

### Features

- Multiple mounting options
- Independent coil orientation
- Manual override
- 2 & 3-Way normally closed
- 14 Solenoid valve styles
- Flying leads available
- DIN connector available



## 2 & 3-Way Solenoid Valves

### "10" Series

The Pneumadyne "10" Series is compact, space saving and provides a cost effective solution for the use of multiple solenoid valves.

Fourteen styles of normally closed 2-Way and 3-Way solenoid valves are available for mounting on five styles of manifolds (see Product Information). The solenoid valve can be fixed in either direction on the manifold and coil orientation is independent of valve orientation. The low wattage (0.8 watt) version solenoid valve is ideal for use in low power control circuits.

### Response Times

Pull-in*		Drop-out*	
AC	DC	AC	DC
10	15	7	7

\* Measurement as full stroke travel in millisecond (ms).

The "10" Series solenoids offer fast response times and consistent operation between valves. Pneumadyne defines valve response time by total plunger travel distance.

### Performance Data

Temperature Range	Orifice Diameter	Flow Rate (scfm)		C <sub>v</sub>	Max. psi	Fill Time sec/ in <sup>3</sup> 0-90 psi	Exhaust Time sec/ in <sup>3</sup> 100-10 psi
		50 psi	125psi				
5° to 122° F	Ø 0.6 mm low 0.8 watt	.47	1.1	.02	125	.29	.47
	Ø 1.0 mm 2.9 watt 3.1 VA	1.27	2.78	.04	125	.11	.18

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

### Port Information for "10" Series Assembly

Definition	1 station	2-5 stations
Input	10-32 (F)	1/8 NPT (F)
Output	10-32 (F)	10-32 (F)

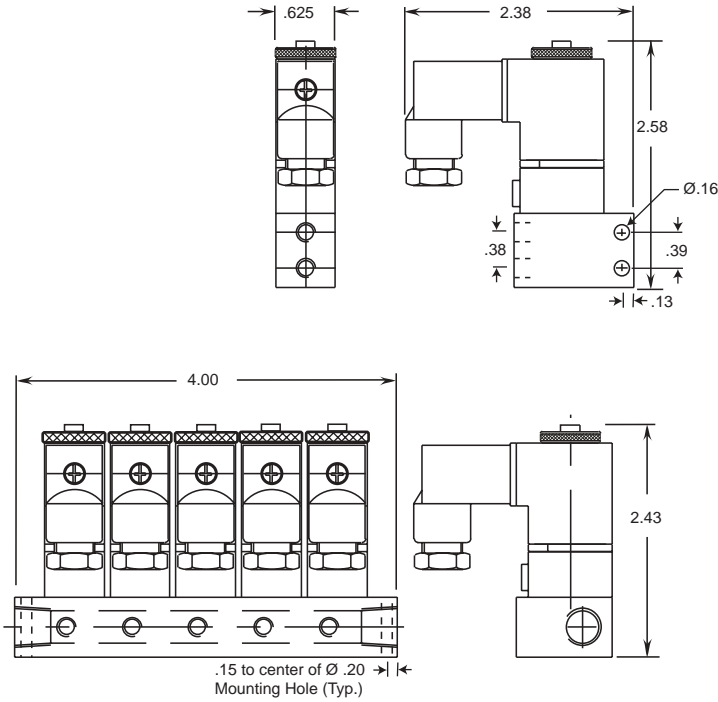
\* 3-Way exhausts to atmosphere.

\*\* A threaded exhaust port is available- contact factory for additional information.

### Materials

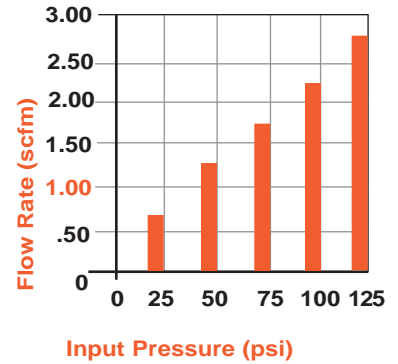
Solenoid: Brass/ Zinc Chromate, Viton®, Copper, Stainless Steel/ Zinc Chromate, Nylon - Glass Filled  
 Manifold: Aluminum/ Anodize

