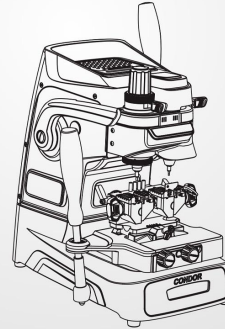


CONDOR

XC-002 PRO

User Manual



Xhorse[®]



XC-002 PRO
Mechanical Key Cutting Machine

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1. Safety precautions and warnings

To avoid loss of personal property or damage to the machine, please make sure you read this manual carefully and observe the following safety precautions before using the machine:

- Please operate this machine in a safe environment.
- Place the machine on a stable and reliable horizontal weight-bearing workbench.
- Please don't expose the machine to the sun or put the machine in a damp, greasy or dusty area.
- Please keep the machine dry and clean, and keep a distance of 30cm from the wall for ventilation.
- Please wear safety glasses that meet ANSI standards.
- Keep clothing, hair, hands and other objects away from the machine work area while the machine is working.
- When the machine is working, someone needs to observe the operation of the machine and never stay away from the machine
- Do not put any objects on the machine while it is working.
- A power socket with a grounding wire must be connected. Do not use power sockets with substandard power or damaged and loose sockets.
- The machine must be unplugged when not in use and when maintenance is performed.
- If an abnormal condition occurs, immediately disconnect the power supply. The power switch is located under the rear of the machine next to the power cord access port.
- Keep the machine out of the reach of children.

2. General information

2.1 Machine description

Dear customer, thank you for choosing the Condor XC-002 PRO Key Cutting Machine. The XC-002 PRO Key Cutting Machine is a professional machine designed for locksmiths to assist them in duplicating and cutting all types of automotive mechanical and residential keys quickly, efficiently and accurately. In order to avoid personal injury, please read this manual carefully before using the machine and strictly follow this manual when using the machine. Please keep this manual in a safe place for reference.








2.2 Machine features









CONDOR XC-002 PRO Key Cutting Machine is a new generation of easy-to-use vertical key cutting machine with the following features:

- Ergonomic design, more convenient to use.
- Rotary locking clamping of probes and cutters for convenience and reliability.
- All-aluminum body for durability and strength.
- Multi-speed motor, suitable for different key materials.
- Built-in leveling indicator, easy to use.
- High-precision crossrail to guarantee machining accuracy.
- Supports internal cutting/external cutting/dimple cutting, some residential keys, etc.
- 0-45° rotating clamp with multiple clamping positions for more key types.
- High-precision micro adjuster, set the probe pre-position function, to ensure the precision of the dimple position.

3. Product list

The following items are included in the factory-packaged box of the whole machine, please contact your dealer if anything is missing.

Name	Picture	Quantity	Instruction
Machine		1	Machine
Clamp		1	For holding keys, rotatable
Top cover gasket		1	Temporary placement of lightweight accessories and consumables
Alignment stopper		2	Key tip alignment
1.5mm cutter		1	Suitable for keys requiring delicate processing
2.5mm cutter		1	Suitable for most vertical cutting keys
Probe		1	Detection tool
Main handle		1	Controls probe and cutter height
Secondary handle		1	Control of cutting table position

Cushion block		2	Used for external key alignment
Power cord of Mainland China		1	Power supply
Power cord of UK standard		1	Power supply
Power cord of EU standard		1	Power supply
Power cord of US standard		1	Power supply
Brush		1	Machine cleaning tool
Product certificate of conformity packing list		1	Product factory verification certificate factory packing statistics
Product manual		1	Machine assembly and use instructions

Attention:

- In order to improve the quality of the product, the color, appearance and structure of the product may be changed, please prevail in kind.
- The cutter needs to be changed periodically to ensure that the key cuts well.
- Please use the 10A fuse.

