

HK series

HK60 adjustable optical fiber welding system

An instruction manual



Wuhan Xinghong Photoelectric Technology Co., Ltd

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Catalogue

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Revision History



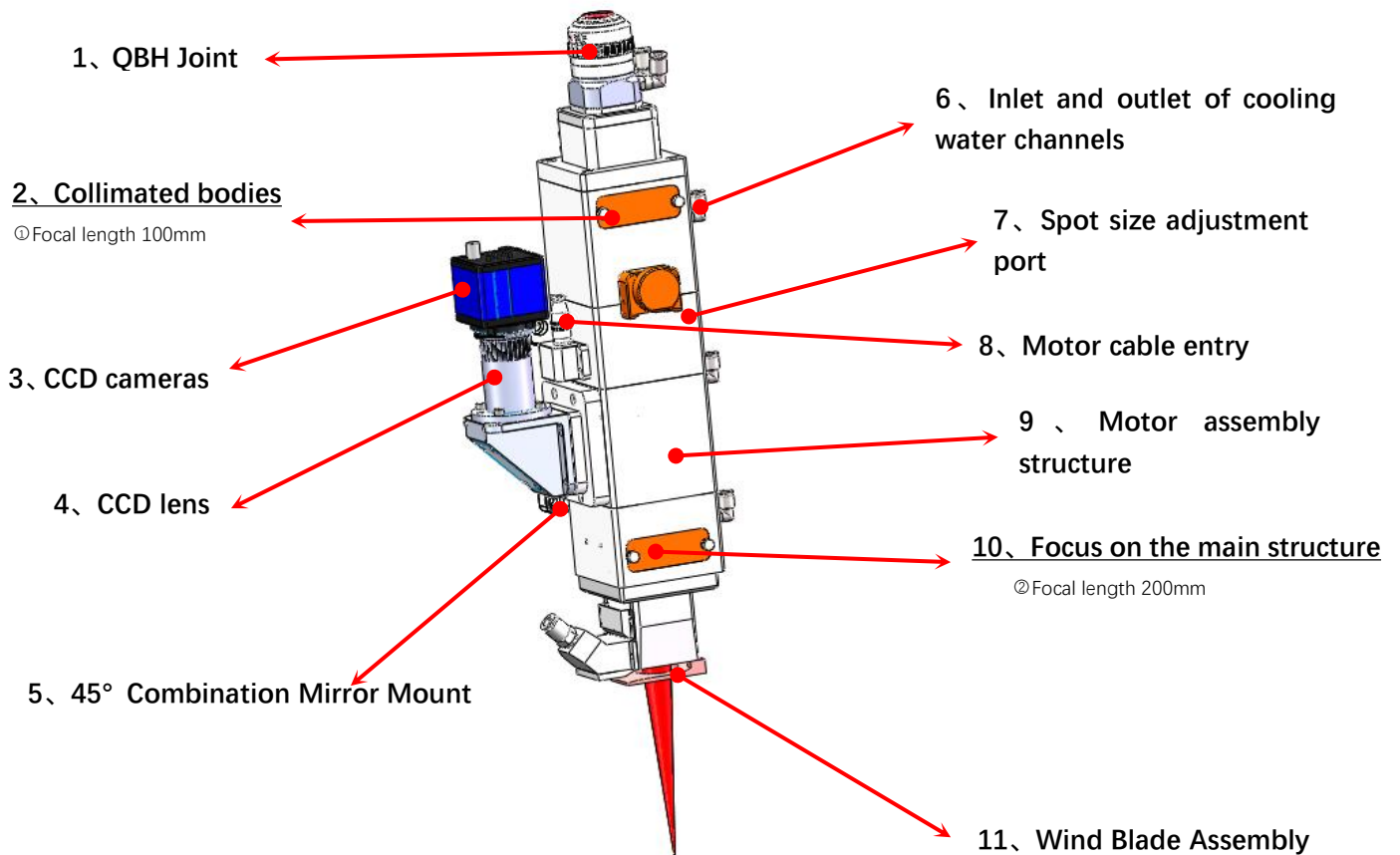
**Please read this product manual carefully after
Then carry out the installation, debugging and use of the product**

