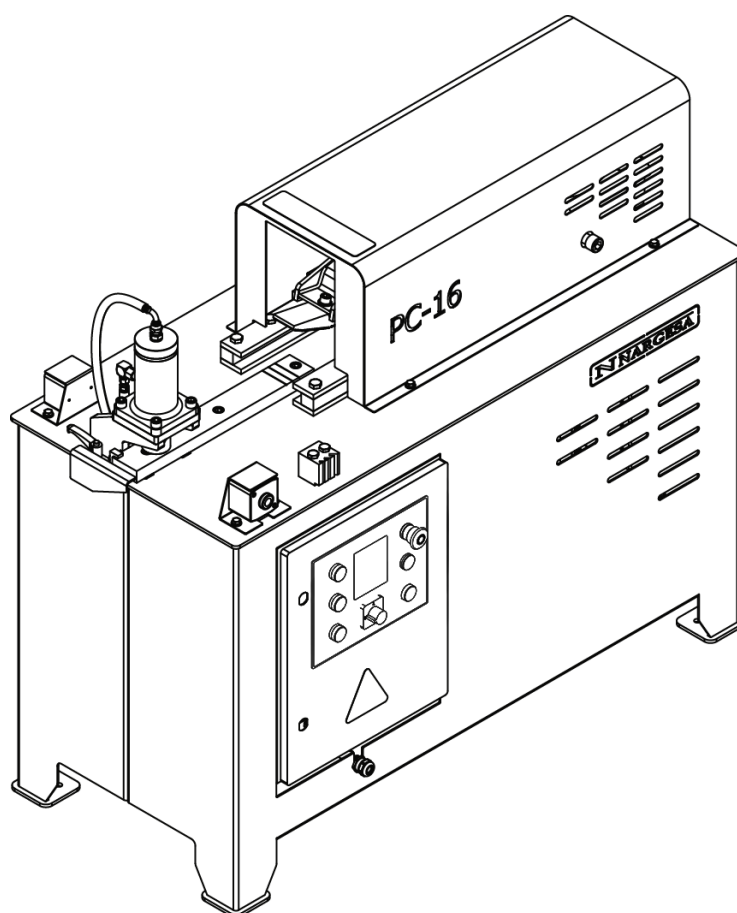


# **END WROUGHT IRON MACHINE**

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## **PC16**

NS: 2017-126



## **INSTRUCTIONS BOOK**

---

**PRADA NARGESA, S.L**

Ctra. de Garrigàs a Sant Miquel s/n · 17476 Palau de Santa Eulàlia (Girona) SPAIN

Tel. +34 972568085 · [nargesa@nargesa.com](mailto:nargesa@nargesa.com) · [www.nargesa.com](http://www.nargesa.com)



## **PRADA NARGESA**

Prada Nargesa S.L. is a family business founded in 1970 located near Barcelona, Spain, with more than 50 years of experience in the sector of manufacturing of industrial machinery, and more than 10.000m<sup>2</sup> of facilities. Nargesa is a symbol of quality, reliability, warranty and innovation.

Our whole range of machines and accessories is manufactured entirely in Nargesa. We have a constant stock of 400 machines, and we have more than 16.800 machines sold all over the world.



### **OUR RANGE OF MACHINERY**

Ironworker Machines

Ring Roller Bender and Pipe Bender

Non-mandrel Tube and Pipe Bender

Twisting / Scroll Bending Machines

Horizontal Press Brakes

End Wrought Iron Machines

Gas Forges

Iron Embossing Machines

Hydraulic Shear Machines

Hydraulic Press Brakes

Presses for Locks

Broaching Machines

Power Hammers

## **CERTIFICATES**

Prada Nargesa has several certifications that backup both, the design and manufacturing processes, as well as the journey through exporting our products around the world and the quality of the manufacturing components we use for our machines. These facts turn into real advantages for our customers:



### **AUTHORIZED EXPORTER**

- Faster customs procedures
- Reduction of tariff documentation
- Tariff preferences according to geographical location



### **INNOVATIVE SME**

- Development in innovation, design and manufacturing technologies
- Certification and audit of efficiency in product and service
- Ability to foresee customer needs



### **R+D+I MANAGEMENT**

- Manufacturing based on the R+D+I process
- Technological surveillance system

## **SUCCESS STORIES**

At Prada Nargesa we believe that the testimony of our clients is our best guarantee, and that is why we like to expose some of the success stories that we have witnessed around the world:

### **PORTUGAL**

Capela & Filhos



### **AUSTRALIA**

Manufactured Alloy Xtras



### **ESTADOS UNIDOS**

Madison Environmental Resources



### **ESPAÑA**

CBET Decoración SL



### **UGANDA**

Steel Limited



### **RUMANIA**

Gala Metal & Design SRL

## **DO YOU WANT TO PARTICIPATE?**

Send an email to [nargesa@nargesa.com](mailto:nargesa@nargesa.com) including the following information and we will add you to our website

Company name

Testimonial name

Post in the Company

Country

Descriptive text

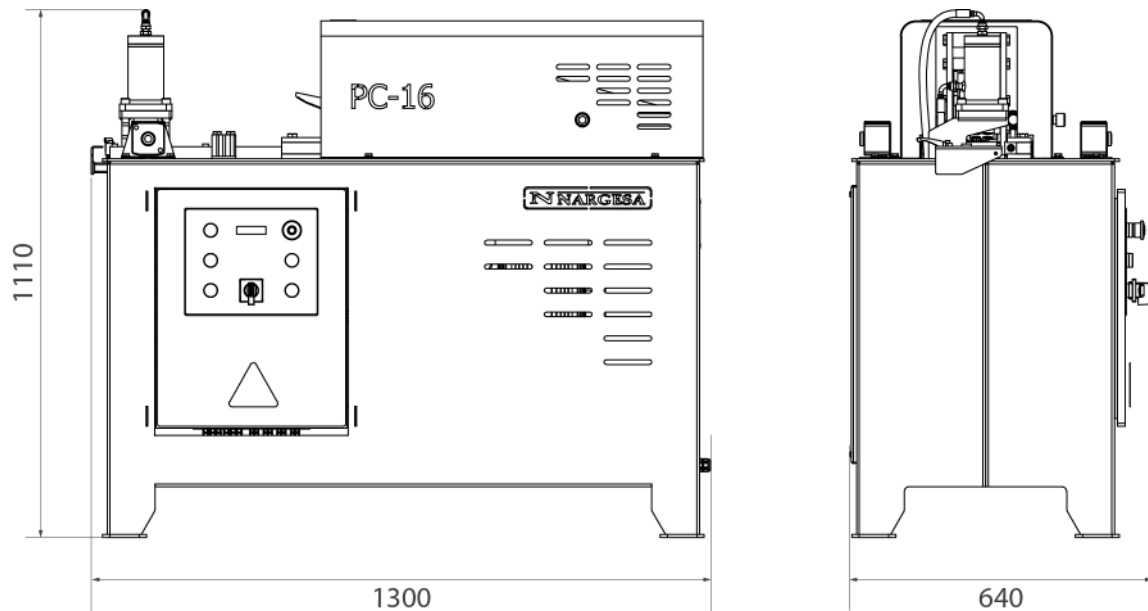
Photography with the machine

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## 1. FEATURES OF THE MACHINE

### 1.1. General dimensions



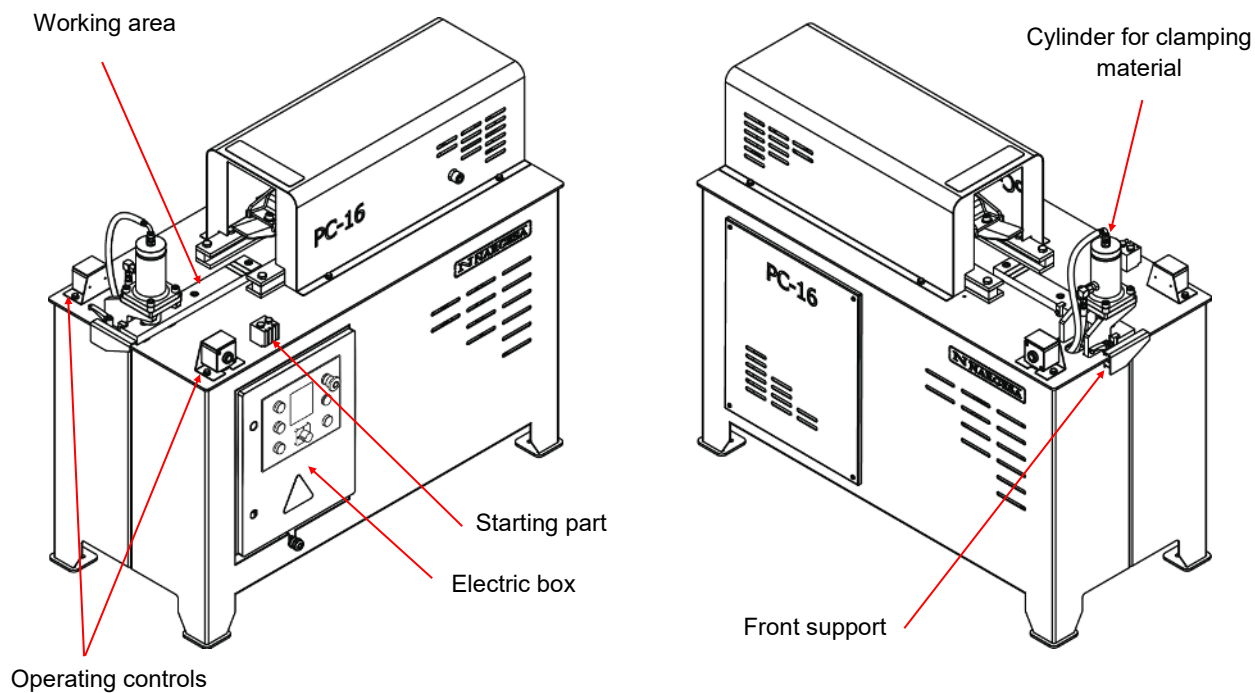
### 1.2. Description of the machine

The purpose of the hot forging machine NARGESA PC16 is to ease up the the work of winding the hot iron, by rolling up the hot extremes of flat bars.

**NOTE:**

Any application other than the specified and for which it has been designed can cause damage to the machine and the user, thus the manufacturer does not take any responsibility.

### 1.3. Identification of the machine

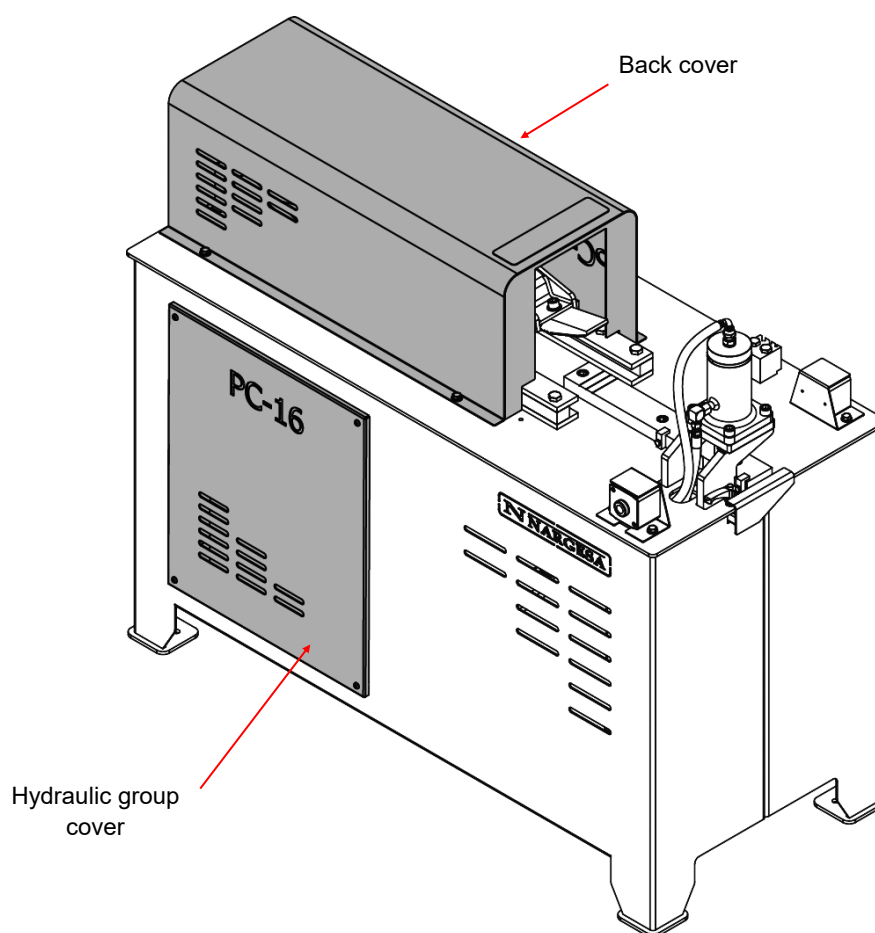


|                                                                                                                               |     |                                                      |            |           |             |
|-------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------|------------|-----------|-------------|
| <b>N NARGESA</b>                                                                                                              |     | <a href="http://www.nargesa.com">www.nargesa.com</a> |            | <b>CE</b> |             |
| PRADA NARGESA, S.L. - CTRA. DE GARRIGAS A SANT MIQUEL S/N<br>17476 PALAU DE STA. EULALIA (GIRONA) SPAIN - TEL.(+34) 972568085 |     |                                                      |            |           |             |
| TRADEMARK NARGESA                                                                                                             |     |                                                      | MODEL PC16 |           |             |
| YEAR OF MANUFACTURE                                                                                                           |     |                                                      | SERIAL N°  |           |             |
| DIMENSIONS 640x1300x1110                                                                                                      |     | mm.                                                  | WEIGHT 336 |           | Kg.         |
| POWER 2,2                                                                                                                     | Kw. | INTENSITY 9/5                                        | A.         | VOLTAGE   | V. Hz 50/60 |
|                                                                                                                               |     |                                                      |            |           |             |
|                                                                                                                               |     |                                                      |            |           |             |
|                                                                                                                               |     |                                                      |            |           |             |

#### 1.4. General features

|                    |                                                             |
|--------------------|-------------------------------------------------------------|
| Electric motor     | 2.2 KW (3 HP) at 1400 r.p.m.                                |
| Tension            | 230/400V Three-Phase 50/60 Hz<br>230V Single-Phase 50/60 Hz |
| Intensity          | 9/5 A                                                       |
| Hydraulic pressure | 210 Kg/cm2                                                  |
| Hydraulic pump     | 7.5 liters / minute                                         |
| Container          | 27 liters                                                   |
| Weight             | 336 Kg.                                                     |

#### 1.5. Identification of safety protections

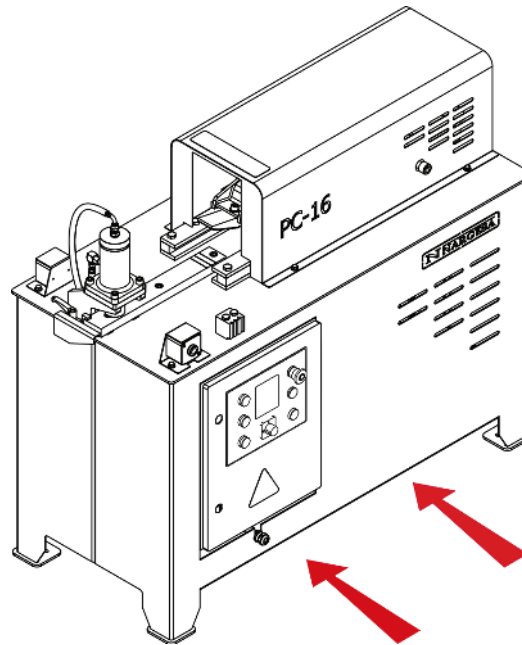


**It is FORBIDDEN to work without safety devices in this area. Protection items will be solely removed during breakdowns (if necessary) and always with the machine stopped.**

## 2. TRANSPORTATION AND STORAGE

### 2.1. Transportation

Transportation of the machine should be carried out by a forklift truck. The lower part of the machine will be lifting point which has been designed for this purpose, as it described below.



