ermengineering
belting fabrication equipment

EP- Series
FRA-100

IMPORTANT:

Read this user manual and follow the instructions and warnings before operating this device.

Any modification or transformation performed on this machine may cause loss of the manufacturer's guarantee and liability.

This manual must always remain near to the machine and visible to all the operating and maintenance staff, for any future consultation, forming part of the equipment.

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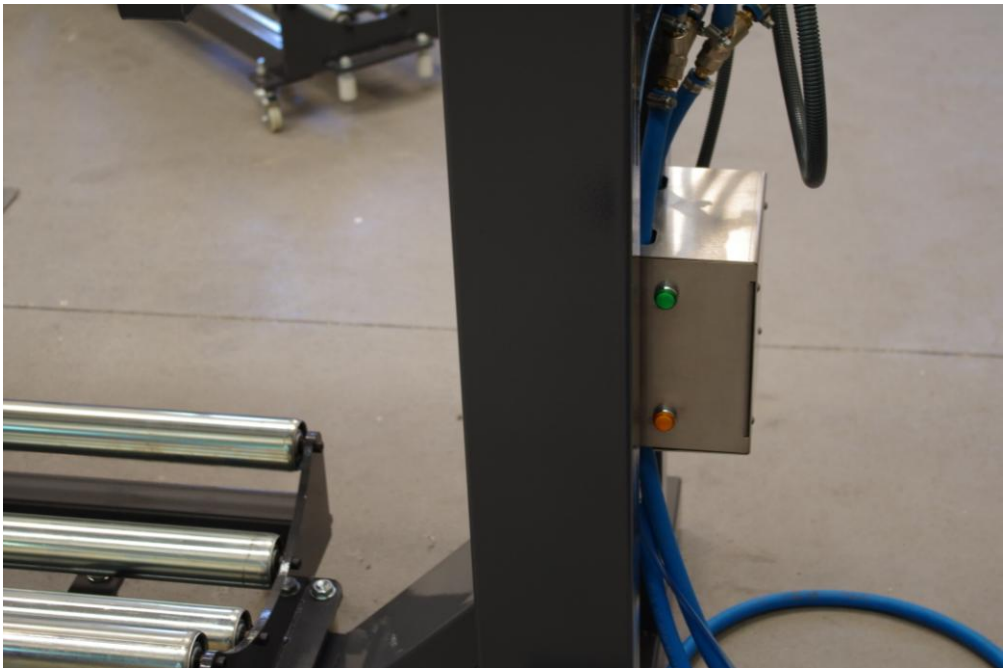
–.Description of the equipment:

Heating press for fusion welding of conveyor belts, comprised of two aluminium plates with cartridge electric elements, controlled by an external temperature board.
Pressure by pneumatic cushions to guarantee uniform pressing.
Intermediate support tray to prepare and hold the joint while hot.
Interior cooling circuit, by water, and also by air in some models.

–.Workshop installation:

These presses may be used both for in-situ assembly, as well as in fabrication workshops, for which it is recommended to adapt the press to a metallic supporting structure, with pneumatic or counterweighted activation, to open the top plate and adapt the water cooling circuits correctly.



Place the control board on the rack at eye level, safely to avoid it breaking or falling.

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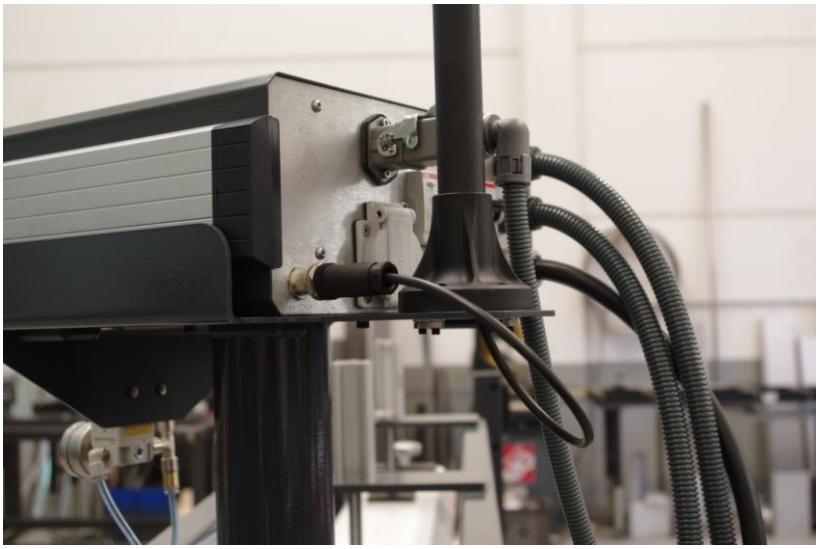
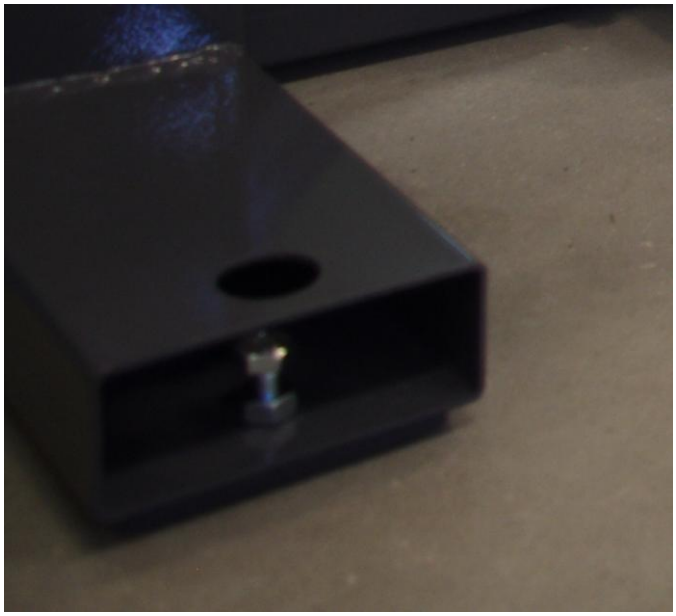


Level the support with the regulation screws located inside the three legs.



NOTE:
Once the frame are leveled, you most to introduce the trolley to level the wheels.
The distance between bottom plate and steel plate of trolley is 1 or 2 mm.

