

WARRANTY CARD

1. KH Trading machines and tools are covered by 6/24 months warranty, starting on the date of purchase, as described in the Civil Code (proof of purchase or invoice receipt must be enclosed with the warranty card when making a claim).
2. This warranty does not cover defects caused by unprofessional handling, machine overloads, not complying with instructions contained in this manual, using accessories that are not approved, unauthorized repair, regular wear and tear and damages occurred during transport. Further, this warranty does not cover parts and accessories such as the motor, carbon brushes, seals and hot-air operated parts and parts that need to be changed regularly.
3. If the repair is to be found as not covered by the warranty policy, all costs including the repair and shipping to and from the repair centre will be paid by the customer, according to valid price list. See www.
4. When making a claim, you must present the warranty card, showing the date of the purchase, the serial number of the machine, vendor stamp and signature of sales clerk, as well as the proof of purchase receipt.
5. Warranty claim shall be made at the vendor shop where you bought your machine or you may mail it to a service centre. The vendor is obligated to fill out the warranty card (date of sale, serial number, vendor stamp and signature). All these information must be filled in at the time of sale.
6. The warranty period will be extended for the period of time for which the machine has been in the service centre possession. If the repair or defect is not covered by the warranty policy, all costs including the repair and shipping will be paid by the owner of the machine / tool. We recommend sending the machine in its original packaging. Please, also enclose brief description of the defect with the packaging.
7. Before sending the machine for repair, clean it thoroughly. If the received machine is dirty, it may be rejected by the service shop or you may be charged a cleaning fee.

SERVICE

Logistic centre Klecany

Topolová 483

250 67 Klecany

Czech Republic

Claim department phone number: 266 190 156

T-mobile: 603 414 975

266 190 111

O2: 601 218 255

Fax: 260 190 100

Vodafone: 608 227 255

<http://www.KHnet.cz>

Email: servis@KHnet.cz

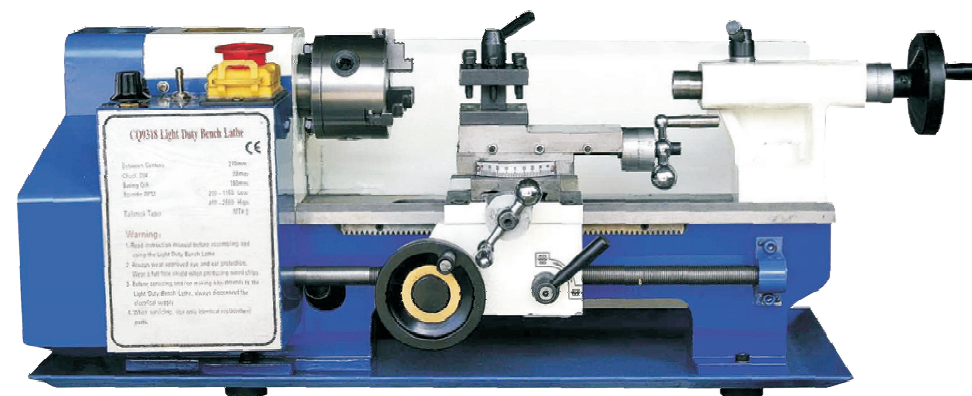
Product: BENCH LATHE CQ9318 MINI	
Type: CQ9318	Serial number (product series):
Date of manufacture:	Repair centre notes:
Date of sale, stamp, signature:	

Without the correctly filled warranty card or without proof of purchase receipt, including the product type (invoice, purchase receipt) no warranty claim will be processed.

uni-max

USER'S MANUAL

BENCH LATHE CQ9318 MINI



CQ9318

Dear customer. Thank you for purchasing equipment from KH Trading, s.r.o.
 Our company is ready to offer you our services - before, during and after you buy our product.
 If you have any question, comment or idea, please contact our business centre. We will do our best to address your comment or question in timely matter.

Before first use, please read this manual carefully. It is your responsibility to study all instructions, necessary for safe use and operation and to understand all risks that may be involved during the use of power machines.

WARNING! Do not try to use this machine before reading this entire manual and before you know how to handle it. Keep this manual for future reference.

Pay special attention to safety instructions. Not complying with safety rules may cause injury to the operating person or to people standing by or it may cause damage to the machine or to the work piece.

Pay special attention to safety notes and safety labels on the machine.

Never remove or damage them.

Please, write information such as the invoice number and the number of the sale receipt here in this box.

