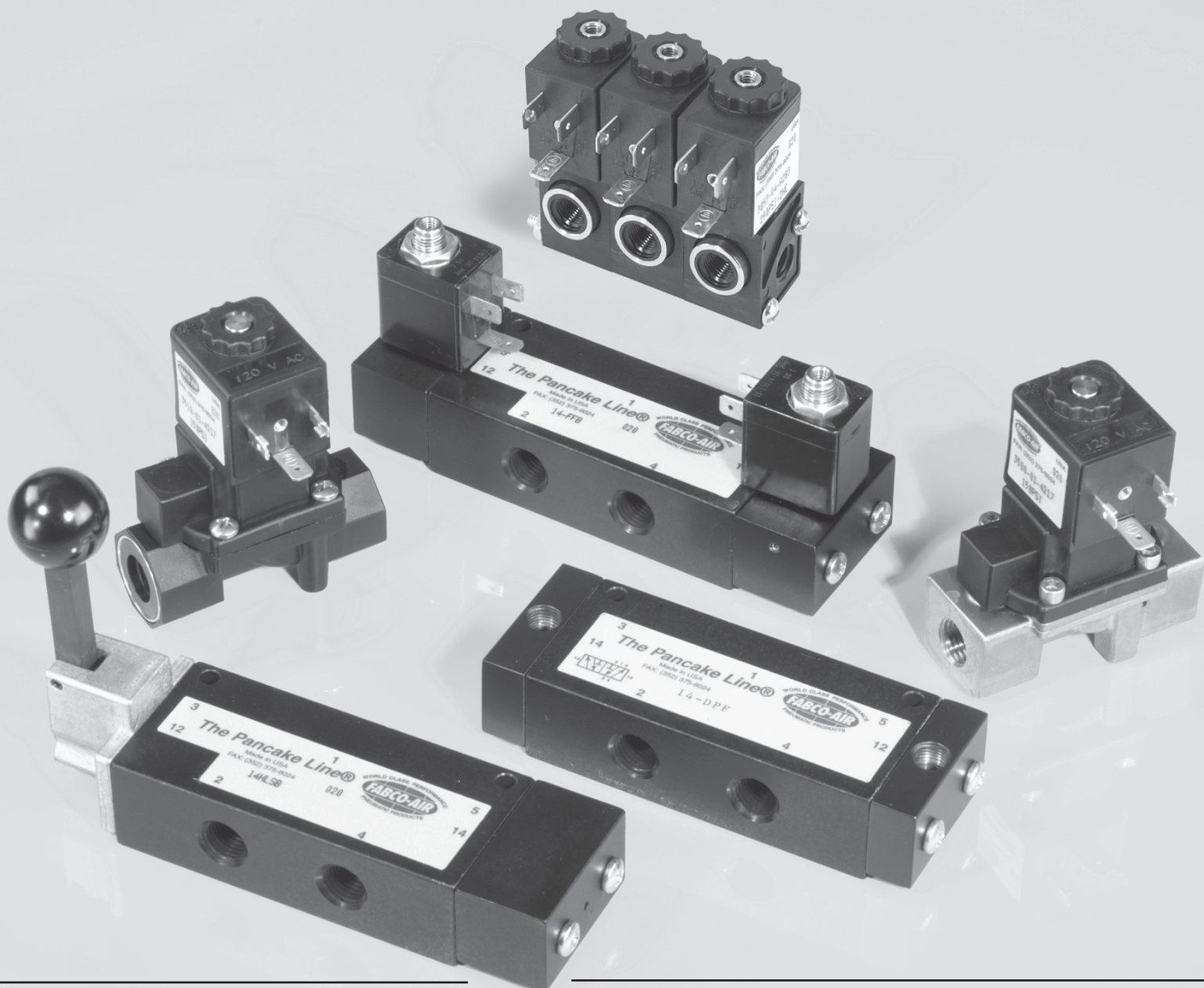




# *Specialty & Control Valves*



# Directional Control Valves *Composite Solenoid Valve, 2 & 3-Way Normally Closed or Normally Open* **Series 38MP**

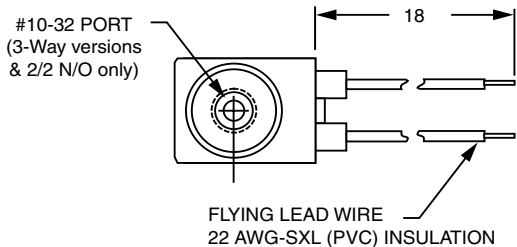
The Series 38MP is a 3 or 2 way, 2 position composite body solenoid valve designed to take the place of a fitting using a female inlet and male outlet port. The valve is generally mounted into an air cylinder port to control a single acting linear actuator. Component features include the proven solenoid operator available in brass/stainless or all stainless-

less pilot design, optional seal materials and nylon encapsulated coil. The "basket" orifice design feature allows the possibility of changing the orifice diameter to meet flow requirements.

The DuPont Zytel FE 5015, FDA approved composite material is media compatible eliminating the need for stocking multiple body materials.

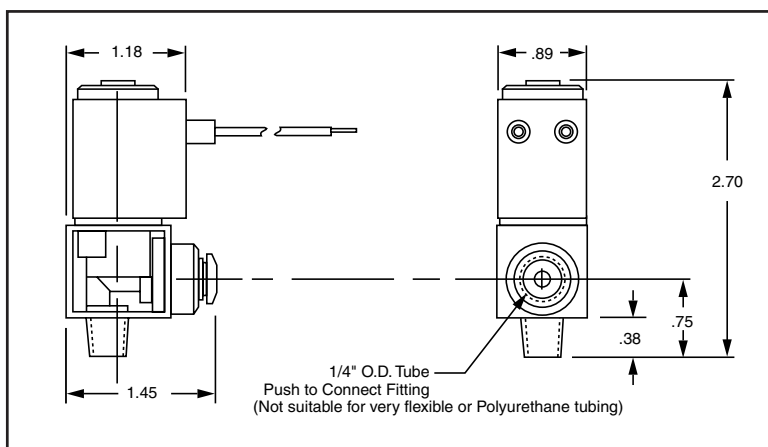
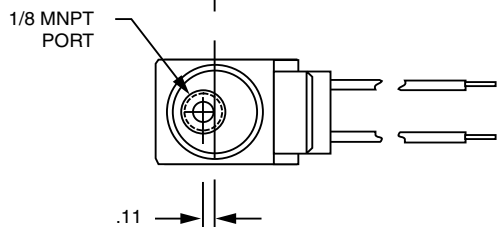
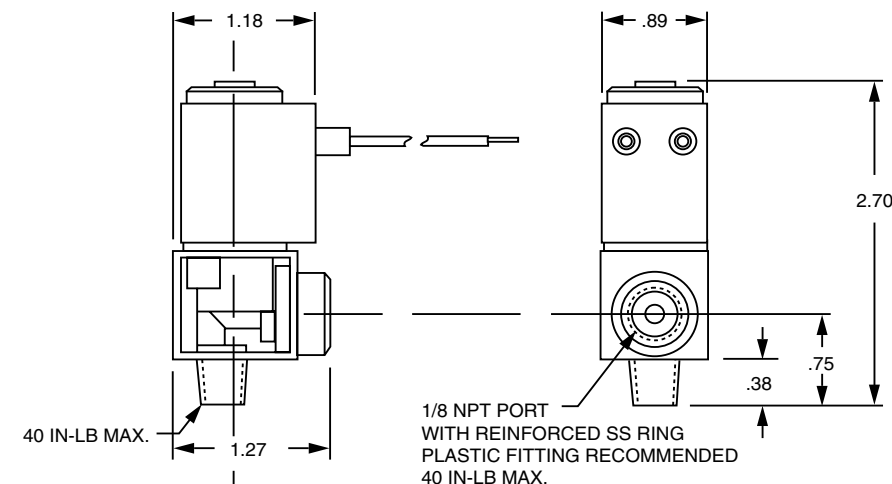
## Dimensional Data

## Features



- Composite material
- Chemical compatibility
- FDA approved versions
- 7 orifice sizes

- Easily replaceable orifice
- Vacuum holding & flow applications
- Pressure to 270 psi
- DIN spades or flying leads



### ORIFICE SIZE / VOLTAGE

FUNCTION	0.6 mm		1.0 mm		1.2 mm		1.5 mm		2.0 mm		2.4 mm		3.0 mm	
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
2/2 NC	270	270	250	250	250	250	250	250	250	250	200	200	75	60
2/2 NO	N/A	N/A	N/A	N/A	N/A	N/A	250	250	N/A	N/A	N/A	N/A	N/A	N/A
3/2 NC	250	250	200	200	180	180	160	150	N/A	N/A	N/A	N/A	N/A	N/A
3/2 NO	N/A	N/A	N/A	N/A	N/A	N/A	170	150	N/A	N/A	N/A	N/A	N/A	N/A

