



Thermopatch

an Avery Dennison Company

MANUAL DP-JUNIOR



ATTENTION!

All persons involved in installation, commissioning, operation, maintenance and repair of this product should be made aware of these instructions.

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Introduction

Dear User,

Welcome to the growing group of Thermopatch users. Your purchase has been manufactured with the utmost care to ensure that you benefit as long as possible from your Thermopatch product.

The products by Thermopatch are designed with special attention to your convenience. Should you discover any fault or damage upon receiving this product, please contact your local Thermopatch vendor.

The manual has been prepared in accordance with NEN 5509 and in conformity with the Machinery Directive 2006/42/EC.

This user manual is intended not only for all users of the machine, but also for those who install and maintain the DP-junior. The goal is to familiarize you with the operation, to provide for safe working instructions and guidelines for maintenance.

ATTENTION!

In order to make safe and optimal use of the DP-junior, it is important to take note of and understand the contents of this manual.



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1. General description



The DP-junior is a practical and universal heat transfer press for direct marking purposes.

Once set up, it produces a permanent image directly onto your textile item.

1.1 Delivery

The DP-junior is mounted onto a wooden pallet and fixed with bolts and straps and covered with a cardboard box.



The screw-on feet are supplied separately in a small plastic bag

The DP-junior shipment contains following items:

- DP-junior direct marking machine
- Power cord
- 6 mm air tube
- Screw-on feet (4x)
- Quick installation guide
- Quality checklist
- Manual on CD-ROM
- CE Declaration of Conformity
- Cliché handle
- Foot switch
- Sample roll of C-tape

If one of these articles should be missing or faulty, please contact your Thermopatch supplier.



1.2 Conditions of warranty

Thermopatch points to its warranty and product liability conditions as laid down in our conditions of sales. These can be obtained at your Thermopatch supplier.





2. Intended use

The DP-junior is designed for direct printing of property marking, branding, coding, logos and care instructions.

All types of flatwork and other suitable textiles can be printed directly with an engraved plate (printing plate) and C-tape, which provides a sharp and clean print, in a fraction of a second.

WARNING!

Any use other than described above can be dangerous and cause damage and thus qualifies as 'misuse' which excludes Thermopatch bv from any liability.

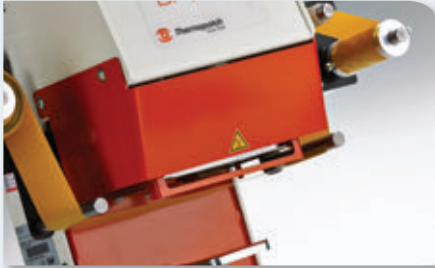
3. Technical specifications

3.1 Specifications of the DP-junior

Power	600 Watts
Power supply	230 Volt
Operating temperature	260 °C
Temperature range	25-270 °C
Press Time range	0.1-60 sec.
Discharge pressure range	2-5 bar
Compressed air use, per cycle	0.5 l
Machine height	550 mm
Machine width	550 mm
Machine depth	350 mm
Gross weight, including packaging	37.5 kg
Net weight	27.7 kg
Maximum size cliché	96 x 125mm
Fuses 2x	4 Amp.
A-weighted noise level	<70 dB (A)



4. Overview of safety measures and warnings



4.1 Safety

The DP-junior is fitted with all required safety measures to ensure safe working as required by European safety guidelines.

The safety frame

The press plate of the DP-junior is provided with a safety frame. When this frame is touched and moved, it will automatically interrupt the sealing cycle. In order to resume work, switch the machine off and start it up again.

The emergency stop button

In accordance to the safety measures required by the conformity with the Machinery Directive, an emergency stop button has been installed, to be able to intervene with production in case of unforeseen events.

⚡ ATTENTION!

Make sure you are informed about the contents of this manual before starting to work with the DP-junior. This ensures an optimal and safe use of the machine.

⚡ ATTENTION!

Always turn the power off (unplug it) when you need to carry out maintenance work or when cleaning the machine.

⚡ ATTENTION!

In case of emergency, press the emergency stop button!

⚡ ATTENTION!

Take care that there is enough space around the machine. Cables and connections must not get pinched. Although the heat radiation of the press is low, there should be enough space for cooling down.

⚡ ATTENTION!

Avoid contact with the press and the heating element.

⚡ ATTENTION!

Pull the fabric tightly around the lower platen and hold it with both hands, ensuring that your hands are positioned below the lower platen to avoid activating the safety bracket.



Warning symbols

The following warning symbols have been mounted onto the machine for added safety:

WARNING!



HOT SURFACE



ELECTRIC TENSION



5. Transport and storage

5.1 Transport

When the machine needs to be moved, Thermopatch advises to use the original packaging.

5.2 Storage

When the machine needs to be stored, Thermopatch advises to use the original packaging. The machine should be stored on a pallet, off the floor, in dry conditions.



6. Operating instruction

6.1 Operating the DP-junior

You can work with the DP-junior when the machine is connected to the mains.

- Set the airpressure, depending on imprint surface, to 2 - 5 bar.
- Place the plug in the socket and turn on the DP-junior with the ON - OFF switch mounted on the back of the machine.
- Wait until the factory set temperature is reached. This will take approximately 3 minutes. The standard operating temperature has been set to 260 °C.

The press is ready for operation.

6.2 Safety frame

The upper platen of the press head of the DP-junior is guarded by a safety frame. This frame will react if it is touched and moved, and will then interrupt the sealing cycle immediately. Switch the machine off and on again to resume work.

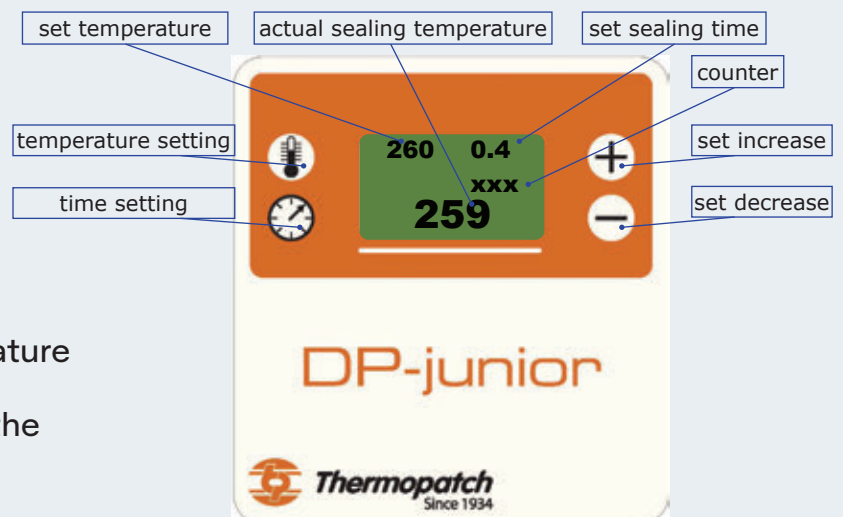
ATTENTION!

When the safety frame is touched or moved, the machine will stop the production cycle immediately.

Switch the machine off and restart again to resume production.

6.3 The control panel

The pressure, temperature and time are shown on the display. The minimum, maximum and default values for temperature and pressure have been set by the manufacturer. The following symbols are present on the control panel:



The buttons time setting, temperature setting, set increase (+) and set decrease (-) are used to change the sealing conditions of the imprint.



