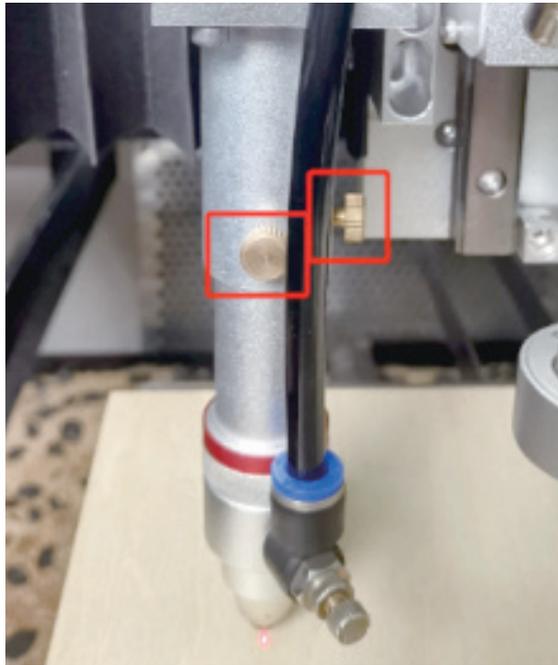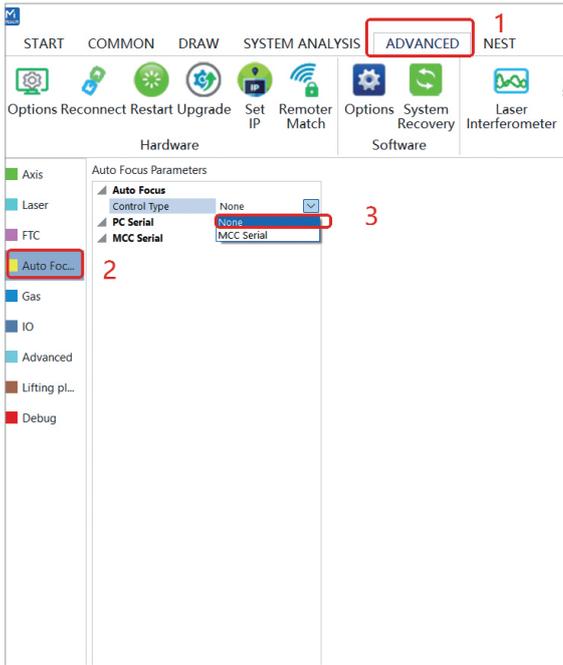# G·WEIKE

M Series

Installation Manual

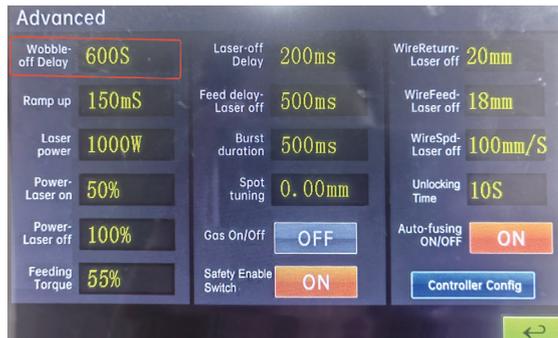# Rotary axis CNC cleaning, quenching, and welding

1. CNC Cleaning

Step 1: Connect the signal line of the laser to the back of the machine bed. Use the chuck to manually secure the pipe, move the Z-axis and W-axis rulers for measurement, and ensure the height from the pipe to the center of the side screw hole of the gun head is 12cm.

Step 2: Shield the height adjuster, remove the height adjuster cable, take off the extension tube at the bottom of the cutting head, and adjust the CO_2 laser head to the highest position.
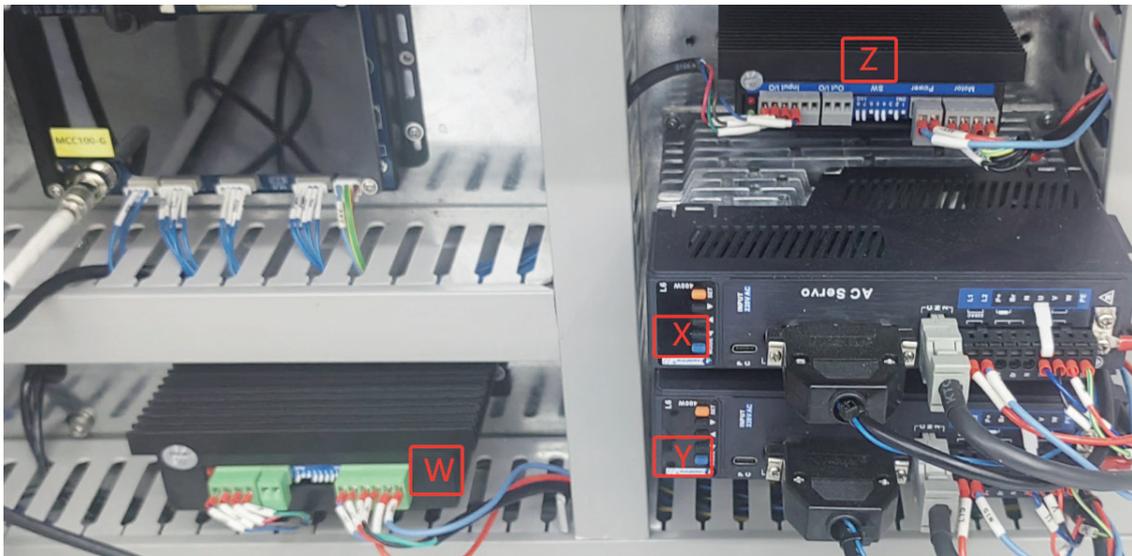
GWEIKE

Step 3: Adjust the stop delay time in the advanced parameters of the air-cooled welding machine. Advanced parameters - Password: 2000.

