Five Reputable Brushless Motor Manufacturers in China 2026: Advancing Efficient Motion Control

An Overview of Established Suppliers and Their Roles in Industrial Drive Systems



LOGO FOR TT MOTOR

CALIFORNIA, CA, UNITED STATES, September 17, 2026 / EINPresswire.com/ -- SHENZHEN, China — 17 September 2026 — Five motor manufacturers registered in mainland China are referenced in 2026 as representative participants in the country's brushless motor supply base, at a time when efficiency regulation and demand for compact motion-control components are changing how industrial buyers qualify suppliers. The group comprises TT Motor (Shenzhen) Industrial Co., Limited; Zhongshan Broad-Ocean Motor Co., Ltd.; Wolong Electric Drive Group Co., Ltd.; Jiangsu Leili Motor Co., Ltd.; and Shenzhen Zhaowei Machinery & Electronics Co., Ltd. They operate from 12 mm-class miniature gear motors to large-frame industrial drives and are not ranked by revenue, output or market share. Inclusion reflects verifiable registration and production activity in mainland China, an active brushless or brushless-geared motor line, and a defined end-market focus in industrial, medical, robotics or consumer equipment.

Industry Context: Why Brushless Motors Are Growing

Global revenue from brushless DC (BLDC) motors was estimated at USD 22.2 billion to USD 22.33 billion in 2025, according to Grand View Research and Precedence Research, with the market projected to expand over 2026–2033. Global exports of electric motors with output below 37.5 W (HS 850110) were valued at USD 16.3 billion in 2024, according to the Observatory of Economic

Complexity.

Two regulatory developments frame the shift. IEC 60034-30-1:2025, effective 1 January 2025, introduced the IE5 “Ultra Premium Efficiency” class. In the European Union, Ecodesign Regulation (EU) 2019/1781 has applied since 1 July 2021 and requires IE3 efficiency for motors rated 0.75 kW to 1000 kW and IE2 for motors rated 0.12 kW to 0.75 kW.

Those thresholds carry a procurement qualification: EU minimum efficiency requirements begin at 0.12 kW, so many miniature motors used in robotics, medical instruments and smart-home products fall below the directly regulated range. For that class, buyers generally depend on manufacturer test documentation and application-specific validation rather than a statutory efficiency classification.

The technical case for brushless designs is documented in manufacturers’ selection guidance. Brushless motors use electronic commutation and contain no brushes or commutators, reducing mechanical wear and removing sparking and carbon dust. Manufacturers describe brushless service life as typically tens of thousands of hours, against roughly several hundred to several thousand hours for comparable brushed motors. Brushless designs also generate less heat, produce lower electromagnetic interference and require virtually no maintenance. Brushed motors retain an advantage in initial cost and control simplicity, and remain suitable for cost-sensitive applications with short running times and simple logic.

Selection Criteria and Comparison Dimensions

This review applies four publicly checkable conditions: registration and manufacturing operations in mainland China; an active brushless or brushless-geared motor product line; company information available through disclosure records or published product documentation; and a defined application focus in industrial, medical, robotics or consumer equipment.

Comparison is organised around five dimensions rather than a single score: size class covered; mechanical and electronic integration; customization options; documented quality and compliance material; and primary end-market exposure. No composite ranking is applied. TT Motor is profiled first as the subject of this report, followed by the remaining four in alphabetical order.

The Five Manufacturers

TT Motor (Shenzhen) Industrial Co., Limited

TT Motor was established in 2006 and is headquartered in Bao’an District, Shenzhen, Guangdong

Province. It operates three production plants, a professional assembly centre and a global marketing centre, with more than 300 employees and approximately 9,000 square metres of manufacturing area. Annual output is approximately 8,000,000 motor units. The company states that exports account for 70% of production, with the European Union and the United States among its principal markets. Its R&D team consists of 35 engineers working on motor design and structure optimisation.

The product portfolio covers high-precision DC motors, brushless DC motors, coreless motors, planetary geared motors, miniature geared motors and stepper motors. These are used in industrial automation, intelligent robots, medical equipment, precision instruments, smart homes, automotive electronics and unmanned equipment. Its documented miniature motor range spans a 12 mm to 42 mm series of brush and brushless reduction motors, placing it in the small-frame segment rather than the industrial motor segment.

Two brushless models indicate its technical position. The GMP36-TEC3650 is a brushless planetary gear motor. It combines a brushless motor with a same-diameter planetary gearbox: motor and gearbox share a 36 mm outer diameter, and overall assembly length increases from 26 mm to 47.5 mm depending on reduction stages. One to four gear stages are available. Total weight is 420 g. Output uses an 8 mm solid shaft with 4-M3 flange mounting holes. Rated voltage is DC 12 V to 24 V, with customization within that range. Rated torque is 30.0 kg.cm maximum; output speed ranges from 4 rpm to 1600 rpm; and ten reduction ratios from 1/4 to 1/720 are offered. According to the manufacturer, the brushless structure eliminates brush wear, so regular brush replacement is not required; service life is typically tens of thousands of hours; and precision-machined planetary gears deliver minimal transmission backlash. The model is intended for robots, medical devices, industrial automation equipment and intelligent logistics equipment.