*The risk of overturning the machine must be kept in mind.*

### 2.2. Storage conditions

- \* Relative humidity between 30% and 95% without condensation.
- \* Temperatur between 15°C and 55°C.
- \* Do not put anything on top of the machine.
- \* Do not dismantle the machine when stored.

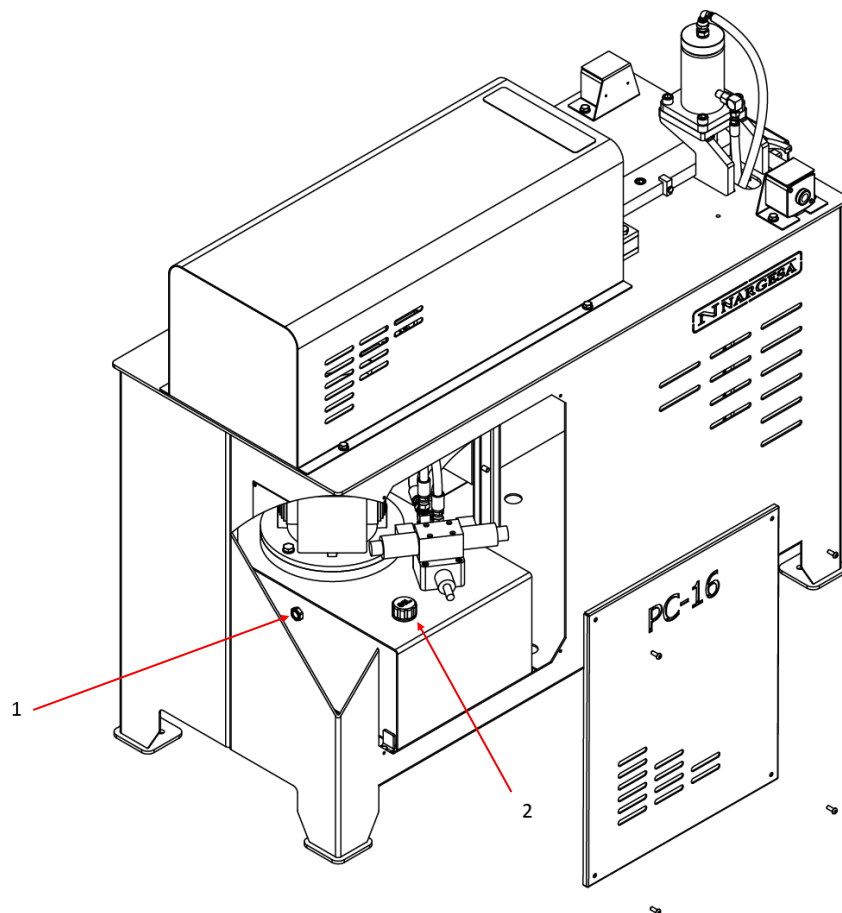
### 3. MAINTENANCE AND CLEANING

The forging machine NARGESA PC16 will require our attention in the maintenance section in the following points:

- Hydraulic Maintenance
- Lubrication
- Cleaning
- Adjusting the Guides
- Setting of brake

#### 3.1. Hydraulic maintenance

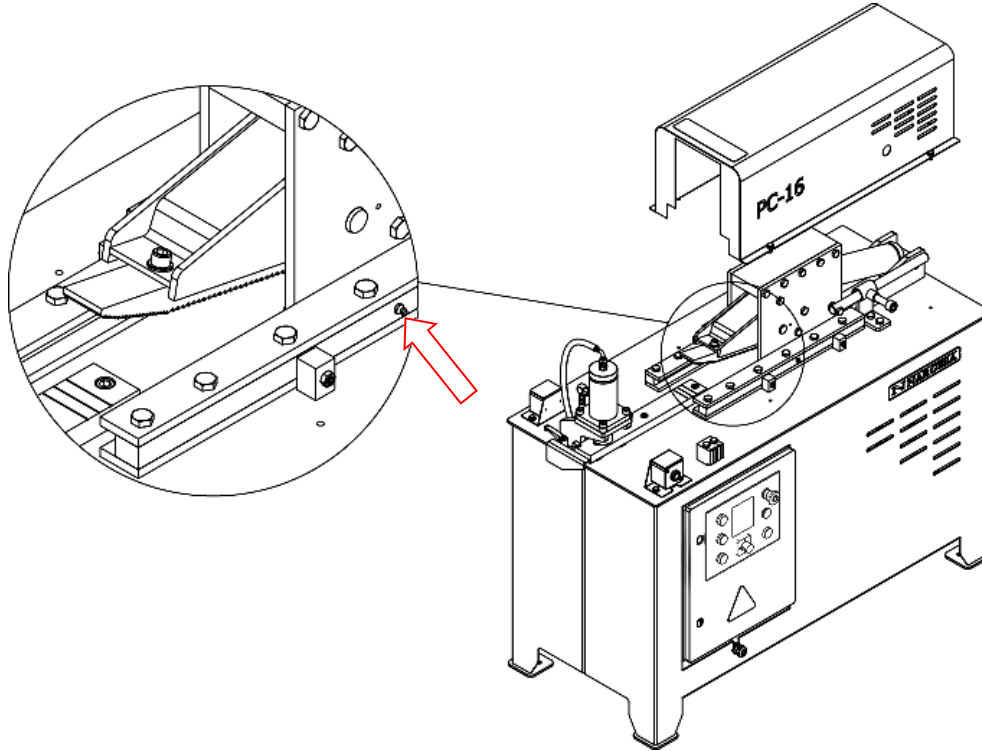
Since PC16 NARGESA forging machine has hydraulic mechanisms will its oil container won't need to be periodically checked up. For this purpose the container is provided with a sightglass (1) that allows us to observe the oil level. The machine must be always stopped in order to checkup the level..



In the event that the level is low, it will be filled with hydraulic oil HM 68 (2) until the oil is visible through the peephole (1) (about half of the sight glass). Level reviews are recommended to be done at least 1 once every 3 months.

### **3.2. Lubrication**

The wrought iron machine NARGESA PC16 incorporates guides where the slide zipper assembly slide should be greased slides. The frequency of lubrication depends on the frequency of use, it should be greased at least every 80 hours of operation.

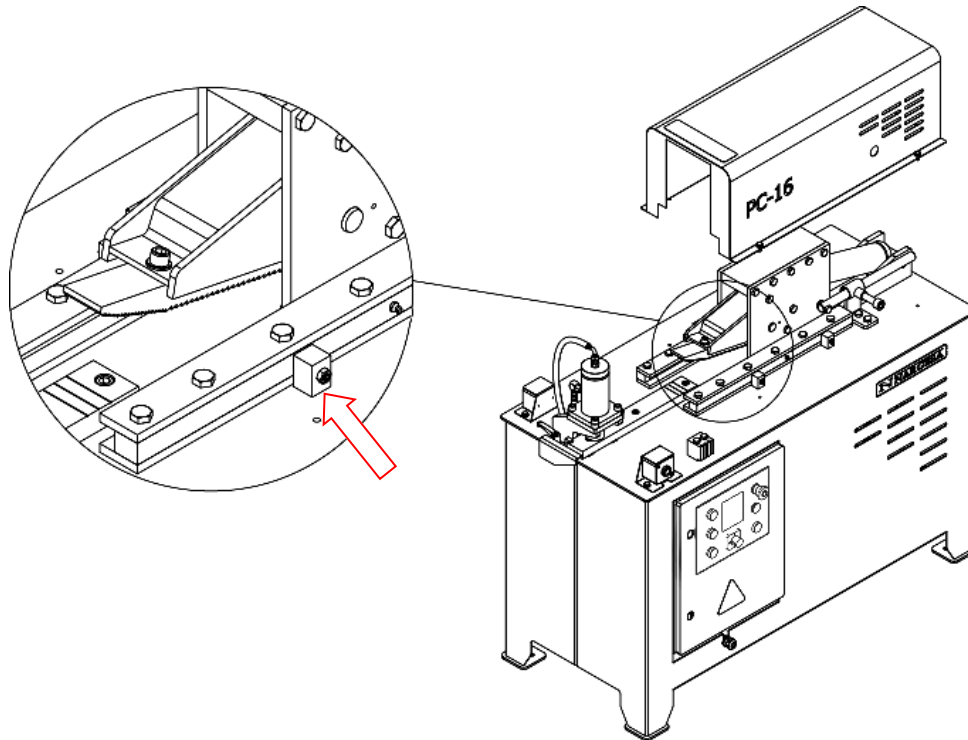


### **3.3. Cleaning maintenance**

Due to normal use of the forging machine NARGESA PC16 metal waste (such slag, etc..) is generated and this may affect the well performance of it. Therefore it is recommended to clean the machine, especially in the area of the guides at the end of each working day.

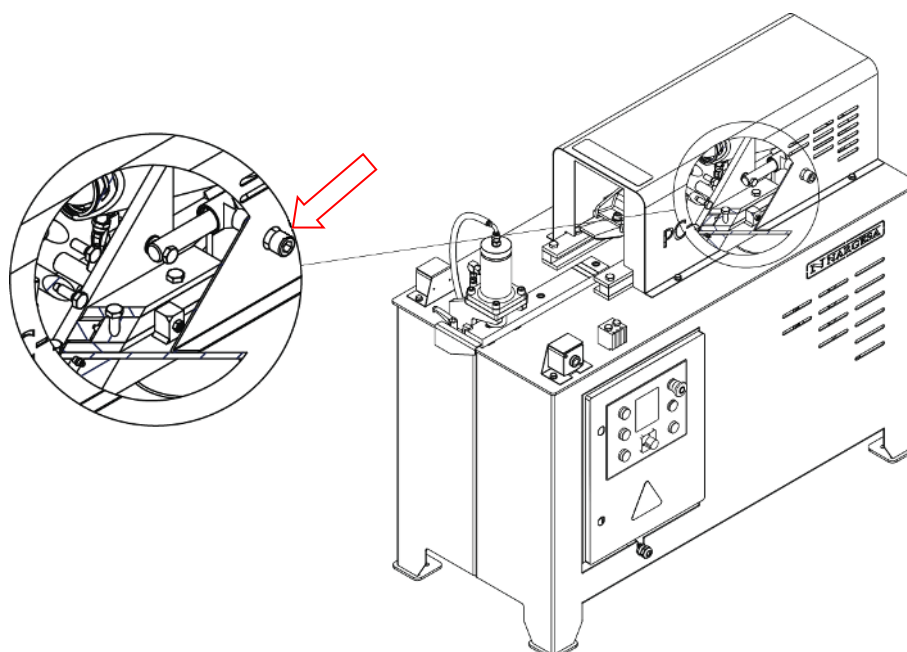
### **3.4. Adjustment of guides**

Due to normal use of the forging machine NARGESA PC16 guides may be out of adjustment. In order to adjust them it is required to act on the adjustment screws on the sides of the guides. This adjustment must be carried out carefully and at both sides equally, otherwise a poor fit could cause malfunction thereof.



### 3.5. Regulation of brake

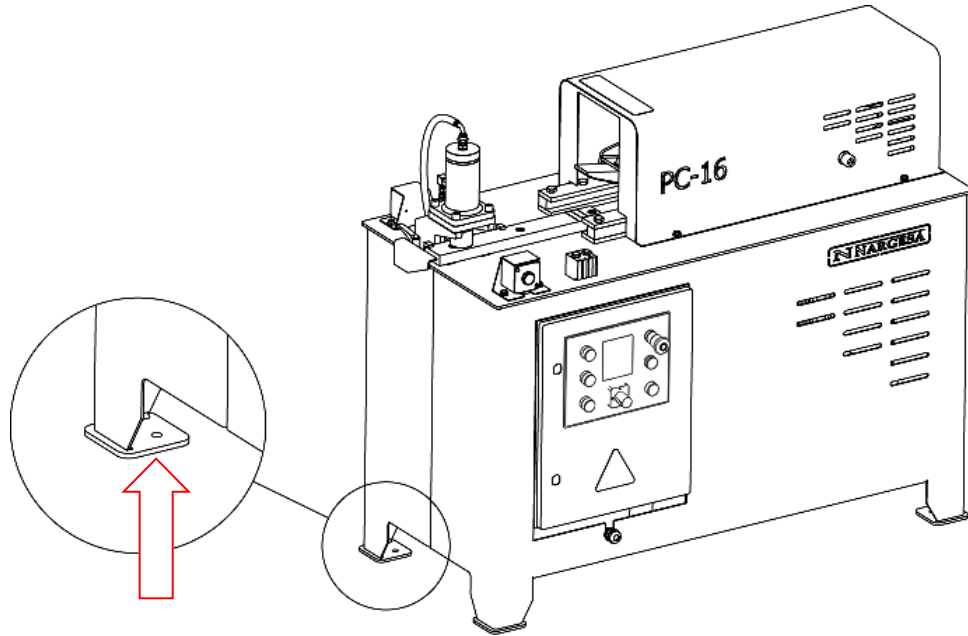
For optimum operation of the forging machine NARGESA PC16, it incorporates a braking system which allows us to control the speed of advance of the zipper. This device comes already graduated and it is advisable not handle it. If it is necessary to adjust the guides, it is recommended also checking up the brake as well, because due to the new set of the guides it is possible that they tend to over brake. The brake control is done via the bolt on top of one of the guides, as it is shown in the picture below, and its regulation can be performed with the help of an allen key number 14, without removing the back cover.



#### 4. INSTALLMEN AND SATRT UP

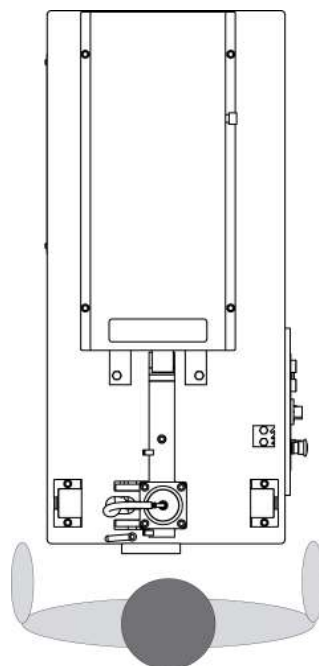
##### 4.1. Location of the machine

The forging machine NARGESA PC16 will be placed on a flat surface so it can be levelled. It can be clamped to the ground if desired through the holes made on its base for that purpose.