6.4 Settings

6.4.1 Temperature settings

The default operating temperature of 260 °C has been set by the manufacturer. In case you want to adjust the operating temperature above or below the default temperature range, please contact the service department of your supplier. The default temperature range is set to a minimum of 50 °C up to a maximum of 270 °C.

ATTENTION!

The DP-junior has maximum a tolerance of 15 °C above or below the set temperature.

If the limit of + or - of 15 °C is exceeded, the machine cannot be operated.

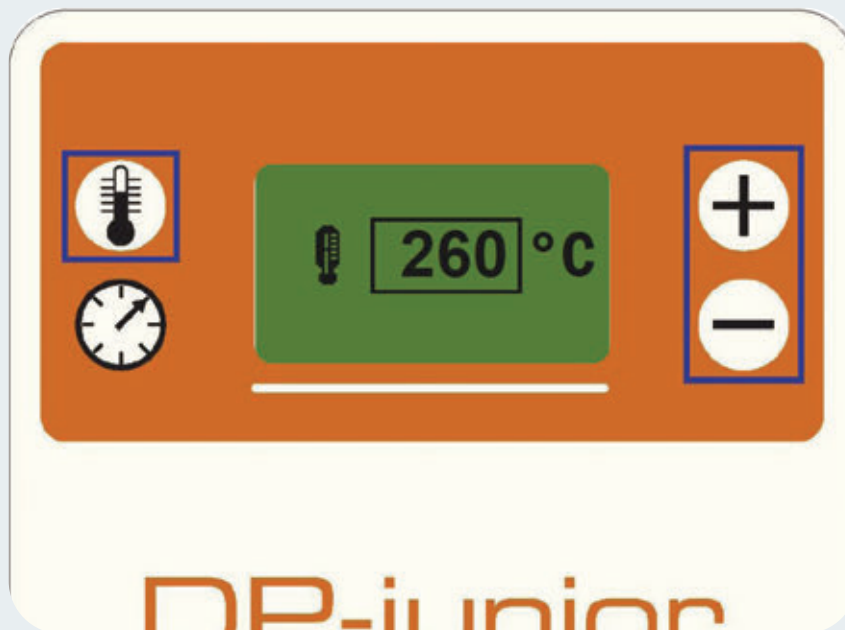
Change temperature settings

You can change the temperature in steps of 1 degree

By pushing the button for Temperature setting you will enter the Temperature setting mode.

Push the + button or the – button, to change the set temperature.

The set temperature is stored after 3 seconds.





6.4.2 Time settings

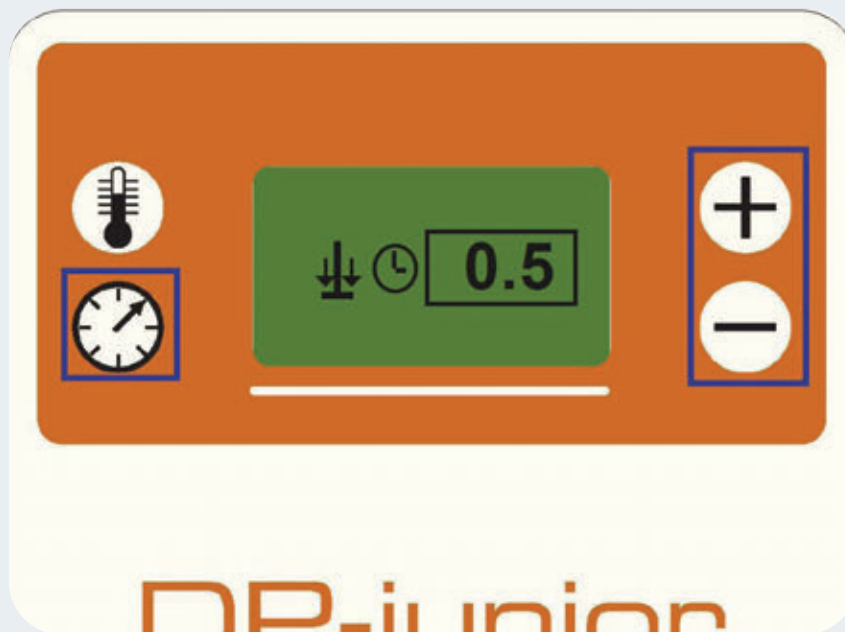
There are 2 separate time settings that can be programmed in the DP-junior:

- the heat sealing time and
- the C-tape transportation time.

Change sealing time

The default sealing time for the DP-junior is set to 0.5 seconds, this includes the time for the cylinder to go down. To change this time push the “time-set” once, then press the + button or the - button, to change the setting.

The set sealing time is stored after 3 seconds.





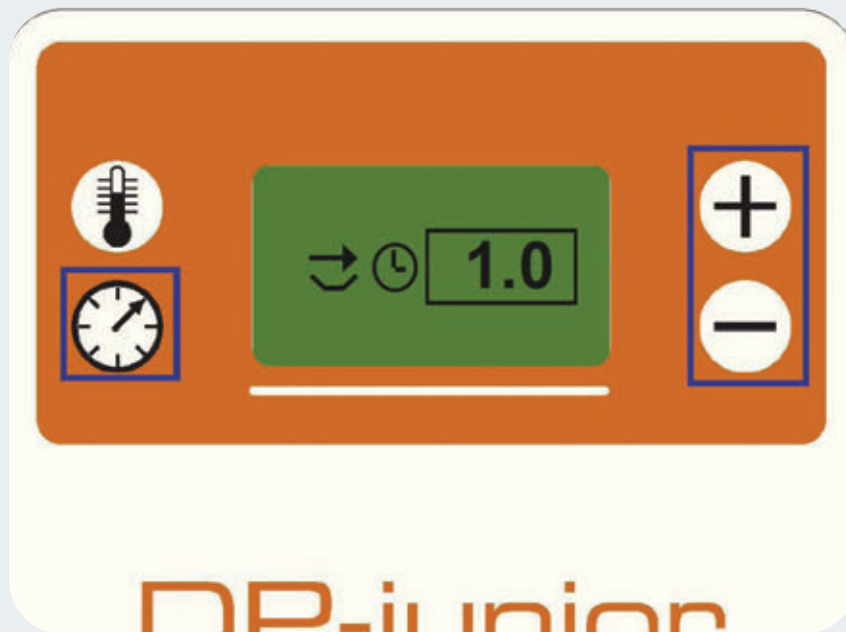
Change the C-tape transport time

The C-tape default transport time is set to 1 second, which corresponds with approx 35 mm of C-tape transport.

The time can be adjusted by steps of 0.1 second.

For that, press the “time-set” twice, and set the required changes by pressing the + button or – button.

The set C-tape transport time is stored after 3 seconds.



