



Thermopatch

an Avery Dennison Company

USER MANUAL

NL-30 v.5



ATTENTION!

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

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Introduction

The products by Thermopatch are designed with special attention to your convenience. Should you discover any fault or damage upon receipt of 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 NL-30 v.5. 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 NL-30 v.5 it is important to take notice of - and understand the contents of his manual.

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1. General description

The pneumatic NL-30 v.5 is a practical, universal heat seal machine. Textile labels, emblems, repair patches, transfers, in short all Thermopatch materials for marking and repair are easily and durably pressed onto textile fabrics.

1.1 Delivery

The NL-30 v.5 machines are delivered on a pallet covered with a wooden crate.
In the delivery of your NL-30 v.5 machine you will find the following:

- NL-30 v.5 heat seal machine
- Power cord
- Quick installation guide

1.2 Warranty and product liability conditions

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

2. Intended use

The NL-30 v.5 heat seal machine is practical and universally applicable.

The machine is designed for applying transfers, emblems and other Thermopatch heat seal products.

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. Assembly and installation

3.1 Assembly and installation

Unpacking

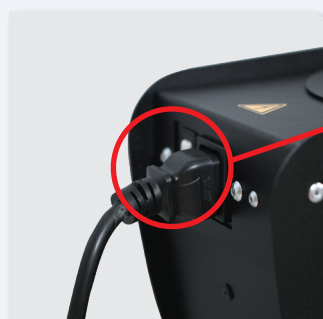
- Remove the wooden protective crate.
- Use a 10 mm spanner to remove the four screws with which the machine is screwed to the pallet
- Lift the machine onto the work table by means of the tongs that are mounted.
- Place the foot extender as shown in the photo below.

ATTENTION!

*Mount the foot extender **BEFORE** loosening the transport screws.*

3.2 Electrical installation

Take the NL-30 v.5 out of the box and place the machine on a stable work table in the vicinity of a grounded socket. The NL-30 v.5 is connected to the power supply (230 V alternating current) with the supplied mains cable. The NL-30 v.5 is grounded and equipped with two fuses type 16 A.



2. Connecting
power cable





4. Operating instructions

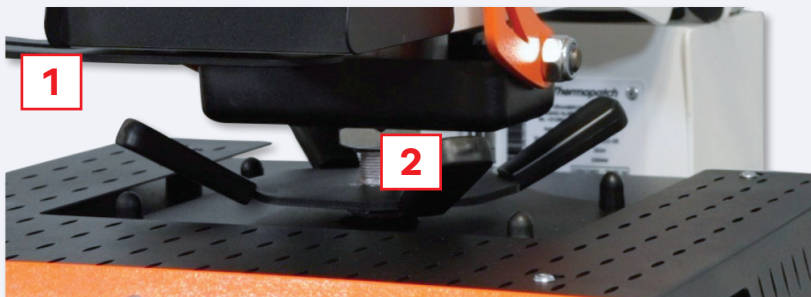
4.1 Operating the NL-30 v.5

- Switch on the press by pressing the power switch located at the rear.
- Adjust set point temperature (See 4.2.b).
- Adjust sealing time (See 4.2.a).
- Adjust the pressure (according to the type of transfer)
- Place the garment on the lower platen.
- Place the transfer.
- Once the heating platen has reached the desired temperature, close the machine with the handle.
- When the machine is closed, the timer starts running.
- At the end of the sealing time, the press will open automatically.
- If you want to interrupt the cycle, you can do it by pushing the stop button located on the control panel: the press will then open automatically within 2 seconds (see 4.2).

4.1.1 Setting the sealing pressure

The sealing pressure of the NL-30 v.5 can be adjusted by increasing or decreasing the gap between the two platens. The maximum space between the two platens is 1.5 cm.

