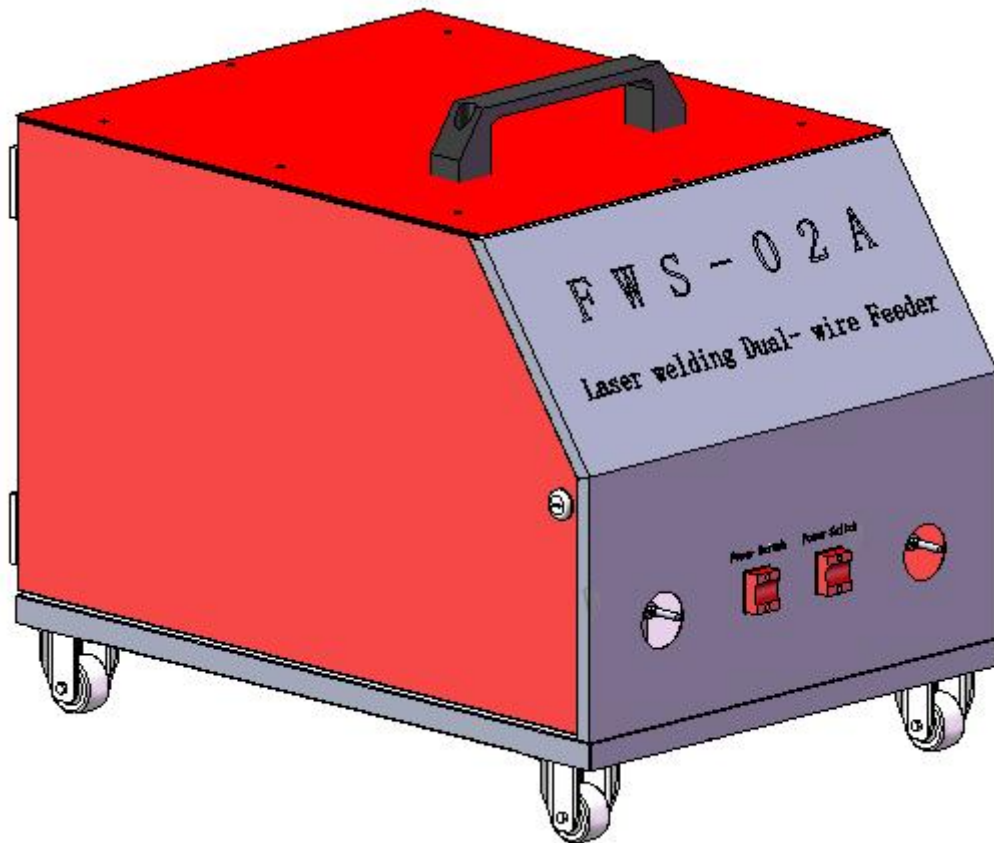


# FWS-02A Laser Welding Double Wire Feeder



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

**Website: [www.relfar.com](http://www.relfar.com)**

**Tel.: 0755-23143635**

**Address: Block E, Area I, Siyuan Industrial Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province**

# **Preface**

Thank you for choosing our products!

To enable you to have an overall understanding of our company, there is a detailed introduction regarding features, structural features, technical parameters, instructions for use and maintenance of the product in the Manual. Carefully read the Manual to help you better use it before the product is used.

Due to constant update of product functions, the product you received may differ from the description in the manual. We hereby express our deep sorry for this matter! In case of any question in the use process, timely call us for consultation, and we will offer dedicated service to you wholeheartedly.

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# Chapter I Overview

## 1.1 Product parameters

Name	Laser Welding Double Wire Feeder
Model	FWS-02A
External dimension	Length 605mm*width 398mm×height 472mm
Gross weight	22.6KG
Power supply	220V
Weight of welding wire	Maximum 25KG;
Core diameter of welding wire	Maximum Ø2.0mm

