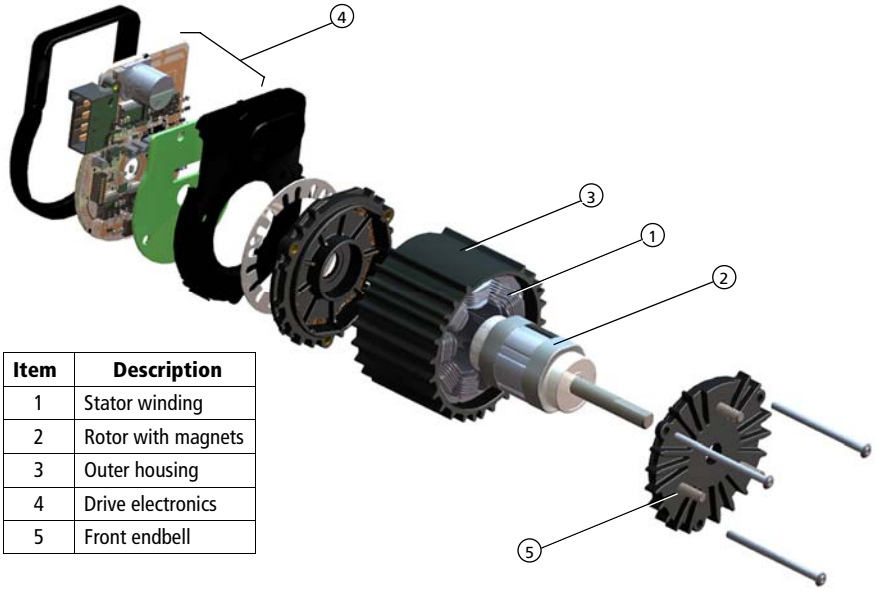
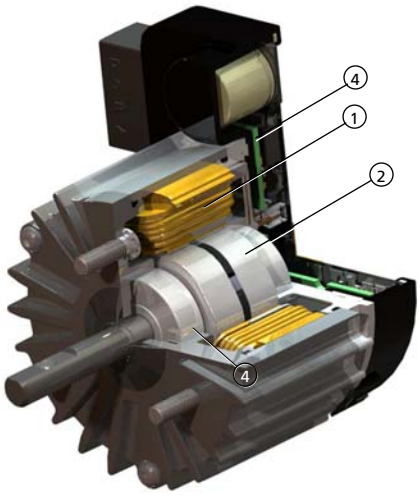
Integrated Brushless DC Motors



Item	Description
1	Stator winding
2	Rotor with magnets
3	Outer housing
4	Drive electronics
5	Front endbell



Cutaway of an EnduraMax BLDC motor

Integrated Brushless DC Motor Technology

Integrated brushless DC motors combine a brushless DC motor and an electronic drive in a single compact package.

The motor (items 1, 2, 3 above) and drive (item 4) are situated in close proximity within the housing. This eliminates the wiring/cabling between these two elements that is required in traditional separate motor and drive combinations. Power and control inputs are all that is needed to power and command an integrated motor.

Allied Motion's EnduraMax integrated brushless DC motor technology also combines a segmented stator and a rotor with shaped magnets to cost-effectively deliver high power and high torque density while minimizing torque ripple.

The drive section includes a novel power section with a cold-plate design that enables better heat management than other approaches. The drive is fed from a DC source, making the integrated motor-drive ideal for battery powered applications.

Advantages of Integrated Brushless DC Motors

Allied Motion's EnduraMax integrated brushless DC motors offer advantages for many industrial and commercial applications:

- Integrated compact design avoids the need for a drive and the intermediate wiring
- Torque and power density is up to 40% better than typical brush DC motors, and even better if resistor packs are used to control DC motor speed.
- Integrated brushless DC motors are audibly quieter than DC motors.
- No need for brush maintenance and no commutator wear mean longer life than DC motors.
- Industrial control networks like CAN can be directly integrated into the motor.

Integrated Brushless DC Motor Applications

Listed below are a few of the applications that can benefit from Allied Motion's EnduraMax integrated brushless DC motors:

- Bus and truck HVAC compressors
- Vehicle blower and fan systems
- Liquid and gas volume and metering pumps
- Conveyor systems
- Medical irrigation system pumps
- Inkjet high-speed marking machine gear pumps
- Power assist systems in off-road vehicles
- Medical exam table and hospital bed actuators
- Vehicle drive by wire (marine, off-road and other)
- Agricultural vehicle accessories (e.g. seeders)
- Wind power generator pitch adjustment systems
- Automated firefighting equipment (e.g. nozzles and monitors)
- Aerospace and defense systems (e.g. helicopter HVAC)

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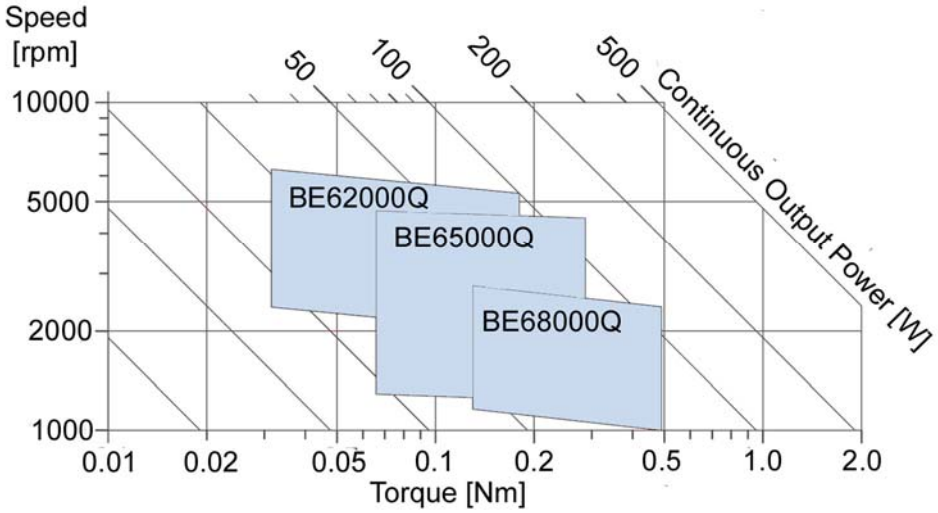
Integrated Brushless DC Motors

	Size (OD x Length) [mm (in)]	Power [HP (Watt)]	Torque [Nm (oz-in)]	Rated Speed [RPM]	No-load Speed [RPM]	Voltages (VDC)	Options
EnduraMax BE62000Q 	75 x 70.1 (2.954 x 2.79)	0.14 (100)	0.18 (25)	5500	6400	12, 24	• Lead, leadless, or connectorized models • 9 mm dia. shaft • Customized shaft, and/or mounting to match application requirements • Sealed ball bearings • Stainless steel shaft • IP56 wash-down version
EnduraMax BE65000Q 	75 x 84.8 (2.954 x 3.34)	0.18 (133)	0.28 (40)	4500	4900	12, 24	• Lead, leadless, or connectorized models • 9 mm dia. shaft • Customized shaft, and/or mounting to match application requirements • Sealed ball bearings • Stainless steel shaft • IP56 wash-down version
EnduraMax BE68000Q 	75 x 98.8 (2.954 x 3.89)	0.17 (124)	0.49 (70)	2400	2900	12, 24	• Lead, leadless, or connectorized models • 9 mm dia. shaft • Customized shaft, and/or mounting to match application requirements • Sealed ball bearings • Stainless steel shaft • IP56 wash-down version



Note: Blue-shaded area indicates optimum operational area for the motor

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