

CNC Glass Straight-Line Edging Machine

CNC-E9 General description

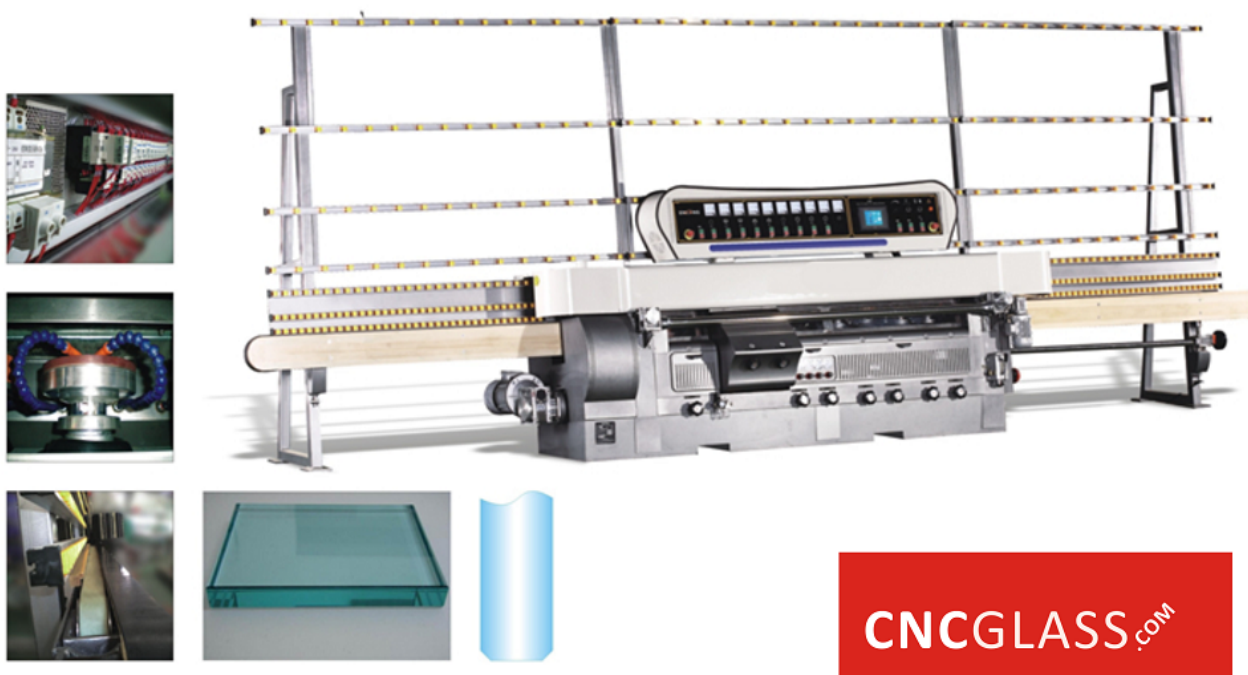
CNC-E9 is suitable for processing straight-line edge & 45° arrises of glass sheet with various size and thickness.

The main base is made of cast iron.

The glass thicknesses is adjusted by a servomotor and showed on a digital display.

A special design of the in-feed section for controlling the desired amount of glass removal without adjusting each spindle individually.

Glass Straight-Line Edging Machine



Independent felt wheel and the cerium water recirculation system make the flat edge more shining.

Input and output conveyor adopt timing belt which can improve the transmission precision.

It is easy to operate and has good performance.

CNC-E9 Model Explanation

9 Spindles totally: 5 spindles for the straight-line edge (adopt the independent wool felt wheel), 2 pieces of spindle for front and back arris each.

