SD PRO DP4050 User Manual

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The manufacturer reserves the right to modify the product and its specifications in this manual without prior notice.

Preface

The manufacturer shall not be liable for any direct, indirect, special, incidental, or consequential damages or liabilities arising from improper use of this manual or product.

Purpose of the User Manual

This manual enables users to understand the basic functions of the equipment, as well as its operation, installation, debugging, and maintenance procedures.

Intended Audience

This user manual is intended for personnel who have basic knowledge of heat transfer machines and are familiar with heat transfer processes.

Manual Structure

The manual consists of four chapters and appendices, covering all aspects of daily operations and system functionalities.

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Chapter 1 Overview

1.1 Equipment Overview

Thank you for choosing our **XPDS-20/20A Pneumatic Dual-Station Heat Press Series**.

Before use, please read this manual carefully to ensure proper operation.
Please keep this manual for future reference.

Note: Due to different configurations, some machines may not include certain functions described in this manual. Please refer to the actual machine functions for details.

1.2 Precautions

Only qualified personnel should perform mechanical or electrical maintenance and adjustment to avoid safety hazards, equipment damage, or personal injury.

Keep the control box clear of obstructions and dust to ensure proper ventilation and heat dissipation.

Unauthorized modifications are strictly prohibited. The company assumes no liability for consequences arising from such actions.

WARNING

1. Moving machinery is hazardous! The user is responsible for implementing effective error handling and safety mechanisms in production. The manufacturer shall not be liable for any incidental or consequential damages.

2. Do not perform maintenance while powered on! Always disconnect the power supply and wait at least 1 minute before servicing. All repairs must be conducted under professional supervision.

PROHIBITED

1. Do not touch any moving parts or open access panels during operation! This may cause injury or machine malfunction.

2.Do not operate the equipment in damp, dusty, corrosive, or explosive environments! Risk of electric shock or fire.

1.3 Operating Environment

Well-ventilated, clean, and low-dust environment;
Storage temperature: 5–40 °C (41–104 °F)
Operating temperature: 5–40 °C (41–104 °F)
Operating relative humidity: 30%–90%, non-condensing

1.4 Grounding & Technical Specifications

1.4.1 Grounding Requirements

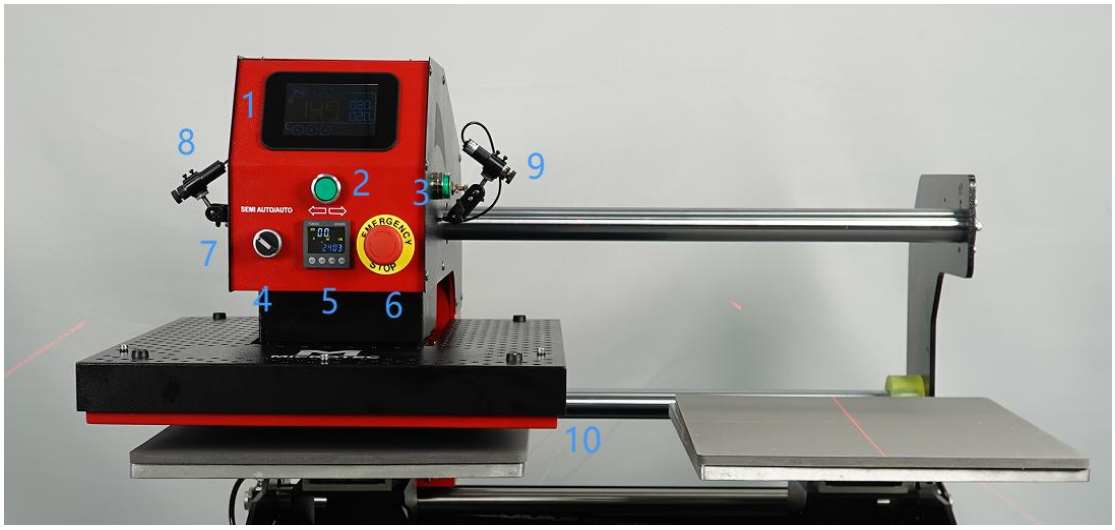
To prevent electric shock or fire caused by leakage current, power surges, or insulation failure, please ensure that the equipment's grounding wire is properly and securely connected.

