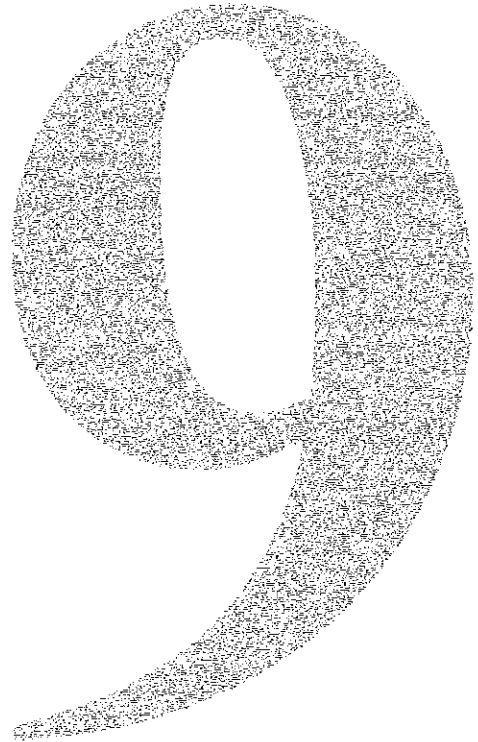


Thermoseal NL 9R

User's Guide



Copyrights

© 1998, Worldpatch International, Almere, the Netherlands. No part of this publication may be reproduced by any means without the prior written permission of Worldpatch International, the Netherlands.

Worldpatch and the Worldpatch logo, Thermoseal, Topline and Thermocrest are registered trade marks of Worldpatch International.

Worldpatch International
Draaibrugweg 14, 1332 AD Almere (the Netherlands)
PO Box 50052, 1305 AB Almere (the Netherlands)

Telephone number: ++31 36 5491177
Fax number: ++31 36 5328967
E-mail: info@worldpatch.com

Preface

Dear user,

Welcome to the large group of Worldpatch users! The product you have bought has been taken good care of since the moment it was produced. We do all we can to ensure that you will have much profit from this Worldpatch product.

In the first place we help you along with this user's guide. Worldpatch products have been developed with extra attention for your convenience. However, we suggest that you go through this manual, to prevent accidents while using the machine.

In this manual you will find information concerning the NL-9-R of Worldpatch in Almere (the Netherlands). This user's guide is meant for all users of the machine, but also for the people who will install and maintain the NL-9-R. You can read about the installation, the maintenance and the various components of the NL-9-R, but of course also about operating the machine.

In case there were any damages on receipt of your product, please contact your Worldpatch distributor.

Contents

1. Introduction Thermoseal NL 9R	1
1.1 What did you receive?	1
1.2 Your supplier	2
1.3 Specifications of the Thermoseal NL 9R	3
1.4 Safety	4
1.5 Conditions for guarantee and product liability	5
2. Installation	6
2.1 Handling instructions	6
2.2 Installing the machine	6
2.3 Assembly	6
3. How to operate the NL 9R	7
3.1 Starting with the NL 9R	7
3.2 Function	7
3.3 The control panel 'smart box'	8
3.4 Safety facilities	8
3.5 Temperature settings	8
3.6 Temperature check	9
3.7 Setting and adjusting the pressure	10
3.8 Time settings	11
3.9 Protection against overheating	11
4. Maintenance	12
4.1 General	12
4.2 Replacing the control panel the 'smart box'	13
5. Functions of the 'smart box'	14
5.1 Illustration of the 'smart box'	14
5.2 Messages in the LED display	15
5.3 Changing the settings	16
5.4 Setting the temperature with the 'smart box'	17
5.5 Press time settings on the 'smart box'	17
5.6 Pressure settings on the 'smart box'	18
6. Trouble shooting	19
7. Accessories and components	21
7.1 Components that should be replaced regularly	21
7.2 List of components (see drawings from page 28 onwards)	22
7.3 Order form components Thermoseal NL 9R	24
8. Drawings and diagrams	25
8.1 Exploded view NL 9R	25
8.2 Wiring diagram NL 9R	25
8.3 Overview electronics and air pressure NL 9R	25

1. Introduction Thermoseal NL 9R

1.1 What did you receive?

The Thermoseal NL 9R has been packed in a cardboard box. The following articles should have been delivered:

- ◆ Thermoseal NL 9R heat seal machine
- ◆ Control panel ('smart box') with cable and plug
- ◆ Holder for control panel
- ◆ Water condenser
- ◆ Foot pedal with cable and plug
- ◆ User's Guide

If one of these articles is missing, please contact your Worldpatch distributor.

1.2 Your supplier

Worldpatch
Draaibrugweg 14, 1332 AD Almere (the Netherlands)
PO Box 50052, 1305 AB Almere (the Netherlands)

Telephone number: ++31 36 5491177
Fax number: ++31 36 5328967
E-mail: info@worldpatch.com

You can easily order supplies or components for the NL 9R from your Worldpatch distributor by filling in the order for (page 24), preferably by fax. Please write down the correct part from the list on page 22 of this user's guide and give the quantity of the items you want to order.

1.3 Specifications of the Thermoseal NL 9R

The pneumatic NL 9R is a practical and universal heat seal press. Textile labels, company emblems, repair patches, transfers, in short all Worldpatch materials for marking and repair are easily and permanently pressed on all types of fabric. The machine is operated with a foot pedal. The adjusted time, pressure and temperature can be read from the control panel.

The Thermoseal NL 9R meets the German GS standard under no. 93032 and it also meets the European CE criteria 89/392/EWG and 91/368/EWG.

If the pressure or the temperature are incorrect, or if the machine gets jammed, you cannot patch.

The machine opens immediately by touching the contact area below the safety frame. Another safety measure that is available is the mechanic switch.

Attention !In order to achieve the required pressure, the NL 9 must be connected to a compressor with a pressure of at least 6 bar. The air must be dry and clean. You can install a control unit that prevents the pre-pressure from exceeding 6 bar.

By using different sizes of press plates you can influence the maximum pressure of the NL 9.

The pressure in kg per cm² is:

PRESS PLATE Dimensions (mm)	PRESSURE		
	4 bar	5 bar	6 bar
130 x 100	1.2 kg	1.5 kg	1.8 kg
130 x 50	2.4 kg	3 kg	3.6 kg
130 x 25	4.8 kg	6 kg	7.2 kg

Specifications

Power consumption.....	400 watts
Power supply	220/240 volts
Fuses.....	2 x 2.5 amps (slow)
Operating temperature.....	204 °C
Safety temperature	190 - 220 °C
Pre-pressure	< 6 bar
Pressure range.....	4-6 bar
Safety settings pressure	3.8 / 6 bar
Air consumption per cycle	1 litre
Height (open).....	460 mm
Height (closed).....	220 mm
Width.....	170 mm
Depth (connections included).....	500 mm
Press time	1 second - 4 minutes
Press pad dimensions	130 x 100 mm
Available press pads (extra) ...	130 x 50 and 130 x 25 mm
Net weight	20 kg
A-weighted noise level.....	< 70 dB (A)

1.4 Safety

The Thermoseal NL 9R meets the German GS standard under no. 93026 and also meets the European CE criteria 89/392/EWG and 89/368/EWG. In normal circumstances almost nothing can go wrong. For safety reasons, however, we provide you with some instructions by means of which you can keep the risks to a minimum.

