CNC TOOL SHARPENER

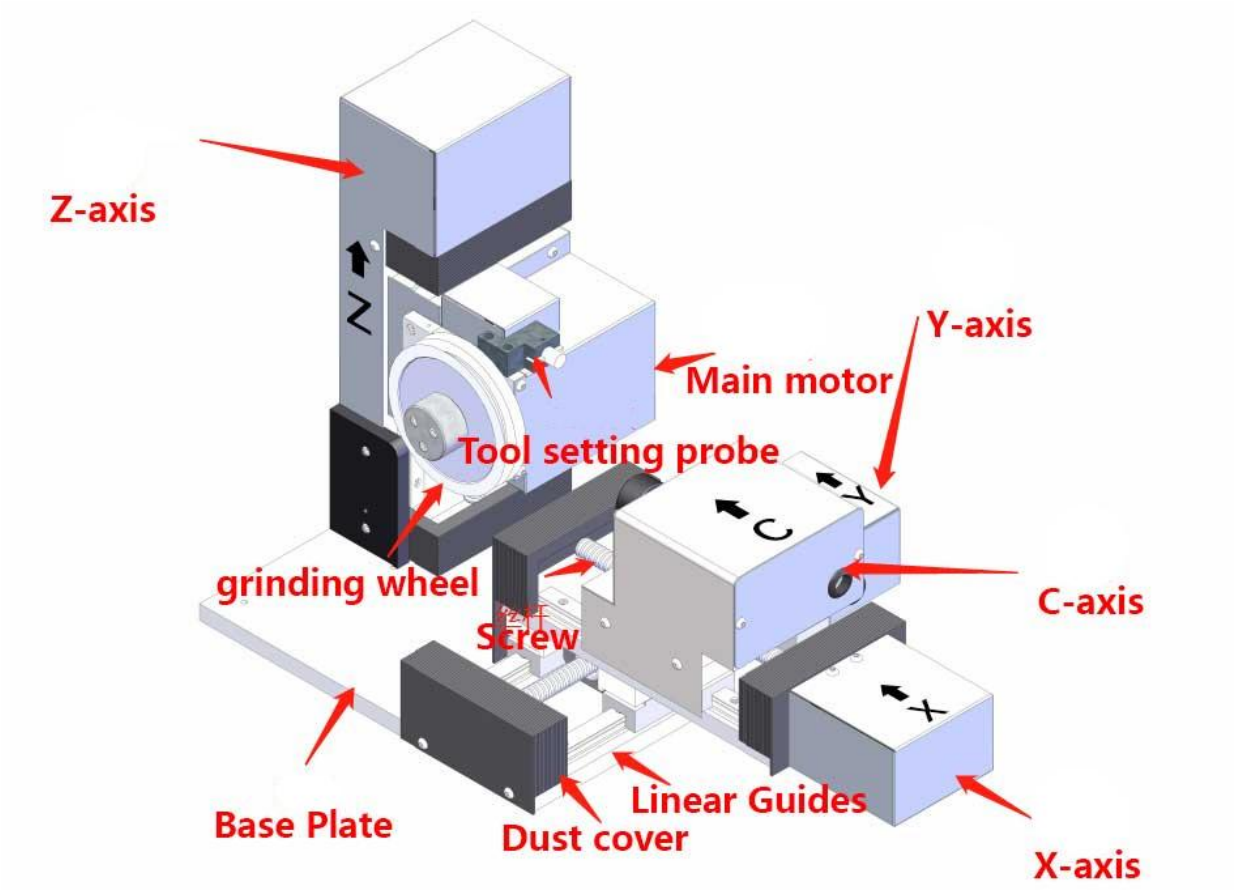
User Manual

☐AE20 ☐AE30

☐AE30Y ☐AE30H

1.Mechanical structure

Rack structure



1 structure

2.Description of common specification parameters

Grinding Range	4-20mm
Wheel Motor Power	750W
Wheel Speed	2700rpm
Input Voltage	220V
Servo System	Self-developed 4-axis grinding system
Operation Method	Touchscreen
Sharpening Efficiency	Fastest: 1-4 minutes per tool
Shift Capacity	200-300 tools per shift
Wheel Specification	Ø32*Ø125*11 (mm)
Wheel Lifespan	800-1000 pcs (for 6mm end mills)
Standard ER32 Collets	4,5, 6, 7,8,9,10, 11,12,13, 14, 15,16, 17,18, 19,20
Functions	☐Through Hole ☐Flat End Mill (2,3,4 flutes) ☐DG Drill ☐Ball Norse (2 flutes) ☐Corner Radius End Mill ☐Unequal Fultes End Mill ☐Chamfer Drill ☐Ball Norse (4 flutes) ☐Flat End Mill (5 flutes) ☐Flat End Mill (6 flutes) ☐Tungsten Bar ☐NACHI Drill

Note: When using different brands and different motors, the appearance Size will vary. The power supply connected to this device must be grounded.

3.Safety Instructions

To ensure your safety, please read and abide by the following safety guidelines before using this machine to reduce the risk of personal injury and damage to the machine.

3.1 Properly protect your eyes and face: Whenever operating this machine, wear safety glasses or a protective mask to prevent accidental injuries.

3.2The permitted rotational speed of the grinding tools used must not be lower than the no-load rotational speed of this machine: When purchasing grinding wheels, it is essential to verify their maximum speed limit to ensure it is consistent with the spindle speed of this machine. This is to prevent the grinding wheel from breaking due to an

excessively low speed limit, which could cause accidental injury.

3. 3For safety reasons, it is essential to ground this machine before use to protect the user from lightning strikes. Before powering on, make sure the switch of this machine is turned off.

3.4If the power cord is damaged or broken during operation, be sure to turn off the power immediately and replace it with a new one. Do not use machines with damaged wires.

3.5The waste dust generated during work may be harmful to health, and the sparks produced may also cause combustion or lead to explosion. Therefore, necessary protective measures must be taken when working. For example: Use appropriate vacuum cleaning equipment or wear a dust mask during the operation of the machine. Do not use this machine in a damp, flammable or explosive environment.

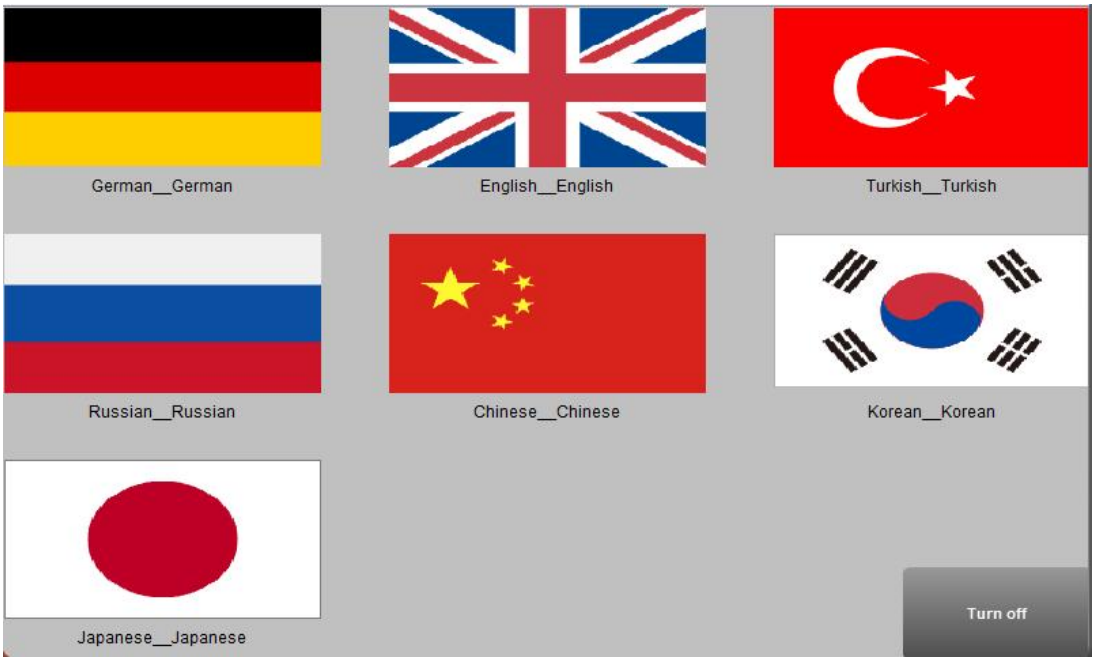
4.Function and Operation instructions

4.1Turn on the machine

First, press the green power switch on the left to turn on the machine. Then, according to the prompts on the display screen, press the reset button. After the machine returns to zero, press the red emergency stop switch on the right to close the warning page. Note: Before each tool installation, the emergency stop switch needs to be pressed. After the tool installation is completed, the emergency stop should be reset.

4.2 Interface Introduction

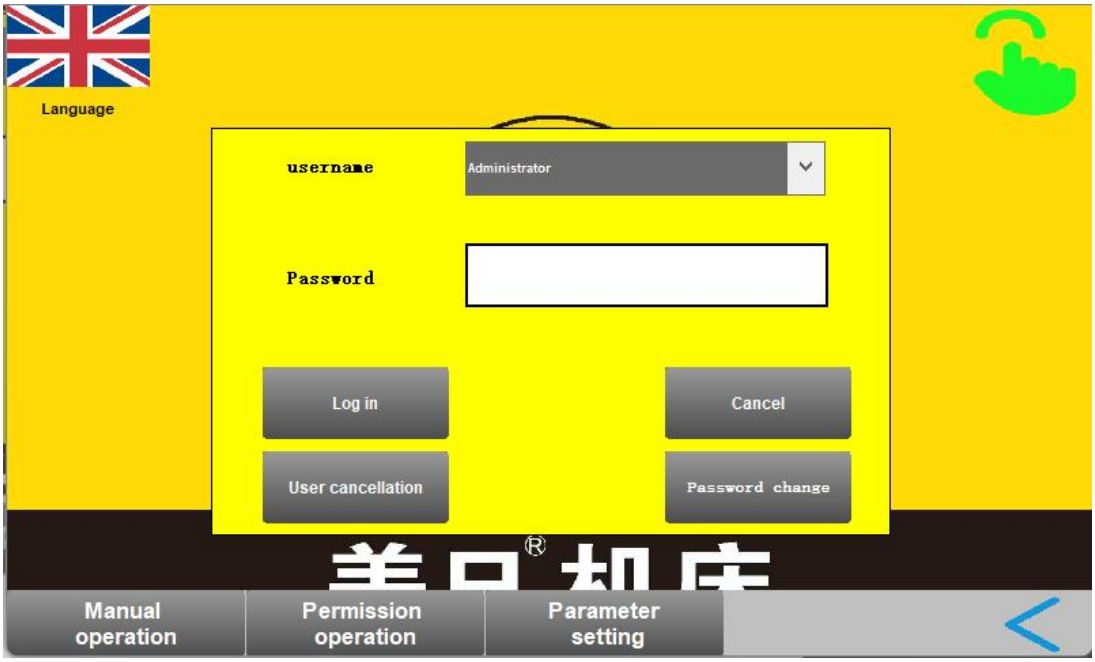
4.3 Language in the upper left corner



Click the corresponding language or "Close" at the lower right corner.

4.4The arrow at the lower left corner

Click on the permission operation to SELECT the username "Operator" or "Manager". Before leaving the factory, the default operator of this machine logs in and can directly operate grinding. Customers can log in to "Manager" according to their actual needs to adjust the parameters. Operator password 121.

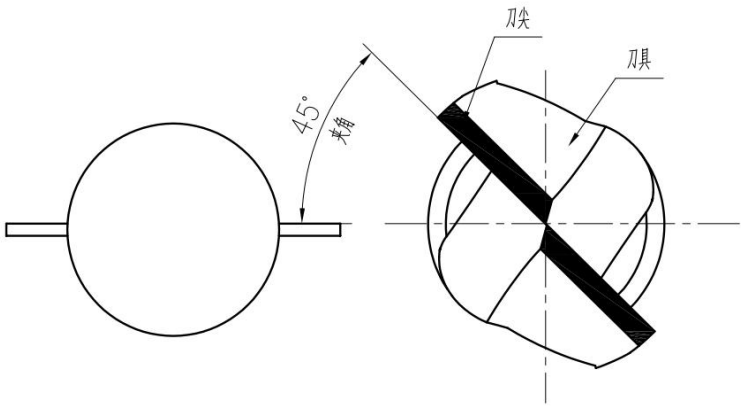


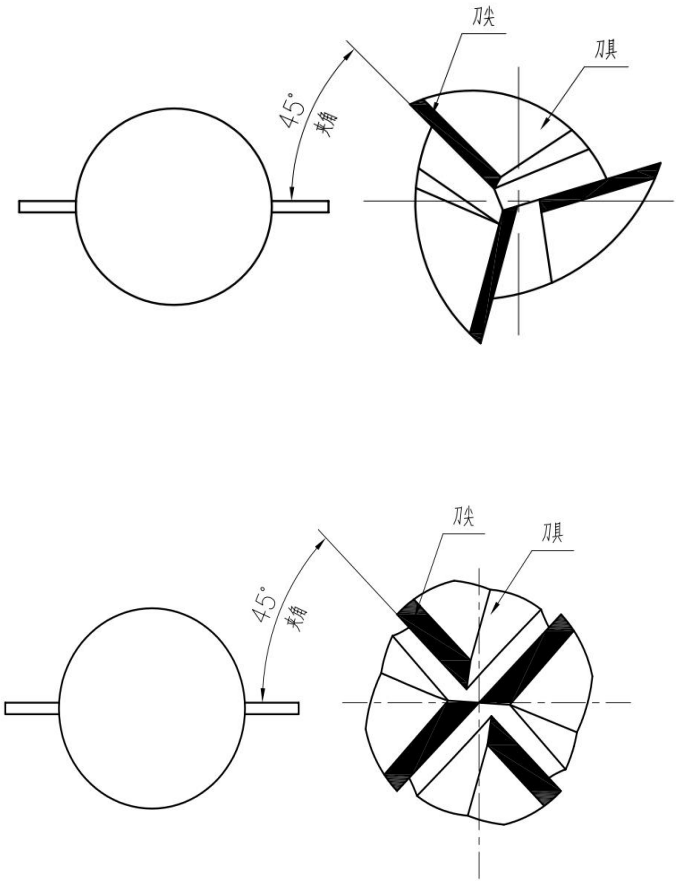
4.5 Install the knife

Step 1: Use a crescent-shaped wrench and an open-end wrench to hold the ER nut and the chuck sleeve respectively. Keep the open-end wrench in place with your right hand, and rotate the crescent-shaped wrench counterclockwise with your left hand to loosen the ER nut and remove it.

Step 2: According to the Size of the tool to be ground, SELECT the corresponding ER chuck, insert the ER nut, and then screw the ER nut into the chuck sleeve. Then place the tool that needs to be ground into the ER nut, with the tool extension length ranging from 35 to 105mm. With the right hand, use an open-end wrench to hold the chuck and keep it still. With the left hand, use a crescent-shaped wrench to hold the ER nut and rotate it clockwise to lock the ER nut and the tool.

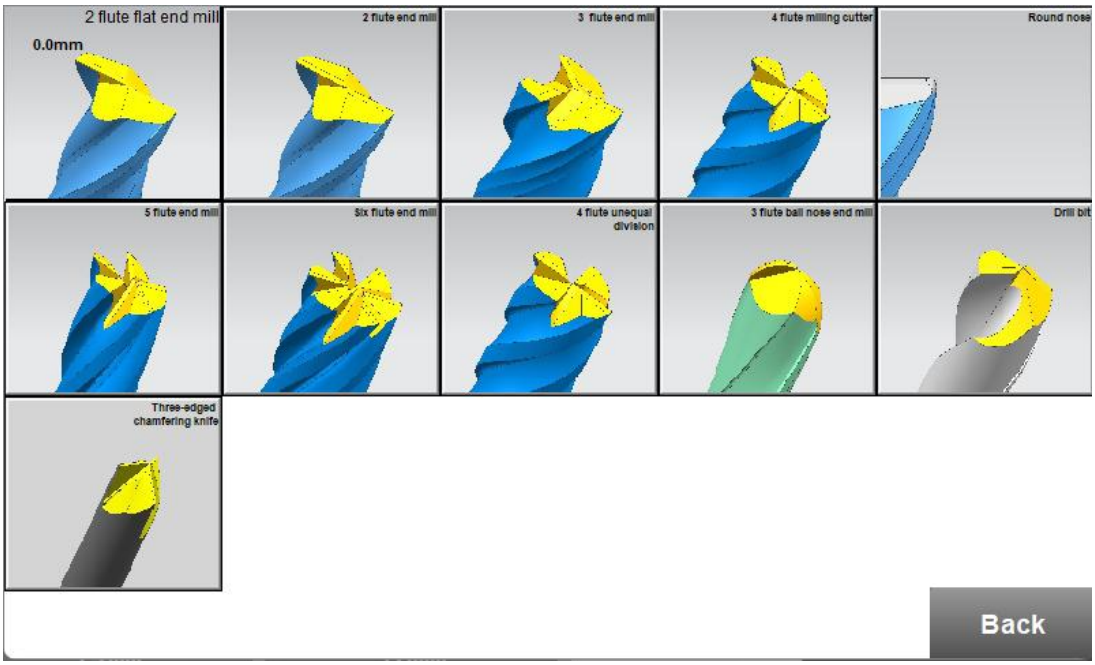
Step 3: Adjust the Angle between the tool and the tool setter. The tool tip should be about 45 degrees off the horizontal line, as shown in the following schematic diagram. Note: For a 3-flute end mill, the second Long flute is used as the cutting flute, and for a 4-flute end mill, the Broken flute is used as the cutting flute.





