



INDUSTRIAL EQUIPMENTS PVT. LTD.

PERMANENT JEWELRY SPOT WELDER MANUAL

(Please read and keep this manual properly)

PulseGem 100

Permanent Jewelry Spot Welder - Pulse Arc, Argon Shielded



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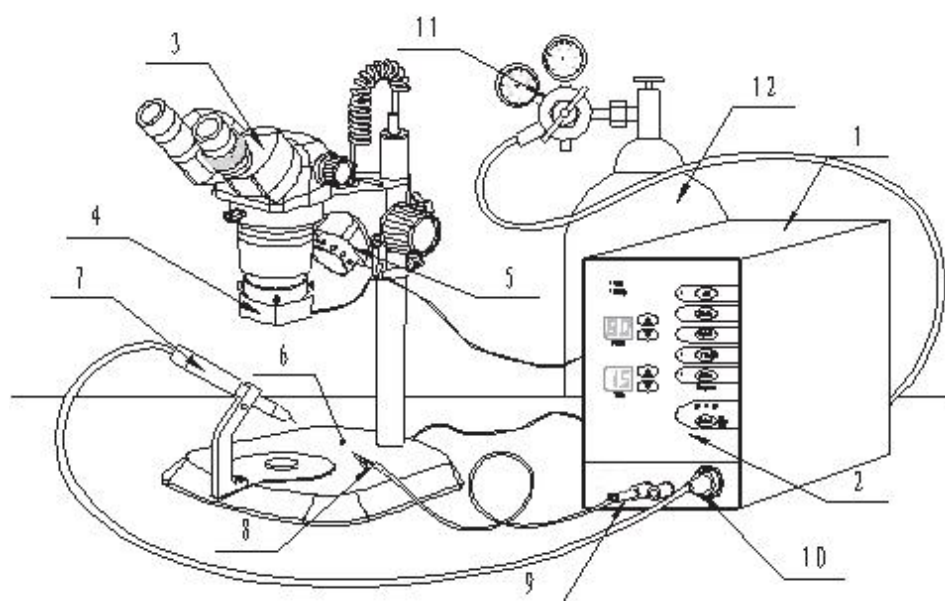
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I. Security Considerations

In order to avoid electric shock, fire and dangerous accident when using electrical equipment, be sure to pay attention to following basic safety measures.

1. Before using the instrument, please read this manual and precautions. Placing this manual near the instrument for convenient view.
2. Please keep the electrical equipment away from children and absolutely forbid children to play this electrical equipment, spare parts and other cables.
3. The operating of the equipment should maintain good ventilation and lighting, do not work in a humid and dusty environment thus to avoid accidents by abnormal environment.
4. Never let any liquid enter the instrument
5. There will be a strong arc light when operating, irrelevant personnel should away from the work site for avoiding damage the eyes.
6. Do not use cable to drag equipment. Cables should be away from heat, oil and other sharp objects, so as not to damage the cable.
7. You must completely cut off the power before clean the equipment and open the case.
8. This machine with compact and reasonable structure does not need special and tedious maintenance. Paying attention to the cleaning of the instrument specially the microscope. Not clean the attachments will seriously affect the observation of objects.
9. The instrument should be covered with a dust cover in non-working status.
10. For your security, please use the correct fittings.

II. Main Instruments

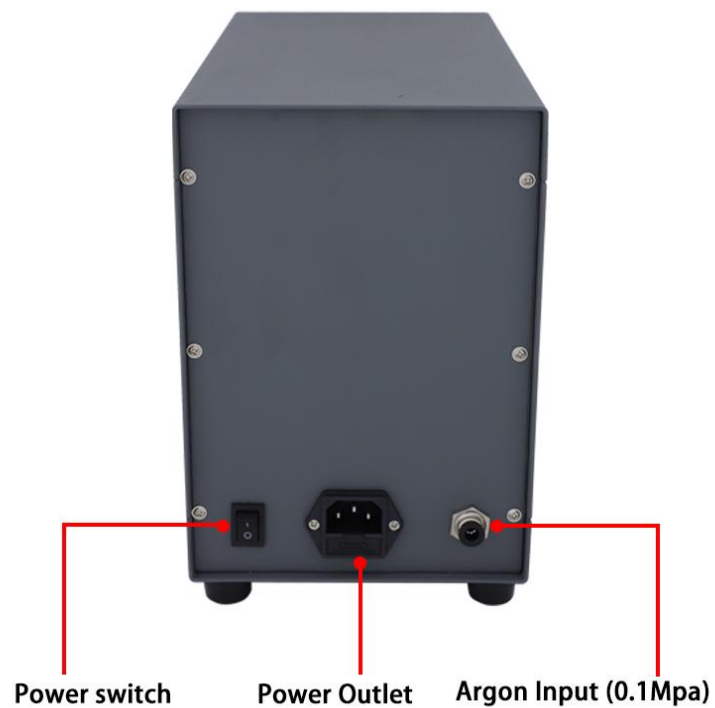


- | | |
|-------------------------------|-----------------------------------|
| 1. Welding Host | 7. Welding Handle |
| 2. Hosting Control Panel | 8. Welding Circuit Clip |
| 3. Zoom-stereo Microscope | 9. Loop Outlet |
| 4. Electric Protective Filter | 10. Gas-Electric Connector |
| 5. Lighting Source | 11. Argon Cylinder with Regulator |
| 6. Microscope Frame | 12. Argon Bottle |

