OKANEN 1005009964175587

OKANEN Keyway Broaching Cutter Carbide Insert Blade (3mm) User Manual

1. Introduction

This user manual provides comprehensive instructions for the safe and effective use of the OKANEN Keyway Broaching Cutter Carbide Insert Blade. This precision-engineered tool is designed for creating blind internal keyway slots and grooves on spline shafts with high accuracy. Please read this manual thoroughly before installation and operation to ensure optimal performance and safety.

2. Safety Information

Always prioritize safety when working with cutting tools. Failure to follow these safety guidelines may result in injury or damage to the equipment.

- **Wear appropriate personal protective equipment (PPE):** This includes safety glasses, gloves, and hearing protection.
- **Ensure proper machine setup:** Verify that the tool holder and workpiece are securely clamped before operation.
- **Use correct cutting parameters:** Refer to your machine's guidelines for appropriate speeds and feeds for carbide inserts.
- **Inspect the insert before use:** Check for any chips, cracks, or wear that could compromise performance or safety.
- **Handle with care:** Carbide inserts are sharp and brittle. Avoid dropping or impacting them.
- **Keep work area clean:** Remove debris and obstructions to prevent accidents.

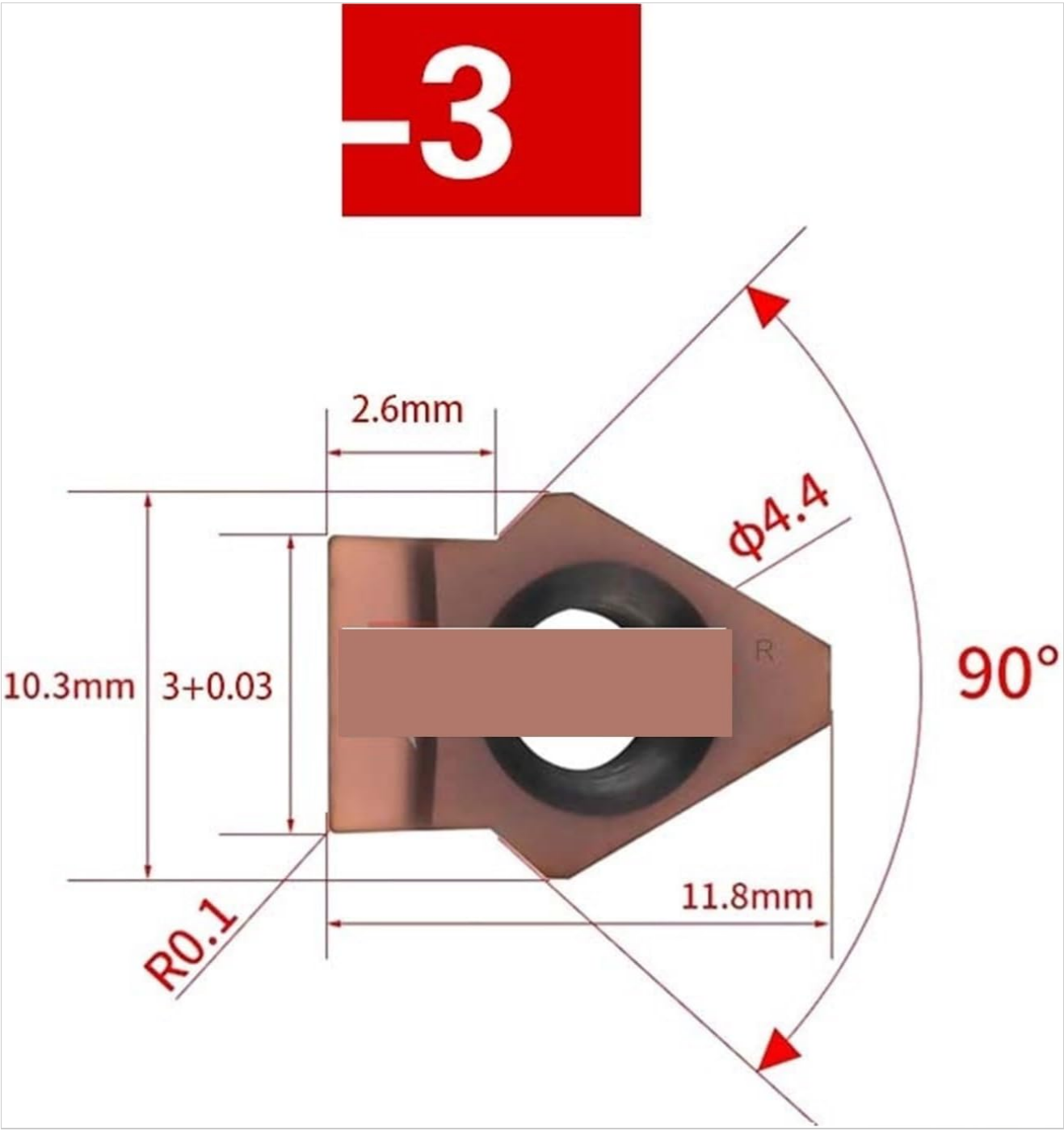
3. Product Overview

The OKANEN Keyway Broaching Cutter Carbide Insert Blade is a durable and precise cutting tool. It features a carbide construction for extended tool life and is designed for high-accuracy keyway slotting. Its versatile

compatibility allows integration with various machining equipment.

