

NL-40

User manual



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

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 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-40. The goal is to familiarize you with the operation, to provide for safe working instructions and guidelines for periodical maintenance.



ATTENTION!

In order to make safe and optimal use of the NL-40, it is important to take note of and understand the contents of this manual.

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DECLARATION OF CONFORMITY

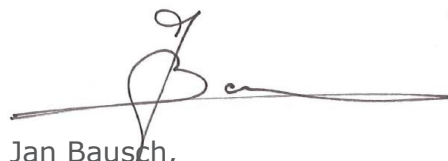
We,
Thermopatch B.V.
Draaibrugweg 14
1332 Almere
The Netherlands

herewith declare, on our own responsibility, that the machinery:

Thermopatch **NL-40**,
which this declaration refers to, is in accordance with the conditions of the following Directive(s):

2006/42/EG (Machinery directive)
2004/108/EG (EMC directive)

The Netherlands, Almere, 25-03-2016

A handwritten signature in black ink, appearing to read 'Jan Bausch', is written over a horizontal line.

Jan Bausch,
Director

1. General description



The NL-40 has been specifically designed for heat sealing transfers onto balls and caps. the machine has been fitted with two different exchangeable lower platen assemblies which enable both functions.

1.1 Delivery

The NL-40 is supplied in a card board box.

The following articles are included:

- NL-40 heat seal machine
 - Power cord
 - Heating plate
 - Manual on CD-ROM
 - CE Declaration of Conformity in the manual on the CD
-
- In a seperate box the lower platen unit is supplied, either the ball platen unit or the cap platen unit. When both were ordered, two separate boxes will be supplied additional to the machine packaging.

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

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 NL-40 is a heat seal machine that is intended for the application of heat seal transfers and emblems to balls and caps.

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 NL-40

Power	600 Watts
Power supply	230 Volt 50/60 Hz
Temperature range	0-220 °C
Press Time range	0-9 min. 30 sec.
Thermoregulator accurate up to	+/- 1%
Machine height (closed)	570 mm
Machine height (open)	643 mm
Machine width	243 mm
Machine depth	543 mm
Gross weight, including packaging	25 kg
Size sealing pads, size	142,5 x 100 mm
Fuses	3.15 A
A-weighted noise level	<70 dB (A)



4. Overview of safety tips and warnings

4.1 Safety tips and warnings



ATTENTION!

Make sure you are informed about the contents of this manual before starting to work with the NL-40. 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 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.



WARNING!



Hot surface



WARNING!



Electric tension

5. Transport and storage



5.1 Transport

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

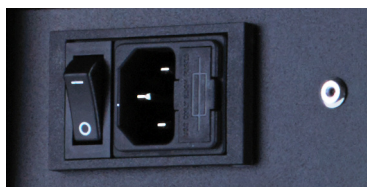
- For carrying the press, ensure that the press is cold and move the press by holding the two plates (top and bottom) at the same time (closed press).
- Ensure that the screw designated for «Transport security» is in place to secure the platens for carrying.

5.2 Storage

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

6. Operating instruction





6.1 Installation

Unpacking

- Remove the press from its packaging.
- Place the machine on its operating location.
- For carrying the press, ensure that the press is cold.
- Remove the screw labelled « Transport security » after mounting the heating unit (see pg. 18 - 19) before opening the press.
- Plug the machine into the electrical mains (230 Volt grounded / 50 - 60 Hertz).