Step 4: Switch the control interface of the air-cooled welding machine to cleaning mode with the password 5000, and adjust the frequency and swing width. It is recommended that the maximum frequency be 60Hz and the maximum width be 20mm. (Since the signal line of the laser is connected to the machine, the power can only be modified in the cutting software.)
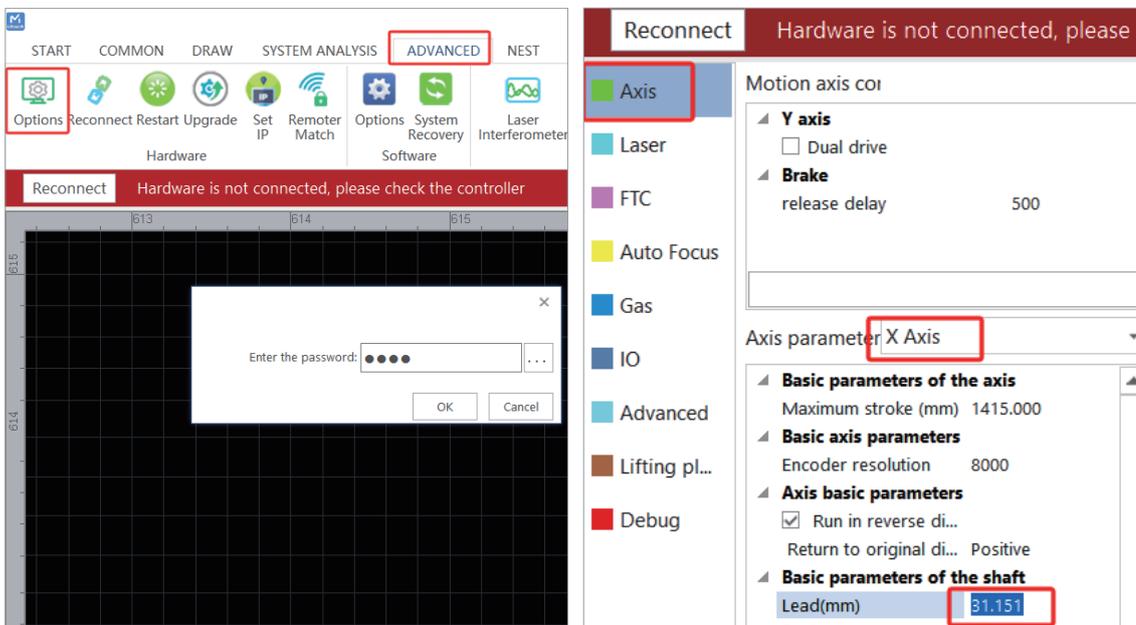

Step 5: Locate the X-axis driver.

Step 6: Unplug the encoder cable and motor cable of the X-axis, and install the encoder cable and motor cable of the rotary axis.
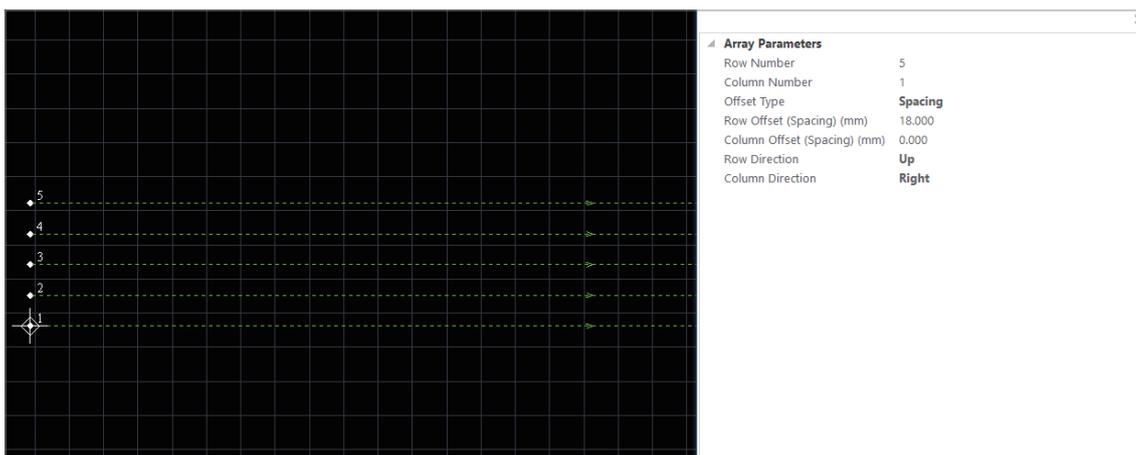
Step 7: Wire and place the rotary axis, with the rotary axis positioned parallel to the Y-axis.
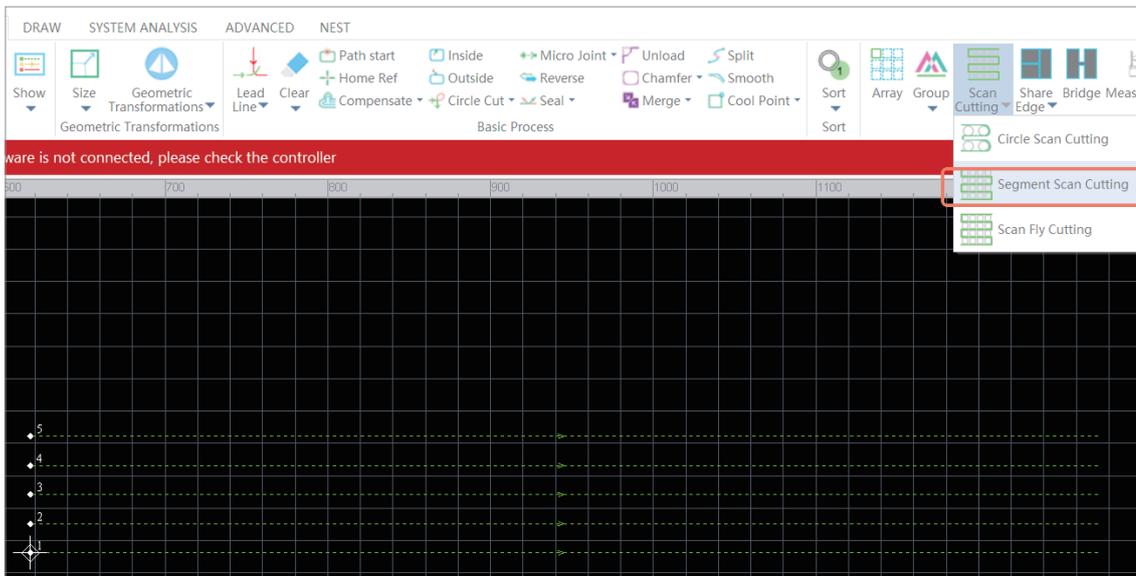

