DRUCKTECH

SP-45NA

USER'S GUIDE

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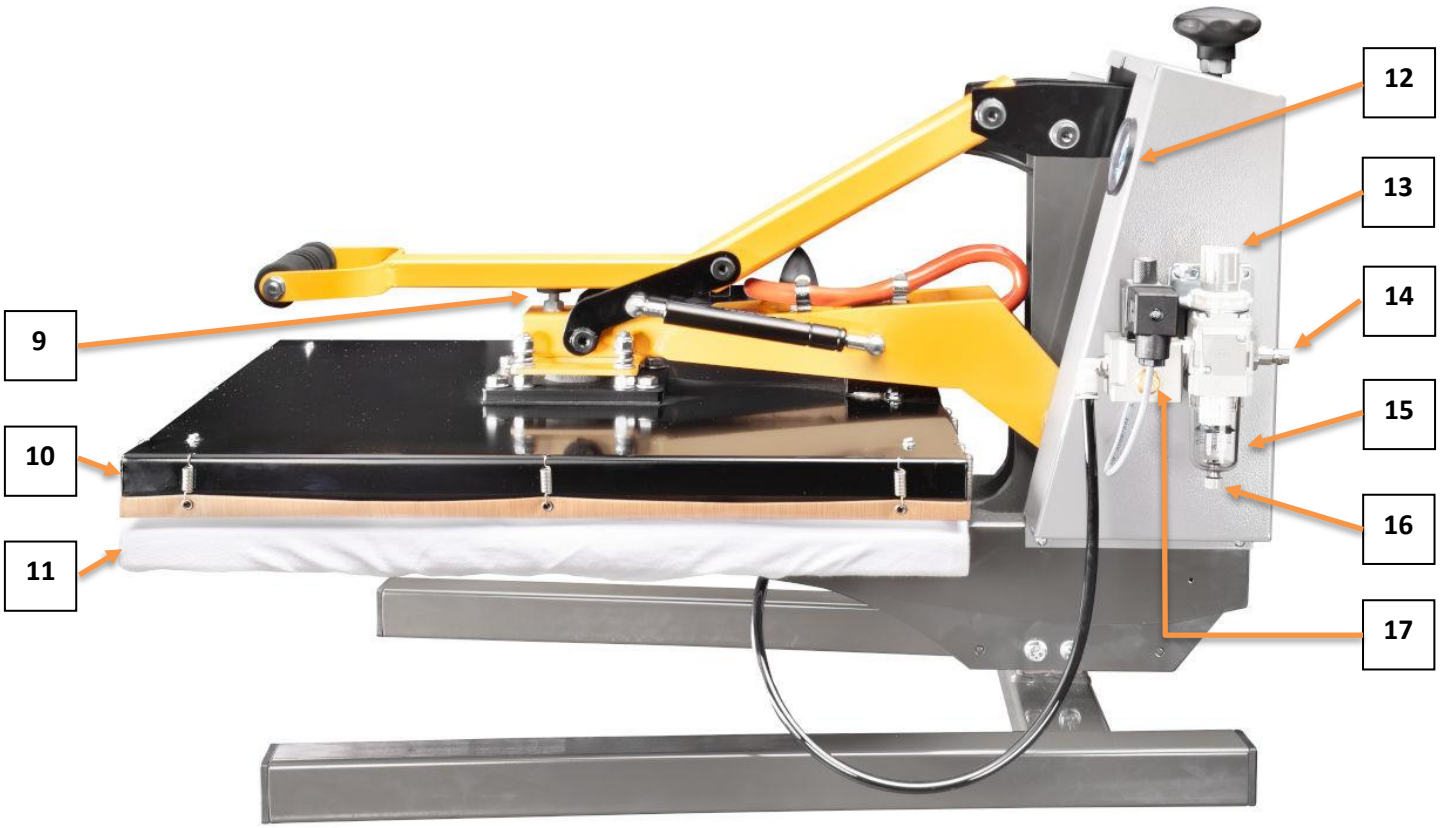
1. TECHNICAL DATA

