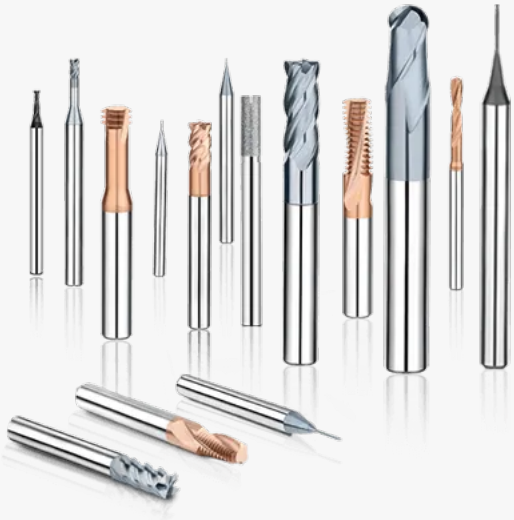
SAMHO Launches High-Performance Tungsten Carbide End Mills

HRC65 Ball Nose End Mill Achieves 0.001mm Accuracy in Precision Mold Machining



type of end mills

CA, UNITED STATES, November 11, 2025 /EINPresswire.com/ -- As the demand for precision manufacturing continues to increase, CNC tool performance defines machining quality and efficiency. SAMHO, a professional manufacturer specializing in high-performance tungsten carbide cutting tools, has introduced its latest generation of high-precision tungsten carbide end mills.

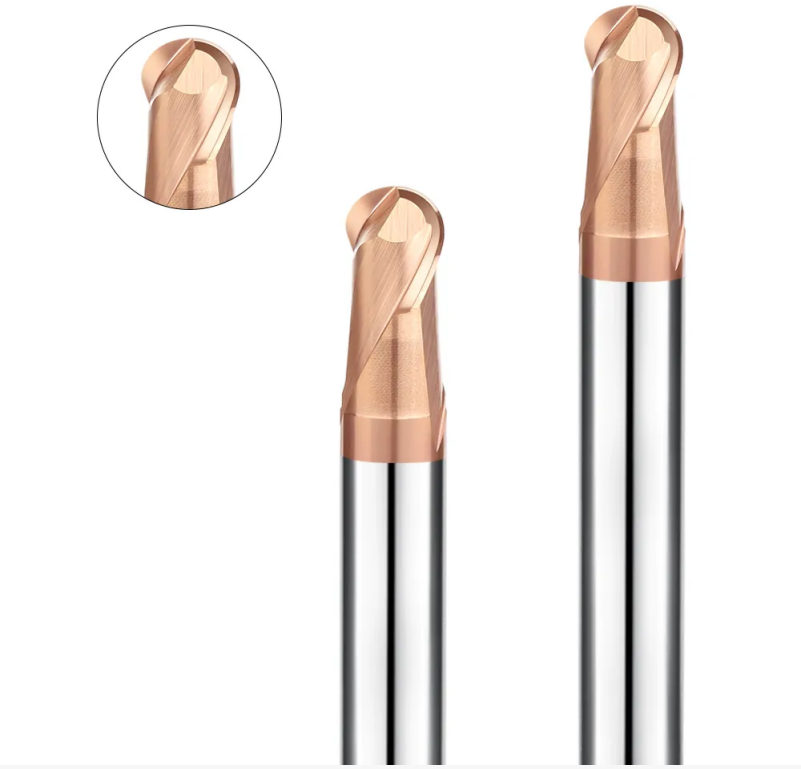
Leveraging over a decade of industry experience, SAMHO's new tool line is designed for demanding applications involving mold steel, graphite, copper, and high-hardness materials, providing global B2B clients with efficient, stable, and precise machining solutions.

Company Profile

Shenzhen SAMHO Metal Co., Ltd. (SAMHO TOOLS) is headquartered in Shenzhen, China, one of the world's core manufacturing hubs. The company focuses on the R&D, production, and sales of tungsten carbide cutting tools while providing process optimization and machining troubleshooting services to industrial clients.

With extensive experience across materials including mold steel, graphite, aluminum alloy, copper, titanium alloy, plastics, tungsten carbide, and ceramics, SAMHO offers tailored tooling solutions optimized for each material's unique cutting characteristics.

Since 2015, SAMHO has established branch offices in Hong Kong, Suzhou, Xiamen, and Dongguan, building a national technical support and service network that ensures fast response and localized after-sales assistance.