DESCRIPTION

Machine description

Light weight, high power output and economical lathe for manufacturing small metal parts. Continuous two range speed regulation with automatic longitudinal feed. Also setting for M or W thread cutting is available. DC powered electrical motor with permanent magnet, drives the main chuck via toothed belt. The chuck speed (revolutions) may be continuously set to achieve best results.

Accessories include:

- 3-jaw chuck
- revolving tailstock tip
- rigid tip
- internal fastening clamps
- fastening latch

WARNING: If your machine is not delivered with a power plug, have the appropriate plug (compatible with your wall outlet) installed by qualified technician.

REPAIR AND MAINTENANCE REPORT

Report and maintenance report:

DATE	REPAIR AND MAINTENANCE REPORT	SERVICE SHOP

REVISION REPORT

The user is obligated to perform tests and revisions of electrical equipment of the machine in accordance with valid rules and regulations. Result report:

DATE	REVISION REPORT	REVISION TECHNICIAN Number / SIGNATURE

TECHNICAL SPECIFICATION

Voltage	~230V AC
Power input	.250 W
Maximum Ø cutting diameter above the cutting knife (L)	.180 mm
Maximum Ø cutting diameter above the support (S)	.70 mm
Maximum work piece length (X)	.210 mm
Inner chuck diameter	.20 mm
Chuck cone	Mk 3
Tailstock cone	Mk 2
Revolution range setting	.200 - 2,500 / (2) rpm/level
M thread pitch (degree)	.0.4 - 2 (10) mm degree
W thread pitch (degree)	.12 - 48 (10) 1/" (degree)
Maximum cutting knife feed range	.60 mm
Maximum feed range of the cross support	.60 mm
Maximum longitudinal feed range	.210 mm
Automatic longitudinal feed	.0.09 mm/revolution
Automatic cross feed	.NONE
Tailstock range	.35 mm
Number of uni chuck jaws	.3
Inner fastening diameter of the uni chuck (Ui)	.80 mm
Dimensions (l x w x h)	.635 × 305 × 300
Gross weight	.36 kg

The accuracy of instructions, graphs and information contained herein, depends on the printing date. Due to continuous product improvement, the manufacturer reserves the right to change technical parameters of the product, without prior customer notification.

SAFETY PRECAUTIONS

- **This device may be used by a qualified person, 18 years or older who has been trained in work and environmental safety procedures.**
- **Any person using this equipment must possess a medical certificate demonstrating his eligibility to operate this equipment.**

We recommend placing work safety regulations notices at your workshop:

- **"Prevent most common injuries" - LATHES**
- **"Prevent injuries" - METAL TURNING MACHINES.**

Symbols used in this manual



Warning!

This symbol informs you about the risk of personal injury or damage to the machine or materials.



Caution! You are using electrically powered machine!

Risk of injuries by electrical current.



Risk of being caught by spinning machine parts!

Caution! Loose clothing or body parts may get caught by moving machine parts.



Warning!

Danger of damage.



Note:

Additional information.



Use personal protective gear



General instructions

- Plastic bags and packaging materials pose danger for small children and animals.
- Make sure you know how to control your tool or machine and that you are familiar with its operating procedure. Know the hazards that may occur, if not used correctly.
- If other person is using this machine make sure that he knows how to safely operate this equipment and that he is familiar with hazards and risk that may occur, if not used correctly.
- Pay special attention to safety notes and safety labels on the machine. Never remove or damage them. If the warning label becomes unreadable, please contact your vendor.
- Keep your working place clean. Dirty and disorganized workplace may cause accidents.
- Never work in tight spaces or in purely lit rooms. Make sure the floor is solid and stable and that you can move around easily. Always keep stable posture.
- Keep focusing and use common sense. Do not continue working if you cannot pay attention.

DISPOSAL

When the operational life of your device is over, dispose off it in accordance with valid rules and regulations. Your product is made of metal and plastic parts that may be recycled when separated.

1. Disassemble all parts.
2. Separate all parts according to the material they are made of (e.g. metals, rubber, plastics, etc.). Take the separated parts to the recycling facility near you for further processing.
3. Electrical waste (used electrical power tools, electric motors, recharging equipment, electronics, accumulators, batteries etc.).

Dear customer. In accordance with the valid regional rules and regulations describing the management of electrical waste, electrical waste is considered dangerous.