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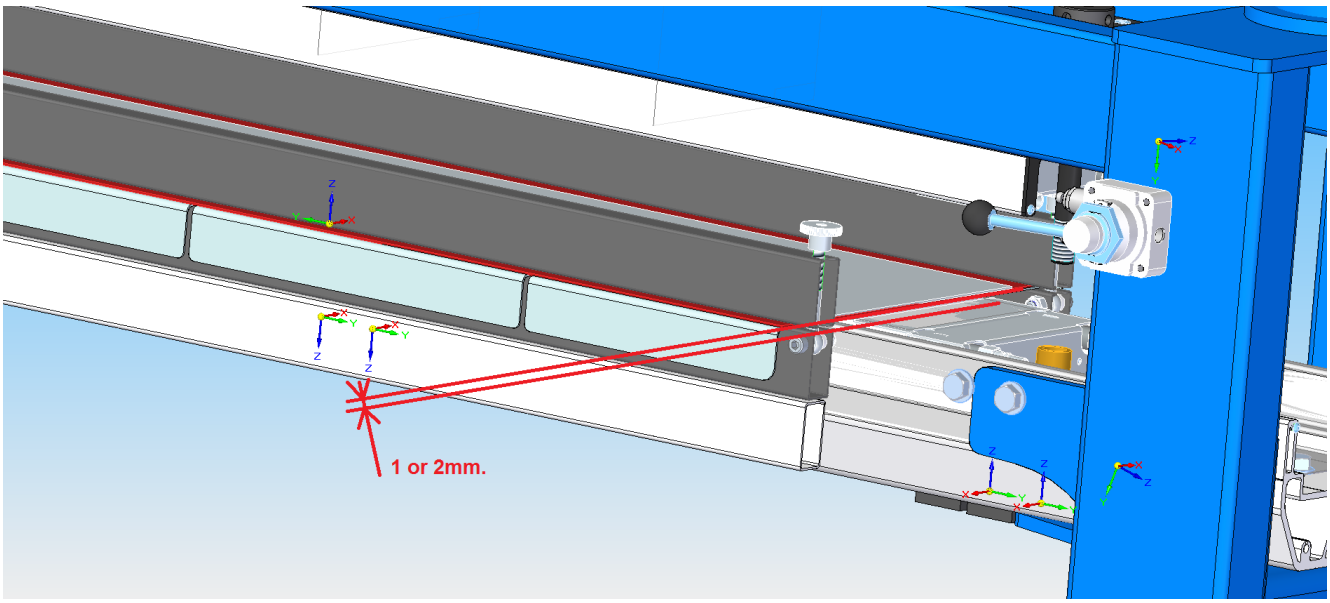

We can modify this distance across the wheels screws.

NOTE:

In the case of several presses being connected to the same drainage line, installation of a one-way valve at each press is recommended, thus avoiding water entering the other presses during the purge process.

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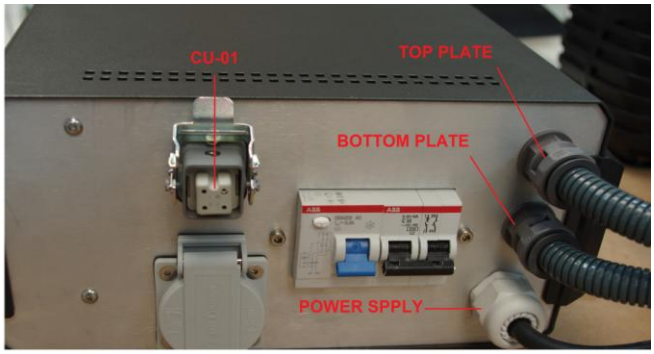
Connect control board CB-01
(For further information, consult the User Manual for CB-01)



-.Technical characteristics:

MODEL	EP-30	EP-50	EP-80	EP-100
Control box unit options	CB01/1	CB01/1	CB01/2-3	CB01/2-3
Dimensions (Length-Width-height)	570x360x145	770x360x145	1080x360x175	1280x360x175
Weigth	23.8	32.8	54	59
Top part	10.65	14.29	22.6	23
Bottom part	9	12	19.6	21.5
Steel table and clamps	4.15	6.51	11.8	14.5
Maximum temperature	200º C	200º C	200º C	200º C
Maximum pressure	2.5 bar	2.5 bar	2.5 bar	2.5 bar
Heating time 20ºC-170ºC	7 min.	7 min.	7 min.	7 min.
Cooling time with water 170ºC - 50ºC	1.2 min.	1.4 min.	1.7 min.	1.8 min.
Cooling time with air 170ºC -50ºC	4.5 min.	6 min.	8 min.	9 min.
Power W.	1.680	2.640	4.080	4.800

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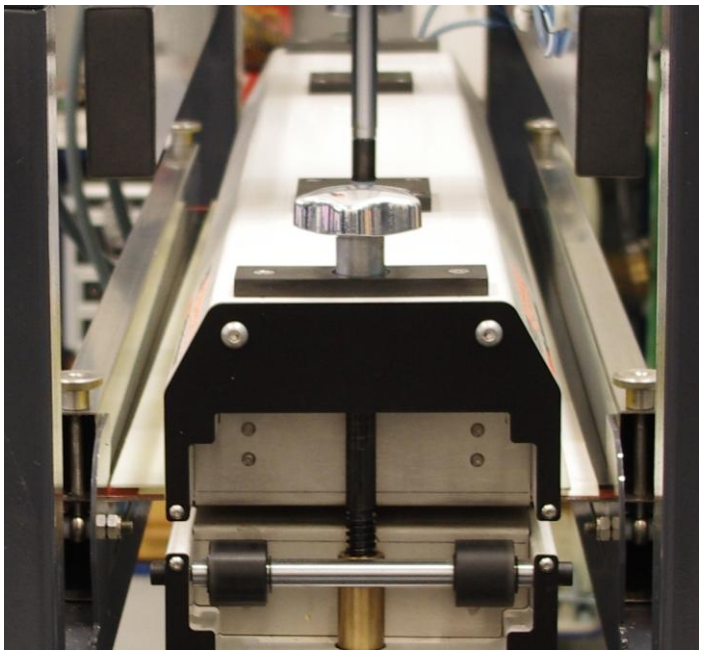
–.Instructions for use:

Open the press by releasing and extracting the two closing bolts located at both ends of the top plate.



WARNING:
Before opening the press, check that the inflation pressure of the manometer is 0 bar.

Up the top plate using the manual valve in UP position.

–.Preparing the joint on trolley

Place the first end of the belt on the lower silicone, well centred on the support tray and making sure the joint is within the welding zone of the hotplate.

