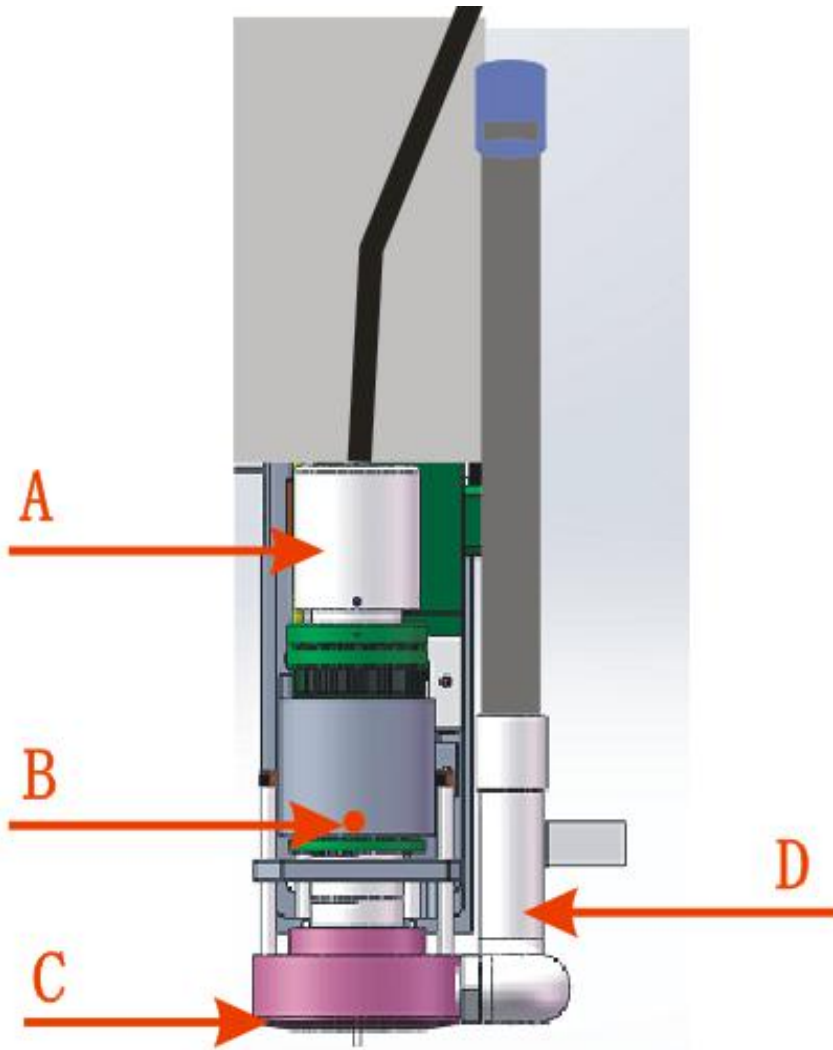


Universal router tool manual

1, install router tool

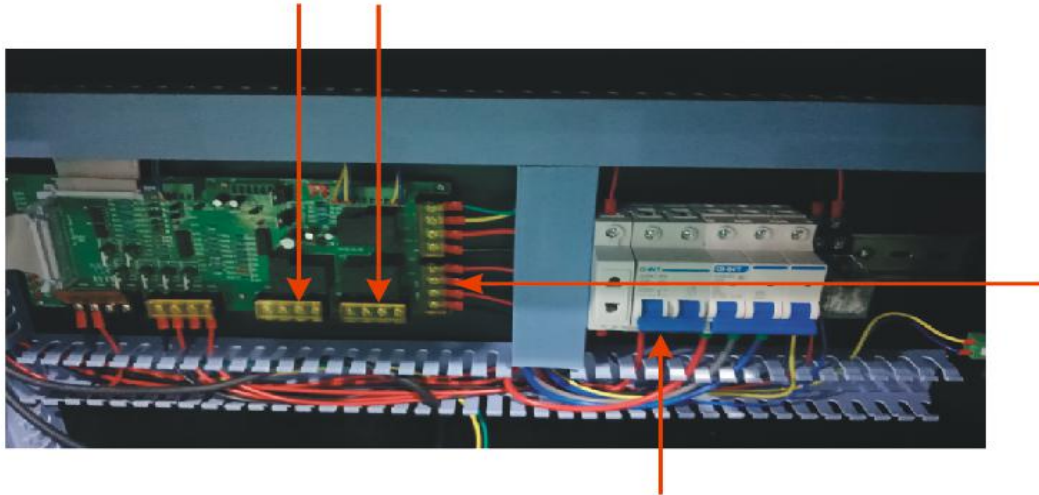
- Connect with the machine head:



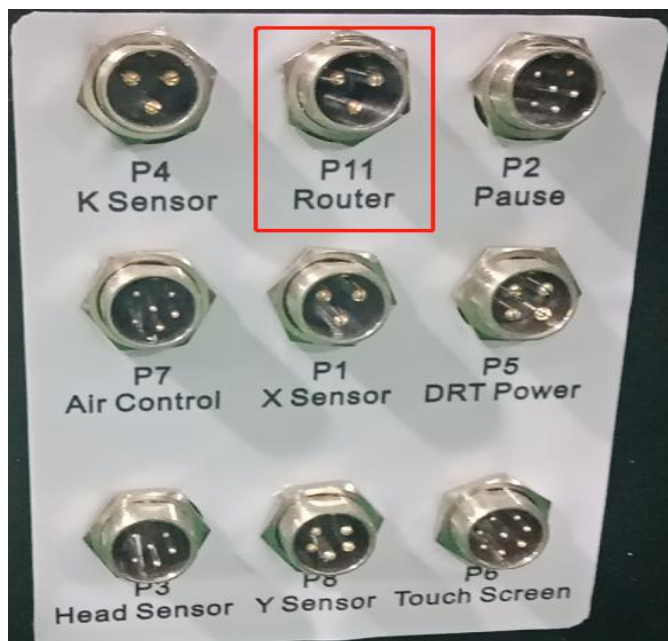
Depending on the structure of the machine, the router tool may be installed on U or U1. A is the spindle motor, B is the fixing screw of the dust suction device, C is the pressure plate, D is the dust suction hose. To install the router tool pressure plate, you need to remove the fixing screw B before installing.

- Connect cables: 2 cables need to be connected to the router tool, one with an aviation plug is the signal cable, the other with two blue and brown wires is the 220V power cable.

Connect the router tool power supply cable to a stable 220v power supply, preferably the same source as the machine. The arrow positions in the figure can be connected. Note that the brown is L and the blue is N in the power cable.



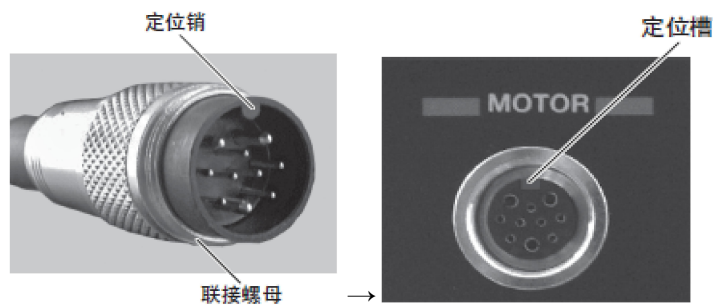
Router tool signal wire connection: connect to the left side of the chassis. As shown below,



➤ Router tool electrical box connection



The 6-position connection mode is shown in the figure below:

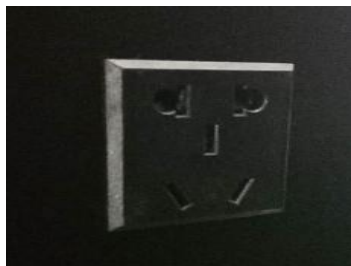


7, 8 position connection(should be well connected when receive it):

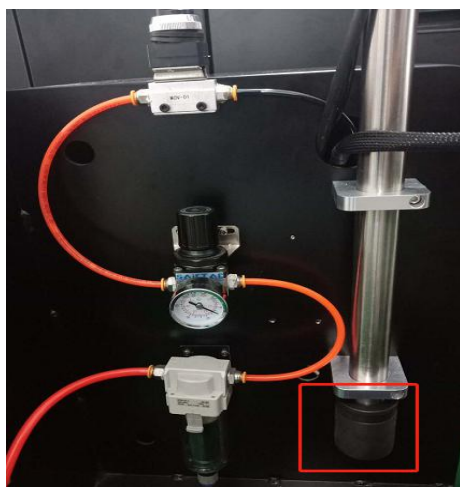
- (1) Insert the $\phi 6\text{mm}$ air pipe (accessory) with filter of the air pipe kit (AL-0201) into the air inlet port ⑦ of the controller (controller unit).
- (2) Insert the $\phi 4\text{mm}$ air duct (for motor cooling: attached to the motor cable) into the air port at the rear of the motor shaft (motor).
- (3) Insert the other side of the $\phi 4\text{mm}$ air pipe (for motor cooling: attached to the motor cable) into the air output port ⑧ on the front of the controller. In this case, use a reducer ($\phi 6-\phi 4$ conversion adapter, accessories).