##### 4.2. Working site

In order to use the forging machine NARGESA PC16 it is essential to have enough space to work at the front of it (as it is shown in the drawing) and also to have access to its side part to carry out maintenance on the machine.



#### 4.3. Admissible outer conditions

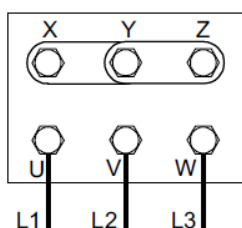
The working conditions of the machine would range between +5 ° C and +50 ° C and the maximum continuous temperature +45°C (24 hours)

The condition of humidity ranges between 30% and 90% without condensation.

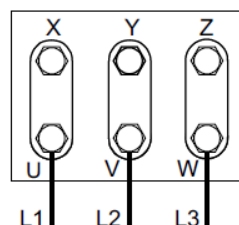
#### 4.4. Electrical connections

The machine NARGESA PC16 is designed to be connected to an outlet 230/400 volt three phase 50/60 Hz.

When connecting make sure that the electric motor rotates in the correct direction (the direction is indicated by the sticker placed on the motor). In case you it doesn't go in the right direction, turn one of the input phases.



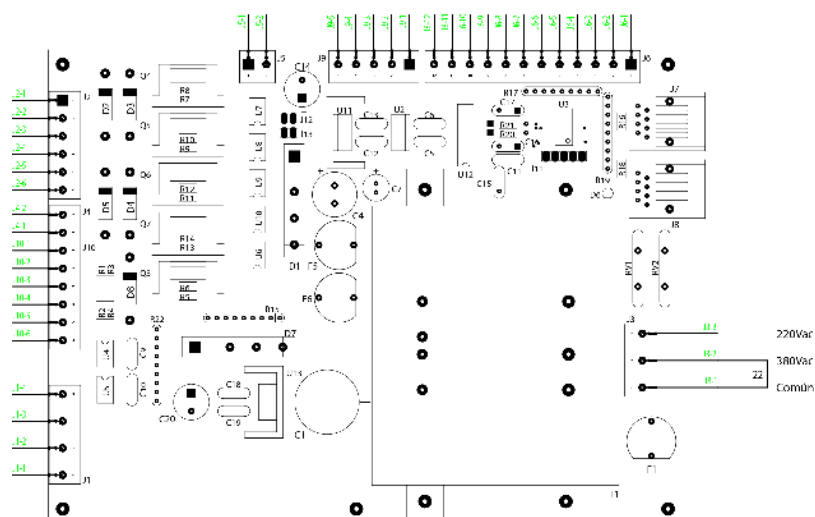
Star picture  
(default)  
For 400V



Triangle picture  
For voltage 230V

**NOTE:** If voltage changes it will be necessary to change the protection of the electric motor according to the following table:

| TENSION | AMPERE RATING |
|---------|---------------|
| 230 V   | 7 - 10 A      |
| 400 V   | 4 - 6 A       |



## 5. OPERATION MANUAL

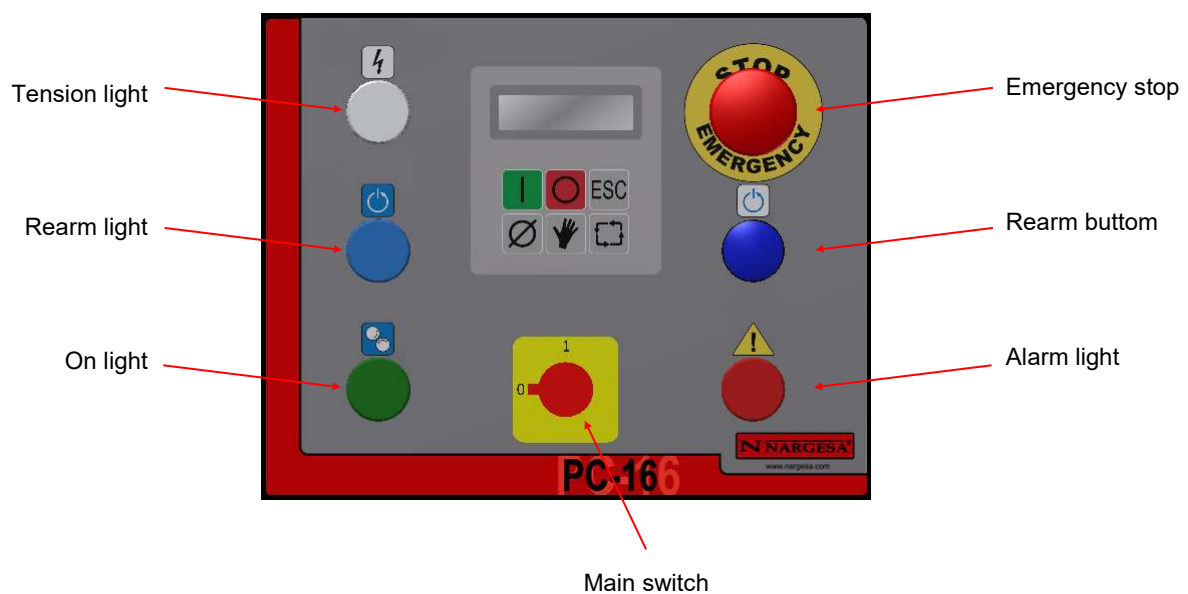
The PC16 NARGESA forging machine has 2 modes:

- Manual mode
- Automatic mode

Before explaining the operation modes we'll explain the different components and features of the forging machine NARGESA PC16.

### 5.1. Description of the control panel

On the side of the forging machine PC16 NARGESA there is a cabinet where you can identify the various controls of the machine. These controls are located in the following picture.



|                                                                                     |                 |                                                                                     |             |                                                                                       |                |
|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------|----------------|
|  | Start           |  | Stop        |  | ESC            |
|  | Counter to zero |  | Manual mode |  | Automatic mode |

### 5.2. Start up

To start up the forging machine NARGESA PC16 it will need to be connected to a power source. Once it is connected, we will switch on the main switch, which will illuminate both the strain gauge pilot and pilot alarm indicator. Unlock the emergency stop if it is blocked press the rearming button. At this time the alarm indicator light goes off.

Then we'll press the ON button (if it is the first time you connect the machine, checkup the direction of motor rotation guided by the sticker placed on it) so the gear indicator light will illuminate, indicating that the machine is ready for performance.

### 5.3. Setting up material

Before making the spiral tip is necessary to perform an operation to set up the material that are to work with.

Since the spiral tip is a forging operation, we take for granted that the material will be red hot prior to deformation.

To get a correct tip snail, we need to deform the material before placing in the machine, you will make a small spiral start using the tool on the side of the machine, called "Starting Piece" identified in the section 1.3 of the manual. This is a small fold beginning  $3 \div 4$  mm in the direction of the spiral.

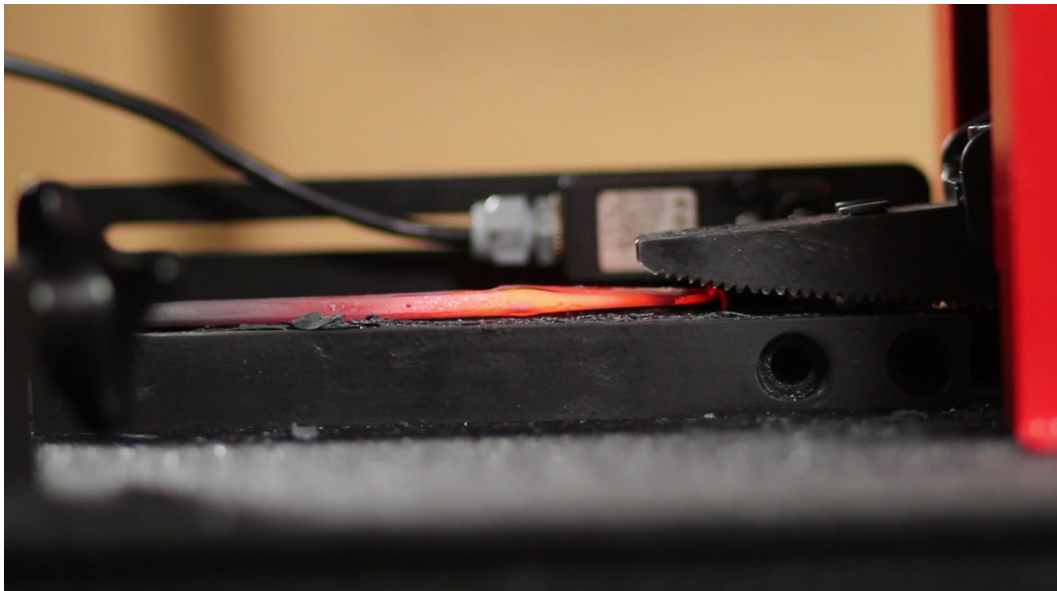
This part consists of several slots of different widths which allow us to bend the tip of the material to which the beginning of the spiral is desired.

### 5.4. Sequence of performance

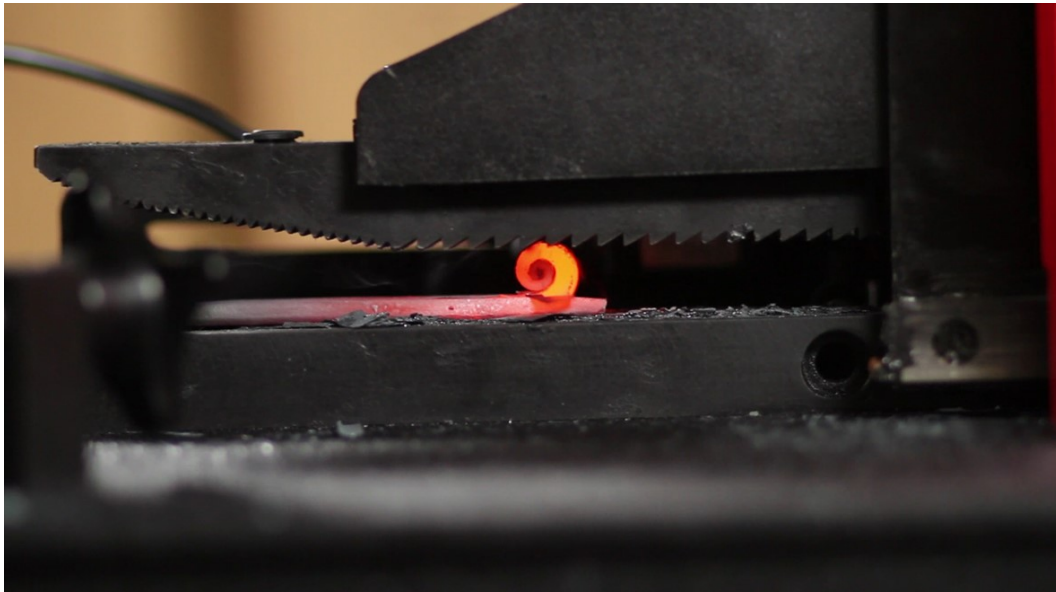
The operating sequence of the machine forging NARGESA PC16 starts at the moment you pressed both operating controls together on the sides of the machine. If we keep only driven one of the buttons, the machine does not respond to commands.

Once the sequence is started, first clamping cylinder descends which we fixed the material into the proper position. Then it will start the lowering and advancing of the zipper to perform spiral tip.

In the next picture we can see the time at which the fastener contacts the workpiece to be rolled.

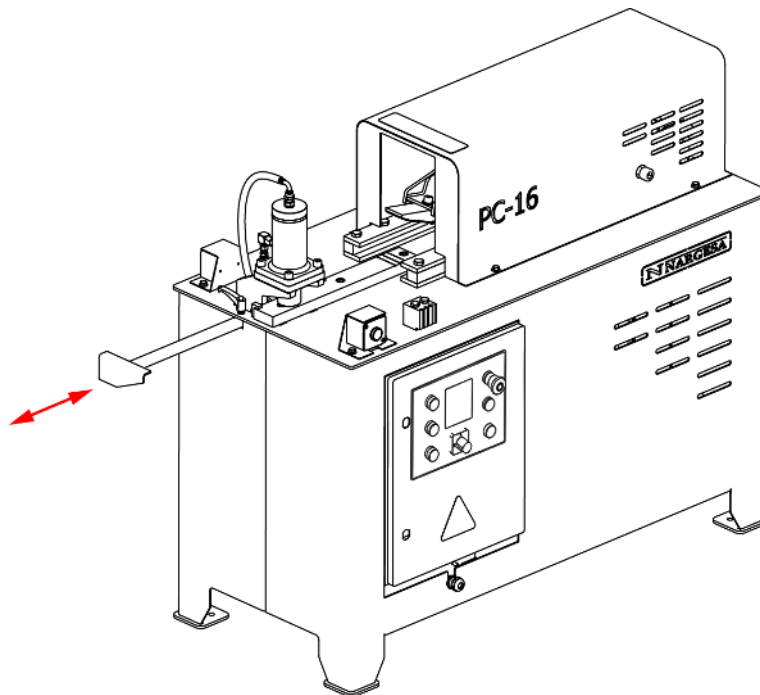


In this picture we can see how the material is rolled to deform while the zipper moves



After reaching the final position of the zipper, it is lifted, the material is released and goes back to the start point. This maneuver depends on the mode of operation used.

To ease up the work, the machine has an adjustable front bumper that allows us to support the material on it in case of long pieces.



### 5.5. Manual mode

The operating Manual mode is used to grade the final position of the zipper that will perform the spiral tip.

In order to select the Manual mode of operation we press the key located in the control panel 

The Manual mode functions in such way that when we maintain activated the operating controls while the machine starts moving forward, if we release the controls it stops maintaining the position and direction of movement. When the rack reaches the front limit actuates the limit, it stops.

### 5.6. Automatic mode

The Automatic mode or continuous mode is the working operation of the machine you will use in their usual production.

In order to select the Automatic mode of operation we press the key located in the control panel 

A message will show up on screen: CHANGE TO AUTOMATIC? pressing again to Automatic key, the machine will start on this performance mode.

The Automatic mode functions to maintain activated while operating controls while the machine starts moving forward to the final displacement, at raising the zipper it starts moving backward, releasing the workpiece held by the material held by the fastening cylinder, the return movement is stopped when the zipper reaches the rest position.

If during the progress we release the controls, the machine starts automatically the backward movement and then it is not possible to start the forward motion again.