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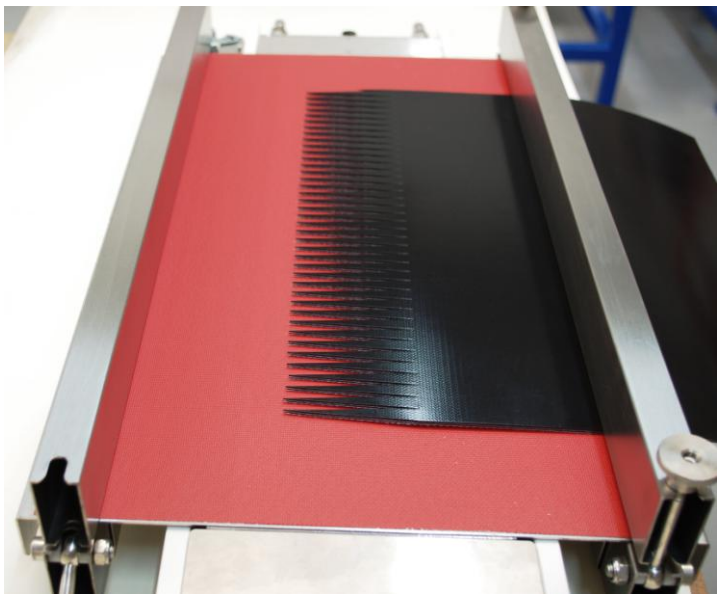
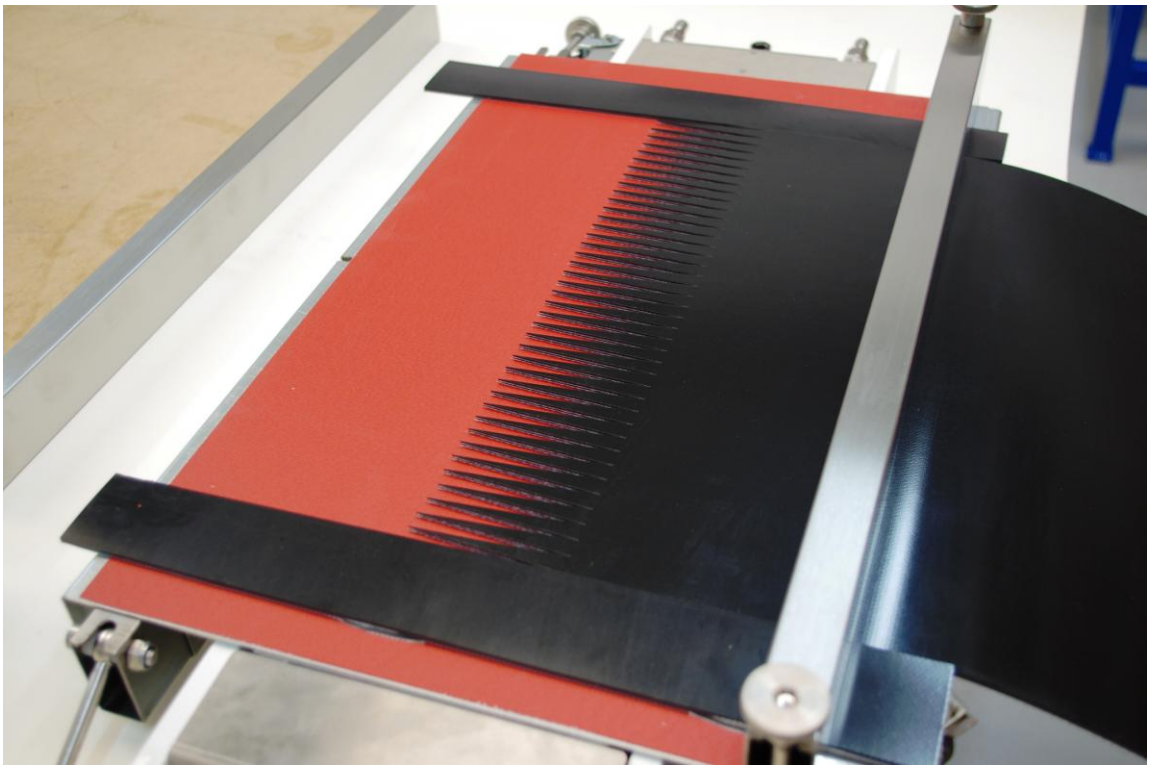


Then place two sufficiently large scraps and the same material offered up to weld, at both ends and properly tangential to the belt, and fix them using the same holding bar.

It is also possible to use metal callipers of the same thickness as the belt and, when necessary, use scraps of the same belt after the callipers to fill out the welding zone.



NOTE:
It is always recommendable to fill out the material, at least to 70% of the pressing surface, to avoid deformation in the plates or thickness differences in the welding.

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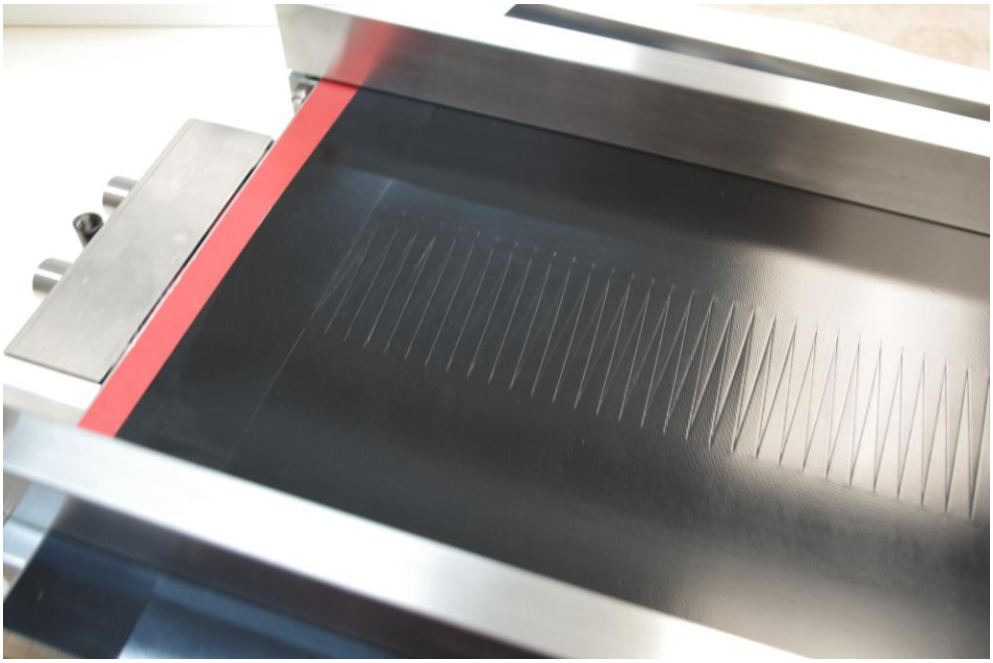
Afterward, insert the second end of the belt, leaving the whole surface to be joined fully in contact with the first end already fixed, and hold it with the other holding bar.



Once the joint placement operation has been completed, we cover the whole welding surface with silicone or adequate silicone paper recommended by the belt manufacturer.

Thus, on completing the welding, we guarantee that the joint zone has the same texture and finish as the rest of the belt.