- ◆ Always switch off the power (pull the plug out of the socket) when you do maintenance work or clean the machine.
- ◆ Take care that there is enough space around the machine. Cables and connections must not get jammed. Although the heat radiation of the press is low, there should be enough space for cooling down.
- ◆ Avoid contact with the press element and the heating element.
- ◆ Pull the fabrics tight around the press pad and ensure that your hands are away from the pad before operating the foot pedal.

1.5 Conditions for guarantee and product liability

Worldpatch guarantees a correct working of the machine and its components for twelve months.

2. Installation

2.1 Handling instructions

When you receive the machine, it is packed in a cardboard box. If you have to replace the machine at a later time, it is recommended to pack it in a similar way. Please let the press cool down first.

2.2 Installing the machine

Take the Thermoseal NL 9R out of the box and put the machine on a work table near an earthed 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.

Connect the 'smart box' to the back of the machine and tighten the screws of the flat plug.

The Thermoseal NL 9R should be connected to the electricity grid (220 V alternating current).

Use the machine's power cable to provide current. The NL 9R is an earthed machine and has been provided with two fuses of 2.5 amps (slow).

2.3 Assembly

In order to operate the NL 9 without trouble, it is very important that the machine uses **clean, dry air**. The available water condenser is only an extra safety measure for your machine. The user must take care that the air pressure does not exceed 6 bar. In order to work without problems, there should be an air volume of 0.28 litres per second.

- a Fasten the water condenser at the back of the machine if it is loose. Due to the soft gasket, the water condenser can be turned vertically.
- b Connect an air hose with a diameter of 6 mm to the compressed air unit in your company and also connect it to the condenser of the NL 9.
- c Install the foot pedal in such a way that the cable runs underneath the table to the back of the machine. Put the plug in the machine and screw it tight.
- d Place the control panel plug at the back of the machine as well and screw the panel tight by means of the two screws.

3. How to operate the NL 9R

3.1 Starting with the NL 9R

You can work with the NL 9R when the machine is connected to the electricity grid (see chapter 2).

- 1 Set the air pressure.**
Keep the requirements and procedures in mind which have been discussed in chapter 2.
- 2 Turn on the NL 9R.**
You can find the on/off switch on the back of the machine.
- 3 Wait until the standard temperature has been reached.**
This will take ten to fifteen minutes. The standard operating temperature has been set to 204 °C.
- 4 The press can be operated now.**

3.2 Function

Immediately after turning on the NL 9, a number for the machine will appear in the LED display of the 'smart box'. For the NL 9, it is number 9. The programme version of the electronics is subsequently shown.

A dot in the field of the upper plate heating and two vertical lines indicate that the machine is heated. You can only operate the NL 9 when the temperature is displayed. This will only happen if the entire display is filled with lines and the default minimum temperature has been reached.

If the pressure is not correct while warming up, the dot and the two lines in the field PRESS. will blink. After warming up, the message 'S' with the number 5 or 6 will appear, instead of the temperature. This message will be alternated with the value of the incorrect pressure.

It is possible to test and adjust the pre-pressure. If the pressure on the press cylinder is too low, you can adjust the pressure regulating valve, which has been built in at the back of the machine.

If any errors are noticed during the warming up of the NL 9, these will be indicated as failures as well. See page 14 about the error codes of the 'smart box'.

After the warming up, the control panel normally shows a temperature of about 204 °C, after which the machine can be operated. This is done by the foot pedal.

3.3 The control panel 'smart box'

The pressure, temperature and time are shown in the LED display. The minimum, maximum and default values for temperature and pressure have been set by the manufacturer. However, they can be adjusted for each user. Read the instructions on page 14.

The settings of the press time depend on the operations to be done and on the materials that will be used. See the settings for marking and repair, page **Error! Bookmark not defined.**

3.4 Safety facilities

The NL 9 has been equipped with a double structure, namely sensor technique and mechanical technique. The upper shoe of the NL 9 is enclosed by a safety frame. The machine can be opened with a light touch. The control panel confirms the touching of the frame with a beep. The machine can only be operated again after a short period of time.

It may be that you correctly set all instructions, but that the machine opens immediately without sealing. The reason for this can be that the sensor is activated by metal parts, like zips, buttons, etc. If you cannot put the fabrics on the press pad in another way, you should switch off the sensor when using these materials. At the back of the machine, there is a switch, just above the connection of the foot pedal. Do not forget to switch on the sensor again ! It is better to work with the sensor as protection for the hands.

The sensor is a very sensitive element. Its sensitivity is set by the manufacturer under normal conditions. However, it cannot be prevented that conduction can occur by certain rooms or people, which causes the sensor to be activated. Turn to the technical department of your company to correct the sensibility of the electronics.

When the safety frame is operated mechanically (which means that it is raised), the Thermoseal NL 9 is turned off and the machine is opened. The machine must be turned on again.

3.5 Temperature settings

The default operating temperature of 204 °C has been set by the manufacturer. If you want to, a different control panel with another operating temperature and a larger temperature range can be ordered.

Do not try to change the programming of the 'smart box' yourself. In case you want to adjust the operating temperature above or below the default temperature range, please contact your Worldpatch distributor.

The default temperature range is: a minimum of 189 °C, a maximum of 219 °C.

If the temperature exceeds this range, the NL 9 cannot be operated. The temperature settings can be adjusted with the control panel, the 'smart box', see page 16.

3.6 Temperature check

The temperature is displayed digitally by pressing one key. An additional check of the temperature between the press plates can be performed by means of Thermolabels.

To check the temperature, do the following:

- 1 Let the machine warm up for about 30 minutes.
- 2 Set the time to 5 seconds and let the machine close.
- 3 After opening the machine, put the Thermolabel on the press pad and let the machine close again.
- 4 Take the label away immediately after opening the machine.

The optimal temperature has been reached when the fields below the field 182-204 °C are black. The lower limit has been reached when all the fields of 182-199 °C are black and the field below 204 °C is dark grey. The upper limit has been reached when all the fields of 182-204 °C are black and the field below 210 °C is dark grey.

3.7 Setting and adjusting the pressure

The working pressure of the machine has been set to 5 bar. The pressure regulator on the machine only influences the pressure on the press cylinder. The opening and closing of the NL 9 is done with the pressure that is supplied by the machine.

The NL 9 has a pressure safety range. This means that a maximum pressure of approximately 6 bar and a minimum pressure of about 3.8 bar is allowed. When the air pressure exceeds these limits, the machine cannot be operated. You can set the pressure with the control panel, see page 18.

Setting the opening and closing speed and controlling the pressure is done as follows:

a Air pressure settings

You can make these settings with the pressure regulator switch on the right hand side (as viewed from the front of the machine). See the detailed description of the Pressure settings on the 'smart box' on page 17.

b Safety switch

The settings of component no. valve 62 from the exploded view must not be changed. It is a safety switch for protection of the pneumatic parts of the machine.

c Opening / closing

There are speed controls for opening and closing the upper shoe. This is done with both valves no. 56.

d The bottom plate of the machine must be removed to get at the regulating valves, and the plastic box which contains the power supply must be taken out.

