Heat Press Machine (Ver. 1.3)
Description and Operating Manual

Important: This equipment poses a safety hazard. When operating this equipment, follow electrical safety rules and safety rules for heat press operation.

Safety Requirements Prior to Operation

1. Prior to operation, read this manual carefully.
2. Make sure that the leads and the socket into which the heat press machine will be plugged are rated for at least 10 A. The socket must be properly grounded.
3. Make sure that the electric cable used to connect the heat press machine and the socket has no visible damage and is of sufficient length to prevent tension when the heat press machine is in extreme positions.
4. The heat press machine must be placed on a solid horizontal surface to ensure the stable position of supports.
5. Keep the heat press machine away from combustible and flammable objects.
6. The oil feeder used with the machine must provide the required pressure in the cylinder.
7. Vents in the heat press cover must not be covered to avoid overheating and electronics failure.
8. Do not plug in the heat press machine if the back is open or side covers are removed.

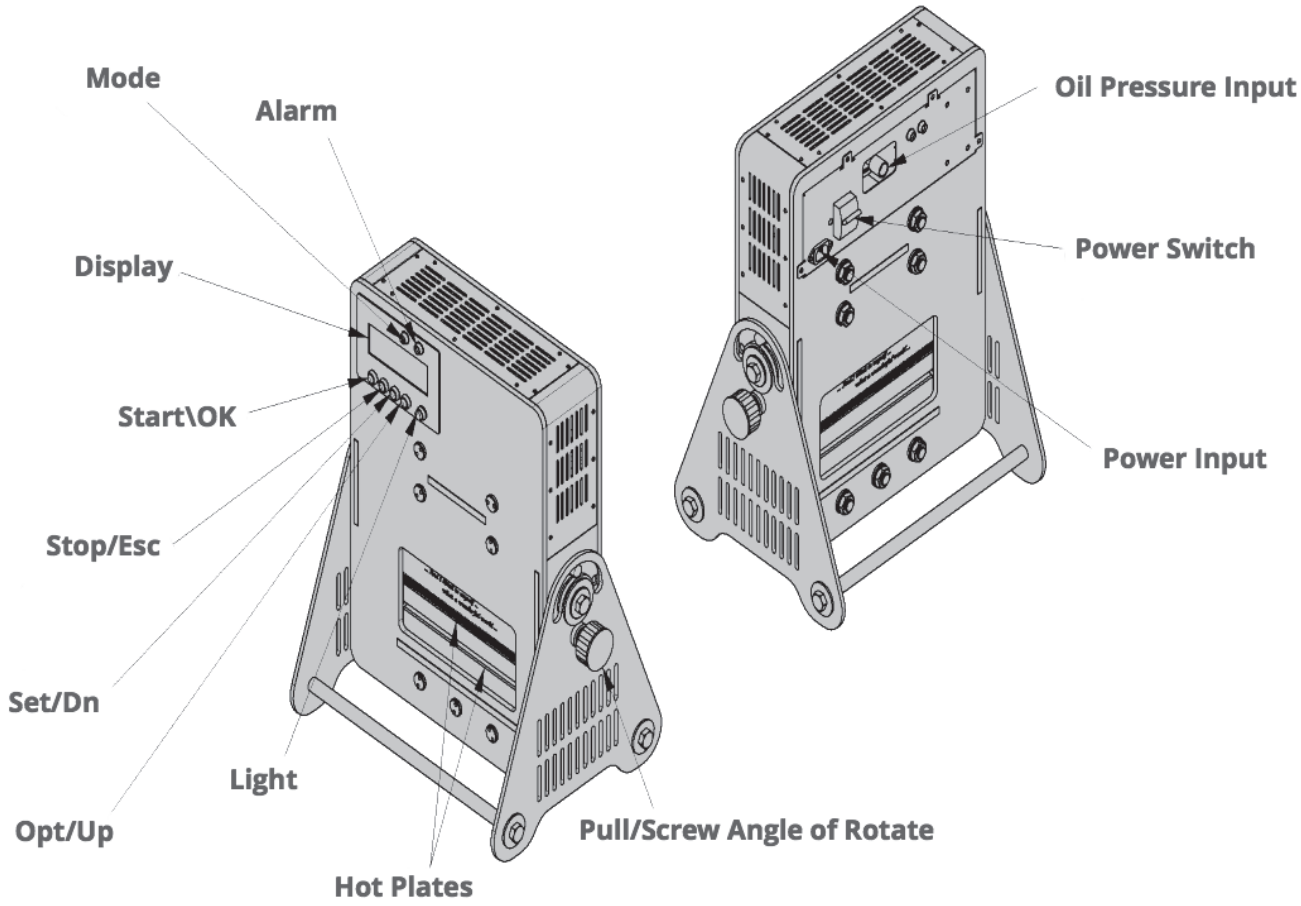
Specifications

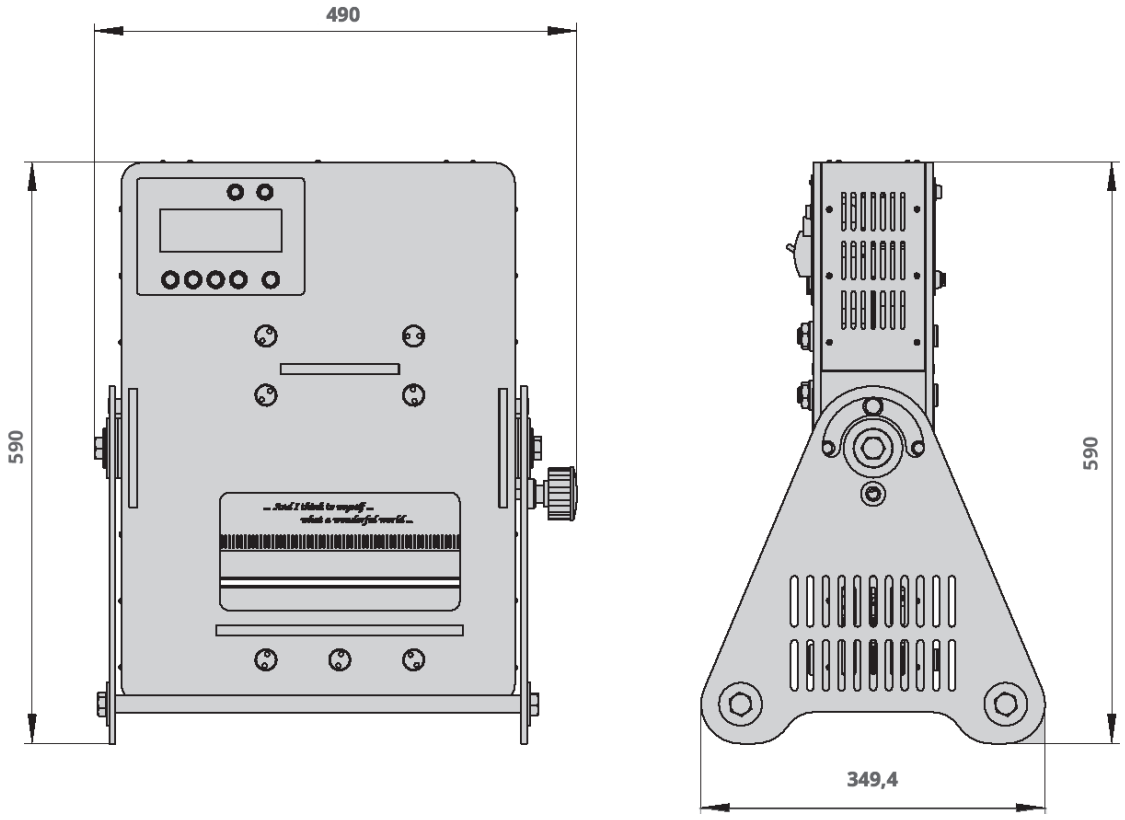
Heat press type:	Hydraulic
Feeder:	Hydropneumatic
Maximum pressure:	20 tons
Airline pressure:	7-8 bar
Maximum heating temperature:	up to 356° F (180° C)
Double heating:	Top and bottom plates
Dimensions of the heated plate:	250 x 100 x 30 mm
Plate material:	Aluminum
Temperature accuracy:	(-1□+3) ° F
Temperature units:	Degrees Fahrenheit / Celsius
Timer set range:	1 sec – 999 sec
Electrical rating:	~120 V | 1,000 W | 8.3 A
Package size (WxHxD):	528 x 715 x 286 mm
Net weight:	54.2 kg
Gross weight:	62 kg