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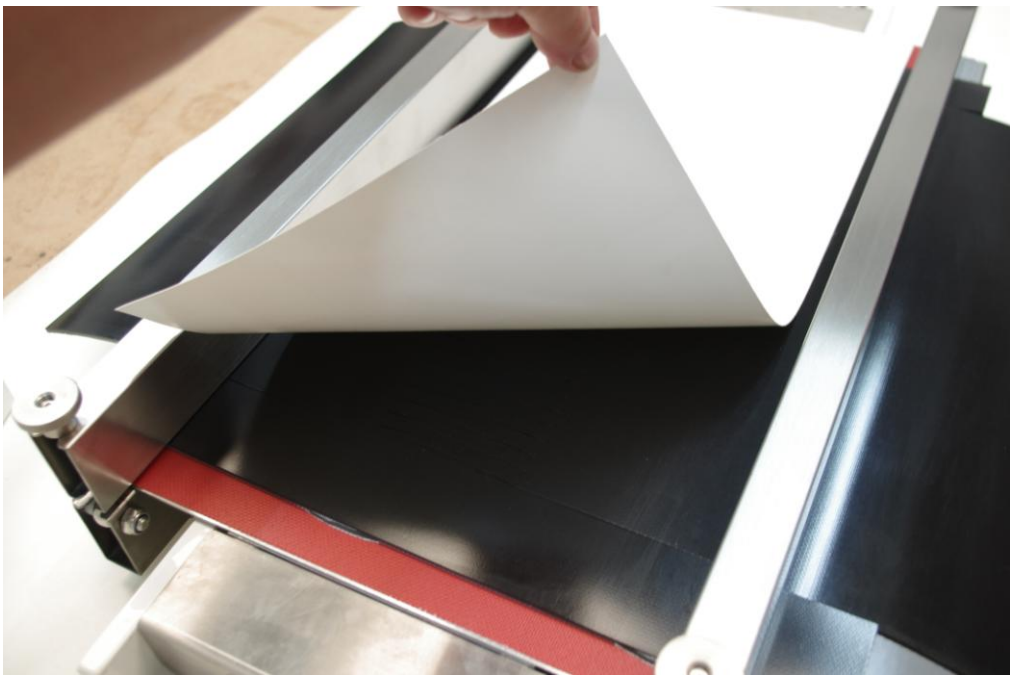
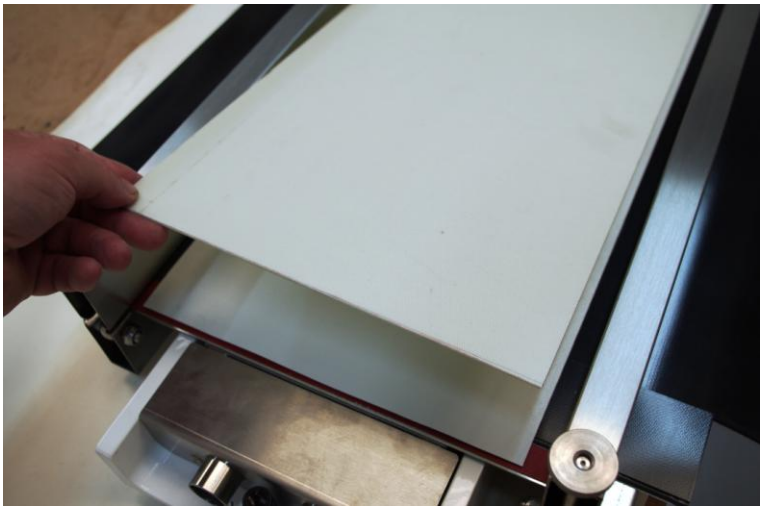


Before closing the press, we place the metal or fibreglass plate, according to the material to be welded, to avoid marks caused by the radical change of temperature and pressure outside the welding zone.



We introduce the trolley inside the press and down the top plate

Once the upper plate has been put in place, we close the press using the closing controls, softly pressing with just two fingers, and in a balanced way on both sides.

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NOTE:
To obtain homogeneous pressure throughout the surface, it is always recommended not to press the closing controls too much, so the pneumatic cushion will thus work in a more balanced way.

We can now proceed to inflate.

-.Inflation:

WARNING:
Always make sure the press is correctly closed before inflating.
There is a risk of explosion of the top plate.

We inflate the press turning the white wheel of pressure control until bar required.

We control the inflation visually using the manometer.

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-.Programming:

At the moment of starting up the board, the actual temperatures of both plates are displayed, and the welding time of the last programming.

To see the temperatures assigned, it shall suffice to press the relevant button for each plate.

To change these values, we must hold down the button for 3 seconds and change the value using the central keys.

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The board shall memorise these values, showing the present ones again.

NOTE:
The minimum and maximum temperatures that may be programmed are 30 to 200 ºC.

We shall perform the same operation to program the welding time, ALWAYS IN MINUTES. The values shown are complete minutes without decimals.

That welding time shall always show the programmed value, except for starting the count, that shall show the count-down until ending.

Once the two temperatures and time values are programmed, we press START.

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NOTE:
To halt the process or to make any change after beginning with START, we must press STOP and the cycle will stop.

When the welding time ends, the relevant orange LED to start that operation shall turn on.

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When the STOP led shows on the board, it means the operation has ended.

If we have the CU-01 cooling control unit, the cooling and purging operations shall be performed automatically.

Once the welding has ended, we deflate the press pressure reducing the pressure until 0 bar.

We can then proceed to open it and up the top plate.

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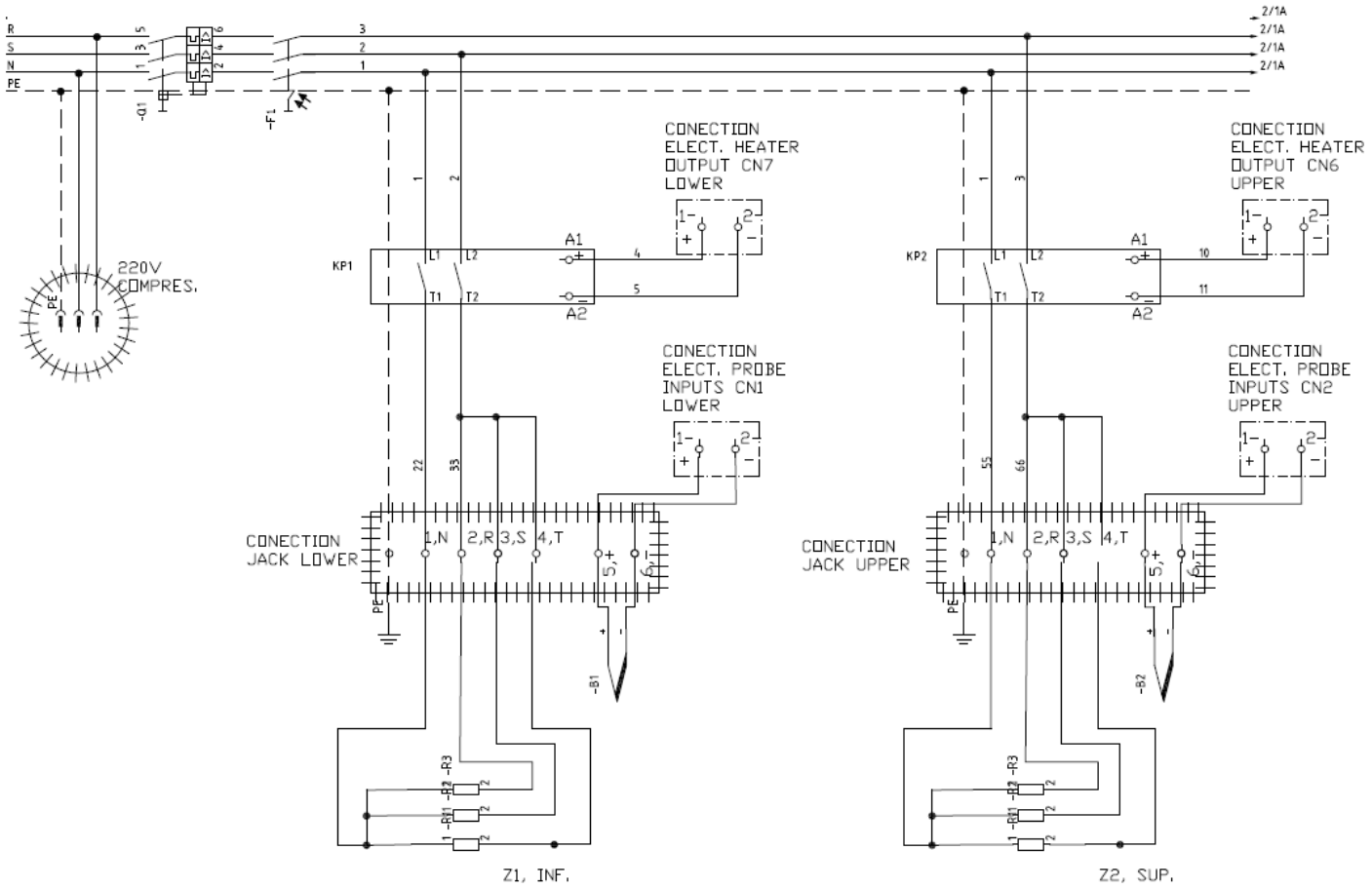
– Electrical drawings.