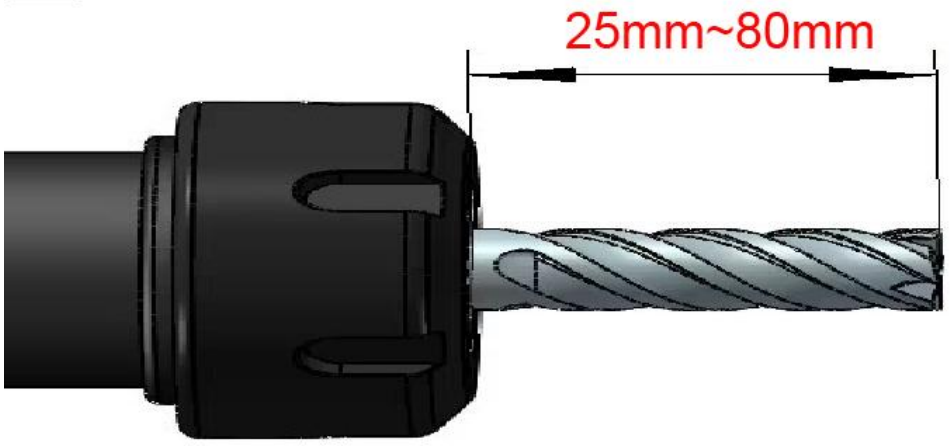
4.6 Click on the blank area of the screen

4.7 SELECT the type of tool that needs mold repair (taking a two-flute end mill as an example)

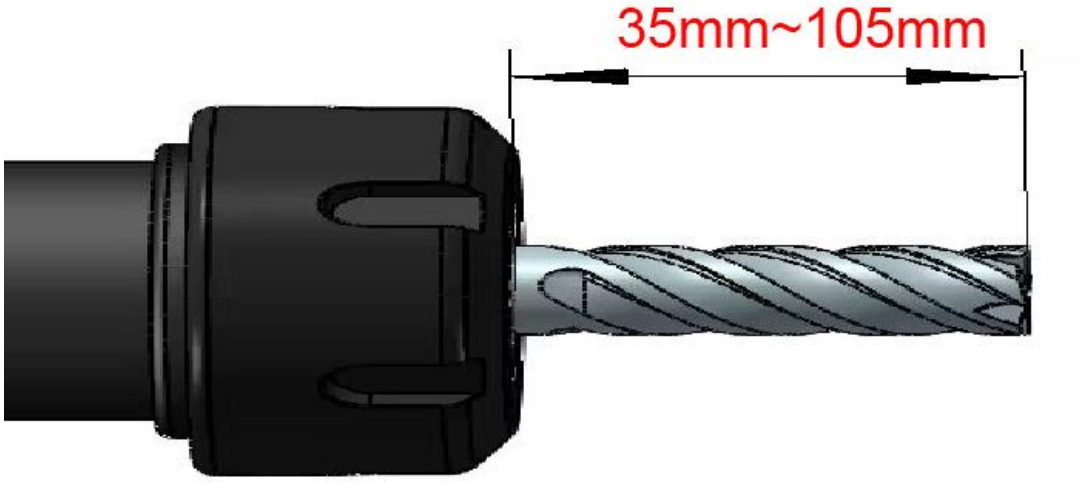


4.8 Select grinding Diameter

4.9 Click to start or exit the window (through hole choose 25mm to 80mm, blind hole choose 35mm to 105mm)



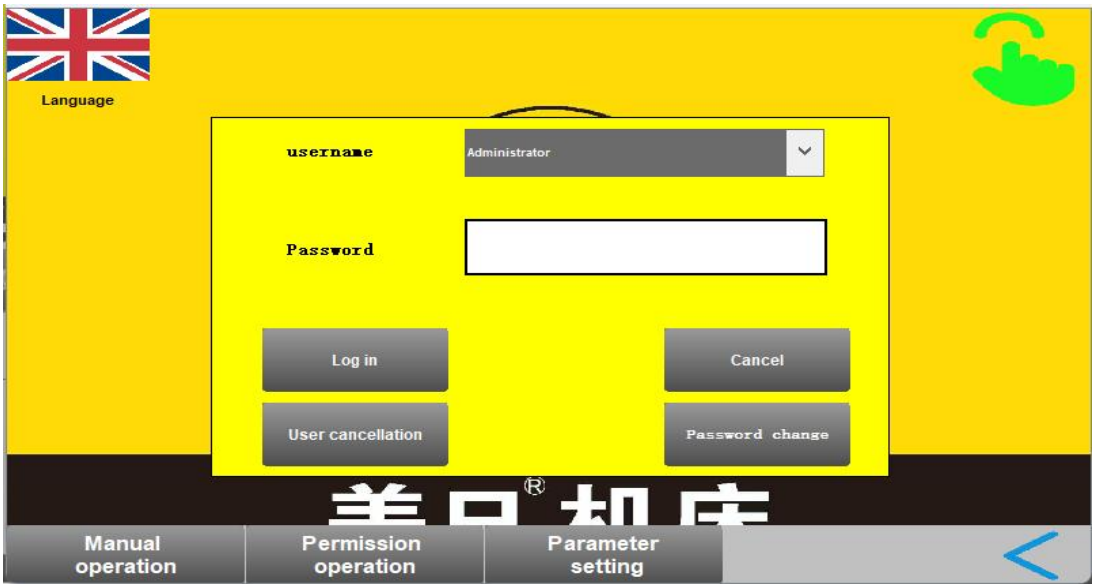
After confirmation, press start for processing!
Otherwise click on the window to exit!



After confirmation, press start for processing!
Otherwise click on the window to exit!

Click the start switch to begin the grinding, and click the screen window to cancel the grinding.

5. Administrator Login

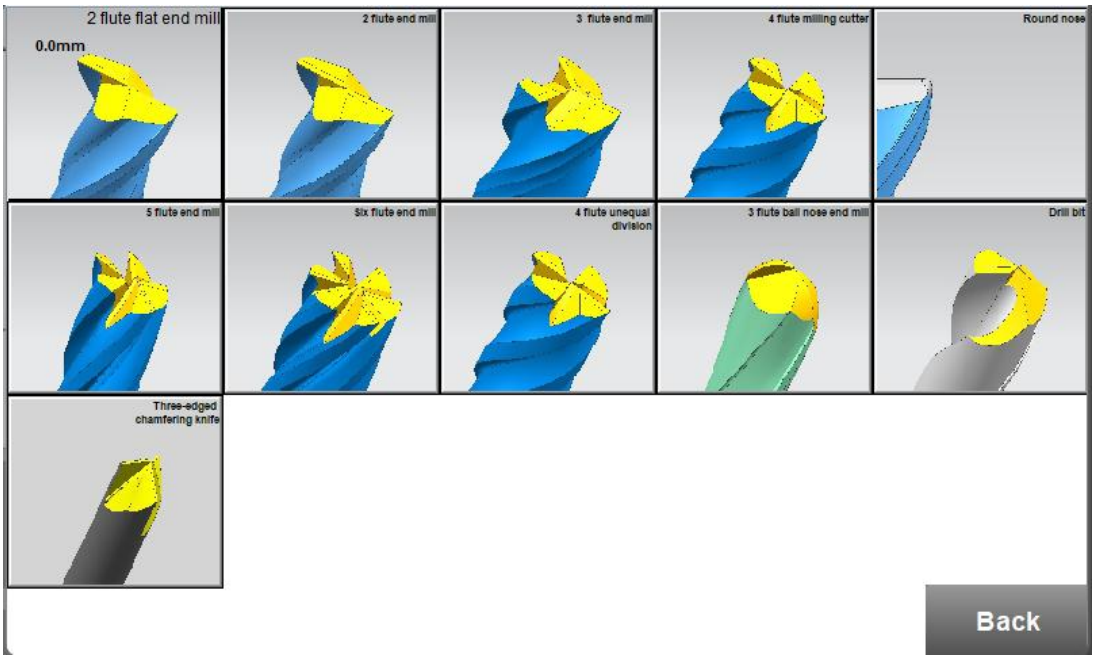


Click on the permission operation, SELECT the username "Manager", enter the password 123123, and then click Login

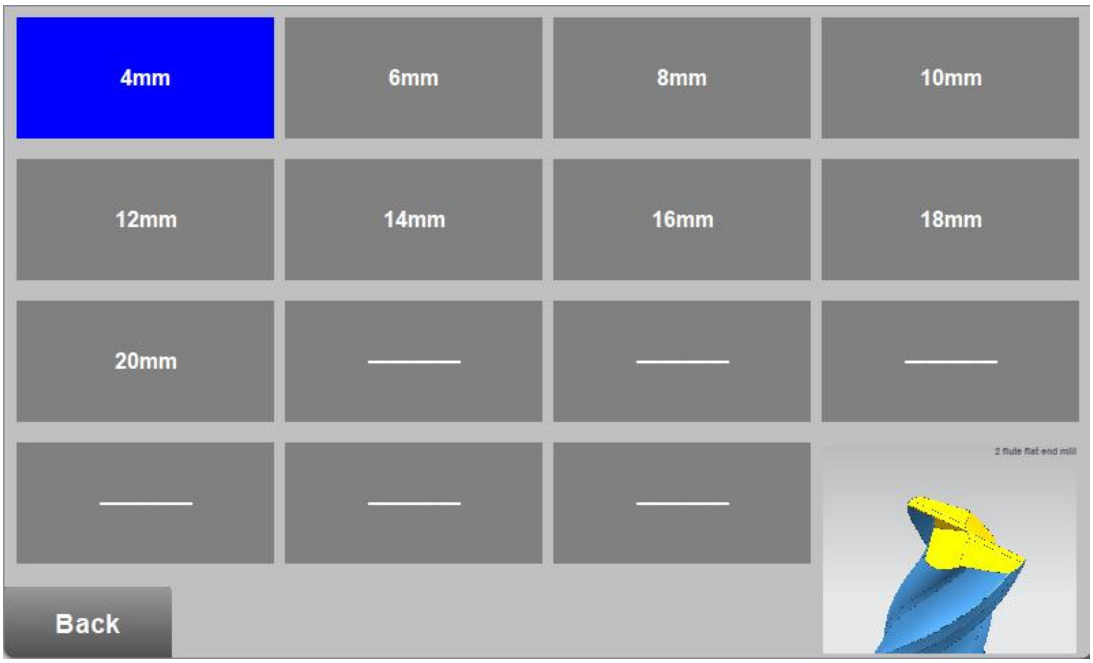
6.end mill

6.1 Click on the blank area of the screen

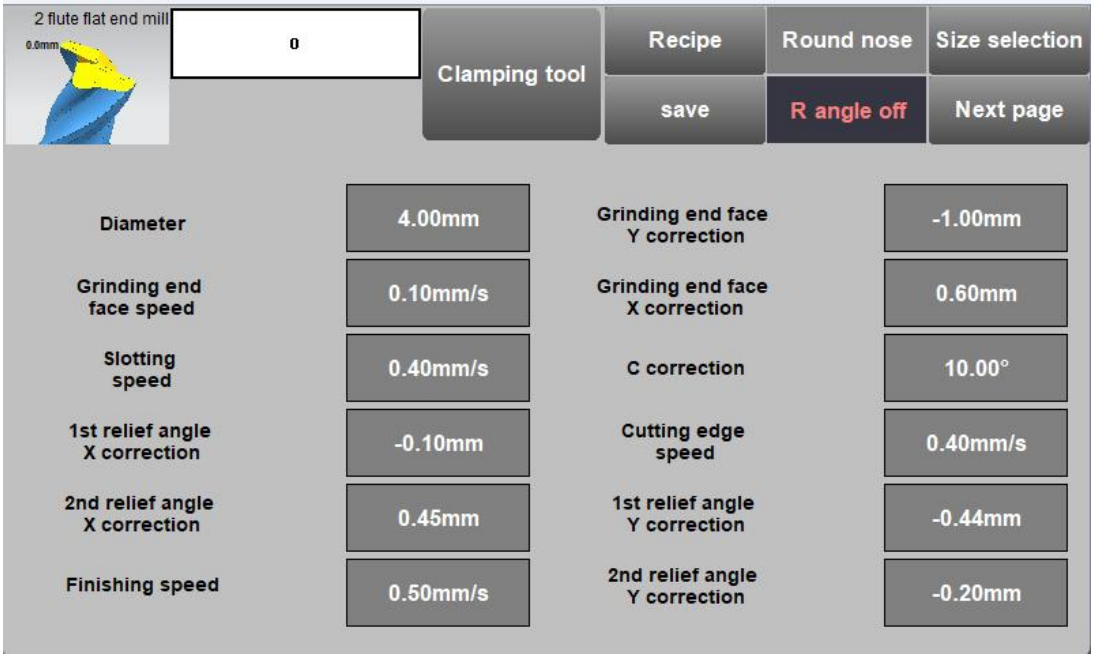
6.2 Two-flute end

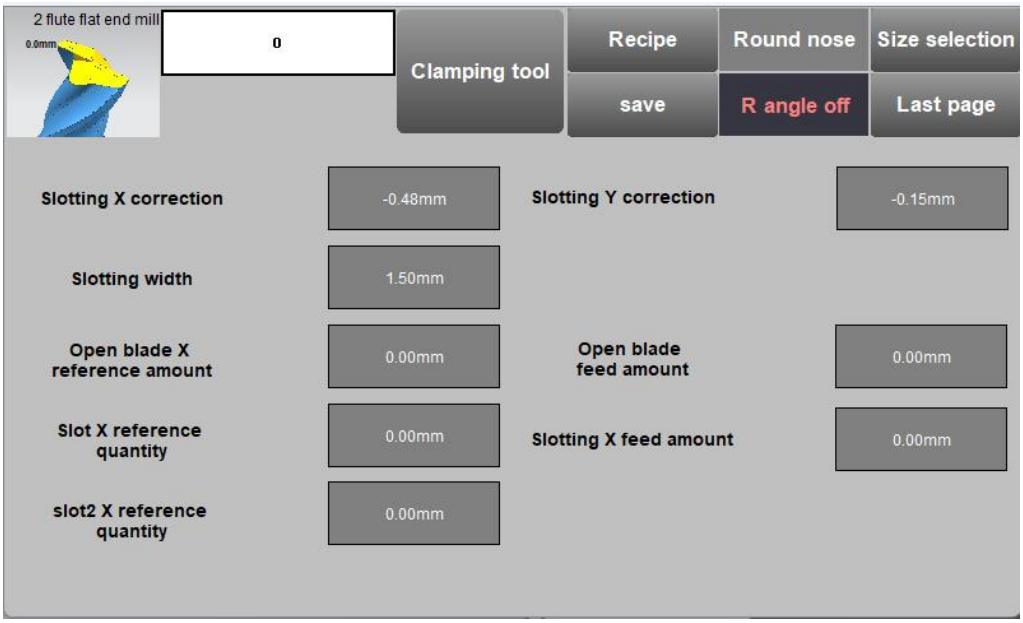


6.3 Select Size



6.4 Next Page

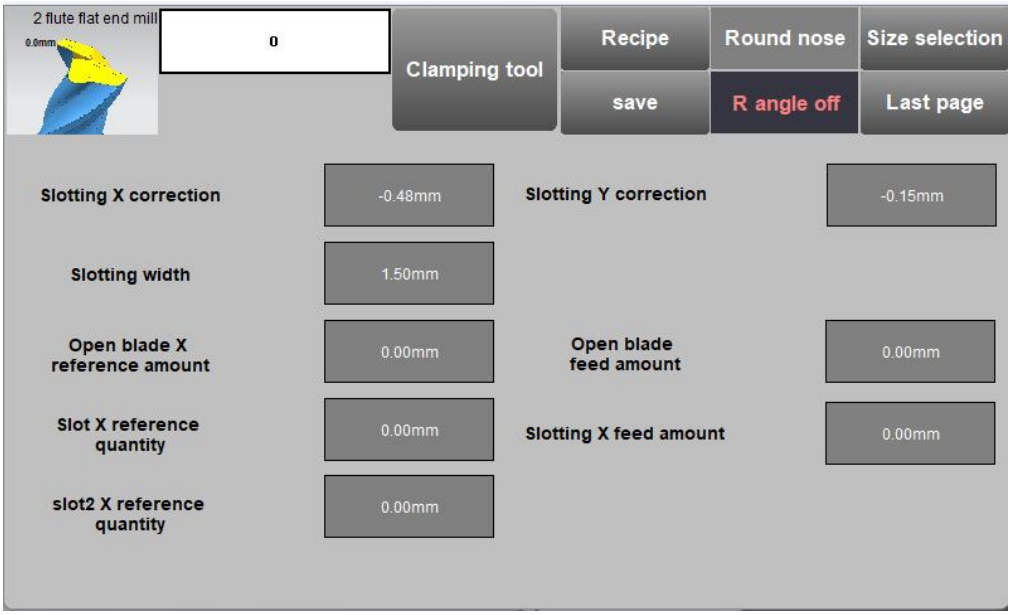




Options	Function
Diameter	Adjust according to the actual tool
Grinding end face correction	X: Material removal (positive 0.1 = +0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Grinding end face correction Speed	The higher the value, the faster the speed (do not exceed 1)
C correction	Adjust the feed Angle when grooving (1° is more than 1 degree forward rotation)
Slotting/Cutting Speed	The higher the value, the faster the speed (the slower the speed of the end mill, do not exceed 1)
1st relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y：Feed position（-0.1=+0.1mm close to the center of the end mill)
Finishing Speed	The higher the value of the transverse pulling speed of the tool, the faster the speed
2nd relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y：Feed position（-0.1=+0.1mm close to the center of the end mill)
Slotting correction	X: Material removal (positive 0.1 = +0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Slotting width	Adjust the Slotting width
Open balde X reference amount	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.

