

How to adjust the moving precision of Tube-mini Y and X axis

→ Problem : The precision of Tube-MINI X/Y axis is not correct;

- Solution overview:
1. Adjust system pulse parameters--X axis;
 2. Adjust system pulse parameters--Y axis;

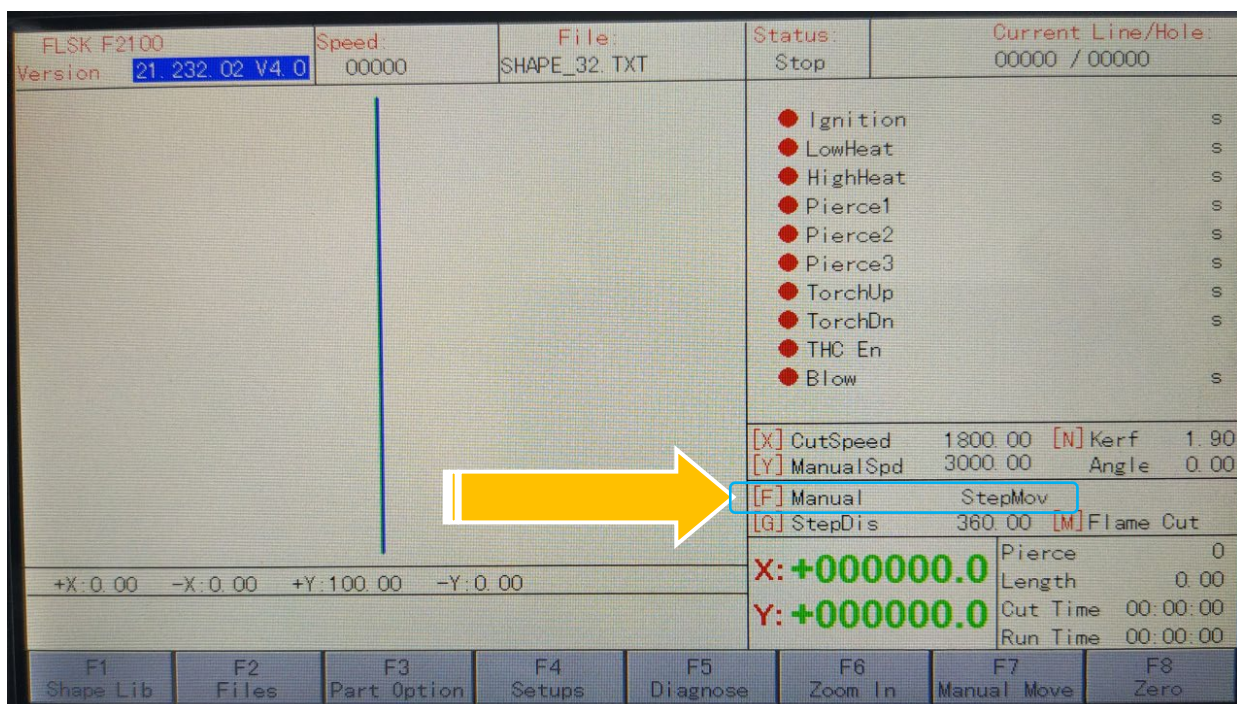
Problem analysis:

✳ Adjust system pulse parameters--X axis;

Solution: Step 1- Move the X axis to one end of the frame and mark it at the initial position;

This is to measure the actual distance the X axis moves.

Step 2- Interface main ,Press **【F】** button , Choose **【StepMov】** As show in pic1.

