

## Features

- 2 position 4-Way function
- Balanced spool design (45 Series)
- Heavy duty toggle available
- Panel or surface mount
- Push-to-connect fittings available



## 4-Way Valves "4" & "45" Series

4-way valves are one of the most commonly used pneumatic components for directional control. A 4-Way has four distinct flow paths within the valve and is commonly used to cause reversible motion of a cylinder or motor.

Pneumadyne manufactures two complete series of 4-way valves featuring multiple actuator and porting options.

The **"4" Series** valves feature five actuator options including a specially designed Heavy Duty Toggle for use in rugged applications.

The **"45" Series** valves feature higher flow rates and a balanced spool allowing the use of threaded exhaust ports to direct and capture exhaust flow. If the valve is used to select between two different pressures, the higher pressure must flow between ports 4 and 5, the lower pressure between ports 2 and 3. Both *Series* are available with push-in fittings for plumbing convenience.

### Performance Data

Temperature Range	Operating Pressure		Media	
-20° to 160° F	0 to 125 psi		Compatible w/ seals	

Product	C <sub>v</sub>		Flow Rate (scfm)				Fill Time sec/ in <sup>3</sup> 0-90 psi	Exhaust Time sec/ in <sup>3</sup> 100-10 psi
	Ports 1-2	Ports 1-4	Ports 1-2		Ports 1-4			
			50 psi	125 psi	50 psi	125 psi		
"45" Series 10-32 (F)	.25	.25	8.4	17.7	8.4	17.7	.02	.04
"45" Series 1/8 NPT (F)	.29	.29	10.0	21.6	10.0	21.6	.01	.04
"4" Series	.13	.13	5.1	10.9	5.1	10.9	.03	.05

C<sub>v</sub> per ANSI / (NFPA) T3.21.3

### Port Options

Definition	Port 1 Input	Port 2, 4 Output	Port 3, 5 Exhaust
"45" Series 10-32 (F)	10-32 (F)	10-32 (F)	10-32 (F)
"45" Series 1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)	1/8 NPT (F)
"4" Series	<ul style="list-style-type: none"> <li>● (x3) 10-32 (F)</li> <li>● (x3) 5/32" PI</li> <li>● (x3) 1/8 NPT (F)</li> </ul>	<ul style="list-style-type: none"> <li>● (x3) 1/4" PI</li> <li>● (x3) 1/8" PI</li> </ul>	non-threaded <b>NOT TO BE RESTRICTED</b>

## "4" Series Cut-away 2-Position 4-Way

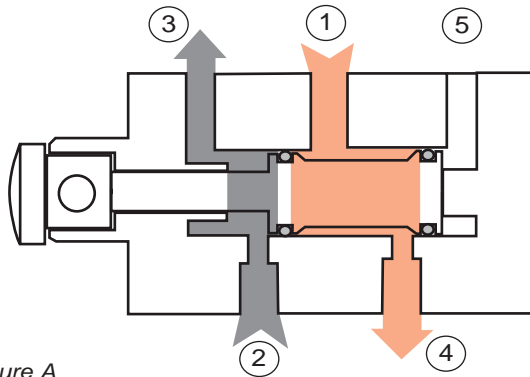


figure A

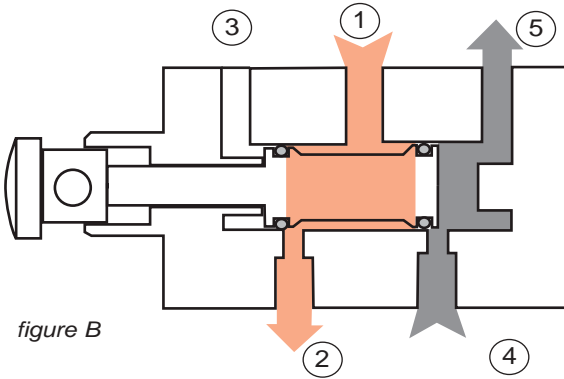


figure B

### Function

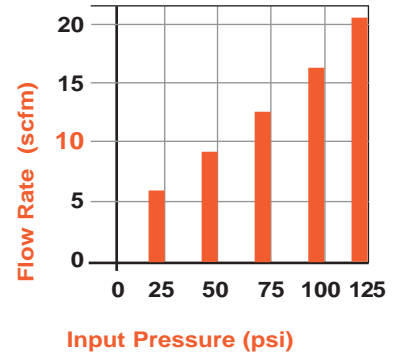
In the example above (figure A) flow is directed through port 1 to port 4 as port 2 exhausts to atmosphere through port 3.

