AUXILIARY DEVICE FOR LASER CLEANING

JF-500

OPERATION MANUAL

LUOYANG XINCHENG PRECISION MACHINERY CO.,LTD.

Content

I Scope of application

This product is a cleaning auxiliary device used with the handhld laser cleaner to clamp the cleaning head during the laser cleaning process. Compared with the traditional hand-held method, it reduces labor costs and greatly improves the cleaning effect.effect. Its stable operation and diversified operation modes make it suitable for a variety of working conditions.

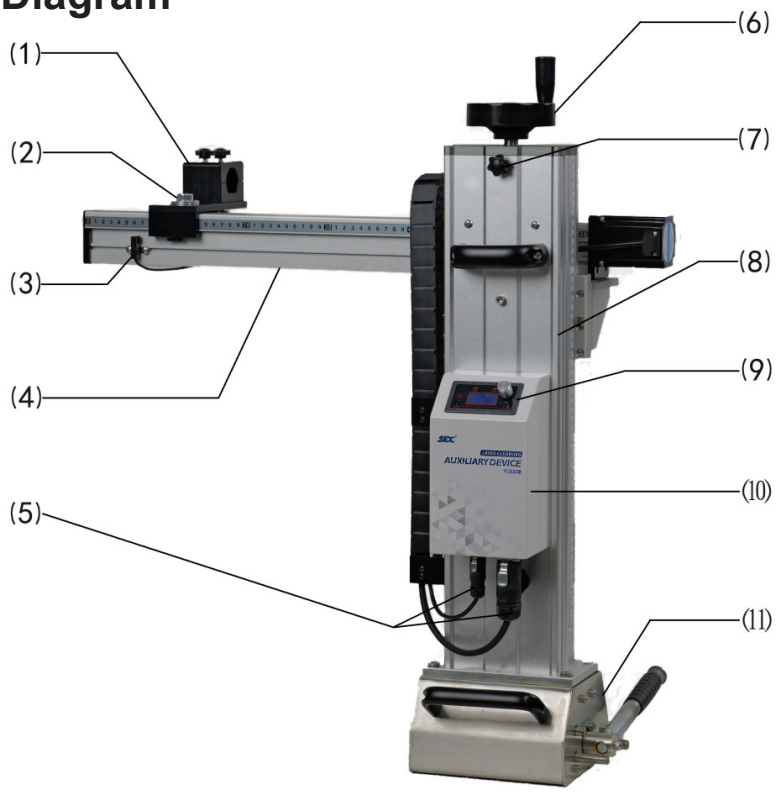
※This product does not include laser, cleaning head, and needs to be used with laser products.

II Product Description

1.Main technical parameters

Input Voltage	AC110~220V ±10%
X-axis Travel	500mm
Z-axis Travel	500mm
Max. Speed	40mm/s
Net Weight	21KG
Gross Weight	34KG
Packing Size	800*340*380mm（L*W*H）

2.Structure Diagram



(1) Cleaning Head Fixture (2) Level (3) Limit Switch

(4) X-axis (5) Signal Wire (6) Hand-wheel

(7) Z-axis locking Screw (8) Z-axis (9) Control Box Panel

(10) Control Box (11) Magnetic Base

3.Optional Parts

The use of the rotary axis is optional. The workpiece can be clamped in the center of the rotary axis and thus rotated during the cleaning for a more comprehensive cleaning effect.

