 tank lid base	917XX191	1
2	Tapa depósito EC4	EC4 tank lid	917XX192	1
	Tapa depósito EC8/EC14	EC8/EC14 tank lid	917XX193	1
3	Contratapa EC4	EC4 lid	917XX194	1
	Contratapa EC8/EC14	EC8/EC14 lid	917XX195	1
4	Asidero tapa EC4	EC4 lid handle plate	917XX196	1
	Asidero tapa EC8/EC14	EC8/EC14 lid handle plate	917XX197	1
5	Eje bisagra tapa EC4	EC4 lid axle	917XX344	1
	Eje bisagra tapa EC8/EC14	EC8/EC14 lid axle	917XX349	1
6	Chapa interior tapa EC4	EC4 lid inside plate	917XX807	1
	Chapa interior tapa EC8/EC14	EC8/EC14 lid inside plate	917XX808	1
7	Casquillo tapa	Lid bushing	917XX335	2
8	Asa pequeña negra	Black small handle	917XX338	1
9	Anillo de retención lateral 5	Lateral retention ring 5	914XX254	2
10	Pegatina riesgo alta temperatura	High temperature risk sticker	917XX212	1
11	Tuerca contratapa	Lid nut	917XX259	4
12	Tuerca hexagonal rebajada M6	M6 lowered hex nut	917XX809	2
13	Arandela grover M6 inox.	Stainless M6 grover washer	910XX131	4
14	Muelle tapa depósito	Tank lid spring	914XX333	4
15	Tornillo hexagonal M6x12	M6x12 hex screw	912XX625	2

Descripción	Description	Ref.
Subconjunto tapa EC4	EC4 lid cover assembly	916XX759
Subconjunto tapa EC8/EC14	EC8/EC14 lid cover assembly	916XX775

7. CONJUNTO FRONTAL / FRONT COVER ASSEMBLY:

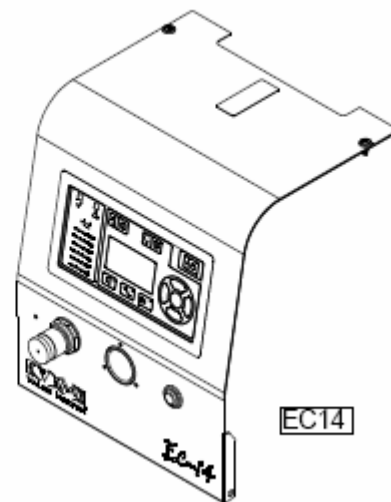
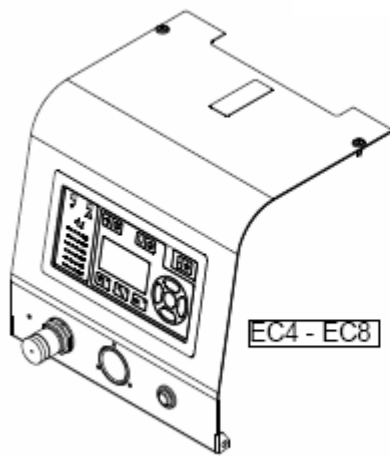
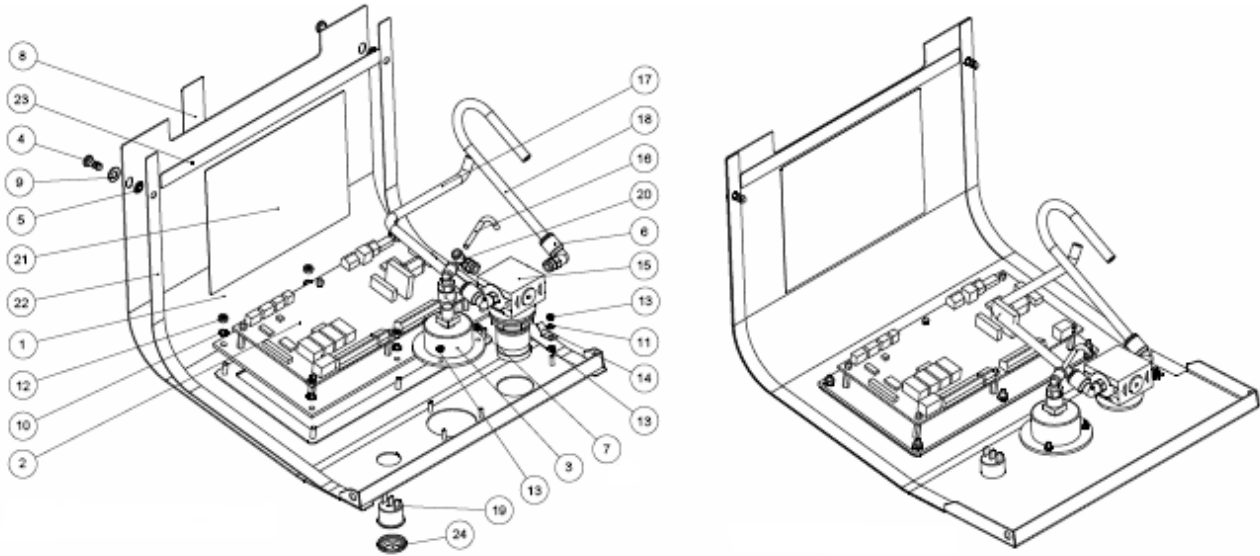
Nota: Valido para equipos hasta número de serie 15206
/ Note: Valid for equipments with serial number up to 15206



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Frontal EC4/EC8	EC4/EC8 Front cover	X	X	X	917XX260	1
	Frontal EC14	EC14 Front cover	X	X	X	917XX845	
2	Pegatina conexiones electricas	Electrical connections sticker	X	X	X	917XX811	1
3	Junta porton delantero	Front door joint	X	X	X	917XX282	2
4	Junta transversal porton delantero	Front door cross joint	X	X	X	917XX812	1
5	Pegatina riesgo electrico	Electric risk sticker	X	X	X	917XX266	1
6	Overlay assy, hot melt EC disp	Overlay assy, hot melt EC disp	X	X	X	137XX015	1
7	Manómetro 0 a 6 con marco	Pressure gauge 0-6 with frame	X	X	X	918XX849	1
8	Tornillo 1/4 vuelta	1/4 screw	X	X	X	917XX263	2
9	Reten	Screw retainer	X	X	X	917XX264	2
10	Arandela Nylon	Nylon washer	X	X	X	917XX267	2
11	Regulador tomas 1/8" 0-12 bar	1/8" tomas pressure regulator	X	X	X	917XX268	1
12	Tubo poliuretano 4x2.5 L=120mm	4x2.5 L=150mm polyurethane tube	X	X	X	917XX269	1
13	Tubo poliuretano 8x5,5 L=270mm	8x5,5 L=270mm polyurethane tube	X	X	X	918XX639	1
14	Tubo poliuretano 8x5,5 L=320mm	8x5,5 L=320mm polyurethane tube	X	X	X	918XX639	1
15	Racor 90° 1/8" E/R tubo 8	1/8" tube 8 fitting	X	X	X	988XX018	2
16	Racor entrada recto 1/8" E/R tubo 4	1/8" tube 4 straight fitting	X	X	X	917XX265	1
17	Racor 90° 1/8" tubo 4 E/R	1/8" tube 4 90° fitting	X	X	X	943XX051	1
18	Arandela plana M4	M4 plain washer	X	X	X	914XX330	6
19	Arandela dentada M3	M3 toothed washer	X	X	X	910XX397	1
20	Tuerca hexagonal M4 Inox.	Stainless M4 hex nut	X	X	X	915XX159	6
21	Tuerca hexagonal M3 Inox.	Stainless M3 hex nut	X	X	X	914XX982	5
22	Terminal faston M-panel TE938	M-panel TE938 faston terminal	X	X	X	915XX158	1
23	Interruptor redondo serie EC	EC serie round switch	X	X	X	918XX637	1
24	Cubierta interruptor redondo	Round switch cover	X	X	X	918XX638	1

Descripción	Description	Ref.	Qty
Conjunto frontal EC4/EC8	EC4/EC8 front cover assembly	916XX760	1
Conjunto frontal EC14	EC14 front cover assembly	916XX908	1

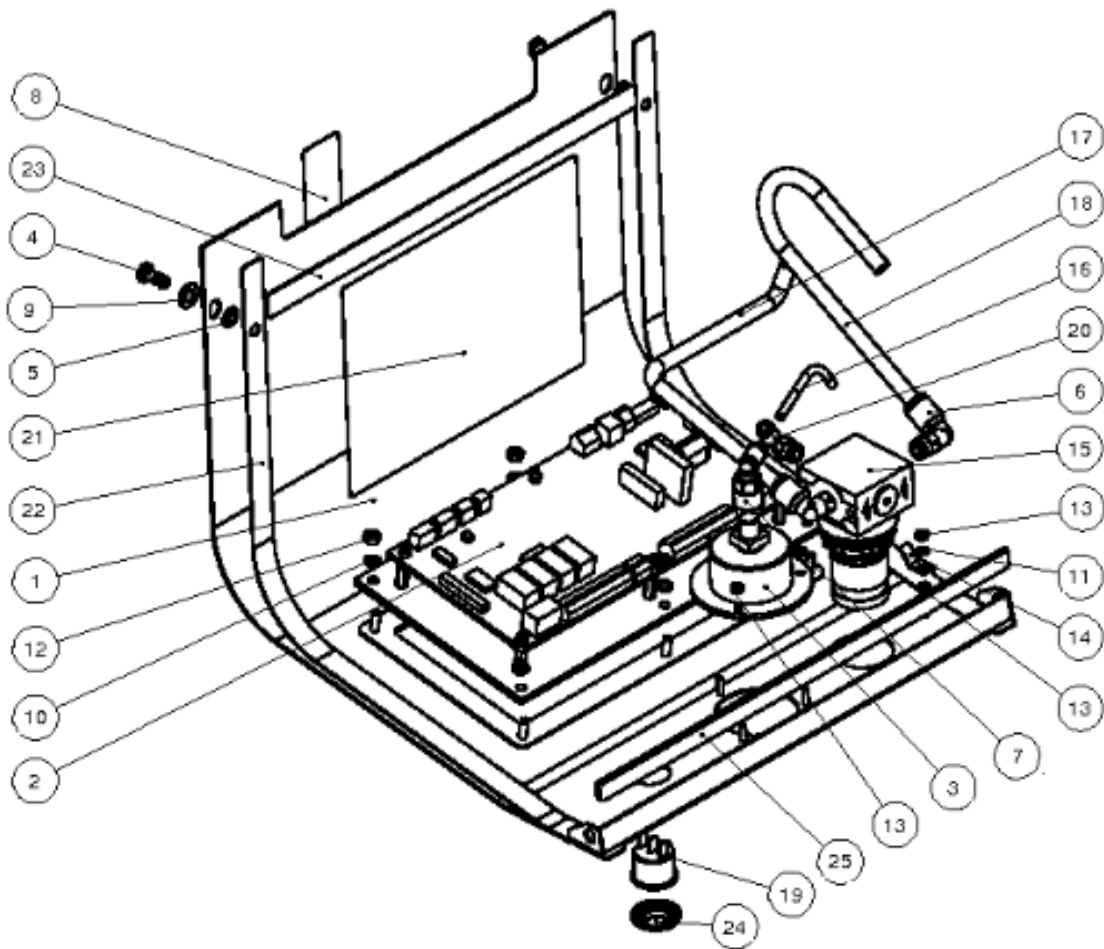
Nota: Valido para equipos desde número de serie 15207 hasta 16537
/ Note: Valid for equipment with serial number from 15207 hasta 16537



Nº	Descripción	Description	Ref.	Qty.
1	Frontal EC4/EC8	EC4/EC8 Front cover	917XX260	1
	Frontal EC14	EC14 Front cover	917XX845	
2	Overlay assy, hot melt EC	Overlay assy, hot melt EC	137XX015	1
3	Manómetro 0 a 6 con marco	Pressure gauge 0-6 with frame	918XX849	1
4	Tornillo 1/4 vuelta	1/4 Screw	917XX263	2
5	Retén	Screw retainer	917XX264	2
6	Racor 90° 1/8" E/R tubo 8	1/8" tube 8 90° fitting	988XX018	2
7	Racor 90° hembra 1/8" E/R tubo 4	1/8" tube 4 90° female fitting	914XX377	1
8	Pegatina riesgo eléctrico	Electric risk sticker	917XX266	1
9	Arandela tornillo cautivo	Washer captive screw	914XX378	2
10	Arandela plana M4	plain washer M4	914XX330	6
11	Arandela dentada M3	Jagged washer M3	910XX397	1
12	Tuerca hexagonal M4 inox.	Nut hexagonal M4 SS	915XX159	6
13	Tuerca hexagonal M3 inox.	Nut hexagonal M3 SS	914XX982	5
14	Terminal faston	Faston terminal	915XX158	1
15	Regulador tomas 1/8" 0-12bar	1/8" Tomas pressure regulator	917XX268	1
16	Tubo poliuretano 4x2,5 azul L=120mm	4x2,5 polyurethane tube	917XX269	1
17	Tubo poliuretano 8x5,5 azul L=270mm	8x5,5 polyurethane tube	918XX639	1
18	Tubo poliuretano 8x5,5 azul L=320mm	8x5,5 polyurethane tube	918XX639	1
19	Interruptor redondo	Round switch	918XX637	1
20	Racor 90° 1/8" tubo 4	1/8" tube 4 90° fitting	943XX051	1
21	Pegatina conexiones eléctricas	Electrical connection sticker	917XX811	1
22	Junta portón delantero	Front gasket	917XX282	2
23	Junta transversal portón delantero	Front door cross joint	917XX812	1
24	Cuebierta interruptor redondo	Switch protection	918XX638	1

Descripción	Description	Ref.	Qty
Conjunto frontal EC4/EC8	EC4/EC8 front cover assembly	916XX760	1
Conjunto frontal EC14	EC14 front cover assembly	916XX908	1

Nota: Valido para equipos desde número de serie 16538
/ Note: Valid for equipment with serial number from 16538



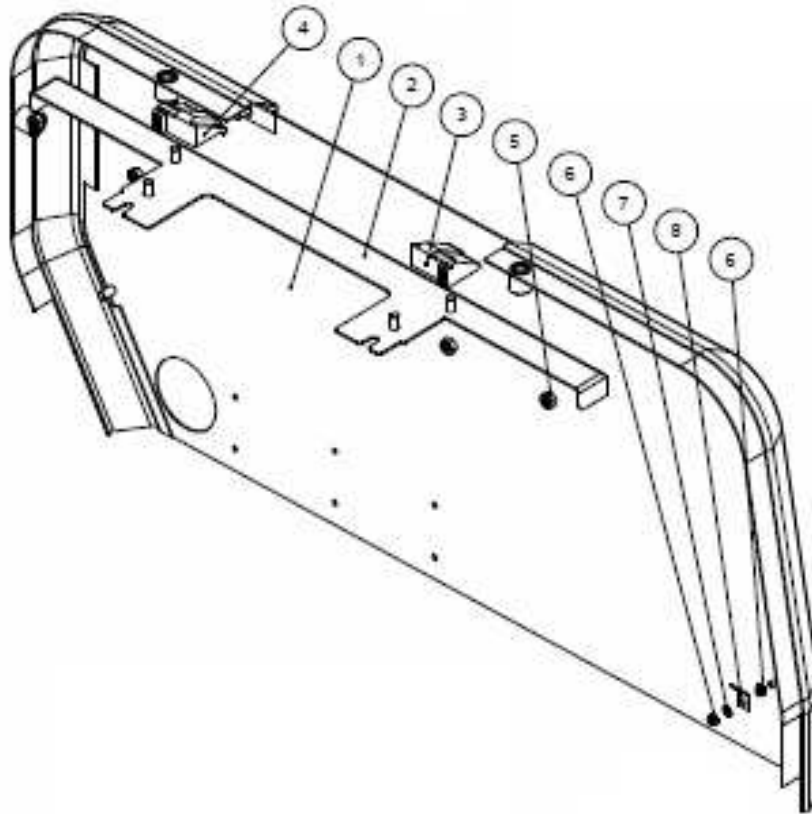
Nº	Descripción	Description	Ref.	Qty.
1	Frontal EC4/EC8	EC4/EC8 Front cover	917XX260	1
	Frontal EC14	EC14 Front cover	917XX845	
2	Overlay assy, hot melt EC	Overlay assy, hot melt EC	137XX015	1
3	Manómetro 0 a 6 con marco	Pressure gauge 0-6 with frame	918XX849	1
4	Tornillo 1/4 vuelta	1/4 Screw	917XX263	2
5	Retén	Screw retainer	917XX264	2
6	Racor 90° 1/8" E/R tubo 8	1/8" tube 8 90° fitting	988XX018	2
7	Racor 90° hembra 1/8" E/R tubo 4	1/8" tube 4 90° female fitting	914XX377	1
8	Pegatina riesgo eléctrico	Electric risk sticker	917XX266	1
9	Arandela tornillo cautivo	Washer captive screw	914XX378	2
10	Arandela plana M4	plain washer M4	914XX330	6
11	Arandela dentada M3	Jagged washer M3	910XX397	1
12	Tuerca hexagonal M4 inox.	Nut hexagonal M4 SS	915XX159	6
13	Tuerca hexagonal M3 inox.	Nut hexagonal M3 SS	914XX982	5
14	Terminal faston	Faston terminal	915XX158	1
15	Regulador tomas 1/8" 0-12bar	1/8" Tomas pressure regulator	917XX268	1
16	Tubo poliuretano 4x2,5 azul L=120mm	4x2,5 polyurethane tube	917XX269	1
17	Tubo poliuretano 8x5,5 azul L=270mm	8x5,5 polyurethane tube	918XX639	1
18	Tubo poliuretano 8x5,5 azul L=320mm	8x5,5 polyurethane tube	918XX639	1
19	Interruptor redondo	Round switch	918XX637	1
20	Racor 90° 1/8" tubo 4	1/8" tube 4 90° fitting	943XX051	1
21	Pegatina conexiones eléctricas	Electrical connection sticker	917XX811	1
22	Junta portón delantero	Front gasket	917XX282	2
23	Junta transversal portón delantero	Front door cross joint	917XX812	1
24	Cubierta interruptor redondo	Switch protection	918XX638	1
25	Junta labio inferior portón delantero	front gate bottom lip joint	913XX544	1

Descripción	Description	Ref.	Qty
Conjunto frontal EC4/EC8	EC4/EC8 front cover assembly	916XX760	1
Conjunto frontal EC14	EC14 front cover assembly	916XX908	1

8. CONJUNTO LATERAL DERECHO / RIGHT LATERAL COVER ASSEMBLY:

Nota: Valido para equipos hasta número de serie 15206

/ Note: Valid for equipment with serial number up to 15206



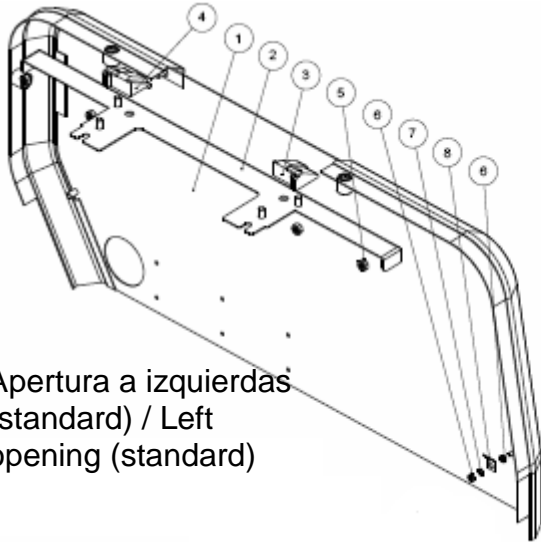
Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Lateral derecho	Right lateral cover	X	X		---	1
	Lateral derecho EC4 con cargador	Right lateral cover EC4 with feeder			X	917XX271	1
	Lateral derecho EC8 con cargador	Right lateral cover EC8 with feeder			X	917XX273	1
	Lateral derecho EC14 con cargador	Right lateral cover EC14 with feeder			X	917XX276	1
2	Tirante	Brace	X	X		---	1
	Tirante EC4 con cargador	Brace EC4 with feeder			X	917XX293	1
	Tirante EC8-EC14 con cargador	Brace EC8-EC14 with feeder			X	917XX294	1
3	Moldura / junta izda.	Left joint / molding	X	X		---	1
	Junta interior izquierda	Left inside joint			X	918XX627	
4	Moldura / junta dcha.	Right joint / molding	X	X		---	1
	Junta interior derecha	Right inside joint			X	918XX628	
5	Tuerca hexagonal M5 Inox.	Stainless M5 hex nut	X	X	X	910XX359	4
6	Tuerca hexagonal M3 Inox.	Stainless M3 hex nut	X	X	X	914XX982	2
7	Arandela dentada M3	M3 toothed washer	X	X	X	910XX397	1
8	Terminal faston M-panel TE938	M-panel TE938 faston terminal	X	X	X	915XX158	1

Ref.	916XX776	916XX777	916XX778	916XX779	916XX780	916XX781
Nº	EC4	EC4	EC8	EC8	EC14	EC14
	Apertura a izquierdas / Left open	Apertura a dchas / Right open	Apertura a izquierdas / Left open	Apertura a dchas / Right open	Apertura a izquierdas / Left open	Apertura a dchas / Right open
1	917XX271	917XX272	917XX273	917XX275	917XX276	917XX277
2	917XX293		917XX294			
3	917XX803	917XX804	917XX803	917XX804	917XX803	917XX804
4	917XX805		917XX805		917XX805	

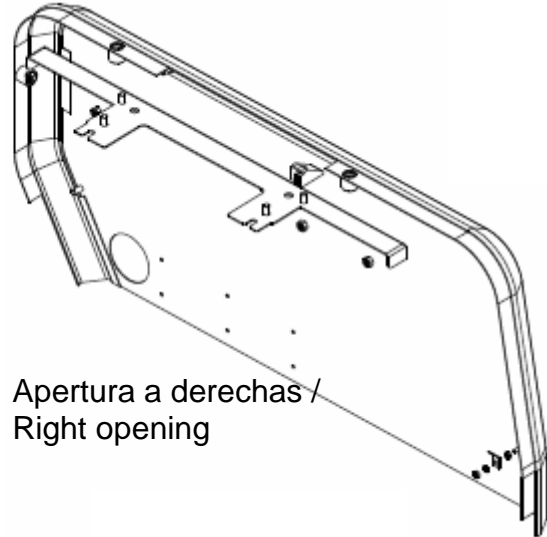
Modelo/ Model	Descripción	Description	Ref.	Qty
EC4	Conjunto lateral derecho apertura izquierda	Left opening right lateral assembly	916XX776	1
	Conjunto lateral derecho apertura derecha	Right opening right lateral assembly	916XX777	1
EC8	Conjunto lateral derecho apertura izquierda	Left opening right lateral assembly	916XX778	1
	Conjunto lateral derecho apertura derecha	Right opening right lateral assembly	916XX779	1
EC14	Conjunto lateral derecho apertura izquierda	Left opening right lateral assembly	916XX780	1
	Conjunto lateral derecho apertura derecha	Right opening right lateral assembly	916XX781	1
EC4	Conjunto lateral derecho con cargador	Right lateral assembly with feeder		1
EC8	Conjunto lateral derecho con cargador	Right lateral assembly with feeder	916XX151	1
EC14	Conjunto lateral derecho con cargador	Right lateral assembly with feeder		1

**Nota: Valido para equipos desde número de serie 15207
/ Note: Valid for equipment with serial number from 15207**

MODELOS A – B / A - B MODELS:



Apertura a izquierdas
(standard) / Left
opening (standard)

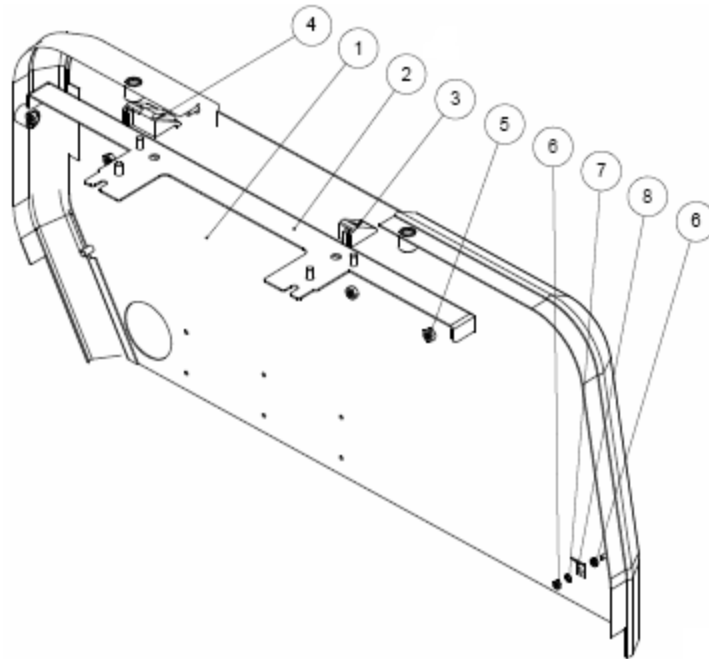


Apertura a derechas /
Right opening

1	Lateral dcho EC4 standard	Standard EC4 right lateral	917XX271	1
	Lateral dcho EC4 apertura a dchas	Right opening EC4 right lateral	917XX272	
	Lateral dcho EC8 standard	Standard EC8 right lateral	917XX273	
	Lateral dcho EC8 apertura a dchas	Right opening EC8 right lateral	917XX275	
	Lateral dcho EC14 standard	Standard EC14 right lateral	917XX276	
	Lateral dcho EC14 apertura a dchas	Right opening EC14 right lateral	917XX277	
2	Tirante EC4	EC4 Brace	914XX380	1
	Tirante EC8/EC14	EC8/EC14 Brace	914XX381	
3	Moldura izda standard	Standard EC right lateral left moulding	917XX803	1
	Moldura/junta izda apertura a dchas	Right opening EC right lateral left moulding	917XX804	
4	Moldura/junta dcha standard	Standard EC right lateral right moulding	917XX805	1
5	Tuerca hexagonal M5 inox.	Stainless M5 hexagonal nut	910XX359	4
6	Tuerca hexagonal M3 inox.	Stainless M3 hexagonal nut	914XX982	2
7	Arandela dentada M3	M3 washer	910XX397	1
8	Terminal faston	Faston terminal	915XX158	1