4. Overview

4.1 Schematic diagram of machine structure



4.2 Machine specification parameters

Input voltage	220VAC
Input frequency	50Hz
Power	360W(10500rpm)
Motor speed	Maximum 10500rpm Minimum 6700rpm (Infinitely adjustable speed)
Motor torque	Torque 0.34N
Spindle travel	27mm
Working table moving distance	Horizontal: 40mm Longitudinal: 50mm
Working temperature	0-50°
Working humidity	10-90%
Machine size	298x445x525mm
Packing size	600x565x380mm
Net weight	23kg
Gross weight	28kg

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Machine dimensions



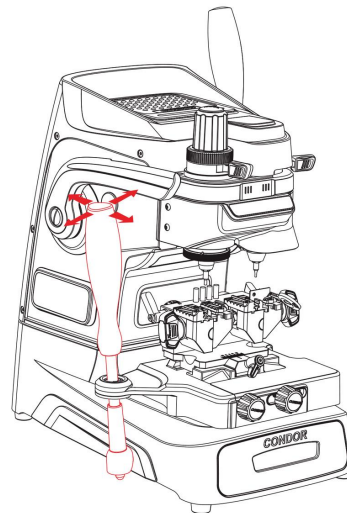
Package dimensions

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4.3 Description of main parts and functions

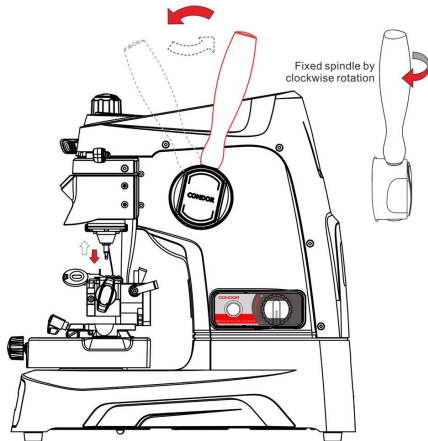
4.3.1 Secondary Handle



Controls the position of the cutting table within a specified range of movement in the horizontal direction, and can be moved arbitrarily in each direction.

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4.3.2 Main handle



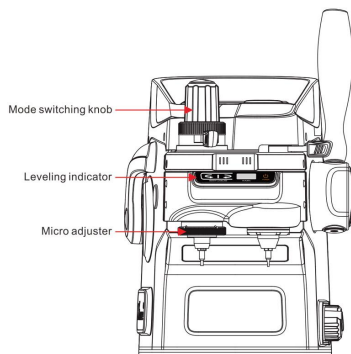
- 1) Turn the main handle back and forward to adjust the height position of the probe and the cutter, release the handle and the probe and cutter will return to the initial height.
- 2) Control the main handle to make the probe and cutter move to a certain height, and tighten the main handle along the clockwise direction to fix the height of the probe and cutter.

Attention:

- 1) Please note that the operating force should not be too strong to avoid damage to the machine parts.
- 2) When the power switch is turned on, the cutter will spin when the main handle is pressed down to a certain position; if it stops at the initial position, the cutter will not spin even if the power is turned on. (See section 5.6).
- 3) Please ensure that the spindle is running and has reached a stable target speed before key cutting.

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4.3.5 Mode switching knob, Leveling indicator and Micro adjuster



1. Mode switching knob is used to set the pre-position function, which is mainly used to cut the dimple key and improve the accuracy of the dimple position.
 - 1) When the mode selection is "Standard mode", the pre-position function is turned off.
 - 2) When the mode selection is "Dimple mode", the pre-position function is enabled. The height of the probe is lower than the height of the cutter with the spring, and it has the ability to return, so when cutting the dimple key, the probe will locate the characteristic point of the original key in advance, and guide the cutter to cut the blank key, so as to improve the accuracy of the dimple position.

Attention:

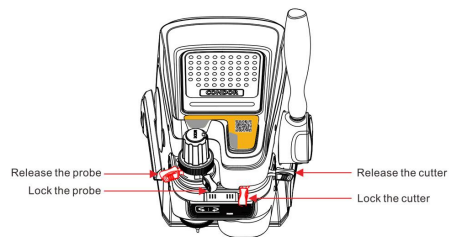
Probe micro adjustment should only be used in "Standard Mode", otherwise the accuracy of the cut key may be affected.

2) Leveling indicator and Micro adjuster.

- 1) When only the left red light is on, the height of the probe is lower than the height of the cutter, it is necessary to rotate the micro adjuster knob counterclockwise to make the probe move up.
- 2) When only the right red light is on, the height of the probe is higher than the height of the cutter, you need to rotate the micro adjuster knob clockwise to make the probe move down.
- 3) When the middle green light is on, the probe and cutter are height leveled.