The package contains:

Heat press machine	1 pc.
Base	2 pcs.
Base clamp	2 pcs.
Fastening bolt	4 pcs.
Bolt washer	4 pcs.
Operating Manual	1 pc..

General View





Operating Manual

1. Setup

Assemble the heat press according to the assembly instructions.

Place the heat press on a sturdy horizontal surface.

Connect the oil feeder hose to the hydraulic cylinder fitting.

Plug the heat press into an AC outlet (~120 V/60 Hz).

Power the heat press by setting the switch on the back panel to ON.

Important: Important: Do not power the heat press when the back cover is open.

2. Control Panel

The control panel consists of an alphanumeric LCD display, LED indicators, and buttons. The LCD display has internal lighting and displays the information in 4 lines, 20 symbols each. Both LED lights indicate operating modes. Backup LED lights are located on the back panel.

Control buttons are used to:

Start / Ok: Switch heating on / Enter the parameter editing mode / Confirm parameter entry

Stop / Esc: Switch heating off / Cancel parameter changing / Exit from the Settings menu

Opt(ions)/ Up: Go to the Options menu / Cursor up / Increase the parameter value

Set(tings) / Dn: Go to the Settings menu / Cursor down / Decrease the parameter value

Light: Turn the plate lighting on

3. Information Displayed on the LCD Display Screen

Information is displayed on the LCD display on three pages.

After power is supplied, the LCD display shows the startup screen with the heading and the software version. In 2 seconds, the program goes into the current parameter display mode. This is the main display page (**Main Page**).

The following parameters are displayed on the main page (current parameters):

STATE: [WAIT | HEAT | READY | <MIN:SEC>] [▼]

Pressure: 00.0 Ton

Top Temp: 85 ºF

Btm Temp: 210 ºF

The parameters are as follows:

STATE: The state of the system. The system may be in one of the following states:

WAIT: Heating mode off (heaters off)

HEAT: Heating mode on. The top heater and the bottom heater are switched on separately. When one of the heaters is on, the following symbol is highlighted at the upper right corner of the display:

[▼] – Top heater on

[▲] – Bottom heater on

READY: Both heaters have reached the setting and are in the temperature maintenance mode

<MIN:SEC>: Timer countdown in minutes and seconds.

Pressure: Current pressure in the hydraulic cylinder in tons.

Top Temp: Current temperature of the top plate in °F / °C

Btm Temp: Current temperature of the bottom plate in °F / °C

4. State Indication by LEDs

Green LED indicates the state of plate heating and may be as follows:

OFF: Plate heating is off. Same as WAIT (see 3).

Lights up once every 2-3 seconds: Plate heating is on but the temperature has not reached the setting yet. Same as HEAT (see 3).

ON: Plate heating is on and the temperature of both plates have reached the setting. Same as READY (see 3).

Red LED indicates warnings about state changes or emergency modes of operation. When the LED is on, it is confirmed by a sound signal. The following warnings are issued:

A single beep signal, 1 to 3 seconds long, when the program is started: pressure gauge calibrations are not set and pressure will be measured with poor accuracy. Please contact the service department for calibration setting.