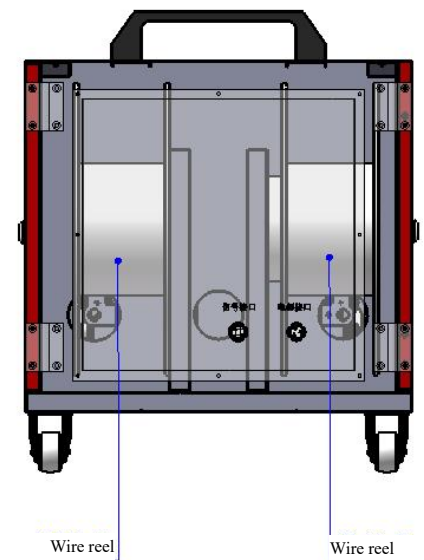
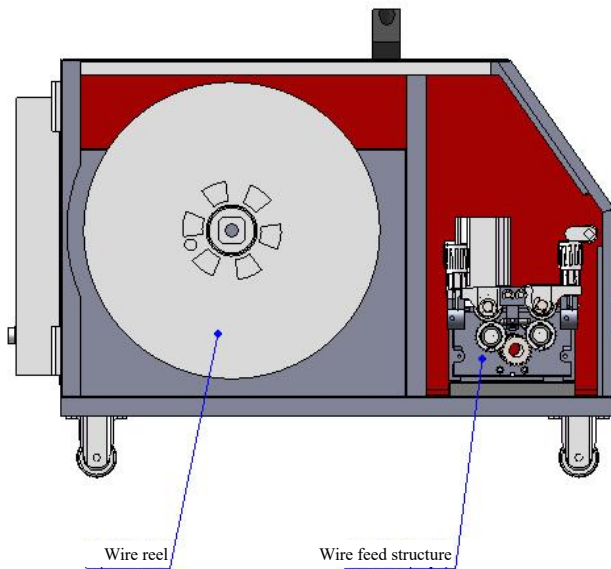
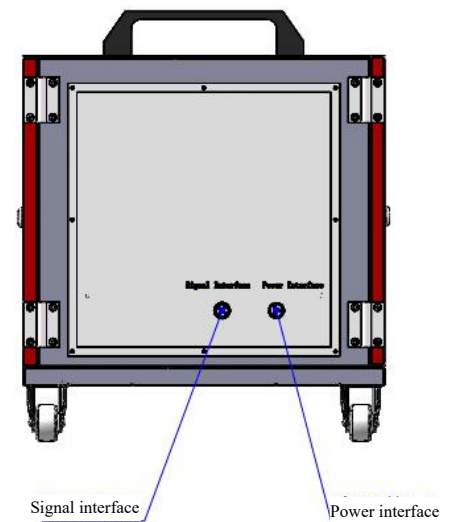
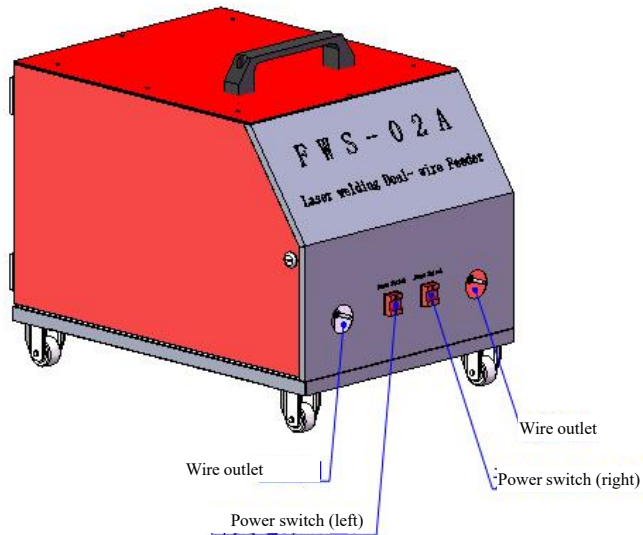
## 1.2 Precautions

※ To ensure personal safety, please read this Manual carefully before operation.