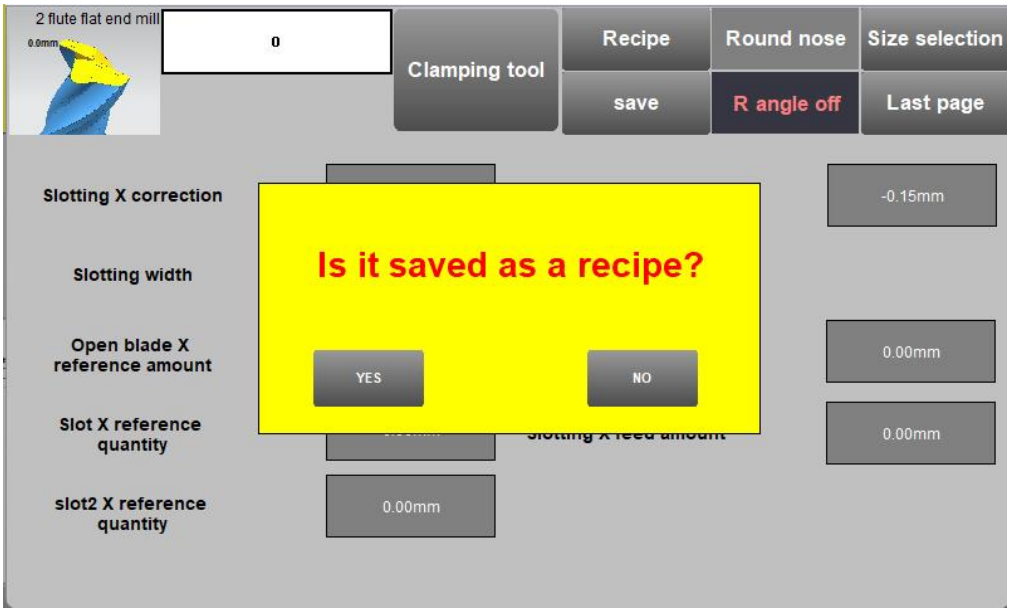
Open blade feed amount	Multi-stage grinding starting point to reduce grinding times
Slot X reference quantity	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.
Slotting x feed amount	Multi-stage grinding starting point to reduce grinding times

6.5 R-angle switch



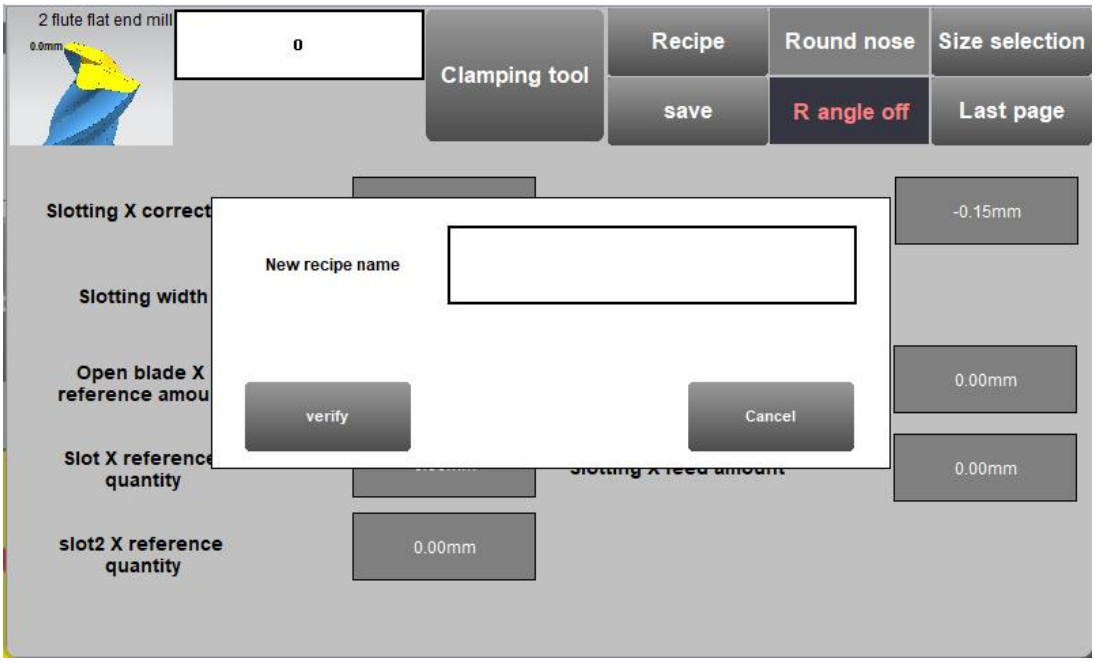
At the R Angle, grind the ordinary end mill. Open the R Angle and grind the round-nose end mill. This is associated with the R-corner switch of the round-nose page.

6.6 Save



The corresponding data can be modified as needed, and then click Save. SELECT "No" to cancel the save and click "Yes".Enter the Next Page.

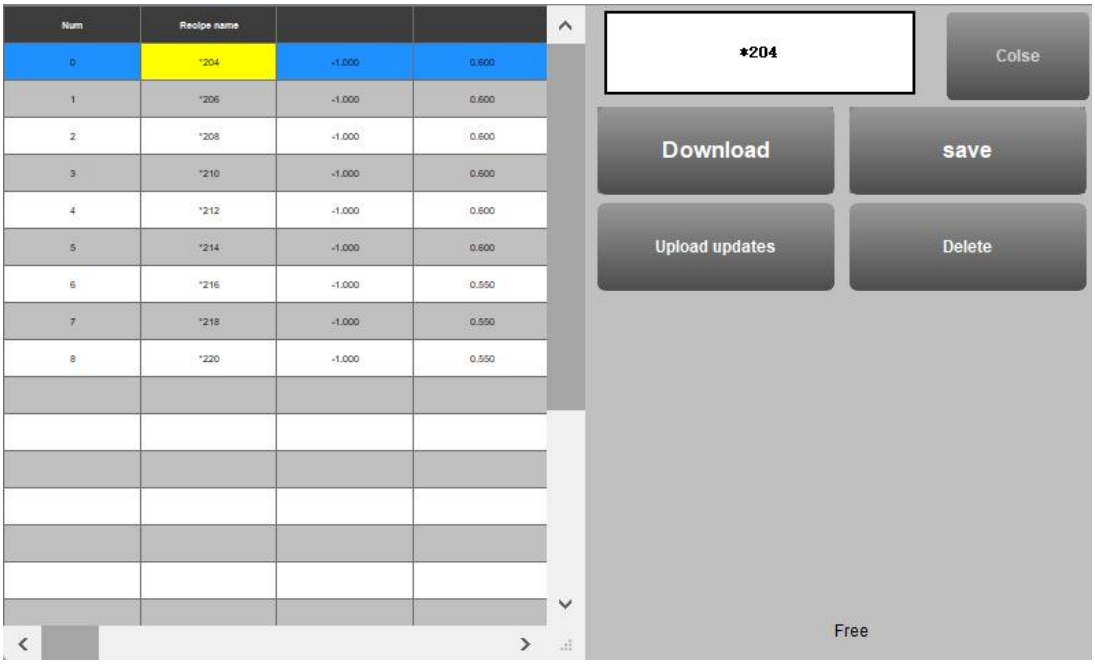
6.7 New recipe name



Enter the name of the newly created recipe. "Cancel" means to cancel the save, and "Confirm" means to save the new recipe.

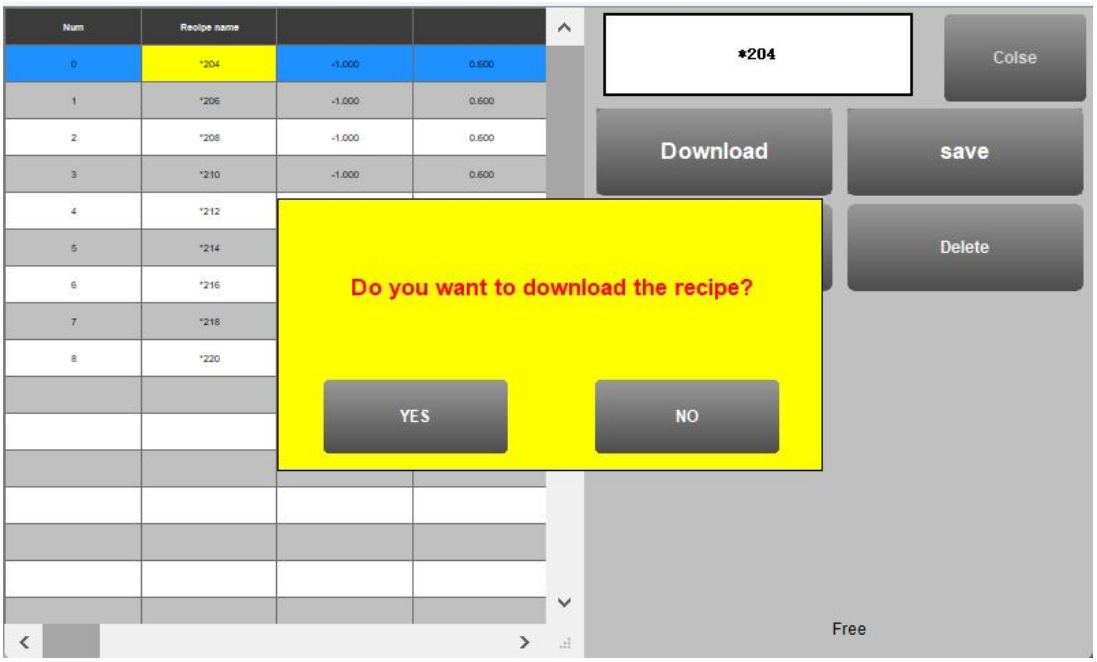
6.8 Underlying program

The formula names marked with * are the underlying formulas of the machine when it leaves the factory. They cannot be deleted or overwritten and can be used to restore the factory formulas.



6.9. Download

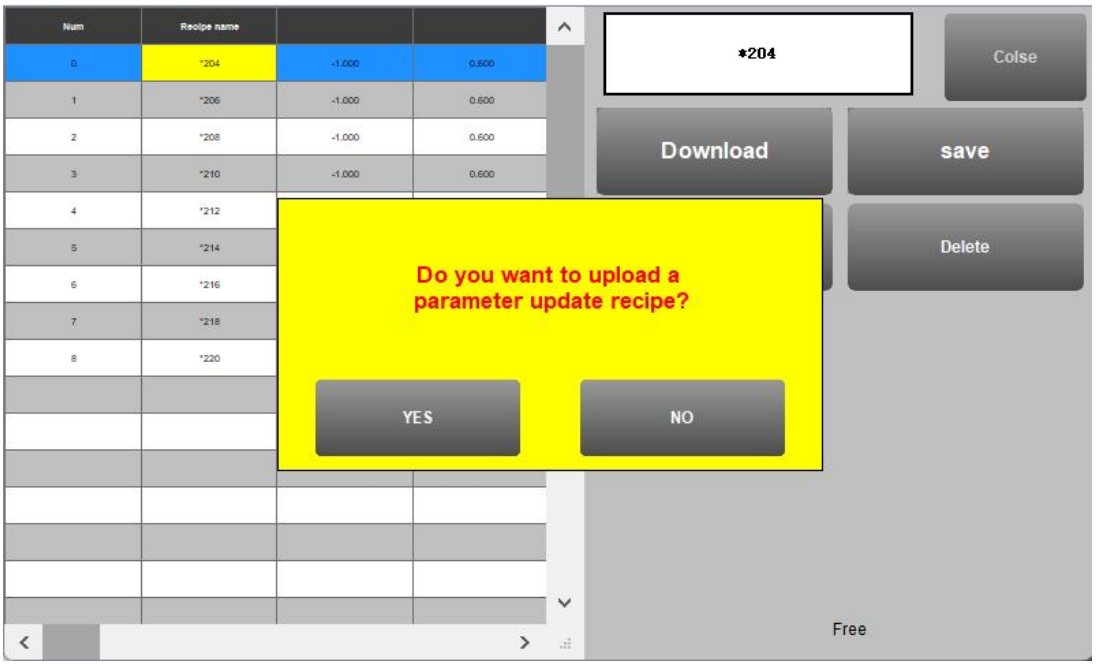
SELECT the recipe you need to download from the recipe name list and click "Download". "No" means to cancel the download, and "Yes" means to replace the current parameter.



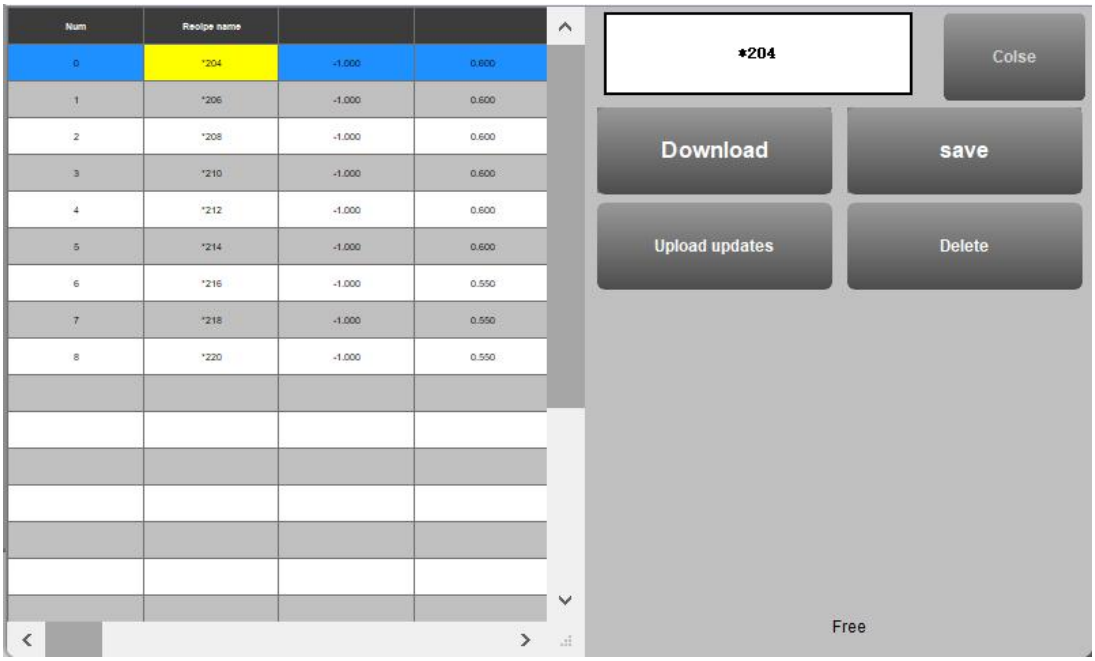
6.10 Upload and update

SELECT the recipe that needs to be modified from the recipe name list and click "Upload Update". "No" means to cancel, and "Yes" can overwrite the modified data to the corresponding formula.

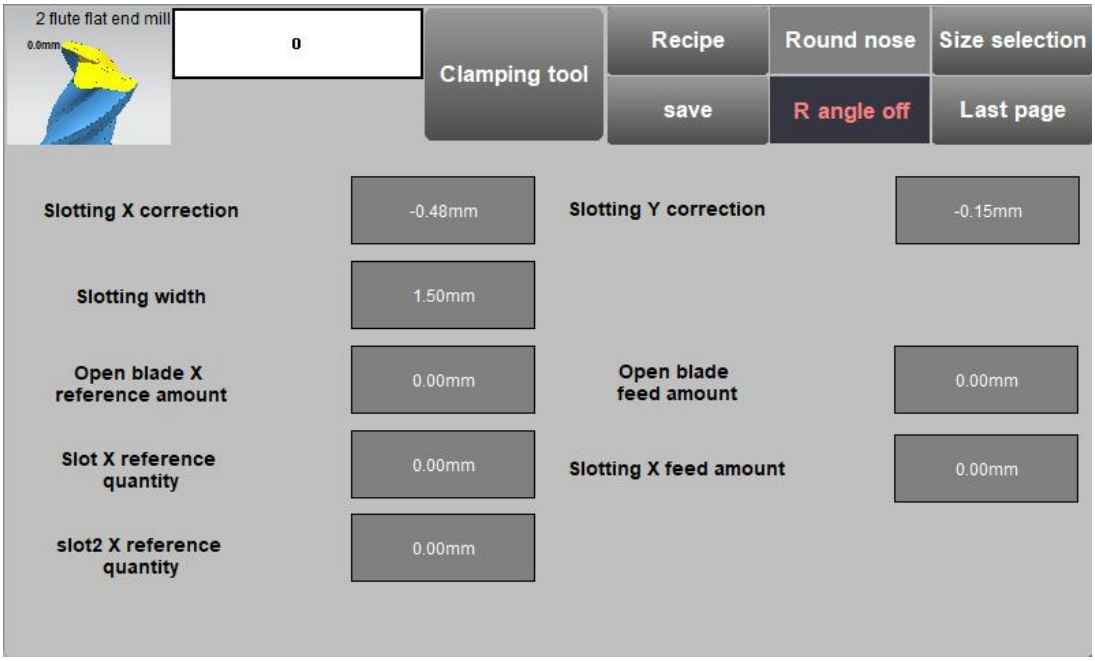
By analogy, all the Functions and operations related to the "Recipe" and "Save" pages on this machine are the same.

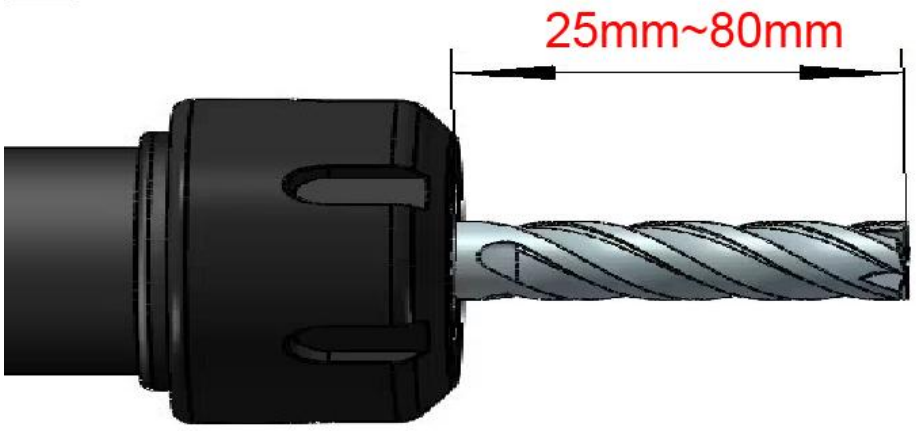


6.11 Close window

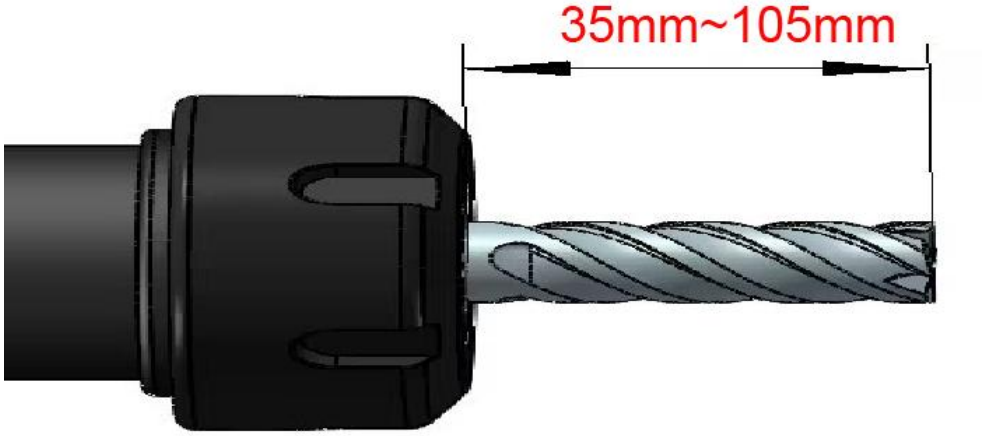


6.12 Clamping tool





After confirmation, press start for processing!
Otherwise click on the window to exit!