Disposal of electrical waste must be therefore handled as dangerous waste in accordance with waste management rules valid in the state you are in.

It is prohibited to mix electrical waste with regular household waste.

You may return your used electrical appliance to a recycling facility near you. More information about electrical and dangerous waste disposal may be obtained from your local authority or from the Internet.

CAUTION

If the machine breaks down, send it back to the vendor for quick repair.

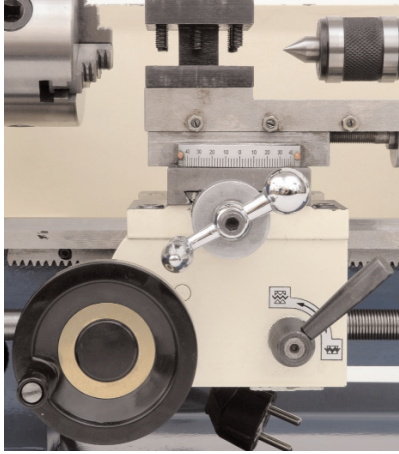
Please, enclose brief description of the defect. That makes repair easier. If the machine is still covered by warranty, enclose the warranty card and proof of purchase receipt. After the warranty period expires, we repair your machine for a special price.

To prevent possible damages during shipping, packed the machine carefully or use the original packaging material. We are not liable for shipping damages due to incorrect packaging of your machine. If making a claim at the shipping company the level and method of packaging plays a major role during claim evaluation process.

Note: Pictures and contents in this manual may slightly differ from the actual product or accessories.

It is due to continuous improvement of our products. Such small differences have no effect on the product functionality.

Switching the longitudinal feed on



The automatic feed is not equipped with an end switch or stopper.

If the feed hits the end, it will damage the machine.

MAINTENANCE

- After finishing your work, remove all dirt, sawdust, metal chips and other waste accumulated during work. Also clean grease and oils from the machine bed.
- If you hear unusual sound, switch off your machine immediately.
- Find the cause of the noise and repair it. If everything is ok, continue working.
- Keep your tools clean. Dirt may enter the inner mechanism of your machine and cause damage.
- Do not use aggressive cleaning solution or paint thinners to clean the machine.
- Clean plastic parts with cloth dipped in soap water.
- Clean and lubricate metal surfaces with a cloth dipped in paraffin oil.
- If you are not using your machine, lubricate it with suitable grease and store it in a dry place to prevent corrosion.

Lubrication

- Lubricate working surfaces with suitable grease regularly.
- Every day before starting your work, lubricate the machine guides, feed guides, feed screw and toothed gears with motor oil SAE 10.
- When you finish your work, remove sawdust and metal particles from your machine.
- Clean the guides and lubricate it with oil.
- After long time of use, lubricate the main spindle/chuck bearing with high-quality grease.

- Maintain your tools clean and in safe working conditions.
- Handles must be kept free of grease and dirt.
- Make sure no children, unauthorized persons or animals have access to your workshop.
- Never put your hands or legs inside the working area.
- Never leave your machine unattended during operation.
- Use only for purposes for which it has been designed.
- Use personal protective gear such as safety goggles, ear protection, respirator, safe working shoes etc.
- Do not overreach, use both hands.
- Never work under the influence of alcohol or other drugs.
- Do not use the machine/tool if you feel dizzy or weak.
- Any modifications or improvements to the machine are strictly prohibited. DO NOT USE if you discover bent part, crack or other damage to your machine.
- Never perform any maintenance during operation.
- If you see any unusual sign or hear any strange sound, switch of the machine immediately.
- Do not forget to remove all wrenches and/or screwdrivers from the machine.
- Before use, make sure all screws are tightened securely.
- Perform maintenance regularly. Before use make sure the machine is in good working conditions and without any damage.
- Use only original spare parts during repairs.
- Using accessories or extension pieces not approved by the manufacturer may cause injuries.
- Use this machine only for work that could be handled by it. Do not overload tools, accessories or the machine. For large work volume use more powerful machine.
- Do not overload the machine. Measure the work load in such way, so it could be done with comfortable speed. Damages due to machine overload are not covered by the warranty policy.
- Do not expose to extremely high temperature or direct sunlight.
- This machine is not designed for use in humid environments or under water.
- If you are not using your equipment, store it in a dry and locked place, out of reach of children.
- Before switching your machine on, make sure that all safety elements work as designed. Make sure all moving parts are in good working conditions.
- Inspect all parts for cracks and damages. Make sure movable parts are not stuck and set properly. Also take into consideration other conditions that may have a negative effect on the proper function of your machine.
- If not stated otherwise in this manual, all damaged parts and safety elements must be repaired or changed.



