

Shen zhen Rel Far Intelligent Technology Co.,Ltd.

FWS-03A Laser Welding Wire Feeder



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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 one summarize

1.1 Product Parameter

Name	Laser Welding Wire Feeder
Model	FWS-03A
external dimension	560mm long *240mm wide *472mm high
weight	16.2KG
power supply	220V
Wire weight	25KG maximum
Core diameter of welding wire	Ø2.0mm maximum

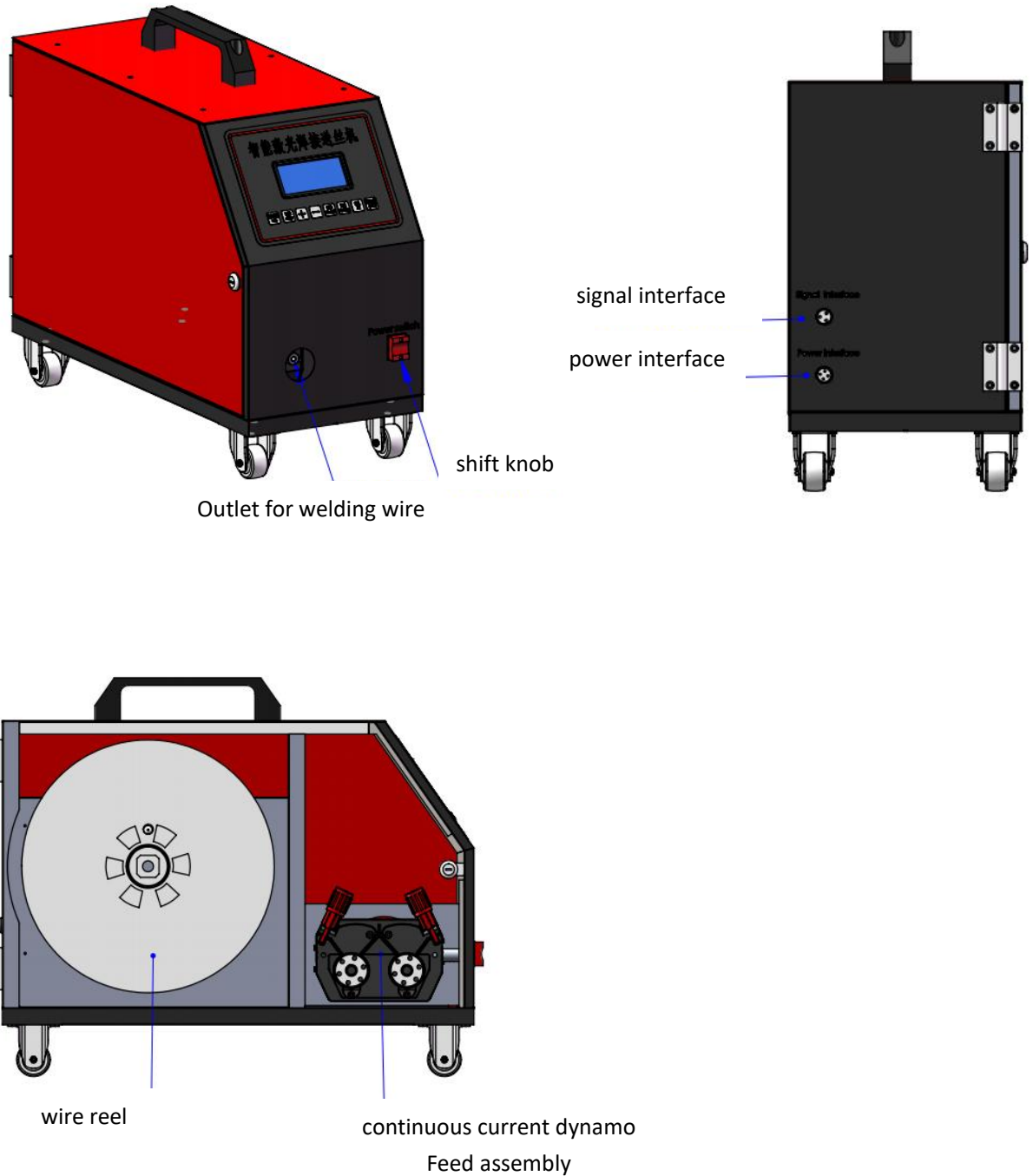
1.2 matters need attention

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

