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ABSTRACT

Linear Reciprocating Actuator Utilizing A Brushless DC Motor

5 This invention embodies a linear reciprocating actuator that is powered by a
modified conventional brushless DC (BLDC) motor and comprises a rotor, a
stator, a spindle, a shaft with internal thread, a lead screw assembly that is
made up of a threaded shaft and a shaft with a cross-section that is shaped to
prevent rotating motion when fitted into a matching hole and a mounting
10 plate with anti-rotation hole feature. A feedback system is incorporated into
the motor that senses the end-of-stroke position of the reciprocating shaft. A
printed circuit board containing electronic devices drives the motor and a
separate controller board generates the shaft's reciprocating motion by
switching the motor direction at the exact instance.

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Figure 2 of the drawing to accompany the abstract.



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