Attention! Pull the plug out of the socket before removing the screws!

Lay the machine on its side. The valves can be reached from below. With the help of the exploded view, the position of the regulators can be easily adjusted. By carefully turning the valve, the desired corrections can be done.

- ◆ Before the correction, loosen the nuts; fasten them again after the correction.
- ◆ Turning to the right: slower / more.
- ◆ Turning to the left: faster / less.

Attention ! Never adjust regulating valve no. 62.

3.8 Time settings

The default setting of the NL 9R is 12 seconds. Adjusting the settings can be done with the control panel, the 'control box', see page 17. You can find directions for the time settings of the various products and materials on page 17.

3.9 Protection against overheating

A safety thermostat has been built in on the upper shoe of the machine to prevent overheating. This thermostat interrupts the power supply at a temperature of about 260 °C. After the machine has cooled off to the normal temperature, the thermostat automatically turns on the heating again.

The upper shoe must be disassembled to replace the safety thermostat (component no. AL 49999). Unscrew both clamp screws on the press arm housing.

Attention ! Pull the plug out of the socket before unscrewing the crews!

4. Maintenance

4.1 General

Take care that the work cycle of the machine has been finished before you start working with it. Depending on the actions that must be done, the power supply or the air supply can be disconnected.

a Mechanism

The air cylinder and other parts of the machine do not need maintenance. The bearings are self-lubricating. However, it is a condition that dry and clean air is used for the heat seal machine. The available water condenser is an extra safety measure. Your company should have a well-equipped maintenance service to maintain the machine. Humidity and dirty air disturb a permanent lubricating of the air cylinder. The pre-pressure must not exceed 6 bar !

b Temperature

The temperature of the press plate can be tested regularly by means of Thermolabels.

c Teflon coating

The Teflon coating of the heating plate must always be absolutely clean. If not, patches and labels will stick to the upper plate, or there will be impurities on the products. You can observe this when opening the machine. The fabric is pulled up a little from the lower shoe. Clean the pad with a dry cloth when the machine is still warm. Clean several times a day ! When the Teflon is damaged or cannot be cleaned anymore, replace it immediately.

d Press pad

Clean the coating on the lower shoe, the press pad, regularly with a dry cloth while the pad is still warm. Zips, buttons, staples, etc. must not be put on the pad in order to prevent holes and tears. Never clean the press pad with solvents and thinners or other chemicals. This would absolutely affect the coating. Do not pull the fabrics from the pad after the sealing process, but take it off !

e Replacing the Teflon coating and the lower press pad

The Teflon coating of the upper shoe and the lower press pad must be replaced regularly, depending on their condition. Both are adhesive. The heat seal machine must be cooled down to replace the Teflon ! Pull the old coating off like a plaster. Carefully remove the glue layer from the metal surface. The surface must be absolutely clean and even, so that the new Teflon can stick well. You can find the components on page 21, Accessories and components.

f Air filter

Empty the air filter and, especially, the water condenser daily.

g Cleaning

Besides cleaning the outside of the machine, the inside of the heat seal machine must be cleaned as well. Unscrew the bottom plate and take the frame with the main power supply out.

Attention ! Pull the plug out of the socket before unscrewing the bottom plate !

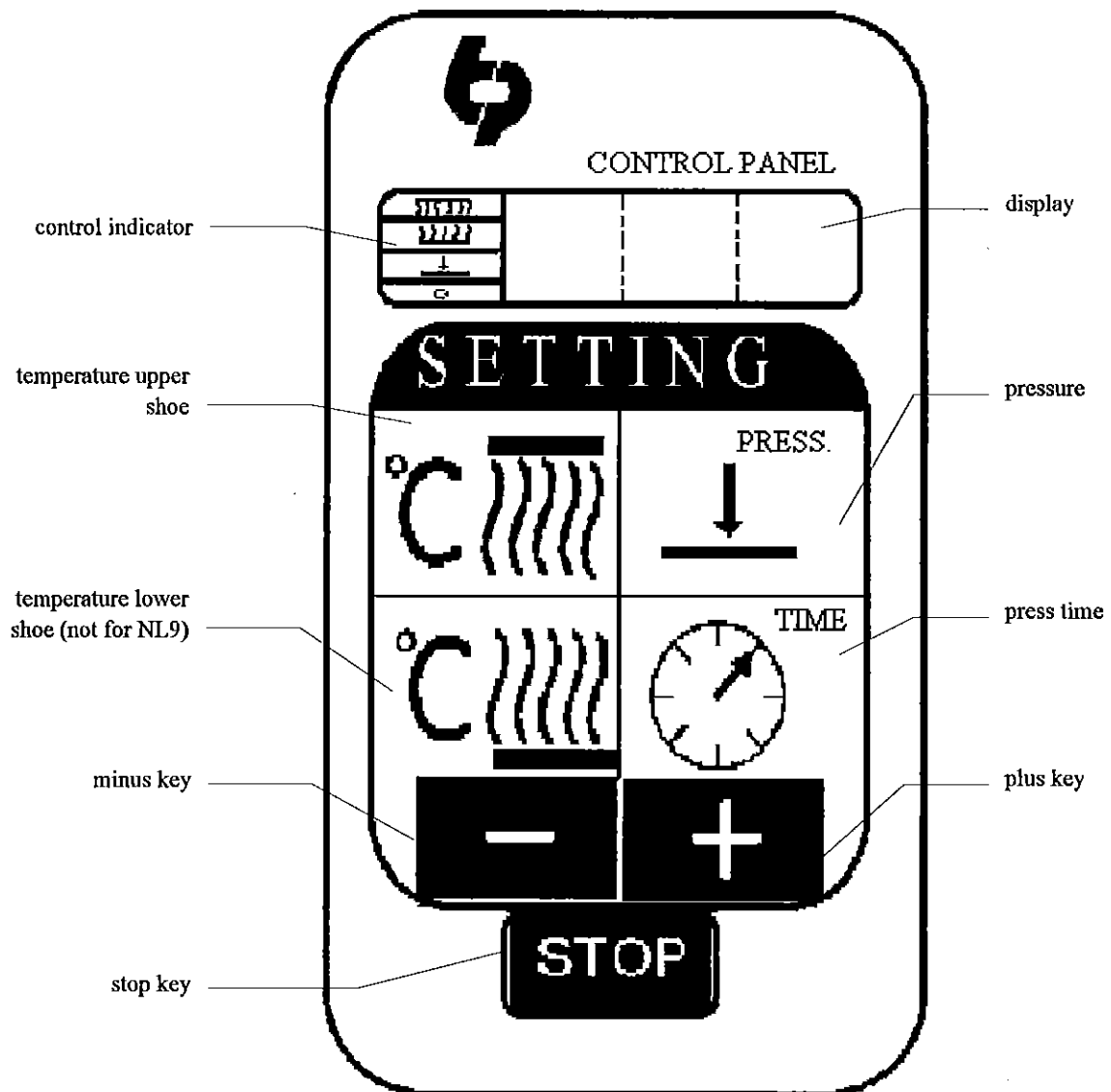
4.2 Replacing the control panel the 'smart box'

Turn off the heat seal machine. It is even better to pull the cable out of the socket !