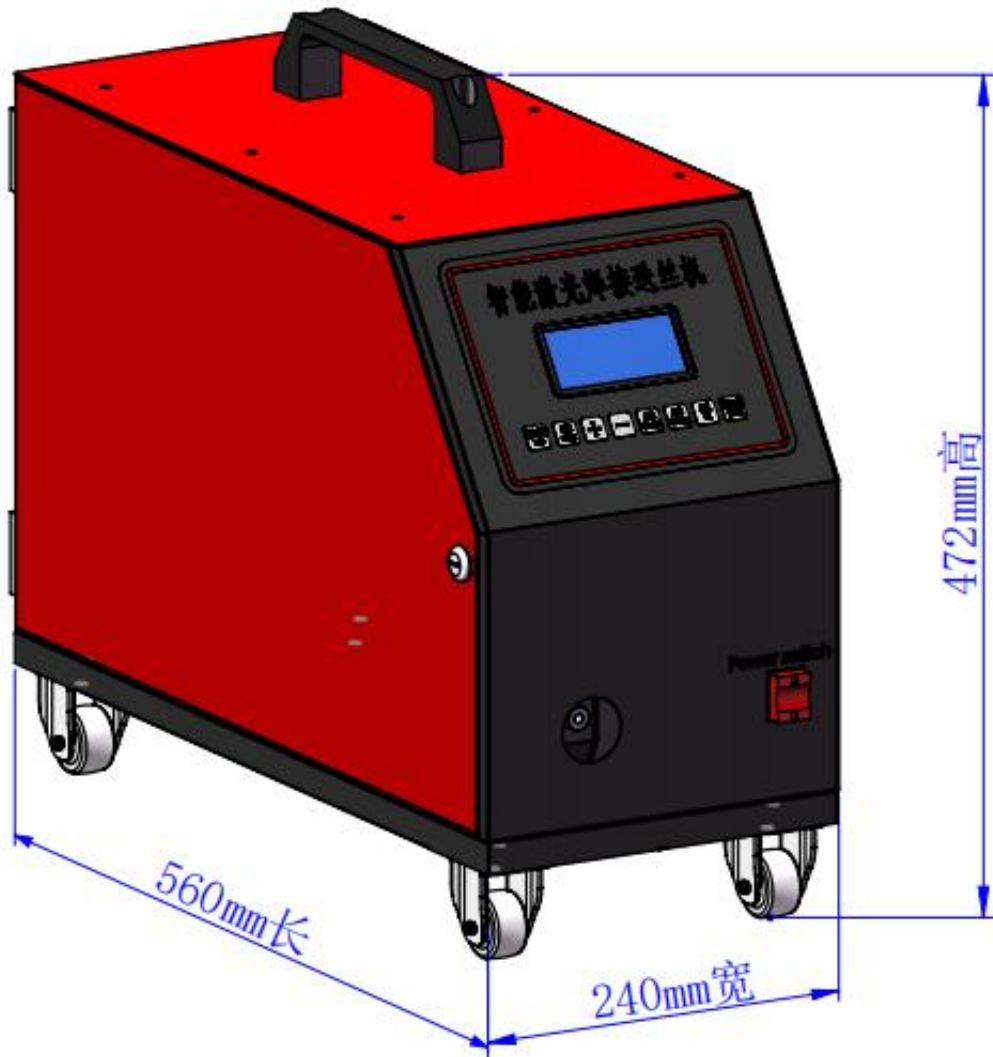
※ Before supplying power, ensure reliable grounding protection。

Chapter 2 Structure and Feature

2.1 Product Structure



2.2 Product shape size



chapter three inventory

After receiving the product, please check whether the outer package is in good condition. After unpacking the product, check whether the product is intact and all the parts of the product are in good condition. If any damage is found, please contact us immediately.(The product is updated constantly, so the accessories you receive may be a little different from those in the manual.)