CNC-E9 Operation Condition

Power supply :AC380V±10% 3φ 50HZ±2%

Environment :Temperature : 1~40℃

R.H: 90%

CNC-E9 Technical Data

A. Processing glass thickness: 3-25mm

B. Angle of arris: 45°

C. Min.size of glass: 80mm×80mm

D. Processing speed: 0.5~4.5m/min

E. Installed power :19.08KW;

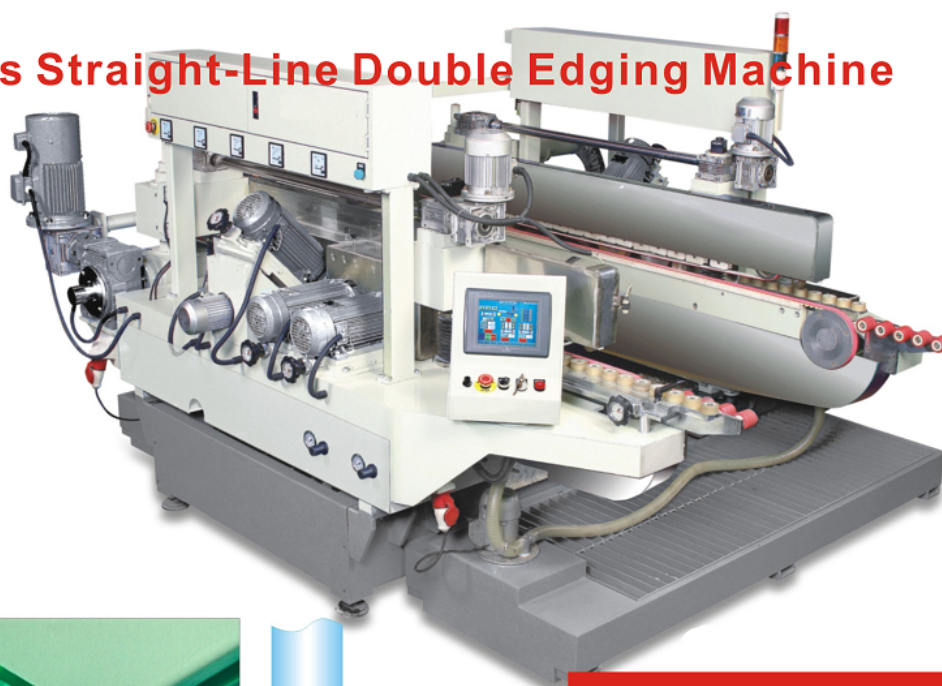
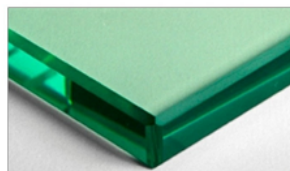
F. Dimension : 7000×1400×2500mm

CNC Glass Straight-Line Double Edging Machine

CNC2E8 is available in processing glass with thickness 3-12mm, which is produced in 8spindles (4 peripheral wheels per side) rough, fine grinding; polishing can be finished at a time. Adopt PLC for controlling. The CNC2E8 are also suitable for small production batches.



Glass Straight-Line Double Edging Machine

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Mainly parameter:

Dimension of the whole machine (L*W*H) (mm):3270*3240*1900

Working table height (mm): 850

The Min. area of processing glass (mm²): 150*150

Processing glass width (mm): 150~1500

Processing glass thickness (mm): 3~19

Processing glass Diagonal error (mm): $2m*2m \leq 1$

Processing glass parallelism error (mm) $\leq 0.5/2m$

The speed of transmission of processing glass (M/Min): 0.5-4.5M/Min.

(According to the thickness of glass to adjust)

Power (KW): 21.7

Voltage (V): 380

Frequency (Hz): 50

Air pressure (MPA):0.4-0.8

Weight (Kg):3500

CNCGLASS glass straight line edge grinding machine is suitable for grinding the straight edge and 45°corner angle of flat glass with various dimensions and thickness. It can be used to implement such procedures as coarse grinding, fine grinding and polishing the straight edge, as well as coarse grinding and fine grinding the corner angles at two sides. One-time processing. Frequency control of motor speed in a wide adjustable range, and the speed is changed smoothly. During the grinding process, you can adjust the feeding speed as you want. With such advantages as advanced structure, high precision, convenient operation and high operation efficiency, it is an absolutely necessary tool for glass processing technique.

CNCGLASS straight-line edge grinding machine is composed of such parts as feeding rail, glass thickness adjusting mechanism, glass support, principle machine and the discharging guide rail.

The two hanging rings of the principle machine are used to lift the principle machine. A hoister with the capability of 3 tons hoists the machine by using two steel cables, and then places the machine onto the installation situation. After setting down the machine, remove the two hanging rings.

Horizontal adjustment:

1)-Horizontal adjustment of the principle machine

Horizontal adjustment of the principle machine is implemented by adjusting the position of bolt 1, nut 2 and supporting disc A, so as to make the machine maintain in horizontal level.

2)-Horizontal adjustment of the glass support

Adjust the position of nut 1, bolt 2 and supporting disc B, so as to make the glass support maintain in horizontal level. When the horizontal adjustment is finished, fix the glass support onto the floor with the expansion bolt 3, nut 4 and the opposite vertex nut 5.