6.4.3 Interrupting the operation of the DP-junior

There are various means to interrupt the operation of the machine:

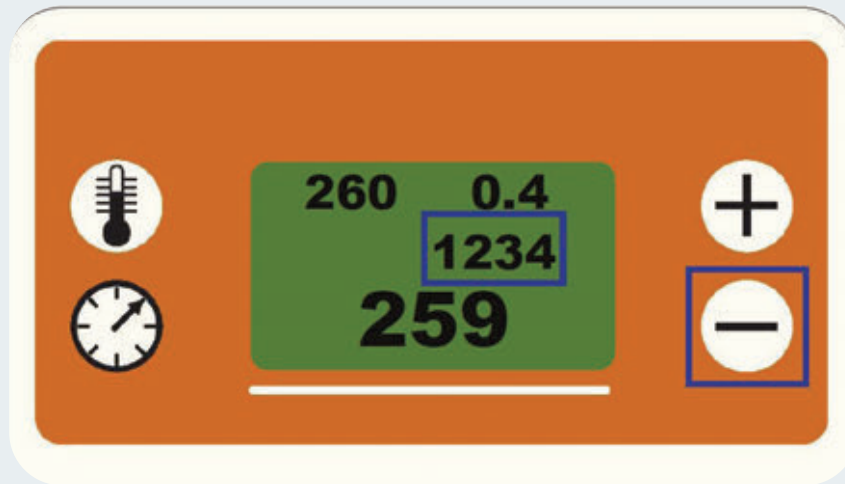
- Turning the machine off with the ON/OFF switch on the back of the DP-junior.
- Stir the safety bar. You have to press the “set temp” button to reactivate the machine or switch off the machine and after 5 seconds switch it on again.
- Push the emergency stop button and after 5 seconds switch the machine on again.



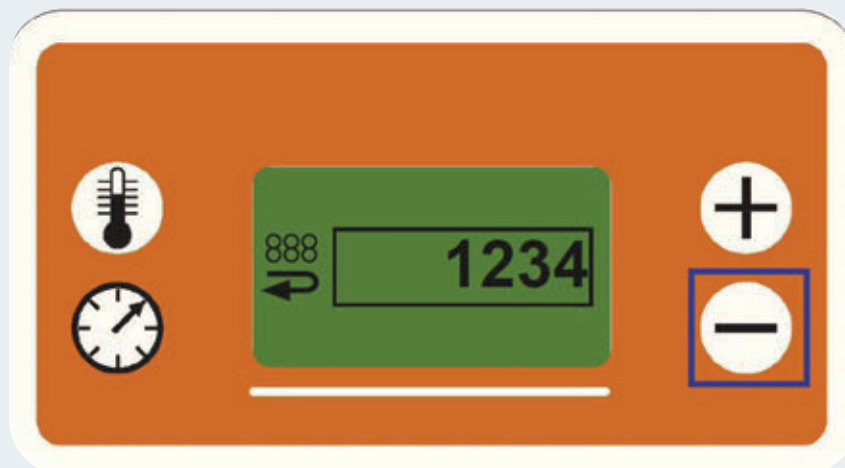
6.4.4 Counter

The DP-junior has two types of counters.

The piece counter can be reset after pushing the - button for three seconds.



When the - button is pushed shortly, the machine counter can be seen. This counter cannot be reset.





6.4.5 Error codes

There are 4 error codes that can be displayed in the display:



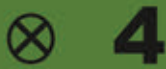
- **01:** Temperature is too high, indicating that the sensor is defective or a broken sensor cable, or a loose sensor cable connector



- **02:** Temperature is too low, indicating that the sensor or cable is cut short.



- **03:** The heating element does not heat up, indicating that the element is defective, or a broken cable, or a bad connector.



- **04:** indicates that there is a memory storage issue on the print.



- **Safety Warning:** Indicates that the touchbar has been activated; any production cycle is stopped immediately.



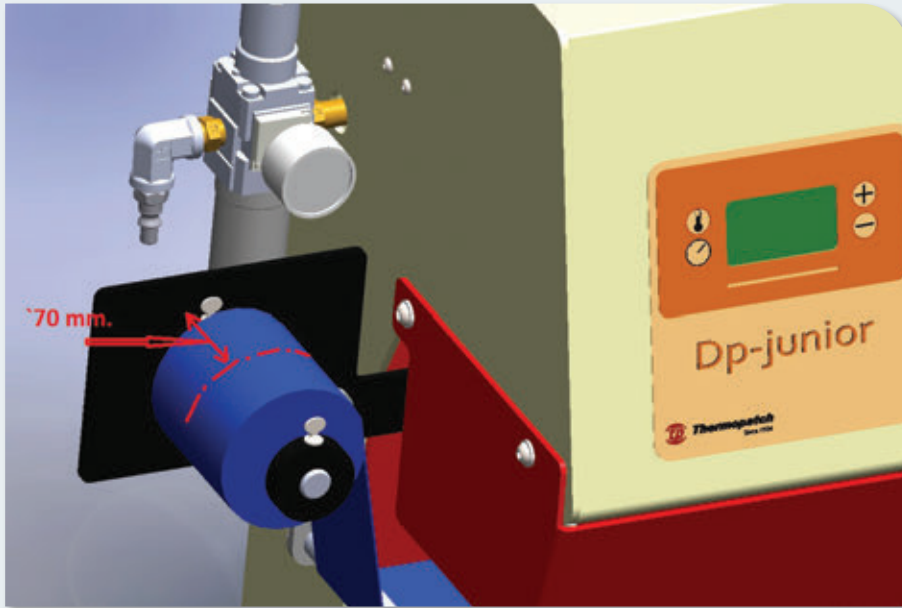
- **Safety Warning:** After reset (switch off and on again) the machine is safe for use again.



6.5 Inserting C-tape

C-Tape can be obtained in 1", 2", 3" and 4" width and in 11 standard colours.

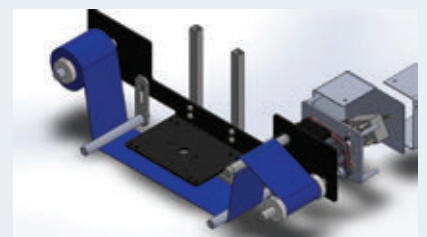
The tape should run centered through the DP-junior which means that the center of the C-tape roll should be ± 70 mm from the black back plate of the tape roll holder.



Make sure that both the tape-collars are not too tight, allowing the tape and the cardboard core to slip on the de-roll and on the enroll side of the machine. The tape de-rolls from the left hand side to the right hand side and has to be lead under the tape supports and under the heater, over the transport roll and the rewind roll, see pictures. The ink side of the roll (dark side) pointing downwards.

ATTENTION!

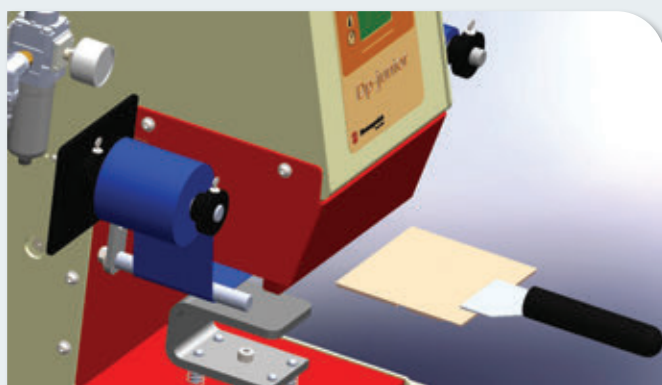
Do NOT attempt to rotate the wind up shaft by hand. This can cause damage to the wind up mechanism!



6.6 Inserting the cliché

To insert the cliché, use the provided handle SPA46007 to pick up the cliché and place it through the slot in the safetyguard into the guide rail to place it underneath the heater.

Wait for 5 minutes to allow the cliché to heat up to the set working temperature, after which the DP-junior is ready for production.





7. Assembly and installation

7.1 Assembly

It is very important that the DP-junior is provided with clean, dry air. The water condenser is an additional safety measure.

Provide air pressure of 2 – 6 bar from the compressor or its own air supply. Connect the air tubing with a diameter of 6 mm to the compressor or to your own local air supply, and to the pressure regulator of the DP-junior.