Modelo/ Model	Descripción	Description	Ref.	Qty
EC4	Conjunto lateral derecho apertura izquierda	Left opening right lateral assembly	916XX776	1
	Conjunto lateral derecho apertura derecha	Right opening right lateral assembly	916XX777	1
EC8	Conjunto lateral derecho apertura izquierda	Left opening right lateral assembly	916XX778	1
	Conjunto lateral derecho apertura derecha	Right opening right lateral assembly	916XX779	1
EC14	Conjunto lateral derecho apertura izquierda	Left opening right lateral assembly	916XX780	1
	Conjunto lateral derecho apertura derecha	Right opening right lateral assembly	916XX781	1

MODELO C (CON CARGADOR) / C MODEL (WITH FEEDER):



Nº	Descripción	Description	Ref.	Qty.
1	Lateral dcho EC4	EC4 Right lateral	917XX271	1
	Lateral dcho EC8	EC8 Right lateral	917XX273	
	Lateral dcho EC14	EC14 Right lateral	917XX276	
2	Tirante EC4	EC4 Brace	914XX380	1
	Tirante EC8/EC14	EC8/EC14 Brace	914XX381	
3	Moldura izquierda	Left moulding	917XX804	1
4	Moldura derecha	Right moulding	917XX805	1
5	Tuerca hexagonal M5 inox.	Stainless M5 hexagonal nut	910XX359	4
6	Tuerca hexagonal M3 inox.	Stainless M3 hexagonal nut	914XX982	2
7	Arandela dentada M3	M3 washer	910XX397	1
8	Terminal faston	Faston terminal	915XX158	1

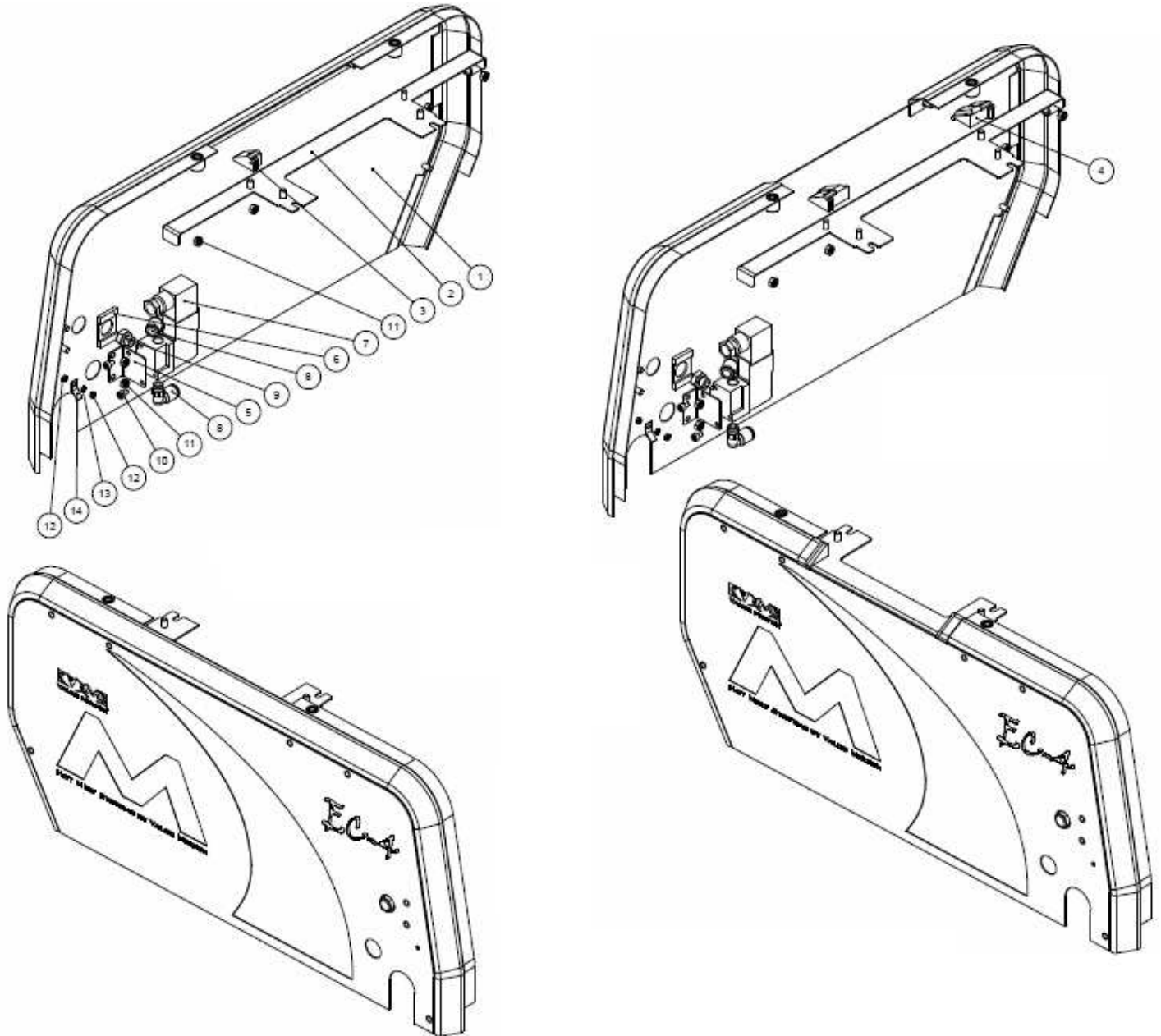
Modelo/ Model	Descripción	Description	Ref.	Qty
EC4	Conjunto lateral derecho con cargador	Right lateral assembly with feeder	917XX893	1
EC8	Conjunto lateral derecho con cargador	Right lateral assembly with feeder	916XX151	1
EC14	Conjunto lateral derecho con cargador	Right lateral assembly with feeder	917XX894	1

9. CONJUNTO LATERAL IZQUIERDO / LEFT LATERAL COVER ASSEMBLY:

**Nota: Valido para equipos hasta número de serie 15206
/ Note: Valid for equipments with serial number up to 15206**

Apertura a izquierdas / Left open
STANDARD

Apertura a derechas / Right open
ESPECIAL / SPECIAL



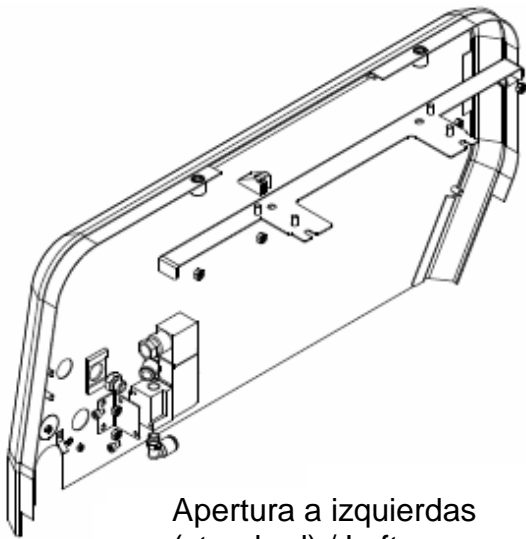
Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Lateral izquierdo	Left lateral cover	X	X		---	1
2	Tirante	Brace	X	X		---	1
3	Moldura / junta dcha	Right joint / molding	X	X		---	1
4	Moldura / junta izda	Left joint / molding	X	X		---	1
5	Soporte electroválvula	Electrovalve support	X	X		917XX283	1
6	Junta escape válvula	Valve gasket	X	X		917XX284	1
7	Electroválvula 3/2 – 1/8 – 24V DC	3/2 – 1/8 – 24V DC Electrovalve	X	X		917XX285	1
8	Racor 90º 1/8" E/R tubo 8	90º 1/8" E/R fitting 8 tube	X	X		988XX018	2
9	Silenciador corto 1/8" gas	1/8" GAS short silencer	X	X		917XX286	1
10	Tornillo allen M4x6 Inox.	Stainless M4x6 allen screw	X	X		910XX004	2
11	Tuerca hexagonal M5 Inox.	Stainless M5 hex nut	X	X		910XX359	6
12	Tuerca hexagonal M3 Inox.	Stainless M3 hex nut	X	X		914XX982	2
13	Arandela dentada M3 inox	Stainless M3 toothed washer	X	X		910XX397	1
14	Terminal faston M-panel TE938	M-panel TE938 faston terminal	X	X		915XX158	1

Ref.	916XX782	916XX783	916XX784	916XX785	916XX786	916XX787
Nº	EC4	EC4	EC8	EC8	EC14	EC14
	Apertura a izquierdas / Left open	Apertura a dchas / Right open	Apertura a izquierdas / Left open	Apertura a dchas / Right open	Apertura a izquierdas / Left open	Apertura a dchas / Right open
1	917XX287	917XX288	917XX289	917XX290	917XX291	917XX292
2	917XX293		917XX294			
3		917XX805		917XX805		917XX805
4		917XX803		917XX803		917XX803

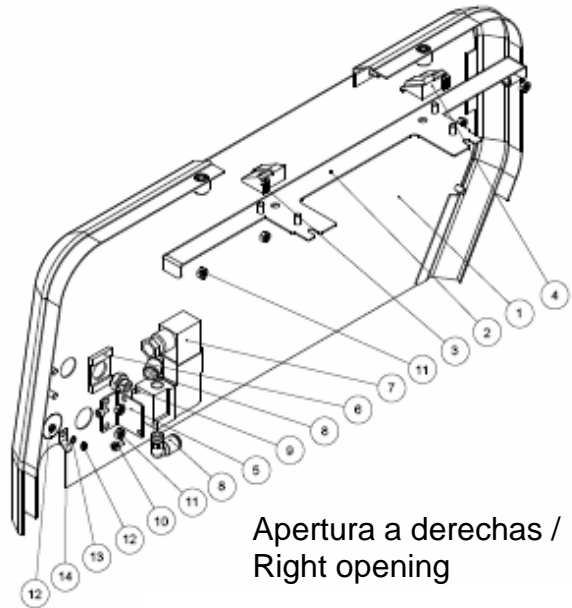
Modelo/ Model	Descripción	Description	Ref.	Qty
EC4	Conjunto lateral izquierdo apertura izquierda	Left opening left lateral assembly	916XX782	1
	Conjunto lateral izquierdo apertura derecha	Right opening left lateral assembly	916XX783	1
EC8	Conjunto lateral izquierdo apertura izquierda	Left opening left lateral assembly	916XX784	1
	Conjunto lateral izquierdo apertura derecha	Right opening left lateral assembly	916XX785	1
EC14	Conjunto lateral izquierdo apertura izquierda	Left opening left lateral assembly	916XX786	1
	Conjunto lateral izquierdo apertura derecha	Right opening left lateral assembly	916XX787	1

Nota: Valido para equipos desde número de serie 15207

/ Note: Valid for equipments with serial number from 15207



Apertura a izquierdas
(standard) / Left
opening (standard)



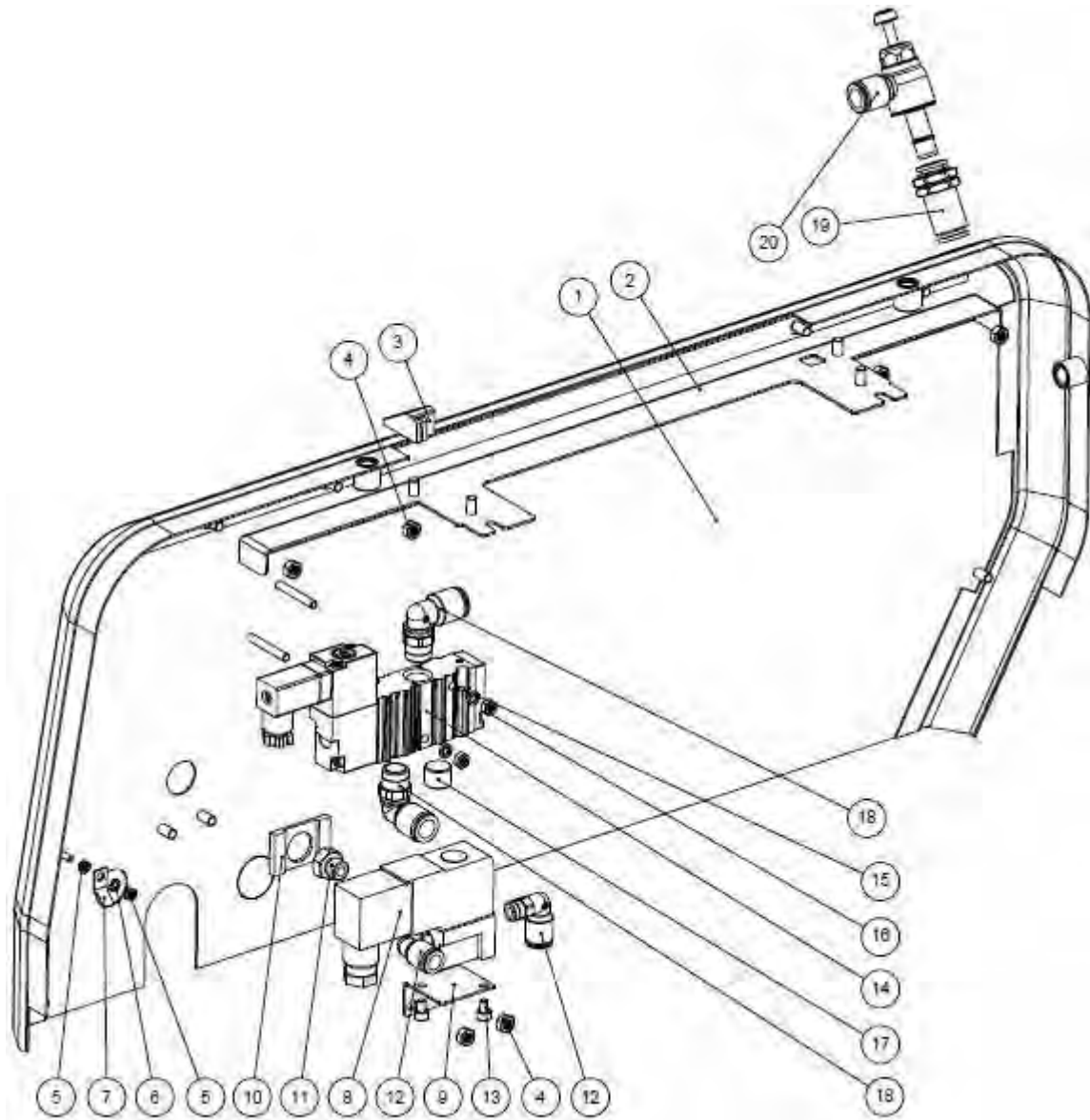
Apertura a derechas /
Right opening

Nº	Descripción	Description	Ref.	Qty.
1	Lateral izdo EC4 standard	Standard EC4 left lateral	917XX287	1
	Lateral izdo EC4 apertura a dchas	Right opening EC4 left lateral	917XX288	
	Lateral izdo EC8 standard	Standard EC8 left lateral	917XX289	
	Lateral izdo EC8 apertura a dchas	Right opening EC8 left lateral	917XX290	
	Lateral izdo EC14 standard	Standard EC14 left lateral	917XX291	
	Lateral izdo EC14 apertura a dchas	Right opening EC14 left lateral	917XX292	
2	Tirante EC4	EC4 Brace	914XX380	1
	Tirante EC8/EC14	EC8/EC14 Brace	914XX381	
3	Moldura dcha standard	Standard EC left lateral right moulding	918XX628	1
	Moldura dcha apertura a dchas	Right opening EC left lateral right moulding	917XX805	
4	Moldura izda	Left moulding	917XX803	1
5	Soporte electroválvula	Electrovalve support	917XX283	1
6	Junta escape	Valve gasket	917XX284	1
7	Electroválvula	Electrovalve	917XX285	1
8	Racor 90° 1/8" E/R tubo 8	1/8" tube 8 90° fitting	988XX018	2
9	Silenciador 1/8" gas	1/8" gas silencer	917XX286	1
10	Tornillo allen M4x6 inox	Stainless M4x6 allen screw	910XX981	2
11	Tuerca hexagonal M5 inox	Stainless M5 hexagonal nut	910XX359	6
12	Tuerca hexagonal M3 inox	Stainless M3 hexagonal nut	914XX982	2
13	Arandela dentada M3	M3 washer	910XX397	1
14	Terminal faston	Faston terminal	915XX158	1

Modelo/ Model	Descripción	Description	Ref.	Qty
EC4	Conjunto lateral izquierdo apertura izquierda	Left opening left lateral assembly	916XX782	1
	Conjunto lateral izquierdo apertura derecha	Right opening left lateral assembly	916XX783	1
EC8	Conjunto lateral izquierdo apertura izquierda	Left opening left lateral assembly	916XX784	1
	Conjunto lateral izquierdo apertura derecha	Right opening left lateral assembly	916XX785	1
EC14	Conjunto lateral izquierdo apertura izquierda	Left opening left lateral assembly	916XX786	1
	Conjunto lateral izquierdo apertura derecha	Right opening left lateral assembly	916XX787	1

10. CONJUNTO LATERAL IZQUIERDO EC CON CARGADOR / EC LEFT LATERAL COVER ASSEMBLY WITH FEEDER:

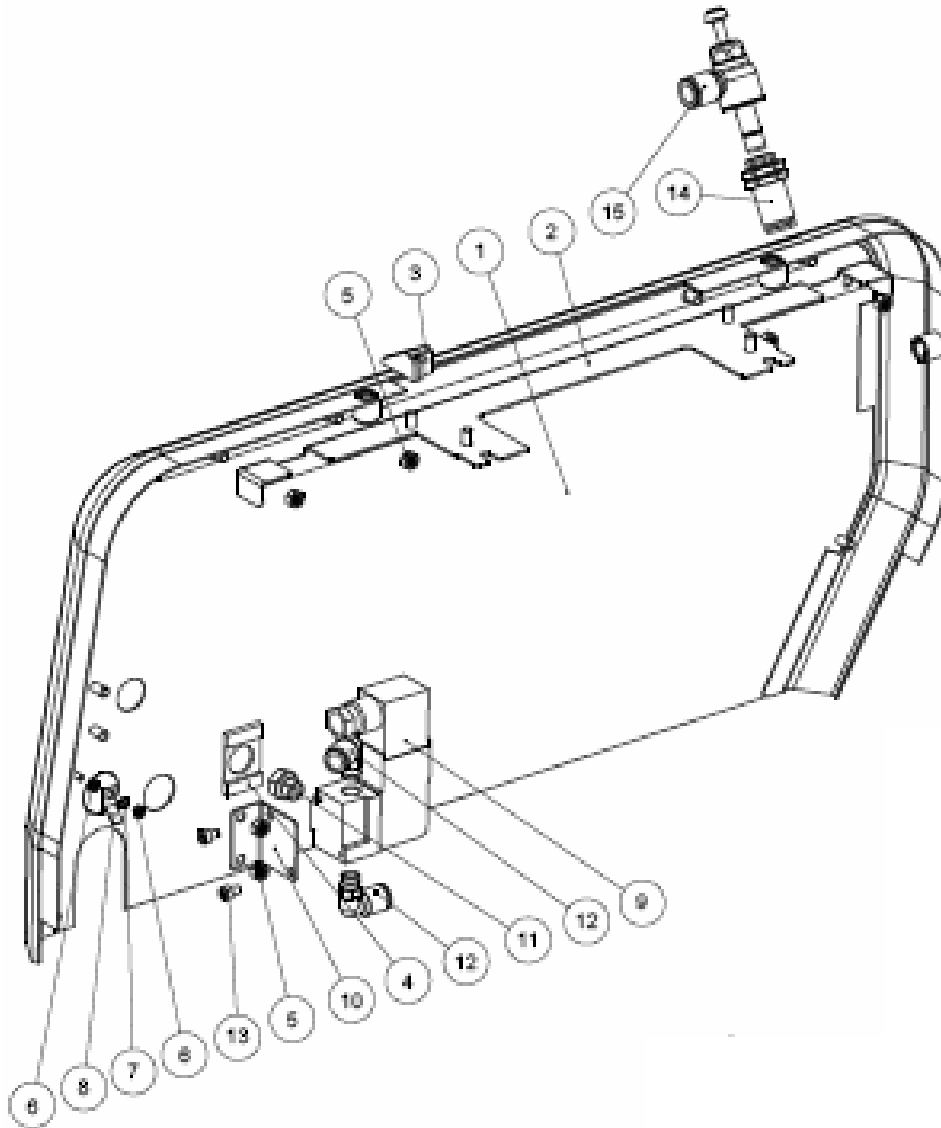
**Nota: Valido para equipos hasta número de serie 15206
/ Note: Valid for equipments with serial number up to 15206**



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Lateral izquierdo EC4	Left lateral cover EC4			X	918XX748	1
	Lateral izquierdo EC8	Left lateral cover EC8			X	918XX629	1
	Lateral izquierdo EC14	Left lateral cover EC14			X	918XX749	1
2	Tirante EC4	Brace EC4			X	918XX750	1
	Tirante EC8/EC14	Brace EC8/EC14			X	917XX294	1
3	Junta interior derecha tabique	Wall right inside joint			X	918XX628	1
4	Tuerca hexagonal M5 Inox.	Stainless M5 hex nut			X	910XX359	6
5	Tuerca hexagonal M3 Inox.	Stainless M3 hex nut			X	914XX982	2
6	Arandela dentada M3 inox	Stainless M3 toothed washer			X	910XX397	1
7	Terminal faston M-panel TE938	M-panel TE938 faston terminal			X	915XX158	1
8	Electrovalvula 3/2 – 1/8 – 24V DC	3/2 – 1/8 – 24V DC Electrovalve			X	917XX285	1
9	Soporte electrovalvula	Electrovalve support			X	917XX283	1
10	Junta escape valvula	Valve gasket			X	917XX284	1
11	Silenciador corto 1/8" gas	1/8" GAS short silencer			X	917XX286	1
12	Racor 90° 1/8" E/R tubo 8	90° 1/8" E/R fitting 8 tube			X	988XX018	2
13	Tornillo allen M4x6 Inox.	Stainless M4x6 allen screw			X	910XX004	2
14	Valvula 52A-11-DOA-DM	52A-11-DOA-DM valve			X	988XX235	1
15	Arandela Grover M4 inox	Stainless M4 grover washer			X	910XX332	2
16	Tuerca hexagonal M4 inox	Stainless M4 hex nut			X	915XX159	2
17	Tapon ¼ GAS BSP	BSP GAS ¼" plug			X	915XX264	1
18	Racor 90° ¼" e/r tubo 10	Pipe 10 e/r ¼" 90° fitting			X	918XX630	2
19	Racor pasatabiques Ø10	Ø10 fitting			X	918XX631	1
20	Regulador de caudal tubo 10	10 pipe flow regulator			X	918XX632	1

Descripción	Description	Ref.	Qty
Conjunto lateral izquierdo EC4	EC4 left lateral assembly	916XX626	1
Conjunto lateral izquierdo EC8	EC8 left lateral assembly	916XX150	1
Conjunto lateral izquierdo EC14	EC14 left lateral assembly	916XX627	1

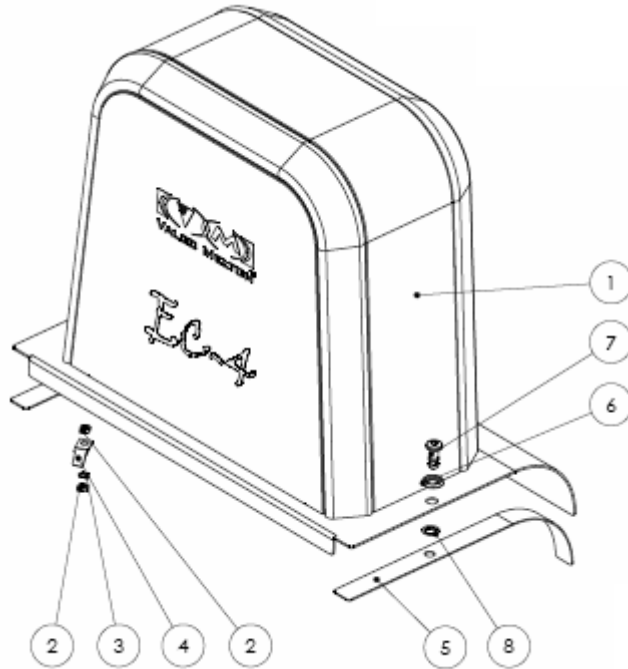
Nota: Valido para equipos desde número de serie 15207
/ Note: Valid for equipments with serial number from 15207



Nº	Descripción	Description	Ref.	Qty.
1	Lateral izdo EC4	EC4 Left lateral	918XX748	1
	Lateral izdo EC8	EC8 Left lateral	918XX629	
	Lateral izdo EC14	EC14 Left lateral	918XX749	
2	Tirante EC4	EC4 Brace	914XX383	1
	Tirante EC8/EC14	EC8/EC14 Brace	914XX381	
3	Moldura dcha standard	Standard EC left lateral right moulding	918XX628	1
4	Junta escape	Valve gasket	917XX284	1
5	Tuerca hexagonal M5 inox	Stainless M5 hexagonal nut	910XX359	6
6	Tuerca hexagonal M3 inox	Stainless M3 hexagonal nut	914XX982	2
7	Arandela dentada M3	M3 washer	910XX397	1
8	Terminal faston	Faston terminal	915XX158	1
9	Electroválvula	Electrovalve	917XX285	1
10	Soporte electrovalvula	Electrovalve support	917XX283	1
11	Silenciador 1/8" gas	1/8" gas silencer	917XX286	1
12	Racor 90° 1/8" E/R tubo 8	1/8" tube 8 90° fitting	988XX018	2
13	Tornillo allen M4x6 inox	Stainless M4x6 allen screw	910XX981	2
14	Racor pasatabiques Ø10	Ø10 wall fitting	918XX631	1
15	Regulador de caudal tubo 10	10 pipe flow regulator	918XX632	1