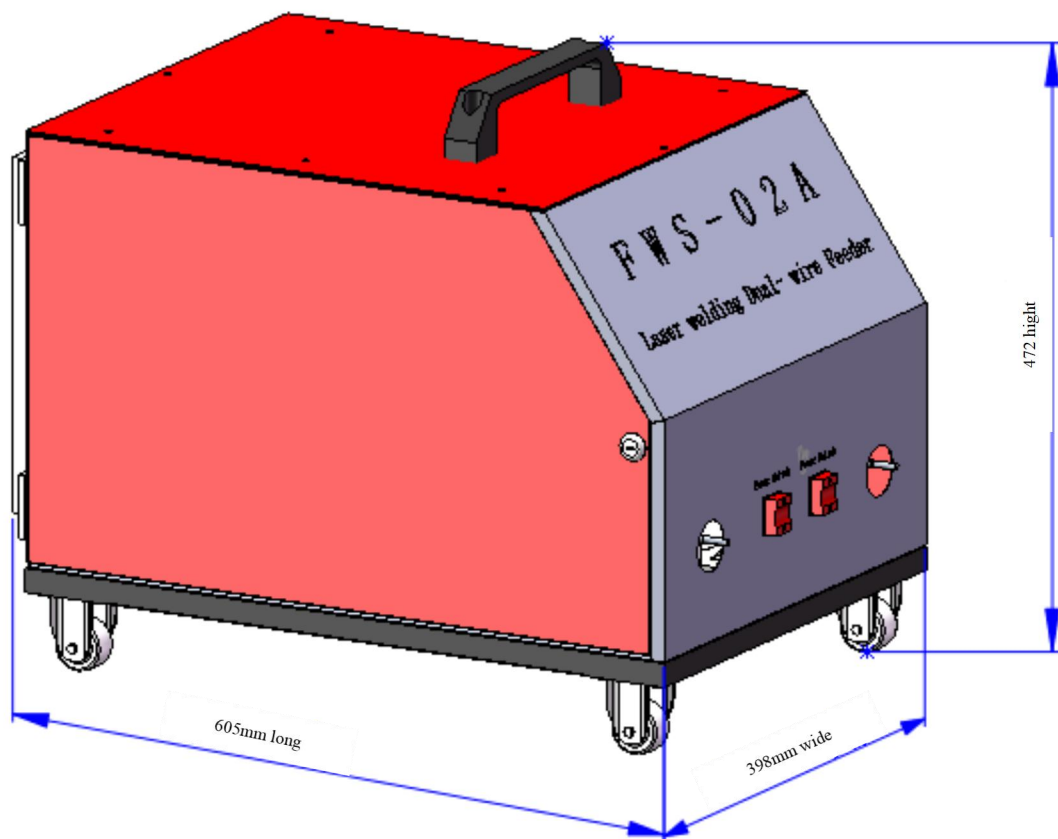
※ Before power supply, it is necessary to ensure reliable grounding protection.

# Chapter II Structural Characteristics

## 2.1 Product structure



## 2.2 Overall dimension of product






## Chapter III List of Articles

### List of articles

After receiving the product, please check whether the outer package is in good condition, and after unpacking, please check whether the product is complete and each part is in good condition. In case of any damage, please contact us immediately. (Due to the continuous updating of products, the accessories you may receive are different from those in this Manual)

### List of articles

S/N	Name	Item	Specification	Quantity	Department	Confirm
1	Double Wire Feeder		PWS-02A	1	PCS	
2	Wire feed rolls		Type 2.0, 2.0V	1	PCS	
3	Components of double wire feed tube		SS-02 (D1.6)	1	PCS	
4	Components of power supply plug wire		SS-02	1	PCS	
5	Wire feed signal control line		SS-08	1	PCS	
6	Components of intelligent wire feed tube		SS-07 (D1.6)	1	PCS	

7	Wire feed rolls		V0.8 and V1.0V grooves	1	PCS	
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## Chapter IV Electrical

### 4 Electrical installation

4.1 The power cord is plugged into a three-core aviation plug in butt joint, and the port provides 220V power supply.

4.2 The signal control line is plugged into a four-core aviation plug in butt joint, and the signal port is connected with the hand-held welding control system.

