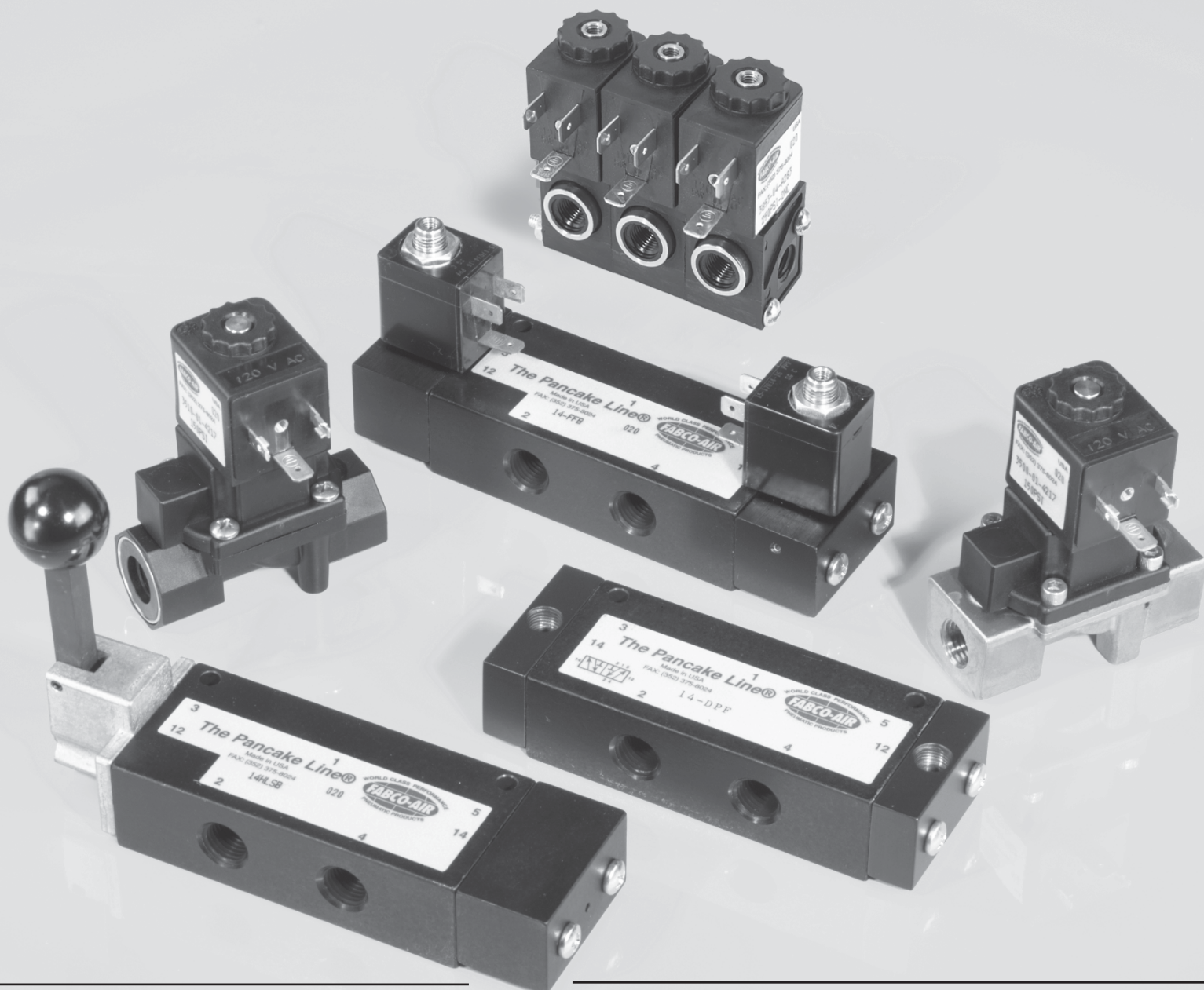




Specialty & Control Valves



Directional Control Valves

Composite Solenoid Valve, 2 & 3-Way
Normally Closed or Normally Open

Series 38MP

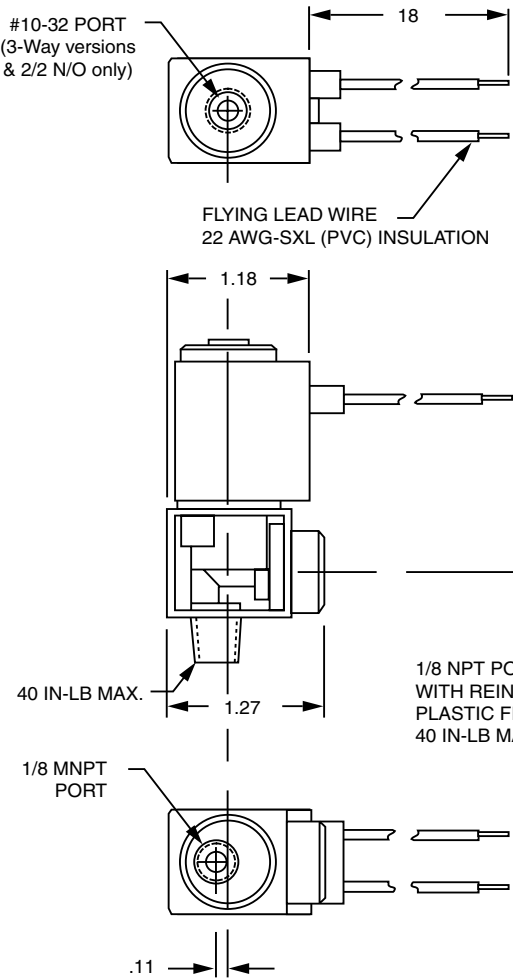
The Series 38MP is a 3 or 2 way, 2 position composite body solenoid valve designed to take the place of a fitting using a female inlet and male outlet port. The valve is generally mounted into an air cylinder port to control a single acting linear actuator. Component features include the proven solenoid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

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.