Descripción	Description	Ref.	Qty
Conjunto lateral izquierdo EC4	EC4 left lateral assembly	916XX626	1
Conjunto lateral izquierdo EC8	EC8 left lateral assembly	916XX150	1
Conjunto lateral izquierdo EC14	EC14 left lateral assembly	916XX627	1

11. CONJUNTO CARCASA BOMBA / PUMP COVER ASSEMBLY:

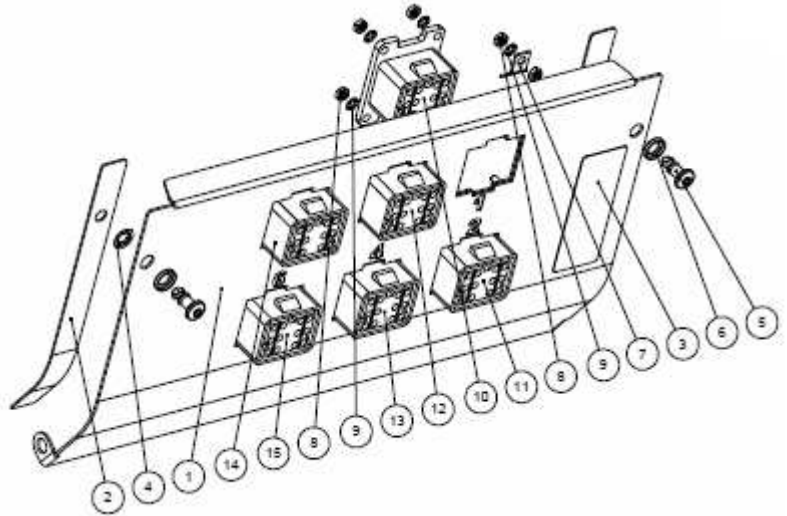


Nº	Descripción	Description	Ref.	Qty.
1	Carcasa bomba EC4	EC4 Pump cover	917XX297	1
	Carcasa bomba EC8	EC8 Pump cover	917XX298	
	Carcasa bomba EC14	EC14 Pump cover	917XX299	
2	Tuerca hexagonal M3 inox	Stainless M3 hex nut	914XX982	2
3	Arandela dentada M3	M3 toothed washer	910XX397	1
4	Terminal faston	Faston terminal	915XX158	1
5	Junta carcasa bomba	Pump cover joint	917XX295	2
6	Arandela tornillo cautivo	Washer captive screw	914XX378	2
7	Tornillo 1/4 vuelta	1/4 Screw	917XX263	2
8	Retén	Screw retainer	917XX264	2

EC4	EC8	EC14
916XX761	916XX803	916XX804

12. CONJUNTO PANEL TRASERO / REAR PANEL COVER ASSEMBLY:

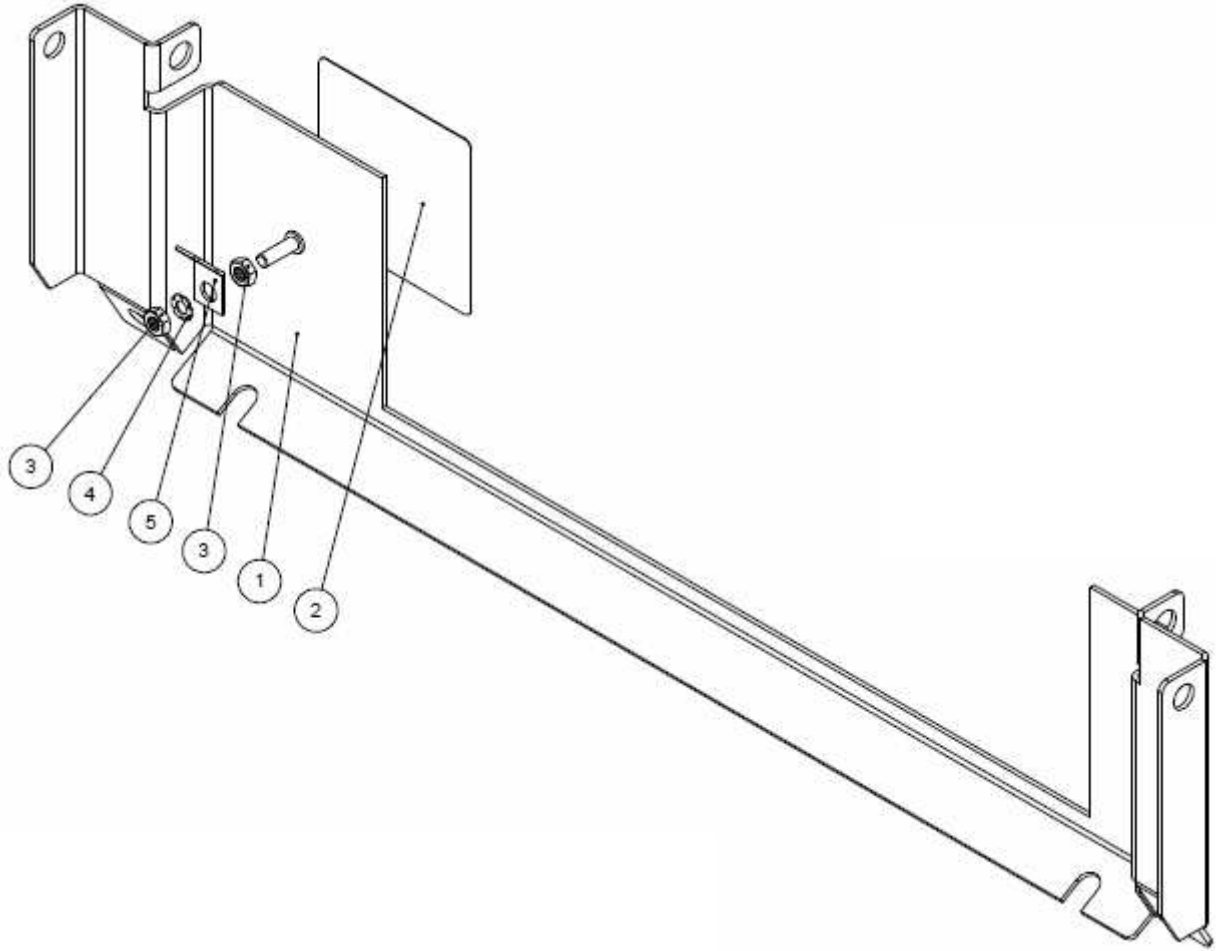
Salidas / Outputs	EC4	EC8	EC14
2	916xx794	916xx797	916xx800
4	916xx795	916xx798	916xx801
6	916xx796	916xx799	916xx802



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Panel trasero 2 salidas EC4/EC8	2 outs rear panel EC4/EC8	X	X	X	917XX300	1
	Panel trasero 2 salidas EC14	2 outs rear panel EC14	X	X	X	917XX462	
	Panel trasero 4 salidas EC4/EC8	4 outs rear panel EC4/EC8	X	X	X	917XX301	
	Panel trasero 4 salidas EC14	4 outs rear panel EC14	X	X	X	917XX842	
	Panel trasero 6 salidas EC4/EC8	6 outs rear panel EC4/EC8	X	X	X	917XX302	
	Panel trasero 6 salidas EC14	6 outs rear panel EC14	X	X	X	917XX843	
2	Junta porton trasero EC4/EC8	EC4/EC8 Rear door joint	X	X	X	917XX296	2
	Junta porton trasero EC14	EC14 Rear door joint	X	X	X	917XX844	
3	Pegatina riesgo electrico	Electric risk sticker	X	X	X	917XX266	1
4	Reten Southco	Southco screw retainer	X	X	X	917XX264	2
5	Tornillo 1/4 vuelta Southco	¼ Southco screw	X	X	X	917XX263	2
6	Arandela nylon Southco	Southco nylon washer	X	X	X	917XX267	2
7	Terminal faston M-panel TE938	M-panel TE938 faston terminal	X	X	X	915XX158	1
8	Tuerca hex M3 Inox. (2 salidas)	Stainless M3 hex nut (2 outputs)	X	X	X	914XX982	10
	Tuerca hex M3 Inox. (4 salidas)	Stainless M3 hex nut (4 outputs)	X	X	X		18
	Tuerca hex M3 Inox. (6 salidas)	Stainless M3 hex nut (6 outputs)	X	X	X		26
9	Arandela dentada M3 (2salidas)	M3 toothed washer (2 outputs)	X	X	X	910XX397	9
	Arandela dentada M3 (4salidas)	M3 toothed washer (4 outputs)	X	X	X		17
	Arandela dentada M3 (6salidas)	M3 toothed washer (6 outputs)	X	X	X		25
10	Mazo Ni120 Manguera-pistola 1	1 Hose-gun Ni120 cable	X	X	X	---	1
11	Mazo Ni120 Manguera-pistola 2	2 Hose-gun Ni120 cable	X	X	X	---	1
12	Mazo Ni120 Manguera-pistola 3	3 Hose-gun Ni120 cable	X	X	X	---	1
13	Mazo Ni120 Manguera-pistola 4	4 Hose-gun Ni120 cable	X	X	X	---	1
14	Mazo Ni120 Manguera-pistola 5	5 Hose-gun Ni120 cable	X	X	X	---	1
15	Mazo Ni120 Manguera-pistola 6	6 Hose-gun Ni120 cable	X	X	X	---	1

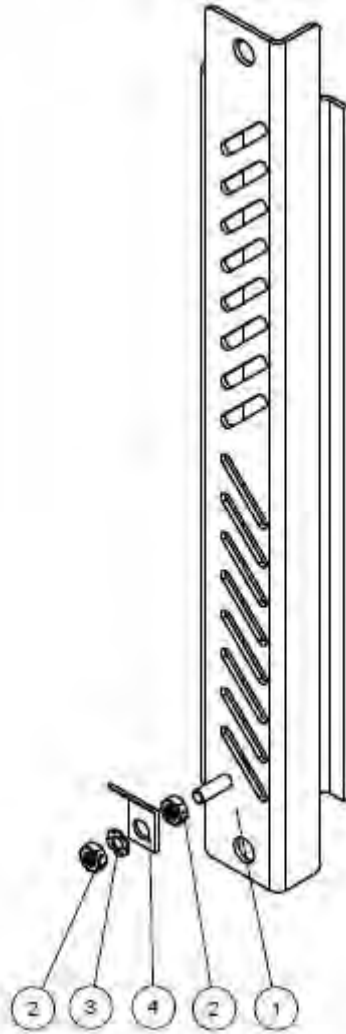
Nº	EC4	EC8	EC14
10	917XX303	917XX309	917XX315
11	917XX304	917XX310	917XX316
12	917XX305	917XX311	917XX317
13	917XX306	917XX312	917XX318
14	917XX307	917XX313	917XX319
15	917XX308	917XX314	917XX320

**13. CONJUNTO CHAPA DISTRIBUIDOR / MANIFOLD PLATE ASSEMBLY:
(916XX762)**



Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Chapa trasera distribuidor	Manifold rear plate	X	X	X	917XX321	1
2	Pegatina riesgo alta temperatura	High temperature risk sticker	X	X	X	917XX258	1
3	Tuerca hexagonal M3 Inox	Stainless M3 hex nut	X	X	X	914XX982	2
4	Arandela dentada M3	M3 toothed washer	X	X	X	910XX397	1
5	Terminal faston M-panel TE938	M-panel TE938 faston terminal	X	X	X	915XX158	1

14. CONJUNTO REJILLA CARENAJE / GRID ASSEMBLY: (916XX923)

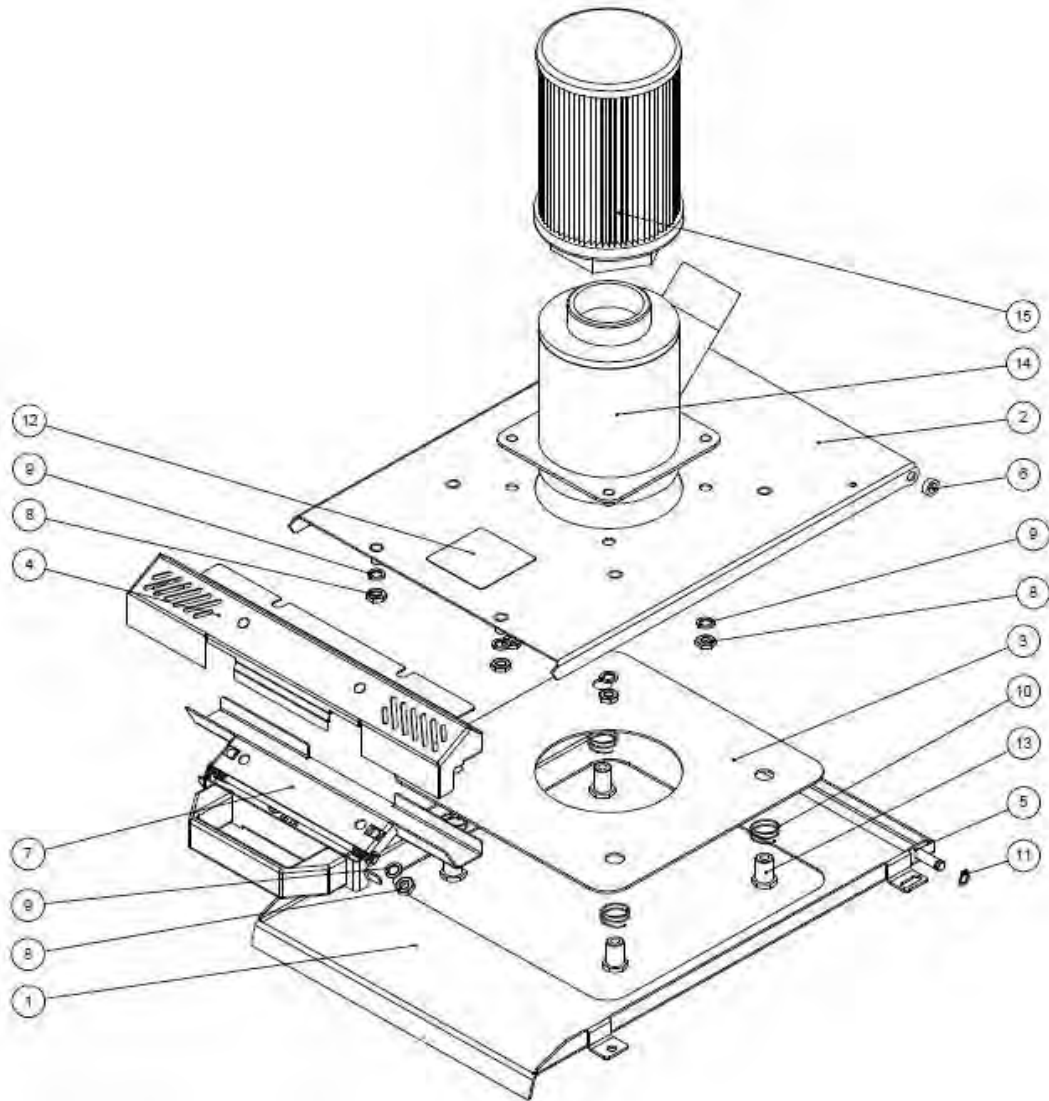


Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Rejilla carenaje EC	EC grid	X	X	X	917XX806	1
2	Tuerca hexagonal M3 inox	Stainless M3 hex nut	X	X	X	914XX982	2
3	Arandela dentada M3	M3 toothed washer	X	X	X	910XX397	1
4	Terminal faston M-Panel	Therminal faston M-Panel	X	X	X	915XX158	1

15. CONJUNTO TAPA CARGADOR EC / EC FEEDER LID COVER ASSEMBLY:

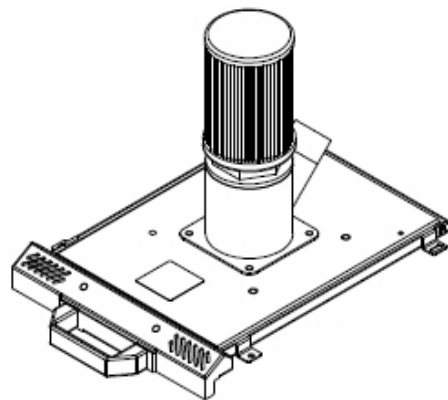
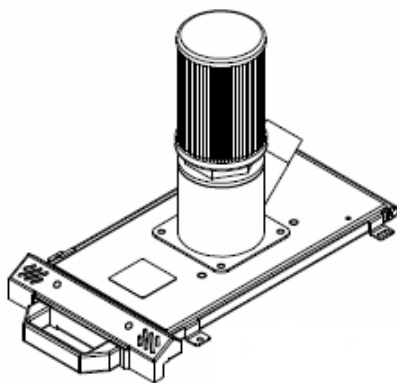
Nota: Valido para equipos hasta número de serie 15206

/ Note: Valid for equipments with serial number up to 15206



EC4 CON CARGADOR /
EC4 WITH FEEDER

EC8-EC14 CON CARGADOR/
EC8-EC14 WITH FEEDER

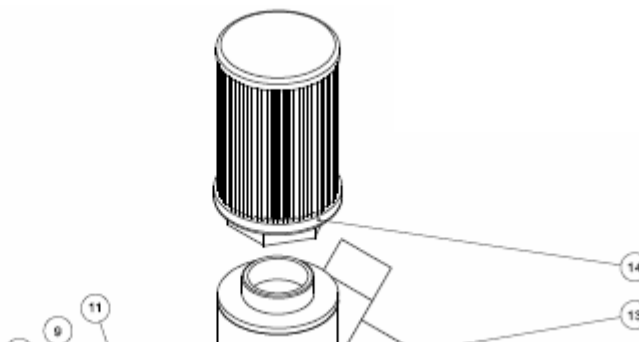


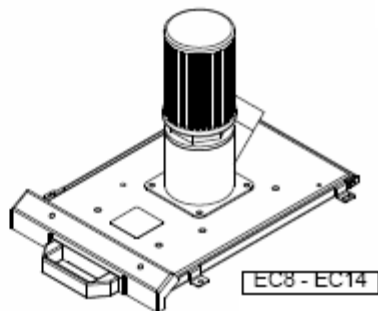
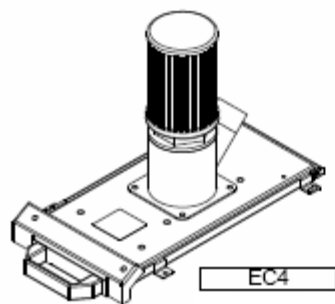
Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Base tapa deposito EC4	EC4 tank lid base			X	917XX340	1
R033010101	Base tapa deposito EC8/EC14	EC8/EC14 tank lid base			X	917XX345	

2	Tapa deposito EC4	EC4 tank lid cover			X	917XX341	1
	Tapa deposito EC8/EC14	EC8/EC14 tank lid cover			X	917XX346	
3	Contratapa EC4	EC4 lid			X	917XX342	1
	Contratapa EC8/EC14	EC8/EC14 lid			X	917XX347	
4	Asidero tapa EC4	EC4 Handle lid			X	917XX343	1
	Asidero tapa EC8/EC14	EC8/EC14 Handle lid			X	917XX348	
5	Eje bisagra EC4	EC4 Hinge shaft			X	917XX344	1
	Eje bisagra EC8/EC14	EC8/EC14 Hinge shaft			X	917XX349	
6	Casquillo tapa	Lid bushing			X	917XX335	2
7	Conjunto pestillo tapa	Lid latch assembly			X	PAG 53	1
8	Tuerca hexagonal rebajada M6	M6 hex nut			X	910XX131	8
9	Arandela grover M6 Inox.	Stainless M6 grover washer			X	910XX131	8
10	Muelle tapa deposito	Tank lid spring			X	915XX546	4
11	Anillo elastico eje 6	6 Axle elastic ring			X	914XX952	2
12	Pegatina riesgo alta temperatura	High temperature risk sticker			X	917XX212	1
13	Tuerca contratapa	Bach cover nut			X	917XX259	4
14	Chimenea cargador EC	EC feeder chimney			X	918XX623	1
15	Filtro aspiracion rosca 1/2	½ thread aspiration filter			X	910XX465	1

Descripción	Description	Ref.
Subconjunto Tapa cargador EC4	EC4 feeder lid cover assembly	916XX788
Subconjunto Tapa cargador EC8/EC14	EC8/EC14 feeder lid cover assembly	916XX789

Nota: Valido para equipos desde número de serie 15207
/ Note: Valid for equipments with serial number from 15207





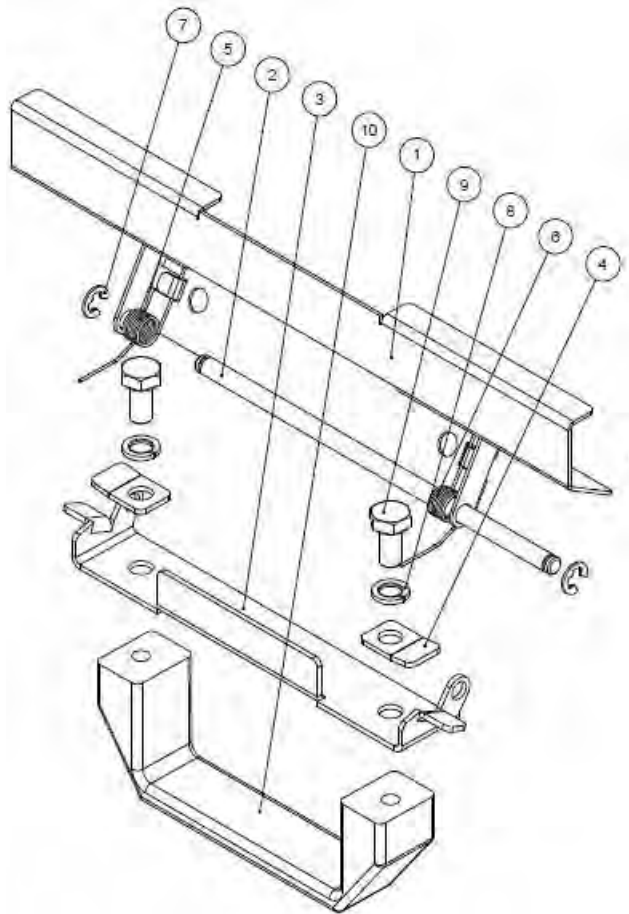
Nº	Descripción	Description	Ref.	Qty.
1	Base tapa depósito EC4	EC4 Tank lid base	917XX190	1
	Base tapa depósito EC4 apertura drcha	EC4 Tank lid base right opening		
	Base tapa depósito EC8/EC14	EC8/EC14 Tank lid base	917XX191	1
	Base tapa depósito EC8/EC14 apertura drcha	EC8/EC14 Tank lid base right opening		
2	Tapa depósito EC4	EC4 tank lid cover	914XX334	1
	Tapa depósito EC4 apertura drcha	EC4 tank lid cover right opening		
	Tapa depósito EC8/EC14	EC8/EC14 tank lid cover	914XX335	1
	Tapa depósito EC8/EC14 apertura drcha	EC8/EC14 tank lid cover right opening		
3	Contratapa EC4	EC4 lid	917XX342	1
	Contratapa EC4 apertura drcha	EC4 lid right opening		
	Contratapa EC8/EC14	EC8/EC14 lid	917XX347	1
	Contratapa EC8/EC14 apertura drcha	EC8/EC14 lid right opening		
4	Asidero tapa EC4	EC4 handle lid	914XX369	1
	Asidero tapa EC4 apertura drcha	EC4 handle lid right opening	914XX370	1
	Asidero tapa EC8/EC14	EC8/EC14 handle lid	914XX371	1
	Asidero tapa EC8/EC14 apertura drcha	EC8/EC14 handle lid right opening	914XX372	1
5	Eje bisagra tapa EC4	EC4 hinge shaft	917XX344	1
	Eje bisagra tapa EC4 apertura drcha	EC4 hinge shaft right opening		
	Eje bisagra tapa EC8/EC14	EC8/EC14 hinge shaft	917XX349	1
	Eje bisagra tapa EC8/EC14 apertura drcha	EC8/EC14 hinge shaft right opening		
6	Casquillo tapa	Lid bushing	917XX335	2
7	Subconjunto pestillo	Lid latch assembly	VER PÁG.	1
8	Tuerca hexagonal rebajada M6	M6 hex nut	917XX809	10
9	Arandela grover M6 inox.	Stainless M6 grover washer	910XX131	10
10	Muelle tapa depósito	Tank lid spring	914XX333	4
11	Pegatina riesgo alta temperatura	High temperature risk sticker	917XX212	1
12	Tuerca contratapa	Back cover nut	917XX259	4
13	Chimenea cargador	Feeder chimney	914XX373	1
14	Filtro aspiración rosca 1/2	1/2 thread aspiration filter	910XX465	1
15	Anillo retención lateral 5	Ring lateral retention 5	914XX254	2

Descripción	Description	Ref.
Subconjunto tapa EC4 dchas c/cargador	EC4 with feeder lid cover assembly right opening	917XX887
Subconjunto tapa EC4 c/cargador	EC4 with feeder lid cover assembly	917XX888
Subconjunto tapa EC8/EC14 c/cargador	EC8/EC14 with feeder lid cover assembly	917XX889