Fine mechanics

- Never use a vise to hold you device.
- Protect your machine from fall and impact.



Assembly

- Do not use the machine unless completely assembled.

Electrical equipment

- Observe all basic safety rules when using electrical equipment to prevent risk of fire, injuries by electrical shock and other hazards. Before using this device, read this manual entirely and follow all safety instructions.
- Make sure the power cable plug is plugged into the correct wall outlet. The voltage in the wall outlet must be the same as shown on the specification label to prevent damage to the electric motor. Too low voltage will not provide your machine with enough power.
- Before connecting the machine to the wall outlet make sure that the main switch is in the "OFF" position. When you finished your work, disconnect the power plug from the wall outlet and switch off the main switch.
- Never carry electrical tools and appliances by their power cord. When disconnecting the plug from the wall outlet, never pull the cable by its cord.
- Protect the power cable from high temperatures, oils, paint thinners and make sure that the cable is not hanging over sharp edges.
- Inspect the power cable regularly. If damaged have it replaced by qualified technician. Inspect extension cables regularly. If damaged, have it replaced.
- If you need to use an extension cable, use cable with appropriate power rating. Use only completely unwound. Inspect extension cables regularly. Damaged cable must be repaired or changed immediately.
- Before performing any maintenance, repair or adjustment, switch off the main switch and disconnect the power cable from the wall outlet.
- Make sure that machine may not be switched on accidentally. Do not keep your fingers close to the main switch, unless absolutely necessary.
- If you mount your machine to the work table, release the safety button after installation.
- Do not use in environments where explosives are stored or used (paint shops, warehouse with flammables etc.).
- Do not use in humid environments or if wet.

Rotary tools

- Always wear suitable work clothing (do not wear loose clothing, ties, jewellery etc.). Long hair must be covered and tied up behind you head. Do not wear worn out working shoes. Sleeves must be rolled up. Loose clothing or body parts may get caught by moving machine parts.
- Do not remove safety covers. Make sure the operating person is well-protected.
- Do not touch or come close with moving machine parts during work. Keep your hands away from moving and spinning machine parts.

Machining and turning operations

- Always securely fasten the work piece on the work table using appropriate clamping equipment or vise. Do not hold the work piece in your hands during work. Use both hands to hold the handles of the machine/tool.
- Do not overreach. Maintain safe posture on both legs.
- Keep your tools clean and sharp.
- When changing tools or during maintenance, follow safety instructions.
- Make sure the work piece complies with required technical parameters and that is securely fastened.
- Use extra caution when releasing the work piece from the fastening device.

Detail view of the control panel

Control panel button description

- FUSE
- RPM control turn knob
- Directional switch ON/OFF

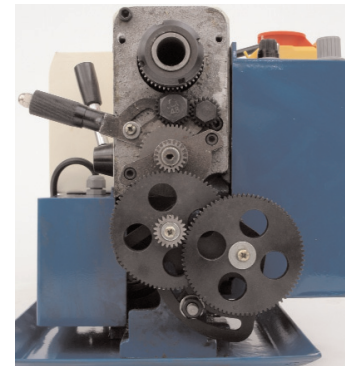
Control buttons in the yellow cover

- 0 - machine off
- I - machine on

Note: After you have switched the machine on, close the cover with the red press button. The red button serves as the STOP button. It is used to stop your machine in emergencies.



