

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

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Product Information

SHAPE AND VARIETY

[mm]

DC MINI-MOTORS

Diameter	Length												
	12.5	14	15	18	19	25	26	31	32.5	38	50	57	65
ø 8		M8E-2											
ø 10			M10E-2										
ø 15					M15E-3								
					M15N-3								
ø 20						M20N-8							
ø 22				M22E-12			M22E-14						
				M22E-13									
ø 25	M25E-4L							M25E-6					
								M25N-1					
								M25N-2					
ø 28									M28N-4	M28N-3			
ø 36											M36N-4E	M36N-3E	M36N-5E

Micro Air Pump Motor

	Length	
	38	55
Micro Air Pump Motor	MAP-HD-140	MAP-AM-265

Geared Motor

	Length	
	32	40
Geared Motor	M15N-3G	M22E-13G

MODEL NAME COMPOSITION

M	25	E	—	4
(1)	(2)	(3)		(4)

(1) "M" means motor.

(2) This shows the external diameter.
ex. 25→ϕ25 34→ϕ34

(3) This shows the characteristics.
E : Fork brush type
N : Carbon brush type
BL : Brushless type

(4) This shows the development order by type.
It begins with 1.

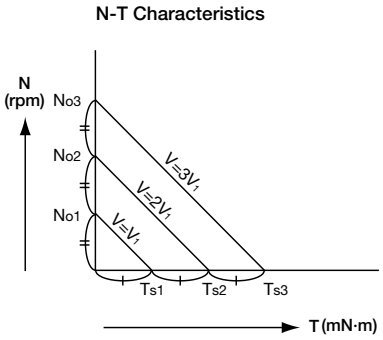
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EXPLANATION OF TERMINOLOGY AND CHARACTERISTICS DIAGRAMS

No load rpm : No (rpm)
This shows the revolutions per minute in an unloaded state when voltage is applied between terminals.

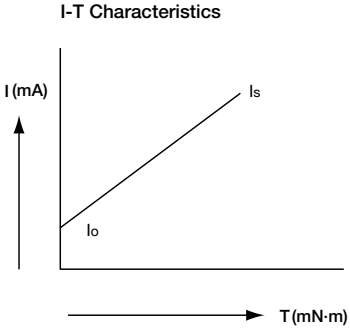
Starting torque : Ts (mN·m)
This shows the torque when the motor rotation is stopped by the increased load during the rotation.

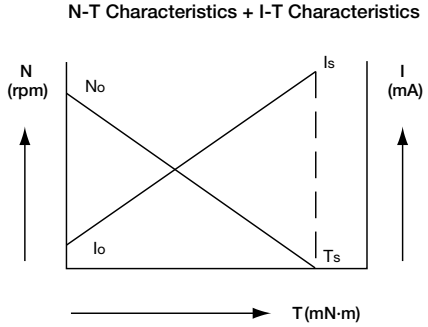
Applied voltage : V (V)
This shows the voltage applied between motor terminals.
The no load rpm and starting torque are both proportional to the applied voltage, so when the applied voltage is used as a parameter the N-T characteristics is a parallel moving straight line as shown left.



No load current : Io (mA)
This shows the current that flows at no load when voltage is applied between terminals.

Starting current : Is (mA)
This shows the current when the motor rotation is stopped by the increased load during the rotation.
The graph in which Io and Is is linked is called I-T characteristics.
The relationship between the torque, current, and rpm when the rated voltage is applied is shown in a graph like below and is included in each product page.





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HOW TO ORDER

When sending us an inquiry, please inform the following items.

Application	
Device in which Motor is included	MP Period
	Monthly Q'ty, Total Planning Q'ty
Motor	Model Name
	Operating Voltage Rang (V)
	Rated Voltage (V)
	Rated Load (mN·m)
	Rated Speed (rpm)
	Rated Current (mA)
	Starting Torque (mN·m)
	Starting Current (mA)
	Rotational Direction (CW/CCW)
	Shaft Diameter (ϕ) × Length (mm)
	Terminal Shape
	– Terminal Type
	– Lead Type (With or Without Connector)
etc.	