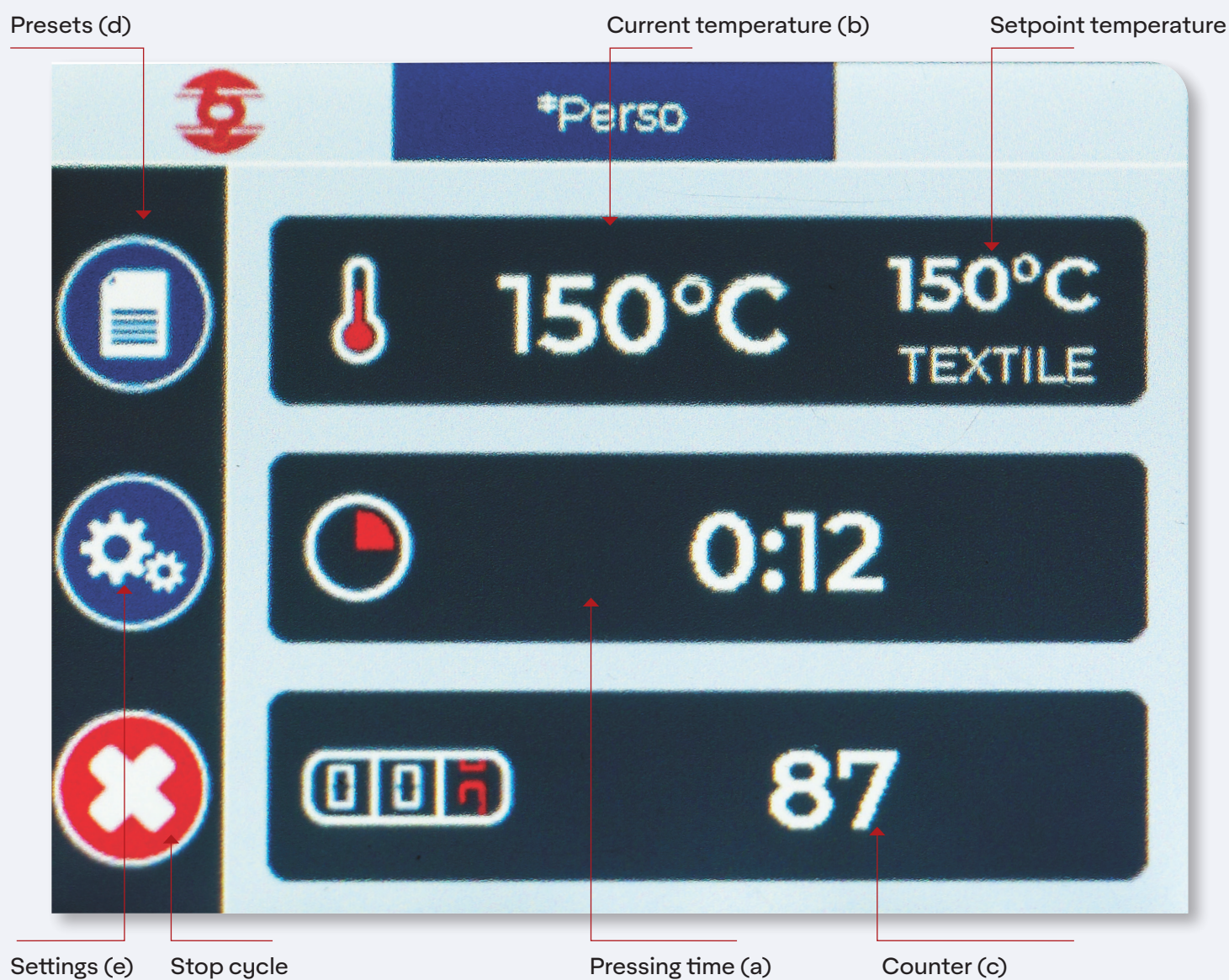
- Unlock the adjusting wheel (1)
- Turn the adjusting wheel (2) clockwise to increase the pressure, turn counterclockwise to reduce it.
- Lock the adjusting wheel after the desired pressure setting has been selected (1).