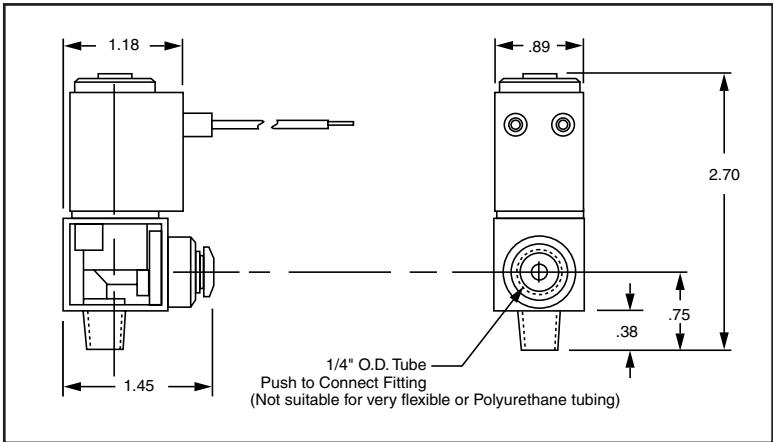
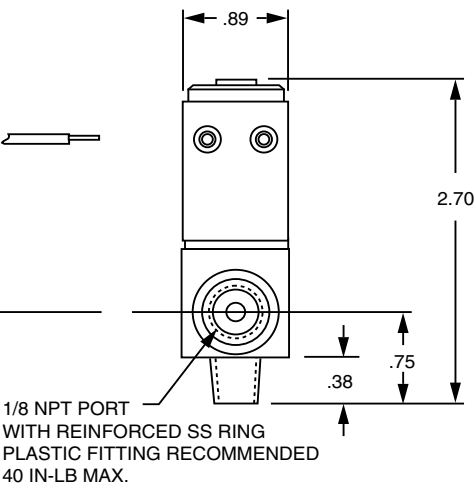
The DuPont Zytel FE 5015, FDA approved composite material is media compatible eliminating the need for stocking multiple body materials.

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	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

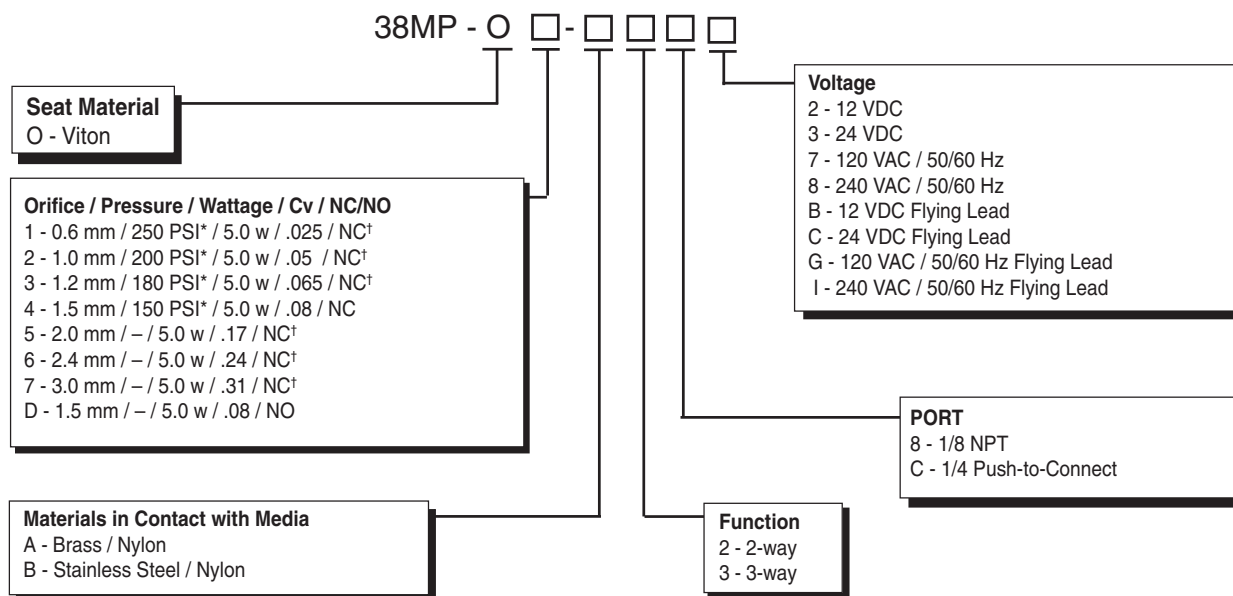
MAX. PRESSURE RANGE

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

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 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