Type	SP-45NA
Voltage	AC 230 V 50Hz
Rated current consumption	9,3 A
Rating	2140 W
Fuse	16A (6x32mm)
Touch protection class 	I. class (It can only be connected to a socket with a protective contact!)
Timer	0-9999 sec
Temperature	0-230 ºC
Pneumatic connection	max. 10 bar
Standard pressure	0,05 MPa (0,5 bar ~ 0,5 kg/cm²)
Maximal operating pressure (membrane plate)	~0,07 MPa (0,7 bar ~ 0,7 kg/cm²)
Compressed air consumption	15l / min.
Base structure	Surface treated steel structure
Workplate	Steel plate wit a rubber sheet and silicone sponge
Heated plate	Heating element cast into aluminium, with upper heat insulation and lower teflon cover.
Size of heated plate	50 x 40 cm
Maximal material thickness	~ 1,5 cm
Size of machine [W. x H. x D.] (*when open)	47 x 53 (92) x 75 cm
Net weight of machine (with plate)	58 kg
Accessories	1 pc 13 wrench 1 pc white cover 1 pc warranty booklet

2. FIGURES



3. DESCRIPTION

The terminology below will be used repeatedly on the following pages:

1.	thumb screw (for setting the distance between workplate and heated plate)
2.	control unit
3.	main switch
4.	fuses
5.	electric connector of heated plate
6.	base structure of the machine
7.	reset button
8.	handle of heated plate
9.	buffer screw with rubber on top
10.	heated plate
11.	membrane workplate
12.	pressure gauge
13.	air preparatory / control unit (pressure regulator)
14.	connection of compressed air
15.	settling tank of air filter
16.	drain valve of settling tank
17.	copper filter plug

4. SYMBOLS/MARKS

Electrical hazard

Hot surface

Grounding

Main switch

Reset

Fuse (16 amper)

5. SAFETY INSTRUCTIONS

- After removing the packaging, check that the unit is undamaged. If you are in any doubt, do not operate the unit and consult a specialist.
- Keep the packaging materials away from children.
- Caution! Touching hot parts of the appliance may cause burns.
- While using the device, it is forbidden to touch moving parts other than the sponge-covered handle!
- Keep your hands away from the moving heated plate during operation!
- Avoid the appliance's contact with water.
- Unsupervised operation is forbidden!
- Keep the appliance away from children and unqualified personnel.
- In the event of a breakdown or prolonged periods of inactivity, switch the machine off and disconnect it from the mains electricity and compressed air supply.
- If possible, operate the machine directly from the wall socket, avoid using power strips and extension cords!
- If any part of the appliance (wiring, control unit, etc.) is damaged during operation, do not operate the appliance until the fault has been repaired.
- Remember to switch off the power to the appliance and service units at their main switches when you have finished working.
- In the event of a power failure, switch off the appliance using the main switch for safety reasons.
- When using any liquid-soaked material, be very careful of any vapour formation.
- The machine is primarily designed for application of heat transfers on textile materials up to the thickness specified in the instructions. Before using other materials, it is always advisable to carry out a test ironing on a less visible area. For thermoplastic materials, check the heat resistance of the material to be used before starting work.
- Carry out regular electrical safety checks of the equipment in accordance with the regulations.

FAILURE TO COMPLY WITH THE ABOVE MAY ENDANGER THE SAFE OPERATION OF THE APPLIANCE AND YOUR SAFETY!

5.1 Compressed air supply

To operate the heat press, oil-free, clean, dry air must be used, the factory lubrication of the pneumatic cylinders guarantees several years of use without oil lubrication of the air. The membrane plate and the membrane cylinder can be damaged by oil, so we recommend using oil-free compressors if possible.

The use of oil-lubricated compressors is not prohibited (based on many years of experience, there are customers who use them without problems), but it requires extra care!

Select the air compressor according to the value listed on the heat press's technical data sheet. When calculating the compressed air consumption, the average (15 sec) transfer time was taken into account, in the case of a denser cycle, a proportional increase in air consumption must be calculated.

ATTENTION! It is important to check the settling tanks installed on the heat press and the compressor (or the lines) before starting work, because this is where the condensate and oil are collected!

The compressor must be able to produce 2-3 times the required amount of air, because in this case it can cool down during activation.

ATTENTION! In the case of an overheated compressor, condensate and oil precipitation increases!

