Spur Gear Motor GM16

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PRODUCT CATEGORIES

- Brushed Gear Motor
  - Spur Gear Motor
  - Planetary Ge
  - DC Worm Gea
- Brushless Gear Motor
- Coreless Gear Motor
- AC Shaded Pole Gear Motor
- Smart Lock Motor

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Spur Gear Motor GM16

Main Applications

Smart Agriculture & Gardening

Electric pruning tools, automatic feeding equipment, small irrigation devices, spraying equipment, quantitative feeding, rotary adjustment and automatic opening/closing mechanisms.

Focus: Evaluate dust/moisture exposure, startup resistance, jam conditions, gear material, lubrication and product-level sealing in the real equipment.

Automotive Electronics

Automotive door locks, charging-port covers, HVAC air flaps, hidden door handles and other small opening/closing mechanisms.

Focus: Validate high/low-temperature start, vibration, stall, noise, duty cycle and batch consistency according to the customer project standard.

Smart Home

Smart door locks, electric curtains, window openers, smart blinds, automatic soap dispensers, smart bins and compact appliance actuators.

Focus: Balance noise, power consumption, startup current, speed, torque, package size and repeated-cycle reliability.

Medical Equipment

Electronic blood pressure monitors, drug-dispensing equipment, sample transport mechanisms, medical valves and compact rotate/push-pull/open-close/quantitative actuators.

Focus: Evaluate noise, vibration, temperature rise, duty cycle, stall protection and batch consistency inside the actual device.

AI Robots

Service-robot grippers, hatches, feeding mechanisms, cleaning modules and light-load joints.

Focus: For frequent start-stop or reversing, verify gear impact, wear, backlash, lu output-shaft loading and cycle life.

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Industrial Automation

Small conveyors, feeders, sorting mechanisms, labeling equipment, automatic fixtures and inspection equipment.

Focus: Separate continuous, starting and peak torque requirements; match motor, ratio and stage count to the actual cycle rather than applying one generic safety factor.

Commercial / Office Equipment

Coffee machines, printers, copiers, smart lockers and ticketing equipment for feeding, dispensing, opening/closing, locking and transmission.

Focus: Evaluate jam/stall peak torque, noise, cycle life and recovery logic while controlling package size and cost.

Custom Drive Applications

Non-standard small transmission mechanisms where standard voltage, speed, ratio, shaft, mounting or motor configuration does not fit.

Focus: Re-match motor, ratio, stage count, output shaft and operating point to the customer mechanism and validation target.

FAQ

Q1. What applications are spur gear motors best suited for?

Spur gear motors are well suited for small drive systems with relatively stable loads where efficiency, cost, simple structure, and reliable mass production are important. Typical applications include feeders, small conveyors, opening and closing mechanisms, dispensing systems, smart home devices, medical equipment, industrial automation, and commercial equipment.

Q2. How do I select the right spur gear motor for my application?

Motor selection should be based on the operating voltage, target output speed, continuous torque, starting torque, peak torque, gear ratio, installation space, duty cycle, and operating environment. For applications with jamming, frequent start-stop, or reversing, the actual load profile should also be evaluated rather than selecti tor based only o no-load spe pment weight.

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Q3. How can noise and vibration be reduced in a spur gear motor?

Noise and vibration can be reduced by optimizing motor speed, gear accuracy, gear material, backlash, lubrication, assembly tolerances, and mounting structure. Because the final enclosure can amplify resonance, low-noise performance should be validated in the complete customer mechanism rather than relying only on motor no-load noise.

Q4. How should stall, overload, and frequent start-stop conditions be evaluated?

Continuous torque, starting torque, peak torque, stall current, and operating time should be evaluated separately. For applications that may jam or overload, current detection, operation timeout, reverse recovery, or mechanical protection can help reduce the risk of overheating and gear damage. Frequent start-stop and reversing applications should also be validated for gear wear, backlash, temperature rise, and service life.

Q5： How do I place an order with Shunli Motor?