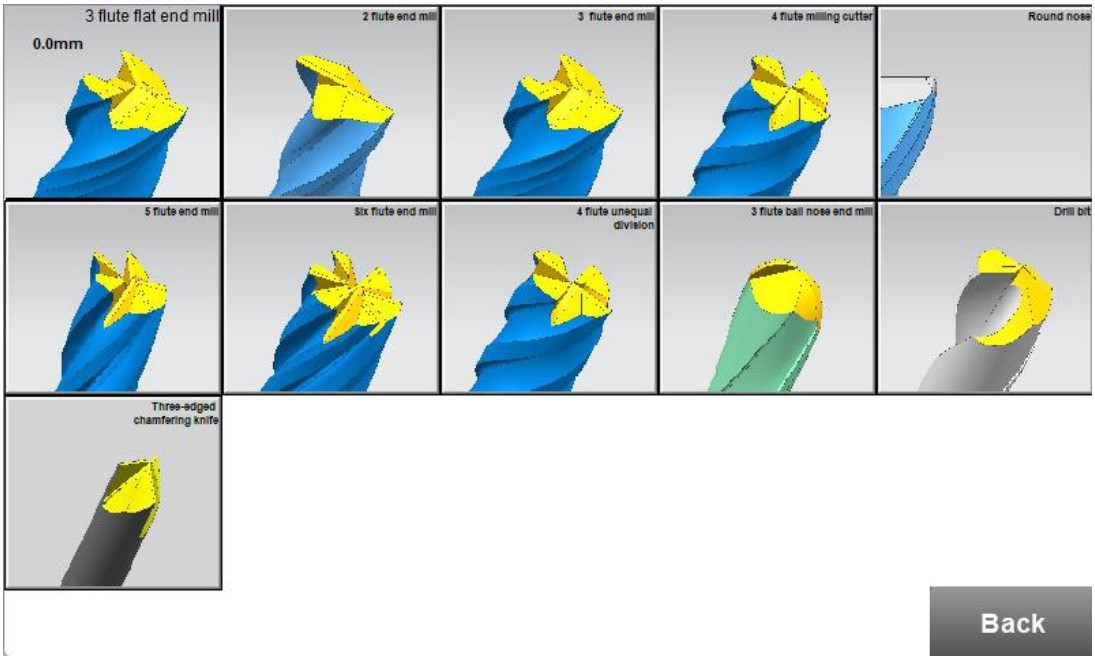
After confirmation, press start for processing!
Otherwise click on the window to exit!

Click the start switch to begin grinding, and click the window to cancel grinding.

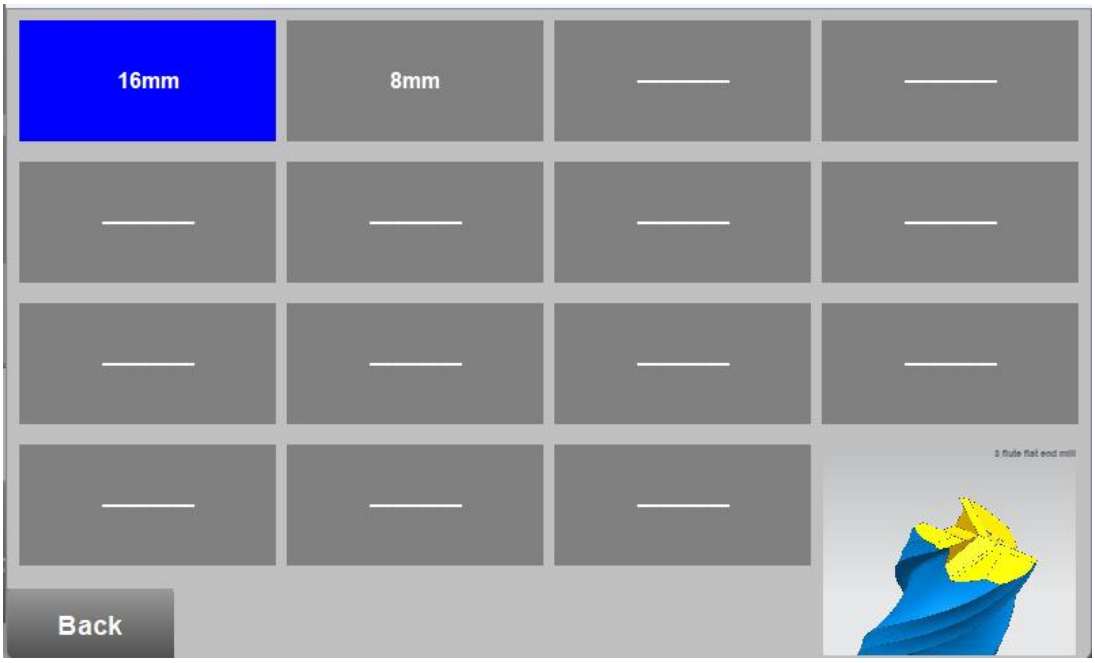
Note:The machine with through hole choose 25mm to 80mm, blind hole choose 35mm to 105mm

6.13 Three-flute end mill

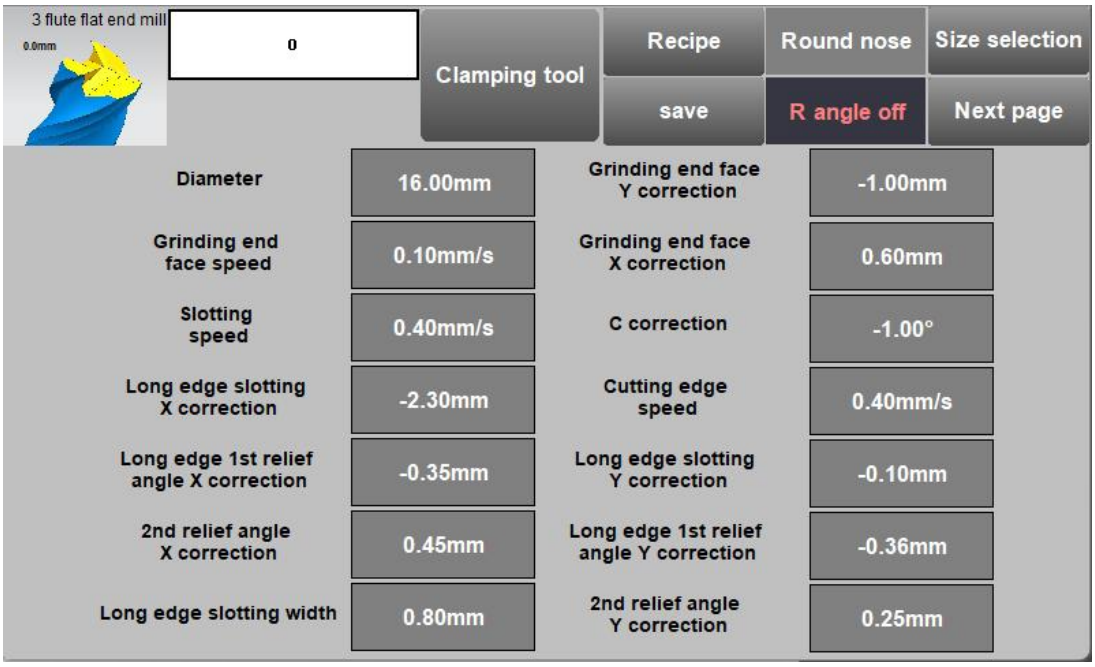
Return to the tool SELECT page and SELECT the three-flute end mill

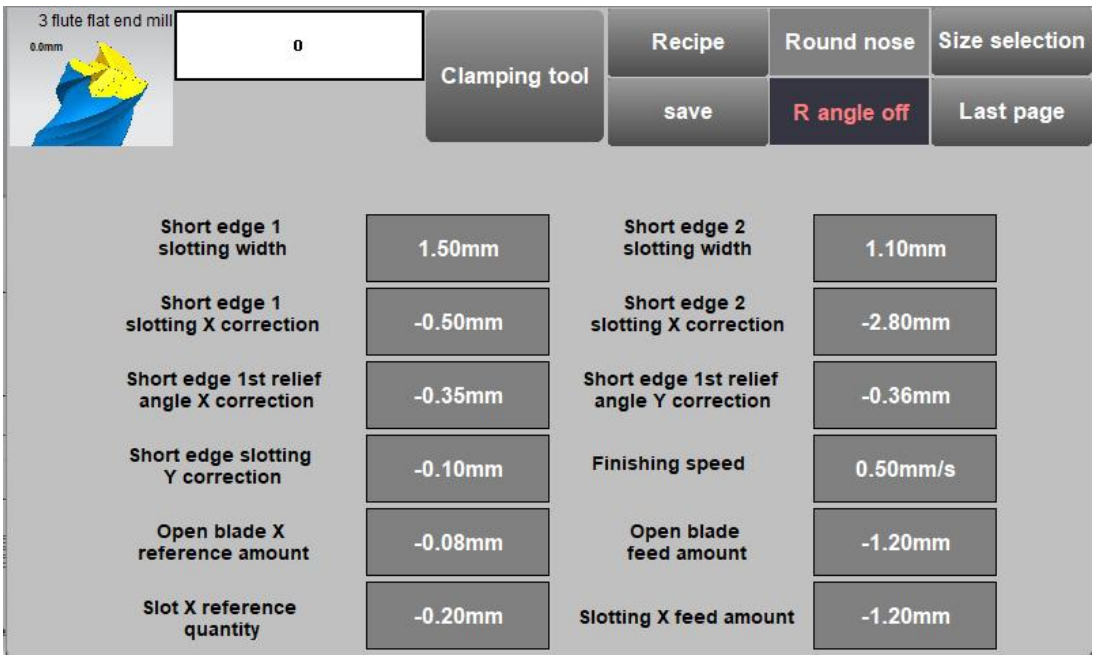


6.14 Select Size



6.15 Next Page

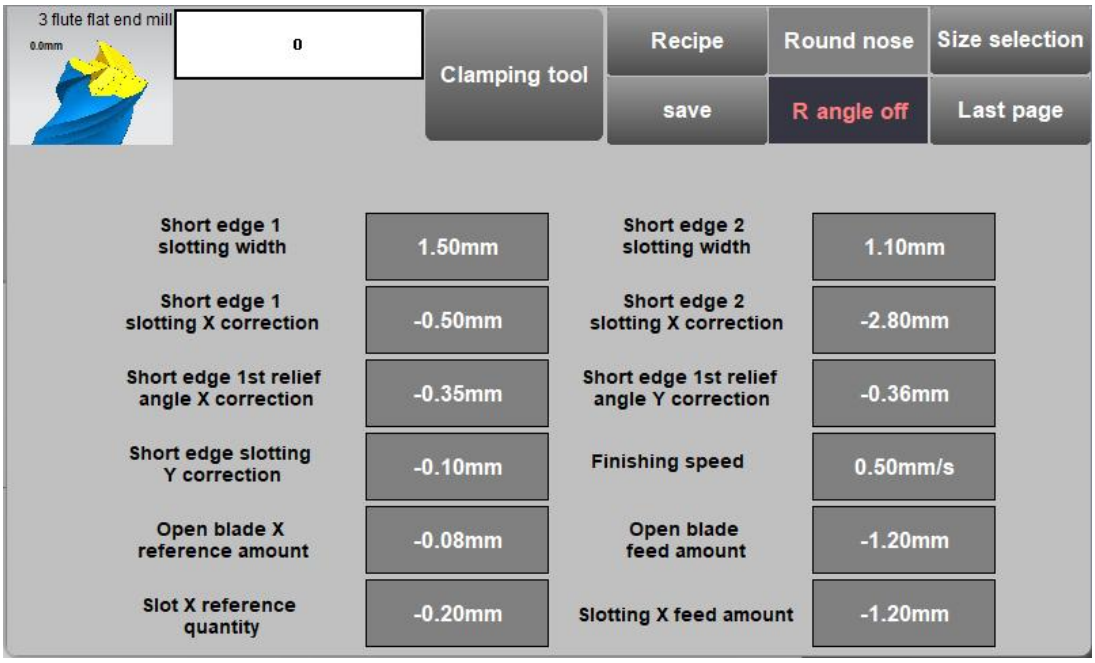




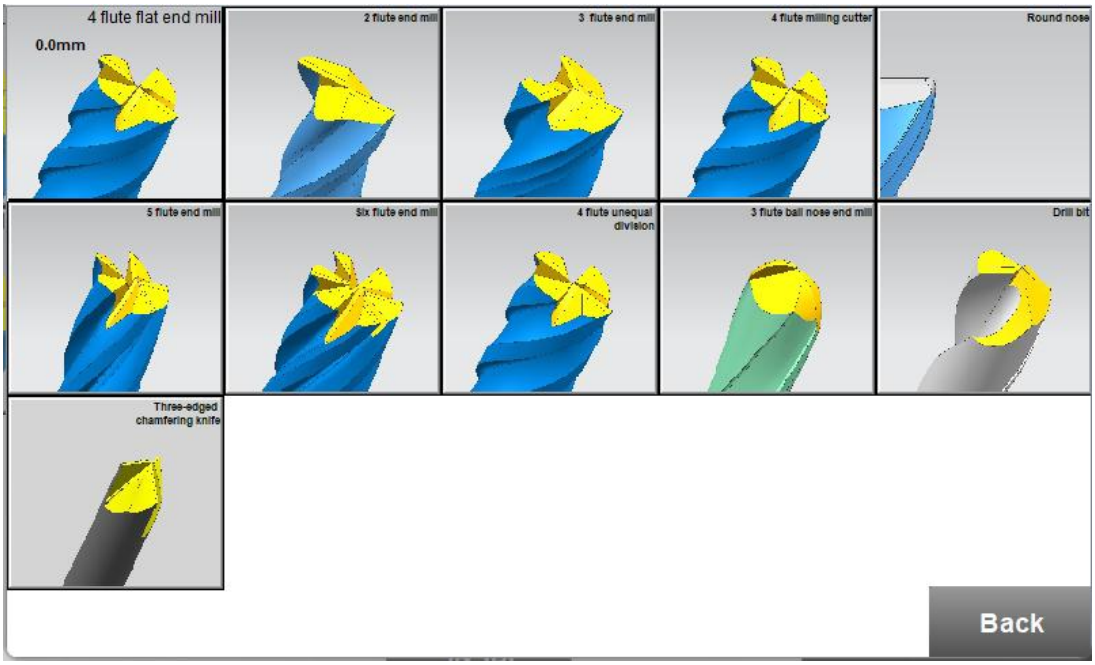
Item	Function
Diameter	Adjust according to the actual tool
Grinding end face correction	X: Material removal (positive 0.1 = +0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Grinding end face correction Speed	The higher the value, the faster the speed (do not exceed 1)
C correction	Adjust the feed Angle when grooving (1° is more than 1 degree forward rotation)

Slotting/Cutting Speed	The higher the value, the faster the speed (the slower the speed of the end mill, do not exceed 1)
Long flute（Longest）Slotting correction Short flute1 （Shortest flute） Slotting correction Short flute2（Mid） Slotting correction	X: Material removal (- 0.1 =+ 0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Finishing Speed	The higher the value of the transverse pulling speed of the tool, the faster the speed
Long flute （Longest） 1st relief angle correction Short flute1 （Shortest flute） 1st relief angle correction Short flute2 （Mid） 1st relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y：Feed position（-0.1=+0.1mm close to the center of the end mill)
Long flute（Longest）2nd relief angle correction Short flute1（Shortest）2nd relief angle correction Short flute2（Mid）2nd relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y：Feed position（-0.1=+0.1mm close to the center of the end mill)
Slotting width	Adjust the Slotting width (not less than 0)
Open balde X reference amount	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm
Open blade feed amount	Multi-stage grinding starting point to reduce grinding times
Slot X reference quantity	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm
Slotting x feed amount	Multi-stage grinding starting point to reduce grinding times

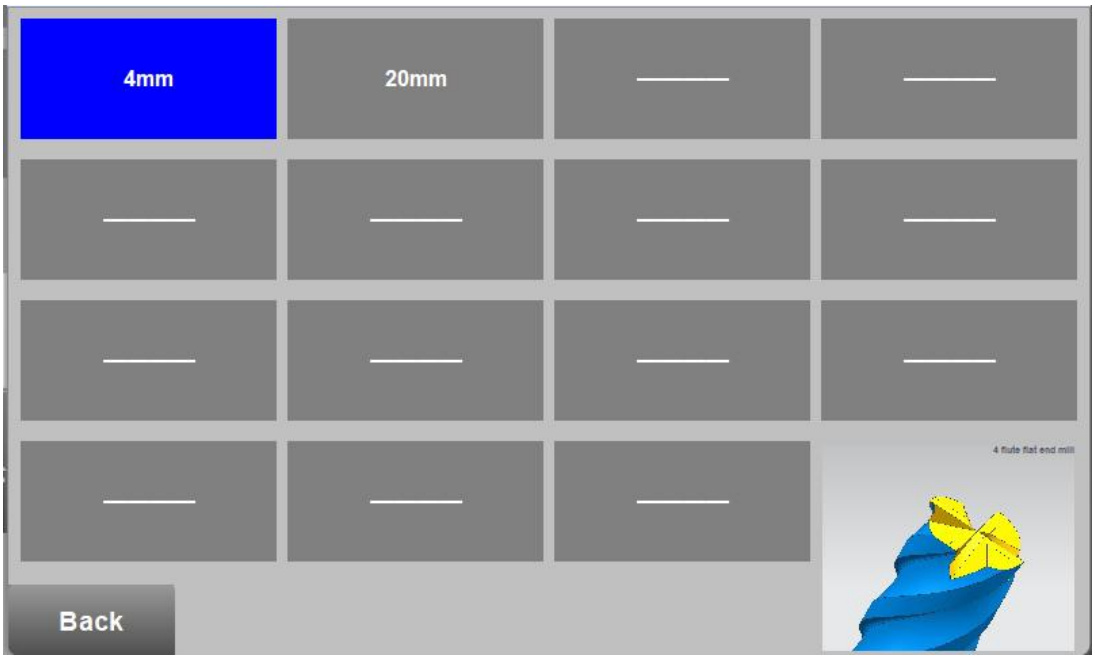
6.16 Click on the picture in the upper left corner