In the case of oil-lubricated compressors, it is important to check the oil level, a low oil level can cause heating and damage, a high oil level can cause oil wear.

6. SETTINGS

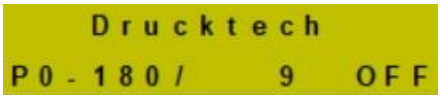
Place the machine on a dry work surface away from water taps.

Check that the mains voltage corresponds to the value specified in the "Technical data" chapter. Connect the appliance only to an earthed socket with a minimum current rating of 10 A. The manufacturer is not responsible for accidents caused by connecting the appliance to an unearthed mains supply. If the type of socket does not correspond to the plug of the appliance, have the socket replaced by a qualified electrician.

Reassemble any parts that have been removed for transport.
Connect compressed air to No. 14. connector.

Switch on the device by turning on the No. 3 main switch.

WARNING! The machine is equipped with a restart protection. After turning on the red main switch, the following screen will appear:



The device starts heating after pressing the „i” button. (In the event of a power failure, the machine switches to "stand by " mode and restarts when the „i” button is pressed.)

6.1 PLC control

The machine has a control unit with a microcomputer, which provides a precise temperature regulation. The operation of the machine can be monitored on the controller. It provides continuous information about the status of the current work phase.

6.1.1 Interface

[1] Alphanumeric LCD display

[2] Control buttons

[3] „i" on/off switch

[4] Enter

[5] Program buttons

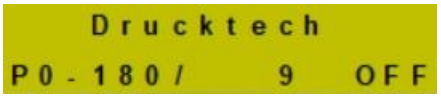
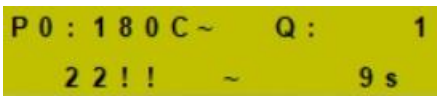
The operation of the machine can be monitored on the [1] alphanumeric display. The displayed information may slightly vary depending on the settings and the actual operating mode.

6.1.2 Warning signal

The machine gives visual and acoustic signals.
These signals ensure the protection of the machine, the worpiece and the operator, therefor they cannot be switched off.

Drucktech ↑ P0-180/ 9 OFF	The ↑ sign appers in case the machine is switched off and the heated plate is closed. In this case after pushing the „i" button, the display starts flashing quickly.
Drucktech X P0-180/ 9 OFF	The **X** sign appears in case the machine is switched off and the reset button [7] is pushed or stuck. In this case the machine makes a beeping sound as well.
P0:180C~ Q: 1 176!! ✳ 9s	In case the actual temperature is different from the set temperature (+/- 2 ºC) the display is flashing and the !! sign appears next to the actual temperature.

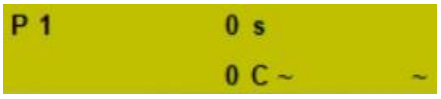
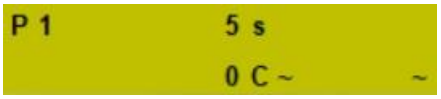
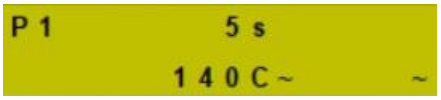
6.1.3 Displayed information

	**When switched off:** The number of the selected program (P0), the set temperature (180 ºC) and time (9 sec), off status display (OFF).
	**When switched on**: Number of the selected program (P0), set temperature (180 ºC), daily workpiece counter (Q: 1), current temperature (22 ºC) and the set time.
	**During operation**: The symbol between the lower current temperature and the set time (automatic control status display): * active heating + PLC temperature up regulation - PLC temperature downward regulation

6.1.4 Setting program positions

The machine has 10 preset program positions for easier work transition.
Programs can be selected using the number buttons [5] of the controller.
The temperature and the corresponding ironing time can be set for each program position.

Setting of program positions 1-9 is only possible when the machine is switched off!

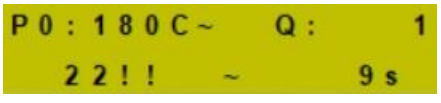
	With the controller switched off, press and hold (2 sec) the number button [5] of the program you want to set. The parameters for the program will then appear.
	Using the number keys, first set the time, then press the ENTER [4] key.
	Now set the desired temperature using the number keys, then press the ENTER [4] key.

