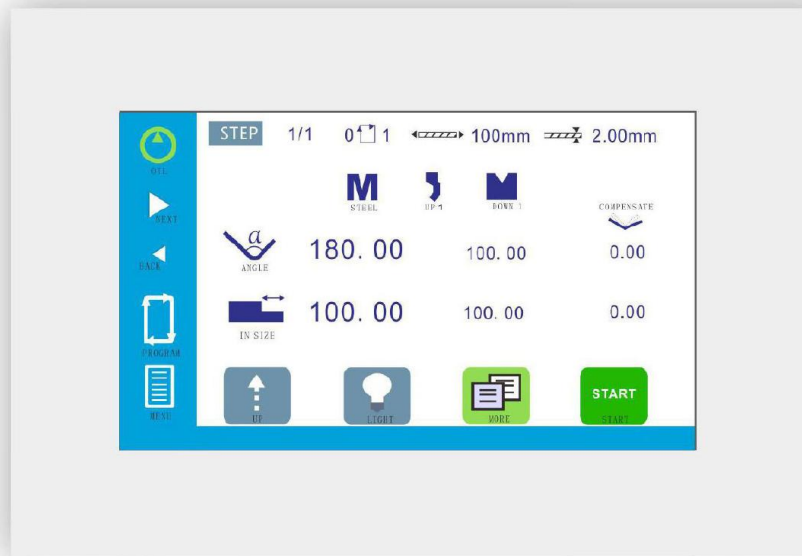

TP10s - user guide (v3.95)

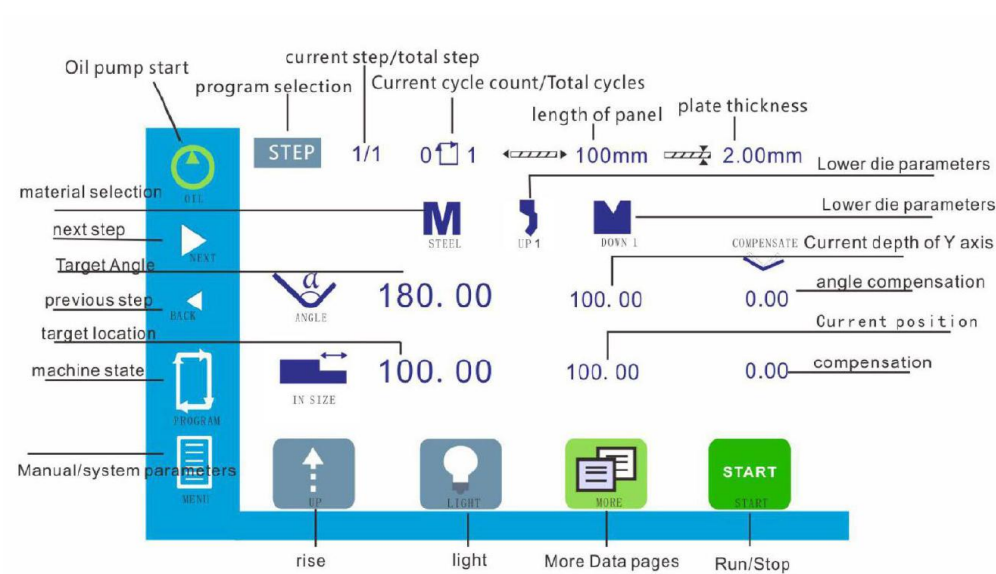


Directory:

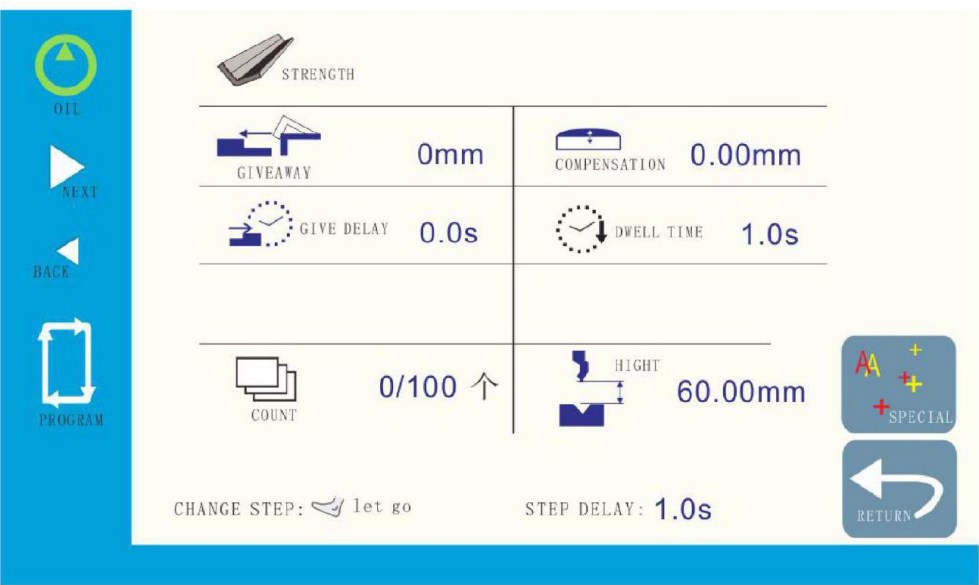
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1 overview

1.1 programming/running



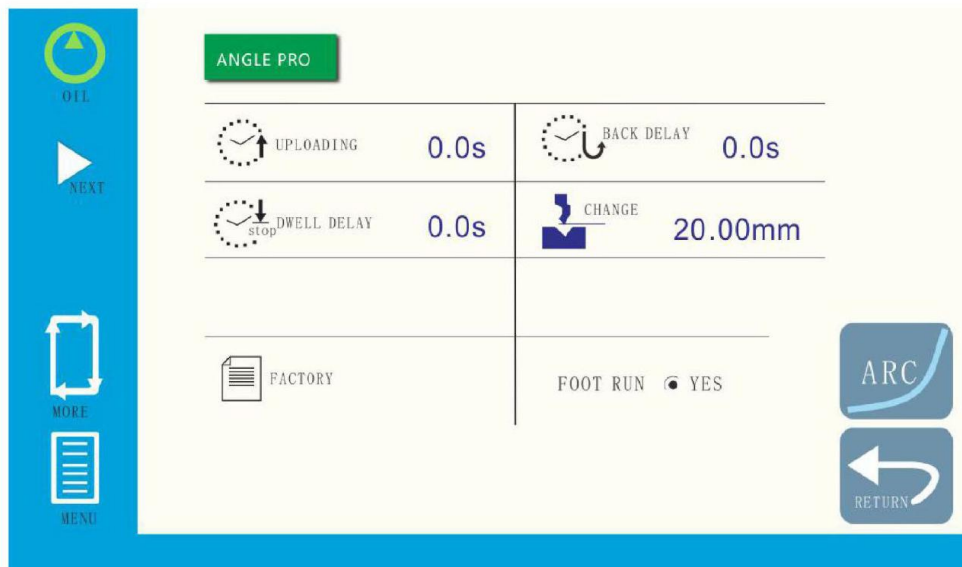
1.2 more programming



Parameter:

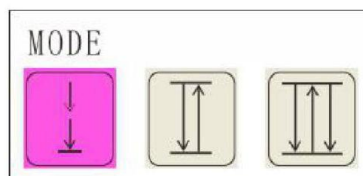
Parameter	Introductions
GIVEAWAY	After the system is in place, the distance at which the bending gear begins to yield
GIVE DELAY	After the system is in place, when bending, the delay time for the rear file to give up
COUNT	Record the current number of products processed
COMPENSATION	Compensation table compensation height (optional)
DWELL TIME	pressure dwell
HIGHT	The height at which the slider opens
CHANGE STEP	Top dead center: Move the slider to the next step
	Bottom stop: Switch to the next step on the return trip of the slider
	Loose foot: The slider moves to the next step when it loosens foot
STEP DELAY	Wait time for another step.

