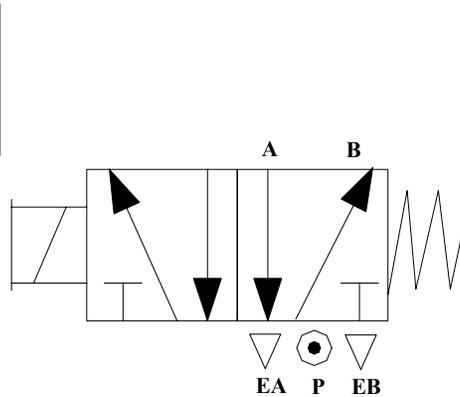


# Reading Pneumatic Schematic Symbols

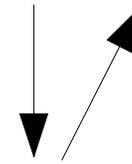
## The Block

The block symbolizes the possible valve functions or positions. Example: A 5/2 valve schematic will be illustrated with 2 blocks describing two valve functions or positions. A 5/3 valve schematic will show three blocks describing 3 possible valve functions or positions.



## The Arrows

The Arrow symbols illustrate the direction of gasses flowing into and out of the valve ports. Gas pressure is supplied from port P. Depending on which of the valve blocks is in function, the gas is directed to port A or B as shown by the arrows.



## The Actuator (Solenoid) Symbol



Pneumatic valves can be operated in several ways. Hand operated (including levers and push and or push pull buttons); Air piloted (Operated remotely by pneumatic signals); Solenoid (directly actuated with electronic signals)

**5/2 Valve has 5 ports and 2 possible conditions**

- 1.) B is pressurized and A is exhausted.
- 2.) A is pressurized and B is exhausted.

**When the solenoid is NOT energized the B port is pressurized. The spring symbol defines the valve position at rest.**



## The Return Spring

The spring symbol defines the "at rest" position of the solenoid valve. The spring "Pushes" from the side it is drawn on and places the right side block diagram of the valve in function.



## The T Symbol

This symbol indicates that a port is closed and is neither passing or exhausting gas.



## Exhaust Port Symbol

The inverted triangle symbol denotes an exhaust port. The letters EA indicate this is the exhaust port for the A circuit. Ebin turn indicates the exhaust port for the B circuit.



## Pressure or Air Supply Symbol

This symbol indicates the air supply port. In addition to this symbol the letter P or the number 1 also indicates the air supply port.