RQ-120-B Automatic CNC EDM Notch

Instruction manual

Nanjing BKN Automation System CO.,LTD

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Company Profile

Nanjing BOKENA Automation System Co.,Ltd., originated from the eddy current testing laboratory of Nanjing University of Technology. It is a eddy current testing benchmark enterprise and has long been committed to the development and production of bearing hardness and crack eddy current screening equipment . Our products are widely used in aerosapce ,electricity,petroleum , natural gas , metallurgical machinery and automative industries and we have high proprietory intellectual property rights patent technology . Our products are exported to USA, RUssia,Singapore,Thailand ,India ,Hongkong,Taiwan,Yemen,Kazakhsta n,Iran,Japan,Korea, Brazil. We advocates "Technology is the strength ,quality is the foundation, honesty is the basic,"and "exceedinhg detection and creating value" is our tenet and team value.

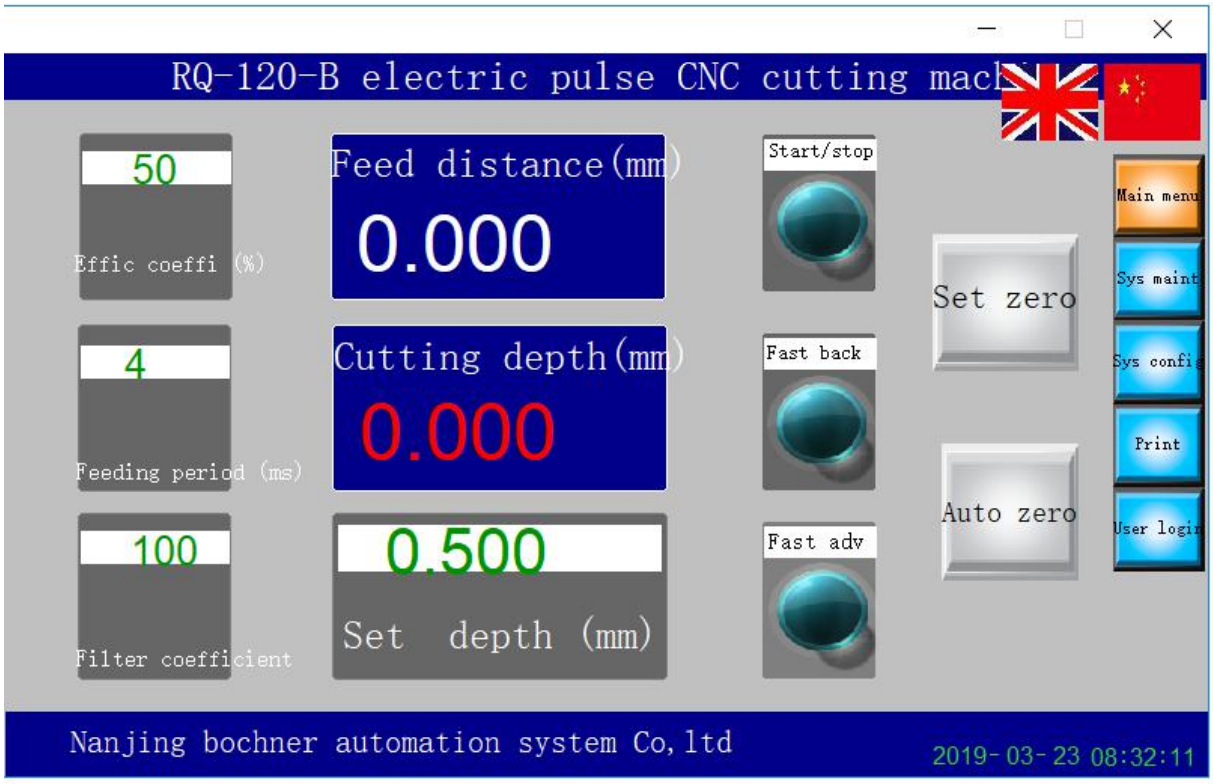
We provide customer-centric design services to meet the different application needs of our users. BKN will work with you to keep up with the times. For China's industrial non-destructive testing devices and equipments to the world, to the future and unremitting struggle!

The eddy current screening machine is the company's flagship product, suitable for rapid screening of bearing cracks, mixing , hardness deviation , burns . The whole system consists of four parts: testing

equipment , testing probe , mechanical and electrical . Realize automatic detection of defects, automatic sorting ,automatic alarm.

2.1 Interface display parameter

description:



1: 

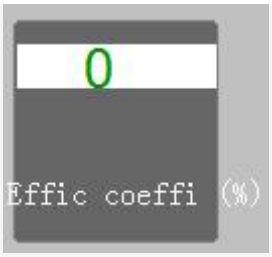
: Display current scratch display value

2: 

: Depth value to be scratched.