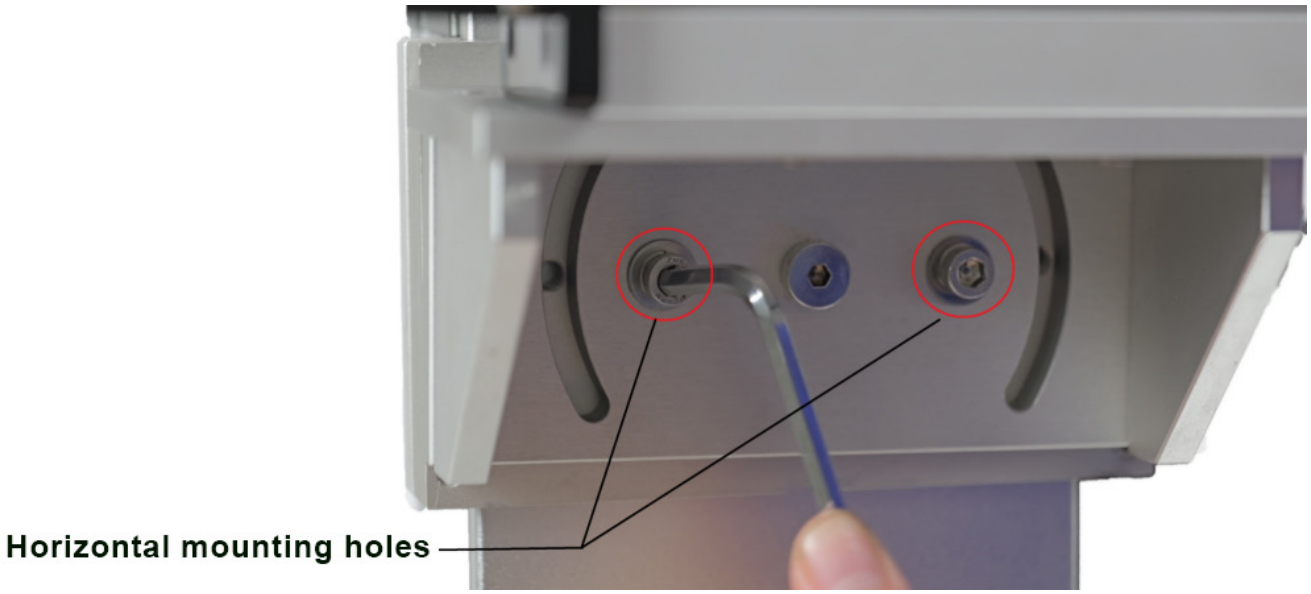
※The picture shows our D80 rotary axis, please refer to the actual model.

Ⅲ Installation and use instructions

1. Installation Instructions

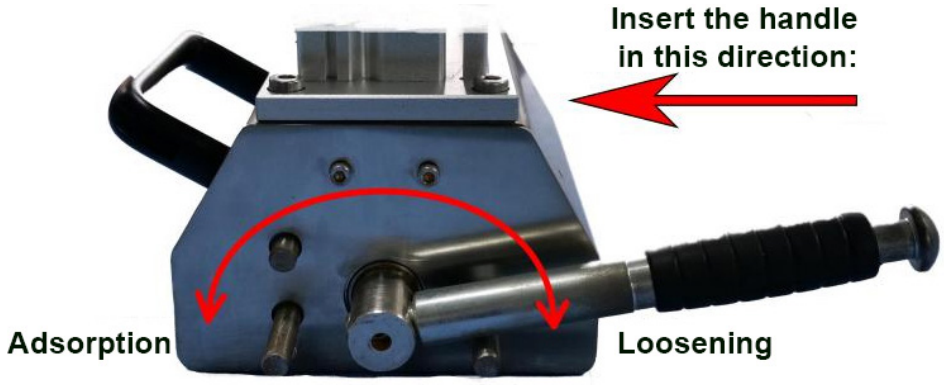
Before initial use, do the following:

1.1 Adjust the X-axis angle: Remove the X-axis fixing plate screws, rotate the X-axis to a horizontal angle, install the screws into the horizontal mounting holes and tighten them;



1.2 Installation of cleaning head fixture: When installing the fixture, make sure that the fixture and the main body of the device are on both sides of the X-axis to avoid the fixture colliding with the Z-axis during operation, which may result in damage to the gun head or the device;

1.3 Installation of magnetic base handle: When installing the magnetic base handle, please install it in the correct direction to avoid usage problems.



2. Usage Requirements

2.1 Before use, please make sure that the signal cable of the control box is firmly connected;

2.2 Before starting the device, please ensure that the cleaning head is clamped tightly;

2.3 The equipment should be used on a flat surface that can be magnetically attracted or equipped with a stable iron base.

2.4 The voltage of the equipment is AC 110–220V; if you need to use it at another voltage, please equip the transformer in advance.