Step 8: Modify the lead, which is calculated as π*D*gear ratio (26/48). Enter the platform configuration, modify the lead based on the obtained value, and use the password 3721. Click confirm after the modification.
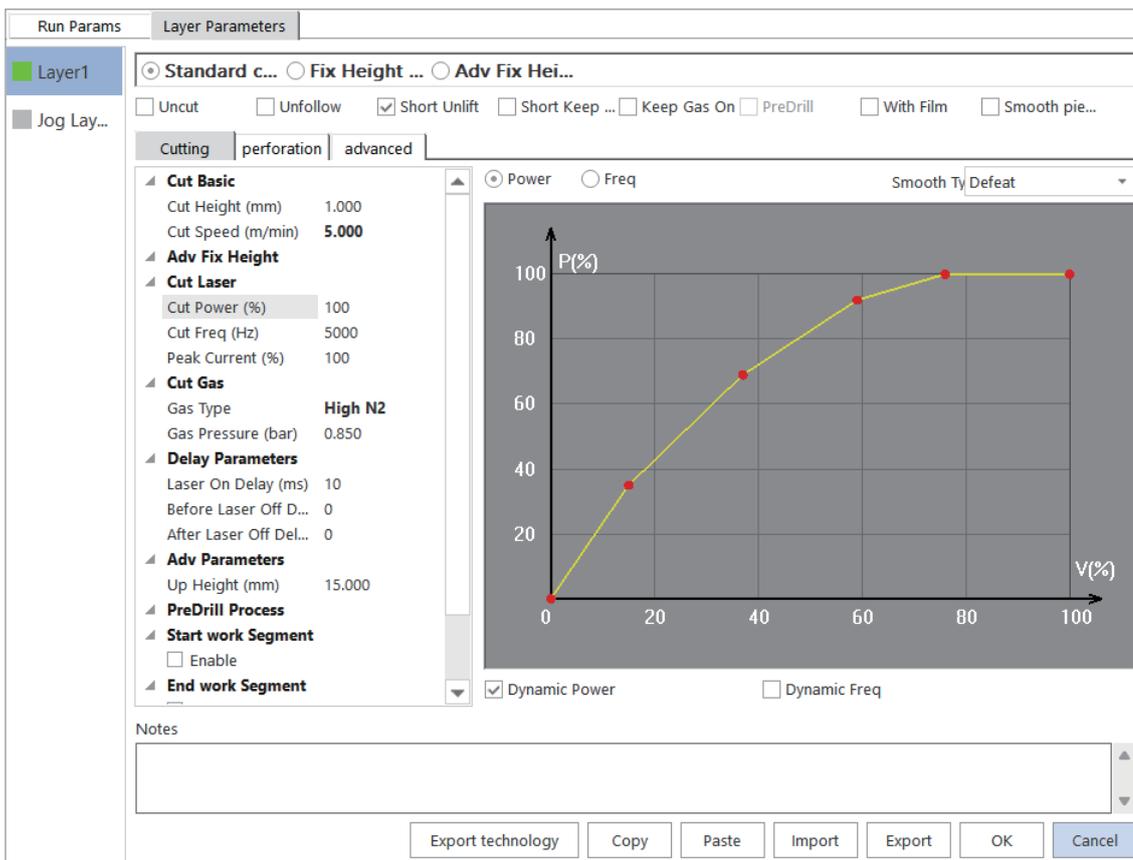

Step 9: Draw lines (set the length according to the pipe circumference (π*D) and add 5mm), array (set the quantity according to the pipe length), and set the line spacing to about 18mm (slightly less than 20mm). Select the graphics and then choose straight line flying cut.
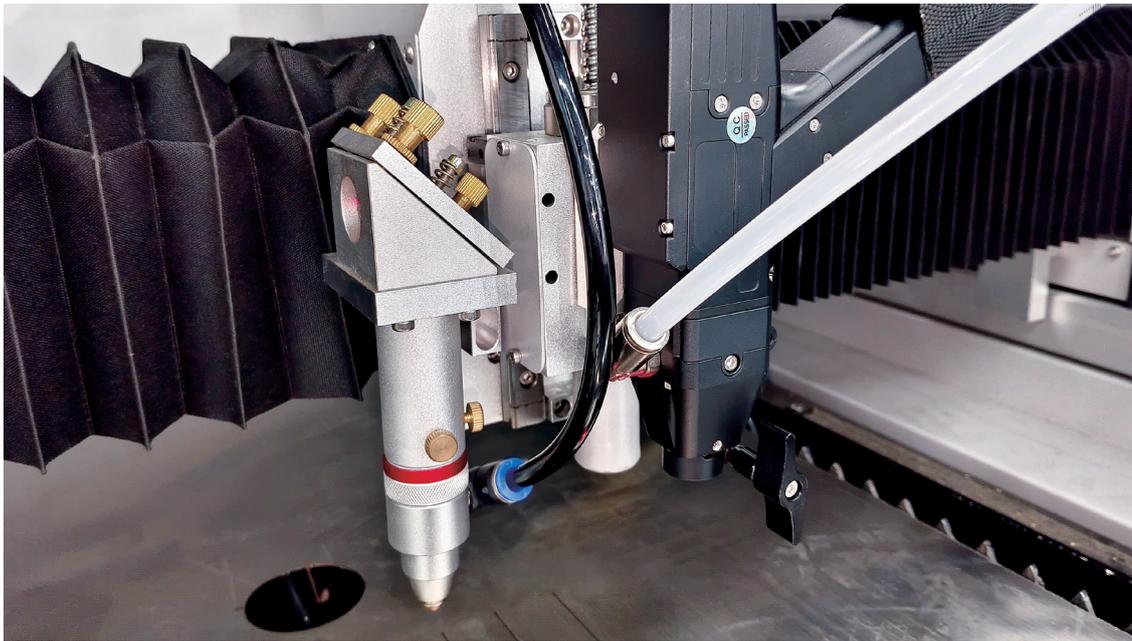
Step 10: Parameter settings, including fixed-height cutting, speed settings, air pressure and other parameters. The frequency and swing parameters are modified on the welding machine, and only the speed and power can be modified in the software.
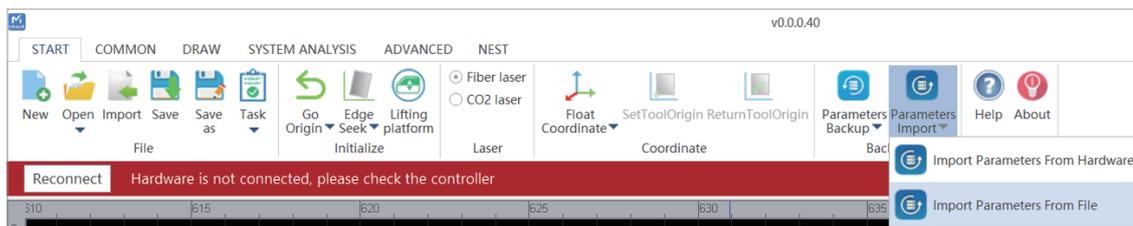