15.1 A) CONJUNTO PESTILLO TAPA / LID LATCH ASSEMBLY: (916XX979)

Nota: Valido para equipos hasta número de serie 15206

/ Note: Valid for equipments with serial number up to 15206

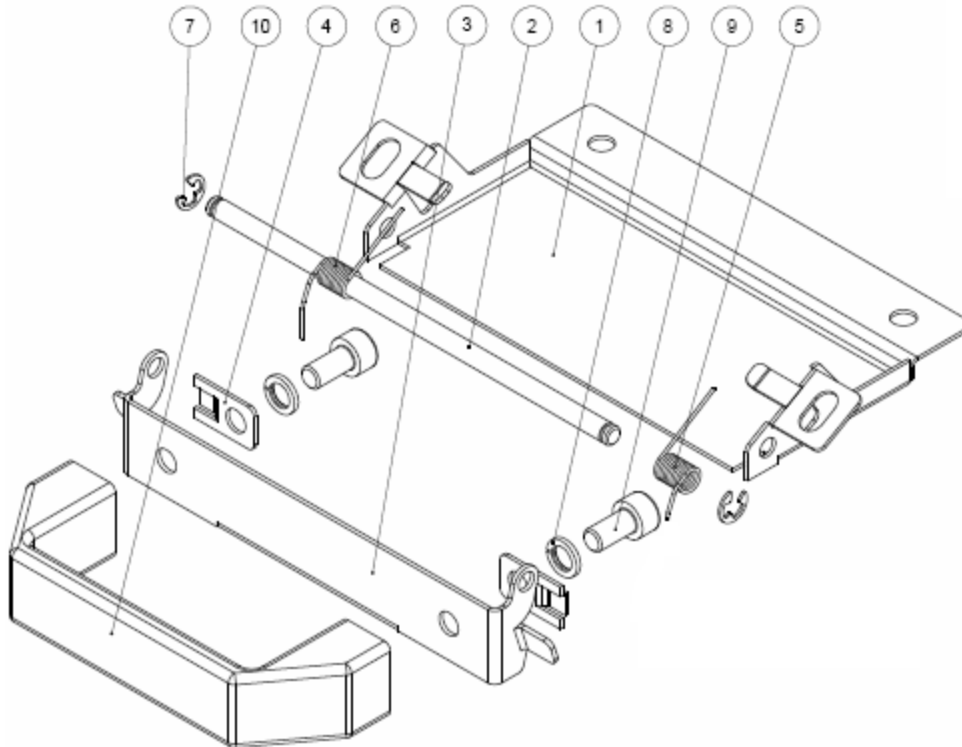


Nº	Descripción	Description	A	B	C	Ref.	Qty
1	Chapa interior tapa EC4	EC4 lid inside plate			X	918XX460	1
	Chapa interior tapa EC8/EC14	EC8/EC14 lid inside plate			X	918XX461	
2	Eje pestillo tapa EC con cargador	EC lid latch shaft with feeder			X	918XX462	1
3	Pestillo tapa EC con cargador	EC lid latch with feeder			X	918XX463	1
4	Brida muelle	Spring bridle			X	918XX464	2
5	Muelle 1	Ring 1			X	918XX625	1
6	Muelle 2	Ring 2			X	918XX626	1
7	Anillo retencion lateral	Lateral retention ring			X	918XX467	2
8	Arandela grover M6 Inox.	Stainless M6 grover washer			X	910XX131	2
9	Tornillo hexagonal M6x12	M6x12 hex screw			X	912XX625	2
10	Asa pequeña negra	Black small handle			X	917XX338	1

Descripción	Description	Ref.
Conjunto pestillo tapa EC4	EC4 lid latch assembly	916XX149
Conjunto pestillo tapa EC8/EC14	EC8/EC14 lid latch assembly	916XX147

15.1 B) CONJUNTO PESTILLO TAPA / LID LATCH ASSEMBLY: (917XX890)

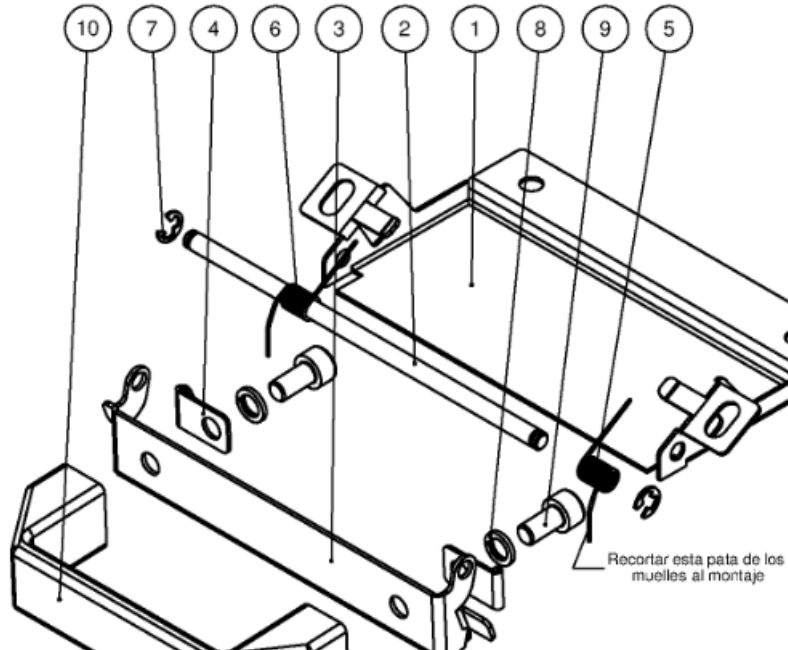
Nota: Valido para equipos número de serie 15207 hasta 15621
/ Note: Valid for equipments with serial number from 15207 to 15621



Nº	Descripción	Description	Ref.	Qty.
1	Cubierta interior	Internal cover EC lid	914XX374	1
2	Eje pestillo tapa	Lid latch shaft	918XX462	1
3	Pestillo tapa	EC lid latch with feeder	914XX375	1
4	Brida muelle	Spring bridle	918XX464	2
5	Muelle R	R spring	918XX625	1
6	Muelle L	L spring	918XX626	1
7	Anillo de retención lateral 4	Lateral retention ring 4	914XX376	2
8	Arandela grover M6 inox.	Washer grower M6	910XX131	2
9	Tornillo allen M6x12 inox.	Screw allen M6x12 SS	910XX089	2
10	Asa pequeña	Black small handle	917XX338	1

15.1 C) CONJUNTO PESTILLO TAPA CON CARGADOR / FEEDER LID LATCH ASSEMBLY:

Nota: Valido para equipos desde número de serie 15622
/ Note: Valid for equipments with serial number from 15622

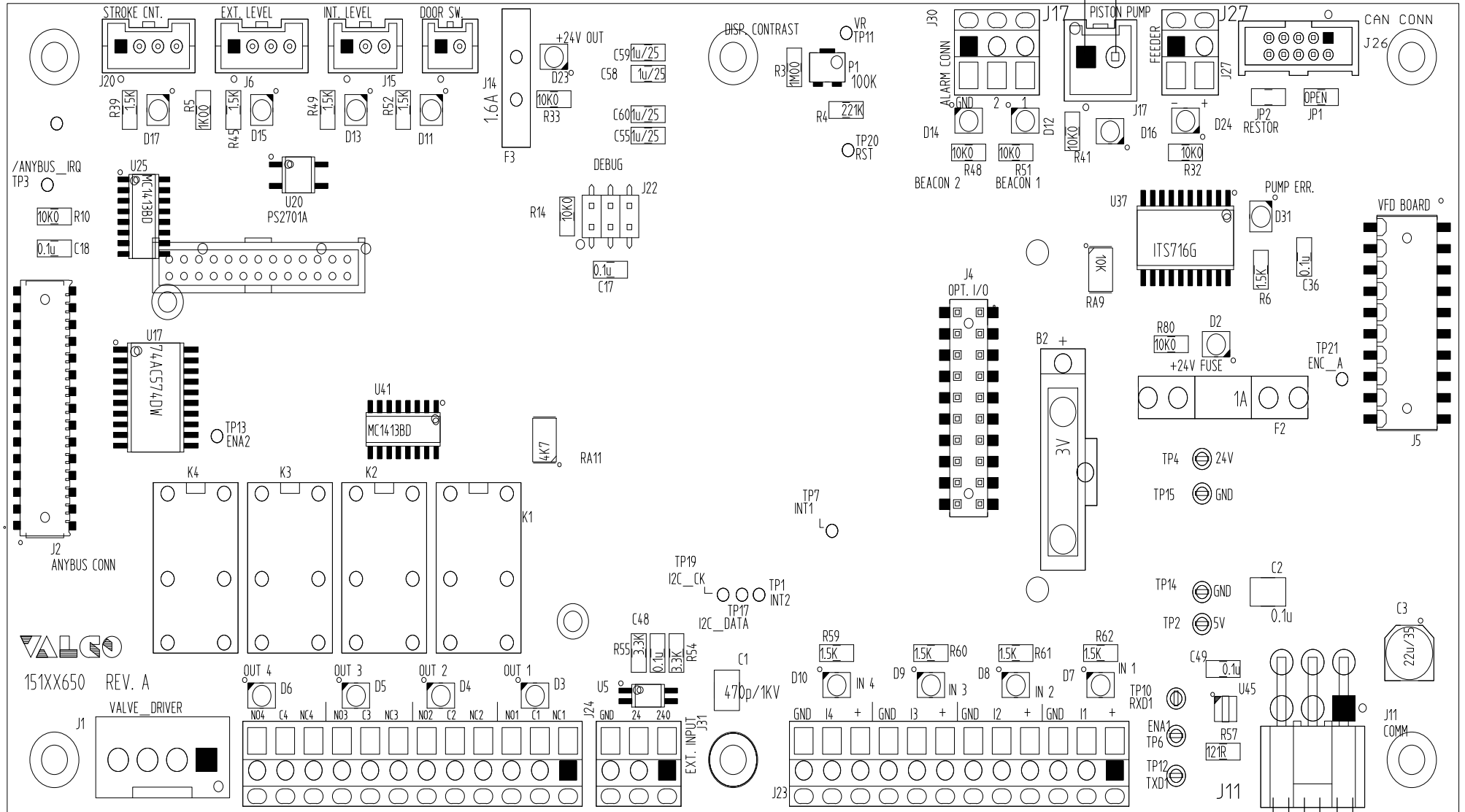


7	EC4	EC8 / EC14
	2	4

Nº	Descripción	Description	Ref.	Qty
1	CUBIERTA INTERIOR CON ALAS TAPA EC	INNER COVER	914XX374	1
2	EJE PESTILLO TAPA EC CON CARGADOR	EC LID LATCH AXLE	depending model	1
3	PESTILLO TAPA EC C/CARGADOR V1	EC LID LATCH	depending model	1
4	BRIDA MUELLE	SPRING BRIDLE	918XX464	2
5	MUELLE T030-270-172 R	T030-270-172 R SPRING	918XX625	1
6	MUELLE T030-270-172 L	T030-270-172 L SPRING	918XX626	1
7	ANILLO DE RETENCION LATERAL 4	LATERAL TOP SPRING	914XX376	dep. model
8	ARANDELA GROVER M6 INOX.	GROVER WASHER M6 STAINLESS	910XX131	2
9	TORNILLO ALLEN M6X12 INOX.	ALLEN SCREW M6X12 STAINLESS	910XX089	2
10	ASA PEQUEÑA NEGRA CIEGA	LITTLE HANDLER	917XX338	1

EC4	2	EJE PESTILLO TAPA EC4 CON CARGADOR	EC4 FEEDER LID LATCH AXLE	918XX462
	3	PESTILLO TAPA EC4 C/CARGADOR V1	EC4 FEEDER LID LATCH	914XX375
EC8/14	2	EJE PESTILLO TAPA EC8/14 CON CARGADOR	EC8/14 FEEDER LID LATCH AXLE	914XX638
	3	PESTILLO TAPA EC8/14 C/CARGADOR V1	EC8/14 FEEDER LID LATCH	914XX639

CONTROL BOARD



SEE PAGE 5

SEE PAGE 11

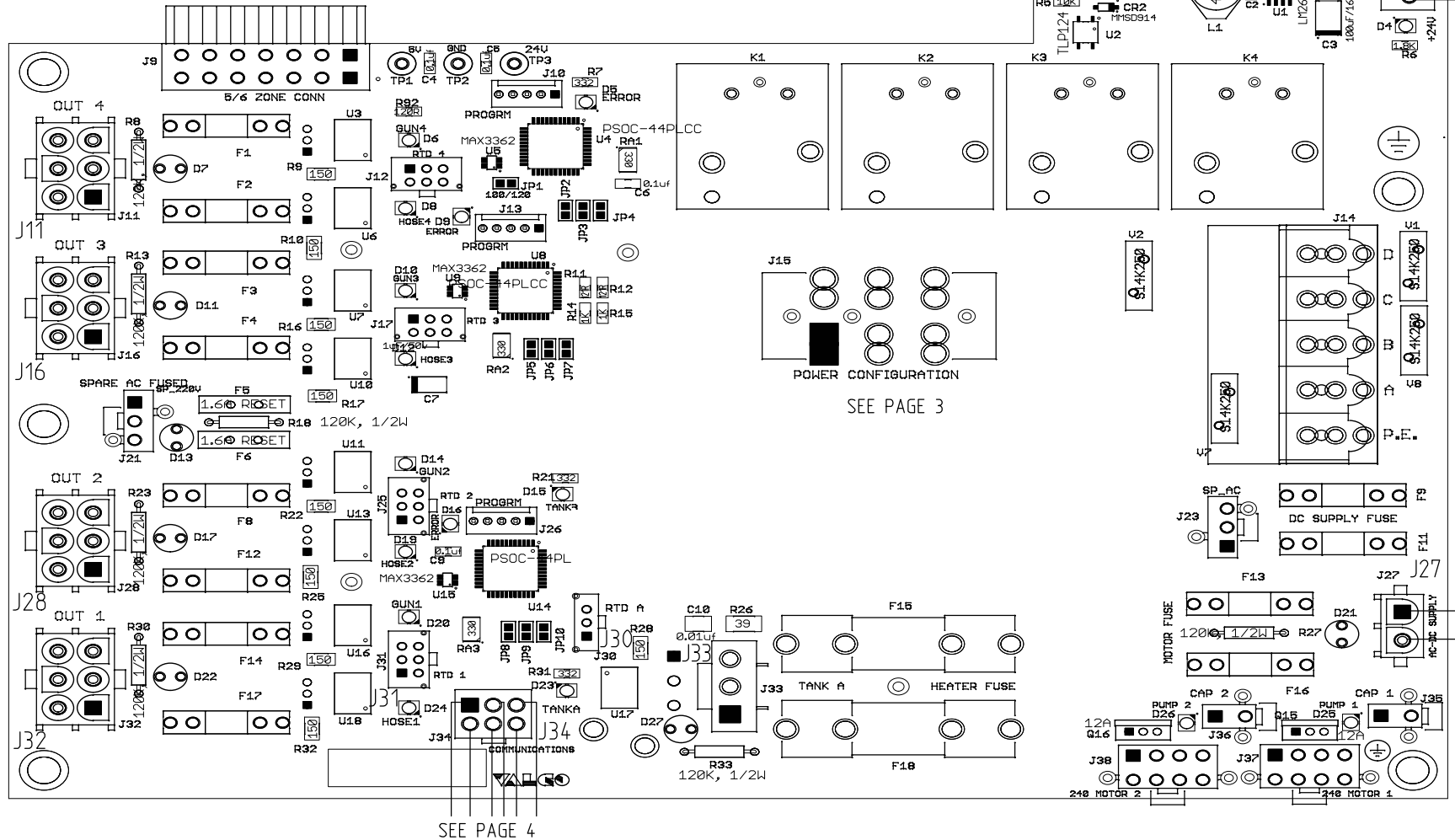
SEE PAGE 11

SEE PAGE 11

SEE PAGE 4

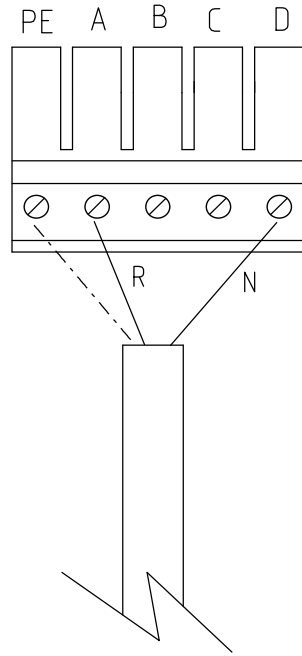
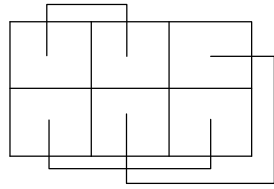
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MTL: CONTROL BOARD						
FINISH:		TOLERANCES - EXCEPT AS NOTED		TITLE		
REV:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	ALL DIMENSIONS IN MILLIMETERS		CONTROL BOARD EC SERIES		
		MACHINED SURFACES	✓			ANGULAR
		DRAWN BY M. AYESTARAN	DECIMAL X.			
	CHECKED	DECIMAL X.X		SCALE S/E		
	APPROVED	DECIMAL X.XX		SHEET 1 OF	SUPERSEDES	
					SUPERSEDED BY	

POWER BOARD



USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
Mtl: POWER BOARD					
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE	
REV: PM13768 28/07/11 MAF		ALL DIMENSIONS IN MILLIMETERS		POWER BOARD EC SERIES	
		MACHINED SURFACES	✓	ANGULAR	
	DRAWN BY M. AYESTARAN	DECIMAL X.			DATE 19.01.2001
	CHECKED	DECIMAL X.X			DRAWING NUMBER S033020201
	APPROVED	DECIMAL X.XX			SCALE S/E
					SHEET 2 OF
					SUPERSEDES
					SUPERSEDED BY

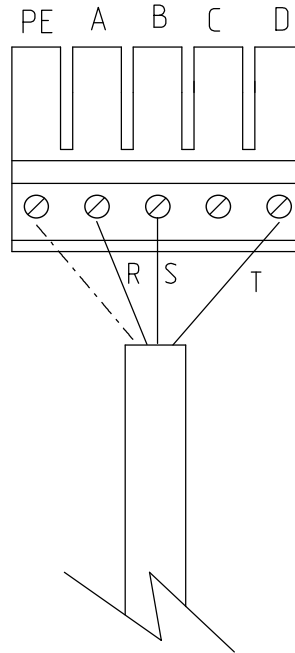
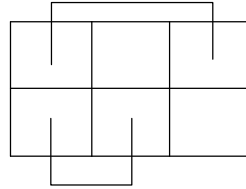
JUMPER 029XX436



I 240V ONE PHASE CONNECTION

SEE PAGE 2

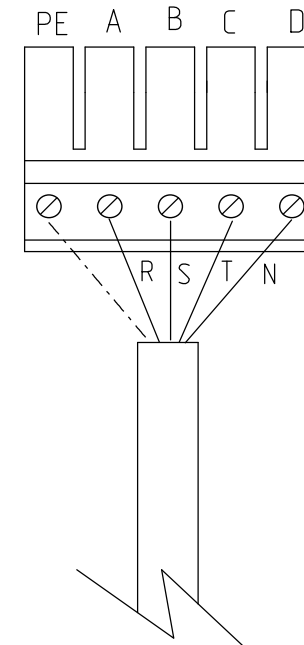
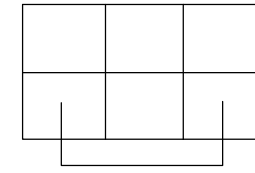
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III 240V THREE PHASE CONNECTION

SEE PAGE 2

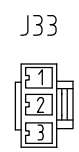
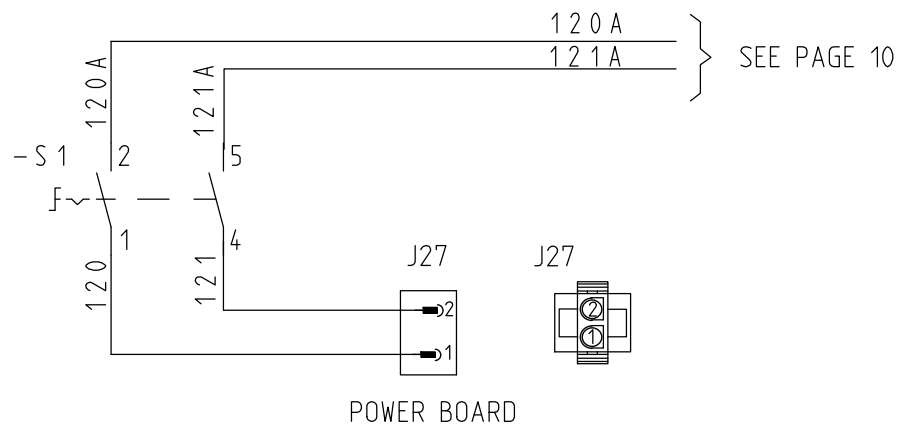
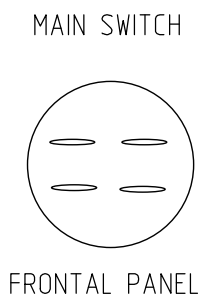
JUMPER 029XX437



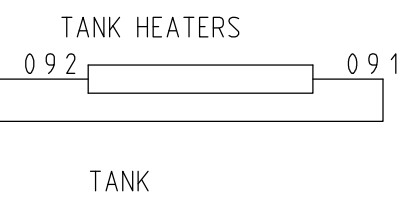
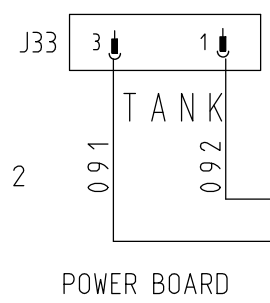
III 380V THREE PHASE CONNECTION WITH NEUTRAL

SEE PAGE 2

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: SERVICE WIRES						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE		
REV:		ALL DIMENSIONS IN MILLIMETERS		SERVICE WIRES		
		MACHINED SURFACES	✓	ANGULAR	EC SERIES	
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 19.01.2001		DRAWING NUMBER S033020201	
	CHECKED	DECIMAL X,X	SCALE S/E			
	APPROVED	DECIMAL X,XX	SHEET 3 OF		SUPERSEDES	
					SUPERSEDED BY	

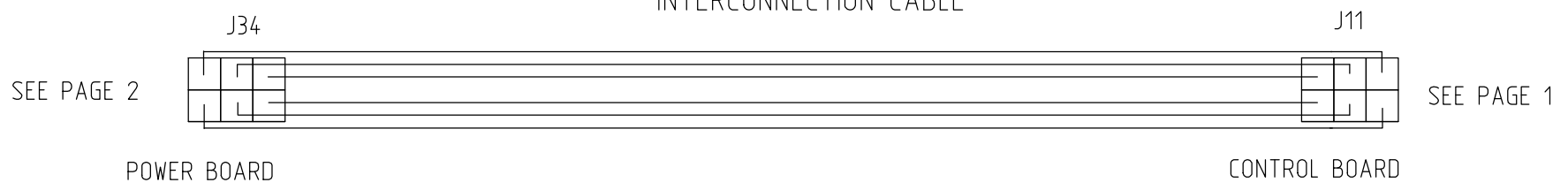


SEE PAGE 2

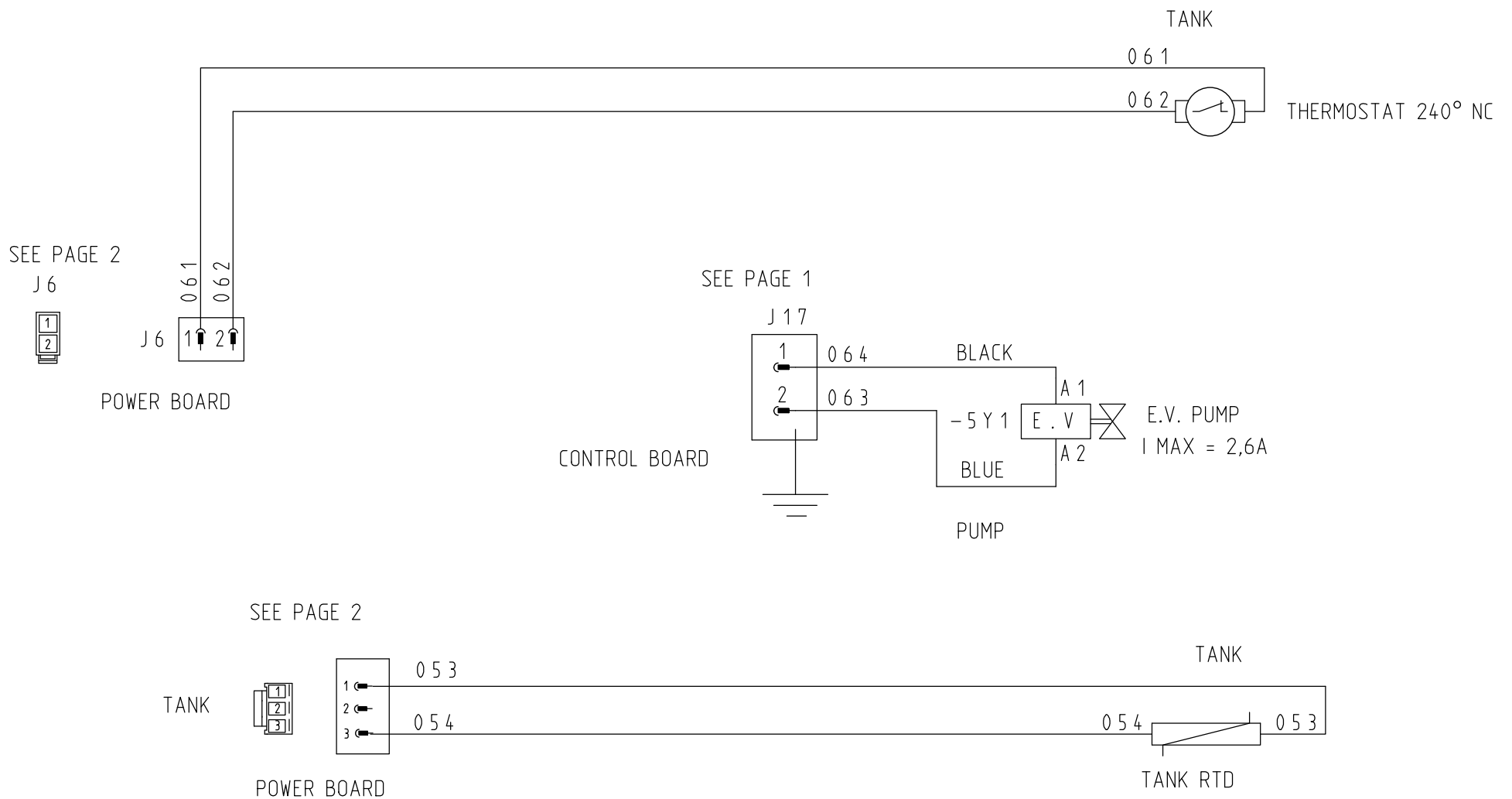


EC04	1800W
EC08	2900W

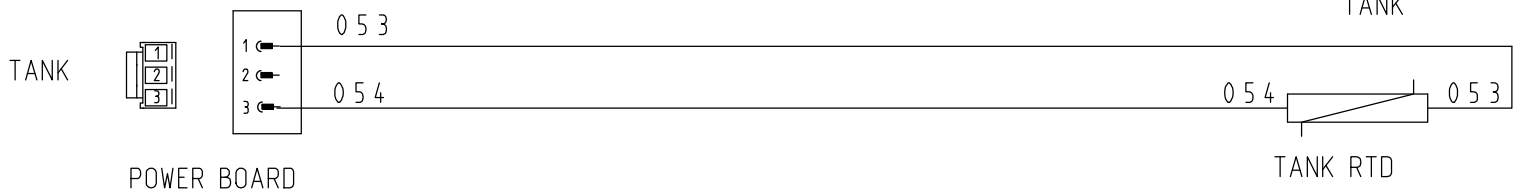
INTERCONNECTION CABLE



USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED. BREAK ALL SHARP EDGES & CORNERS (DEBURRI UNLESS OTHERWISE SPECIFIED (0.4 mm MAX))			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: INTERCONNECTION						
FINISH:	ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES ✓ ANGULAR	GENERAL SWITCH TANK HEATERS INTERCONNECTION CABLE		DATE 19.01.2001		DRAWING NUMBER
REV: PM13778 28/07/11 MAF				DRAWN BY M. AYESTARAN		
	CHECKED	APPROVED		SHEET 4 OF	SUPERSEDES	SUPERSEDED BY