### MAX. PRESSURE RANGE

# Directional Control Valves Composite Solenoid Valve, 2 & 3-Way **Series 38MP**

Normally Closed or Normally Open

## Technical Data

**Function:** 2-way, 2 position and 3-way, 2 position  
direct acting, normally closed or normally open

<b>Port Sizes:</b>	<b>Function</b>	<b>Inlet</b>	<b>Outlet</b>	<b>Exhaust</b>
	2/2 NC	1/8 Male NPT	1/8 NPT or 1/4" Push-to-connect	---
	2/2 NO	1/8 Male NPT	10-32 TOP	---
	3/2 NC	1/8 NPT or 1/4" Push-to-connect	1/8 Male NPT	10-32 TOP
	3/2 NO	10-32 TOP	1/8 Male NPT	1/8 NPT

**Orifice Sizes/  
Flow Factor:**

0.6 mm / .025 Cv
1.0 mm / .05 Cv
1.2 mm / .065 Cv
1.5 mm / .08 Cv
2.0 mm / .17 Cv
2.4 mm / .24 Cv
3.0 mm / .31 Cv

**Pressure Range:** 0-270 PSI (depending on orifice size and function)

**Temp. Range:** (Media 90°C max.) Ambient - 10 to +50°C

**Response Time:** 12-14 ms complete cycle

**Materials:**

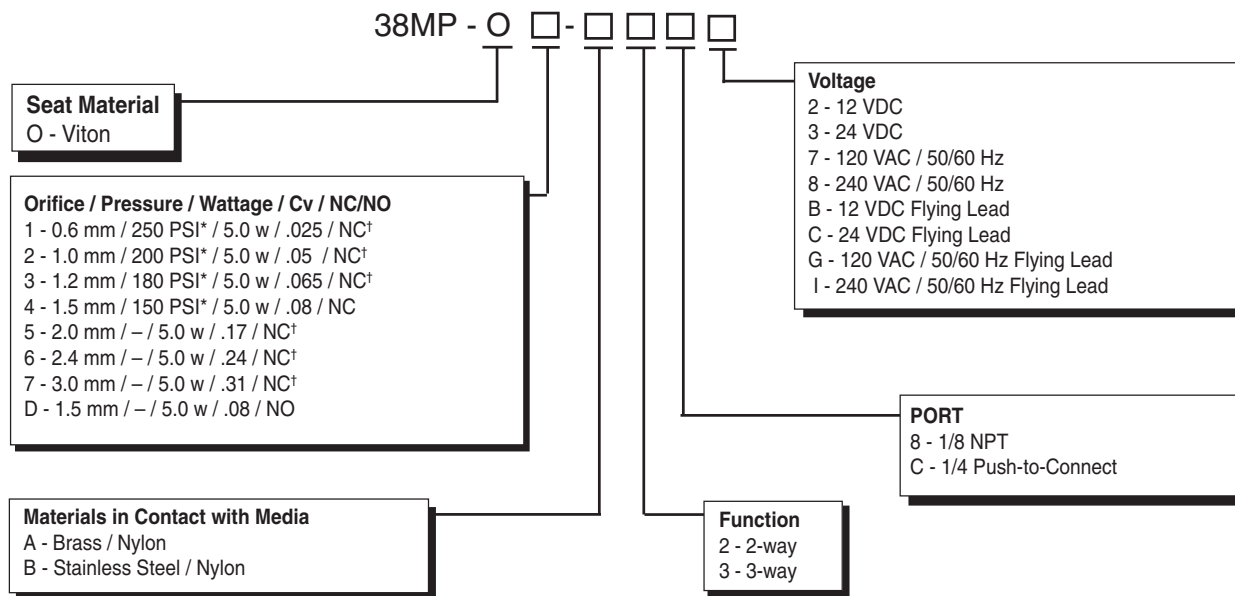
Operator:	400 Series Stainless and Brass standard (400 and 300 Stainless optional)
Shading Ring:	Copper
Springs:	300 Series Stainless
Seals:	Viton standard (other materials available on request)
Valve Body:	Celcon GB25 DuPont Zytel FE 5105. FDA Approved.

**Media:** Air, oil, inert gas, water, caustics, etc.

**Mounting:** 1/8 NPT male port

**Coil Data:** Glass filled nylon encapsulation (Class F, continuous duty)  
DIN spades (11 mm centers) or flying leads – 22 ga. wire w/PVC insulation – 18" long  
5 watt standard (other wattages available on request)  
All standard industrial voltages  
Voltage Tolerance: +/- 10%  
Connectors available for DIN Spades – see page bottom for part numbers.

## How To Order



† Not Available in All functions

\*NOTE: Pressure ratings, if shown, are for 3/2 NC valve with DC voltage

**Connectors for DIN Spades (11 mm centers):**

P/N 122-09-N . . . . . Black housing - No LED  
P/N 122-09-T-A-1-Voltage . . Transparent housing and LED

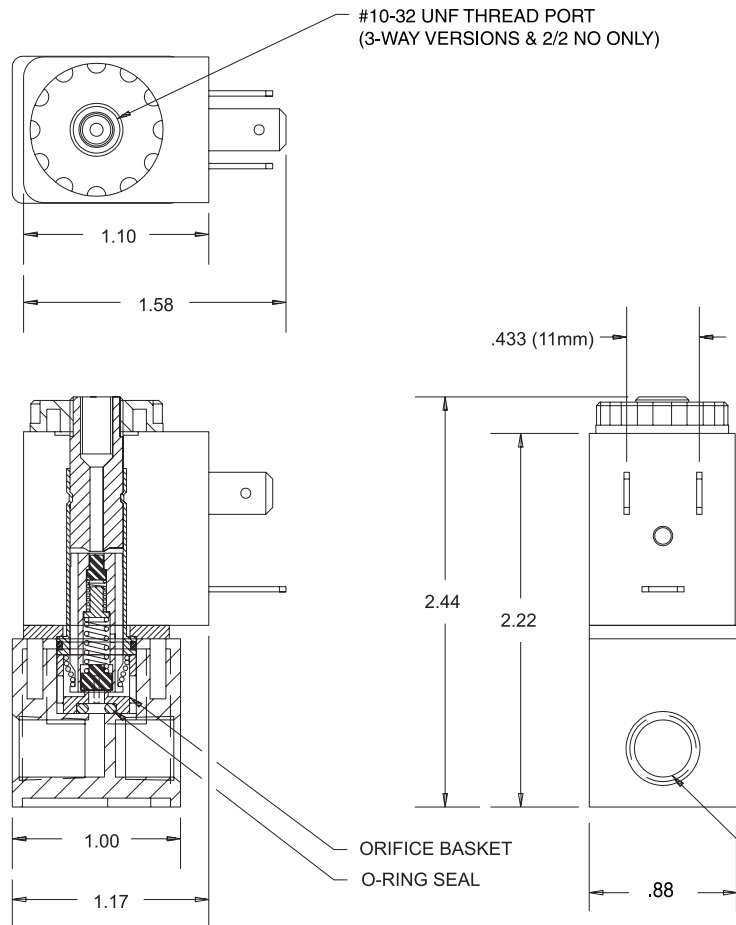
# Directional Control Valves *Composite Solenoid Valve, 2 & 3-Way Normally Closed or Normally Open* **Series 3853**

The Series 3853 is a composite body solenoid valve offered in both 2-way and 3-way normally open or closed functions and seven orifice sizes. Component features include the proven solenoid operator available in brass/stainless or all stainless pilot design, optional seal materials and nylon encapsulated coil. The "basket" ori-

fice design feature allows the possibility of changing the orifice diameter to meet flow requirements.

The DuPont Zytel FE 5105, FDA approved composite material is media compatible eliminating the need for stocking multiple body materials.