7.2 Installation

Upon delivery, the DP-junior is fastened with straps and bolts to a pallet. Put the machine on a work table near an earthed wall socket. Take care that there is enough free space around the machine. Also take care that there are no items near the machine that are sensitive to heat radiation.

If you have to move the machine at a later time, it is recommended to pack it in a similar way. Make sure the machine is cooled down before you pack it.

7.3 Electrical requirements

The DP-junior should be connected to the mains (230 V alternating current) with the supplied power cable. The DP-junior is an earthed machine and has been provided with two fuses of 4 amps.



8. Maintenance

8.1 Maintenance

Every day

Clean the machine with a dry non pilling cloth.

Teflon cover small	SPADP48027A
Teflon cover medium	SPADP48030A
Teflon cover large	SPADP48026A

Periodically

Replace the self-adhesive teflon cover when worn.

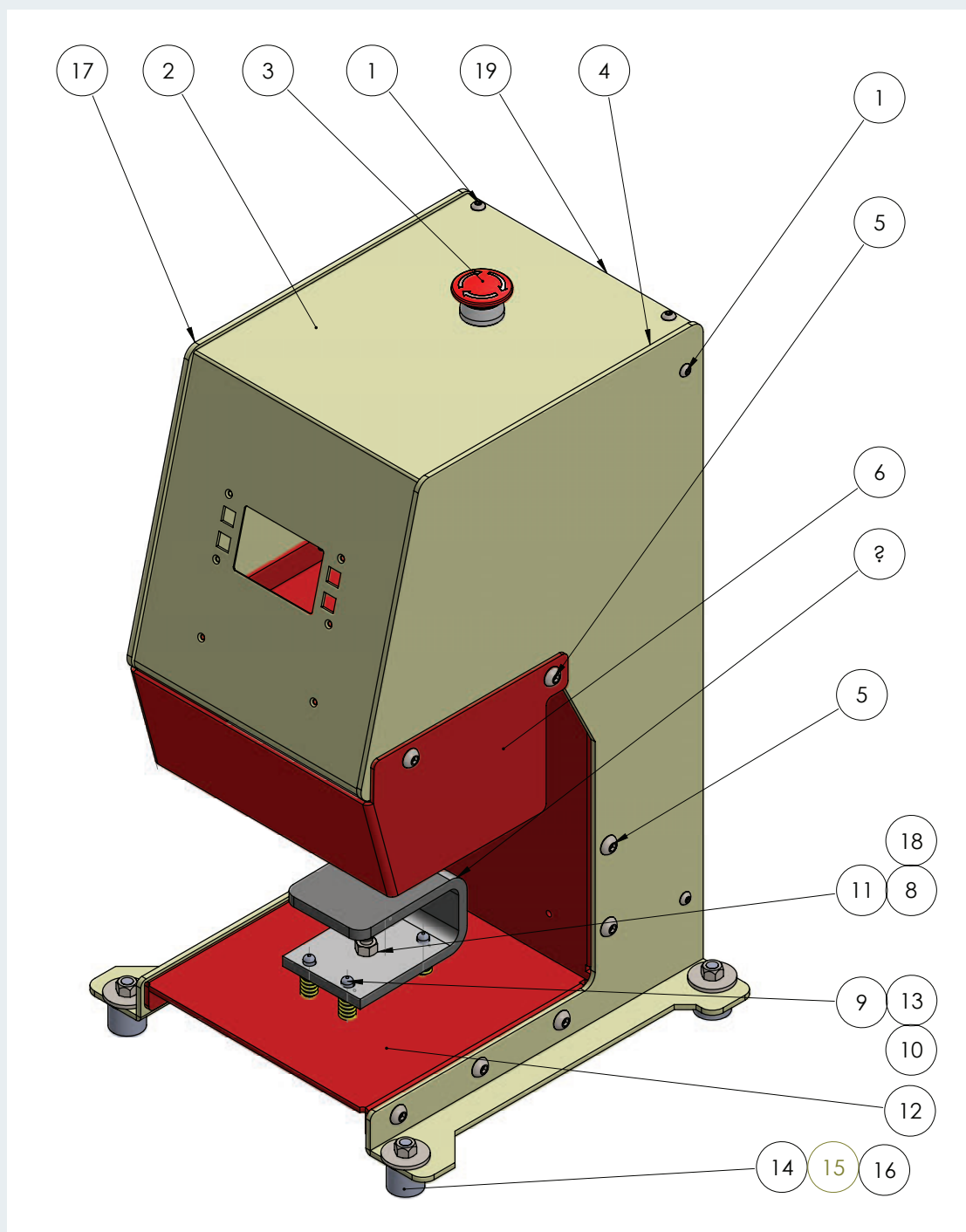
ATTENTION!

Switch off the machine and disconnect from the electrical power

Make sure the DP-junior has cooled down enough before starting maintenance or repairs.