- a** Loosen both screws by which the flat plug of the control panel is connected to the back of the machine and pull the plug out.
- b** Insert the new electronics in the machine and fasten it with screws.
- c** Turn on the machine and check the message in the display to see if the new electronics is fit for model NL 9 and whether the programme version for your machine is correct or not (see page 15 for further reference).
- d** Each 'smart box' is adjusted by the manufacturer to the machine concerned. The spare part has only default settings. If you want to have specific settings, replacing the control panel has to be done by one of our technicians.
- e** Please check the adjusted time, pressure and temperature after the warming up of the machine and set these values to the values you wish to have.

5. Functions of the 'smart box'

5.1 Illustration of the 'smart box'



5.2 Messages in the LED display

A description is given below of the messages in the display which appear immediately after turning on the machine. Further, we will discuss some failure codes that can be displayed on the control panel display.

Messages

After turning on the machine, the address for the machine for which the electronics has been set, is first shown in the display.

9 is model NL 9

Secondly, the programme version of this 'smart box' is displayed.

21 is version 2.1.

Thirdly, the normal programme functions are displayed.

Failure codes

There are 7 different failure codes that can be displayed.

0	Safety switch not in end position or failure in the 24 Volt circuit of the electronics.
1	Temperature sensor in upper shoe not connected.
2	Temperature sensor in upper shoe is defect.
3	Not displayed for the NL 9.
4	Not displayed for the NL 9.
5	Pressure too low.
6	Pressure too high.

The failures are indicated by 'S -'. The notation is 'S', followed by a dash and a number 0-6.

This message is alternated with the incorrect values that are measured by the electronics.

Some examples:

CODE	EXPLANATION
'S - 5' Alternated by '2.8'	Failure no. 5 Pressure too low, only 2.8 bar.
'S - 1' Alternated by '238'	Failure no. 1 Sensor in the upper shoe not connected; actual temperature is 238 °C.

5.3 Changing the settings

A description is given below of the way in which the settings of the control panel of the NL 9 can be adjusted.



The input of the temperature (in °C), the pressure (in bar) and the time (in seconds) can be checked in the display. In the left part of the display, the symbol of the key which was selected and shortly pressed is indicated by a red indicator. The value on the display refers to this symbol.

The meaning of the symbols is as follows:



1 Temperature symbol

The temperature is given in °C. In the display the latest entered value of the temperature is given. The work setting and the recommended value is 204 °C. The temperature range is a minimum of 189 °C and a maximum of 219 °C.



2 Pressure symbol

The air pressure is expressed in bar. The display shows the latest entered pressure. The range is from about 3.8 bar - 6 bar. These settings only regulate the air pressure. The closing process of the machine is not adjusted.



3 Time symbol

The press time in seconds. The display shows the latest entered press time in seconds. The run down of the press time is displayed by means of a timer.



4 Plus key

By means of the plus key the values can be raised.



5 Minus key

By means of the minus key the values can be lowered.



6 Stop key

After pressing a symbol, the new value is displayed for almost 30 seconds. Restoring the value is done automatically, but by the 'STOP' key is it done immediately.

After changing a value, the corresponding symbol must be pressed at the same time as the 'STOP' key to save the new value.

5.4 Setting the temperature with the 'smart box'

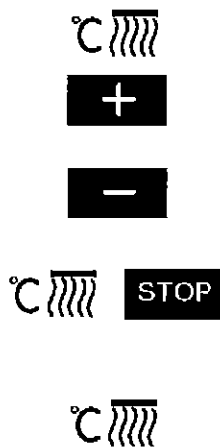
Below we will describe the way to adjust the temperature settings for the NL 9.

Attention ! Let the machine warm up for at least 15 minutes before you make any changes to the temperature setting.

The operating time between two keys must not be more than 8 seconds.

The work settings and the default value is 204 °C. The temperature range is between 189 °C and 219 °C. Settings between 100 °C and 230 °C and longer ranges can be programmed by the manufacturer. It is also possible to program a fixed default value for your machine.

Shortly press the keys explained below:

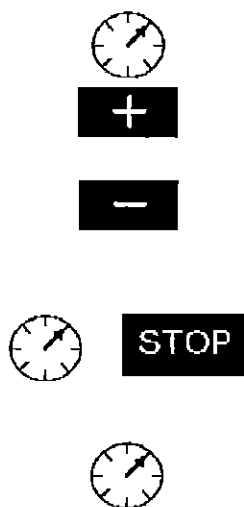


1. Key with the temperature symbol of the upper shoe.	The display shows the last entered temperature.
2. Key '+' If the temperature must be higher.	The value in the display will become higher.
Key '-' If the temperature must be lower.	The value in the display will become lower.
3. Press the temperature key and hold it. Then press 'STOP'. <u>In this order !</u>	The display shows 3 horizontal lines with a dot instead of the temperature value. A beep is also given.
4. Press the temperature key again to check the new value.	The display shows the new value.

5.5 Press time settings on the 'smart box'

The time between pressing the keys must not be more than 8 seconds. The work setting is 12 seconds. The time range is 1 to 255 seconds.

Press the keys explained below:






1. Key with the time symbol of the upper shoe.	The display shows the last entered press time in seconds.
2. Key '+' If the press time must be longer.	The value in the display shows the larger press time in seconds.
Key '-' If the press time must be shorter.	The value in the display shows the shorter press time in seconds.
3. Press the time key and hold it. Then press 'STOP'. <u>In this order !</u>	The display shows 3 horizontal lines with a dot instead of the time value. A beep is also given.
4. Press the time key again to check the new value.	The display shows the new value.

5.6 Pressure settings on the 'smart box'

The work setting is approximately 5 bar. The value '50' in the display means 5.0 bar. The pressure range is 4 - 6 bar.

The pressure regulating valve is on the right side of the housing, as seen from the front of the machine. To adjust the pressure, the valve must be pulled out a little to be unlocked. When turning the valve to the right, the pressure becomes higher. If turned to the left, the pressure becomes lower. After adjusting the pressure, press the valve in again. This valve only changes the air pressure and does not change the opening / closing pressure of the upper shoe.

The proceedings are as follows:

- 1 Set the press time to 2-3 seconds (see the setting of the press time above).
- 2 Pull the pressure regulating valve out and unlock it.
- 3  Pressure key.
The display shows the latest entered air pressure in bar.
- 4 Set the correct pressure on the display by means of the valve and close the press plates. After opening the plates, check the air pressure by pressing the symbol key. When the displayed setting is not correct, you must repeat adjusting the opening/closing process until the correct values +/- 0.2 bar appear. The value is displayed for almost 30 seconds.
- 5 Press the regulating valve again to lock it.
- 6  Press 'STOP'
Pressing this key will set the electronics in the working position.
- 7  Check again by pressing the pressure symbol, if you want to.
- 8 Set the press time to the correct value again !

Attention ! If the requested pressure even after turning the valve up to the correct position is not reached then there is insufficient pre-pressure (input pressure). Check the pressure pipe. The pressure must not exceed 6 bar !