4.2 Using the control panel

NL-30 v.5 control panel

The temperature and time are shown on the display.



a) Pressing time

Press this menu to set the machine's pressing time.

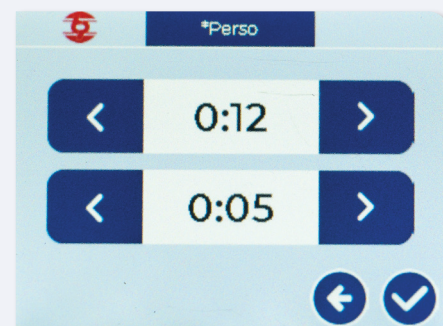
Use the left and right arrow keys to increase and decrease this setting.

You can also have two consecutive pressing times (cf. "Settings (e)").

You can also change this setting by pressing the time display and

entering the required time from the touch pad.

Once you have entered the required time, press the confirm key in the bottom right corner of the screen.



b) Temperature setting

Press the temperature menu. You can select the temperature you

require in the same way as for the pressing time, using the arrow keys

on the left and right of the temperature display. You can also click on

the reading and manually select a temperature.

When entering a temperature below 100°C, place a 0 before the

desired value (e.g. 090° C).

Select the material profile you wish to press from the 3 options provided (TEXTILE, RIGID and DTG) and press the confirm icon.



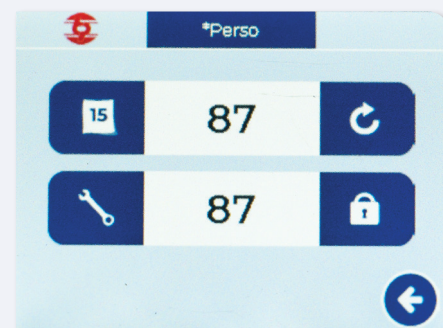
c) Item counter

This menu shows how many items the machine has printed.

When you click on this icon, two counters are displayed.

The first counter shows the partial count. It can be reset to zero by pressing the arrow to its right.

The second counter shows the total number of items printed since the machine was installed. This count is permanent and cannot be reset.



d) Presets

Pressing the Presets icon brings up the menu shown opposite. Use the left and right arrows to select one of the 5 pre-configured presets. To use a preset, press the floppy disk icon with the arrow pointing to the right. Once selected, press the home icon in the bottom right corner to return to the main menu.

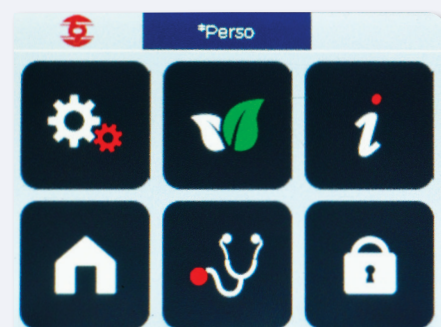
To create or alter a preset, you must first set the time and temperature from the main screen and then select a memory slot (1 to 5) from the preset screen. To rename a preset, press the pencil icon. Give your preset a name and press the arrow in the bottom right corner to confirm. To finish, press the floppy disk icon with the arrow pointing to the left to save your choice/setting.



e) Settings



Press this icon in the main menu to go to the machine settings. There are 6 available options.

The first option, represented by 2 gear wheels, lets you change the machine's technical aspects. Touching this option brings up another 6 icons.







	Lets you choose whether the machine emits a sound each time the touch screen is used.
	Lets you enable or disable an alarm when the pressing time is complete.
	Lets you choose the unit of temperature: Celsius or Fahrenheit.
	Lets you enable another timer for the pressing time. With this option enabled, you can alter 2 times in the pressing time menu.
	The left arrow takes you back to the previous menu. The right arrow takes you to other settings.