3.1 inventory

Number	Name	Material	Specification	Number	Unit
1	Wire feeder		FWS-03A	1	PCS
2	DA10Wire feed roll		1. 2/1. 6V-shaped pulley	2	PCS
3	Wire feeding pipe accessory		SS-65 (D1. 6)	1	PCS
4	Power plug cable accessory		DYCTXZJ-001-3m	1	PCS
5	Wire feeding signal control cable		SS-KZX-5m	1	PCS

Chapter 4 Supplies

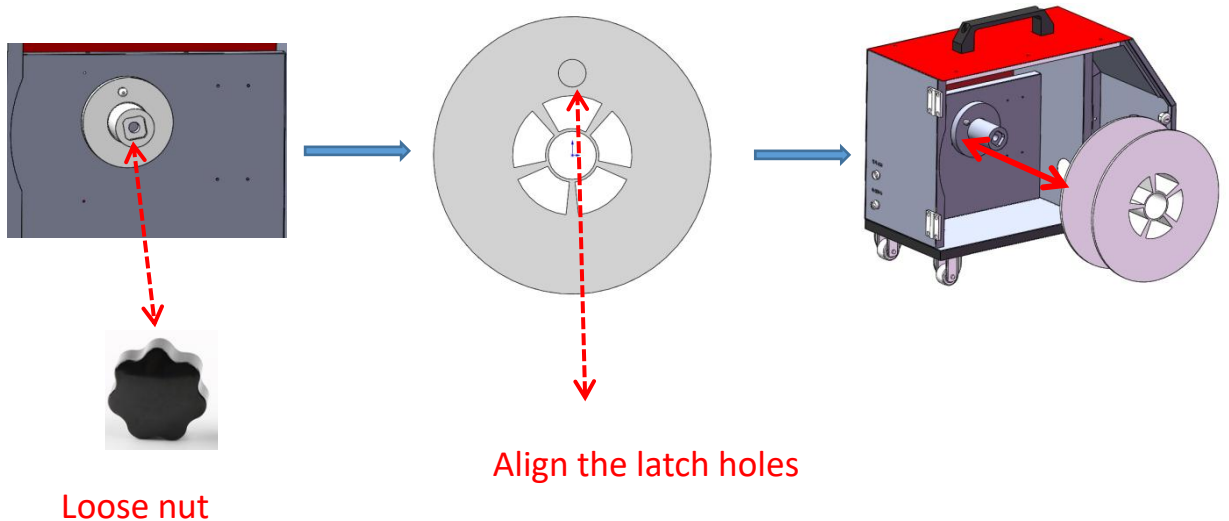
port	signal	definition	explain
Two core plug-ins	Feed1	1.Wire feeder signal line	Connect to pin 6 of control box CN1
	Feed2	2.Wire feeder signal line	Connect to pin 7 of control box CN1
three-pin plug	L	1.Wire feeder supply live wire	220V input
	N	2.Wire feeder power supply neutral line	
	PE	3.Wire feeder power supply ground	

Chapter 5 Wire Reel Assembly

Step 1: rotate the quincunx nut counterclockwise to loosen it

Step 2: install wire feed roll. Align the small hole in the middle with the damping wheel and take care of the wire direction when assembly. Rotate counterclockwise the wire and connect it with the wire feed roll horizontally.

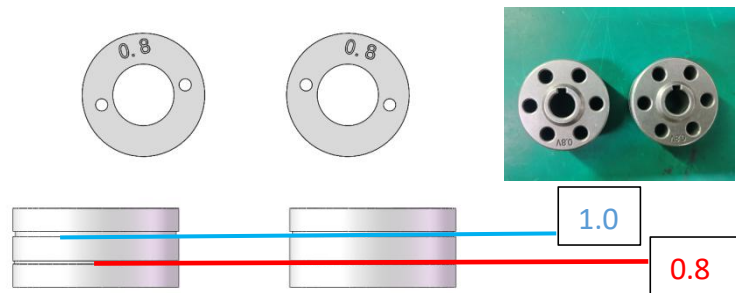
Step 3: lock the wire wheel by rotating the nut tightly.



