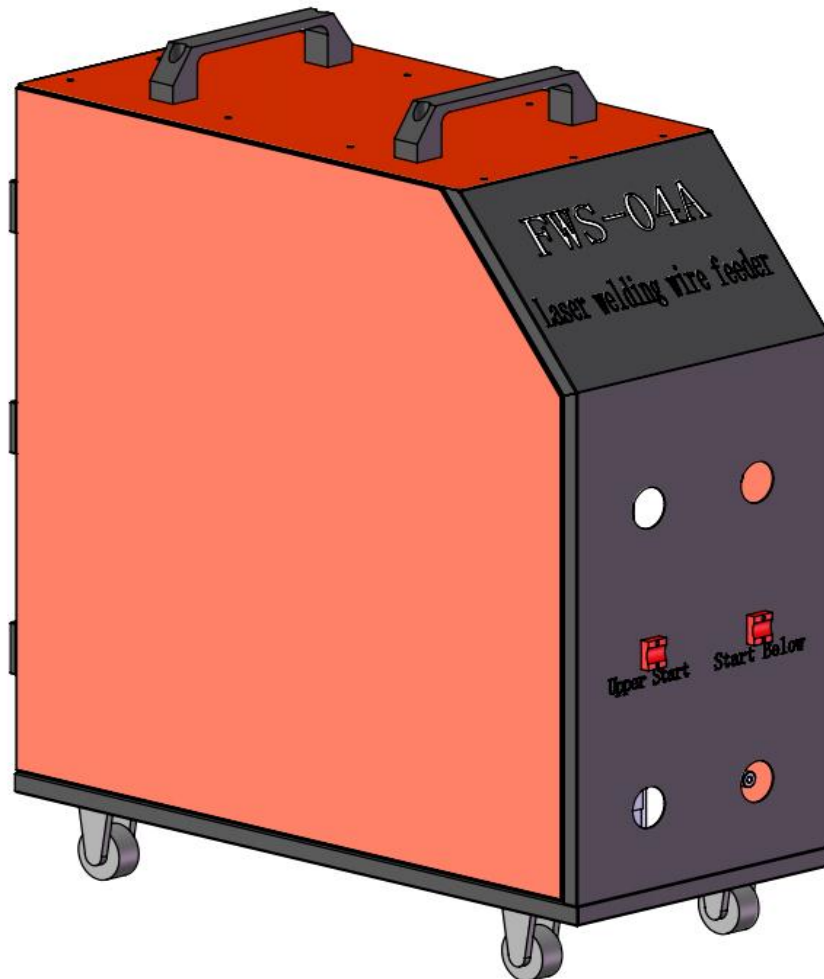


**Shenzhen RelFar Intelligent Technology Co., Ltd.**

## **FWS-04A Laser welding four wire feeder**



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# **Shenzhen RelFar Intelligent Technology Co., Ltd.**

## **Introduction**

Thanks for choosing our products!

To ensure you an overall understanding about this product, the manual has made a detailed introduction on features, structure, technical parameters, instructions and maintenance of this product. Before using the product, please read the manual carefully to help you use it better.

For the constant renovation of function for the product, I want to apologize for that there may be differences between the product and the manual. If you have any question when using it, please call us in time. We will help you as possible as we can.

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## **Chapter I summarize**

### **1.1 Product parameter**

name	Laser welding double wire feeder
Model number	FWS-04A
External dimension	690mm long *310mm wide *690mm high
Core diameter of welding wire	$\Phi$ 2.0mm maximum
weight	38KG
Power source	220V
Reduction ratio	1:5
Motor type	57Stepper motor
Weight of welding wire	20KG (maximum)