Key Features:

- **Carbide Insert:** Engineered for durability and long-lasting performance in demanding machining applications.
- **Precision Cutting:** Designed for creating blind internal keyway slots and grooves with exceptional accuracy.
- **Versatile Compatibility:** Works seamlessly with various machines, making it suitable for a wide range of industrial applications.
- **Easy Installation:** User-friendly design allows for quick and hassle-free installation on compatible equipment.
- **Enhanced Efficiency:** Optimized for high-speed cutting, reducing machining time and improving overall productivity.



The image displays a detailed technical drawing of the Keyway Broaching Cutter Carbide Insert Blade. Key dimensions are indicated: overall length of 10.3mm, a cutting width of 3mm with a tolerance of +0.03mm, a cutting edge length of 2.6mm, a base width of 11.8mm, and a corner radius of R0.1. The tool features a 90-degree cutting angle and a central bore with a diameter of 4.4mm. This diagram is crucial for understanding the precise geometry and fit of the insert.

4. Specifications

Attribute	Value
Manufacturer	OKANEN
Part Number	1005009964175587
Item Weight	1.76 pounds
Package Dimensions	0.39 x 0.39 x 0.39 inches
Item Model Number	1005009964175587
Size	1
Color (Nominal Size)	3 3mm
Power Source	AC (for associated machinery)
Item Package Quantity	1
Batteries Required?	No

5. Setup

Proper setup is crucial for the performance and longevity of the carbide insert blade.

1. **Prepare the Tool Holder:** Ensure the tool holder is clean and free of debris.
2. **Insert the Blade:** Carefully place the OKANEN carbide insert blade into the designated slot in the tool holder. Ensure it is seated correctly and flush against all contact surfaces.
3. **Secure the Blade:** Use the appropriate clamping mechanism (e.g., screw, wedge) to firmly secure the insert in place. Do not overtighten, as this can damage the insert.
4. **Mount the Tool Holder:** Install the assembled tool holder into your milling machine or broaching equipment according to the machine manufacturer's instructions.
5. **Verify Alignment:** Check that the tool is properly aligned with the workpiece and the intended cutting path.

6. Operating Instructions

Follow these steps for effective and safe operation of the keyway broaching cutter.

1. **Workpiece Preparation:** Securely clamp the workpiece in the machine vise or fixture. Ensure it is stable and will not move during the cutting process.
2. **Set Cutting Parameters:** Based on the workpiece material, desired keyway depth, and machine capabilities, set the appropriate cutting speed, feed rate, and depth of cut. Consult material data sheets or machining handbooks for recommendations.
3. **Initiate Cutting:** Carefully bring the tool into contact with the workpiece. Begin the cutting operation, applying consistent feed.
4. **Monitor Process:** Observe the cutting process for chip formation, tool vibration, and surface finish. Adjust parameters if necessary to optimize performance and prevent tool wear.
5. **Coolant Application:** Use appropriate cutting fluid or coolant to dissipate heat, lubricate the cutting zone, and flush chips, especially when machining tough materials.

6. **Complete Cut:** Once the keyway is fully formed, retract the tool safely from the workpiece.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your carbide insert blade.

- **Cleaning:** After each use, clean the insert and tool holder to remove chips, coolant residue, and any buildup. Use a soft brush or compressed air.
- **Inspection:** Periodically inspect the cutting edges for signs of wear, chipping, or damage. Replace worn inserts promptly to maintain cutting quality and prevent damage to the tool holder or workpiece.
- **Storage:** Store unused inserts in their original packaging or a protective container to prevent damage. Keep them in a dry environment.
- **Tool Holder Maintenance:** Regularly check the tool holder for wear, especially in the clamping areas. Replace or repair if necessary.

8. Troubleshooting

Refer to the following table for common issues and their potential solutions.

Problem	Possible Cause	Solution
Poor surface finish	Worn or chipped insert; incorrect cutting parameters; insufficient coolant.	Replace insert; adjust speed/feed; increase coolant flow.
Excessive tool wear	High cutting speed; insufficient feed; abrasive material; lack of coolant.	Reduce speed; increase feed; use appropriate coolant; select tougher insert grade.
Tool breakage	Excessive depth of cut; sudden impact; improper clamping; workpiece movement.	Reduce depth of cut; ensure secure clamping; verify workpiece stability.
Vibration/Chatter	Unstable setup; worn machine components; incorrect cutting parameters.	Ensure rigid setup; check machine condition; adjust speed/feed.

9. Warranty and Support

For specific warranty information regarding your OKANEN Keyway Broaching Cutter Carbide Insert Blade, please refer to the purchase documentation or contact your retailer. For technical support or inquiries, please reach out to the manufacturer or authorized distributor.