1.3 advanced parameters



Parameter	Introductions
UPLOADING	Unloading duration of the slide block
DWELL DELAY	Pressure pause time
BACK DELAY	Time to wait on the return trip
CHANGE	Pressure height
FOOT RUN	Step down and automatically run into position
FACTORY	Formatting (user prohibited)
ANGLE PRO	Angle programming switch

1.4 mode selection



Inching: Inching control

Single: Automatic return after the end of a single bend

Continuous: Automatic cycle operation

1.5 system parameter

When the one-way trip is on, Motor orientation always in one direction, when the system Long screw pitch timeWear and tear creates a gap, Turn this function on to cancel Mechanical clearance

The encoder takes the opposite direction

motor direction

SETTING	X	Y	R	COMP
ENCODER	UP			
ONE WAY	CLOSE			
MOTOR DIR				DOWN
CONTROL				FREQ2

pulses/distance

Minimum limit position

Maximum limit position

Current and target locations

Allowable error

One-way travel gives way to distance

Automatic running speed or manual high speed

The speed at which the machine is operated automatically or manually

MINIMUM	10.00mm	MOTOR DPI	100.00p/r
MAXIMUM	500.00mm	AUTO SPEED	500.00r/m
PRECISION	0.02mm	MANU SPEED	10.00r/m
ONE WAY DIST	0.20mm		

1.6 machine diagnosis

Machine state allows you to view all the state of the machine:

MACHINE

INPUT

☐ UP LIMIT

☒ DOWN LIMIT

☐ UP FOOT

☐ DOWN FOOT

☐ OIL

GRID

ENCODER

X

Y

OUTPUT

☐ FEED FRONT

☒ FEED BACK

☐ OUT FRONT

☐ OUT BACK

☐ DRAG FRONT1

☐ DRAG FRONT2

☐ DRAG BACK1

☐ DARG BACK2

☒ MAGNET

☐ Y1

☐ Y2

☐ Y3

☐ Y4

☐ Y5

FORCE

☐ LIGHT

☒ OIL

☐ COMP+

☐ COMP-

2. debugging system

When the system is used for the first time, it is necessary to debug the machine to achieve the purpose of users.

You need to do the following steps for debugging.

2.1 valve settings

	Y1	Y2	Y3	Y4	Y5
FAST DOWN	☑ 1	☑ 1	☐ 0	☐ 0	☐ 0
SLOW DOWN	☐ 0	☑ 1	☐ 0	☐ 0	☐ 0
UNLOADING	☐ 0	☐ 0	☐ 0	☐ 0	☐ 0
BACKHAUL	☐ 0	☐ 0	☑ 1	☐ 0	☐ 0

Go down: Go down.

Slow down: Pressure action.

Unloading: Unloading action.

Backhaul: Backhaul action.