**NOTE: You can see the operation of the machine in the product section of our website:  
www.nargesa.com or through our YouTube channel at this link:  
<http://www.youtube.com/watch?v=YwBRkTaldTE>**

## 6. POSSIBLE FAULTS

### 6.1 Electrical faults

Due to the daily use of the forging machine PC16 NARGESA, anomalous situations may arise which we try to describe below in order to facilitate the use and repair in any case

| Fault                                   | Cause                                   | Solution                                                    |
|-----------------------------------------|-----------------------------------------|-------------------------------------------------------------|
| The control panel does not light up     | No power supply                         | Make sure the machine is properly connected to power supply |
|                                         | Some phase power is faulty              | Make sure we get the three phase tension                    |
|                                         | Maneuver Thermal protection is disabled | Reset the circuit breaker of the maneuver                   |
|                                         | Protection fuse is blown                | Replace the fuse                                            |
| El Motor eléctrico no se pone en marcha | Thermal motor protection is disabled    | Reset motor protection                                      |
|                                         | One power phase is faulty               | Make sure that we get the three phase tension               |
|                                         | Emergency stop is activated             | Disengage the emergency stop and reset the machine          |
|                                         | Failure of the motor contact.           | Contact our technical assistance                            |

**NOTE:** In case of repeated anomalies please contact technical support NARGESA.

## 6.2. Mechanical faults

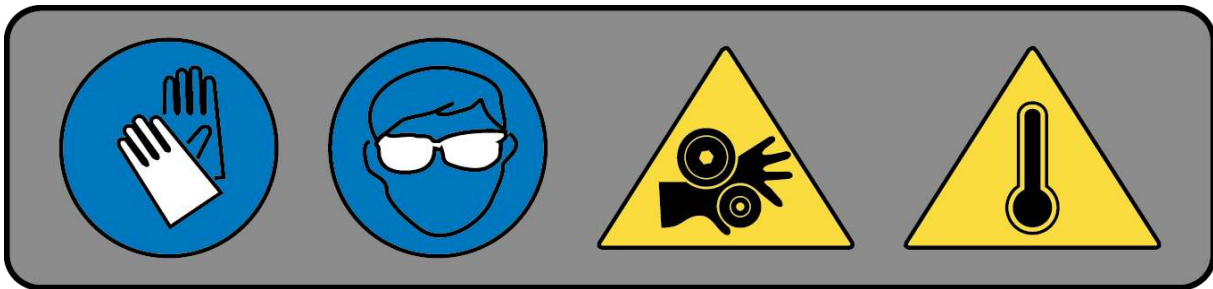
We refer to this chart once we take for granted there is no electrical anomaly.

| Fault                                     | Cause                             | Solution                                                                                                                              |
|-------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| The zipper doesn't go forward / backwards | The solenoid is not activated     | We found that manually maneuver is performed by pressing the center of the coil. If so please contact technical support NARGESA       |
|                                           |                                   | We found that manually maneuver is performed by pressing the center of the coil. If it does not contact the technical service NARGESA |
| The zipper moves back / forth bouncing    | Lack of lubrication of the guides | Proceed to lubricate the machine as described in section 3.2                                                                          |
|                                           | The guides move                   | Adjust the guides as indicated in paragraph 3.4.                                                                                      |
|                                           | The brake works too strong        | Loosen the brake as shown in section 3.5.                                                                                             |

## 7. WARNINGS

- Do not handle any part of the machine while it's running.
- Do not use the machine to any other purposes but the ones described in this manual.
- Use gloves when handling components of the machine for the work processes.
- Wear homologated safety goggles and protective boots.
- Hold up the base material.
- Do not work without the protections the machine is equipped with.

**In case of accident by negligence of the operator, for not following the safety and operating standards set out in this manual, NARGESA SL will not take any responsibility.**



## **Thecnical annex**

### Hot wrought iron machine PC16

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List of parts

Material cylinder

Cylinder

Hydraulic group

Electric box · THREEPHASE MACHINE

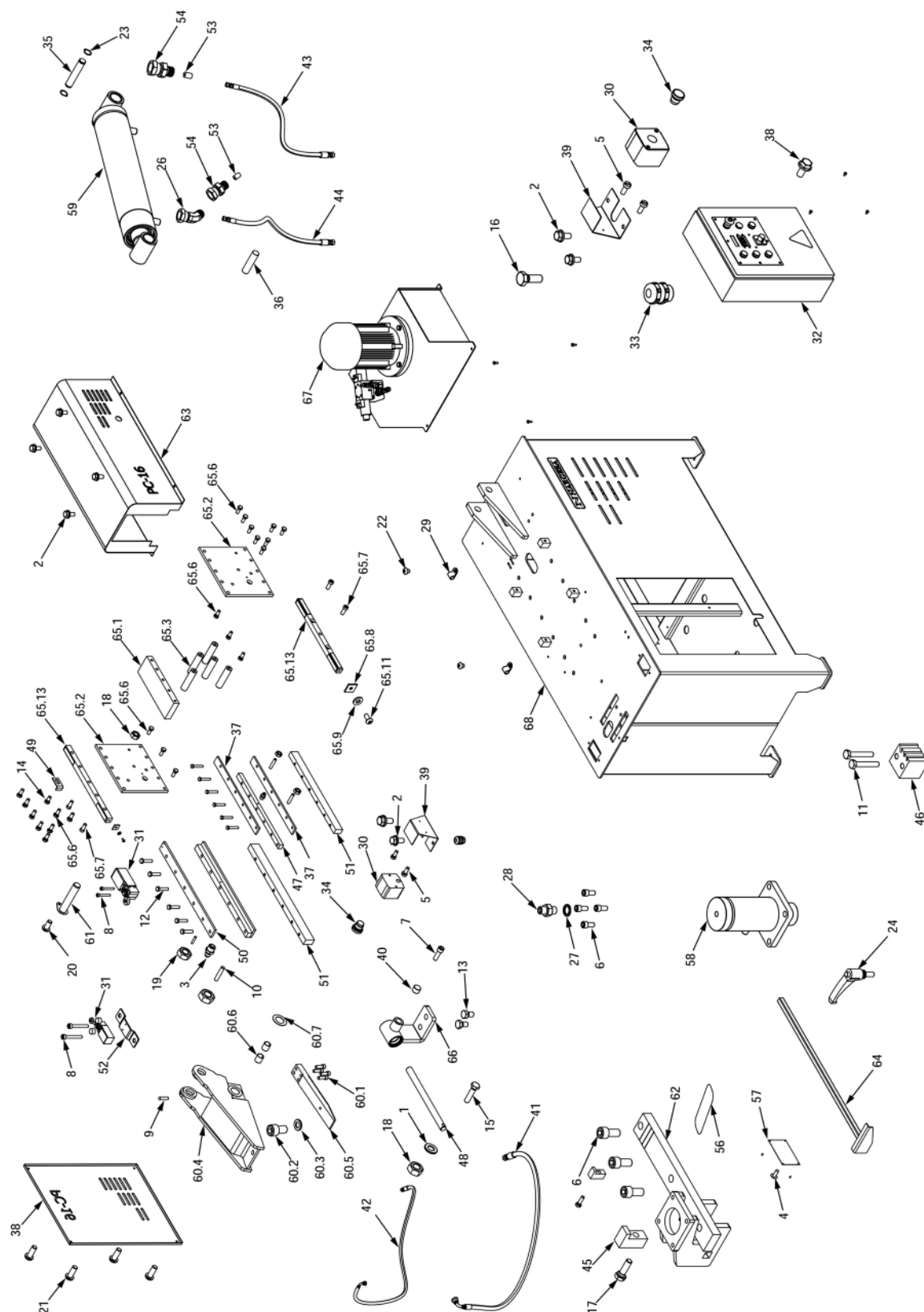
Electric map · THREEPHASE MACHINE

Electric box · SINGLEPHASE MACHINE

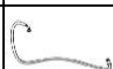
Electric map · SINGLEPHASE MACHINE

Hydraulic map

## A1. List of parts



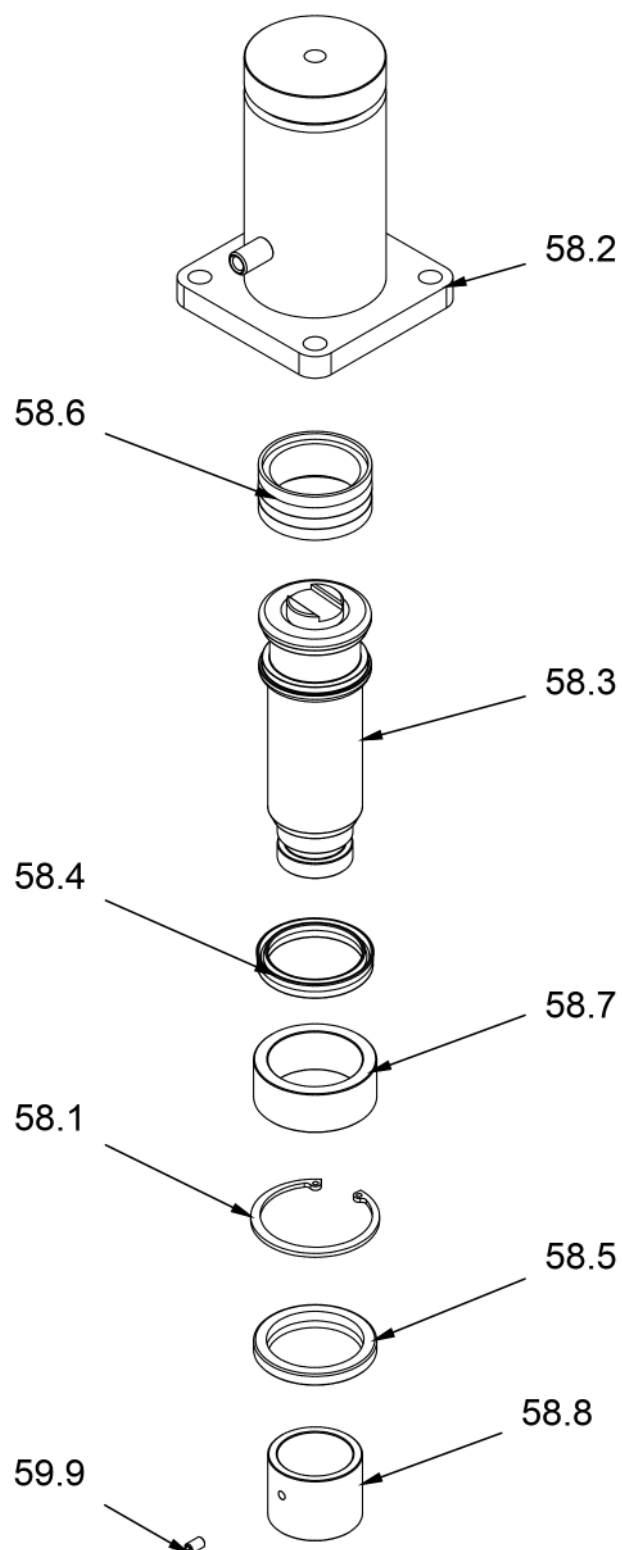
| Nº ORDEN | DIBUJO                                                                              | DESCRIPCION                            | Nº PLANO         | PIEZAS POR MAQUINA |
|----------|-------------------------------------------------------------------------------------|----------------------------------------|------------------|--------------------|
| 1        |    | ARANDELA DIN 125 B M12                 | 020-D125B-M12    | 1                  |
| 2        |    | TORNILLO HEXAGONAL DIN 6921 M8x16      | 020-D6921-M8X16  | 8                  |
| 3        |    | ENGRASADOR DIN 71412 M8 RECTO          | 020-D71412-00002 | 2                  |
| 4        |    | REMACHE DE CLAVO DIN 7337 De Al Ø3x8   | 020-D7337-3X8    | 4                  |
| 5        |    | TORNILLO DIN 84 M4x10                  | 020-D84-M4X10    | 4                  |
| 6        |    | TORNILLO ALLEN DIN 912 M12X25          | 020-D912-M12X25  | 7                  |
| 7        |    | TONILLO ALLEN DIN 912 M18X60           | 020-D912-M18X60  | 1                  |
| 8        |    | TORNILLO ALLEN DIN 912 M4x30 PAVONADO  | 020-D912-M4X30   | 4                  |
| 9        |   | ESPARRAGO ALLEN DIN 913 M5X10          | 020-D913-M5X10   | 1                  |
| 10       |  | ESPARRAGO ALLEN DIN 913 M8X40          | 020-D913-M8X40   | 4                  |
| 11       |  | TORNILLO HEXAGONAL DIN 931 M10X60      | 020-D931-M10X60  | 2                  |
| 12       |  | TORNILLO HEXAGONAL DIN 931 M12x65      | 020-D931-M12x65  | 12                 |
| 13       |  | TORNILLO HEXAGONAL DIN 933 M12X20      | 020-D933-M12X20  | 2                  |
| 14       |  | TORNILLO HEXAGONAL DIN 933 M12X25      | 020-D933-M12X25  | 1                  |
| 15       |  | TORNILLO HEXAGONAL DIN 933 M12X50      | 020-D933-M12X50  | 1                  |
| 16       |  | TORNILLO HEXAGONAL DIN 933 M6X16       | 020-D933-M6X16   | 4                  |
| 17       |  | TORNILLO HEXAGONAL DIN 933 M6X20       | 020-D933-M6X20   | 2                  |
| 18       |  | TUERCA DIN 934 M12                     | 020-D934-M12     | 2                  |
| 19       |  | TUERCA DIN 934 M8                      | 020-D934-M8      | 4                  |
| 20       |  | TORNILLO ALLEN ABOMBADO ISO 7380 M6X12 | 020-I7380-M6X12  | 1                  |
| 21       |  | TORNILLO ALLEN ABOMBADO ISO 7380 M6X16 | 020-I7380-M6X16  | 4                  |

| N° ORDEN | DIBUJO                                                                              | DESCRIPCION                                                      | N° PLANO         | PIEZAS POR MAQUINA |
|----------|-------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------|--------------------|
| 22       |    | TORNILLO ALLEN ABOMBADO<br>ISO 7380 M6X6                         | 020-I7380-M6X6   | 2                  |
| 23       |    | CIRCLIP EJE DIN 471 Ø25                                          | 030-D471-00008   | 2                  |
| 24       |    | EMPUÑADURA GRADUABLE<br>MACHO M8X20 NEGRA CON<br>BOTON NARANJA   | 031-MAG-00005    | 1                  |
| 26       |    | CODO 45° MACHO HEMBRA 1/4"                                       | 040-CMH45-00002  | 1                  |
| 27       |    | JUNTA METAL GOMA 1/4"                                            | 040-JMG-00002    | 1                  |
| 28       |    | RACOR MACHO MACHO 1/4"                                           | 040-RMM-00002    | 1                  |
| 29       |    | ABRAZADERA PARA CABLE DE 6                                       | 050-ABR-00001    | 2                  |
| 30       |    | CAJA DE SUPERFICIE PARA<br>BOTON                                 | 050-CSB-00001    | 2                  |
| 31       |   | FINAL DE CARRERA CON RUEDA<br>FR530 NO-NC                        | 050-FC-00003     | 2                  |
| 32       |  | KIT INSTALACION ELECTRICA PC<br>16                               | 050-KIE-1501-002 | 1                  |
| 33       |  | PRENSAESTOPA M16                                                 | 050-PE-00007     | 2                  |
| 34       |  | PULSADOR VERDE Ø22                                               | 050-PUL-00001    | 2                  |
| 35       |  | EJE TRASERO CILINDRO PC-16                                       | 120-15-01-00026  | 1                  |
| 36       |  | EJE DELANTERO CILINDRO PC-<br>16                                 | 120-15-01-00027  | 1                  |
| 37       |  | PASAMANO GUIA PC-16                                              | 120-15-01-00038  | 3                  |
| 38       |  | PUERTA PC-16                                                     | 120-15-01-00044  | 1                  |
| 39       |  | SOPORTE MANDOS BIMANUAL<br>PC-16                                 | 120-15-01-00053  | 2                  |
| 40       |  | TOPE NYLON FRENO PC-16                                           | 120-15-01-00063  | 1                  |
| 41       |  | MANGUERA HIDRAULICA 1/4"<br>CODO 90° 1/4" TG- TG 3/8" L= 1400 mm | 120-15-01-00117  | 1                  |
| 42       |  | MANGUERA HIDRAULICA 1/4"<br>CODO 90° 1/4" TG- TG 3/8" L= 1400 mm | 120-15-01-00115  | 1                  |
| 43       |  | MANGUERA HIDRAULICA 1/4" TG<br>1/4"-TG 3/8" L= 600 mm            | 120-15-01-00116  | 1                  |