6. Trouble shooting

Failure	Possible causes	Solution
Heating plate remains cold	<ol style="list-style-type: none"> 1. ON/OFF switch is not set to ON 2. Machine is not connected to the electricity grid 3. Electronics not connected to the machine 4. Temperature sensor defective 5. Electronics wrongly set 6. Electronics defective 7. Heating element defective 8. Safety thermostat against overheating was activated and has not been turned on after cooling down 	<p>Check Put the plug into the socket Check</p> <p>Replace Correct Replace Replace Check thermostat and, if necessary, replace it</p>
Heating plate becomes too hot or too cold	<ol style="list-style-type: none"> 1. Check set value by pressing symbol key 	Set correctly
Indicator blinks during the warming up and the red dot of the check box is on the field PRESS.	<ol style="list-style-type: none"> 1. Insufficient pressure 	Set the pressure correctly
After the warming up, the indicator does not show the temperature, but the pressure	<ol style="list-style-type: none"> 1. Insufficient pressure 	Set the pressure correctly
Machine opens too early	<ol style="list-style-type: none"> 1. Check set value by pressing the symbol keys 2. Safety frame was touched 	<p>Set correctly</p> <p>Put textile correctly on the pad</p>
Machine cannot be closed	<ol style="list-style-type: none"> 1. Foot pedal not connected 2. Incorrect pressure or temperature 	<p>Check</p> <p>Check</p>
Machine is closed, but does not seal	<ol style="list-style-type: none"> 1. Pressure too low 2. Textile too thick, machine cannot be locked 	<p>Check air pressure system</p> <p>Put textile correctly on the pad</p>

<p>Insufficient adhesion of patches, label tapes, labels or fixing of the transfers</p>	<ol style="list-style-type: none"> 1. Press time too short 2. Incorrect pressure 3. Heating plate too cold 4. Press pad of lower plate worn out 5. Teflon below heating plate dirty or defective 	<p>Increase time settings by 2 seconds and check results Set pressure correctly with knob and check results Check temperature Replace Clean with soft cloth or replace</p>
<p>Transfer colour or layer penetrates</p>	<ol style="list-style-type: none"> 1. Time setting too long 2. Temperature too high 	<p>Decrease time setting Reduce temperature</p>

7. Accessories and components

7.1 Components that should be replaced regularly

◆ Press plates (lower press pad)

130 x 100 mm	N 9 - 9012 / 9015	standard
130 x 50 mm	N 9 - 9013 / 9016	extra
130 x 25 mm	N 9 - 9014 / 9017	extra

◆ Press pad with thin metal plate, self-adhesive

130 x 100 mm	N 9 - 9015
130 x 50 mm	N 9 - 9016
130 x 25 mm	N 9 - 9017

◆ Teflon coating, self-adhesive

130 x 100 mm	N 9 - 9000
--------------	------------

◆ Fuses

2 x 2,5 A (slow)	CE-2497
------------------	---------

7.2 List of components (see drawings from page 25 onwards)

Drawing no.	Component no.	Description
1	N9 9101B	Housing
2	N9 9002B	Housing upper shoe
3	N9 9003	Holder
4	N9 9004	Locking handle, left
4A	N9 9004A	Locking handle, right
5	N9 9005	Axis
6	N9 9006	Hinged plate, left
6A	N9 9006A	Hinged plate, right
7	N99007	Hinge holder
8	N9 9108B	Cover plate
9	N9 9109	Bush
10	N9 9110B	Power supply complete, with power cable N 9 - 9092
11	N9 9111	Guide plate for lower shoe
12	N9 9012	Lower plate 130 x 100
13*	N9 9013	Lower plate 130 x 50
14*	N9 9114	Lower plate 130 x 25
15	N9 9015	Silicone rubber plate 130 x 100
16*	N9 9016	Silicone rubber plate 130 x 50
17*	N9 9017	Silicone rubber plate 130 x 25
18	N9 9018	Pressure axle
19	N9 9019	Insulating block
20	N9 9020	Lower heating plate
21	N9 9021B	Upper heating plate
22	N9 9122	Air cylinder
22A*	N9 9122 REP	Repair kit for air cylinder
23	N9 9023	Opening / closing cylinder
24	N9 9024	Safety frame
25	N9 9025	Bar for safety frame
26	N9 9026	Hinge bolt, 16 mm
26A	N9 9026A	Hinge bolt, 20 mm
27	N9 9027	Nut M10
28	N9 9028	Fillister head screw M6x20
29	N9 9029	Fillister head screw M12x9
30	N9 9030	Nut M12
31	N9 9031	Fillister head screw M6x10
32	N9 9132	Sensor chassis
33	N9 9133B	Bottom plate
34	N9 9034	Fillister head screw M6x16
35	N9 9035	Fillister head screw M3x10
36	N9 9036	Ring M3
37	N9 9037	Rubber foot
38	N9 9138	Hexagonal screw M6x50
39	N9 9139	Fitted screw M8x25
40	N9 9040	Countersunk-head screw M6x20
41	N9 9041	Fillister head screw M5x40
42	N9 9042	Fillister head screw M6x10
43	N9 9143	Guide plate N9-9110
44	N9 9144	T-piece
45*	N9 9145	Straight hose connection
46	N9 9146	Cross-slotted screw M4x16
47	N9 9147	Gear wheel M4

Drawing no.	Component no.	Description
48	N9 9148	Nut M3
49	N9 9149	Cable guide
50	N9 9150	Back plate for microswitch
51	N9 9051	Hose connection, air connection
52	N9 9052	Air filter
53	N9 9053	Shoulder nipple
54	N9 9054	Connecting piece, wall brace
55	N9 9055	T-piece
56	N9 9056	Regulating valve for opening/closing
57*	N9 9157	Coupling regulating valve
58	N9 9058B	Air pressure regulating valve
59	N9 9059	Angle hose coupling
60	N9 9060	Angle hose coupling
61	N9 9061	Magnet valve 24 volts
62	N9 9062	Pre-pressure safety regulator
64	N9 9164	Hexagonal screw M3x25
65	N9 9065	Disc M3
66	N9 9066	Nut M3
67	N9 9067	Flat-headed screw M3x10
68	N9 9168	Socket screw M6x20
69	N9 9169	Cross-slotted screw M3 x 7
70	N9 9170	Spring ring M6
71*	N9 9171	Controlled non-return valve
72*	N9 9172	Angle hose coupling
73*	N9 9073	Piston rod packing
75*	N9 9075	Draw spring
76	N9 9076	Gear wheel M12
77	N9 9077	Disc M6
78	N9 9178	Plastic cap
81	N9 9081	Complete 'smart box' electronics
82	N9 9082	Built-in plug and socket connection for 'smart box'
83	N9 9083	Mains guide plate 24 Volt
84	N9 9084	Fuse holder
85*	CE 2497	Fuse 2.5 A
86	N9 9086	Microswitch for safety frame
87	N9 9087B	Heating element 220/400 watts
88	N9 9088	Temperature sensor PT 100, 50 x 3 mm
89	N9 9089	Air pressure sensor with cable
90	N9 9090	Foot pedal with cable
91	N9 9091	Built-in plug for N9-9090
92	N9 9092	Connection cable with plug
93	N9 9093	Connection cable for magnet valve
94	N9 9094	Plug
95	N9 9095	On/off switch
96	N9 9096	Teflon coating, self-adhesive
97*	N9 9097	Holder for 'smart box'
98	N9 9098	Cable input
99	N9 9099	Plug connection
100	AL 49999	Safety thermostat
101	N15 068	Tumbler
102	TP 0522	Solid state relay

* not represented

7.3 Order form components Thermoseal NL 9R

If you want to order components for the Thermoseal NL 9R, copy this form, fill it in and send or fax it to your Worldpatch distributor.