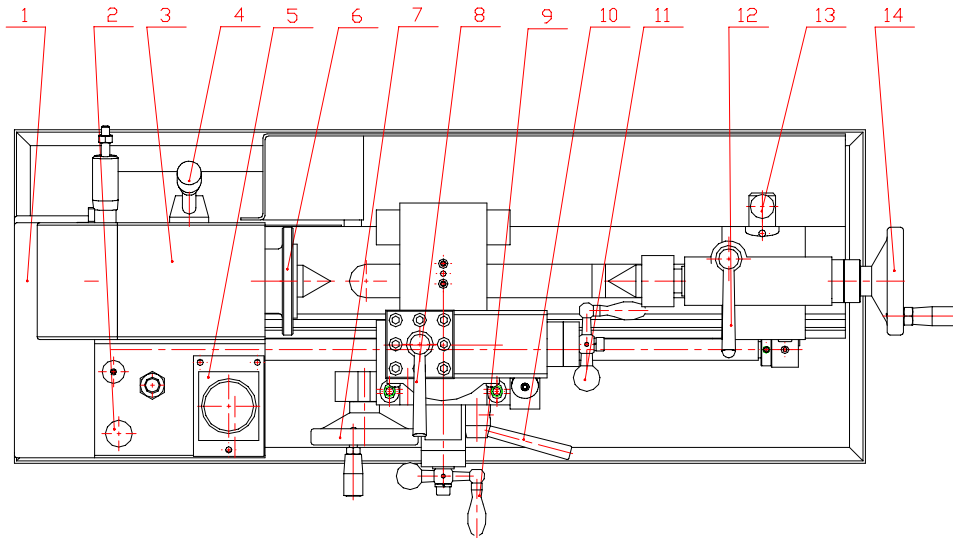
Exchangeable gear detailed view



Tread cutting feed selection chart

Exchangeable gear housing	Exchangeable gears					Exchangeable gears				
	S	Metric thread pitch				n	Metric thread pitch			
		A	B	C	D		A	B	C	D
0.09	20	80	20	80						
0.4	20	50	40	60	48	30	54	40	63	
0.5	20	50		60	40	40	63	40	60	
0.6	40	50	30	60	32	50	30	20	63	
0.7	40	50	35	60	28	40	42	40	63	
0.8	40	50	40	60	24	40	42	40	54	
1.0	20	60		30	20	40	30	40	63	
1.25	50	40		60	18	40	63	80	54	
1.5	40	50		40	16	50	30	40	63	
1.75	35	60		30	14	40	63	80	42	
2.0	40	60		30	12	40	54	80	42	

Machine description



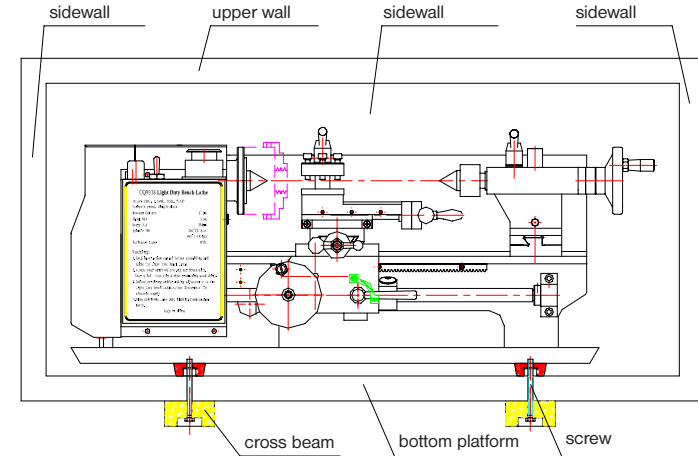
- 1 Transmission
- 2 Speed/rpm regulator
- 3 Main chuck housing
- 4 Fork handle of the speed setting system
- 5 Main switch
- 6 Main spindle
- 7 Longitudinal support feed control wheel - manually operated
- 8 Tool fastening handle
- 9 Cross feed control wheel - manually operated
- 10 Divided screw setting handle
- 11 Slide plate handle
- 12 Tailstock fastening handle
- 13 Tip socket fastening handle
- 14 Tip socket feed control wheel

⚠ Lathe turning operations

- Make sure that the work piece is properly fastened and secured in the chuck.
- If you working with long pieces, use the tailstock to prevent vibrations.
- Before switching the chuck motor on, make sure that the fastening wrench is removed from the chuck.
- Make sure to clean and remove all tools from the machine after setting and adjustment.
- To remove metal sawdust and chips, use metal hook and working gloves.
- Make sure that the chuck is not wrapped with metal splinters and chips. It is prohibited to use your machine with the chuck wrapped around with metal cuttings.
- To prevent long metal cuttings, select the appropriate cutting conditions.
- Use protective eye goggles.
- Do not stand in the chuck turning plane.
- After maintenance or repair, make sure to replace all safety covers back. It is prohibited to use your machine without all safety covers installed.

ASSEMBLY AND PACKAGING

- Make sure not part is left inside the packaging box before throwing the packaging materials out. If so, take it out and install it. Use the part listing for check-up and the installation drawing for guidance.
- Use the packaging list to inspect the contents for completeness.
- To unpack your machine, you must first, remove the upper wall and both sidewalls of the box. Then loosen 4 screws on the bottom part and mount the four rubber pads (supplied as accessories) on your machine using 6x20 screws.