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4.3.3 Cutter and probe lock switch



- 1) Probe locking switch on the left side, cutter locking switch on the right side.
- 2) When installing/removing probes or cutters, follow the icons indicated on the machine.

Attention:

Make sure the locking switch is set to the specified position. If the locking switch is not set to the specified position, the cutter spindle will not rotate even if the power switch is turned on.

4.3.4 Cutter speed knob and the cutter power switch



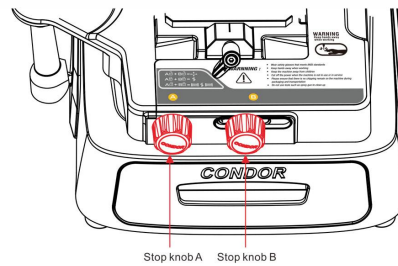
- 1) Rotate the cutter speed knob to control the motor speed, the speed is 6700 R/MIN, 7300 R/MIN, 7900 R/MIN, 8500 R/MIN, 9100 R/MIN, 9700 R/MIN, 10500 R/MIN. the speed is real-time displayed on the led screen.
- 2) When the cutter power switch is turned on, the power indicator will turn on (red).

Attention:

When the power switch is turned on, the cutter will spin when the main handle is pressed down to a certain position; if it stops at the initial position, the cutter will not spinning even if the power is turned on. (See section 5.6).

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4.3.6 Stop knob

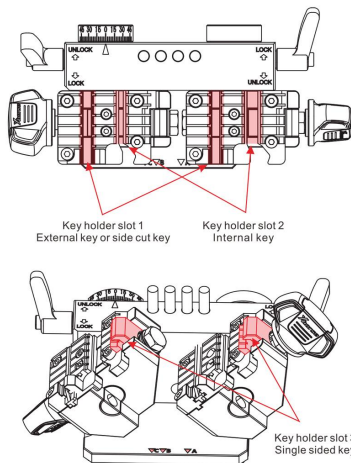


There are stop knob A and stop knob B on the working table, which can be switched to different working statuses according to the actual use requirements.

- 1) By locking only the right stop knob B, the table moving distance is shortened and limited to a certain range, which is generally used for precise control of key bit depth during cutting key.
- 2) Lock the left stop knob A and right stop knob B at the same time, the table left and right movement is locked, used for cutting dimple key and to prevent the table from shaking left and right under the vibration of the cutting force to affect the precision of the key cutting.

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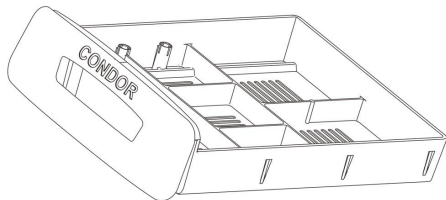
4.3.7 Clamp



Used to hold keys in position, four slots on the rear side allow the user to put probes and cutters.
In the normal condition key is placed flat in the key holder slot 1 or key holder slot 2. The key holder slot 1 holds the external or flat key and the key holder slot 2 holds the internal key.
The black locking knobs on both rear sides can be loosened in a counterclockwise direction to adjust the clamp surface for counterclockwise rotation. The key clamp slot 3 holds single sided keys. When using, please select the corresponding cutting surface according to the type of key.

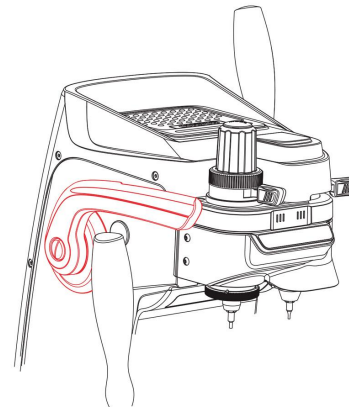
Attention:
When cutting key, the same cutting surface must be selected for both left and right clamps (See section 6 for details on clamp use).

4.3.9 Storage drawers



Store consumables and tools such as probe, cutters, key blanks, brushes, etc.