Step 11: Run the border to check if the entire area can be covered. Start the process after confirmation. (It is recommended that the air pressure be greater than 1MPa)

Note: Do not directly return to the origin after modification. It is recommended to first return the X-axis to the origin separately, then return the Y-axis to the origin.
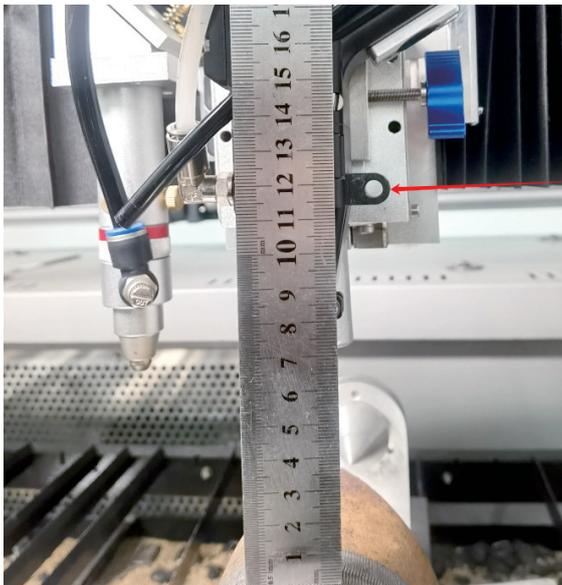
Parameters need to be re-imported (START-PARAMETERS IMPORT), or the modified settings should be restored to the original ones, and the stop delay time in the advanced parameters of the air-cooled welding machine should be restored.
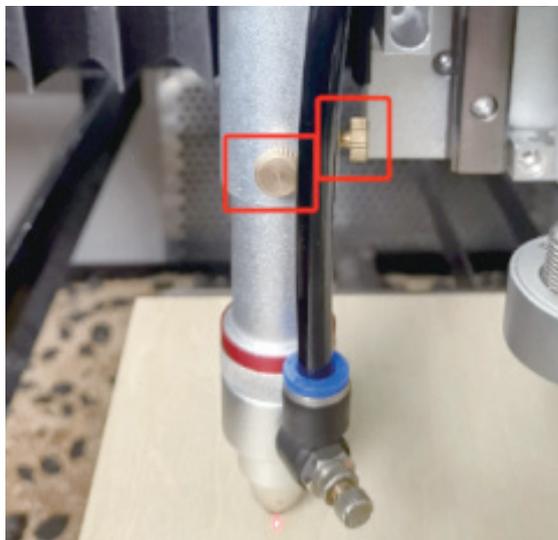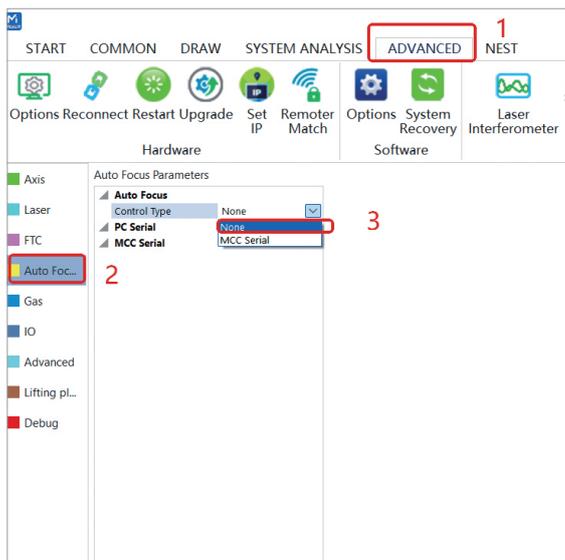

2. CNC Quenching

Step 1: Connect the signal line of the laser to the back of the machine bed. Use the chuck to manually secure the pipe, move the Z-axis and W-axis rulers for measurement, and ensure the height from the pipe to the center of the side screw hole of the gun head is 12cm.

