

深圳市睿法智能科技有限公司

FWS-01A 激光焊接送丝机

FWS-01A Laser Welding Wire Feeder



深圳市睿法智能科技有限公司

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# 前言

感谢您选择本公司的产品！

为了使您对我公司有一个总体认识，本手册对此产品的特点、结构特征、技术参数、使用说明、保养维护等做了详细的介绍，在使用此产品前，请您详细阅读本手册，这将有助于您更好的使用它。

由于产品功能的不断更新，您所收到的产品在某此方面可能与本手册陈述有所出入，在此谨表歉意。如在使用过程中有所疑问，请及时来电咨询，我们定当竭诚为您服务。

## 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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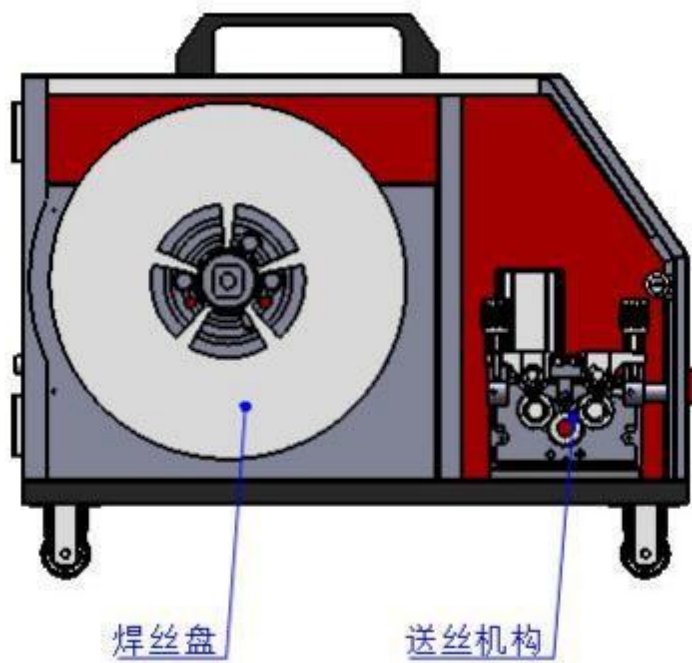
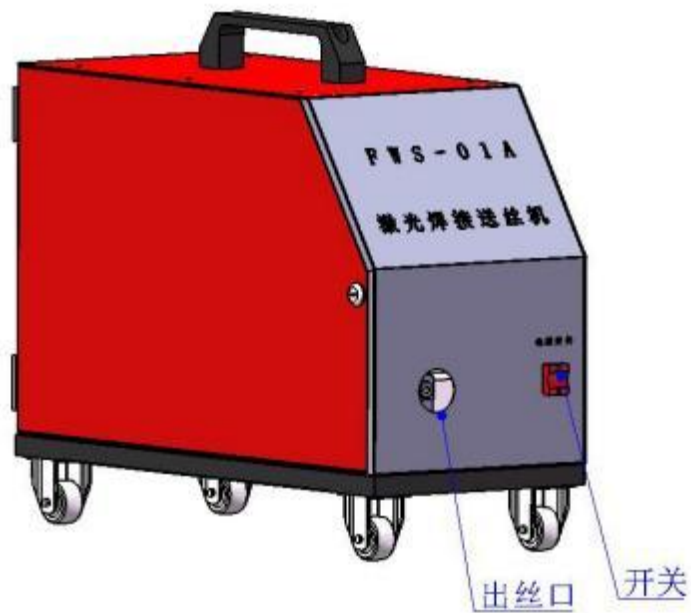
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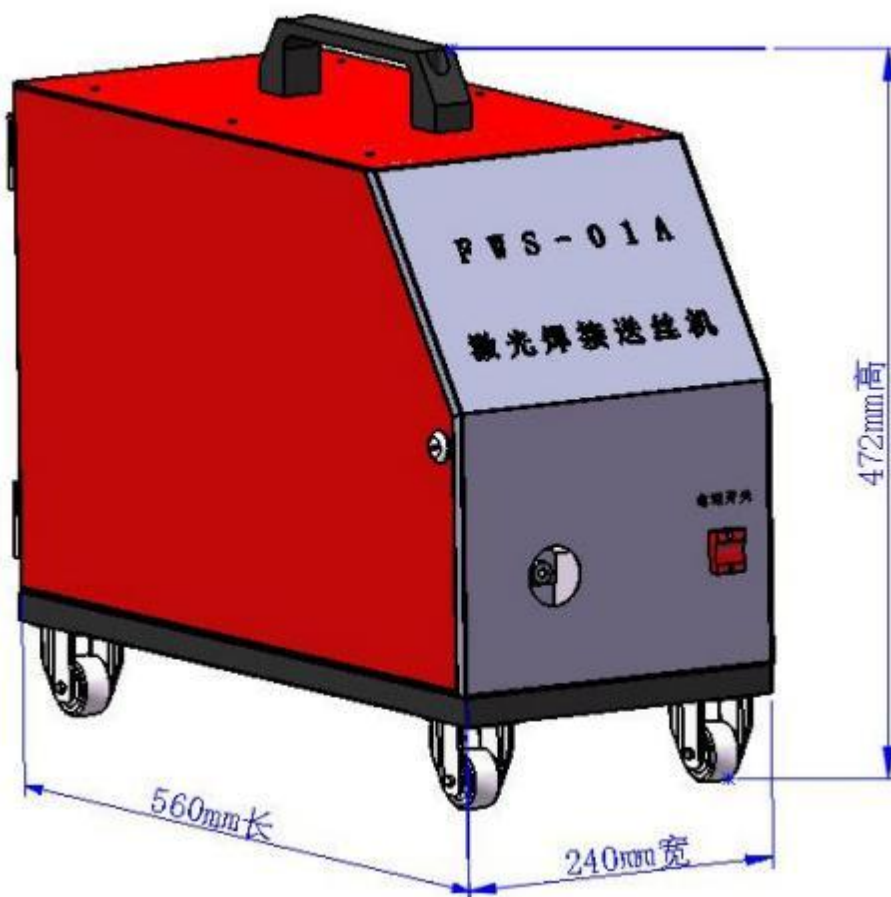
## 第二章 结构特征

