DC Worm Gear Motor GM49EM385

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DC Worm Gear Motor GM49EM385

Main Applications

Industrial Automation

Industrial valves, dampers, gates, low-speed rotary platforms, adjustment mechanisms, and compact actuators requiring right-

Focus: Match starting torque, continuous torque, duty cycle, temperature rise, lubrication, and emergency manual-release requirements. Continuous high-load operation must be validated thermally.

Smart Home & Appliances

Electric doors/windows, smart blinds, smart valves, furniture adjustment, kitchen/bathroom appliances, pet equipment, and automatic opening/closing or lifting mechanisms.

Focus: Balance low noise, current consumption, motion smoothness, and holding performance. Validate frequent start/stop, reversing, long standstill, abnormal stall, and restart in the customer's actual mechanism.

Commercial & Office Equipment

Electric lifting mechanisms, vending-machine gates, smart cabinet locking/actuation, display lifting, automatic flaps, and other compact opening/closing mechanisms.

Focus: For unattended equipment, validate long-term standstill restart, humidity, lubrication aging, jam recovery, abnormal power interruption, and reverse-holding requirements.

Medical Auxiliary Equipment

Nursing-bed, medical-chair, lifting, positioning, and adjustment mechanisms where low-speed torque or right-angle transmission is needed.

Focus: Any function related to patient safety requires system-level risk control. Reverse holding must be tested, and independent mechanical locking, limit, brake, or p echanisms may be required.

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Smart Agriculture & Gardening

Ventilation/adjustment me[illegible] irrigation-related actuators, greenhouse opening/closing systems, feeding mechanisms, and equipment height or angle adjustment.

Focus: Evaluate moisture, dust, corrosion, temperature change, vibration, shock, long standstill, abnormal jam, and shaft/interface protection at the complete-produ[illegible]

AI & Service Robotics

Low-speed lifting, rotary stages, compact joints, and mechanisms that benefit from right-angle packaging and position holding.

Focus: Worm gearing has sliding friction, so battery-powered systems should calculate energy consumption and temperature rise from the real motion cycle. It may not be the best choice for high-speed or high-efficiency axes.

Automotive Electronics

Window, sunroof, seat, and other actuator concepts requiring right-angle transmission and load holding, subject to automotive-grade validation.

Focus: Anti-pinch or safety functions cannot be achieved by the gearmotor alone. Current sensing, position feedback, control logic, mechanical protection, temperature testing, vibration testing, and life validation are system responsibilities.

Application Pain Points the GM49EM385 Platform Can Address

Limited installation space: Use the 90-degree worm-drive layout to reorganize the transmission path and evaluate a shaft/interface that fits the mechanism. Insufficient starting torque or frequent stalling: Select motor platform, output speed, reduction configuration, and torque margin from starting resistance and peak-load conditions rather than from no-load speed alone. Noise, vibration, or unstable motion: Optimize gear meshing, transmission clearance, lubrication, motor load point, and installation [illegible]; verify the complete a[illegible]ther than judging from the bare motor. Poor holding or

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rebound after stopping: Evaluate reverse-holding torque un
Where safety holding is required, combine the drive with independent mechanical or control protection. Short service life under frequent cycling: Validate start/stop, reversing, overload/stall, temperature rise, bearing/gear wear, lubrication life, and long-term restart against the actual duty cycle.

FAQ

Q1: What types of projects are best suited to the GM49EM385 DC Worm Gear Motor?

It is best suited to low-speed actuator mechanisms that benefit from right-angle transmission, torque multiplication, compact packaging, and some degree of resistance to reverse driving. Typical examples include valves, gates, opening/closing mechanisms, lifting/adjustment devices, and low-speed rotary mechanisms.

Q2: Can the GM49EM385 be used as a self-locking or safety-locking drive?

Worm gearing can provide useful reverse-holding behavior in suitable configurations, but self-locking is not guaranteed for every reduction ratio, load, lubrication condition, wear state, vibration level, or temperature. For safety-critical holding, validate reverse torque and use independent mechanical or control protection where required.

Q3: How should torque and speed be selected?

Do not select only from no-load speed. Provide target speed plus continuous, starting, and peak torque, along with the transmission mechanism, installation direction, duty cycle, and maximum external load. The motor platform and reduction configuration should be matched to the complete operating point.

Q4: Is the GM49EM385 suitable for continuous operation?