In figure B the spool is reversed and the flow is directed through port 1 to 2 as port 4 exhausts to atmosphere through port 5.

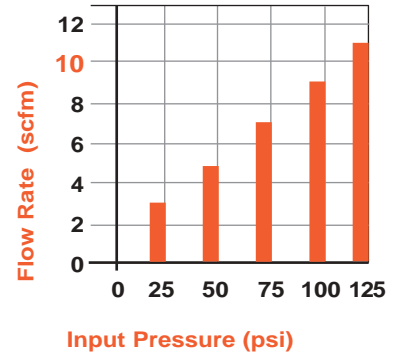
### Actuation Force

Actuator Style	"45" Series: 10-32 (F)		"45" Series: 1/8 NPT (F)		"4" Series	
	50 psi	125 psi	50 psi	125 psi	50 psi	125 psi
Nylon Toggle	16 oz	16 oz	16 oz	20 oz	N/A	N/A
Metal Toggle	13 oz	13 oz	13 oz	16 oz	16 oz	16 oz
Push Button	5 lbs	8 lbs	5 lbs	8 lbs	3 lbs	3 lbs
Double Push Button	N/A	N/A	N/A	N/A	12 oz	12 oz

45 Series: 1/8 NPT (F)  
Flow Chart



4 Series  
Flow Chart



### Materials

Aluminum/ Anodize, Brass/ Electroless Nickel, Acetal, Stainless Steel, Nylon, Nickel, Buna-N (other seals available - contact factory)

### Mounting Method

Series	Panel	Surface
"45" 10-32 (F)	31/64"	MB-1 or MB-1F
"45" 1/8 NPT (F)	31/64"	(3) .14 diam. thru holes
"4"	31/64"	(2) .20 diam. thru holes
"4" Heavy Duty Toggle	21/32"	(2) .20 diam. thru holes



**"4" Series valve with Heavy Duty Toggle and push-in connectors**

### Ordering Information

- To order standard product use part number listing.
- Optional seals- contact factory.
- Spring Bias function available to custom orders.
- Push/Pull Knob (PK) now available in red. To order add a -3 suffix to the part number.
- Nylon toggles and push buttons are available in seven colors with black as standard. To order colored actuators specify the color, by code, as a "-code#" suffix following the part number (see color code chart page 91).

### Product Number Diagram "4" Series

**A 4 C - 1 0 0 - D P**

**Actuator**

- A= Push Button
- H= Heavy Duty Detent Toggle
- F= Heavy Duty Momentary Toggle

**Series**

- 4= "4" Series

**Finish**

- C= Black Anodize
- N= Electroless Nickel (10-32 Only)

**Port Options**

- 100= 10-32 (F)
- 125= 1/8" Push-in
- 157= 5/32" Push-in
- 250= 1/4" Push-in
- 1/8= 1/8 NPT (F)

**Button Style**

- DP= Double Push
- KB= Knob w/ Button Return
- PK= Push/Pull Knob
- SR= Spring Return

**Example:**

"4" Series, Aluminum/ Black Anodize, 10-32 (F) ports, Double Push Button

### "45" Series

**A P 4 5 - 1 0 0 - S R**

**Actuator**

- AP= Push Button
- AM= Metal Button
- FP= Momentary Toggle
- HP= Detented Toggle
- HM= Metal Detented Toggle

**Series**

- 45= "45" Series

**Port Options**

- 100= 10-32 (F)
- 1/8= 1/8 NPT (F)

**Actuator Style**

- SR= Spring Return
- DT= Detented

**Example:**

"45" Series, Nylon Button, 10-32 Fully Ported, Spring Return

- Please use **Product Number Diagram** to interpret part numbers (*do not attempt to build part numbers*) see **Product Information** for part number listing.