### Chapter 2 Structure and Feature

#### 2.1 产品结构 Product structure



## 2.2产品外型尺寸 Product size



## 第三章 物品清单

### Chapter 3 Material List

#### 物品清单 Material list

在收到产品后，请检查外包装是否完好，拆箱后核对产品是否完整，各零部件是否完好，如果发现损坏，请立即联系。（由于产品在不断更新，可能收到的配件与本手册有所不同）

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.)

#### 物品清单 Material list

序号 Number	名称 Name	物品 Material	规格 Specification	数量 Number	单位 Unit
1	送丝机 Wire feeder		SS-A-001	1	PCS
2	送丝轮 Wire feed roll		SXLZJ-001	2	PCS
3	送丝管组件 Wire feeding pipe accessory		SXGZJ-001-5m	1	PCS
4	电源插头线组件 Power plug cable accessory		DYCTXZJ-001-2m	1	PCS
5	送丝信号控制线 Wire feeding signal control cable		SS-KZX-5m	1	PCS

## 第四章 电气

### Chapter 4 Supplies

#### 4 电气安装

4.1 电源线三芯航插对接插入，该端口提供220V 供电。

4.2 信号控制线四芯航插对接插入，为信号端口与手持焊接控制系统 连接。

#### Electrical material assembly

Power cable is connected with three-core aero plug. This port provides 220V power.

Signal control cable is connected with 4-core aero plug. Namely, the signal port is connected with handheld welding control system.

## 第五章 焊线盘安装

### Chapter 6 Wire Reel Assembly

5.1 第一步、逆时针旋转松开梅花螺帽。

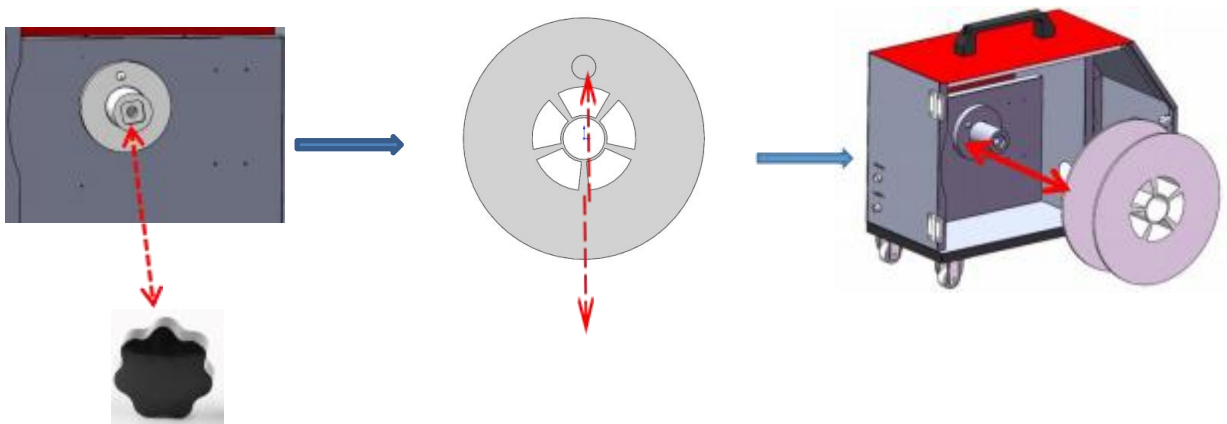
5.2 第二步、安装送丝盘，中间处有一个小孔与阻尼轮对齐安装，安 装时注意丝朝向，丝为逆时针旋转，丝为水平直线与送丝轮相连。