Chapter 6 Assembly of Wire Feed Roll

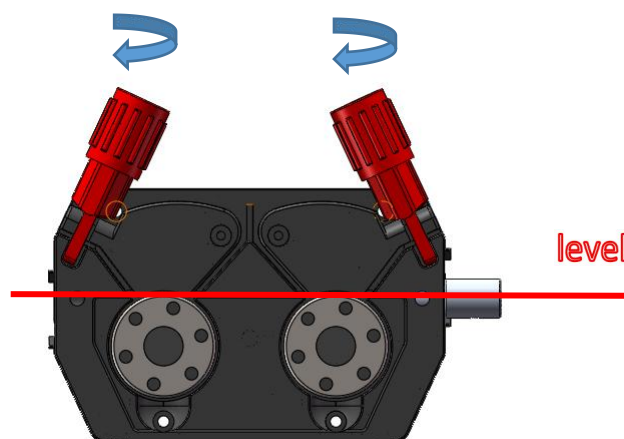
6.1 Wire feed roll specification

There are two feed wheels in one set. There are two slots on the wire feed roll, which should be installed one by one. The wire core diameter should be matched with the width of the slot by 1:1. Usually the wire feed roll has two slots of different specifications shown in the following figure. During installation, the two slots should be in the same horizontal line. For example:



6.2 Wire pressing wheel

Rotate the the handle on the wire pressing wheel. The scale on the handle can help to adjust wire feeding to make the wire feeding on the same horizontal line.



6.3 Change wire feed roll

Step 1: swing forward 90° and loosen it downward

Step 2: rotate and loosen the nut locking the wire feed roll and change it

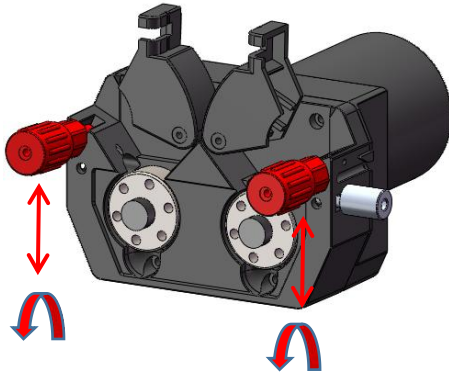


图 2

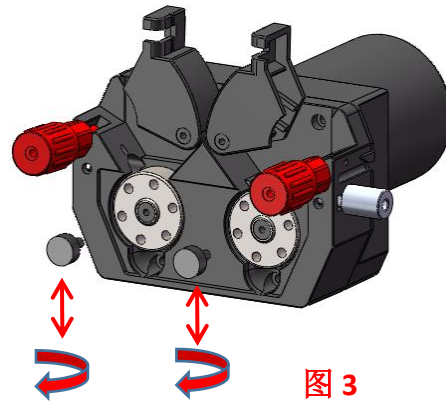
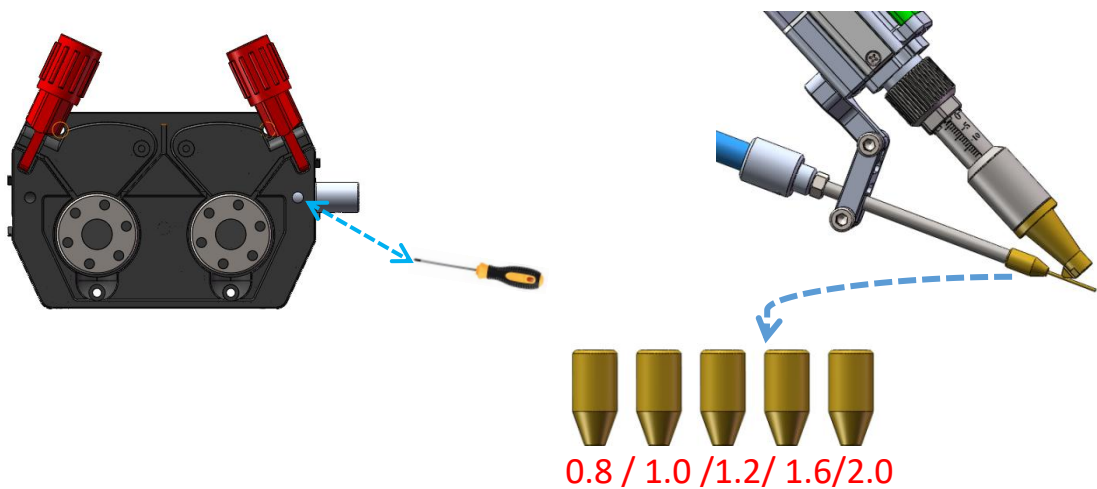


