

MagShift® Quiet Solenoids

MagShift® solenoids have several unique characteristics which differentiate this product from other linear open frame and tubular solenoids:

Extremely low noise potential. In a power ON mode, this unit will measure below 40 dBA, including the end-of-travel stop. This is accomplished by the elimination of the hard stop within the solenoid. Instead, the MagShift unit stops magnetically within the body of the solenoid.

No impact forces. As the unit reaches its power ON, end-of-travel position, there is no impact force from the unit. This eliminates potential issues of vibration or product life failures caused by the end-of-travel impact associated with some linear solenoids.

Mechanical over-travel. In a typical linear solenoid, once the power ON position is reached, no further travel of the plunger is possible. With the MagShift, the plunger is able to continue to travel past the electrical ON position when actuated externally by the application.

Higher initial starting forces. Due to the starting position of the plunger, the MagShift solenoid will, in general, have a higher starting force than some linear solenoids. This provides more starting force for a given power level solenoid.

No residual magnetism. Due to the elimination of internal components, the MagShift solenoid has no residual magnetism.

Flexibility. Due to the unique construction of this unit, the same assembly can be configured as either a push or a pull solenoid, allowing for greater flexibility in system design.

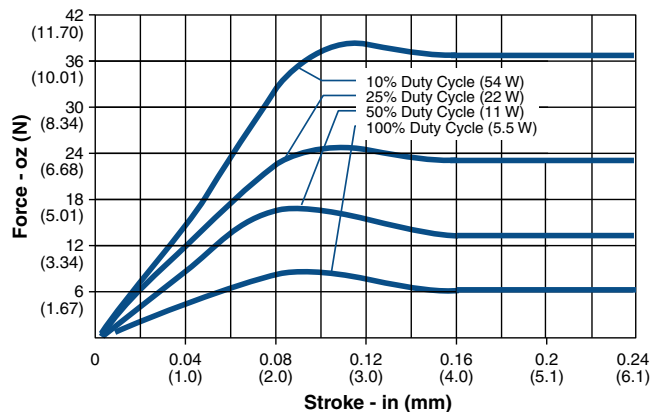
Although the MagShift performance curves will show the solenoid force ramp towards zero in the full power ON position, this unit will still hold a load when in the fully energized position. Due to the hysteresis characteristics of this unit, system return springs and light system loads can be held in the fully energized position, even though the unit will come to a magnetically zero position. This unit is ideally suited for system applications where high holding loads are not required, but where higher starting loads, quiet operation, or no impact vibrations are desired.

Note that the data shown below reflects only one design of this very flexible solenoid family. Please call to discuss your application.

Specifications

Continuous Duty Cycle	100% at 20°C ambient temperature
Intermittent Duty Cycle	See below
Coil Insulation	Class "A": 105°C max. temperature standard. Other temperature classes are available
Coil Termination	Lead wires (other coil terminations available)

Typical Net Force @ 20°C



Performance

Maximum Duty Cycle	100%	50%	25%	10%
Maximum ON Time (sec) when pulsed continuously	∞	80	22	8
Maximum ON Time (sec) for single pulse	∞	320	132	48
Watts (@ 20°C)	5.4	10.8	21.6	54
Ampere Turns (@ 20°C)	761	1076	1523	2408

Coil Data						
awg	Resistance (@20°C)	# Turns	Unlatched VDC	VDC (Nom)	VDC (Nom)	VDC (Nom)
29.5	24.97	1650	11.6	16.4	23.2	36.7
30.5	37.90	2004	14.3	20.2	28.6	45.2

Dimensions in (mm)

