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Features

- 4-Way 2 position 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. In addition to the standard toggles and buttons, a Double Push Button (-DP) has been added to accommodate circuitry requirements. The Double Push Button is most commonly used in conjunction with air pilot operators. This combination allows two different pneumatic signals to actuate the valve and direct air flow. For plumbing convenience, push-to-connect fittings are also available.

Performance Data

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

Product	C_V		Flow Rate (scfm)				Fill Time sec/ in³ 0-90 psi	Exhaust Time sec/ in³ 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)	.23	.23	7.8	17.3	7.8	17.3	.02	.03
"45" Series 1/8 NPT (F)	.37	.37	12.1	27.2	12.1	27.2	.01	.02
"4" Series	.13	.13	5.1	10.9	5.1	10.9	.03	.05

C_V 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	● (x3) 10-32 (F) ● (x3) 5/32" PI ● (x3) 1/8 NPT (F) ● (x3) 1/4" PI ● (x3) 1/8" PI		non-threaded **NOT TO BE RESTRICTED**

Note: 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 port 2 and 3.

"4" Series Cut-away

4-Way 2-Position

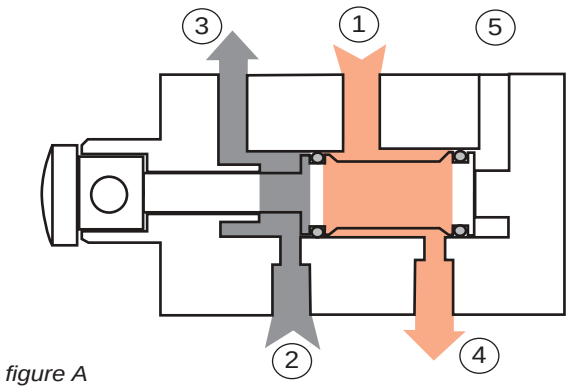


figure A

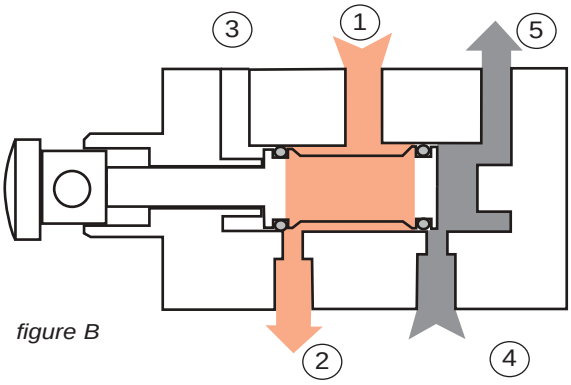


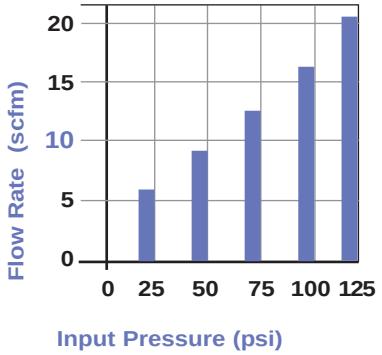
figure B

Function

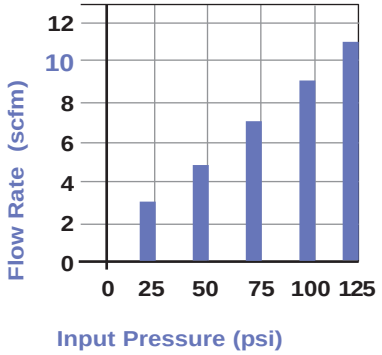
In the example above (figure A) flow is directed through port 1 to port 4 as port 2 exhausts to atmosphere through port 3.

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.

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)

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	16 oz	3 lbs	16 oz	3 lbs	12 oz	12 oz

Mounting Method

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



"4" Series valve with Heavy Duty Toggle and push-to-connect fittings

Ordering Information

- To order standard product refer to Product Information 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).

