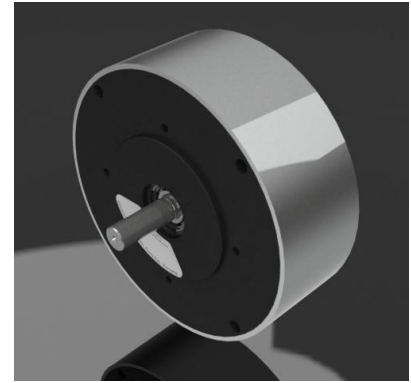


# GM Series

Peak Torque **360 to 3200 Ncm**  
 Cont. Torque **36 to 320 Ncm**  
 Power **113 to 1000 Watts**  
 Speed **<1 to 6000 rpm**

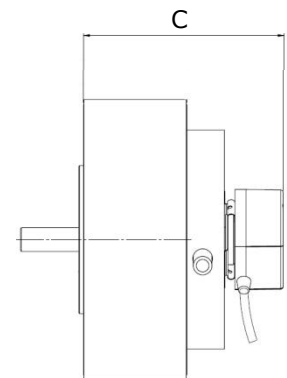
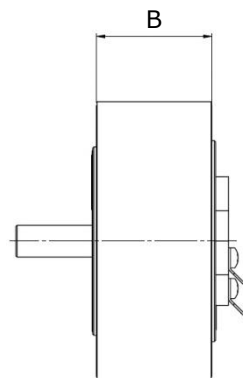
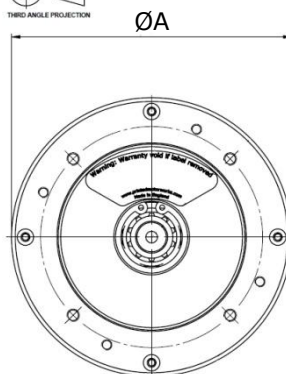
The Printed Motor Works *GM* series is the original printed armature motor. Extremely powerful and accurate, the *GM* range brings all the benefits of printed armature technology to industrial applications. Higher torque 'H' versions offer more torque for the same package and weight. Low voltage versions are available for vehicle applications (details on application). The *GM* range is available with a host of options such as: encoders, imperial mounting, adaptors, gearboxes, tachos, resolvers and with custom mounting plates & shafts.



Motor	Power	Torque	Speed	Voltage	Current	Cont. Stall Current	Diameter	Depth	Depth + Encoder
	P	T	N	V	I	IS	A	B	C
	Watt	Ncm	RPM	Volt	Amp	Amp	mm	mm	mm
GM9	113	36	3000	24.1	8.7	6.8	111	46.0	88.5
GM9H	179	57	3000	31.9	8.6	6.8	111	57.0	99.5
GM12	284	91	3000	43.4	8.8	8.1	142	52.5	101.5
GM12H	396	126	3000	62.7	7.9	8.1	142	70.0	119.0
GM16	704	227	3000	82.7	11.0	9.2	187.2	61.0	110.0
GM16H	890	284	3000	125.7	8.5	9.8	187.2	73.0	122.0

### General benefits

- High peak torque output
- Zero cogging
- Low inertia
- Rapid acceleration
- Stable up to high temperatures
- High instantaneous torque
- Long brush life
- Controllable with servo amplifiers
- Design options include custom shaft, encoders, tachometers, gearboxes and pulleys



Standard Motor

Encoder Option



# GM Series

## Applications:

Servo mechanisms, motion control, industrial robots, CNC machining, printing machinery, logistics solutions, medical mobility, medical scanners, flight simulators, marine autopilots and high ambient temperature ventilation, valve actuators and scientific instrumentation.

## Markets:

Industrial automation, medical, life sciences, aerospace & defence, printing, logistics, instrumentation, test and measurement, oil & gas and offshore marine.

