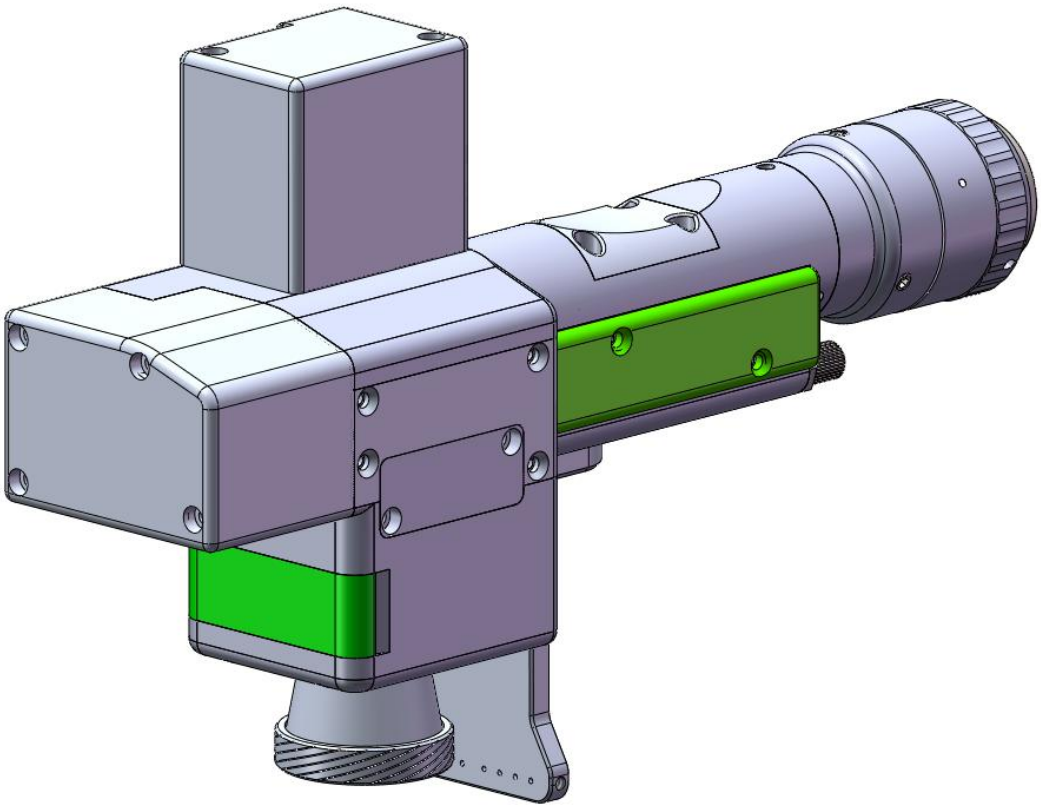
Shenzhen RelFar Intelligent Technology Co., Ltd.

FWH20-DC30A-V4-T Intelligent Double Pendulum Handheld Cleaning Head



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Foreword

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 us 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.

Contents

Chapter 1 Overview

1.1 Product parameter

Name	Intelligent Double Pendulum Handheld Cleaning Head
Model	FWH20-DC30A-V4-T
Fiber interface	QBH
Wavelength scope	1,070±20nm
Rated power	≤3000W
Collimation focal length	F40mm
Focus focal length	F800mm
Scanning Range	300mm long *300mm wide
Scanning speed	20,000mm/s
Auxiliary pressure	≥0.5~0.8Mpa
Effective clear aperture	φ22
Swing type	
Weight	0.96Kg

1.2 Product parameter

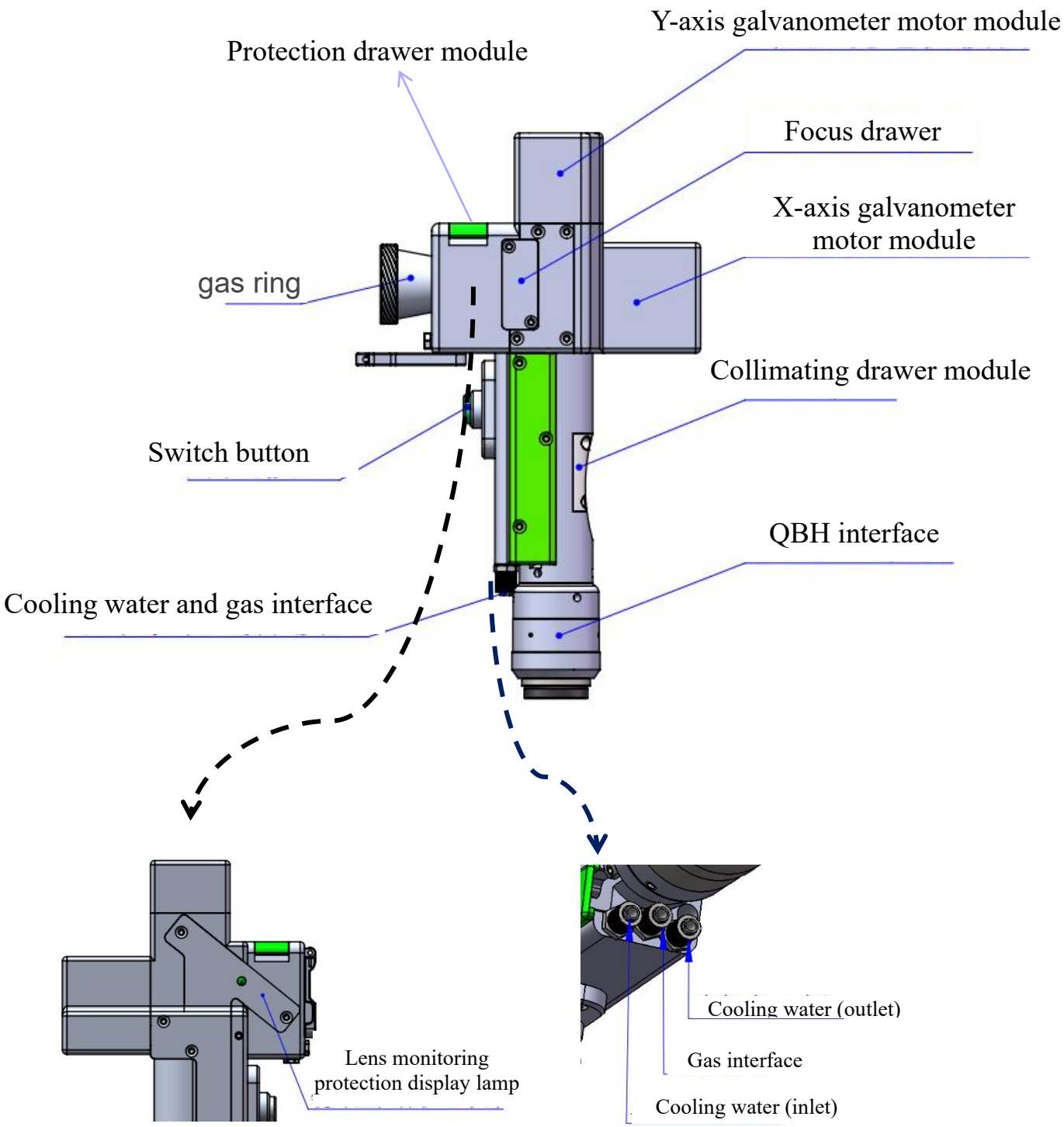
※ Before the laser presents, the front end flip cover plate is required to be opened.

※ To ensure personal safety, wear the special fiber laser protective glasses before operation.

※ It is necessary to keep the product clean and prevent the cooling liquid, condensate water or other foreign matter from intruding into the cavity, or the functional contamination and functional impact of related parts will be incurred.

Chapter 2 Structural Characteristics

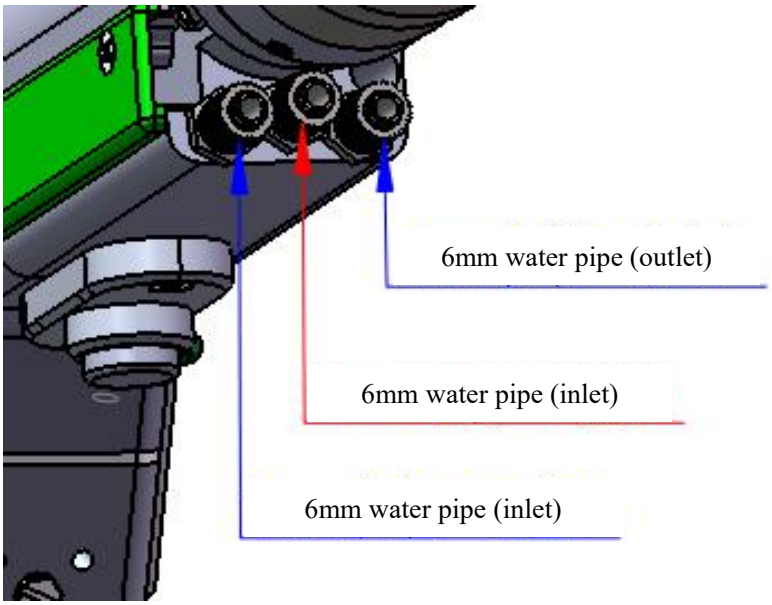
2.1 Product structure



Chapter 3 Product Installation

3.1 Pipe connection

Cooling water circuit and auxiliary protective gas connection



Connection of cooling water and protective gas and usage requirements:

Note: Gas for regular use: Compressed air (oil-water filtration required)

Gas for regular use: argon, nitrogen and compressed air (oil-water filtration required).

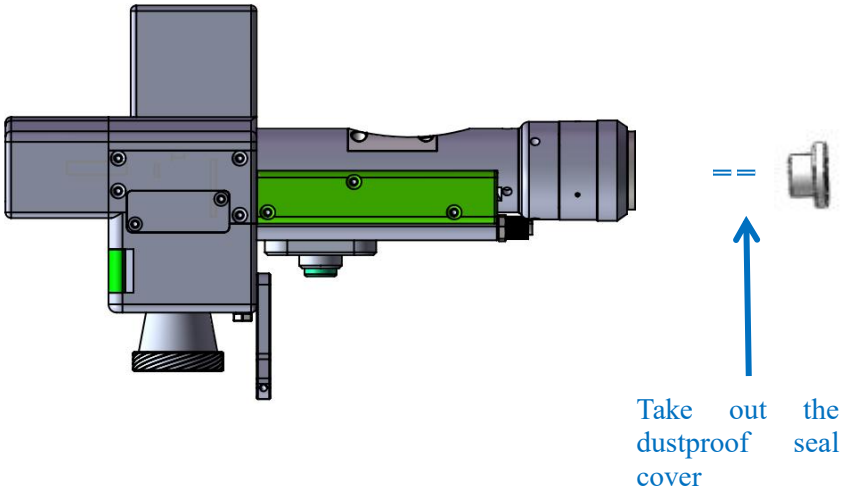
3.1.1 Cooling water: The 6mm air tube is connected. The main function is that the excess heat is taken away by cooling through the internal structural member water route when the heat is produced by the light path in the cavity to ensure the cleaning performance. The series connection of cooling water

pipeline is required, with one-in and one-out water circulation connected.