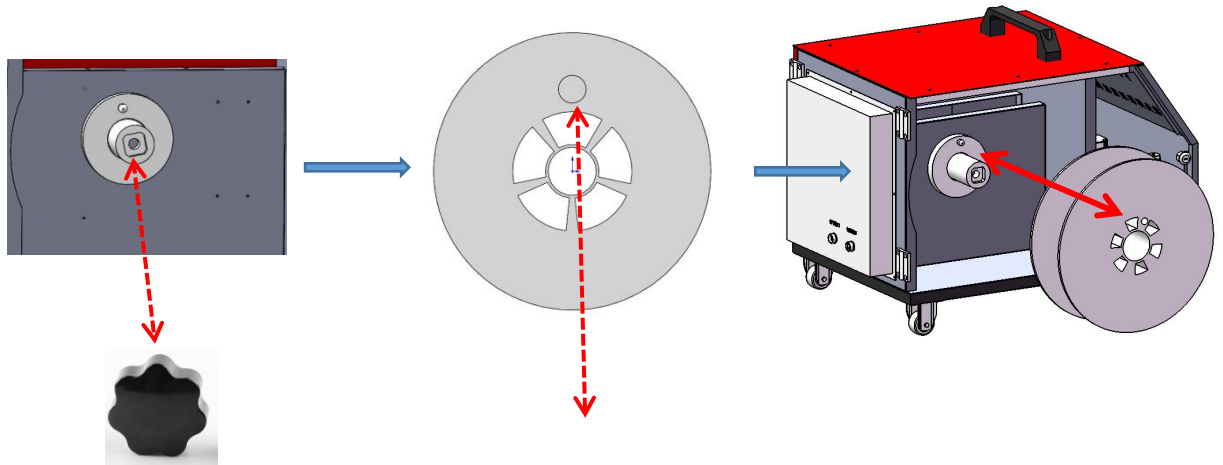


# Chapter V Installation of Wire Bonding Pad

5.1 Step 1. Rotate counterclockwise to loosen the plum nut. 阻尼轮

5.2 Step 2. Install the wire feed plate, and a small hole is arranged in the middle to align with the damper. Pay attention to the orientation of the wire during installation. The wire rotates counterclockwise, and is connected with the wire feed roll in a horizontal straight line.

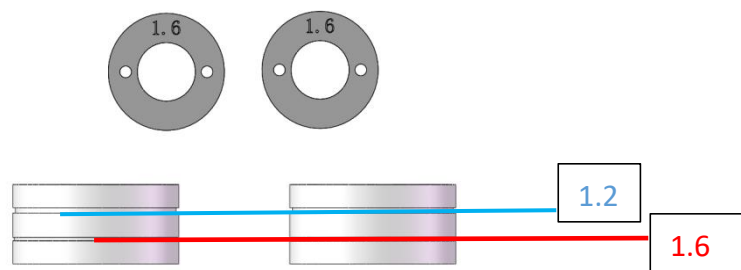
5.3 Step 3. Lock the wire feed plate with a nut.



Align the bolt hole  
and loosen the nut.

# Chapter VI Installation of Wire Feed Rolls

There are 2 pieces of wire feed rolls in a group. The wire feed roll is provided with two small grooves, which shall correspond to each other one by one during installation. Users can make 1: 1 correspondence between the wire feed roll and the groove width according to the core diameter of the filler rod used. Generally, the wire feed roll has two small grooves with different specifications, which is equivalent to one roll with two purposes as shown in the following figure. During installation, the two small grooves shall be on the same level. For example, as follows:

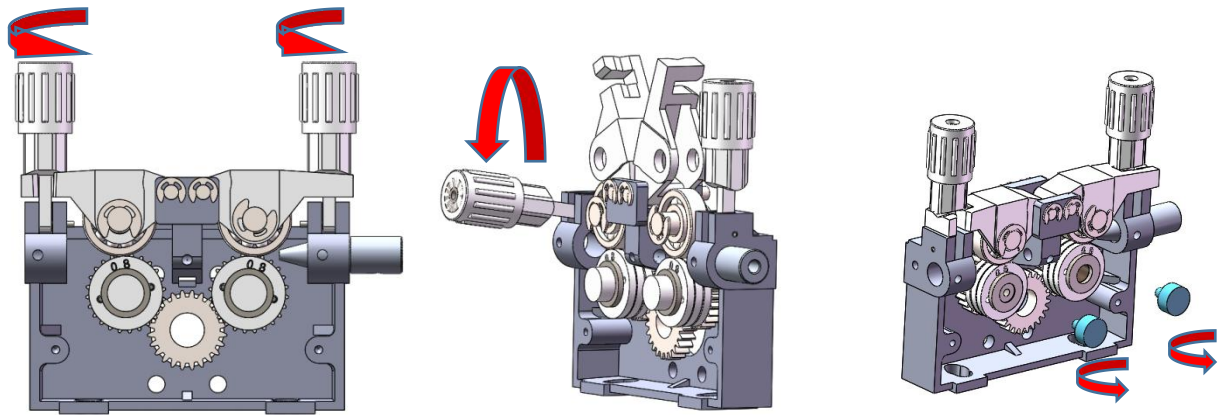


## 6.2 Replace wire feed roll

Step 1. Rotate and loosen the handles of the left and right locking wire feeding rolls,