3. Precautions

3.1 Before adjusting the cleaning head, please stop the laser equipment emitting laser. It is strictly prohibited to adjust the cleaning head when the laser equipment is emitting laser.

3.2 When adjusting the height of the Z-axis up and down, please do not touch the Z-axis to avoid pinching;

3.3 If the x-axis motor runs beyond the limit, please stop the equipment running immediately to avoid causing motor failure;

3.4 Do not apply strong force perpendicular to the Z-axis during the operation of the equipment to avoid causing the equipment to shake or tip over;

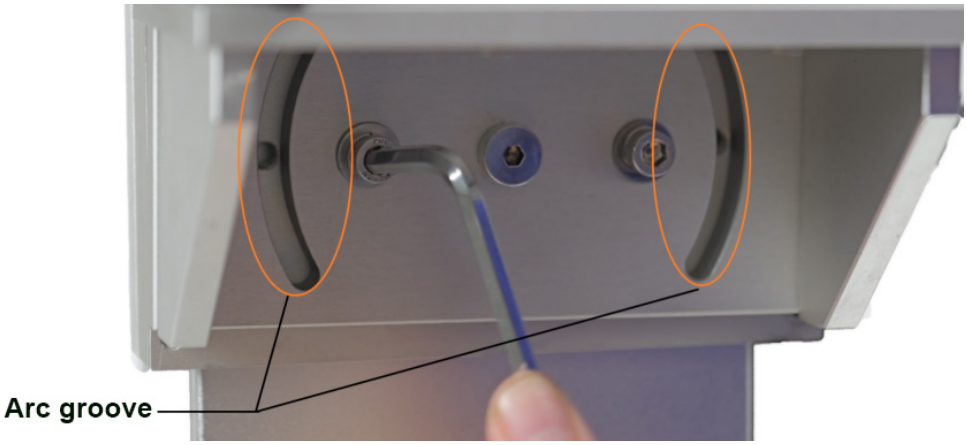
Ⅳ Operation Flow

1. Place the device on a magnetizable plane, and trigger the magnetic base handle to make the device adsorbed on the plane;
2. Connect the signal cable and power cable;
3. Adjust the X-axis angle so that the X-axis direction is parallel to the cleaning plane;
4. Clamp the cleaning head on the fixture, tighten the screws to ensure that the cleaning head is clamped firmly;
5. Adjust the height of Z-axis through the Z-axis handwheel, so that the distance between the cleaning head and the surface to be cleaned is the focal length of the cleaning head, tighten the Z-axis locking screws to fix the distance;
6. After operating the fixture to a suitable position, press the control box operation key to control the device to run, and at the same time control the laser product emitting laser, start cleaning the workpiece;

