



DRUCKTECH



PHP45-2N

USER'S GUIDE


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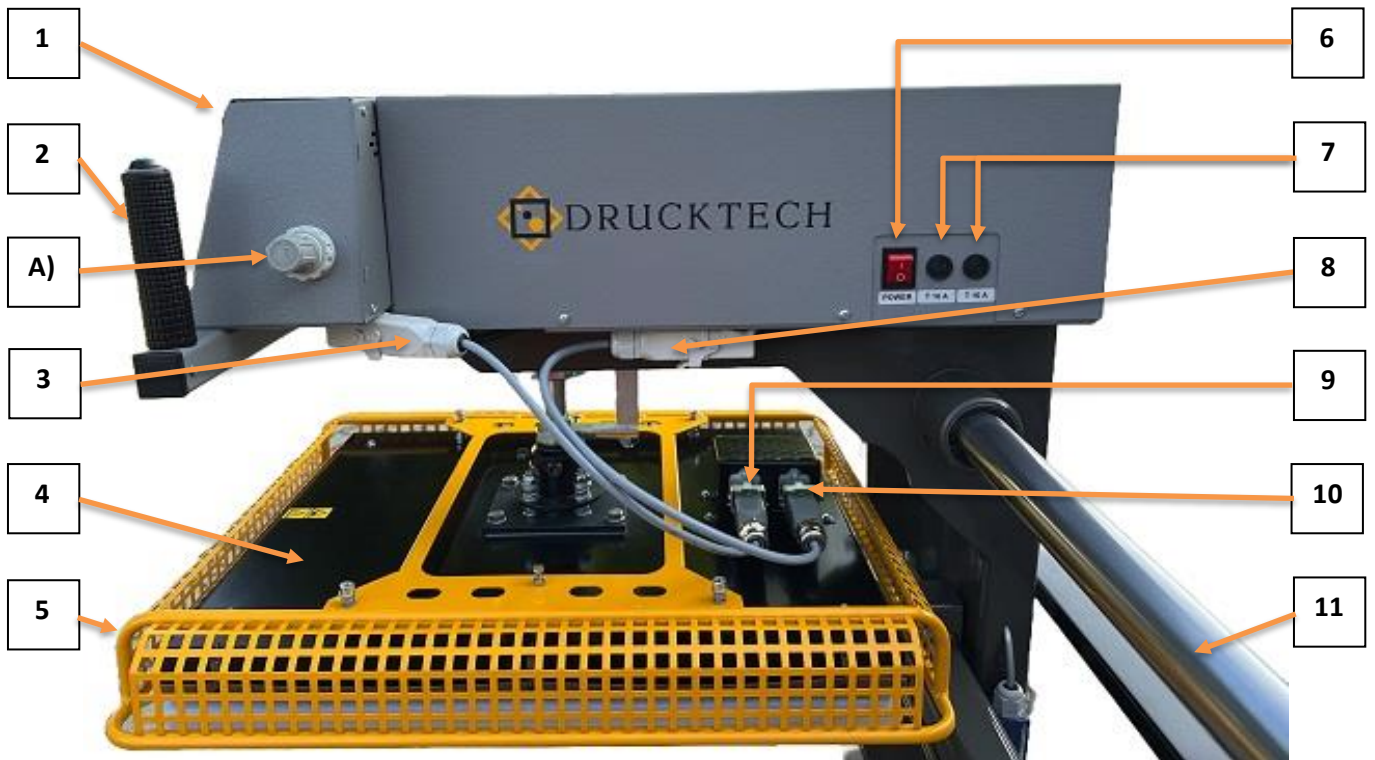
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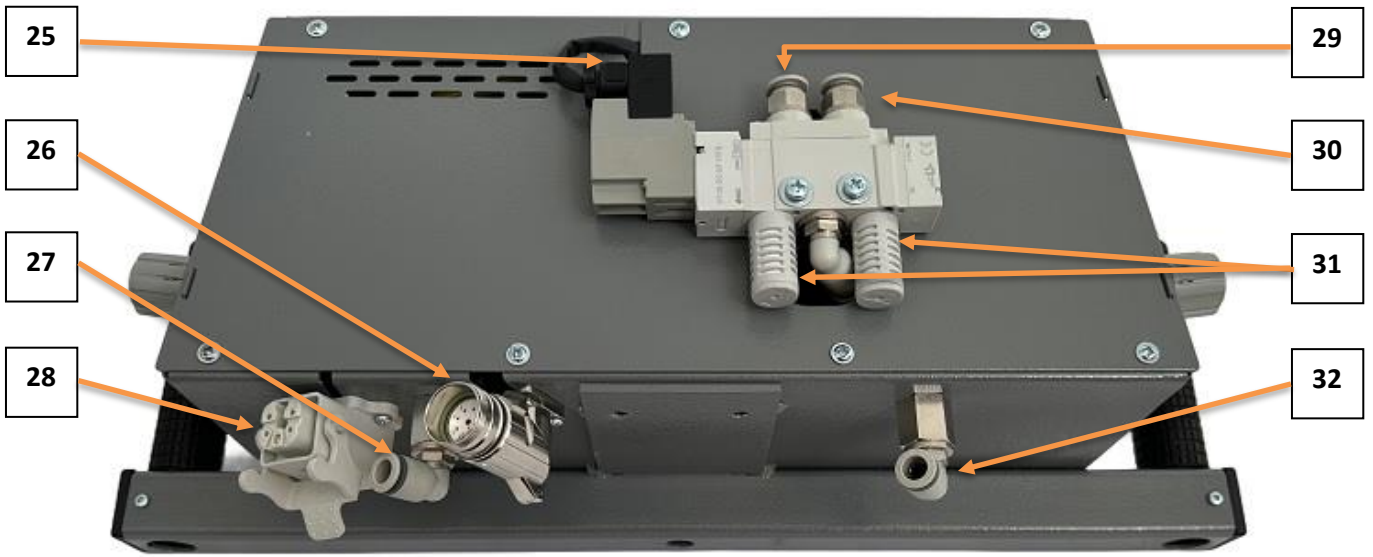
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1. TECHNICAL DATA