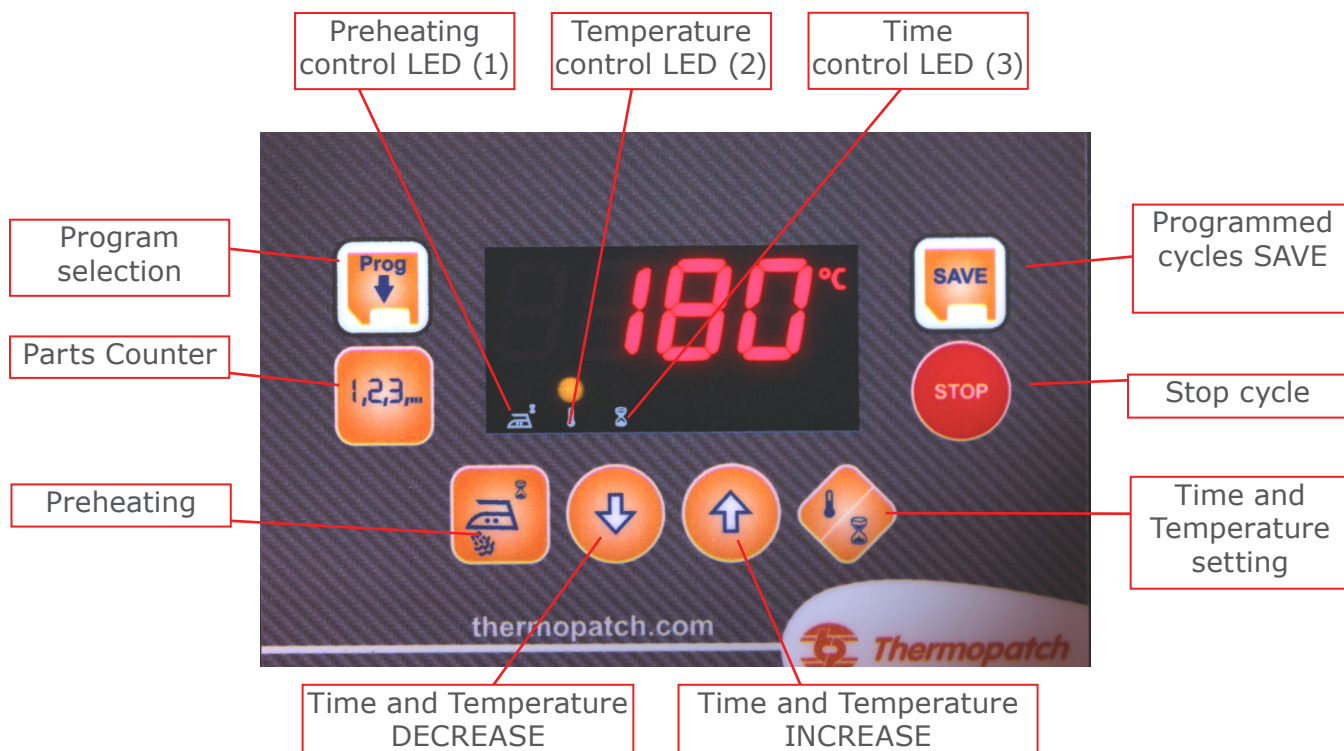
6.2 Operating the NL-40

- Switch on the press by pressing the power switch located at the rear.
- Adjust set point temperature (See 6.4.1.b).
- Adjust sealing time (See 6.4.1.a).
- If desired, set the preheating time (See 6.4.2)
- Adjust the pressure (according to the type of transfer) (See 6.5).
- Place the article on the lower plate.
- Place the transfer or emblem.
- Once the heating plate 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 6.4.3).

6.3 Using the control panel

NL-40 control panel

The temperature and time are shown on the display.







6.4 Press time and temperature settings

1. Pressing time and temperature settings






a) Pressing time

- Press TIME/TEMPERATURE key : the LED (3) lights and indicates that you can set the pressing time.
- The default value is set to 15 seconds.
- You can change this value with the INCREASE key  or the DECREASE  key.
- Confirm the desired value by pressing again on the TIME/TEMPERATURE  key.
- Now, you can adjust the set point temperature.

b) Temperature

After setting the pressing time, the LED (2) lights and indicates that you can adjust the set point temperature.




- The default value is set to 180° C.
- You can change this value by pressing the INCREASE  key or the DECREASE  key.
- Confirm the desired value by pressing again on the TIME/TEMPERATURE  key.
- Now, the press is ready to work.

2. Preheating cycle



The press is provided with a secondary timer for preheating. This function allows you preheat the textile before installing the transfer.


a) Preheating time setting

- Pressing PREHEATING  key, The LED (1) lights.
- You can change the value with the INCREASE  key or the DECREASE  key.
- Confirm the value by pressing again on the PREHEATING key.
- If the value is 0 (default value), the preheating cycle will not be performed.

b) Operation

- Place the textile without transfer on the lower silicone rubber plate.
- Lower the heating plate: the secondary counter starts and the LED (1) lights.
- At the end of the countdown, the buzzer rings and the press open automatically.
- Install the transfer on the textile and lower the heating plate.
- The main counter starts and the LED (3) lights.
- At the end of the countdown, the press opens automatically.

3. Stop Cycle

At any time, you can stop the cycle by pressing the STOP CYCLE  key.


The press opens automatically and the countdown stops.

4. Storing programmed cycles



You can store up to 3 programs with different set points on this press.