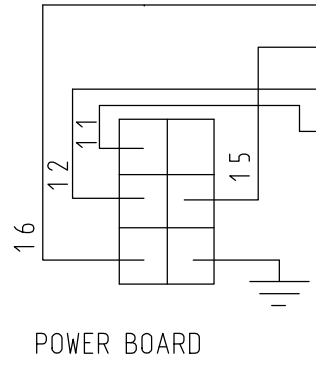
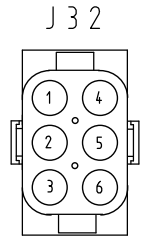
SEE PAGE 2



USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.				
MTL: RTD								
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE THERMOSTAT PUMP EV TANK RTD				
REV:		ALL DIMENSIONS IN MILLIMETERS						
		MACHINED SURFACES	✓	ANGULAR	DATE	19.01.2001	DRAWING NUMBER	S033020201
	DRAWN BY M. AYESTARAN	DECIMAL	X		SCALE	S/E		
	CHECKED	DECIMAL	X,X		SHEET	5	OF	
	APPROVED	DECIMAL	X,XX		SUPERSEDES			SUPERSEDED BY

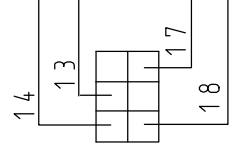
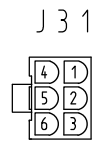
BACK CONNECTOR

SEE PAGE 2



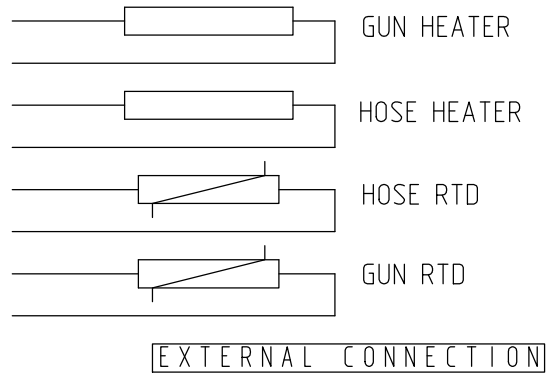
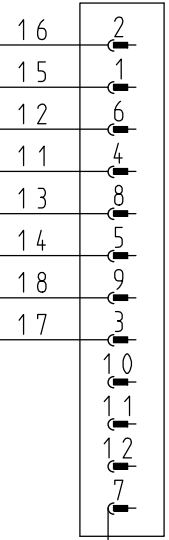
POWER BOARD

SEE PAGE 2



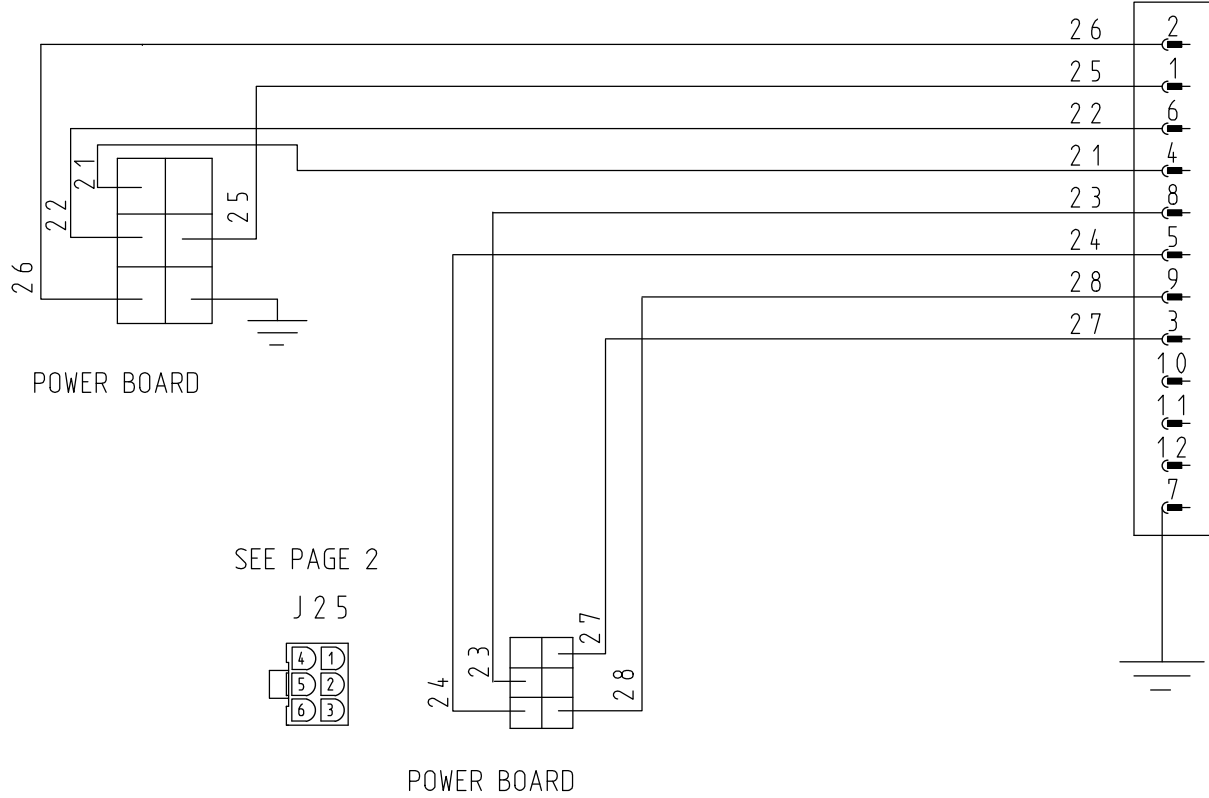
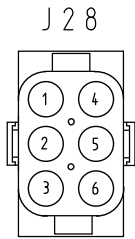
POWER BOARD

- 1 X 1

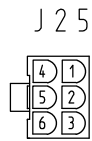


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MTL: HOSE-GUN 1							
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE-GUN 1 CONNECTIN NI 120			
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>	ANGULAR	DATE 19.01.2001	DRAWING NUMBER S033020201	
	DRAWN BY M. AYESTARAN	DECIMAL X		SCALE S/E	SHEET 6 OF		
	CHECKED	DECIMAL X,X		SUPERSEDES	SUPERSEDED BY		
	APPROVED	DECIMAL X,XX					

SEE PAGE 2



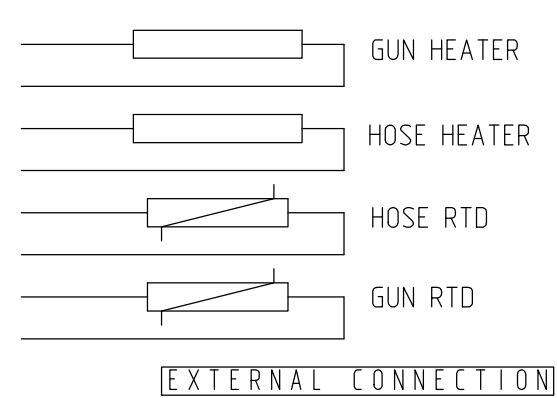
SEE PAGE 2



POWER BOARD

BACK CONNECTOR

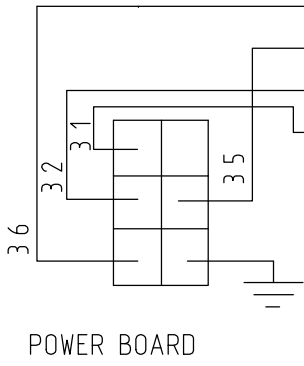
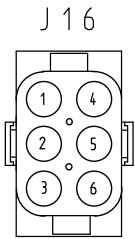
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EXTERNAL CONNECTION

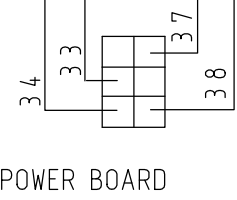
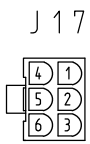
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MTL: HOSE-GUN 2						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE-GUN 2 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>	ANGULAR	DATE 19.01.2001	DRAWING NUMBER S033020201
	DRAWN BY M. AYESTARAN	DECIMAL X		SCALE S/E	SHEET 7 OF	
	CHECKED	DECIMAL X,X		SUPERSEDES	SUPERSEDED BY	
	APPROVED	DECIMAL X,XX				

SEE PAGE 2



POWER BOARD

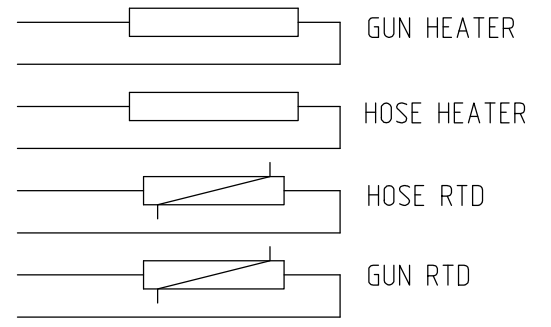
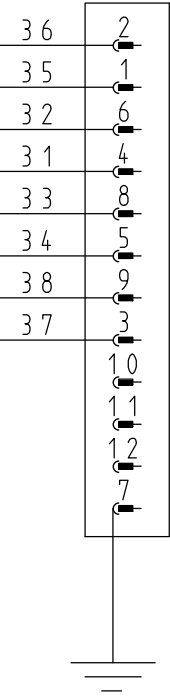
SEE PAGE 2



POWER BOARD

BACK CONNECTOR

- 3 X 1

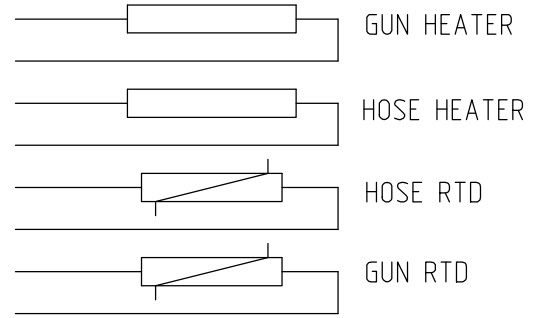
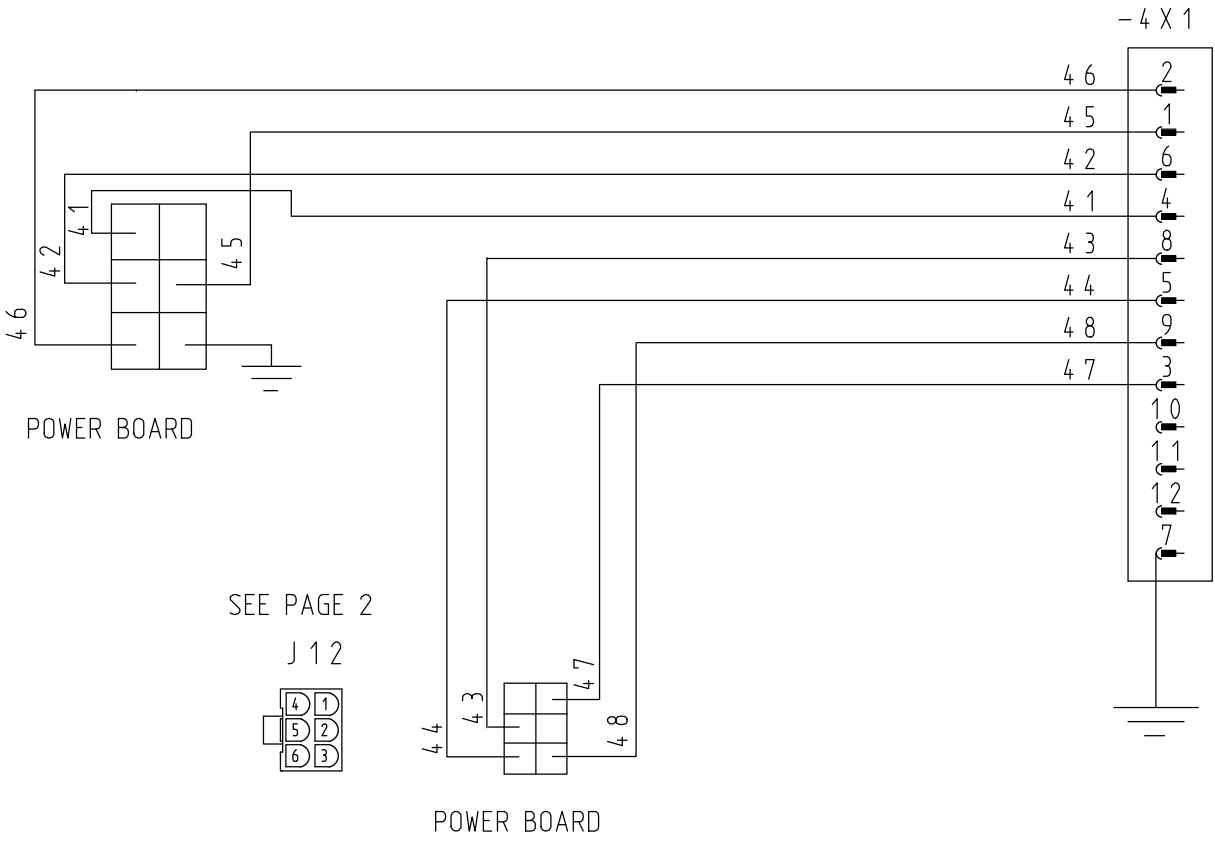
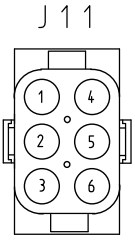


EXTERNAL CONNECTION

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: HOSE-GUN 3						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE-GUN 3 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR	DATE 19.01.2001	DRAWING NUMBER S033020201		
	DRAWN BY M. AYESTARAN	DECIMAL X	SCALE S/E	SHEET 8 OF	SUPERSEDES	SUPERSEDED BY
	CHECKED	DECIMAL X,X				
	APPROVED	DECIMAL X,XX				

BACK CONNECTOT

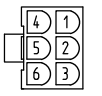
SEE PAGE 2



EXTERNAL CONNECTION

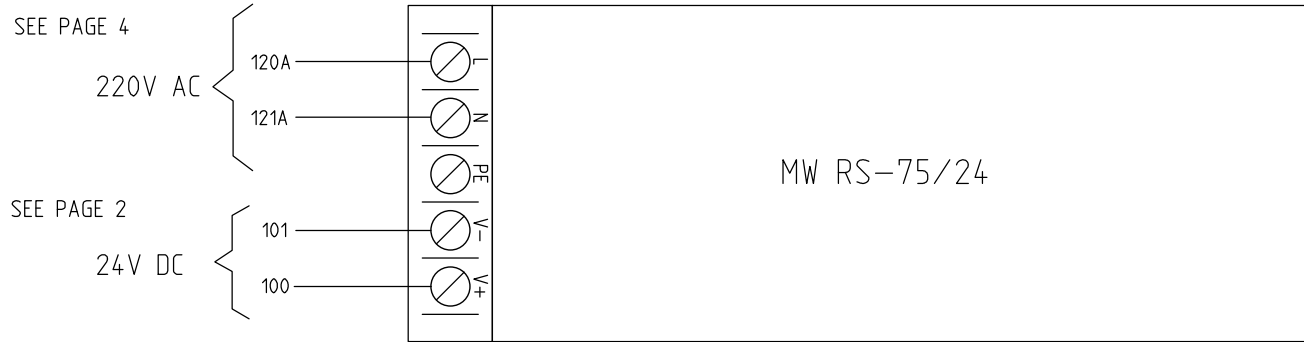
SEE PAGE 2

J 12



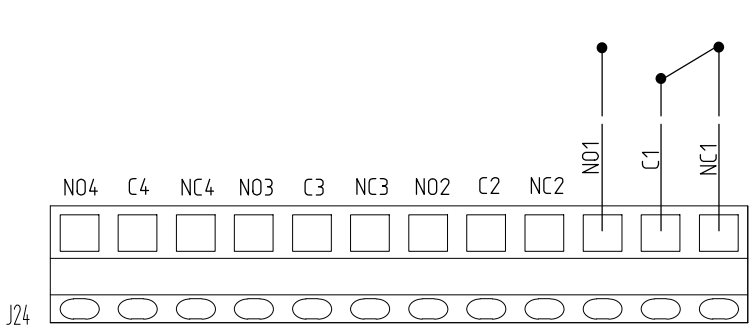
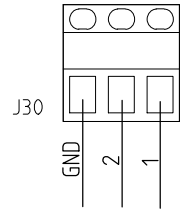
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MTL: HOSE-GUN 4					
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE-GUN 4 CONNECTION NI 120	
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>		
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 19.01.2001	DRAWING NUMBER S033020201	
	CHECKED	DECIMAL X,X	SCALE S/E	SHEET 9 OF	
	APPROVED	DECIMAL X,XX	SUPERSEDES	SUPERSEDED BY	

POWER SUPPLY

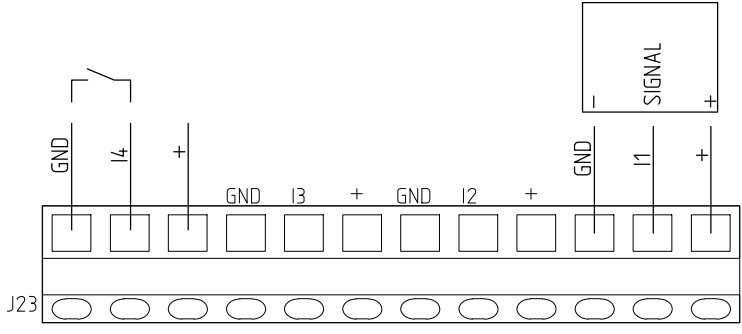


USED ON:	<small>THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.</small>			<small>PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.</small>			
MTL: POWER SUPPLY							
FINISH:	<small>BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)</small>	<small>TOLERANCES - EXCEPT AS NOTED</small>		<small>TITLE</small>			
REV: PM13768 28/07/11 MAF		<small>ALL DIMENSIONS IN MILLIMETERS</small>		POWER SUPPLY CONNECTION			
		<small>MACHINED SURFACES</small>	<input checked="" type="checkbox"/>	<small>ANGULAR</small>			
	<small>DRAWN BY</small> M. AYESTARAN	<small>DECIMAL</small> X		<small>DATE</small>	04/11/2010	<small>DRAWING NUMBER</small>	S033020201
	<small>CHECKED</small>	<small>DECIMAL</small> X,X		<small>SCALE</small>	S/E		
	<small>APPROVED</small>	<small>DECIMAL</small> X,XX		<small>SHEET</small>	10 OF	<small>SUPERSEDES</small>	
						<small>SUPERSEDED BY</small>	

24 VDC ALARMS
 I MAX ADDITION= 2,6A
 I MAX (J30 + J17) = 5,3A
 (TO SEE J17 SEE PAGES 5)



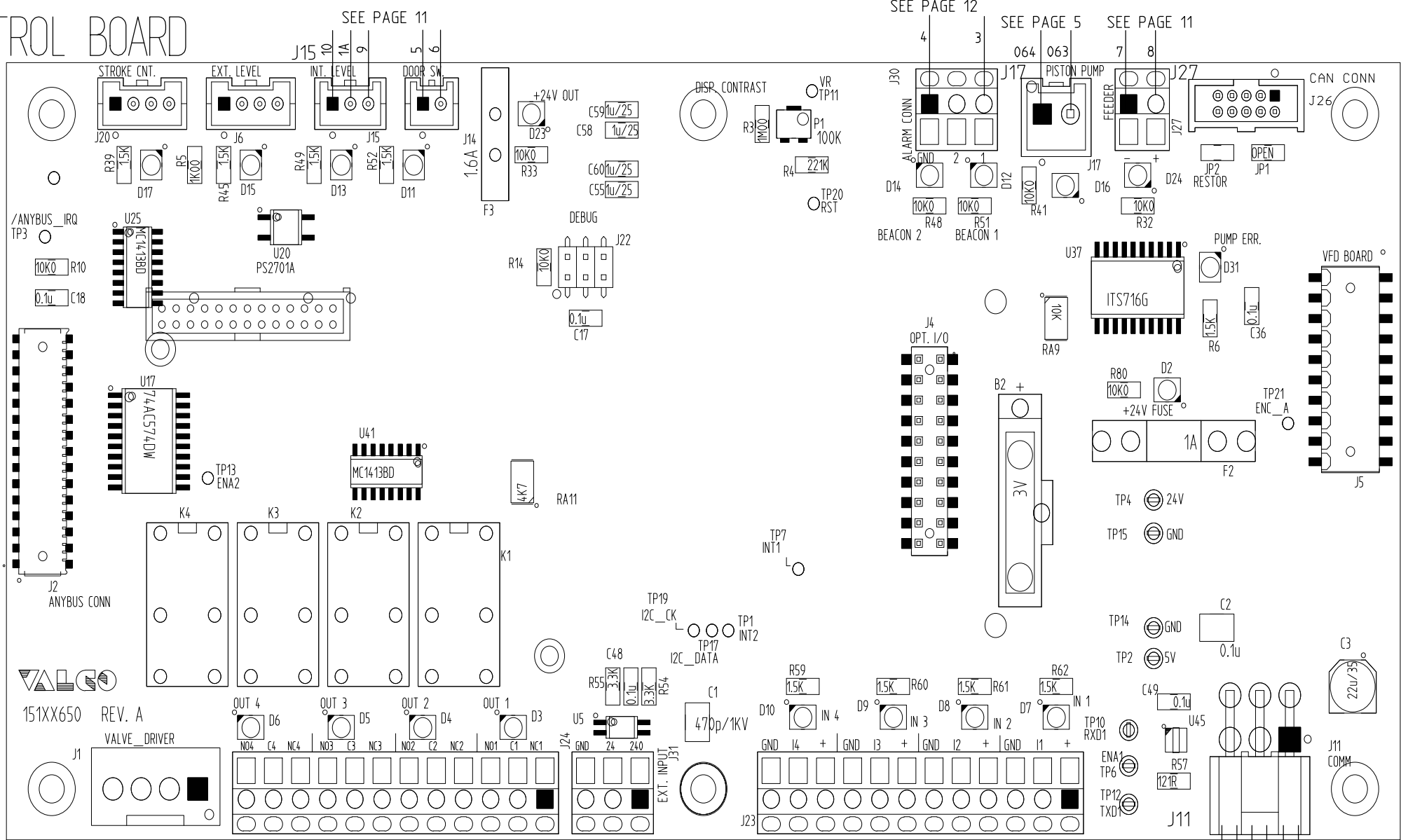
AUXILIAR RELAY OUTPUTS
 NO-COM-NC
 5A EACH OUTPUT RELAY



AUXILIAR INPUTS
 NPN OR FREE VOLTAGE
 I MAX ADDITION FOR ALL INPUTS 1A

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.				
MTL: 1/0								
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE AUXILIAR INPUTS/OUTPUTS 24VDC ALARMS EC SERIES				
REV:		ALL DIMENSIONS IN MILLIMETERS						
		MACHINED SURFACES	✓	ANGULAR	DATE	24/02/2011	DRAWING NUMBER	S033020201
	DRAWN BY	M. AYESTARAN	DECIMAL	X,	SCALE	S/E		
	CHECKED		DECIMAL	X,X	SHEET	1 1 OF	SUPERSEDES	
	APPROVED		DECIMAL	X,XX			SUPERSEDED BY	

CONTROL BOARD



SEE PAGE 12

SEE PAGE 12

SEE PAGE 4

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MTL: CONTROL BOARD					
FINISH:		TOLERANCES - EXCEPT AS NOTED		TITLE	
REV:	BREAK ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	ALL DIMENSIONS IN MILLIMETERS		CONTROL BOARD EC SERIES	
		MACHINED SURFACES	✓		
	DRAWN BY M. AYESTARAN	DECIMAL X.		DATE 19.01.2001	DRAWING NUMBER S033050201
	CHECKED	DECIMAL X.X		SCALE S/E	
	APPROVED	DECIMAL X.XX		SHEET 1 OF	SUPERSEDES
					SUPERSEDED BY