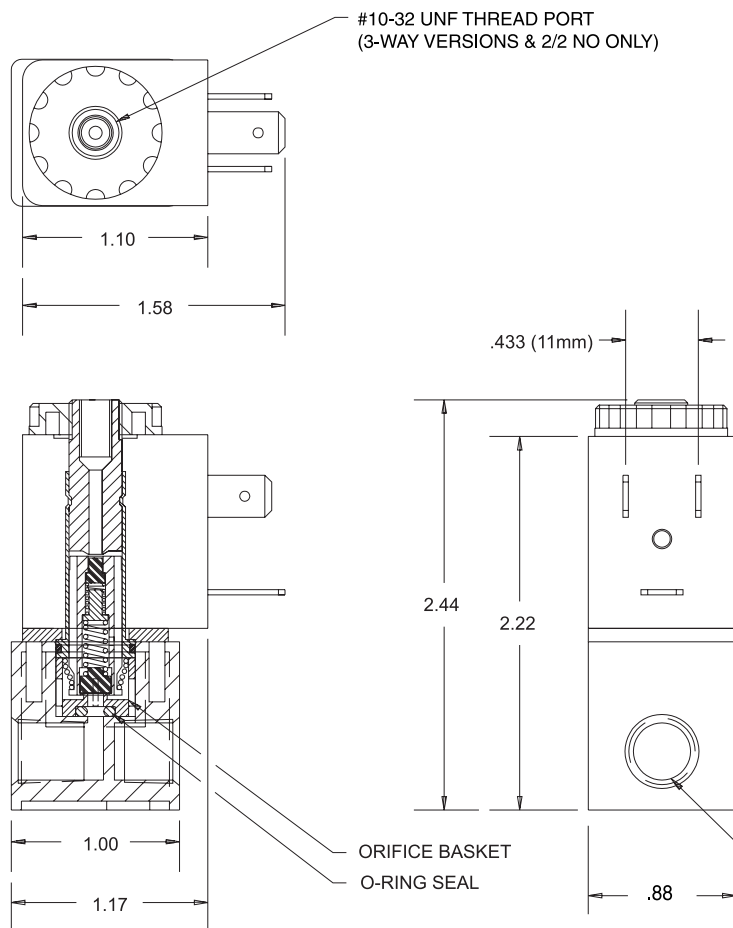
Directional Control Valves *Composite Solenoid Valve, 2 & 3-Way* **Series 3853** Normally Closed or Normally Open

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



- 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
	270	270	250	250	250	250	250	250	250	250	200	200	75	60
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 Normally Closed or Normally Open **Series 3853**

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:

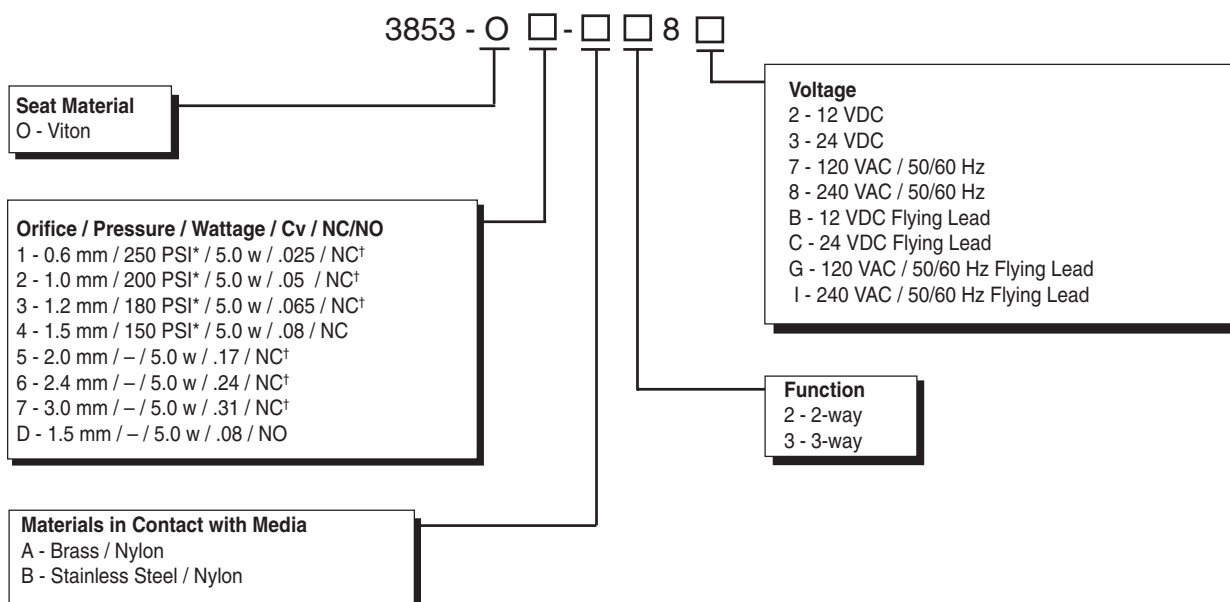
Operator:	400 Series Stainless and Brass standard (400 and 300 Stainless optional)
Shading Ring:	Copper
Springs:	300 Series Stainless
Seals:	Viton standard (other materials available on request)
Valve Body:	DuPont Zytel FE 5105. FDA Approved.