3: 

: Injured tool head actual position display value

4: 

:Standard parameters for depth. It is used to compensate the loss of the electrode piece. The larger the value, the smaller the loss, the value range is 0~100. (When the steel is scratched, it can be adjusted according to the material of the steel and the depth of the scratch). Set to 100 in the actual setting, then scratch, divide the measured actual value by the set value and multiply by 100, and then write into the efficiency coefficient.

The efficiency of a certain steel piece is generally as shown in the following table. The specific value is based on the set measurement value:

Set the depth of the scratch（mm）	Recommended efficiency（%）
0.35	74

0.47	73
0.58	71
0.70	70
0.90	68
1.05	67

5: 

: The time interval between the knife head and the head when the wound is cut. If it is found that there is often an automatic regression phenomenon, this value should be appropriately increased; If the burn speed is too slow, this value is appropriately reduced. (Usually working is to set this value to "4" in 0.01 seconds)

6: 

: It is the short circuit time when the knife head hits the workpiece, to the set time. The knife is automatically reversed. (Usually working is to set this value to "100" in 0.01 seconds)

7: 

: Move the knife head to the surface of the workpiece manually.

8: 

: Manually return the cutter head quickly

9: 

: Start the device, perform automatic scratching, and stop after setting the position. Then return to the set bit.

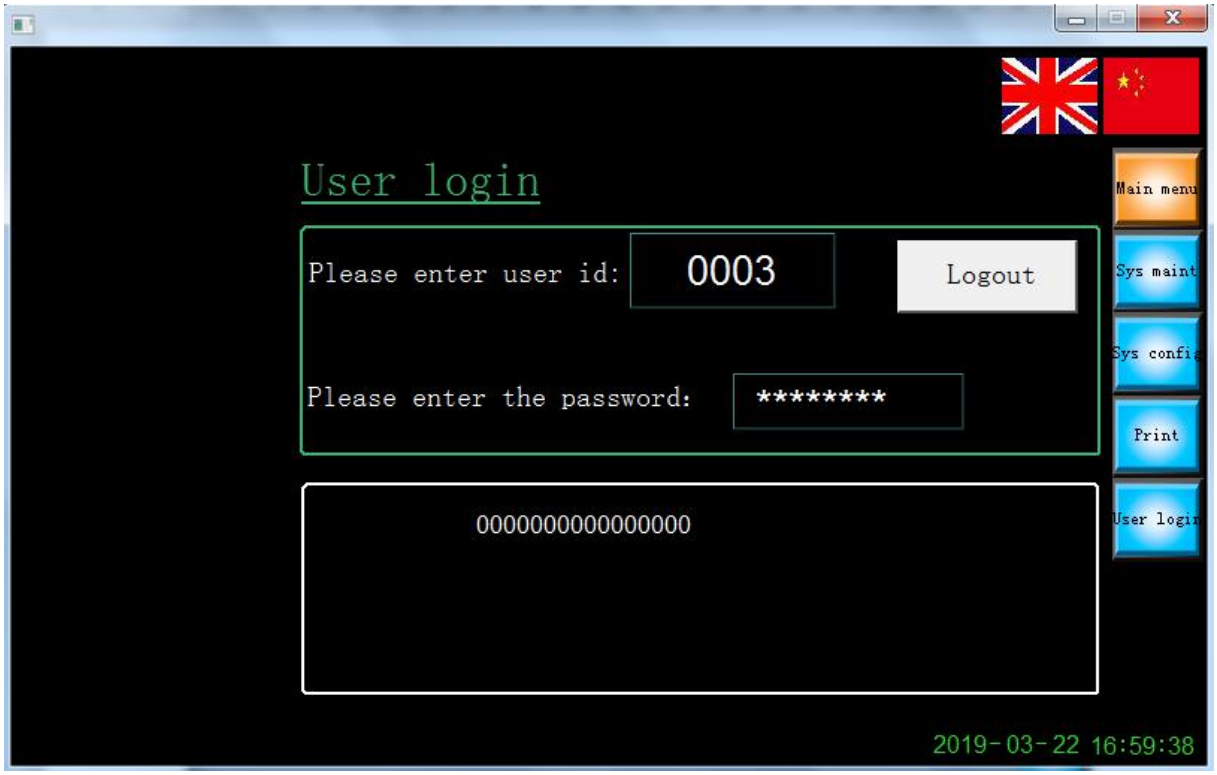
10: 

: At this time, the "feed distance" and "depth" display values are cleared; the scratch is started, and when the "depth" reaches the "set depth", the scratch stops automatically;

11: 

