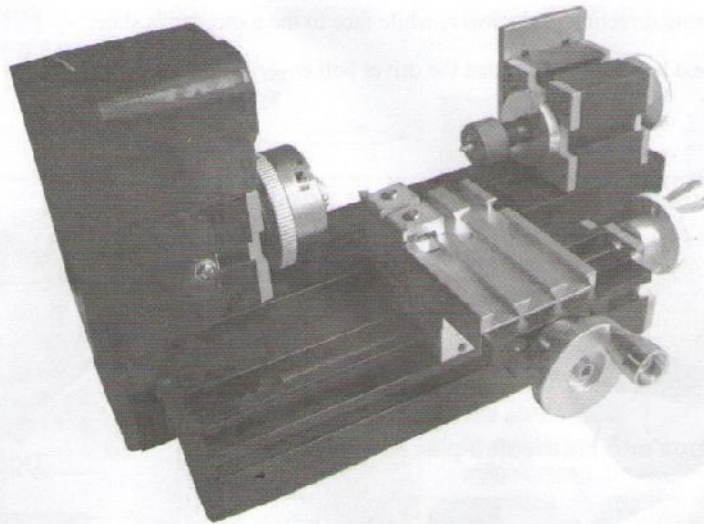




# INSTRUCTION

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## Lathe-Z20002/M



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Please read this instruction carefully before using the machine

## Component combination and usage

### 1. Motor-Gear Box Unit(Z1)

The followings are steps for assembling the Motor-Wheel Gear Box Unit (Z1):

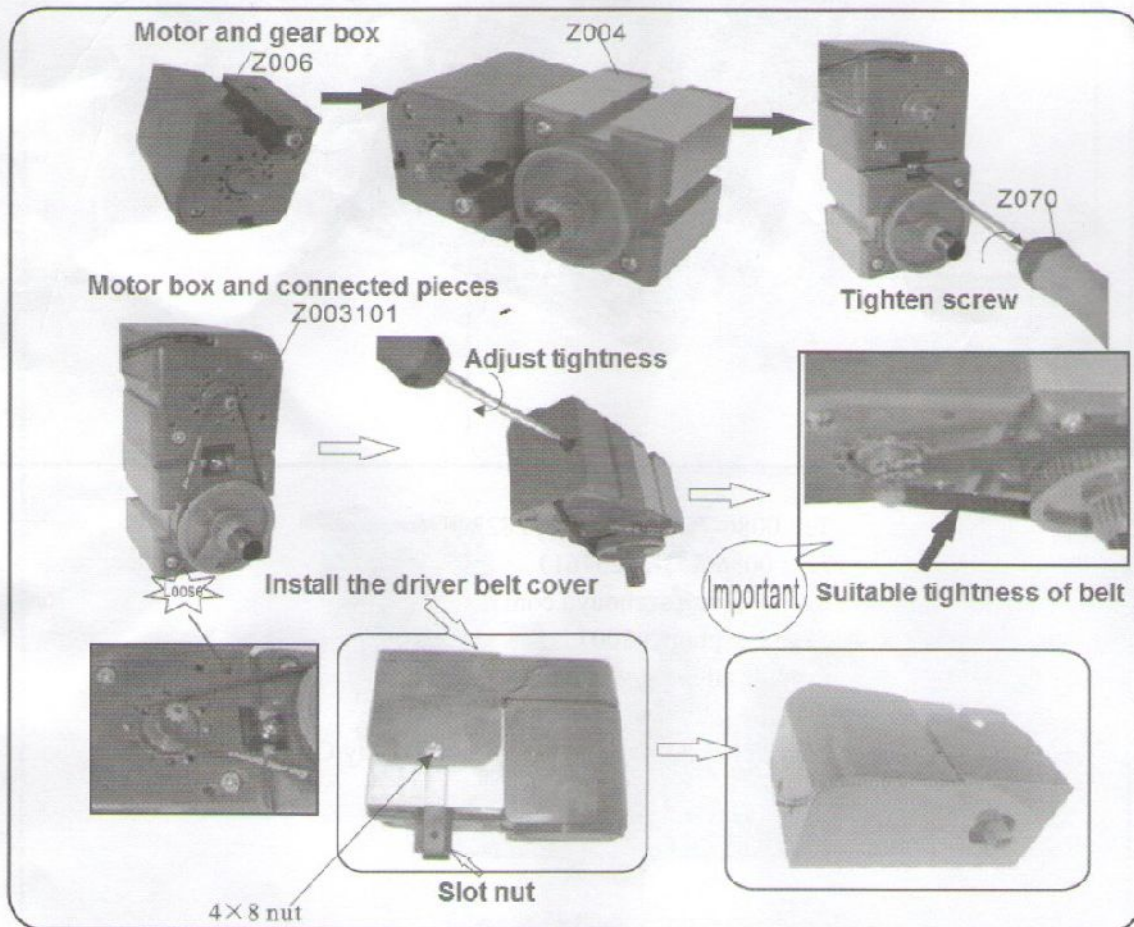
Slide the Dovetail Connection Block (Z013) into the Motor (Z006). After inserting the Dovetail Connection Block into the Motor, connect the Motor with the Wheel Gear Box (Z004) by sliding the Connection Block into the groove of the Motor as shown in Fig. Once both the Motor and the Wheel Gear Box are in the corrected position, fasten and tighten the connection block to hold the Motor and the Wheel Gear Box together. Fit the toothed belt (Z031) into the Motor and Gear Box.