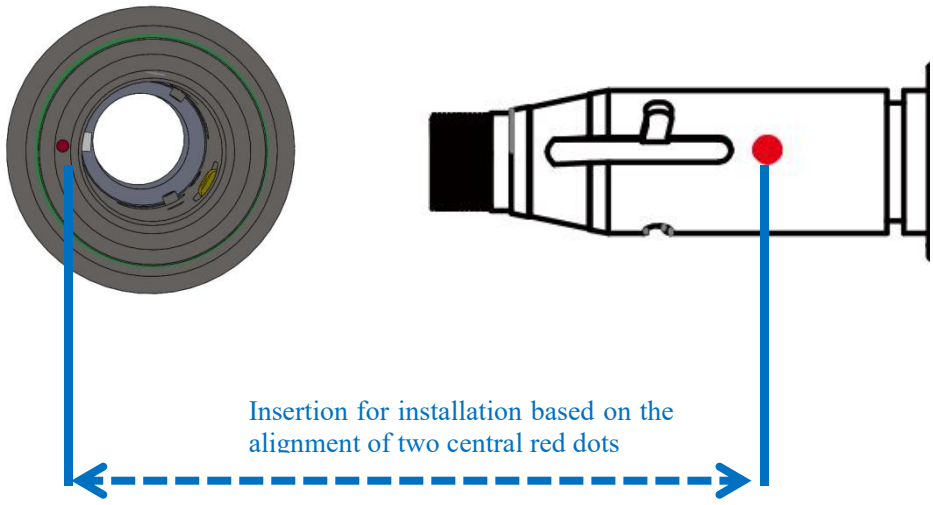
3.1.2 Maintained gas: The 6mm air tube is connected for butt welding gas protection, with input pressure＜0.5~0.8MPa.

3.2 Optical fiber input installation

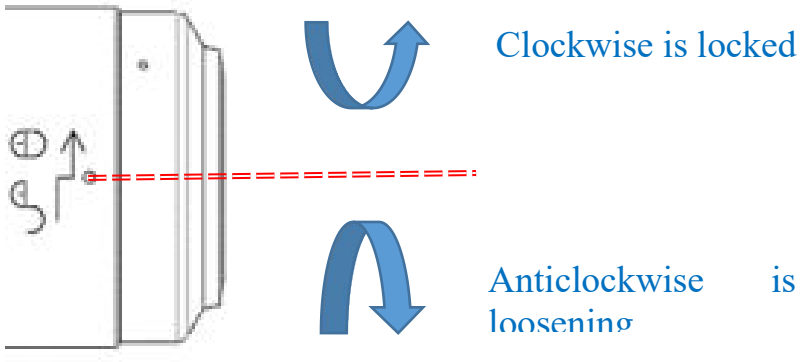
※ The QBH is a horizontal arrangement to take out the dustproof seal cover.



※ Align the red dot on the fiber optic head with the QBH red dot, and slowly insert the fiber optic head into the QBH.



※ The QHB is screwed to the locking state: Rotate it to the limiting position clockwise (hearing the "click"), lift up the rotating mantle, and clockwise rotate the mantle until the head of optical fiber is compressed.

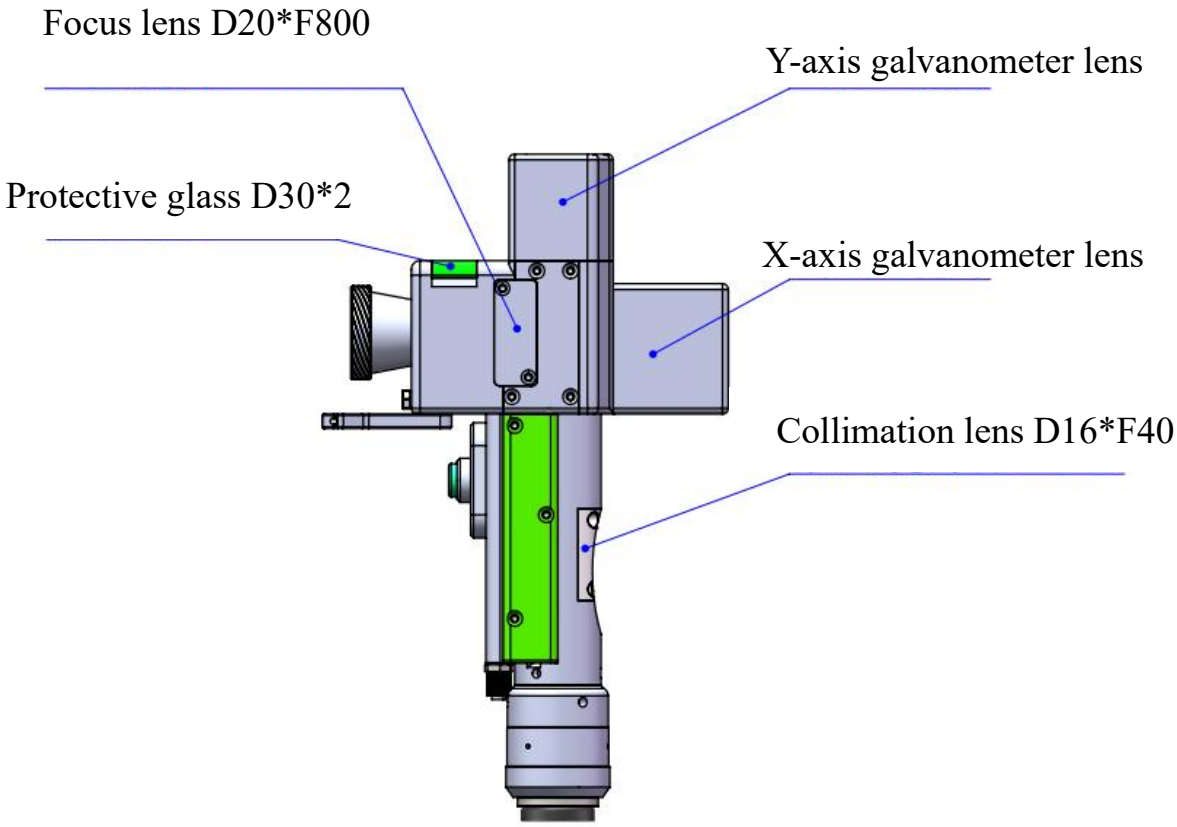


※ Before the laser presents, open the front end clamshell dust blocking plate!

Chapter 4 Maintenance

4.1 Structure of optics lens

※ The assembly is completed in the dust-free plant at the time of replacement of parts. In principle, except for the front-end first protective glass can be disassembled and assembled, other modules are forbidden to be dismounted. If it is necessary to check the collimating lens, focus lens and galvanometer lens, the product shall be put into a clean environment for disassembly.

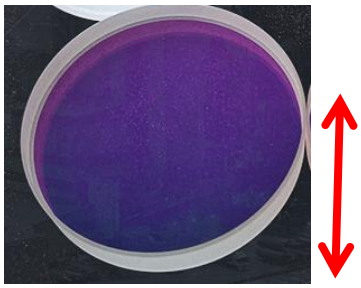


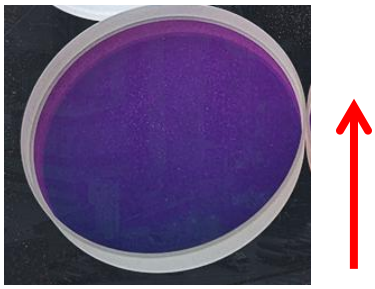
4.2 Cleaning of optics lens

※ When the optics lens are cleaned, the operation method and attention points are as follows:

※ Tools: Dust-free gloves or dust-free fingerstall, dust-free wiping cotton swab, isopropyl alcohol, and caned dry and pure compressed air.

※ Spray the isopropyl alcohol onto the dust-free cotton swab, align the lens to eyes, gently pinch the side edge of the lens with left thumb and index finger and hold the dust-free cotton swab with right hand to gently wipe the front and back of the lens in a single direction from bottom to top or from left to right (avoid wiping back and forth to avert the secondary contamination of lens), blow the surface of the lens with filling dry and pure compressed air and confirm the surface of lens is free from foreign matters after cleaning.





4.3 Disassembly and assembly of optics lens

4.3.1 Disassembly and assembly of collimation lens

Tools: 2mm inner-hexagon wrench, dust-free cotton swab, alcohol.

※ The disassembly and assembly shall be completed in a clean place. When the lens are dismounted, the dust-free gloves or dust-free fingerstall.

※ Disassembly and assembly steps:

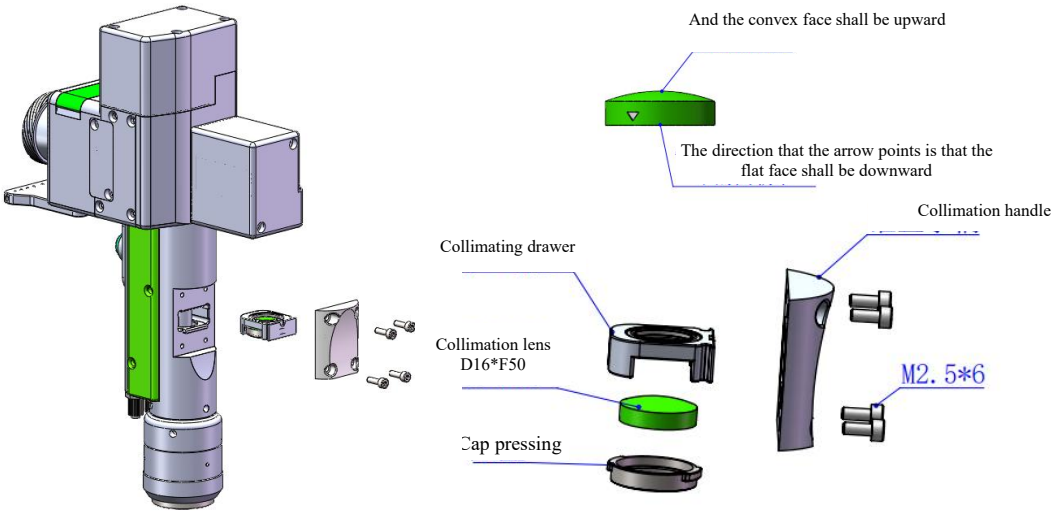
Step I: Clean up all the dust on the surface of the laser head firstly.

Step II: Loosen the 4-M2.5*6 screw in the figure with 2mm inner-hexagon wrench.

Step III: Take out the collimating drawer module and seal the port with textured paper to prevent the dust from entering the cavity.

Step IV: When the two bosses are aligned with the opening slot after the gland is rotated anticlockwise, remove them upward and replace the lens. (Note that the orientation of lens installation can be divided into plane and convex surface. After disassembly, record it; otherwise, the optical path will be affected.)

Note: The drawer gap shall be installed upwards.



