Xhorse HKSL25

Xhorse 1.5mm Milling Cutter Instruction Manual

For Condor XC-Mini Plus/Plus II/XC-002 and Dolphin XP005/XP005L/XP007 Key Cutting Machines

1. Product Overview

The Xhorse 1.5mm Milling Cutter is a precision-engineered accessory designed for use with Xhorse automatic key cutting machines. This cutter is essential for accurately duplicating and cutting various types of keys, ensuring high precision and durability.
It is specifically designed to work seamlessly with the Condor XC-Mini Plus, Condor XC-Mini Plus II, Condor XC-002, Dolphin XP005, Dolphin XP005L, and Dolphin XP007 key cutting machines.

Image: A set of five Xhorse 1.5mm milling cutters, each housed in its protective plastic case, ready for use.

2. Compatibility

This 1.5mm milling cutter is compatible with the following Xhorse key cutting machine models:

- Condor XC-Mini Plus
- Condor XC-Mini Plus II
- Condor XC-002
- Dolphin XP005
- Dolphin XP005L
- Dolphin XP007

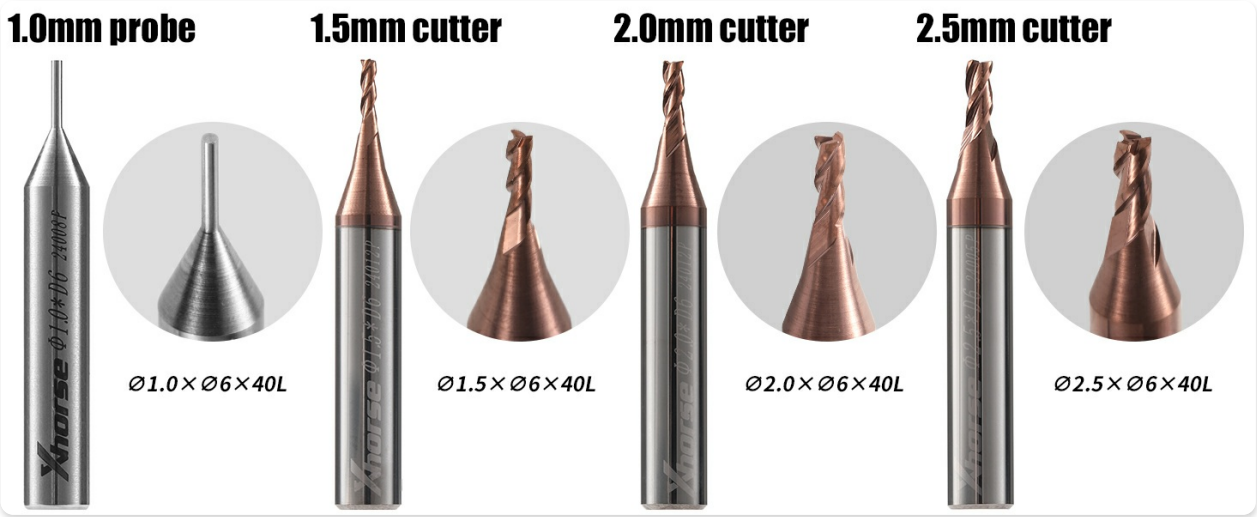

Image: Various Xhorse key cutting machines, including Condor XC-Mini Plus, Condor XC-Mini Plus II, Dolphin XP005, and Dolphin XP005L, illustrating the range of compatible devices.

3. Specifications

Specification	Detail
Size	1.5mm
Material	Carbide
Number of Flutes	2
End Cut Type	Ball End
Cut Type	Non-Center Cutting
Number of Cutting Edges	5
Finish Type	Unfinished
Tolerance Held	Precision
Item Weight	2.39 ounces
Package Dimensions	3.11 x 2.05 x 0.43 inches
Country of Origin	China
Model Number	HKSL25

Image: A visual comparison of various Xhorse cutters and probes, highlighting the distinct features and sizes, including the 1.5mm milling cutter.

4. Setup and Installation

Proper installation of the milling cutter is crucial for accurate key cutting and to prevent damage to the machine or cutter.

