

Moog has been a leader for over 2 decades in providing servomotors and drives offering the highest dynamics, power density, and reliability. Moog is committed to offering motors and drives that are ideal for high performance applications. Market focuses include robotics, plastics, metal-forming, material handling, and power generation to name a few.

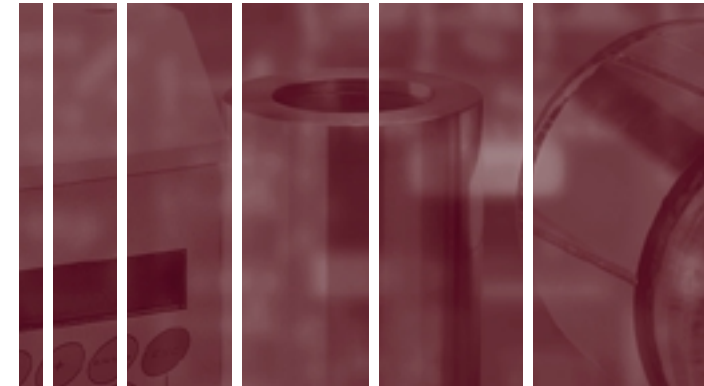
Servomotors and Drives Product Line Overview



In addition to our extensive product range, Moog is committed to offering custom solutions for OEM's and sharing our motion control expertise to create complete systems. Moog's global presence and knowledge of electric and hydraulic systems ensures that your current and future needs are with the real motion control experts.

Why Moog Motors?

- Highest dynamics, power density, and reliability
- Superior servo performance
- Broad product range and flexibility to customize
- Compact light-weight construction to simplify machine design
- Proprietary, low-cogging design for smooth low speed operation
- Designed and manufactured using ruggedized components and materials









Why Moog Drives?

- High dynamics and reliability
- Smooth low speed performance
- Thermal management for operation in demanding industrial environments
- Simplified installation and wiring
- Quick and easy setup and system commissioning
- High speed field bus interfaces
- Characteristics matched to optimize the performance of Moog motors

Moog Servomotors



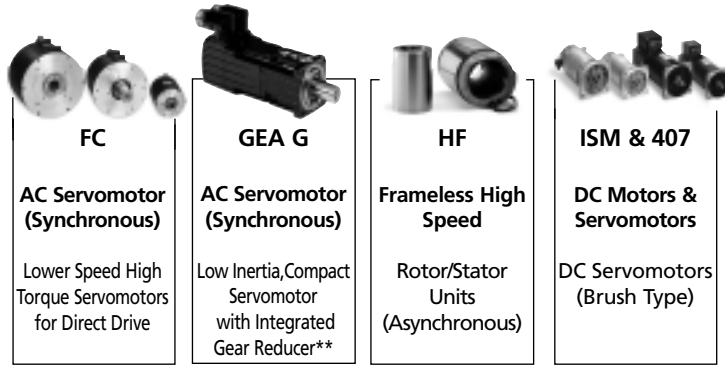
					
FAS G	FAS T	FAS F	FAS N	FAS W	FAS Y
AC Servomotor (Synchronous)	AC Servomotor (Synchronous)	AC Servomotor (Synchronous)	AC Servomotor (Synchronous)	AC Servomotor (Synchronous)	AC Servomotor (Asynchronous)
Low Inertia Compact Length	Medium Inertia Medium Length	Integrated Fan Cooling	Economically Priced Good Performance	Water Cooled Servomotors	Induction Servomotors

