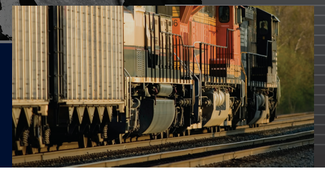
HARNESS THE **power**
OF **COLLABORATIVE INNOVATION**

Turning our knowledge into customer value



MAGNET-SCHULTZ OF AMERICA
SPECIALISTS IN ELECTROMAGNETIC DEVICES

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MSA and MSM are registered to ISO 9001.

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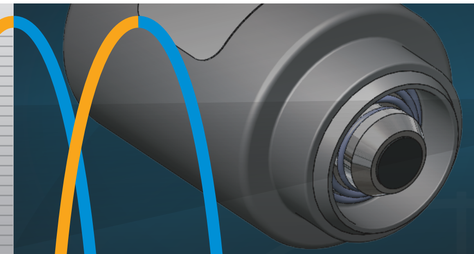
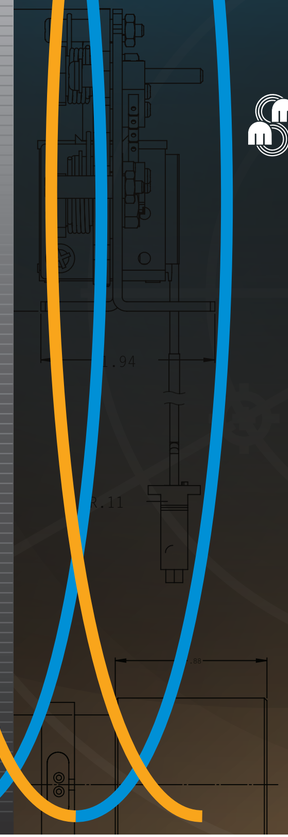
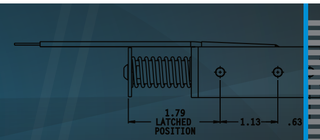


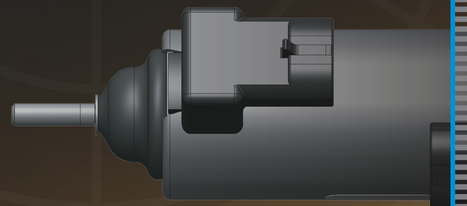




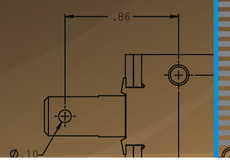
MAGNET-SCHULTZ OF AMERICA
SPECIALISTS IN ELECTROMAGNETIC DEVICES

INDUSTRY LEADING ELECTROMECHANICAL AND ELECTROHYDRAULIC SOLUTIONS

Engineered for the most demanding applications



PRODUCT OVERVIEW



PRODUCTS AND CAPABILITIES

HIGH PERFORMANCE SOLUTIONS FOR A RAPIDLY EVOLVING MARKETPLACE

A leading manufacturer of electromechanical and electrohydraulic devices—Magnet-Schultz of America (MSA) provides advanced engineering, innovative design, and precision manufacturing capabilities for a diverse list of customers and industries.

MSA designs completely custom solutions. Performance characteristics and design specifications including size/shape, mounting style, magnetic force and power consumption are all tailored to precisely meet customer requirements. FMEA severity is considered from the inception of the design, preserving the safety and integrity of the application.

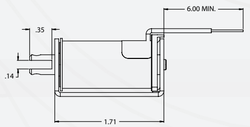
Our sophisticated solenoid, electromagnet, valve, and solenoid voice coil designs and sub-assemblies provide smaller-size, higher-force, longer-life solutions that enable our customers' end products to outperform their competition.

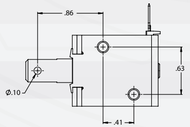
MSA's experienced design team, skilled support services, precision manufacturing, and vertical integration provide the flexibility needed to respond to ever changing technical and commercial requirements, while meeting customer expectations relative to performance, cost, delivery and quality.

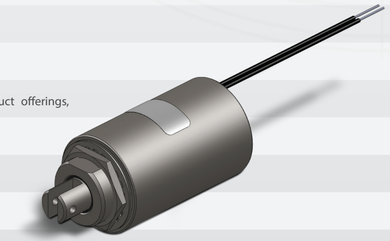
Partnering with MSA Ensures:

- Superior, consistent quality and reliability
- Projects that are developed to specification, on time and within budget
- Globally competitive value

To learn more about our company history, capabilities and custom product offerings, contact Magnet-Schultz of America today.