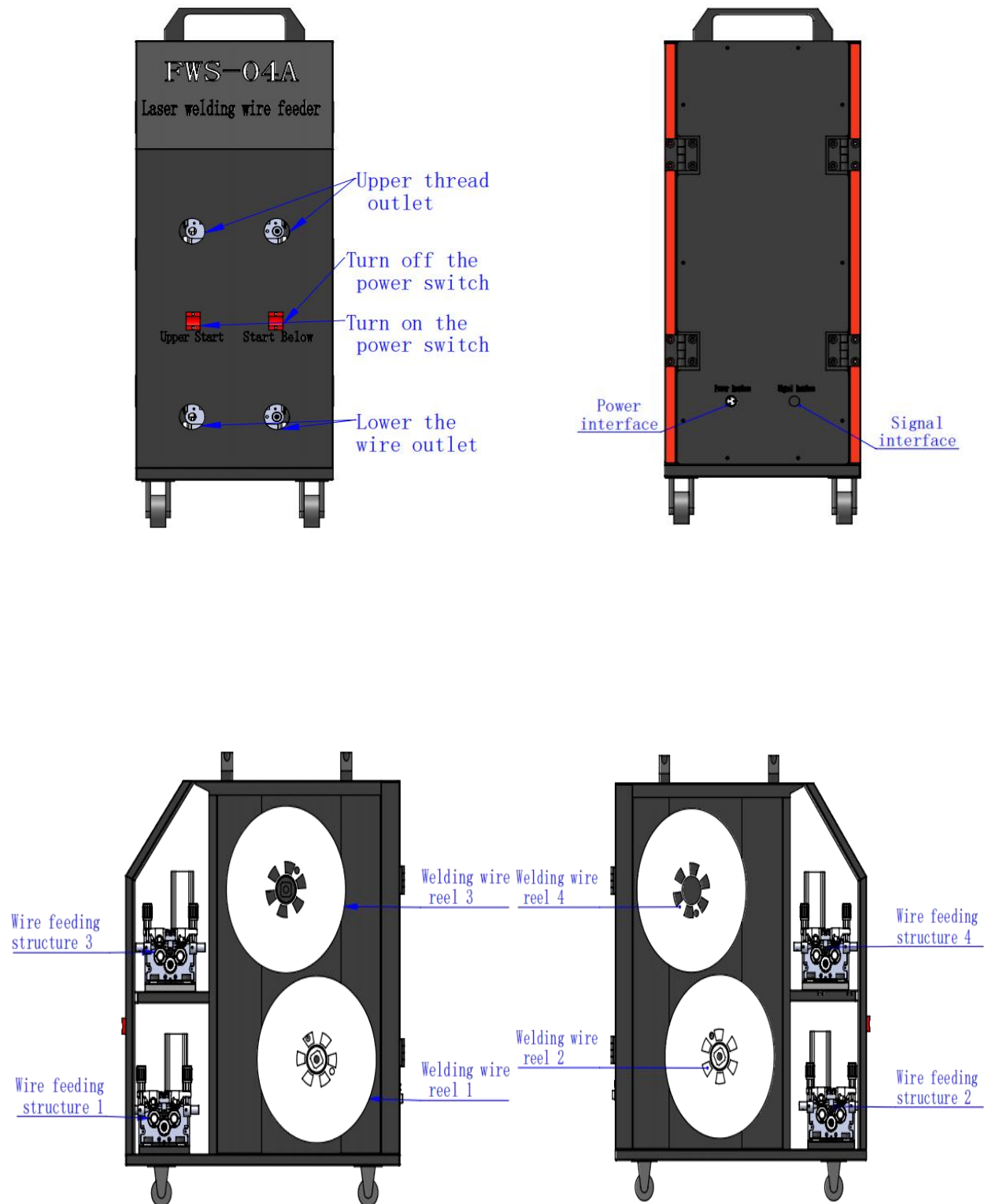
### **1.2 Matters needing attention**

※ To ensure personal safety, read this user manual carefully before operation.