| Nº ORDEN | DIBUJO                                                                              | DESCRIPCION                                           | Nº PLANO         | PIEZAS POR MAQUINA |
|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------|------------------|--------------------|
| 44       |    | MANGUERA HIDRAULICA 1/4" TG<br>1/4"-TG 3/8" L= 550 mm | 120-15-01-00118  | 1                  |
| 45       |    | TOPE LATERAL ENTRADA                                  | 120-15-01-00077  | 2                  |
| 46       |    | PASAMANO INICIO                                       | 120-15-01-00080  | 1                  |
| 47       |    | PASAMANO INTERMEDIO GUIA<br>PC-16                     | 120-15-01-00086  | 2                  |
| 48       |    | BARRA FRENO PC-16                                     | 120-15-01-00092  | 1                  |
| 49       |    | ACCIONAMIENTO FINAL DE<br>CARRERA DELANTERO PC-16     | 120-15-01-00096  | 1                  |
| 50       |    | PASAMANO GUIA PC-16                                   | 120-15-01-00097  | 1                  |
| 51       |    | REFUERZO INFERIOR PC-16                               | 120-15-01-00099  | 2                  |
| 52       |   | SOPORTE FINAL DE CARRERA<br>DELANTERO PC-16           | 120-15-01-00100  | 1                  |
| 53       |  | CHICLE M7 D2 mm                                       | 120-15-01-00102  | 2                  |
| 54       |  | RACOR PORTA CHICLE PC-16                              | 120-15-01-00104  | 2                  |
| 56       |  | ADVERTENCIAS PC-16                                    | 122-CAL-1501-002 | 1                  |
| 57       |  | PLACA CARACTERISTICAS<br>GENERAL                      | 122-PLC-0000-001 | 1                  |
| 58       |  | CONJUNTO CILINDRO MATERIAL<br>PC-16                   | 130-15-01-00002  | 1                  |
| 59       |  | CILINDRO PRINCIPAL PC-16                              | 130-15-01-00007  | 1                  |
| 60.1     |  | TORNILLO ALLEN DIN 912<br>M12X30                      | 020-D912-M12X30  | 4                  |
| 60.2     |  | TORNILLO ALLEN DIN 912<br>M12X20                      | 020-D912-M12X20  | 1                  |
| 60.3     |  | ARANDELA DIN 125 B M12                                | 020-D125B-M12    | 1                  |
| 60.4     |  | CONJUNTO ARTICULACION<br>CREMALLERA                   | 130-15-01-00008  | 1                  |
| 60.5     |  | CREMALLERA PUNTA CARACOL<br>PC-16                     | 120-15-01-00031  | 1                  |
| 60.6     |  | DOLLA PARTIDA D25XD28X30                              | 030-DP-00046     | 2                  |

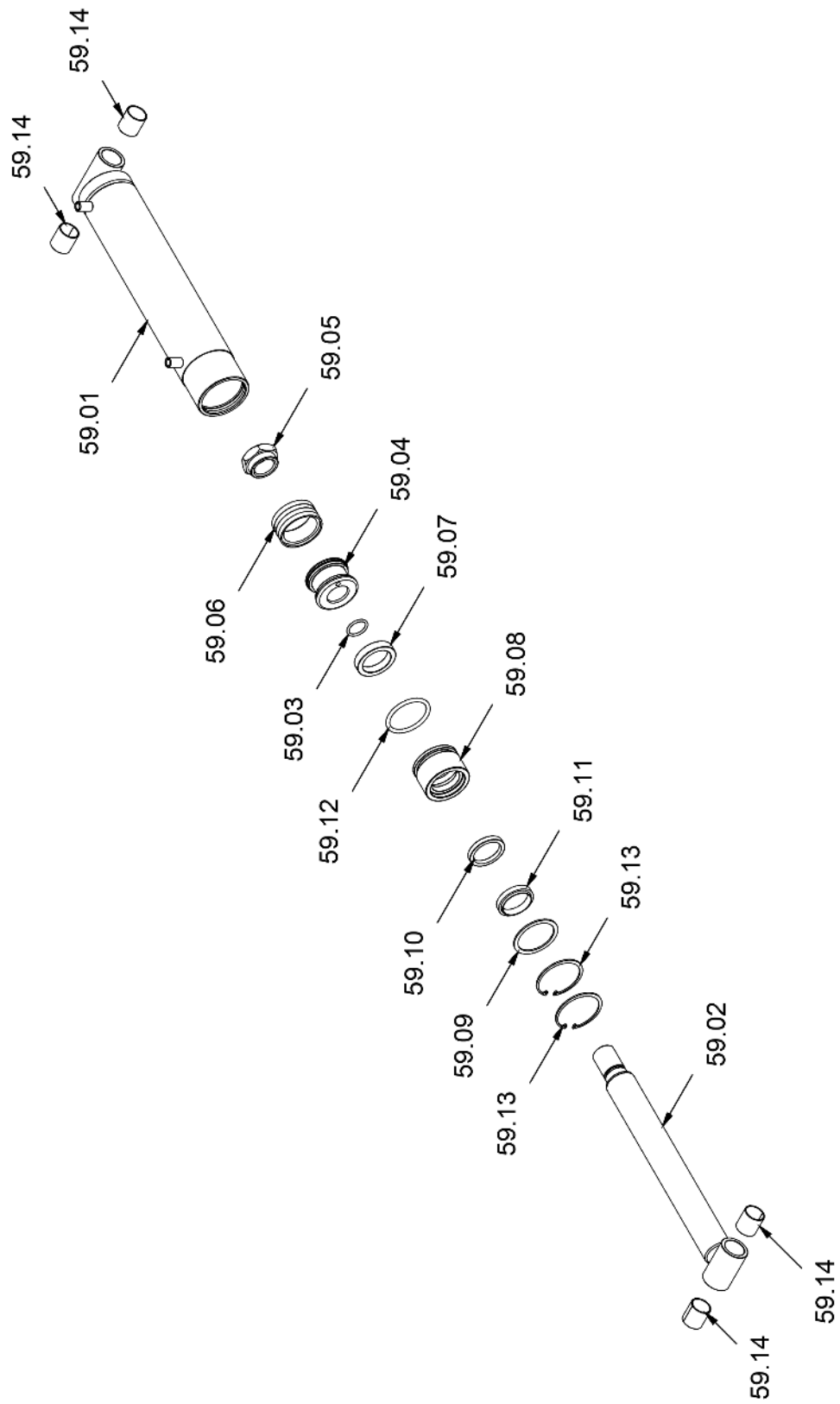
| Nº ORDEN | DIBUJO                                                                              | DESCRIPCION                                        | Nº PLANO         | PIEZAS POR MAQUINA |
|----------|-------------------------------------------------------------------------------------|----------------------------------------------------|------------------|--------------------|
| 60.7     |    | ARANDELA GRUESO<br>D47xD25.5x1                     | 120-15-01-00087  | 2                  |
| 61       |    | CONJUNTO BULON<br>ARTICULACION CREMALLERA<br>PC-16 | 130-15-01-00011  | 1                  |
| 62       |    | CONJUNTO SOPORTE CILINDRO<br>MATERIAL PC-16        | 130-15-01-00012  | 1                  |
| 63       |    | CONJUNTO TAPA SUPERIOR PC-<br>16                   | 130-15-01-00013  | 1                  |
| 64       |    | CONJUNTO APOYO TRASERO<br>PC-16                    | 130-15-01-00018  | 1                  |
| 65.1     |    | SEPARADOR SUPERIOR CARRIL<br>GUIA PC-16            | 120-15-01-00033  | 1                  |
| 65.2     |    | LATERAL DERECHO CARRIL<br>GUIA PC-16               | 120-15-01-00034  | 2                  |
| 65.3     |    | SEPARADOR CARRIL GUIA PC-16                        | 120-15-01-00036  | 5                  |
| 65.6     |    | TORNILLO HEXAGONAL DIN 933<br>M12x30               | 020-D933-M12X30  | 22                 |
| 65.7     |   | TORNILLO ALLEN CABEZA<br>REDUCIDA DIN 6912 M12x40  | 020-D6912-M12X40 | 4                  |
| 65.8     |  | RASCADOR DE GOMA GUIA PC-<br>16                    | 120-15-01-00089  | 2                  |
| 65.9     |  | ARANDELA D15xD7x2                                  | 120-15-01-00090  | 2                  |
| 65.11    |  | TORNILLO ALLEN ABOMBADO<br>ISO 7380 M6x12          | 020-I7380-M6X12  | 2                  |
| 65.13    |  | CONJUNTO CUADRADO GUIA PC-<br>16                   | 130-15-01-00021  | 2                  |
| 66       |  | CONJUNTO FRENO PC-16                               | 130-15-01-00020  | 1                  |
| 67       |  | GRUPO HIDRAULICO PC-16                             | 130-15-01-00026  | 1                  |
| 68       |  | ESTRUCTURA INFERIOR PC-16                          | 130-15-01-00025  | 1                  |

## A2. Material cylinder



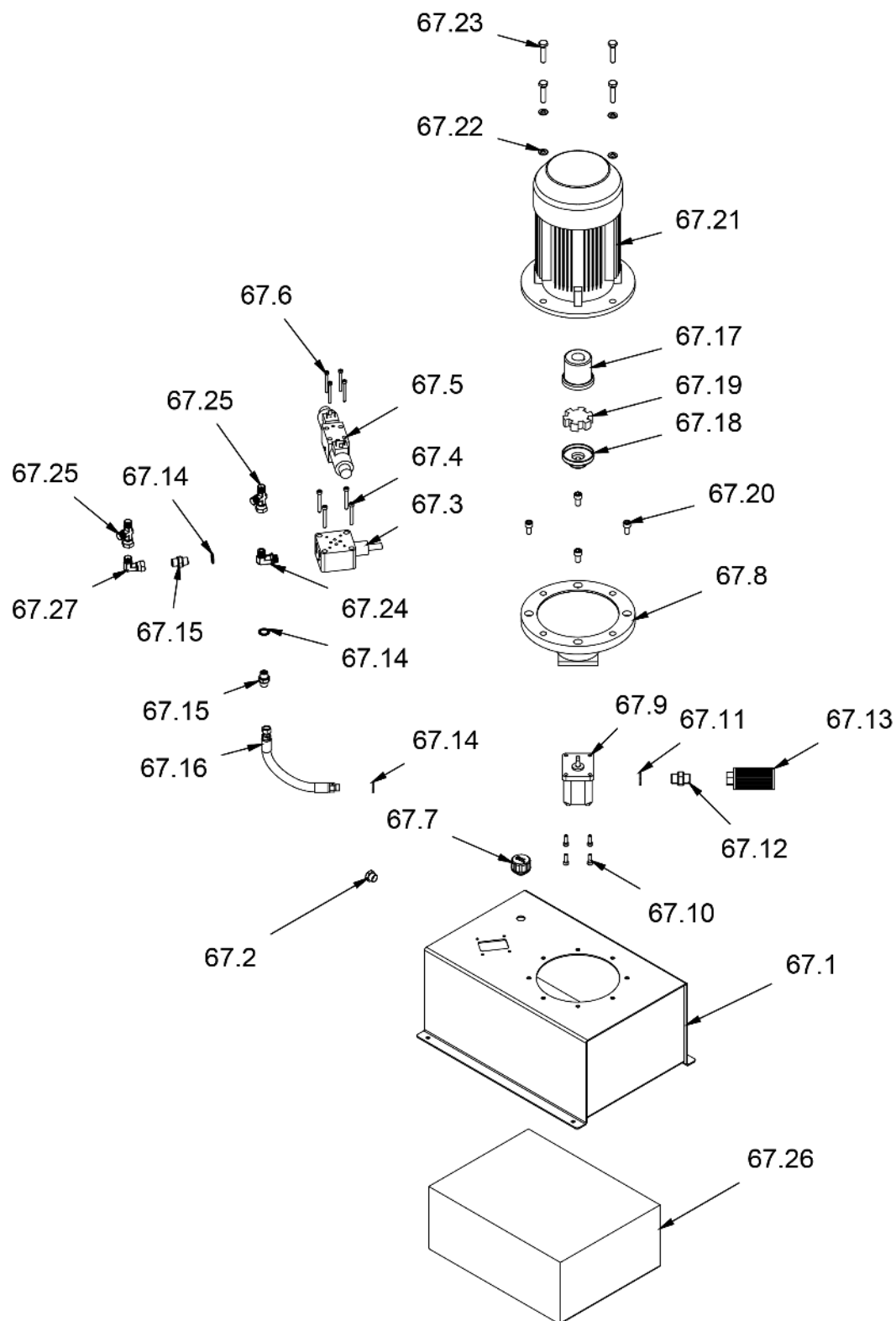
| Nº ORDEN | DIBUJO                                                                              | DESCRIPCION                                          | Nº PLANO        | PIEZAS POR MAQUINA |
|----------|-------------------------------------------------------------------------------------|------------------------------------------------------|-----------------|--------------------|
| 58.1     |    | CIRCLIP AGUJERO DIN 472<br>D65X2.5                   | 030-D472-00005  | 1                  |
| 58.2     |    | CONJUNTO CAMISA CILINDRO<br>FIJACION MATERIAL PC-16  | 130-15-01-00003 | 1                  |
| 58.3     |    | CONJUNTO VASTAGO CILINDRO<br>FIJACION MATERIAL PC-16 | 130-15-01-00004 | 1                  |
| 58.4     |    | COLLARIN TIPO BA D50XD62X9.5                         | 040-BA-00008    | 1                  |
| 58.5     |    | RASCADOR D50XD65X5/8                                 | 040-RAS-00005   | 1                  |
| 58.6     |    | JUNTA DPS D60XD48X14X28                              | 040-DPS-00005   | 1                  |
| 58.7     |    | DOLLA BRONCE CILINDRO<br>FIJACION MATERIAL           | 120-15-01-00016 | 1                  |
| 58.8     |   | PIEZA EMPUJE CILINDRO<br>FIJACION MATERIAL           | 120-15-01-00017 | 1                  |
| 58.9     |  | ESPARRAGO ALLEN DIN 913<br>M6x10                     | 020-D913-M6X10  | 1                  |