A double beep signal in the heating mode: Switching to READY.

A single beep signal after pressure is applied: Pressure in the cylinder has reached the setting and the exposure timer is started.

A three beep signal after pressure is applied: The exposure timer has expired.

A ten beep signal after pressure is applied: Maximum allowable pressure in the cylinder is exceeded (the relevant message is shown on the display). Release the pressure to the allowable value.

A ten beep signal when heating is on: Maximum allowable plate heating temperature is exceeded (the relevant message is shown on the display). Switch off the heat press to cool down the plates.

5. Setting Parameters

Adjusting Settings

Prior to operation, adjust the temperature and pressure settings and set exposure time. To go to the Settings page, press **Set**/. A page will open that shows the parameters below. A triangular cursor will appear in the left column. The cursor points to the selected current parameter.

The following parameters are displayed on the Settings page:

Pressure: < 1 – 21 > Ton

Top Plate: < 68 - 356 > °F

Btm Plate: < 68 - 356 > °F

Timer: < 0 - 999 > sec

The parameters are as follows:

Pressure: Pressure in the cylinder in tons. When this pressure is reached, the exposure timer starts counting down. The range of allowed values is: 1...21 t.

Top Plate: The required temperature value for the top plate in °F / °C. The range of allowed values is: 68□356 °F (20□180 °C).

Btm Plate: The required temperature value for the bottom plate in °F / °C. The range of allowed values is: 68□356 °F (20□180 °C).

Timer: Exposure time in seconds. The range of allowed values is: 1□999 seconds.

Select the parameter you want to adjust. To select the parameter, use / **Up** button to move the cursor up and / **Dn** button to move the cursor down.

To edit the selected parameter, press **OK**. When you enter the editing mode, the parameter you selected will flash on and off. Use / **Up** and / **Dn** buttons to change the parameter. If you press one of these buttons and hold it down, the parameter value will change faster. All parameters can be repeatedly adjusted from the minimum value to the maximum value.

When the parameter is entered, press /**OK** to confirm the entry. If you want to cancel the changes, press / **Esc**. The program will save the new parameter value or leave the previous one and then switch to the parameter selection mode.

If necessary, adjust the values of other parameters in the same way, When you are done, press / **Esc** to exit from the Settings menu. You will be taken to the main page.

Setting Options

To go to the Options menu, press **Opt**/ on the main page. A page will open that shows the parameters below. A triangular cursor will appear in the left column. The cursor points to the selected current parameter.

The following parameters are displayed on the Options page:

Timer: [ON | OFF]

Auto Run: [ON | OFF]

Temp Unit: [ºF | ºC]

Sound: [ON | OFF]

The parameters are as follows:

Timer: If the timer is ON, then the exposure timer will start counting down when the set pressure is reached. Exposure times are set in the Settings menu using the same-name parameter, Timer.

Auto Run: If auto run is ON, then when the heat press is powered up, the HEAT mode will be activated automatically.

Temp Unit: You can use this parameter to select temperature units to be displayed (ºF is Fahrenheit degree units and ºC is Celsius degree units).

Sound: Not available in this version.

Select the parameter you want to adjust. To select the parameter, use / **Up** button to move the cursor up and / **Dn** button to move the cursor down.

To edit the selected parameter, press **OK**. When you enter the editing mode, the parameter you selected will flash on and off. Use / **Up** or / **Dn** buttons to change the parameter.

When the parameter is entered, press /**OK** to confirm the entry. If you want to cancel the changes, press / **Esc**. The program will save the new parameter value or leave the previous one and then switch to the parameter selection mode.

If necessary, adjust the values of other parameters in the same way, When you are done, press / **Esc** to exit from the Settings menu. You will be taken to the main page.

6. Operating Procedure

Switching On and Setting Parameters

Make sure that the heat press is ready for operation as described in **Setup**. After power is supplied, the display shows the startup screen for a few seconds and then the current parameters of the main page as described in **3 Information Displayed on the LCD Display Screen**.