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

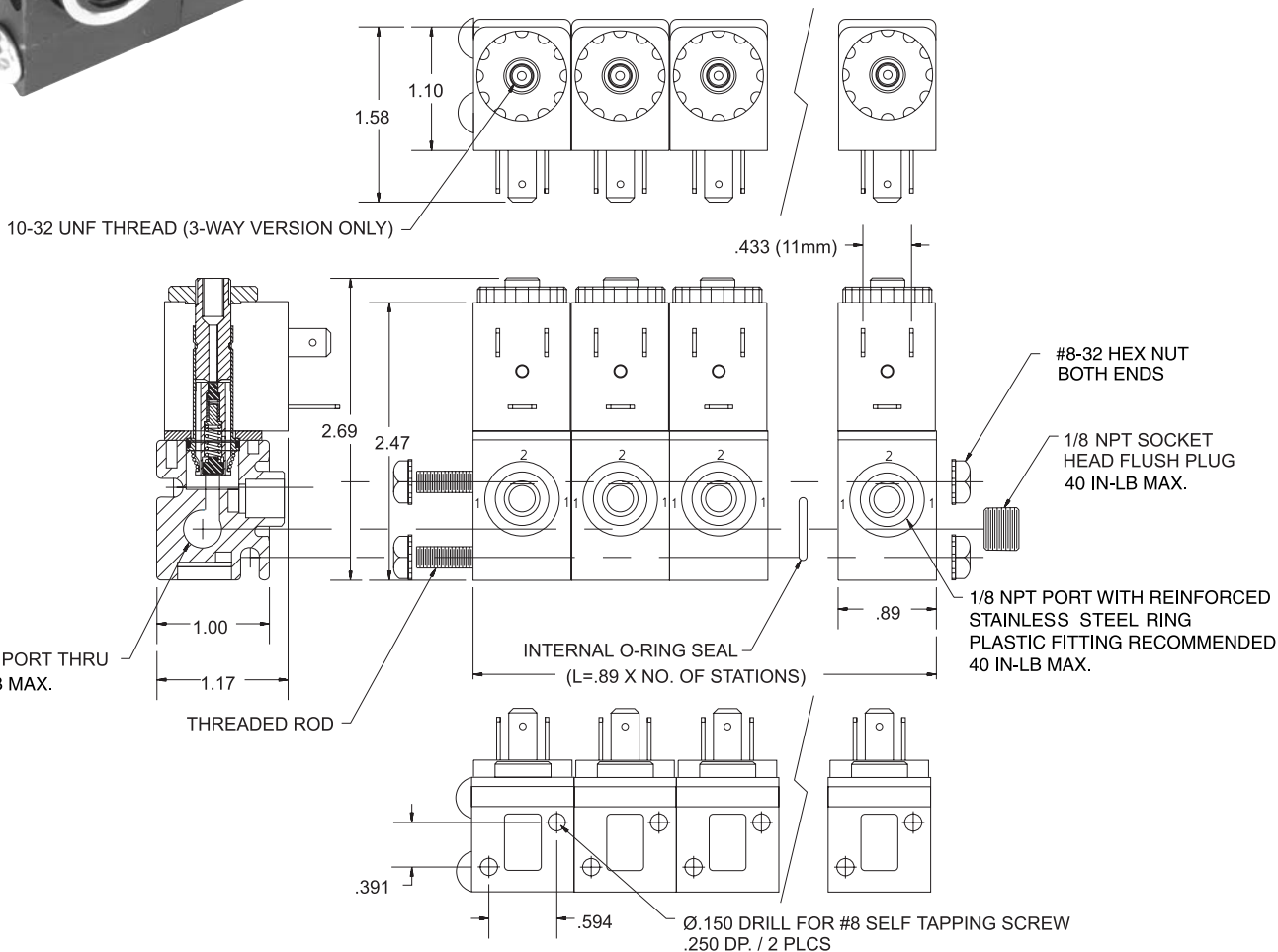
and build, mix and match to meet specifications. In most cases the Series 3953 reduces inventory costs and lowers cost per installation over conventional manifold valve series. The coils are available with DIN quick connect pin out or flying leads.

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

FUNCTION

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 □ – □ □ □ □

Seat Material
O - Viton

Orifice / Pressure / Wattage / Cv / NC/NO

1 - 0.6 mm / 250 PSI* / 5.0 w / .025 / NC†
2 - 1.0 mm / 200 PSI* / 5.0 w / .05 / NC†
3 - 1.2 mm / 180 PSI* / 5.0 w / .065 / NC†
4 - 1.5 mm / 150 PSI* / 5.0 w / .08 / NC
5 - 2.0 mm / – / 5.0 w / .17 / NC†
6 - 2.4 mm / – / 5.0 w / .24 / NC†
7 - 3.0 mm / – / 5.0 w / .31 / NC†

Materials in Contact with Media

A - Brass / Nylon
B - Stainless Steel / Nylon

Function

2 - 2-way
3 - 3-way

Voltage

2 - 12 VDC
3 - 24 VDC
7 - 120 VAC / 50/60 Hz
8 - 240 VAC / 50/60 Hz
B - 12 VDC Flying Lead
C - 24 VDC Flying Lead
G - 120 VAC / 50/60 Hz Flying Lead 5
I - 240 VAC / 50/60 Hz Flying Lead0

