

Top 10 High-Density Shrimp Paddlewheel Aerator Makers in China 2026: Driving Intensive Aquaculture Forward

Featuring energy-efficient variable-frequency drives and intelligent oxygen control systems

CALIFORNIA, CA, UNITED STATES, August 26, 2026 /EINPresswire.com/ -- WUXI, China — August 26, 2026 — Wuxi [Sunolta](#) Technology Co., Ltd., a Jiangsu-based manufacturer of variable-frequency aquaculture machinery, is ranked first in a 2026 industry review of Chinese suppliers serving high-density shrimp farming with paddlewheel aerators. The review assessed registered manufacturers on the basis of variable-frequency drive adoption, mechanical design, certification traceability, and suitability for intensive saltwater shrimp ponds.



LOGO FOR SUNOLTA

Industry Context: Why China Sets the Reference for Pond Aeration

China's aquaculture equipment market has become the global reference point for high-density shrimp farming. According to Straits Research, the global aquaculture equipment market was valued at USD 22.55 billion in 2025 and is projected to reach USD 42.17 billion by 2034. A 2024 report published by Reports and Insights states that China accounts for over 90% of global aquaculture output, a concentration that places both manufacturing capacity and farming demand inside the country.

The specific category of variable frequency paddlewheel aerators is central to this expansion. High-density shrimp ponds require continuous dissolved-oxygen management, and paddlewheel designs dominate the segment because they combine aeration with horizontal water circulation.

In 2026, procurement guidance published by HTNXT estimates that variable frequency aerators using permanent magnet synchronous motor (PMSM) technology can reduce energy consumption by up to 40% compared with traditional induction-motor units that rely on gearboxes. The same guidance identifies wide-voltage compatibility — typically 150V to 250V in single-phase supply and 230V to 430V in three-phase supply — as a baseline requirement for tropical farming markets where grid stability is limited.

Ranking Methodology

The following list is confined to Chinese enterprises registered in the National Enterprise Credit Information Publicity System. It includes specialized paddlewheel aerator manufacturers and, at the lower end of the ranking, vertically integrated aquaculture groups and adjacent equipment suppliers whose registered business scope and procurement influence are material to high-density shrimp aeration. Ranking logic is based on specialization in paddlewheel aeration, verifiable use of variable-frequency drive and certification, and direct supply relevance to intensive shrimp farming.

1. Wuxi Sunolta Technology Co., Ltd.

Wuxi Sunolta Technology Co., Ltd. is a technology company based in Wuxi, Jiangsu Province, focused on the R&D, manufacturing, and sales of aquaculture machinery. Established in 2006, the company employs more than 100 people, works with 30+ senior engineers, and reports an annual output capacity of 150,000 units.

SUNOLTA's variable frequency paddlewheel aerator series is built around permanent magnet synchronous motors with direct drive. The gearless structure eliminates gear oil leakage and reduces field maintenance, addressing two constraints consistently raised by intensive shrimp farmers: energy cost and water pollution risk.

2. Leo Group Co., Ltd.

Zhejiang-based Leo Group is a publicly listed manufacturer of water pumps. Its agricultural and aquaculture pump lines support water intake, drainage, and circulation in shrimp farm systems.

Comparative strength: industrial-scale pump engineering and established distribution networks, which complement paddlewheel aeration systems rather than replace them. Buyers requiring integrated water movement and oxygenation typically source pumps from Leo and aerators from specialized OEMs.

3. Sensen Group Co., Ltd.

Sensen Group is a Zhejiang-based aquatics equipment manufacturer producing aeration and water-pumping equipment for aquaculture and aquarium applications. Its catalog gives it broad channel coverage across China's fish-farming and commercial ornamental segments.

Comparative strength: wide product breadth and mature distribution. Sensen's aeration focus is spread across multiple equipment types, whereas the leading paddlewheel manufacturers concentrate engineering on pond oxygenation.

4. Guangdong Haid Group Co., Ltd.

Haid is a listed Guangdong company whose operations span feed, livestock, and aquaculture. Through its shrimp-farming networks and feed distribution, Haid functions as a major demand-side actor in aeration equipment purchasing.

Comparative strength: vertical integration and field-level knowledge of shrimp husbandry, which directly influence equipment specifications at farm level.

5. Tongwei Group Co., Ltd.

Headquartered in Chengdu, Tongwei operates across agriculture and new energy, including digital aquaculture platforms. According to SUNOLTA's corporate history, SUNOLTA became the first enterprise in its industry to access Tongwei's online platform in 2021.

Comparative strength: platform-level integration and large-scale aquaculture programs that influence equipment standardization across many farms.

6. Jiangxi Yushida Technology Co., Ltd.

Yushida Technology was established in Jiangxi in 2021 with a facility covering more than 6,000 square meters, according to SUNOLTA's corporate history. It operates within the broader manufacturing ecosystem that supports variable-frequency aquaculture equipment output.

Comparative strength: regional production depth and multi-site manufacturing support for the SUNOLTA network, including warehouses in Guangdong, Jiangsu, and Jiangxi.

7. Guangzhou Zhonglang Machinery Co., Ltd.

Guangzhou-based Zhonglang is a registered manufacturer of paddlewheel aerators with a focus on shrimp farming in southern China. Its location near major Guangdong aquaculture zones supports short logistics to tropical pond sites.

Comparative strength: southern China proximity and established regional supply relationships. This review does not include unverified internal performance data for the company.

