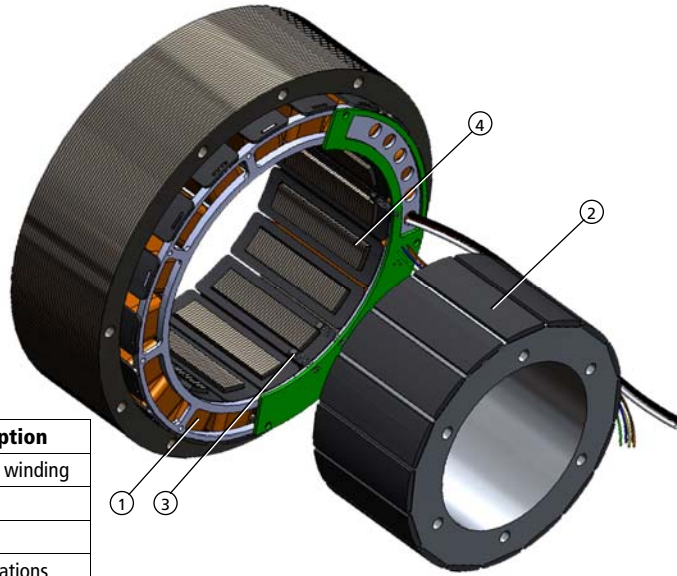
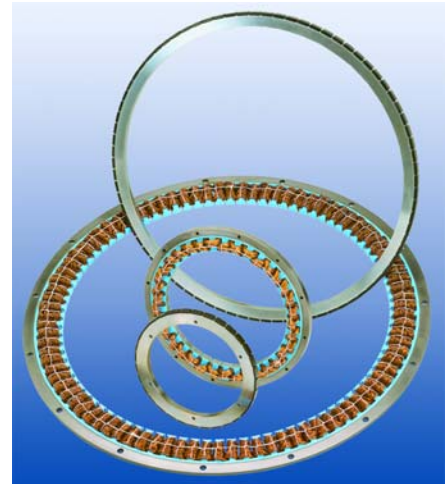


## Megaflux Gen II Brushless Torque Motors



Item	Description
1	Single-tooth winding
2	Magnet
3	Hall sensor
4	Stator laminations



Frameless Megaflux brushless torque motors

### Megaflux Gen II Brushless Torque Motor Technology

Torque motors are large diameter, axially short servo motors intended to run at low to moderate speed and output a large torque. Typically frameless, they are usually directly integrated into the driven axis.

Allied Motion's Megaflux Gen II torque motor technology differs from other designs in several respects. First, single-tooth winding (item 1 above) is used along with a high pole (magnet) count. This construction lowers phase resistance and enables better heat transfer, producing higher torque ratings per frame size and a larger rotor I.D. Hall sensors (item 3) are standard for commutation feedback.

Further, Gen II Megaflux motors employ magnetics optimization to maximize performance and minimize cogging torque, while proprietary assembly technology helps insure a high performance yet cost-effective brushless torque motor.

### Advantages of the Megaflux Gen II Brushless Torque Motor

Allied Motion's Megaflux Gen II brushless torque motors offer significant advantages:


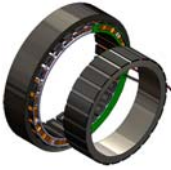
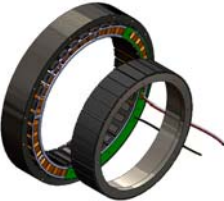
- Provide high output torque at low speed for direct drive applications, eliminating the mechanical backlash and lost motion of geared solutions
- Low cogging torque ratio for smooth precise rotation
- Thin radial thickness means a larger clear hollow shaft enabling the passage of more cabling, piping and/or other material through the motor center
- Thinner axial dimension means a more compact solution and smaller overhung load when cantilevered outside a shaft end bearing
- Hall sensors for commutation are standard, and hollow shaft encoders are easily added
- Housed versions are available for a complete rotary axis solution