4.3.2 Disassembly and assembly of focus lens

Tools: 2mm inner-hexagon wrench, dust-free cotton swab, alcohol

※ The disassembly and assembly shall be completed in a clean place. When the lens are dismounted, the dust-free gloves or dust-free fingerstall.

※ Disassembly and assembly steps:

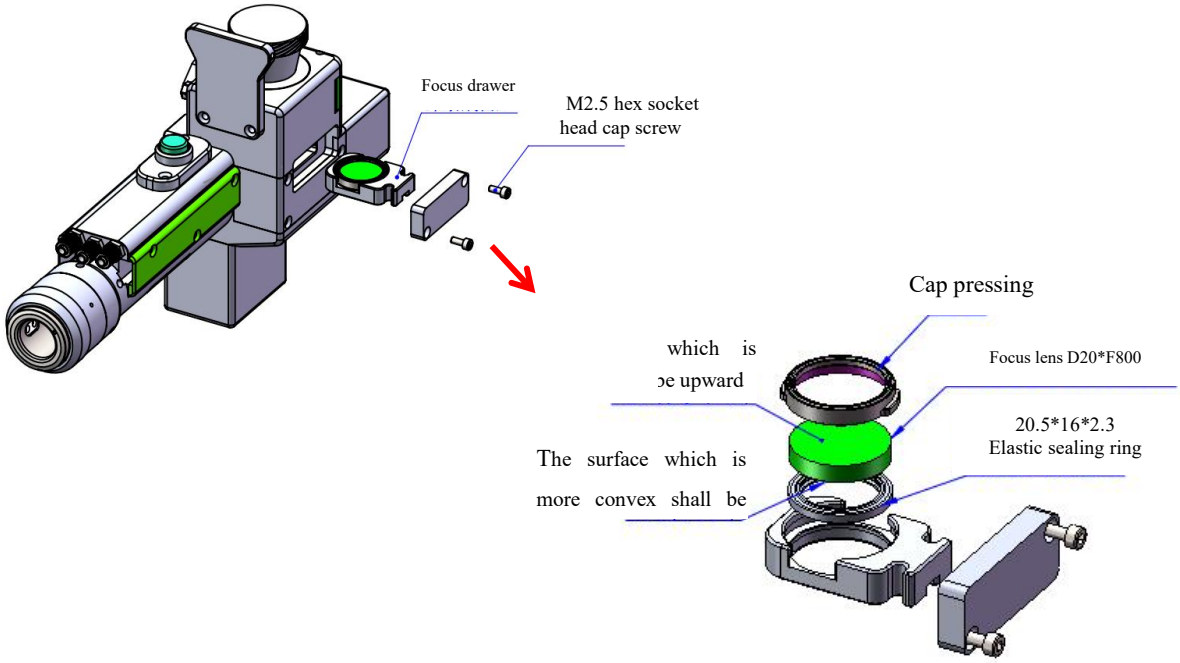
Step I: Loosen lateral 2-M2.5 screws

Step II: Remove the focus drawer assembly horizontally and seal the exposed sealing surface of the cavity with textured paper to prevent dust from entering.

Step III: When the two bosses are aligned with the opening slot after the gland is rotated anticlockwise, remove them upward and replace the lens. (Note that the orientation of lens installation can be divided into plane and convex surface. After

disassembly, record it; otherwise, the optical path will be affected.)

Note: The drawer gap shall be installed upwards.



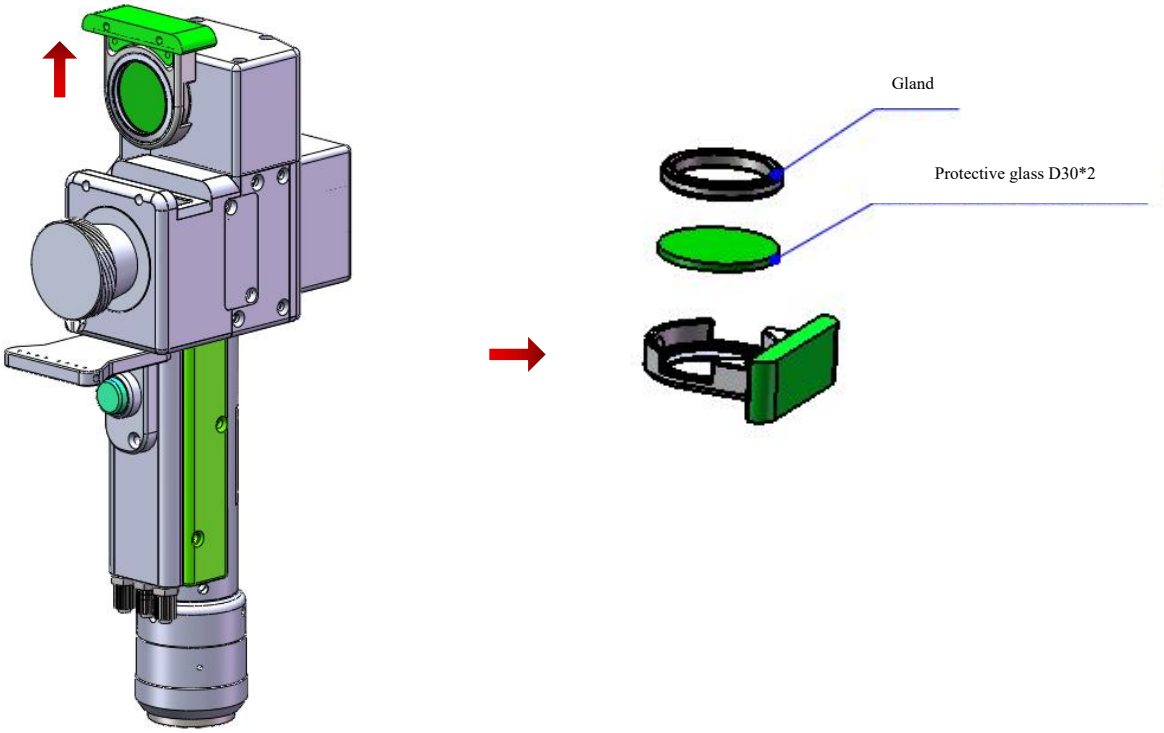
4.3.3 Disassembly and assembly of protective glass

※ The disassembly and assembly shall be completed in a clean place. When the lens are dismounted, the dust-free gloves or dust-free fingerstall.

Change the protective lens

The first step is to take both sides of the drawer in hand and pull out the protective drawer seat upward. After taking it out, seal the window exposed on the cavity with textured paper to prevent dust from entering.

Step II, when the two bosses are aligned with the opening slot after the gland is rotated anticlockwise, remove them upward and replace the lens.