Drawing no.	Component no.	Description	Quant.

SENDER:

Company name: _____

Contact: _____

Address: _____

Postcode and town: _____

Telephone number: _____

Fax number: _____

Date: _____

8. Drawings and diagrams

On the next pages the following drawings are given:

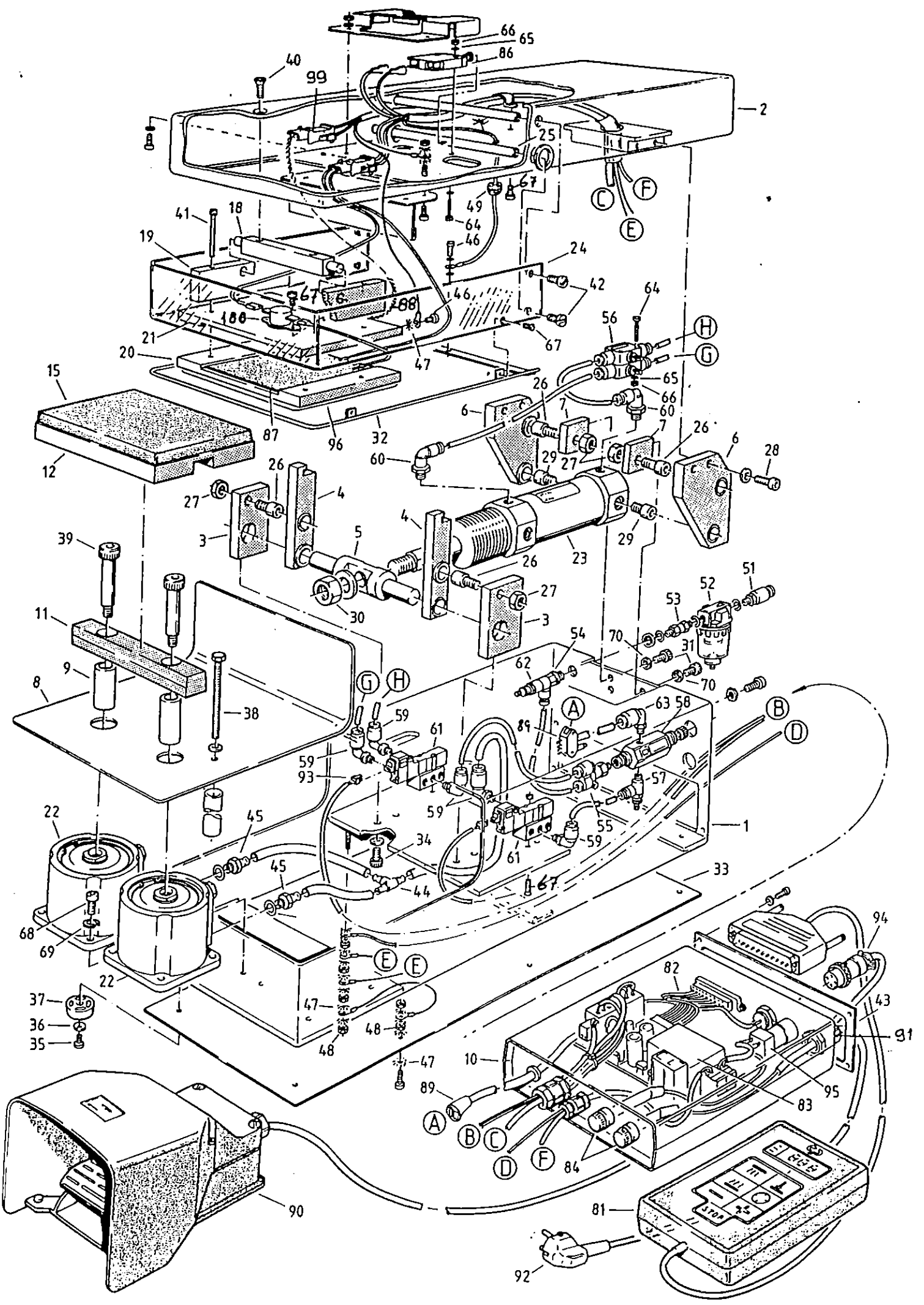
8.1 Exploded view NL 9R

Meaning of the letters on the exploded view:

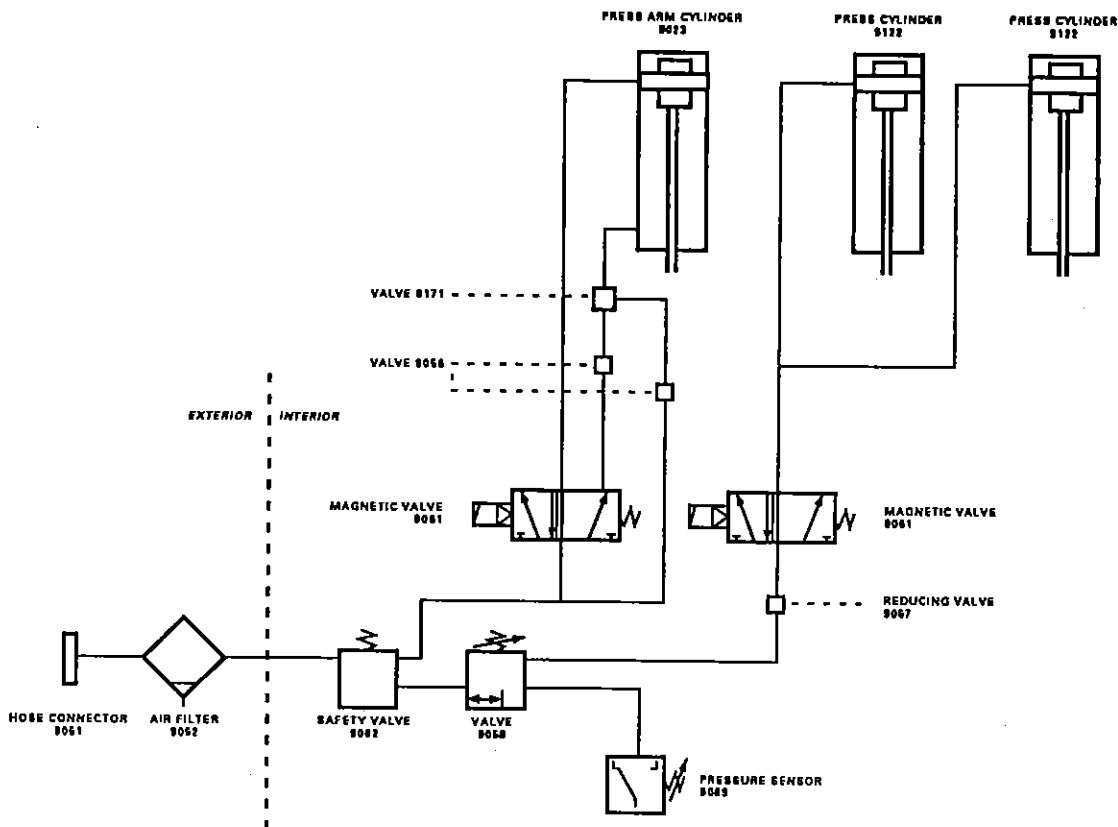
LETTER	MEANING
A	Cable connection to air pressure sensor.
B	Cable connection to magnet valves.
C	Cable connection to heating element.
D	Main earth leakage switch.
E	Earth cables inside the machine.
F	Cable connections to the safety bracket switches and to the sensor frame.
G and H	Air hoses between magnet valves and regulating valves of the opening / closing cylinders.