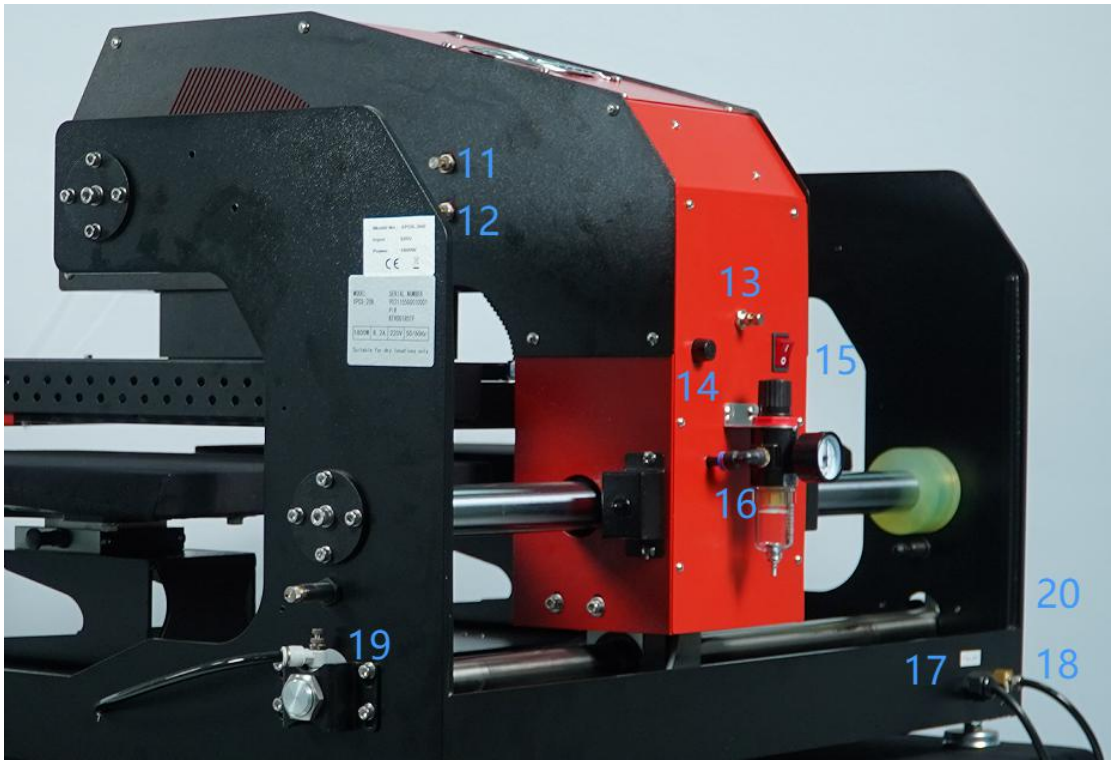
1.4.2 Technical Specifications

Model	SD PRO DP4050	
Temperature Controller	GY-13 Touchscreen Panel, Store 3 Settings	
Power Supply	AC120V±10%1700W/AC220V±10%1800W，50/60HZ	
Transfer Temperature	℃(0～230),℉(32～446)	
Time Range	0～999S	
Platen Size	40*50cm	
Cylinder Type	Standard	Air-Fail Reset

Chapter 2 Appearance and Functions

2.1 Product Appearance





2.2 Parts Names and Functions

1.**GY-13 Temperature Controller**: Controls machine heating and transfer process.

2. **Station Switch Button**: In semi-auto mode, press once to move the heating platen one step to the left or right.