Type of Motor		Totally enclosed, natural cooling (optional fan ventilation)	Totally enclosed, natural cooling	Forced axial fan ventilation	Totally enclosed, natural cooling	Forced water cooling	Totally enclosed, natural cooling (optional fan ventilation)
Continuous Power		0.15 - 11.3 kW	0.19 - 24.3 kW	1.1 - 36.1 kW	0.18 - 4.2 kW	1.4 - 58.6 kW	0.31 - 6.0 kW
Number of Poles		8, 12	6, 8	6, 8	6	6, 8, 12, 16	4
IEC Mounting Designation		63*, 75, 115, 165, 215	63*, 90, 115, 165, 215, 300	63*, 90, 115, 165, 215, 300	90*, 115, 130, 165, 215	125*, 165, 215*, 300	115, 165, 215, 265
Maximum Bus Voltage		750 Vdc	750 Vdc	750 Vdc	750 Vdc	750 Vdc	750 Vdc
Permanent Magnets		NdFeB/Sm2Co17	NdFeB/Sm2Co17	NdFeB/Sm2Co17	NdFeB	NdFeB/Sm2Co17	n/a
Transducer:	Resolver	Standard	Standard (Various options)	Standard (Various options)	Standard (Various options)	Standard (Various options)	Standard (Various options)
	Other	Encoder	Encoder	Encoder	Encoder	n/a	n/a
Insulation Class		F	F	F	F	F	F
Thermal Protection (type of temp. sensor)		155°C (NTC)	155°C (PTC)	155°C (PTC)	155°C (PTC)	155°C (PTC)	155°C (PTC)
Shaft Seal		Optional	Optional	Optional	Optional	Optional	Optional
Protection		IP65 std, IP67 (optional)	IP64 std, IP65-67 (optional)	IP64 std, IP65 (optional)	IP64 std, IP65-67 (optional)	IP64 std, IP65-67 (optional)	IP64 std, IP65 (optional)
Electrical Connection	Power Line	Connector: std.	Terminal box: std. Connector: optional	Terminal box: std. Connector: optional	Terminal box: std. Connector: optional	Terminal box: std. Connector: optional	Terminal box: std. Connector: optional
	Signal Line	Connector: std.	Connector: std.	Connector: std.	Connector: std.	Connector: std.	Connector: std.
Mechanical Brake		Optional	Optional	Optional	Optional	n/a	Optional
Marks		CE, UR/CUR	CE, UR/CUR	CE, UR/CUR	CE, UR/CUR	CE, UR	CE
Ambient Temperature Ratings		-25° to +55°C	-25° to +55°C	-25° to +55°C	-25° to +55°C	Water cooling	-25° to +55°C

*Deviates from IEC classification

**Consult factory for available Gear Ratios

Moog Servomotors (continued)








Type of Motor	FC	GEA G	HF	ISM & 407
	AC Servomotor (Synchronous)	AC Servomotor (Synchronous)	Frameless High Speed	DC Motors & Servomotors
	Lower Speed High Torque Servomotors for Direct Drive	Low Inertia, Compact Servomotor with Integrated Gear Reducer**	Rotor/Stator Units (Asynchronous)	DC Servomotors (Brush Type)
	Totally enclosed, natural cooling	Totally enclosed, natural or water cooling	Frameless Rotor Stator Unit	Totally enclosed or frameless
Continuous Power	1.2 - 9.2 kW	0.15 - 4.1 kW	0.80 - 200 kW	40 W to 2.5 kW
Number of Poles	12	8, 12	2, 4, 6	2
IEC Mounting Designation	See catalog	63*, 75, 115	See catalog	See catalog
Maximum Bus Voltage	750 Vdc	750 Vdc	750 Vdc	240 Vdc
Permanent Magnets	Ferrite	NdFeB/Sm2Co17	n/a	Ferrite
Transducer:	Resolver	Standard (Various options)	n/a	n/a
	Other	n/a	Encoder	Tachometer generator
Insulation Class	H	F	F	F
Thermal Protection (type of temp. sensor)	155°C (PTC)	155°C (NTC)	Optional	No
Shaft Seal	Optional	Optional	n/a	n/a
Protection	IP54 std, IP65 (optional)	IP65 std, IP67 (optional)	n/a	IP54 (various)
Electrical Connection	Power Line	Connector: std.	Connector: std.	Flying lead or Cust. Specified
	Signal Line	Connector: std.	Connector: std.	n/a
Mechanical Brake	Optional	Optional	n/a	Optional
Marks	CE, UR pending	CE, UR	n/a	CE, UR
Ambient Temperature Ratings	-25° to +55°C	-25° to +55°C	Water cooling	-25° to +55°C