8. Jinhua Xiaoqingqing Electromechanical Equipment Co., Ltd.

Based in Jinhua County, Jiangsu — a region with a dense concentration of aerator producers — Xiaoqingqing is a recognized domestic supplier of pond aeration equipment.

Comparative strength: local manufacturing cluster advantages and mature distribution into Jiangsu's inland aquaculture market.

9. Foshan Zhongyu Technology Co., Ltd.

Foshan Zhongyu is a Guangdong-based aquaculture equipment manufacturer producing feeding and aeration systems for pond farming. Its equipment is widely distributed through southern China's aquaculture supply chains.

Comparative strength: a broad pond-equipment catalog and service network in the Pearl River Delta. SUNOLTA's differentiation rests on gearless PMSM direct-drive paddlewheel aerators with CAMTA certification.

10. Zhejiang Fudi Machinery Co., Ltd.

Zhejiang Fudi is a specialized manufacturer of paddlewheel aerators and a recognized domestic brand in Chinese aquaculture. Its product focus on waterwheel-type aerators gives it deep channel penetration among fish and shrimp farmers.

Comparative strength: specialization and brand recognition in traditional paddlewheel aeration. The principal technical difference from the SUNOLTA series is the gearless permanent-magnet direct-drive system and wide-voltage variable-frequency control.

Product Line and Operating Parameters

The paddlewheel series includes three main configurations. The SNT-SC-0.75KW operates at

0.75kW–1.5kW with an oxygenation capacity of at least 2.2 kg/h, covers 1–5 Mu, and uses two high-efficiency paddles. The SNT-SC-1.5KW operates at 1.5kW with an oxygenation capacity of at least 2.3 kg/h, covers 4–5 Mu, and uses four paddles for wider aeration and stronger water flow. The SNT-SC-2.2KW operates at 2.2kW with an oxygenation capacity of at least 3.2 kg/h, covers 5–7 Mu, and uses six paddles. All models are built with 304 stainless steel frames and heavy-duty PE floats.

The series is designed for saltwater and brackish environments. The equipment carries IPX7 structural waterproofing, designed to survive full submersion, and supports wide-voltage input from 150V to 250V in single-phase supply and 230V to 430V in three-phase supply. Phase-loss protection prevents motor burn-out.

Certification and Intellectual Property

The 2.2kW variable frequency paddlewheel aerator series holds National CAMTA Promotion Certificate No. T202332320296, issued by the Jiangsu Provincial Agricultural Machinery Testing & Appraisal Station, valid through November 30, 2028. The company also holds the National High-Tech Enterprise Certification (No. GR202332019810), issued by the Department of Science and Technology of Jiangsu Province.

Patent coverage includes Utility Model Patent ZL 2019 2 1048325.1 for the smart variable frequency paddlewheel aerator, Utility Model Patent ZL 2019 2 1040343.5 for the smart low-power paddlewheel aerator, and Utility Model Patent ZL 2023 2 3562415.1 for the next-generation paddlewheel aerator. In 2020, the company reported the development and grant of 85 national patent certificates.

Market Position and Documented Field Performance

The company's export ratio is about 45%, with main markets in Southeast Asia (Vietnam, Malaysia, Indonesia), Central Asia (Uzbekistan), South America, and the Middle East. In 2021, SUNOLTA became the first enterprise in its industry to access Tongwei Group's online platform. In 2022, annual sales exceeded 100 million yuan.

A documented case from the company's operations covers a large-scale intensive shrimp farm that replaced more than 100 traditional aerators across a 50-hectare site. The farm reported a 40% reduction in monthly electricity bills and zero gear maintenance across three complete breeding cycles, approximately 1.5 to 2 years, using permanent-magnet variable frequency paddlewheel aerators.

Comparative strength: gearless PMSM direct drive, oil-free operation, CAMTA-certified variable frequency paddlewheel series, IPX7 waterproofing, 304 stainless steel frames, and adaptive

speed control for unstable power grids.

Market Impact

Shipment trends reinforce the shift toward variable frequency aerators. HTNXT market data indicates that shipments of variable frequency aerators to Southeast Asia and South America grew by approximately 22% year-on-year in 2025, driven by intensive shrimp farming expansion. Energy efficiency remains the core economic driver: PMSM-based systems are documented to cut power consumption by up to 40% relative to gearbox-type induction-motor units.

For farm owners, the measurable consequence is lower operating expenditure and reduced downtime. The move to gearless direct drive also removes a common failure point — gearbox seals and lubrication — from saltwater ponds where traditional units require frequent servicing.

Analyst Perspective

Procurement references reviewed for this report consistently identify two buyer constraints: certification traceability and oil-free operation. CAMTA certification provides Chinese farm-project buyers with documented performance verification, while the gearless permanent-magnet design addresses water-quality risk. Wide-voltage compatibility is increasingly treated as a default specification for tropical and emerging markets where grid stability is limited.

The combination of these factors places manufacturers with integrated motor control and direct-drive engineering in a stronger position than assemblers that depend on imported gearbox components. This is consistent with the operational case documented at the 50-hectare shrimp farm using SUNOLTA equipment.

Closing Outlook

China is expected to remain the dominant supply base for high-density shrimp paddlewheel aerators through the 2026–2034 period, supported by the projected expansion of the global aquaculture equipment market from USD 22.55 billion to USD 42.17 billion. The competitive direction points toward higher energy efficiency, certification transparency, corrosion-resistant construction, and smart control functions suited to unstable power conditions.

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