## Product Information

### "4" Series Standard

Porting	Part Number	Actuator
10-32 (F)	<b>A4C-100-DP</b>	Double Push Button
	<b>A4C-100-KB</b>	Knob w/ Button Return
	<b>A4C-100-PK</b>	Push/Pull Knob
	<b>A4C-100-SR</b>	Button w/ Spring Return
	<b>A4N-100-DP</b>	Double Push Button- ENI
	<b>A4N-100-KB</b>	Knob w/ Button Return- ENI
	<b>A4N-100-PK</b>	Push/Pull Knob- ENI
	<b>A4N-100-SR</b>	Button w/ Spring Return- ENI
	<b>F4C-100-SR</b>	Heavy Duty Toggle-Mom
	<b>H4C-100-DT</b>	Heavy Duty Toggle-Det
1/8 NPT (F)	<b>A4C-1/8-DP</b>	Double Push Button
	<b>A4C-1/8-SR</b>	Button w/ Spring Return
	<b>F4C-1/8-SR</b>	Heavy Duty Toggle- Mom
	<b>H4C-1/8-DT</b>	Heavy Duty Toggle-Det
1/8" Push-in	<b>A4C-125-DP</b>	Double Push Button
	<b>A4C-125-KB</b>	Knob w/ Button Return
	<b>A4C-125-PK</b>	Push/Pull Knob
	<b>A4C-125-SR</b>	Button w/ Spring Return
5/32" Push-in	<b>F4C-125-SR</b>	Heavy Duty Toggle-Mom
	<b>H4C-125-DT</b>	Heavy Duty Toggle-Det
	<b>A4C-157-DP</b>	Double Push Button
	<b>A4C-157-KB</b>	Knob w/ Button Return
	<b>A4C-157-PK</b>	Push/Pull Knob
	<b>A4C-157-SR</b>	Button w/ Spring Return
	<b>F4C-157-SR</b>	Heavy Duty Toggle-Mom
	<b>H4C-157-DT</b>	Heavy Duty Toggle-Det

### "4" Series Standard

Porting	Part Number	Actuator
1/4" Push-in	<b>A4C-250-DP</b>	Double Push Button
	<b>A4C-250-KB</b>	Knob w/ Button Return
	<b>A4C-250-PK</b>	Push/Pull Knob
	<b>A4C-250-SR</b>	Button w/ Spring Return
	<b>F4C-250-SR</b>	Heavy Duty Toggle-Mom
	<b>H4C-250-DT</b>	Heavy Duty Toggle-Det

### "45" Series

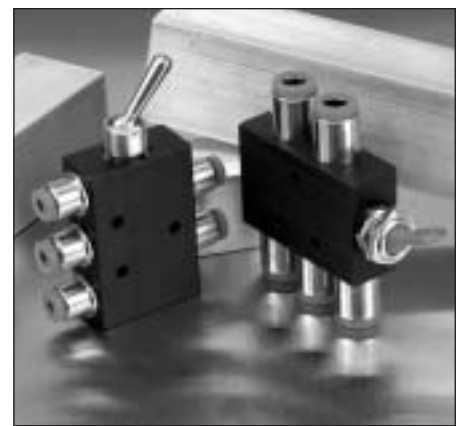
#### 10-32 (F) Fully Ported

Porting	Part Number	Actuator
10-32 (F)	<b>AP45-100-SR</b>	Nylon Button
	<b>AM45-100-SR</b>	Metal Button
	<b>FP45-100-SR</b>	Nylon Tog Mom
	<b>HP45-100-DT</b>	Nylon Tog Det
	<b>HM45-100-DT</b>	Metal Tog Det

### "45" Series

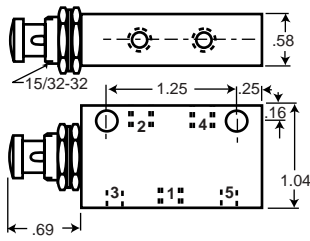
#### 1/8 NPT (F) Fully Ported

Porting	Part Number	Actuator
1/8 NPT (F)	<b>AP45-1/8-SR</b>	Nylon Button
	<b>AM45-1/8-SR</b>	Metal Button
	<b>FP45-1/8-SR</b>	Nylon Tog Mom
	<b>HP45-1/8-DT</b>	Nylon Tog Det
	<b>HM45-1/8-DT</b>	Metal Tog Det

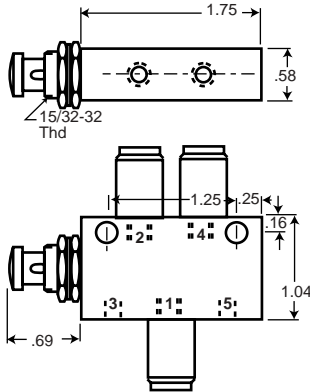


**"45" series valves are also available with 1/8", 5/32", 1/4" and push-to-connect fittings- refer to page 92 for information**