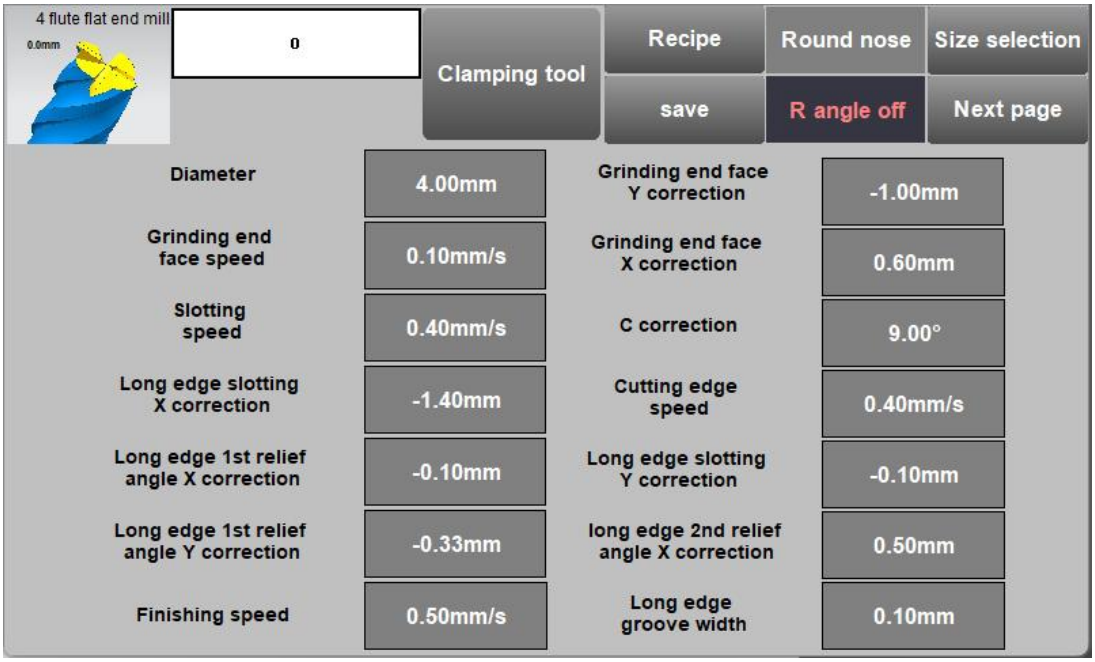
6.17 Select Four-flute end mill

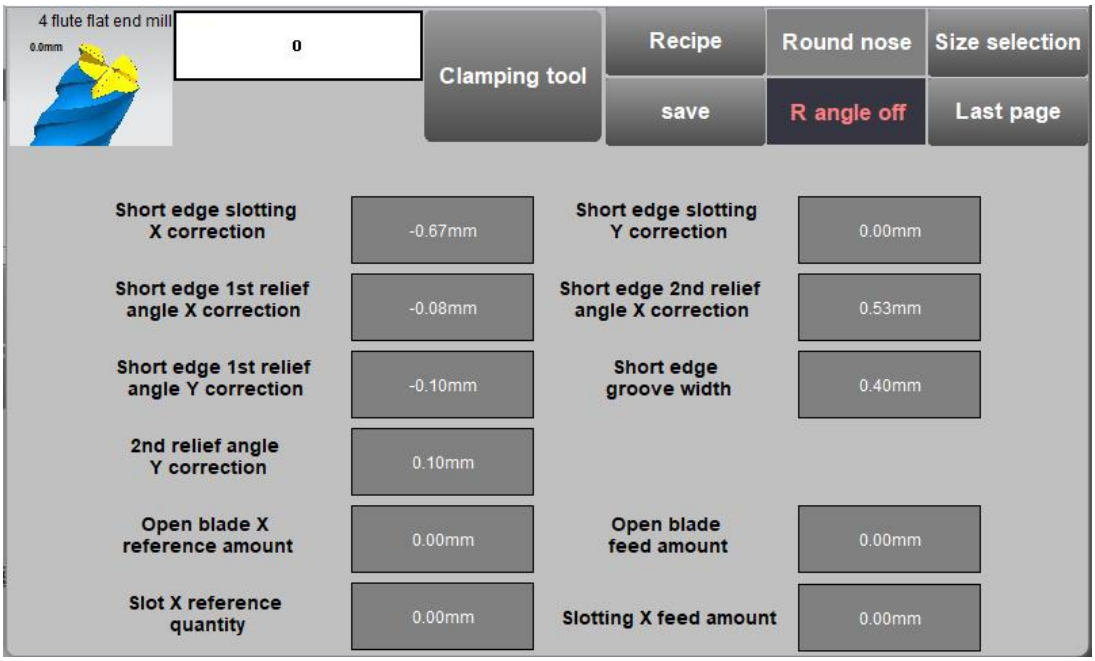


6.18 Select Size



6.19 Next Page



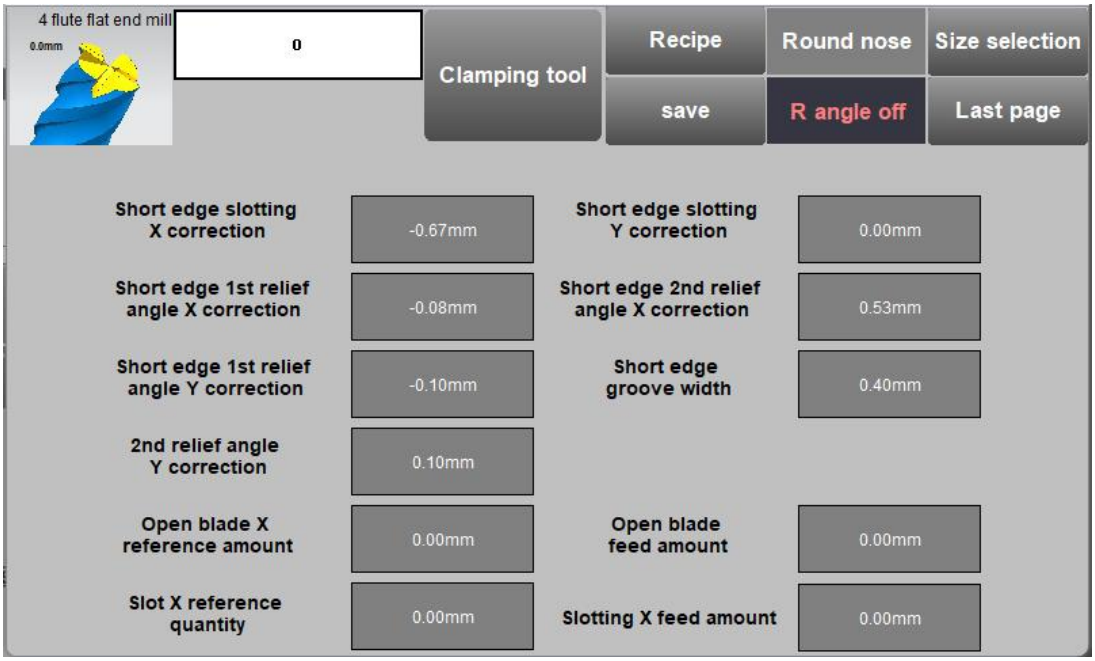


ITEM	Function
Diameter	Adjust according to the actual tool
Grinding end face correction	X: Material removal (positive 0.1 = +0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Grinding end face correction Speed	The higher the value, the faster the speed (do not exceed 1)
C correction	Adjust the feed Angle when grooving (1° is more than 1 degree forward rotation)
Slotting/Cutting Speed	The higher the value, the faster the speed (the slower the speed of the end mill, do not exceed 1)
Long flute （Connecting flute） Slotting correction Short flute （ Broken flute ） Slotting correction	X: Material removal (- 0.1 =+ 0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Long flute （Connecting flute） 1st relief angle correction Short flute（Broken flute） 1st relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y： Feed position （-0.1=+0.1mm close to the center of the end mill)
Finishing Speed	The higher the value of the transverse pulling speed of the tool, the faster the speed
Long flute （Connecting flute） 2nd relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y： Feed position （-0.1=+0.1mm close to the center of the end

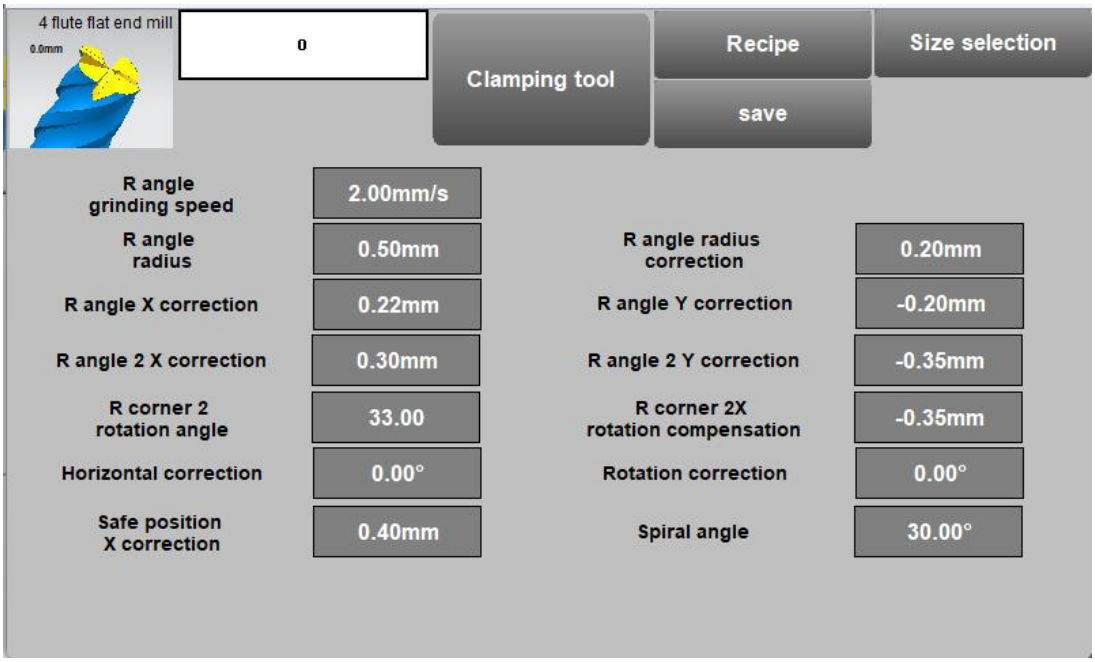
Short flute（Broken flute）2nd relief angle correction	mill)
Slotting width	Adjust the Slotting width size (it should not be less than 0)
Open balde X reference amount	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.
Open blade feed amount	Multi-stage grinding starting point to reduce grinding times
Slot X reference quantity	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.
Slotting x feed amount	Multi-stage grinding starting point to reduce grinding times

7.Corner Radius

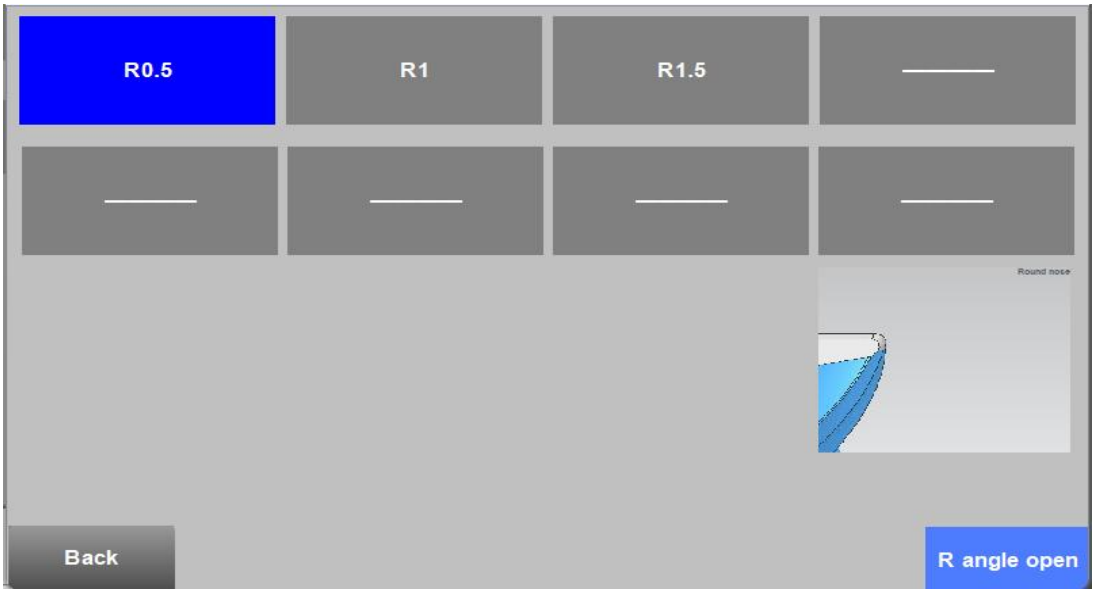
7.1 Click on the picture in the upper left corner

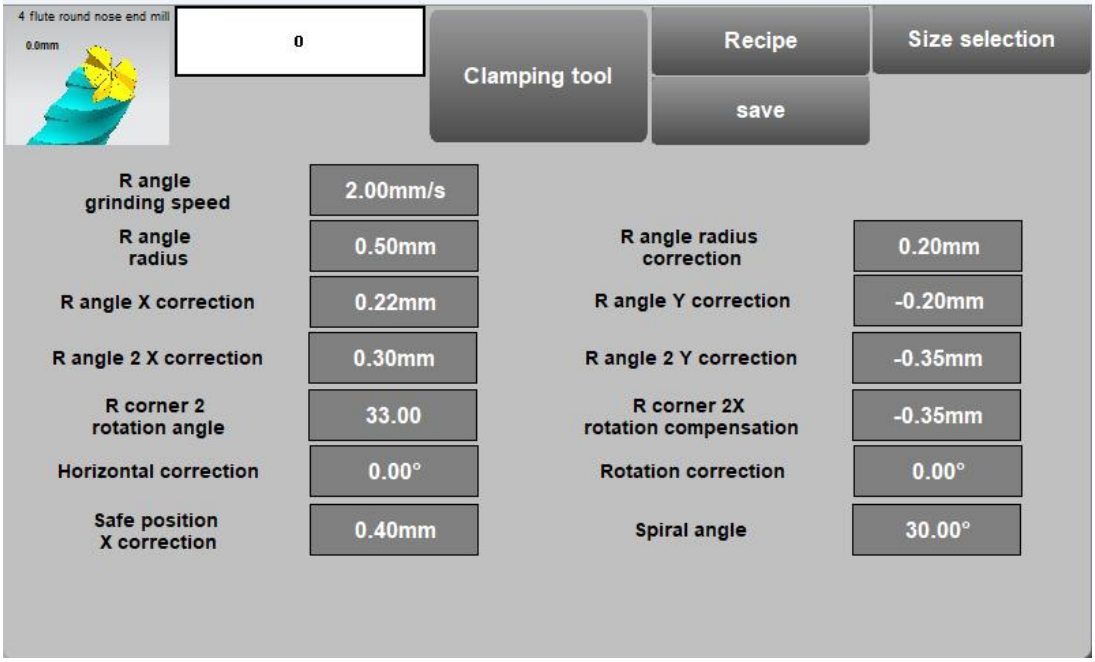


7.2 Select Corner Radius



7.3 Select Size

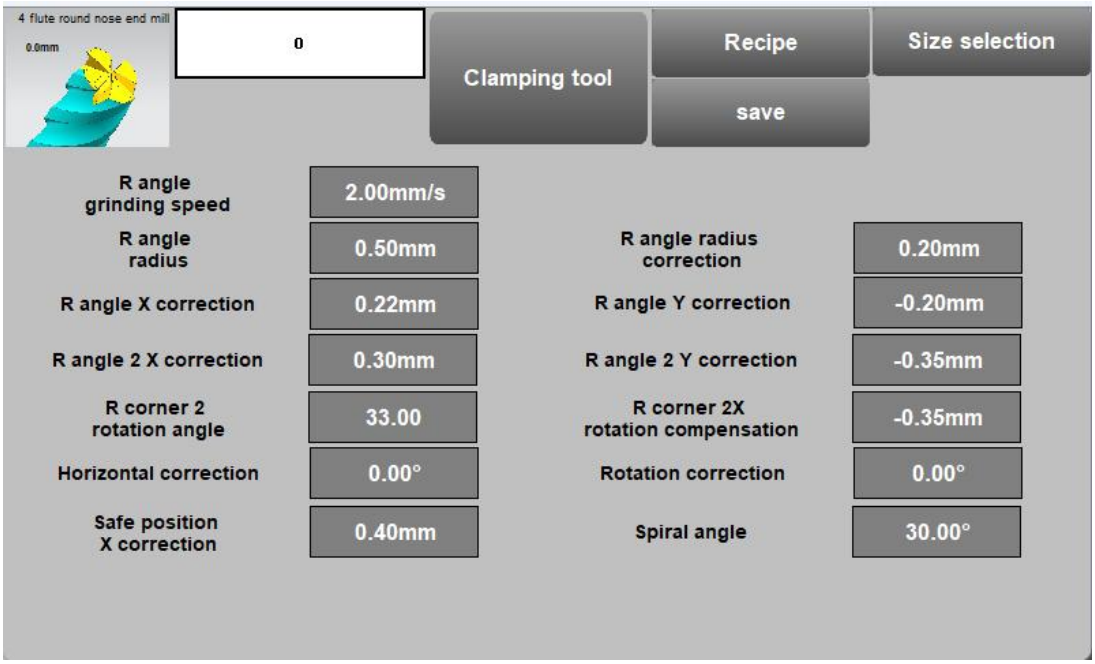




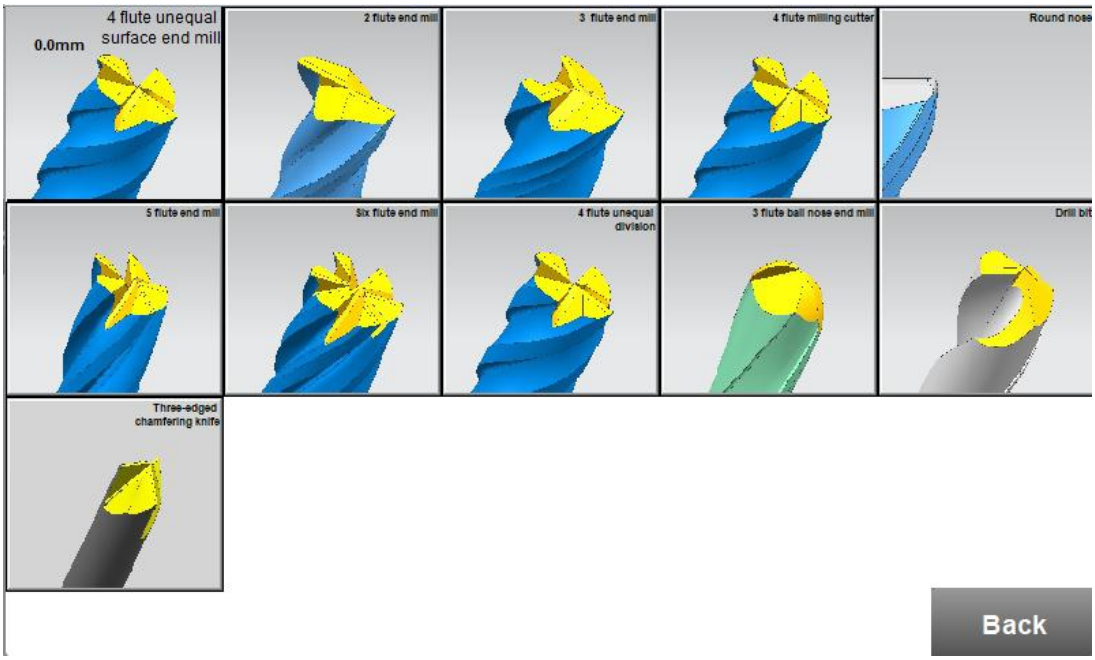
ITEM	Function
R angle grinding speed	The higher the value, the faster the speed (do not exceed 1)
Horizontal correction	Adjust the horizontal angle of the end mill (1 ° means an additional 1 degree of forward rotation)
R angle radius	According to the requirements, if 0.5 is set, it represents R0.5
R angle radius correction	According to the size after grinding, the shape after grinding can be flexibly adjusted. If the size is not enough or the blade flute is damaged, this parameter can be increased
R angle X correction R angle 2X correction	This parameter affects whether the connection between the rear angle and the R angle is smooth. If there are steps on the surface after grinding, increase this parameter. If the parameter setting is too large, it will affect the shape and size of the R angle
R angle Y correction R angle 2Y correction	This parameter affects whether the connection between the blade and the R angle is smooth. If the blade has a step after grinding, increase this parameter. If the parameter setting is too large, it will affect the shape and size of the R angle
R corner 2X rotation correction	Keep factory Settings
Rotation correction	Keep factory Settings
sprial angle	According to the actual tool settings, if the deviation is too large and affects the shape of the tool after grinding, it may not meet the grinding requirements

