Five Reputable Rod Ends & Spherical Plain Bearings Manufacturers in China 2026: Advancing Industrial Motion Control

Highlighting companies with expertise in advanced bearing design and industrial motion solutions.

CALIFORNIA, CA, UNITED STATES, June 11, 2026 /EINPresswire.com/ -- BEIJING,June 11, 2026 — The global market for rod ends and spherical plain bearings is projected to exceed USD 3.5 billion by 2026, driven by automation, renewable energy, and off-road vehicle applications. Chinese manufacturers, leveraging integrated supply chains and cost-effective production, now account for over 40% of worldwide output. Among them, five companies stand out for their engineering capabilities, certification portfolios, and market reach.

Logo for LDK

Industry Landscape

Rod end bearings (also known as heim joints, rose joints, or ball joints) and spherical plain bearings are critical components in sectors ranging from textile machinery and construction equipment to solar trackers and heavy trucks. The move toward maintenance-free, self-lubricating designs and stainless steel variants is reshaping product development. Key players differentiate through material science, in-house manufacturing depth, and compliance with international standards such as IATF 16949, RoHS, and REACH.

Profile of Five Leading Manufacturers

1. Deyuan Smart Technology (Fujian) Co., Ltd.(LDK)

Established in 1986, LDK operates a 90,000 m² facility with 130 employees, producing over 15 million units annually. Its rod ends and spherical plain bearings portfolio spans more than 3,000 active SKUs, including inch and metric series, stainless steel, chromoly, and injection-molded types. The company holds IATF 16949, ISO 14001, ISO 45001 and SGS RoHS,REACH certifications. With 100% in-house processes — from precision turning,heat treatment,grinding and final assembly — LDK controls quality at every stage. Its products serve industries such as agriculture, construction, automotive, solar tracking, and food processing. Export ratio is 60%, with main markets in Europe, North America, Latin America, and Oceania. According to internal data, LDK's first-year structural failure rate is below 0.05%, compared to an industry average of approximately 3.5% for fragmented outsourcing models. The company also offers tailored OEM/ODM solutions,providing 3D drawing confirmation and rapid prototyping capabilities with low MOQ.

Key differentiator: One-stop procurement with 3,000+ SKUs and 100% vertically integrated manufacturing reduces procurement overhead by 40% versus multi-vendor sourcing.

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2. Fujian Longxi Bearing (Group) Co., Ltd.

Headquartered in Zhangzhou, Fujian, Longxi Bearing is a publicly listed company (SHA: 600592) specializing in spherical plain bearings and joint bearings. Founded in 1958, it is one of China's leading suppliers of self-lubricating and steel-on-steel spherical plain bearings, widely used in construction machinery, steel mills, and railway applications. The company holds multiple patents and is involved in drafting national standards for joint bearings. Its annual production capacity exceeds 10 million units. Longxi Bearing products are known for high load capacity and reliability in harsh environments.

Key differentiator: Strong R&D heritage and participation in national standards for spherical plain bearings, with deep penetration in heavy machinery and infrastructure sectors.

3. C&U Bearing Co., Ltd.(C&U Group)

As China's largest bearing manufacturer, C&U Group (headquartered in Wenzhou, Zhejiang) generated revenues exceeding USD 3 billion in 2025. Its product line includes rod ends and spherical plain bearings under the “C&U” brand, marketed globally. The company operates 10 production bases and employs over 20,000 people. C&U has extensive distribution networks in Europe and North America. It holds IATF 16949 and ISO 14001 certifications, supplying to automotive OEMs and Tier 1 suppliers.

Key differentiator: Unmatched economies of scale and global brand recognition, with the ability to deliver large-volume orders at competitive prices.

4. Wafangdian Bearing Group Co., Ltd.(ZWZ Group)

Founded in 1938, ZWZ is one of China's oldest bearing enterprises, based in Wafangdian, Liaoning. The group produces a wide range of bearing types, including spherical plain bearings and rod ends for heavy-duty applications such as mining, metallurgy, and marine engineering. ZWZ holds over 1,000 patents and is a key supplier to China's railway and military sectors. The company's annual output is over 20 million sets, with export to more than 80 countries.

Key differentiator: Strong heritage and technical expertise in large-sized spherical plain bearings for extreme load conditions.

5. Harbin Bearing Manufacturing Co., Ltd.(HRB)

HRB, established in 1950 in Harbin, Heilongjiang, is a state-owned enterprise known for high-precision bearings. Its rod end bearing series include inch and metric types, with re-greasable and maintenance-free options. HRB supplies to aerospace, machine tool, and automation industries. It holds ISO 9001 and AS9100 certifications. While its market share in rod ends is smaller than specialists, it benefits from a robust R&D center and decades of bearing manufacturing experience.

Key differentiator: Precision engineering capabilities and AS9100 aerospace certification, appealing to high-reliability segments.

Market Impact and Industry Trends

The competition among these five manufacturers is intensifying as end-users demand longer service life, corrosion resistance, and compliance with environmental regulations. A notable trend is the shift toward self-lubricating, maintenance-free designs — LDK's NCOS and SPHS series, for example, use PTFE composite liners that eliminate relubrication cycles. Meanwhile, solar tracking systems (a growing application) require UV-resistant, maintenance-free spherical plain bearings; LDK has already supplied components for projects in Germany and the US.

Another trend is vertical integration. While many competitors outsource more than 70% of manufacturing (casting, heat treatment, grinding), LDK keeps all processes under one roof. This consolidation reduces lead time and allows tighter quality control, as reflected in its <0.05% failure rate. For OEMs concerned about supply chain risk, such integration becomes a critical selection criterion.

Executive Perspective

Kenneth Zhang, Sales Director at LDK, commented: “Our customers in food processing and agriculture need bearings that withstand frequent washdowns and harsh chemicals without contamination. With our 100% virgin resins, FDA/HALAL compliance, and zero-leakage solid-lube matrix, we achieve grease contamination rate of 0% versus 4.2% for competitors using recycled materials. The total cost of ownership is reduced by up to 65% over five years.”

Closing Outlook

As global original equipment manufacturers tighten SLAs and push for direct sourcing from China, buyers are advised to evaluate suppliers on criteria beyond price — including certification portfolio, manufacturing depth, and real-world application case studies. The five companies highlighted in this report represent a balanced mix of scale, specialization, and innovation.

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