Step 2: Shield the height adjuster, remove the height adjuster cable, take off the extension tube at the bottom of the cutting head, and adjust the CO_2 laser head to the highest position.
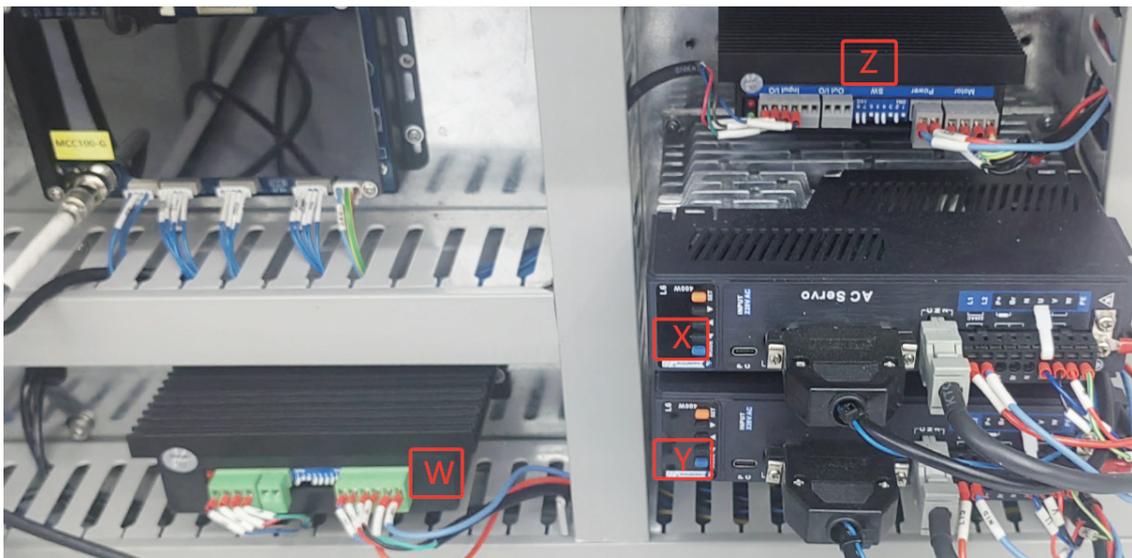
Step 3: Adjust the stop delay time in the advanced parameters of the air-cooled welding machine. Advanced parameters - Password: 2000.

Step 4: Switch the control interface of the air-cooled welding machine to cleaning mode with the password 5000, and adjust the frequency and swing width. It is recommended that the maximum frequency be 60Hz and the maximum width be 20mm. (Since the signal line of the laser is connected to the machine, the power can only be modified in the cutting software.)

Step 5: Locate the X-axis driver.

Step 6: Unplug the encoder cable and motor cable of the X-axis, and install the encoder cable and motor cable of the rotary axis.

Step 7: Wire and place the rotary axis, with the rotary axis positioned parallel to the Y-axis.
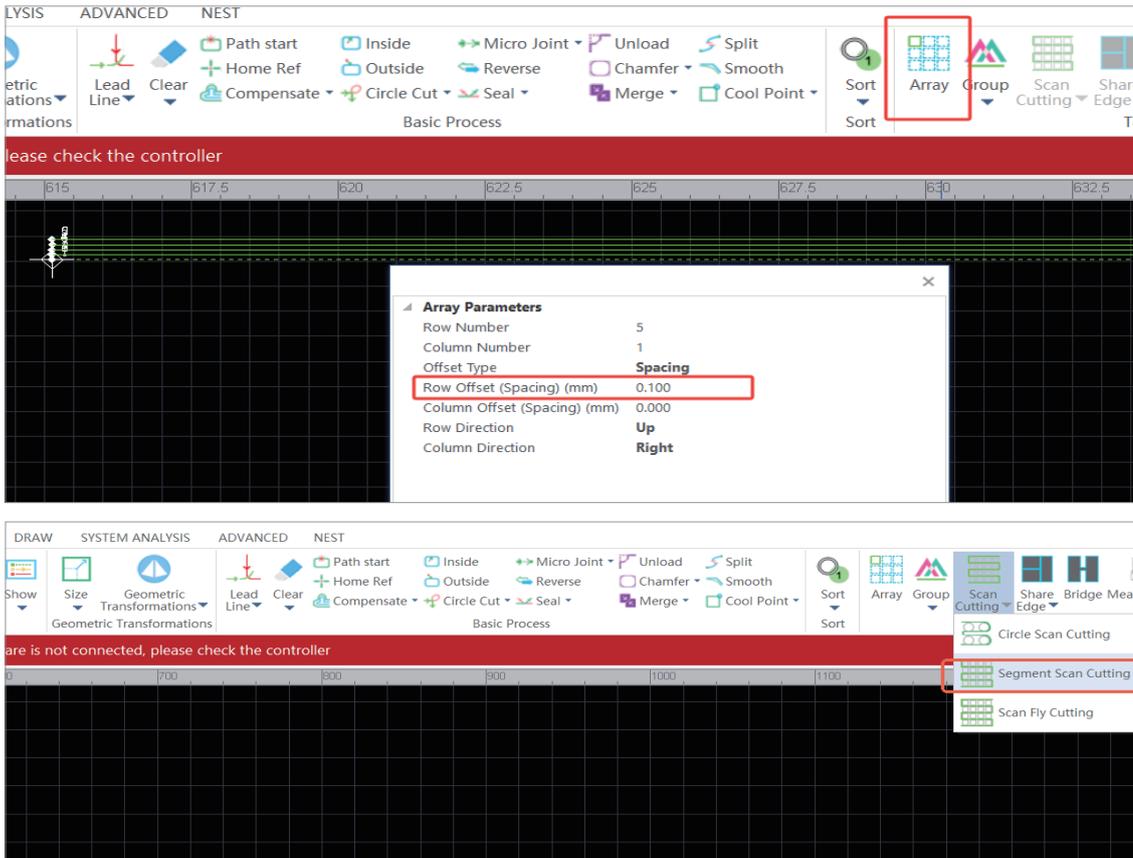