## "10" Series



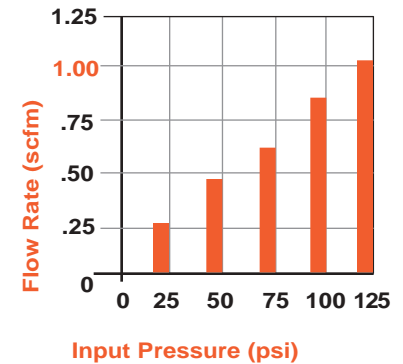
"10" Series Flow Chart

1.0 Orifice



"10" Series Flow Chart

0.6 Orifice



### Product Information

#### Solenoid

Part Number	Description
<b>S10-20-12DC</b>	2WNC, 12DC, 2.9 watt
<b>S10-20-24AC</b>	2WNC, 24AC, 3.1 VA
<b>S10-20-24DC</b>	2WNC, 24DC, 2.9 watt
<b>S10-20-120AC</b>	2WNC, 110/120AC, 3.1 VA
<b>S10-20-220AC</b>	2WNC, 220/240AC, 3.1 VA
<b>S10-20-12LW</b>	2WNC, 12DC, 0.8 low watt
<b>S10-20-24LW</b>	2WNC, 24DC, 0.8 low watt
<b>S10-30-12DC</b>	3WNC, 12DC, 2.9 watt
<b>S10-30-24AC</b>	3WNC, 24AC, 3.1 VA
<b>S10-30-24DC</b>	3WNC, 24DC, 2.9 watt
<b>S10-30-120AC</b>	3WNC, 110/120AC, 3.1 VA
<b>S10-30-220AC</b>	3WNC, 220/240AC, 3.1 VA
<b>S10-30-12LW</b>	3WNC, 12DC, 0.8 low watt
<b>S10-30-24LW</b>	3WNC, 24DC, 0.8 low watt

#### Manifold

Part Number	Description
<b>S10M-1</b>	1 station, 1.25" OAL
<b>S10M-2</b>	2 station, 1.94" OAL
<b>S10M-3</b>	3 station, 2.63" OAL
<b>S10M-4</b>	4 station, 3.31" OAL
<b>S10M-5</b>	5 station, 4.00" OAL

#### DIN Connector

<b>S10C</b>	8 mm sq. IP65
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- **Push-in fittings available** for 1/8" and 5/32" OD tubing. Product information can be found on page 92 and 117.

### Ordering Information

- Solenoid valve and manifold sold separately.
- To order standard product use part number listing.
- Solenoid mounting screws (2) are provided.
- For 18" 20 AWG flying leads options- add a "F" suffix to the part number.
- Contact factory for DIN connector with LED and/or suppression.

Additional product information available in PneuTrends Vol. 3 No. 1

### Features

- High flow/ low watt solenoid valve
- Manual override
- Closed crossover
- 2 & 3-Way normally closed
- Tee input base
- Mounting versatility



## 2 & 3-Way Valves "20" Series

Pneumadyne's "20" Series combines the highly reliable construction of the "0" Series valve with a solenoid actuator, resulting in a long life, high flow, low wattage valve. Pneumadyne tested over 20 million cycles, these low watt solenoid actuators (0.8 watt & 3.1 VA) produce a Cv of .24 and are available in three volt-ages. The "20" Series valves are also available with a variety of momentary and detented actuators in nylon or metal.

### Actuation Force

Actuator	50 psi	125 psi
Button	38 oz	5 lbs
Toggle	6 oz	11 oz
Integral Air Pilot	30 psi min.	60 psi min.

**Solenoid actuator** requires a minimum input of 20 psi and has a maximum operating pressure of 125 psi.

The standard "tee" base provides a convenient method of plumbing consecutive valves. A plug (SPG-10) is furnished to permit the use of one input port and provide **installation versatility**. The "20" Series also offers **mounting versatility**- valves can be easily secured to a machine member using two .20 diameter holes (no need for mounting brackets) or panel mounted using the 15/32-32 threaded neck (manual style only- nuts and lockwashers are provided).

### Function

When the 3-way normally closed valve is actuated (figure A), the stem unseats the poppet allowing flow through port 1 around the poppet and stem and out port 2.

In the unactuated position (figure B) the poppet is seated. When flow enters from port 2 it travels through the hollow stem and exhausts to atmosphere through port 3. The poppet design provides a large durable surface that can withstand millions of cycles.

### Performance Data

Temperature Range		Operating Pressure				
-20°F to 160°F		0 to 125 psi				
Porting Information	Solenoid Orifice Diameter	Cv	Flow Rate		Fill Time sec/ in <sup>3</sup> 0-90 psi	Exhaust sec/ in <sup>3</sup> 100-10 psi
			50 psi	125 psi		
10-32 (F)	Ø 0.6 mm low 0.8 watt	.24	7.8	18.0	.02	.06
	Ø 1.0 mm 2.9 watt 3.1 VA					

- Performance data shown for flow paths 1-2 and 2-3.