2.2 coefficient

2.2.1 X axis


OIL


NEXT


GUIDE

+

+

+

2.2.2 Y axis


OIL


NEXT


GUIDE

+

+

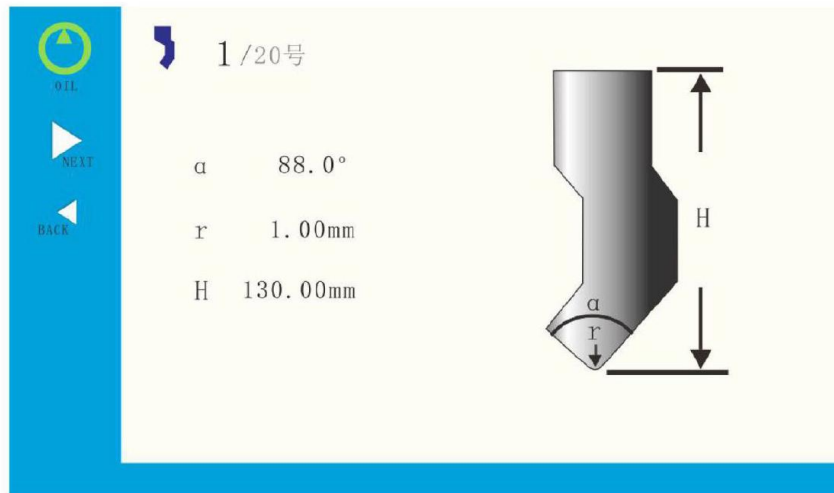
+

Following the steps above, you are ready to adjust the bending Angle.

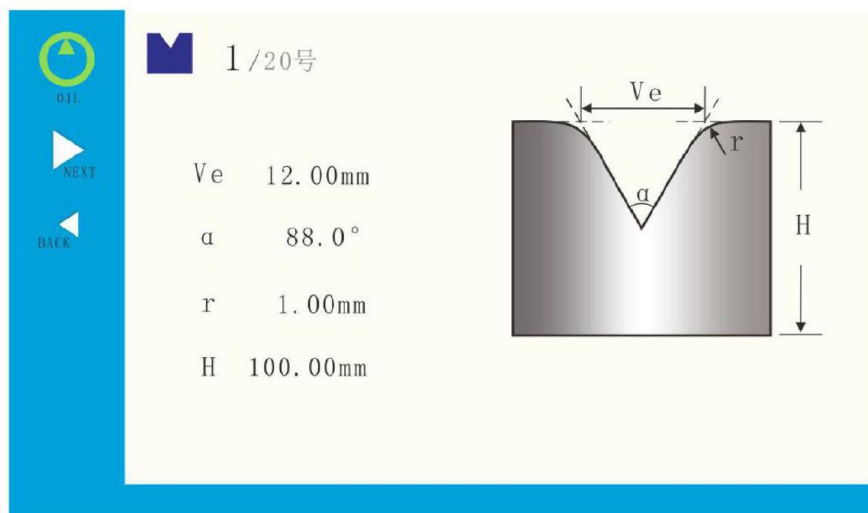
2.3 angle debugging

First, we set the upper and lower mold sizes:

2.3.1 upper mold



2.3.2 lower mold



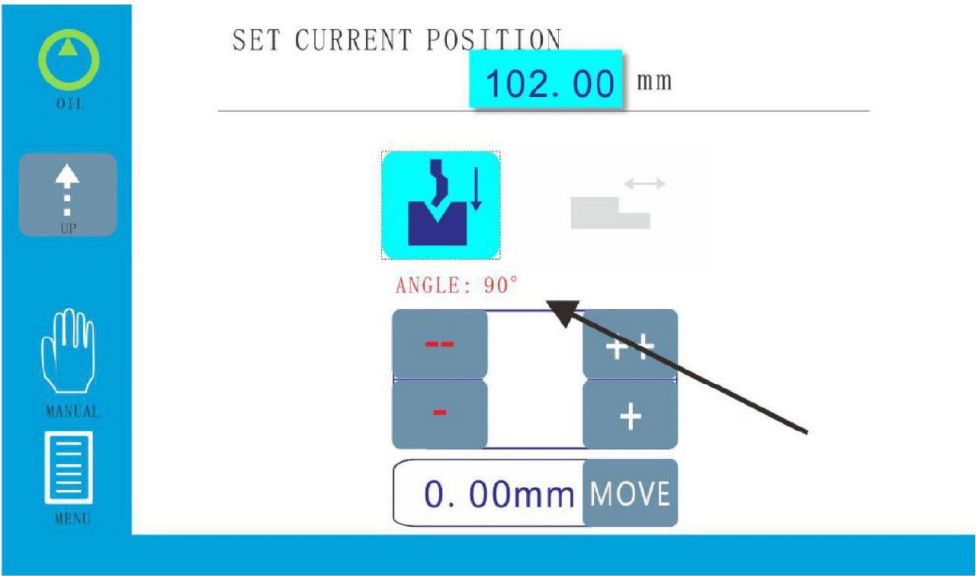
2.3.3 other parameter

The following red box:



2.4 angle calibration

Set up the upper mold, lower mold, material, plate thickness and plate length, click the menu and enter manual debugging. Bend an Angle at will, then click the coordinate reference point and enter the password 1212. The actual Angle appears, enter the actual measured Angle, and the Angle is calibrated. The diagram below:

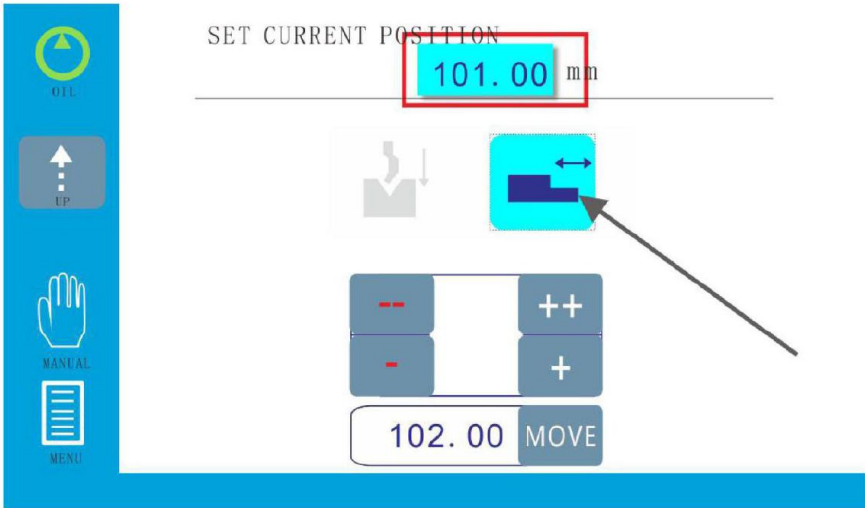


2.5 length of calibration



When the user uses the inner ruler to bend and inputs the size of the inner ruler as 100, if the actual measurement is 101, then click the menu into manual and change the coordinate reference point to 101.

When the user uses the outside dimension to bend, if the actual outside dimension is 105, switch to the top of the outside dimension, enter 105, and then switch to the inside dimension. If the inside dimension is 103, click the menu into the manual and change the coordinate reference point to 103.

