



Shanghai Pengwang Machinery Co., Ltd.

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PW-GM1 Geomembrane Wedge Welder

User's Guide



Please read this manual carefully before using this machine, and retain it for future reference.

i. Applications:

It can be applicable for welding PE、PVC、HDPE、EVA、PP and other hot melted materials.

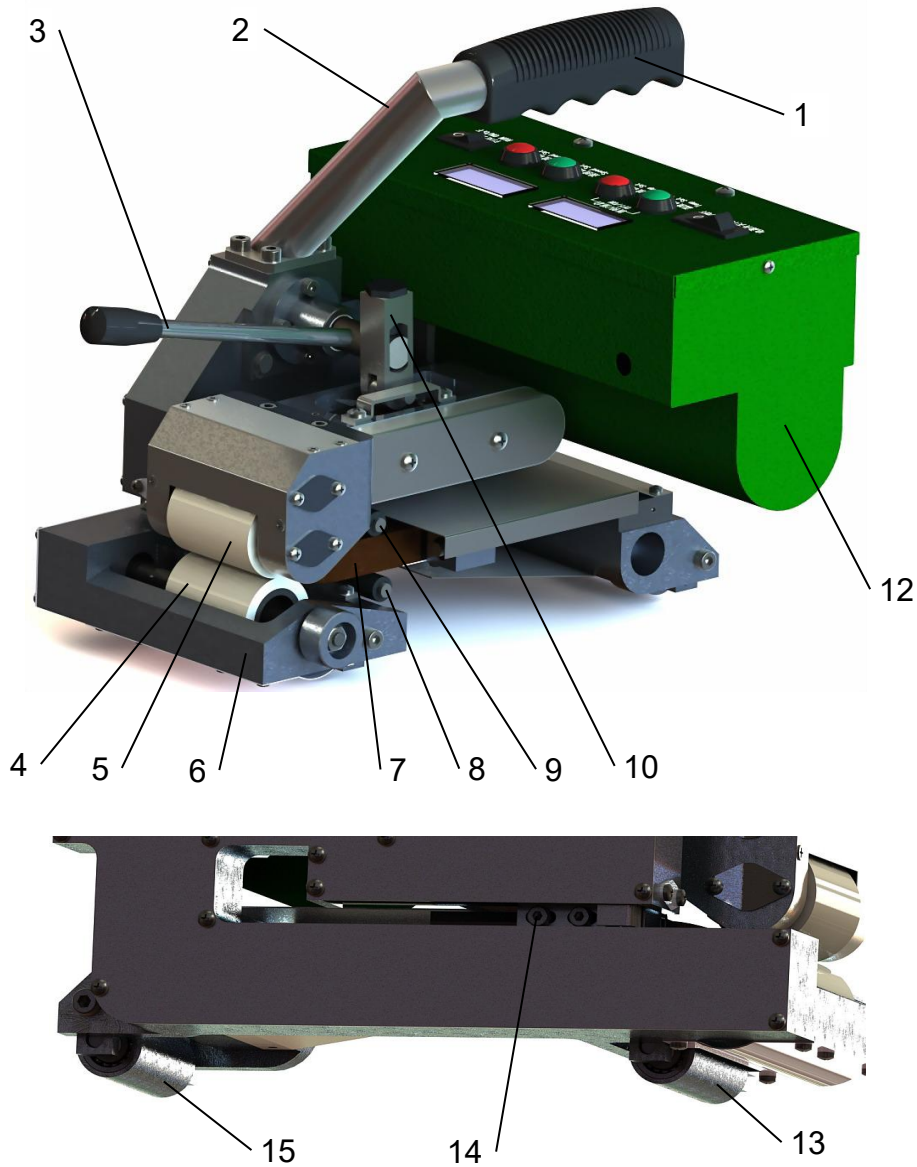
ii. Notice:

1. Use with grounded 3-cords mains cable and socket (socket with 15A capacity. On the corresponding welder, phase L connected to live wire, N to zero line, phase \perp to grounded protection line), plug will not be modified without prior permission.
2. Pressure roller will not engage on free running.
3. Don't touch hot wedge when they are hot. They may cause burns.
4. The voltage rating stated on the welder must correspond to line/mains voltage (220V).
The drop cable / wire with protective earthed conductors can only be used.
5. To ensure operator safety and reliable operation of equipment, the power supply must be installed power supply and leakage protection at the construction site.
6. It must be running at the correct use of manipulation of the operator, or they may cause a fire or explosion caused by high temperature.
7. Don't use welder in the water, or on a muddy construction site, to avoid flooding, rain or moisture.
8. The circuit board and other components in the controller box may be charged, please don't disassemble it without professional skills.
9. In normal work, the welding temperature generally does not exceed 400 °C.
10. Please preheat the welder about 30 minutes if it hasn't be used for a long time or it is affected with damp.
11. The power of this welder is large. Please don't heat it for long time to avoid excessive heating if it is in absence of welding or interval time is longer.