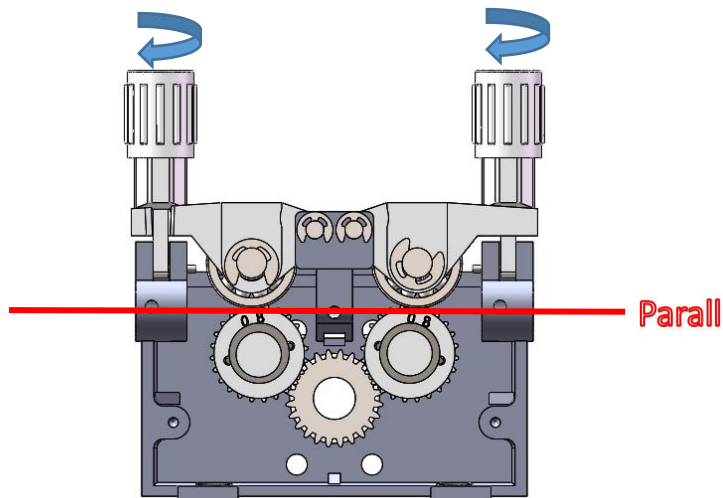
Step 2. Swing forward by 90 degrees and release downward.

Step 3. Rotate and loosen the nut of the wire feed roll, and take it out for replacement.



### 6.3 Adjust the wire feeding fastening.

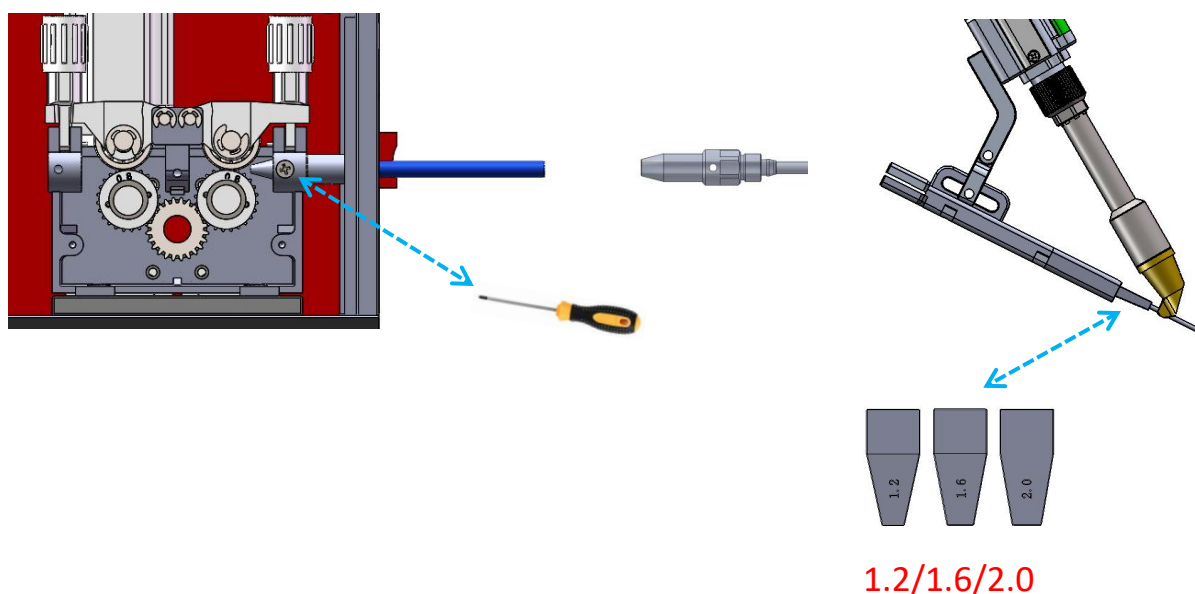
Rotate the handle of the wire feed roll, which is marked with scales to adjust the smooth wire feed. The main purpose is to assist the wire feed parallel to the same horizontal line.