SEE PAGE 11

SEE PAGE 10

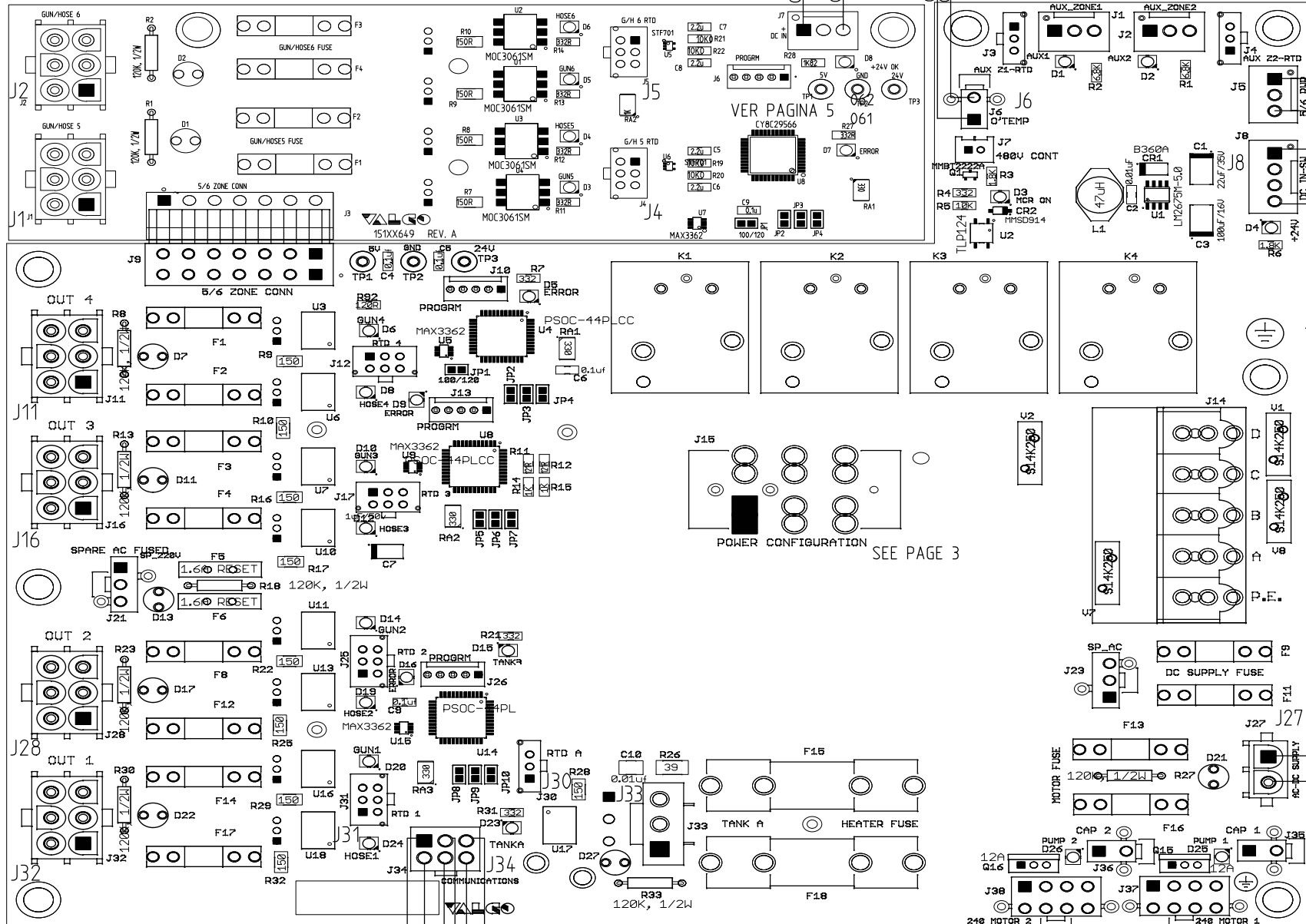
SEE PAGE 9

SEE PAGE 8

SEE PAGE 7

SEE PAGE 6

TARJETA POTENCIA



SEE PAGE 4

SEE PAGE 4

SEE PAGE 5

SEE PAGE 4

SEE PAGE 4

SEE PAGE 10

SEE PAGE 10

SEE PAGE 3

SEE PAGE 4

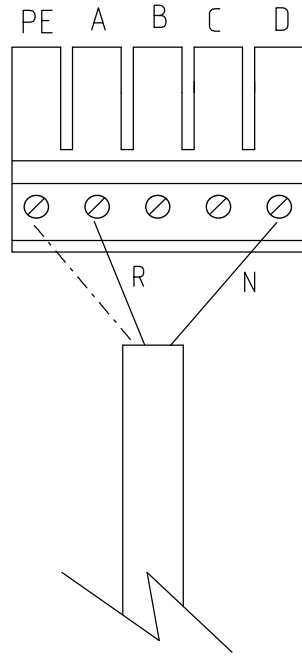
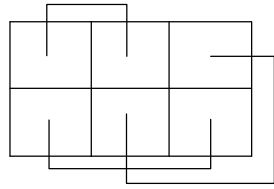
SEE PAGE 4

USED ON:				PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
M1L: POWER BOARD		THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			
FINISH:		TOLERANCES - EXCEPT AS NOTED		TITLE	
REV: PM13770 28/07/11 MAF		ALL DIMENSIONS IN MILLIMETERS		POWER BOARD	
BROKE ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)		MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR		DRAWING NUMBER	
DRAWN BY M. AYESTARAN		DECIMAL X.		DATE 19.01.2001	
CHECKED		DECIMAL X.X		SCALE S/E	
APPROVED		DECIMAL X.XX		SHEET 2 OF	
				SUPERSEDES	
				SUPERSEDED BY	

POWER BOARD EC SERIES

S033050201

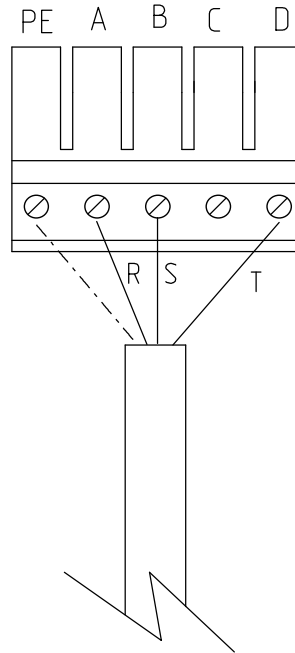
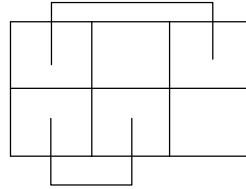
JUMPER 029XX436



I 240V ONE PHASE CONNECTION

SEE PAGE 2

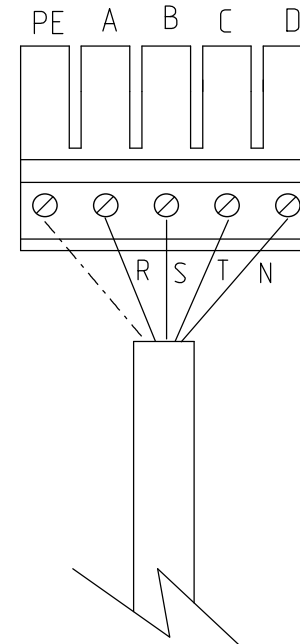
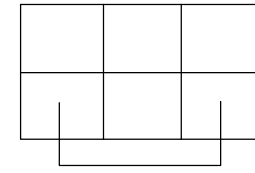
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III 240V THREE PHASE CONNECTION

SEE PAGE 2

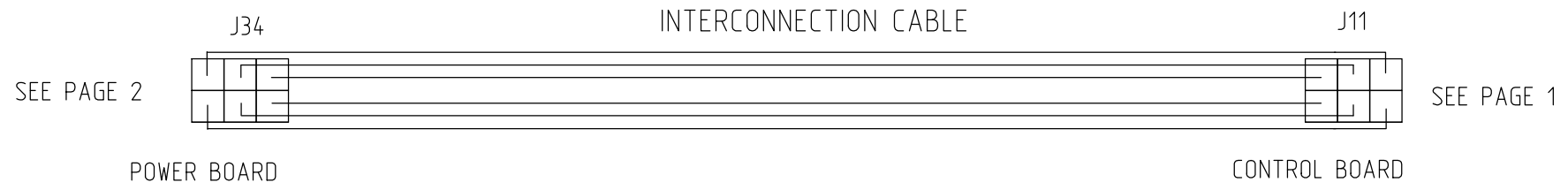
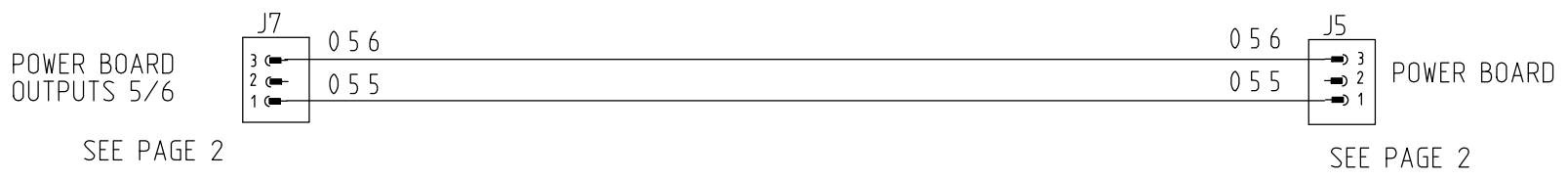
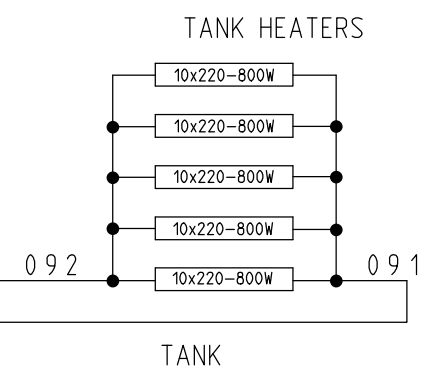
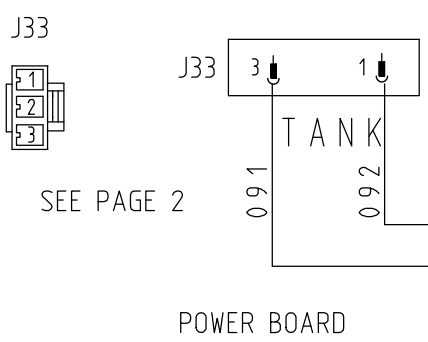
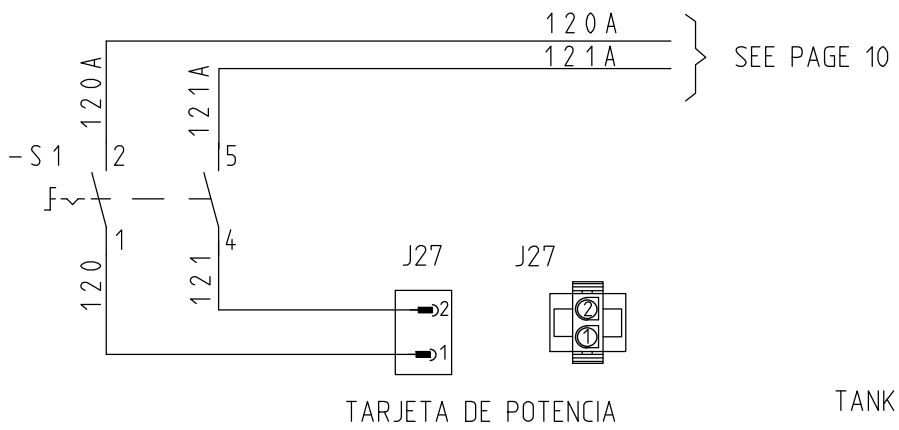
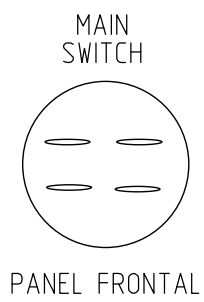
JUMPER 029XX437



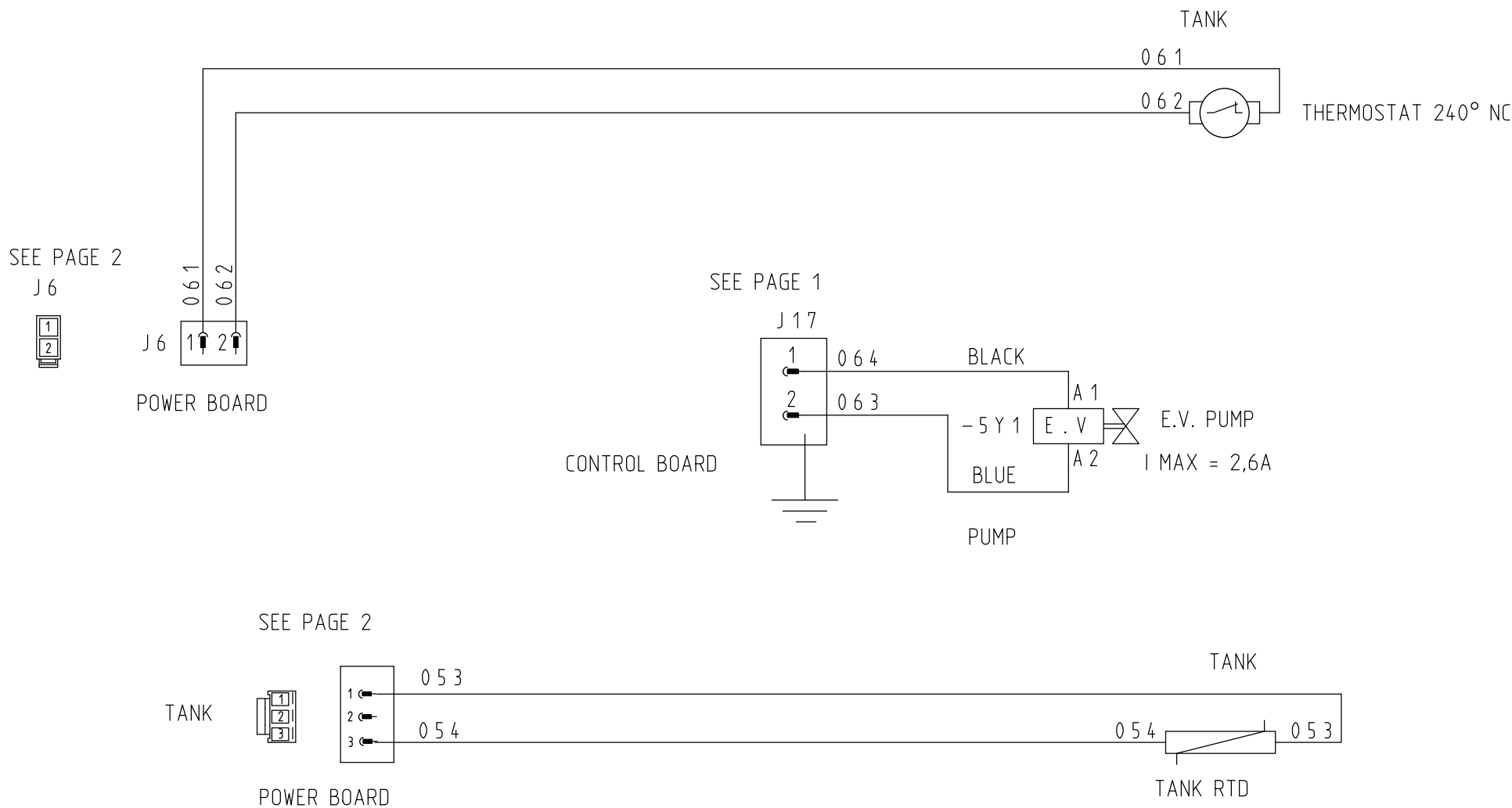
III 240V THREE PHASE CONNECTION WITH NEUTRAL

SEE PAGE 2

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: SERVICE WIRES						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE SERVICE WIRES EC SERIES		
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>			
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 19.01.2001	DRAWING NUMBER S033050201		
	CHECKED	DECIMAL X,X	SCALE S/E			
	APPROVED	DECIMAL X,XX	SHEET 3 OF	SUPERSEDES		SUPERSEDED BY



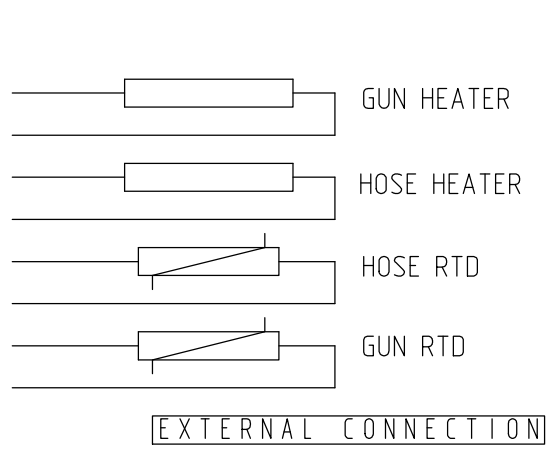
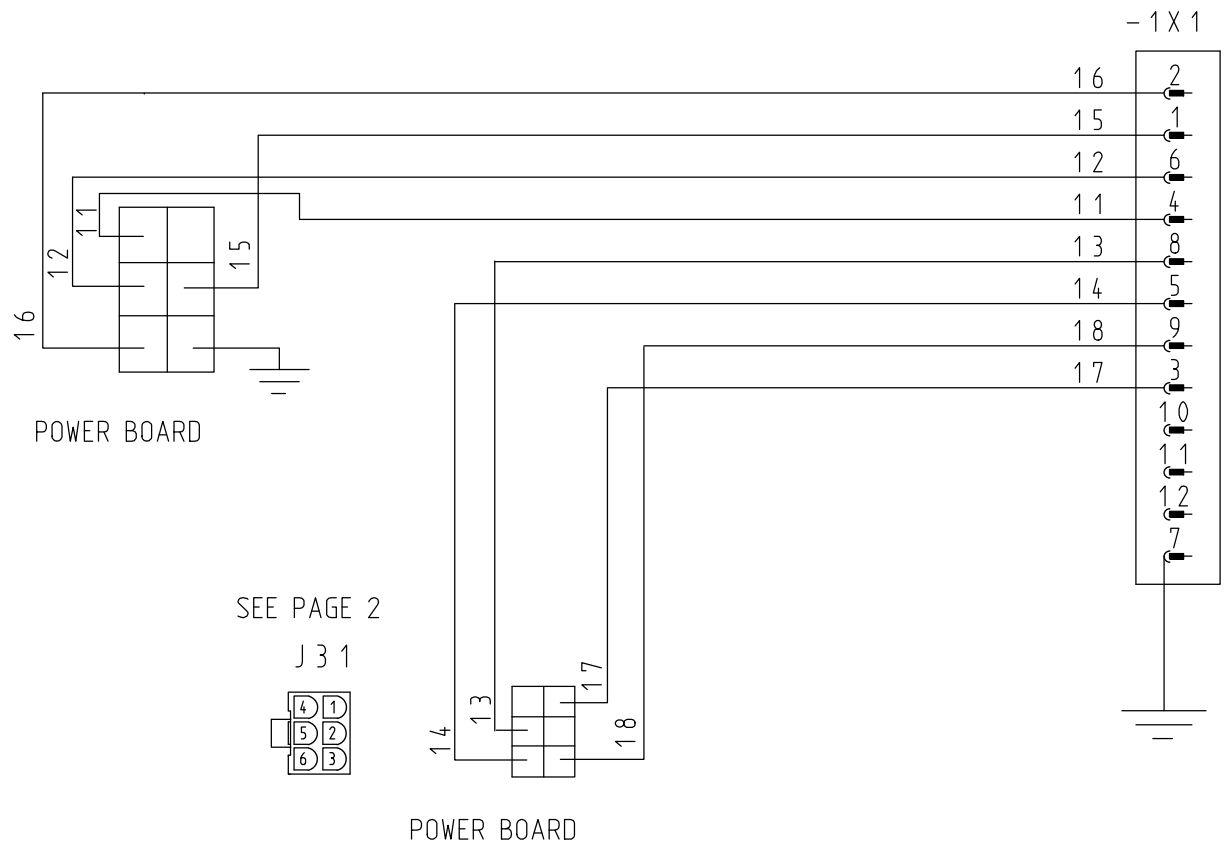
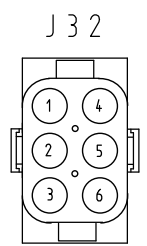
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MTL: INTERCONNECTION						
FINISH:	ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR	ALL DIMENSIONS IN MILLIMETERS		MAIN SWITCH TANK HEATERS		DRAWING NUMBER S033050201
REV: PM13778 28/07/11 MAF		DRAWN BY M. AYESTARAN		DATE 19.01.2001	SCALE S/E	
		CHECKED		SHEET 4 OF		
	APPROVED		DECIMAL X,XX	SHEET 4 OF	SUPERSEDED BY	



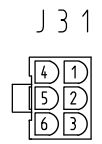
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MTL: RTD					
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE THERMOSTAT PUMP E.V. RTD TANK	
REV:		ALL DIMENSIONS IN MILLIMETERS			
		MACHINED SURFACES	ANGULAR	DATE	DRAWING NUMBER
	DRAWN BY M. AYESTARAN	DECIMAL X	✓	19.01.2001	S033050201
	CHECKED	DECIMAL X,X		SCALE	S/E
	APPROVED	DECIMAL X,XX		SHEET	5 OF
				SUPERSEDES	SUPERSEDED BY

BACK CONNECTOR

SEE PAGE 2



SEE PAGE 2

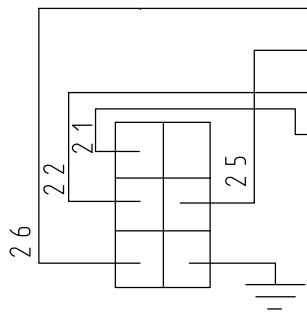
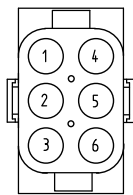


POWER BOARD

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: HOSE-GUN 1						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE-GUN 1 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR				
	DRAWN BY M. AYESTARAN	DECIMAL X.	DATE 19.01.2001	DRAWING NUMBER S033050201		
	CHECKED	DECIMAL X.X	SCALE S/E			
	APPROVED	DECIMAL X.XX	SHEET 6 OF	SUPERSEDES		SUPERSEDED BY

SEE PAGE 2

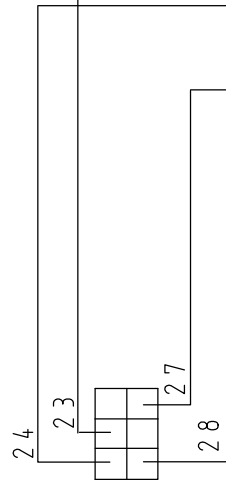
J 28



POWER BOARD

SEE PAGE 2

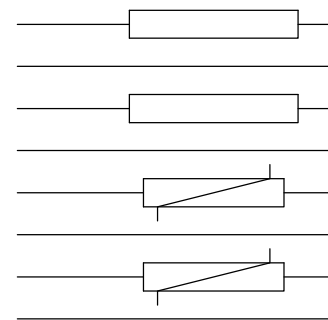
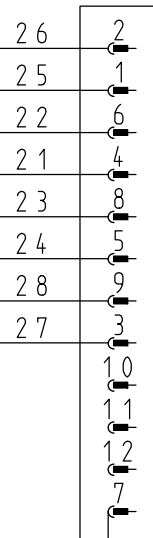
J 25



POWER BOARD

BACK CONNECTOR

- 2 X 1

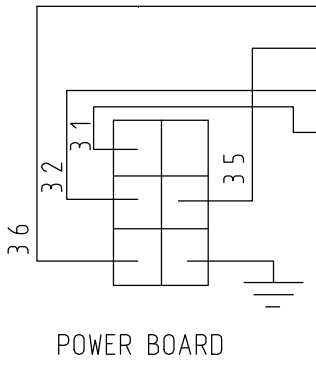
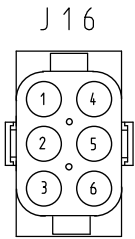


EXTERNAL CONNECTION

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.			
MTL: HOSE-GUN 2							
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE CONNECTION HOSE-GUN 2 NI 120			
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>	ANGULAR	DATE 19.01.2001	DRAWING NUMBER S033050201	
	DRAWN BY M. AYESTARAN	DECIMAL X		SCALE S/E	SHEET 7 OF		
	CHECKED	DECIMAL X,X		SUPERSEDES	SUPERSEDED BY		
	APPROVED	DECIMAL X,XX					

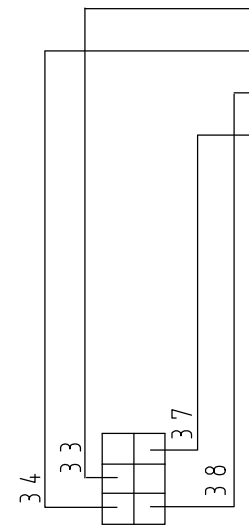
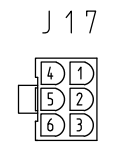
BACK CONNECTOR

SEE PAGE 2



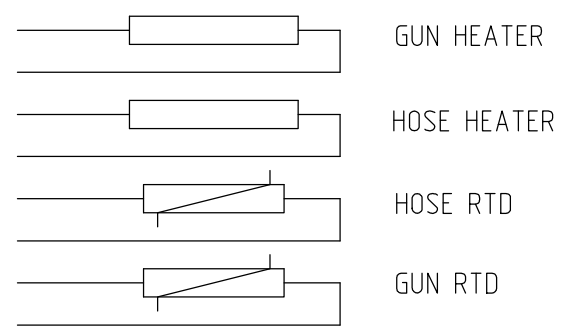
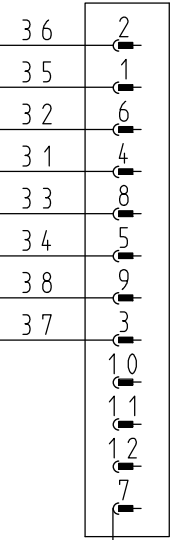
POWER BOARD