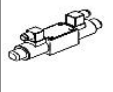
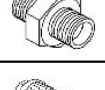
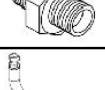
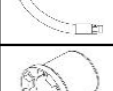
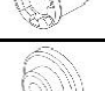
### A3. Cylinder



| Nº ORDEN | DIBUJO                                                                              | DESCRIPCION                             | Nº PLANO        | PIEZAS POR MAQUINA |
|----------|-------------------------------------------------------------------------------------|-----------------------------------------|-----------------|--------------------|
| 59.1     |    | CONJUNTO CAMISA CILINDRO PC-16          | 130-15-01-00005 | 1                  |
| 59.2     |    | CONJUNTO SOLDADO VASTAGO CILINDRO PC-16 | 130-15-01-00006 | 1                  |
| 59.3     |    | JUNTA TORICA D24X3 90 Shore             | 040-JT-00010    | 1                  |
| 59.4     |    | DOLLA CILINDRO FIJACION MATERIAL PC-16  | 120-15-01-00015 | 1                  |
| 59.5     |    | TUERCA POSTERIOR                        | 120-08-01-00001 | 1                  |
| 59.6     |    | JUNTA DPS D60XD48X14X28                 | 040-DPS-00005   | 1                  |
| 59.7     |    | SEPARADOR CILINDRO PC-16                | 120-15-01-00023 | 1                  |
| 59.8     |   | DOLLA BRONCE CILINDRO PC-16             | 120-15-01-00024 | 1                  |
| 59.9     |  | ARANDELA GRUESO CILINDRO PC-16          | 120-15-01-00025 | 1                  |
| 59.10    |  | COLLARIN BA D40XD50X7.3                 | 040-BA-00005    | 1                  |
| 59.11    |  | RASCADOR 40X50X7/10                     | 040-RAS-00003   | 1                  |
| 59.12    |  | JUNTA TORICA D53X5 90 Shore             | 040-JT-00016    | 1                  |
| 59.13    |  | CIRCLIP AGUJERO DIN 472 D63X2           | 030-D472-00006  | 2                  |
| 59.14    |  | DOLLA PARTIDA D25XD28X30                | 030-DP-00046    | 4                  |

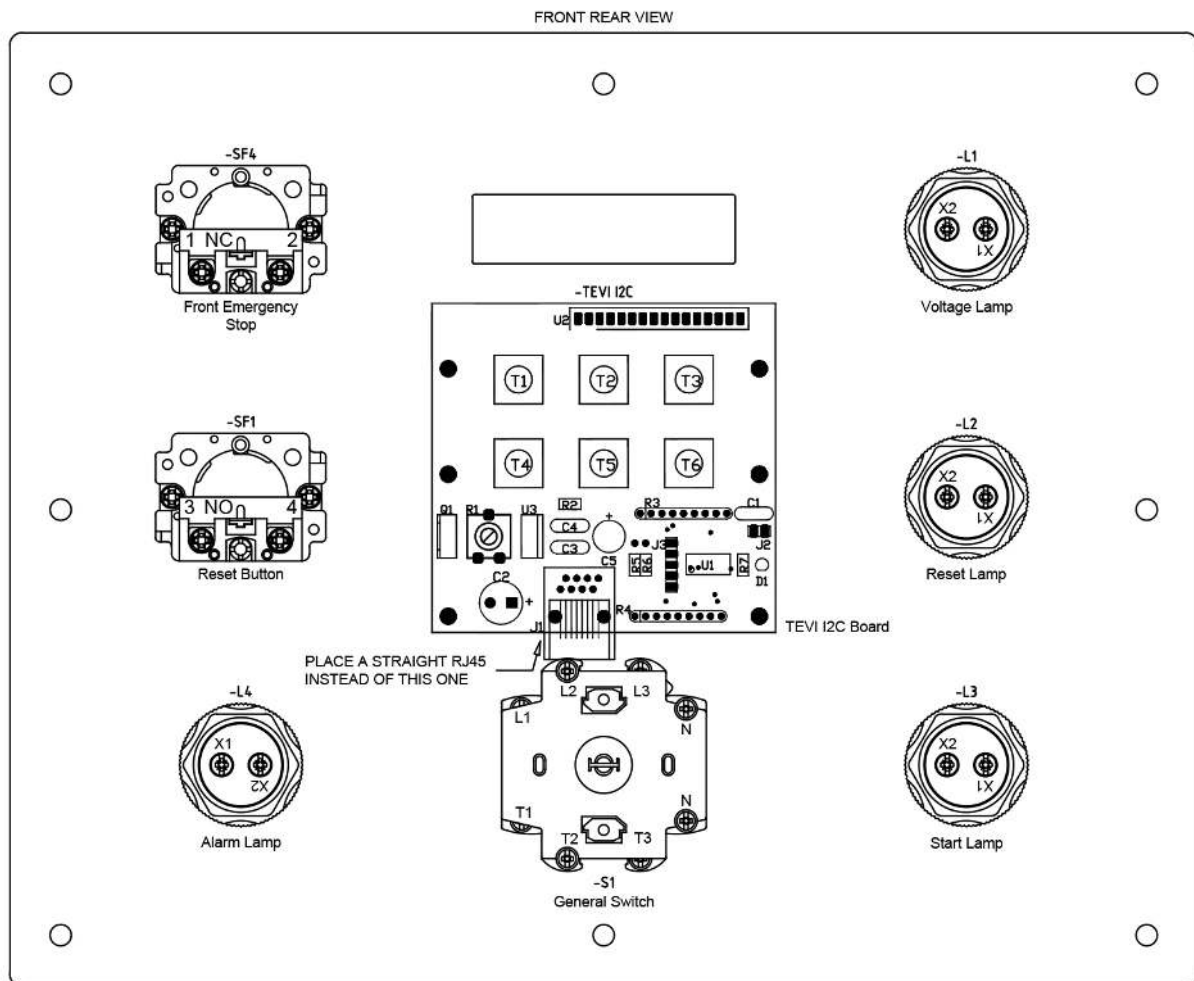
#### A4. Hydraulic group

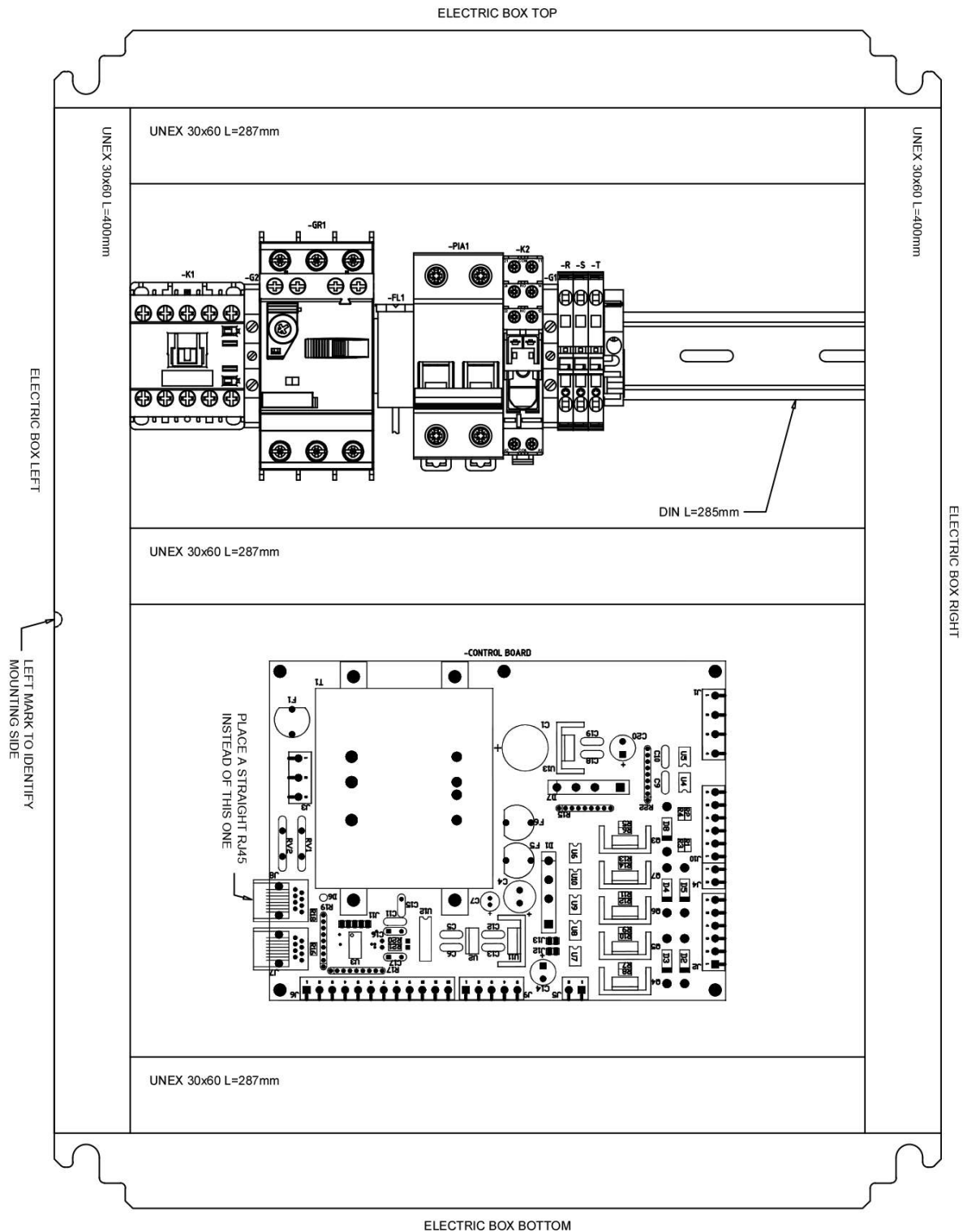


| Nº ORDEN | DIBUJO                                                                              | DESCRIPCION                                                                             | Nº PLANO        | PIEZAS POR MAQUINA |
|----------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------|--------------------|
| 67.1     |    | DEPOSITO HIDRAULICO PC-16                                                               | 130-15-01-00027 | 1                  |
| 67.2     |    | NIVEL DE ACEITE 3/8"                                                                    | 040-NA-00001    | 1                  |
| 67.3     |    | VALVULA LIMITADORA PRESION<br>5RLL02P2F/03 -T210 TARADA A<br>210 Bares                  | 040-VLP-00002   | 1                  |
| 67.4     |    | TORNILLO ALLEN DIN 912 M6X50                                                            | 020-D912-M6X50  | 4                  |
| 67.5     |    | ELECTROVALVULA DOBLE<br>BOBINA CON ALOJAMIENTO<br>DETECTOR M5x0.5<br>5EVP3D1C02D24-NAG6 | 040-ELV-00009   | 1                  |
| 67.6     |    | TORNILLO ALLEN DIN 912 M5x50                                                            | 020-D912-M5X50  | 4                  |
| 67.7     |    | TAPON LLENADO DE 1/2' DOBLE<br>RESPIRADERO Y FILTRO                                     | 040-TLL-00003   | 1                  |
| 67.8     |   | CAMPANA ACOPLAMIENTO<br>BOMBA TIPO LO MOTOR 3/4/5.5<br>C.V.                             | 040-CA-00002    | 1                  |
| 67.9     |  | BOMBA HIDRAULICA DE<br>ALUMINIO DE 7.5 L 1LO7.5DE10R                                    | 040-BH-00002    | 1                  |
| 67.10    |  | TORNILLO ALLEN DIN 912 M6X20                                                            | 020-D912-M6X20  | 4                  |
| 67.11    |  | JUNTA METAL GOMA 1/2"                                                                   | 040-JMG-00001   | 1                  |
| 67.12    |  | RACOR MACHO MACHO 1/2"                                                                  | 040-RMM-00004   | 1                  |
| 67.13    |  | FILTRO DE ASPIRACION DE 1/2'<br>REF 2FA15R125N                                          | 040-FL-00002    | 1                  |
| 67.14    |  | JUNTA METAL GOMA 3/8"                                                                   | 040-JMG-00004   | 3                  |
| 67.15    |  | RACOR MACHO MACHO 3/8"                                                                  | 040-RMM-00003   | 2                  |
| 67.16    |  | MANGUERA HIDRAULICA 3/8" M-H<br>3/8" L=450 mm                                           | 120-15-01-00070 | 1                  |
| 67.17    |  | ACOPLAMIENTO LADO MOTOR<br>3/4 / 5.5Cv                                                  | 040-AE-00007    | 1                  |
| 67.18    |  | ACOPLAMIENTO LADO BOMBA<br>LO PARA MOTOR 3/4 / 5.5 Cv                                   | 040-AE-00008    | 1                  |
| 67.19    |  | ESTRELLA ACOPLAMIENTO PARA<br>MOTOR 3/4 / 5.5 Cv                                        | 040-AE-00009    | 1                  |