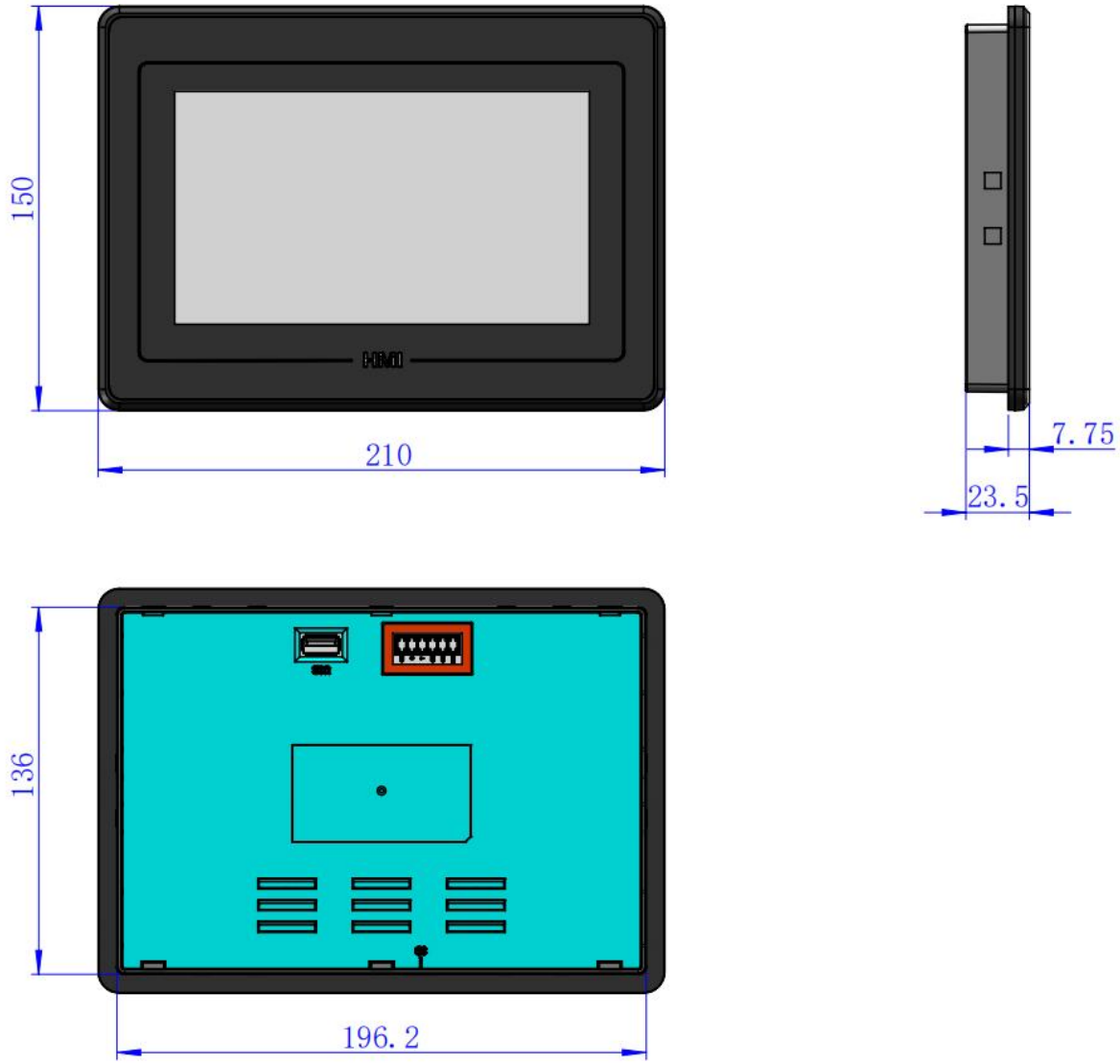
Chapter 5 Laser Cleaning System

5.1 Installation Dimension Drawing for Product

5.1.1 Installation dimension of touch screen

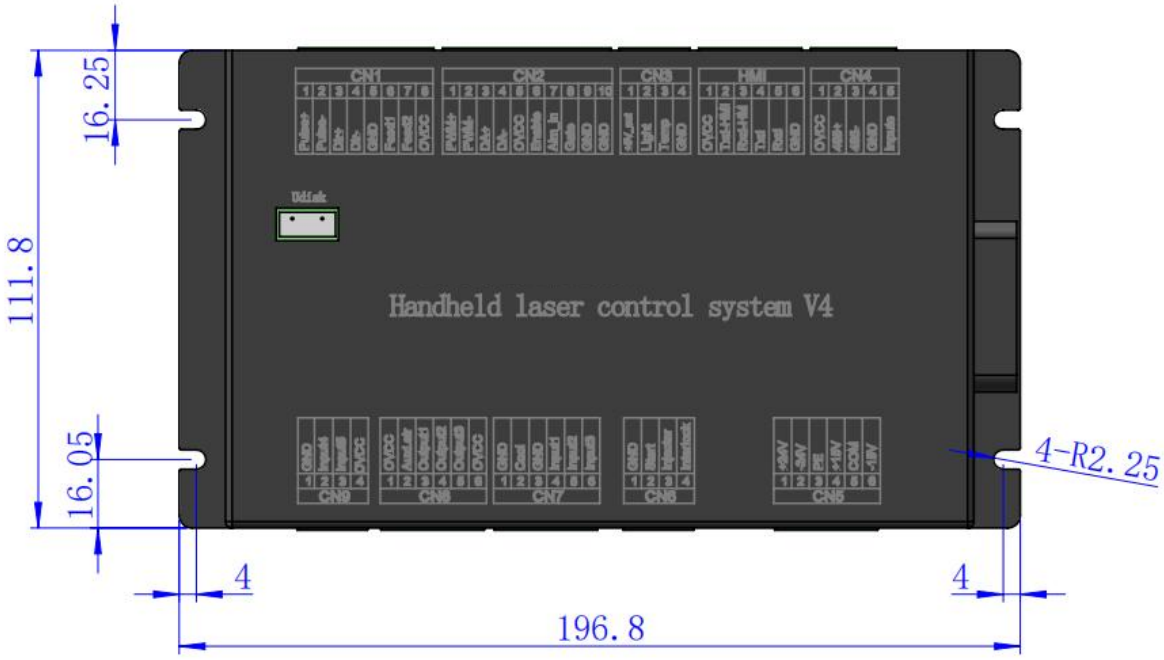
External dimensions: (210*150*23.5) mm

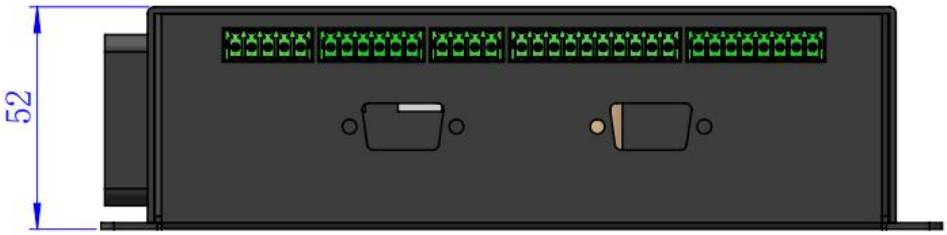
The installation dimensions of the touch screen are as shown in the following figure.:



5.1.2 Installation dimension of main board

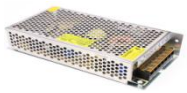
Overall dimensions: (196.8 * 111.8 * 52) mm





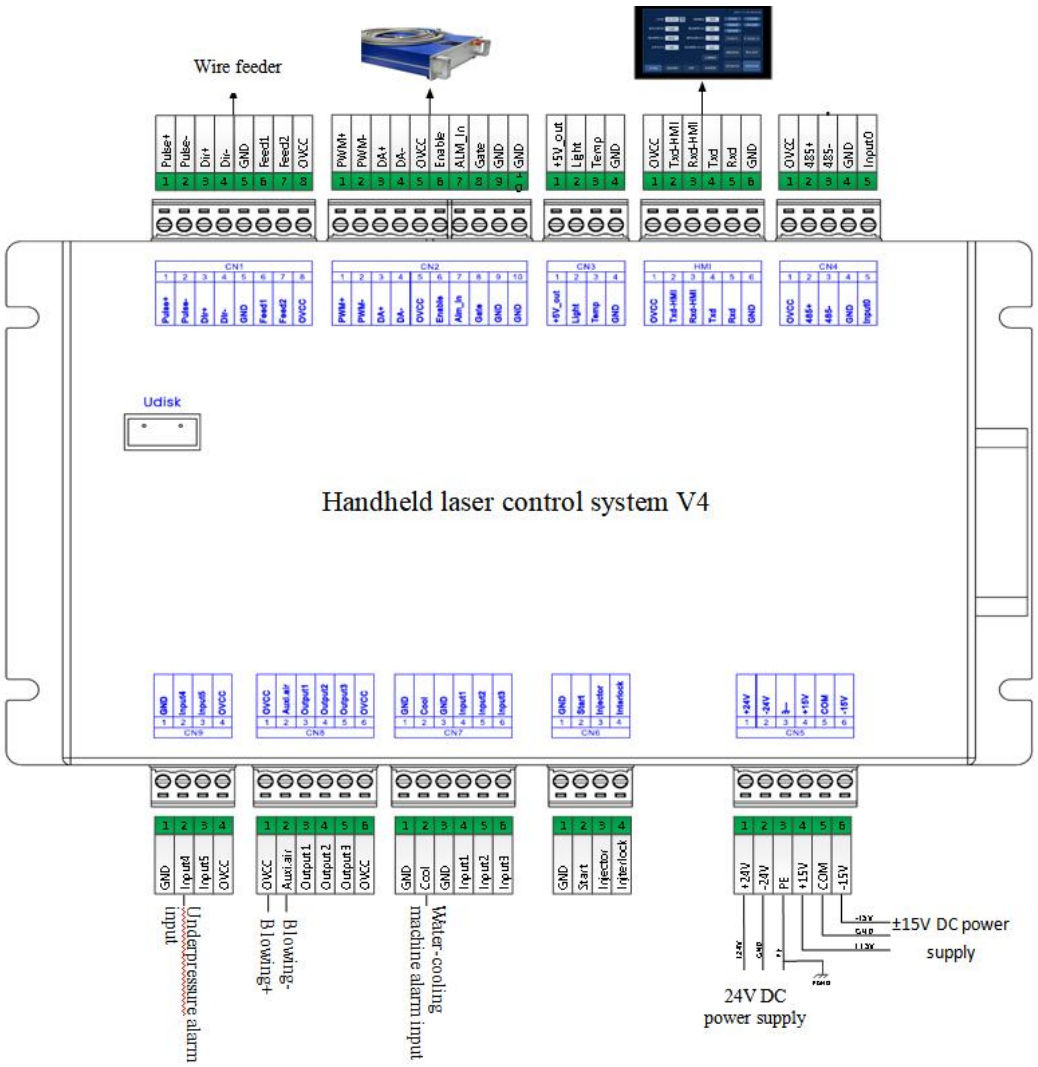
Chapter 6 Electrical

6.1 Packing list

List				
S/N	Name	Illustration	Quantity	Remarks
1	Intelligent handheld welding head		1PCS	
2	24V power pack		1PCS	
3	15V power pack		1PCS	
4	Ground clamp component		1PCS	
5	7-inch display screen		1PCS	
6	Touch screen 6-core connecting line-1.5m-black		1PCS	
7	Handheld laser welding system V4		1PCS	

6.2 System wiring

The following figure is a schematic diagram for wiring of the whole system. Refer to the schematic diagram for system wiring. Refer to relevant chapters for detailed interface definition.



Note:
Don't connect the reserved pin in the mainboard.

6.3 CN5 power supply interface

The power supply interface allsinto6PINgreenterminal,providing a power interface for mainboard and galvanometer externally, with voltage: DC 24V (DC 24V) and DC ±15V (DC ±15).
Table 6.3.1 shows the definition of CN5 power supply interface.

Table 6.3.1

Pin	Signal	Definition	Instruction
1	24V+	Power supply input	+24V external power input and power supply output current: above 2A
2	24V-	Power reference ground	—
3	PGND	External shielding ground	Generally connecting to ground or enclosure
4	+15V	Power supply input	+15V external power input and power supply output current: above 2A
5	GND	Power reference ground	—
6	-15V	Power supply input	-15V external power input and power supply output current: above 2A

6.4 CN1 wire feeder interface

The interface CN1 of the wire feeding machine is an 8-pin green terminal, which supports both motor wire feeding and IO wire feeding. Table 6.4.1 provides the definition of the wire feeding machine interface.

Table 6.4.1

Pin	Signal	Definition	Instruction
1	Pulse+	Motor wire feed pulse + interface	The motor wire feed is used, and the driver PUL+ is connected
2	Pulse-	Motor wire feed pulse - interface	Motor wire use, connected to drive PUL-
3	DIR+	Motor wire feed direction + interface	Motor wire wire, connected to driver Dir +
4	DIR-	Motor wire feed direction - interface	Motor wire used, connected to drive Dir-
5	GND	Reference ground	—

6	Feed	Wire feed control interface	Used for automatic wire feed of IO control wire feeder
7	Backoff	Wire withdrawal control interface	Used for automatic wire withdrawal of IO control wire feeder
8	OVCC	+24V power output	Power supply, maximum output is 500mA

6.5 CN2 laser interface

The laser interface is a 8PIN green terminal. Table 6.5.1 shows the definition of laser interface.

Table 6.5.1

Pin	Signal	Definition	Instruction
1	PWM+	Modulated signal +	Duty cycle adjustable from 1% to 99%, 24V level
2	PWM-	Modulated signal-	Duty cycle adjustable from 1% to 99%, 24V level
3	DA	Simulated voltage output	0-10V analog voltage, used for adjusting the peak power of the laser
4	GND	Power reference ground	Generally, it connects to the laser control interface DA-
5	OVCC	+24V power output	Power supply, capable of delivering a maximum output of 500mA
6	Enable	Laser enable signal	24V voltage level, with high level as the valid state
7	Alarm_in	Laser failure alarm input	—
8	GATE	Red light indication signal	24V voltage level, with low level as the active state
9	GND	Signal reference ground	—
10	GND	Signal reference ground	—

6.6 CN3 temperature sensor interface

The temperature sensor interface CN3 is a 4PIN green terminal. Table 6.6.1 shows the definition of temperature sensor. The user directly inserts the supporting connection line with terminal.

Table 6.6.1

Pin	Signal	Definition	Instruction
1	+5V_out	Sensor P interface	+5V power supply, maximum output is 500mA
2	Light	Sensor L interface	—
3	Temp	Sensor T interface	—
4	GND	Sensor G interface	—

6.7 HMI touch screen interface

The HMI interface is a 6PIN green terminal and power supply to and communication with HMI by the mainboard are performed via the port. Table 6.7.1 shows the definition of HMI interface.

Table 6.7.1

Pin	Signal	Definition	Instruction
1	OVCC	+24V power output, 500mA	Panel power supply
2	TXD_HMI	Connecting to the HMI sending end	Serial port communication TXD signal
3	RXD_HMI	Connecting to the HMI receiving end	Serial port communication RXD signal
4	TXD	Reserved communication interface	RS232 reserved communication interface
5	RXD	Reserved communication interface	RS232 reserved communication interface
4	GND	Power reference ground	—

6.8 CN4 reserved serial port interface

CN4 reserved serial port interface is a 5-pin green terminal without wiring. Chart 6.8.1 shows the definition of CN4 interface.