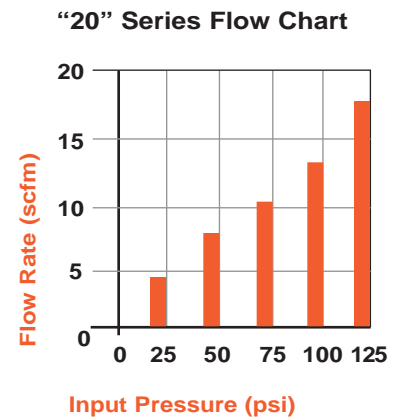
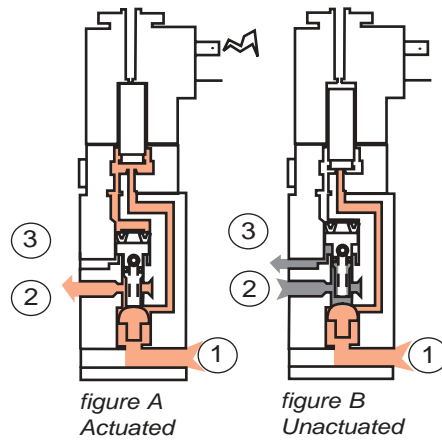
Cv per ANSI / (NFPA) T3.21.3

### Materials

Aluminum/ Anodize, Brass/ Electroless Nickel, Buna-N, Acetal, Stainless Steel

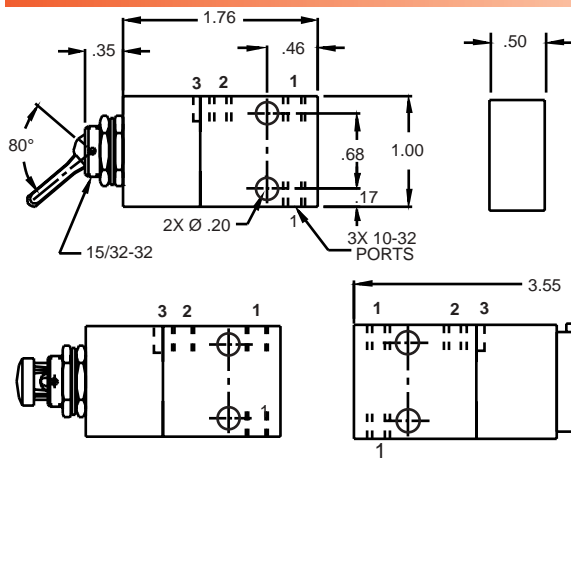
## “20” Series Cut-away 3-Way Normally Closed

“20” Series with  
Solenoid Actuator



Valves  
“20” Series

## “20” Series



● Push-in fittings available for 1/8" and 5/32" OD tubing. Product information can be found on page 92 and 117.

### Product Number Diagram

**A P 20 - 20 - 100 - x x x x**

**Valve Series**  
20 = 20 Series

**Function**  
20 = 2WNC  
30 = 3WNC

#### Actuator Style

AP = Push Button

AM = Metal Button

FP = Momentary Nylon Toggle

HP = Detented Nylon Toggle

P = Integral Air Pilot (10-32 tap)

S = Solenoid Valve

#### Porting

100 = 10-32 (F)

#### Solenoid Voltage

12LW = 12 DC

24LW = 24 DC

120 = 120 AC

## Product Information

### 2-Way Normally Closed 10-32 (F)

Part Number	Actuator
<b>AP20-20-100</b>	Push Button
<b>AM20-20-100</b>	Metal Button
<b>FP20-20-100</b>	Momentary Nylon Toggle
<b>HP20-20-100</b>	Detented Nylon Toggle
<b>P20-20-100</b>	Integral Air Pilot
<b>S20-20-100-12LW</b>	12 DC Solenoid 0.8 watt
<b>S20-20-100-24LW</b>	24 DC Solenoid 0.8 watt
<b>S20-20-100-120</b>	120 AC Solenoid 3.1 VA

### 3-Way Normally Closed 10-32 (F)

Part Number	Actuator
<b>AP20-30-100</b>	Push Button
<b>AM20-30-100</b>	Metal Button
<b>FP20-30-100</b>	Momentary Nylon Toggle
<b>HP20-30-100</b>	Detented Nylon Toggle
<b>P20-30-100</b>	Integral Air Pilot
<b>S20-30-100-12LW</b>	12 DC Solenoid 0.8 watt
<b>S20-30-100-24LW</b>	24 DC Solenoid 0.8 watt
<b>S20-30-100-120</b>	120 AC Solenoid 3.1 VA

## Ordering Information

● To order standard product use the part number listing.

● Nylon actuators are available in seven colors, with black as standard. Specify the color, by code as “-code#” suffix following the part number (see color code chart page 91).

● Contact factory for DIN connector with LED and/or suppression.