3)-Adjustment of the go-out guide rail

A-The horizontal adjustment of the go-in and go-out guide rail (the conveying guide rail) is implemented by adjusting bolt 7.

B-The position the go-in and go-out guide rail located on the principle machine is adjustable by adjusting nut 1 and nut 2 on the screw mandrel.

Connecting the cooling system:

Introduce the cooling water to the fluked joint 1 through a plastic hose with the inner diameter of $\Phi 19$. After passing through the fluent distributor 2, fluked joint 3 and a plastic hose with the inner diameter of $\Phi 13$ in turn, the cooling water runs into the three-way joint 4. Then, the cooling water runs through a plastic hose with the inner diameter of $\Phi 12$, and at last goes into the cooling equipment 5, so as to cool down 8 or 9 grinding heads. Then, use a plastic hose with the inner diameter of $\Phi 50$ to make the cooling water run back to the water tank be used in duty-cycle operation. Besides, the fresh water (with a hydraulic pressure more than 0.5MPa) also can be used as the cooling water to cool down the grinding heads. But, in

this condition, the cooling water is discharged from the plastic hose, and does not go into the next operation cycle.

Connecting the cooling pump:

The plug seat located in the right and back of the principle machine is the outlet for the cooling pump of the cooling system.

Control Panel:

PV—Voltmeter

H1—Power indicator

H2—Overload indicator

P1~P9—Operating current meter of the grinding head motor

SA2—EMERGENCY

SA3—EMERGENCY

SB1—Water pump with indicator start up

SB5~SB13—Grinding head motor with indicator start/stop button

SB2—Conveying belt with indicator start/stop button

SA1—Direct motion/converse knob of carrier chain and driving band

SA4—High speed/Low speed motor option switch of carrier and driving band

“LOW”, low gear, through to adjust the hand wheel of the variable speed case, speed range of 0.6~3m/min

“HIGH”, high gear, through to adjust the hand wheel of the variable speed case, speed rang of 1.2~6m/min

Installation of the Grinding Wheel:

1)-Installation of the Diamond Wheel

2)-Installation of the Polishing Wheel

The installation of the Polishing Wheel is the same with the Diamond Wheel; just need a Polishing Wheel Pallet. The Polishing Wheel and the Diamond Wheel felt together by ethoxyline and use after 24 hours' pressurize.

Adjustment:

1)-Adjustment of the front guide rail

Adjust the position of the leading clamping plate according to the thickness of processed glass. First, turn the hand wheel, to make the leading clamping plate near to the back guide rail. Then, based on the thickness of processed glass, turn the hand wheel, to make the leading clamping plate go back to an appropriate position. Then, start up the motor, and select an appropriate transmission speed. Place the glass between the leading and end clamping plates. Shake the glass hard with hand, to check whether the glass is clamped firmly. At this time, it's should be noted that all of the grinding wheels shall be set to the neutral position.

2)-Adjusting the first and second straight-edge grinding wheels

Turn the hand wheel in the anticlockwise direction. To make the grinding head move down. Switch on the circuit, and turn on the power air switch on the electric appliance case. Set "SA1" to the left position; set "SA4" to the "HIGH" position. Place a piece of machined glass into the feeding inlet of the conveying chain. Turn on the power switch "SB1, SB5, SB6", and press the start button of conveying belt "SB2". When the glass arrives at the No.1 and No.2 grinding wheels, make it stop. Then, Turn the hand wheel in the clockwise direction, until the grinding wheel touches the glass. Set the displayed scale mark of hand wheel 2 to the "O" position, and turn the hand wheel in the anticlockwise direction, so as to make the grinding wheel far from the glass (on the hand wheel, one grating presents 0.1mm, one ring presents 1mm).

3)-Adjusting the third, fourth, fifth and sixth front and back corner angle coarse and fine grinding wheels

Turn the hand wheel in the anticlockwise direction, to make the grinding head move down. Restart the machine. Drive the glass move and pass through the grinding head Press the stop button "SB2" of the conveying belt, to make the glass stop moving. Turn the hand wheel in the clockwise direction, until the grinding wheel touches the glass. Move the opposite vertex nut of the locking device located on the left of the grinding head, until the nut meets with the stop block. Then, turn the hand wheel in the anticlockwise direction, so as to make the grinding head far from the glass.