## Dimensional Data



## Features

- Composite material
- Chemical compatibility
- FDA approved versions
- 7 orifice sizes
- Easily replaceable orifice
- Vacuum holding & flow applications
- Pressure to 270 psi
- DIN spades or flying leads



1/8 NPT PORT / 2 PLACES  
\*WARNING- WHEN USING METAL FITTINGS  
DO NOT EXCEED 40 IN. LBS TORQUE OR  
MATERIAL FAILURE CAN OCCUR .  
PLASTIC FITTINGS RECOMMENDED

## ORIFICE SIZE / VOLTAGE

FUNCTION	0.6 mm		1.0 mm		1.2 mm		1.5 mm		2.0 mm		2.4 mm		3.0 mm	
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
	2/2 NC	270	270	250	250	250	250	250	250	250	250	200	200	75
2/2 NO	N/A	N/A	N/A	N/A	N/A	N/A	250	250	N/A	N/A	N/A	N/A	N/A	N/A
3/2 NC	250	250	200	200	180	180	160	150	N/A	N/A	N/A	N/A	N/A	N/A
3/2 NO	N/A	N/A	N/A	N/A	N/A	N/A	170	150	N/A	N/A	N/A	N/A	N/A	N/A

## MAX. PRESSURE RANGE

# Directional Control Valves *Composite Solenoid Valve, 2 & 3-Way* **Series 3853** *Normally Closed or Normally Open*

## Technical Data

**Function:** 2-way, 2 position and 3-way, 2 position  
 direct acting, normally closed or normally open

Port Sizes:	Function	Inlet	Outlet	Exhaust
	2/2 NC	1/8 NPT	1/8 NPT	---
	2/2 NO	1/8 NPT	10-32 TOP	---
	3/2 NC	1/8 NPT	1/8 NPT	10-32 TOP
	3/2 NO	10-32 TOP	1/8 NPT	1/8 NPT

**Orifice Sizes/  
 Flow Factor:**

0.6 mm / .025 Cv
1.0 mm / .05 Cv
1.2 mm / .065 Cv
1.5 mm / .08 Cv
2.0 mm / .17 Cv
2.4 mm / .24 Cv
3.0 mm / .31 Cv

**Pressure Range:** 0-270 PSI (depending on orifice size and function)

**Temp. Range:** (Media 90°C max.) Ambient - 10 to +50°C

**Response Time:** 12-14 ms complete cycle

**Materials:**

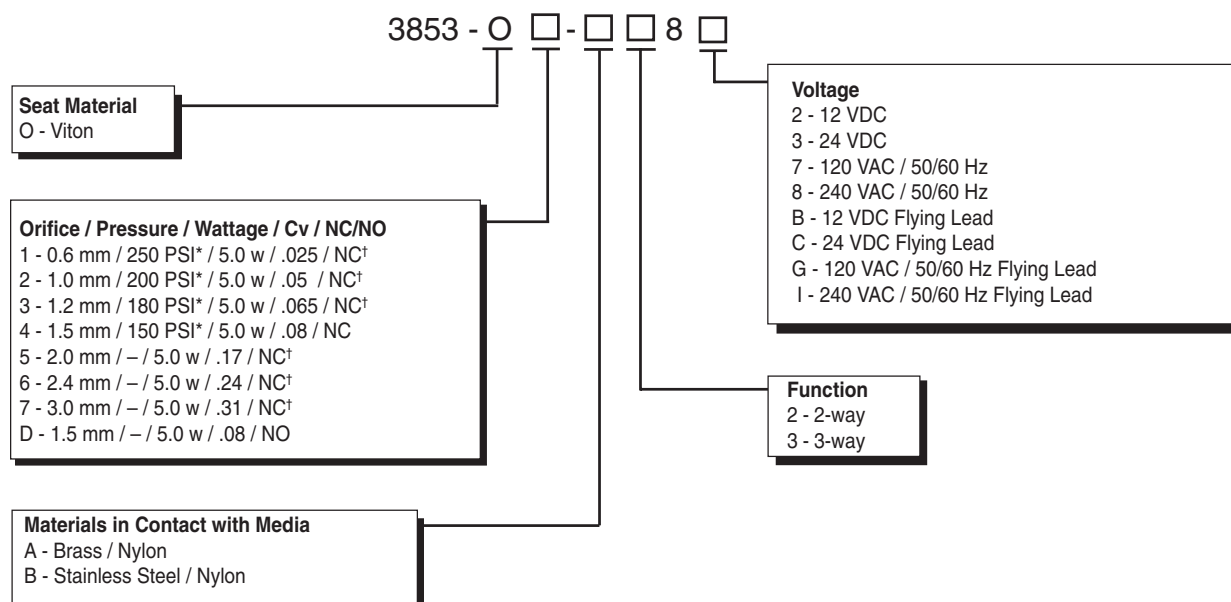
Operator:	400 Series Stainless and Brass standard (400 and 300 Stainless optional)
Shading Ring:	Copper
Springs:	300 Series Stainless
Seals:	Viton standard (other materials available on request)
Valve Body:	DuPont Zytel FE 5105. FDA Approved.

**Media:** Air, oil, inert gas, water, caustics, etc.

**Mounting:** Ø.150" drill, 2 places for a #8 self-tapping screw

**Coil Data:** Glass filled nylon encapsulation (Class F, continuous duty)  
 DIN spades (11 mm centers) or flying leads – 22 ga. wire w/PVC insulation – 18" long  
 5 watt standard (other wattages available on request)  
 All standard industrial voltages  
 Voltage Tolerance: +/- 10%  
 Connectors available for DIN Spades – see page bottom for part numbers.

## How To Order



† Not Available in all functions

\*NOTE: Pressure ratings, if shown, are for 3/2 NC valve with DC voltage

**Connectors for DIN Spades (11 mm centers):**

P/N 122-09-N . . . . . Black housing - No LED

P/N 122-09-T-A.1-Voltage . . . Transparent housing and LED

The 3953 contains all the features of the Series 3853 but can be stacked into a multiple output bank of solenoid valves. The Series 3953 features a fully encapsulated coil, spring compensated plunger seats for long life and a miniature stackable composite valve body. The advantage to this design is the versatility to stock single units

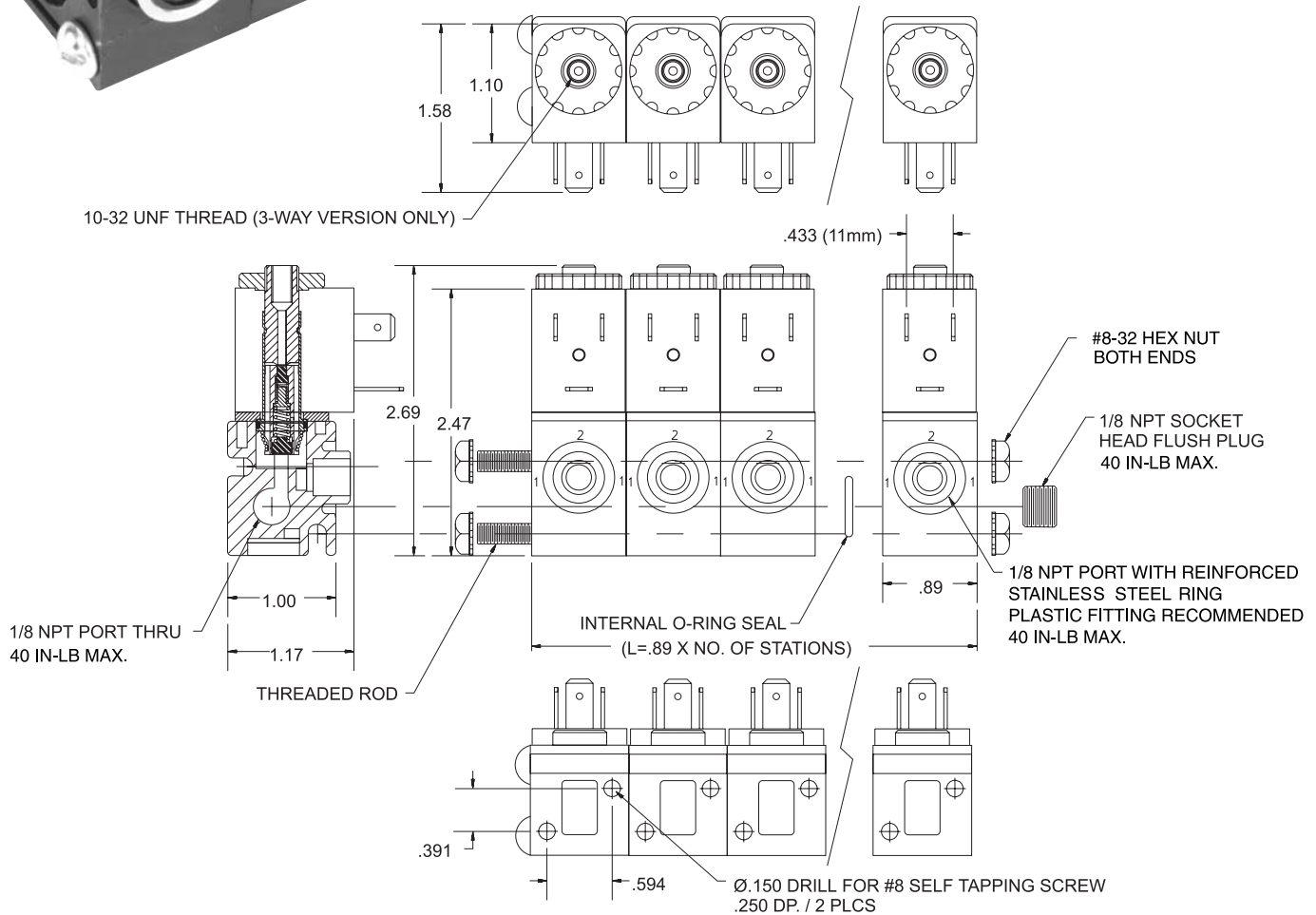
and build, mix and match to meet specifications. In most cases the Series 3953 reduces inventory costs and lowers cost per installation over conventional manifold valve series. The coils are available with DIN quick connect pin out or flying leads.