## Chapter VII Installation of Wire Feed Tube

7.1 Install the wire tube directly at the wire outlet and fix it with the locking screw.

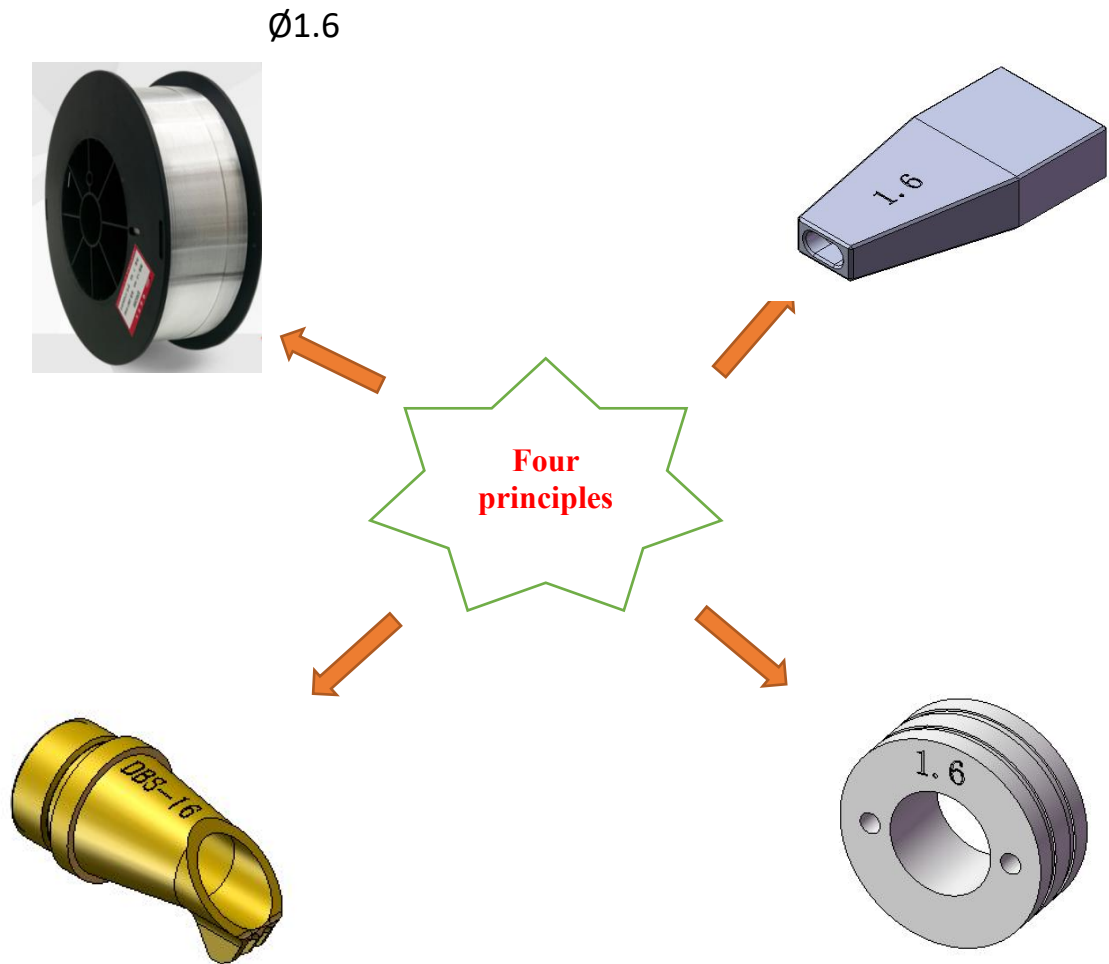
7.2 The wire feed nozzle is matched with the copper nozzle by 1: 1 according to the core diameter of the wire feed selected by the customer.



### 7.3 Selection of the wire nozzle

First of all, it shall be carried out according to customers' application scenarios, and four principles shall be followed, that is, the core diameter of welding wire, the diameter of the wire outlet nozzle, the wire slot diameter of the copper nozzle and the slot diameter of the wire feed roll are matched according to 1: 1.