8.Four-flute unequal division end mill

8.1 Click on the picture in the upper left corner

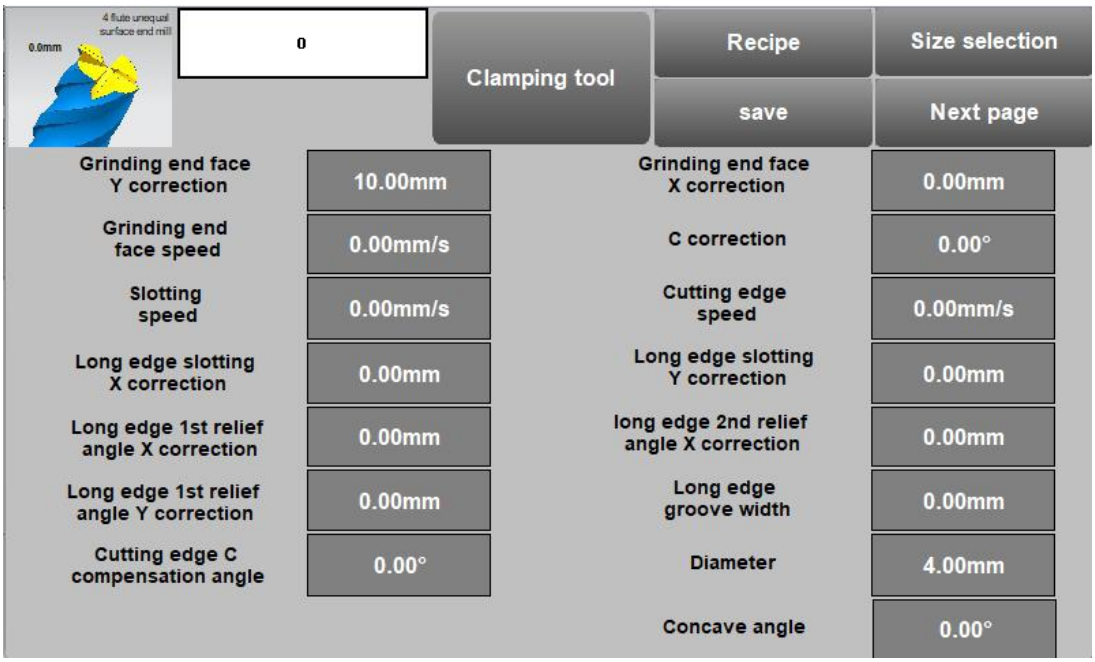


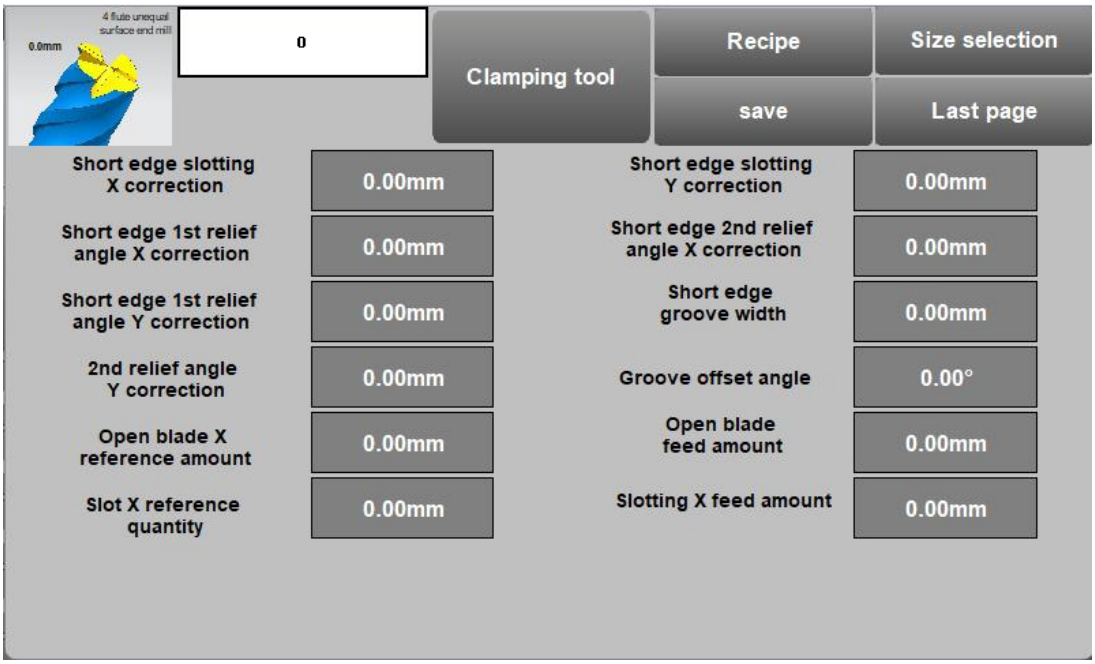
8.2 The four flutes of SELECT are not equally divided



8.3 Select Size

8.4 Next Page





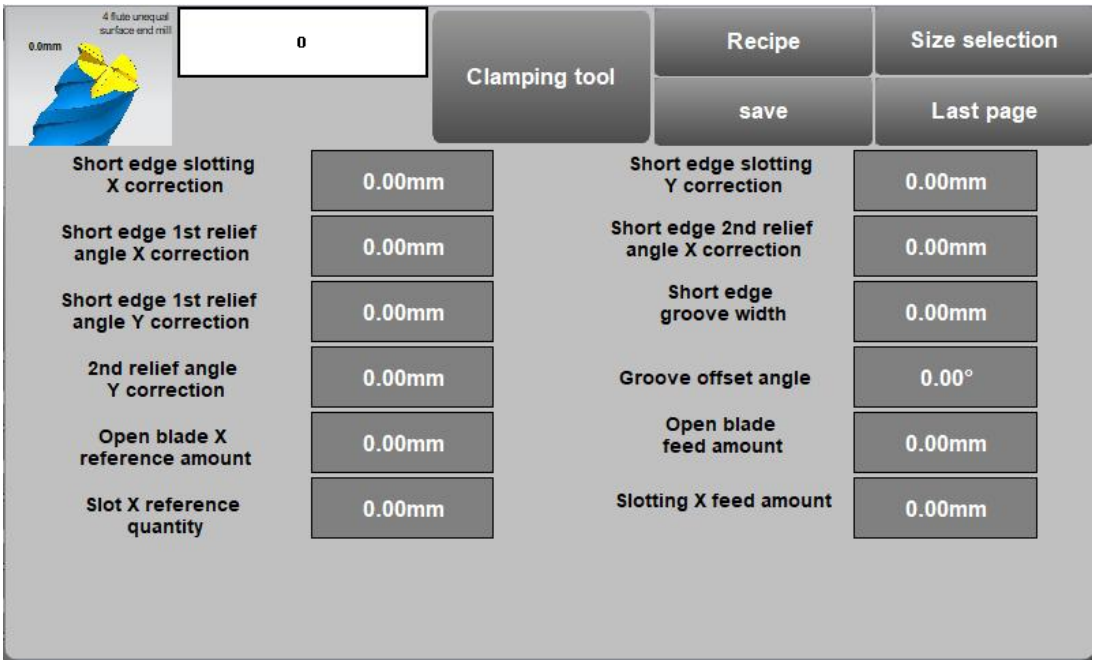
ITEM	Function
Grinding end face correction	X: Material removal (+ 0.1 = +0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Grinding end face correction Speed	The higher the value, the faster the speed (do not exceed 1)
C correction	Adjust the feed Angle when grooving (1° is more than 1 degree forward rotation)
Slotting/Cutting Speed	The higher the value, the faster the speed (the slower the speed of the end mill, do not exceed 1)
Long flute （Connecting flute） Slotting correction Short flute （Broken flute） Slotting correction	X: Material removal (- 0.1 =+ 0.1mm) Y: Feed position (negative 0.1 = 0.1mm away from cutter center)
Long flute （Connecting flute） 1st relief angle correction Short flute（Broken flute） 1st relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y： Feed position （-0.1=+0.1mm close to the center of the end mill)
Long flute （Connecting flute） 2nd relief angle correction Short flute（Broken flute） 2nd relief angle correction	X: Material removal (- 0.1 =+ 0.1mm) Y： Feed position （-0.1=+0.1mm close to the center of the end mill)
Slotting width	Adjust the Slotting width (not less than 0)
Diameter	Set according to tool Size

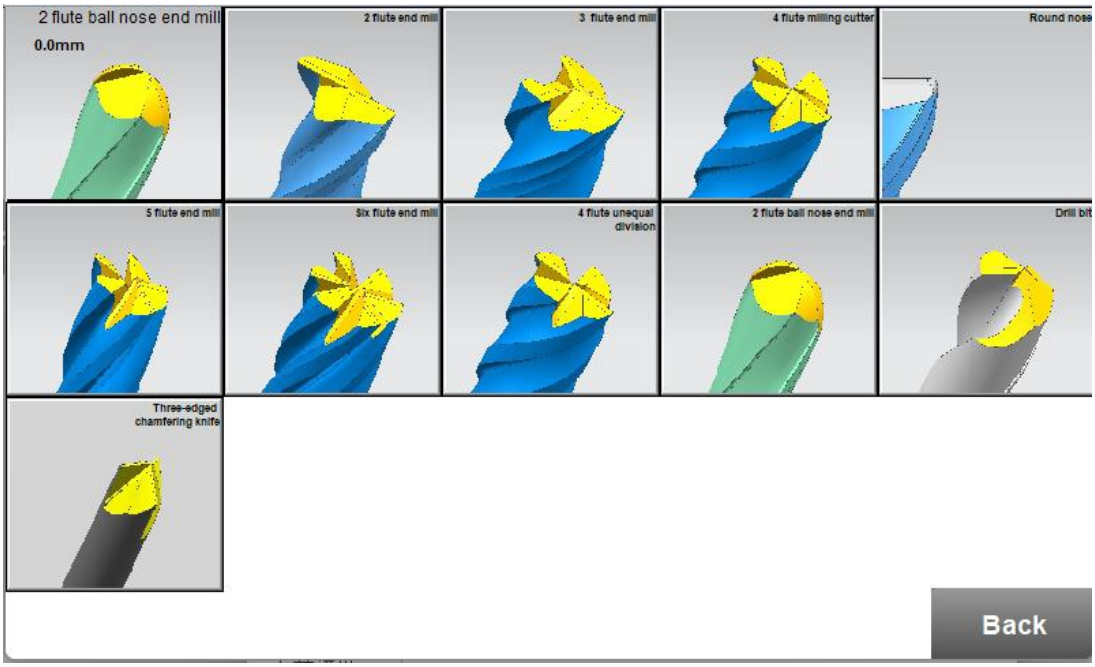
concave angle	concave angle is generally set to 2°
Cutting flute c compensation angle	Suggested parameter:0
Groove offset angle	Suggested parameter:10
Open balde X reference amount	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.
Open blade feed amount	Multi-stage grinding starting point to reduce grinding times
Slot X reference quantity	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.
Slotting x feed amount	Multi-stage grinding starting point to reduce grinding times

9 .Ball end mill

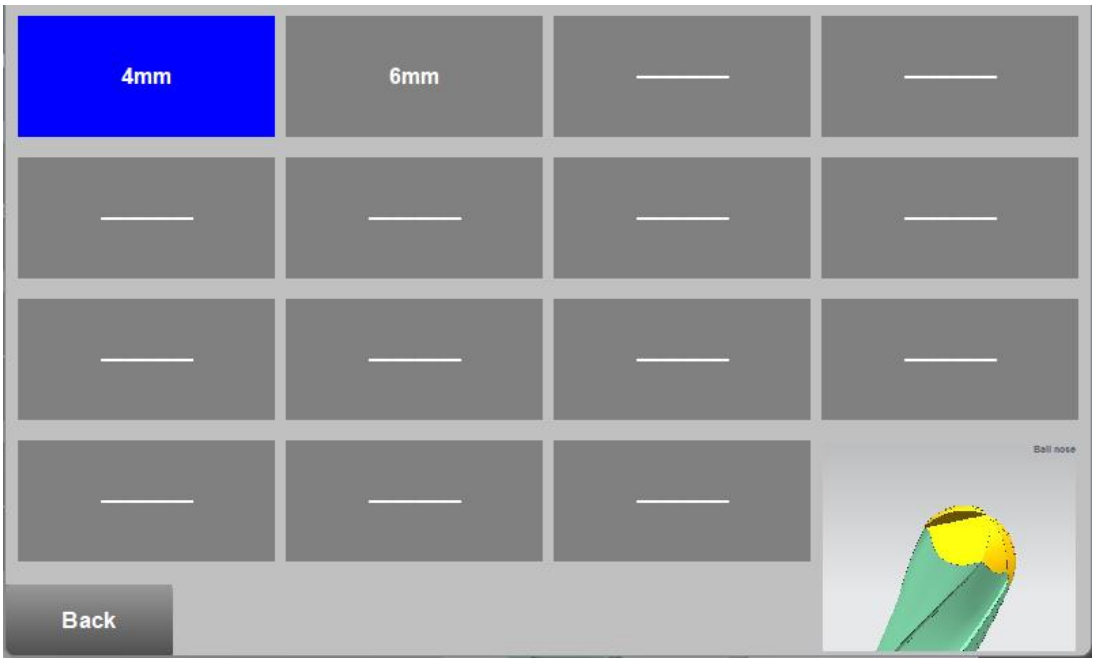
9.1 Click on the picture in the upper left corner