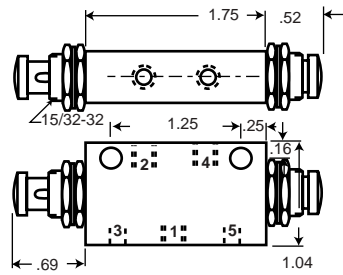
"4" Series



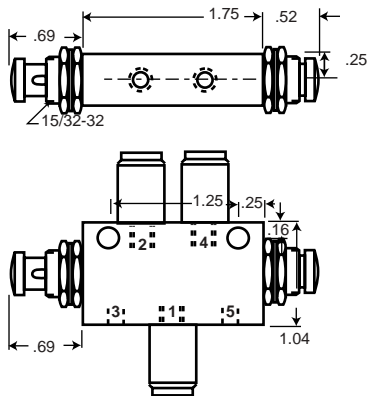
Spring Return  
A4C-100-SR  
A4N-100-SR



Spring Return  
A4C-125-SR  
A4C-157-SR  
A4C-250-SR

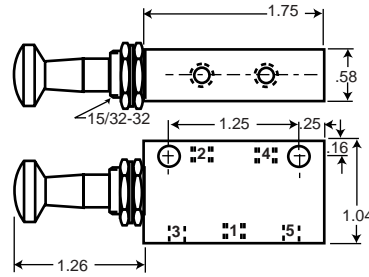


Double Push Button  
A4C-100-DP  
A4N-100-DP  
Spring Bias  
A4C-100-SB  
A4N-100-SB

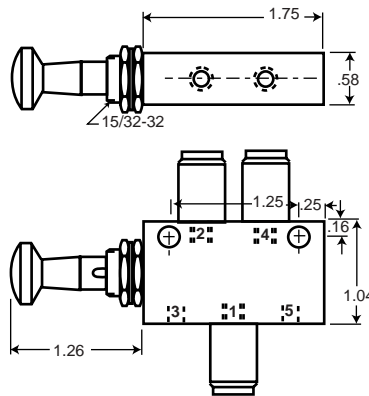


Double Push Button  
A4C-125-DP  
A4C-157-DP  
A4C-250-DP  
Spring Bias  
A4C-125-SB  
A4C-157-SB  
A4C-250-SB

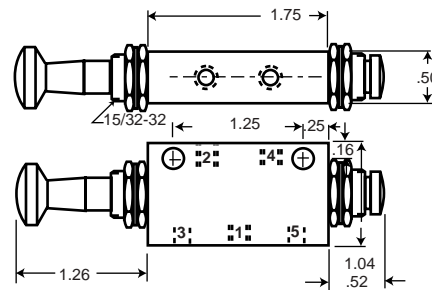
"4" Series



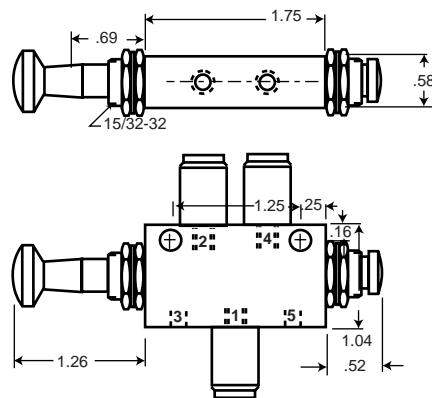
Push/Pull Knob  
A4C-100-PK  
A4N-100-PK



Push/Pull Knob  
A4C-125-PK  
A4C-157-PK  
A4C-250-PK

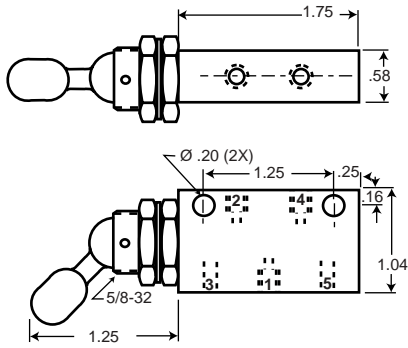


Knob with Button  
A4C-100-KB  
A4N-100-KB

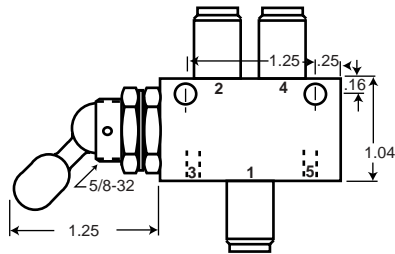


Knob with Button  
A4C-125-KB  
A4C-157-KB  
A4C-250-KB

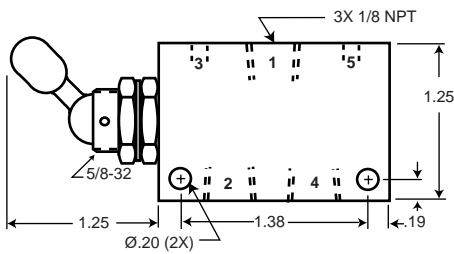
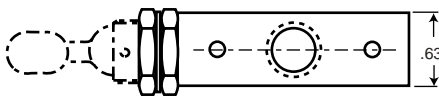
## "4" Series