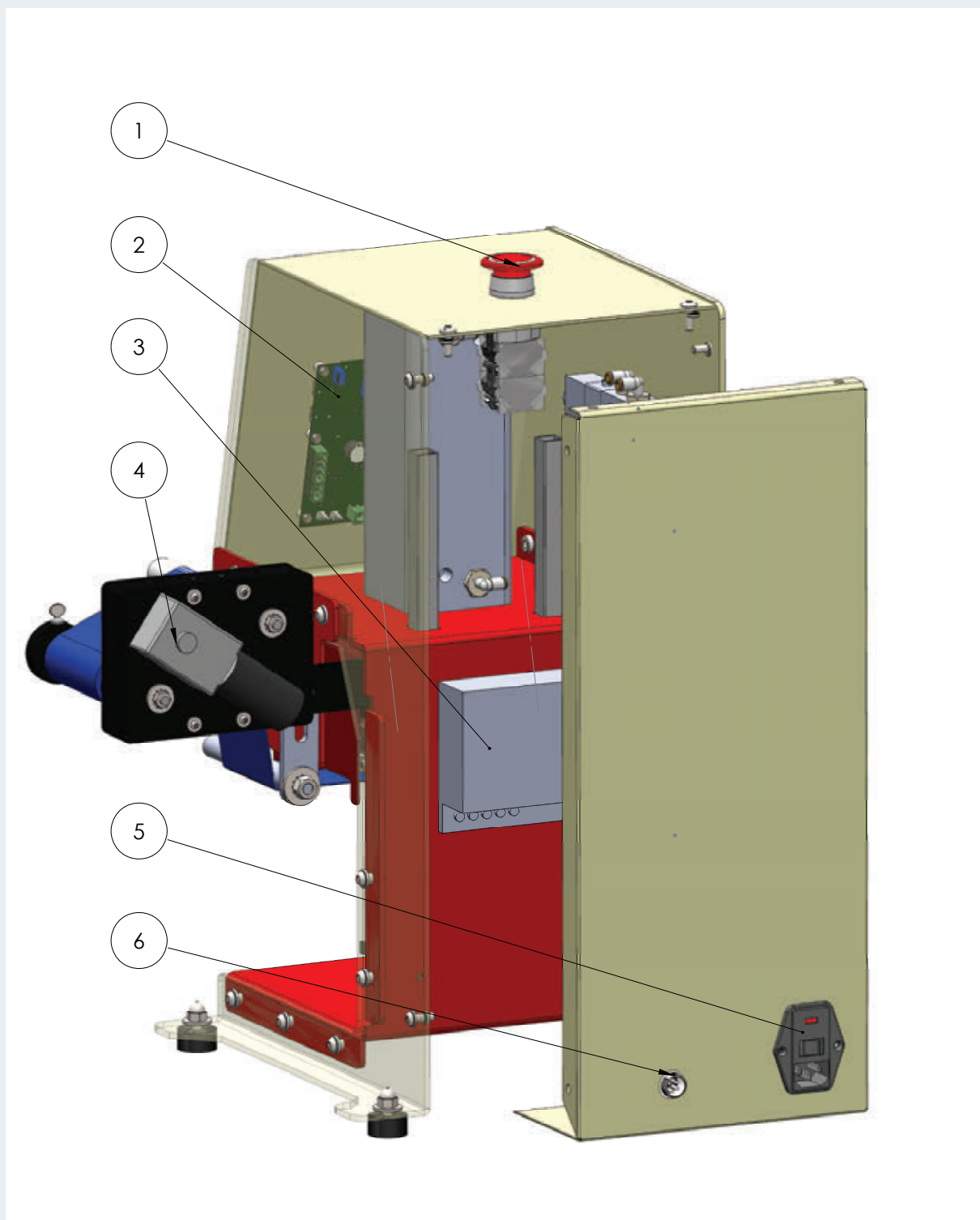
9. Technical annexes



9.1 Drawing of the frame

Number	Description	Part number	Qty
1	Buttonhead screw	M5x16	9
2	Frame front	SPADP48008	1
3	Emergency stop	SPADP48041	1
4	Rightside frame	SPADP48005	1
5	Buttonhead screw	M6x20	14
6	Static security frame	SPADP48006	1
7	Lower platen small	SPADP48027	1
	Lower platen large	SPADP48026	
	Teflon cover small	SPADP48027A	
	Teflon cover large	SPADP48026A	
8	Central bolt	M8x 50	1
9	Pen 8 mm x 32	39090.080.032	4
10	Buttonhead screw	M5x12	4
11	Nut	M8	2
12	Central frame	SPADP48002	1
13	Spring	D-233B	4
14	Rubber foot	Spapen-01-03	4
15	Cap-nut	M8	4
16	Ring	M8	4
17	Left side frame	SPADP48044	1
18	Star shape nut M8		1
19	Back frameplate	SPADP48004	1