Please send us your application requirements or motor specifications. Our engineering team will develop a suitable solution, confirm the technical details, and provide samples for evaluation. Once the samples are approved, we will arrange mass production. Shipping methods can be selected based on your delivery requirements.

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Product Overview

16 mm micro spur gearbox platform | 3.7 VDC reference gearmotor configurations The GM16 Series is a compact 16 mm-class DC spur gear motor platform designed for miniature transmission systems that require efficient speed reduction, co w-speed output, cost-effective construction, and repeatable mass production. T d 3.7 VDC

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reference configurations include GMP16M030-100K with 72 RPM rated speed and 0.03 N·m rated torque, and GMP16M050-300K with 40 RPM rated speed and 0.10 N·m rated torque. The gearbox family covers 4- to 7-stage spur gear configurations with ratio options from 25K to 800K, supporting compact actuators, smart devices, medical mechanisms, robotics modules, feeders, and other small OEM drive systems.

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Model Information

Reference Model	Motor	Ratio	Rated Voltage	Product Category
GMP16M030-100K	SL-03003710000	1:100	3.7 VDC	DC Spur Gear Motor
GMP16M050-300K	SL-05003715000	1:300	3.7 VDC	DC Spur Gear Motor

Gearmotor Model	Ratio	Rated Voltage (V)	No-Load Speed (RPM)	No-Load Current (mA)	Rated Speed (RPM)	Ra Curren
GMP16M030-100K	1:100	3.7 VDC	100	<80	72	<300
GMP16M050-300K	1:300	3.7 VDC	50	<200	40	<650

Item	4 Stages	5 Stages	6 Stages	7 Stages
Ratio	25K / 30K / 35K / 42K	70K / 85K / 100K / 119K	143K / 169K / 200K / 239K / 285K	300K / 400K / 568K / 800K
Gearbox Length A (mm)	13.2	14.1	15.6	17.0
Max. Rated Torque (kgf.cm)	0.6	1.0	1.5	2.0
Max. Gearbox Torque (kgf.cm)	1.5	3.0	4.0	5.0

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Gearbox Efficiency	60%-70%	55%-60%	50%-55%	45%-50%

PMDC Motor Model	Motor Length B (mm)	Rated Voltage (V)	No-Load Speed (RPM)	No-Load Current (mA)	Rated Speed (RPM)	Rate Current
SL-03003710000	18.7	3.7 VDC	10000	<55	7350	<22
SL-05003715000	26.7	3.7 VDC	15000	<145	12000	<60

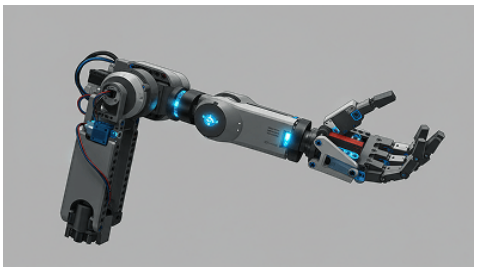
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Main Parameters

Dimension Drawing

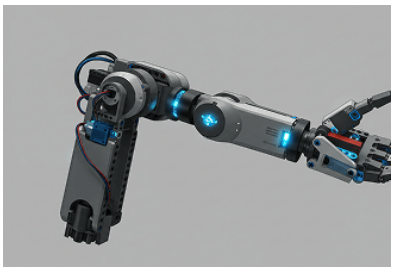
Contact us for the dimension drawing of this model.

Main Applications



Industrial Automation

Industrial valves, dampers, gates, low-speed rotary platforms, adjustment mechanisms, and



Industrial Automation

Industrial valves, dampers, gates, low-sp rotary platforms, adjustment mechanisms

Customization Range

- Gear Ratio & Stage Count
- Select from the documented 4- to 7-stage ratio families and evaluate each configuration against target speed, torque, gearbox length, efficiency, noise, and life requirements.
- Motor Configuration
- Motor parameters can be customized. The supplied platform includes SL-030 and SL-050 PMDC motor references at 3.7 VDC; project-specific v d operating point should be confirmed through engineering evaluation.