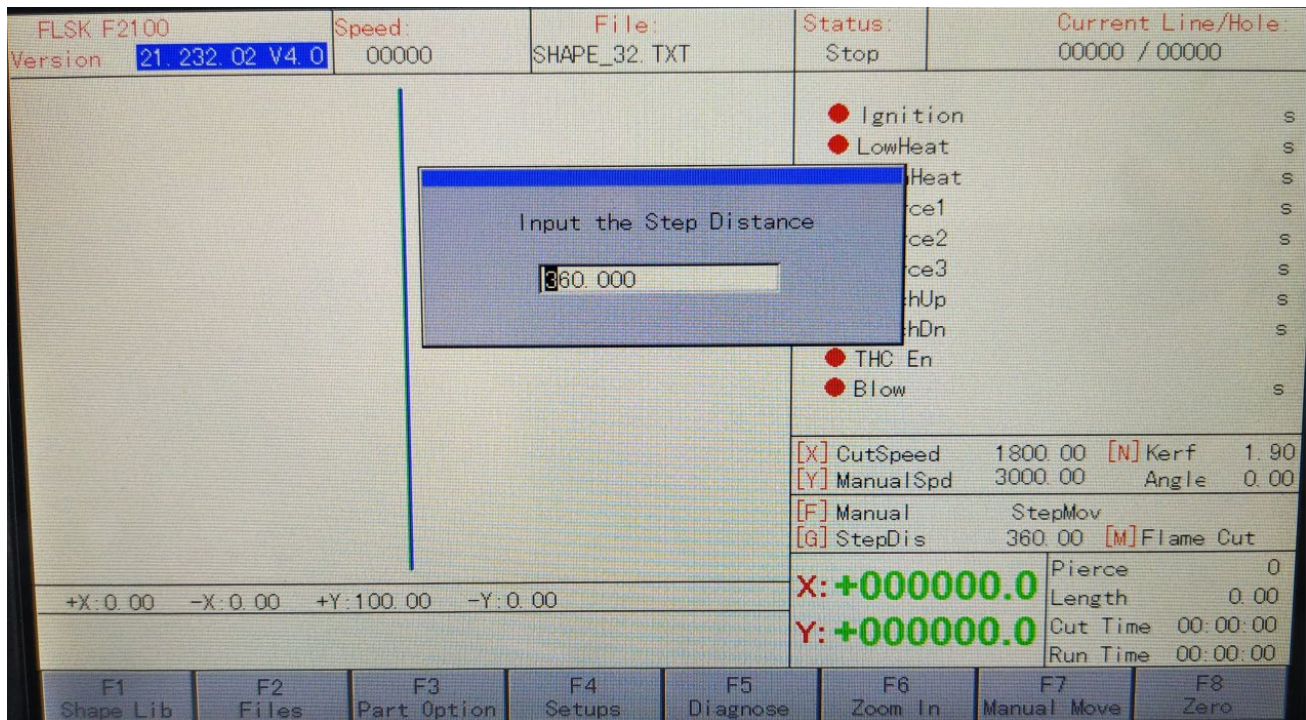


Pic-1

Step 3- Interface main ,As show in pic1→Press **【G】** button, then Input 1000 value,

Press **【↵】** enter As show in pic2.

Note: The input value of 1000 is the theoretical movement distance of the X axis.



Pic-2

Step 4- Interface main ,As show in pic1→Press **【F8 Zero】** button [Clear the coordinates for easy observation], →Press X-axis direction key[Both direction keys can be], as shown in pic. →The X axis moves a some distance. Please measure the distance from this position to the initial position.



Step 5-Calculate the X-axis pulse with the formula;

【The theoretical distance】

【The actual distance】

$$X \text{ System pulse value} = \text{new pulse value}$$

→ For example: the System Pulse value is 127, The input theoretical value is 1000; The actual distance is 1500