Table 6.8.1

Pin	Signal	Definition	Description
1	OVCC	+24V power supply, 500mA	Power supply
2	485+	TXD signal	Serial communication TXD signal
3	485-	RXD signal	Serial communication RXD signal
4	GND	GND	—
5	Input0	Reserved input interface	

6.9 CN6 external start and interlock interface

The CN6 interface is a 4PIN green terminal. Table 6.9.1 shows the definition of CN6 interface.

Table 6.9.1

Pin	Signal	Definition	Instruction
1	GND	Reference ground	Generally connecting to the start button switch on the welding head-
2	Start	External start switch input	Generally connecting to the start button switch on the welding head+
3	Injector	Safety clamp signal input	The pin must be connected to the safety clamp and the safety clamp shall be clamped onto the metal material before welding.
4	Interlock	Safety lock signal input	The pin must be connected to the nozzle of the handheld head. The nozzle touches the metal material at the moment of welding.

6.10 CN7 general input interface 1

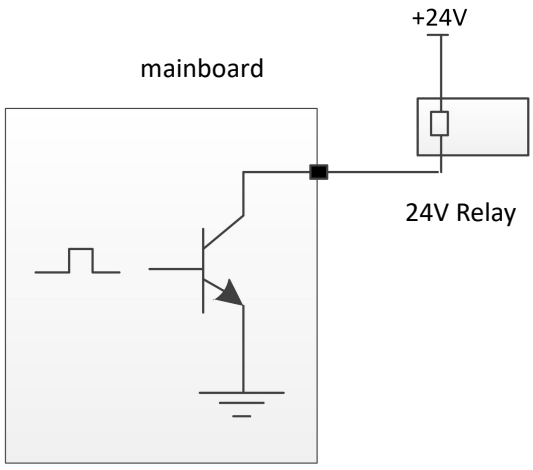
The CN7 interface is a 6PIN green terminal and of NPN type. Table 6.10.1 shows the definition of CN7 interface.

Table 6.10.1

Pin	Signal	Definition	Instruction
1	GND	Reference ground	—
2	Cool	Water-cooling machine alarm input	NPN type input
3	GND	Reference ground	—
4	Input1	Reserved	NPN type input
5	Input2	Reserved	NPN type input
6	Input3	Reserved	NPN type input

6.11 CN8 general output interface

The CN8 interface is a 6-pin green terminal. By using the OC output, it can directly drive relays, with a maximum current of up to 500mA. The wiring diagram is shown in Table 6.11.1.



Output terminal relay wiring diagram

Table 6.11.1

Pin	Signal	Definition	Instruction
1	OVCC	+24V power output	Power supply, capable of delivering a maximum output of 500mA
2	Auxi.air	shielding gas	Used for gas blowing control protection, it can directly drive the solenoid valve
3	Output1	retain	OC output, capable of driving relays
4	Output2	retain	OC output, capable of driving relays
5	Output3	retain	OC output, capable of driving relays
6	OVCC	+24V power output	Power supply, capable of delivering a maximum output of 500mA

6.12 CN9 common input interface 2

The CN9 interface is a 4-pin green terminal of NPN type. The definition of the CN9 interface is given in Table 6.12.1.

Table 6.12.1

Pin	Signal	Definition	Instruction
1	GND	Reference ground	—
2	Input4	Underpressure alarm input	
3	Input5	Reserved	—
4	OVCC	+24V power output	Power supply, maximum output is 500mA

6.13 Galvanometer interface

The system provides two DB9 galvanometer interfaces, one DB9 male connector and one DB9 female connector.

Chapter 7 Introduction to HMI Operation

7.1 Introduction to HMI function

As for the handheld laser welding system operation panel (hereinafter referred to as "HMI"), the 7cun configuration TFT touch screen is used, with beautiful interface and convenient operation. The laser-related parameters can be set, respectively and the real-time display of input/output IO state, alarm information and running state can be realized on the main interface.

Refer to the following figure for the HMI main interface.

Main interface of HMI

[Scanning parameter]: Used to set the parameters related to the scanning processing of the galvanometer.

Parameter number: Multiple groups of different cleaning parameters can be set with different parameter numbers.

Scanning type: 9 types of scanning waveforms for setting dual-axis galvanometer, supported: ‘—’, ‘|’, ‘⬭’, ‘⦸’, ‘▦’, ‘▩’, ‘⩛’, ‘✳’, ‘◎’,

Scanning speed: It is used to set the scanning speed of the galvanometer.

Laser power: It is used to set the percentage of the peak power of the laser.

Laser frequency: It is used to set the PWM frequency of the laser.

Duty ratio: It is used to set PWM signal duty ratio of continuous laser.

Scanning length: It is used to set the length of the laser scan.

Scanning width: Used to set the length of laser scanning.
Maximum diameter: It is used to set the ‘  ’ maximum circular diameter of the waveform. It will be automatically displayed after switching the waveform and is a dedicated parameter.
Minimum diameter: It is used to set the ‘  ’ maximum circular diameter of the waveform. It will be automatically displayed after switching the waveform and is a dedicated parameter.
[System Settings]: Click to enter the system setting page and modify system function parameters.
[Alarm State Area]: After the alarm signal is enabled, the real-time display of protective gas underpressure alarm, cold water flow alarm, laser alarm and temperature alarm, and galvanometer state is conducted. The real-time display of safety lock state will arise when the safety lock is enabled; When the alarm signal isn't triggered, the corresponding alarm state will turn into blue; When the alarm occurs, the corresponding alarm icon will flicker between red light and blue light.
[Red light | switch on/off]: The red light switch can control the switch of the laser red light indication.
[preparation \ stop | cleaning]: Emission of laser can be allowed or forbidden by the button. In a state ready to clean, press the cleaning start button will be laser cleaning; Under the stop cleaning state, press the cleaning start button will not produce light cleaning.

7.2 System parameter setting.

System parameter setting: The modification takes effect after being saved.
Double click light extraction enabling: Switch off the enabling function. Click the button once and the laser will come out. Switch on the enabling function. Double click the button twice and the laser will come out.
Delay in enabling gas: Delay in enabling gas can be set when processing is enabled. The emission of laser will start after blowing is delayed for a period of time by pressing the external start button.
Delay in disenabling gas: Delay in disenabling gas can be set when processing is disenabled. Stop blowing after stopping laser emission, and then delaying for a period of time when processing is stopped.
Scale factor: This parameter is used to set the maximum range of the galvanometer. The value must be consistent with the actual range of the galvanometer; otherwise, the actual length and width of the light output may be inaccurate.

Enabling the safety lock: Select whether to enable security lock protection.

Phase increment: used for waveform filling speed adjustment, the larger the increment, the faster the filling, the parameter is 0, the static does not fill, suitable for "  " and"  ", note that "  " when set to 0 will also fill slowly.

Filling spacing: used for waveform filling speed adjustment, is the interval between lines, the larger the interval, the faster the filling, suitable for '  '  ' 'and'  '.

Corner delay: used for the delay time after the line swings to the end position, generally set to 0, the setting is not ignored to lead to a strong focus on both ends of the line, suitable for "  " "  "  " .

Sine wave - Scan level: Used to set the number of sine waves when scanning, applicable to '  '

Sine wave - scan density: used to set the density of each sine wave during scanning, the larger the value, the denser, suitable for "  "

Rotation Angle: It is used to adjust the rotation Angle after scanning, and set reasonably according to demand, which is suitable for "  "

Language: Select the HMI language.

[Center shift] : Used for setting the center shift of red light.

[Authorization] : Perform authorization code reading and decryption operations, as well as display panel and motherboard version number related information.

7.3 Equipment parameters

[Equipment parameters]: It is used to limits the maximum and minimum parameters. This parameter limits the laser parameters, only by entering the password to enable it. After the parameter is changed, it must be saved to take effect.

Maximum scanning speed: It is used to set the maximum oscillating speed of the galvanometer

Minimum scanning speed: It is used to set the minimum oscillating speed of the galvanometer

Maximum scanning length: It is used to set the maximum scanning length allowed by the equipment

Minimum scanning speed: It is used to set the minimum scanning length allowed by the equipment

Laser rated power: It is used for setting the rated power of the laser.

Maximum laser frequency: It is used to set the maximum laser

frequency

Minimum laser frequency: It is used to set the minimum laser frequency

Laser alarm enabling: It is used to set whether to enable laser alarm. If this parameter is enabled, a laser alarm will be generated when the laser alarm input triggers the alarm.

Laser alarm level: It is used to set the laser alarm that triggers the electrical level logic.

Water-cooling machine alarm enabling: It is used to set whether to enable water-cooling machine. If this parameter is enabled, a water-cooling machine will be generated when the water-cooling machine input triggers the alarm.

Water-cooling machine alarm level: It is used to set the water-cooling machine that triggers the electrical level logic.

Underpressure alarm enabling: It is used to set whether to enable underpressure alarm. If this parameter is enabled, an underpressure alarm will be generated when the underpressure alarm input triggers the alarm.

Underpressure alarm level: It is used to set the underpressure alarm that triggers the electrical level logic.

Temperature alarm enabling: It enables the lens temperature alarm. When the temperature exceeds the limit value, an alarm signal will be generated.

Temperature alarm limit: Lens temperature limit value.

7.4 Alarm message

Alarm information includes: Safety clamp alarm and machine alarm.

Safety clamp alarm lies in that the safety clamp and cleaning head is not reliable conduction.

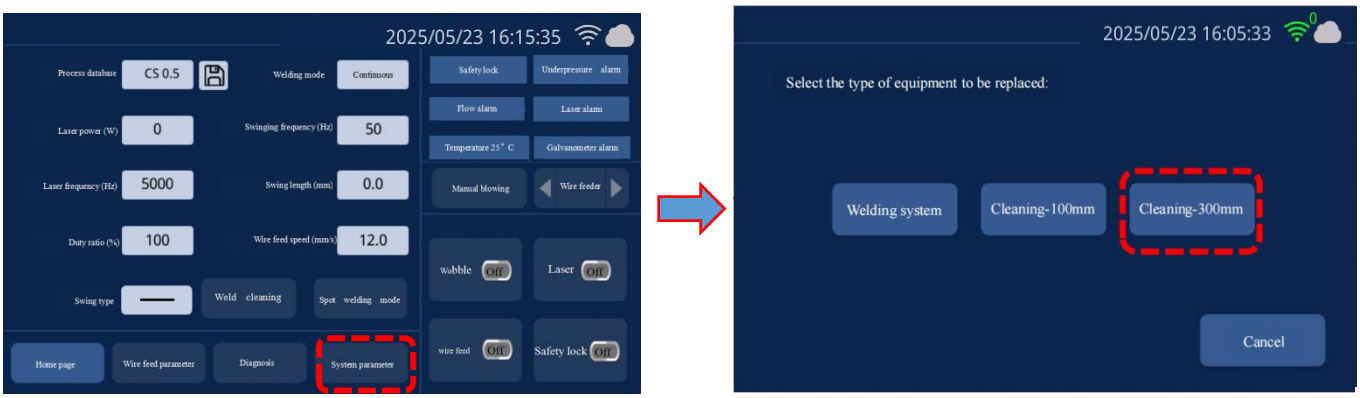
Machine alarm includes 3 alarms, laser alarm, water-cooling machine alarm, underpressure alarm. In the alarm information interface, it can display multiple alarm information, up to 3 pages, and it can switch through the previous page and the next page.