3 Ph x 400 v.



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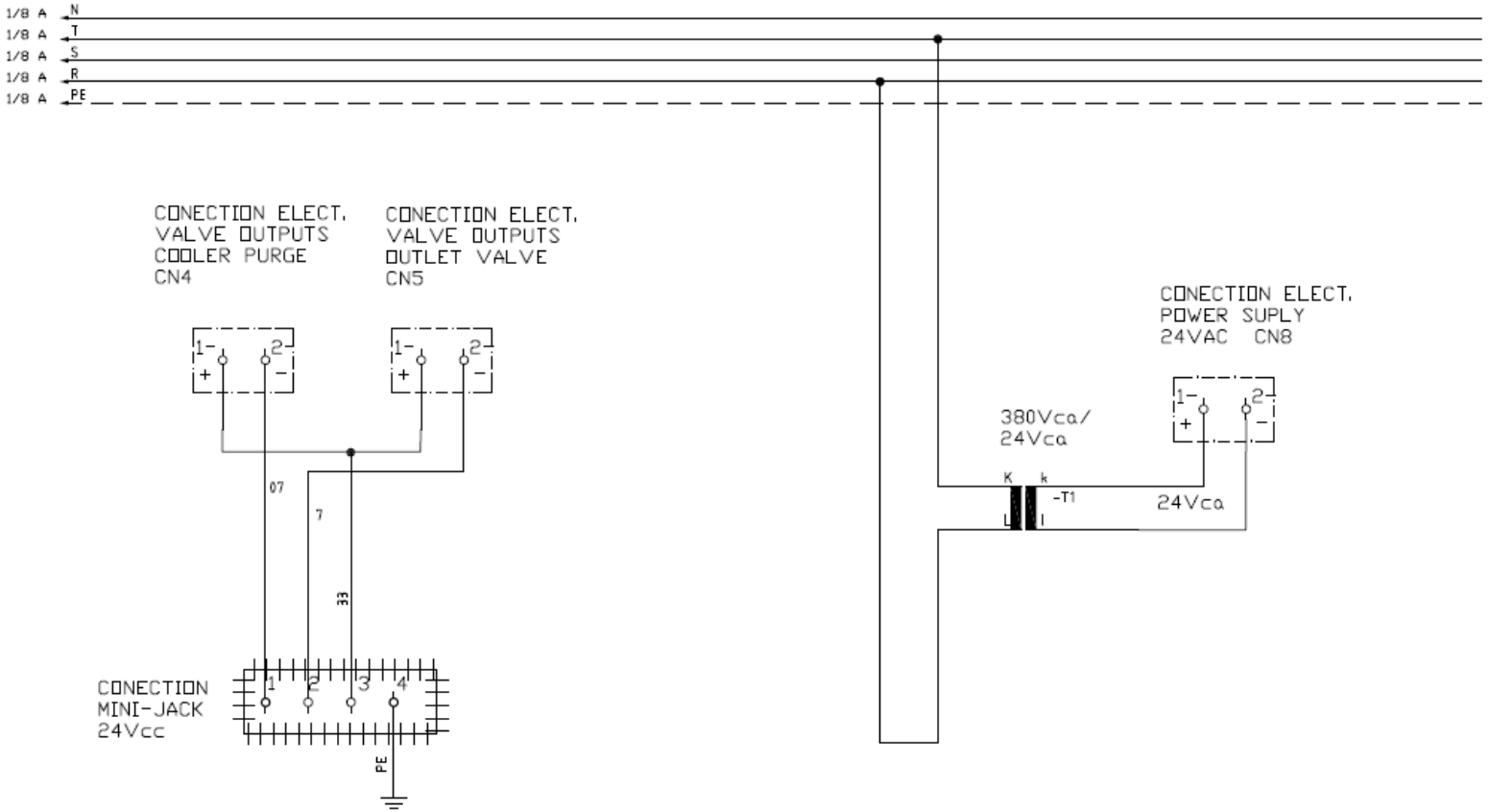

