

# USER MANUAL NL-35 v.3



#### **ATTENTION!**

These instructions must be made available to all persons involved in the assembly, commissioning, operation, maintenance and repair of this product.



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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-35 v.3. 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-35 v.3 it is important to take notice of and understand the contents of this manual.



# Index

	yrights duction	
<b>1nde</b> <b>1.</b> 1.1 1.2	<b>x</b> General description Delivery Warranty and product liability conditions	<b>4</b>
2.	Intended use	
<b>3.</b> 3.1	Assembly and installation Assembly and installation	
<b>4.</b> 4.2 4.2.1 a b c d 4.2.7 4.3	Operating instructions Operating the NL-35 v.3 Operating the control panel Sealing time and temperature settings Pressing time Temperature setting Presets Settings List of alarms/events Error messages Automatic head swing on or off	6 6 7 7 7 7 7 8 10 11
<b>5.</b> 5.1	<b>Overview of safety measures and warnings</b> Safety	
<b>6.</b> 6.1	<b>Technical specifications</b> Specifications of the NL- <u>35 v.3</u>	
<b>7.</b> 7.1 7.2	<b>Transport and storage</b> Transpor <u>t</u> Storage	
8.	Maintenance	
<b>9.</b> 9.1 9.2 9.3	<b>Technical annexes (English)</b> Spare Parts Troubleshooting Electric diagram Pneumatics diagram	18 19 20
10.	End of life	
11.	Declaration of Conformity CE and UKCA	22
12	Disclaimer	



# **1. General description**

The pneumatic NL-35 v.3 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-35 v.3 machines are delivered on a pallet covered with a wooden crate.

- In the delivery of your NL-35 v.3 machine you will find the following:
- NL-35 v.3 heat seal machine
- Power cord
- Air tube 6 mm

#### 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-35 v.3 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

#### 1. 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.

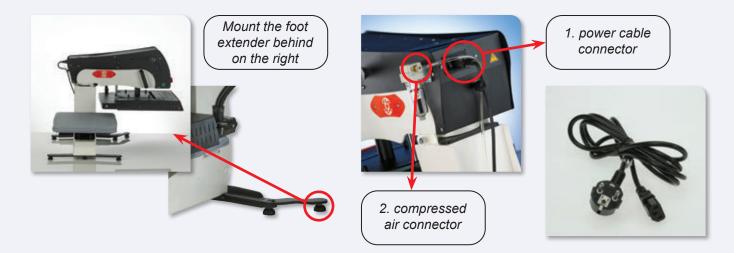
### 2. Electrical installation (1)

Take the NL-35 v.3 out of the box and place the machine on a stable work table in the vicinity of a grounded socket. The NL-35 v.3 is connected to the power supply (230 V alternating current) with the supplied mains cable. The NL-35 v.3 is grounded and equipped with two fuses type T 16 A.

### 3. Pneumatic installation (2)

In order to be able to work with the NL-35 v.3 without problems, it is very important that you work with clean, dry air that is offered at a minimum of 3 bar up to a maximum of 8 bar.

The supplied water separator / pressure regulator is only an additional protection for the machine. The user must ensure that the air pressure does not exceed 8 bar. Connect an air tube with a diameter of 6 mm to the locally provided air pressure system and connect it to the water separator / pressure regulator of the NL-35 v.3.





# 4. Operating instructions

### 4.1 Operating the NL-35 v.3

Switch on the press by pressing the power switch located at the rear.

Adjust set point temperature (See 4.2.1.b).

Adjust sealing time (See 4.2.1 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.

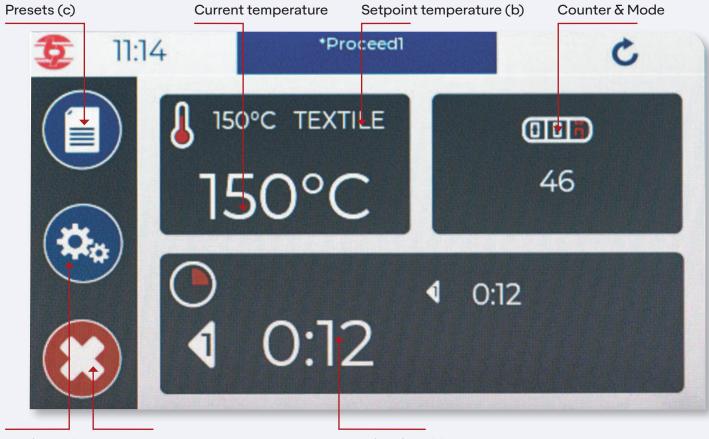
At the end of the sealing time, the press will open automatically.

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 4.2.1).