Type	PHP45-2N
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 °C
Pneumatic connection	max. 10 bar
Standard pressure	0,08 MPa (0,8 bar ~ 0,8 kg/cm ²)
Maximal operating pressure (membrane plate)	~1 MPa (10 bar ~ 10 kg/cm ²)
Compressed air consumption	50l / min.
Base structure	Surface treated steel structure
Workplate	Steel plate wit a rubber sheet and silicone sponge
Heated platte protective frame	Surface treated steel structure
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	~ 2,5 cm
Size of machine [W. x H. x D.]	195 x 141 x 85 cm
Net weight of machine (with plate)	168 kg
Accessories	1 pc 36 wrench 2 pc white cover 1pc „T” 6 Allen key 1 pc warranty booklet

2. FIGURES





3. DESCRIPTION

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

1.	control box
2.	operating handle
A)	cylinder (heated plate) pressure regulator
3.	control signal connector → heated plate connector (9)
4.	heated plate
5.	safety cover
6.	main switch
7.	fuses
8.	power connector → heated plate's power connector (10)
9.	heated plate's control signal connection
10.	heated plate's power connector
11.	head's transmission shaft
12.	central unit
13.	machine frame
14.	air connection of membrane plate
B)	pressure regulator of membrane plate
15.	air inlet connection
16.	membrane workplate
17.	operation indicator lamp
18.	START button
19.	pressure gauge of membrane plate
20.	control unit
21.	EMERGENCY STOP
22.	START button
23.	head (heated plate) pressure gauge
24.	chart of pressure settings

25.	electric connector of solenoid valve
26.	electric connection of central unit
27.	output air connector for membrane plates
28.	connector of control signal (3)
29.	air connection of head (direction: down ↓)
30.	air connection of head (direction: up ↑)
31.	silencer of the air cylinder of the head (heating plate)
32.	inlet air connector
33.	copper filter plug
34.	web information page (QR code)
35.	„Typ“: type-number of the device, „Nr“: serial nr of the device

4. SYMBOLS/MARKS



Electrical hazard



Hand injury



Hot surface



Grounding



Emergency Stop

POWER

Main switch

T 16 A

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.

ATTENTION! After connecting the air supply to the inlet of the machine, open the slide valve by means of the blue ring on the valve and slide it towards the settling tank.

(To close the valve, slide it in the opposite direction.)



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.

Switch on the device by turning on the No. 6 main switch.