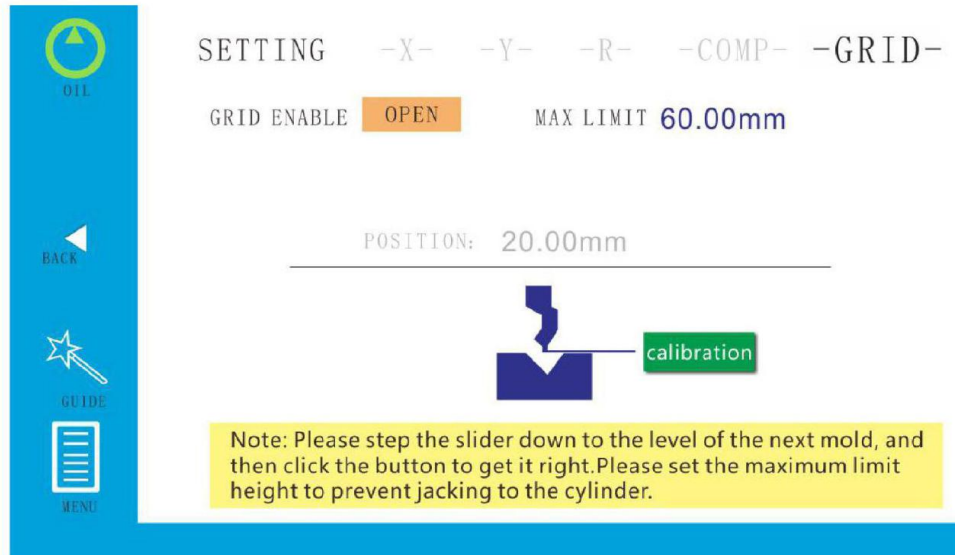


2.6 frame strength

When the user needs to bend the long board, because the long board has a larger rebound than the short board, so in the same Angle of folding, the long board should be pressed deeper than the short board, in order to correctly bend the required Angle. At this time, the frame strength of the material needs to be set, as shown in the figure below:

ID	MATERIALS	STRENGTH
1	STEEL	2.0
2	ALUMINUM	0.3
3	ZINC	0.3
4	STAINLESS	0.3
5	OTHER	0.3

2.7 grid ruler



Before setting, please close the magnetic grid ruler first, step the upper mold and the lower mold to the flush position, then click the key to calibrate, the current position will automatically change to 0mm, then step on to stop the slider, check whether it will jack up the oil cylinder, and set the maximum limit position.

2.8 mechanical compensation

01L

BACK

GUIDE

MENU

SETTING -X- -Y- -R- -COMP- -GRID-

VOLTAGE UP MOTOR UP

COMPENSATE OPEN PRECISION 0.01mm

PRESS +/- MEASURE AND SET VALUE:

	MIN	MAX
COMP (mm)	0.00	2.00
VOLTAGE (v)	0.00	10.00

+

-

INERTIA: 0.00mm VOLTAGE: 5.00v
CUR COMP: 1.00mm

Drive the compensation motor to the maximum position, input the maximum voltage and the maximum height. Then the compensation motor is driven to the minimum position, input the minimum voltage and the minimum height.

2.9 great arc

To set the size of the arc, click to generate the program

01L

BACK

GUIDE

MENU

ARC:

α :

90.0 °

R :

10.00mm

L :

50.00mm

n :