Finally, the Motor-Wheel Gear Box Unit (Z1) has been assembled. Adjust the belt tension by tightening or loosening the screw of the motor with a ScrewDriver (Z070) as shown in the diagram.

Ensure the belt having the right tension as the belt has major influence on the motor and work performance. It is very important to adjust the tension of the drive belt before starting the motor.

The motor rotating direction is clockwise while face to the motor leaf's slice.

Using the nut and bolt (Z065) to fasten the driver belt cover (Z032) onto the motor to protect the toothed belt in most situations.





## 2. Small Slide-Large Slide Unit(Z2)

As shown in Fig

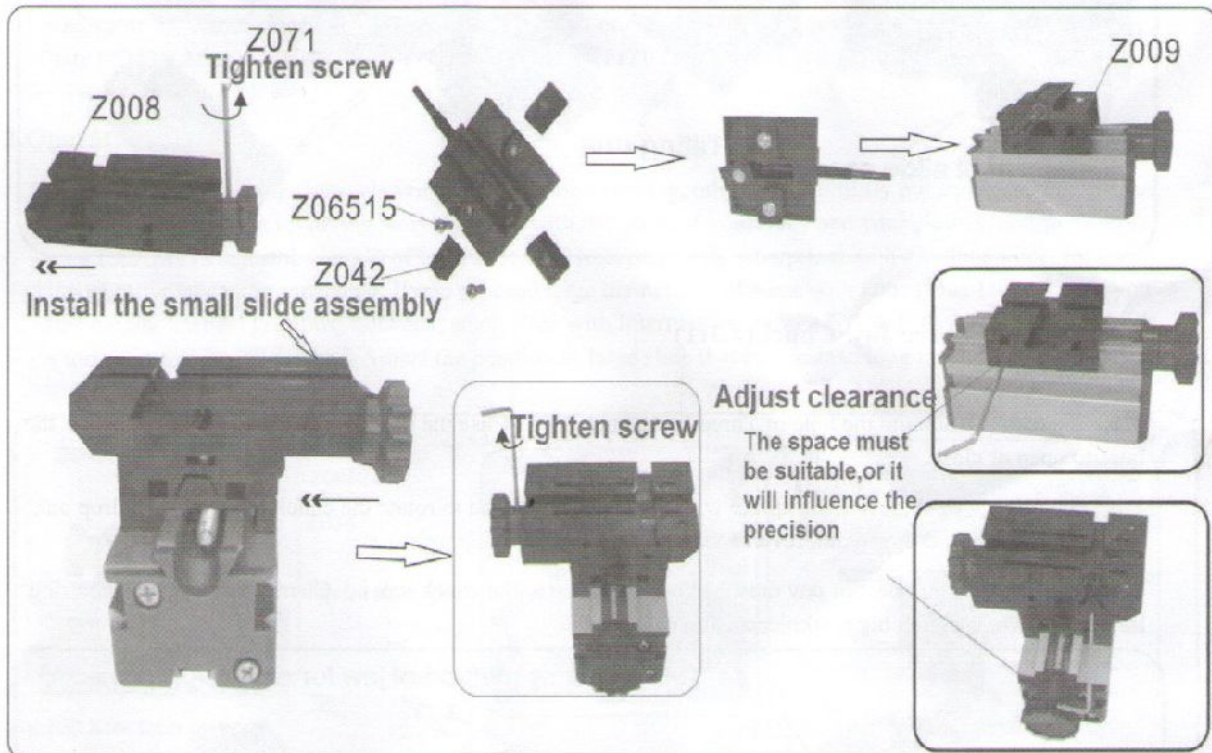
Hold the Small Slide (Z008) tightly, use the Socket Screw Wrench (Z071) to loosen the bolt in the position as shown in the diagram.