Step 8: Modify the lead, which is calculated as π*D*gear ratio (26/48). Enter the platform configuration, modify the lead based on the obtained value, and use the password 3721. Click confirm after the modification.
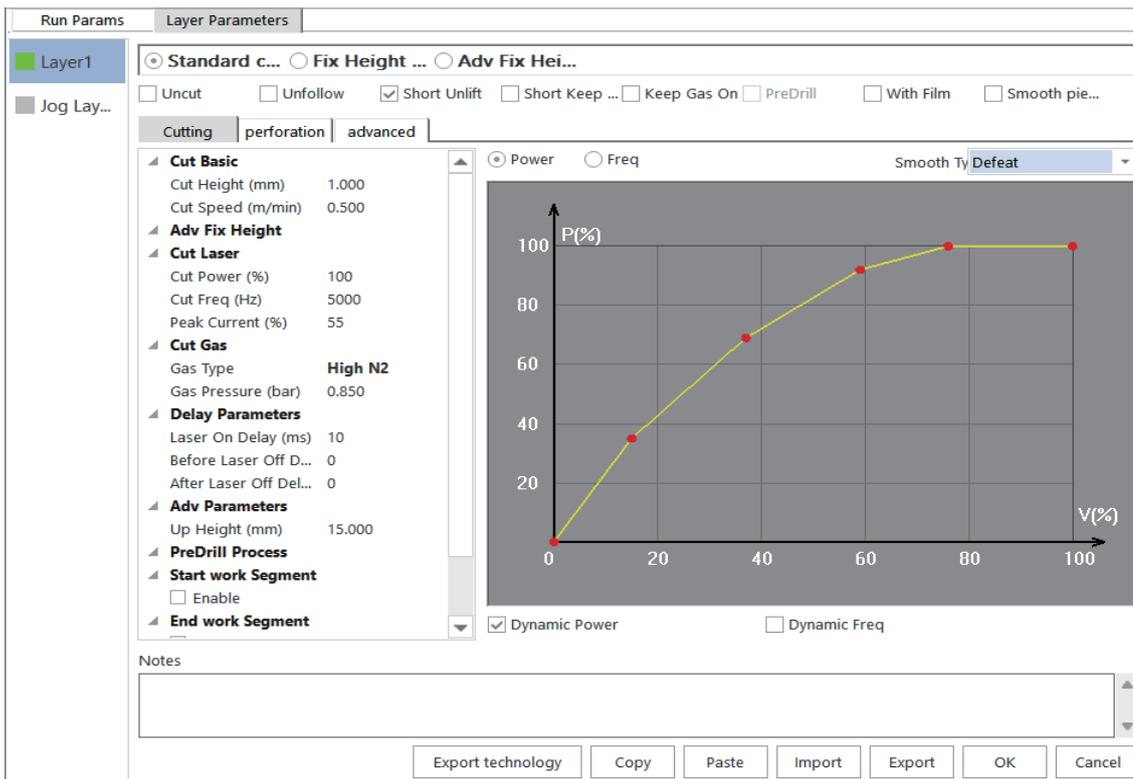
Step 9: Draw lines (set the length according to the pipe circumference (π*D) and add 5mm), array (set the quantity according to the pipe thickness), and set the line spacing to 0.1mm. Select the graphics and then choose straight line flying cut.

Step 10: Parameter settings, including fixed-height cutting, speed settings, air pressure and other parameters. The frequency and swing parameters are modified on the welding machine, and only the speed and power can be modified in the software.

Step 11: Run the border to check if the entire area can be covered. Start the process after confirmation. (It is recommended that the air pressure be greater than 1MPa)
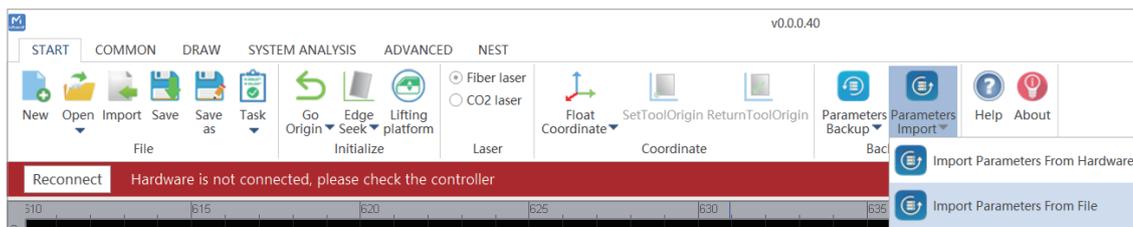

Note: Do not directly return to the origin after modification. It is recommended to first return the X-axis to the origin separately, then return the Y-axis to the origin.

Parameters need to be re-imported (START-PARAMETERS IMPORT), or the modified settings should be restored to the original ones, and the stop delay time in the advanced parameters of the air-cooled welding machine should be restored.

3. CNC Welding

Step 1: Connect the signal line of the laser to the back of the machine bed. Use the chuck to manually fix the pipe, replace the cutting head nozzle (with the scale at the -2 position), move the Z-axis and W-axis rulers for measurement, and ensure the distance between the pipe and the nozzle is approximately 3mm.

Step 2: Shield the height adjuster, remove the height adjuster cable, and adjust the CO_2 laser head to the highest position.
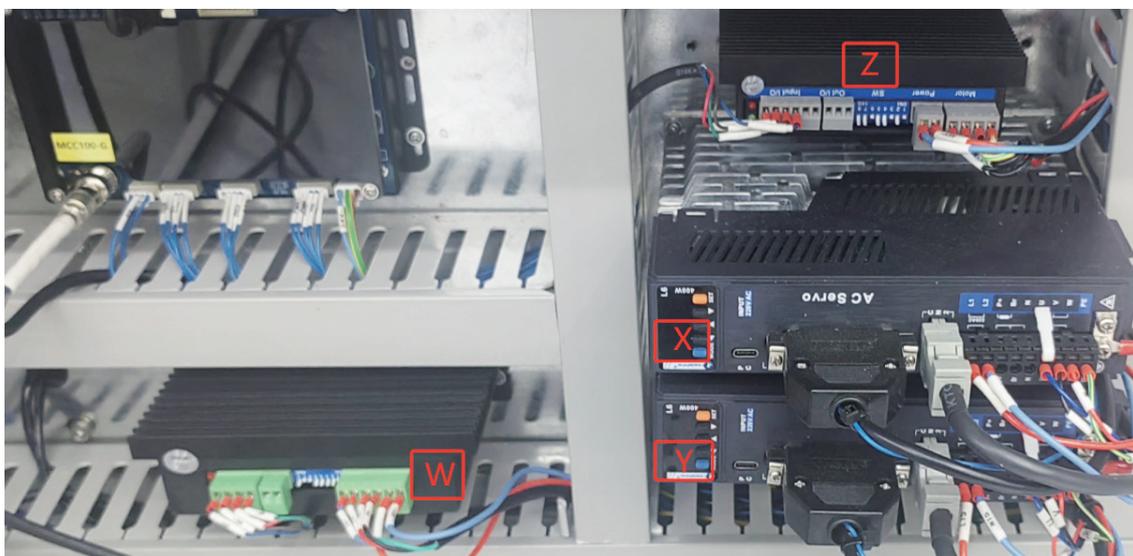
Step 3: Adjust the stop delay time in the advanced parameters of the air-cooled welding machine. Advanced parameters - Password: 2000.