5.3 第三步、螺帽锁紧送丝盘即可。

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.



松开螺帽

Loosen the nut

对准插销孔

Align with the bolt hole

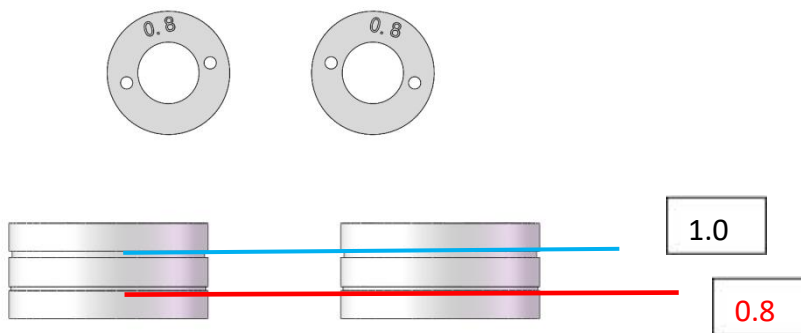
## 第六章 送丝轮安装

### Chapter 6 Assembly of Wire Feed Roll

#### 6.1 送丝轮规格 Wire feed roll specification

送丝轮一组共2 件。送丝轮上有两条小槽，安装时要一一对应，用户根据使用填丝丝芯径对送丝轮槽宽为 1：1 对应，通常送丝轮有两条 小槽不同规格，相当一轮两用如下图。安装时两轮小槽要对应在同一条水平上。例如改下：

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 更换送丝轮

第一步、旋转松开左右两个锁紧压丝轮的手柄，

第二步、向前90°摆动向下松开。

第三步、旋转松开紧固送丝轮的螺帽，取出更换即可。

### Change wire feed roll

Step 1: rotate and loosen two handles locking the wire feed roll

Step 2: swing forward 90° and loosen it downward

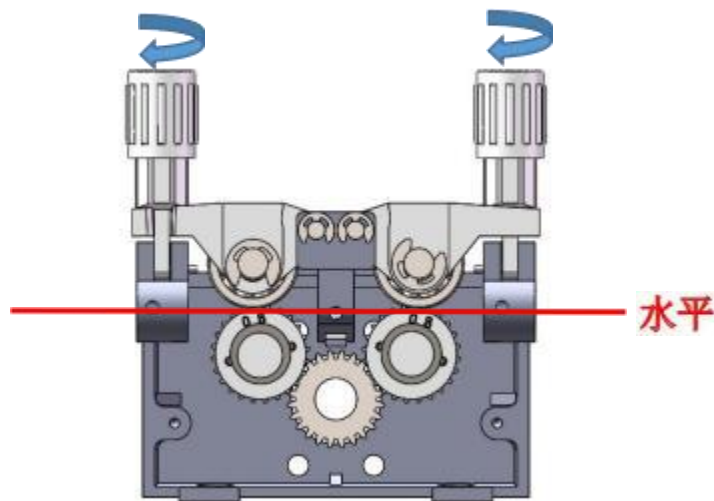
Step 3: rotate and loosen the nut locking the wire feed roll and change it

## 6.3 调整压丝紧固 Wire pressing wheel

旋转压丝轮手柄，手柄上有刻度，调整送丝顺畅，主要目的是辅助送

丝平行在同一水平线上送丝。

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.



