

Taiwan Hub Manufacturer Yu Hub Highlights CNC Engineering Behind Long-Distance Touring Wheels

CA, UNITED STATES, June 17, 2026 /EINPresswire.com/ -- Yu Hub Industrial Co., Ltd., a Taiwan-based specialist hub manufacturer founded in 1982, is drawing growing attention from the global touring and gravel cycling community for its CNC-machined hub lineup — including gravel-focused models such as the XCL-R02 and CL-R64 — engineered to meet the demands of long-distance, fully loaded cycling.

As the bikepacking and adventure cycling segment continues to expand worldwide, riders and custom wheel builders are increasingly seeking hub components that combine dimensional precision, bearing longevity, and real-world durability under sustained load. Yu Hub's manufacturing model — integrating robotic CNC arms, in-house heat treatment, and 3D Coordinate Measuring Machine (CMM) validation — positions its hubs as a technically credible alternative to European boutique brands at a more competitive price point.



Why Hub Engineering Matters for Long-Distance Touring

A fully loaded touring bike can carry a combined rider-and-gear weight exceeding 120 kg. Under these conditions, hub flanges endure continuous cyclic stress across millions of wheel revolutions. Bearing seats must maintain precise geometry to prevent premature wear; flange walls must be thick enough to resist fatigue cracking at spoke holes without adding unnecessary rotational mass.

Yu Hub's CNC machining process holds bearing seat tolerances to $\pm 0.01\text{mm}$ — a level of precision that ensures consistent bearing preload across production batches. Long-term

structural performance is validated by dedicated Hub Free Body Fatigue Testing Machines and Wheel Fatigue Testing Systems, simulating real-world cyclic loading before any product reaches market.

"Touring cyclists are not the same as weekend riders," said a Yu Hub spokesperson. "They need components that perform at kilometer 8,000 the same way they did at kilometer one. Our manufacturing infrastructure — from robotic CNC machining to in-house heat treatment — exists precisely to guarantee that level of consistency."

Featured Hubs for Touring and Gravel Applications

XCL-R02 — Gravel / Road Rear Hub Designed for loaded gravel and adventure road touring, the XCL-R02 features M12×142mm thru-axle, Center Lock disc mount, a 6-pawl system with 36-tooth ratchet (5° engagement), 72 engagements, and a straight-pull spoke configuration compatible with Shimano HG freehubs. Available in 24H and 28H drilling. Weighing 243g, its straight-pull flange design reduces spoke fatigue at the elbow — a meaningful benefit over long tours where spoke flex cycles accumulate into the millions.

CL-R64 — Gravel / Bikepacking Rear Hub The CL-R64 has gained real-world validation from Yu Hub's customers who use it specifically for bikepacking — multi-day, fully loaded off-road expeditions on variable terrain. Center Lock disc-compatible with modern thru-axle standards and a robust freehub body for Shimano cassette stacks, the CL-R64 is a well-rounded option for riders who need disc braking reliability without sacrificing wheel build flexibility.

XCL-R03X — Road / Gravel Rear Hub At 255g, the XCL-R03X supports both HG (Shimano) and XD (SRAM) freehub standards via its straight-pull, Center Lock configuration. The XD compatibility addresses the growing number of touring cyclists running wide-range SRAM cassettes for fully loaded mountain climbing.

Full product specifications are available at <https://www.yuhub.com.tw/product.php>

ODM and OBM Capabilities

Yu Hub operates a dual business model: as an ODM (Original Design Manufacturing) partner for global bicycle brands, and as the brand owner of its own premium consumer label, WANDEN, launched in 2025. This positions the company to serve both the trade market — providing custom flange geometry, spoke hole counts, axle standards, and anodized finishing for partner brands — and the growing segment of custom wheel builders and discerning individual cyclists seeking performance hubs with transparent manufacturing credentials.

The WANDEN brand, whose tagline is "Excellence in Every Revolution," brings Yu Hub's four decades of manufacturing expertise into a new era of direct consumer presence, with products available through the company's international network.

Manufacturing Infrastructure

Yu Hub's production facility in Changhua, Taiwan includes:

CNC lathes, press machines, hydraulic machines, and rotary swaging machines
Robotic CNC arms introduced in 2021 for consistent high-volume production

In-house heat treatment furnace for enhanced alloy hardness and fatigue resistance
3D Coordinate Measuring Machines (CMM) and IM-X1000 Full-Function Image Measuring System for dimensional validation
Universal Testing Machines for mechanical strength verification
Hub Free Body Fatigue Testing Machines and Wheel Fatigue Testing Systems for long-term durability validation
These investments reflect a manufacturing philosophy centered on vertical integration and quality control — rare among hub producers at this scale.

About Yu Hub Industrial Co., Ltd.

Founded in 1982 and led by President Mr. Wan Tun Huang, Yu Hub Industrial Co., Ltd. is a professional manufacturer of bicycle, tricycle, and wheelchair hubs based in Changhua, Taiwan. With over 40 years of precision manufacturing experience and a product range spanning road, gravel, [MTB](#), [e-bike](#), [e-cargo](#), BMX, city, and special-use applications, Yu Hub serves global cycling brands as an ODM partner and consumers through its WANDEN brand.

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