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



turn on -> (i)

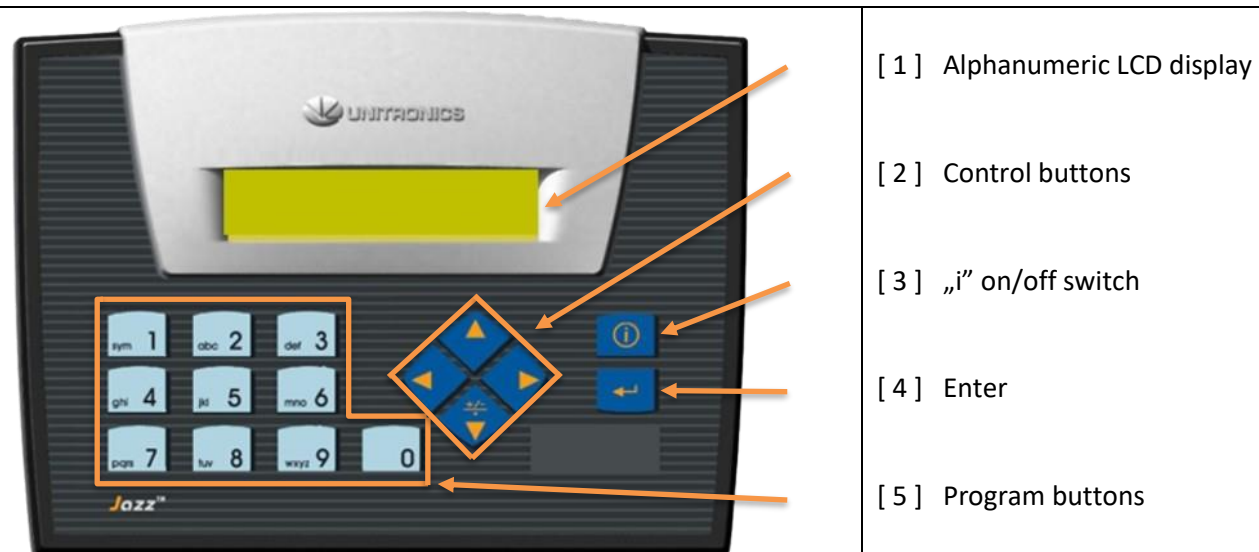
The device starts heating after pressing the „i” button. (In the event of a power failure, the machine switches to "stand by " mode and restarts when the „i” button is pressed.)

Once the language has been set, the next time the power is turned on, the start-up screen will be displayed in the language of the language selected.

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



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 PLC controller language setting

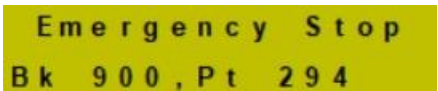
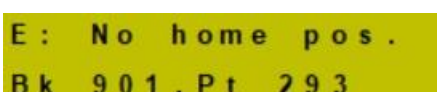
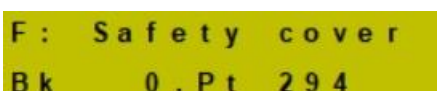
After each power-up using the main switch a welcome screen is displayed for 3 seconds and during this time, by pressing the corresponding numeric key, it is possible to set the language of the controller as follows:

	Press the '0' key, for Hungarian.
	Press the '1' key for English.
	Press the '2' key for German.
	Press the '3' key for Romanian.


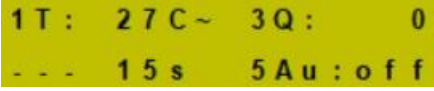
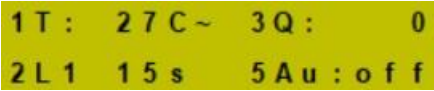
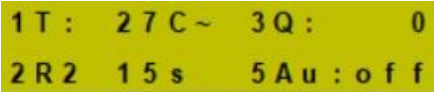
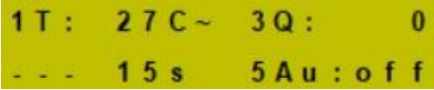

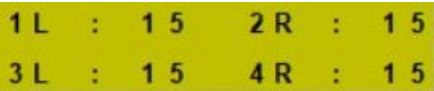
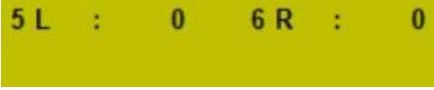

6.1.3 Warning signal

The machine gives visual and acoustic signals.

These signals ensure the protection of the machine, the workpiece and the operator, therefore they cannot be switched off!

	In this case, the 'Emergency Stop' switch on the controller is pressed and the system is disabled. By turning the red knob to the right, the switch can be released and the controller can be reactivated.
	If the heated plate is not in the default position and a pressing process is attempted, the machine will beep continuously and the red LED will light up. The heated plate must be moved fully to the left or right side by means of the lever.
	If during the pressing process the yellow protective frame around the heated plate is raised, the process stops. As long as the protective frame does not come to rest, the machine will beep continuously and the red LED will light up.