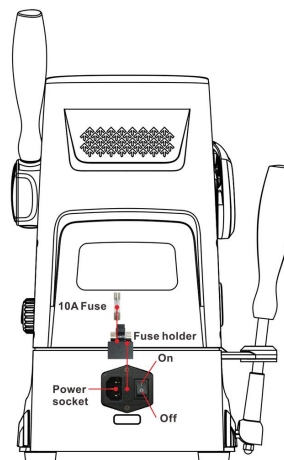
4.3.8 Armrest pivot



- 1) The armrest pivot has a certain degree of damping, and can be rotated within a certain range by pulling up or pressing down on the pivot with force.
- 2) In order to ensure stable cutting and avoid moving handle too fast, please rotate the armrest pivot to a suitable position as an operating support when using.

4.3.10 Power control module

The power socket, fuse and power switch are located the rear of the machine

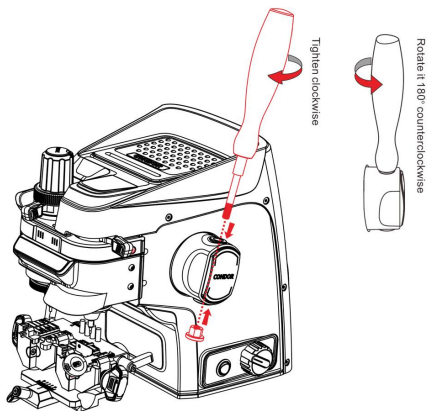


- 1) Plug the power cord into the socket on the left side and connect it to a power outlet with a grounding wire.
- 2) Set the power switch to "On", at this time, the machine enters the standby state.
- 3) To replace the fuse, remove the fuse holder, replace the new fuse, and put it back in place.

- ★ Please use 10A fuse
- ★ When the machine is not used for a long time or when performing maintenance operations such as replacing fuses, the power must be turned off and the power cord must be unplugged.

5. Installation and setup of the machine

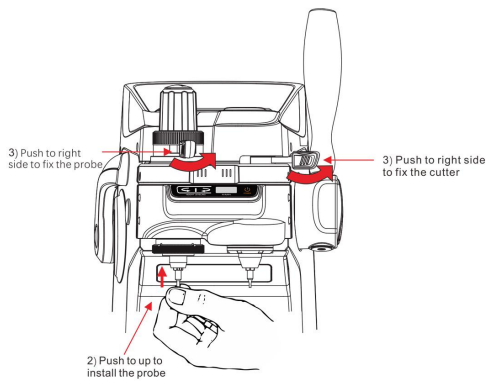
5.1 Installation of the main handle



- 1) Insert the lower end of the main handle aligned with the mounting holes on the right side of the machine, then cap the screw cap and rotate the handle in a clockwise until tight.
- 2) When fully tightened, the spindle will be limited to a fixed position and will not be able to move up or down.
- 3) Rotate the handle 180 degrees in counterclockwise direction, the height position of the probe and cutter can be adjusted.

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5.3 Installation and removal of the probe and cutter

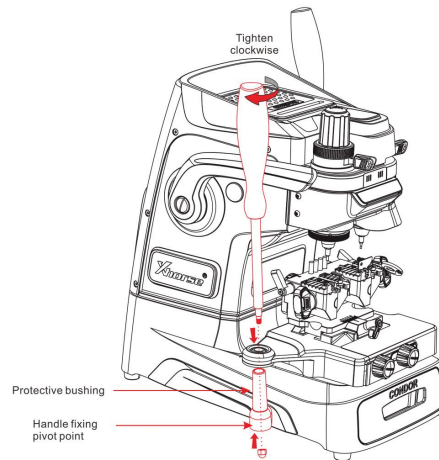


- Installation steps:**
- 1) Probe on the left, cutter on the right. Push the locking switch to left side to release it.
 - 2) Put the probe/cutter up into the mounting hole and make sure the probe/cutter is pushed up to the most up position in the mounting hole.
 - 3) Push the locking switch to right side to lock it.

Attention:
When using the 1.5mm cutter and the 2.5mm cutter, the probe and the cutter must be selected with the same diameter.