## Design Modifications

- Encoders
- Timing pulleys
- Long leads
- Tri-rated cable
- US mounting configuration
- Customised shafts
- EMC suppression
- Connectors
- Rated for operation in 150°C ambient

## Standard Encoder Option:

Motor	Counts per Rev. CPR	Channels	Type	Supply Voltage V
GM9	5000	A + B + I + Complementary	Optical	+ 5 - 24
GM9H	5000	A + B + I + Complementary	Optical	+ 5 - 24
GM12	5000	A + B + I + Complementary	Optical	+ 5 - 24
GM12H	5000	A + B + I + Complementary	Optical	+ 5 - 24
GM16	5000	A + B + I + Complementary	Optical	+ 5 - 24
GM16H	5000	A + B + I + Complementary	Optical	+ 5 - 24

## Suggested Drives:

### **JUNUS** *General speed control applications*



20-180Vdc for Velocity and Torque control with 6 digital I/O. 5Amp - 30Amp variants, RS232 communication.

### **ACCELNET** *General servo applications*



20-180Vdc for Velocity, Torque and Position control with 11 digital I/O and Encoder feedback. 5Amp - 36Amp variants, RS232 & macro communication.

### **XENUS** *Advanced servo control*

CANopen

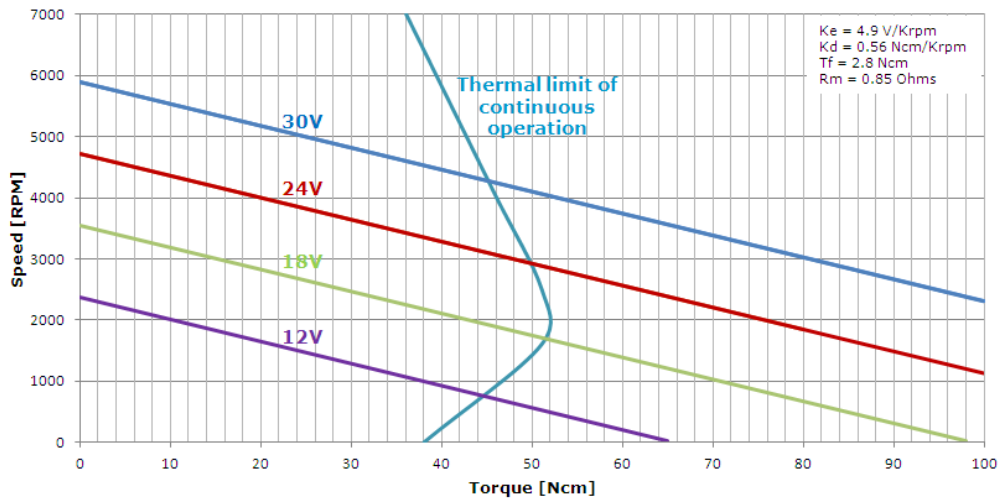


110-230Vac for Camming, Gearing, Position, Velocity & Torque control with 16 digital I/O and multiple feedback options. A stand alone motion control device with CANopen & RS232 communication protocols.