1. Preheating time
2. Pressing time
3. Temperature

- For storing the last set points used, press the SAVE  key during 3 seconds.
- The display lights up with the program name to be recorded (First Pr1).




ATTENTION!


The preheating temperature is the same as the set point temperature

- Choose the program name you want to be recorded by repeated pressing of the SAVE  key: Pr1->Pr2 ->Pr3 ->Pr1...
- Press during 3 seconds on the SAVE  key to save the program.
- The buzzer indicates the storing of the program was succesful.
- The default value for the 3 programs Pr1 to Pr3 is :
 1. 180° C. for the temperature
 2. 15 seconds for the pressing time
 3. 0 second for the preheating time

5. Selecting a programmed cycle



To select a recorded program, press on the PROG  key: the screen displays the last program used.
Press the key until the display of the desired program.

- Keep the PROG  key pressed for 3 seconds to confirm your storage.
- The buzzer sound indicates the storage is succesful.
- The temperature set point, the preheating time and the pressing time according to the selected program will be loaded automatically.


6. Parts counter



The press has 2 parts counters :

1. An erasable counter, with a possible reset
2. A main counter, without reset.

a) Erasable counter

- Press one time on COUNTER  key: the screen displays during 5 seconds the number of cycles performed with success since the last reset.
- Pressing the key for 3 seconds will reset the counter.

b) General counter

- Press 2 times on COUNTER  key: the screen displays the total number of cycles performed, into hundreds of pressing (Example: 230 indicates 23000 parts). Reset is not possible.

After 3 seconds, the screen returns to the normal display.

7. Error messages

Message on the screen	Due to	Effect
Er1	Temperature probe default	Heating relay off
Err	Card probe default	Heating relay off
Col	Keyboard connection alarm	Relay off

8. Power safe function

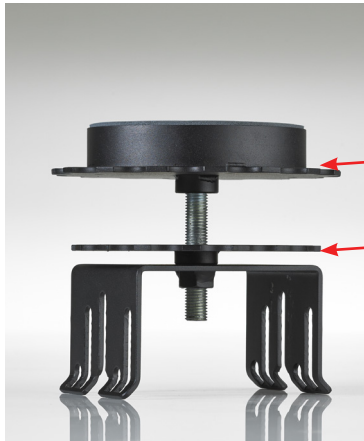
The press has an energy saving program, allowing to maintain a set point temperature after a defined time without use. The default value is >> DISABLED<<

Contact your dealer for activation of this function.

6.5 Pressure Adjustment

Pressure setting on the NL 40 Ball platen unit and Cap platen unit

Lower platen unit for balls



Height adjustment ring

Height lock wheel

- Unlock the height lock wheel
- Screw or unscrew the height adjustment wheel to set the required height
- Lock the height lock wheel to fixate the chosen height



Lower platen unit for caps



Mounting knobs

Pressure adjustment wheel

- Unlock the mounting knobs
- Screw or unscrew the pressure adjustment wheel to set the required height.
- Lock the mounting knobs
- Tighten the pressure adjustment wheel to fixate the chosen height