20

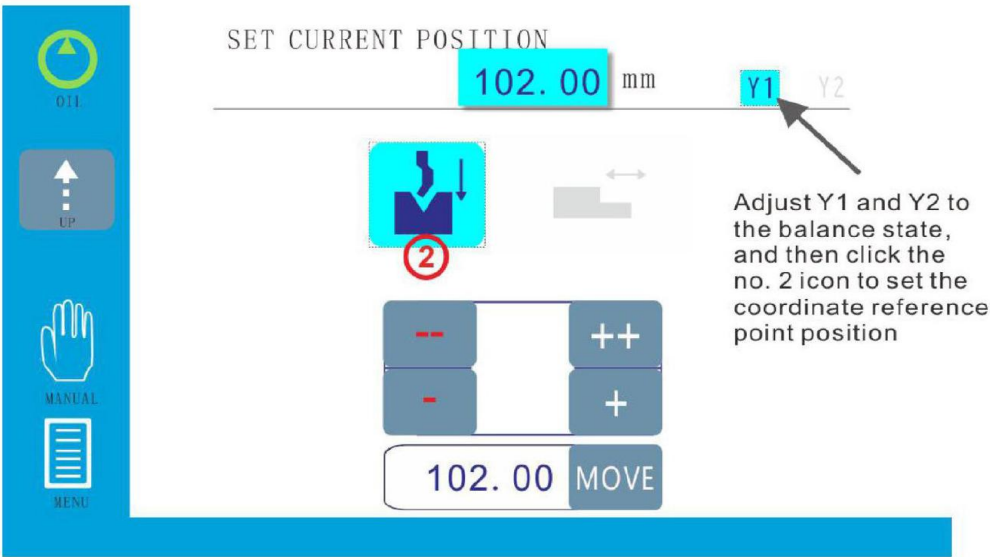
GENERATED PROGRAM

the head and tail are the middle half

all lengths are equal

BACK

2.10 Y1-Y2 axis



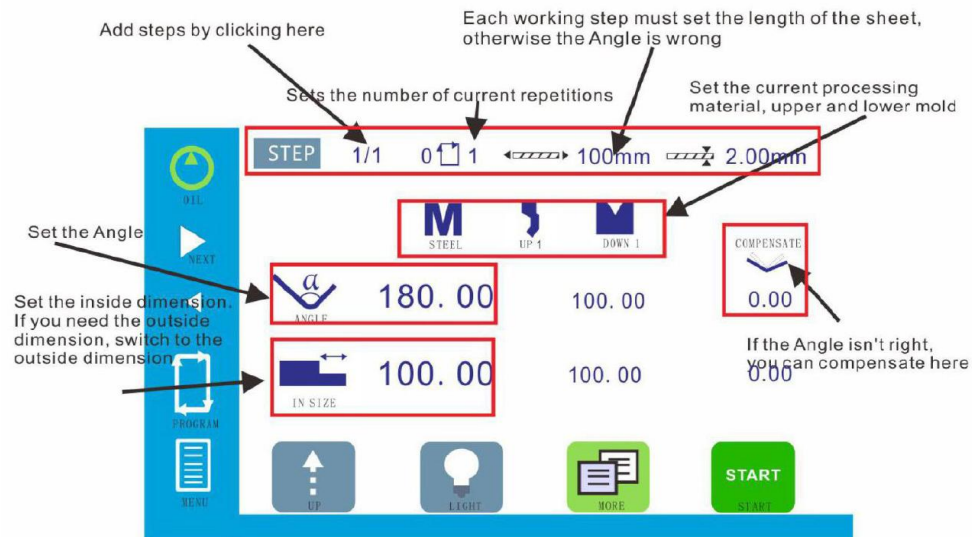
3. user operation

3.1 single step programming

The user only needs one machining step when as follows



3.2 multi-step programming



Programming steps:

First set up the material, thickness, long plate and mold base, opening height and the speed change point, then set up the target size and bending Angle, set up after the first step, click on add processing step by step number (see above), and then click the insert step sequence, at this point you can edit the second step, and so on, in the process of programming, will copy the programming of all parameters on the step.

4.common problem

problem	solutions
The oil pump won't start	1. Check the feedback signal of oil pump 2. Check oil pump signal output 3. Check emergency stop
Stop after the pump starts	1. Check emergency stop 2. check oil pump line
XY motor is not running	1. Check emergency stop 2. Does the servo have an alarm 3. Is the motor wire loose 4. Servo communication failure

The Y-axis motor does not move	1. Check if the slider is on it 2. Check if the drive alarms 3. Is the oil pump on 4. Is there on limit
Unable to START	1. Did you release it during the emergency stop 2. Is the oil pump on 3. Is the servo normal 4. Is it at top dead center
Valve is not action	1. Did you release it during the emergency stop 2. Has the oil pump started 3. Check valve operation configuration 4. Check upper and lower dead center signals 5. Check the foot switch 6. Check relay output
Abnormal action	1. Check the holding time 2. Check unloading time 3. Check the oil pump
Error showing X/Y position	1. Power is suddenly cut off during operation 2. The encoder wire is loose Solution: Reset the coordinate reference point
The bending Angle error is too large	1. Check the parallelism of the working table 2. Check the parallelism of both ends of the slider 3. Check the cutting edge center of upper and lower molds 4. Check whether the Y-axis belt is loose 5. Check Y axis transmission coefficient 6. Check the parameters of the mold 7. Check upper die parameters 8. Check materials, board length, board thickness and frame strength 9. Did you use Angle compensation 10. Plate thickness and groove width ratio 11. Pressure holding time is different