## 第七章 送丝管安装

### Chapter 7 Assembly of Wire Feed Tube

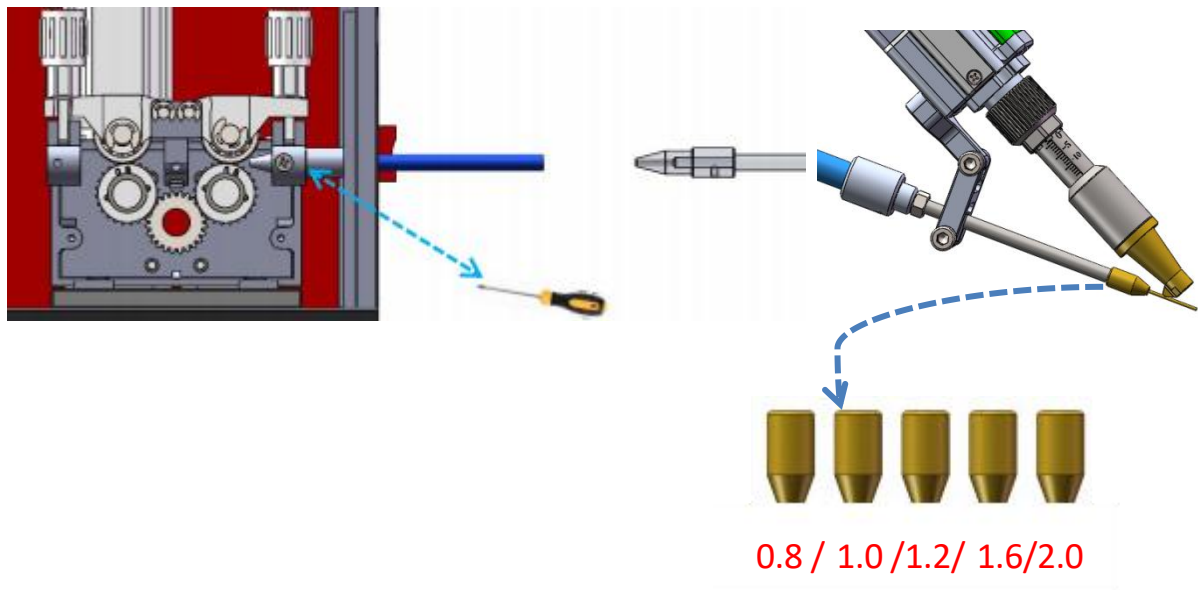
7.1 丝管直接对准送比出丝口安装，锁紧螺丝固定即可。

Step 1: align the wire tube with the wire nozzle to stall it. Tight the screw to fix it.

7.2 出丝嘴，是根据客户所选用送丝芯径大小，跟铜嘴去匹配 1：1 匹配。

Step 1: align the wire tube with the wire nozzle to stall it. Tight the screw to fix it.

Step 2: the wire nozzle should be matched with copper nozzle by 1:1 according to the size of the wire core diameter selected by customers.

