

# SYMBOLIC REPRESENTATION OF DIRECTIONAL CONTROL VALVES

Directional Control valves are mainly used to change the direction of flow path of working medium or signal medium. They are used for admitting or exhausting working medium to the cylinder or from the cylinder for actuation of the cylinder. Also used to start or stop the pneumatic signal as well as for signal processing

Directional control valves are designated as per the following functions:

- Number of ports on the valves
- Number of switching positions
- Method of actuation
- Method of reset
- Design and constructional features

## 3.1 Symbolic Representation of Directional Control Valves

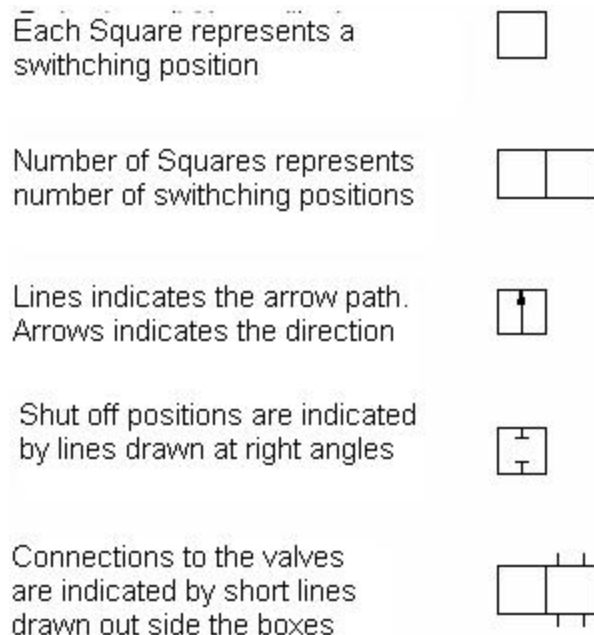
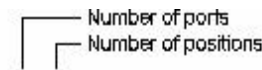
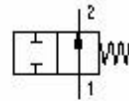
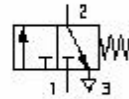


Figure 3.1 Symbolic Representation of Directional Control Valves

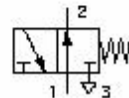

  
 Number of ports
   
 Number of positions
   
 2/2 Way Directional Control
   
 Valves Normally Open

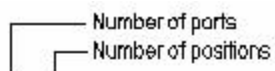


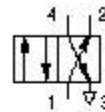
3/2 Way Directional Control
   
 Valves Normally Closed



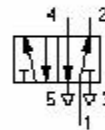
3/2 Way Directional Control
   
 Valves Normally Open




  
 Number of ports
   
 Number of positions
   
 4/2 Way Valve



5/2 Way Valve



5/3 Way Valve ,
   
 Mid Position Closed

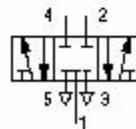


Figure 3.2 Symbolic Representation of Directional Control Valve

PUSH BUTTON OPERATED VALVE

PEDAL OPERATED VALVE

SPRING RESET

ROLLER LEVER OPERATED LIMIT SWITCH

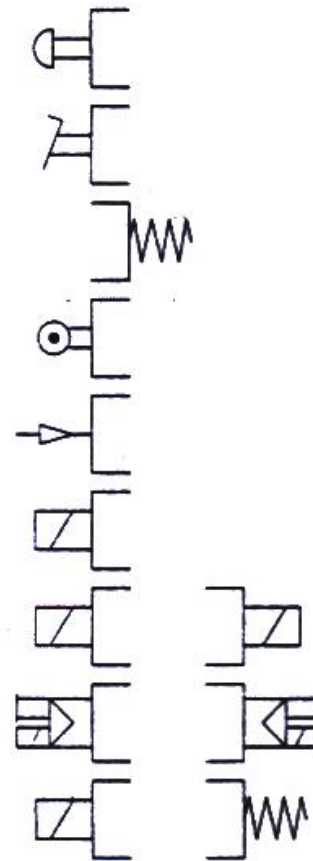
PILOT OPERATED VALVE

SOLENIOD ACTUATED VALVE

SOLENIOD ACTUATION AND RESET

PILOT ASSISTED SOLENIOD ACTUATION AND  
RESET WITH MANUAL OVER RIDE

SOLENIOD ACTUATION AND SPRING RESET



**Figure 3.3** Method of Actuation and Reset of Directional Control Valves

Source : <http://elearningatria.files.wordpress.com/2013/10/hydraulics-and-pneumatics.pdf>