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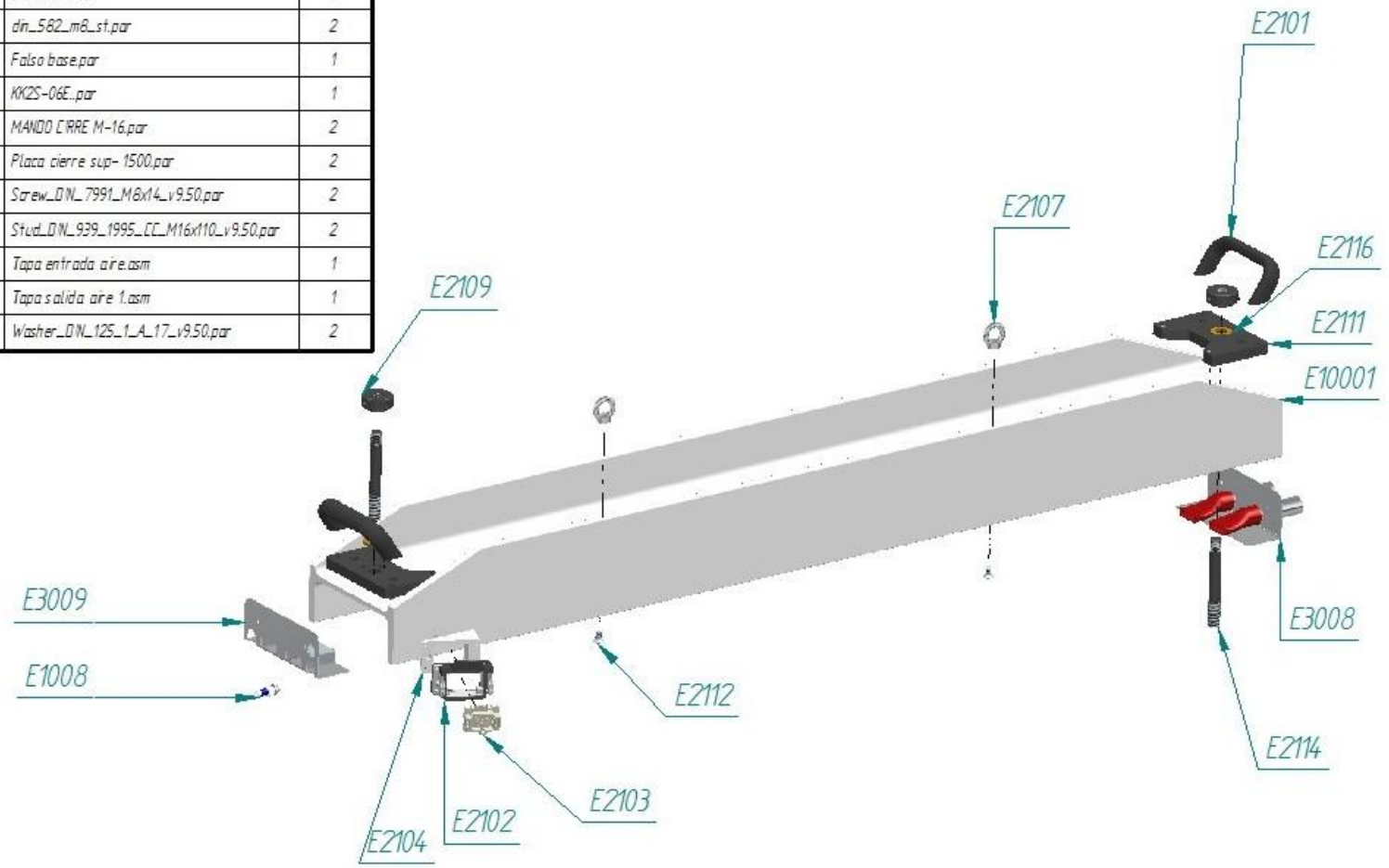
–. Spare parts:

Number	Part name	Units
E2101	ASA INOX N40A.par	2
E10001	Chasis S 1000.par	1
E2102	CH' 06 L.par	1
E2103	DNEM 06 T.par	1
E2107	din_562_m8_st.par	2
E2104	Falso base.par	1
E1008	KK2S-06E..par	1
E2109	MANDO CIRRE M-16.par	2
E2111	Placa cierre sup- 1500.par	2
E2112	Screw_DIN_7991_M8x14_v9.50.par	2
E2114	Stud_DIN_939_1995_CC_M16x110_v9.50.par	2
E3008	Tapa entrada aire.asm	1
E3009	Tapa salida aire 1.asm	1
E2116	Washer_DIN_125_1_A_17_v9.50.par	2



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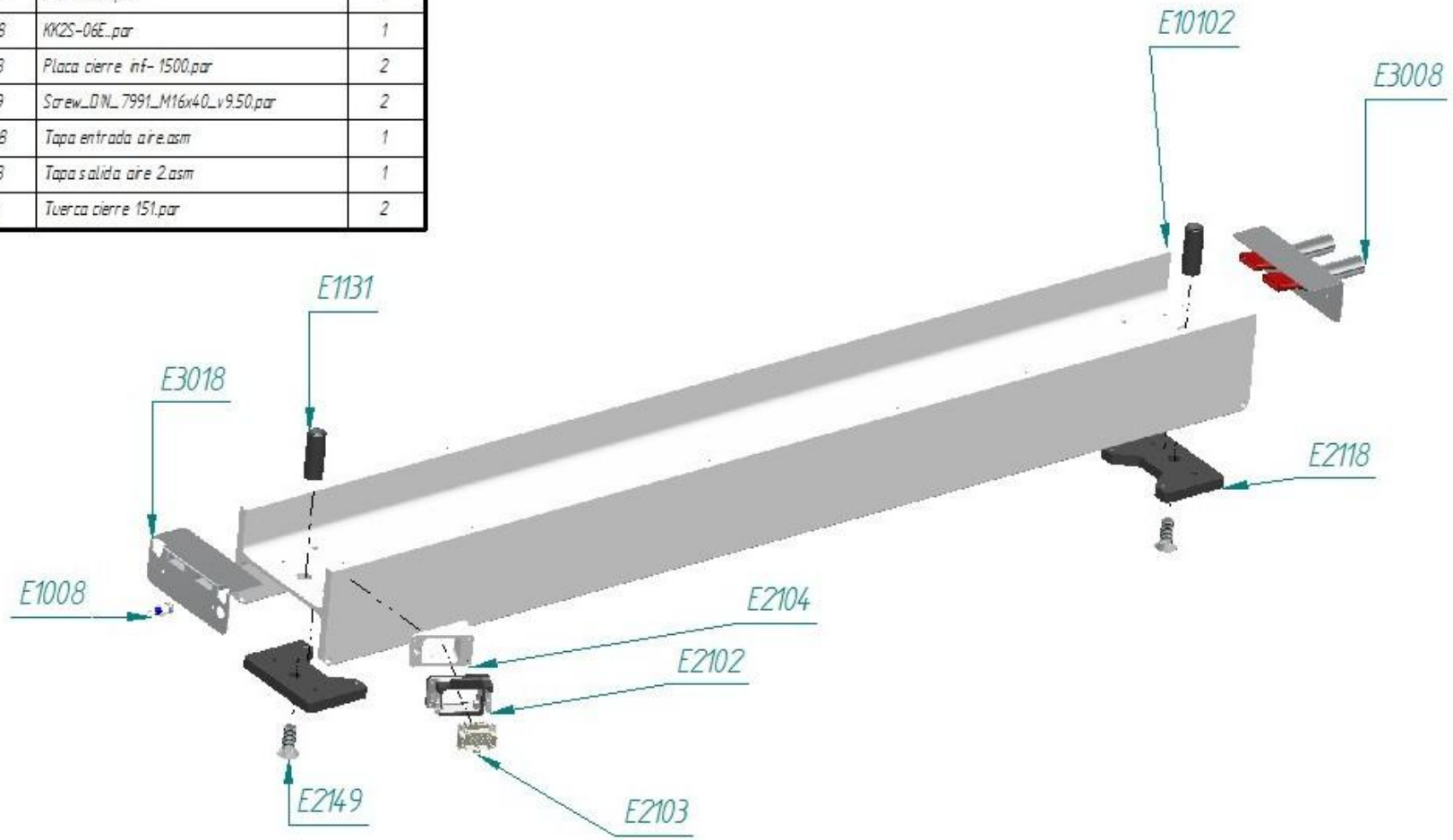
Number	Part name	Units
E10102	Chasis 1000.par	1
E2102	CH! 06 L.par	1
E2103	CNEM 06 T.par	1
E2104	Falso base.par	1
E1008	KK2S-06E..par	1
E2118	Placa cierre inf- 1500.par	2
E2149	Screw_DIN_7991_M16x40_v9.50.par	2
E3008	Tapa entrada aire.asm	1
E3018	Tapa salida aire 2.asm	1
E1131	Tuerca cierre 151.par	2