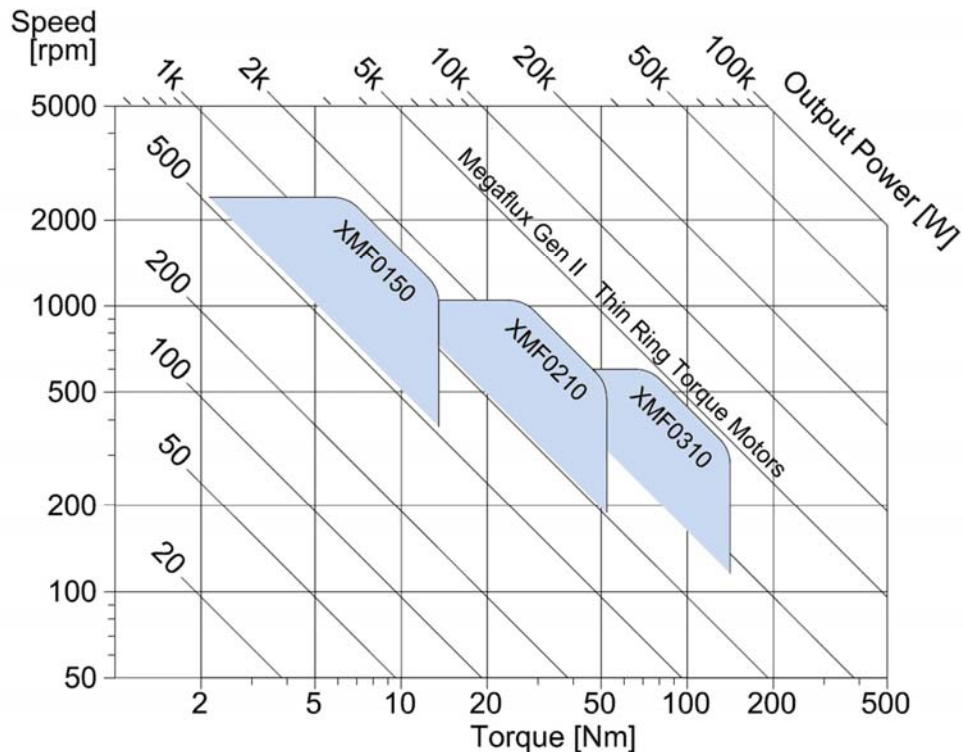
### Megaflux Gen II Brushless Torque Motor Applications

Below are representative applications that benefit from the advantages of Gen II Megaflux torque motors:

- Semiconductor manufacturing equipment
- Robot base, shoulder and joint axes
- Machine tool axis and spindle drives
- Stabilized instrumentation platforms
- Telescope and antenna pointing and tracking
- Simulator force feedback and actuator drives
- Specialized winch drives
- Printing and converting machines

## Megaflux Gen II Brushless Torque Motors

	Size [mm (in)]	Stall Torque [Nm (lb-ft)]	No-Load Speed [RPM]	Pole Count	Winding Voltage [VDC]	Inertia [kg-m <sup>2</sup> (lb-ft-s <sup>2</sup> )]	Options
<b>XMF0150 Series</b> 	170 (6.7) O.D. 74 (2.91) I.D.; 9.9, 25.9, 50.9 (0.39, 1.02, 2.0) stack height	3.5, 9.1, 15.3 (2.5, 6.7, 11.2)	1293 - 2533, 1136 - 2663, 617 - 1930	16	48, 150, 300	1.01E-3 (7.51E-4), 2.7E-3 (2.0E-3), 5.4E-3 (4.0E-3)	<ul style="list-style-type: none"> <li>Encoder</li> <li>Housed version</li> <li>Special winding voltage</li> <li>Larger/smaller stack size</li> </ul>
<b>XMF0210 Series</b> 	230 (9.06) O.D. 130 (5.12) I.D.; 9.9, 25.9, 50.9 (0.39, 1.02, 2.0) stack height	8.7, 21.7, 41.1 (6.4, 16, 30.3)	631 - 1274, 338 - 779, 200 - 626	24	48, 150, 300	5.2E-4 (3.8E-3), 0.014 (0.010), 0.028 (0.021)	<ul style="list-style-type: none"> <li>Encoder</li> <li>Housed version</li> <li>Special winding voltage</li> <li>Larger/smaller stack size</li> </ul>
<b>XMF0310 Series</b> 	330 (13) O.D. 210 (8.27) I.D.; 9.9, 25.9, 50.9 (0.39, 1.02, 2.0) stack height	20.5, 49.1, 100.4 (15.1, 36.2, 74)	924 - 1884, 743 - 1266, 658 - 1266	32	48, 150, 300	0.026 (0.019), 0.071 (0.052), 0.140 (0.103)	<ul style="list-style-type: none"> <li>Encoder</li> <li>Housed version</li> <li>Special winding voltage</li> <li>Larger/smaller stack size</li> </ul>



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