HRC65 ball nose end mill

High-Performance Product Matrix: System Solutions for Multi-Material Machining

With a deep understanding of high-hardness materials and high-precision machining, SAMHO's products integrate international production standards and advanced CNC grinding technology to deliver superior tool performance. The product portfolio includes:

1. High-Performance Mold Steel End Mills
Manufactured with high-toughness, ultra-fine grain tungsten carbide and reinforced edge design, these tools maintain outstanding anti-chipping stability when cutting steels above HRC60. Through optimized tool geometry and heat treatment processes, they enable high-speed cutting, reduced vibration, and mirror-level surface finishes—ideal for stamping dies, injection molds, and die-casting cavity machining.

2. Tungsten Carbide Graphite End Mills
Engineered for graphite machining, these end mills feature optimized rake angles and low-adhesion coatings that reduce graphite powder buildup and edge wear. They ensure excellent surface finish, long service life, and clean, efficient chip evacuation in graphite electrode manufacturing.

3. DLC-Coated Copper End Mills
Coated with DLC technology, these tools achieve a friction coefficient below 0.1, preventing sticking or scratching during red copper machining.
Their corrosion-resistant, ultra-smooth surfaces allow mirror-grade finishing of copper electrodes and precision parts, improving reflectivity and surface quality.

4. HRC65 Tungsten Carbide Drill Bits
Equipped with nano-composite coatings for enhanced heat and wear resistance, these drills are designed for HRC65 mold steel.
Optimized flute geometry ensures smoother chip removal, consistent hole accuracy, and tool life over 50% longer than conventional carbide drills.

5. Tungsten Carbide Thread Milling Cutters
Using advanced concentricity control and precise edge geometry, SAMHO's thread mills achieve forming accuracy within ±0.002mm. They produce clean, high-finish threads ideal for precision machinery and mold fastener applications, verified with go/no-go gauge inspection.

Key Highlight: HRC65 Ball Nose End Mill — The Symbol of ±0.001mm Ultra-Precision

In high-hardness mold machining, micron-level accuracy determines mold life and product quality.
SAMHO's flagship HRC65 Ball Nose End Mill embodies extreme precision engineering. Manufactured from imported ultra-fine particle tungsten carbide, combined with a high-toughness edge design and nano-level coating technology, it maintains stable cutting force and minimal vibration even when machining steels rated above HRC65.

Using German WALTER five-axis grinding machines and ZOLLER on-machine measuring systems, SAMHO achieves dimensional accuracy within ±0.001mm—a benchmark rarely reached in the global tooling industry.

This level of precision ensures:

Virtually zero tool-tip deviation, enabling seamless surface transitions in 3D cavity machining.

Perfectly smooth arcs and surface continuity, reducing polishing time by more than 30%.

Improved assembly precision, meeting the highest standards of electronic, optical, and medical mold manufacturing.

Even under long-duration high-speed operations, the HRC65 ball end mill retains consistent dimensional stability and surface accuracy, making it the preferred choice for mold manufacturers working with high-hardness steels, powder metallurgy, and post-heat-treated materials.

Technical Strength and Quality Commitment

SAMHO upholds its production philosophy of "Precision First, Quality Foremost."
The company operates German WALTER and Swiss ROLLOMATIC five-axis CNC grinders, enabling

micron-level control of complex tool geometries. Supported by ZOLLER inspection systems, microscopic imaging, and dynamic balancing equipment, SAMHO ensures complete digital quality management from design to inspection.

Only imported ultra-fine tungsten carbide bars are used, featuring superior strength and bending resistance.
All coatings are applied using multilayer nanocomposite processes, providing exceptional adhesion, wear resistance, and heat stability, ensuring sharp and durable cutting edges even under extreme loads.

Before shipment, every SAMHO tool undergoes blade morphology inspection, dynamic balance testing, and real-world cutting trials.
The company's MES (Manufacturing Execution System) enables traceability and data-driven quality control across the production chain.

Through ongoing innovation, SAMHO continues to lead in high-hardness material machining, complex surface finishing, and mirror-grade mold manufacturing.

A Trusted Partner for Global B2B Clients

With robust technical expertise and uncompromising product quality, SAMHO has established long-term partnerships with leading mold manufacturers, precision machining firms, and electronics producers around the world.

Moving forward, SAMHO will remain dedicated to its core values of Precision, Efficiency, and Reliability, focusing on high-hardness material machining innovation and elevating Chinese high-end CNC tooling to the global stage.

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