After that, push the base of small slide out. Slide three Greased Slot Nuts (Z042) into the dovetail groove of the Large Slide (Z009). Then, fix the Small Slide base on the Large Slide by tightening the bolts into the three Slot Nuts.

Place the other parts of the Small Slide on the base, use the Socket Screw Wrench to tighten the bolt in the handle.

When the above adjustment is done, the Small Slide and the Large Slide Unit (Z2) have completed as shown in the diagram.

Grease the movable sections as required, such as bolt, dovetail groove of small slide, Large slide, etc.



## 3. Small Slide(Z008) And Intermediate Piece(Z030) Unit (Z3):

As shown in Fig :

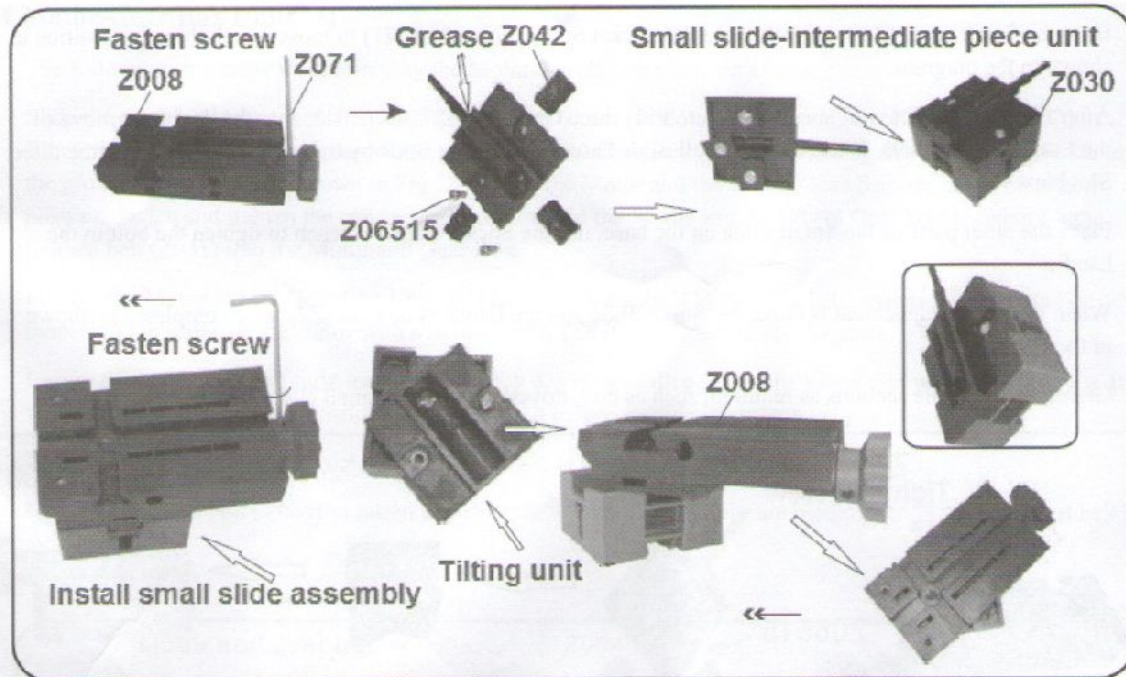
Use the Socket Screw Wrench (Z071) to loosen the bolt in the handle of the Small Slide (Z008). Then, push the base of Small Slide out.