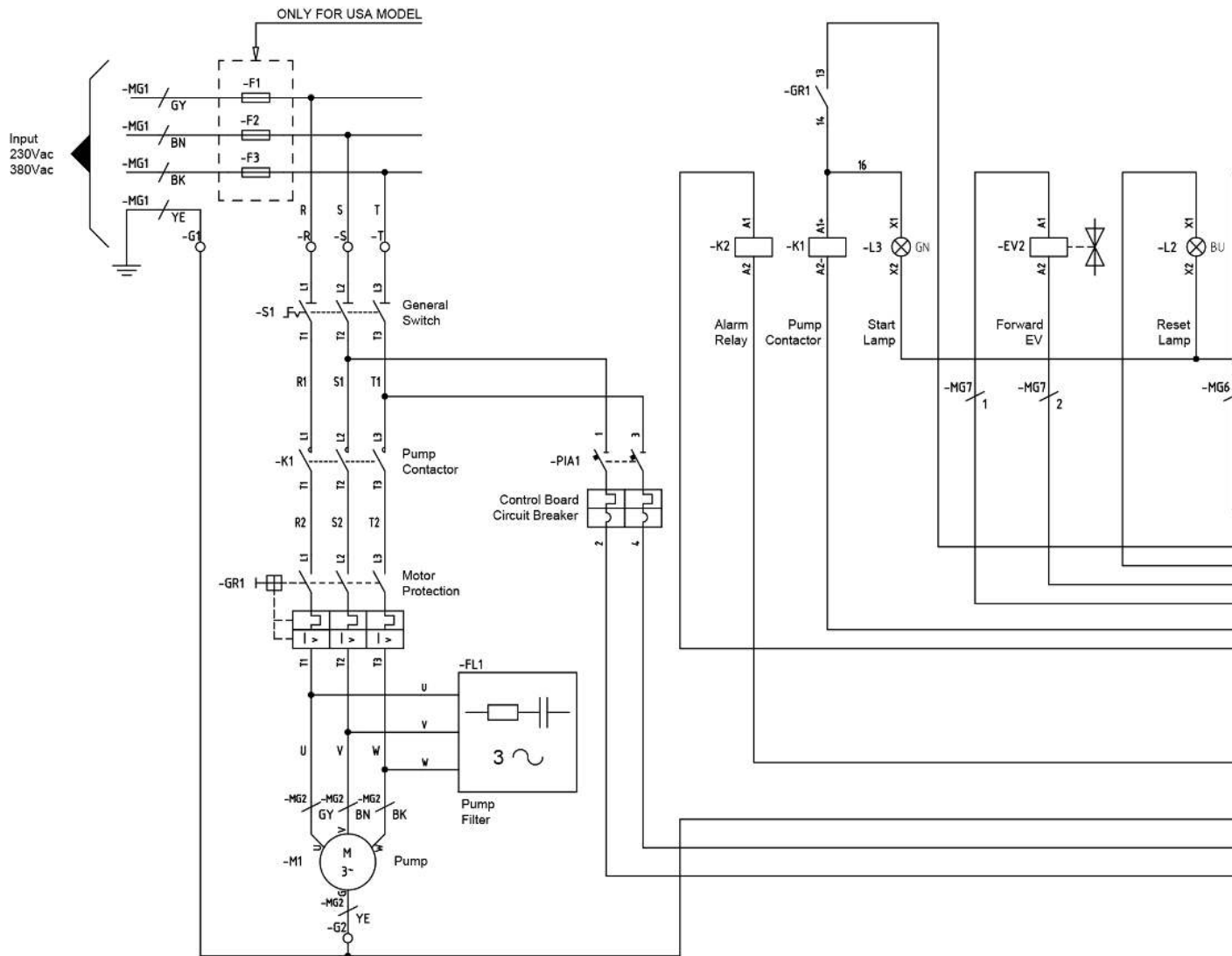
| Nº ORDEN | DIBUJO                                                                             | DESCRIPCION                                          | Nº PLANO        | PIEZAS POR MAQUINA |
|----------|------------------------------------------------------------------------------------|------------------------------------------------------|-----------------|--------------------|
| 67.20    |   | TORNILLO ALLEN DIN 912 M10X20                        | 020-D912-M10X20 | 4                  |
| 67.21    |   | MOTOR ELECTRICO 2.2Kw<br>1500RPM 50-60Hz B5 220/380V | 050-ME-00003    | 1                  |
| 67.22    |   | ARANDELA DIN 125 B M10                               | 020-D125B-M10   | 4                  |
| 67.23    |   | TORNILLO HEXAGONAL DIN 933<br>M10X45                 | 020-D933-M10X45 | 4                  |
| 67.24    |   | CODO ORIENTABLE MACHO<br>MACHO 3/8"                  | 040-CGMM-00002  | 1                  |
| 67.25    |   | FIGURA 'T' GIRATORIA LATERAL<br>3/8"                 | 040-TGL-00001   | 2                  |
| 67.26    |   | ACEITE HM68 26 LITROS                                | 120-15-01-00109 | 1                  |
| 67.27    |  | CODO 90º MACHO HEMBRA 3/8"                           | 040-CMH-00002   | 1                  |