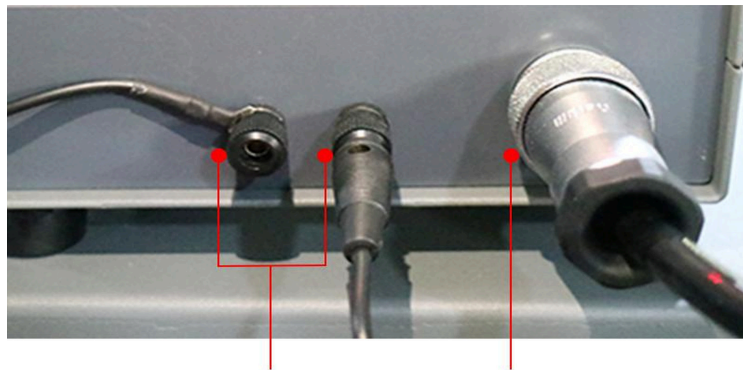
Note: Argon cylinders shall be handled by the user himself.

III. Operation Panel and Button Manual

1. Operation Panel and Button Manual



2. Welding Handle Joint & Cathode Circuit Joint (2)



Cathode Circuit Joint (2)

Welding Handle Joint

3. Workbench Installation Steps



① Loosen the screws on bottom plate



② Install the bracket



③ Put the welding pen into the holder

4. Accessory Display



①

Power cord



②

10 tungsten needles and 4 clip heads



③

Trachea



⑦

Data cable



⑧

Needle burnisher



⑨

Bracket base



④

Welding Handle



⑤

Crocodile clip



⑥

Hexagon wrench



⑩

Bracket rod I



⑪

Bracket rod II



⑫

Bracket screw



⑬

Support of pressure regulating valve



⑭

Pressure regulating valve



⑮

Pressure gauge

①	Power cord	⑥	Hexagon wrench	⑪	Bracket rod 2
②	10 tungsten needles and 4 clip heads	⑦	Data cable	⑫	Bracket screw
③	Trachea	⑧	Needle burnisher	⑬	Support of pressure regulating valve
④	Welding Handle	⑨	Bracket base	⑭	Pressure regulating valve
⑤	Crocodile clip	⑩	Bracket rod 1	⑮	Pressure gauge

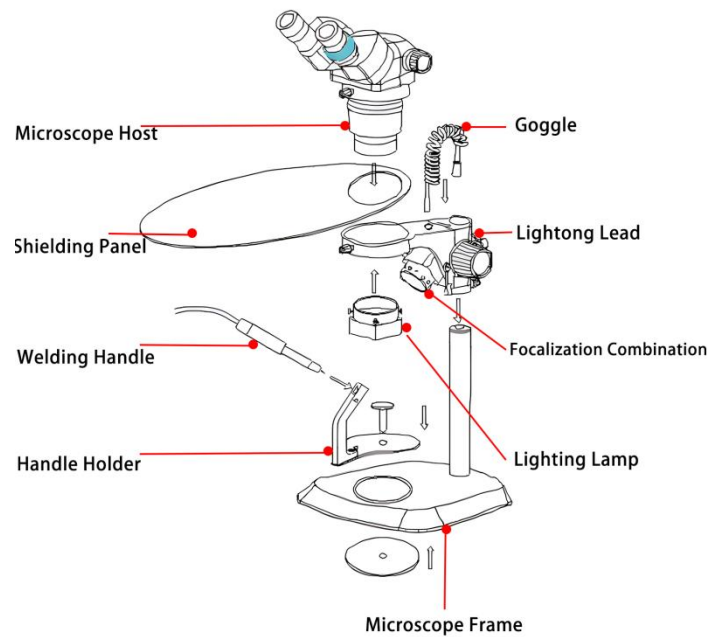
IV. Main Performance Parameters

Model-Input Voltage&Frequency	110V/60HZ	Power	100W
	220V/50HZ		
Welding Voltage	40V	Welding Current	50A - 600A
Welding Time	3ms - 30ms	Max Welding Frequency	1HZ
Protective Tube	250V/2.0A	IP Grade	IP21
Gas Supply Pressure	$\geq 0.1\text{Mpa}$	Max Argon Consumption	5L/min
Product Size(mm)	240*155*280	Dimensions after packing(mm)	355*255*300
Product Weight(kg)	6.35	Weight after packing(kg)	7