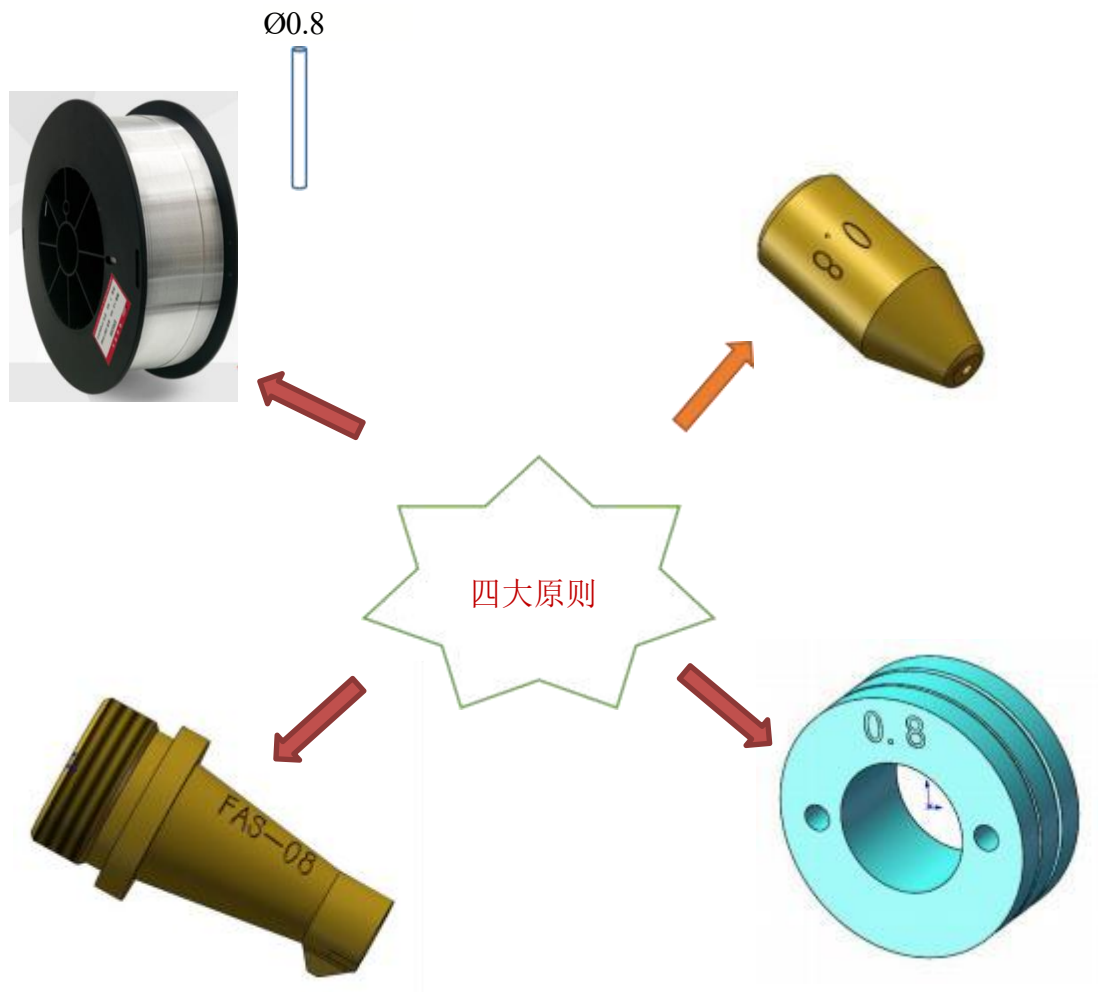


### 7.3 丝嘴选型 Type of wire nozzle

首先跟据客户应用场景而定，要遵守四大原则，焊丝芯径、出丝嘴孔径、铜嘴导丝槽径，送丝轮槽径,按 1: 1 配对。

例如以下：

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.



焊丝芯径、出丝嘴孔径、铜嘴导丝槽径，送丝轮槽径按 1: 1 配对

Welding wire diameter, wire nozzle hole diameter, copper nozzle guide wire slot diameter and the wire feed roll slot diameter should be matched by 1:1.

## 第八单 操作介绍

### Chapter 8 Operating Introduction

手持激光焊接系统操作面板（简称“HMI”）采用 7 寸组态 TFT 触摸屏，界面美观，操作方便。

Handheld laser welding control system operating panel ( “HMI” for short) adopts a 7-inch configuration TFT touch screen with beautiful interface and convenient operation.



是 【自动送丝关】：通过该按钮可以控制是否在焊接时进行自动送丝。只有在允许出光是才会自动送丝

【手动吹气】 【送丝机】：手动进行吹气测试和送丝机的送丝与退丝测试。例如： 常按 手动吹气区域则一直进行吹气，松开手动吹气区域则关闭吹气，手动送丝与抽丝则常按对应的小三角箭头。

【送丝参数】：用于设置送丝参数，包括补丝参数、退丝参数等。

退丝速度： 松开启动开关后电机退丝的速度。

退丝时间： 电机退丝的时间。

补丝速度： 电机补丝的速度。

补丝时间： 电机补丝的时间。

送丝延迟时间： 出光后延迟一段时间再送丝，一般为0。

Automatic wire feeding off: to control whether to start automatic wire feeding during welding. It will start automatic wire feeding only when laser emits light.

Blowing manually/ Wire feeder: for manual blowing test and the wire feeding and wire withdrawing tests of wire feeder. For example, long press manual blowing key, and it will blow all the time; loosen this key, and it will stop blowing. For manual wire feeding and wire withdrawing, long press the corresponding small triangle area.

Wire feeding parameter: used to set parameters related to wire feeding, wire supplement and withdrawal.

Wire withdrawal speed: the wire withdrawal speed of motor when the start button is loosened.

Wire withdrawal time: the time for motor wire withdrawal

Wire supplement speed: the speed of motor wire supplement

Wire supplement time: the time for motor wire supplement

Wire feeding delay time: wire feeding after light delay for a period, generally it's 0.

### 8.1 更换送丝 Change wire feeding

连续送丝：用于送丝机换丝，单击一次可持续送丝，再次单击后停止。连续退丝：用于送丝机换丝，单击一次可持续退丝，再次单击后停止。

Continuous wire feeding: used to change wire for the wire feeder. Click once for continuous wire feeding, click again to stop it.

Continuous wire withdrawal: used to change wire for the wire feeder.

Click once for continuous wire withdrawal, click again to stop it.



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