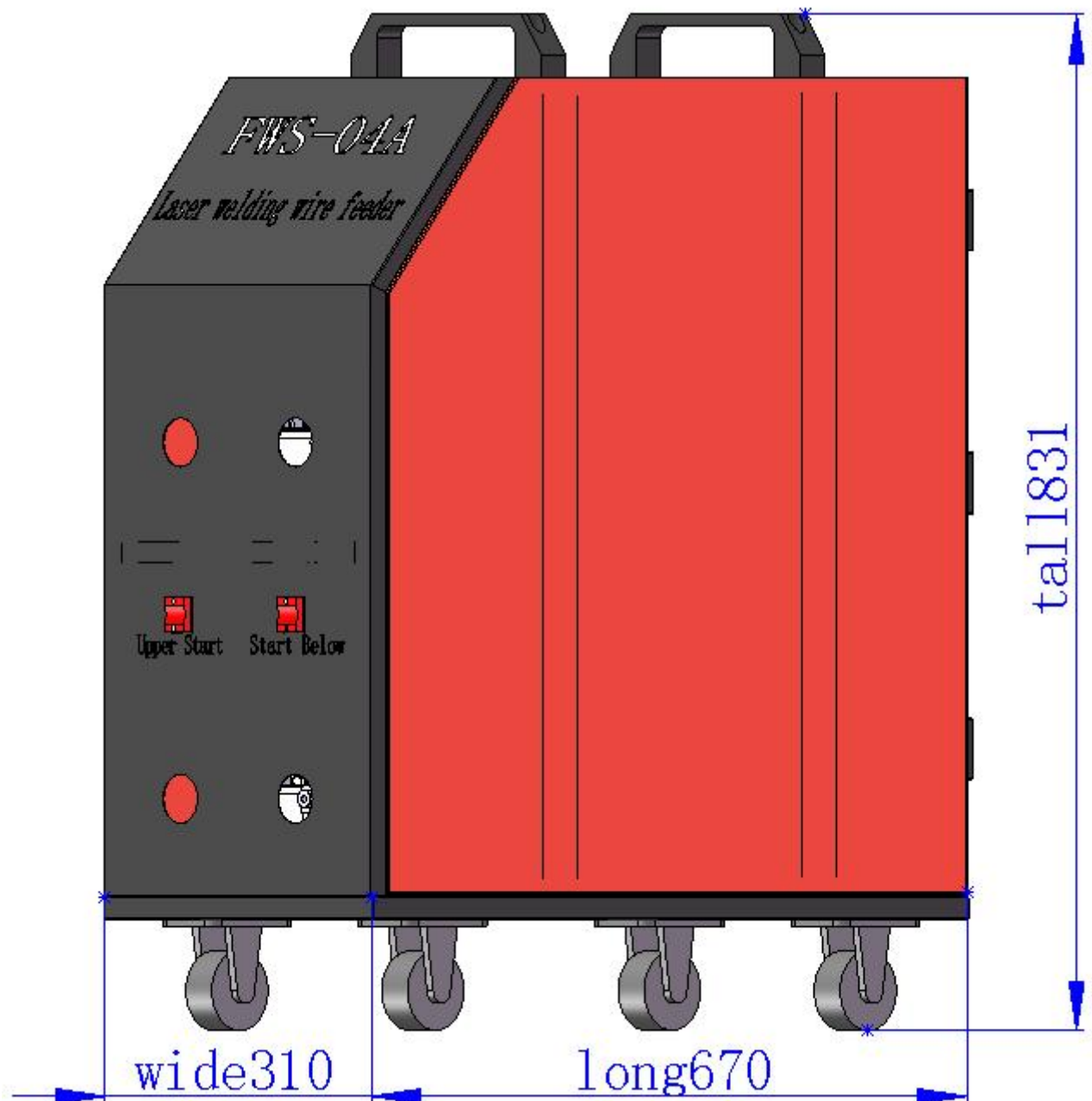
※ Before supplying power, ensure reliable grounding protection.

## Chapter II structural features

### 2.1 Product structure



## 2.2 Product shape size

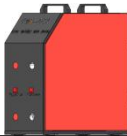






## **Chapter III List of Articles**

### List of goods

After receiving the product, please check whether the outer package is intact, check whether the product is complete after unpacking, and whether the parts are intact. If you find damage, please contact immediately. (Because the product is constantly updated, the accessories may be different from this manual)

### List of goods

<b>No</b>	<b>name</b>	<b>goods</b>	<b>Specifications</b>	<b>quantity</b>	<b>Company</b>
1	Laser welding four wire feeder		FWS-04A (Comes with 1.2/1.6V wire feeding wheel)	1	PCS
2	Wire feeding wheel		2.0、2.0Vtype	8	set
3	Four wire feeding tube components		SS-99A	1	set
4	Power plug and cable assembly		SS-86A	1	PCS
5	Wire feeding signal control line		SS-08A	1	PCS