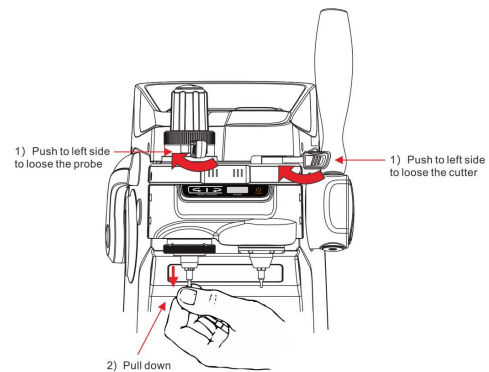
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5.2 Installation of the secondary handle



- Insert the lower end of the secondary handle aligned with the mounting holes on the left side of the cutting table and into the protective bushing, followed by inserting it into the handle fixing pivot bearing holes on the lower left side of the machine, then cap the screw cap and rotate the handle in a clockwise direction until it is tightened.

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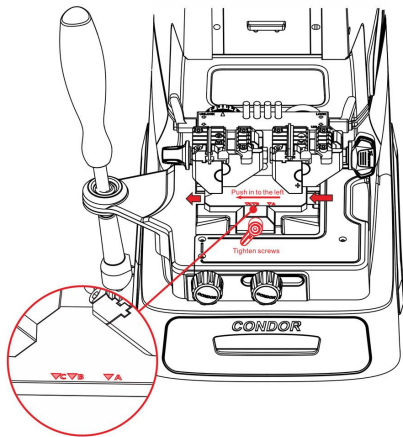
- Removal steps:**
- 1) Push the locking switch to left side to release it.
 - 2) Pull down the probe/cutter.

Attention:

1. Try to keep the machine in a power-off state when disassembling to avoid accidents.
2. When disassembling, hold the probe/cutter first, and then release the locking switch to avoid dropping the probe/milling cutter directly.

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5.4 Clamp installation

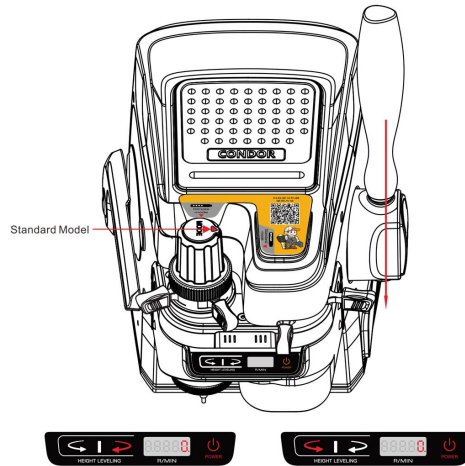


- 1) Installation of the clamp: Push the clamp into the dovetail slot from right to left so that the arrow on the clamp aligns with the clamp alignment line. Adjust the clamp position to point A, point B, point C as needed. Lock the tightening screws.
- 2) Disassemble the clamp: loosen the fastening screws and push out the clamp to the right.
- 3) Clamp rotation: according to the cutting needs, you can loosen the locking knob on both sides of the rear, adjust the clamp surface counterclockwise, rotate to the desired angle and then re-lock the clamp.

Attention:
The grooves at the bottom of positions A, B, and C must fit the ball, otherwise the leveling light will not come on when the probe and cutter touch the clamp!

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5.5 Probe and cutter height leveling

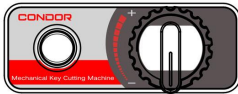


- 1) Turn the mode switching knob clockwise to "Standard Mode", install the cutter and probe, and operate the main handle to move the probe and cutter downward.
- 2) If the cutter touches the surface of the clamp first, the indicator light of the right clockwise leveling indicator will be on. At this time, turn the probe micro-adjustment knob clockwise to move the probe down until the leveling indicator light in the center is green.
- 3) If the probe touches the surface of the clamp first, the indicator light of the left counterclockwise leveling indicator will be on, at this time, turn the probe micro-adjustment knob counterclockwise until the leveling indicator light in the center is green.

Note:
To ensure the accuracy of the height leveling, replace the left and right sides with probes of the same size for leveling!

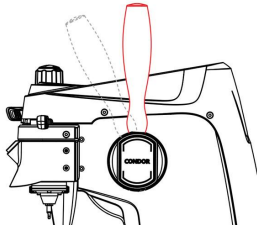
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5.6 Cutter power switch and speed control knob

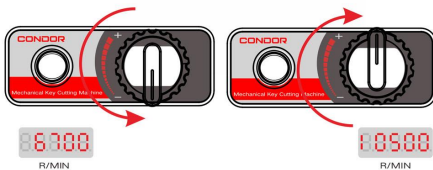


The cutter power switch is located on the right side of the machine, turn one the switch before use.