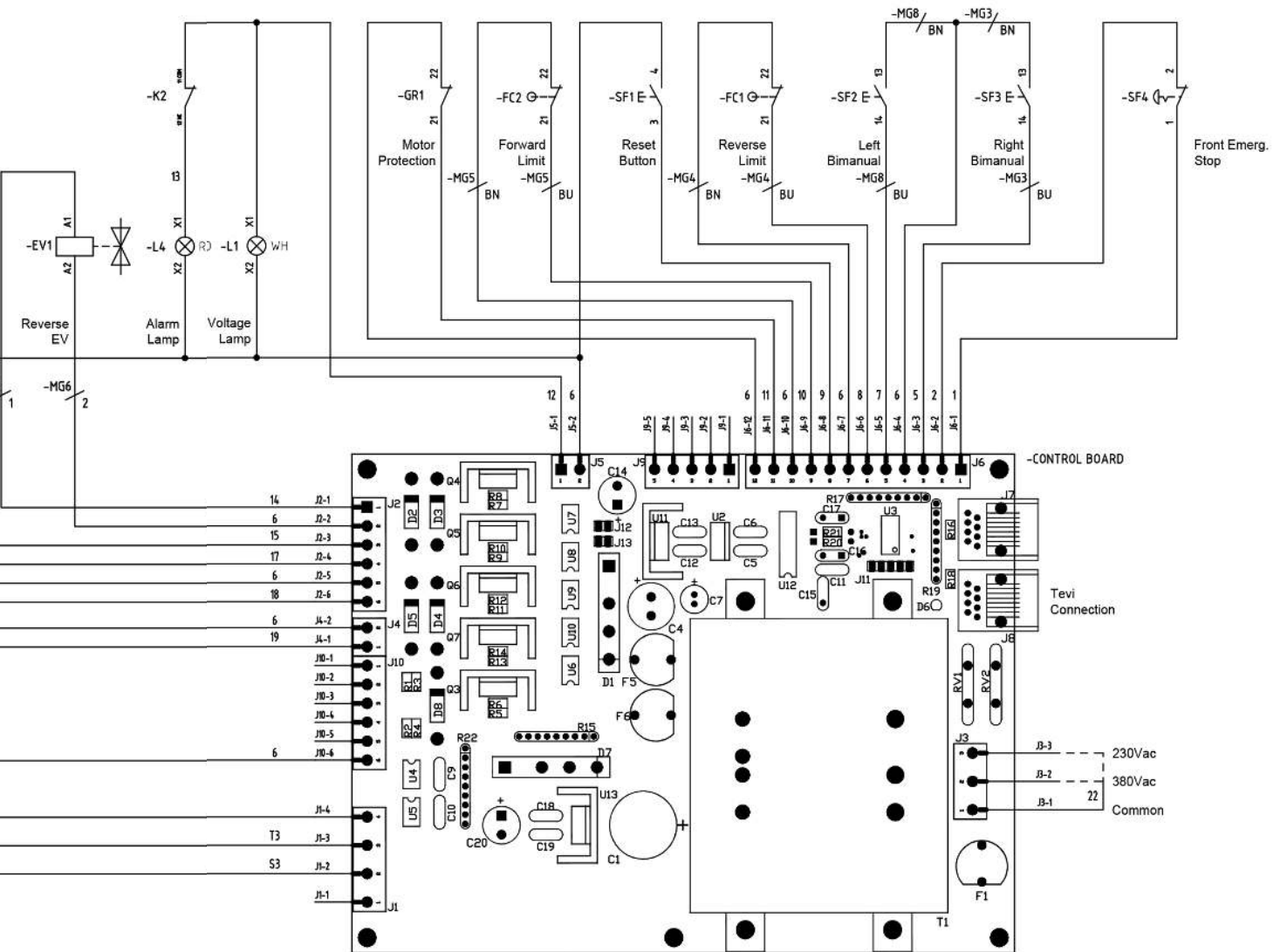
A5. Electric box · THREEPHASE MACHIN



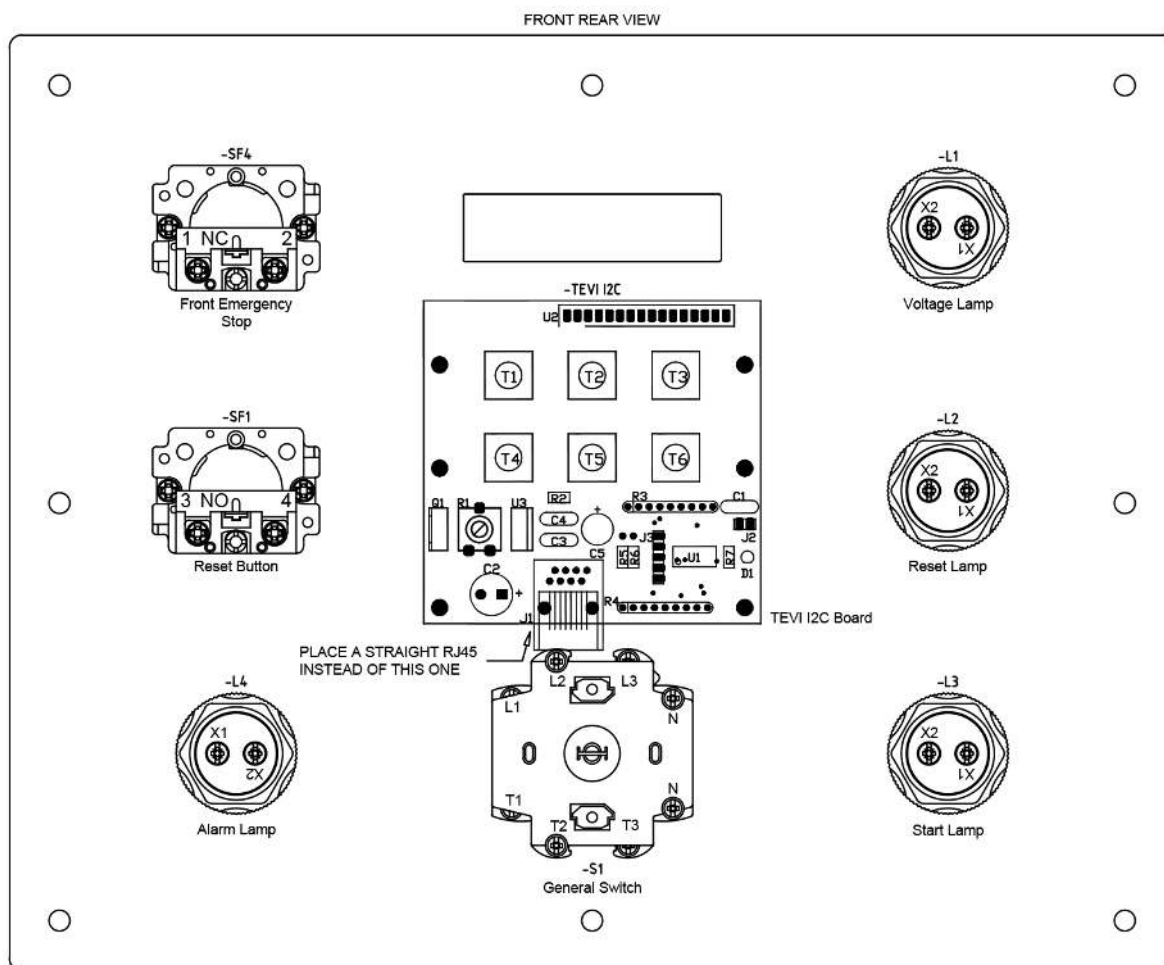


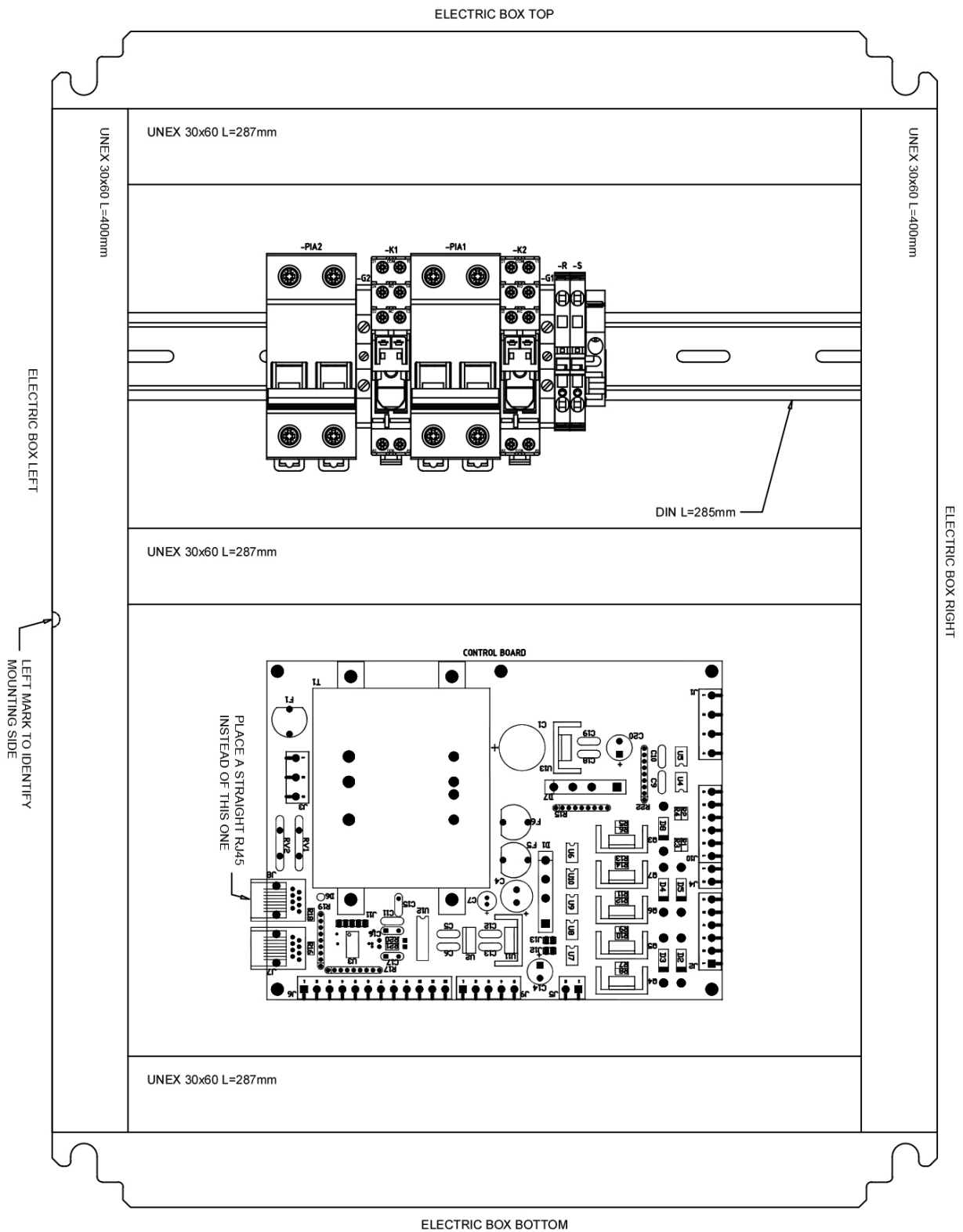




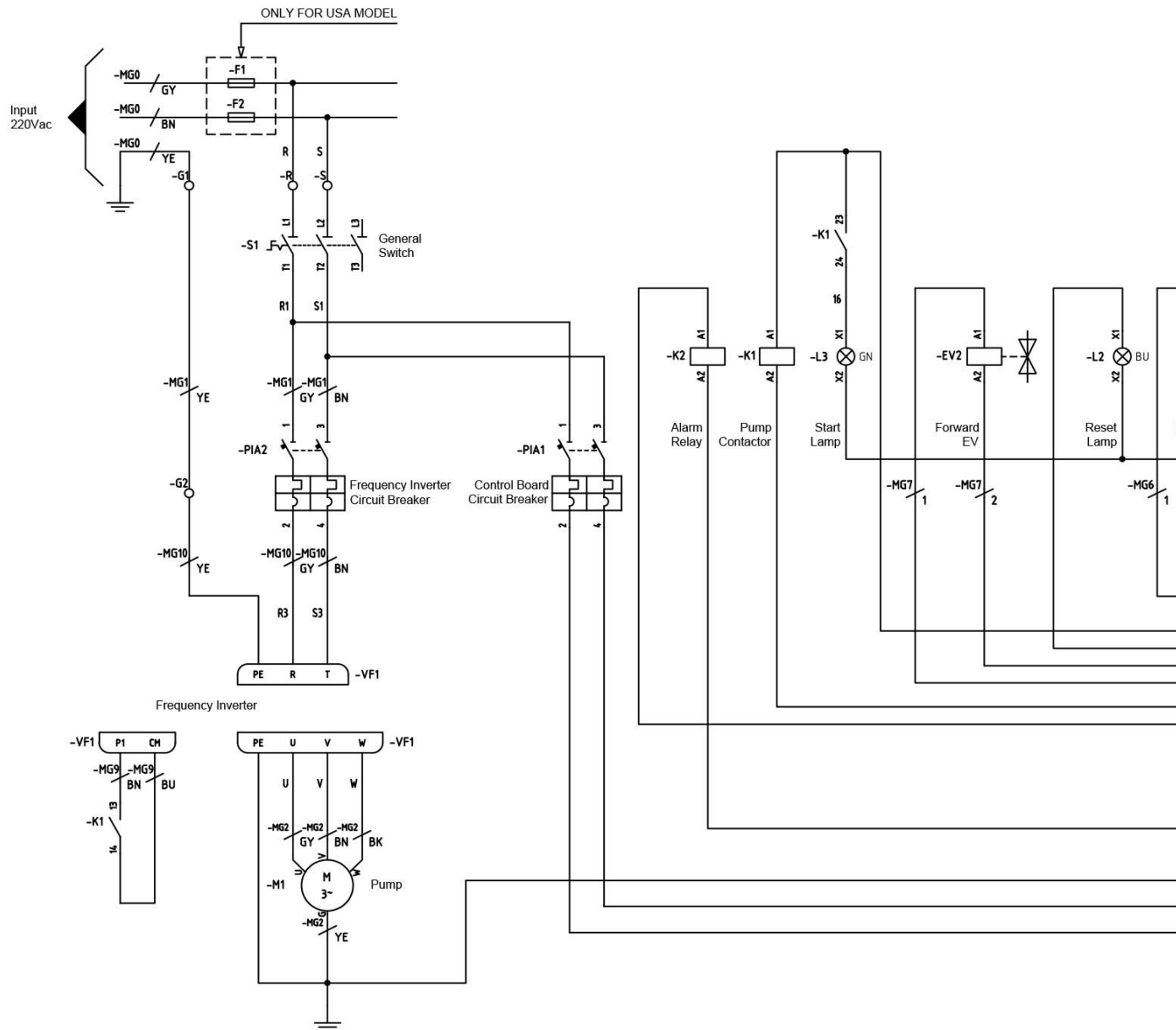


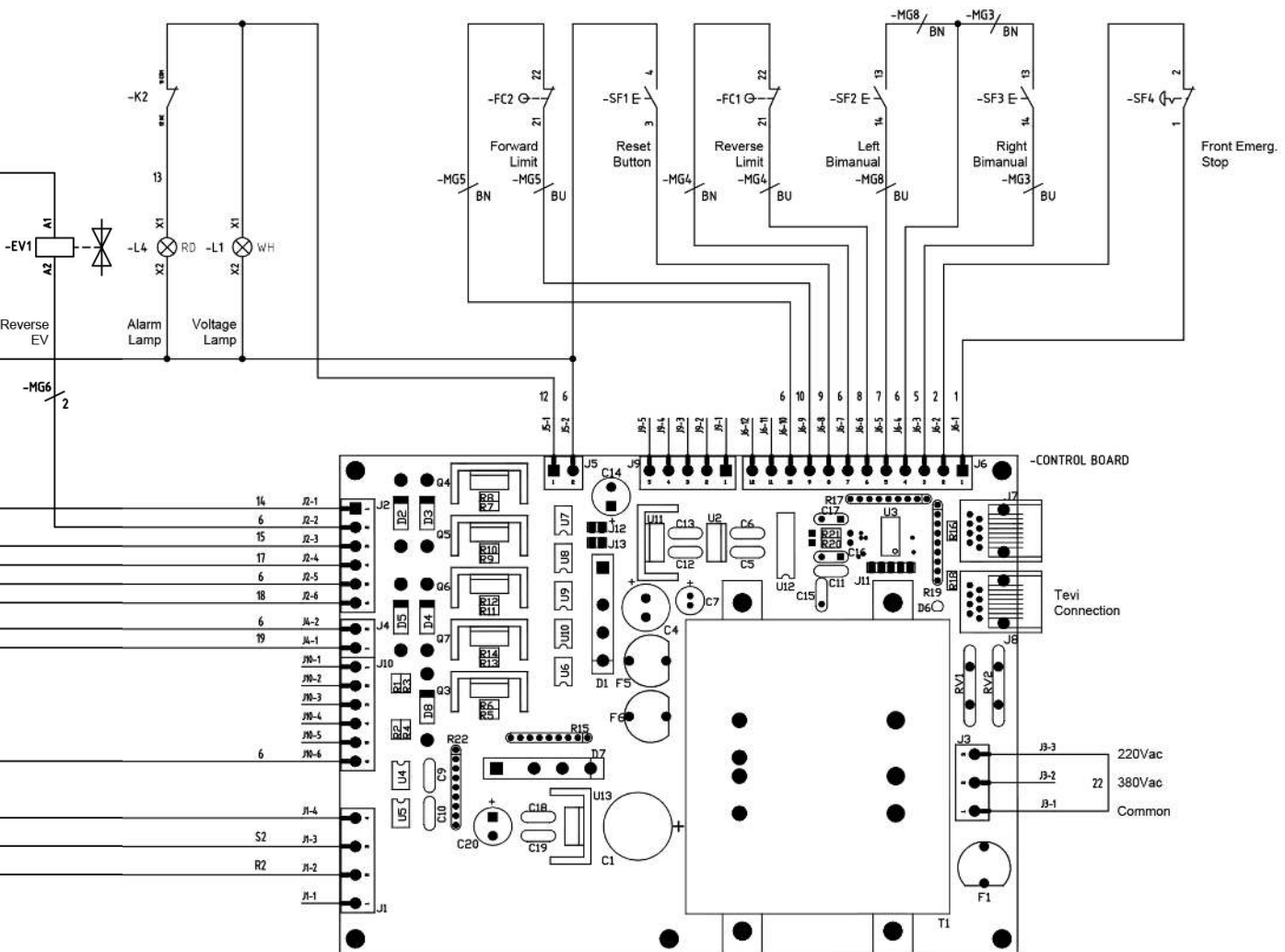
## A7. Electric box · SINGLEPHASE MACHINE

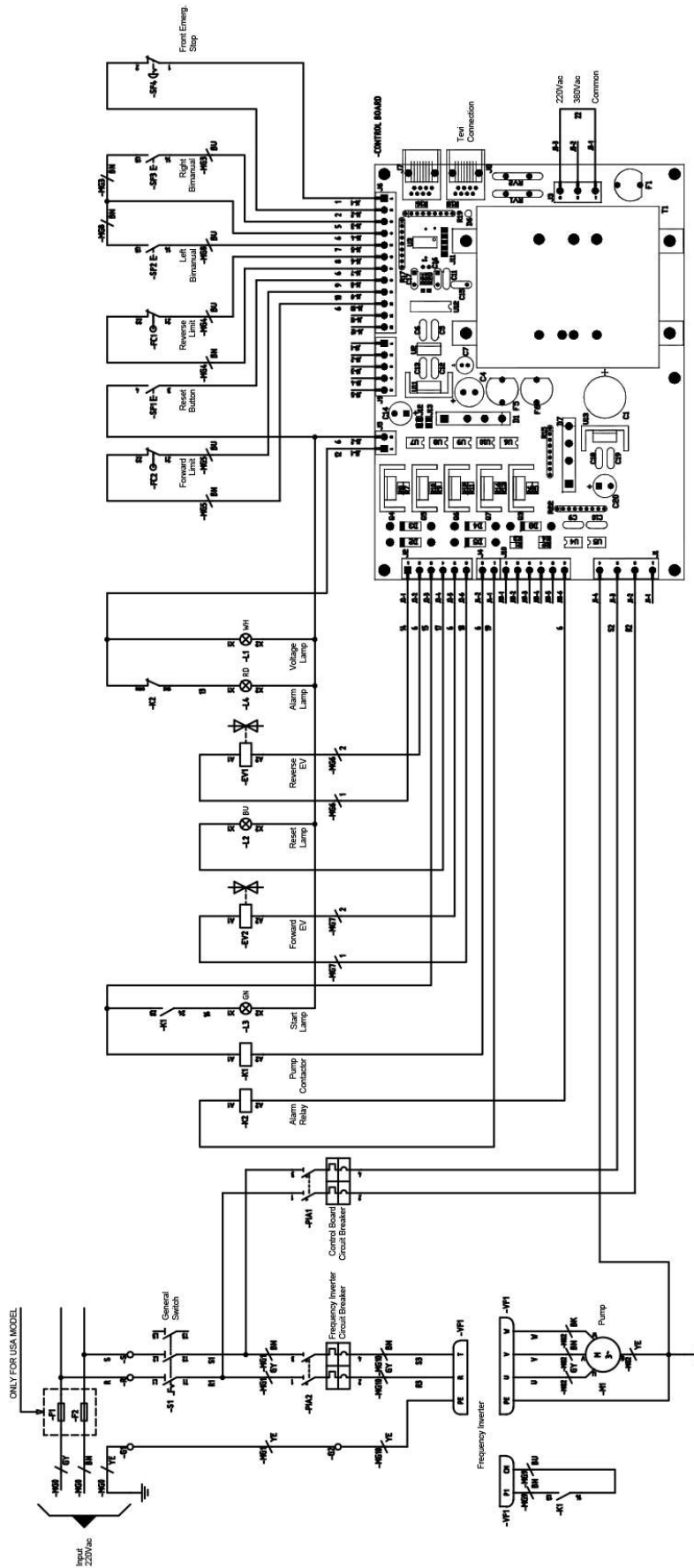




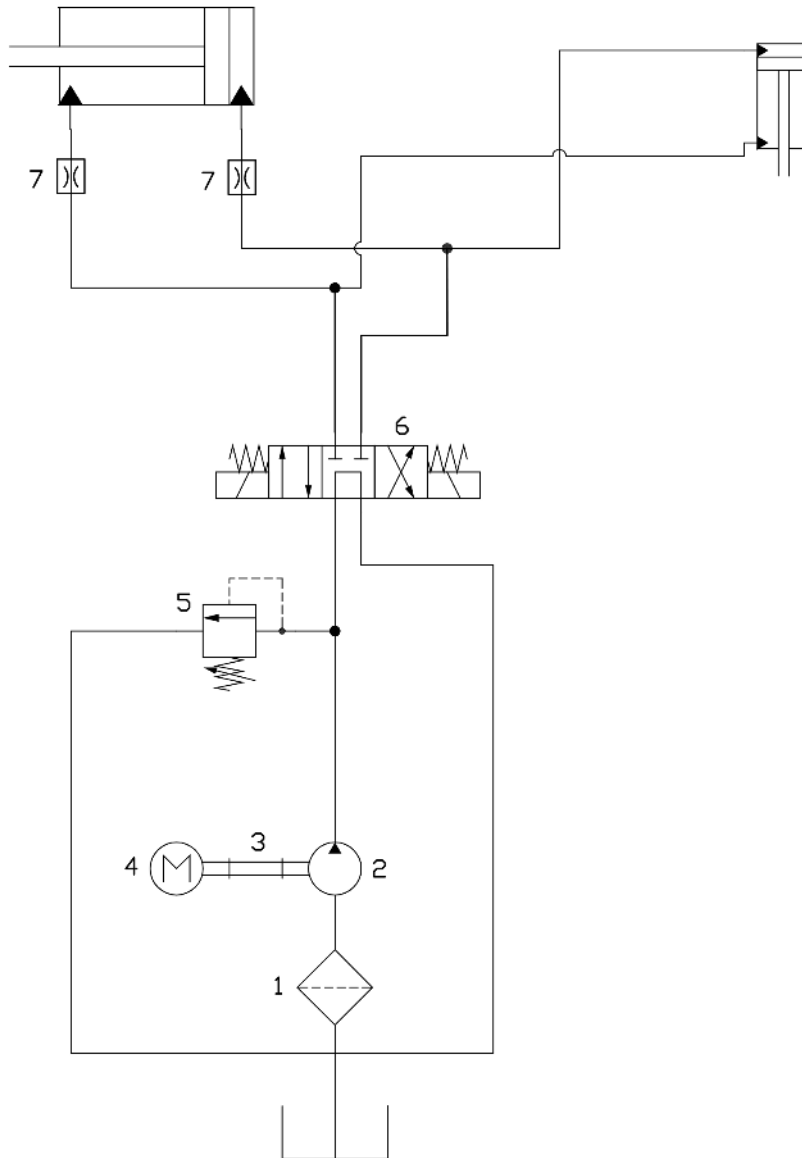
## A8. Electric map · SINGLEPHASE MACHINE







## A7. Hydraulic map



1. Filtro 2FA15R125N
2. Bomba hidráulica 1L 7.5 DE10R
3. Acoplamiento Elástico
4. Motor Eléctrico 2.2. Kw 1400 rpm
5. Limitadora de Presión 5RLL02P2F/03
6. Electroválvula 5EVP3D1C02D24
7. Chicle Ø 2mm



## **WARRANTY**

Nargesa machines have 3 years warranty provided that the customer registers it in our website. Otherwise it would be only one year warranty. This one encloses any manufacturing default all along these 3 years for components. Any misuse is excluded from this condition. Labor, back and forth shipping and any eventual repair, are not included in this warranty.



## **SHIPMENT EVERYWHERE**

Nargesa will arrange transport up to final destination, whenever the customers asks for so. There is also the possibility for the customer to arrange the shipment himself with his own agency.



## **TECHNICAL ASSISTANCE**

All our customers have access to technical support quickly and efficiently. 90% of incidences are solved out on the phone, mail, Skype or video-conferencing in less than 24hours. In case of needing presencial technical assistance, we may as well send a technician to the customer's facilities.



## **WE CLEAR UP YOUR DOUBTS**

Our sales department offers personalized advice

## OUR RANGE OF MACHINERY



IRON WORKERS



SECTION BENDING



NON-MANDREL



HORIZONTAL PRESS



TWISTING/SCROLL



HYDRAULIC PRESS



HYDRAULIC SHEAR



GAS FORGES



IRON EMBOSSING



END WROUGHT IRON



BROACHING



POWER HAMMERS



PRESSES FOR LOCKS