1. **Power Off Machine:** Ensure your Xhorse key cutting machine is powered off and unplugged before attempting any installation or removal of components.
2. **Locate Cutter Clamp:** Identify the cutter clamp on your machine's cutting head. Refer to your specific machine's user manual for exact location if unsure.
3. **Loosen Clamp Screw:** Use the appropriate tool (usually an Allen wrench) to loosen the screw that secures the existing cutter or holds the empty clamp. Do not remove the screw completely.
4. **Remove Old Cutter (if applicable):** Carefully pull out the old cutter from the clamp. Dispose of worn or damaged cutters responsibly.
5. **Insert New Cutter:** Insert the new 1.5mm milling cutter into the clamp. Ensure it is seated firmly and correctly aligned. The cutter should be inserted to the proper depth as indicated by your machine's guidelines or the cutter's design.
6. **Tighten Clamp Screw:** While holding the cutter in place, tighten the clamp screw securely. Do not overtighten, as this can damage the cutter or the clamp.
7. **Verify Installation:** Gently tug on the cutter to ensure it is firmly held and does not wobble.

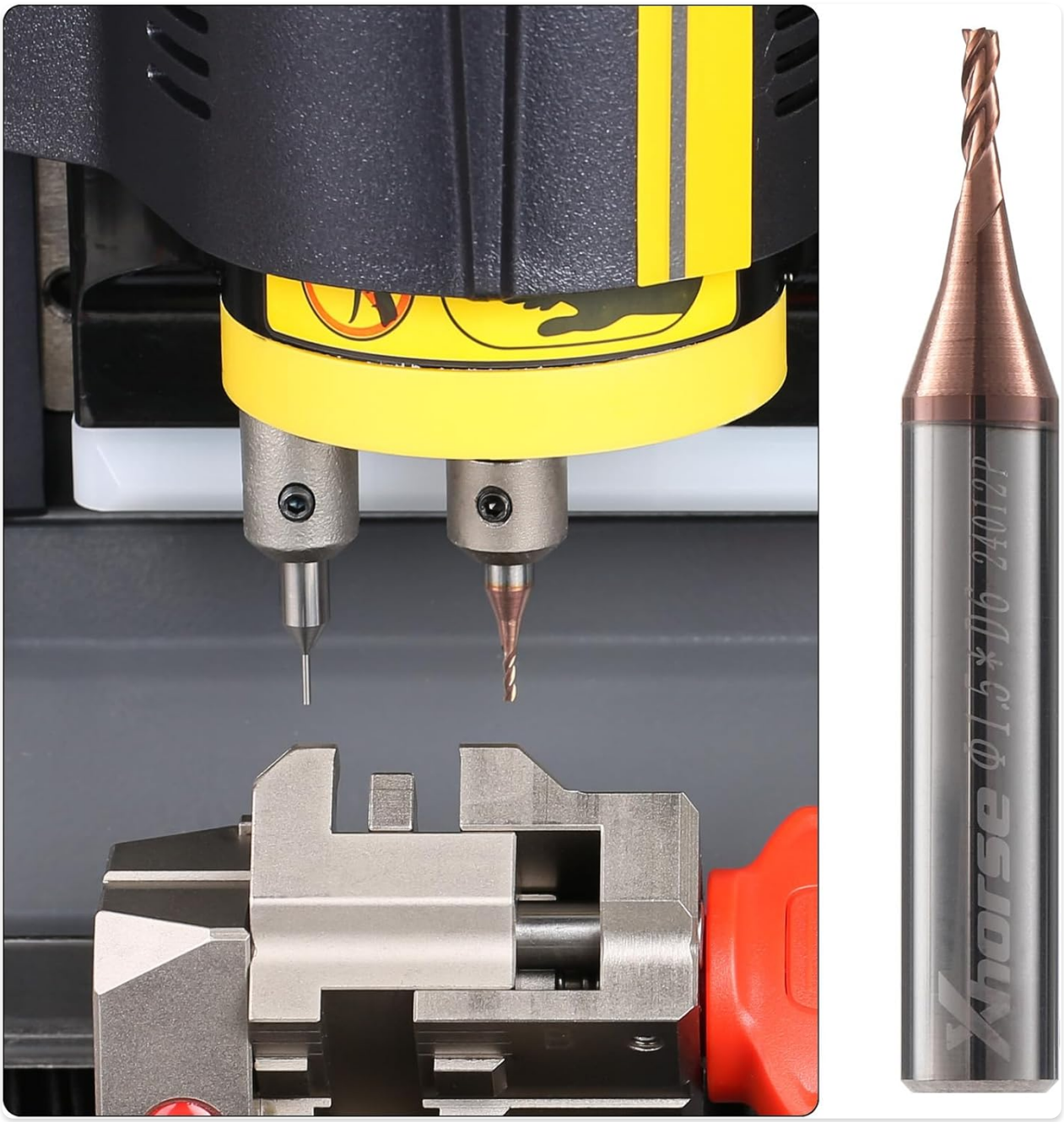

Image: The 1.5mm milling cutter correctly installed in an Xhorse key cutting machine, positioned alongside the machine's probe, demonstrating readiness for key cutting operations.

5. Operating Instructions

Once the 1.5mm milling cutter is installed, follow your key cutting machine's specific operating procedures. This cutter is designed for precision cutting of various key types.

- **Calibration:** After installing a new cutter, it is recommended to perform a machine calibration or cutter height adjustment as per your machine's manual to ensure optimal cutting accuracy.
- **Key Clamping:** Securely clamp the key blank in the appropriate jaw of your key cutting machine. Ensure the key is stable and correctly aligned.
- **Software Selection:** Select the correct key type and cutting parameters in your machine's software interface. Verify that the software recognizes the 1.5mm cutter if automatic detection is available.

- **Cutting Process:** Initiate the cutting process through the machine's interface. Monitor the cutting operation to ensure smooth and accurate key duplication.
- **Post-Cutting Inspection:** After cutting, carefully remove the key and inspect it for accuracy and finish. Deburr if necessary.