V. Application Method

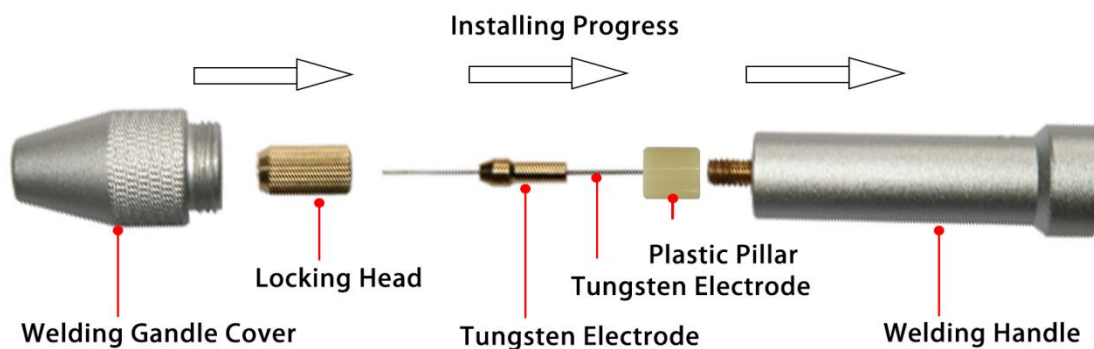
1. Installation of Tungsten Electrode Welding.

Microscope assembly:



Put the assembled microscope, host, welding handle and related accessories into working surface, (refer to main instrument mapping) connected firmly for spare.

2.The Installation of Welding Handle and Tungsten Electrode.



The order of installation is as shown.

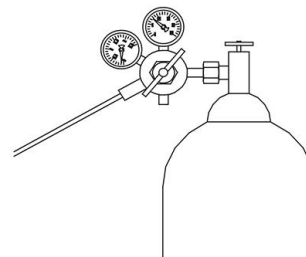
Unplug welding handle cover in real practice and unscrew locking head, inserting tungsten electrode. Using the cover measure the tungsten electrode exposes 10-15mm after installation. Than screw locking head and cover.



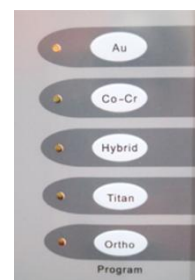
The tungsten electrode should keep sharp status, angle LE 25° . After use for a period, you need polishing until the tungsten electrode can not meet use length, please change in time.

3. Setting of Instruments

Turn on the power switch, make sure the gas supply pressure of argon is 0.1Mpa.



Confirming the panel working pattern according to welding material, this equipment have set up 5 working pattern which almost meet operating demand. If you need change pattern, adjusting the 5 buttons on the panel to achieve the working condition you needed. Welding power and welding time Nixie tube will indicate corespondent values.



If the 5 working pattern can not satisfied your need, you can adjust the quantity of welding power and the length of welding time so as to change the welding performance parameter. Adjusting power, pushing the button ▼ means decrease and ▲ means increase. Adjust value of 1 to 10 integer and display of valuelx10 means the percentage of actual power. Adjusting time, pushing the button ▼ means decrease and ▲ means increase. And the value according to the multiple of 3, the units is second.



Setting the deflate time according the proficiency of worker, which means the time of workplace touching tungsten electrode . Pushing the select button, you can choose 0.5,1,1.5 second as deflate time.

The equipment will automatically tune to Ortho working pattern without any action of machine in 5 minutes of power on. For avoid damage to the welding object with wrong operating.



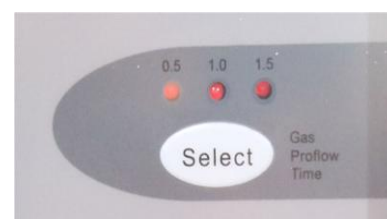
4. Welding

Put welding circuit clamp clip in workplace and grasp the welding workplace, looking into the eyepiece and let welding place touch tungsten electrode tip. Don push too hard for left space of automatic retraction, and the machine will welding naturally.

Attention: The two electrodes can never short-circuit

5. Operation Tips

Pressure Hint: The indicator light below the Select button of panel will flash, when the gas pressure of argon can not reach the welding pressure demand. (According to



current setting.)

Waiting for welding :

The button of wait is on means charging and the light turn to Ready means charge complete.

Ready:

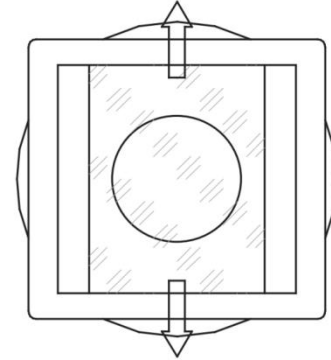
Everything is right after boot and the Ready indicator lit, you can start welding.



6. Replacement of Lens

There install an cover lens under electric protective filter because of it is too close to welding place. And the lens will bonding welding slag, you should replace it based on the bonding extend.

Note: The electric protective filter maybe diminished after two years using.



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