3 & 7. **Right & Left Start Buttons**: In semi-automatic mode, press both the left and right green buttons simultaneously to activate the temperature controller and lower the heating platen for transfer.

4. **Mode Switch**: Switches between semi-auto and auto modes (default is semi-auto).

5. **Time Relay**: Sets the station switching time in automatic mode.

6. **Emergency Stop Switch**: During transfer or heating plate pressing, press the emergency stop switch, the heating plate will rise and stop the transfer. During left/right movement, pressing it stops the movement; after reset, the heating plate resumes moving in the original direction.

8 & 9: **Laser Positioning System**: Used for aligning transfer materials.

10. **Pinch-Guard Safety System(Red Part, Optional)**: If the heating plate touches a hand or object during descent, it automatically ascends.

11 & 12. **Throttle Valves**: Adjust the cylinder's speed, with (11) controlling upward speed and (12) controlling downward speed.

13.**Throttle Valves**: Adjust the main air supply valve for the left-right switching cylinder.

14. **Fuse Holder**: Houses the fuse, which cuts off power if the current abnormally increases.

15. **Power Switch**: Turns the machine's power on/off.

16. **Pressure Gauge Assembly**: Adjusts and displays the operating air pressure.

17. **Power Input Cable**: Supplies power to the machine.

18. **Air Hose Connector**: Provides air supply for the machine's cylinders.

19. **Throttle Valve**: Adjusts the speed of the heating platen toward the direction of Valve 19. **Turn no more than 90° at a time to avoid excessive speed.**

20. **Throttle Valve**: Adjusts the speed of the heating platen toward the direction of Valve 20. **Turn no more than 90° at a time to avoid excessive speed.**

2.3 Functional Operation

Operating Steps:

1.Connect the AC220/110V power supply according to the machine's voltage requirements, turn on the power switch [15], connect a suitable air source, lift the black adjustment valve on the pressure gauge assembly [16], and adjust the pressure to 4 – 6 kg/cm^2 as indicated.

2.Place the transfer material on the station without a heating plate.

3.**Semi-Auto Mode**: Turn the mode switch [4] to the left to select Semi-Auto mode.

3.1. When the temperature reaches the set transfer temperature, press the station switch button [2] to move the heating plate to the desired station. Simultaneously press the left [7] and right [3] start buttons to activate the temperature controller to lower the heating plate for transfer. When the set time is reached, the heating plate automatically rises to complete the transfer.

Repeat step 3.1 to cycle between the two stations.

3.2 Auto Mode: Turn the mode switch [4] to the right to select Auto mode (set the time relay [5] T1 before switching).

3.2.1. When the temperature reaches the set transfer temperature, the heating plate automatically moves to the desired station and the temperature controller controls the heating plate to press down for transfer. When the set time is reached, the heating plate automatically rises to complete the transfer.
3.2.2. When the time relay [5] T1 is reached, the heating plate automatically switches stations and repeats step 3.2.1 to cycle between the two stations.

4. During the countdown in steps 3.1 and 3.2, pressing the emergency stop raises the heating plate. During station switching, pressing the emergency stop stops the heating plate; after reset, the heating plate resumes moving in the original direction.

2.4 GY-13 Temperature Controller Operation Instructions

2.4.1: On the main interface, tap “1/2/3” on the touchscreen to switch between three memory settings (the selected setting is highlighted with a border, as shown below with [3] selected).



2.4.2:

Tap the “ S ” key on the main interface; the temperature unit (° C or ° F) will flash, allowing temperature adjustment using the “ -/+ ” keys (° C range: 0 – 230; ° F range: 32 – 446).
Tap “ S ” again; the first set of time “ S ” display flashes, adjust the value using “ -/+ ” (range: 0 – 999 seconds)
Tap “ S ” again; the second set of time “ S ” display flashes, adjust the value using “ -/+ ” (range: 0 – 999 seconds).

Tap “ S ” again to save and return to the main interface.