*Deviates from IEC classification

**Consult factory for available Gear Ratios

Moog Servodrives



 DBM 04 Digital Servodrive Multiple Axis	 DBS Digital Servodrive Stand Alone Single Axis	 DS 2000 Full Digital Servodrive with Power Supply Stand Alone Single Axis	 μDS Full Digital Servodrive with Power Supply Stand Alone Single Axis	 T200 Programmable Digital Servodrive Stand Alone Single Axis
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Control Function	Torque, Velocity	Torque, Velocity	Torque, Velocity, Position	Torque, Velocity	Torque, Velocity, Position
Automated Self Tuning	No	No	No	No	Yes
PWM Frequency	10 (kHz)	10, 5 (kHz)	10 (kHz)	10 (kHz)	10, 8.8, 5 (kHz)
Encoder Simulation	Yes	Yes	Yes	Yes	Yes
Power Source					
Main Power Source	Separate	Integrated	Integrated	Integrated	Integrated
AC Main Input Voltage Range	360-506 Vac	207-506 Vac	80-510 Vac	80-510 Vac	100-255 Vac
Internal Re-generation Resistor and Power	External	Internal/External	Internal/External	Internal/External	Internal/External
Logic Back-up Power	220 Vac	24 Vdc	24 Vdc	24 Vdc (req.)	120 Vac or 24 Vdc
Output Current					
Nominal	3 - 35 Arms	3 - 180 Arms	3 - 60 Arms	3 or 6 Arms	5 - 60 Arms
Peak	6.4 - 63.6 Arms	6.5 - 226 Arms	6.4 - 124 Arms	8 or 16 Arms	10 - 140 Arms
Thermal Specifications					
Operating Temperature*	0 - 40°C	0 - 40°C	0 - 40°C	0 - 40°C	0 - 55°C
Winding Temp. Protection	Yes	Yes	Yes	Yes	Yes
Base Plate Temp. Protection	Yes	Yes	Yes	Yes	Yes
I/O					
Analog Input	Velocity demand and torque limit	Velocity demand and torque limit	Velocity demand and torque limit	Velocity demand and torque limit	Velocity demand and torque limit
Analog Output	3 fixed (velocity) 2 programmable	1 fixed (velocity) 1 programmable	1 fixed (velocity) 1 programmable	1 fixed (velocity) 1 programmable	2 programmable
Digital Input	5 opto isolated	3 opto isolated	3 opto isolated	3 opto isolated	10 opto isolated
Digital Output	3 non opto isolated	2 opto isolated	1 opto isolated	1 opto isolated	5 opto isolated
Communication	RS232, 485, CAN (optional)	RS232, 485, CAN (optional)	RS232, 485, CAN (optional)	RS232, 485	RS232, 485, CAN (optional)
Marks	CE, UL	CE, UL	CE, UL	CE, UL pending	CE, UL

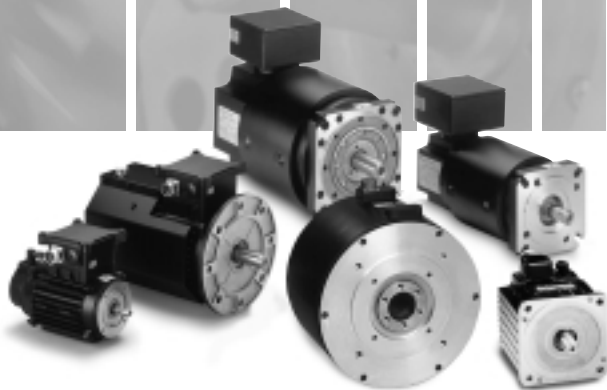
*Consult catalog for derating at higher temperatures

Moog Support

Motors and drives are manufactured in Moog facilities around the world that work together seamlessly to design and support all of our products. The use of tight machining tolerances, state-of-the-art production processes, and thorough product testing guarantee a long service life. Moog's technical staff is available to help you make sure your components and systems run in peak operating conditions. Our engineers and technicians are the best at helping to get the right components in the right application, providing you a competitive advantage in the marketplace.



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