**You must wear safety goggles when operating laser equipment.
Safety glasses should be reasonably selected according to the
wavelength of the laser emitted by the laser equipment. If the device is a
laser tunable or Raman product, it will emit laser light beyond the normal
output wavelength range of the device's laser, and corresponding safety
protection should be taken against this phenomenon during protection.
Laser safety goggles should be selected based on the ability to shield
the entire wavelength range of laser light emitted by laser equipment.**

Chapter 1 product introduction and display

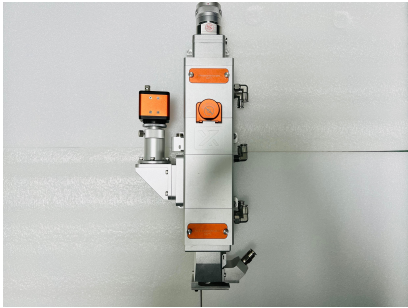
1. Product introduction

"HK series adjustable optical fiber welding system" is composed of "brushless motor driver" and "optical fiber swing adjustable welding joint". The adjustable spot structure is manual adjustment. Remember to ensure that the motor stops running when adjusting the spot size. After receiving the product, open the packing box, including: 1 set of optical fiber swing adjustable welding joint, 1 driver, 1 set of 8-inch display screen, 1 3-core connecting wire and several accessories.

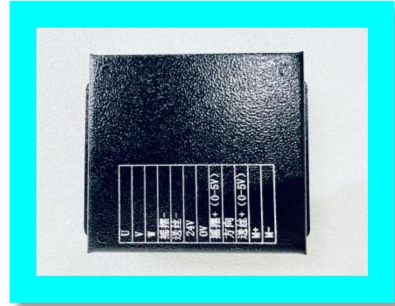


Note: adjusting the size of the light spot is manual, and it can be adjusted only after the motor stops completely. Otherwise, the gear will be damaged and the internal motor will run disorderly.

2.Accessories display



Fibre optic oscillating adjustable welding head
(sample)



Drive (sample)



8" monitor (sample)



3-core connection cable
(sample)



Protective lenses (sample)

3. Special attention: 5 steps for inserting and unplugging optical fiber

Note: when inserting optical fiber, the laser head shall be placed horizontally; Ensure that the optical fiber is inserted horizontally

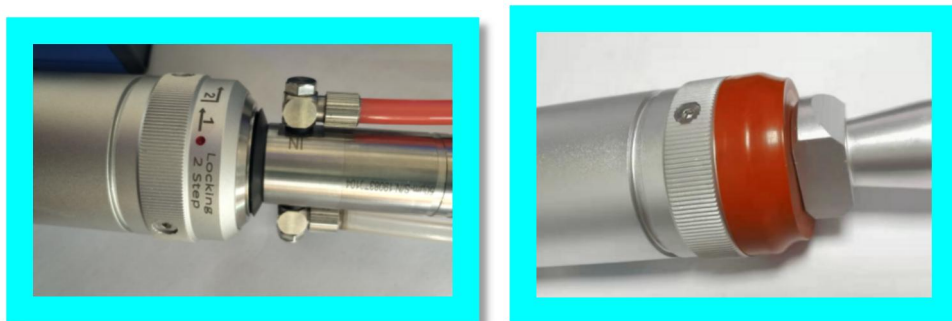
3.1 Check whether QBH connector and optical fiber plug are dirty, and wipe them with alcohol and cotton swab (cotton paper) in time



3.2 QBH homing "two points and one line" 3.3 alignment insertion of optical fiber plug



3.4 secondary locking clockwise 3.5 optical fiber protective jacket for complete protection