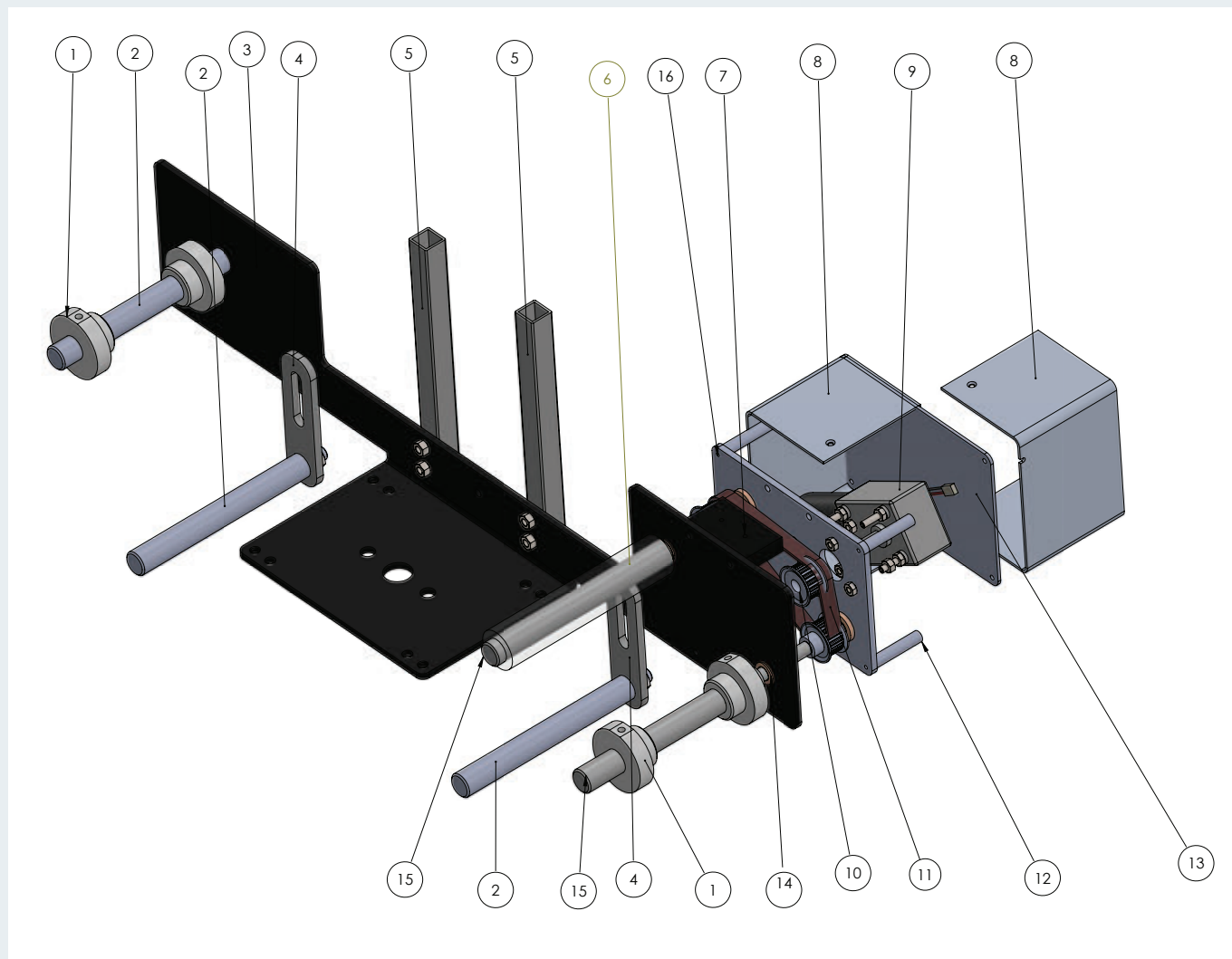
9.1 Parts list



9.2 Drawing electrical

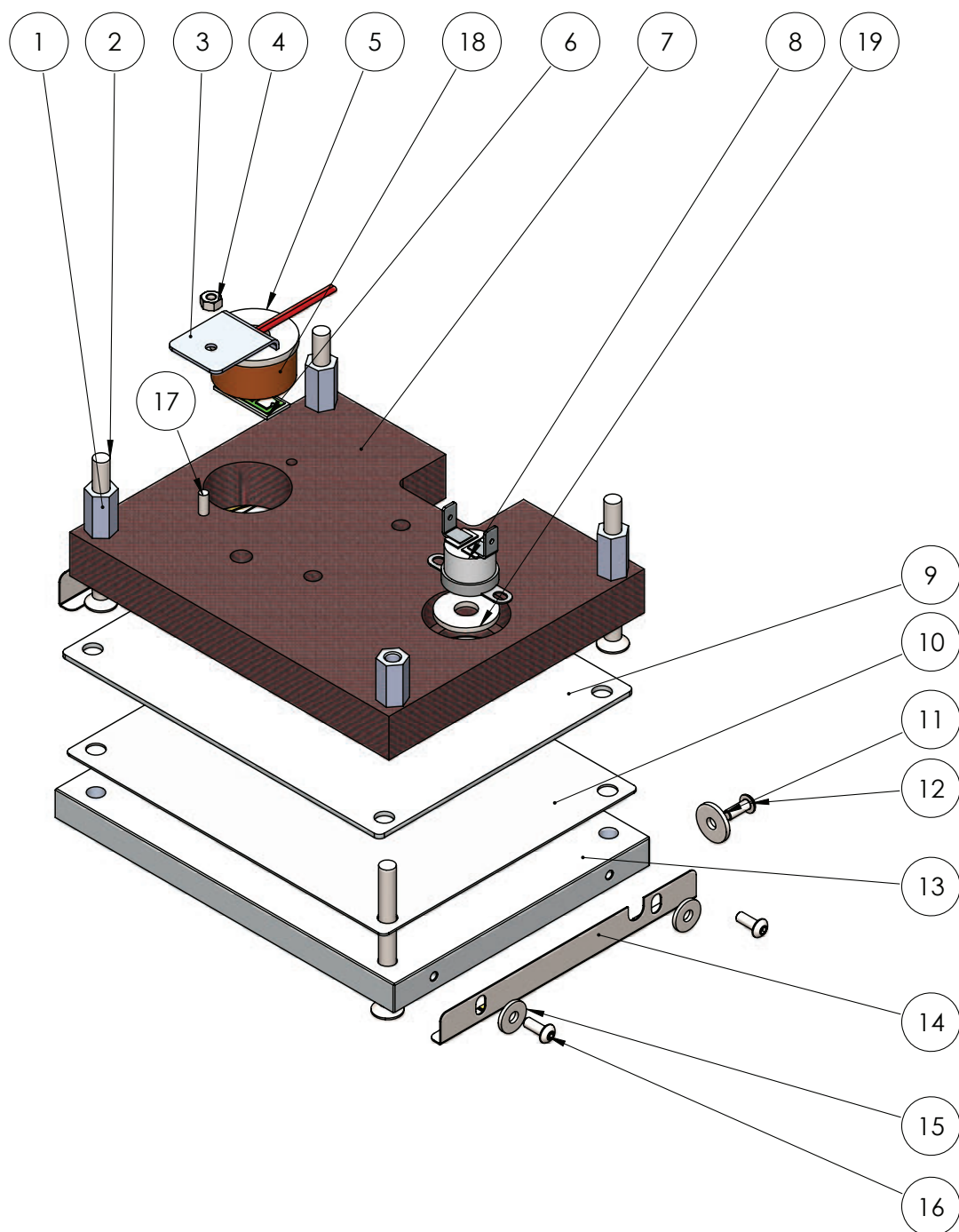
Number	Description	Part number	Qty
1	Emergency Stop Button	SPADP48041	1
2	Electronics	SPADP48032	1
3	Power supply	SPADP48023	1
4	Gear motor 24v	SPADP48033	1
5	Power entry	SPA105003	1
6	Footswitch connector		1

Components and electronics



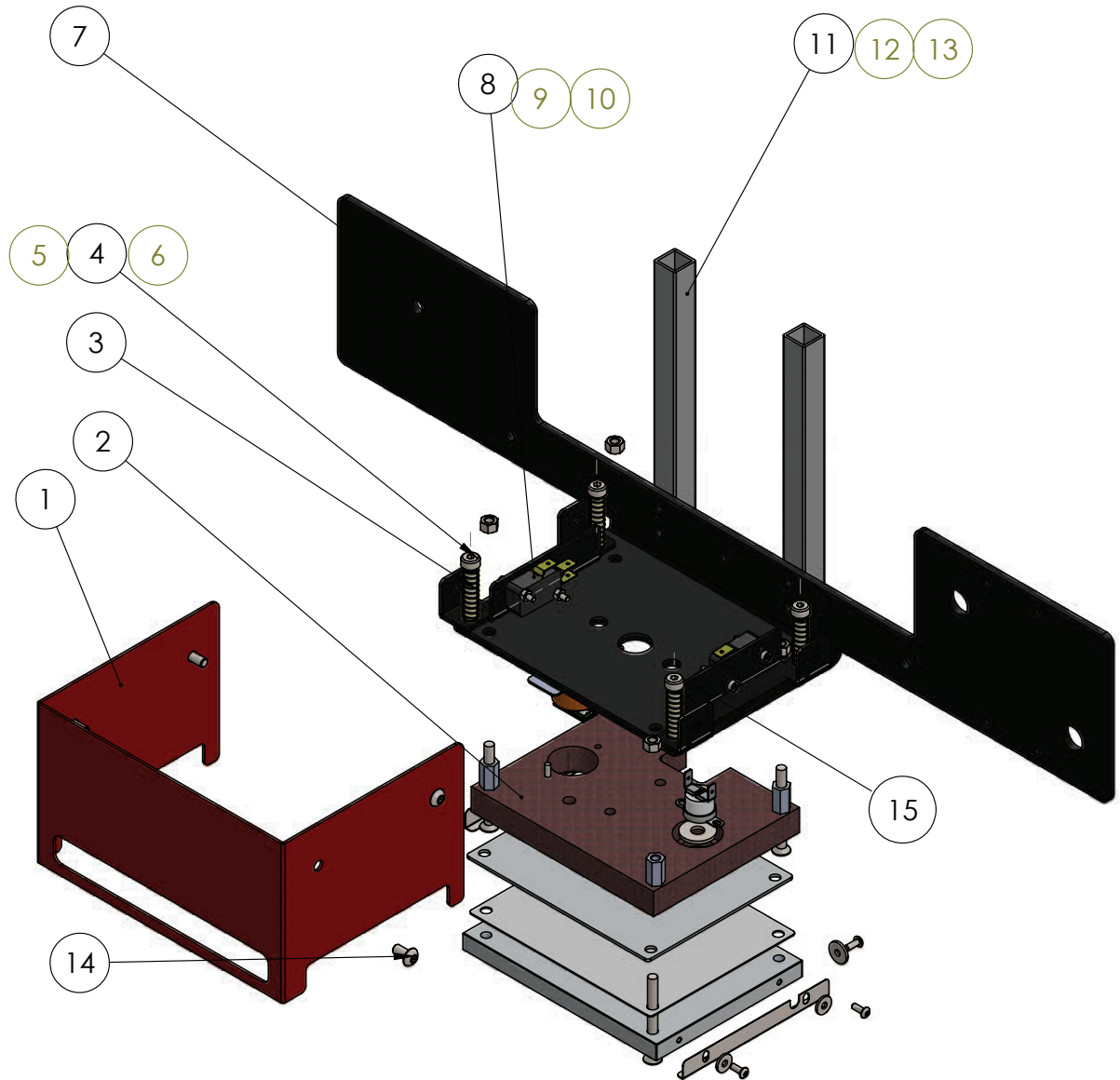
9.2 Parts list

Number	Description	Part number	Qty
1	Tape roll collar	SPADP48015	4
2	Feed/guide roller	SPADP48019	3
3	Press arm	SPADP48007	1
4	Arm attachment	SPADP48016	2
5	Square tube	SPADP48020	2
6	Silicone tube 120mm.	SPADP48024	1
7	Block motor assembly	SPADP48028	2
8	Motor cover	SPADP48009	2
9	Motor assembly	SPADP48033	1
10	Pulley motor/drive shaft	SPADP48034	3
11	Motor drive Belt	SPADP48036	1
12	Standoff 45 mm		4
13	Backplate motorhousing	SPADP48021	1
14	Bronze bearing	SPADP48038	4
15	Rewind/drive shaft	SPADP48018	2
16	Motor Plate	SPADP48017	1