Stations

1 - 1 Station
2 - 2 Stations
3 - 3 Stations
4 - 4 Stations
5 - 5 Stations
6 - 6 Stations

† 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

Function:	2-way, 2 position normally closed internal pilot diaphragm		
Port Sizes:	1/4", 3/8", 1/2" NPT		
Orifice Sizes:	1/2"		
Pressure Range:	0 to 230 PSI 1/4" to 1/2" NPT (Valve requires 1.5 PSI differential to fully open.)		
Flow Factors:	1/4" NPT 1.55 Cv 3/8" NPT 1.95 Cv 1/2" NPT 2.45 Cv		
Temperature Range:	(Fluid max. 90°C) Ambient -10° to +80°C		
Response Time:	20 to 80 ms complete cycle		
Materials:	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	
Manual Override:	Push non-locking		
Media:	Air, oil, water, emulsion, inert gases		
Coil Data:	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		



F

U

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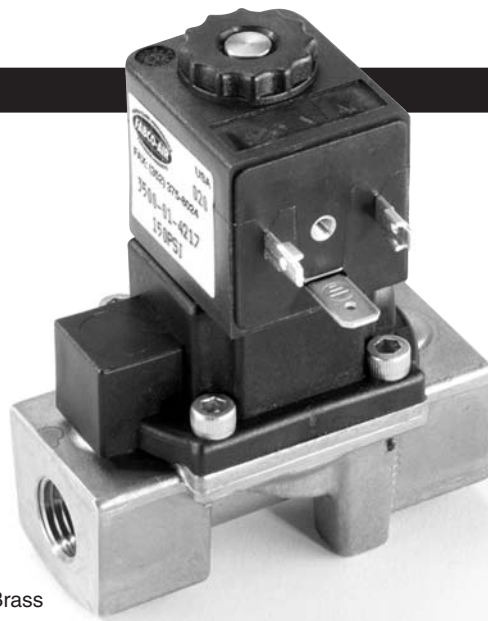
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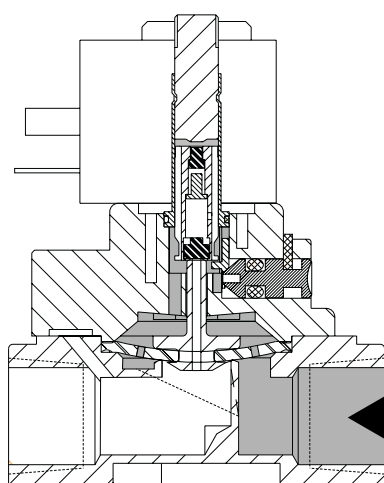


F U N C T I O N	VOLTAGE	
	AC	DC
	2/2 NC	230 150
	2/2 NO	185 150

MAX. PRESSURE RANGE

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Principle of Operation

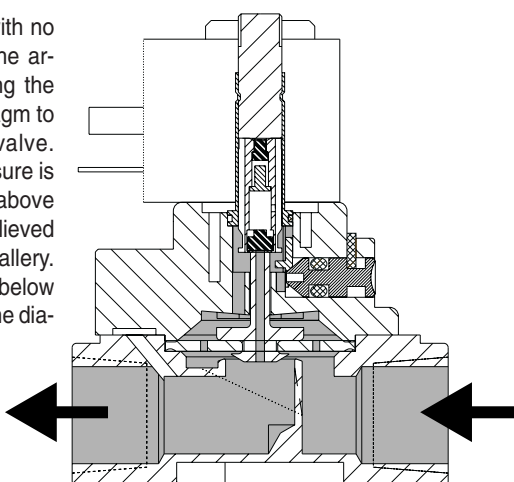


Closed Position

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).

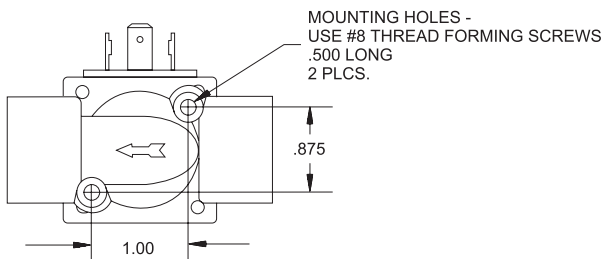
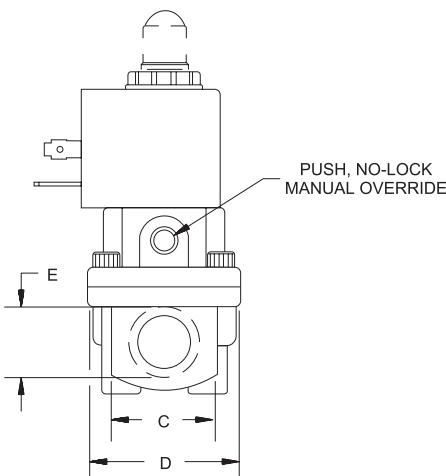
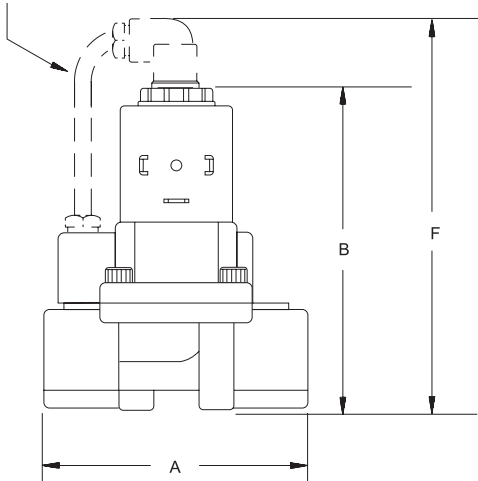
Open Position