When the alarm is triggered, the output of the laser will be stopped and the galvanometer will stop moving at the same time, and the corresponding alarm information will be prompted. The user can check the related hardware problems according to the alarm prompt and remove the alarm. When the alarm is lifted, the alarm record of the machine alarm will still exist in the alarm information. At this time, you can manually clear the alarm by entering the alarm information interface. If the alarm is not lifted, the alarm will continue to prompt when it is manually cleared.

Chapter 8 Processing Module Switching

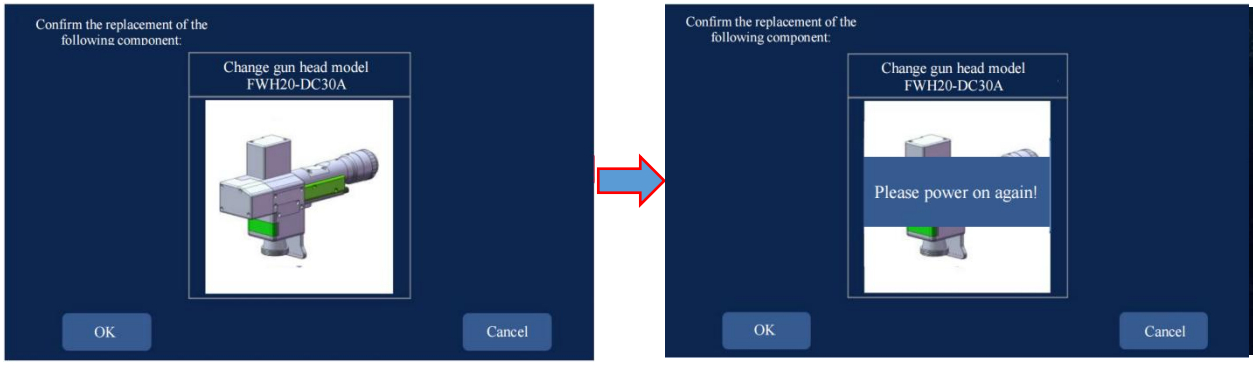
8.1 Selection of processing type

As for the welding mode switching to 300mm cleaning mode, inputting password-666666 will be reminded by clicking [Processing Type] on the panel pursuant to [System Parameter]->[Authorization]->[Processing Type]. After the password is put correctly, enter the system type selection interface, as shown in the figure:



8.2 Hint of module replacement

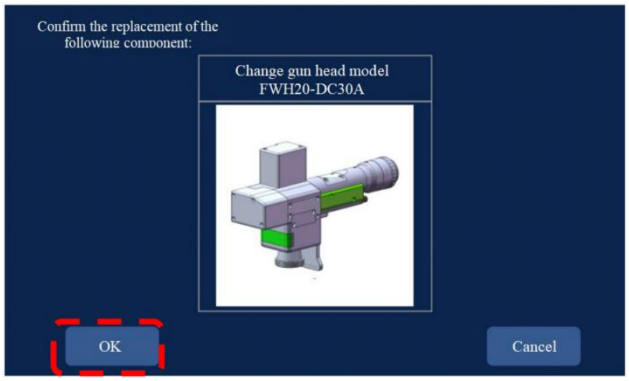
After the user chooses the processing type, the system shall use the text and picture for prompting for the gun head component to be replaced. The system will remind power-on anew by clicking [Confirm] after the user confirms the corresponding hardware components and replacement conditions. The equipment is powered down by the use interface to replace the corresponding component.



8.3 Switch completion

After the replacement of hardware component by the user is over, the equipment can be powered on anew. Whether you confirm the replacement of the hardware component will be reminded again at the moment. The user shall click [Confirm] after confirming the replacement of component is over and the system processing mode switch will be over.

Warm tips: After replacing a component, the system prompts you to confirm for the second time.



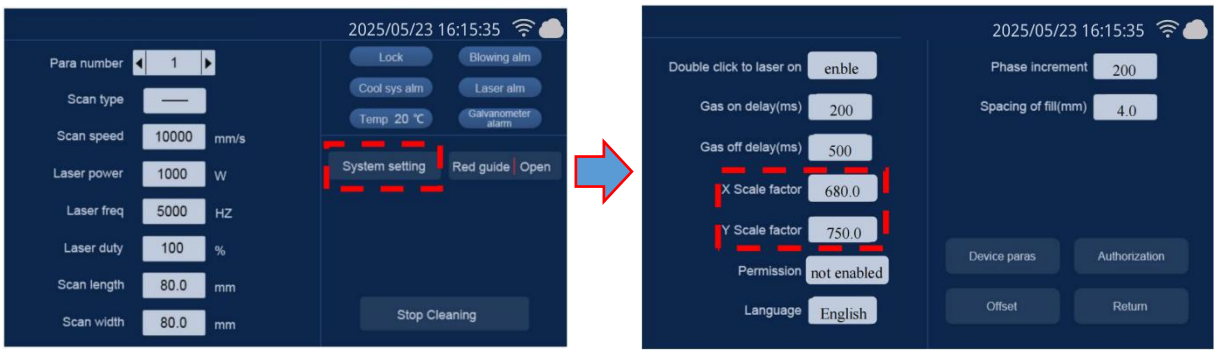
8.4 System parameters

The user needs to set parameters before using. Click [System Parameters] to set.

Double click light extraction enabling: The enabling is opened, double click the button for twice to extract light, close the enabling button, click once to extract light.

Scale factor: X system parameter is changed to 680;

Y system parameter is changed to 750.

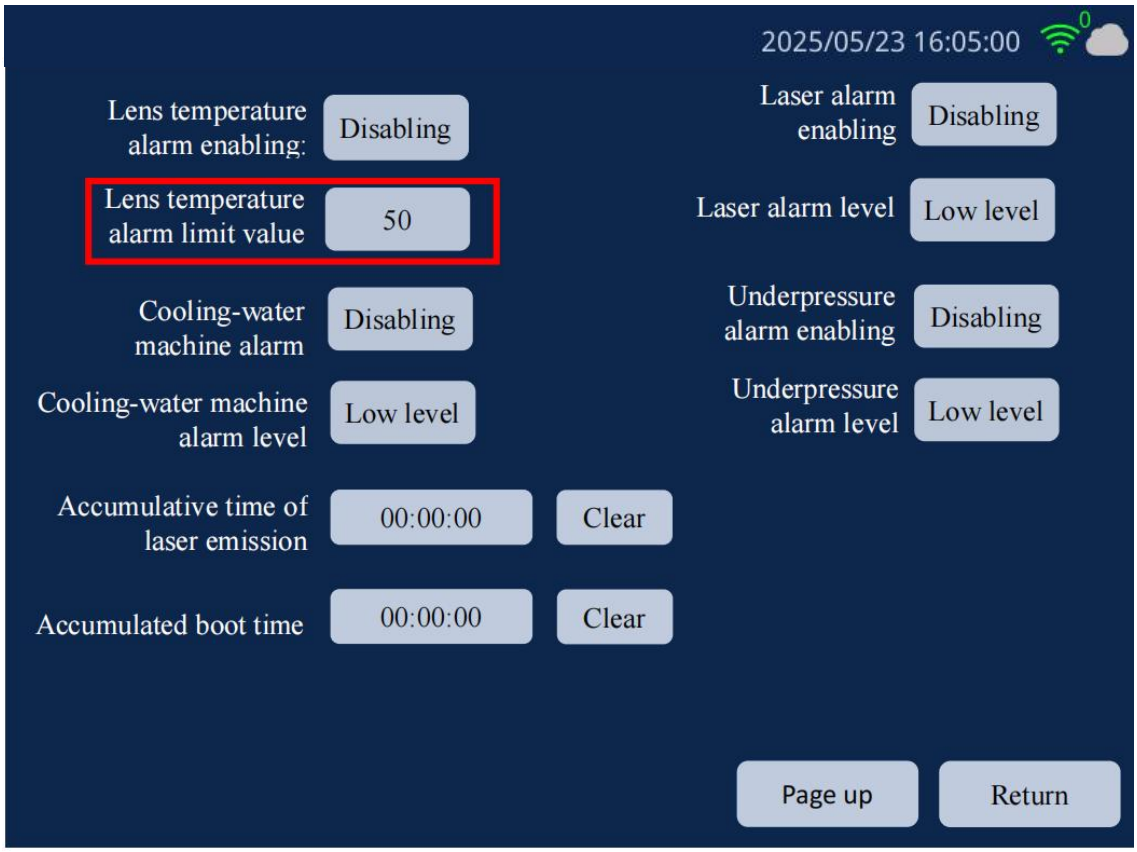


Chapter 9 Monitoring and Protection Device

9.1 Temperature parameter setting of protective glass

[Home Page]→[System Parameter]→[Equipment Parameter]→[Input Password: 666888] →next page→ lens temperature alarm limit value.

It is suggested to set the set value of lens temperature to 50. After the lens temperature exceeds the set value, the alarm caution will arise on the home page and the display light on the side of the handheld plumb joint will turn to red.



Chapter 10 Introduction to the APP

10.1 Function Introduction

The RDWelder mobile APP is an application suitable for remote control of handheld welding products, supporting various types of product applications such as single pendulum welding, double pendulum welding, single pendulum cleaning, and double pendulum cleaning. Users can connect the board card through this APP to achieve the purpose of wireless connection control. It can effectively solve the problem of the processing station being far from the equipment and constantly traveling back and forth. It supports remote viewing of equipment status and parameter adjustment, facilitating equipment management and maintenance. The APP also has rich technical center resources. It is provided for customers to install and maintain equipment, review process data, assist in troubleshooting, and refer to application cases.

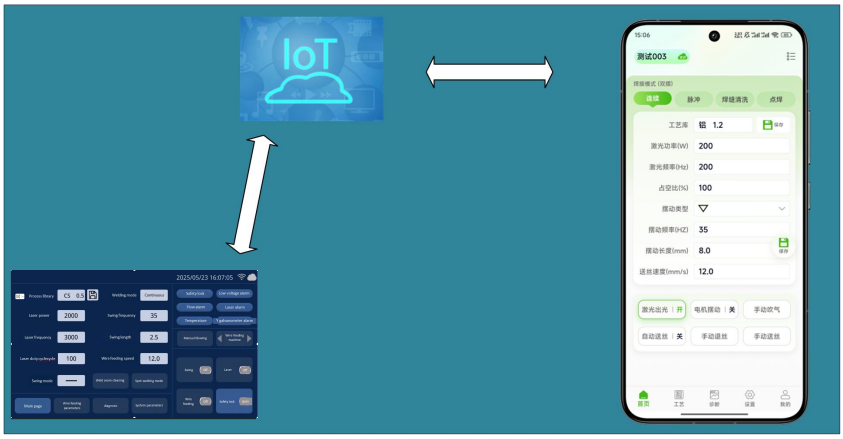
10.2 Equipment connection

10.2.1 Connection mode

The handheld APP and control card support two connection modes: AP mode and STA mode.