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)

Actuator Style
DP= Double Push
DT= Toggle Detent
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
DP= Double Push
DT= Detented
PK= Push/Pull Knob
SR= Spring Return

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
4-Way 3 Port 2 Position

Porting	Part Number	Actuator
10-32 (F)	A4C-100-DP	Double Push Button
	A4C-100-PK	Push/Pull Knob
	A4C-100-SR	Button w/ Spring Return
	A4N-100-DP	Double Push Button- ENI
	A4N-100-PK	Push/Pull Knob- ENI
	A4N-100-SR	Button w/ Spring Return- ENI
	F4C-100-SR	Heavy Duty Toggle-Mom
	F4N-100-SR	Heavy Duty Toggle-Mom- ENI
	H4C-100-DT	Heavy Duty Toggle-Det
	H4N-100-DT	Heavy Duty Toggle- Det
1/8 NPT (F)	A4C-1/8-DP	Double Push Button
	A4C-1/8-SR	Button w/ Spring Return
	F4C-1/8-SR	Heavy Duty Toggle- Mom
	H4C-1/8-DT	Heavy Duty Toggle-Det
1/8" Push-in	A4C-125-DP	Double Push Button
	A4C-125-PK	Push/Pull Knob
	A4C-125-SR	Button w/ Spring Return
	F4C-125-SR	Heavy Duty Toggle-Mom
	H4C-125-DT	Heavy Duty Toggle-Det
5/32" Push-in	A4C-157-DP	Double Push Button
	A4C-157-PK	Push/Pull Knob
	A4C-157-SR	Button w/ Spring Return
	F4C-157-SR	Heavy Duty Toggle-Mom
	H4C-157-DT	Heavy Duty Toggle-Det

"4" Series Standard
4-Way 3 Port 2 Position

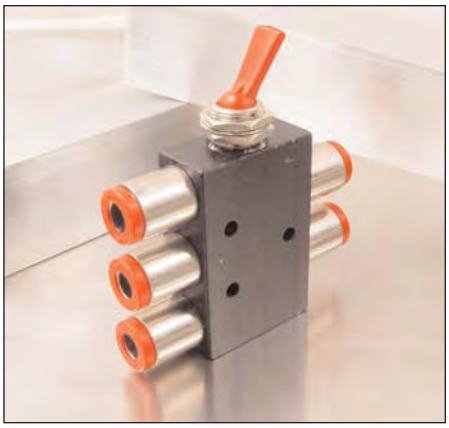
Porting	Part Number	Actuator
1/4" Push-in	A4C-250-DP	Double Push Button
	A4C-250-PK	Push/Pull Knob
	A4C-250-SR	Button w/ Spring Return
	F4C-250-SR	Heavy Duty Toggle-Mom
	H4C-250-DT	Heavy Duty Toggle-Det

"45" Series
10-32 (F) Fully Ported
4-Way 5 Port 2 Positions

Porting	Part Number	Actuator
10-32 (F)	AP45-100-DP	Double Push Button
	AP45-100-SR	Nylon Button
	AM45-100-SR	Metal Button
	FP45-100-SR	Nylon Tog Mom
	HP45-100-DT	Nylon Tog Det
	HM45-100-DT	Metal Tog Det

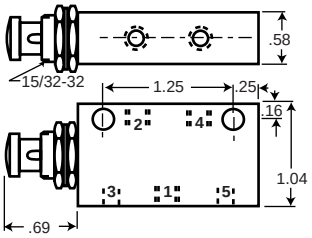
"45" Series
1/8 NPT (F) Fully Ported
4-Way 5 Port 2 Positions

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

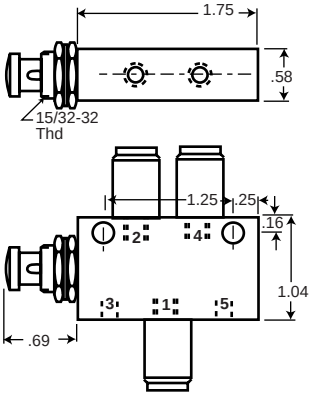


"45" series valves are also available with 1/8", 5/32", 1/4" and push-to-connect fittings

