





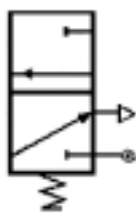
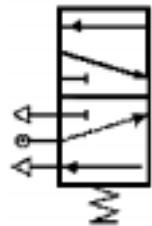

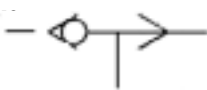
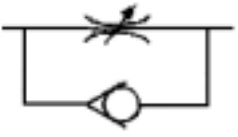
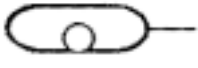





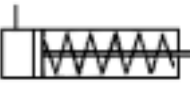



# Pneumatics Chooser Chart

Component	Function	Applications
<i>For input - actuators</i>		
toggle switch 	to switch the valves in a 3-port or 5-port valve	hand operation of control valves
push button 	to switch the valves in a 3-port or 5-port valves	hand or foot operation of control valves
plunger 	to switch the valves in a 3-port or 5-port valve	mechanical operation (by pedal, lever, piston rod or cam) of control valves
roller trip 	to switch the valves in a 3-port or 5-port valve	mechanical operation (by pedal, lever, piston rod or cam) of control valves
signal air 	to switch the valves in a 3-port or 5-port valve	to provide for remote switching
solenoid 	to switch the valves in a 3-port or 5-port valve	electrical operation of control valves
<i>For control</i>		
3-port valve 	to control the flow of air to a single connection in a component by switching the connection from compressed air to exhaust or exhaust to compressed air	controlling a single-acting cylinder two valves in series make an AND gate two valves in parallel with a shutter valve make an OR gate one valve with air supply connected to port 3 and exhaust connected to port 1 makes a NOT gate
5-port valve 	to control the flow of air to two connections at the same time. One connection is switched from compressed air to exhaust as the other connection is switched from exhaust to compressed air	controlling a double-acting cylinder latching a double-acting cylinder

## Pneumatics Chooser Chart (cont'd)

Component	Function	Applications
<i>For control</i>		
non-return valve 	to allow air to pass in one direction only	used in parallel with a flow restrictor to give different speed forward and reverse strokes on a double-acting cylinder
shuttle valve 	to allow the air to take only one of the two routes through a T-junction	used with a 3-port valve to produce an OR gate
flow restrictor 	to control the rate of air flow	on its own to control piston speed in both directions, with a non-return valve to give different speed forward and reverse strokes, with a reservoir to control length of time delay
reservoir 	to produce time delays	used in series with a flow restrictor to give different lengths of time delay
<i>For sensing</i>		
push button 	to switch the valves in a 3-port or 5-port valve	used to detect the position of objects or pistons
plunger 	to switch the valves in a 3-port or 5-port valve	used to detect the position of objects or pistons
roller trip 	to switch the valves in a 3-port or 5-port valve	used to detect the position of objects or pistons
reed switch 		used with a solenoid activated 3-port or 5-port valve to detect the position of magnetized objects or pistons
micro-switch 		used with a solenoid activated 3-port or 5-port valve to detect the position of magnetized objects or pistons
<i>For output</i>		
single-acting cylinder 	produces linear force and movement in <u>one</u> direction along a line for fixed distance (the stroke) reverse movement provided by return spring	to provide force and movement at the output of the system, e.g. controlled with a 3-port valve
double-acting cylinder 	produces linear force and movement in <u>two</u> directions along a line for a fixed distance (the stroke)	to provide force and movement at the output of the system. e.g. controlled with 5-port valve