



Super Stroke Solenoid

Description

The super stroke solenoid is a special implementation of the tubular solenoid design, modifications have been made to the geometry of the pole-piece and magnetic return path to produce a device which develops useful force over an exceptionally long stroke, with high efficiency, and with a flat force characteristic having many of the characteristics of a proportional solenoid allowing approximate position control over a large linear stroke.

The use of many of the components of the tubular solenoid range makes the super stroke solenoid a cost-effective solution compared to other long-stroke actuators or proportional solenoid designs.

The long stroke with flat force characteristic makes the super stroke solenoid a good replacement for small air cylinders in applications where a few linear actuators are needed, but where air supply is otherwise not required, machinery can be made independent of air supply with elimination of compressors, airline, and air preparation equipment and associated maintenance.

The super stroke solenoid allows approximate proportional control over a long linear stroke, the force is approximately proportional to applied current, and is uniform over the operating stroke. This characteristic can be used to control tension of wire, fibres, or web material, or can be applied against a spring to realise an actuation system where position can be controlled proportional to the applied current.