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

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

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

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

Function:	2-way, 2 position normally closed internal pilot diaphragm	
Port Sizes:	1/4", 3/8", 1/2" NPT	
Orifice Sizes:	1/2"	
Pressure Range:	0 to 150 PSI 1/4" to 1/2" NPT (Valve requires 1.5 PSI differential to fully open.)	
Flow Factors:	1/4" NPT 1.55 Cv 3/8" NPT 1.95 Cv 1/2" NPT 2.45 Cv	
Temperature Range:	(Fluid max. 90°C) Ambient -10° to +50°C	
Response Time:	20 to 80 ms complete cycle	
Materials:	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
Manual Override:	Push non-locking	
Media:	Air, oil, water, potable water, emulsion, inert gases	
Coil Data:	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.	

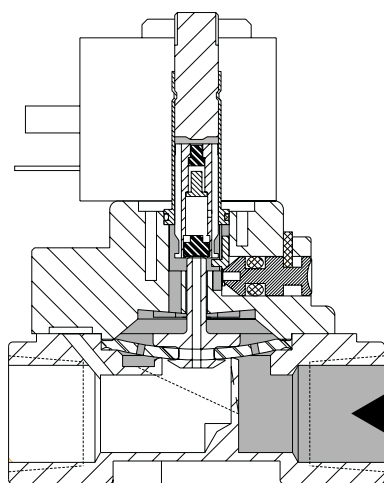


FUNCTION	VOLTAGE		
		AC	DC
	2/2 NC	150	150
	2/2 NO	150	120

MAX. PRESSURE RANGE

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Principle of Operation

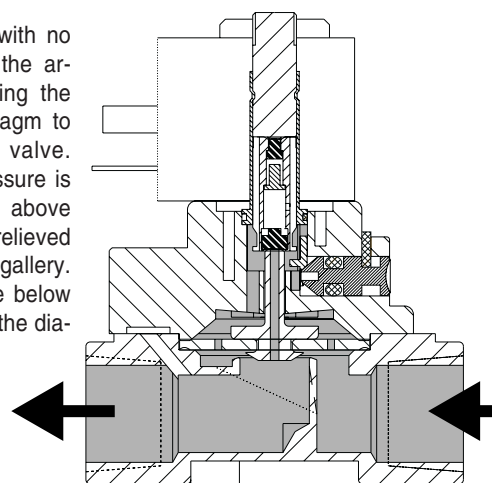


Closed Position

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).

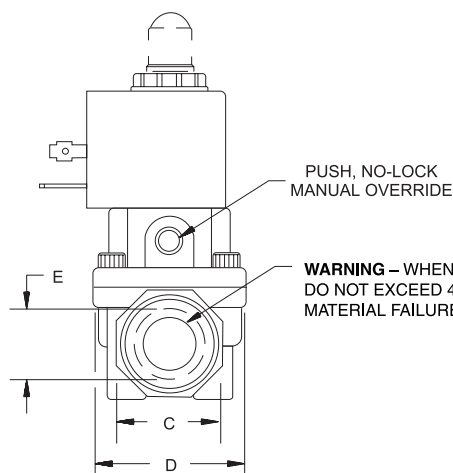
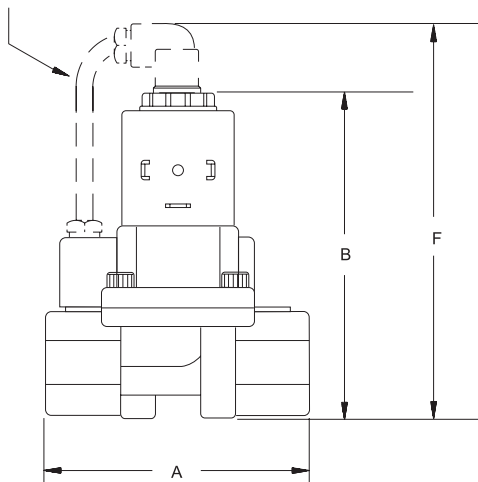
Open Position

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.