## Dimensional Data



## Features

- Chemical compatibility
- Direct poppet actuation
- Composite valve body
- Available 2 or 3-way
- Stock components to build desired number of outlets reduces inventory costs
- Vacuum holding & flow applications
- Pressure to 270 psi
- DIN spades or flying leads
- Single inlet with multiple outlets (3/2 NC only)



## Technical Data

**Function:** 2-way, 2 position and 3-way, 2 position  
direct acting, normally closed

**Port Sizes:** 1/8" NPT

**Orifice Sizes/  
Flow Factor:**  
0.6 mm / .025 Cv  
1.0 mm / .05 Cv  
1.2 mm / .065 Cv  
1.5 mm / .08 Cv  
2.0 mm / .17 Cv  
2.4 mm / .24 Cv  
3.0 mm / .31 Cv

F U N C T I O N	ORIFICE SIZE / VOLTAGE													
	0.6 mm		1.0 mm		1.2 mm		1.5 mm		2.0 mm		2.4 mm		3.0 mm	
	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC
2/2 NC	270	270	250	250	250	250	250	250	250	250	200	200	75	60
3/2 NC	250	250	200	200	180	180	160	150	N/A	N/A	N/A	N/A	N/A	N/A

MAX. PRESSURE RANGE

**Pressure Range:** 0-270 PSI (depending on orifice size and function)

**Temp. Range:** (Media 90°C max.) Ambient - 10 to +50°C

**Response Time:** 12-14 ms complete cycle

**Materials:**  
Operator: 400 Series Stainless and Brass (400 and 300 Stainless optional)  
Shading Ring: Copper  
Springs: 300 Series Stainless  
Seals: Viton standard (other materials available on request)  
Valve Body: DuPont Zytel FE 5105. FDA Approved

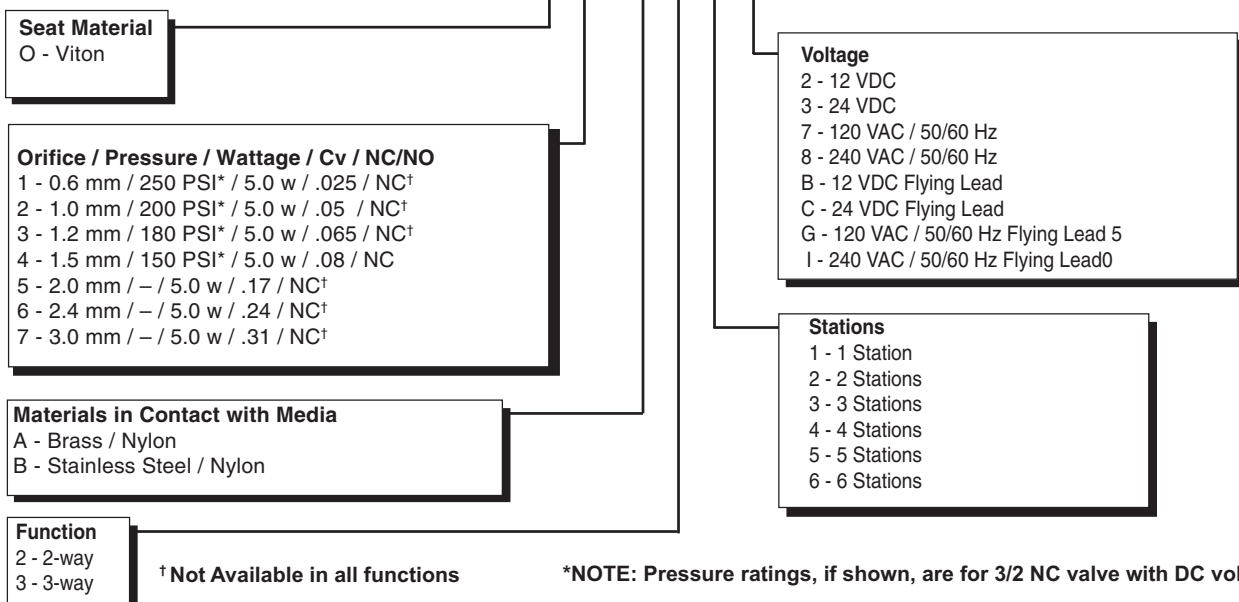
**Media:** Air, oil, inert gas, water, caustics, etc.

**Mounting:** Ø.150" drill, .250" deep for #8 self tapping screw

**Coil Data:** Glass filled nylon encapsulation (Class F, continuous duty)  
DIN spades (11 mm centers) or flying leads – 22 ga. wire w/PVC insulation – 18" long  
5 watt Standard (other wattages on request)  
All standard industrial voltages  
Voltage Tolerance: +/- 10%  
Connectors available for DIN Spades – see page bottom for part numbers.

## How To Order

3953 – O □ – □ □ □ □ □



† Not Available in all functions      \*NOTE: Pressure ratings, if shown, are for 3/2 NC valve with DC voltage

**Connectors for DIN Spades (11 mm centers):**  
P/N 122-09-N . . . . . Black housing - No LED  
P/N 122-09-T-A.1-Voltage . . . . . Transparent housing and LED

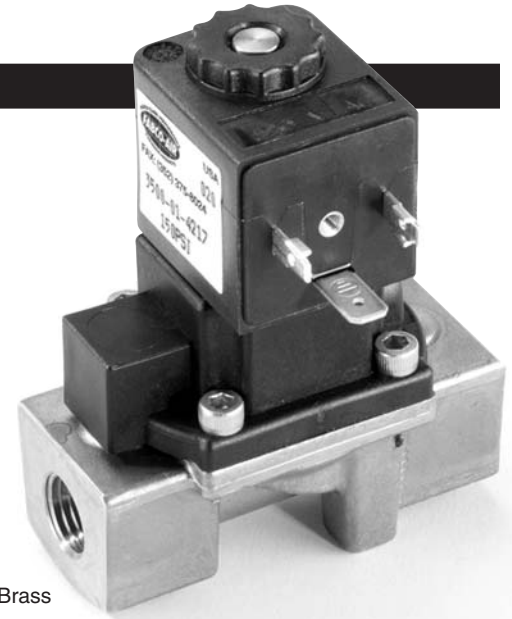
## 2-Way, 2-Position normally closed/open Process Solenoid Valves

The Series 3500 2-way, 2-position Solenoid valve uses the latest combinations of technologies for materials and function which provide the user with the highest quality, smallest size per Cv of flow and most competitive pricing of any valve on the market. The 3500 utilizes the latest injection molding and forging technologies available which combined garner the highest quality yields of components. When coupled with the solenoid operator and used as a direct acting/pilot operated valve, the 3500 gives full flow throughout the pressure range starting

with an MOPD of zero psi. The forged body section gives strength and robustness to the valve and is available in 1/4", 3/8" and 1/2" NPT sizes. The orifice for all sizes is 12.5mm or 1/2". The molded pilot section features a push non-locking manual override, high cycle life solenoid parts and quick connect DIN 43650 "A" electrical connection. Typical applications include air control, inert gas control, water, inert fluids, condensate drainage, hot water plumbing and sprinkler systems.

### Technical Data

<b>Function:</b>	2-way, 2 position normally closed internal pilot diaphragm	
<b>Port Sizes:</b>	1/4", 3/8", 1/2" NPT	
<b>Orifice Sizes:</b>	1/2"	
<b>Pressure Range:</b>	0 to 230 PSI 1/4" to 1/2" NPT (Valve requires 1.5 PSI differential to fully open.)	
<b>Flow Factors:</b>	1/4" NPT 1.55 Cv 3/8" NPT 1.95 Cv 1/2" NPT 2.45 Cv	
<b>Temperature Range:</b>	(Fluid max. 90°C) Ambient -10° to +80°C	
<b>Response Time:</b>	20 to 80 ms complete cycle	
<b>Materials:</b>	Operator:	AISI 400 and 300 Series Stainless Steel or Brass
	Shading Ring:	Copper (Silver on request)
	Seal:	Viton standard (Nitrile, EPDM optional)
	Diaphragm:	Viton standard (Nitrile, EPDM optional)
	Valve Body:	Forged brass & glass filled Nylon
<b>Manual Override:</b>	Push non-locking	
<b>Media:</b>	Air, oil, water, emulsion, inert gases	
<b>Coil Data:</b>	Glass filled nylon encapsulation (Class F, continuous duty) 10 watt VDC, 8 watt VAC. All standard industrial voltages. Voltage tolerance: +/- 10% Connectors available for ISO "C-Tab" Spades – see next page for part numbers.	