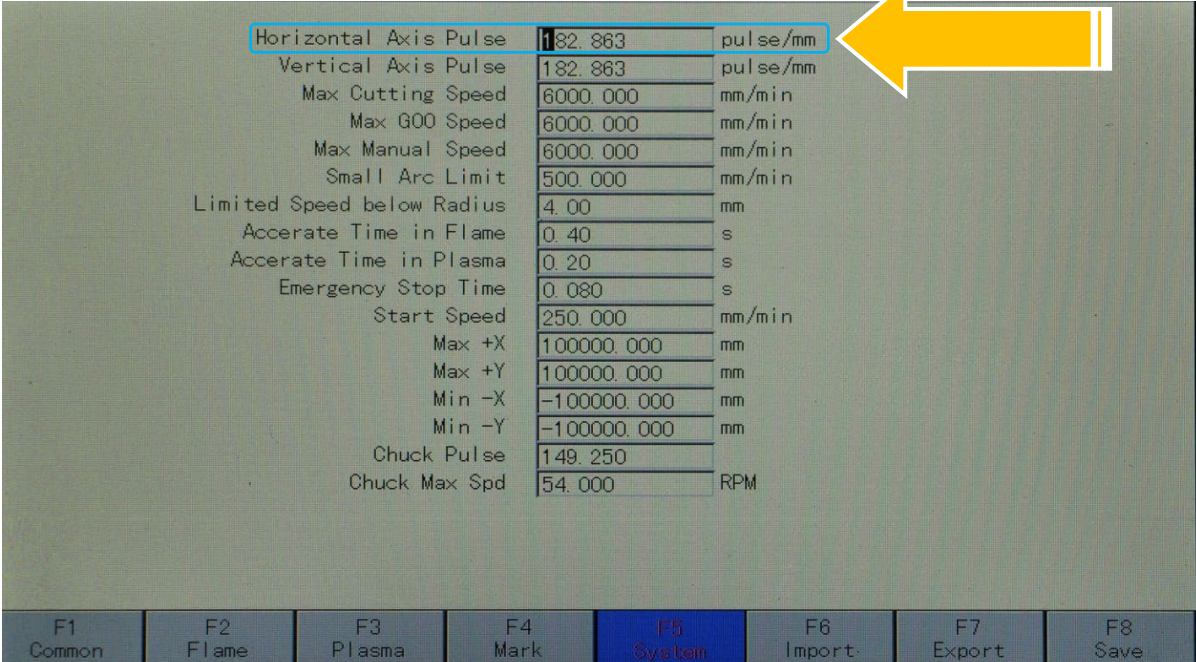
→ So:

【The theoretical distance:1000】

【The actual distance:1500】

X System pulse value: 125 = New pulse:83.333

Step 6-Output new pulses to the system;



Horizontal Axis Pulse	182.863	pulse/mm
Vertical Axis Pulse	182.863	pulse/mm
Max Cutting Speed	6000.000	mm/min
Max G00 Speed	6000.000	mm/min
Max Manual Speed	6000.000	mm/min
Small Arc Limit	500.000	mm/min
Limited Speed below Radius	4.00	mm
Accerate Time in Flame	0.40	s
Accerate Time in Plasma	0.20	s
Emergency Stop Time	0.080	s
Start Speed	250.000	mm/min
Max +X	100000.000	mm
Max +Y	100000.000	mm
Min -X	-100000.000	mm
Min -Y	-100000.000	mm
Chuck Pulse	149.250	
Chuck Max Spd	54.000	RPM

Pic-3

Step 7- Please follow the steps, please try again;

Note: If you find the moving precision is still not correct, please repeat the above steps.

Problem analysis:

✳ Adjust system pulse parameters--Y axis;

Solution: **Step 1-** Move the Y axis ; No need to install a pipe, mark the initial position on the chuck; This is to measure the actual degree of rotation the Y axis moves.