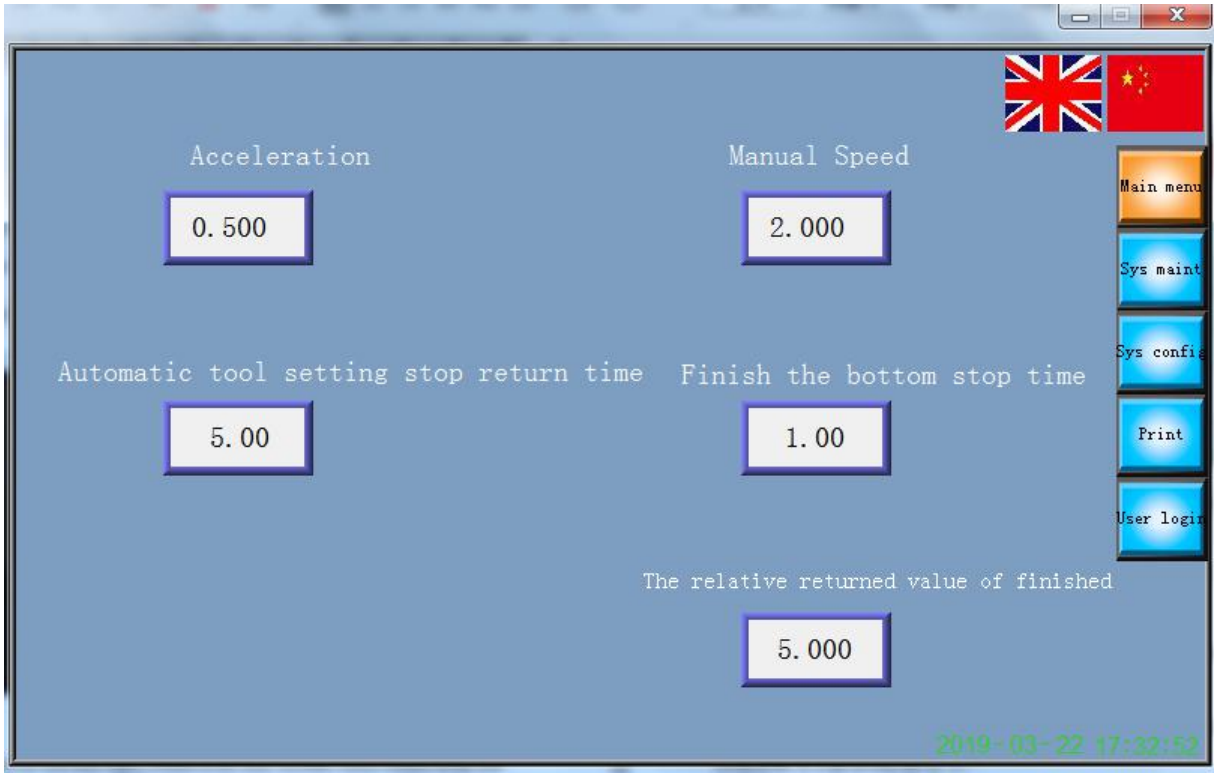
: When pressed, the cutter head automatically moves to the surface of the workpiece and stops immediately after touching the fire. (You can fast forward the button at halfway)

Setting Screen



Click on the user login. Please enter user number: 0003. Please enter the password 83532848. 

Button, appear below setting screen



1, acceleration: The initial speed of the motor when manual, generally set to "0.5", usually does not need to be adjusted.

2, manual speed: The manual speed of the motor, generally set to "2", usually does not need to adjust.

3, automatic knife stop time: automatic knife, when the blade touched the workpiece, the return time is generally set to "5."

4, finish the bottom stop time: The time spent at the bottom after the burn is completed. It is generally set to "1".

5, finish the burn return position: After the burn is completed, the blade returns to the position(relative value. And how much to retreat after completion).

Panel Settings Data

1, pulse width: The width of the spark pulse is generally set to "25" and usually does not need to be adjusted.

2, Pulse interval time: The larger the value, the longer the interval, usually does not need to adjust. At a maximum of 19, it is generally set to "10"; When the maximum value is 31, it is generally set to "18".

3, current: generated spark size adjustment parameters, the minimum value of 1 file, the maximum is 15 files. Generally set to "2", when precision and fine cut surface are required, select a small file; When you need to speed up the burn, select a large file.