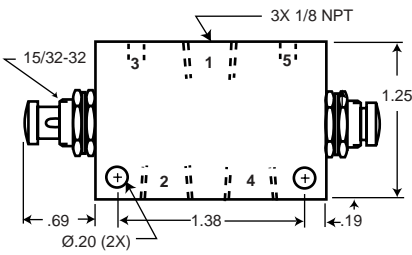
Heavy Duty Toggle  
**H4C-100-DT**  
**H4N-100-DT**  
**F4C-100-SR**



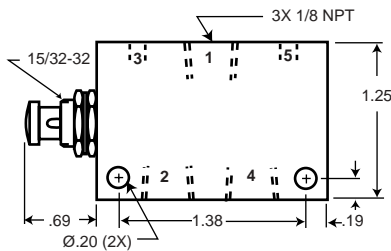
Heavy Duty Toggle  
**H4C-125-DT**  
**H4C-157-DT**  
**H4C-250-DT**  
**F4C-125-SR**  
**F4C-157-SR**  
**F4C-250-SR**



Heavy Duty Toggle  
**F4C-1/8-SR**  
**H4C-1/8-DT**



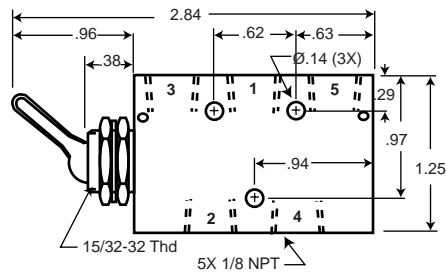
Double Push Button  
**A4C-1/8-DP**



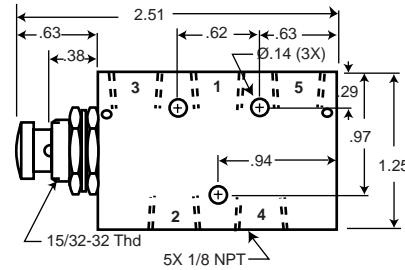
Spring Return  
**A4C-1/8-SR**

● When design makes a dimension critical- contact factory for confirmation. All dimensions shown subject to change without notice.

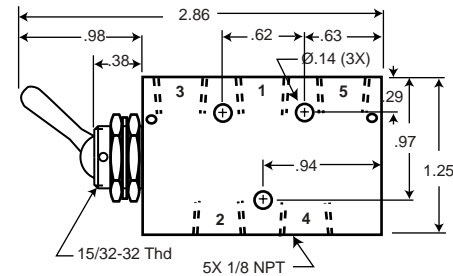
## "45" Series



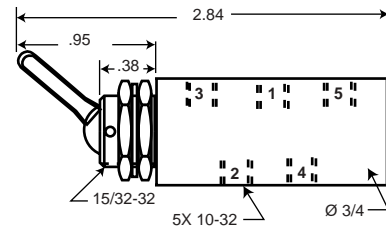
**FP45-1/8-SR**  
**HP45-1/8-DT**



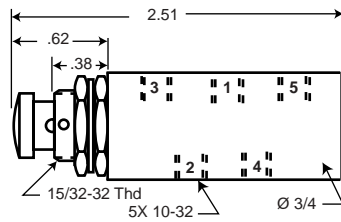
**AP45-1/8-SR**  
**AM45-1/8-SR**



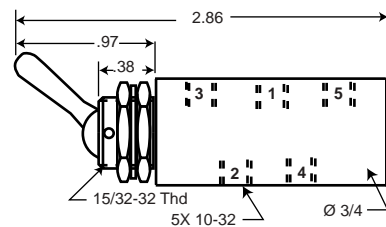
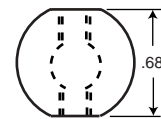
**HM45-1/8-DT**



**FP45-100-SR**  
**HP45-100-DT**



**AP45-100-SR**  
**AM45-100-SR**



**HM45-100-DT**