The other settings:






	<p>The setting in the top left corner shows that the machine is pressing within the set temperature range. This range can be set by pressing the icon and entering the 2 required temperatures. A non-locking warning will be displayed. It will be ignored during the 2nd pressing and allows the work continue even if the setpoint is not reached.</p>
	<p>The setting at the top right lets you adjust the screen brightness. There are 3 brightness levels from low to high.</p>

To return to the settings menu, press the left arrow twice.

	<p>The green leaf icon is used to set energy-saving mode.</p> <p>The operator can choose: After how many hours and minutes energy-saving mode comes on. The temperature at which the press switches over (only if it is below the setpoint temperature). Energy-saving mode is switched off when the screen is pressed.</p> <p>The board will only switch to eco mode if it is on the home screen. If the user leaves the press on another screen, the screen is presumed to be in the process of being altered. The press should not switch to eco mode.</p>
	<p>The “i” at the top right provides key information about the software version. Press the arrow in the bottom right corner to return to the previous menu.</p>
	<p>The diagnostic button brings up the machine status so you can see if there are currently any malfunctions.</p>
	<p>The padlock icon can only be accessed by an approved service technician.</p>

The last icon is home, which takes you back to the machine’s main menu.

List of alarms/events:

Alarm 01: PT100		Inconsistent interpretation of the reading – Probe signal lost (sensor or cable). The heating control is instantly disabled.
Alarm 02: Platen overheating		Temperature reading above 240° C. The heating control is instantly disabled.
Alarm 06: Platen lift		The top travel limit is not read during the lift phase before the platen lift time-out ends.
Alarm 10: Pb COM.		Communication between the power board and the screen board interrupted. Contact your reseller.
Alarm 13: Temperature setpoint not reached		Rising or falling temperature triggers before + or – 30° C maximum around the setpoint.

Press in the red zone to clear the fault. The work page will be displayed.

4.2.1 Error messages

Message on display	Cause	Effect
Er1	Temperature sensor defective	Heating relais switches off
Err	Defect in the ambient temperature sensor of the electronics	Heating relais switches off
Col	Display connection alarm	Relais switches off

Each warning signal is accompanied by a sound signal that can be silenced by pressing a button.



4.3 Automatic rotation on or off

The automatic rotation of the press head can be switched off with a button. This is on by default so that the press head rotates automatically after completion of the press cycle.

The button for activating or deactivating is located under the round flap on top of the press arm.

If the machine automatically opens, press the button to turn it off. If the machine does not rotate to open automatically, press the button to turn it on.



*Button inside for
activating or de-activating
the automatic headswing*



5. Overview of safety measures and warnings

5.1 Safety

The NL-30 v.5 is equipped with all mandatory safety requirements that apply according to the European guidelines for machine safety.

Warning symbols:

for additional safety the following symbols have been placed on the machine:

WARNING!



Hot surface



Electric tension

ATTENTION!

*Make sure you are informed about the contents of this manual before starting to work with the NL-30.
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!

*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 heating element.

ATTENTION!

*Pull the fabrics tight around the press pad and ensure that your hands are away from
the sealing pad before operating the machine.*

6. Technical specifications

6.1 Specifications of the NL-30 v.5

Power	2500 Watts
Power supply	230 Volt 50/60 Hz
Operating temperature	180 °C
Temperature range	0-220 °C
Press Time range	0-59 min. 59 sec.
Thermoregulator accuracy up to	+/- 1%
Adjustable pressure range	0-590 g/cm ²
Machine height (closed)	570 mm
Machine height (open)	969 mm
Machine width	439 mm
Machine depth	830 mm
Gross weight, including packaging	75 kg
Net weight	68 kg
Size sealing pads, size	400 x 500 mm
Fuses	16.0 Ampere
A-weighted noise level	<70 dB (A)





7. Transport and storage

7.1 Transport

When the machine must be moved, Thermopatch recommends using the original packaging.