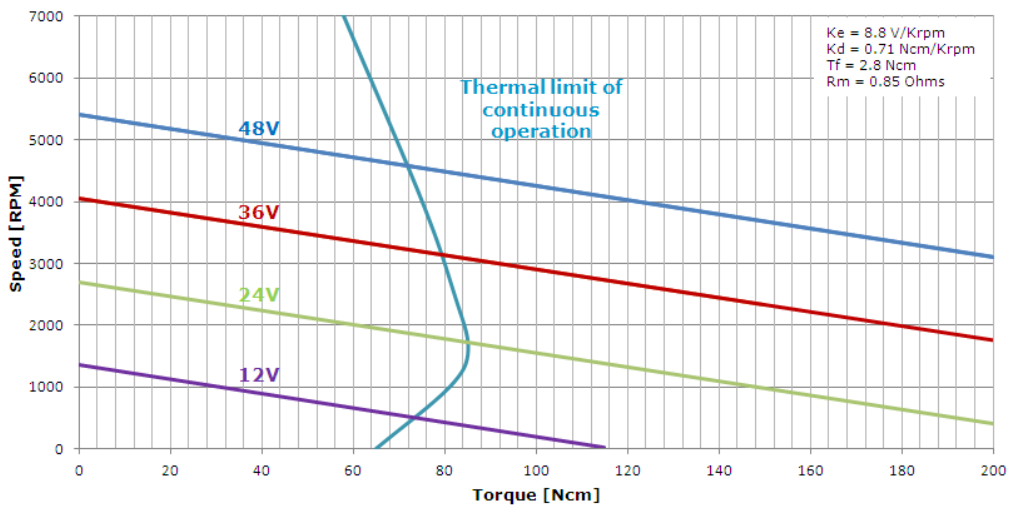


# GM Series

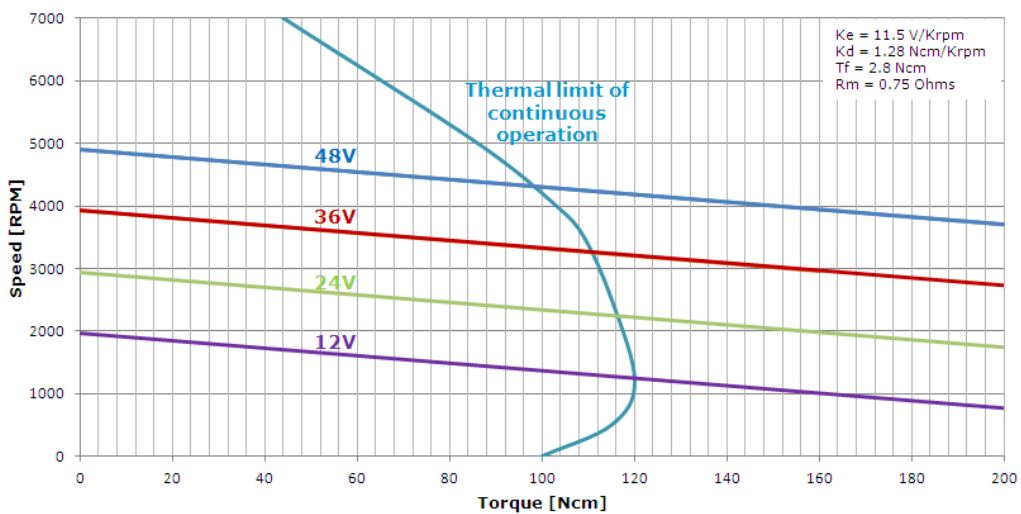
### GM9



### GM9H



### GM12

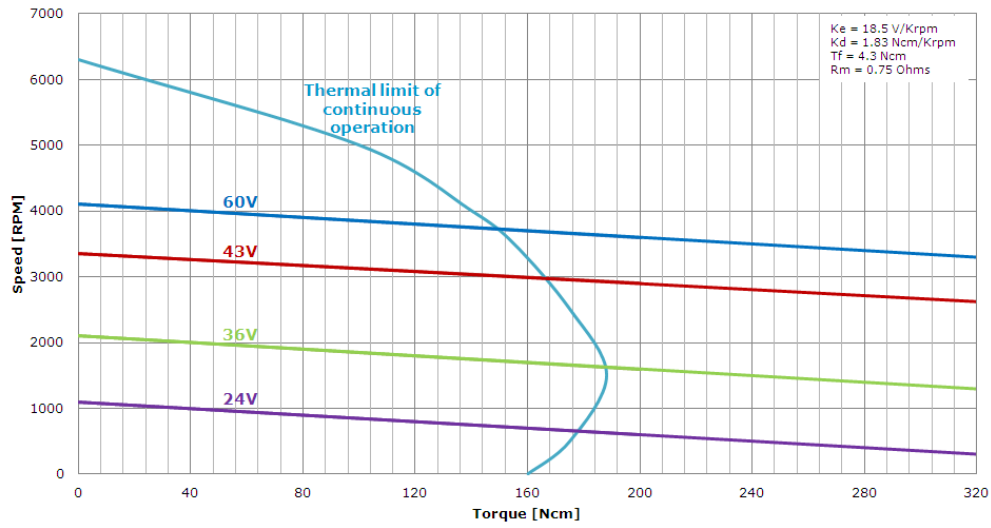


NOTE: The above voltages are examples, not a predefined maximum or minimum.  
 Due to ongoing product improvements data is subject to change without notice.