Ⅴ Function Introduction

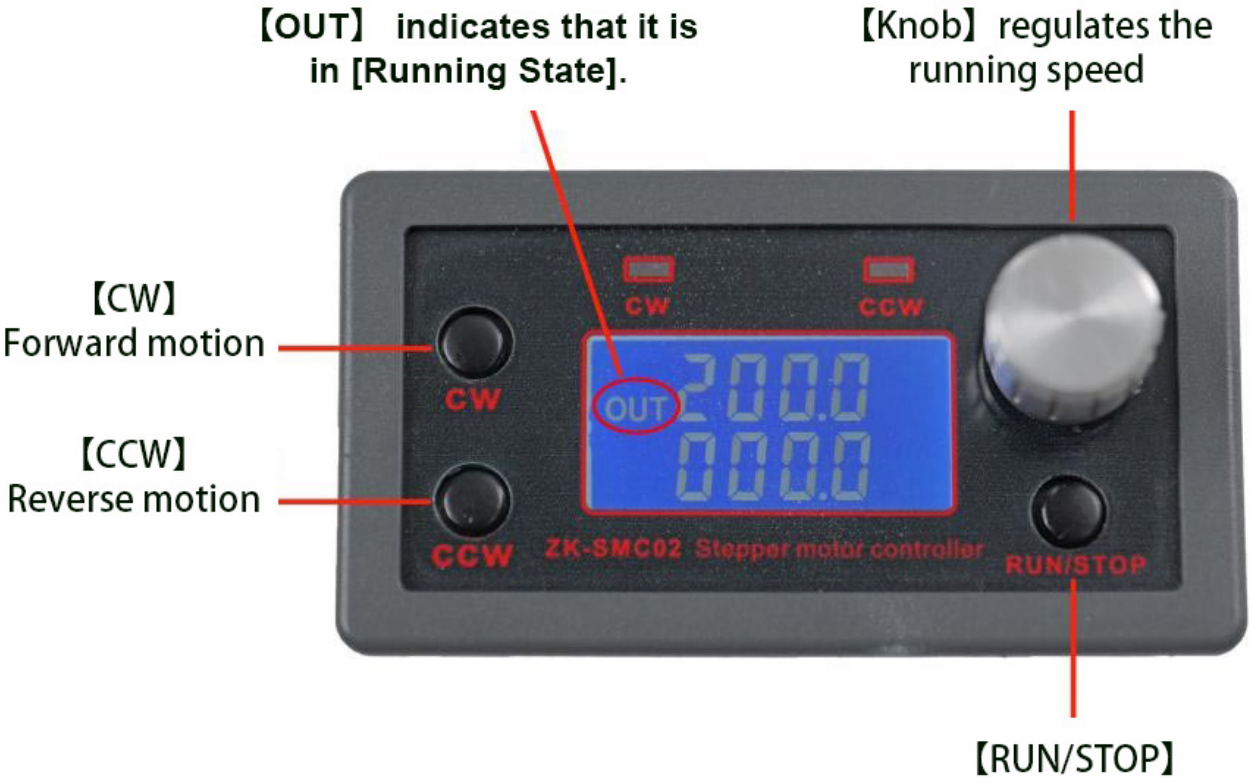
1. X-axis angle adjustable:

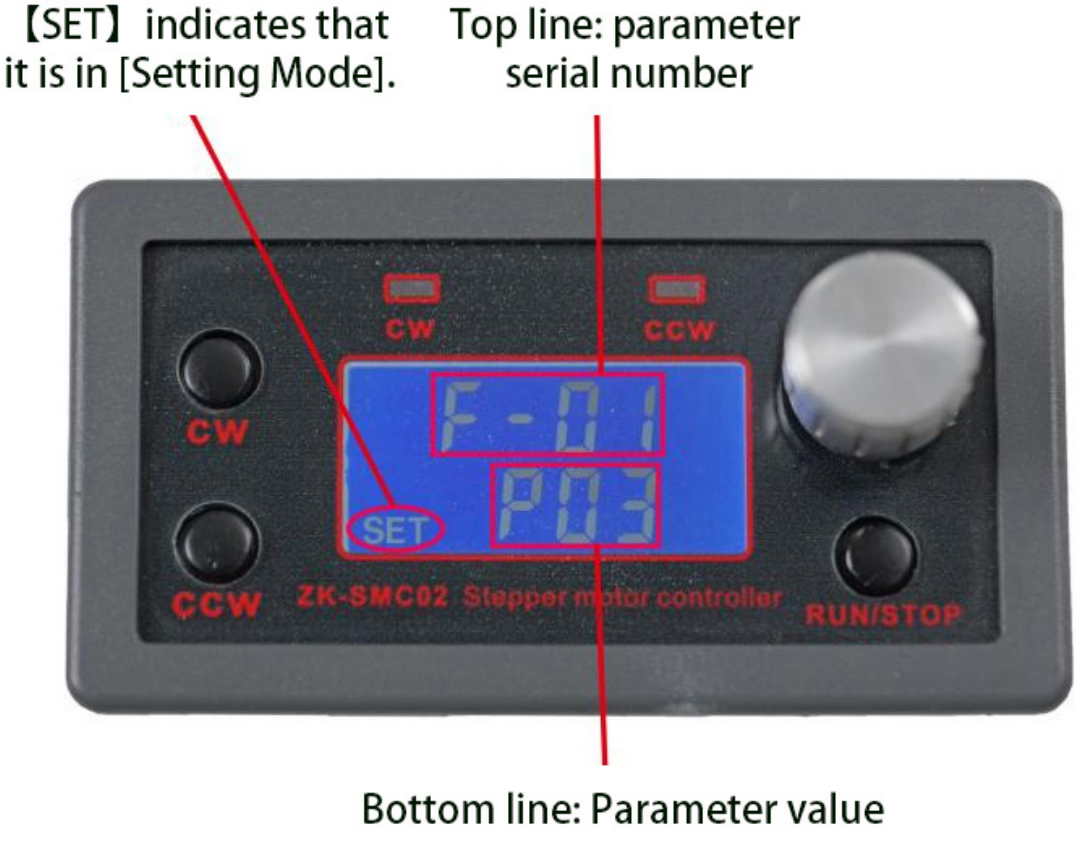
First remove the screws from the horizontal mounting holes, install them into the arc groove, adjust the X-axis angle and then tighten the screws to fix the X-axis;