## **Chapter IV Electrical**

### **4 Electrical Installation**

4.1 Power cables are inserted into a three-core navigation connector. The port provides 220V power supply.

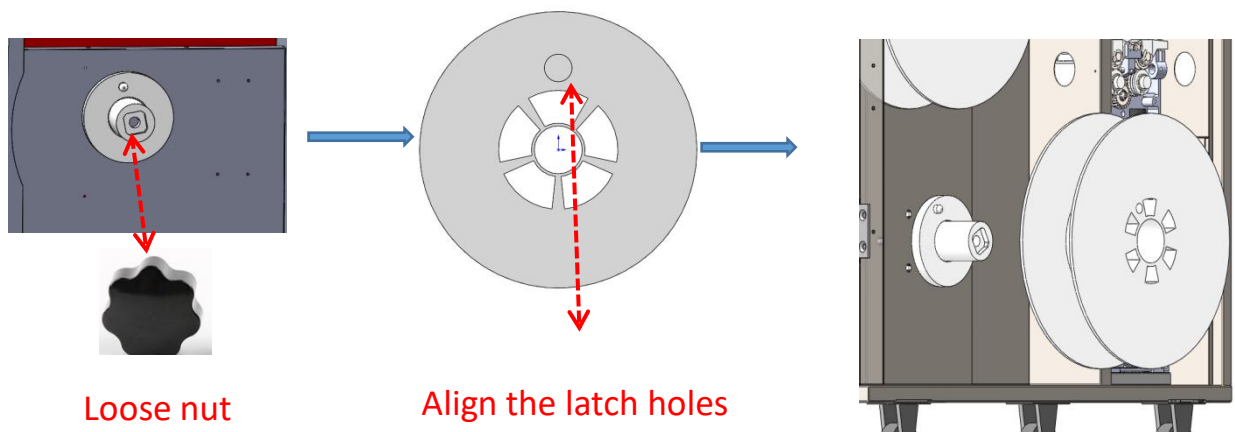
4.2 The four-core navigation connector of the signal control line is inserted to connect the signal port to the handheld welding control system.

## **Chapter V Installation of Solder Pads**

5.1 First, loosen the club nut by turning it counterclockwise.

5.2 The second step is to install the wire feeding disc. There is a small hole in the middle to align with the blocking wheel. During installation, pay attention to the orientation of the wire, the wire is rotated counterclockwise, and the wire is connected with the wire feeding wheel in a horizontal straight line.

5.3 The third step is to lock the screw feed tray.

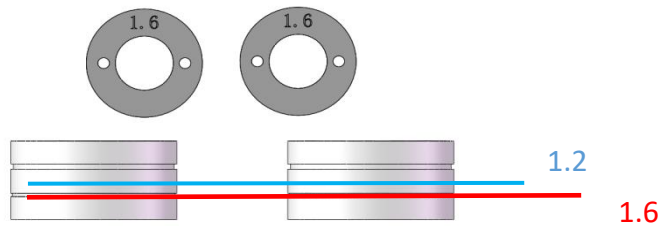




## Chapter VI Installation of wire feed wheel

### 6.1 Wire feed wheel specifications

A set of two wire feeding wheels. There are two small slots on the wire feed wheel, the installation should be one-to-one corresponding, the user according to the use of filling wire core diameter of the wire feed wheel groove width is 1:1 corresponding, usually the wire feed wheel has two small slots of different specifications, quite a round of dual use as shown below. When installing, the two small grooves should correspond to the same level. For example, change:

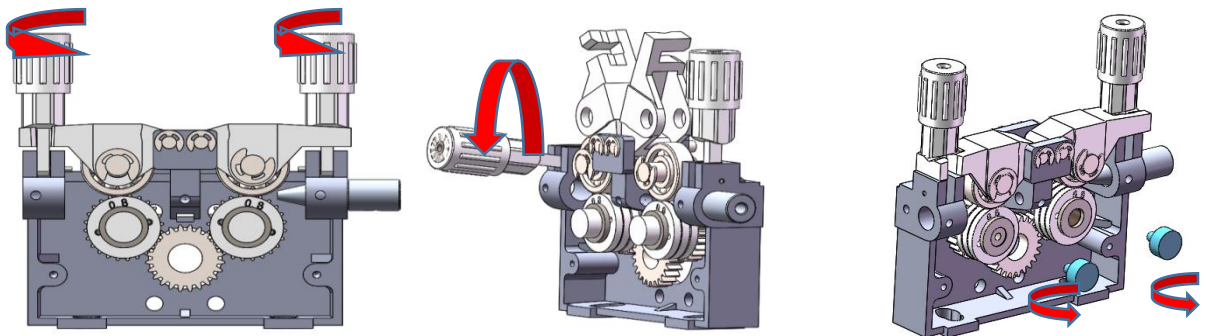


### 6.2 Replace the wire feed wheel

First step, rotate the left and right two locking screw wheel handles,

The second step, 90° forward swing downward release.