8.2 Wiring diagram NL 9R

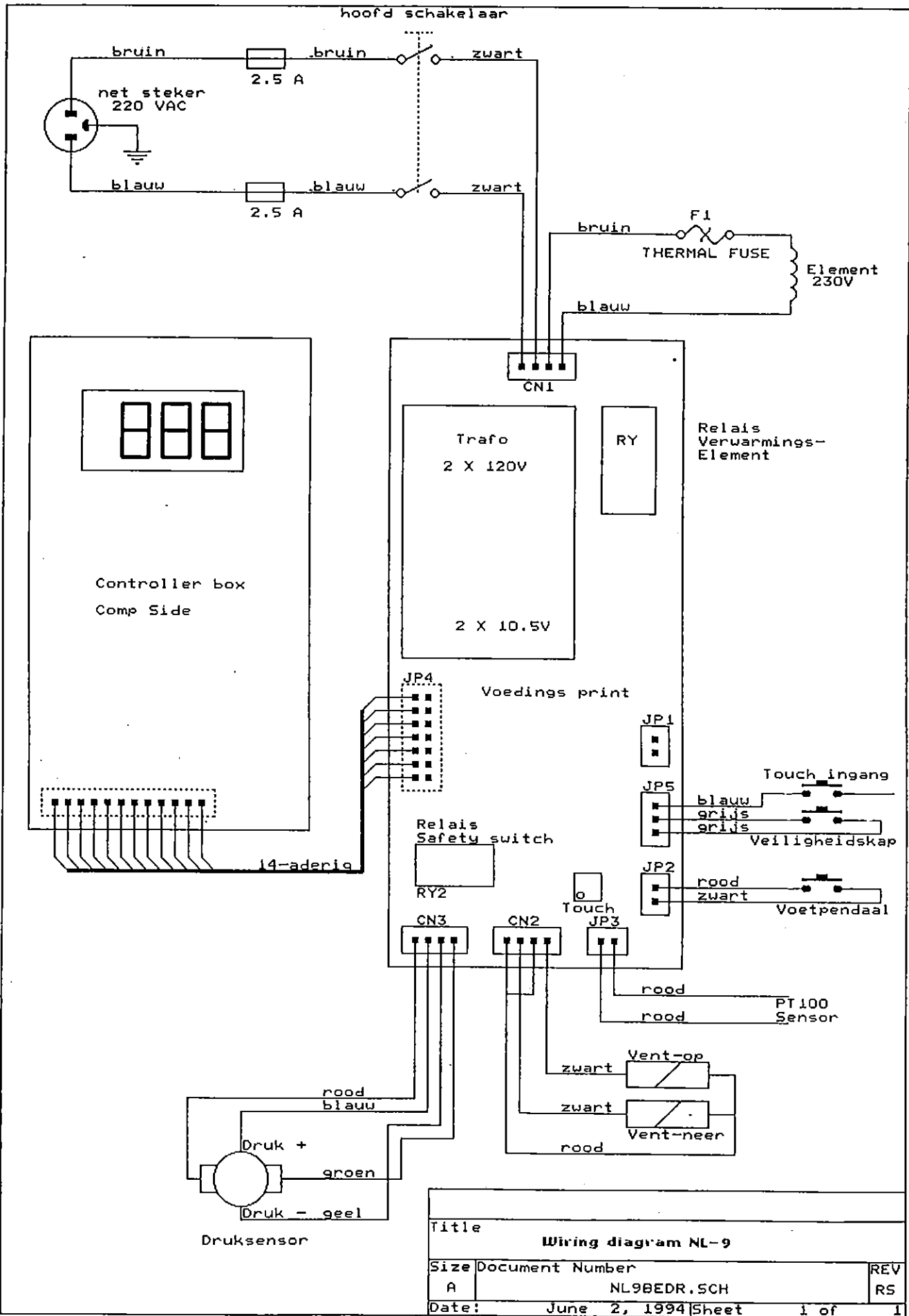
8.3 Overview electronics and air pressure NL 9R