Slide three slot nuts (Z042) into the dovetail groove of the Intermediate Piece (Z030), fix the Small Slide base on the Intermediate Piece by tightening the bolts into three slot nuts.

Replace the other parts of the Small Slide on the base, tighten the bolt in the handle by Socket Screw Wrench.

Completing above steps, the Small Slide-Intermediate Piece Unit (Z3) has been assembled as shown in the diagram.

If you are working with tilted slide, you may need to tighten slide base to the intermediate piece in a desired angle as shown in the diagram.



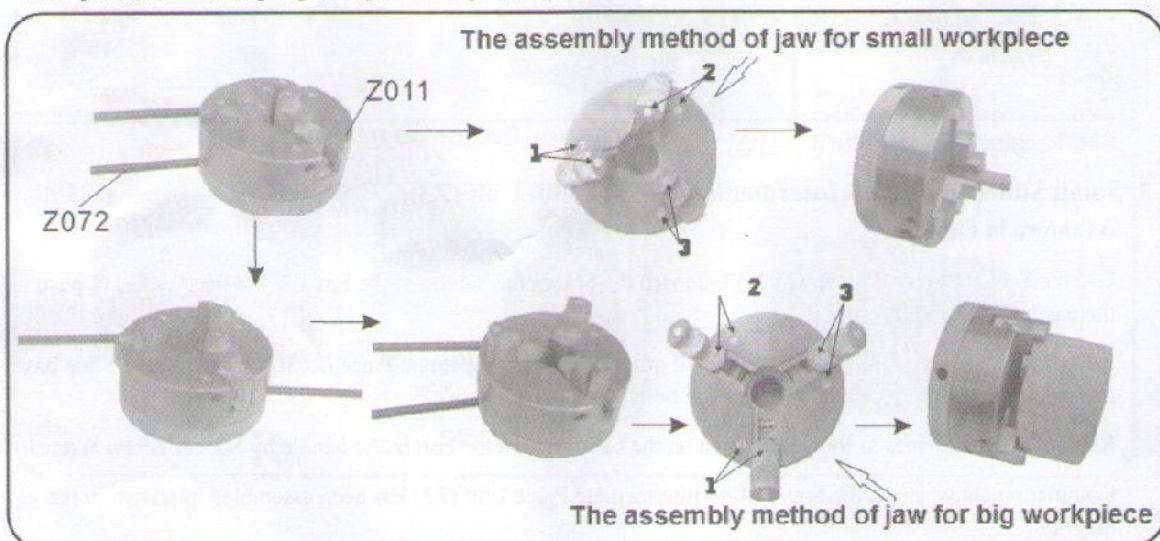
#### 4.Operation Of Three Jaw Chuck(Z011)

As shown in Fig :

Place the rods (Z072) into the hole of Three Jaw Chuck (Z011), use the rods to rotate the chuck that makes the jaws to open or close.

Working on a bigger diameter workpiece with the chuck, you need to rotate the chuck until the jaws drop out. As soon as the jaws dropped out, reverse the jaws into the chuck.

The position of the numbers of jaw must be corresponding to the chuck top, i.e. Clamp small workpiece using inner jaws, while Clamp big workpiece using outer jaws.