7.2 Storage

If the machine must be stored, Thermopatch recommends using the original packaging.
The machine must be stored off the ground, preferably on a pallet in dry conditions.



8. Maintenance

Make sure that the working cycle of the machine has ended before you start working on the machine.

Teflon cover:

The teflon film protecting the element must be cleaned regularly to prevent sticking of labels and patches or the transfer of dirt to the garments. Clean the Teflon cover with a dry, clean cloth while the machine is still warm. Repeat the process regularly as often as necessary. Damaged or soiled Teflon protection should be replaced. These are available from your Thermopatch supplier.

Rubber cushion:

Clean the still warm rubber plate with a clean, lint-free cloth. Clean it as often as necessary. Damaged or soiled rubber sheets must be replaced. These are available from your Thermopatch supplier.

Replacing the rubber cushion:

- Turn off the device and allow it to cool
- Make sure both the bottom metal plate and the rubber cushion are clean and free of grease
- Apply SPA-0892330 silicone adhesive (with a glue comb) to the metal plate and place the rubber plate immediately with no air bubbles
- Allow to dry overnight at room temperature under light pressure without heating.

ATTENTION!

Remove the plug from the wall socket BEFORE starting maintenance or repairs

9. Technical Annexes

9.1 Spare parts

Reference	Description	Quantity
SPA3X-028	ELECTRONIC BOARD	1
SPA27-005	MICA HEATING ELEMENT 400x500 2500 W	1
SPA3X-029	PT100 SENSOR	1
SPA27-002	REED TYPE LIMIT SWITCH	1
SPA3X-100-8	SILICONE FOAM 400X500 mm	1
SPA30-003	GAS-OPERATED SPRING	2
SPA3X-004	230 V 7 W ELECTROMAGNETIC AIR VALVE	1
SPA3X-003	16 A FUSE	2

9.2 Troubleshooting

In this paragraph you will find the most common problems, causes and solutions.