Step 4: Change the control interface of the air-cooled welding machine to welding mode.


Step 5: Locate the X-axis driver.

Step 6: Unplug the encoder cable and motor cable of the X-axis, and install the encoder cable and motor cable of the rotary axis.


Step 7: Wire and place the rotary axis, with the rotary axis positioned parallel to the Y-axis.


Step 8: Modify the lead, which is calculated as π*D*gear ratio (26/48). Enter the platform configuration, modify the lead based on the obtained value, and use the password 3721. Click confirm after the modification.
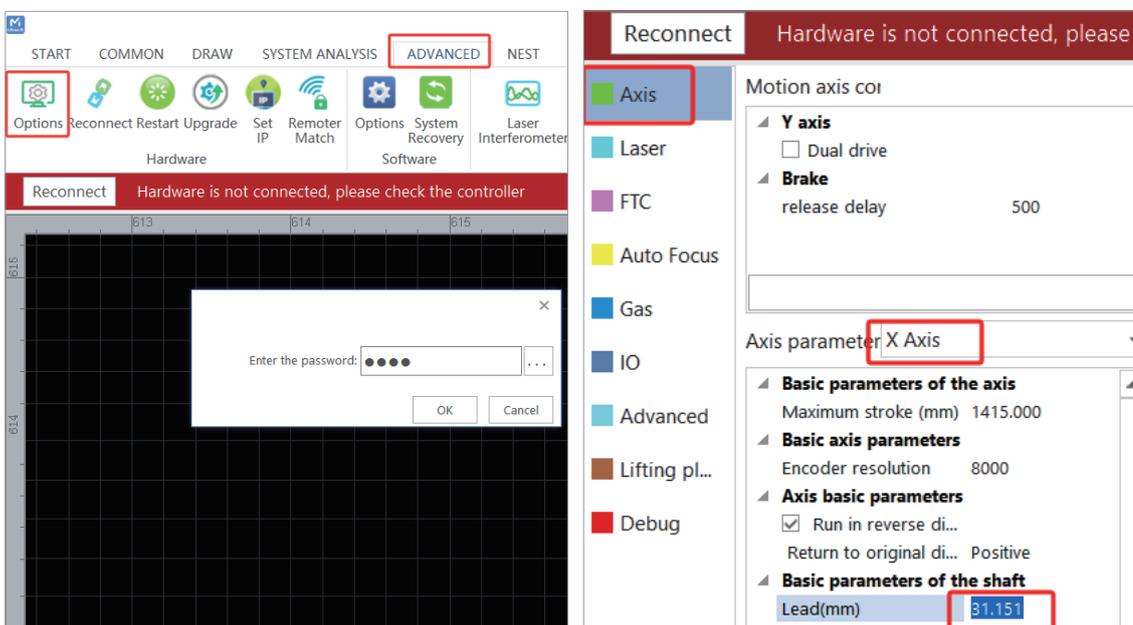
Step 9: Create a single straight line (set the length according to the pipe circumference (π*D) and add 5mm).
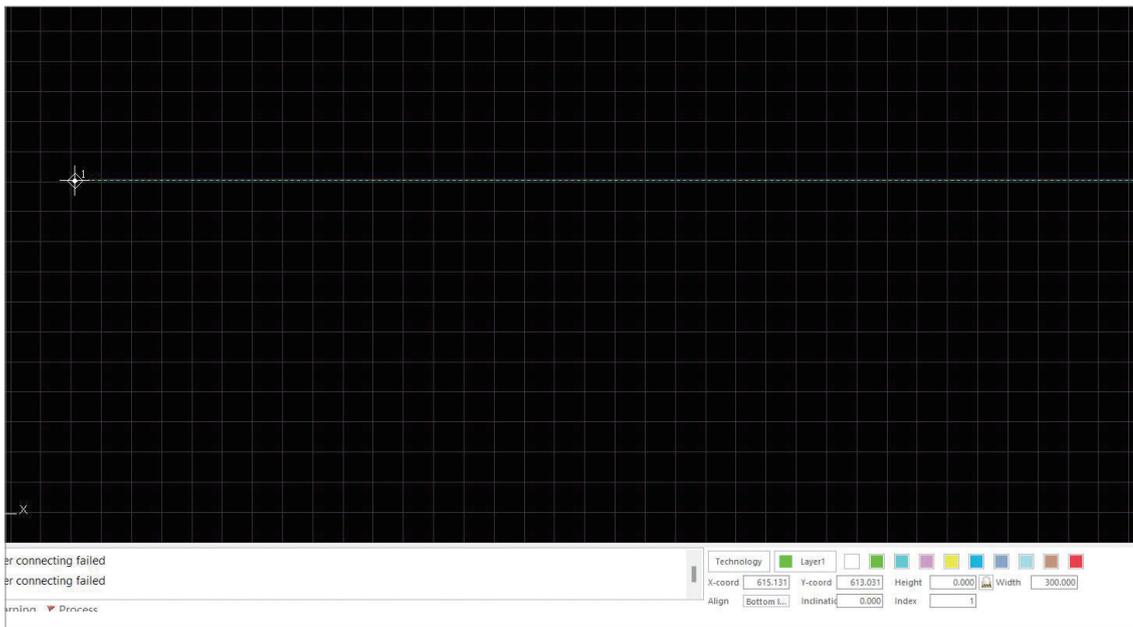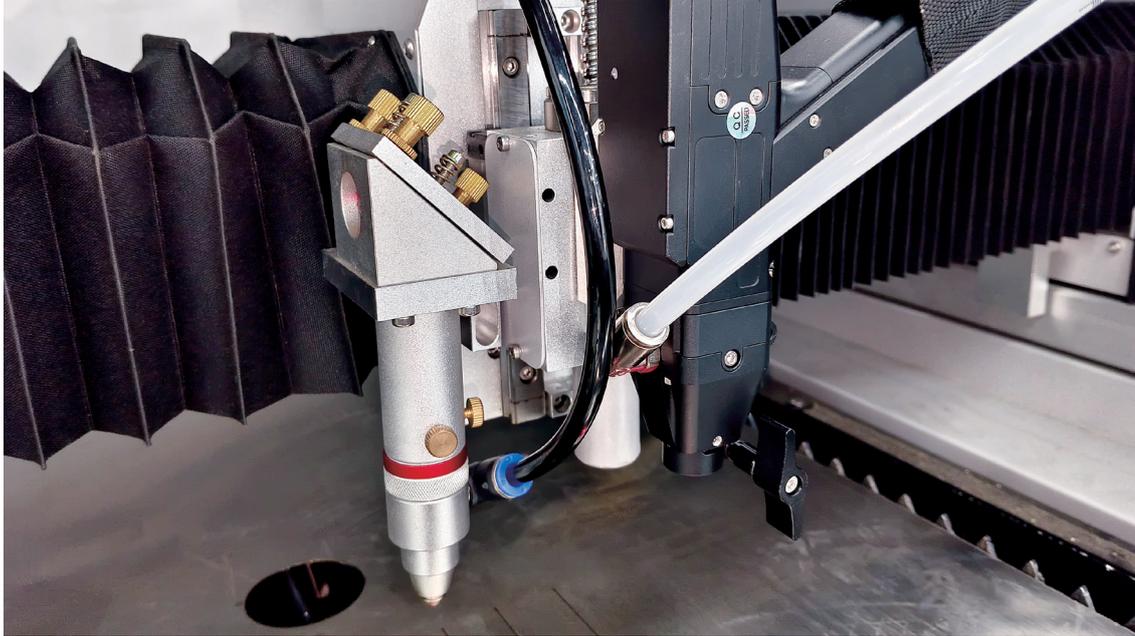

