## Types of Valves

### Quarter-turn Valves

- **Ball Valve**
  - OPEN: Stem & Ball Rotate 90° from OPEN to CLOSED
  - CLOSED: Stem & Ball Rotate 90° from OPEN to CLOSED

- **Plug Valve**
  - OPEN: Stem & Plug Rotate 90° from OPEN to CLOSED
  - CLOSED: Stem & Plug Rotate 90° from OPEN to CLOSED

- **Butterfly Valve**
  - OPEN: Stem & Disc Rotate 90° from OPEN to CLOSED
  - CLOSED: Stem & Disc Rotate 90° from OPEN to CLOSED

### Rising Stem Valves

- **Globe Valve**
  - FULL OPEN: Stem & Plug Disc Rise and Lower to Control Flow
  - CLOSED: Stem & Plug Disc Rise and Lower to Control Flow

- **Gate Valve**
  - OPEN: Rising Stem Wedge Gate Rise and Lower to Control Flow
  - CLOSED: Rising Stem Wedge Gate Rise and Lower to Control Flow

### Compact, Fast-acting On/Off Valves

- **Solenoid Valve**
  - CLOSED (coil NOT energized): Spring holds plunger down
  - OPEN (coil energized): Coil's magnetic force pulls plunger up

- **Coaxial Valve**
  - NORMALLY CLOSED: Air venting
  - DOUBLE ACTING: Air to Open

- **Angle Seat Valve**
  - OPEN: Needle & Stem Rise and Lower to Control Flow
  - CLOSED: Needle & Stem Rise and Lower to Control Flow

From Lesson 1 of the Assured Automation Actuated Valve Training Center
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