Check the parameters. To do this, go to the Settings page by pressing **Set** /. If required, adjust the parameters as described in **5. Setting Parameters/Adjusting Settings**. Go back to the main page by pressing /**Esc**.

Plate Heating

To start heating the plates, press **Start**/. Note that **STATE** shown on the display will change from <**WAIT**> to <**HEAT**> and the **Mode** LED will flash on and off every 2-3 seconds. Symbols ▼ and ▲ will light up in the upper right hand corner of the display. These symbols show that the heaters are on. Monitor plate heating temperatures on the display.

When the set temperature is reached for both plates, you will hear a **double beep signal** and the red LED (**Alarm**) will switch on. In this case, the controller will switch to the temperature maintenance mode. **STATE** shown on the display will change to <**READY**> and **Mode** LED will illuminate continuously. Note that in this mode the heaters will switch on and off intermittently.

Important: Touching hot plates may cause burns.

Pressurization

Before pressurization, make sure that the feeder nozzle is inserted tightly in the mating connector on the hydraulic cylinder and the nozzle nut is finger tightened.

To check the hydraulic system of the heat press:

Switch on the feeder and watch the top plate go down. The plate should move smoothly, without jerking. Wait till the plates make contact. As soon as it happens, pressure in the hydraulic cylinder starts rising quickly. Stop feeding. Increase pressure to 5-10 tons a little at a time and monitor pressure by **Pressure** readings on the display. Check all hydraulic connections. Make sure there are no oil leaks. Bleed pressure and move the plates away at a distance sufficient for feeding.

Important: The heat press is designed for maximum allowable pressure of **21 tons**. If this pressure is exceeded, it may cause permanent deformation and compromise the geometry of the heat press.

Procedure

When feeding, be careful not to touch hot plates. Wearing gloves is recommended during operation.

Press the lever on the side and turn the heat press to a comfortable angle. Fix the heat press in this position by releasing the lever and pushing the heat press further until you hear a click.

Make sure that there are no foreign objects between the plates and apply pressure. After the plates close and pressure reaches the **Pressure** setting, you will hear a single beep **Alarm** signal and the exposure timer will start counting down. Current remaining time is shown in the top line on the display as <MM:SS>. After the countdown ends, you will hear a three beep **Alarm** signal. Note that **STATE** shown on the display will change to <**ENDED**>.

After depressurizing, the state will be shown on the display depending on the heating mode.

Emergency Modes

While the heat press is in operation, alarm messages may appear when allowable pressure or temperature is exceeded.

When pressure in the hydraulic cylinder exceeds 21 tons, you will hear a ten beep **Alarm** signal and the following message will appear on the display: **‼ STOP Pressing ‼/ MAX pressure reached**. When this message appears, bleed pressure to the allowable value.

When plate temperature exceeds the maximum value of 356° F (180° C), you will hear a ten beep **Alarm** signal and the following message will appear on the display: **!!! OVER HEAT !!!**. When this message appears, switch the heat press off and let it cool down. If overheating occurs again, please contact the service department.

Important: Each heat press plate has a temperature switch. The temperature switch may be activated before the overheating message appears. The switch will break the heater power supply circuit and the plate temperature will start going down until the circuit is restored.

To avoid activating the temperature switch, it is not recommended to set the plate temperature close to the maximum allowable temperature.

7. Maintenance

After operating the heat press, switch it off and remove the plug from the socket.

Bleed pressure in the hydraulic system by holding the feeder pedal down for one minute in the Release position. Make sure that the top plate is in the uppermost position.

Place a piece of cloth or paper under the fitting to avoid spilling the remaining oil and disconnect the hydraulic hose from the hydraulic cylinder.

Check the exterior of the hydraulic cylinder for oil stains or leaks. If a leak is found, please contact the Technical Support Center.

The rotation and fixation assembly should be lubricated with a small amount of oil (a few drops of oil used in the system) once a month.