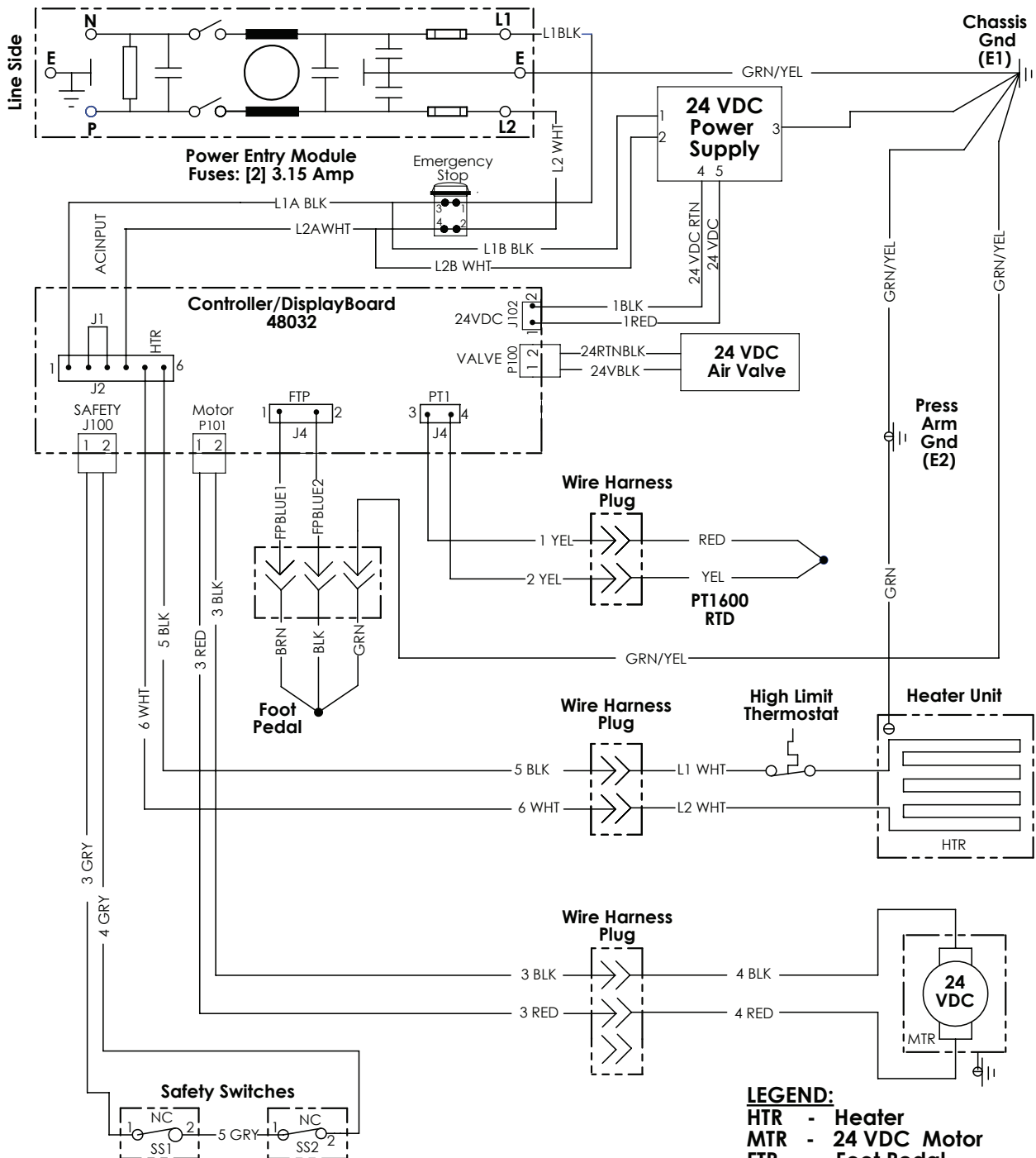
9.3 Parts list

Number	Description	Part number	Qty
1	Countersunkscrew	M5x 60	4
2	Stand-off	M5x 25	4
3	Sensor fixture	SPAHS40005	1
4	Nylock nut	M3	1
5	Ring	M8	1
6	Pt1600	SPAMA-030-4-4	1
7	Insulation plate	SPAHS40004	1
8	Hi-limit thermostat	Spapen-03-02	1
9	Sensor shield	SPAHS40003	1
10	Mica element	SPAHS40002	1
11	Imbus	M3x10	3
12	Stopring	M3	2
13	Heater shield	SPADP48045	1
14	Cliche rail	45849	2
15	Ring	M3	4
16	Imbus	M3X10	4
17	Hex bolt	M3X25	1
18	Silicone sponge	Round 25 mm	1
19	Ring	M8	1