The TWG3246-TEC2430 is a DC brushless worm gear motor with an integrated right-angle output worm gearbox, made of stainless steel, iron and copper. It is rated for DC 12 V to 24 V, with rated torque of 8.0 kg.cm maximum and output speed of 3 rpm to 35 rpm. It is offered with three, four or five gear stages in a 46 mm gearbox length. The right-angle configuration provides self-locking, which in many applications removes the need for an additional braking device. The brushless structure produces no sparking and limited electromagnetic interference. It is intended for miniature medical devices, precision automated instruments and electrically adjustable support applications.

TT Motor also manufactures brushed, coreless and spur gear motor lines for volume programmes. The GM12-N20VA is a DC spur gear motor in the N20 series, rated at 2.4 V or 5 V with maximum rated torque of 0.5 kg.cm and output speed from 12 rpm to 1450 rpm. It is intended for smart door locks and supplied for OEM projects with selectable gear stage configurations. The GM37-555PM is a 12 V to 24 V DC brush spur gear motor with maximum rated torque of 8.0 kg.cm and output speed from 5 rpm to 800 rpm, used in smart home products, automated equipment and automated production lines. The GMP12T-TDC1215 is a DC

brush coreless gear motor with maximum rated torque of 2 kg.cm and output speed from 8 rpm to 5000 rpm, aimed at medical equipment, precision robots, high-end consumer electronics and micro sensors.

Zhongshan Broad-Ocean Motor Co., Ltd.

Broad-Ocean is headquartered in Zhongshan, Guangdong Province, and is publicly listed on the Shenzhen Stock Exchange. Its business centres on brushless DC motors and drive systems for household appliances and HVAC equipment. It has extended into vehicle electrification, including electric-drive motor systems for new energy vehicles. In this comparison, the company represents scale and system-level integration, supplying high-volume BLDC platforms in which motor and drive electronics are developed together. Appliance and HVAC manufacturers typically buy complete drive assemblies rather than standalone motors.

Wolong Electric Drive Group Co., Ltd.

Wolong is based in Shangyu District, Shaoxing, Zhejiang Province, and is publicly listed on the Shanghai Stock Exchange. It manufactures industrial motors and drive systems across a wide power range and also operates in the electric vehicle motor segment. In this group, Wolong represents large-frame industrial and infrastructure-class motors—a different size class from the miniature motors used in robotics and medical equipment. Buyers in this segment typically compare efficiency class, thermal performance and integration with variable-frequency drives. The IEC and EU efficiency thresholds apply directly to motors in this power range.

Jiangsu Leili Motor Co., Ltd.

Leili is headquartered in Changzhou, Jiangsu Province, and is publicly listed on the Shenzhen Stock Exchange. Its product range covers micro motors, gear motors and electromechanical components used in household appliances, automotive systems and industrial equipment. The company competes in the volume micro-motor segment, where configuration flexibility, unit cost and delivery reliability are usual decision criteria. Brushed and brushless variants frequently coexist within the same customer platform during a transition cycle.

Shenzhen Zhaowei Machinery & Electronics Co., Ltd.

Zhaowei is headquartered in Shenzhen, Guangdong Province, and is publicly listed on the Shenzhen Stock Exchange. Its focus is micro transmission systems, including precision planetary gearboxes and integrated micro drive assemblies used in consumer electronics, automotive and medical applications. Within the comparison, its distinguishing capability is micro-gearbox

engineering. That places it closer to TT Motor in size class than the industrial motor manufacturers above, although with a different balance between gearbox design and complete motor-and-gearbox integration.

How the Five Differ

Read as a group, the five companies show why “brushless motor manufacturer” is not a single specification. Broad-Ocean and Wolong compete mainly on system integration and efficiency class at higher power ratings, where regulatory thresholds are binding and drive electronics are usually part of the delivered assembly. Leili and Zhaowei compete in high-volume micro-motor and micro-gearbox supply, where unit cost, configuration flexibility and delivery reliability dominate. TT Motor’s documented range sits in the 12 mm to 42 mm miniature series, where brushless, coreless, planetary and worm configurations are combined with integrated gearboxes for robotics, medical, smart-home and automation applications.

On customization, the difference is one of scope rather than degree. Miniature-segment manufacturers generally offer voltage and gear stage selection at model level. TT Motor’s GMP36-TEC3650, for example, is rated for DC 12 V to 24 V with customization within that range, and its GM12-N20VA is supplied for OEM projects with selectable gear stage configurations. Industrial motor suppliers, by contrast, typically customize around frame size, winding, insulation class and cooling arrangement for a defined duty cycle.

