



Feature:

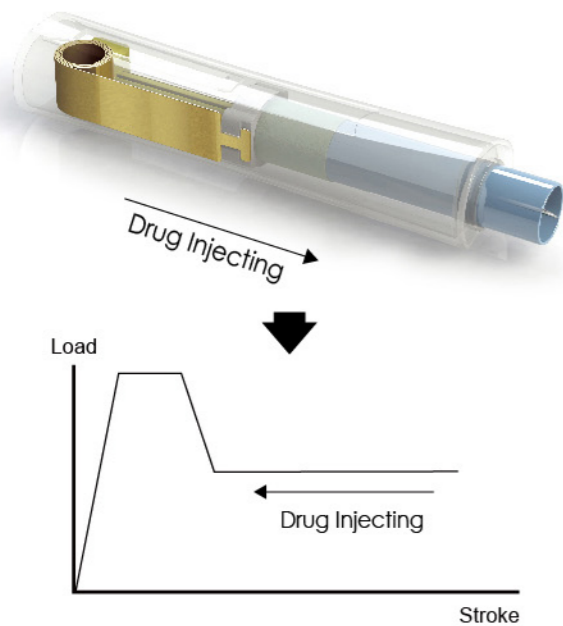
Variable force spring and variable torque spring are very similar with constant force spring and constant torque spring. But we diversify the radian by winding the steel strip into a coil. Therefore, it can unfold negative gradient, positive grained compounded in a spring. Here are some relations between load and stroke that can be use on specific occasion. There are many different variable force springs designed available for any give application to meet customized solution. We strongly suggest you to consult with a Ming-tai engineer early in the design phase.

Function+Applications

- 1. Automotive seat belt
- 2. Point of purchase display
- 3. Pen auto injector
- 4. Fireplace up-down slide door
- 5. Cordless Shades

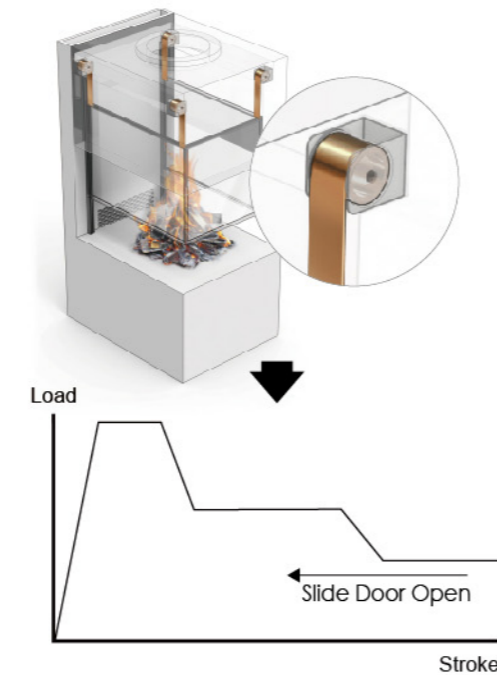
Variable Force Spring and Variable Torque Spring

Pen Type Drug Injector Application



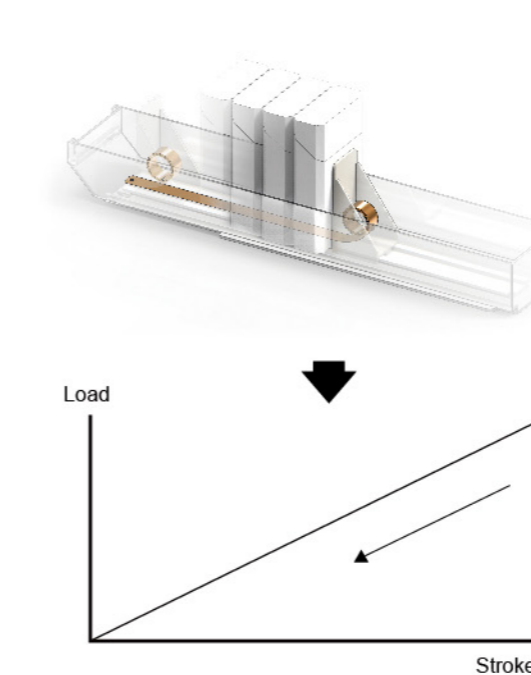
The spring exerts constant force to keep the drug flow fixed, preventing the patient from feeling uncomfortable when applying it. It features stretch force in end of the stroke to ensure all drug can be injected entirely.

Fireplace up-down Slide Door



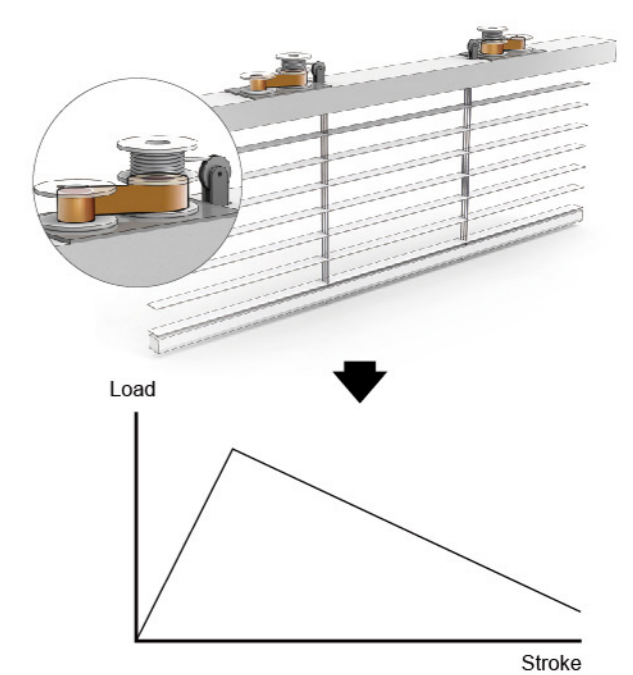
Variable force spring can be applied to up-down slide door of fire place. When the door is closed, the spring force is less than the weight of door; while the door in middle stroke, the spring force is equal to the door weight. When fully open, the spring exerts force greater than the door weight to secure the door does not slide down.

Point of Purchase Display



Variable force spring can be applied to point of purchase display. The spring export variable force to match the quantity of display items. While the large force can ensure push large quantity display item smooth, the small force push small quality items available and avoid flattening the display items.

Cordless Shades



The variable torque spring can be applied to cordless shade, it makes user to adjust curtain up and down easily. The spring exerts smaller torque step by step, which generate balance of gravity to allow the curtain to stop at any height.