



Custom Valves

for Special Applications

Specialty Valves

Let us finish your valve or manifold with value-added accessories that will save you time, money and potential maintenance issues.

Most applications using solenoid valves require some level of custom design. Solenoid Solutions can produce custom engineered valves and manifolds for your specific requirements. We work closely with you to ensure that custom built solenoid valves and manifolds exactly meet your needs. With our array of solenoid valves, manifold bodies, and value-added services, we can produce millions of solenoid valve and manifold combinations.

Specialized valve designs include latching valves which do not require a current to stay in an energized position, valves designed to operate on bump and hold circuits that utilize a minimal amount of power to stay open, and axial flow valves which provide a straight flow from the bottom to the top of the valve.

Accessories and customization we can add to your solenoid valve:

- Leads
- Fittings
- Controls
- Gauges and Transducers
- Check Valves
- Custom Porting
- Special Coatings
- Custom Threading
- Custom Mounting Options
- Mounting Straps
- Pressure Switches
- All Types of Electrical Connections

Latching Solenoid Valves - Low Power

Latching solenoid valves offer energy savings by reducing power consumption

In the case of a latching valve, a permanent magnet that requires no electric input is built into the top of the valve. The small magnetic field is not enough to activate the plunger. However, when the valve is switched opened to full power, the permanent magnet is strong enough to keep the valve open. This allows the valve to remain open after the initial electrical power has been turned off, thus offering significant potential energy savings. The valve will remain open until another electrical charge, of opposite polarity, is applied. This is particularly beneficial in applications where the valve remains open for long periods of time or if the valve is battery powered and must conserve as much energy as possible.

In general, a latching solenoid valve is a very well balanced system. All components of the valve, pressures, power inputs, and operating conditions must be stable and within the design specification. Small deviations will likely cause the valve to not operate properly. For instance, latching valves do not operate reliably when they are subject to vibration.

The electrical current applied to the latching valve is very brief, typically in pulses of 20 to 50 milliseconds. The device's electrical control system must control these pulses precisely. If they are too short, the valve will not respond and if they are too long, the valve will open and then close again or vice versa. This is commonly referred to as re-latching. The voltage must also be stable not varying more than +10% or -15% of rated voltage.