Assembly

- Place the machine on solid table and mount the four rubber pads.
- Clean the sliding surfaces and surfaces with no paint coating with turpentine or paraffin oil to remove the conservation grease.
- Then lubricate it with oil.
- Inspect position of all parts.
- Before switching your machine on, make sure that the main switch and the direction switch are in the OFF position.

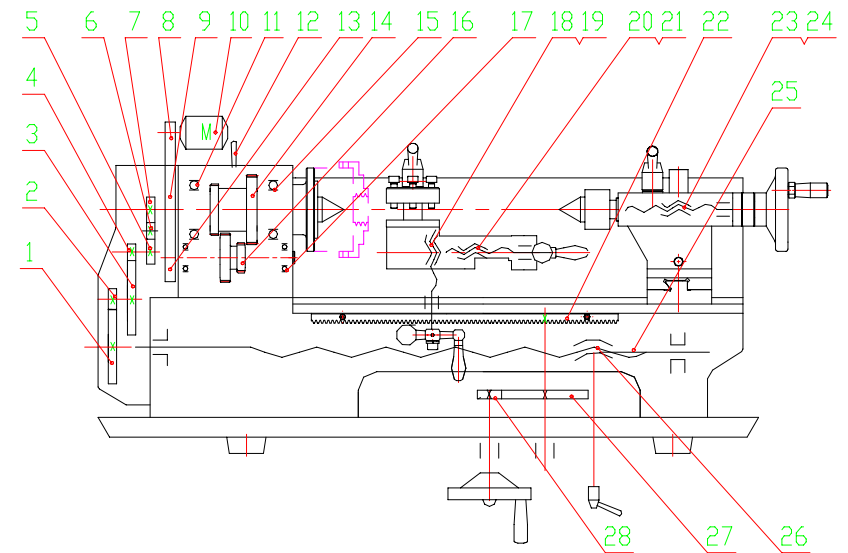
OPERATION

- Using the rpm/speed regulator set the revolutions to minimum.
- Connect the power cable to the wall outlet and turn the main switch and the direction switch to ON position. Let the machine run for at least two minutes to make sure that it is working properly.
- Then slowly adjust the revolutions to the desired value.
- Before putting the machine in reverse, switch it off and set the revolutions/rpm to minimum. Then set the reverse turning direction and switch the machine on.
NOTE: If you will not set the speed control to the minimum before putting the machine in reverse, you will damage the electronic rpm control unit.
- If you wish to change the toothed gear, you must stop the machine first. The "L" position refers to the lower wheel. The "H" position refers to the upper wheel.
- If, during the machine operation the electric power supply suddenly shuts off, turn the speed regulator to the lowest revolutions setting.
- When the power comes back on, turn the switch to the "ON" position to restore the working process.

Additional notes

- Your machine is equipped with overload protection, which limits the feed.
- When the main chuck turns within the lower gear speed ratio (the lower toothed gear has been selected - 1,000 rpm), the allowed feed speed is up to 4 mm (0.16").
- When the main chuck turns within the upper gear speed ratio (the upper toothed gear has been selected - 1,000 rpm), the allowed feed speed is up to 2 mm.
- If the feed speeds are set higher than the above described values, the protection system will shut the electric power supply off.

Drive train drawing



- | | |
|-------------------------------------------|-------------------------------------|
| 1. Exchangeable toothed gear | 16 Double moveable toothed gear |
| 2. Exchangeable toothed gear | 17 Ball with deep groove and covers |
| 3. Exchangeable toothed gear | 18 Cross feed threaded pole |
| 4. Exchangeable toothed gear | 19 Cross nut |
| 5. Middle toothed gear | 20 Knife head screw |
| 6. Middle toothed gear | 21 Knife head nut |
| 7. Toothed gear | 22 Toothed rack |
| 8. Synchronized belt pulley | 23 Tailstock screw |
| 9. Synchronization belt | 24 Chuck nut |
| 10. Motor with permanent magnet | 25 Longitudinal feed screw |
| 11. Ball with deep groove and covers | 26 Longitudinal feed nut |
| 12. Exchangeable toothed gear handle | 27 Double toothed gear |
| 13. Synchronized belt pulley | 28 Short screw |
| 14. Double toothed gear | |
| 15. Ball bearing with angle contact point | |