9.2 SELECT Two-flute unequal end mill

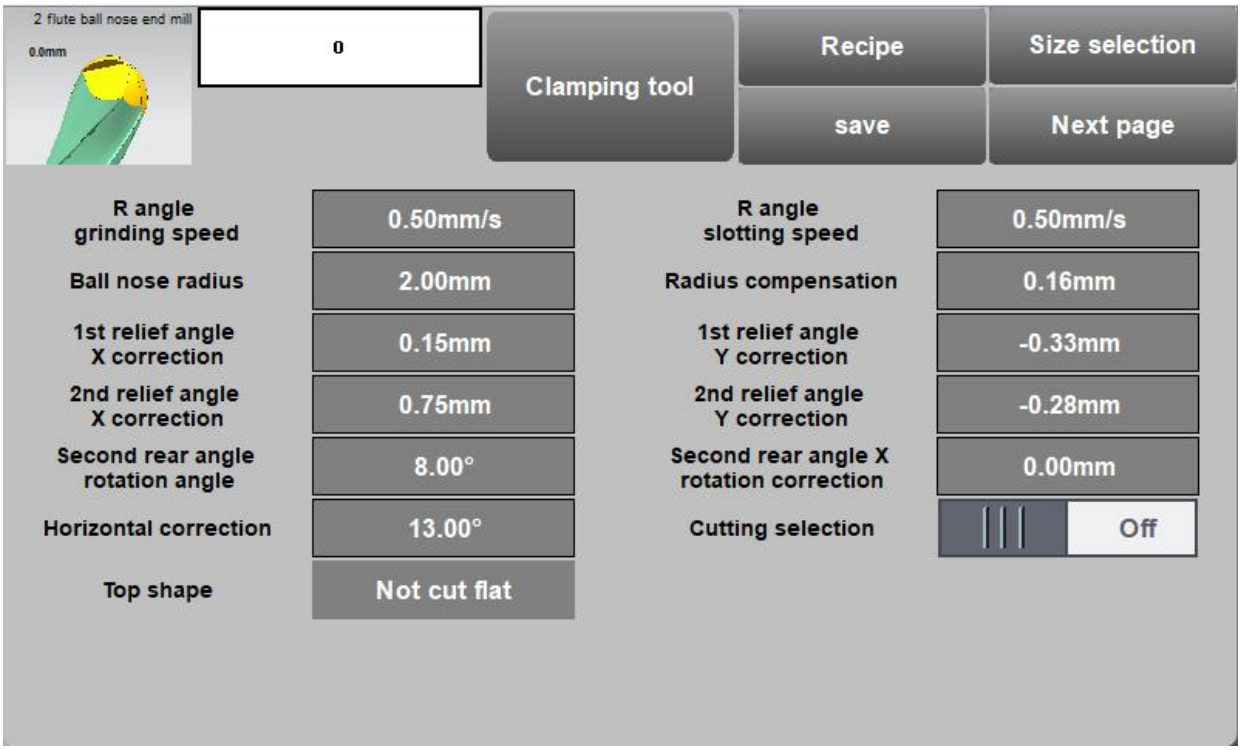




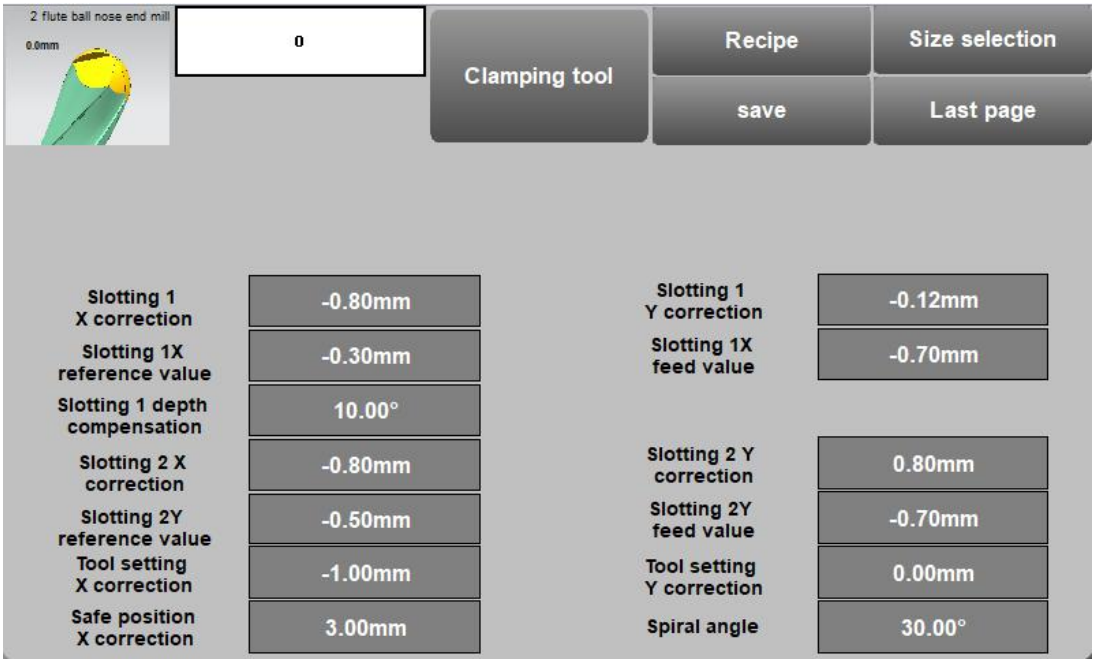
9.3 Select Size



9.4 Cutting selection：（It is not recommended to open.）



9.5 Next Page



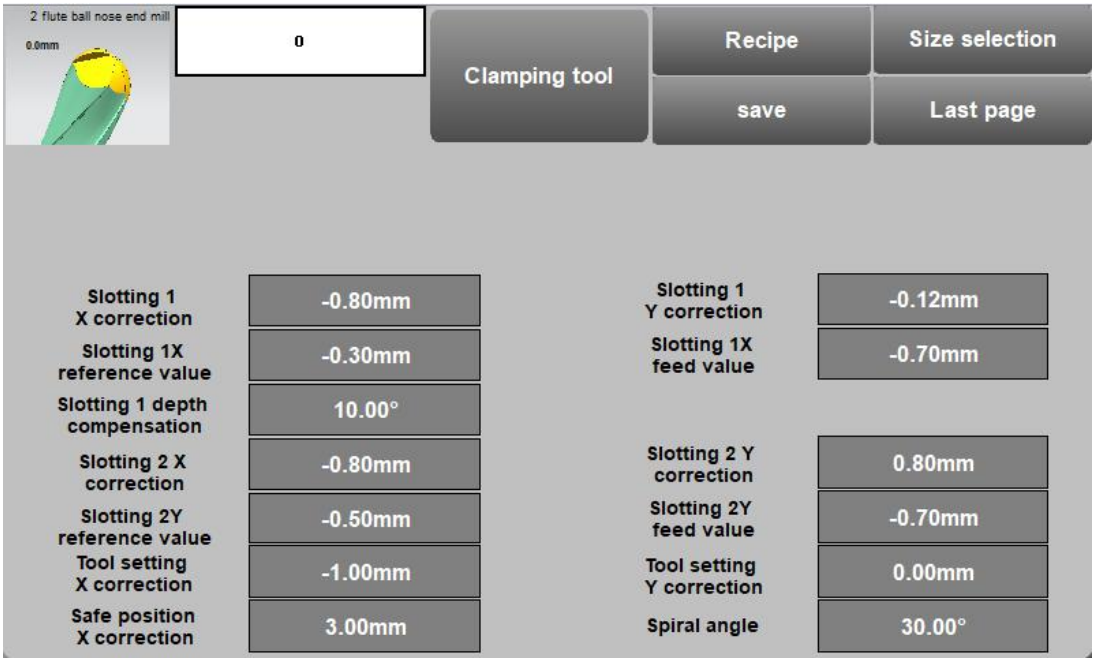
ITEM	Function
R angle grinding speed	The higher the value, the faster the speed (do not exceed 1)
R angle slotting speed	The higher the value, the faster the speed (do not exceed 1)
Horizontal correction	Adjust the horizontal Angle of the ball cutter (1° is more than 1

	degree of positive rotation)
Ball nose radius	Adjust according to the actual tool
Radius compensation	Set this parameter based on the actual size of the tool after grinding. If the flute is damaged, this parameter can be increased
1st relief angle X correction 2nd relief angle X correction	This parameter can change the blade width, and the smaller the parameter, the wider the blade width For example, changing the original parameter from 0 to -0.1 means grinding 10 more threads and moving the X-axis in the negative direction (forward)
1st relief angle Y correction 2nd relief angle Y correction	This parameter can eliminate the central convex point of the ball cutter. For example, if there is a small convex point in the middle of the two blades, this parameter can be adjusted to decrease. At this time, the Y-axis extension in the negative direction (left) parameter increases, and the Y-axis extension in the positive direction (right) moves
second rear rotation angle Second rear angle X rotation correction	This parameter is used for avoiding empty spaces.Keep factory Settings
Top shape	Select based on the current shape of the tool
Correction of the safe position for slotting/cutting flute	Retreat the safe distance when switching the blade
Cutting selection	This parameter is not recommended to be turned on as it will affect the service life of the grinding wheel. For example, when selecting to cut flat, the program will grind off the set length in sections according to the parameter
Cut flat Y for correction	The protected section of this parameter is completely cut off. Generally, this parameter is set as a negative number, such as -1
Cut to the safe position of Y	This parameter ensures the safety of the grinding position. Generally, this parameter is set to a positive number such as 1
Flattening speed	The higher the value, the faster the speed, it is recommended to be less than 1, if the large tool heat, the life of the grinding wheel is also affected
Cut flat length	If it is set to 1, grind off 1mm of the ball knife
Flatten the reference value	For a single grinding value, if the cutting length is 1mm and the cutting reference value is 0.1, then each grinding is 0.1, and the

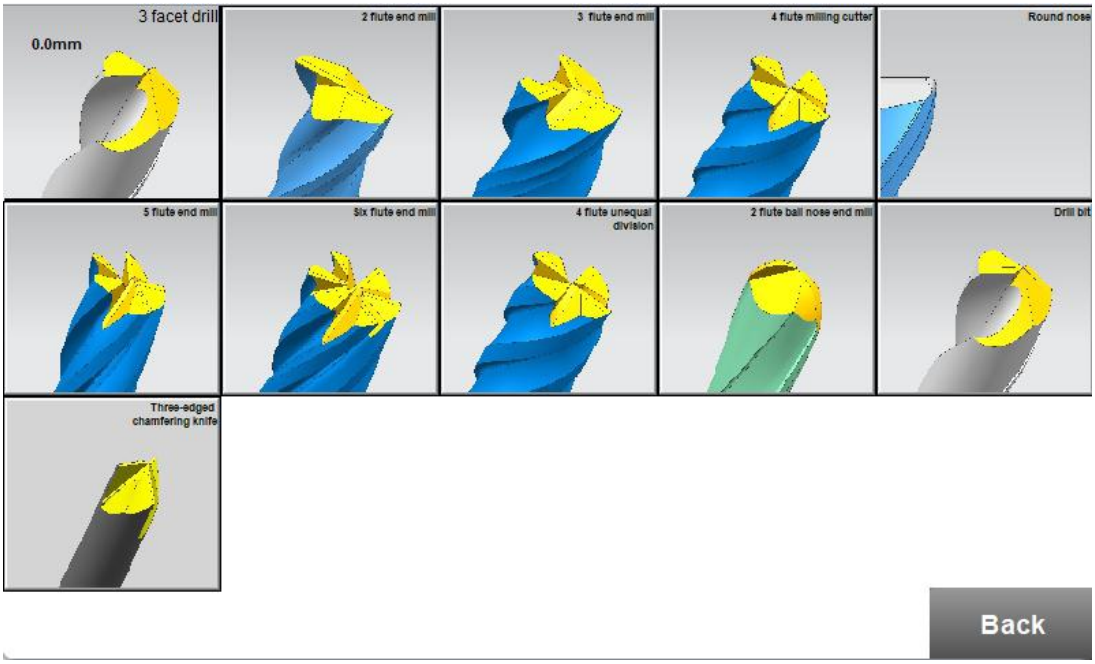
	grinding is done 10 times
slotting 1 X correction	This parameter affects the depth of the slot, the smaller the parameter, the shallower the slot, that is, the farther away from the center of the circle in the vertical direction
slotting 1 Y correction	This parameter affects the horizontal distance between the two blades, the smaller the distance, that is, the smaller the middle distance
Slotting 1X reference value	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.
Slotting 1X feed value	Multi-stage grinding starting point to reduce grinding times
Slotting 1 depth compensation	This parameter remains factory set
Slotting 2X correction Slotting 2Y correction	This parameter guarantees the depth of the side slot This parameter ensures the slotting width on the side. If the slotting area is too small, both parameters will be reduced simultaneously
Slotting 2Y reference value	When this parameter is less than 0, open multiple segments, such as -0.1 feed 0.1mm each time until the feed reaches the program calculation end position, it is recommended to open this Function for tools over 10mm.
Slotting 2Y feed value	Multi-stage grinding starting point to reduce grinding times
Tool setting X correction	This parameter takes effect when the top shape is uncut. It is recommended to set a negative radius, such as -5 for a 10mm ball cutter. If the X direction fails to align, reduce the value by -5.1
Tool setting Y correction	This parameter takes effect when the top shape is uncut. It is recommended to set it to 0. If the Y-axis fails to align, increase the value by 0.1
Safe position X correction	To ensure the safety of the X direction position, it is recommended to set a positive number such as 2
sprial angle	According to the actual tool settings, if the deviation is too large and affects the shape of the tool after grinding, it may not meet the grinding requirements

10. Three facet drill (DG Drill)

10.1 Click on the image in the upper left corner

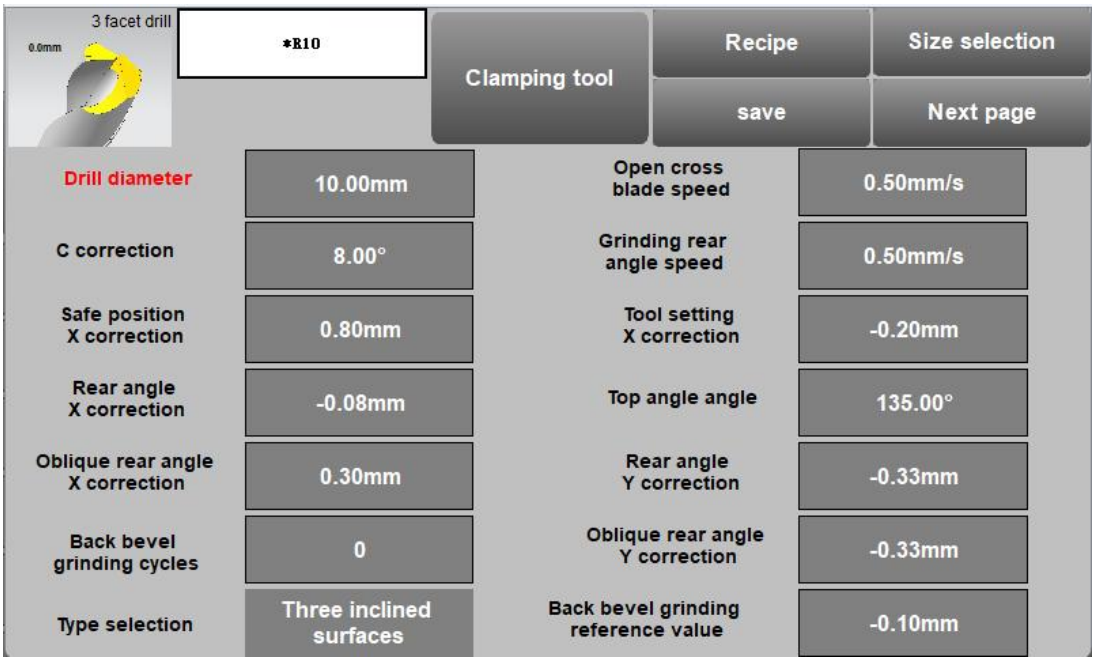


10.2 SELECT BIT

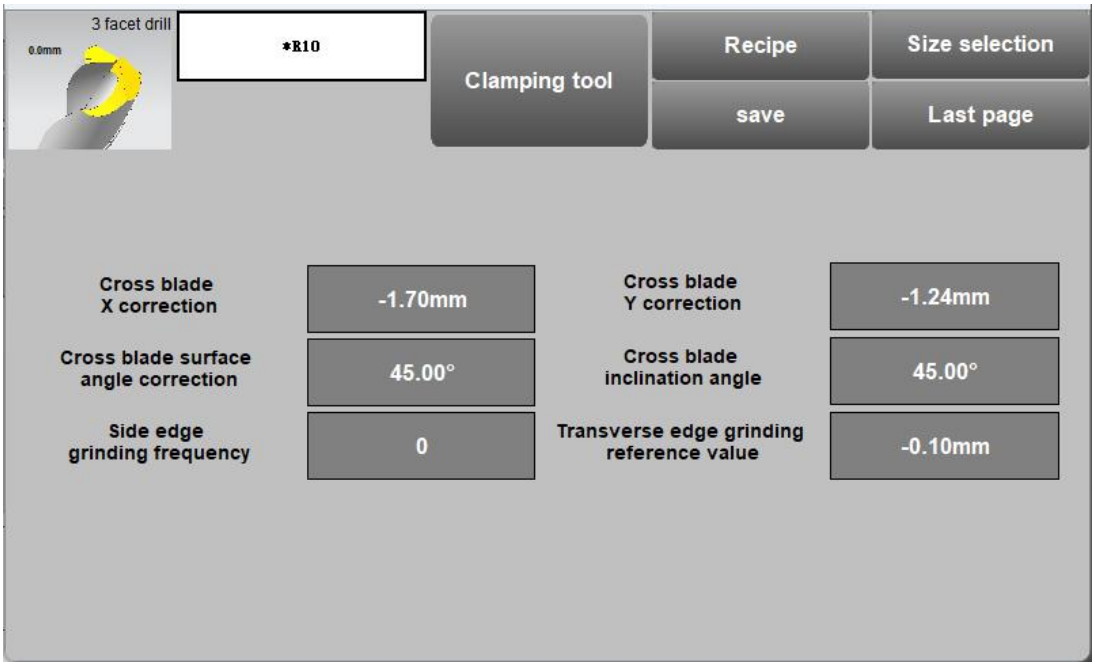


10.3 Select Size

10.4 Next Page



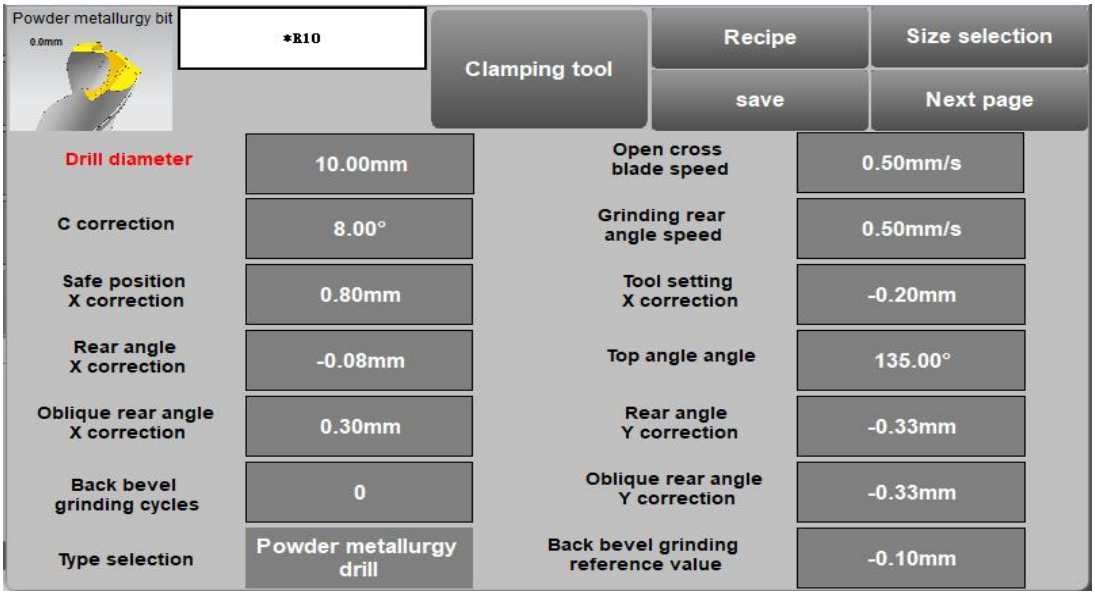
Note: Non integer drill bits can be directly modified at the Drill Diameter.
If 10 is changed to 8.8, it can be used directly.



