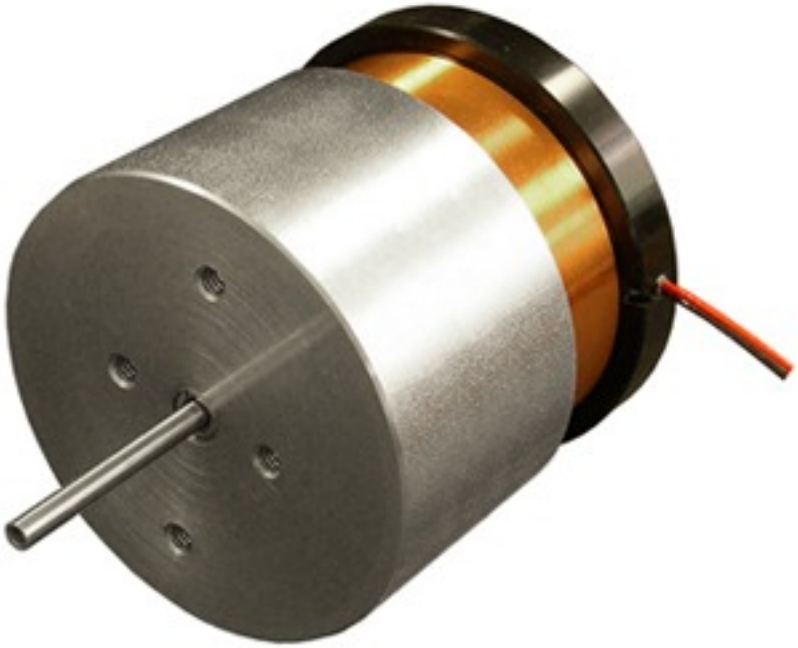
DC motors intended for positioning applications with tight mechanical dimensions



The voice coil actuators also known as linear DC motors are the simplest type of electric motors to operate.

The non-commuted motor construction increases reliability with no cogging. The direct coupling of the motor to the load allows for fast acceleration / deceleration and high speed operation with zero backlash.

The high performance voice coil motors are used in positioning applications with tight mechanical dimensions. Other applications of the linear DC motors are when high speed, high acceleration or high accuracy is required.

Applying a voltage across the terminals of the motor causes the motor to move to one direction. Reversing the polarity of the applied voltage will move the motor to the opposite direction. The generated force is proportional to the current that flows through the motor coil. This force is almost constant in the specified stroke range of the motor.

The low moving mass also allows for high bandwidth servo loops.

Range of motion is from 0.250” (6.4 mm) through 5.20” (132.1 mm). Continuous (stall) forces range from 1 oz (0.28 N) through 23.0 lb (102 N). The intermittent forces at 10% duty cycle are from 3.2 oz (0.88 N) through 73 lb (323 N).

These motors are also available with internal bearing or hollow shaft.

This type of motor may be used in conjunction with a position sensor and a motion controller for accurate positioning.

The other applications of the voice coil motors are conversion pneumatic systems to electrical system, force and pressure control.

There are currently 63 models to choose from. All motors are available for immediate worldwide shipment.

http://www.moticont.com [1].

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Links:
[1] http://www.moticont.com