4) Adjusting the seventh, eighth and ninth straight-edge grinding wheel (polishing wheel)

This procedure is some like the adjusting procedure of other straightedge grinding wheels. Turn the hand wheel in the anticlockwise direction, to make the grinding head move down. Restart the machine. Drive the glass move and pass through the grinding head. Press button "SB2" of the conveying belt, to make the glass stop on the above of grinding head. Turn the hand wheel in the clockwise direction, until the grinding wheel touches the glass. Press the start button "SB2" of the conveying belt, to make the glass move, until the glass leaves from the principle machine and arrives at the discharging port of the conveying belt. Then press the stop button "SB2" of the conveying belt, to make it stop.

Note The above-mentioned adjustment of machine refers to the installation adjustment. Note: In the usual operation condition, it's only necessary to remedy the abrasion of grinding wheel generally. When grinding a piece of thick glass, you must adjust the position of the position of the last piece of glass. If the abrasive wheel has been changed, the position of grinding wheel must be reset.

5) Start up:

When such a series procedures including installation, adjustment and test finished, switch on the cooling system and the power supply. Then operate according to the following steps:

a) Adjust the position of the grinding head. Turn the hand wheel on the grinding head seat in the clockwise direction, to make the grinding head located in its original operation position as set before. Set "SA1" to the left position, and select HIGH/LOW position.

b) Turn on the power on the electric case, then the indicator light "H1" shines.

- c) Press the start button “SB1” on the water pump, and check whether there is cooling fluid.
- d) Press the start button of the grinding head motor one by one (“SB5～SB13”).
- e) Place the glass for grinding onto the guiding plate at the feeding port of conveying chain.
- f) Press the start button “SB2” of conveying belt. Then the machine begins to operate.
- g) When grinding work finished, press the urgent stop button “SA2” or “SA3”, to make the machine stop. Then turn off the air switch.

Maintenance and Service

Lubrication

- 1)-After running for a day, you should clean the machine, and paint the rust preventative oil onto the revealed parts without painting or oxide coating. Apply the mechanical oil to lubricate the sliding bar of grinding head rack as well as the slide plate chair.
- 2)-For the mechanical step less variable speed unit, use the UB-1 dedicated oil for step less variable speed unit to lubricate the variable speed components. It's necessary to change the original oil with HB-1# oil At an interval of 1000 operating hours. It should be noted that the oil level can only reach the middle of oil mirror, and the oil amount can't be excessive. For the speed reducer, it's necessary to inject ZGN-1 natrium lubricating grease (SY1409-77) at an interval of 3000 operating hours, in order to lubricate the bearings and gears. For the worm reducer, it's necessary to change the lubricant oil at an interval of 3000 hours. Select the 350# industrial gear oil (SY-1172-80) to lubricate, and it should be noted that the oil level could only reach the middle of oil mirror.
- 3)-After the grinding head motor running for 3 months, it's necessary to remove the grinding wheel. When change the reinforced seal (indicated as N..7 in the 10) of the motor, it's necessary to paint the seal with the ZB-3 barium lubricant grease (SY1409-16)。
- 4)-For such components as the grinding head rack bearing, grinding head rack screw mandrel, grinding head rack gear and main driving bearing of the chain, etc, it's necessary to paint them with ZG-2H compositive calcium lubricant grease (SY1409-16) at an interval of about 2-3 months.
- 5)-For all of the chains, it's necessary to paint the with ZG-2H compositive calcium lubricant grease (SY1409-16) at an interval of about 2-3 months. If possible, it's best to remove the chains, and clean them with kerosene. When dried, paint them with lubricant grease and then fix again for using.
- 6)-For the guiding plates on the front and back transmission chain guide rail as well as the stainless steel guide rail, it's necessary to paint them with ZG-2H compositive calcium lubricant grease (SY1409-16) at an interval of one month. When painting, you should remove the front cover, then the left and right covers. At the corners of transmission chain, paint the grease onto the transmission plate. Then, the lubricant grease shall be brought into the guiding plate and stainless steel guide rail by the transmission plate running.

Position and numbers of the rolling bearing:

Resolving means for the electrical accidents

- 1-The voltmeter works improperly, and the indicator doesn't shine

Check whether the power supply and the fuse wire is burned out, if so, change with a new fuse wire and fuse tube.

2-The failure indicator lights, and the machine can't be started up.

The motor is overloaded, and the thermo relay acts to cut-off the power supply circuit, so the machine can't operate. To resolve this accident, you should stop work for a while, and then press the manual reset buttons of thermo relay from the first button to the tenth button. At this time, the failure indicator blacks out. Then, the machine can be started up. If the failure indicator it's necessary to find out the cause why the motor is overloaded, and whether the thermo relay breaks down.

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