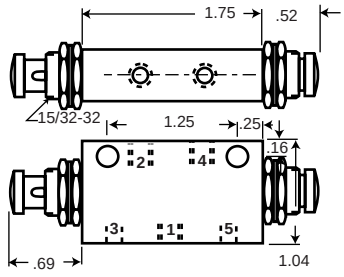
"4" Series



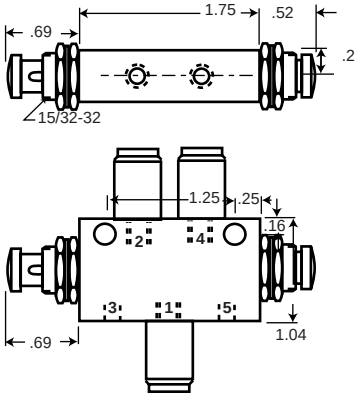
Spring Return
A4C-100-SR
A4N-100-SR



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

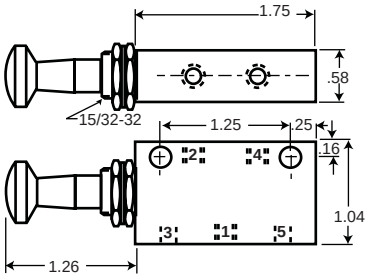


Double Push Button
A4C-100-DP
A4N-100-DP

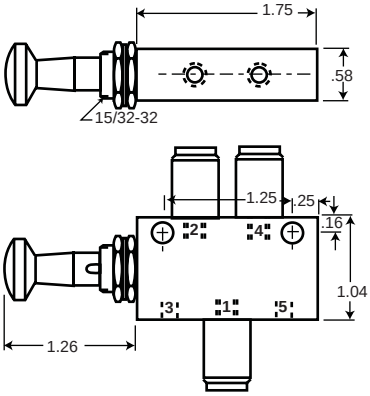


Double Push Button
A4C-125-DP
A4C-157-DP
A4C-250-DP

"4" Series

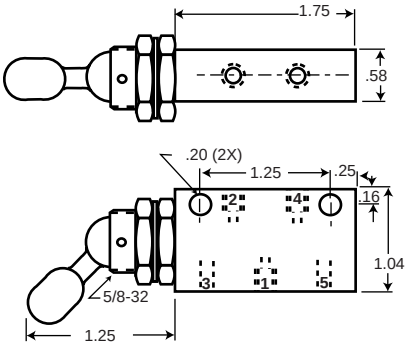


Push/Pull Knob
A4C-100-PK
A4N-100-PK

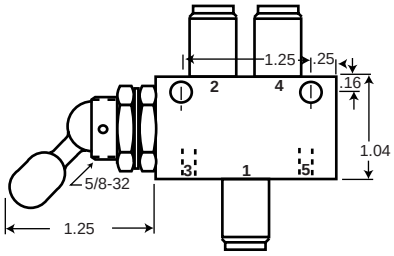


Push/Pull Knob
A4C-125-PK
A4C-157-PK
A4C-250-PK

"4" Series



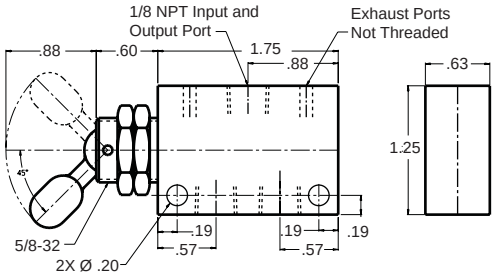
Heavy Duty Toggle
H4C-100-DT
H4N-100-DT
F4C-100-SR