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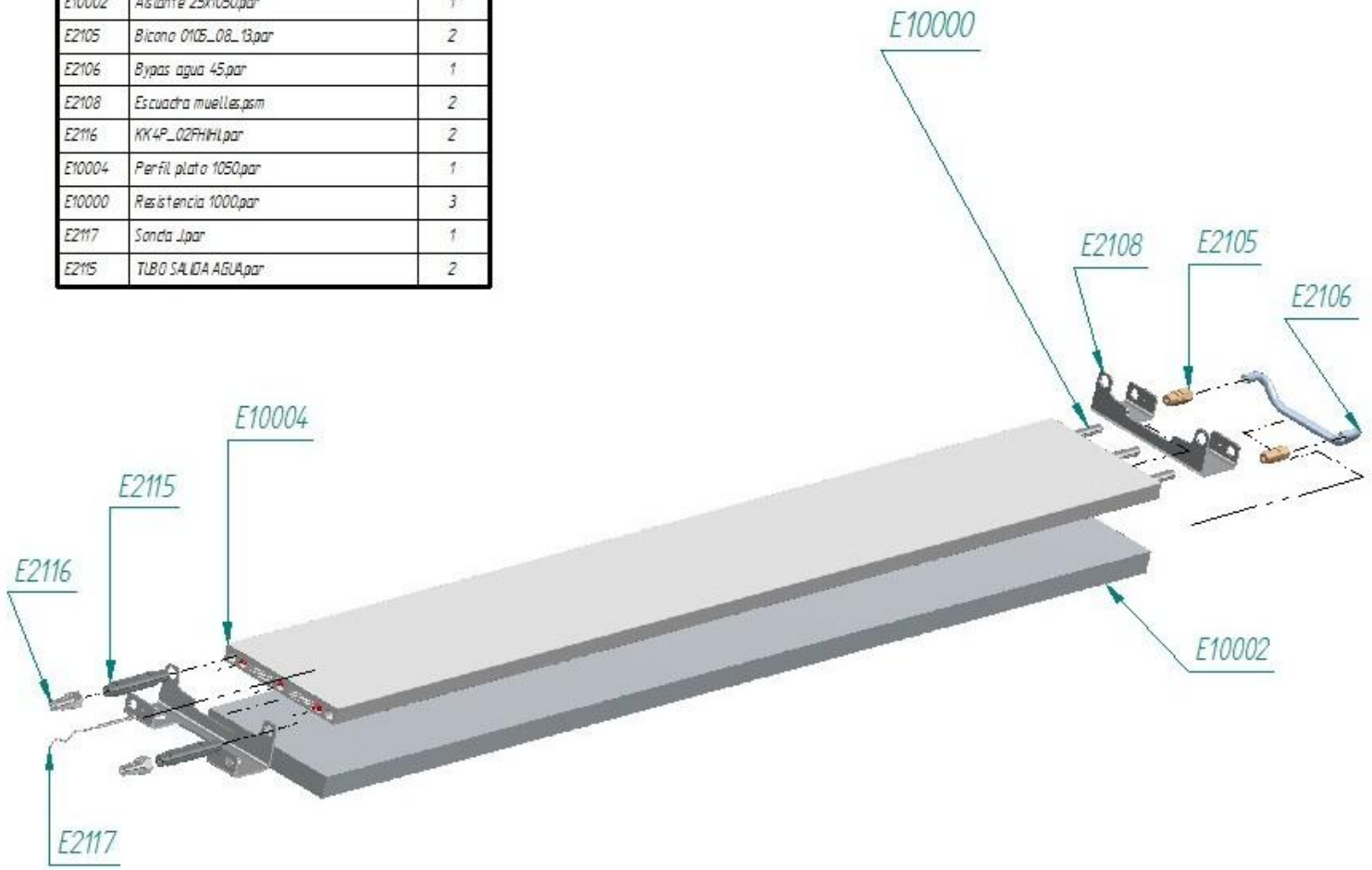
Number	Part name	Units
E10002	Aislante 25x1050.par	1
E2105	Bicono 0105_08_13.par	2
E2106	Bypas agua 45.par	1
E2108	Escuadra muelles.psm	2
E2116	KK4P_02FHKH.par	2
E10004	Perfil plato 1050.par	1
E10000	Resistencia 1000.par	3
E2117	Sonda J.par	1
E2115	TUBO SALIDA AGUA.par	2



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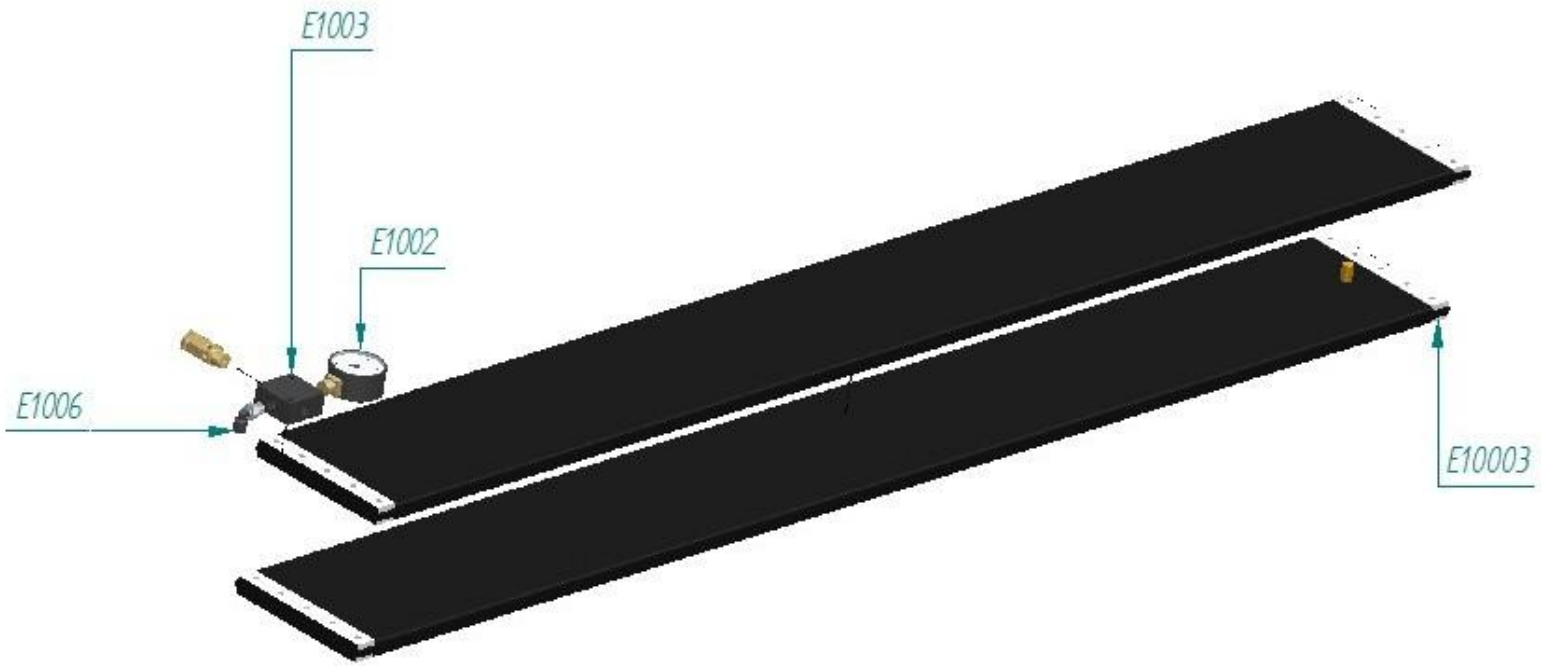
Number	Part name	Units
E1006	CODO TUBO-6/MACHO.par	1
E10003	COJIN 1000SUPER.par	2
E1002	MANOMETRO.par	1
E1003	RX4.par	1
E1004	VALVULA SEGURIDAD.par	1