When the settings are ready, we can exit by pressing the ENTER [4] key again. The set values are saved to the given program location. In case any alterations are necessary, start the setting of the given program location.
Time setting: 1 – 9999 sec
Temperature setting: 1 - 230 ºC

To select the desired program location, shortly press the corresponding number key.
This can be done with the controller turned off and on.

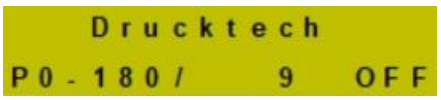
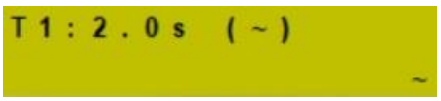
6.1.5 Quick setting

During operation, only the P0 program allows the setting of the desired temperature and time value by pressing the number key "0" for a long time (2 sec).

	When the controller is switched on, press the 0 button for a long time (2 sec), then proceed as described in the 'setting program locations' section.

6.1.6 Setting the delay of the membrane plate's inflating

When the controller is switched off, it is possible to set the delay time between 0 and 2 sec.

	In the off state, press the up arrow from the control buttons [3]. ▲
	Use the numeric keys to enter the desired time, then press the ENTER key to save. To exit press the ENTER button again.

6.1.7 Heating

The device heats up to the set temperature while continuously displaying the current temperature and the ↑↑symbol next to it. During heating, the display flashes to indicate that the set temperature has not yet been reached. When the temperature is set to a lower temperature, the display also flashes during the cooling phase.

6.1.8 Standby

If the heated plate has reached the desired temperature, the controller makes a short buzzing sound, the display stops flashing, the ↑↑ symbol disappears next to the current temperature and continuous work can begin.

Range: set temperature + / - 2 ºC

	Set parameters, Heat-pressing can start!

6.1.9 The heat-pressing process

Using the lever, the heated plate can be closed and heat-pressing can be started

- In case of mechanical presses, the plate gets locked.
- In case of pneumatic presses, the rubber sheet covering the plate is automatically inflated, which provides the pressure required for heat-pressing.
- For presses with a magnetic attachment, the electromagnet pulls in and locks the plate. The pull-in delay is the same as the table inflation time delay.

When pressing starts, the pressing time countdown starts.

6.1.10 Counter

The control unit counts each successful heat-pressing process and displays it at the value marked with Q.

6.1.11 Counter reset

When the controller is on, the counter can be reset by pressing the down arrow for a long time (2 seconds) among the control buttons [3].

6.1.12 End of heat-pressing

When the set pressing time is over, a beeping sound can be heard.
• In the case of pneumatic presses, the air is automatically deflated, the pressing force ceases and the heated plate rises.
• In case of presses with a magnetic attachment, the electromagnet is released and the heated plate rises.
At the end of pressing, if the heated plate does not open, the controller stops the heating and warns with a continuous beeping signal!

6.1.13 Cancel heat-pressing

The heat-pressing process can be cancelled any time by pushing the reset button on the lever.
The counter will not add the cancelled cycle.

6.2 Deflating the membrane-plate of pneumatic heat-presses

In case of incorrect pressing, the table membrane may remain inflated.
When starting pressing, the heated plate must be closed with a quick, firm, continuous movement. If the continuity is broken and the start switch starts the pneumatics and the heated plate is not on the membrane plate, it cannot be locked.
In this case, the remaining air must be squeezed out of the membrane manually.
By pressing down the heated plate, the air can be squeezed out by continuously pressing the "reset button" on the lever or when the machine is switched off.

6.3 Setting material thickness

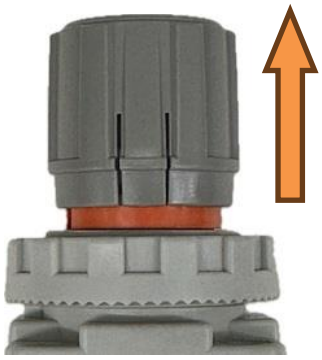
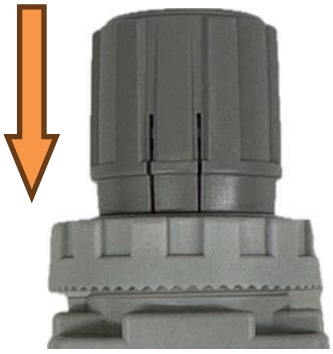
The gap between the heated plate and the membrane plate can be set using the knob which is located on the top of the machine depending on the thickness of the material (turning in down direction decreases the distance, turning in up direction increases it). It is advisable to set the distance between the heated plate and the workplate so that they are as close as possible, then the air consumption, the use of the rubber sheet, and the shortest time for inflation and air deflation will be the most favorable.