- In AP mode, the APP is directly connected to the control card. The control card emits a WIFI hotspot signal. Customers can use mobile devices such as mobile phones to connect to the WIFI hotspot signal emitted by the control card. After the connection is completed, the board card can be controlled using the APP. Both the touchscreen and the APP use WIFI ICONS for status display.

- In STA mode, the APP and the control card are connected to the cloud via the Internet. After setting the control card to STA mode, it is necessary to connect to WIFI to access the network. Access the server through traffic data to obtain the device status and perform operation control. Both the touchscreen and the APP use Internet of Things cloud ICONS for status display.

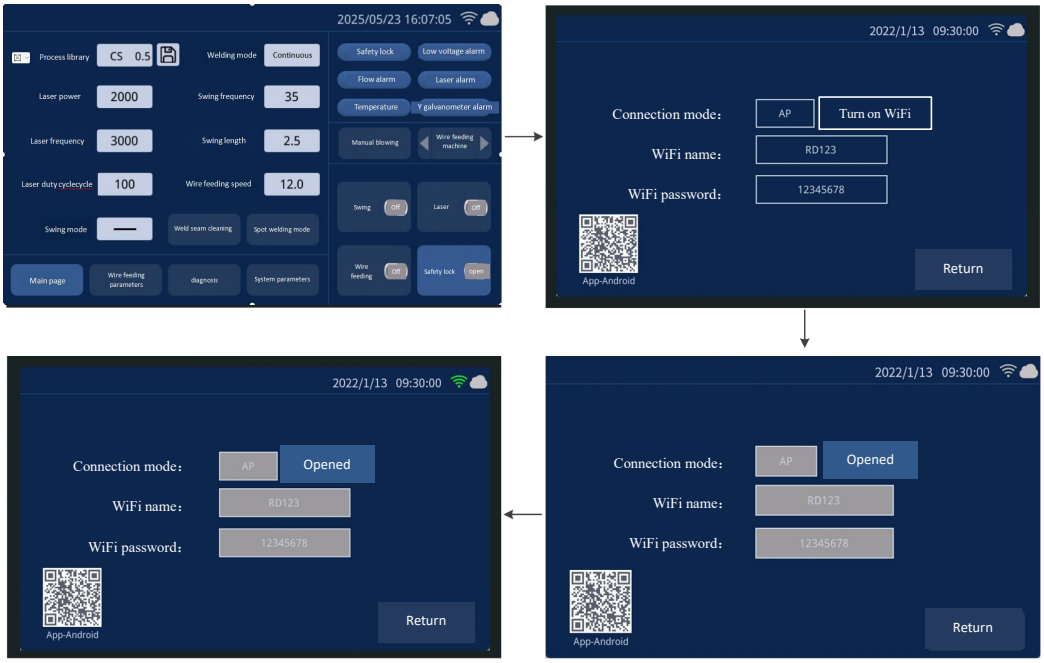


10.2.2 AP mode connection

Board card Settings:

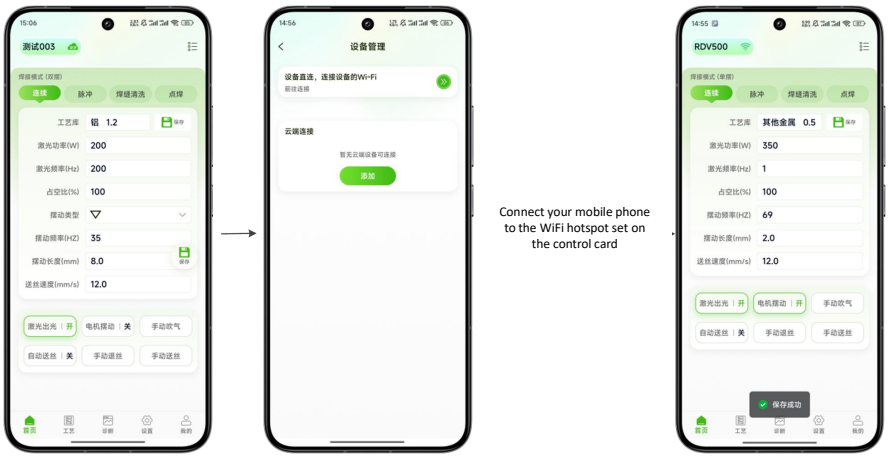
- Click the upper right corner of the touch screen to enter the WIFI configuration page and configure the WIFI hotspot.
- Set the connection mode to AP and set the name and password of the WIFI hotspot. If the WIFI is turned on, you need to first click the < Turned On > button to turn off the WIFI. When the WIFI icon goes off, you will enter the configurable WIFI setting state.
- After the configuration is completed, click the < Turn on WIFI> button, and the system will turn on WIFI again.

- After the WIFI hotspot configuration is completed, the WIFI configuration mode will be turned off, the WIFI icon will light up, and the mobile phone APP can connect to the WIFI on the board card.



APP Settings:

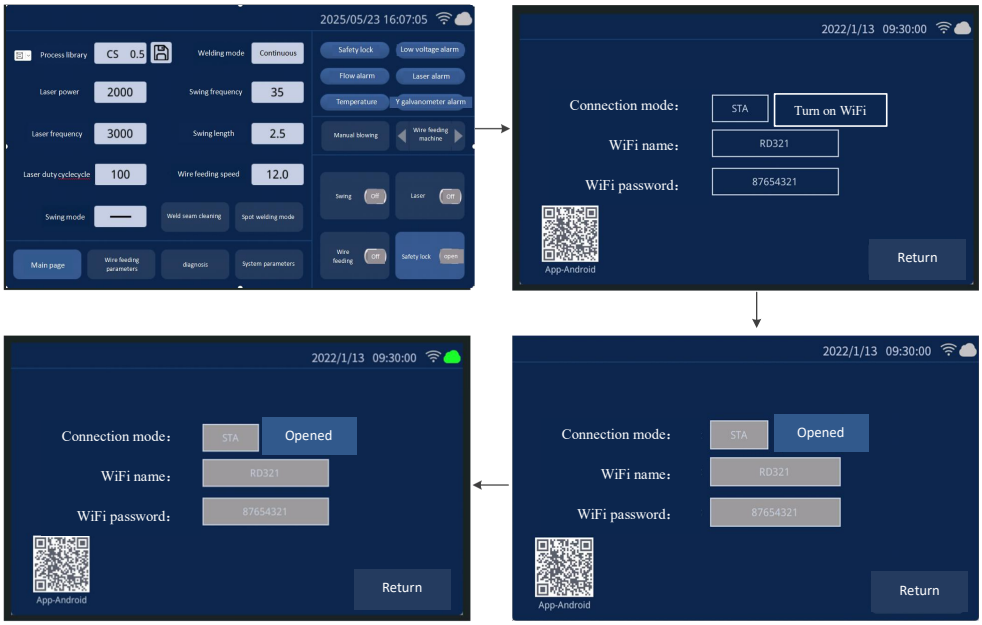
- Click the icon on your mobile phone to launch the APP.
- The device connection status in the upper left corner of the motor enters the < Device Management > page.
- Select the direct connection of the device, enter the phone Settings page to set up the WIFI connection, and connect to the WIFI hotspot of the control card.
- After the connection is completed, you can enter the APP to check that the mobile APP has been connected to the device.



10.2.3 STA mode connection

Board card Settings：

- Click the upper right corner of the touch screen to configure the WIFI hotspot and enter the WIFI configuration page.
- Set the connection mode to STA and connect to an external WIFI. If the WIFI is turned on, you need to first click the < Turned On > button to turn off the WIFI. When the WIFI icon goes off, you will enter the configurable WIFI setting state.
- After the configuration is completed, click the < Turn on WIFI> button, and the system will connect to an external WIFI.
- After the WIFI connection is completed, the WIFI configuration mode will be turned off, the remote icon will light up, and the device will be in an online state.



APP Settings：

Click the icon on your mobile phone to launch the APP.

The device connection status in the upper left corner of the motor enters the < Device Management > page.

You can view the added cloud devices on the device management page. The highlighted cloud logo indicates that the device is online, while the grayish-white status indicates that it is offline.

After selecting the online device, click "Connect" to complete the device connection.

Note: The STA mode requires users to register an account and then add the device serial number to their personal account before remote management can be carried out.

10.3 APP download method

Android:

https://mantisolo.com/versionQrCode.html?qrform=6a7a15d4f48d72e6e02b0b14af8e3bc15&company_code=003&platform=APP

Apple: Search for "RDWelder" in the App store

10.4 APP function

Welding mode

Cleaning mode

The RDWelder mobile APP supports single pendulum welding, single pendulum cleaning, double pendulum welding and double pendulum cleaning. After the APP is connected to the board card, it can automatically adapt to the current processing mode of the control card.

Welding mode:

[Home Page] : Supports management of process parameters, processing status, blowing adjustment, and wire feeding control. The entry to < Technology Center > is located in the upper right corner.

【 Process 】 : Welding process library, where users can manage process parameters.

【 Diagnosis 】 : Manage the status of the equipment, support the query of alarm records, and enable central correction.

【 Settings 】 : Go to the parameter setting page to manage ordinary setting parameters. You can enter the authorization management. After entering the password, you can manage advanced parameters.

[My] : Personal user page for managing personal information.

Cleaning mode:

[Home Page] : Supports management of process parameters, processing status, and blowing adjustment. The entry to < Technology Center > is located in the upper right corner.

【 Diagnosis 】 : Manage the status of the equipment, support the query of alarm records, and enable central correction.

【 Settings 】 : Go to the parameter setting page to manage ordinary setting parameters. You can enter the authorization management. After entering the password, you can manage advanced parameters.

[My] : Personal user page for managing personal information. Style.

