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.

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

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**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

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**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)

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**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.*
Linear Motors Product Overview
Powerful and Precise Linear Motion

Quick Reference Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Peak Force</th>
<th>Peak Current</th>
<th>Continuous Static Force - Natural Convection</th>
<th>Continuous Static Force - LQ / FN Cooling**</th>
<th>Force Sensitivity Measured @ 25% of Peak Current</th>
<th>Peak Drag Force (Max)</th>
<th>Max Speed @ 220 V</th>
<th>Max Speed @ 400 V</th>
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</thead>
<tbody>
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<td></td>
<td>lbf [N]</td>
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<td>lbf [N]</td>
<td>lbf [N]</td>
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<td>m/s [m/s]</td>
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<td>50</td>
<td>160 [712]</td>
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<td>55 [245]</td>
<td>100 [2.54]</td>
<td>180 [4.57]</td>
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</tbody>
</table>

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

Dimensions in inches [mm]

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

Specifications and information are subject to change without prior notice.
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