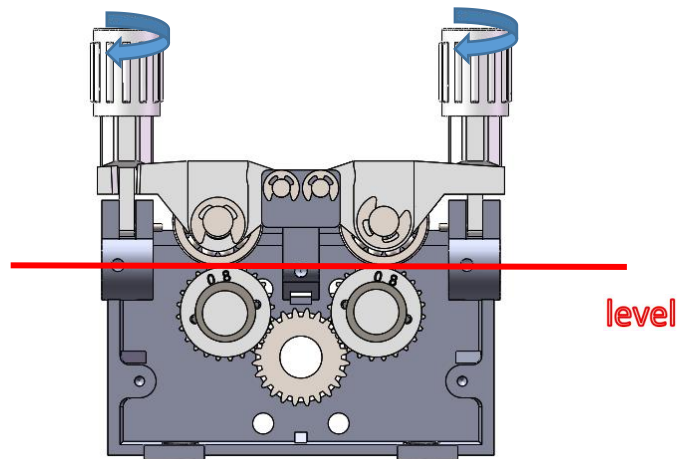
The third step, rotate loosen the fastening screw feed wheel, remove and replace.



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## 6.3 Adjust wire fastening

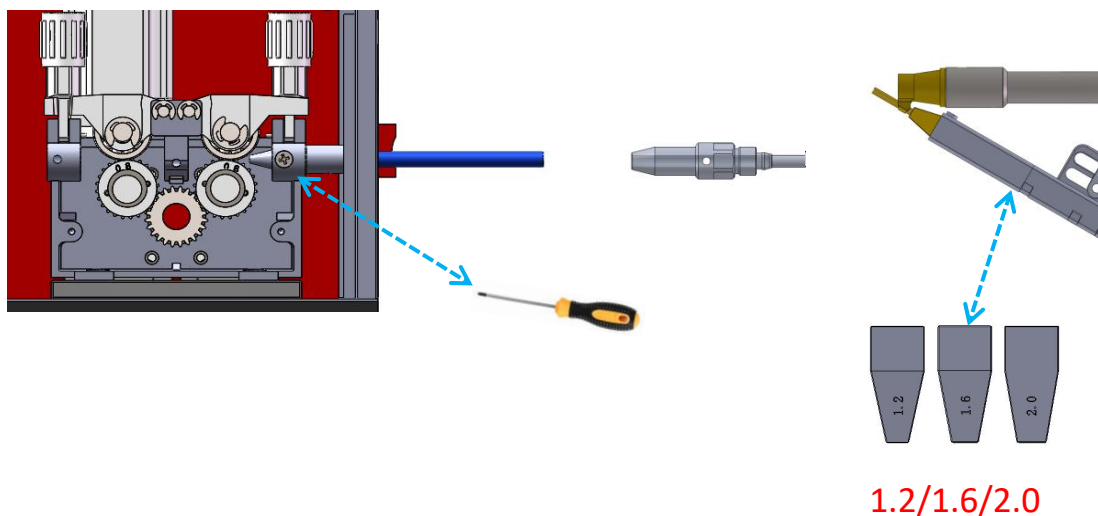
Rotate the handle of the wire press wheel, there is a scale on the handle, adjust the wire feed smoothly, the main purpose is to assist the wire feed parallel to the same horizontal line.