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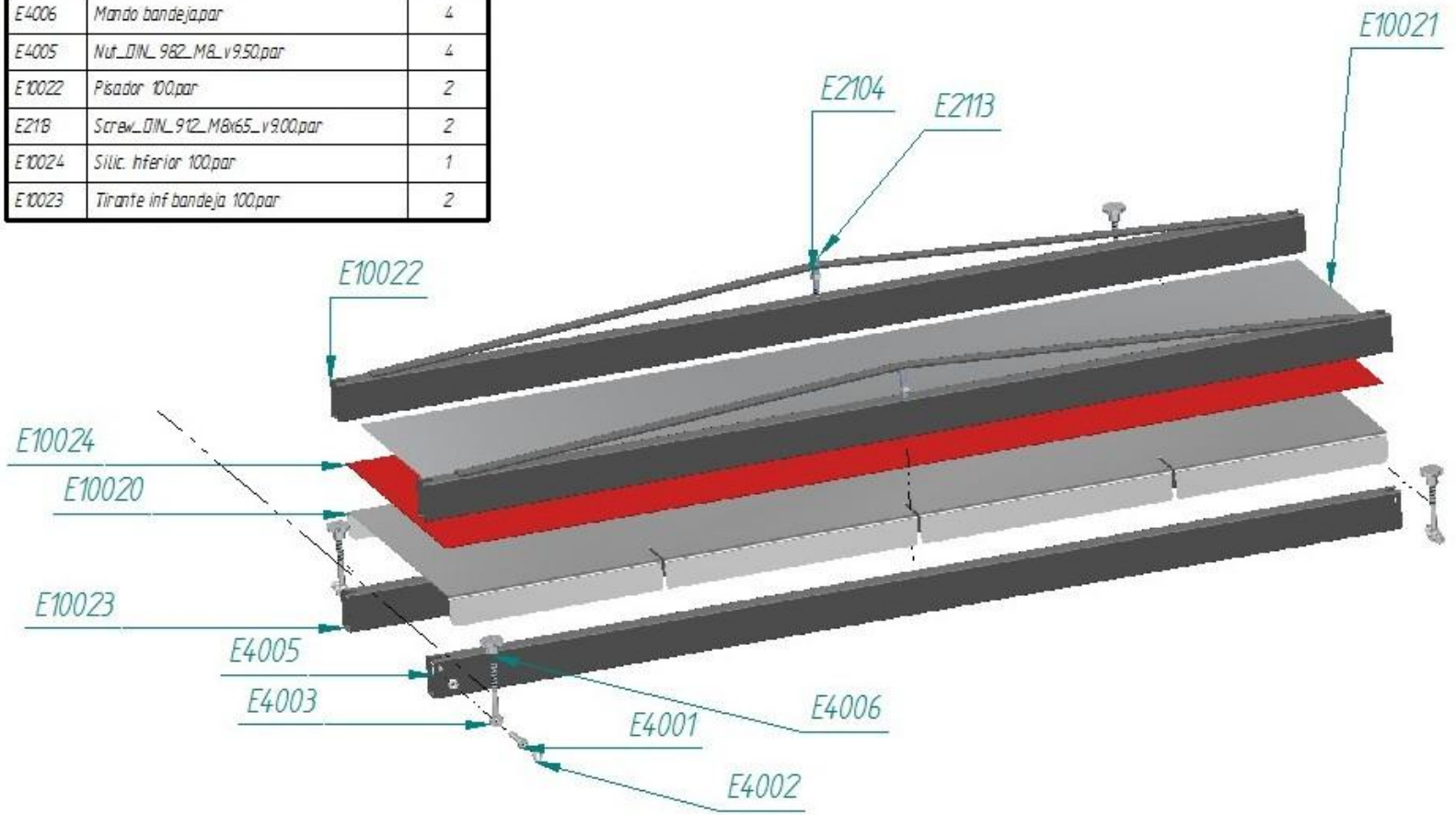
Number	Part name	Units
E4001	912 M8-45.par	4
E2104	934_M8_v9.00.par	2
E10020	Bandeja 100.psm	1
E4003	din_444_m8_75_ni.par	4
E4002	Distancial tornillo bandeja.par	8
E10021	Fleje 100.par	1
E4006	Mando bandeja.par	4
E4005	Nut_DIN_982_M8_v9.50.par	4
E10022	Pisador 100.par	2
E218	Screw_DIN_912_M8x65_v9.00.par	2
E10024	Silic. Inferior 100.par	1
E10023	Tirante inf bandeja 100.par	2



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–. EC Declaration of conformity

WE DECLARE on our responsibility BARRING AUTHORIZED HIGHER CRITERIA that the machine:
-Model: FRA-100
-Serial nº: 10018
-Year of manufacture:2013

Complies with the provisions for design and construction for Mechanical engineering by the European Commission Enterprise and Industry:

2006/42/EC (Directive 2006/42/EC on machinery)

2006/95/EC Low Voltage Directive.

And European General Safety Standards for Machines:

EN 292-1. General Safety of Machines.
EN 292-2. General Safety of Machines.
EN 60204-1 G.S. Machines. Electrical Provisions.
EN 418. Provisions foe Emergency Devices.
EN 294. General Safety. Upper Members.

Authorized by, Eduardo Ramos Martinez

Date: 16-03-2013 SIGNATURE:

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