Step 10: Parameter settings, including fixed-height cutting, speed settings, air pressure and other parameters. The frequency and swing parameters are modified on the welding machine, and only the speed and power can be modified in the software.
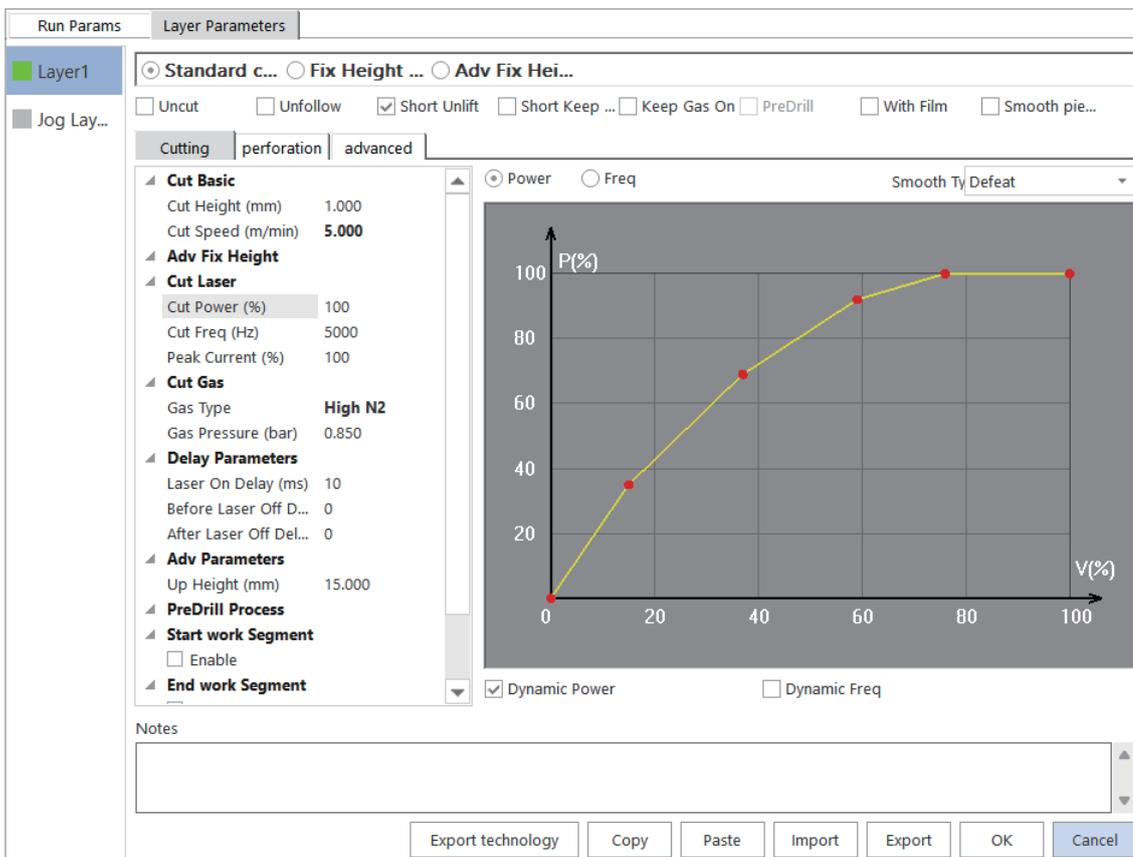
Step 11: First, spot-weld and splice the two round pipes to fix them, then install them inside the rotary axis.

Step 12: Run the border to check if the entire area can be welded. Start the process after confirmation. (It is recommended that the air pressure be 0.3MPa)

Note: Do not directly return to the origin after modification. It is recommended to first return the X-axis to the origin separately, then return the Y-axis to the origin.

Parameters need to be re-imported (START-PARAMETERS IMPORT), or the modified settings should be restored to the original ones, and the stop delay time in the advanced parameters of the air-cooled welding machine should be restored.