After each setting is completed, the current setting value will be saved in the memory value [1] [2] [3] with the outer frame lit.

2.4.3: The two countdown timers are used in sequence. If only the first timer is used, the buttons will not respond until the second timer is also used. Alternatively, set the first timer to 0 to use only the second timer.

2.5 Time Relay [4] Setting Instructions

2.5.1 Press and hold the “ F/M ” and “ L/K ” keys simultaneously for more than 3 seconds to enter the mode selection. Press the “ F/M ” key to select “ S ”.

2.5.2 Press and hold the “ F/M ” and “ D/N ” keys simultaneously for more than 3 seconds to set the T1 time specification. Press the “ F/M ” or “ D/N ” key to switch the time unit and select “ S ” (seconds). Press the “ F/M ” key to adjust the tens digit of T1, and press the “ D/N ” key to adjust the units digit (increment only, no decrement).

2.5.3 Press and hold the “ SET ” and “ L/K ” keys simultaneously for more than 3 seconds to set the T2 time specification. Press the “ SET ” or “ L/K ” key to switch the time unit and select “ H ” (hours). Press the “ SET ” key to adjust the tens digit of T2, and press the “ L/K ” key to adjust the units digit (increment only, no decrement).

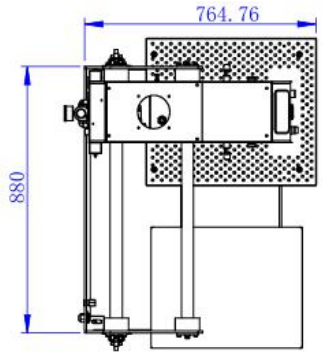
2.5.4 **The factory default settings are T2 = 24H and T1 = 5S. The operator only needs to adjust T1 according to actual requirements; T2 does not need adjustment.**

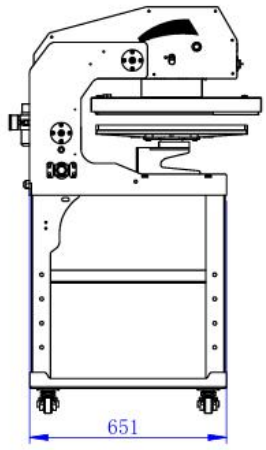


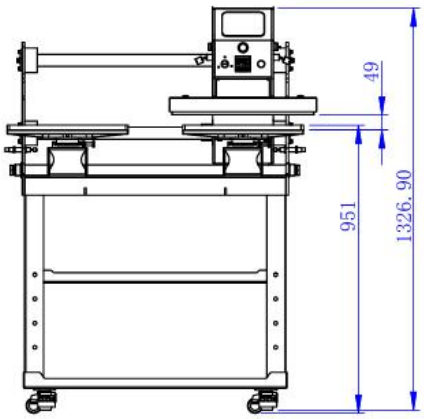
During the above setting process, press and hold the “SET” key for more than 3 seconds to save the current settings, or wait for more than 10 seconds without any operation to save automatically (no flashing digits indicate the settings have been saved).

For more instructions on the temperature controller and time relay, please contact your supplier.

2.6 Machine Dimensions







Chapter 3 Common Issues and Troubleshooting

3.1 No Power to Machine

A: Check if the power plug is properly inserted.
B: Check if the power switch [15] is turned on.
C: Unplug the power cord and check if the fuse [14] is blown.

3.2 Machine Powered but Cannot Start

A: Check if the GY-13 meter [1] display is functioning normally.
B: Check if the start buttons [3] and [7] are working properly.
C: Check if the emergency stop switch [6] is pressed.
D: Check if the mode switch [4] is set to Semi-Auto or Auto.
E: Check if the hand safety anti-press device [10] is stuck.

3.3 GY-13 Controller Screen Unresponsive

Check if the first countdown timer has reached 0 and the second timer has not been used.

Chapter 4 Circuit Diagram