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PRECAUTIONS IN USE OR HANDLING

(In use)

Usage temperature conditions
Care must be taken so that the motor is not used under high temperature or high humidity conditions.
Please refer to the specifications before use.

Belt charge
The motor case becomes charged from the belt friction, and this charge creates noise when released, so use a belt material that is difficult to be charged. Also, be sure to ground the case.

Motor installation
If the length of the motor installation screws are toolong, the internal rotors or magnets could be damaged. Use a safe length that takes into account the chassis thickness and dimensions in the specifications.

Do not stop the motor while the power is on.
Be careful that the shaft does not lock while the power to the motor is turned on. Depending on the motor specifications, the inside of the motor will become hot and could suffer burn damage.
Strictly observe the specification values and use the motor within the usage voltage and load ranges.

Pulley and gear installation
1) When they are press fitted to the shaft, correctly receive the shaft reception part in the opposite side.
2) When the shaft is held by a stop screw, do not use a screw that is so large that it will cause rotational unbalance.
3) When the shaft is glued, be careful that the adhesive does not flow down the shaft into the bearing.

Oiling the motor shaft bearing
When the motor shaft bearing is oiled the oil will get into the motor and cause a degradation of the motor's characteristics, so do not oil the motor shaft bearing.

Atmosphere
Do not use the motor in areas where there are corrosive gases (H_2S, SO_2, NO_2, Cl_2, etc.), harmful gases, or substances from which harmful gases can be created (especially organic silicones, cyanides, formalin, and phenol substances).
Make a sufficient check ahead of time that none of the above substances exist in the devices.

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Load on the motor shaft
If a large load like below is applied to the shaft during motor operation, the life of the motor could be shortened. Check the actual usage loads ahead of time so that appropriate measures can be taken for the mechanism.
1) When there is a large thrust load from the worm gear or fan, etc.
2) When there is a large radial load from a centrifugal cam, etc.

Clearance noise
When the side pressure that is applied to the motor output axis is less than a minute load (refer to the individual specifications), a clearance noise might be generated between the metal and output shafts. Check the set mounting conditions ahead of time.

Motor expanded usage
If the motor is used in the other devices than the one in "APPLICATION", check the electrical noise, mechanical noise, vibration, rotational waste, drift, motor and circuit resonance, etc. beforehand mounting the motor on the actual device.

(In handling)

Soldering to motor terminals.
1) Keep the iron temperature below 320°C and keep the soldering time within 3 sec. In addition, do not apply so much load to terminals.
2) Make sure that the spattering of flux and solder does not get into the motor.

Storage
Do not store in areas containing harmful gases as described in Item (7), or with high temperatures, low temperatures, or high humidity. Extra care should be taken for long-term storage. Be sure to keep the storage period at normal temperature and humidity within 6 months.

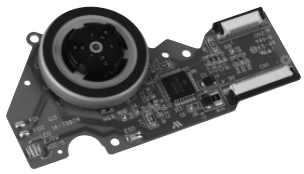
Handling of faulty motors
If a fault occurs with a motor, do not disassemble or attempt to repair it. MITSUMI will handle the problem as soon as contacted.

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CUSTOMIZATION

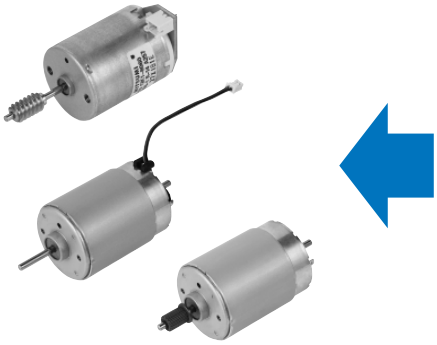
Blushless Motor

We customize a blushless motor according to the demand.



Mounting

We mount several types of gear, herness and substrate on a motor based on our customers needs.





Unitization

We unitize encorder and gear box with on motor accoding to demand.





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