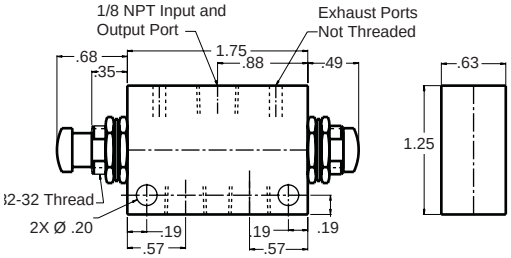
Heavy Duty Toggle

H4C-125-DT
H4C-157-DT
H4C-250-DT

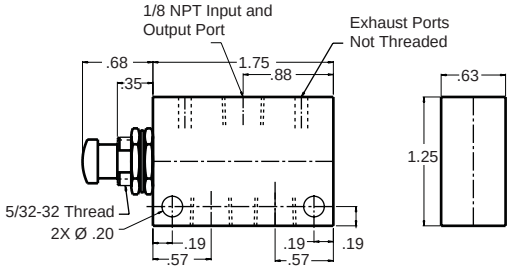
F4C-125-SR
F4C-157-SR
F4C-250-SR



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



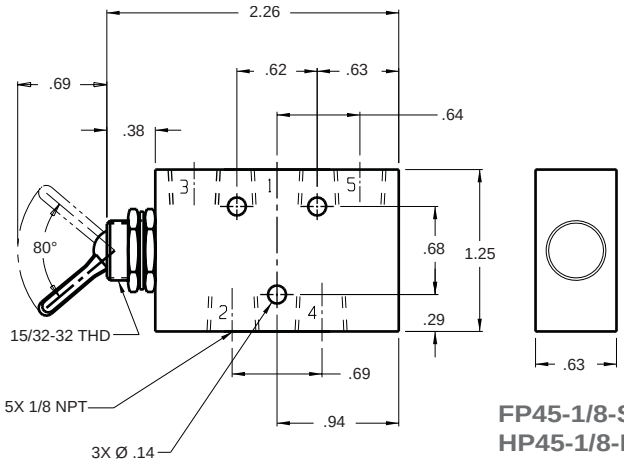
Double Push Button
A4C-1/8-DP



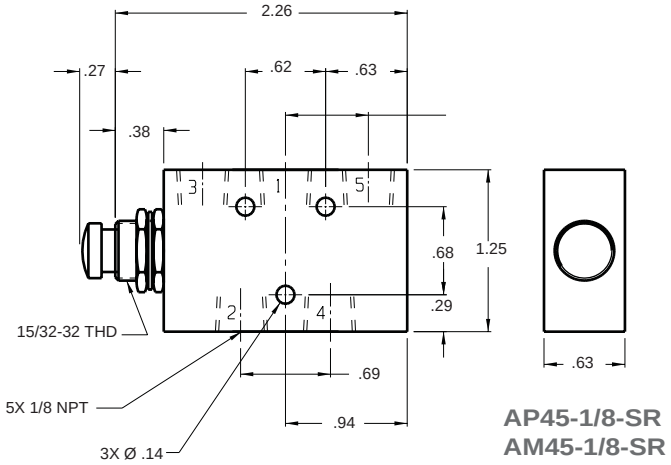
Spring Return
A4C-1/8-SR

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

"45" Series

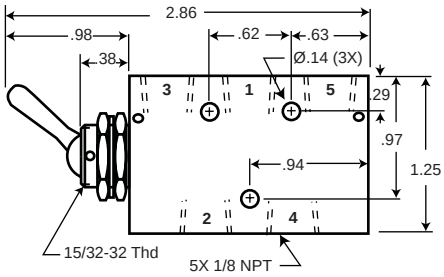


FP45-1/8-SR