图 3

Chapter 7 Assembly of Wire Feed Tube

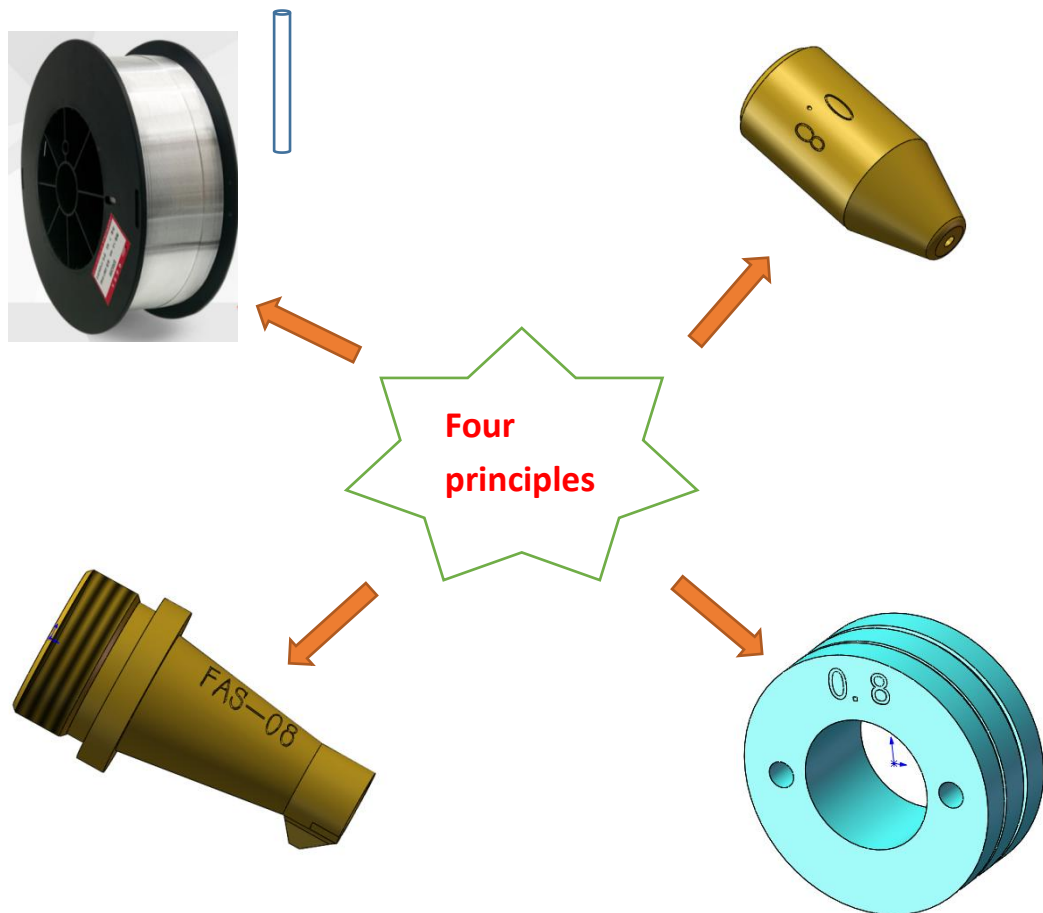
7.1 align the wire tube with the wire nozzle to stall it. Tight the screw to fix it.

7.2 align the wire tube with the wire nozzle to stall it. Tight the screw to fix it. the wire nozzle should be matched with copper nozzle by 1:1 according to the size of the wire core diameter selected by customers.



7.3 Type of wire nozzle

First, it depends on the customer's application scenarios. Four principles should be followed according to the proportion 1:1: wire core diameter, wire nozzle hole diameter, copper nozzle guide wire slot diameter and the wire feed roll slot diameter.