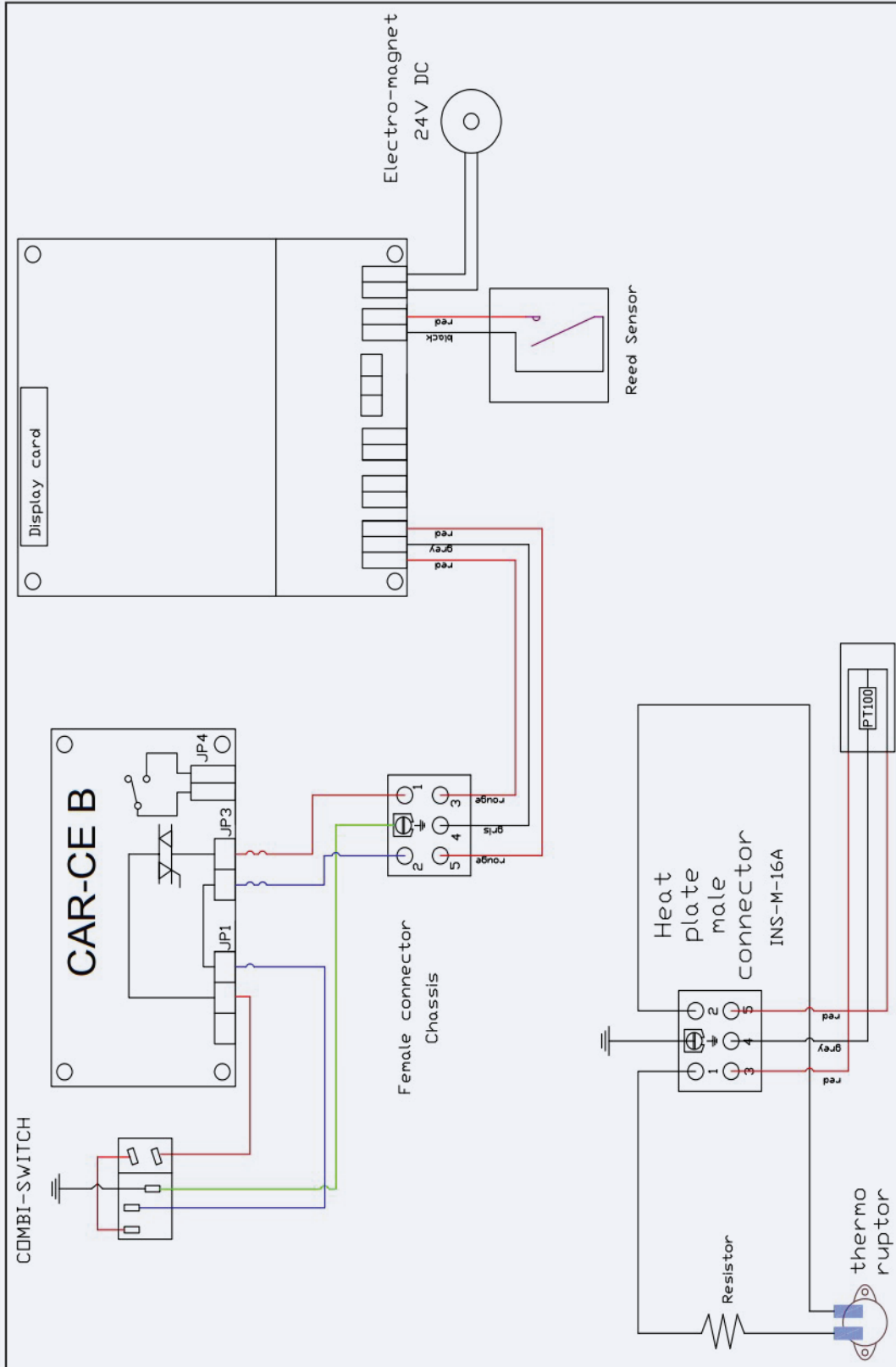
Problem	Possible cause	Solution
The machine does not switch on	The plug is not connected The switch has not been switched to 'on' Main fuse is not working	Check the connection to the electric mains and if the machine is plugged in Press the main switch to 'on' The fuse is located in the fuse holder next to the power cord connector.
The heating platenn does not heat up	Faulty heating element Problem with the main board Temperature set too low	Check the connections and the condition of the wiring Remove the heating element Check the on-screen messages and refer to the section error messages, page 9
The heating element overheats	Problem with the probe of electronic board	Check de messages on the LCD screen, page 9 Contact your supplier
The timer does not count down	Disabled or faulty limit switch on the swing arm Problem with the electronic board	Check the connections Check the on-screen messages and refer to the section error messages, page 9
The press head does not lower	The pins are stuck, or too tight The gas springs are stuck	Lubricat or loosen the pins slightly Check the gas springs but do not try to open them! PARTS UNDER PRESSURE, DANGER. Contact your supplier for replacement
The press head stays down after pressing	The gas springs are stuck The timer is not counting down	Leaking gas spring gasket, pressure too low to open up the machine. Check the gas springs but do not try to open them! PARTS UNDER PRESSURE, DANGER. Contact your supplier for replacement See above

WARNING!

*All repair and maintenance operations should be done when the machine is turned off and unplugged from the main electric power supply. Ensure that the machine has cooled down before starting repairs or maintenance. The heating element can cause burns.
All repairs must be performed by qualified staff.*



9.3 Electric Diagram





10. End of life

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.



ATTENTION!

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

11. Declaration of Conformity CE and UKCA

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



herewith declare, on our own responsibility, that the machinery:
Thermopatch NL-30 v.5 heat sealing machine, which this declaration refers to, is in accordance with the conditions of the following Directive(s):

2014/35/EG (emc directive)
2006/42/EG (machinery 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 **Thermopatch NL-30 v5**, 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 BV 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 configuration other than the standard is at the customer's own responsibility.

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