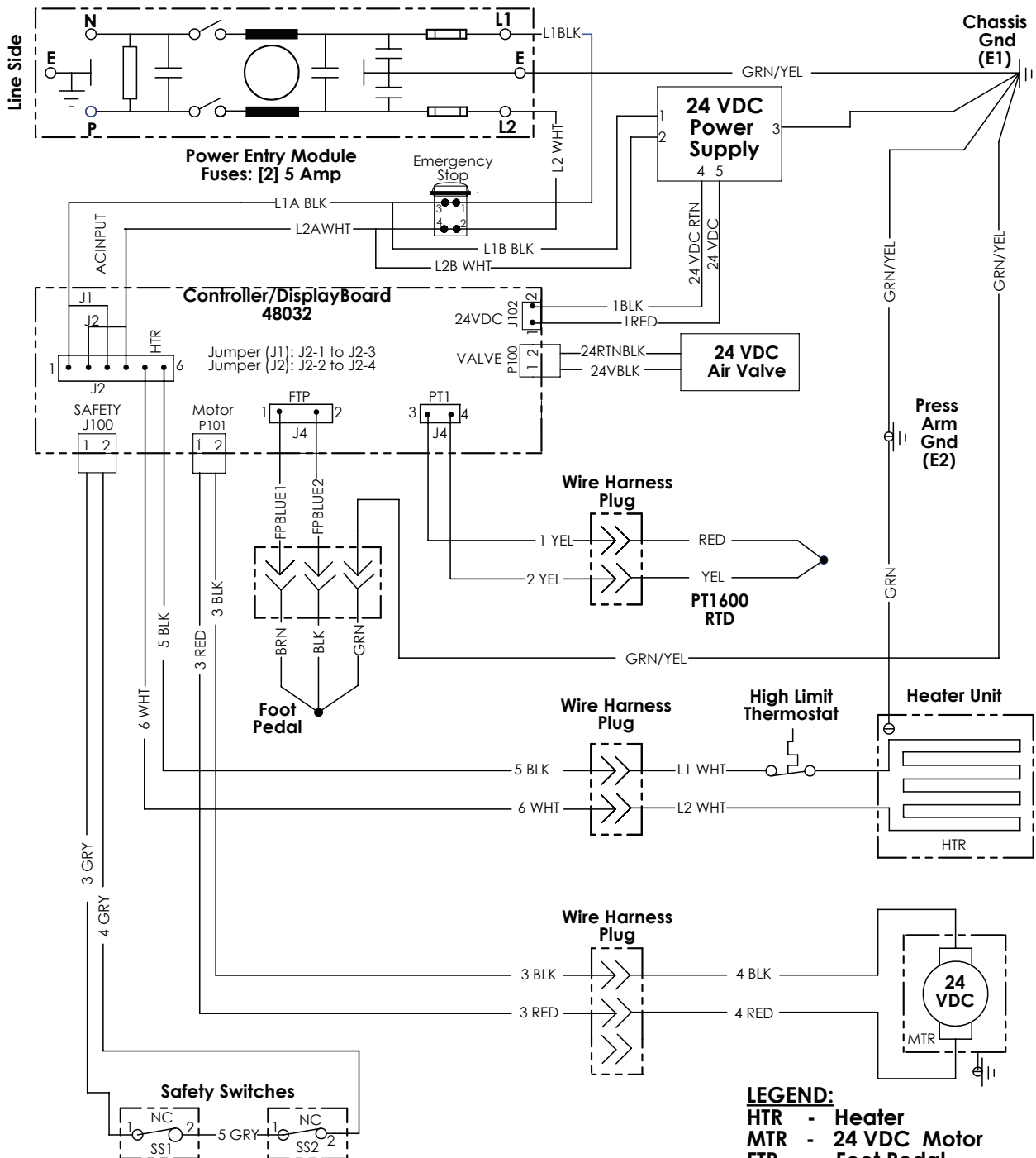


9.4 Parts list

Number	Description	Part number	Qty
1	Safety guard	SPADP48001	1
2	Element assembly	SPADP48031	1
3	Compression spring		4
4	Shoulder bolt M5	M5X	4
5	Nylock nut	M5	4
6	Ring	M5	4
7	Press arm	SPADP48007	1
8	Safety switch		2
9	Screw	M3x25	4
10	Nylock nut	M3	4
11	Support	SPADP48020	2
12	Philipshead screw	M5x10	4
13	Nylock nut	M5	4
14	Cuttonhead srew	M4x10	4
15	Bracket safety switch	SPADP48012	2



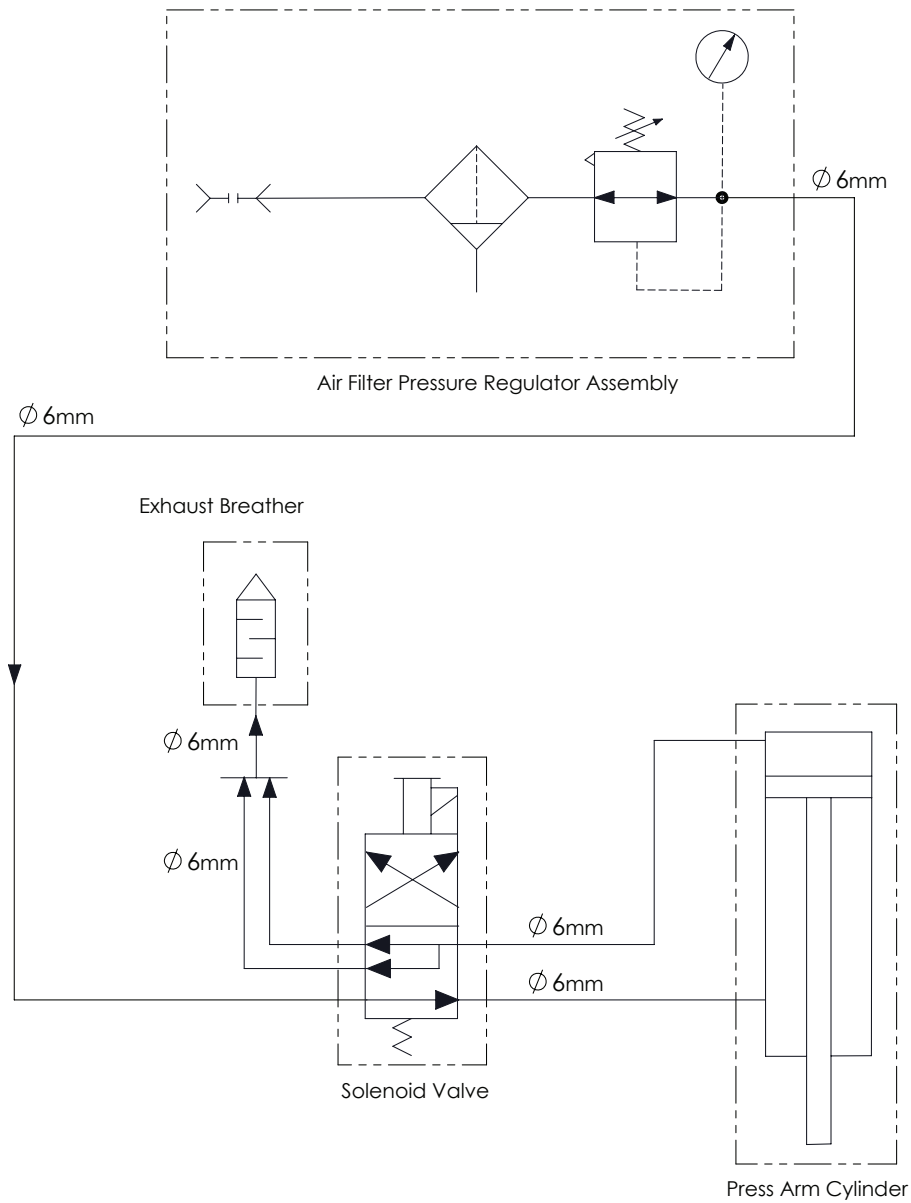
DP2015 Electrical Schematic: 230 Volt
20151208



DP2015 Electrical Schematic: 120 Volt
20160113

LEGEND:

- HTR - Heater
- MTR - 24 VDC Motor
- FTP - Foot Pedal
- SSW - Safety Switch
- SS1 - Safety Switch 1
- SS2 - Safety Switch 2
- DSP - Display Board
- TS - Temperature Sensor
- AV - 24 VDC Air Valve
- RST - Reset Switch



Pneumatic Diagram

10. Recycling

Choose to dispose of the machine responsibly when it has reached its end of life. Electrical machinery, accessories and packaging should be recycled as much as possible in an environmentally responsible manner.

- Dismantle the machine groups: steel parts / pneumatic components / electrical components
- These can be separated and returned for recycling.

Always dispose according to current and locally applied guidelines for health and safety and disposal requirements.



11. Declaration of conformity

We,
Thermopatch B.V.
Draaibrugweg 14
1332 Almere
Netherlands



herewith declare, on our own responsibility, that the machinery: marking machine Thermopatch DP-junior which this declaration refers to, is in accordance with the conditions of the following Directive(s):

2006/42/EG (Machinery directive)
2014/30/EU (EMC directive)

The Netherlands, Almere, 05-07-2016



Stephen Huyton
Business & Financial Director Thermopatch EMEA



We,
Thermopatch BV
Draaibrugweg 14
1332 Almere
Netherlands



declare that the DoC is issued under our sole responsibility and belongs to the following product: Thermopatch DP-junior, which this declaration refers to, is in accordance with the conditions of the following guidelines:

- Electromagnetic Compatibility Regulations (EMC) 2016
- Electrical Equipment (Safety) Regulations (LVD) 2016
- Supply of Machinery (Safety) Regulations 2008

The Netherlands, Almere, 01-05-2022

Stephen Huyton
Business & Financial Director Thermopatch EMEA

12. Disclaimer

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For any warranty Thermopatch B.V. refers to its general terms and conditions.

We can confirm that the machines we supply conform to CE when in standard configuration. Using sealing pads of any format other than the standard supplied with the machine may render the CE declaration invalid.

Thermopatch accepts no responsibility for any damage or injury that may result from possible non-conformity. Choosing an alternative sealing pad configuration other than the standard is at the customer's own responsibility.

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