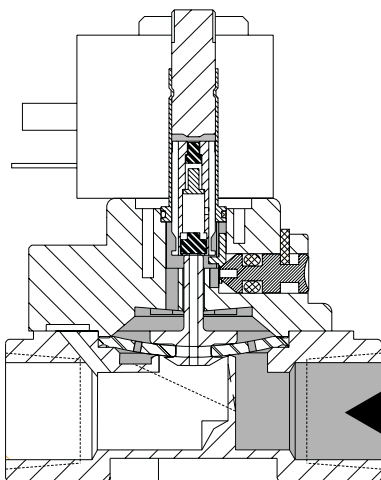


FUNCTION	VOLTAGE	
	AC	DC
	2/2 NC	230
2/2 NO	185	150

MAX. PRESSURE RANGE

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### Principle of Operation

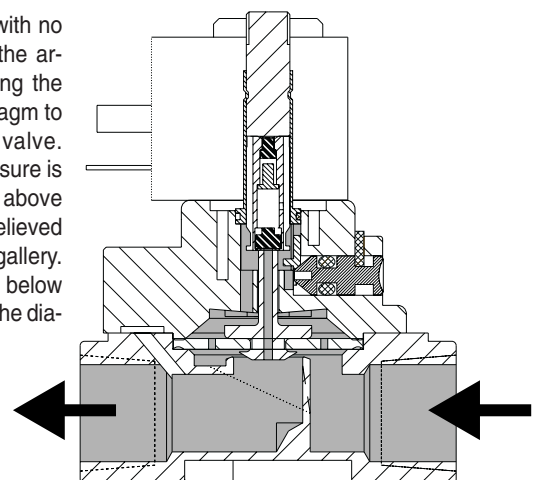


#### Closed Position

With no supply pressure and the valve de-energized, spring force from the armature holds the valve closed. As the supply pressure is increased, pressure builds up on top of the diaphragm via the bleed hole. This force, acting on the larger effective area, holds the valve closed (in conjunction with the armature spring).

#### Open Position

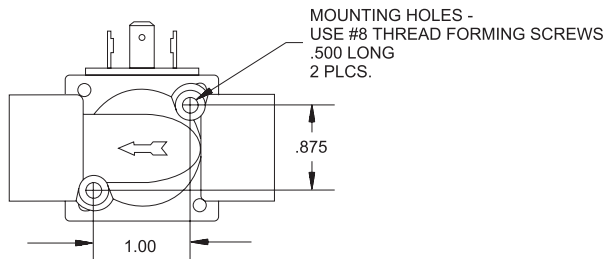
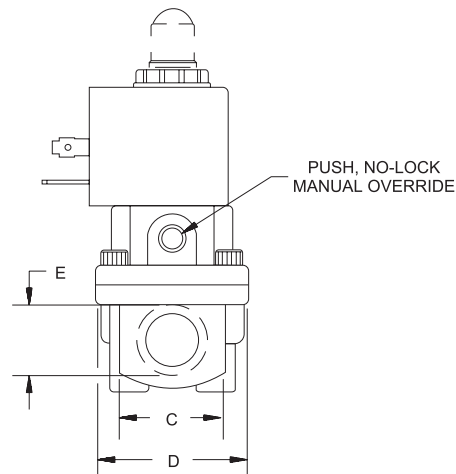
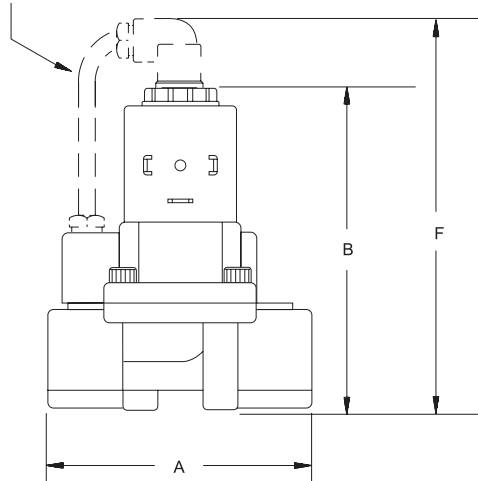
When energized with no supply pressure, the armature lifts allowing the pre-loaded diaphragm to lift, opening the valve. When supply pressure is applied, pressure above the diaphragm is relieved via the open pilot gallery. The fluid pressure below assists in holding the diaphragm open.





## Dimensional Data

TUBE AND FITTING INSTALLED  
WITH NORMALLY OPEN VERSION ONLY



DIMENSIONAL TABLE	
Ports	1/4" - 3/8" - 1/2"
A	2.75"
B	3.50"
C	1.10"
D	1.50"
E	1/4" - 3/8" - 1/2" NPT
F	4.45"

## How To Order

3500 -   - 42

**Function**  
0 - 2-way, Normally Closed  
1 - 2-way, Normally Open

**Seal Material**  
1 - Viton  
2 - Buna N / Nitrile  
3 - EPDM

**Port Size / Orifice / Pressure / Cv**  
1 - 1/4" NPT / 1/2" / 0 to 230 PSI / 1.550  
2 - 3/8" NPT / 1/2" / 0 to 230 PSI / 1.95  
3 - 1/2" NPT / 1/2" / 0 to 230 PSI / 2.45

**Voltage**  
1 - 6 VDC  
2 - 12 VDC  
3 - 24 VDC  
4 - 120 VDC  
5 - 12 VAC / 50/60 Hz  
6 - 24 VAC / 50/60 Hz  
7 - 120 VAC / 50/60 Hz  
8 - 240 VAC / 50/60 Hz

**Replacement Diaphragm Kit**  
Includes Diaphragm, Spring & Brass Insert

Specify Part Number		
	Norm. Closed	Norm. Open
Viton	3500-01-0001	3500-01-0003
Buna N / Nitrile	3500-B1-0001	3500-B1-0003
EPDM	3500-E1-0001	3500-E1-0003

**Order Example:** 3500-01-423-7  
2-way, normally closed, 1/2" NPT,  
120 VAC / 50/60 Hz, 0 to 230 psi

**Connector for ISO "C-Tab" Spades:**  
P/N 5100-1080000 . . . . . Black housing - No LED

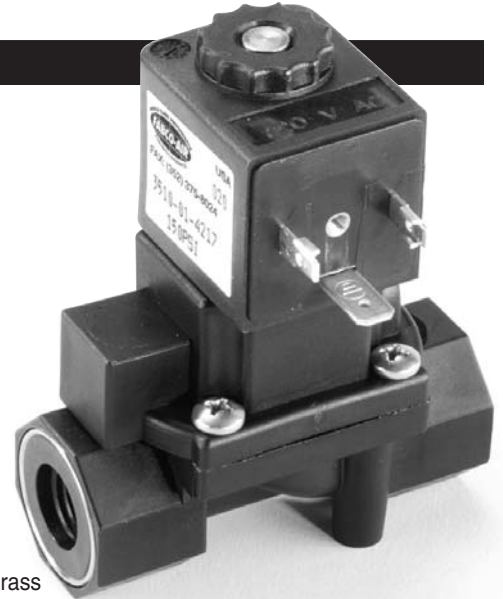
## 2-Way, 2-Position Process Composite Solenoid Valves

The Series 3510 2-way, 2-position Solenoid valve uses the latest technologies for materials and function which provide the user with the highest quality, smallest size per Cv of flow and most competitive pricing of any valve on the market. The 3510 utilizes the latest injection molding technologies available which make the 3510 compatible with many fluids and other media. When coupled with the solenoid operator and used as a direct acting/pilot operated valve, the 3510 gives full flow throughout the pressure range starting with an MOPD of zero

psi. The polymer body section is available in 1/4", 3/8" and 1/2" NPT sizes and features a stainless steel anti-flex ring for port strength. The orifice for all sizes is 12.5mm or 1/2". The molded pilot section features a push non-locking manual override, high cycle life solenoid parts and quick connect DIN 43650 "A" electrical connection. Typical applications include air control, inert gas control, potable water (NSF versions), condensate drainage, hot water plumbing and sprinkler systems.

### Technical Data

<b>Function:</b>	2-way, 2 position normally closed internal pilot diaphragm	
<b>Port Sizes:</b>	1/4", 3/8", 1/2" NPT	
<b>Orifice Sizes:</b>	1/2"	
<b>Pressure Range:</b>	0 to 150 PSI 1/4" to 1/2" NPT (Valve requires 1.5 PSI differential to fully open.)	
<b>Flow Factors:</b>	1/4" NPT 1.55 Cv 3/8" NPT 1.95 Cv 1/2" NPT 2.45 Cv	
<b>Temperature Range:</b>	(Fluid max. 90°C) Ambient -10° to +50°C	
<b>Response Time:</b>	20 to 80 ms complete cycle	
<b>Materials:</b>	Operator:	AISI 400 and 300 Series Stainless Steel or Brass
	Shading Ring:	Copper (Silver on request)
	Seal:	Viton standard (Nitrile, EPDM optional)
	Diaphragm:	Viton standard (Nitrile, EPDM optional)
	Valve Body:	DuPont Zytel® 77G33, glass filled nylon, NSF approved
<b>Manual Override:</b>	Push non-locking	
<b>Media:</b>	Air, oil, water, potable water, emulsion, inert gases	
<b>Coil Data:</b>	Glass filled nylon encapsulation (Class F, continuous duty) 10 watt VDC, 8 watt VAC. All standard industrial voltages. Voltage tolerance: +/- 10% Connectors available for ISO "C-Tab" Spades – see next page for part numbers.	