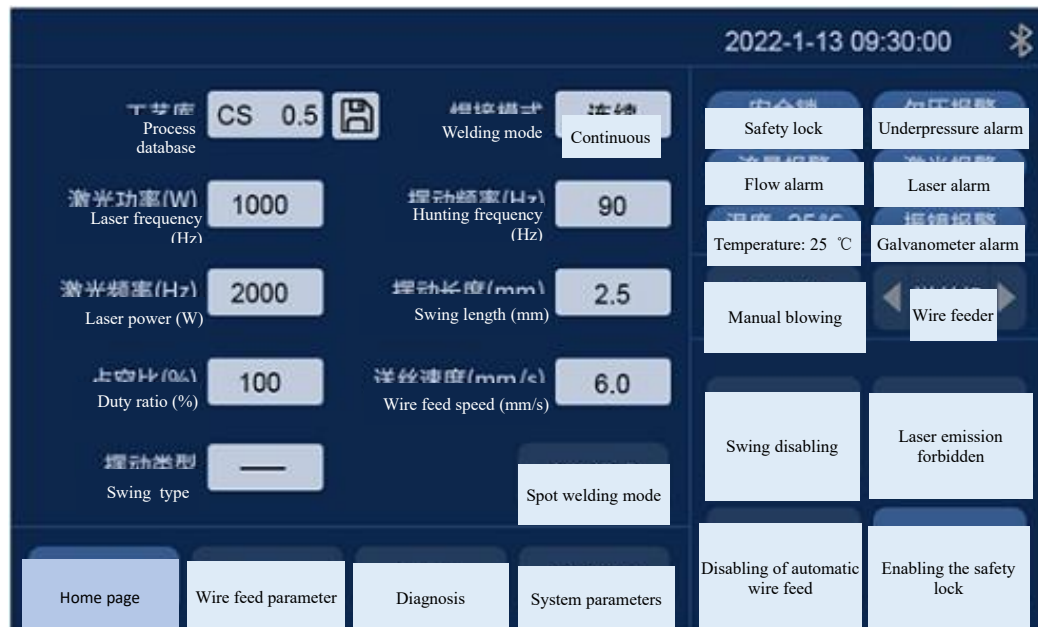
For example, as follows:



The core diameter of welding wire, the diameter of the wire outlet nozzle, the wire slot diameter of the copper nozzle and the slot diameter of the wire feed roll are matched according to 1: 1.

## Chapter VIII Introduction to Operation

As for the handheld laser welding system operation panel (hereinafter referred to as "HMI"), the 7寸 configuration TFT touch screen is used, with beautiful interface and convenient operation.



[Disabling of Automatic Wire Feed]: Whether automatic wire feed is performed at the moment of welding can be controlled by the button. Automatic wire feed will arise only when the laser emission is allowed

[Manual Blowing][Wire Feeder] Manual blowing test as well as wire feeder wire feed and wire withdrawal test. For instance: Blowing is performed all the time by always pressing the manual blowing area, and the blowing will be disabled by loosening the manual blowing area. The corresponding small triangular arrow is pressed all the time for manual wire feed and wire drawing.

[Wire feed parameter]: Used to set the wire feed parameters, such as wire supplement parameter and wire withdrawal parameter.

**Wire withdrawal speed:** Motor wire withdrawal speed after the starting switch is loosened.

**Time of wire withdrawal:** Time of motor wire withdrawal.

**Wire filling speed:** Speed of motor wire supplement.

**Time of wire filling:** Time of motor wire filling.

**Wire feed delay time:** Wire feed after delay for a period of time after laser emission which is generally 0.

## 8.1 Replace wire feeding

**Continuous wire feed:** Used for wire change of wire feeder. Continuous wire feed will arise by clicking once, and continuous wire feed will stop by clicking anew.

**Continuous wire withdrawal:** Used for wire change of wire feeder. Continuous wire withdrawal will arise by clicking once, and continuous wire feed will stop by clicking anew.

Time of wire withdrawal (ms)	200	Safety lock	Underpressure alarm
Wire withdrawal speed (mm/s)	70.0	Flow alarm	Laser alarm
Time of wire supplement	200	Manual blowing	Wire feeder
Wire filling speed (mm/s)	60.0	Swing disabling	Laser emission forbidden
Wire feed delay time (ms)	0	Disabling of automatic wire feed	Close the safety lock
Continuous wire feed:	Continuous wire withdrawal:		
Home page	Wire feed parameter	Diagnosis	System parameters

**Thank you for using the intelligent technology product of Shenzhen RelFar!**

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