7. Unit and installation



7.1 Installation

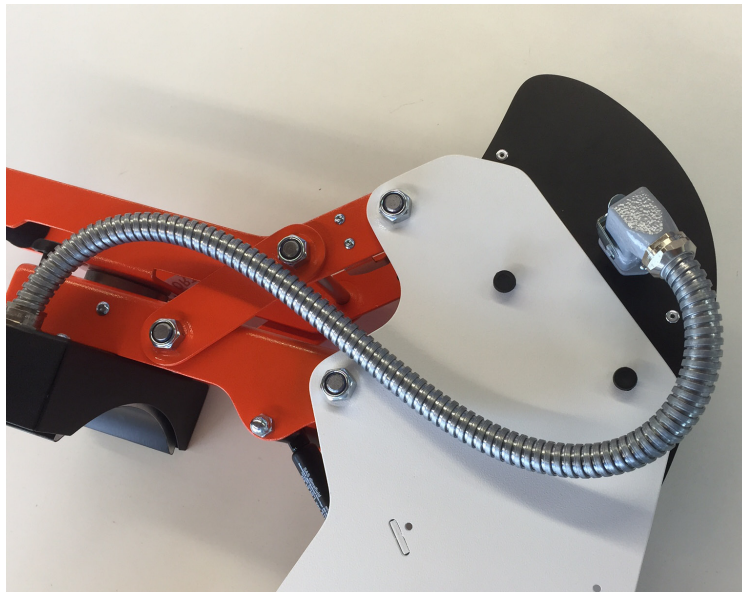
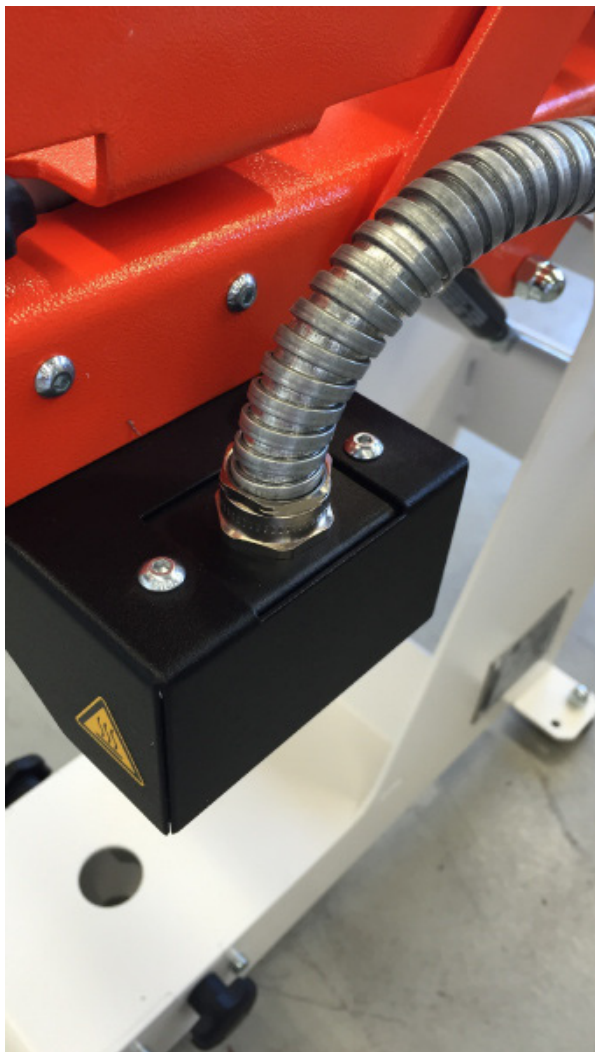
Unpacking

- Remove the NL-40 from its packaging.
- Place the machine on its operating location.
- Before carrying the press, ensure that the press is cold.
- Remove the screw labelled « Transport security » after mounting the heating unit (see pg. 18 - 19) before opening the press.
- Plug the machine into the electric mains (230 Volt + Ground / 50 or 60 Hertz) after the heating unit has been mounted.



ATTENTION!

Before (re)placing the heating unit, electrically disconnect the machine!



Mounting the lower platen for heat sealing onto balls

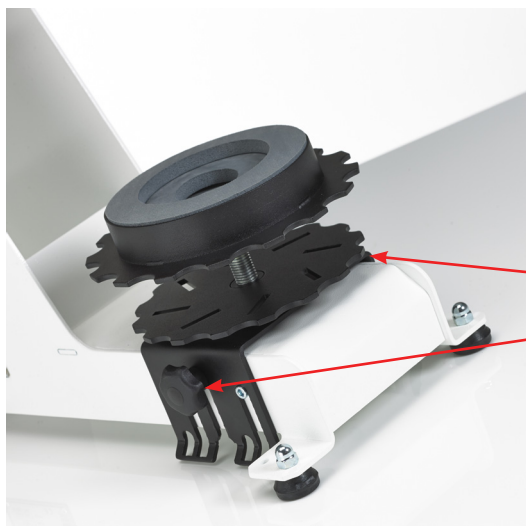
To exchange the lower platen:

Loosen the two knobs on either side of the lower unit and place it accordingly to the size of ball you need to heat seal on.



For smaller type balls numbers 1 and 2

mounting knobs



For larger type balls numbers 3, 4 and 5.

mounting knobs



8. Maintenance instructions

8.1 Maintenance

- Every day:
Clean the heating plate with a dry cloth.
- Depending on use:
Change the silicon rubber as soon as it is damaged or if it has lost its properties.



ATTENTION!