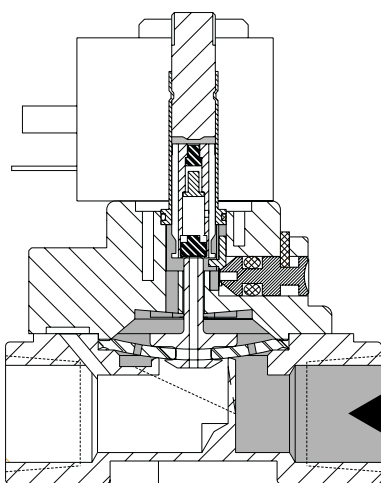


FUNCTION	VOLTAGE	
	AC	DC
	2/2 NC	150
2/2 NO	150	120

MAX. PRESSURE RANGE

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### Principle of Operation

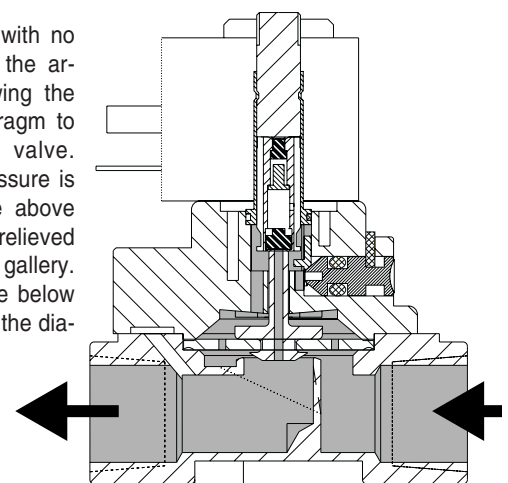


#### Closed Position

With no supply pressure and the valve de-energized, spring force from the armature holds the valve closed. As the supply pressure is increased, pressure builds up on top of the diaphragm via the bleed hole. This force, acting on the larger effective area, holds the valve closed (in conjunction with the armature spring).

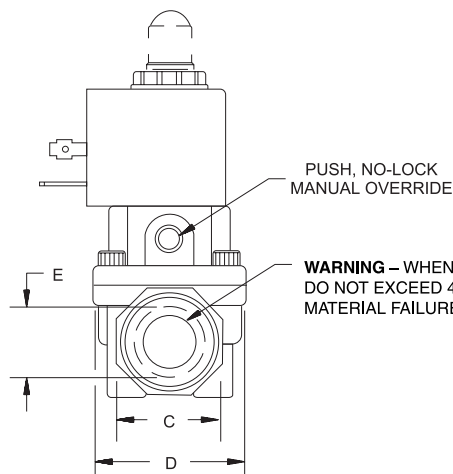
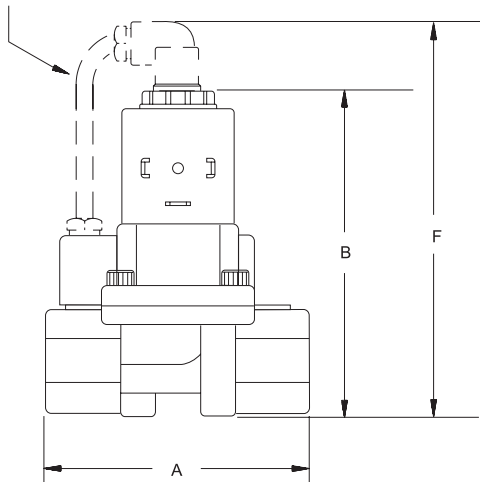
#### Open Position

When energized with no supply pressure, the armature lifts allowing the pre-loaded diaphragm to lift, opening the valve. When supply pressure is applied, pressure above the diaphragm is relieved via the open pilot gallery. The fluid pressure below assists in holding the diaphragm open.

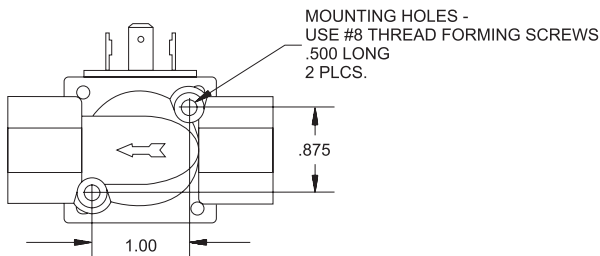


## Dimensional Data

TUBE AND FITTING INSTALLED  
WITH NORMALLY OPEN VERSION ONLY



**WARNING** – WHEN USING METAL FITTINGS  
DO NOT EXCEED 40 IN LBS TORQUE OR  
MATERIAL FAILURE CAN OCCUR.



DIMENSIONAL TABLE	
Ports	1/4" - 3/8" - 1/2"
A	2.75"
B	3.50"
C	1.10"
D	1.50"
E	1/4" - 3/8" - 1/2" NPT
F	4.45"

## How To Order

### Function

0 - 2-way, Normally Closed  
1 - 2-way, Normally Open

### Seal Material

1 - Viton  
2 - Buna N / Nitrile  
3 - EPDM

### Materials in Contact with Media

A - Brass / Nylon  
B - Stainless Steel / Nylon

3510 -   -  2

### Voltage

1 - 6 VDC  
2 - 12 VDC  
3 - 24 VDC  
4 - 120 VDC  
5 - 12 VAC / 50/60 Hz  
6 - 24 VAC / 50/60 Hz  
7 - 120 VAC / 50/60 Hz  
8 - 240 VAC / 50/60 Hz

### Port Size / Orifice / Pressure / Cv

1 - 1/4" NPT / 1/2" / 0 to 150 PSI / 1.55  
2 - 3/8" NPT / 1/2" / 0 to 150 PSI / 1.95  
3 - 1/2" NPT / 1/2" / 0 to 150 PSI / 2.45

**Order Example:** 3510-01-A23-7  
Zytel®, 2-way, normally closed, 1/2" NPT,  
120 VAC / 50/60 Hz, 0 to 150 psi

### Connector for ISO "C-Tab" Spades:

P/N 5100-1080000 . . . . . Black housing - No LED

### Replacement Diaphragm Kit

Includes Diaphragm, Spring & Brass Insert

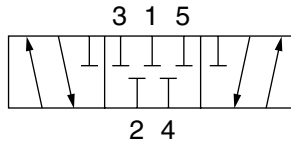
### Specify Part Number

	Norm. Closed	Norm. Open
Viton	3500-01-0001	3500-01-0003
Buna N / Nitrile	3500-B1-0001	3500-B1-0003
EPDM	3500-E1-0001	3500-E1-0003

## 1/4 NPT & 3/8 NPT Ported, Manual & Pilot Operated, & Solenoid Controlled Air Valves

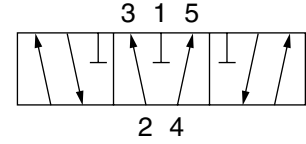
### New 5 Ported, 3-Position 4-Way Operation

## New Spools for 14 & 34 Series Air Valves



**4-Way - 5 Ported - 3 Position - Type B**  
"Blocked"

Center position - All ports blocked and isolated. Use on conventional block and hold circuits.



**4-Way - 5 Ported - 3 Position - Type F**  
"Float"

Center position - Inlet blocked  
Cylinders open to exhaust  
Used to vent both ends of cylinder to allow cylinder to float with a manual or machine movement. Flow controls or exhaust speed controls should not be used.