### 4.2 Operating the control panel

The settings for time and temperature are shown on the LCD display

### 4.2.1 Sealing time and temperature settings



Settings (d) Stop cycle



## a) Pressing time

Press here to set the machine's pressing time. Use the left and right arrow keys to increase and decrease the setting.

You can also change this setting by pressing the time display and entering the required time from the touch pad (4 characters must be entered).

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 (b). 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 typing in a temperature below 100°C, enter a "0" first (e.g. 090°C).

You can also slide the blue cursor left and right with your finger to lower and raise the temperature respectively, and then adjust it using the arrows. Select the profile you wish to press (Textile, Rigid or DTG).

### c) Presets

Pressing the "Presets" icon (c) brings up the menu shown opposite. Use the left and right arrows to select one of the 10 pre-configured recipes. To use (load) a preset, press the floppy disk icon with the arrow pointing to the right. Once selected, press the arrow in the bottom left 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 10) from the preset (d) 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.

An asterisk(\*) at the start of the name of the current preset on the indication bar means that the current settings are not the same as the original settings for this preset, and the settings that are currently being applied have not been saved to the preset.







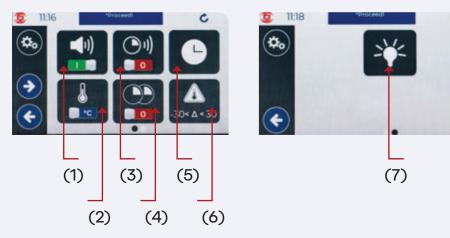
### d) Settings

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



C

The gear wheel button lets you change the machine's technical aspects.



1	Switch the sound on or off. Warning sounds will still be emitted if a fault occurs.	
2	Choose between Celsius or Fahrenheit.	
3	Switch the 2-second end-of-cycle notification signal on or off.	
4	Choose 1 (OFF), 2 or 4 different timers.	
5	Internal clock setting (date and time).	
6	Operating temperature range setting.	
7	Screen backlight setting.	



	The green leaf icon is used to set energy-saving mode.
The operator can use two energy-saving modes:	
	• Hibernate
	→ Hibernate start time
	→ Heating restart time
	• Sleep
	→ Sleep temperature (40°C (104°F) to 140°C (284°F))
	→ Idle time before sleep mode
	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. Simply touch
	the screen or start a cycle to exit energy-saving modes that are currently running.
-	
i	The "i" at the top right provides key information about the software version.
-	
<u>ئ</u>	The diagnostic button brings up the machine status so you can see if there are currently any malfunctions.

î

The padlock icon can only be accessed by an approved service technician.



### List of alarms/events:

Alarm 01: Probe PT100	🔔 🌡 💉	Probe signal lost (sensor or cable). The heating control is instantly disabled.
Alarm 02: Overheating. Temperature above 220°C		Temperature reading above 230°C. The heating control is instantly disabled.
Alarm 06: Upper pressing sensor not reached		Signal not detected after 5 seconds. Caused by faulty sensor, lack of com- pressed air supply, jamming (mechanical, etc)
Alarm 07: Lower pressing sensor not reached		Signal not detected after 5 seconds. Caused by faulty sensor, lack of com- pressed air supply, jamming (mechanical, etc)
Alarm 10: Communication error	🛕 F 🇞	Communication lost between power board and screen board. Contact your stockist.
Alarm 13: Temperature not reached		Blocks first cycle start request. Permits cycle start at second request (forced start despite setpoint not being reached).

Press the red/orange area to clear the fault.



#### 4.2.7 Error messages

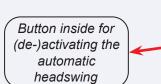
Message on display	Cause	Effect
Er1	Temperature sensor defective	Heating relais switches off
Err	Defect in the ambient temperature sensor of the electronics	Heating relais switches off
Col	Display connection alarm	Relais switches off

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

### 4.3 Automatic head 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.







# 5. Overview of safety measures and warnings

#### 5.1 Safety

The NL-35 v.3 is equipped with all mandatory safety requirements that apply according to the European guidelines for machine safety.

#### The emergency stop button

As required in the guidelines for machines, the machine is provided with an emergency stop button. Press in case of emergency!

Turn the button anti-clockwise to unlock again and the machine will reset automatically.





## ATTENTION!

Warning symbols:

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



## **ATTENTION!**

Make sure you are informed about the contents of this manual before starting to work with the NL-35 v.3. 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 fabrics tight around the lower platen and ensure that your hands are away from the machine before operating the machine.