Image: A detailed view of the Xhorse milling cutter engaged in the key cutting process, showcasing its precise interaction with the key blank within the machine.

6. Maintenance

Regular maintenance of your milling cutter will extend its lifespan and ensure consistent cutting quality.

- **Cleaning:** After each use, use a soft brush or compressed air to remove any metal shavings or debris from the cutter and the surrounding area of the machine.
- **Inspection:** Periodically inspect the cutter for signs of wear, chipping, or damage. A dull or damaged cutter can lead to inaccurate cuts and potential machine strain.
- **Storage:** When not in use, store the milling cutter in its protective plastic case to prevent damage and keep it clean. Store in a dry, cool place.
- **Replacement:** Replace the cutter when it shows significant signs of wear or when cutting quality deteriorates. The lifespan of a cutter depends on the material being cut and frequency of use.

7. Troubleshooting

If you encounter issues while using the 1.5mm milling cutter, consider the following common problems and solutions:

- **Poor Cutting Quality / Rough Edges:**
  - **Cause:** Worn or dull cutter.
  - **Solution:** Replace the milling cutter.
  - **Cause:** Incorrect calibration or cutter height.

- **Solution:** Perform machine calibration or adjust cutter height according to your machine's manual.
- **Cause:** Key blank not securely clamped.
- **Solution:** Ensure the key blank is firmly and correctly clamped in the machine's jaws.

- **Cutter Breaking Frequently:**
  - **Cause:** Overtightening the clamp screw during installation.
  - **Solution:** Ensure the clamp screw is tightened securely but not excessively.
  - **Cause:** Cutting material that is too hard for the cutter.
  - **Solution:** Verify the cutter is suitable for the key blank material.
  - **Cause:** Machine vibration or misalignment.
  - **Solution:** Check machine stability and perform a full machine calibration.

- **Cutter Not Recognized by Machine:**
  - **Cause:** Improper installation.
  - **Solution:** Re-install the cutter, ensuring it is fully seated.
  - **Cause:** Software glitch.
  - **Solution:** Restart the machine and its software. Update machine firmware if available.

8. Warranty and Support

For warranty information and technical support regarding your Xhorse 1.5mm Milling Cutter or compatible key cutting machines, please refer to the official Xhorse website or contact your authorized Xhorse dealer.
Keep your purchase receipt or proof of purchase for any warranty claims.