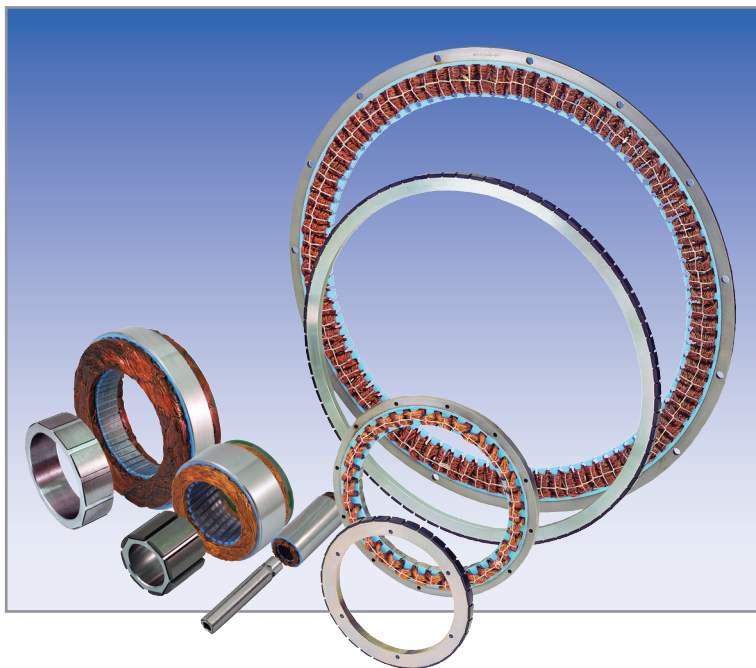




*Motion Solutions That Change the Game*



## High Performance Frameless Brushless Torque Motors

- *Diameters from 19 up to 792 mm*
- *Rated torques from 0.008 up to 1875 Nm*
- *Covers virtually all torque motor requirements*



## Brushless High Torque HT Series

### High Torque Density Sinusoidal BEMF Frameless Motors

Allied Motion's HT family of frameless direct drive brushless motors is a nine frame-size series of high torque density frameless, component (rotor and stator pair) motors. A smaller diameter offering than our Megaflux family, HT series diameters range from 19 mm up to 127 mm, and continuous torque ranges from 0.008 Nm up to 9 Nm.

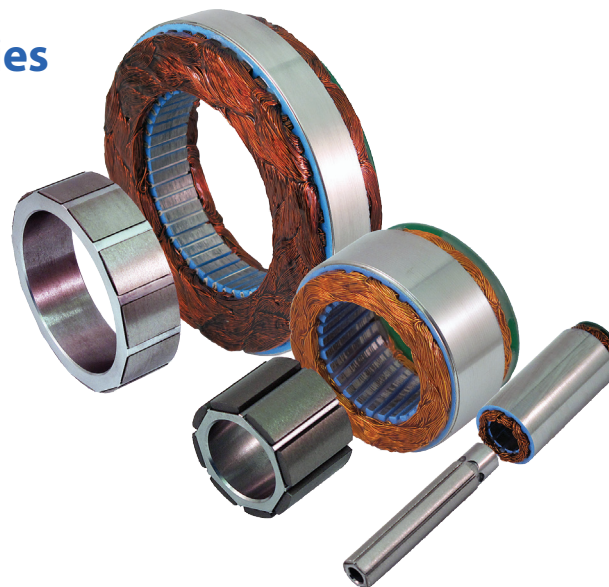
HT Series torque motors offer lower inertia and higher speed capability than similar-sized Megaflux models. Similar to the Megaflux family, HT motors feature relatively large hollow shafts of up to 63.5 mm. They are equipped standard with a Hall commutation switch assembly.