HP45-1/8-DT

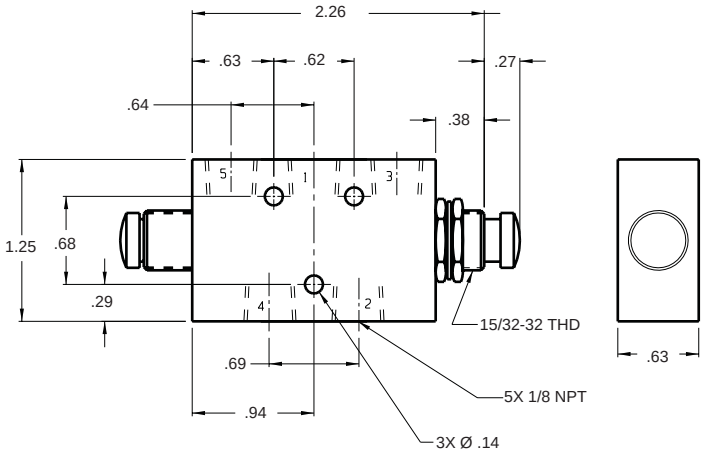


AP45-1/8-SR
AM45-1/8-SR

"45" Series



HM45-1/8-DT

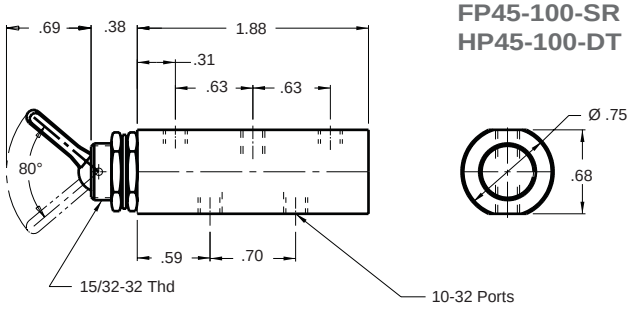


AP45-1/8-DP

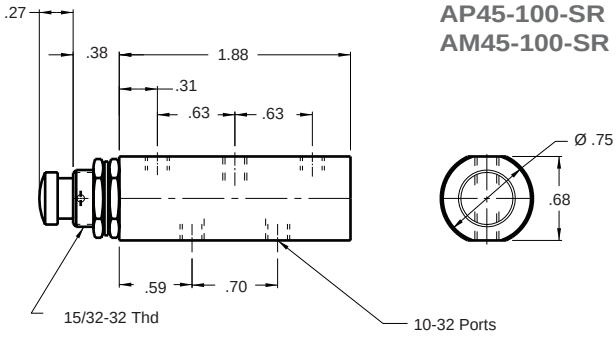
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"45" Series

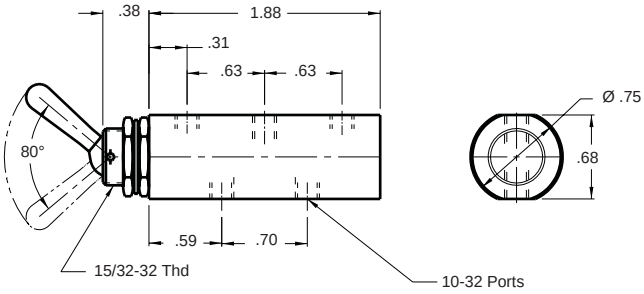
FP45-100-SR
HP45-100-DT



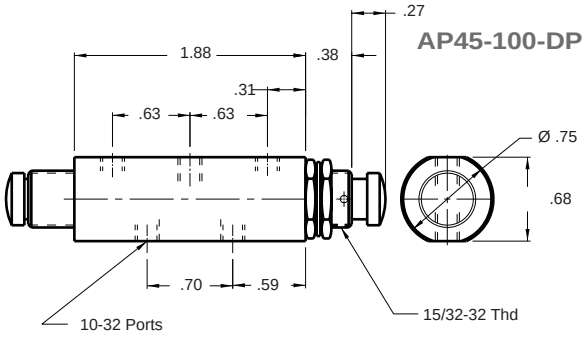
AP45-100-SR
AM45-100-SR



HM45-100-DT



AP45-100-DP



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