## Lathe-Z20002

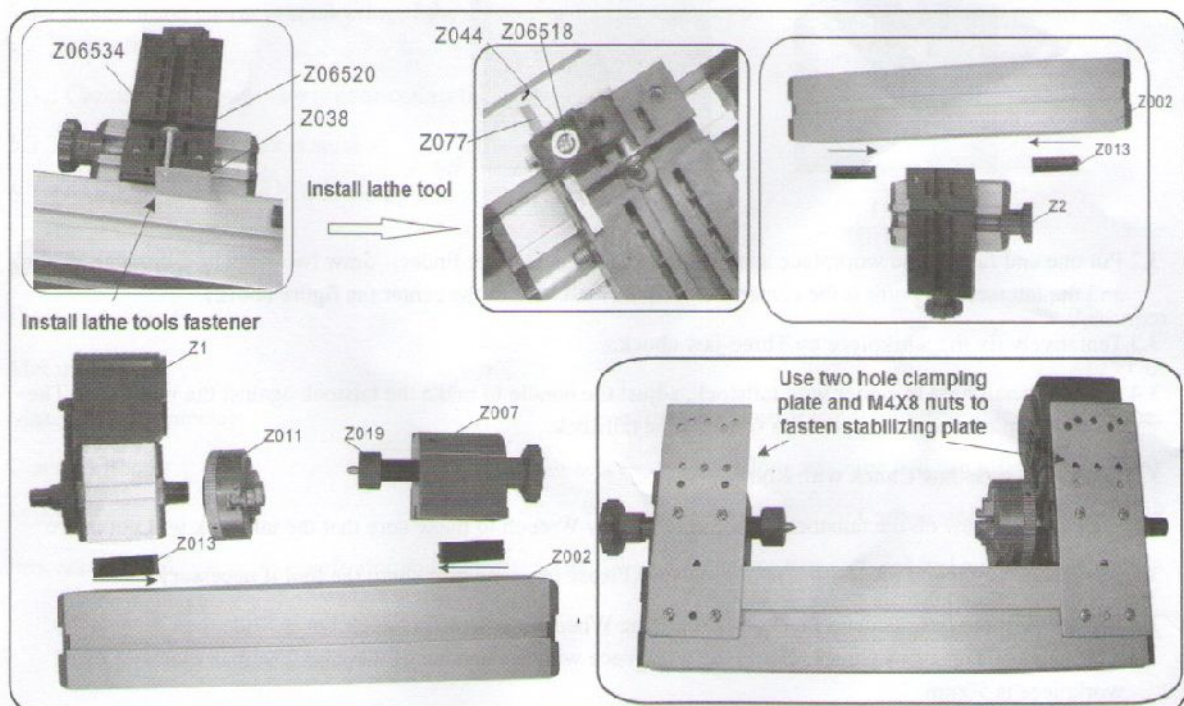
### 1. Assembly

As shown in figure:

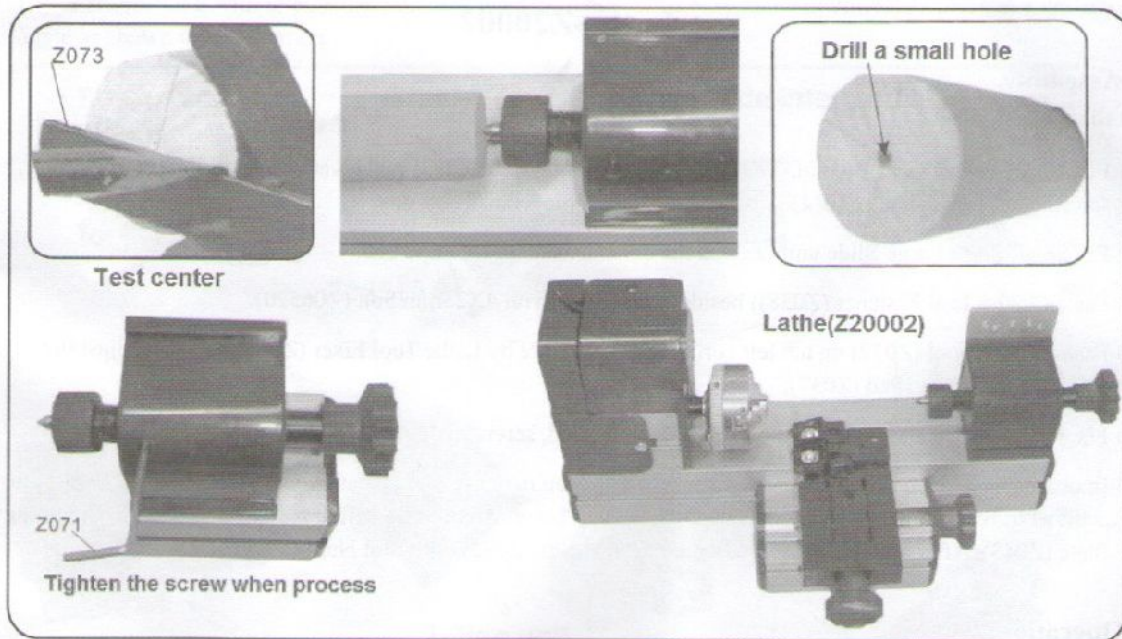
- 1.1 Fix Motor-Wheel Gear Box unit (Z1) on the left of Long Bed (Z002) by Dovetail Connection Piece (Z013), screw Three-Jaw Chuck (Z011) into axle of Motor-Wheel Gear Box unit.
- 1.2 Fix Small Slide-Large Slide unit (Z2) on the obverse of long machine bed.
- 1.3 Fasten Lathe Tool Fastener (Z038) beside Small Slide with 4X25mm bolt (Z06520).
- 1.4 Fasten Lathe Tool (Z077) on the left corner of Small Slide by Lathe Tool Fixer (Z044), You can adjust the height of tool by 0.3Pad (Z037).
- 1.5 Fix Tailstock (Z007) on the right of Long Machine Bed, screw Live Center (Z019) into tailstock.
- 1.6 In order to reinforce the connection of the machine, you may use two fastener Stabilizing Plates (Z08001) to achieve it: fix Stabilizing Plates on Wheel Gear Box, Long Machine Bed, Tailstock with Two Hole Clamping Plate (Z043). After all are finished, assemble Belt Cover (Z032) with Slot Nut (Z042).