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 Operating Introduction

8.1 Operation panel introduction

The hand-held laser welding operation panel (referred to as "dot matrix screen") adopts 3.5-inch configuration TFT touch screen, which can be operated remotely and feed wire.



【Continuous/pulse】 : Under the home page, press the button to switch the wire feeding mode, and the screen displays the wire feeding mode accordingly. Hold down the button to switch on and off the wire feeding function. When the wire feeding function is turned off, it does not respond to external trigger signals, and press the button under the menu interface to exit the menu.

【set】 : Tap to enter the menu and set the working parameters of the machine.

【+ key】 : Short press under the main interface can speed up the wire feeding speed, long press can be adjusted continuously.

【- key】 : Short press under the main interface can reduce the wire feed speed, long press can be adjusted continuously.

【wire feed】: In the home screen, long press to feed wire manually, double click to feed wire sustainably.

【Back out wire】 : In the home screen, long press to manually recoil, double click to sustainably recoil.

【affirm】 : On the home screen, tap to view device information, including the device number and software version number.

【simulation run】 : Under the main page interface, long press can simulate the normal working wire feeding process, wire feeding, pumping, filling the whole process.

The operation method of adjusting parameters in the menu: click the wire feed button in the operation panel to go forward, and the single repel wire button to go back.

8.2 Description of menu bar parameters

【wire feed rate】 : The wire feed speed for continuous wire feed welding is measured in cm/min and ranges from 15 to 600cm/min. In continuous wire feed mode on the home page, press the up/down key to adjust the wire feed speed. On the menu page, select wire feed speed and press the up/down key to adjust the wire feed speed.

【start delay】: The wire feeder receives the trigger start wire feeding signal and starts wire feeding after a delay of a certain time. The value ranges from 0 to 2000ms. The default value is 0ms. For example, if the start delay is set to 500ms, after the external trigger signal is closed, wait for 500ms to start wire feeding.

【Pullback length】 : The drawing length is designed to facilitate the welding of broken wire, and is the length of the wire feeder after the trigger signal is disconnected. The value ranges from 0 to 100mm. The default setting is 12mm, which can be adjusted according to the actual situation on site.

【Patch length】 : The length of the filler wire is the length of the wire that needs to be compensated after the wire is drawn, so that the welding wire can be in the solder spot or laser focus position. The value ranges from 0 to 100mm. The default setting is 10mm, which can be adjusted according to the actual use on site.

【Add wire feed delay】 : The delay is the time interval between the completion of the drawing action and the start of the sewing, which can better prevent the bonding caused by the sewing when the solder joint is not cooled and solidified, and improve the effect of breaking the wire. The value ranges from 0 to 2000ms.

【impulse speed】: The wire production speed of pulsed wire production welding, expressed in cm/min, ranges from 15 to 600cm/min. In the pulse wire feeding mode on the home page, you can press the up and down key to adjust the pulse wire feeding speed. In the menu page, select the pulse speed item and press the up and down key to adjust the pulse wire feeding speed.

【pulse time】 : In pulse wire feeding mode, the duration of a single pulse wire feeding, in ms, ranges from 20 to 1000ms.

【pulse separation】 : In pulse wire feeding mode, the time for a single pulse to stop wire feeding, in ms, ranges from 20 to 1000ms.

【Manual wire feed speed】 : The user presses the manual wire feed button on the panel of the wire feeder, and the wire feeder feeds the wire at this speed for the user to debug the equipment, such as the wire threading tube, the unit is cm/min, and the range is 15~600cm/min.

【Manual pullback speed】 : The user presses the manual pullback button on the panel of the wire feeder, and the wire feeder draws the wire at this speed for the user to debug the equipment, such as when replacing the wire reel, the unit is cm/min, and the range is 15~600cm/min.

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【 language 】 : Standard language factory:Chinese, English, Turkish, Russian, Korean, German, Spanish, Portuguese, Japanese, French, Czech, Polish, Italian, Hungarian, Traditional, Vietnamese, Greek, Ukrainian, Finnish, Norwegian, Croatian, Swedish, 22 languages in total.

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