At the start of the pressing process and after the pressing time has elapsed, the red LED on the controller flashes and the built-in buzzer emits a beeping sound.

6.1.4 Displayed information	
	When switched off: The start-up screen appears in the previously selected language.
	When switched on: Top line: - 1T: current temperature (27 °C) - 3Q: daily piece counter (0) Bottom line: - - - -: the heating plate is not completely above the table - 2L1: left position - 2R2: right position - 15s: (time for current position, process) - 5 Au: current status of semi-automatic mode
	
	
6.1.5 Temperature settings	
From the home screen, pressing key number 1 once will display the temperature setting screen. Maximum temperature setting: 230 °C	
	Press key 1 to start setting.
	Enter the desired temperature using the numeric keys and press Enter [4] twice.
6.1.6 Time setting	
Up to six different time settings can be set on the heat press, three for the plate on the left and three for the plate on the right. From the home screen, pressing key number 2 once will display the time setting screen.	
	On the first screen, you can set the time settings for up to 1-4 cycles. 1,3: plate on the left 2,4: plate on the right
	On the next screen, you can set the time for cycles 5 and 6. You can switch between the screens using the arrows ▼▲ 5: plate on the left 6: plate on the right
	You can set the time by pressing the number button of the desired cycle on the screen. Then press Enter [4] 2 times.
Press the arrow key ► to return to the home screen. Before starting the cycle, always have the heated plate on the right side, because the first cycle starts on the left side! During the pressing process, press the '0' button to cancel the cycles and return to the starting position.	

6.1.7 Menu 1

To enter the menu, press buttons 7 and 9 at the same time.

1M: 2.0s 3T: Off
2E: +25% 4: ~ 100%

1M: inflation delay of the membrane plate
2E: additional heating power activated during pressing process
3T: allowed temperature difference
4: current heating power

Set 2.0s 3T: Off
2E: +25% 4: ~ 100%

The inflation delay of the membrane plate can be set to the desired value by pressing button 1 and then using the arrows ▼▲. You can return by pressing the arrow ◀.

1M: 2.0s 3T: Off
Set +25% 4: ~ 100%

The additional heating power can be set to the desired value by pressing button 2 and then the arrow ▼▲. You can return by pressing the arrow ◀.

1M: 2.0s Set Off
2E: +25% 4: ~ 100%

To set the allowed temperature difference to the desired value, press button 3 and then the arrow ▼▲. You can return by pressing the arrow ◀.

To return to the home screen, press the arrow ▶

6.1.8 Menu 2

To enter the menu, press buttons 8 and 9 at the same time.

The menu is password protected. Default password: **3322**

PW?
~ ~ ~

After pressing keys 8 and 9 at the same time, the system will ask for the password.
After entering the password, press Enter [4].

2HS=0 3P=1
4HT=0 5B=1 spw~~

3P: Press time interruption by the operator is allowed. This function can be disabled by pressing key 3.

2HS=0 3P=1
4HT=0 5B=1 spw~~

4HT: The machine operation can be started by the operator even if the temperature is out of the allowed range by pressing and holding one of the start buttons. This function can be disabled by pressing button 4.

2HS=0 3P=1
4HT=0 5B=1 spw~~

5B: the operator has setting rights. This can be disabled by pressing button 5.
ATTENTION! In this case the operator cannot adjust the temperature or time nor can they reset the counter to zero.

2HS=0 3P=1
4HT=0 5B=1 spw~~

spw: by pressing arrow ◀ a new password can be set.

ATTENTION! Make a note of the modified password in order to re-enter it.

To display the status of a function:

0: Disabled

1: Enabled

Press the ▶ arrow to return to the home screen.

6.1.9 Heating

The unit heats up to the set temperature while continuously displaying the current temperature (**1T**).

6.1.10 Starting the pressing process

There are 3 ways to start the pressing process:

Manual start:

Press and hold one of the green buttons 18 or 22 to start the process.

In this case, the machine will ignore the preset time and the pressing process will continue as long as the button is kept pressed.

When the button is released, the process is completed.

Start by program:

The process can be started by pressing the green buttons 18 and 22 together once.

The machine will run the pressing process according to the preset time.

Semi-automatic mode:

It is possible to set the machine to semi-automatic mode by pressing the number 5 key.

The main screen will display **5 Au: on** when the semi-automatic mode is activated.