## Chapter VII Installation of wire feed pipe

7.1 The wire tube is directly aligned with the wire outlet, and the locking screw can be fixed.

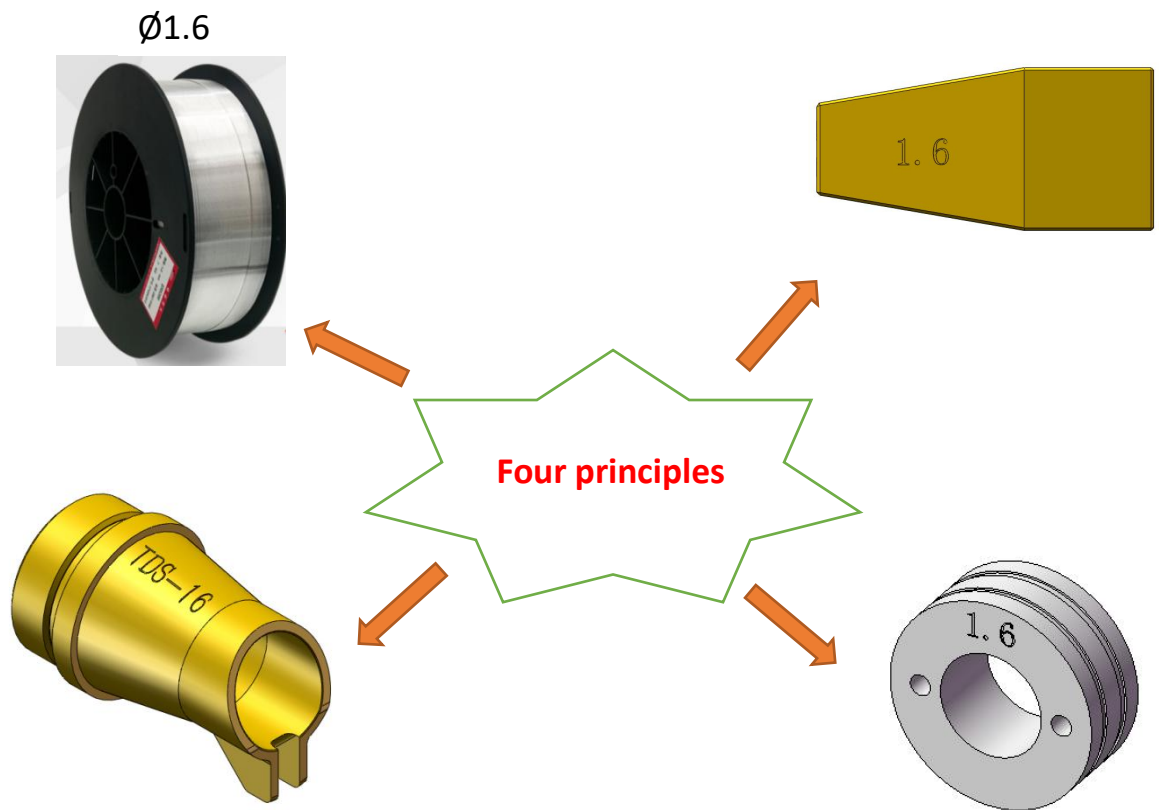
7.2 The wire nozzle is based on the size of the wire feeding core selected by the customer, and the copper nozzle is matched with 1:1 pairs.



### **7.3 Thread selection**

First of all, according to the customer's application scenario, it is necessary to comply with the four principles, the core diameter of the welding wire, the diameter of the wire nozzle, the diameter of the wire guide groove of the copper nozzle, and the diameter of the wire feed wheel groove are matched 1:1.

Such as the following:

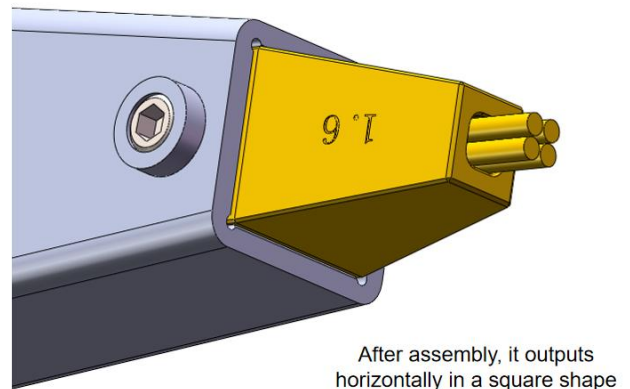
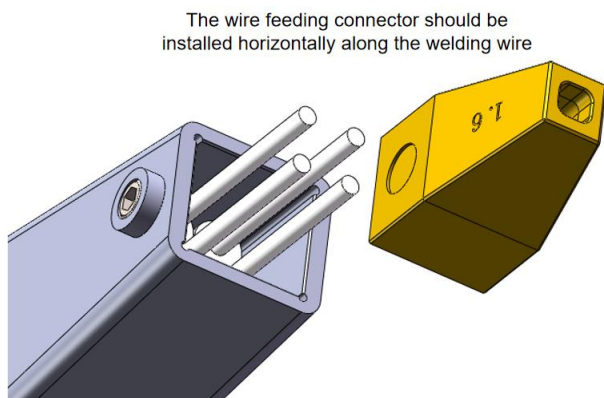


The core diameter of the welding wire, the diameter of the wire outlet nozzle, the diameter of the wire guide groove of the copper nozzle, and the diameter of the wire feed wheel groove are matched 1:1

## **Chapter 8: Replacement of Wire Feeding Nozzle**

### **8.1 Switching of wire feeding nozzle**

The assembly of wire feeding connectors should first send the welding wire 5-10mm out of the port, and then install the wire feeding nozzle horizontally along the welding wire. After installation, the welding wire should follow the slot position of the welding nozzle (copper nozzle). Pay attention to adjusting the welding nozzle and installing it vertically with the wire feeding component.