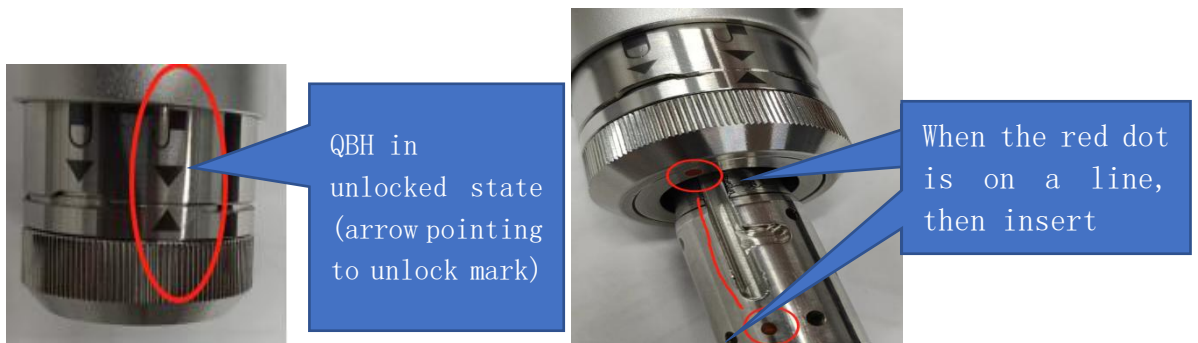
Note: when inserting optical fiber, the laser head shall be placed horizontally; Ensure that the optical fiber is inserted horizontally

4. Special note: Steps for plugging and unplugging optical fibres (new QBH connectors)

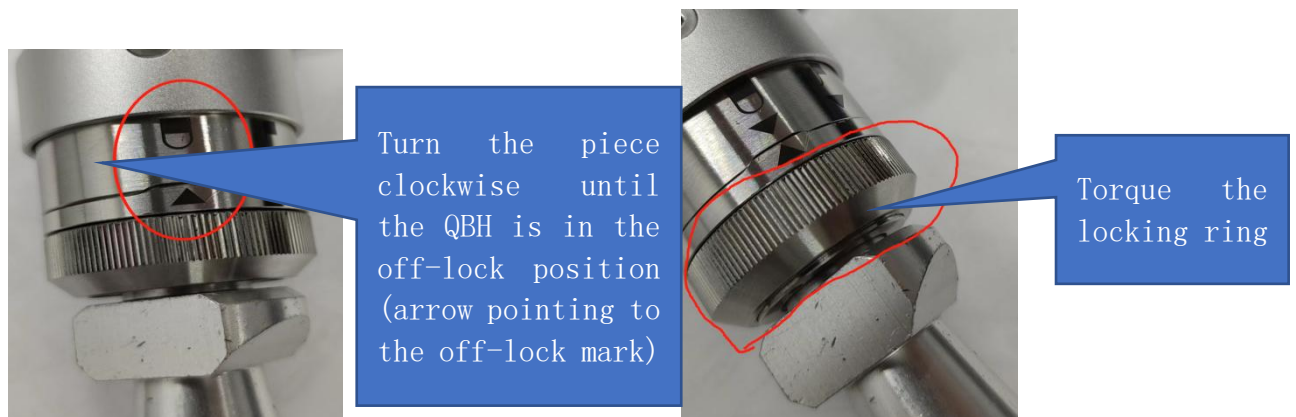
4.1 Inspect QBH connectors and fibre plugs for dirt and wipe them clean promptly with alcohol and cotton swabs (cotton paper).



4.2 The QBH is in the unlocked position (arrow pointing to the unlocked logo) and the red dot of the fibre optic plug is inserted into place against the red dot on the end of the QBH.