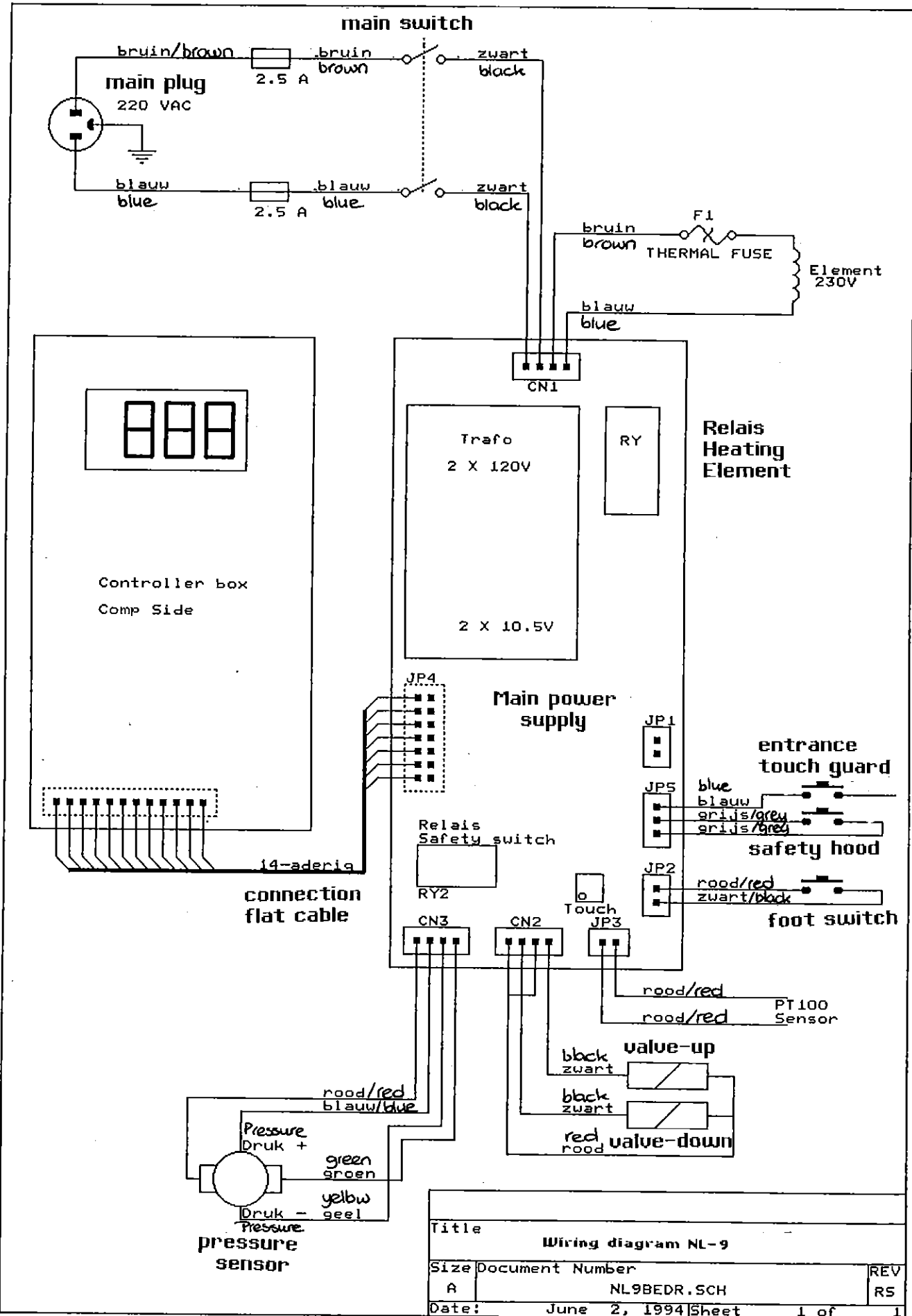
Pneumatisch schema



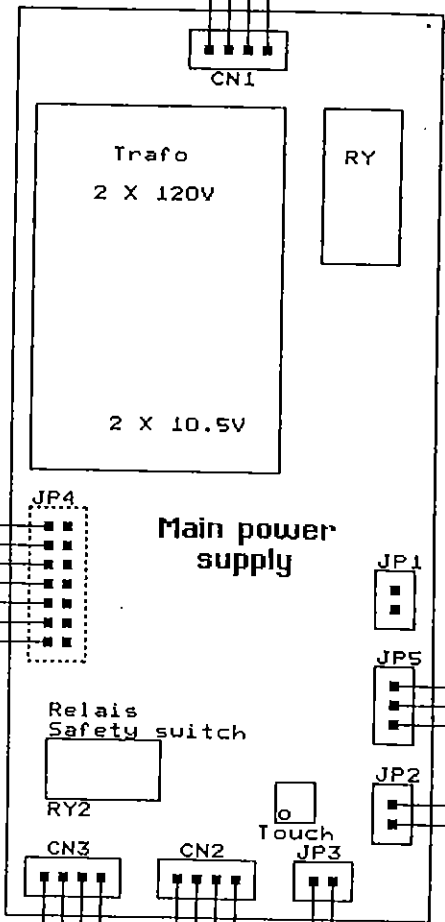
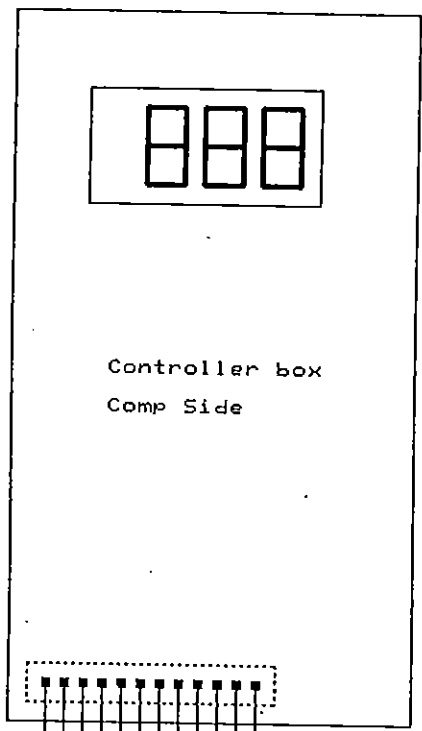
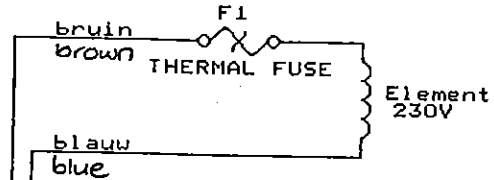
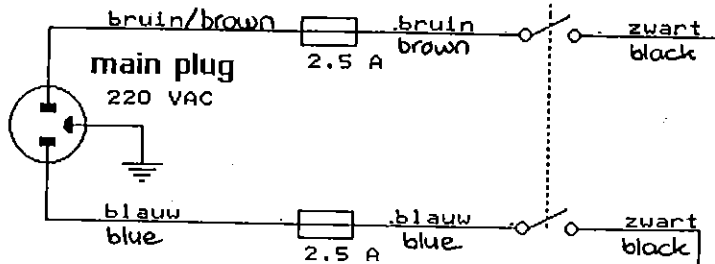
worldpatch	
THERMOSEAL NL 9R	
PNEUMATIC DIAGRAM	
1993 / 11 / 04	



Title		
Wiring diagram NL-9		
Size	Document Number	REV
A	NL9BEDR.SCH	RS
Date:	June 2, 1994	Sheet 1 of 1

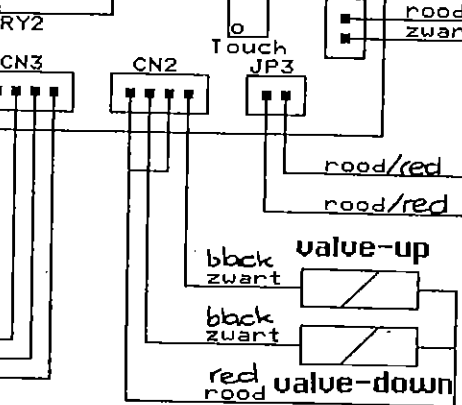
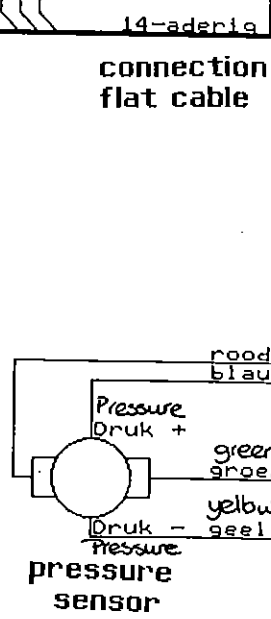
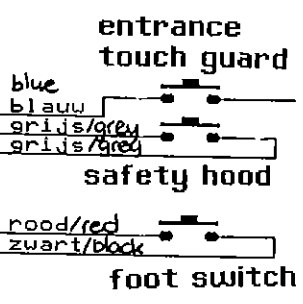


main switch



Relais Heating Element

Main power supply



Title		
Wiring diagram NL-9		
Size	Document Number	REV
A	NL9BEDR.SCH	RS
Date:	June 2, 1994	Sheet 1 of 1