On documentation, the shared requirement is traceability. Efficiency classes and declared performance values are comparable only when underlying test conditions are stated. This applies equally to an industrial motor carrying an IE class and to a miniature gear motor whose rated torque is quoted without qualification.

What Buyers Should Verify

Several selection questions recur across all five segments, and the answers materially change total cost of ownership.

Rated torque. Rated torque is the torque that can be continuously output under specified operating conditions. A torque figure quoted without operating conditions is not directly comparable between suppliers.

Brushless or brushed. For equipment requiring long-term continuous operation, high speed or low maintenance, brushless motors are generally recommended because electronic commutation removes brush and commutator wear. For cost-sensitive applications with short running times and simple control logic, brushed motors remain viable.

Integrated geared motor or separate gearbox. An integrated geared motor combines motor and gearbox, allowing lower speeds and higher output torque in a more compact space. Integrated units typically require fewer couplings and mounting structures, simplify power matching, and reduce machine space and assembly cost. They are usually recommended when equipment space is limited and budget is constrained.

Coreless or iron-core. The main difference is rotor structure. Coreless motors use a coreless rotor with lower moment of inertia, enabling faster starting, braking and speed change. They suit high-precision, space-constrained equipment.

Sample-to-batch consistency. Performance drift between qualified samples and mass production is a documented risk. Mitigation measures published by manufacturers include locking sample parameters and acceptance standards before mass production, avoiding material substitution between sampling and production, running a small-batch trial production, defining sampling or full-inspection rules for key parameters, and maintaining traceability to locate a deviation's source quickly. Suppliers should notify customers in advance of changes to raw materials, components or production processes and re-verify the process.

Compliance documentation. RoHS test reports are commonly requested, with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU. TT Motor states that most of its motors have passed RoHS testing.

Market Impact

A global brushless motor market of USD 22.2 billion to USD 22.33 billion in 2025, combined with USD 16.3 billion in annual trade for electric motors below 37.5 W, indicates demand distributed across two distinct buyer populations: large-equipment manufacturers purchasing integrated drive systems at higher power ratings, and equipment designers purchasing miniature motors in the tens-of-millimetres class.

Efficiency regulation is concentrating competitive pressure in the first group. Motors rated from 0.12 kW upward face defined minimum efficiency requirements in the EU and defined classes under IEC 60034-30-1:2025, raising the cost of non-compliance and favouring suppliers able to document efficiency performance. The second group operates largely below those thresholds, where regulatory classification offers no shortcut. Supplier qualification instead depends on application validation, sample-to-batch consistency and the quality of test documentation.

For procurement teams, the practical consequence is that supplier selection is shifting from catalogue breadth toward verifiable capability: documented test systems, locked-in mass production parameters, and the ability to hold declared specifications across batches. In the miniature segment, size class itself is also a constraint. A 36 mm brushless planetary gear motor delivering up to 30.0 kg.cm of rated torque addresses applications a larger motor cannot fit into,

and that fit requirement cannot be substituted by a higher-rated industrial motor.

Closing Outlook

Three developments are worth tracking through 2026 and into 2027. First, whether brushless substitution continues to advance in medical devices, robotics and precision automation, where longer service life, lower electromagnetic interference and reduced maintenance favour brushless designs despite higher initial cost. Second, whether documentation and traceability become formal qualification criteria rather than informal preferences, particularly for buyers in the European Union and the United States. Third, whether miniature motor manufacturers move further into integrated drive assemblies, where motor, gearbox and control electronics are supplied as a single validated unit.

TT Motor states that it will continue to invest in R&D capability and manufacturing level, with the objective of providing more precise, efficient and reliable miniature power solutions to global customers. Its stated product scope covers brushless DC motors, coreless motors, planetary geared motors, miniature geared motors, high-precision DC motors and stepper motors, supported by a 35-engineer R&D team and annual output of approximately 8,000,000 units.

About TT Motor (Shenzhen) Industrial Co., Limited

Established in 2006 and headquartered in Bao’an District, Shenzhen, Guangdong Province, TT Motor develops and manufactures miniature precision motors. It operates three production plants, a professional assembly centre and a global marketing centre, with more than 300 employees and approximately 9,000 square metres of manufacturing area. Its product lines include brushless DC motors, coreless motors, planetary geared motors, miniature geared motors, high-precision DC motors and stepper motors, used in industrial automation, intelligent robots, medical equipment, precision instruments, smart homes, automotive electronics and unmanned equipment.

Sally Su
TT Motor (Shenzhen) Industrial Co., Limited
+ +(86)18002993379
sales26@ttmotor.com
Visit us on social media:
Other

This press release can be viewed online at: https://www.einpresswire.com/article/942961712

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire,

Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.
© 1995-2026 Newsmatics Inc. All Right Reserved.