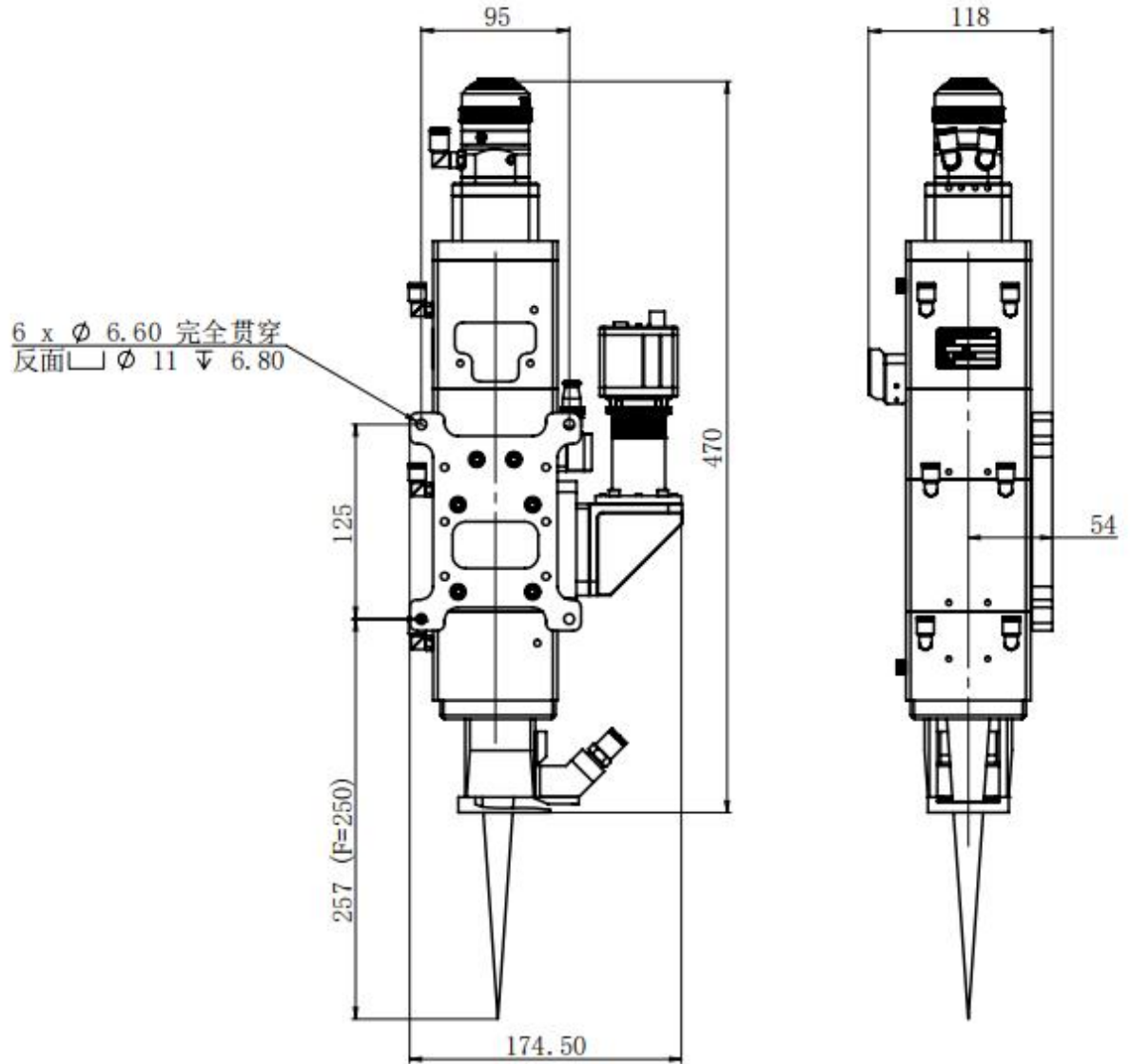


4.3 Turn the ring with the lock mark on the QBH connector clockwise until the QBH is in the off-lock position (arrow pointing to the off-lock mark) and finally twist the locking ring to tighten it.