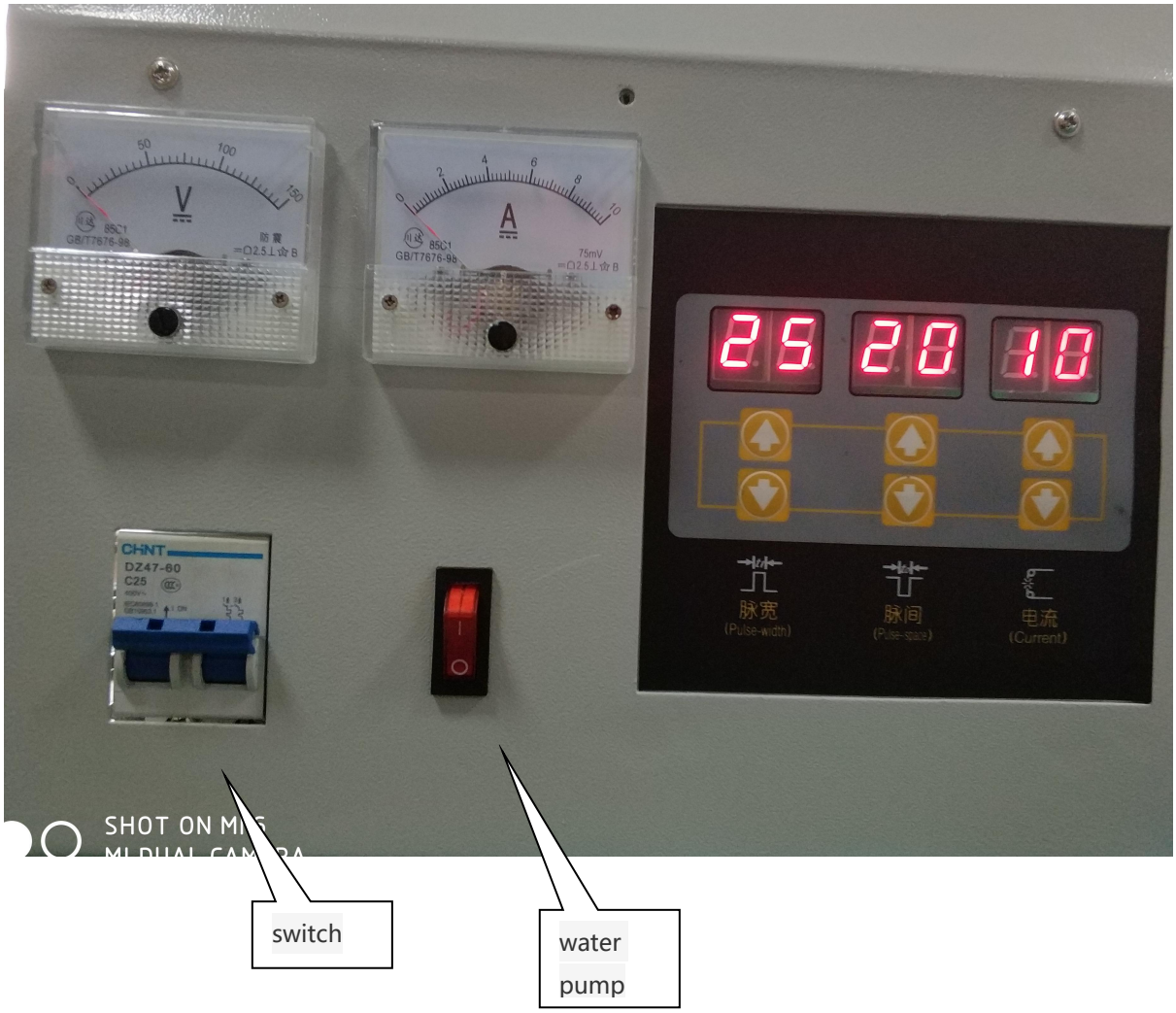
Print Screen

1、The device generates the printed data on the page after the burn is done

1、For printing, prepare a USB disk(USB disk file system: FAT32), click the screen button 

。The device generated print data will be saved in the USB disk in tabular form.

Front view of Machine



Connection view at the back of machine

2.2 Operation process

1. Fix the tool holder;

2. Install the scratched electrode piece to ensure that the blade does not touch the scratched object;

3. Connect the cable on the equipment, fix the coolant tube and electrode, and energize it; (the positive pole must be connected to the workpiece, and the negative pole should be connected to the cutter head terminal)

4. Set the parameters required for the scratch;

5, open the coolant, the nozzle is good;

6. Press the "fast forward" button: stop when the knife edge is close to the wounded object;

7. Press "Automatic tool setting": The tool head continues to advance, and when the spark occurs, it stops automatically.

8. Press "Start/Stop" to continue: When the "Depth" reaches "Set Depth", the scratch will stop automatically; then the tool head will return to the set position.

2.3 Note:

1. After energization, do not short-circuit the electrode; do not touch the electrode when it is energized, so as to avoid electric shock (do not connect the electrode in the wrong direction, and connect the positive electrode to the steel pipe).

2. If using flammable liquid for cooling, the operator should not leave the site to prevent fire.

3. When adjusting the advance and retraction of the knife up and down, pay attention to observe the advance and retraction stroke of the knife holder to avoid motor stall.