



## **Shanghai Pengwang Machinery Co., Ltd.**

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### **PW602 Metabo Double Heating Extruder**



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# PW602 Hand extruder Manual

## 1. Company

Pengwang is a professional high-tech enterprise engaged in the development and sales of electromechanical integration. "Realistic and pragmatic, sincere humility, excellence, strive for perfection" is adhered to by all employees of the company. Pursuing efforts to provide users with advanced technology, quality products, good service is our consistent purpose. We have advanced production and test equipment, and often make technical training for workers to ensure the advanced technology and equipment, to create good conditions for producing high-quality and cost-effective products. With a perfect quality assurance system, from procurement of raw materials, production processes, factory inspection to ensure that the products can be 100% qualified out of factory.

We always follow the quality first, user supreme principle. With the best products into the market, and return the user with the best service. We will continue to carry out technical innovation, improve production processes, improve product quality, strengthen after-sales service for the user to eliminate the worries. User's needs is our pursuit. We are sincerely looking forward to working with you and creating brilliant future..

## 2. Product Overview

PW602 hand extruder is a new type of hot air welder which imported foreign advanced technology, well-developed,.It has reached or exceeded the same type products of oversea, filling the domestic blank. The major components (hot air gun and drive motor) are made of imported brand-name accessories, stable performance, long service life; They are two independent systems,one is for preheating raw material,another is for welding rod extrusion. Reasonable structure, convenient operation, continuous welding, high working efficiency, powerful extrusion, to make the weld strength is greatly improved. It is the ideal product for a variety of thermoplastic welding processing.

This product is with two major components, preheating raw material's hot air part and welding rod's extrusion part. Hot air part with adjustable temperature controller to heat automatically, and extrusion part with independent thermostatic heating control system to send hot air independently. It is easy to adjust extrusion speed and use screw extruding for powerful extrusion pressure. Using 220V power supply uniformly to weld plastic sheets,tube and other thermoplastic products,especially for both ends of large diameter hollow wall pipe, producing pipe and repairing pipe and so on.

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Available welding materials: thermoplastic HDPE, PP, PVDF, especially PE .Do not apply in a conductive plastic (PE-EL), or cause the machine to produce a conductive short-circuit.

Replacement of the different welding nozzle, can be applied:

- 1) Plastic containers's welding, stitching, etc.;
- 2) The large diameter plastic pipe's pipe welding, repairing, splicing, sealing, etc.;
- 3) The thicker plastic membranes, geomembrane splicing, patching and so on.

## **Main technical parameters:**



### **PW602 Hand Extruder:**

- 1) Voltage: 220V
- 2) Power: extrusion system drive motor: 1300W  
Heating systems: heating tube 1100W + hot air welding torch 3400W
- 3) Temperature: adjustable air temperature 20 to 600 ° C  
Adjustable plastic extrusion heating temperature is 0 ~ 450 ° C
- 4) Preheating air volume: 500L/min
- 5) Welding rod diameter size:  $\Phi$ 3.0mm ~ 5.0mm

## **3. Operation procedures:**

- 1) Put the hand extruder on the shelf, install the handle, plug in the mains plug.
- 2) Open the control box switch, welding temperature is generally set at 300 ° C, when the temperature reach 270 ° C, the motor switches off, you can not start, when the temperature reaches 270 ° C, the motor switch is turned on, you can start properly. Open the hot air machine power switch, thermostat knob, heated a few minutes to operate.
- (3) the right hand pull the motor switch, the motor starts to rotate. The new tool noise, probably it mostly is relevant to the resonance between the tool and the base or the close of the parts inside the tool. If the motor is very smooth, and the internal sound disappears after sending welding rods.
- 4) It is better to re-standby 5 to 6 minutes after ensuring the motor can be started. Then put welding rod into machine to operate. Adjust the temperature carefully depending on the thermoplastic case.
- 5) Motor's rotating speed is fast without thermoplastic and will become heavier when sending welding rod, if become very difficult, please stop, probably screw heating time is too short or low temperature.

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6) different welding methods require different welding nozzles, our company provides a standard nozzle.

7) Need pressure on machine then can be pressurized on the welding seam. Extruding some plastic material to heat nozzle, then make weld surface not smooth.