Continuous can be evaluated, but worm g s sliding friction and may generate more heat than some

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other gear architectures. Load, current, duty cycle, ambient temperature, lubrication, bearing/gear life, and heat dissipation should be validated under the real installation condition.

Q5: What can be customized for a GM49EM385 project?

Voltage, output speed, torque matching, reduction configuration, output direction, output shaft, mounting interface, wires/terminals, rotation direction, feedback components, noise optimization, temperature-rise optimization, holding behavior, and service-life targets can be evaluated according to the project.

Q6: What information is needed for a faster quotation and engineering review?

Provide the operating voltage, target speed, continuous/starting/peak torque, installation drawing, output-shaft requirements, duty cycle, environment, noise/life target, annual demand, and certification requirements. If some data is missing, provide a sample, prototype, or mechanism drawing for initial evaluation.

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Product Overview

The GM49 is a DC worm gear motor offering high reduction ratio, high output torque, and self-locking right-angle output. It suits smart valves, door locks, automatic curtains, vending machines, lifting devices, and industrial actuators that require compact packaging and position holding.

Model Information

Model	Motor Platform	Rated Voltage	Product Category
GM49EM385BMD018-537K	385# PMDC Motor	18 VDC	DC Worm Gear Motor

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Main Parameters

Technical Data

Gearmotor Model	Rated Voltage	No-Load Speed (RPM)	No-Load Current (mA)	Rated Speed (RPM)	Rated Current (mA)
GM49EM385BMD018-537K	18 VDC	20 ±10%	≤280	18 ±10%	≤700

Technical Data

PMDC Motor System Voltage Reference		No-Load Speed	No-Load Current
385#	18 VDC	11000 ±10% RPM	≤180 mA

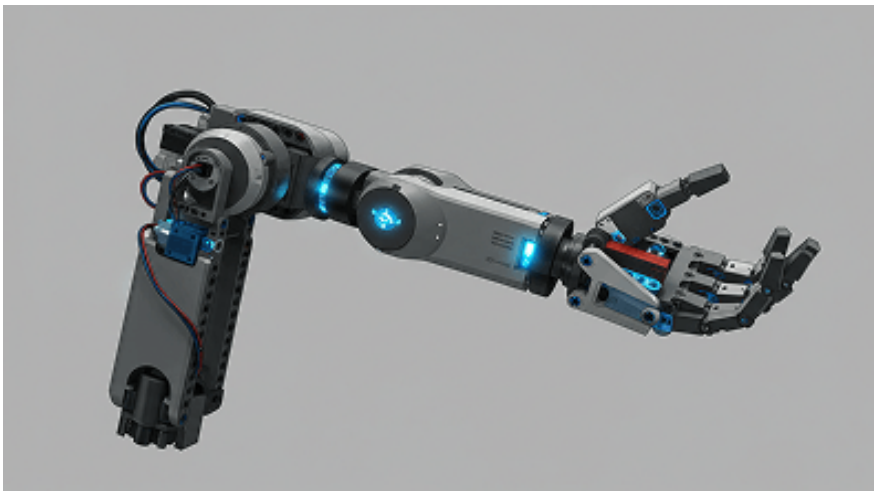
Technical Data

Product reference image - GM49EM385
Dimension / technical drawing - GM49EM385BMD018-537K

Dimension Drawing

Contact us for the dimension drawing of this model.

Main Applications



Industrial Automation

Industrial valves, dampers, gates, low-speed rotary platforms, adjustment mechanisms, and compact actuators requiring right-angle transmission.

Customization Range

- Electrical Configuration

  Rated voltage, motor platform, winding configuration, rotation direction, lead wire, terminal, and connection requirements.

- Performance Matching

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Target output speed, reduction ratio, continuous/starting/peak torque, current limit, duty cycle, and operating pattern.

- **Mechanical Interface**

  Output direction, shaft shape and length, mounting holes/interface, bracket, bearing/sleeve selection, and gear material.

- **Feedback & Functional Options**

  Encoder, Hall/position feedback, limit switch, or related functional modules can be evaluated according to the control architecture.

- **Noise, Thermal & Reliability Optimization**

  Gear meshing, lubrication, transmission clearance, temperature rise, stall/overload, reversing, long standstill restart, and target service life can be optimized and validated for the complete product.

- **Holding & Emergency Requirements**

  Reverse-holding behavior and manual-release requirements can be evaluated. Safety locking should be handled with appropriate system-level mechanical and control protection.