Chapter 2 product installation

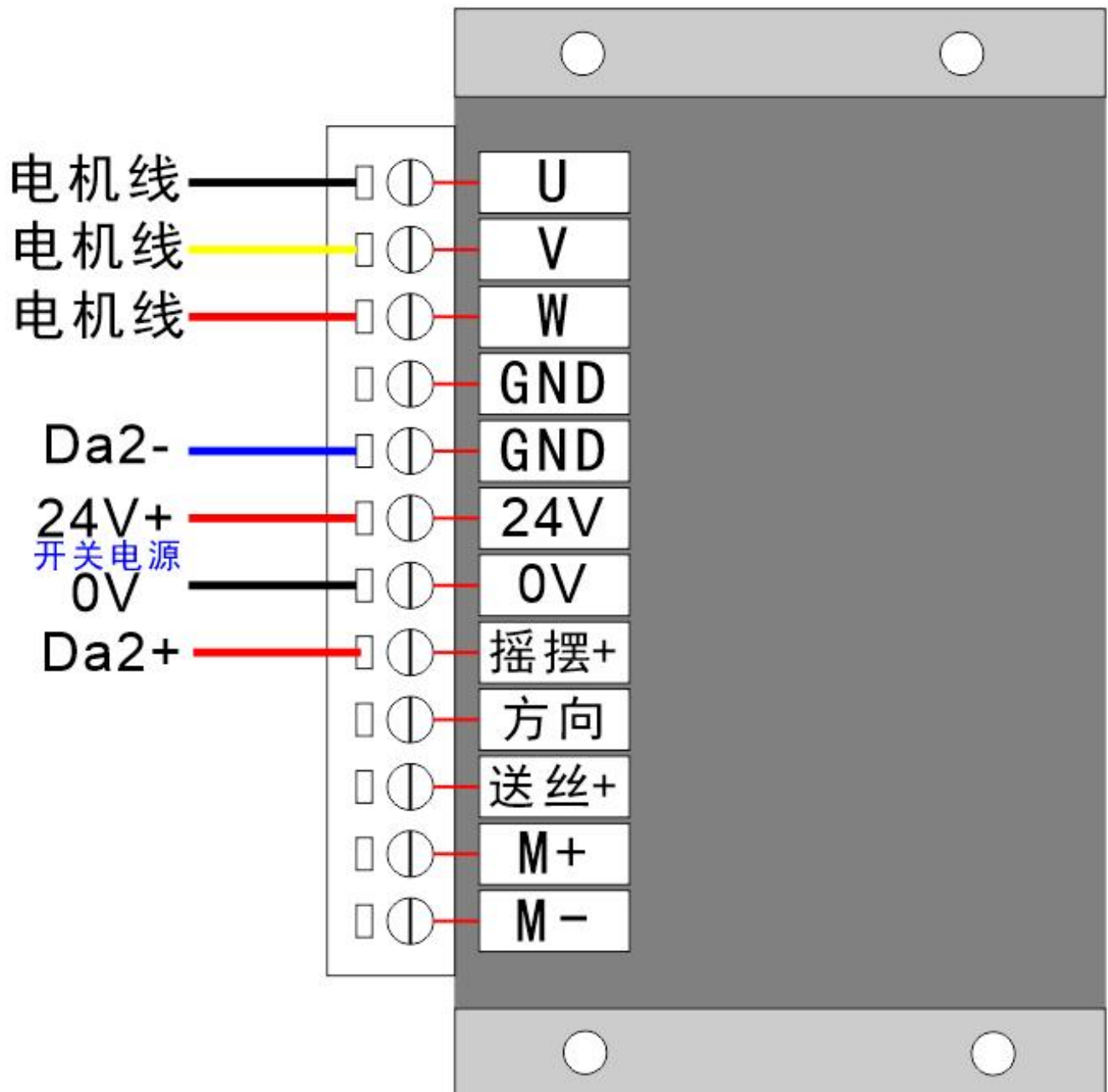
1. Welding joint installation



Mounting adapter plate hole 85X75-M6

2. Drive wiring diagram

Controller model: XMDDC V3.1

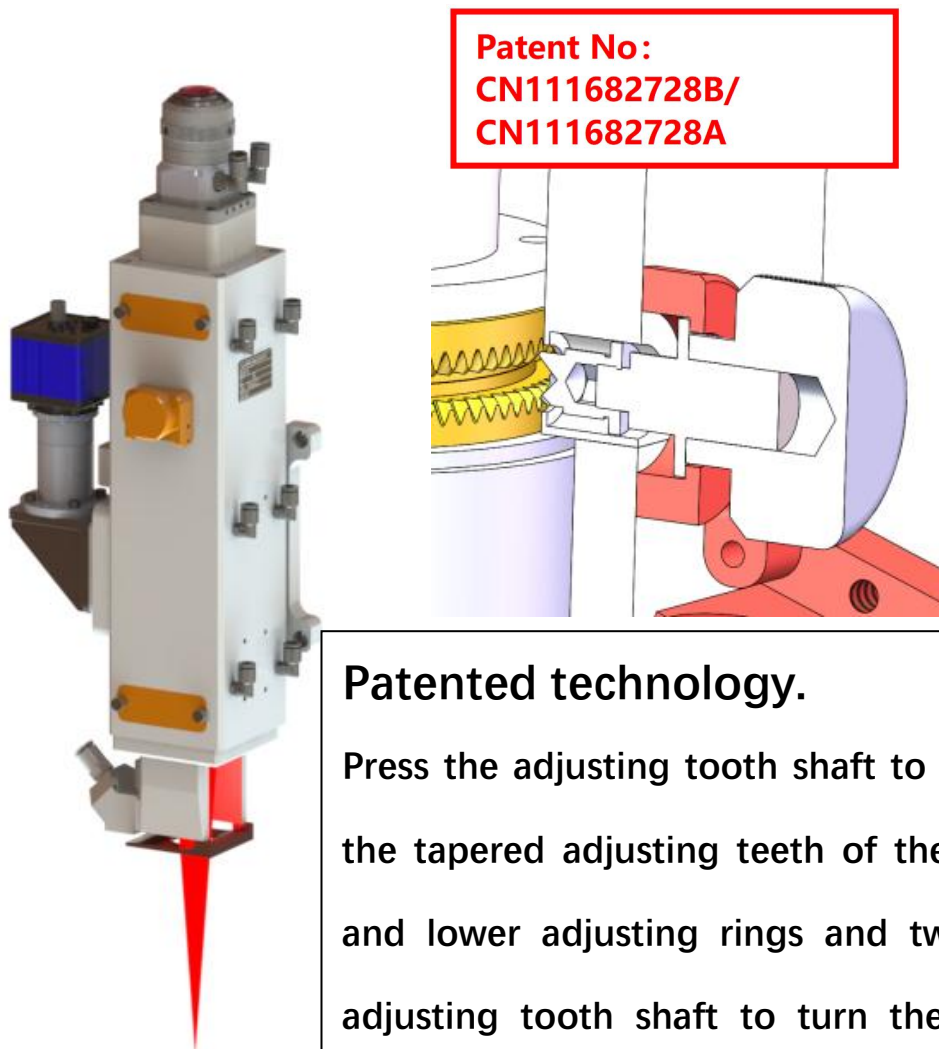


Driver (XMDDC V3.1) wiring

Chapter 3: Adjustment methods for the ring adjustment function

1.The laser ring adjustment function is introduced

To change the single welding method of spot laser welding, the traditional spot light method is changed to swing O-shaped light, to better achieve the "fish scale welding" welding effect, expand the welding width; and the welding spot can change the single welding method of fixed spot size laser welding, to achieve multi-directional, different welding seam situation, a variety of welding conditions can be achieved