8) Welding speed, extruding, angle, nozzle structure will determine welding seam's looking, but the most important thing is air temperature and air volume. It determine welding 's strength. Usually hot air temperature is 260 ~ 400 °C. Certainly, the faster welding speed, the higher required temperature.

9) Hot air with the welder moves, It is alright as long as can make the surface to be welded after the hot air blowing. The higher temperature of the welding is not the better. Select the correct temperature is very important.

10) Please do not knock when replace the PTFE welding head. It is better to heat then take down.

11) Hot air motor carbon brush life is about 800 hours, attention to early replacement, do not wait until the carbon brushes to run out.

12) When shutdown, please circumgyrate hot air thermostat knob to the minimum, a few minutes blowing before they shut down the hot air machine.

13) Retain a little of welding rod when shutdown to avoid extruder screw's damage.

14) Clean up welding nozzle when shut down.

#### **4. Product Features**

1) Imported hot air welding torch and imported driven system, high temperature, big torque, long service life, stable performance.

2) Light weight, easy to handle and available to operation at different angles.

3) Big extrusion volume can be welded more than 10mm welding seam.

4) Different welding shoes can be applied to different types of welding.

5) It is used in the tank and pipe and is comply with Part 4 of the DVS standard (Germany Welding Association).

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## 5. Product warranty

- 1) This extruder warranty period from the date of delivery for one year.
- 2) After receiving the extruder, user should immediately check whether the extruder is in good condition, no comments in two days will be as a complete, through acceptance.
- 3) No warranty for damage caused by the following circumstances:
  - a) No feedback for problems in time or not in accordance with the requirements to take timely measures to cause serious damage;
  - b) Willful damage or overload;
  - c) Demolition, repair and maintenance work without the manufacturers permission ;
  - d) To make alterations or install attachments without being approved by the manufacturer;
  - e) User fails to manual operation;
  - f) The ceramic heating tube or non-company sold products.
- 4) Normal wear and tear is not covered under warranty.
- 5) No warranty for force majeure (lightning, floods, fires, accidents and other non-manufacturing business reasons) caused by damage.
- 6) Above terms shall be invalidated after the warranty period.

## 5. Safety Precautions

- 1) Prohibited the extrusion nozzle facing the person or object of any likely to be scalded when devices work.
- 2) Stop using the equipment, or start using must ensure that the head nozzle is not covered with plastic, and if so may result in poor extrusion, resulting in a backflow or injection, reflux causes the damage, spray may cause burns.
- 3) When the device is working, any metal part is prohibited to touch, otherwise there will be danger of burns.
- 4) The device is turned on, there must be supervised, or may cause equipment damage and cause a fire hazard.

# Common faults & solution

Issue	Possible failure analysis	Solution
Don't blow hot air	Hot air gun motor does not rotate	Check and replace the stator, rotor, switch
	Heating gun core does not heat	Replace the heating gun core
	The air outlet on the upper side of the machine's discharge port is blocked	Remove debris from the air outlet
Noise during discharge	The discharge port is blocked	After preheating for a long time, clean the discharge port
	Worn screw or blade	Replace screw or blade
	Electrode particles jam the blade and the feed screw	Disassemble the connecting screws of the feeding cavity and the extrusion cavity, and clean the electrode particles
Drive motor does not rotate	The carbon brushes are worn out after running beyond service life	Replace carbon brushes
	The temperature does not reach the motor safety lock temperature	Wait for the temperature of the heating tube to rise to the set temperature before operating
	Motor burns due to overvoltage	Replace the stator and rotor of the drive motor
	Loose motor wiring	Rewiring
	The motor overheating protection lamp lights up	Wait 2-3 minutes, after the motor cools down, restart
Don't feed	The electrode is not inserted deep enough	Reinsert the electrode
	The welding rod cannot be inserted into the feed hole	φ4mm welding rod can only be inserted into the upper feed hole (φ4.5mm hole)
	The feed screw is worn, causing the gap to be too large	Replace the feed screw
Abnormal heating tube temperature	The temperature keeps rising and cannot stabilize	The heating tube integrated thermocouple is damaged, replace the heating tube
	No heating, no light on or off	Check the fuse and switch and replace

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