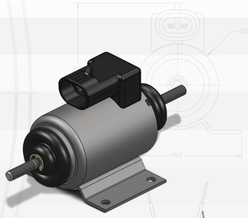




ELECTROMECHANCIAL PRODUCTS

SOLENOIDS

MSA's solenoid expertise allows for the utilization of varying frame and plunger characteristics, providing a broad range of force and stroke capabilities. To precisely meet the requirements of customer applications and budgets, we frequently make adaptations to the plunger, mounting characteristics and/or method of electrical connection. Force characteristics can be precisely tailored by changing the coil winding, plunger configuration, or electronic circuit. MSA's engineers are able to achieve the maximum force possible within the available envelope, while remaining competitive on cost.



ELECTROMAGNETS

Our collaborative innovation process helps determine the ideal properties for a custom electromagnet that will provide the desired performance and cost efficiencies. MSA can also manufacture permanent magnet electromagnets designed for low energy consumption. Typical electromagnet applications involve stabilization devices for medical imaging equipment, clutch/brake mechanisms, door locking and fire door release mechanisms.

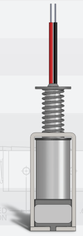
SOLENOID VOICE COILS

Voice coils blend the continuous power of permanent magnets with the intermittent actuation of an electromagnetic coil to achieve high speed, precise linear motion and extremely long operating life. All of MSA's voice coils are fully custom, and come in two distinct design architectures:

- Moving Armature: no moving leads, eliminating lead wear concerns
- Moving Coil: faster response time and high acceleration

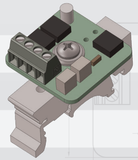
MAGNETIC LATCHING PRODUCTS

Energy-saving applications demand magnetic-holding functionality without continuously applying electrical power. MSA provides fully custom magnetic latching products that employ an internal permanent magnet (to provide a continuous hold force), and a spring (or other return mechanism) to help return the device to the unlatched state when pulsed.



ADVANCED SOLENOID FEATURES

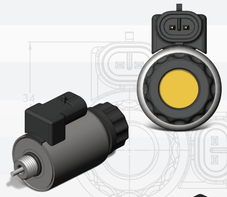
MSA is capable of incorporating electromagnetic functionality into more complex sub-assemblies. Based on the needs of the application, this approach can meet demanding form, fit, and functional challenges within the customer's end product. Advanced features such as lock assemblies, pulse width modulation, ingression protection, and more can be implemented as required. MSA can provide the magnetic design and complete design assistance, as well as manufacture and test the complete assembly.



ELECTROHYDRAULIC PRODUCTS

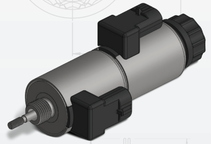
HYDRAULIC SOLENOIDS

Look to MSA for recognized, leading design and quality manufacturing of high-performance electrohydraulic solenoids. Designs include an extensive array of flexible mechanical packaging options and are developed to meet customer specific performance criteria. On/off and proportional solenoids are available in a range of configurations, allowing MSA to offer cost-effective solutions across a broad range of volumes.



BI-DIRECTIONAL ACTUATORS

MSA develops bi-directional actuators by integrating two standard MSA electrohydraulic actuator tubes and coils in a single package. This allows a single unit to act in both the pull and push directions with an equivalent force and a longer stroke than the single acting tube. MSA's bi-directional designs can be designed to utilize cutting edge technologies to provide higher force linearity and significantly increased speed response.



ELECTROHYDRAULIC AND ELECTROPNEUMATIC VALVES

MSA is highly proficient in the design of valve actuators and valve assemblies in industries ranging from mobile hydraulics to food service. MSA's engineers have expertise across a wide range of application and fluid types, and are capable of designing completely custom solutions for both solenoid valve actuators and fully integrated assemblies. Contact us for valve solutions that provide leading performance at a competitive price point.

HAZ-LOC®

This family of coils is designed for world-wide use, and carries NEC 500, NEC 505, CEC/CSA, ATEX, and IECEX certifications. HAZ-LOC is ideal for hazardous location environments, such as gas and dust atmospheres present in petroleum exploration and production, chemical processing, and facilities involving the transfer and storage of grain or other dry materials. Standard design of these coils will fit onto hydraulic valves with actuator tube diameters of 13mm, 16mm, 19mm and 22mm. Customized designs can be developed to meet the needs of your application.

Learn more about MSA's family of products—visit Magnet-SchultzAmerica.com, or contact us directly at 630.789.0600.