For heat presses that open automatically, set the heated plate closer to the workplate until the automatic opening works (it doesn't work when closed too tightly!).

After adjusting the thickness, check the safe closure of the heat press under air pressure by pulling the lever upwards (to prevent the press from opening during operation). The closure of the heat press is adjustable by adjusting the buffer screw with rubber (nr.9).

6.4 Setting pressure

Using the knob (nr.16) on the air preparation unit, the working pressure of the membrane table can be set in the range of 0-0.07 MPa (0.7 bar), the standard pressure: 0.05 Mpa . (This corresponds to the 5-6 bar pressure specified for other pneumatic heat presses)
Pull up No. 16. handle screw (1), so it can be rotated (2) and the appropriate pressure can be set, then by pressing the handle screw (3) (red bar disappears) the head part can be fixed.
After removing the air connection, check the plastic settling tank of the air preparation unit. By unscrewing the drain valve, any accumulated condensate can be drained.

1	2	3
		

The settling tank (18.) of the air filter can be removed in the de-aerated state for cleaning if necessary.

ATTENTION! In order to increase the lifespan of the membrane rubber, regularly drain the accumulated condensate.

ATTENTION! During transfer, constantly check the air pressure, a drop in pressure can cause malfunctions and faulty products.

ATTENTION! Use the heat press only with clean, dry air!

ATTENTION! The pneumatic regulator of the membrane table is a special design, it is not possible to set the air pressure higher than allowed, thus avoiding the deformation or breakage of the components of the heat press.

7. THE PROCESS OF HEAT-PRESSING

The heat-press is operated both in a mechanical and a pneumatic way.
When the settings mentioned before are ready, place the material on the work-plate, in case needed pre-iron it (1-2 sec) and place the heat-transfer on the material.

CAUTION! Be careful not to touch the heated plate while placing the material and the transfer, it may cause scalds!

Close the heated-plate with the handle and keep it down till the membrane plate gets automatically inflated, which ensures the pressing power for the application.

CAUTION! While working with the machine please be careful that neither you, nor others leave their hand or other body-part under the heated plate as closing of the machine is done with strong pressing-power!

CAUTION! Never touch any moving part of the appliance during operation, except the handle covered with sponge.

When the pre-set time is over, you can hear a signal and the heat-press can be opened.

Auto-release machines open up automatically when the time is over.

You can cancel the process by pressing button 7 on the handle. The air pressure is then released and the press can be opened.

Auto-release machines open up automatically after cancelling the process.

8. MAINTENANCE

Before maintenance jobs please make sure that the appliance is not hot and is unplugged from the mains.
Lubrication of moving parts
Cleaning (do not use solvents or abrasive products for cleaning the heat-press, a soft, damp cloth is sufficient)

CAUTION! During cleaning never immerse the heat-press in water as it is an electrical appliance.

Have the regular electrical safety-technology supervision done according to the local rules (at least yearly).

CAUTION! The cover of the appliance can only be removed in an unplugged state!

Regular cleaning of the air unit. After disconnecting the air source the collected condense-water can be let out by loosening the valve of the condense-water cup. When the air-source is disconnected the settling-tank can be taken off for cleaning purposes.

CAUTION! To increase the lifetime of the membrane-rubber, let out the collected condense-water regularly!

Changing the Teflon-sheet: the teflon sheet is fixed by the springs, these can be put on taken off by using a hook (a paper-clip will do).

CAUTION! Before changing the Teflon sheet make sure that the heated plate is not hot!

Changing the white cover of the work-plate. Change the white cover if it gets dirty.