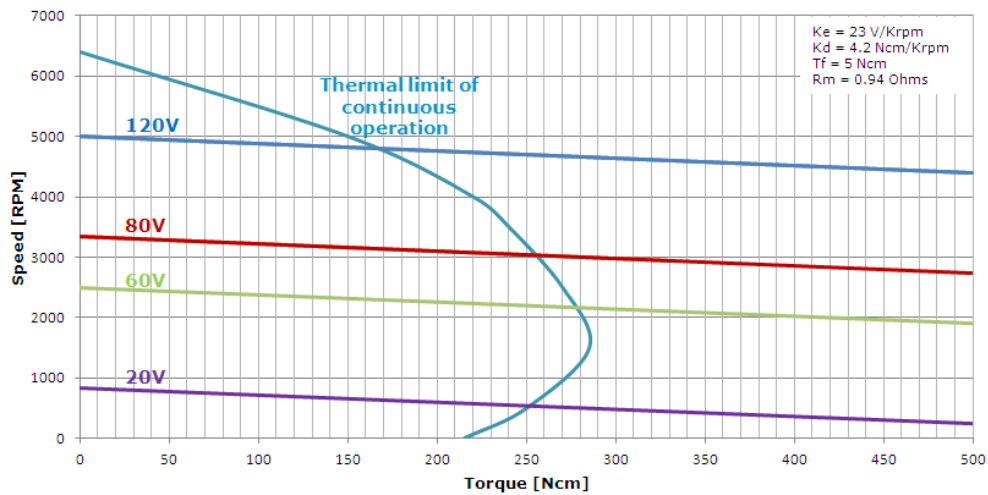


# GM Series

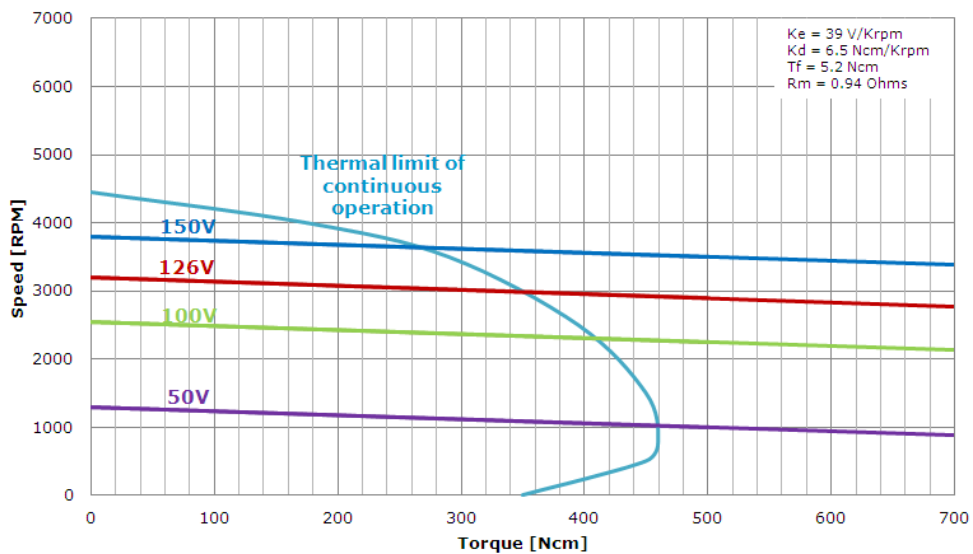
**GM12H**



**GM16**



**GM16H**



NOTE: The above voltages are examples, not a predefined maximum or minimum.  
 Due to ongoing product improvements data is subject to change without notice.