# 6. Technical specifications

### 6.1 Specifications of the NL-35 v.3

Energy consumption during heating up Connection voltage Temperature range Press Time range Height (opened) Width Depth (with connections) Net weight Dimensions of press cushion Fuses 2 x A-weighted sound pressure Compressed air consumption @ 4 bar Compressed air consumption @ 6 bar Compressed air consumption @ 8 bar Pre-pressure Maximum pressing force

2500 Watt / 230 Volt 50/60 Hz 230 Volt 0-220 °C 0-59 min. 59 sec. 621 mm 572 mm 847 mm 71 kg 400 x 500 mm T16A250V <70 dB (A) 3.19 L/cycle 4.78 L/cycle 6.37 L/cycle > 3 bar - < 8 bar 628 DaN at 8 bar





# 7. Transport and storage

#### 7.1 Transport

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

#### 7.2 Storage

If the machine has to 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. Depending on the work to be performed, the power supply or the air supply can be disconnected. The air cylinder and other parts of the machine are virtually maintenance-free.

However, the condition is that clean and dry air is used for the heat seal machine.

The applied water separator / pressure regulator is an extra safety.

Have your machine serviced by technically qualified personnel. Moisture and polluted air disturb the sustainable lubrication of the air cylinder.

## **ATTENTION!**

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

#### **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.

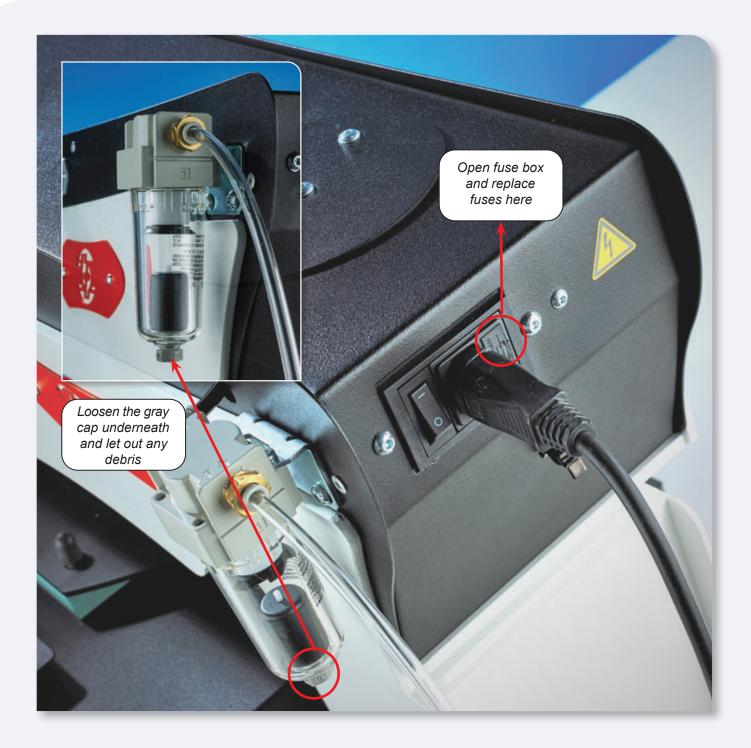
#### Air filter:

The air filter, or the water separator / pressure regulator, must be checked daily and, if necessary, emptied by opening the cap on the underside of the filter.

#### **Replace the fuses**

Make sure that the machine is switched off and that the power cord is unplugged! Replace the T16 A fuses at the back of the machine. Then plug in the power cord again and the machine is ready for use again.







# 9. Technical Annexes

9.1 Spare Parts

Reference	Description	Quantity
	ELECTRICAL PARTS	
SPA3X-028	MAIN ELECTRONICS	1
SPA27-005	MICA HEATING ELEMENT 400x500 2500W	1
SPA3X-029	TEMPERATURE PROBE	1
SPA3X-003	FUSE 5 x 20 mm T 16 A 250 V	2
	PNEUMATIC PARTS	
SPA3X-204	CYLINDER Ø100 C50	1
SPA3X-205	AIR FILTER	1
SPA3X-206	SOLENOID CONTROL VALVE 5/2 G1/8 12V	1
	TEFLON and SILICONE RUBBER	
SPA3X-100-7	FOAM 9.53 mm 400 x 500	1
SPA3X-006/E	TEFLON SHEET	1

