

# MOOG



## Precise, Powerful Linear Motor

In today's industry, the need for accurate, dependable linear motion continues to increase. And many solutions are available. But only one technology provides precision, high force, programmable linear motion at an affordable price – linear servomotors from Moog Components Group.

The superior performance of Moog's linear servomotor results in improved profitability for a broad range of industrial motion control applications. The linear motor's high velocity enables manufacturers to increase throughput. At the same time, its high accuracy and consistent repeatability contribute greatly to improved product quality.

Its unique design incorporates the important features of a single moving part, integral bearings, compact size, and exceptionally high force per volume. These features deliver significant advantages, including cost savings, over not only traditional approaches including hydraulics, pneumatics, ball screws and other electromechanical systems, but also when compared to other linear motors.

With its single moving part and integral bearing system, the Moog linear motor is remarkably easy to install onto your equipment. Its simple design provides robust, reliable operation, and lowers life cycle costs. Its cylindrical configuration yields a highly efficient generation of force, enabling the motor to accelerate quickly to high velocities, even when handling heavy loads.

The motor uses a shaft that slides into a stator assembly which contains electromechanical coils. The Moog motor utilizes 3-phase, brushless DC technology and rare earth permanent magnets. The stator's length and diameter determine the force level, while the shaft length determines the stroke.



Linear motion is initiated by a motion controller, which relays detailed move profiles to the motor. A precision encoder reports motor position to the controller for closed loop control. The motor's position and force are fully programmable, and there is no backlash or compressibility to compromise position accuracy.

Perhaps the best way to appreciate the advantages of the Moog linear motor is to consider the alternatives:

- Hydraulic systems are environmentally unfriendly, require an external power supply, and cannot match the programmability or reliability of the Moog motor.
- Mechanical devices such as ball screws, cams and pulleys have high maintenance requirements, limited programmability, and lack the velocity that can be achieved with the Moog motor.
- Pneumatic systems cannot achieve the accuracy, velocity, programmability or reliability of the Moog motor, and present environmental concerns similar to those of hydraulic systems.
- Competing linear motors are more costly, more difficult to integrate, and lack the Moog motor's integral bearing system. The external bearing system required for competing flat linear motors can cost as much as the motor alone.

So when you choose a servo motion solution for your factory or other industrial application, you need look no further than the new force in precision linear motion – Moog Components Group.

[www.moog.com/components](http://www.moog.com/components)

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