As soon as the heated plate is moved over one of the work tables, the pressing process will run according to the preset time.

This mode can be deactivated by repeated pressing of the number 5 key. The main screen will then display **5 Au: off**

6.1.11 Pressing

Use the lever to move the heated plate over a workp.

Late Once the pressing process has started, the red LED on the controller will start flashing and the built-in buzzer will emit a chirping sound, the heated plate will descend and when it reaches the lower position, the beeps will stop, the membrane plate will inflate after the previously set (described in section 6.1.7.) delay time (**1M**) is over, and the countdown of the previously set process time will start.

6.1.12 Pressure counter

The controller counts all successful press process and displays them on the display at the value of **3 Q**.

6.1.13 Pressure counter reset

When the controller is ready for operation, the counter can be reset by a long (4 sec) press on the number key 3. The display will show **Res**.

6.1.14 End of pressing

When the time has elapsed, the heated plate is lifted and the pressing process is completed, accompanied by a repeated light and sound signal.

6.1.15 Interrupting pressing

Pressing the number 0 button on the control unit interrupts pressing at any time.
The press counter does not count this interrupted cycle!

6.2 Deflation of the inflated membrane table

In case of incorrect pressing or other errors, the table membrane may remain inflated.

In such a case, disconnect the air tube from the air connector at the bottom of the membrane table by pushing the plastic ring shown in the picture towards the connector, then squeeze the remaining air out of the plate by pressing and holding down for a few seconds one of the green buttons 18 or 22.

After releasing the button and returning the heated plate to the upper position, push the air hose back into the connector at the bottom of the plate.



6.3 Rotation of the heated plate and the membrane workplate by 90°

If you need to rotate the workplate and the heated plate 90° in order to perform a particular job, you can do it as follows:



Switch off the machine with the main switch number "6".
Pull the head to the left position.



Using the supplied allen wrench 6, slightly loosen the three allen screws on the base stem of the heated plate as shown in the picture.



Pull the head to the middle.



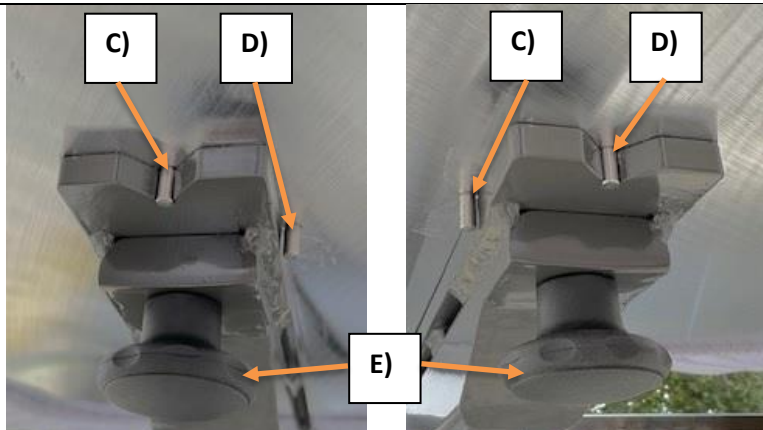
Shut off the air at the air inlet connection by sliding the slide valve to the left. The heated plate will then lower and can be rotated.



Rotate the heated plate 90° as shown in the picture.



Release the air by sliding the slide valve to the right. The heated plate will then lift up.



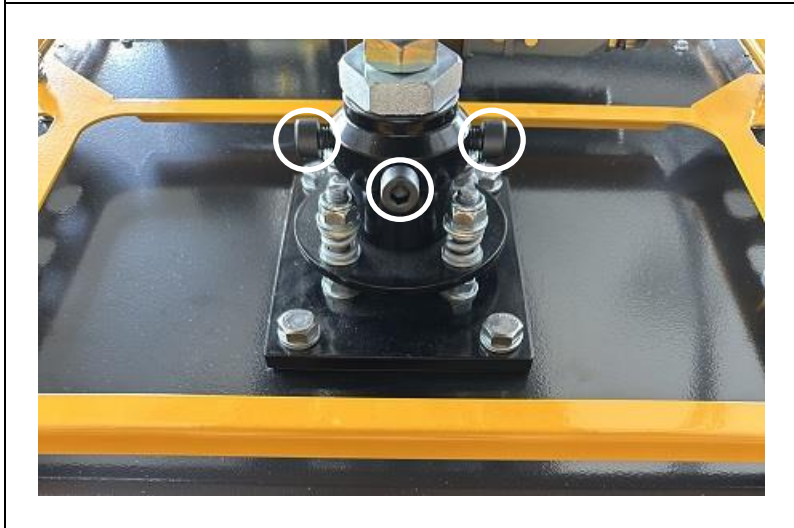
- 1) Unscrew the fixing screw (marked "E") completely.
- 2) Pull the plate forward slightly to allow the pins to move freely.
- 3) Turn the plate 90° as shown in the picture. Make sure that the pins marked "C" and "D" are in the position shown in the picture on the right.
- 4) Screw back and tighten the fixing screw (marked "E").
- 5) Repeat the operation for the other plate



Plates and heated plate rotated by 90 °.