- *Switch off the machine and disconnect from the electrical power*
- *Make sure the NL-40 has cooled down enough before starting maintenance or repairs.*

9. Technical annexes

Parts list 01

TP Art. Nr.	Description	Qty
SPANL4004	MAIN BOARD	1
SPANL4005	MAGNET FOR INDUCTION SENSOR	1
SPANL4006	INDUCTION SENSOR	1
SPANL4007	ELECTROMAGNET	1
SPANL4008	FOAM BLACK GRIP 19 MM X 114 MM	1
SPANL4009	HEATING CARTRIDGE 150 W	2
SPANL4010	TEMPERATURE SENSOR / PROBE	1
SPANL4015	FUSE 5x20mm T 3.15 A 250V	2
SPANL4011	MAIN SWITCH + POWER CORD CONNECTOR	1
SPANL4014	POWER CORD	1
SPANL4012	GAS SPRING RG8/19 COURSE 50 MM 600N	1
SPANL4013	TEFLON ADHESIVE PAD	1

Trouble shooting

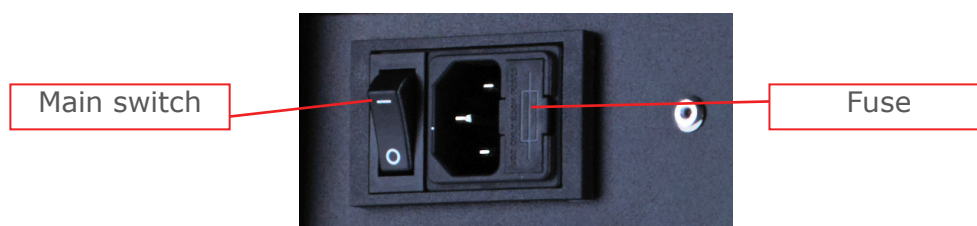
SYMPTOMS	POSSIBLE BRAKDOWN	REPAIRS
The heating platen will not heat up.	<ul style="list-style-type: none"> One of the fuses is out of order The relay is damaged Sensor out of order and/or the display shows ER1 	<ul style="list-style-type: none"> If there is no light when the press is on, check the fuse, change when necessary. <i>The main fuse is located in a seating next to the plug of the power supply cable (16 A). To access it, pull the electrical cable off and with the tip of a pen or a screwdriver, lift the cover of the fuse holder. There you will find a spare fuse in a square tube for replacement.</i> Check the relay and replace when necessary. Check the sensor, and replace when necessary.
The heating platen overheats	<ul style="list-style-type: none"> The relay is stuck The electronic board is damaged 	<ul style="list-style-type: none"> Replace the relay Replace the electronic board
The timer doesn't start	<ul style="list-style-type: none"> The microswitch is not activated 	<ul style="list-style-type: none"> Ensure that the activator of the switch is touched by the press arm of the machine.
The buzzer sounds continuously while the press is opened	<ul style="list-style-type: none"> The microswitch is not set correctly 	<ul style="list-style-type: none"> Check the position of the activator of the microswitch and adjust when necessary
The press will not stay closed	<ul style="list-style-type: none"> The microswitch is not set correctly The electromagnet is not properly activated or defect 	<ul style="list-style-type: none"> Check the position of the activator of the microswitch or replace the microswitch. Check the wiring and the connections.

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.

Drawing 01



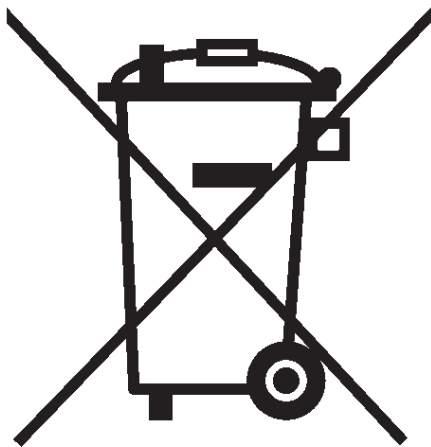
The diagram illustrates the electrical wiring for a heating system. It features a power supply (220V-F=16A) connected to a combi switch. The switch controls the electro magnet and the heating plate. A reed sensor is connected to the electro magnet and the heating plate. A temperature sensor is connected to the heating plate. The diagram includes labels for 'Reed Sensor', 'Display', 'White', 'Black', 'Heater Plug Male', 'Heating Plate', 'Heater Cartridge', 'Temperature Sensor', 'Frame Plug Female', and 'Electro Magnet'.

Thermopatch B.V.
 Draaibrugweg 14, 1332 AD, Netherlands

Electrical Wiring Diagram

COMPLETE NL-40

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.

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