- 1) When the main handle is in the initial position, the cutter will not spin.
- 2) When the main handle is pressed down to a certain height, the cutter starts to spin.



The speed control knob is also located on the right side of the machine, and the speed can be adjusted according to personal use habits.



- 1) Turning the speed control knob counterclockwise, the motor speed decreases and the minimum speed is 6700r/min.
- 2) Turning the speed control knob clockwise, the motor speed increases and the maximum speed is 10500r/min.

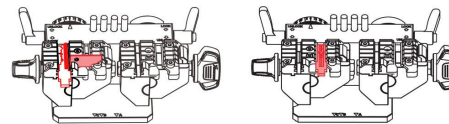
24

6. Clamp use

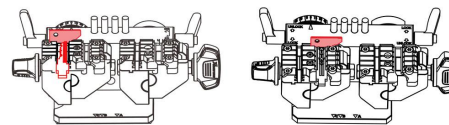
6.1 Key alignment

There are 2 ways of aligning keys: shoulder alignment and tip alignment.

- 1) The shoulder alignment position is shown below, the external key can be aligned with the stopper.



- 2) The head alignment position is shown below, you can choose the stopper according to the length of the key.

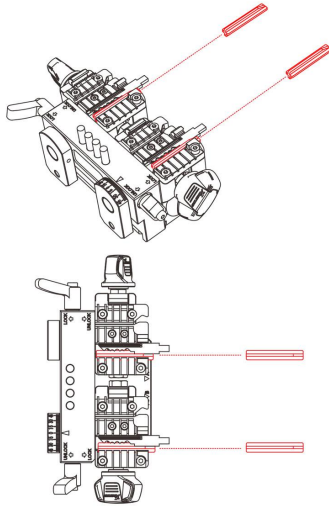


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6.2 Methods to clamp certain keys

6.2.1 Clamping method for external keys

The clamping method for external keys is shown in the figure below, and must be used with pads and according to the key, choose the shoulder alignment or tip alignment method.

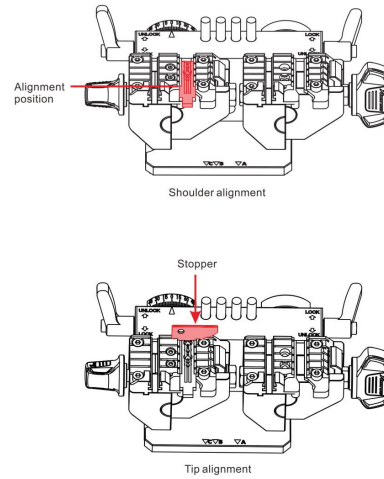


Attention:
This manual only lists some of the key clamping methods as examples, the clamp is more versatile, if you have special key clamping questions, please consult technical support.

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6.2.2 Clamping method for internal keys

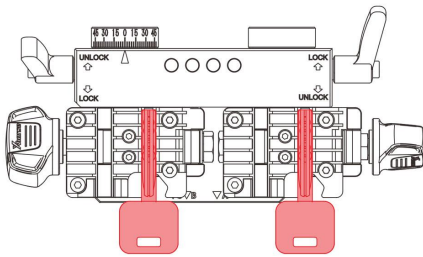
The clamping method for internal keys is shown in the figure below, and choose the shoulder alignment or tip alignment method.



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6.2.3 Clamping method for crescent-shaped keys

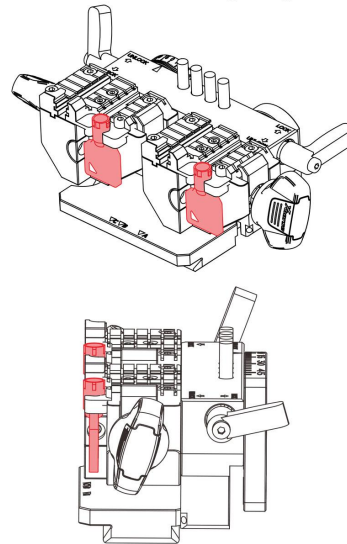
When clamping crescent-shaped keys, make sure that the bottom flat of the key completely fits the bottom of the clamp before clamping; and choose the shoulder alignment or tip alignment method.