CAUTION! Do not use the membrane-plate without the white textile cover, as bubbles may appear between the heated plate and the silicone sponge (because of the water evaporating from the textile, etc.) which may decrease pressing power.
CAUTION! Be careful not to touch the heated plate while changing the white cover of the work-plate, it may cause scalds!
Failing to perform the above mentioned maintenance operations results in loss of guarantee.

Guarantee period: 2 years from the date of purchase.

In case of failures repair is done by the distributor:

CAUTION! In case of possible need of spare-part change, please use only parts from the manufacturer to avoid damage. Using other parts results in loss of guarantee!
CAUTION! The pneumatic regulator of the membrane-plate has a special design, the pressure range is limited to avoid damage or break of the machine's parts.
CAUTION! Repair should be done by authorized qualified professional using original parts.
CAUTION! Failing to respect the above could reduce the safety of the appliance.

9. DECLARATION OF CONFORMITY

Undersigned Drucktech-T Kft

3104 Salgótarján Ipari Park, Park u 11

(Name, address of manufacturer or authorised representative)

I declare with full knowledge of my responsibility that the products of the following product group

Heat.press

HP / PHP / SP / SH / SSH / M / MM
(Product group name, type)

is in conformity with the essential requirements of the following legislation, including all relevant amendments:

2006/42/EG	EN ISO 12100-1,-2	Directives on the safety of machinery
	EN ISO 60204-1	Electrical construction of machinery - General requirements
	EN ISO 13850	Safety of machinery. Emergency stop. Design principles
2006/95/EG	EN ISO 61557-1,-4,-5	Safety of low voltage equipment
2004/108/EG	EN ISO 61000-3-2	Electromagnetic compatibility: noise emission
	EN ISO 61000-6-6	Electromagnetic compatibility: protection against interference

Other technical solutions, the details of which are not included in the technical documentation or specifications:

xxxx

xxxx

Other references and information required by applicable legislation::

- It is recommended that the operator draw up instructions for the operation of the machine in accordance with the instruction manual and other health and safety regulations.
- For the settlement of possible consumer disputes, we recommend the Recommendation 2006/42/EC.

Date.: 2024.01.02.

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10. TROUBLESHOOTING

Problem	Possible cause	Solution
Temperature suddenly rises then falls.	Broken cable	Please contact your distributor.
The membrane plate is not filled with air when you close the heated plate.	Pressing time is too short	Check time settings. (see chapter. 6.1.4)
	Check if the electric valve switches (you can hear it click)	
	► if it does switch:	
	Air hose is broken	Check the air hose of the membrane plate.
	There is no air pressure	Check the air pressure (remove the air hose from the valve and check if there is any air blowing from the valve)
	The air inlet is clogged	In case the heated plate and membrane plate are set too close to each other, a button or zip positioned at the air inlet may stop the airflow. Please set a bigger distance between membrane plate and heated plate. (see chapter 6.3)
	► if it does not switch	
	Distance between workplate and heated plate is too big.	Check the distance distance between membrane plate and heated plate. (see chapter 6.3)
	Failure of electric valve	Please contact your distributor.
	Failure of the inner switch.	Please contact your distributor.
The membrane does not deflate after the heat pressing cycle.	Air hose is broken	Check the air hose of the membrane plate. (Switch the heat press off!)
	The filter plug is clogged	Remove the filter plug and check it.
	The electric valve does not switch.	Please contact your distributor.
	Failure of limit switch	Please contact your distributor.
The heated plate does not open up completely	Spring is not tight enough	Tighten the spring
	Spring is broken	Replace the spring
The heat press does not open when the pre-set time is over.	Distance between membrane plate and heated plate is not big enough	Check the distance distance between membrane plate and heated plate. (see chapter 6.3)
	Failure of gas spring	Please contact your distributor.
The opening is too slow	Springs are not tight enough	Tighten the springs with the screws (equally)

	Failure of gas spring	Please contact your distributor. (remove the rubber buffer and replace the gas spring while the press is in open state.)
The opening is too quick	Springs are too tight	Loosen the springs with the screws (equally)
	Failure of gas spring	Please contact your distributor. (remove the rubber buffer and replace the gas spring while the press is in open state.)
Nothing works after switching the press on	No electricity	Check the network, check if the plug is connected tot he socket.
	Other failure	Please contact your distributor.