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- Output Shaft
- The source technical sheet explicitly supports output-shaft customization. Provide shaft geometry, length, flat/thread feature, tolerance and interface drawing for evaluation.
- Performance Matching
- Output speed, torque and current should be matched to the actual continuous/start/peak load and duty cycle. A target RPM alone is insufficient for reliable selection.
- Gear / Lubrication Optimization
- For noise, life, start-stop or environmental requirements, gear material, meshing condition and lubrication can be evaluated as part of the project solution.
- Wiring / Interface
- Lead wire and terminal/interface requirements can be evaluated from drawings, samples and assembly constraints.
- Validation & Mass Production
- Sample-stage validation can cover speed, current, torque, noise, temperature rise, stall/jam behavior, cycle life and installation fit; pilot production should confirm process capability and batch consistency.

FAQ

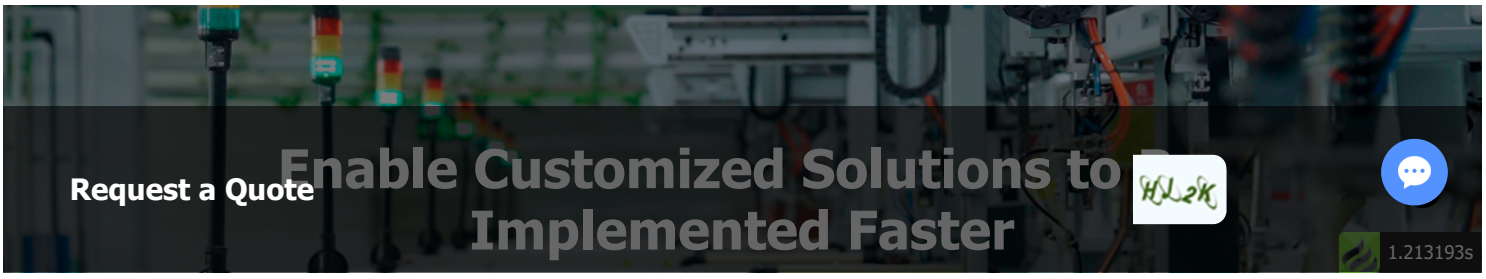
Q1: What types of projects are best suited to the GM58EM DC Worm Gear Motor?

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

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

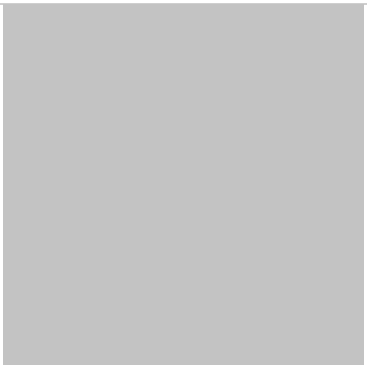
Q3: What types of projects are best suited to the GM58EM DC Worm Gear Motor?

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



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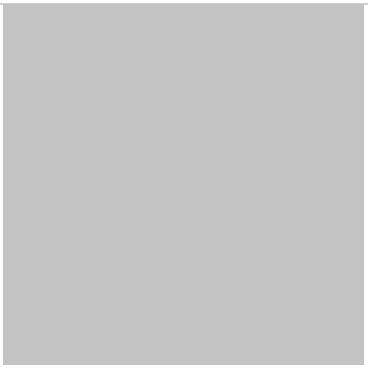
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We offer standard products in high, medium, and low power ranges,...

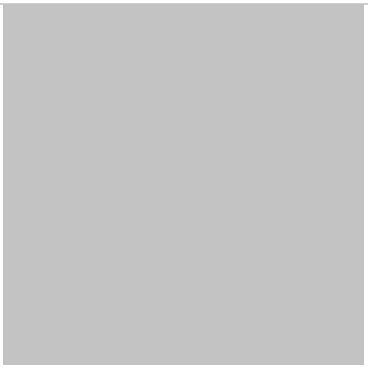
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