SEE PAGE 2



POWER BOARD

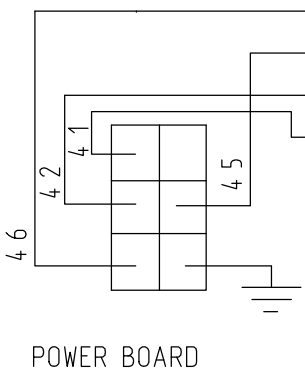
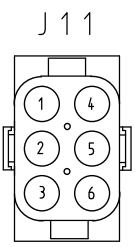
- 3 X 1



EXTERNAL CONNECTION

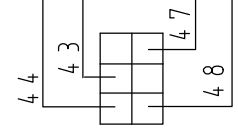
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: HOSE-GUN 3						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE-GUN 3 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR	DATE 19.01.2001	DRAWING NUMBER S033050201		
	DRAWN BY M. AYESTARAN	DECIMAL X	SCALE S/E	SHEET 8 OF		
	CHECKED	DECIMAL X,X	SUPERSEDES			
	APPROVED	DECIMAL X,XX	SUPERSEDED BY			

SEE PAGE 2



POWER BOARD

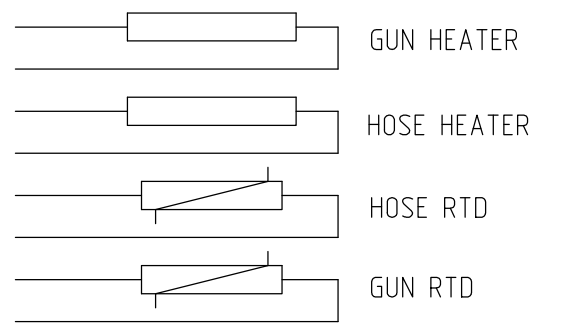
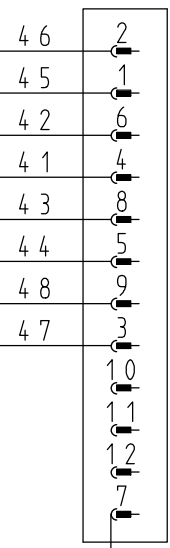
SEE PAGE 2
J 12



POWER BOARD

BACK CONNECTOR

- 4 X 1

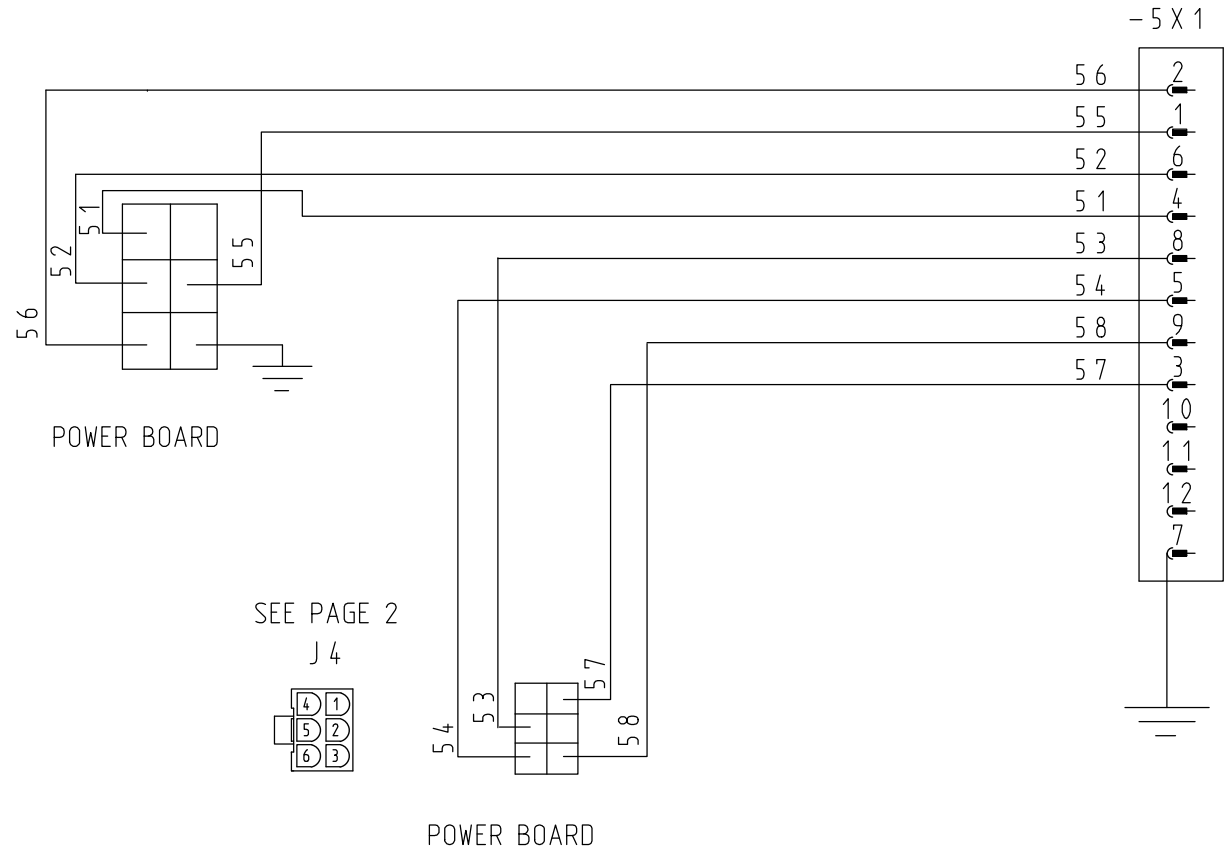
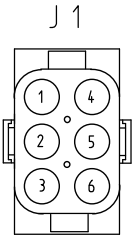


EXTERNAL CONNECTION

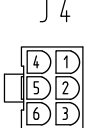
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MTL: HOSE-GUN 4						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE- GUN 4 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR				
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 19.01.2001	DRAWING NUMBER S033050201		
	CHECKED	DECIMAL X,X	SCALE S/E			
	APPROVED	DECIMAL X,XX	SHEET 9 OF	SUPERSEDES		SUPERSEDED BY

BACK CONNECTOR

SEE PAGE 2



SEE PAGE 2



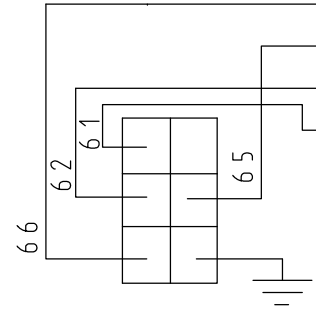
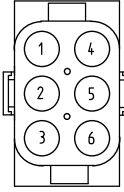
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MTL: HOSE-GUN 5					
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE - GUN 5 CONNECTION NI 120	
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>		
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 24/10/2011	DRAWING NUMBER S033050201	
	CHECKED	DECIMAL X,X	SCALE S/E		
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BACK CONNECTOR

- 6 X 1

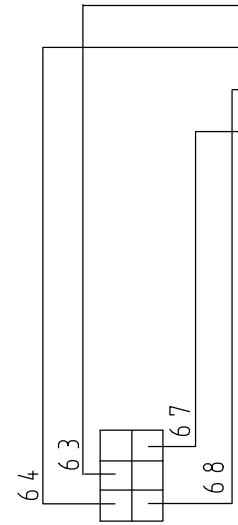
SEE PAGE 2

J 2

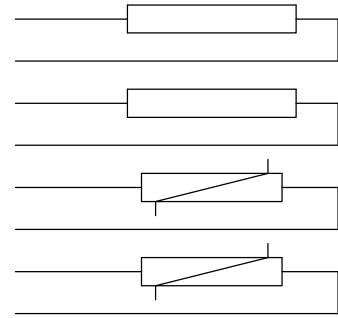
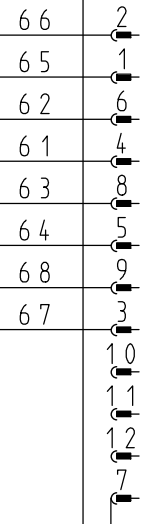


POWER BOARD

SEE PAGE 2
J 5



POWER BOARD

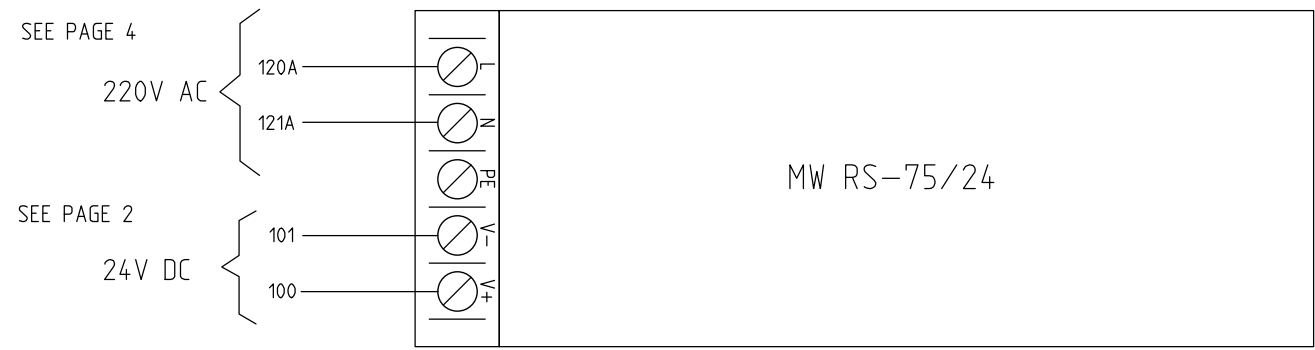


GUN HEATER
HOSE HEATER
HOSE RTD
GUN RTD

EXTERNAL CONNECTION

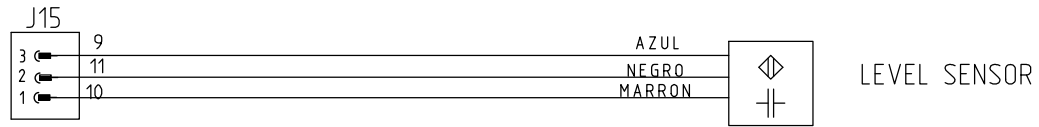
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MTL: HOSE-GUN 6						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE - GUN 6 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR				
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 24/10/2011	DRAWING NUMBER S033050201		
	CHECKED	DECIMAL X,X	SCALE S/E			
	APPROVED	DECIMAL X,XX	SHEET 1 1 OF	SUPERSEDES		SUPERSEDED BY

POWER SUPPLY



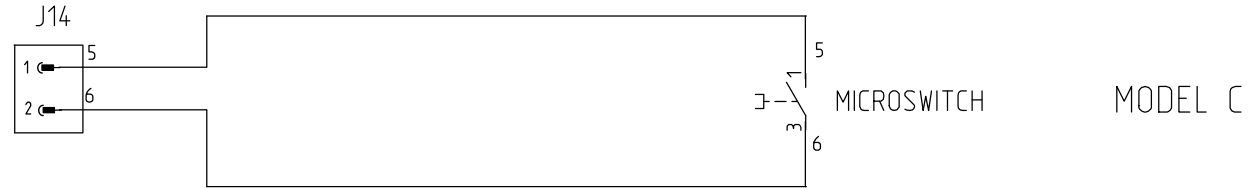
USED ON:	<small>THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.</small>			<small>PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.</small>			
MTL: POWER SUPPLY							
FINISH:	<small>BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)</small>	<small>TOLERANCES - EXCEPT AS NOTED</small>		<small>TITLE</small>			
REV: PM13770 28/07/11 MAF		<small>ALL DIMENSIONS IN MILLIMETERS</small>		POWER SUPPLY CONNECTION			
		<small>MACHINED SURFACES</small>	<input checked="" type="checkbox"/>	<small>ANGULAR</small>			
	<small>DRAWN BY</small> M. AYESTARAN	<small>DECIMAL</small> X		<small>DATE</small>	04/11/2010	<small>DRAWING NUMBER</small>	S033050201
	<small>CHECKED</small>	<small>DECIMAL</small> X,X		<small>SCALE</small>	S/E		
	<small>APPROVED</small>	<small>DECIMAL</small> X,XX		<small>SHEET</small>	12 OF	<small>SUPERSEDES</small>	
						<small>SUPERSEDED BY</small>	

SEE PAGE 1



LEVEL SENSOR

SEE PAGE 1



MICROSWITCH

MODEL C

SEE PAGE 1

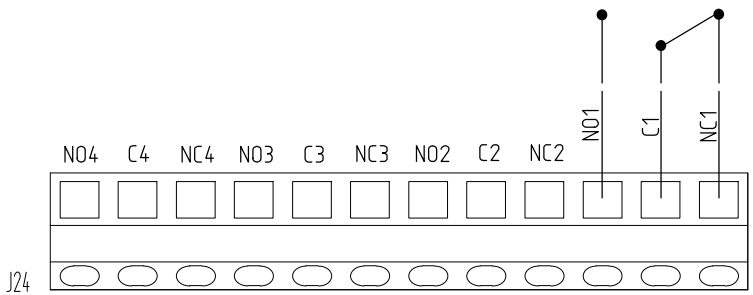
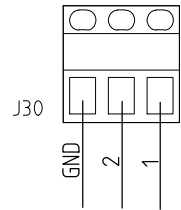


E.V. VACCUM FEED. MODEL C

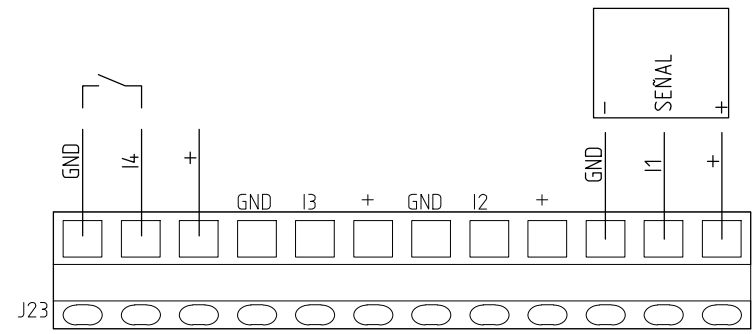
I MAX = 2,6A

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.			
MTL: VACCUM							
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE LEVEL SENSOR SIGNAL VACCUM FEEDING MICROSWITCH			
REV:		ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR					
	DRAWN BY M. AYESTARAN	DECIMAL X.	DATE 04/11/2010	DRAWING NUMBER S033050201			
	CHECKED	DECIMAL X.X	SCALE S/E				
	APPROVED	DECIMAL X.XX	SHEET 13 OF	SUPERSEDES		SUPERSEDED BY	

24 VDC ALARMS
 I MAX ADDITION = 2,6A
 I MAX (J30 + J17 + J27) = 5,3A
 (TO SEE J17 AND J27 SEE PAGES 5 AND 11)



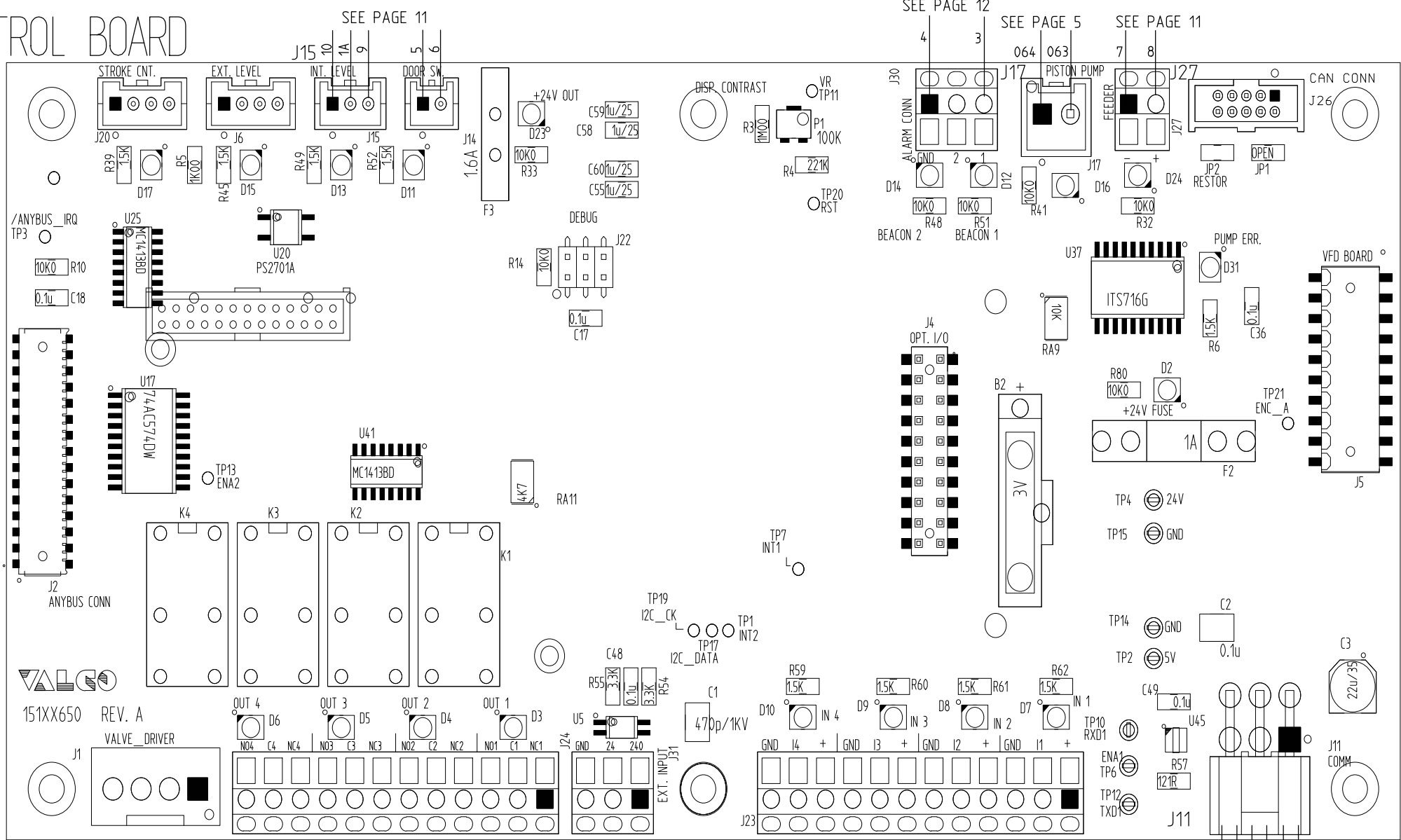
AUXILIARY RELAY OUTPUTS
 NO-COM-NC
 5A EACH OUTPUT RELAY



AUXILIAR INPUTS
 NPN OR FREE VOLTAGE
 I MAX ADDITION FOR ALL INPUTS= 1A

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: 1/0						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE AUXILIAR INPUTS/OUTPUTS CONNECTION 24VDC ALARMS		
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>			
	DRAWN BY M. AYESTARAN	DECIMAL X.	DATE 24/02/2011	DRAWING NUMBER S033050201		
	CHECKED	DECIMAL X.X	SCALE S/E			
	APPROVED	DECIMAL X.XX	SHEET 14 OF	SUPERSEDES		SUPERSEDED BY

CONTROL BOARD



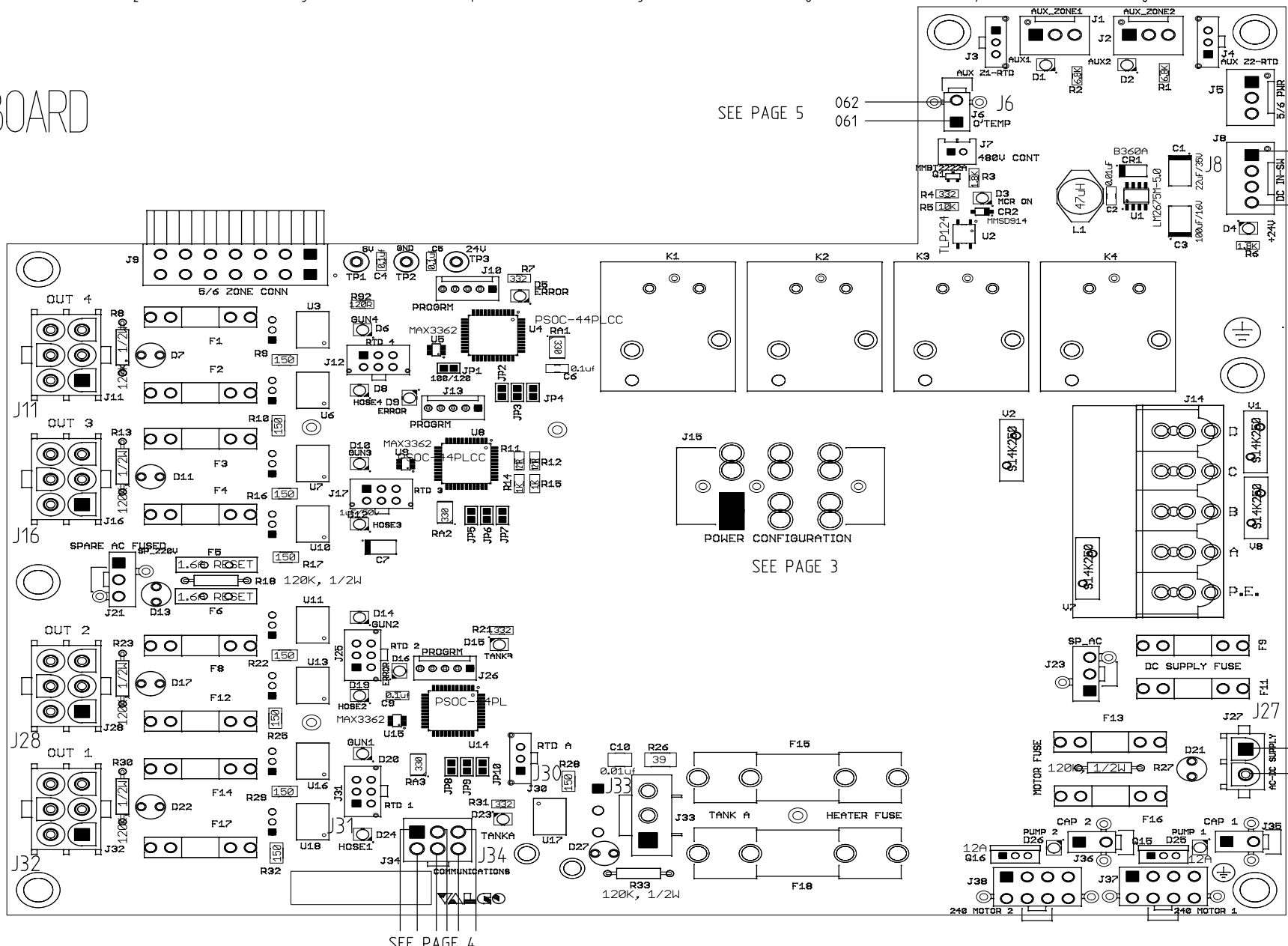
SEE PAGE 12

SEE PAGE 12

SEE PAGE 4

USED ON:			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MTL: CONTROL	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			
FINISH:	TOLERANCES - EXCEPT AS NOTED		TITLE CONTROL BOARD EC SERIES	
REV:	BREAK ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)		ALL DIMENSIONS IN MILLIMETERS	
	DRAWN BY M. AYESTARAN		DATE 19.01.2001	
	CHECKED		SCALE S/E	
	APPROVED		SHEET 1 OF	
	MACHINED SURFACES		DRAWING NUMBER S033010201	
	✓ ANGULAR		SUPERSEDES	
	DECIMAL X.XX		SUPERSEDED BY	
	DECIMAL X.X			
	DECIMAL X.XX			

POWER BOARD



SEE PAGE 9

SEE PAGE 8

SEE PAGE 7

SEE PAGE 6

SEE PAGE 5

SEE PAGE 10

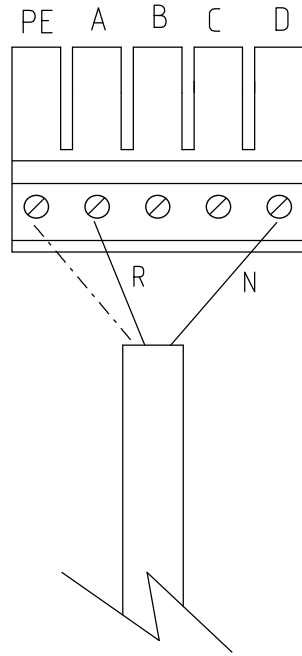
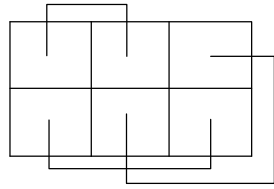
SEE PAGE 3

SEE PAGE 4

SEE PAGE 4

USED ON:				PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MIL: POWER		THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.		TOLERANCES - EXCEPT AS NOTED	
FINISH:		BREAK ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)		TITLE POWER BOARD EC SERIES	
REV: PM13770 28/07/11 MAF		ALL DIMENSIONS IN MILLIMETERS		DATE 19.01.2001 DRAWING NUMBER S033010201	
		MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR		SCALE S/E SHEET 2 OF	
DRAWN BY M. AYESTARAN		DECIMAL X		SUPERSEDES	
CHECKED		DECIMAL X.X		SUPERSEDED BY	
APPROVED		DECIMAL X.XX			

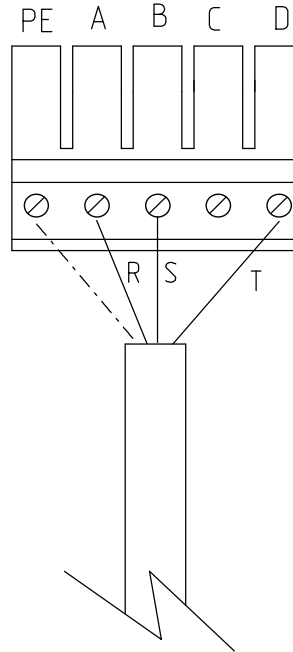
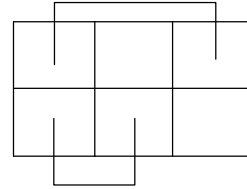
JUMPER 029XX436