The inside of the electrical box is mainly connected to the spindle signal line and the spindle air pipe, and the outside of the electrical box is mainly connected to the air source inlet. The intake air pressure must be between 0.25-0.3Mpa, and the router tool will display an error code if it is less than this value.

➤ Vacuum cleaner connection

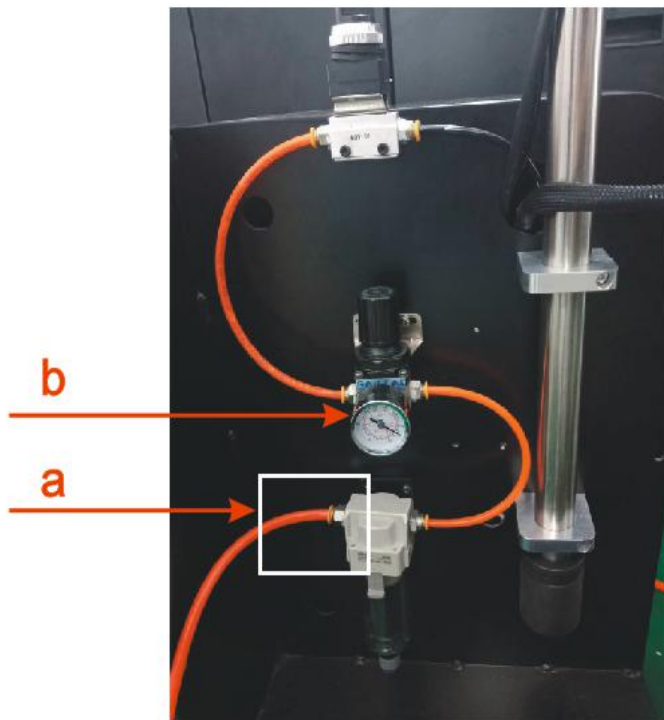


Vacuum cleaner power socket: Connect the power plug of the vacuum cleaner to the power socket on the outside of the router tool control box.



The connection position of the suction pipe of the vacuum cleaner.

➤ Router tool air connection



Connect the air supply pipe to point A, and check the air pressure at point B. The diameter of the pipe is $\phi 8\text{mm}$.

2, Router tool set

LCD touch screen set:

Parameter

SP SET		Function		Area Pump		Back	
				U Tools:	EOT ▼	U1 Tools:	EOT ▼
SP1 :	None ▼	SP5 :	None ▼				
SP2 :	None ▼	SP6 :	None ▼				
SP3 :	None ▼	SP7 :	None ▼				
SP4 :	None ▼	SP8 :	None ▼				
				U Tang Angle			
				Compensation:	12.3		
				U1 Tang Angle			
				Compensation:	12.3		
				U Off Center:	1.23		
				U1 Off Center:	1.23		

Set U or U1 tool as URT

Advance Parameter

	Tools	Accuracy	Function	Advance	Back
Machine Type:	B4-1013	1234	1234	Recipe switch:	OFF
Language:	Chinese	Safety Switch:	OFF	Return Defelt:	Reset Default
Auto Repeat:	OFF	Servo Alarm:	OFF	Temp origin Switch:	OFF
Auto Return:	CUT Position	Pause Function:	OFF	PG Switch:	OFF
Auto Deep Switch:	OFF	Router Alarm:	OFF	Arc buffer :	OFF
IP Address:	123	123	123	123	Enter
				Version:	1.234

Turn on the “Router alarm” switch, machine will stop cutting when the router tool fails. Before cutting with the router tool, the air source must be turned on and the air supply switch must be turned on. As shown:



3, FAQ

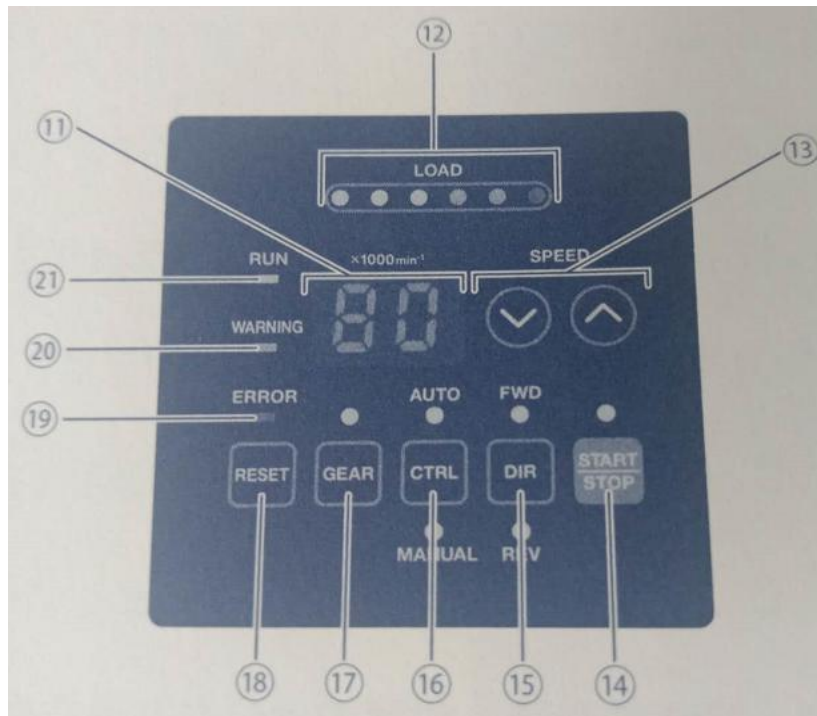
- ✧ The machine prompts that the router tool is abnormal. Check that the router tool drive does not display an alarm code.

Solution: Please check whether the 220v power supply is normal

- ✧ The machine prompts that the router tool is abnormal. Check drive alarm E7.

Solution: Check the spindle air supply switch, and check the air intake condition of the air source. After confirming the problem, click the reset button of the router tool (on the drive panel of the router tool electrical box)

4, Router tool spindle drive panel button



⑪ display

Use 2 digits to display the set rotation speed, actual rotation speed, warning code and fault code. The set rotation speed is displayed when the motor spindle is stopped, and the actual rotation speed is displayed during rotation. (The gear ratio is displayed in the gear ratio setting mode)

⑫ LOAD panel

Use LED lights to display the load of the motor spindle. (3 in green, 2 in yellow, and 1 in red) are displayed in 6 stages.

It can be used continuously under load when 3 or less green LED are on.

The load status when the yellow and red LED lights are on is overloaded and cannot be used continuously, but can be used intermittently.

⑬ SPEED ○Λ、○V

Use the "○Λ" and "○V" buttons to set the rotation speed. In addition, the gear ratio is set in the gear ratio setting mode. (The unit is 100min-1.)

The range of setting the rotation speed is 1,000-60,000 min-1.

⑭ START/STOP

A button that can rotate or stop the motor spindle.

⑮ DIR

A button to set the spindle rotate to the right (FWD) or to the left (REV.).

⑯ CTRL

A button that can switch the control mode to AUTO or MANUAL.

No need to set it.

⑰ GEAR

No need to set it

⑱ RESET

When a fault occurs, it is a button to clear the fault. (During MANUAL operation).

Some fault codes need to be restarted to resolve.

⑱ ERROR

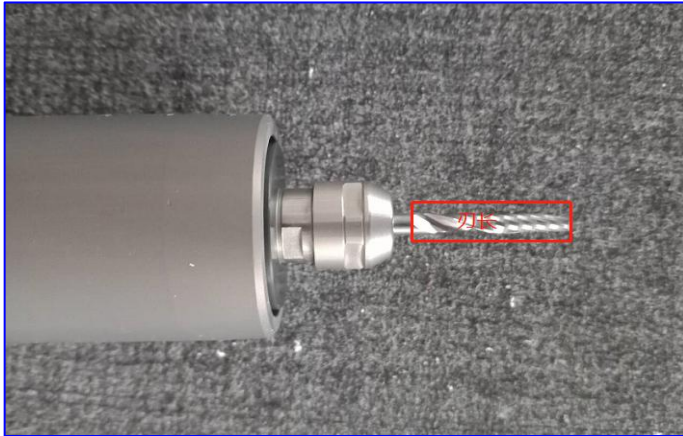
Lights (flashing) when an abnormality occurs in the controller (controller unit) or the motor, or when it is used continuously in a warning state. At this time, the running motor will stop urgently, and the fault code will be displayed on the display ⑪.