iii. Technical Parameters:

Voltage	220	V
Frequency	50	Hz
power	1200	W
Temperature	0~450	°C
Thickness of material	0.2~2	
Welding speed	0.5~8	m/min
Welding width	15*2, cavity 20	mm
Overlap width	120	mm
Size(L*W*H)	256*232*260	mm
Weight	7.5	kg

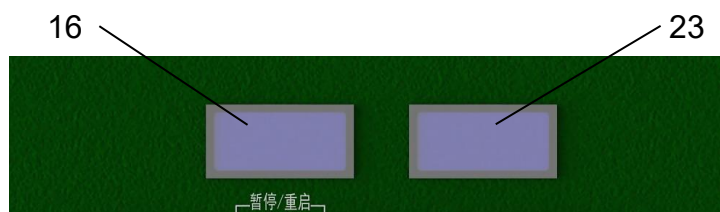
iv. **Description:**



1.	Handle crip	6	Rack	11	Adjusting screw
2.	Handle	7	Hot wedge	12	Controller box
3.	Pressure handle	8	Lower pressing wheel	13	After creeping roller
4.	Lower pressure roller	9	Upper pressing wheel	14	Adjusting screw of hot wedge
5.	Upper pressure roller	10	Cam	15	Front creeping roller

v. **The usage of controller panel**

- Power ON/OFF(17) is for controlling the main power of the welder.
- Switch power ON/OFF(17), LCD display shows as Figure 1, the hot wedge is not heating in natural state.
- Press the bottom (18) and (19)at the same time, LCD display shows as Figure 2, the hot wedge start to heat until reach your setting temperature.
- Press the bottom (18) and (19)at the same time again, LCD display shows as Figure 1, the hot wedge is not heating in natural state.
- Run ON/OFF (22) is used to control walking and stop of the welder
- When the welder start to run, LCD display



shows as Figure 3.



Figure 1



Figure 2



Figure 3

vi. Welding parameters setting

1. Welding temperature setting:

Using bottoms (18) Temperature setting knob ↑ and (19) Temperature setting knob ↓ on the panel to set the required temperature. You can set the temperature according to the welding materials and the ambient temperature. LCD display will show the set temperature and the current actual temperature.

2. Welding speed setting:

Using bottoms (20) Speed setting knob ↑ and (21) Speed setting knob ↓ on the panel to set the required speed according to the welding temperature. LCD display will show the set speed and the current actual speed.

3. Welding pressure setting:

It can change the welding pressure by rotating the pressure adjusting nut (11). Clockwise to reduce the pressure, counterclockwise to increase the pressure.

4. Adjusting hot wedge:

Loosen Adjusting screw of hot wedge (14), then you can move the hot wedge back and forth, lock the adjustment screw of hot wedge (14) after choosing the appropriate position.

5. Memory function:

The machine has a memory function of parameters, namely when you use the welder next time, the welder will automatically use the last set of parameters without having to re-set parameters.

vii. Welding process

1. Please lift the pressure handle (3) to separate the upper and down pressure roller (5、4), then plug the power and open the on power switch.
2. Setting the welding parameters according to the data of welding test.
3. Please wait the actual temperature value reaching the setting value.
4. Put the welder at the welding position and put the two prepared materials (one up and the other one down) into the machine.
5. Press the pressure handle (3) to make the upper and down pressure roller (5、4) in place. Then open the run ON/OFF (22), the machine would start walking and welding automatically.
6. To observe the relative position of the welding seam and the edge of the welded membrane at any time. It must be promptly corrected if there is deviation.

7. When the welder walks into the end of material, the pressures handle needs to be lifted to separate the upper and down pressure roller in time.
8. After completion of the welding work, press the buttons (18) and (19) on the panel to make the hot wedge to stop heating.
9. Turn off the power ON/OFF



viii. Fault diagnosis and solved ways

The fault performance	Caused reasons	Solved ways
Motor cannot turn	<ol style="list-style-type: none"> 1. no power on 2. fuse burns 3. speed circuit board burns 4. motor burns 	<ol style="list-style-type: none"> 1. check power state and connect power 2. change new fuse 3. change new speed circuit board 4. change new motor
Hot wedge cannot heat or overheat	Thermocouple is out of order	Change new thermocouple

IX. Routine maintenance

When the welder is not used, it should be cleaned the dirt and mud sand and other debris in the hot wedge or inside chain cover. And oil the whole welder, and then keep it in a dry place.

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