

Linear Motors Product Overview

Powerful and Precise Linear Motion

Moog linear motors are the solution for highly dynamic and precise linear motion positioning.

Our linear motors are a high force, direct drive solution which maximize positional accuracy while minimizing maintenance costs. With rugged construction designed for industrial applications, Moog's linear motors will extend maintenance intervals and reduce the cost of ownership of any linear motion system.

With only a single moving part and available non-contact position sensing, the number of wearing parts are reduced significantly with respect to traditional linear motion systems. Factory installed integrated bearings allow Moog's linear motors to provide long lasting operation for years of service with minimal downtime.

Other common names for this device include linear servo, brushless motor or linear servo motor.



Linear motors are a high force, direct drive solution for industrial applications.

Features

- **Encoders** with 0.1 μm resolution, optical and Hall types available
- **High force motors** up to 2,000 lbf [9 kN] force
- **Light duty motors** for lower force applications with same durable and rugged construction
- **Fan cooled and liquid cooled** options for maximum performance
- **Custom designs** for any application
- **Available as a component in a complete system solution** that includes brushless linear motors, drives, motion controllers, cabling, filters and accessories

High Performance

Peak Forces
2,000 lbf [9kN]

Continuous Forces
Up to 1,000 lbf

Positional Accuracy*
Better than .001 in

Speed
Up to 275 in/s

Acceleration
Up to 40 G

Stroke
Up to 36 inches

Versatility

Programmability
Factory or on-site programming for initial commissioning and changing customer requirements.

Motion Profiling
Precise control for any required position, velocity or force profile. Retrofit of any existing mechanical system's motion is possible.

Variable Force
Controllable and variable force at any point during operation. (Dependent upon drive selection)

Long Life

Longevity
Design optimized for long life with years of service. Occasional simple on-site servicing can extend life further.

Reliability
Rugged and durable design with a single moving part ensures consistent and dependable operation.

Self-protecting
Built-in thermal and fault detection enables system protection and increases effective service life.

*Positional accuracy is dependent on application, drive and system tuning.

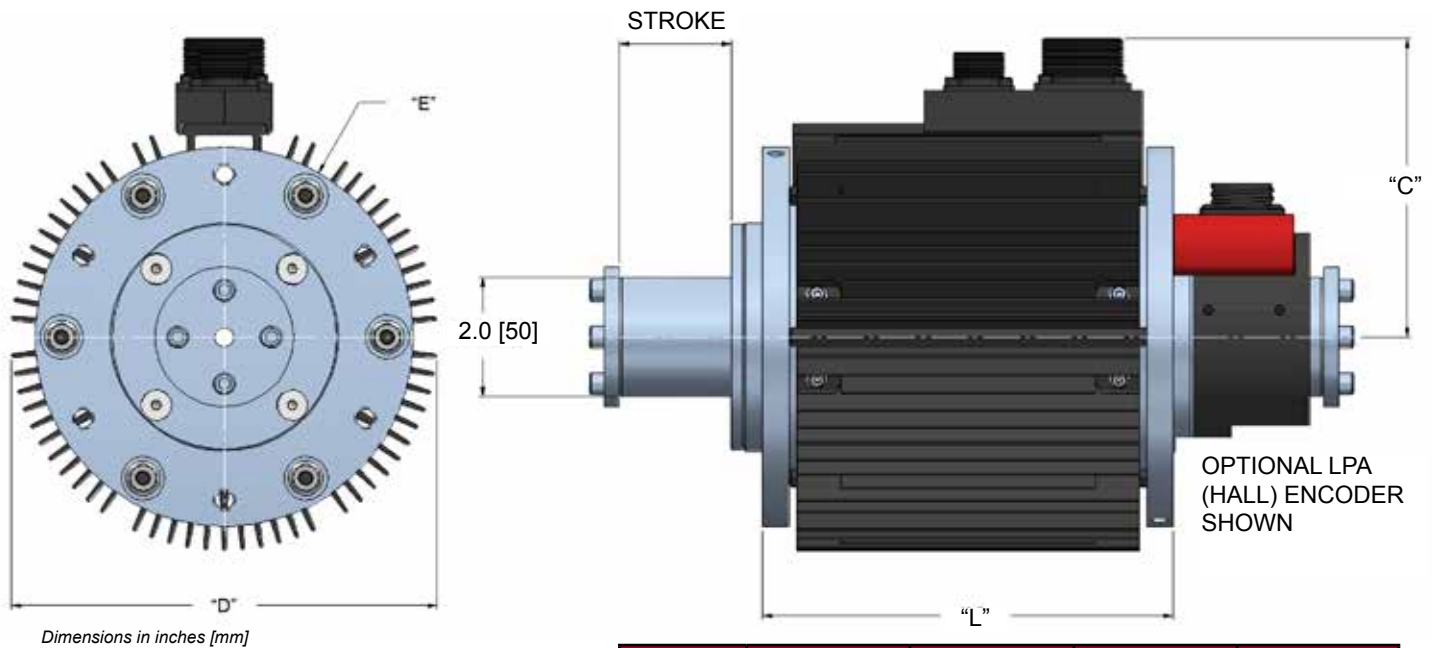
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Quick Reference Specification