Pull the head back to the left position.



Using the supplied allen wrench 6, tighten the three allen screws on the base stem of the heated plate, marked in the picture.

6.4 Adjusting the Pressure

The pressure of the membrane plate (B) and the cylinder (A) of the heated plate can be adjusted using the pressure adjustment knobs on two sides of the control box.

The membrane plate can be adjusted from 0 to 0.055 MPa (0.55 bar); the standard pressure setting is 0.35 bar. The cylinder of the heated plate can be adjusted in the range of 0 to 1 MPa (0 to 10 bar); the standard pressure setting is 6 bar.

Pull up the knob (1) to rotate it (2) and set the correct pressure. Then, press down the knob (3) until the red bar disappears to lock the head section.

The chart below shows the membrane pressure value corresponding to the set heating plate pressure.

JAVASOLT NYOMÁS BEÁLLÍTÁS / RECOMMENDED PRESSURE SETTINGS (bar)								
FŰTŐLAP/ HEATED PLATE (CYLINDER)	3	4	5	6	7	8	9	10
MEMBRÁN/ MEMBRANE	0,2	0,25	0,3	0,35	0,4	0,45	0,5	0,55

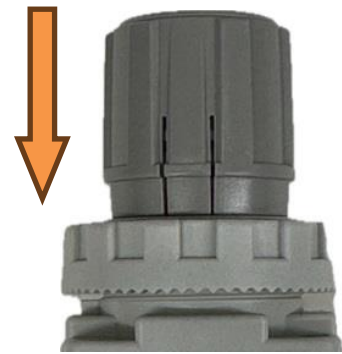
1



2



3



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

7. THE PROCESS OF HEAT-PRESSING

The heat press is operated mechanically and pneumatically.

After completing the above settings, place the material to be ironed on the workplate of the heat press. Pre-iron for 1-2 seconds if necessary, then place the transfer.

ATTENTION! Take extra care not to touch the heated plate when placing the material and the transfer, as this may cause burns.

Use the handle to pull the heated plate over one of the workplates and start the pressing process, as described in Section 6.1.10.

WARNING! When moving the heated plate mechanically during operation, be careful that you or someone else does not reach under the plate, as it closes with a high pressing force.

WARNING! When using the appliance, do not touch any moving parts other than the operating controls on the control box!

After the set time has elapsed, the heat press will beep and open.

You can interrupt the process by pressing the 0 button on the control unit. The air pressure will then be released and the press will open.

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.

Drucktech-T reserves the right to make technical changes without prior notice

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 EN ISO 60204-1 EN ISO 13850	Directives on the safety of machinery Electrical construction of machinery - General requirements 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 EN ISO 61000-6-6	Electromagnetic compatibility: noise emission 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.

.....

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 closing the machine.	Pressing time is too short.	Check time settings. (see chapter. 6.1.6)
	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.
	The air valve is closed.	Release the air by sliding the slide valve to the right.
	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.
	▶ if it does not switch:	
	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.
	Pressure of membrane is too high, or pressure of heated plate is too low.	Check settings and modify them if necessary.
The membrane plate pushes back the heated plate.	The pressure of heated plate is lower than the pressure of membrane plate.	Modify pressure settings.
	The compressor does not supply enough air.	Use a compressor with bigger output volume.
The heatedplate does not go down when pushing the green buttons.	The security frame senses error.	Check the security frame.
	Air pressure is not correct.	Check air pressure of heated plate.
	The heated plate is not in the right position.	Check the position of heated plate, it only works when it's right above the membrane plate.
Nothing works after switching the press on.	No electricity	Check the network, check if the plug is connected tot he socket.
	The emergency stop button is pushed in.	Release the emergency stop button.
	The heated plate is not in the right or left position.	Check the position of heated plate, it only works when it's right or left above the membrane plate.
	Other failure.	Please contact your distributor.