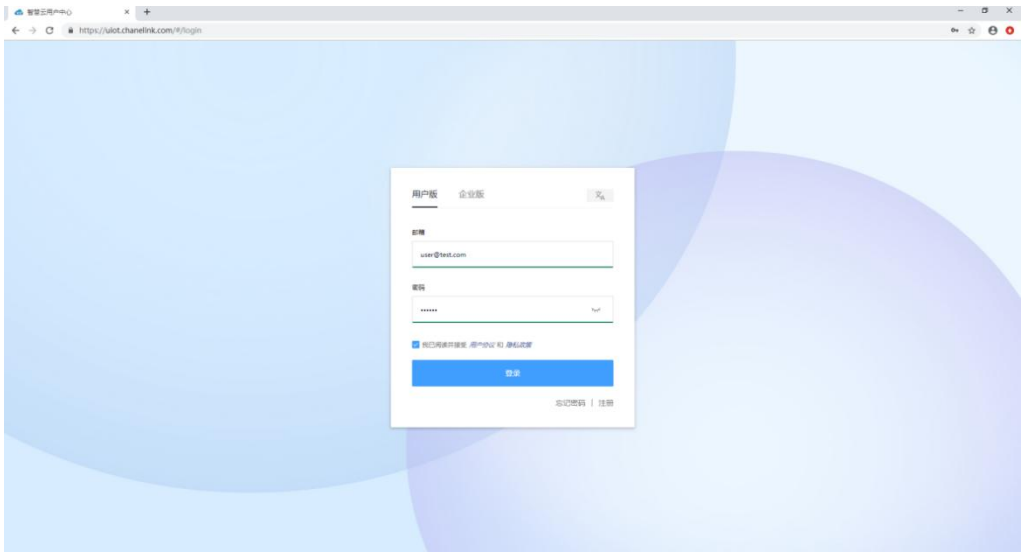
Chapter 11 Introduction to Wisdom Cloud

11.1 Function Introduction

The smart cloud system enables devices to access the Internet, allowing users to view the device status on the web page for remote management.

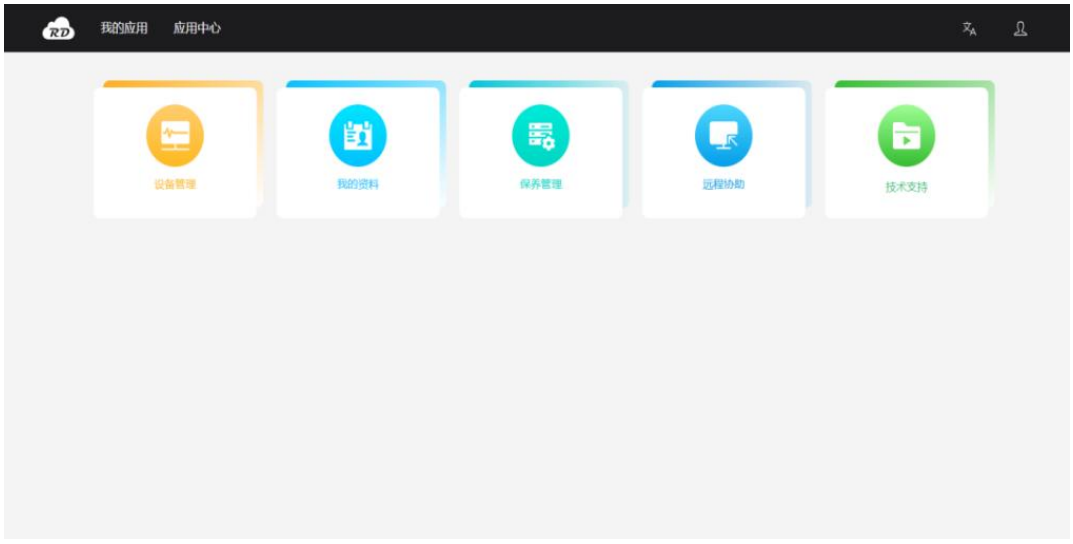
11.2 Smart Cloud Login

By visiting https://fiot.chanelink.com/ address, see page client login page, the following figure, the user account login, new user registration, password can be recovered, and so on.



11.3 User Center

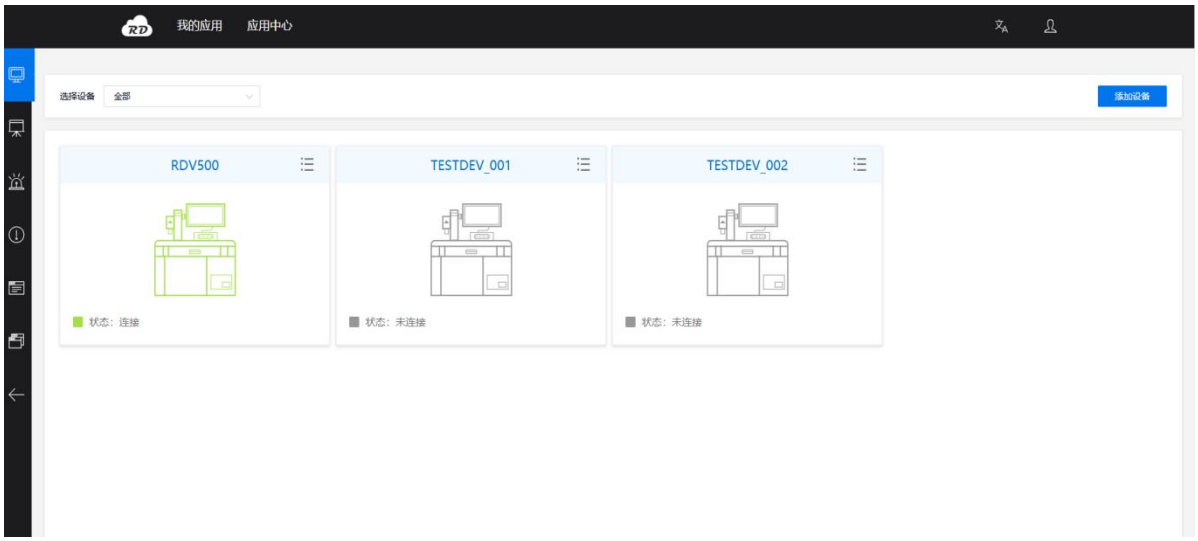
After successful login, you will be redirected to the home page of the User Center, as shown in the following figure. Users can view the added application functions, such as device management, My Profile, remote assistance, technical support, etc.



My application, as seen in the above picture, the one added by this user, can manage the added applications.
Application Center, where applications can be added.
Personal information, click this button to go to my profile, you can modify person information.
Log out. Click this button to exit to the login page.

11.4 Equipment Management

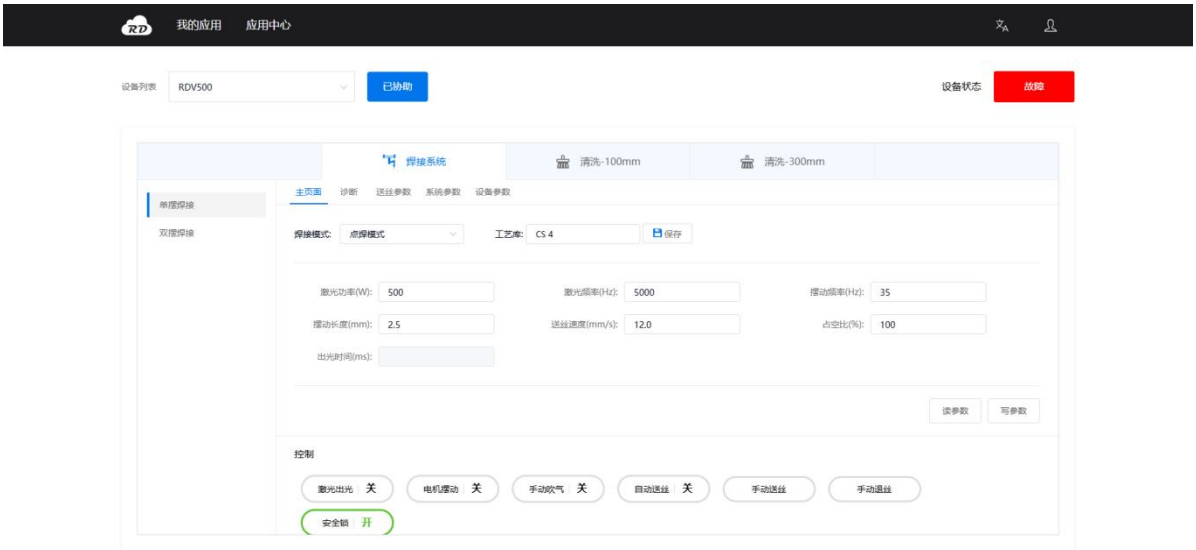
In "My Applications", click on "Device Management" to jump to the "Device Management" page, as shown in the following figure.



The left side is the menu bar, which opens the device monitoring page by default.
The device nickname entered when adding the device.
The connection status of this device indicates whether the device is connected to the Internet.
Equipment operation list (expands when the mouse hovers).
The equipment operation list has the functions of editing, detailing and unbinding.
The device can be edited, unbound and details viewed.
The "Add Device" button allows you to add devices to your personal account.

11.5 Remote assistance

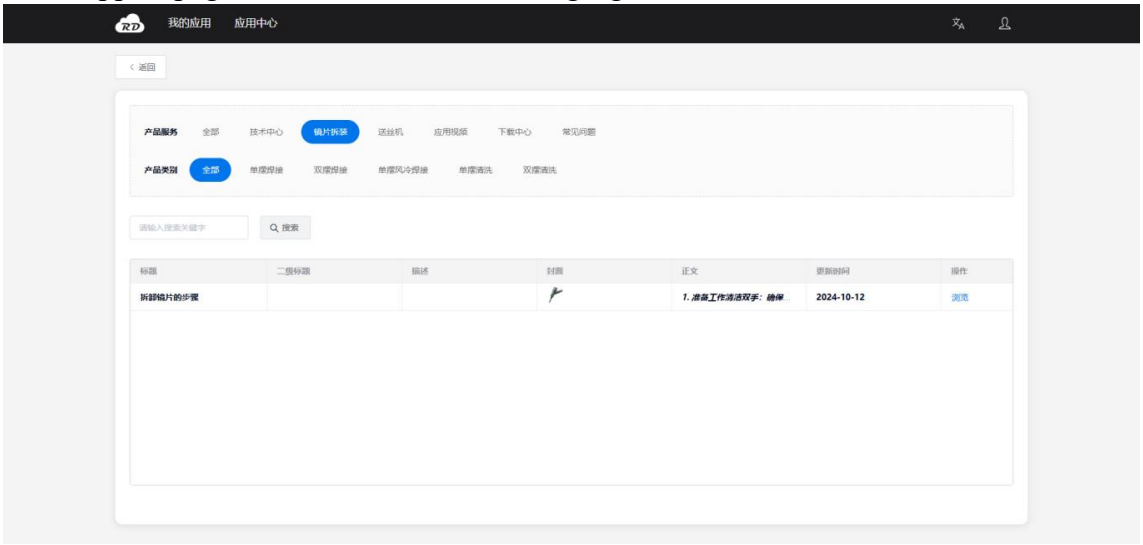
In "My Apps", click on "Remote Assistance" to be redirected to the Remote assistance page, as shown in the following figure.



You can view the devices under the added personal account in the device list. After confirming the need for a remote assistance device, a remote connection can be made to check the device status and manage parameter configuration.

11.6 Technology Center

In "My Applications", click on "Technical Support" to be redirected to the technical support page, as shown in the following figure.



On the technical center page, you can query various product information, including downloading instruction manuals and viewing application videos in the download center.

Shenzhen RelFar Intelligent Technology Co., Ltd.

Thanks for using our products!

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