## 1/4 NPT & 3/8 NPT Ported, Pilot Operated Air Valves

### 5 Ported, 3-Position 4-Way Operation



Model 14-DPB Shown

#### Features

- Aluminum bar body
- Anodized black
- Honed and burnished bore
- Delrin spool, Pressure balanced
- Buna N seals
- May be used as either  
single inlet-dual exhaust or  
dual inlet-single exhaust
- Pre-lubed with Magnalube-G® grease

#### Operating Range

- Operating Pressure ..... 0 to 150 psi
- Minimum Pilot Pressure ..... 50 psi
- Temperature ..... 0° to 180°F
- Cv = 1.0 (56.2 SCFM free flow to atmosphere @ 80 psi supply)

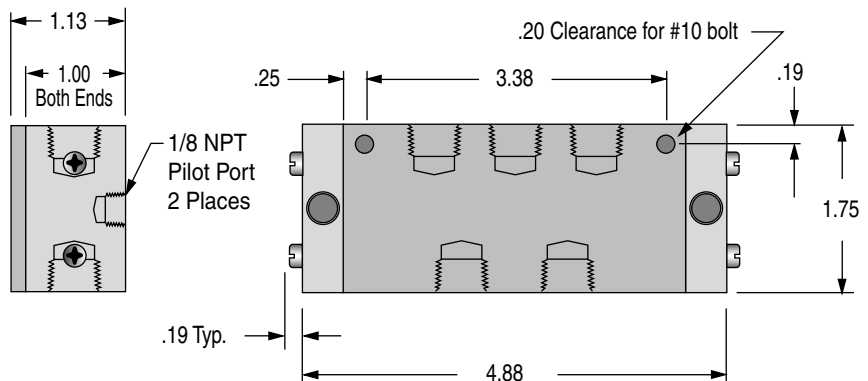
#### Options

Viton Seals, Specify Option -V

#### Model Number Guide: 3-Position, Pilot Operated

Spool Type	Spring Centered Spool		Replacement Spool and Seals
	1/4 NPT Ports	3/8 NPT Ports	
B Spool	14 DPB	34DPB	1400-904B
F Spool	14DPF	34DPF	1400-904F

#### Valve Dimensions



## 1/4 NPT & 3/8 NPT Ported, Hand Lever Operated Air Valves

### 5 Ported, 3-Position 4-Way Operation



Model 14-HLF Shown

#### Features

**Hardened and plated steel shaft with unique connections results in positive shifting**

- Aluminum bar body
- Anodized black
- Honed and burnished bore
- Delrin spool, Pressure balanced
- Buna N seals
- May be used as either  
single inlet-dual exhaust or  
dual inlet-single exhaust
- Pre-lubed with Magnalube-G® grease

#### Operating Range

- Operating Pressure ..... 0 to 150 psi
- Temperature ..... 0° to 180°F
- Cv = 1.0 (56.2 SCFM free flow to atmosphere @ 80 psi supply)

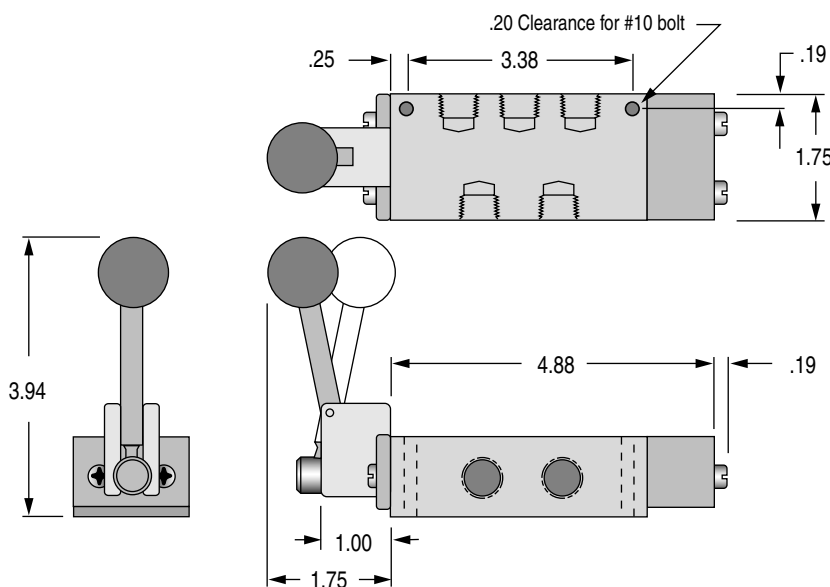
#### Options

Viton Seals, Specify Option -V

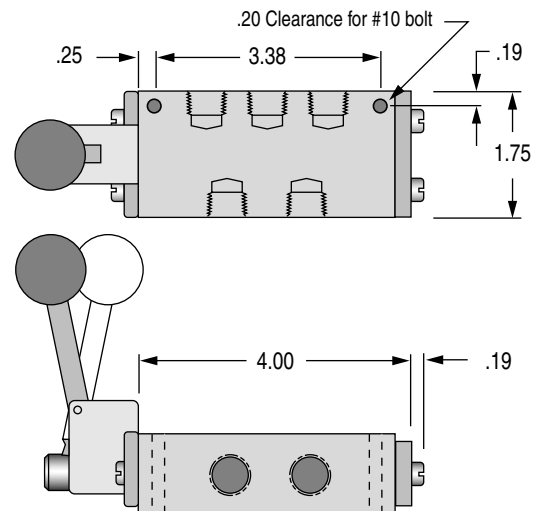
#### Model Number Guide: 3-Position, Hand Lever Operated

Spool Type	Spring Centered Spool		Replacement Spool & Seals	Detented Spool		Replacement Spool & Seals
	1/4 NPT Ports	3/8 NPT Ports		1/4 NPT Ports	3/8 NPT Ports	
B Spool	14HLSB	34HLSB	1400-934SB	14HLB	34HLB	1400-934B
F Spool	14HLSF	34HLSF	1400-934SF	14HLF	34HLF	1400-934F

#### Dimensions – Spring Centered Spool



#### Dimensions – Detented Spool



## 1/4 NPT & 3/8 NPT Ported, 53 Style Solenoid Controlled, Pilot Operated Air Valves

### 5 Ported, 3-Position 4-Way Operation



Model 14-FFB Shown

#### Features

- Aluminum bar body
- Anodized black
- Honed and burnished bore
- Delrin spool
- Buna N seals
- Cv = 1.0 (56.2 SCFM free flow to atmosphere @ 80 psi supply)
- Operation to 150 psi
- Pre-lubed with Magnalube-G® grease

#### Operating Range

- Internal Pilot Supply - Standard  
Inlet ..... 50 to 150 psi
- External Pilot Supply Option -X  
Inlet ..... 0 to 150 psi  
Pilot Supply ..... 50 to 150 psi

#### Ordering

Choose valve model number from table below, add option suffixes as required and specify voltage/hertz.

#### Model Number Guide: 4-Way, 3-Position, Spring Centered Double Solenoid Valves

Spool Type	Conduit Housing "C"		Grommet Housing "G"		Male Mini-DIN Housing "F"		Replacement Spool & Seals
	1/4 NPT Ports	3/8 NPT Ports	1/4 NPT Ports	3/8 NPT Ports	1/4 NPT Ports	3/8 NPT Ports	
B Spool	14-CCB	34-CCB	14-GGB	34-GGB	14-FFB	34-FFB	1400-904B
F Spool	14-CCF	34-CCF	14-GGF	34-GGF	14-FFF	34-FFF	1400-904F

#### Stocked 53 Style Coils, Housings

##### Conduit Housing "C" and Grommet Housing "G"

Non-molded – Class A 221°F (105°C) Rating  
– 24" Leads of AWG #18 Wire  
Stocked Voltages:  
24, 120 and 240 Volt at 50 or 60 Hertz  
6, 12 and 24 Volt DC  
Temperature Range: 0° to +180°F  
(–18° to +82.2°C) including ambient  
Typical response times:  
AC 4 to 8 milliseconds to open or close  
DC 9 to 15 milliseconds to open  
DC 5 to 12 milliseconds to close

##### Male Mini-DIN Housing "F"

Molded – Water tight  
Class A 221°F (105°C) Rating  
European (DIN) Style – 11 mm spacing for popular quick connectors.  
Can also be connected with individual .25" quick-connect terminals  
Stocked Voltages:  
24, 120 and 240 Volt at 50 or 60 Hertz  
12 and 24 Volt DC  
Temperature Range: 0° to +180°F  
(–18° to +82.2°C) including ambient  
Typical response times:  
AC 4 to 8 milliseconds to open or close  
DC 9 to 15 milliseconds to open  
DC 5 to 12 milliseconds to close

#### Options for 53 Style Solenoids

for Conduit Housing "C" and Grommet Housing "G"

- AC Voltages from 5.4 to 575 in 50 or 60 Hertz
- DC Voltages from 3 to 300
- Molded Coil, Option -M  
Water tight molded coil with Class A221°F (105°C) Rating. Coil completely molded in epoxy for maximum moisture resistance. NEMA 1, 2, and 3 when in Conduit "C" or Grommet "G" housing.
- Potted Coil Option -P  
Coil is epoxy potted into conduit for "C" housing only. It offers maximum moisture and vibration resistance. NEMA 3R, 3S, 4, 4X, 6, 11, 12, 13
- High temperature Option -H  
Molded coil with 356°F (180°C) rating
- Viton Seals Option -V (–15° to +400°F)
- Strain Relief Connector Option -Q
- "AN" Connector Option -W
- Splice Box Option -J
- Mounting Bracket Option -R
- Third Wire Ground Option -CC  
A CSA requirement