- Information Required for Custom Evaluation
- End product and motion task
- Working voltage and power-supply limits
- Target output speed
- Continuous, starting, and peak torque requirements
- Installation space and output-shaft/interface drawing
- Run time per cycle, daily operating cycles, and reversing frequency
- Ambient temperature, humidity/dust conditions, vibration/shock conditions
- Noise target, expected service life, and allowable temperature rise
- Whether reverse holding, manual release, encoder, Hall feedback, or limit control is required
- Annual demand and certification / compliance requirements
- If complete parameters are not yet available, an existing motor sample, prototype, mechanism drawing, or load description can be used for an initial engineering evaluation.

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FAQ

Q1: What types of projects are best suited to the GM58EM DC Worm Gear Motor?

Yes. Provide the product structure, space, load, and motion requirements, and our engineering team can assist with parameter conversion and solution evaluation.

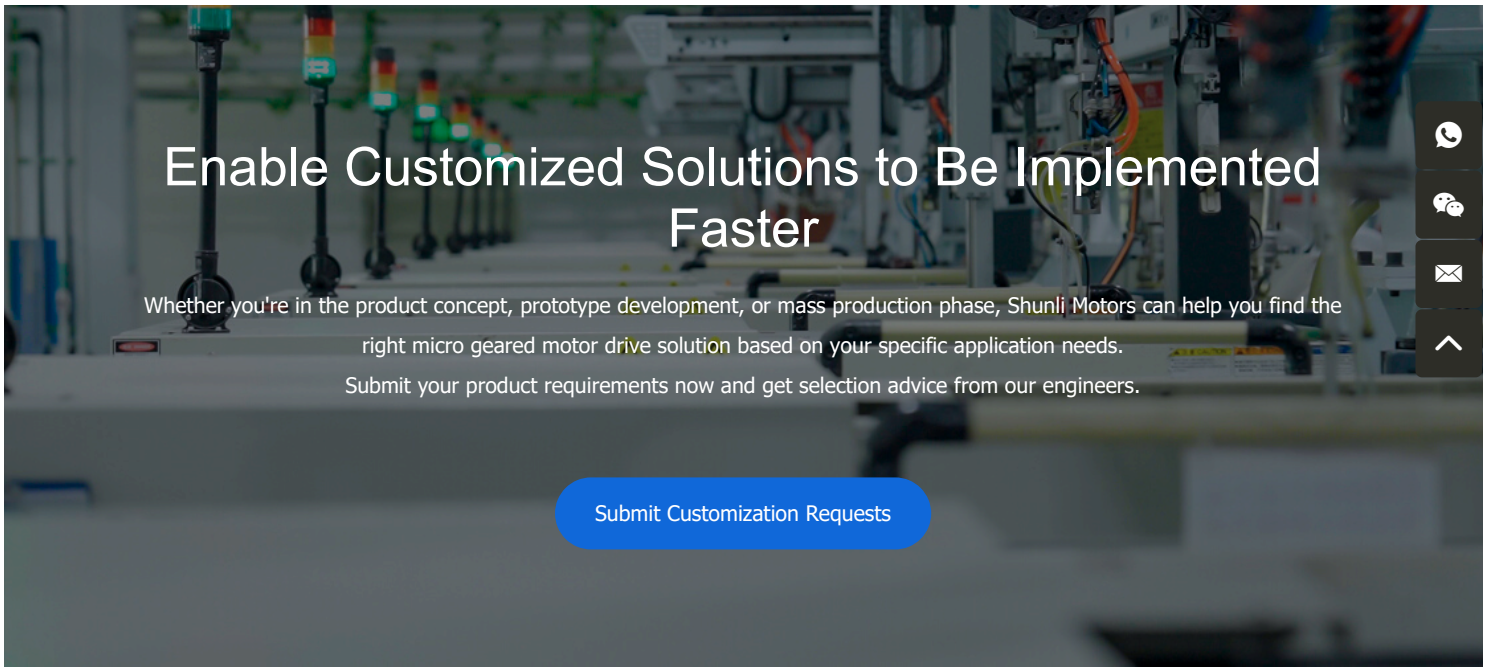
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Q2: What types of projects are best suited to the GM58EM DC Worm Gear Motor?

Q3: What types of projects are best suited to the GM58EM DC Worm Gear Motor?

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Q4: What types of projects are best suited to the GM58EM DC Worm Gear Motor?



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