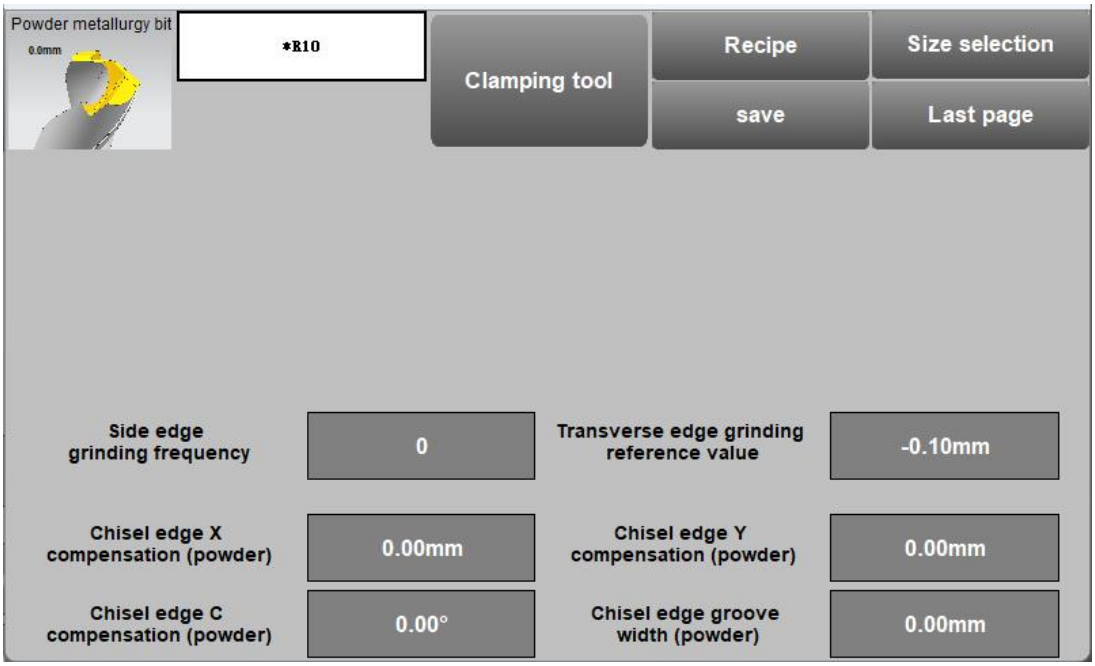
ITEM	Function
Open cross blade speed	The higher the value, the faster the speed (do not exceed 1)
Grinding rear angle speed	The higher the value, the faster the speed (do not exceed 1)
C correction	Adjust the horizontal angle of the tool to ensure its levelness
Safe position X correction	To ensure the safety of the X direction position, it is recommended to set a positive number such as 2
Top angle angle	The top angle after grinding is 135 °
Rear angle X correction	This parameter affects the width of the cutting flute. If the value decreases, the cutting flute will increase. That is, if X moves forward and the decrease value is -0.1, then feed 10 threads
Oblique rear angle X correctlon	Avoid full-face grinding; reserve width for relief angle to prevent over-grinding. Logic matches X-axis relief angle compensation.
Rear angle Y correction Oblique rear angle Y correctlon	Adjust parameter based on midpoint grinding status: decrease if unground, but too low may leave burrs.
sprial angle	Set parameters according to tool geometry. Excessive deviation may cause post-grinding shape mismatch.
The number of times of oblique relief Angle grinding Back bevel grinding reference value	Enable multi-stage grinding for large tools (activated when oblique relief angle passes >0). Example: 10 passes with baseline -0.1mm → 10 steps at 0.1mm within 1mm to endpoint.

Type selection	Triple-bevel/PM drills (optional configuration required).
Cross blade X correction	Reduce parameter to narrow chisel flute (e.g., -0.1mm reduces width by 0.1mm).
Cross blade Y correction	Decrease to thicken midpoint; increase to thin or stagger.
Cross blade surface angle correction	Increasing parameter raises C-Select post-groove rotation angle, reducing secondary relief angle area.
Correction of the bevel Angle of the cross blade	The smaller the parameter, the more inclined the transverse flute Angle
Grinding times of the cross flute Transverse flute grinding reference value	Due to excessive chisel flute grinding, multi-stage grinding is recommended for large tools. When chisel flute passes >0, multi-stage activates. Example: 10 passes with baseline -0.1mm → 10 steps at 0.1mm increments within 1mm to the endpoint.

10.5 Type: SELECT Powder Metallurgy



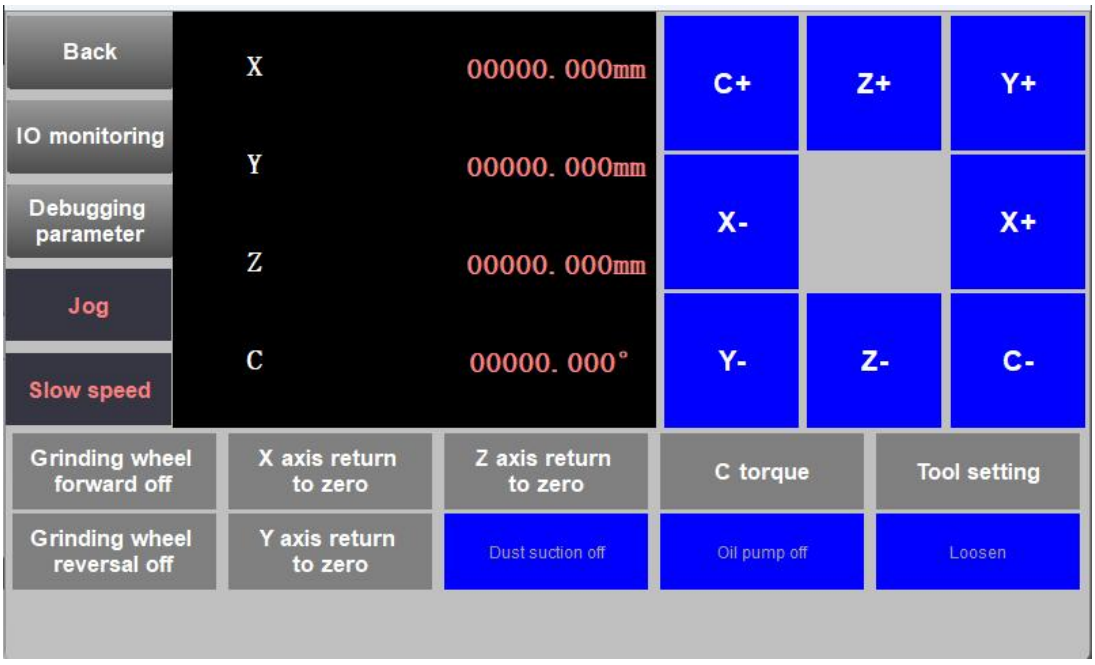
10.6 Next Page



Chisel X flute compensation(powder)	This parameter controls chisel flute width: reduce to narrow, increase to widen. Example: -0.1mm reduces width by 0.1mm.
Chisel flute Y compensation(powder)	This parameter adjusts central gap: decrease to thicken midpoint, increase to thin or stagger.
Chisel flute C compensation(powder)	Higher values increase chisel flute bevel angle (steeper slope).
Chisel flute compensation(powder)	Higher values widen the chisel flute groove.

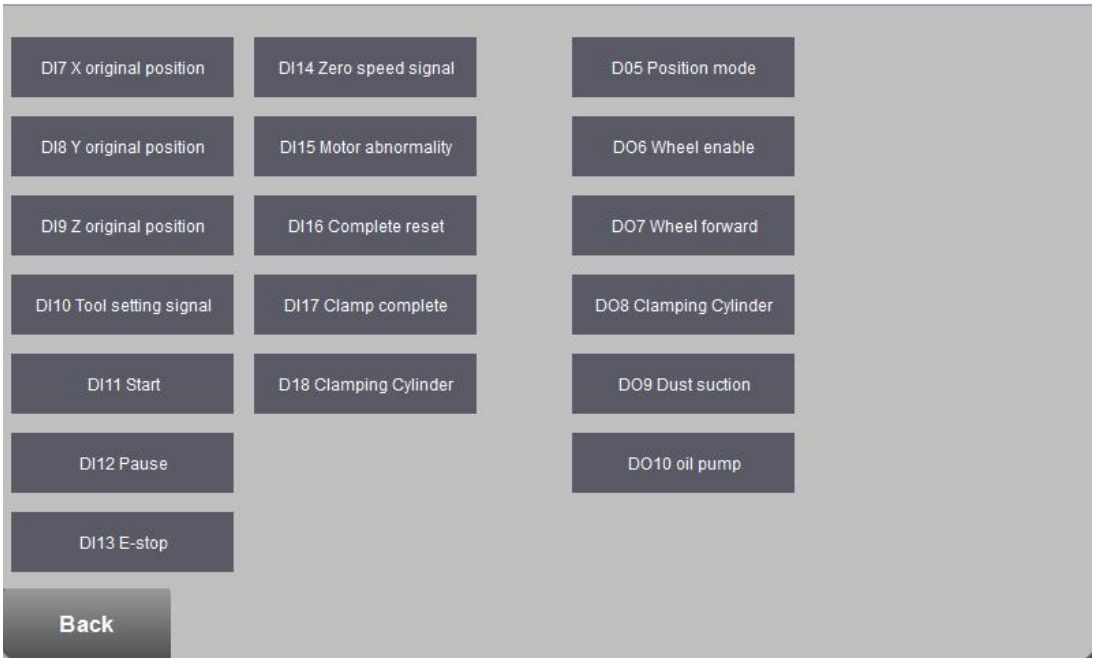
11.Manual operation

After returning to the main page, click on the arrow in the bottom left corner and select "Manual Operation"



Operation icon	Usage method
X- X+	Manually tap or long press to move the X-axis left and right
Y+	Manually tap or hold down to move the Y-axis forward and backward
Z+	Manually click or long press to move the Z-axis (grinding wheel) up and down
C+	Manually click or hold to rotate the C-axis (end mill) Angle
Gromdomg wheel forward off	Long press (2s) to start/stop forward wheel rotation.
Gromdomg wheel reversal off	Long press (2s) to start/stop reverse wheel rotation.
X axis return to zero	Long press (2s) to initiate X-axis homing.
Y axis return to zero	Long press (2s) to initiate Y-axis homing.
Z axis return to zero	Long press (2s) to initiate Z-axis homing.
C torque	Long press (2s) to start C-axis (end mill) rotation.
Tool setting	Long press (2s) to activate tool calibration.
Point movement/inch movement	Click to toggle movement mode (Jog: 0.02mm/step).
Slow/Fast speed	Click to toggle movement speed.

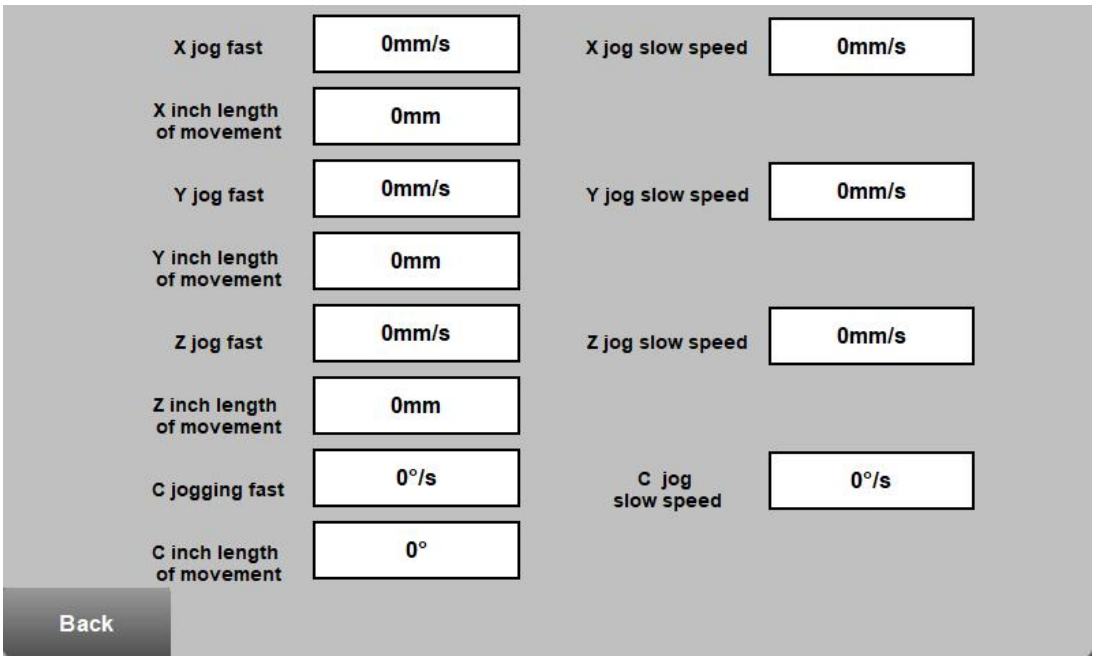
11.1 IO Monitor



ITEM	Function
X Y Z original postition	Monitor whether XYZ is in the origin state
Tool setting signal	Monitor and display the status of the induction signal for the blade block
Start Pause E-stop	Monitoring display shows the status of the Start Pause E-stop signal
Zero speed signal Motor abnormality	Monitoring display of C-axis induction and abnormal status
Position mode	Monitoring display mode status
Wheel enable	Monitor and display the enabling status of the grinding wheel
Grinding wheel forward off	Monitoring shows the forward rotation status of the grinding wheel

When the parameter is gray, it indicates a signal, and when it is blue, it indicates no signal.

11.2 Debugging parameters

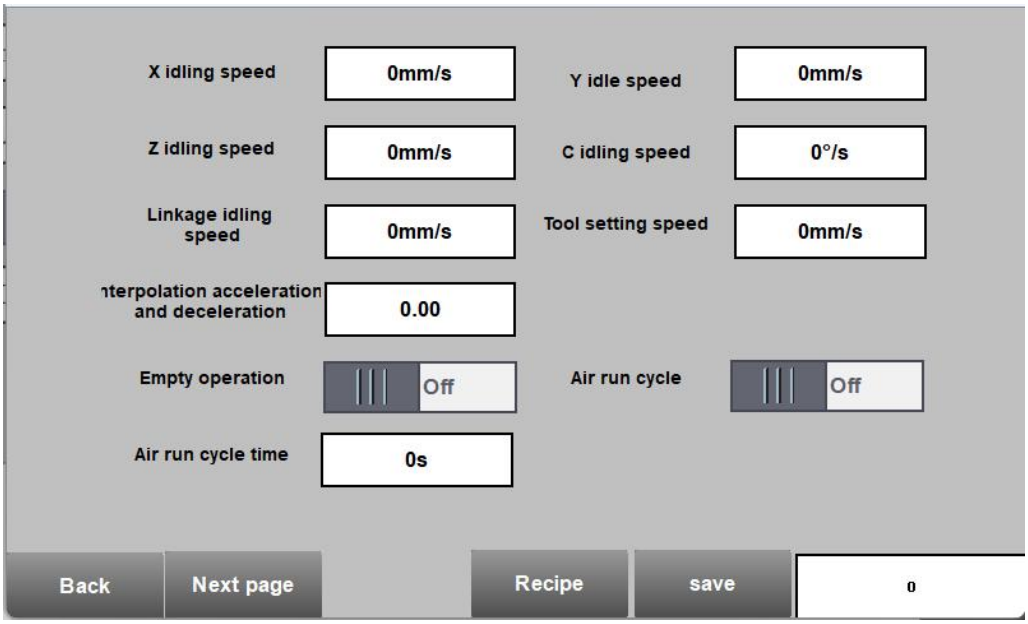


ITEM	Function
X Y Z C jog fast /slow speed	Fast/slow speed during manual operation
X Y Z C inch length of movement	When manually operated, inch the distance of a single movement (every 2 threads)

Note: No modification is recommended.

12. Parameter setting

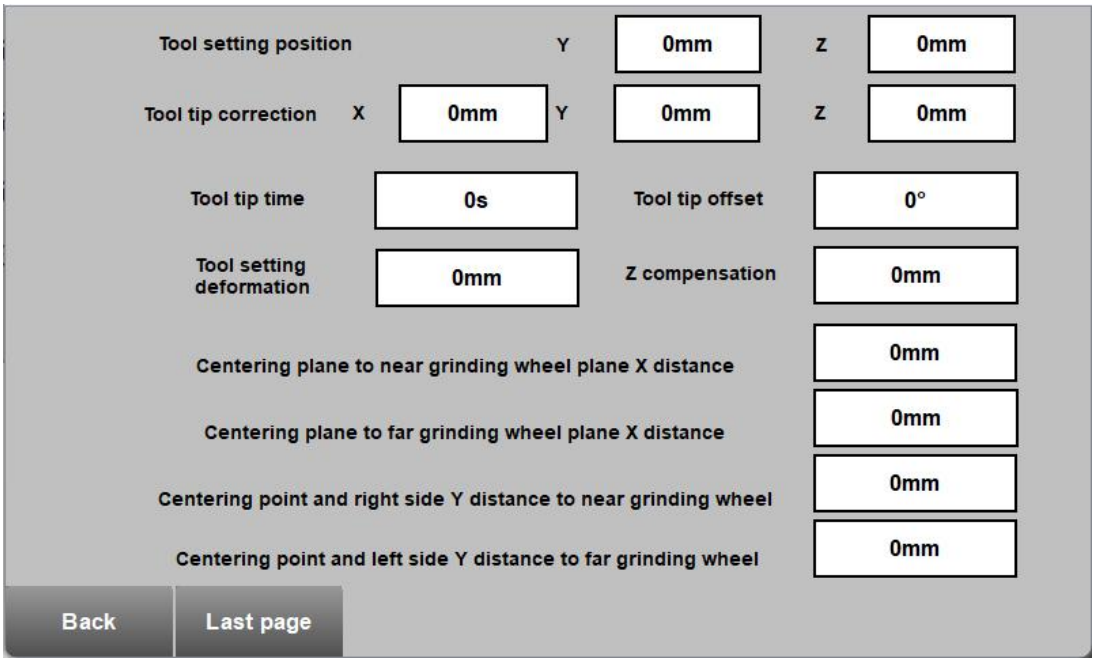
12.1After returning to the main page, click on the arrow in the bottom left corner and select"Parameter setting".



ITEM	Function
X Y Z C idling speed	Adjust the movement speed of each axis during grinding
Linkage idling speed	Adjust the overall movement speed during grinding
Tool setting speed	Adjust the tool movement speed during grinding
Air run cycle	For the display of 10MM end mill with empty running (please do not open)

Note: No modification is recommended.

12.2 Next Page



ITEM	Function
Tool setting positionY Z	Adjust the starting position of the tool (based on the complete return of the 12mm core rod)
Tool tip correction X Y Z	Adjust the position of the alignment block when adjusting the alignment X is the depth of the end mill and the tool block (negative 0.1 means an additional 10 threads) Y is the position of the end mill and the tool block (negative 0.1, away from 10 threads) Z is the height of the cutting block during cutting (negative 0.1 means a decrease of 10 threads)
Tool tip time	Adjust the time required for tool turning
Tool tip offset	Adjust the rotation of the angle after cutting
Tool setting deformation	Difference between initial contact and contact induction of the blade block
Z compensation	Adjust the height of the grinding wheel motor
Centering plane to near grinding wheel plane X distance	Confirm the difference in distance between the starting point of the tool and the cylindrical grinding wheel X
Centering plane to far grinding wheel plane x distance	Confirm the difference in distance between the starting point of the tool and the disc-shaped grinding wheel X
Centering point and right side Y distance to	Confirm the difference in distance between the starting point of

near grinding wheel	the tool and the cylindrical grinding wheel Y
Centering point and left side Y distance to far grinding wheel	Confirm the difference in distance between the starting point of the tool and the disc-shaped grinding wheel Y