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6.2.4 Clamping method for plum keys

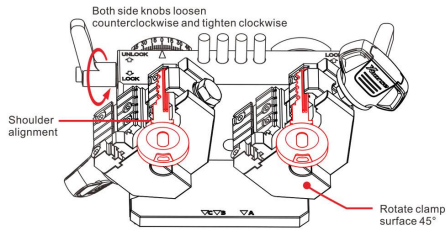
When clamping the plum key, it is necessary to do height positioning and circumferential positioning; height positioning can be used the cutter and probe as a positioning tool, circumferential positioning rely on the clamp on the V groove and the key on the circumference of the characteristics of the lab matching positioning, as shown in the figure:



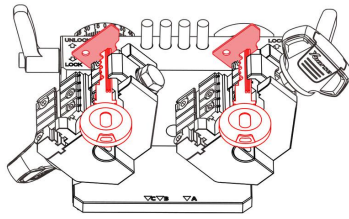
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6.2.5 Clamping method for single sided key

When clamping single-sided thin keys for residential use, since the key blanks are shorter and thinner than other key blanks, the black locking knobs on both sides at the rear of the clamp can be loosened to rotate the clamp counterclockwise by 45°, use the side grooves for clamping, and select either the tip alignment or shoulder alignment method according to the key type. This is shown in the diagram below:



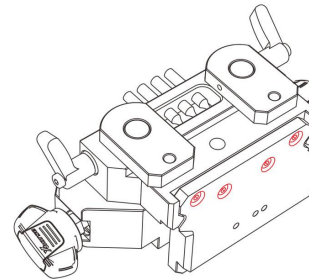
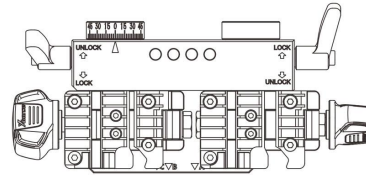
If there is any obstruction to the rotation of the knobs on both sides, the knobs can be gently withdrawn and rotated to adjust the position.



6.2.6 Clamp adjustment

Clamps have been adjusted to the optimal state before leaving the factory, generally do not need to be adjusted separately. If the following conditions are encountered during subsequent use, can be adjusted in accordance with the following method.

- 1) When the tip of the key holding is offset from side to side compared to the tail, loosen the 4 screws at the bottom of the clamp.
- 2) If the tip of the key is more to the right than the tail, loosen the screws on the right side of the bottom of the clamp and tighten the screws on the left side.
- 3) If the tip of the key is more to the left than the tail, loosen the screws on the left side of the bottom of the clamp and tighten the screws on the right side.



7. Maintenance

- Before cutting the key, please use a brush to clean the debris and sundries on each part of the cutting area to ensure the cutting accuracy and avoid impurities from damaging and corroding the machine parts affecting the key cutting accuracy.
- Do not use any detergent to clean the parts of the machine as this may damage or corrode the machine parts.
- Do not rinse the machine and parts directly with water or wipe the machine with a wet cloth to prevent leakage of electricity or rusting of metal parts.
- Under no circumstances is it permissible to use equipment such as air guns, blowers, etc. to clean the cutting area of the machine in order to avoid debris being blown into the machine and causing it to malfunction.

8. Warranty and after-sales instructions

The CONDOR XC-002 PRO warranty period is one year, based on the date on the transaction voucher; if there is no transaction voucher or if the voucher is lost, the date of manufacture as recorded by the manufacturer.

The warranty is not free of charge in the following cases.

- Machine failure caused by not using the machine according to the instruction manual.
- If the machine is damaged due to self-repair or modification.
- Failure of the machine due to falling, collision or improper voltage.
- Damage caused by force majeure.
- Malfunction or damage caused by prolonged use in bad conditions or carrying on vehicles or ships.
- The main unit housing is dirty or damaged due to use.

For product after-sales maintenance and technical support, please contact your dealer or scan the QR code below to download the Xhorse official APP and consult online customer service.



Xhorse APP

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XC-002 PRO