⑳ WARNING

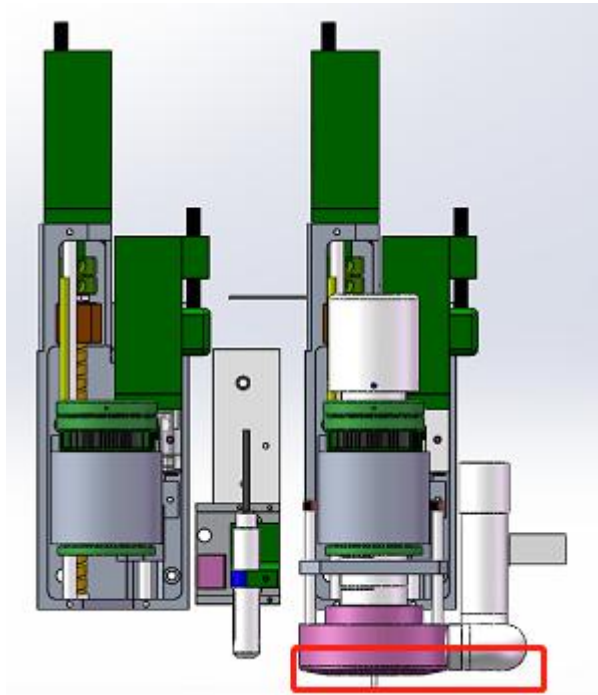
Monitor the status of the controller, motor, and cooling air. It will flash when it cannot be used continuously or the motor's starting conditions are imperfect. At the same time, the display ⑪ will alternately display the warning code and the actual rotation speed (or the set rotation speed).

A, install blade:

- In order to extend the service life and improve the cutting quality, try to use good quality blade.
- When installing the blade, make sure that the blade edge is completely exposed, otherwise the blade is easy to break.




- The length of the blade exposed to the router tool pressure plate is required to be equal to or slightly less than the thickness of the cutting material. Otherwise it will affect the cutting effect and the dust suction effect.



- When the router tool is taken out, it is placed on the router tool seat as required.
- The vacuum bucket of the vacuum cleaner is required to be cleaned every day. (If used)
- Regularly remove the moisture in the air source to prevent damage to the spindle motor due to excessive moisture in the air source.
- Every time a new material is cut, a cutting test is required. Some materials have a good cutting effect in a clockwise direction, and some materials have a good effect in a counterclockwise direction. Record after the test, and you can cut and adjust the pattern in the AMD design software during the next cutting. As below picture:

automatic nesting	ET cad notch
Optimize output sequence	Automatic identification hole
cut page1	tablet input
cut page2	copy pieces group
cut page3	set hole number
Simulation	Repair curve
cut page4	Identifying I Notch
cut page5	Identifying V Notch
cut page6	Near segment connection
cut page7	All outer polygon counterclockwise,inner polygon clockwise
DEL isolated point	All outer polygon clockwise,inner polygon counterclockwise
set interior line number	Optimizing grid/horizontal/vertical lines Ctrl+W
set polygon line number	to close polygon
auto sort cut order	super to close polygon
set allpiece to upper-right corner clockwise	create v-notch type-1
Clear piece cut info	set & check v-notch

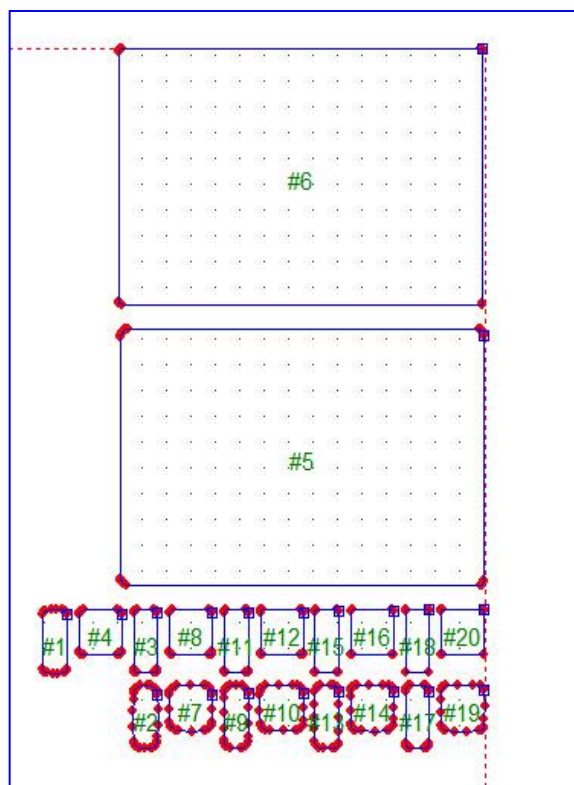
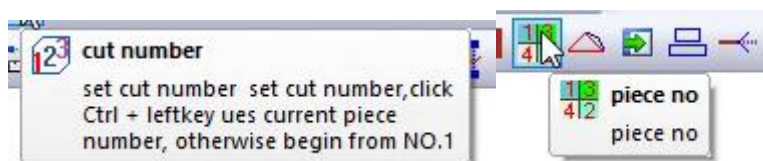