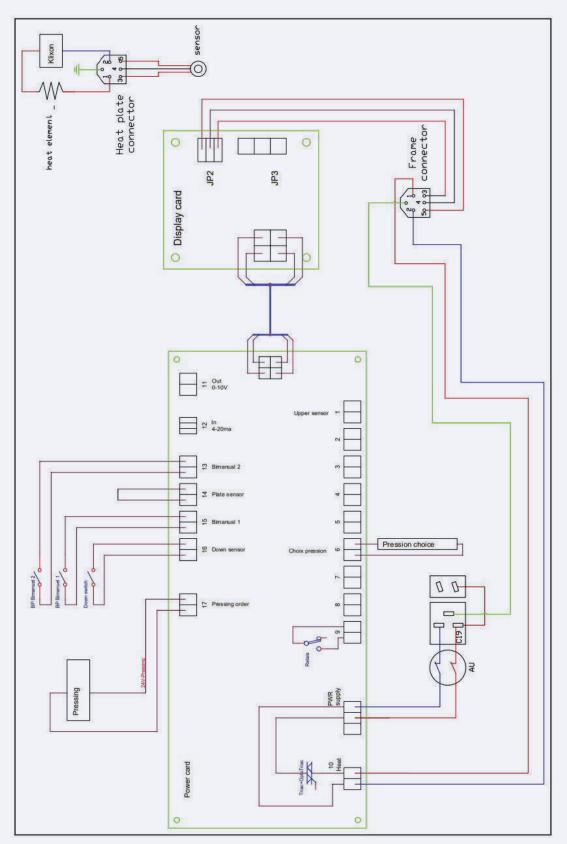


## Troubleshooting

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 placed in the fuse holder next to the power cord connector.
The heating platen 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 press head does not lower	The buttons are not working Leaking cylinder Too low pressure on air supply	Check the connections Check the seals and all connections, contact your supplier Check the valve couplings, contact your supplier for replacement Check that the air supplied is above 3 bar
The press head does not come up	Faulty solenoid control valve Leaking cylinder	Check the valve couplings, contact your supplier for replacement Check the seals and all connections, contact your supplier
The press head stays down after pressing	The timer is not counting down	See above

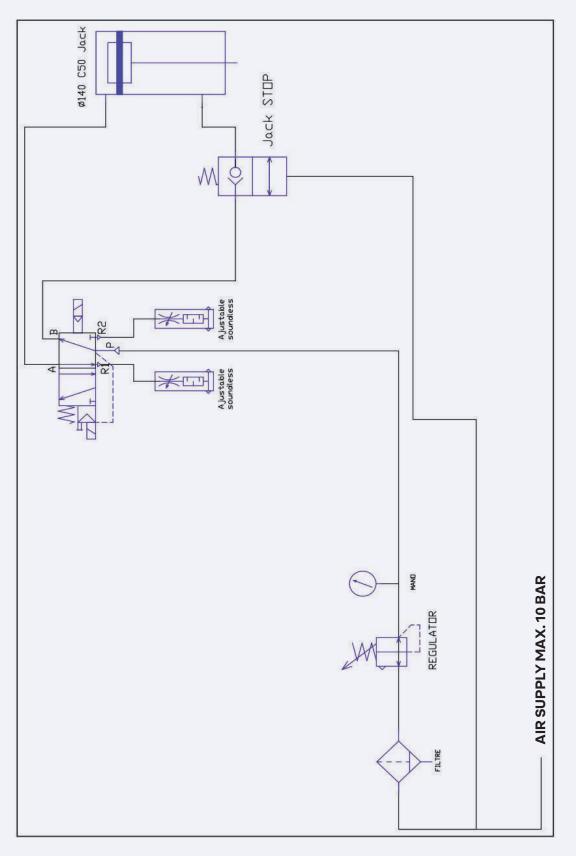


## 9.2 Electrical diagram





## 9.3 Pneumatic 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.

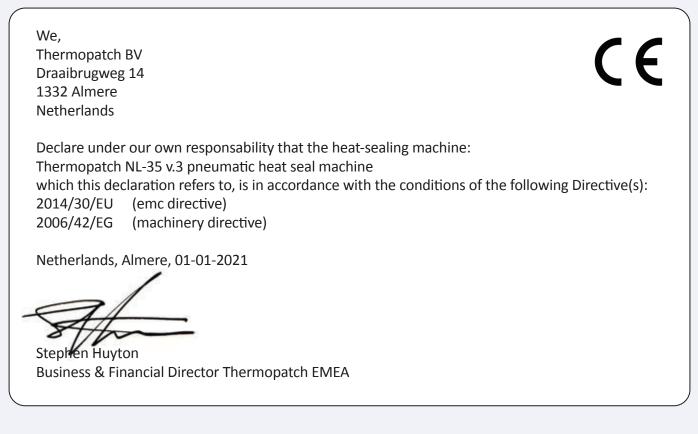
- Dismantle the machine groups: steel parts / pneumatic components / electrical components
- These can be separated and returned for recycling.



## **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 BV Draaibrugweg 14 1332 Almere Netherlands declare that the DoC is issued under our sole responsibility and belongs to the following product: Thermopatch NL-35 v.3 pneumatic heat seal machine, 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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Thermopatch BV, its subsidiaries, the directors, employees, and agents cannot be held liable for the use and reliance of the opinions and findings in this document.

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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