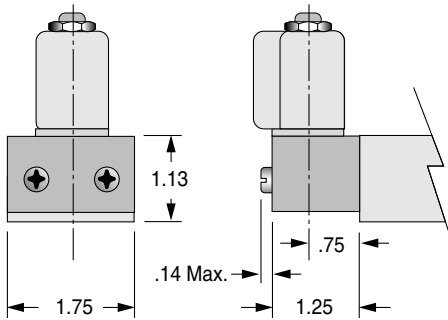
- Yoke with standard coil, Option -YB
- Yoke with molded coil, Option -YM
- Yoke with molded spade terminal coil, Option -KM  
Yoke replaces housing for protected and control box applications. Molded coil with two .25" spade terminals for quick assembly and disconnect.
- Explosion Proof Option -EP  
UL File #E37780  
CSA File #LR-26894 for hazardous locations includes molded coil  
UL Class I Groups C & D  
UL Class II Groups E, F & G  
NEMA 7C, 7D, 8C, 8D, 9E, 9F & 9G

#### Options for 53 Style Solenoids

for Male Mini-DIN Housing "F"

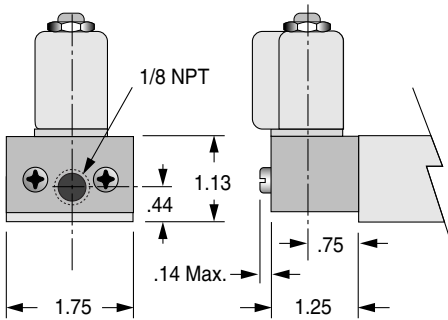
- Viton Seals Option -V (–15° to +400°F)

## 53 Style Solenoid Operators



### Standard 53 Style Operator

The solenoid operator is a 3-way NC valve which, upon receiving an electrical signal, directs pressure to shift the main valve spool. As standard, the operator is internally supplied with air pressure from the main valve inlet.

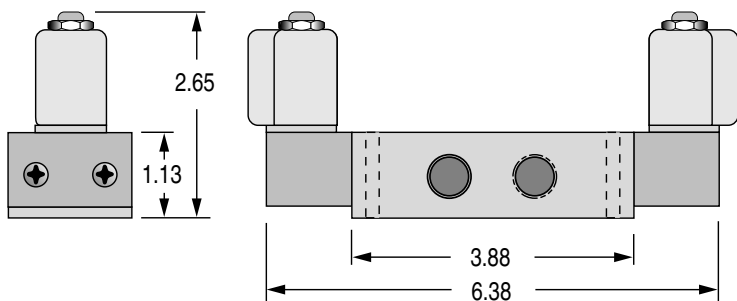
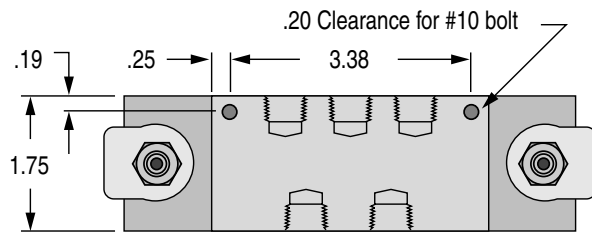


### 53 Style Operator with External Pilot Option -X

In the following listed applications, as well as many others, a proper air supply may not be available from the main valve inlet. For these applications, an external pilot supply port is available (Option -X). A proper air supply to this port then supplies the solenoid with air pressure for piloting the main valve spool.

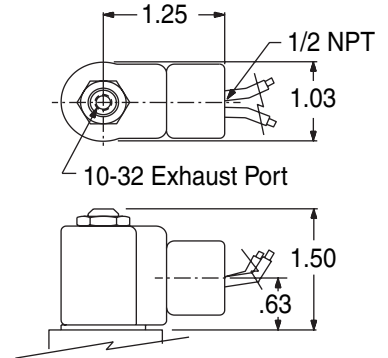
- Dual inlet, single exhaust
- Insufficient Pressure at main valve inlet
- Media at main valve inlet is other than air
- Extreme fast cycling

## Valve Dimensions



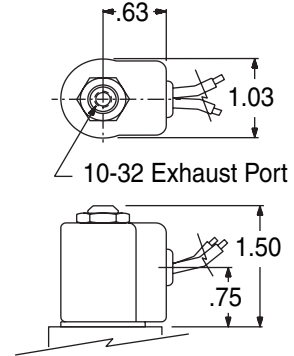
## Conduit Housing "C"

Housing can rotate 360°

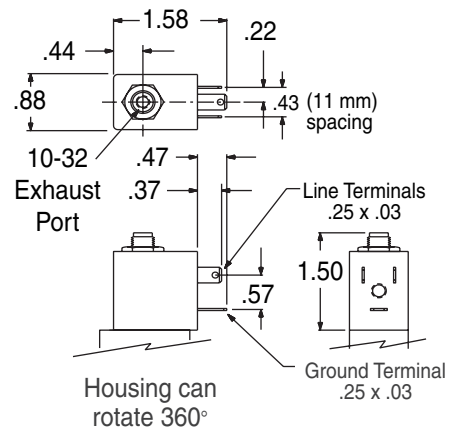


## Grommet Housing "G"

Housing can rotate 360°



## Male Mini-DIN Housing "F"

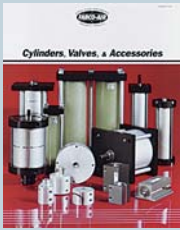


### Connectors for DIN Spades (11 mm centers):

P/N 122-09-N  
Black housing - No LED

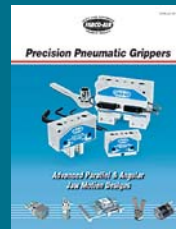
P/N 122-09-T-A.1-Voltage  
Transparent housing and LED

# Fabco-Air Product Catalog Library



**Cylinders, Valves & Accessories Cat. CV9**  
 Describes Pancake®, Square 1®, Longstroke™, Multi-Power®, and HiPower™, cylinder lines. Also details valves, air-over-oil tanks, boosters and accessories.

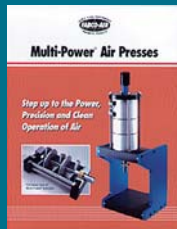
**See catalog #CV9 for other valve models not shown in this bulletin**



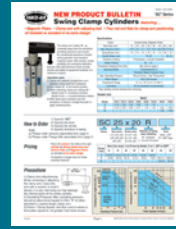
**Pneumatic Grippers Catalog GR-8**  
 • SPG & LPG parallel jaw motion with strokes from 1/4" to 24" & forces to 402 lbs. • GR & GS angular jaw styles with on-the-fly adjustment.



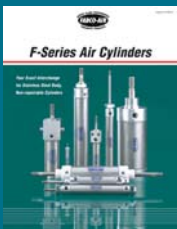
**New Linear Thrusters Bulletin GB-JA02**  
 Features longer strokes to 10" – and 4mm round profile sensors with surge suppression and polarity protection.



**Multi-Power® Air Presses Catalog FP16**  
 Details the powerful line of precision, force-multiplying air presses. Deliver forces to 11,000 pounds.



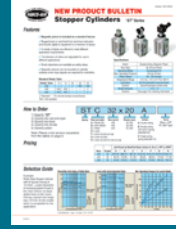
**Swing Clamps Bulletin #SC-DB04**  
 Clamp arm rotates 90° as it extends away from the workpiece. Features standard magnetic piston.



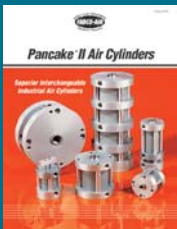
**Stainless Steel Body Air Cylinders Catalog SSB-03**  
 Exact interchange in bores from 5/16" to 3", strokes to 32". Popular options include magnetic piston, non-rotating, and position feedback.



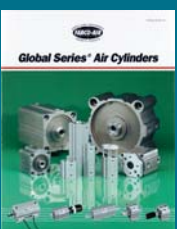
**Dual Function Slides Bulletin EDF-10**  
 Either of two slide styles (gantry or thruster) can be made from a single set of parts. Users can inventory less parts and assemble styles as needed.



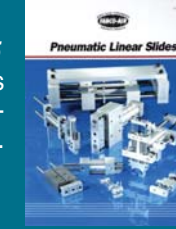
**Stopper Cylinders Bulletin #ST-DIX04**  
 Standard magnetic piston and a wide selection of styles. Roller direction is adjustable. Magnetic sensors can be mounted on body.



**Pancake® II Cylinders Catalog Pan2-2**  
 The direct industrial interchange. High strength composite cylinder barrel. 4 popular styles: Standard, Nonrotating, Multi-Power® and 3-position.



**Global Series™ Air Cylinders Cat. GC-15**  
 Widest choice of models and options. Features non-lube service to 150 psi. Bores 12mm to 100mm  
 • Strokes 5mm - 150mm  
 • NPT or Metric ports



**Linear Slides Catalog LS-03**  
 Line includes 6 families of slides, pick & place units, and thin parts placers. 5/16" to 4" bores. Guide shafts 1/4" to 1-1/2".



**NFPA Interchangeable Air Cylinders Catalog NF-6**  
 All the desirable NFPA mounts. Bores from 1-1/2" to 6"; strokes to 99". Aluminum or high strength composite cylinder body. Magnetic position sensing.