### 2.Operation:

Make sure workpiece has been clamped tightly before working, otherwise it will fly out and cause unexpected harm! Never touch the revolving working piece with any parts of your body and your clothes, and wear goggles! Always adjust the height of Lath Tool with workpiece axis. Sharp tool with grinding wheel following the operation of sanding machine. If you proceed large diameter workpiece with lathe (Max Dia. 50mm), you may heighten wheel gear box, tailstock, small slide with Intermediate Piece (Z030). If the stroke of large slide is too short to do with demand, Adjust the position of large slide that responds to long machine bed.







### 3.How To Use:

3.1 Fix two Two Hole Clamping Plates dividingly on a board or table (as figure 1).Slide the dovetail groove in the bottom of machine along the Two Hole Clamping Plates (as figure 2),fasten the screw.



Fig.1

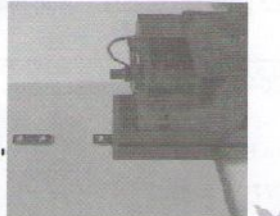


Fig.2

- 3.2 Put one end face of the workpiece against the two sides of center finder, draw two lines in different position, and the intersection point is the center,then drill a small hole in the center (as figure above).
- 3.3 Tentatively fix the workpiece by Three-jaw chuck.
- 3.4 Align to small hole in center with tailstock, adjust the handle to make the taistock against the workpiece.The short workpiece can not need to be fixed by the tailstock.
- 3.5 Lock the Three-Jaw Chuck with Rod.
- 3.6 Tighten the screw on the tailstock with Socket Screw Wrench to make sure that the tailstock will not move
- 3.7 Adjust the height and the sharpness of lathe tool,Please use sander to sharp the tool if necessary.
- 3.8 Please use three Intermediate Pieces to rise up the Wheel Gear Box,Tailstock,Large Slide,then reverse the three jaws of Three-jaw Chuck, clamp the workpiece with the outside of the jaws.The max diameter of workpiece is 50mm.
- 3.9 Generally,process from the right to the left,return the lathe tool after finishing a circle.Feed radially in every circle,and do not feed too much.

#### 4. Notice

- 4.1 Fix the machine on the board or other table.
- 4.2 Wear Protect Goggles when operating the machine.
- 4.3 Put the Power Adaptor in the ventilated and dry condition when operating the machine. Turn off the 12V adaptor when you do not operate the machine.
- 4.4 Clean ,maintain the machine and lubricate the motive parts oftenly .
- 4.5 Control the feed rate well,or the machine will be stuck easily.Put off the power immediately once the workpiece stop rotating.

#### 5. Trouble Shooting

##### 5.1 The machine can not process smoothly.

- 5.1.1 Check if feed is too fast.
- 5.1.2 Check if the tool nose points to the center of the workpiece.
- 5.1.3 Check if the toothed belt is wornout.
- 5.1.4 Check if the tailstock is loose.