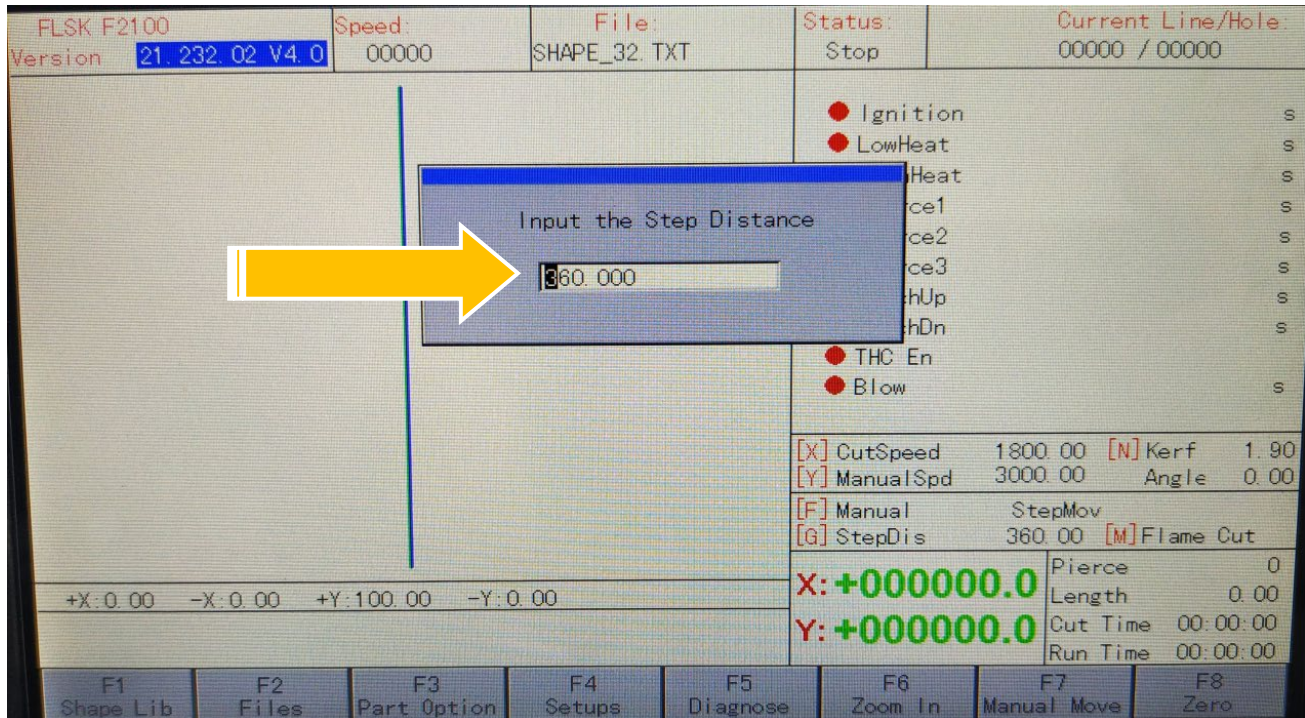
Note: The Y axis is moving at an angle,

Step 2- Interface main ,Press 【F】 button , Choose 【StepMov】 As show in pic1.

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Step 3- Interface main ,As show in pic1→Press **【G】** button, then Input 360 value, Press **【↵】** enter As show in pic4.

Note: The input value of 360 is the theoretical degree of rotation of the Y axis.



Pic-4

Step 4- Interface main ,As show in pic1→Press **【F8 Zero】** button [Clear the coordinates for easy observation], → Press Y-axis direction key[Both direction keys can be], as shown in pic.→The Y axis rotation a some angle. Please measure the rotation angle from this position to the initial position.



Step 5-Calculate the Y-axis pulse with the formula;

【The theoretical rotation angle】

【The actual rotation angle】

$$\frac{\text{Theoretical rotation angle}}{\text{Actual rotation angle}} \times \text{System pulse value} = \text{new pulse value}$$

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→ For example: the System Pulse value is 125, The input theoretical angle value is 360°; The actual angle is 390°

→ So:


【The theoretical distance:360】

X System pulse value: 125 = New pulse:115.384

【The actual distance:390】

Step 6-Output new pulses to the system;

Horizontal Axis Pulse	182.863	pulse/mm
Vertical Axis Pulse	182.863	pulse/mm
Max Cutting Speed	6000.000	mm/min
Max G00 Speed	6000.000	mm/min
Max Manual Speed	6000.000	mm/min
Small Arc Limit	500.000	mm/min
Limited Speed below Radius	4.00	mm
Accerate Time in Flame	0.40	s
Accerate Time in Plasma	0.20	s
Emergency Stop Time	0.080	s
Start Speed	250.000	mm/min
Max +X	100000.000	mm
Max +Y	100000.000	mm
Min -X	-100000.000	mm
Min -Y	-100000.000	mm
Chuck Pulse	149.250	RPM
Chuck Max Spd	54.000	RPM



Pic-4

Step 7- Please follow the steps, please try again;

Note: If you find the moving precision is still not correct, please repeat the above steps.

Step 8- Change parameters 【Chuck Max Spd】 to 80 RPM