

## 3 Way Control Valve Manufacturers



Valves only are the best [3 Way Control Valve Manufacturers](#) in USA. A 3-way control valve is a type of valve used in fluid control systems to regulate the flow of fluid between three different ports. These valves typically have a T-shaped or L-shaped configuration, with three inlet/outlet ports, allowing for multiple flow path configurations. The primary function of a 3-way control valve is to direct the flow of fluid between different process lines, control the mixing or diverting of fluids, or regulate the temperature or pressure within a system. They are commonly employed in HVAC systems, industrial processes, and hydraulic systems where precise control over fluid flow direction and volume is required.

### **How does 3 Way Control Valve Operate?**

The working principle of a 3-way control valve involves the manipulation of a movable plug or spool within the valve body to control the flow of fluid between the inlet and outlet ports. By adjusting the position of the plug or spool using an actuator, such as a pneumatic or electric motor, the valve can direct the flow of fluid according to the desired process requirements. Depending on the valve design, the movement of the plug or spool can either block, mix, or divert the flow of fluid between the different ports. This allows for precise control over the flow rate and direction, enabling efficient operation and regulation of fluid systems in various industrial applications.

### **Parts:**

- Valve Body
- Ports: an inlet port, an outlet port, and a common port.
- Plug or Spool
- Actuator
- Positioner
- Seals and Gaskets
- Connection Flanges or Threads

**Key features of a 3-way control valve:**

- 3-way control valves have three ports, allowing for different fluid flow configurations such as mixing, diverting, or bypassing.
- These valves provide precise control over the flow rate and direction of fluid, which allows efficient regulation of process variables such as temperature, pressure, or flow volume.
- Despite having multiple ports, 3-way control valves are often designed to be compact, making them suitable for applications with limited space or where multiple valves are needed.
- They can be used in a wide range of industries and applications.
- Some 3-way control valves are designed with different components, which allows easy assembly, disassembly, and maintenance.
- These valves can be actuated using various actuators.
- High-quality construction and materials ensure durability and reliability even in demanding operating conditions, minimizing downtime and maintenance costs.
- Precision machining and tight tolerances enable accurate control over fluid flow, ensuring consistent performance and process efficiency.
- 3-way control valves are often compatible with a wide range of fluids, including liquids, gases, and steam, making them suitable for diverse applications.
- Some valves are equipped with features such as position feedback, fail-safe mechanisms, and overload protection to enhance safety and reliability in critical processes.

**As [3 Way Control Valve Manufacturers](#), we supply to these industries:**

- Oil and Gas
- Petrochemical
- Chemical Processing
- Power Generation
- Water and Wastewater Treatment
- Pulp and Paper
- Mining and Metals
- Automotive
- Aerospace

- Marine
- Semiconductor Manufacturing
- Textile
- Renewable Energy

**Description:**

- Available Materials: Stainless Steel (SS316, SS304), Ductile Iron, Super Duplex (F51, F53, F55) Cast iron (WCB, WCC, WC6) LCC, LCB
- Class: 150 to 2500
- Nominal Pressure: PN10 to PN450
- Medium: Air, Water, Chemical, Steam, Oil
- Operations: Electro Pneumatic Operated and Pneumatic Operated.
- Size: 1/2" - 24"
- Ends: Butt Weld, Flanged, Threaded Socket weld

**Electric actuator details:**

- Torque – 3 – 9 nm
- Operating pressure- 8 Bar
- Port Connection-NPT1.4"
- Mounting Base-ISO5211
- Temperature--20°C - +80°C

**Configuration of a Pneumatic Actuator:**

- 4-20 amp
- Pneumatic single acting actuators
- Pneumatic double acting actuators
- Pneumatic rotary actuators
- Pneumatic Scotch and Yoke actuators
- Pressure: 228 bar

**Temperature:**

- Standard -4°F to 200°F (-20°C to 93°C)
- Low -40°F to 176°F (-40°C to 80°C)
- High 0°F to 300°F (-18°C to 149°C)

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