#### Typical Applications

- Surgical robot and other medical systems such as exoskeletons and life support equipment
- Semiconductor manufacturing equipment
- Targeting and sighting platforms
- Cryogenic cooling pumps
- LIDAR laser systems for aerial, ground and environment mapping

#### Options & Accessories

- Samarium-cobalt magnets for high temperature applications
- Larger diameter (up to 239 mm) designs for higher torque requirements
- Housed versions with integral feedback (encoder or resolver)
- Completely custom designs to meet specific requirements



#### Features & Benefits

- Frameless high torque-to-inertia motors with continuous stall torque rating up to 9 Nm
- Frame diameters from 19.3 mm up to 127 mm and multiple stack lengths cover most any application need in this size range
- High strength magnets for high-density torque output
- Integral Hall-effect phase commutation sensors as standard

#### HT Series Specification Summary by Model

Model	Continuous Stall Torque (Nm)	No Load Speed (RPM)	Outer Diameter (mm)
HT0080x	0.008 - 0.021	10891 - 18300	19.3
HT0100x	0.024 - 0.090	4796 - 8510	26.7
HT0150x	0.053 - 0.256	2713 - 6897	37.8
HT0200x	0.127 - 0.658	1429 - 3948	49.2
HT0230x	0.254 - 1.242	600 - 1904	60.4
HT0250x	0.216 - 1.235	847 - 1954	63.5
HT0300x	0.41 - 2.25	530 - 1857	75.9
HT0380x	0.79 - 4.62	545 - 1568	94.7
HT0500x	1.60 - 9.02	419 - 1424	127

## Brushless Megaflux MF Series

### *Thin-Ring Frameless Component (Rotor & Stator) Torque Motors*

Allied Motion's Megaflux family of brushless torque motors is a 12 frame-size series of high performance frameless, component (rotor and stator pair) motors. Series diameters range from 60 mm up to 792 mm, and continuous torque ranges from 0.29 Nm up to 792 Nm.

Megaflux motors are normally mounted directly to the driven axis, which eliminates the backlash / resonance issues of other solutions. Their large open-bore design allows passing electrical cables, laser beams, etc. through the axis center.

#### Typical Applications

- Robot joint axes
- Semiconductor manufacturing equipment
- Machine tool spindle and axis drives
- Telescope and gimbal azimuth/elevation axes

#### Options & Accessories

- Samarium Cobalt magnets for high temperature environments
- Modified designs to meet your specific application requirements
- Fully custom versions, housed or unmounted, with or without integrated control electronics and / or feedback devices



#### Features & Benefits

- High torque output at low speed for direct drive applications—eliminates gearing issues
- Low cogging torque ratio for smooth precise rotation
- Three (3) standard voltage windings per frame size, and per stack length
- Large, hollow shaft up to Ø582 mm allows passing cables, laser beams, etc. through the axis center
- Thin axial dimension for a more compact solution and low cantilever
- 12 standard frame sizes, each with a choice of stack lengths, cover virtually any application requirement
- Stator mounting holes and rotor mounting flange are standard for MF0150 and larger sizes

#### MF Series Specification Summary by Model

Model	Continuous Stall Torque (Nm)	No Load Speed (RPM)	Outer Diameter (mm)
MF0060	0.29 - 1.04	2076 - 7098	60.4
MF0076	0.51 - 2.20	1640 - 6447	76.0
MF0095	0.92 - 4.39	1300 - 5436	94.7
MF0127	1.6 - 8.4	939 - 5097	127.0
MF0150	3.1 - 24.7	416 - 2500	170.0
MF0210	8.0 - 75.0	338 - 1894	230.0
MF0255	9.7 - 102.9	280 - 1591	275.0
MF0310	17.3 - 181.3	100 - 1260	330.0
MF0410	68.6 - 380	71 - 926	430.0
MF0510	110 - 684	42 - 771	535.0
MF0610	172 - 1034	25 - 595	640.0
MF0760	304 - 1875	17.1 - 422	792.0



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[www.alliedmotion.com](http://www.alliedmotion.com)

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