##### 5.2 The machine feed hard

- 5.2.1 Check if the adjustive lock screw is too tight
- 5.2.2 Lubricate the bolt of Large Slide.
- 5.2.3 Clean the dust.

##### 5.3 The motor do not work after connecting the power

- 5.3.1 Check if the power is connecting,if the socket of power adaptor or power supply connector is poor connecting
- 5.3.2 Check if the motor wire is poor connecting.
- 5.3.3 Check if the gear box is stuck.
- 5.3.4 Check if the toothed belt is too tight.

#### 6. Technical parameter

Headstock speed:	2,000rpm
Motor input:	12VDC
Max. Cutting diameter:	20mm(bigger diameter is possible with intermediatepiece)
Center distance:	135mm(with accessories extra long machine bed can longer to 360mm)
Material:	Carbon steel, Aluminum, ABS
Process material:	soft-aluminum, brass, copper, wood, plastics, other soft, colored and precious metals

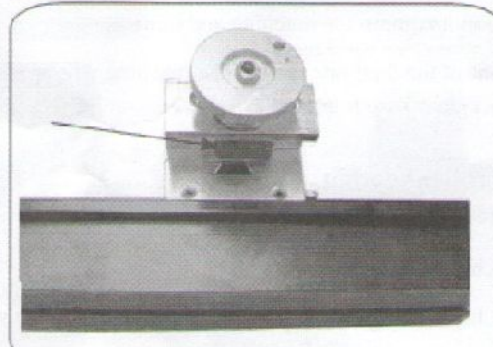


**Metal lathe (Z20002M)**

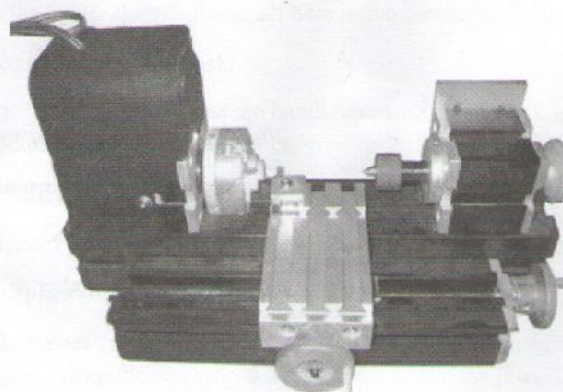
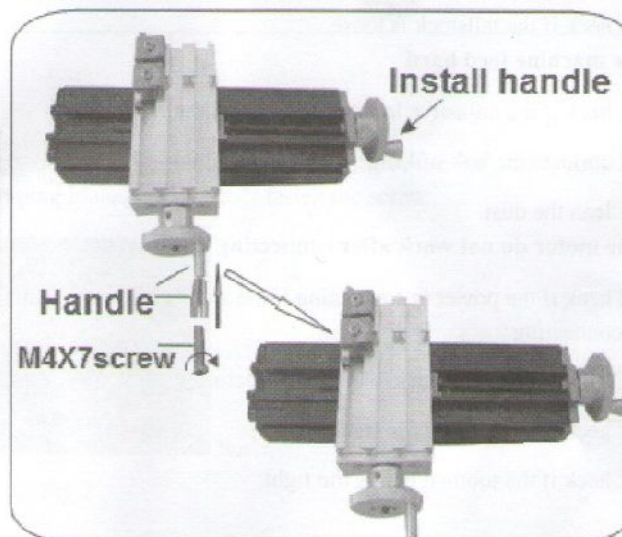
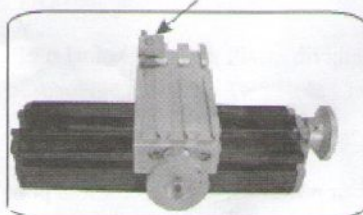
The assembly method of metal lathe is similar to the lathe, but still need to notice:



**Install copper nut**  
Notice: please don't move the screw on the nut, or the running of bolt and the precision of the machine will be influenced



**Install lathe tool**



**Metal lathe (Z20002M)**