I 220V ONE PHASE CONNECTION

SEE PAGE 2

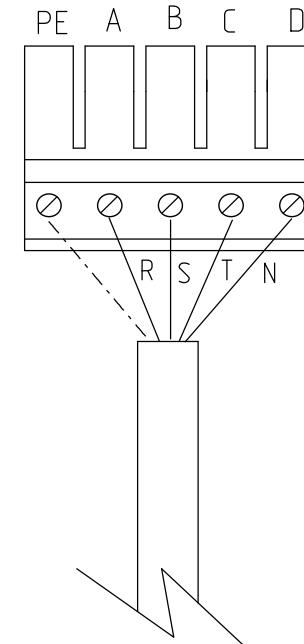
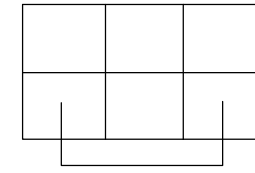
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III 220V THREE PHASE CONNECTION

SEE PAGE 2

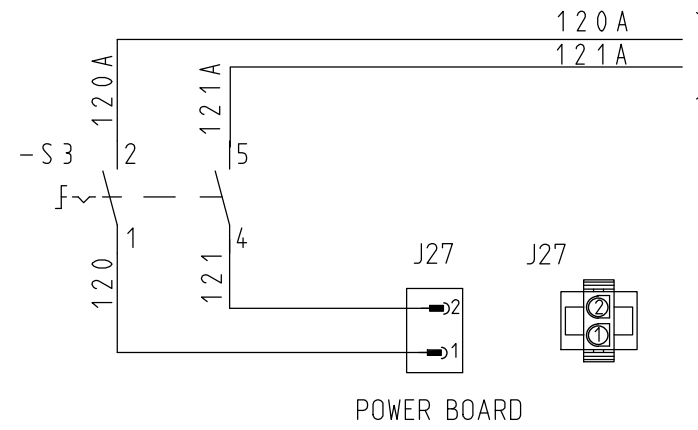
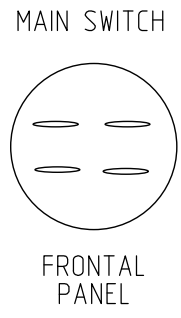
JUMPER 029XX437



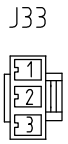
III 380V THREE PHASE CONNECTION WITH NEUTRAL

SEE PAGE 2

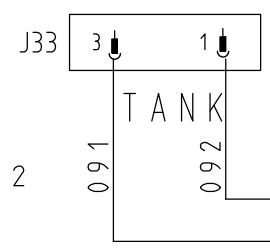
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: SERVICE WIRES						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE		
REV:		ALL DIMENSIONS IN MILLIMETERS		SERVICE WIRES		
		MACHINED SURFACES	✓	ANGULAR	EC SERIES	
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 19.01.2001		DRAWING NUMBER S033010201	
	CHECKED	DECIMAL X,X	SCALE S/E			
	APPROVED	DECIMAL X,XX	SHEET 3 OF		SUPERSEDES	
					SUPERSEDED BY	



SEE PAGE 10



SEE PAGE 2



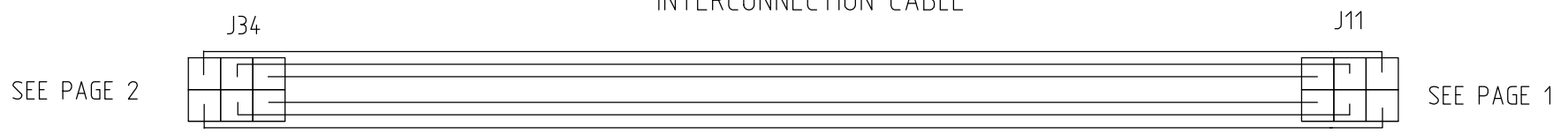
POWER BOARD



TANK

EC04	1800W
EC08	2900W

INTERCONNECTION CABLE



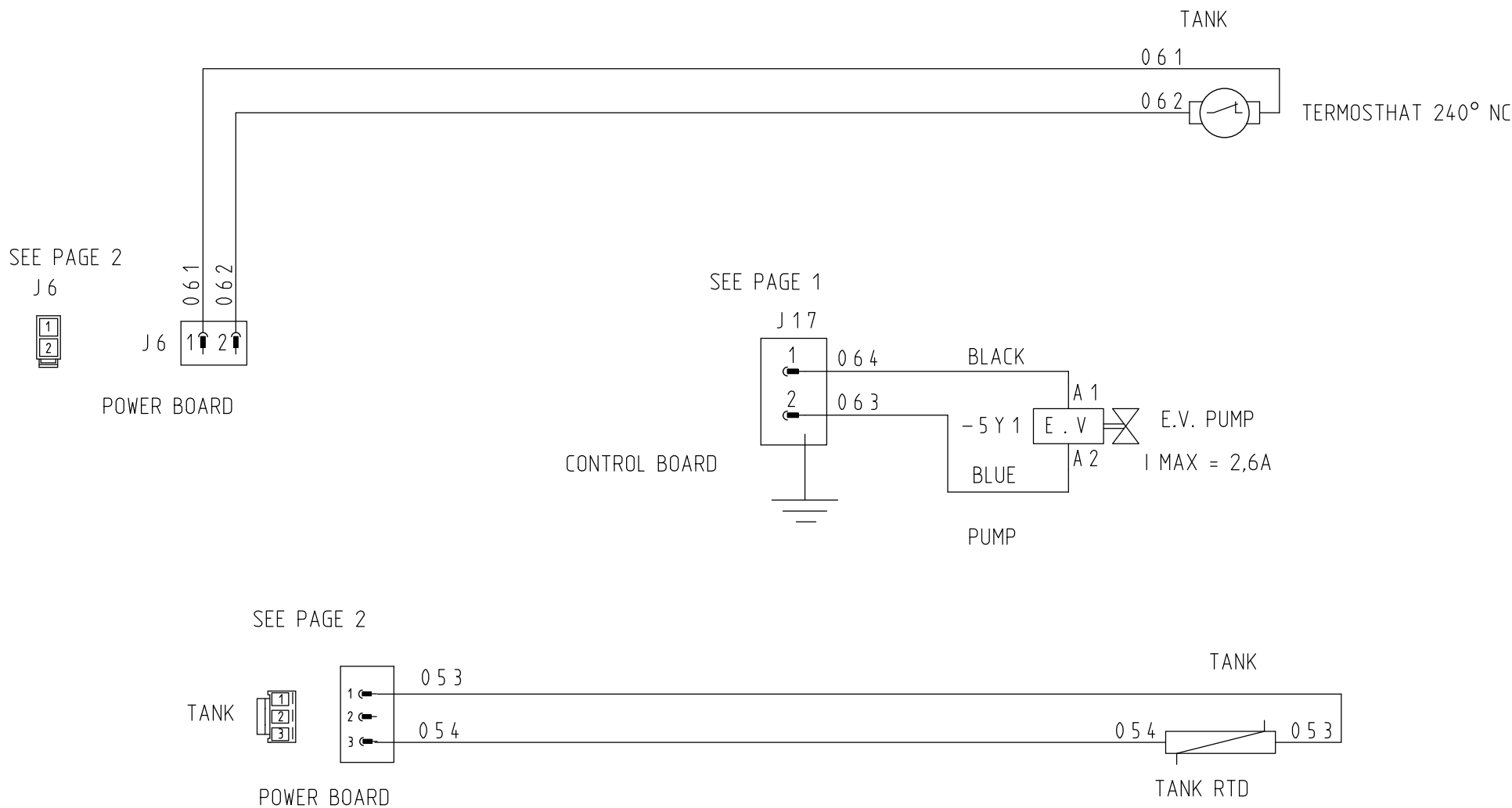
SEE PAGE 2

POWER BOARD

SEE PAGE 1

CONTROL BOARD

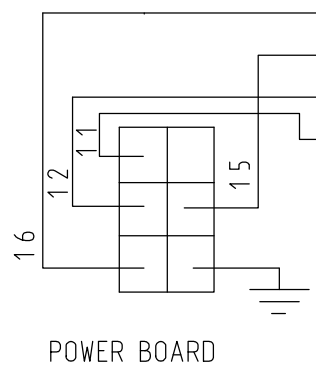
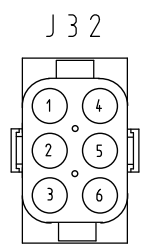
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.		PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: INTERCONNECTION			TOLERANCES - EXCEPT AS NOTED		
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI UNLESS OTHERWISE SPECIFIED (0,4 mm MAX))	ALL DIMENSIONS IN MILLIMETERS		MAIN SWITCH TANK HEATERS INTERCONNECTION CABLE	
REV: PM13778 28/07/11 MAF		MACHINED SURFACES	ANGULAR		
	DRAWN BY M. AYESTARAN	DECIMAL X,	DATE	19.01.2001	DRAWING NUMBER
	CHECKED	DECIMAL X,X	SCALE	S/E	S033010201
	APPROVED	DECIMAL X,XX	SHEET	4 OF	SUPERSEDES
					SUPERSEDED BY



USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MTL: RTD					
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE	
REV:		ALL DIMENSIONS IN MILLIMETERS		THERMOSTAT PUMP EV TANK RTD	
		MACHINED SURFACES	✓	ANGULAR	
	DRAWN BY M. AYESTARAN	DECIMAL X.	DATE	19.01.2001	DRAWING NUMBER
	CHECKED	DECIMAL X.X	SCALE	S/E	S033010201
	APPROVED	DECIMAL X,XX	SHEET	5 OF	SUPERSEDES
					SUPERSEDED BY

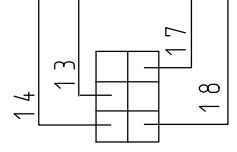
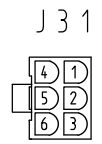
BACK CONNECTOR

SEE PAGE 2



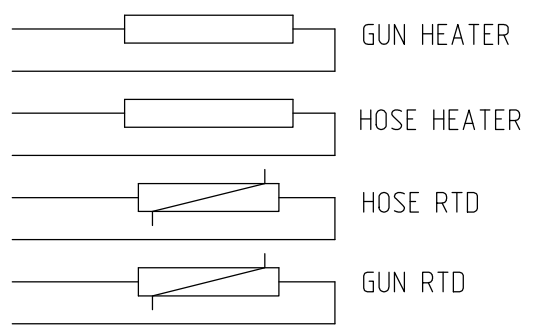
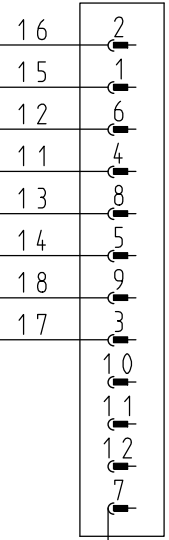
POWER BOARD

SEE PAGE 2



POWER BOARD

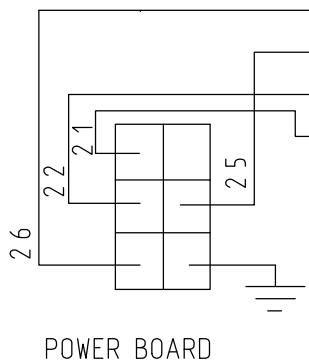
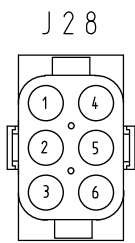
- 1 X 1



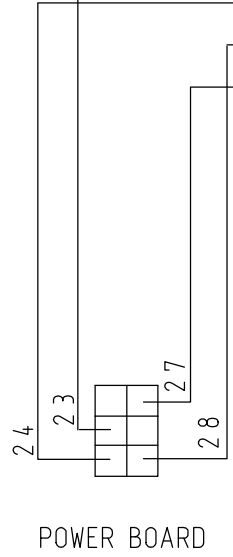
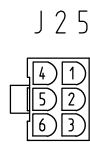
EXTERNAL CONNECTION

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: HOSE-GUN 1						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE - GUN 1 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS MACHINED SURFACES <input checked="" type="checkbox"/> ANGULAR				
	DRAWN BY M. AYESTARAN	DECIMAL X.	DATE 19.01.2001	DRAWING NUMBER S033010201		
	CHECKED	DECIMAL X.X	SCALE S/E			
	APPROVED	DECIMAL X.XX	SHEET 6 OF	SUPERSEDES		SUPERSEDED BY

SEE PAGE 2

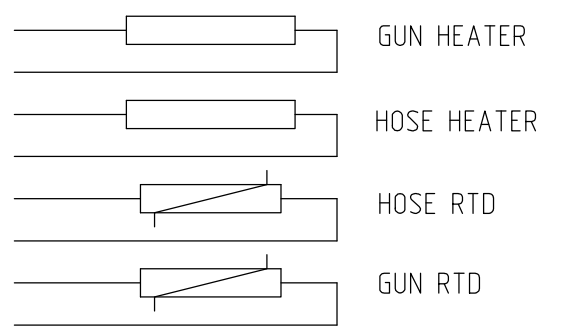
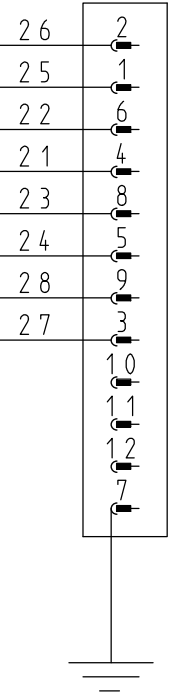


SEE PAGE 2



BACK CONNECTOR

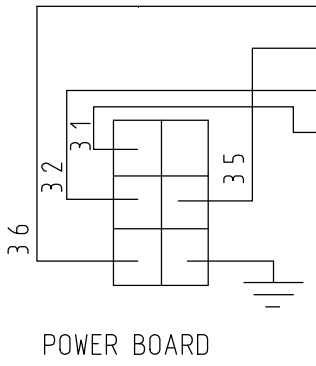
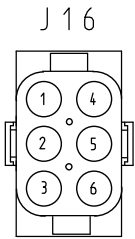
- 2 X 1



EXTERNAL CONNECTION

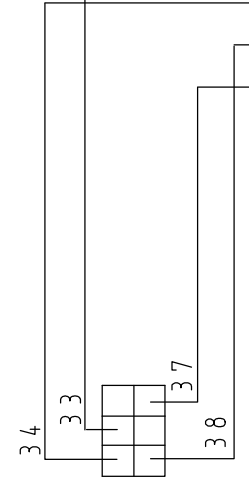
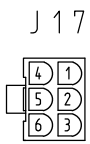
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: HOSE-GUN 2						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE - GUN 2 CONNECTION NI120		
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>	ANGULAR	DATE 19.01.2001	DRAWING NUMBER S033010201
	DRAWN BY M. AYESTARAN	DECIMAL X		SCALE S/E	SHEET 7 OF	
	CHECKED	DECIMAL X,X		SUPERSEDES	SUPERSEDED BY	
	APPROVED	DECIMAL X,XX				

SEE PAGE 2



POWER BOARD

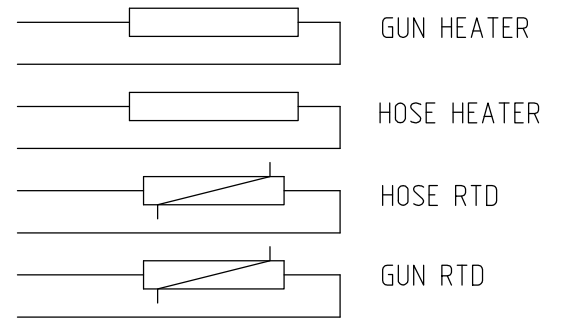
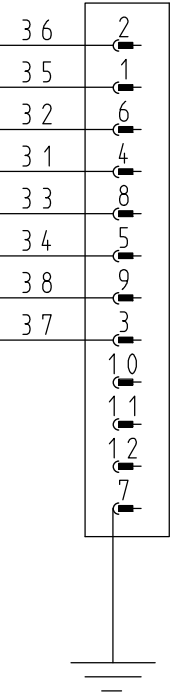
SEE PAGE 2



POWER BOARD

BACK CONNECTOR

- 3 X 1

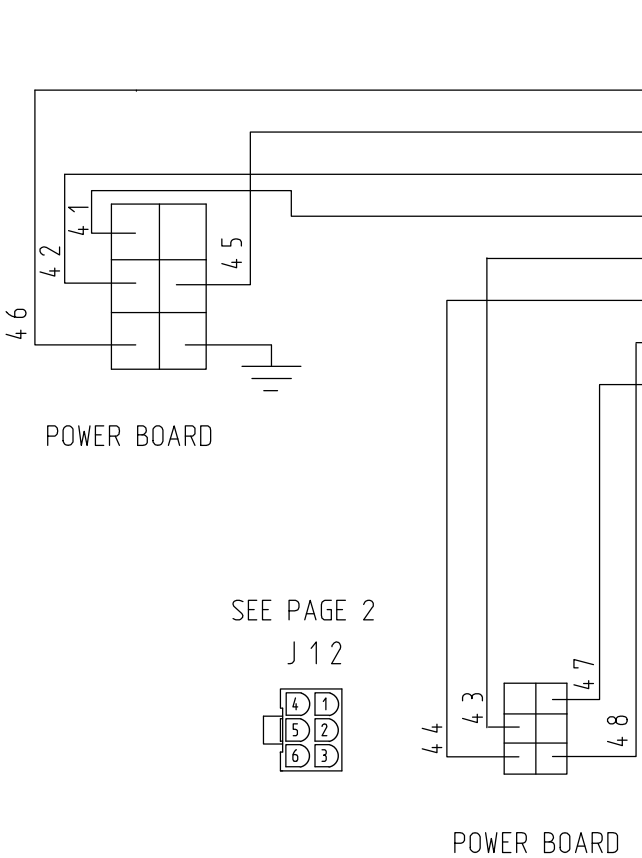
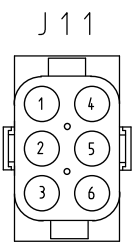


EXTERNAL CONNECTION

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: HOSE-GUN 3						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE - GUN 3 CONNECTION NI 120		
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>	ANGULAR	DATE 19.01.2001	DRAWING NUMBER S033010201
	DRAWN BY M. AYESTARAN	DECIMAL X		SCALE S/E	SHEET 8 OF	
	CHECKED	DECIMAL X,X		SUPERSEDES	SUPERSEDED BY	
	APPROVED	DECIMAL X,XX				

BACK CONNECTOR

SEE PAGE 2

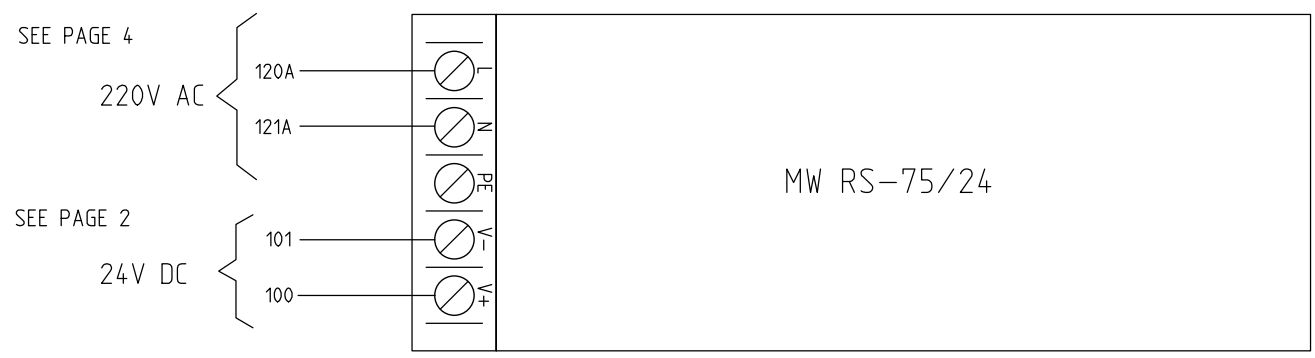


SEE PAGE 2
J 12



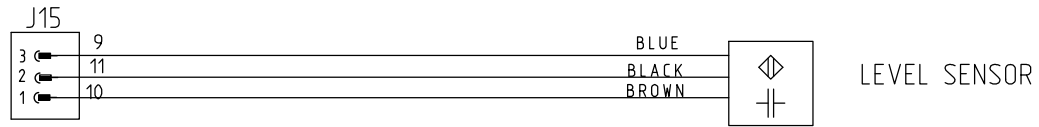
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.	
MTL: HOSE-GUN 4					
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURR) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE HOSE - GUN 4 CONNECTION NI 120	
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>		
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 19.01.2001	DRAWING NUMBER S033010201	
	CHECKED	DECIMAL X,X	SCALE S/E	SHEET 9 OF	
	APPROVED	DECIMAL X,XX	SUPERSEDES	SUPERSEDED BY	

POWER SUPPLY



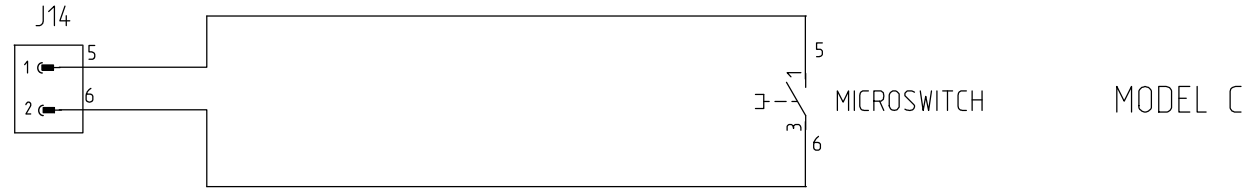
USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.			
MTL: POWER SUPPLY							
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0.4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE POWER SUPPLY CONNECTION EC SERIES			
REV: PM13770 28/07/11 MAF		ALL DIMENSIONS IN MILLIMETERS		MACHINED SURFACES <input checked="" type="checkbox"/>	ANGULAR <input type="checkbox"/>	DATE 04/11/2010	DRAWING NUMBER S033010201
	DRAWN BY M. AYESTARAN	DECIMAL X	SCALE S/E		SHEET 10 OF		
	CHECKED	DECIMAL X,X	SUPERSEDES		SUPERSEDED BY		
	APPROVED	DECIMAL X,XX					

SEE PAGE 1



LEVEL SENSOR

SEE PAGE 1



MICROSWITCH

MODEL C

SEE PAGE 1

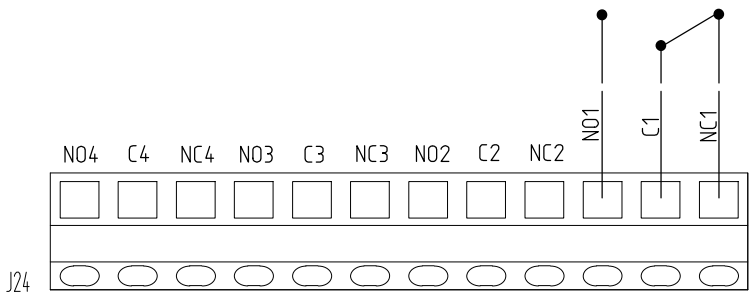
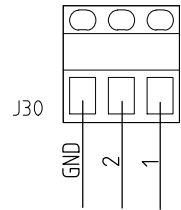


E.V. VACCUM FEED MODEL C

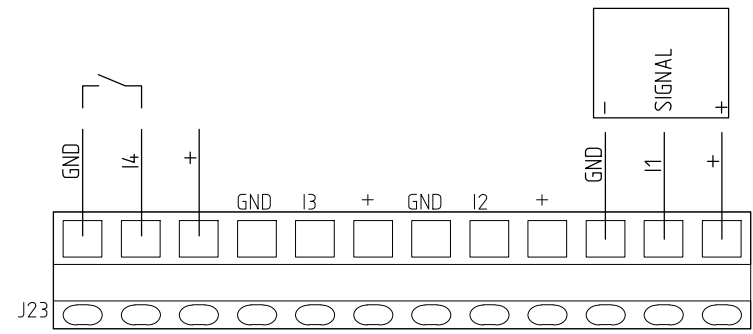
I MAX = 2,6A

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.			
MTL: VACCUM							
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE LEVEL SENSOR SIGNAL VACCUM FEEDING MICROSWITCH			
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>	ANGULAR <input type="checkbox"/>	DATE 04/11/2010	DRAWING NUMBER S033010201	
	DRAWN BY M. AYESTARAN	DECIMAL X		SCALE S/E	SHEET 1 1 OF		
	CHECKED	DECIMAL X,X			SUPERSEDES		
	APPROVED	DECIMAL X,XX			SUPERSEDED BY		

24 VDC ALARMS
 I MAX ADDITION= 2,6A
 I MAX (J30 + J17 + J27) = 5,3A
 (TO SEE J17 AND J27 SEE PAGES 5 AND 11)



AUXILIAR RELAY OUTPUTS
 NO-COM-NC
 5A EACH OUTPUT RELAY



AUXILIAR INPUTS
 NPN OR FREE VOLTAGE
 I MAX ADDITION FOR ALL INPUTS 1A

USED ON:	THREAD LENGTH DIMENSIONS ARE FULL THREAD HOLES TO BE CHAMFERED ONE THREAD DEPTH MAX UNLESS OTHERWISE SPECIFIED.			PROPERTY CONTAINING PROPRIETARY INFORMATION WHICH MUST NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION AND MUST BE RETURNED UPON DEMAND.		
MTL: 1/0						
FINISH:	BREAK ALL SHARP EDGES & CORNERS (DEBURRI) UNLESS OTHERWISE SPECIFIED (0,4 mm MAX)	TOLERANCES - EXCEPT AS NOTED		TITLE AUXILIAR INPUTS/OUTPUTS CONNECTION 24VDC ALARMS		
REV:		ALL DIMENSIONS IN MILLIMETERS	MACHINED SURFACES <input checked="" type="checkbox"/>			
	DRAWN BY M. AYESTARAN	DECIMAL X	DATE 24/02/2011	DRAWING NUMBER S033010201		
	CHECKED	DECIMAL X,X	SCALE S/E	SUPERSEDES		
	APPROVED	DECIMAL X,XX	SHEET 12 OF	SUPERSEDED BY		