

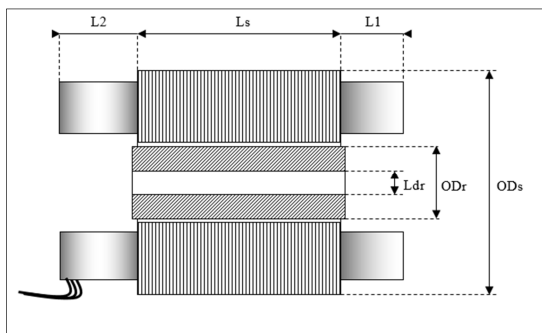
Motors and drives

Brushless DC motor



Extensive range of electric motors, from a few Watts to more than 200 kW. These motors are intended to fit on-board aerospace, defence, and other demanding environments. They are available as a line replaceable unit (housed) or frameless that can be integrated by the customer.

General outline



Outside dia. Stator (ODs)
 Outside dia. Rotor (ODr)
 Stack lamination length (Ls)
 End turns length (L1)
 End turns length wires output side (L2)
 Inside dia. Rotor (Ldr)

Model	ODs	ODr	Ls	L1	L2	Ldr	Weight	Rotor inertia
	mm	mm	mm	mm	mm	mm	g	Kg.m ²
BM5546C01	90	53.7	48	14.5	15	38	1850	2.2E-04

Key features

- Low maintenance
- High power density
- Excellent fluid compatibility
- Customised designs
- Lightweight

Applications

- Fans
- Pumps
- Servo-controlled actuators
- Utilities

Contact

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Meggitt Sensing Systems

Our product competencies and services:
 Avionics displays | Inertial sensors | Ignition systems |
 Performance Sensing | **Power & Motion** | Sensing & Monitoring

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Specifications

	Symbol	Unit	BM5546C01
Size constants			
Continuous stall torque	T_c	Nm	3.950
Motor constant	K_m	Nm/ \sqrt{W}	0.40833
Cogging Torque (peak/peak)	C_{ogg}	Nm	0.1000
Motor friction torque	T_f	Nm	0.100
Viscous friction torque	F_i	Nm/rad/s	2.0E-04
Max. winding temperature		°C	180
Ultimate temperature rise/Watt	TPR	°C/W	0.73
Number of poles	2p	-	12
Winding constants (alternate windings available)			
Terminal DC voltage	U_{dc}	V DC	140
Peak torque	T_p	Nm	79.275
Peak current	I_p	A	269.23
Torque Sensitivity Ph to N at max. current	K_t Ph/N	Nm/A	0.17000
Back EMF peak Ph to N	K_b Ph/N	V/(rad/s)	0.17000
Resistance Phase to neutral @ 25°C	R Ph/N	Ohm	0.26
Inductance Phase to neutral	L Ph/N	mH	0.55
No Load Speed	Ω_0	Rpm	4500
Winding Connection	/	/	Star
Mechanical Time Constant	τ_m	ms	1.98
Electrical Time Constant	τ_e	ms	2.12

Note: Due to continuous process improvement, specifications are subject to change without notice

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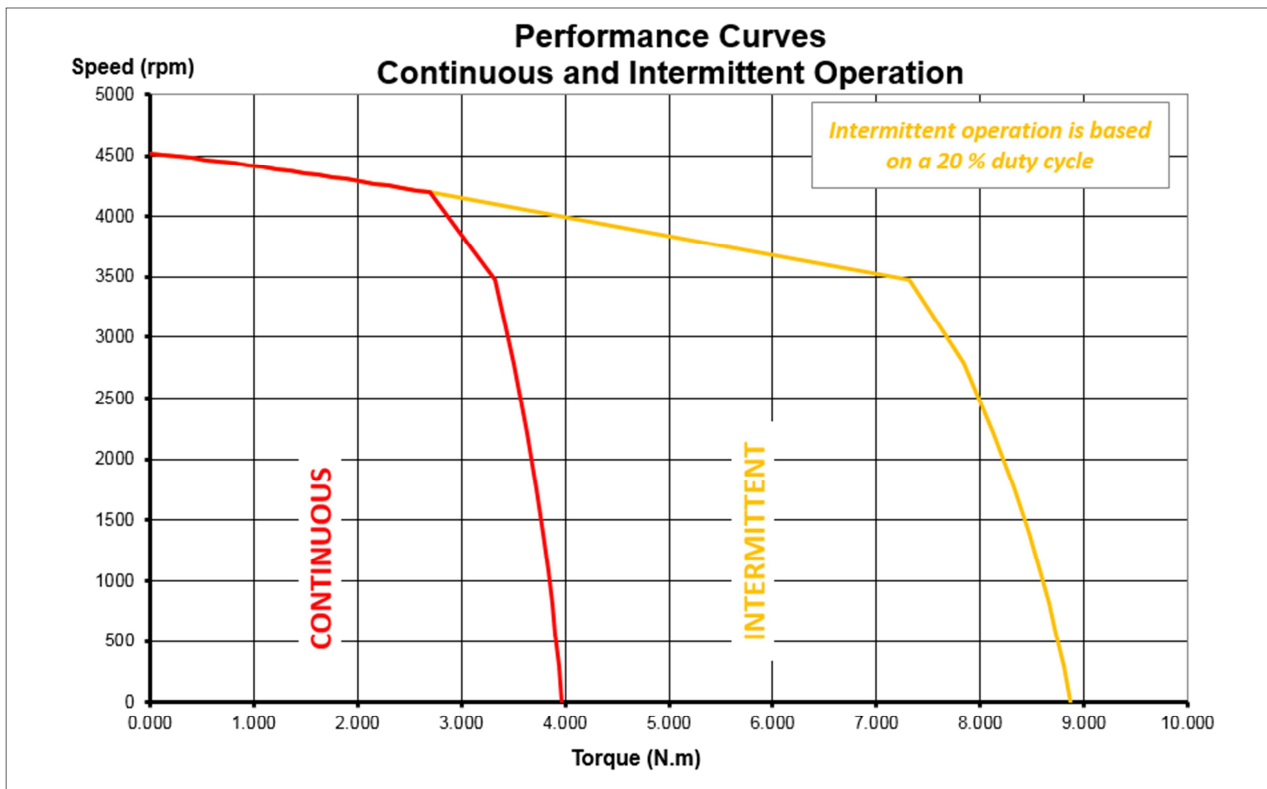
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 smart engineering for
 extreme environments

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Performance curves



BM5546C01

Performance curves and TPR assume with housed motor mounted to (180 x 180 x 6) mm

Notes:

1. Typical electrical specification at 25 °C
2. Many other custom mechanical options are available – for assistance please contact our applications engineer
3. Many other winding options are available - for assistance please contact our applications engineer
4. Housed or frameless designs are available

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