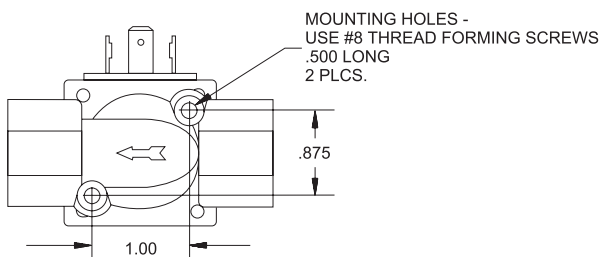


Dimensional Data

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

3510 - ☐ ☐ - ☐ 2 ☐ ☐

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

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

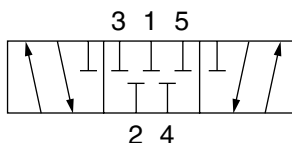
Specify Part Number

	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

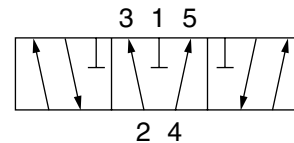
New 5 Ported, 3-Position 4-Way Operation

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)

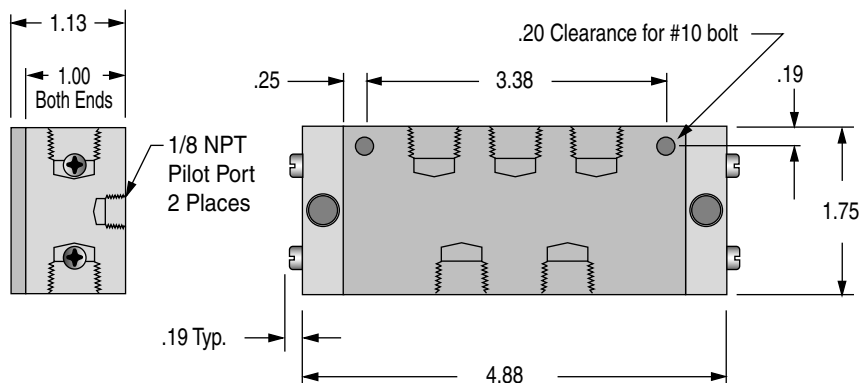
Options

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)

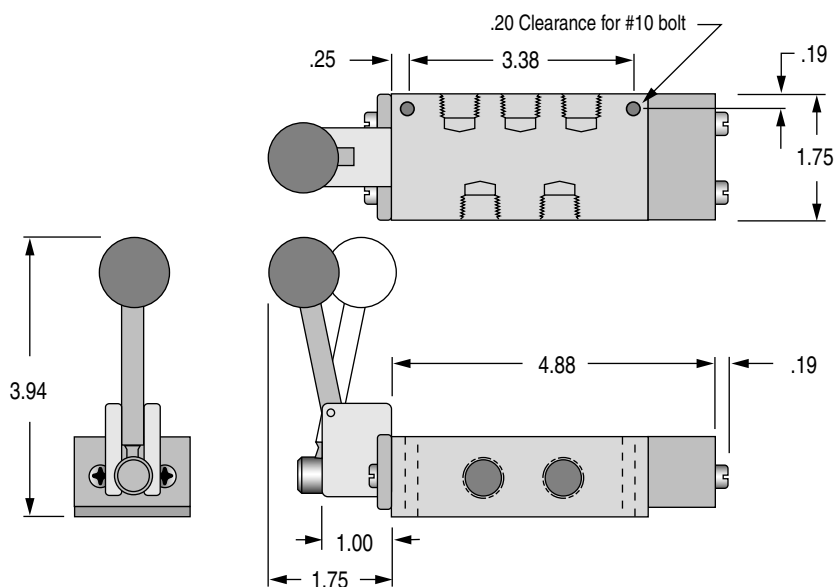
Options

Viton Seals, Specify Option -V

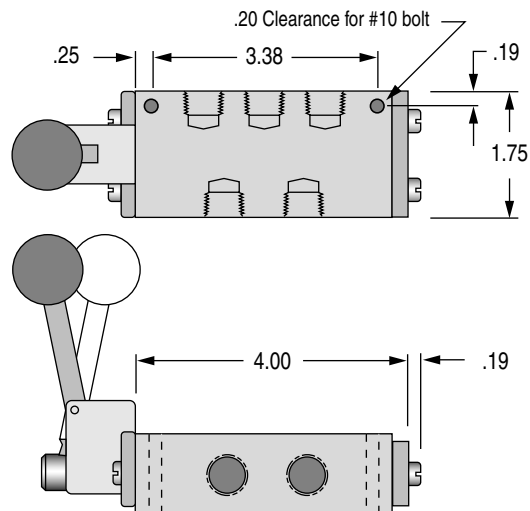
Model Number Guide: 3-Position, Hand Lever Operated

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

	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	
Spool Type							
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.

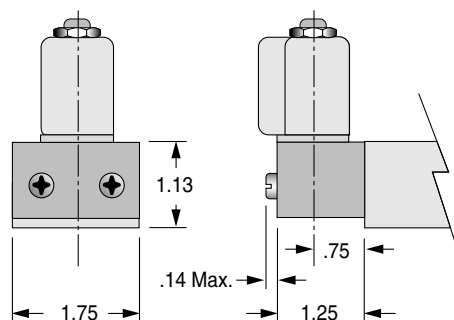
- Explosion Proof Option -EP
UL File #E37780
CSA File #LR-26894
for hazardous locations
includes molded coil
UL Class I Groups C & D
UL Class II Groups E, F & G
NEMA 7C, 7D, 8C, 8D, 9E, 9F & 9G

Options for 53 Style Solenoids

for Male Mini-DIN Housing "F"

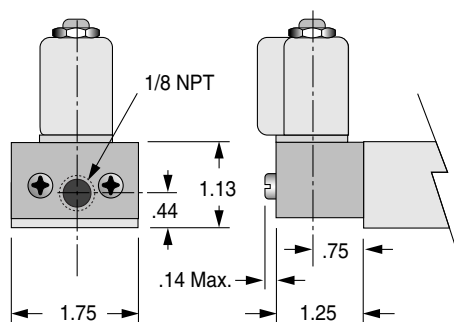
- Viton Seals Option -V (–15° to +400°F)

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.