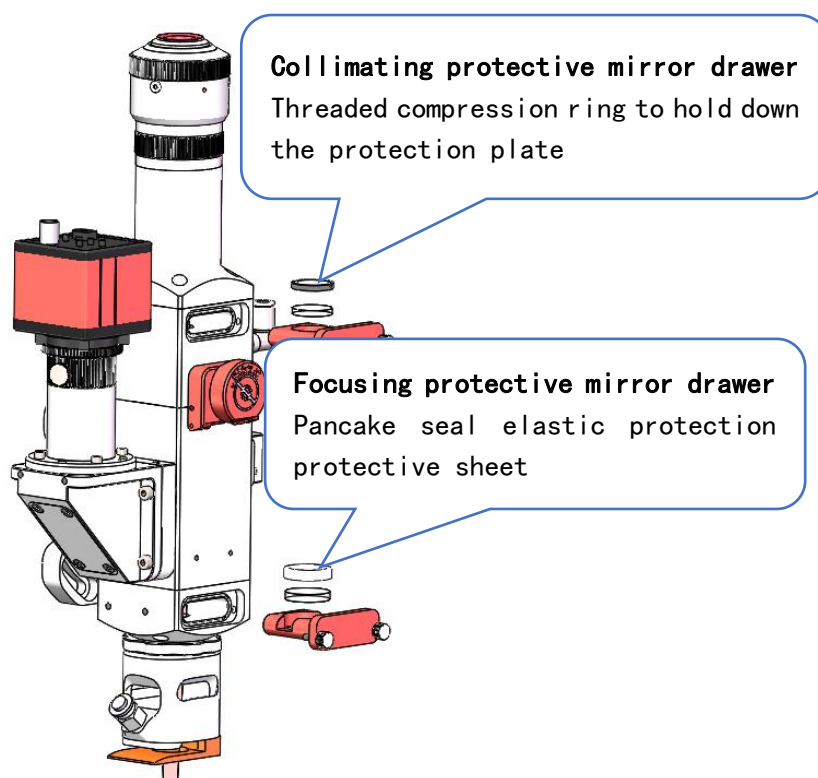
Patented technology.

Press the adjusting tooth shaft to engage the tapered adjusting teeth of the upper and lower adjusting rings and twist the adjusting tooth shaft to turn the upper and lower adjusting rings relative to each other.

Note: Adjustment of the spot size is manual and must wait for the motor to stop completely before adjusting. Otherwise it will damage the gears and cause disruption to the internal motor operation.

Chapter 4: routine operation

1. Replace the protective sheet



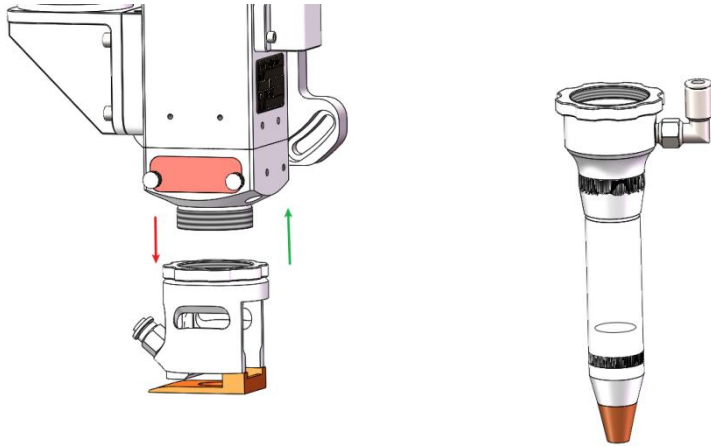
Cautions.

1. Do not repeatedly use a lint-free cotton cloth or cotton swab to wipe the protective lens piece.
2. Do not touch the protective lenses with your fingers.
Do not blow directly on the surface of the protective lenses with your mouth as this may introduce new soiling.
Do not forget to clean the protective lens drawer when putting it back on.
3. When using compressed air, please do not blow directly on the dirt from the front, but use a side blowing method to avoid dirt diving into the surface.

In particular, it is important to wear powder-free gloves or finger gloves when cleaning the product. It is now made clear that if damage is caused by, for example, improper handling or the use of incorrect cleaning procedures or chemical usage, damage due to such causes is not covered by the warranty.

2. Coaxial switching of air knife

Thread switching, double thread self-locking, universal positioning, ensuring that the air outlet is in line with customer requirements, thread size M36X0.75mm.



Revision History

Date	Revised content	Software Versions
20220521	First Edition (First Release)	V1.0
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