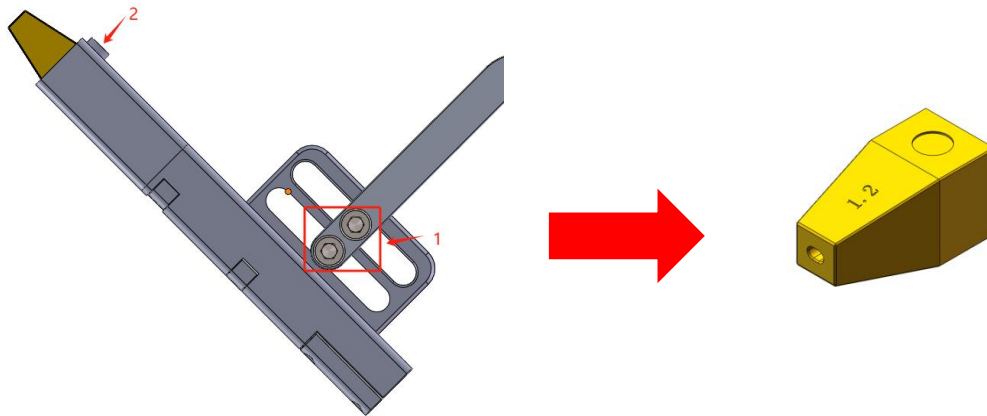


## **Chapter IX Welding wire replacement**

### **9.1 Switch between different welding wires**

Loosen the M5 screw at 1 below, rotate the gun head to the appropriate Angle, loosen the 2 Kimi screws, and replace the appropriate wire feeding connector.

### **9.2 Four wire feed and double wire feed switch**



Turn off the upper and lower power switches, and replace the corresponding double wire feeding connector as shown in the figure above.

## chapter x Operation introduction

The Hand-held laser welding system operation panel (HMI) adopts a 7-inch TFT touch screen with beautiful interface and easy operation.



[Automatic wire feed off] : Through this button can control whether automatic wire feeding is performed during welding. The wire is automatically fed only when light is allowed

[Manual blowing] [Wire feeder] : Manual blowing test and wire feed and withdrawal test of the wire feeder. For example: often press the manual blowing area is always blowing, loosen the manual blowing area is closed blowing, manual wire feeding and drawing are often according to the corresponding small triangle arrow.

[Wire feeding parameters] : used to set wire feeding parameters, including wire filling parameters, wire withdrawal parameters, etc.

**Wire withdrawal speed:** the speed of the motor wire withdrawal after releasing the start switch.

**Annealing time:** The time when the motor dewires.

**Filling speed:** Speed of motor bushing.

**Patch time:** The time of motor bushing.

**Wire feed delay time:** After the light delay for a period of time and then wire feeding, generally 0.

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## 10.1 Replacement feed

**Continuous wire feed:** Used for wire feeding machine. Click once to continue wire feeding and click again to stop.

**Continuous withdrawal:** Used for wire feeding machine. Click once for continuous wire withdrawal and click again to stop.

The screenshot displays a control interface for a wire feeding machine. On the left, there are five input fields for parameters: 'First Extracting Time(ms)', 'First Extracting Speed(mm/s)', 'Second Feeding Time(ms)', 'Second Feeding Speed(mm/s)', and 'Feeding delay Time(ms)'. Below these fields are two buttons: 'Continue Feed' and 'Continue Extract'. At the bottom left, there is a navigation bar with four buttons: 'Main', 'Feeding paras', 'Diagnose', and 'System paras'. On the right side, there is a vertical column of control buttons. The top section includes 'Lock', 'Blowing alm', 'Cool sys alm', 'Laser alm', 'Temp °C', and 'Galvanometer alarm'. Below these are 'Blowing' and 'Feeder' buttons with left and right arrow icons. The next section contains 'Wobble disable' and 'Laser disable'. The bottom section has 'Auto feeding off' and 'Lock off'.

**Thanks for using our products!**

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