Model	Peak Force	Peak Current	Continuous Static Force - Natural Convection	Continuous Static Force - LQ / FN Cooling**	Force Sensitivity Measured @ 25% of Peak Current	Peak Drag Force (Max)	Max Speed @ 220 V	Max Speed @ 480 V
	lbf [N]	A	lbf [N]	lbf [N]	lbf/A [N/A]	lbf [N]	in/s [m/s]	in/s [m/s]
40202C	410 [1824]	45	80 [356]	n/a	13.7 [60.9]	55 [245]	120 [3.05]	200 [5.08]
40202D	410 [1824]	90	80 [356]	n/a	6.8 [30.2]	55 [245]	180 [4.57]	275 [6.99]
40204C	850 [3781]	45	170 [756]	360 [1601]**	27.7 [123.2]	65 [289]	65 [1.65]	130 [3.30]
40204D	850 [3781]	90	170 [756]	360 [1601]**	13.8 [61.4]	65 [289]	120 [3.05]	210 [5.33]
40206C	1180 [5249]	45	260 [1156]	540 [2402]**	44.1 [196.2]	70 [311]	60 [1.52]	100 [2.54]
40206D	1180 [5249]	90	260 [1156]	540 [2402]**	22.0 [97.9]	70 [311]	90 [2.29]	165 [4.19]
50202C	360 [1601]	50	160 [712]	n/a	11.7 [52.0]	55 [245]	100 [2.54]	180 [4.57]
50202D	360 [1601]	100	160 [712]	n/a	5.8 [25.8]	55 [245]	170 [4.32]	215 [5.46]
50204C	780 [3469]	50	320 [1423]	490 [2180]**	26.9 [119.7]	65 [289]	80 [2.03]	130 [3.30]
50204D	780 [3469]	100	320 [1423]	490 [2180]**	13.4 [59.6]	65 [289]	140 [3.56]	200 [5.08]
50206C	1100 [4893]	50	450 [2002]	710 [3158]**	38.7 [172.1]	70 [311]	55 [1.40]	95 [2.41]
50206D	1100 [4893]	100	450 [2002]	710 [3158]**	19.3 [85.8]	70 [311]	80 [2.03]	155 [3.94]

**As an option, liquid (LQ) cooling is offered for 4020 motors, and forced air (FN) cooling is offered for 5020 models.



**Call or email our Application Engineers for more information:
+1-610-328-4000 or mcg@moog.com**

Model	"L" in [mm]	"C" in [mm]	"D" in [mm]	"E" in [mm]
40202	6.9 [175]	4.5 [114]	6.2 [158]	6.0 [152]
40204	10.6 [269]	4.5 [114]	6.2 [158]	6.0 [152]
40206	14.3 [363]	4.5 [114]	6.2 [158]	6.0 [152]
50202	6.9 [175]	5.0 [127]	7.2 [183]	6.4 [163]
50204	10.6 [269]	5.0 [127]	7.2 [183]	6.4 [163]
50206	14.3 [363]	5.0 [127]	7.2 [183]	6.4 [163]

Specifications and information are subject to change without prior notice.
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