2. Adjustable operation mode;

Adjust the operation mode through the control box panel to set the cleaning head fixture operation mode.





The steps of parameter setting are as follows:

Long press [knob] in the operation interface to enter the setting interface;

In the setting interface, rotate the [knob] to adjust the parameter serial numbers F-01~F-13 (the parameters corresponding to the serial numbers are shown in Table 1);

After adjusting to the parameter serial number to be modified, click [RUN/STOP] key to enter the adjustment mode;

After entering the adjustment mode, lightly press [knob] to adjust the number of digits, rotate [knob] to adjust the value;

After adjusting the parameters, click [RUN/STOP] key to exit the adjustment mode;

Continue to adjust the values of other parameter serial numbers, or long press [knob] to return to the operation mode;

Table 1 Parameter serial number table

No.	Function	Range	Default Value
F-01	Action flow mode selection (See details in Table 2)	P 01 - P 09	P 03
F-02	Number of forward pulses	1-9999999	160000
F-03	Forward speed	0.1-999.9	80
F-04	Number of reverse pulses	1-9999999	160000
F-05	Reverse speed	0.1-999.9	80

No.	Function	Range	Default Value
F-06	Cycle times	0-9999	1
F-07	Forward arrival delay (s)	0.0-999.9	0.0
F-08	Reverse arrival delay (s)	0.0-999.9	0.0
F-09	Number of pulses per revolution: 1-9999 (x10)	1-9999	320
F-10	Main interface display content 00- Top line: Motor circle speed (rev/min) Bottom line: delay time (seconds) 01- Top line: Motor circle speed (rev/min) Bottom line: Number of cycles (times)	00-01	00
F-11	Action when pressing the pause button 0-The motor decelerates and stops slowly 1-The motor stops immediately	0-1	0
F-12	Acceleration and deceleration level	1-100	20
F-13	Mailing address	1-255	1

※It is not recommended to adjust the F09 - F13 parameters.

Table 2 F-01 action flow mode table

No.	Operation Mode
P 01	[Controller knob] Controls the movement of the cleaning head fixture: Turn the [knob] and the fixture starts to move; stop turning the knob and the fixture stops running. Turn the [Knob] clockwise and the fixture will move forward along the X-axis scale. Turn the [Knob] counterclockwise and the fixture will move in the opposite direction along the X-axis scale.
P 02	Controller buttons control the inching movement of cleaning head fixture: Press the button and the cleaning head fixture starts to move; release the button and the fixture stops moving. Press the [CW] button and the fixture will move in the forward direction along the X-axis scale. Press the [CCW] button and the fixture will move in the opposite direction along the X-axis scale.
P 03	Controller buttons control the constant movement of the cleaning head fixture: Press the [CW] button, the fixture moves forward along the X-axis scale; press the [CW] again or [RUN/STOP] button, the fixture stops moving. Press the [CCW] button, the fixture moves in the opposite direction along the X-axis scale; press the [CCW] button again or [RUN/STOP] button, the fixture stops moving.

