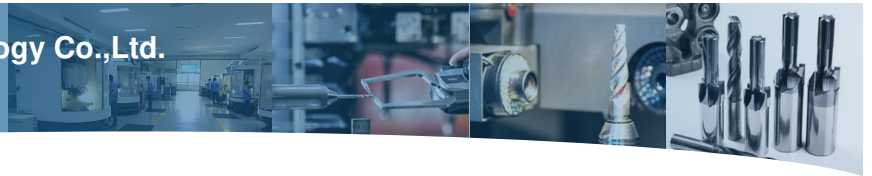




China Factory

Wuxi Soon Technology Co.,Ltd.

soonru.com



4mm Shank Diameter Micro End Mills with HRC60 Hardness and 30° or 45° Helix Angle for Precision Machining

Our Product Introduction

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Basic Information



Product Specification

- Shank Diameter: 4mm
- Suitable For: Steel Copper
- Hrc: HRC60
- Shank Shape: Straight Shank
- Surfacefinish: Polished Or Ground
- Series: SP
- Standard: Standard
- Helixangle: 30° Or 45°
- Выделить: **4mm Shank Diameter Micro End Mills, HRC60 Hardness Micro Carbide Milling Cutters, 30° or 45° Helix Angle Small Diameter End Mills**

Product Description:

Micro End Mills are precision-engineered cutting tools designed to deliver exceptional performance in miniature machining applications. These tools are a vital component in the realm of Miniature Cutting Tools, offering unparalleled accuracy and efficiency for intricate milling tasks. Crafted with meticulous attention to detail, Micro End Mills are ideal for industries that demand high precision and superior surface quality.

One of the standout features of these Micro Carbide Milling Cutters is their surface finish. Available in either polished or ground finishes, these options cater to different machining requirements and preferences. A polished surface finish ensures reduced friction and smoother cutting action, which is particularly beneficial when working with delicate materials or intricate designs. On the other hand, a ground finish provides enhanced rigidity and sharpness, contributing to extended tool life and consistent performance. This versatility allows users to select the optimal surface finish based on the specific application and desired outcome.

The structural integrity of these Micro Carbide Milling Cutters is another critical attribute that sets them apart. They feature an integral structure, meaning the cutting head and shank are manufactured from a single piece of high-quality carbide. This integral design enhances tool strength, reduces the risk of breakage, and ensures precise alignment during cutting operations. The robust construction also allows these micro end mills to withstand the high stresses associated with machining hard materials, making them reliable tools for demanding environments.

Micro End Mills come equipped with a straight shank, which provides a secure and stable grip in the tool holder. The straight shank design simplifies tool changing and enhances the rigidity of the setup, contributing to improved machining accuracy. This feature is especially important when working with miniature components where any tool deflection or instability can lead to defects or inaccuracies. These Micro Carbide Milling Cutters are optimized for use with a variety of metals, including steel and copper. Their design and material composition make them particularly suitable for machining these metals, which are commonly used in manufacturing and fabrication. Whether it's the hardness of steel or the ductility of copper, these micro end mills deliver clean, precise cuts with minimal burr formation. This capability makes them indispensable for applications ranging from medical device manufacturing to electronics and fine mechanical parts production.

The helix angle of the Micro End Mills is available in two configurations: 30° and 45°. The 30° helix angle offers a balanced cutting action that reduces cutting forces and improves chip evacuation, making it suitable for general-purpose milling tasks. In contrast, the 45° helix angle provides a more aggressive cutting action, enhancing surface finish and enabling higher feed rates. This flexibility in helix angle selection allows users to tailor the cutting performance to the specific machining conditions, thereby optimizing productivity and tool life. In summary, these Micro Carbide Milling Cutters represent the pinnacle of precision in the category of Miniature Cutting Tools. Their polished or ground surface finishes, integral structure, straight shank design, and helix angle options provide a comprehensive solution for high-precision milling needs. Designed specifically for steel and copper machining, these micro end mills deliver exceptional performance, durability, and versatility. Whether used in prototype development, fine mechanical work, or high-volume production, they ensure superior results and consistent quality.

Investing in high-quality Micro End Mills means choosing tools that are engineered to meet the exacting demands of modern manufacturing. Their combination of advanced materials, thoughtful design, and adaptability makes them an essential asset for any precision machining operation focused on miniature components. With these Micro Carbide Milling Cutters, achieving intricate details, fine surface finishes, and reliable repeatability becomes not only possible but efficient and cost-effective.

Features:

Product Name: Micro End Mills

Shank Diameter: 4mm

Series: SP

Helix Angle: 30° or 45°

OEM: Accept

Controlling Mode: CNC Tooling System, CNC, CNC System

Ideal for Miniature Cutting Tools applications

High precision with Precision Micro End Mills design

Suitable for machining with Small Diameter End Mills

Technical Parameters:

Surface finish	Polished Or Ground
Structure	Integral
Suitable For	Steel, Copper
Flute Number	2
Series	SP
Standard	Standard
Controlling Mode	CNC Tooling System, CNC, CNC System
Application	Precision Machining, PCB Milling, Mold Making
HRC	HRC60
Tool type	Single End Mill

Applications:

Micro End Mills, particularly those in the SP series, are precision tools designed to excel in a variety of intricate machining tasks. Featuring a helix angle of either 30° or 45°, these Small Diameter End Mills offer enhanced chip evacuation and superior cutting efficiency, making them ideal for detailed and high-precision milling operations. The integral structure of these tools ensures maximum rigidity and durability, which is essential when working with delicate materials or performing fine detail work.

One of the primary application occasions for Micro Carbide Milling Cutters is in the aerospace and automotive industries, where precision and reliability are paramount. These industries often require machining of hard materials with tight tolerances, and the high hardness rating of HRC60 in these end mills ensures excellent wear resistance and longevity. The ability to customize these tools through OEM acceptance allows manufacturers to tailor the Micro Carbide Milling Cutters to specific project requirements, thereby enhancing performance and productivity.

Micro End Mills are also widely used in the medical device manufacturing sector. The integral design combined with a sharp helix angle facilitates the production of miniature components such as surgical instruments and implants, where every micron of precision counts. The small diameter of these cutters enables machining in confined spaces and on complex geometries that larger tools cannot access. In the electronics industry, Micro Carbide Milling Cutters are essential for producing intricate circuit boards and delicate components. Their robust construction and sharp cutting edges allow for clean, precise cuts on brittle materials such as ceramics and composites. The versatility of these small diameter end mills makes them suitable for both prototype development and high-volume production runs. Additionally, these Micro End Mills find applications in mold making, jewelry crafting, and other precision engineering fields where fine detail and surface finish are critical. The combination of a 30° or 45° helix angle with an integral structure ensures smooth cutting action and reduced tool deflection, which translates to higher accuracy and better quality in the finished product.

Customization:

Our Micro End Mills are designed with a hardness of HRC60, ensuring exceptional durability and performance for precision machining. We accept OEM orders, allowing you to customize the tools to meet your specific requirements. These Single End Mills are compatible with various controlling modes including CNC Tooling System, CNC, and CNC System, providing versatile integration into your manufacturing processes. Manufactured to standard specifications, our High-Speed Micro Mills are ideal for intricate milling tasks. Whether you need Small Diameter End Mills or Micro Carbide Milling Cutters, we offer tailored solutions to enhance your machining efficiency and accuracy.



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