start point
start point, to closed line, set the current point as the cutter's direction, and anticlockwise direction, keep pressing ctrl, as clockwise direction, to the signal opened line, just one click is in other direction

- Depending on the thickness and hardness of the material, the cutting speed needs to be adjusted. Thick and hard materials need to reduce the cutting speed of the router tool. The reference speed is URT speed 80\URT acceleration 500

Speed

	Speed	Offset	Function	Back	
Pen Speed:	1234	Move Speed:	1234	KCT Speed:	123
Pen Accel:	12345	Move Accel:	12345	KCT Accel :	1234
EOT Speed:	123	URT Speed:	123	DRT Speed:	123
EOT Accel :	12345	URT Accel:	1234	DRT Accel :	1234
CT Speed:	1234	VCut Speed:	123	UCT Speed:	1234
CT Accel:	1234	VCut Accel :	1234	UCT Accel :	12345

- Cut smaller pieces need to optimize the cutting sequence.



Tips for perfect cutting with router tool:

1. select "little piece milling setup" button in AMD design software.
 2. Set line number the same as router tool in AMD design software.
 3. Set first SP number, if you set it as 3, then need to set SP3 as "U/U1-half" (depend on your router tool installed on U or U1 tool base)
 4. Set U/U1-half depth, usually we suggest the value 0.2~0.3 smaller than U/U1 depth
- Ps: halfcut length value in 1st picture will be create by system, usually is 0.5, when cut small piece of acrylic/MDF, no need to change it

Set cut parameters

X workarea= 250 device port= 192.168.0.250 clear all output file

Y workarea= 160 output path= c:\mon

page num= 3 (1-7) X outputscale= 1 Y outputscale= 1

PEN= 1

HALFCUT= 2 Identify hole

CUT= 3 0.1 <hole1:radius< 0.3

MILL1= 4 0.5 <hole2:radius< 0.9

MILL2= 5 closed line cut

V-CUT= 1 closed line overlay= 0

hole1= 8

hole2= 8

Repeating line= 1 2

Reverse cutting on corner

set enabled lineNO= 2

30 <angle region< 150

ReverseCut Len= 0.6 overcut len= 0

output method

clip on piece overlap

according to piece order

according to line order

double cut

Output in order of line type (1-8)

cut region

reg num= 1

reg height= 0 (0 no region)

dash line set

set HALFC line to dashed output

solid len= 0.7

blank len= 0.1

WD,PX,PS,CK

WD WD= 0

PX PX= 0

PS WW= 0

CK ww=0 auto

over cut(angle)

enabled,lien no= 1

overcut len= 0.3

0 <angle range< 90

Punch output mode

all punching first

one by one piece

Length unit CM,angle unit degree

OK CANCEL

Parameter

SP SET Function Area Pump Back

U Tools: EOT U1 Tools: EOT

SP1 : None SP5 : None

SP2 : None SP6 : None

SP3 : None SP7 : None

SP4 : None SP8 : None

set as U/U1-half

U Tang Angle Compesation: 12.3

U1 Tang Angle Compesation: 12.3

U Off Center: 1.23

U1 Off Center: 1.23

Tool setting interface

1234.5

1234.5

Back

U Position: 123.45

Tool Speed: 12

U UP Depth: 123.45

U Half: 123.45

U Depth: 123.45

↑U

↓U

Save

U1 Position: 123.45

Tool Speed: 123

U1 UP Depth: 123.45

U1 Half: 123.45

U1 Depth: 123.45

↑U1

↓U1

Save