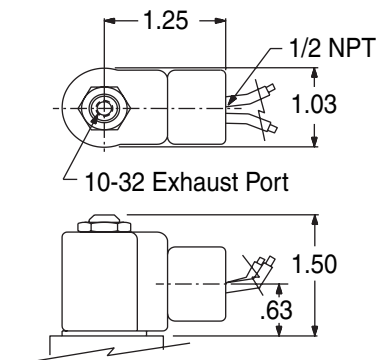
53 Style Operator with External Pilot Option -X

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

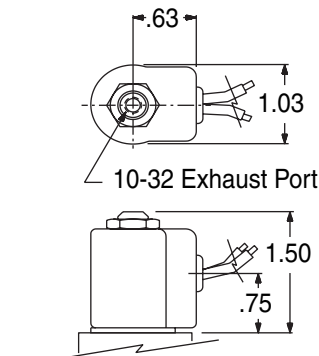
Conduit Housing "C"

Housing can rotate 360°

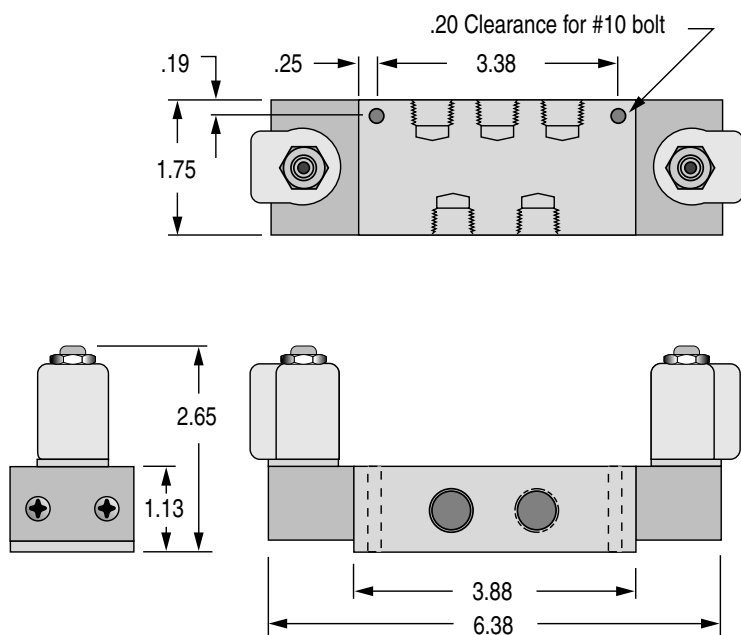


Grommet Housing "G"

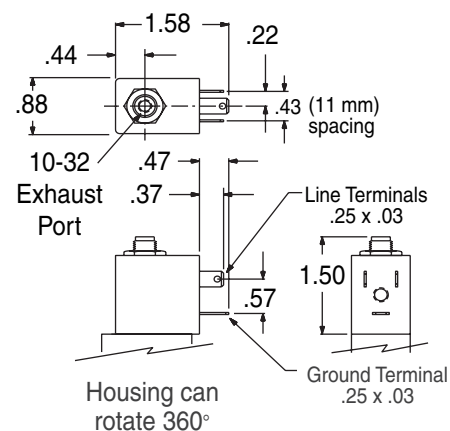
Housing can rotate 360°



Valve Dimensions



Male Mini-DIN Housing "F"

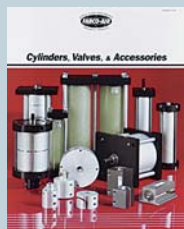


Connectors for DIN Spades (11 mm centers):

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

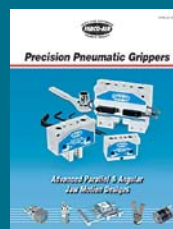
P/N 122-09-T-A.1-Voltage
Transparent housing and LED

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



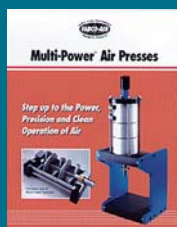
Pneumatic Grippers Catalog GR-8

• 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.



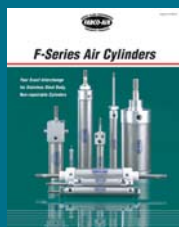
Multi-Power® Air Presses Catalog FP16

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 includes magnetic piston, non-rotating, and position feedback.



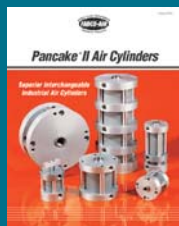
Dual Function Slides Bulletin EDF-10

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.



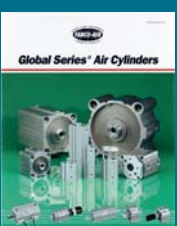
Stopper Cylinders Bulletin #ST-DIX04

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.