No.	Operating Mode
P 04	Controller buttons control the cleaning head fixture to run a set distance and cycle in one direction: Press the [CW] button, the fixture moves the set distance in the forward direction along the X-axis scale, delays [F-07], and the above steps are repeated [F-06] times. Press the [CCW] button, the fixture will move the set distance in the opposite direction along the X-axis scale, delay [F-08], and repeat the above steps [F-06] times.
P 05	Controller buttons control the cleaning head fixture to run a set distance, cycle in one direction, and reset after the cycle is completed: Press the [CW] button, the fixture moves the set distance in the forward direction along the X-axis scale, delays [F-07], and the above steps are repeated [F-06] times, and resets to the initial position after the cycle is completed. Press the [CCW] button, and the fixture will move the set distance in the opposite direction along the X-axis scale, delays [F-08], and the above steps are repeated [F-06] times, and resets to the initial position after the cycle is completed.
P 06	Controller buttons control the cleaning head fixture to run a set distance and cycle in both directions: Press the [CW] button, the fixture will move the set distance in the forward direction along the X-axis scale, delay [F-07], and the fixture will move the set distance in the reverse direction along the X-axis scale, delay [F-08], and the above steps will cycle [F-06] times. Press the [CCW] button, the fixture moves the set distance in the reverse direction along the X-axis scale, delay [F-08], the fixture moves the set distance forward along the X-axis scale, delay [F-07], and the above steps cycle [F- 06] times.

No.	Operating Mode
P 07	When Controller button is pressed, the cleaning head fixture will continue to move in one direction. After the button is released, the fixture will reset: Press the [CW] button, the fixture will move forward along the X-axis scale. Release the [CW] button, delay [F-07], and the fixture will be reset to the initial position; Press the [CCW] button and the fixture will move in the opposite direction along the X-axis scale. Release the [CCW] button, delay [F-08], and the fixture will be reset to the initial position.
P 08	Controller buttons control the cleaning head fixture to run for a set time and cycle in one direction: Press the [CW] button, the fixture will move forward along the X-axis scale for the set time [F-07], delay [F-08], and the above steps will be repeated [F-06] times. Press the [CCW] button, the fixture will move in the reverse direction along the X-axis scale for the set time [F-08], delay [F-07], and the above steps will be repeated [F-06] times.
P 09	Directly after powered on, the cleaning head fixture automatically runs the set distance and can cycle in both directions: Directly after powered on, the fixture moves the set distance in the forward direction along the X-axis scale, delays [F-07], then moves the set distance in the opposite direction along the X-axis scale, delays [F-08], and the above steps will be repeated [F-06] times.

By setting [F-03] and [F-05], the moving speed of the fixture running along the X-axis scale forward and reverse is controlled. The

corresponding relationship between the values is approximately: 100 ≈ 4 mm/s.

By setting [F-02] and [F-04], the set distance of the fixture running along the X-axis scale forward and reverse is controlled. The corresponding relationship between the values is approximately: 10000 ≈ 8 mm.

※The data is for reference only. Please refer to the actual value.

Ⅵ Failure analysis and troubleshooting

Fault Phenomenon	Cause Analysis	Troubleshooting
No response after powered on	1.The fuse is blown 2.Power cord failure	1.Replace the fuse 2.Replace the power cord 3.Contact after-sales service
Power indication is normal but the screen does not light up	1.Small power supply failure 2.Internal circuit problems	1.Replace the power supply 2.Contact after-sales service
Motor does not rotate	1.Controller problem 2.Connection cable problem	1.Check the circuit 2.Contact after-sales service

Ⅶ After-sales Service

1. This machine has one-year warranty

1.1 Our company provides free warranty within one year from the date of purchase of this product. If the product needs to be returned to the factory for repair, the user only needs to bear the two-way transportation costs.

1.2 We provide free lifetime maintenance, and the user only needs to bear the cost of spare parts and two-way transportation costs.

2. The following scopes are not covered by warranty:

2.1 Damage caused by improper use such as violent bumps and bends.

2.2 Damage caused by human factors.

※ The relevant technical parameters listed in this manual are for reference only. Related product information is subject to change without prior notice. All technical parameters and agreements are subject to the terms of the sales contract.

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LUOYANG XINCHENG PRECISION MACHINERY CO.,LTD.

ADD：No.256 East Tanggong Road, Luoyang, Henan, China, 471000

WEB：www.sfxlaser.com

TEL：+1（240）560-8967

EMAIL：support@sfxlaser.com