High-End Manufacturing & Smart Wearables Fuel Surging MIM Demand; China’s Precision Forming Technology Leads the Globe

Harbermetal delivers high-precision titanium and stainless steel MIM structural parts to support elctronics and Smart wearable OEMs pursuing lightweight, compact and premium designs



Dongguan, Guangdong Nov 27, 2026 (Issuewire.com**)** - The tiny metal components that keep the hinges smooth and devices lightweight in your foldable phone and always-on smartwatch are very likely manufactured by Harber Industrial Limited.

Rooted in Dongguan, this high-tech enterprise has successfully entered the supply chains of leading domestic and international brands including Huawei, Samsung, Honor, Lenovo and Xiaomi. Its product portfolio covers smartphones, foldable devices, AI wearables, laptops and more.

DONGGUAN, GUANGDONG, CHINA, November 28, 2026 — Harbermetal (Harber Industrial Limited), a China-based full-chain Metal Injection Molding (MIM) manufacturer, highlights its mature production

capability for miniature hinge assemblies, watch frames, buckles and internal structural components built for smartwatches and wearable electronics.

Inside the production plant of Harber Industrial Limited (HarberMetal), rows of precision injection molding machines run at high speed, producing dozens of intricate metal structural parts every minute. These seemingly minuscule components will soon be assembled into smartphones and wearable devices from top global brands and shipped worldwide.

As a high-tech enterprise specializing in Metal Injection Molding (MIM), MIM experts Harber has grown from a single-product manufacturer to a multi-sector supplier since establishing its base in Dongguan, driven by continuous technological development and market insight. It recorded an output value of nearly 130 million RMB last year, with an annual sales volume reaching 300 million parts.

Bret Chen, General Sales Manager of the company, explained that the consumer electronics sector entered a new growth cycle in 2019, with foldable screens and smart wearables seeing rapid market adoption. Demand surged for high-precision, complex-shaped metal components. Identifying this trend early, Harber ramped up R&D investment and launched fundamental research into material and processing technology, laying a solid foundation for subsequent product upgrades and category expansion.

After five years of technical refinement, HarberMetal's high-precision injection molding equipment enables accurate material forming, supported by high-temperature densification sintering, CNC hydraulic sizing presses and micron-level inspection via AOI systems. Achieving precision up to one-thousandth, far exceeding industry benchmarks, the company supplies precision metal parts for the delicate hinge systems of foldable smartphones and laptops. Evolving beyond a simple component vendor, HarberMetal has built a diversified product lineup spanning foldable smartphones, AI wearables and notebooks, securing its position within the supply chains of Huawei, Samsung, Lenovo, Xiaomi and other global manufacturers.

HarberMetal continues to build on its strengths. As humanoid robots and AI computing industries expand rapidly, demand for precision metal components is shifting from consumer electronics toward higher-value sectors.

"We still have 20% to 30% spare production capacity. We plan to add and upgrade production capacity in the second half of the year according to the mass production schedule of new projects. We are also advancing technical roadmaps and capacity preparation targeting humanoid robots, AI servers and other emerging sectors, so we can quickly respond to customer requirements," said Summer Zhou, Chairman of HarberMetal.

MIM Hinge & Frame Components for Smartwatches and Wearable Electronics

Wearable hardware designers face a persistent set of engineering challenges: ultra-limited internal space, demand for slim profiles, tight assembly clearances, consistent hinge cycling performance, and premium visual finish. Traditional manufacturing methods such as multi-piece CNC machining often drive up costs and assembly complexity for these tiny, intricately featured parts. MIM solves this by consolidating multiple integrated features into a single near-net-shape sintered component, cutting part count and lowering per-unit cost at medium and high volumes.

Harbermetal's wearable MIM portfolio covers titanium alloy and stainless steel grades, including 316L and 17-4PH. The company can mass-produce micro components as light as 0.0035 g, with wall

thickness down to 0.15 mm. Critical mating features on hinge pivot zones and frame interfaces are controlled to ±0.01 mm tolerance. Sintered density reaches 96–99% of theoretical density, delivering mechanical strength and wear resistance suitable for repeated opening-closing cycles on watch buckles and hinge mechanisms.

Backed by its Dongguan R&D center and Shandong manufacturing base, Harbermetal runs an in-house workflow spanning feedstock formulation, precision mold design, injection molding, debinding, vacuum sintering, CNC secondary sizing, laser marking and surface finishing. The dual-site layout enables flexible capacity allocation, with combined daily output reaching 600,000 units to support ramp-up schedules for global wearable brands. All projects start with a formal DFM review, sampling validation and full material documentation including FAI, hardness and metallurgical reports.

“Smartwatch and wearable products require a rare balance: lightweight aesthetics, reliable mechanical movement, and miniature complex geometry,” said Leo Wang, Engineering Director at Harbermetal. “MIM is naturally aligned with this requirement. We help customers merge hinge pins, locking contours, mounting bosses and decorative profiles into one part. Instead of assembling five or six separate machined pieces, OEMs receive a single sintered component ready for finishing and integration. This shortens BOM complexity and improves long-term consistency across mass shipments.”

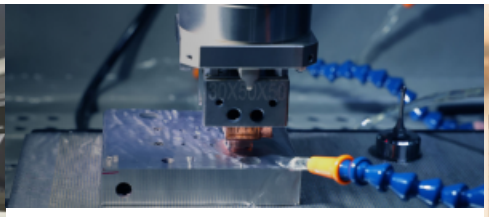
The company’s wearable component track record includes titanium watch frames, spring-loaded buckles, earbud structural brackets and miniature hinge inserts for leading consumer electronics brands. Its ISO 9001, IATF16949 and ISO13485 quality frameworks enforce batch traceability and stable quality control for both sampling runs and million-piece annual programs.

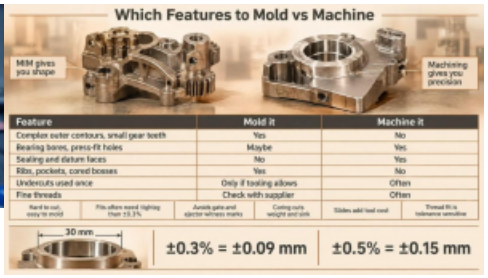
Harbermetal accepts STEP files and 2D drawing submissions from wearable product teams worldwide. Its engineering team returns DFM feedback within two working days, with typical sample lead times between 18–25 business days depending on geometry and surface treatment requirements.

About Harbermetal

Harber Industrial Limited (Harbermetal) was founded in 2014, operating integrated MIM and powder metallurgy production facilities across Dongguan and Shandong, China. The company specializes in high-precision sintered metal components for consumer electronics, automotive safety, minimally invasive medical instruments, power tools and aerospace auxiliary hardware. With full in-house mold making, sintering and secondary processing, Harbermetal delivers one-stop custom MIM solutions for OEMs requiring complex miniature metal parts. Website: https://www.harbermetal.com







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