

# 3-Way Miniature

Direct Acting Valves  
1/8" NPT



3-Way

## General Description:

3-way Miniature Direct Acting valves are suitable for low to medium pressure applications that do not require a minimum operating pressure differential, for actuation. Available in normally open, normally closed, or universal operation. Tested to 20 million cycles under lab conditions. Standard with 303 stainless steel bodies and FKM seals.

### Installation

Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

### Standard Materials of Construction

Please refer to page B4.

### Compatible Fluids

Lubricated Air, Inert Gases, Water, Light Oil (300 SSU) and additional fluids compatible with materials of construction.

Use of non-lubricated gaseous media can affect valve life.

## Electrical Characteristics:

### Standard Voltages:

AC -24/60

120/60-110/50

240/60-220/50

DC -12, 24

For other voltages - consult factory



### Coil Classification:

Class F standard

Class H available

AC & DC coils are interchangeable on the same pressure vessel.

### Agency Approvals:

Standard valves with NEMA 4X are

C-UL-US listed and CSA certified.

For additional details, consult factory.

### Maximum Ambient Temperature

135°F (AC); 125°F (DC)

In the absence of moisture, applications as low as -20°F are possible.

Please refer to Page B4 for details.

## Applications:

- Single acting spring return cylinder control
- Selection or diversion of process media
- HVAC damper control
- Instrumentation
- Pneumatic positioning
- Automatic dispensing equipment
- Small compressors
- Water treatment
- Air dryers
- Medical & dental equipment
- Damper control



### 3-Way Miniature Direct Acting - Normally Closed - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>														
1/8	1/32	1/32	0.02	0.02	0	250	250	250	10	240	FKM	30CC02AV4	9	B1
1/8	3/64	3/64	0.05	0.05	0	200	200	200	10	240	FKM	30CC02EV4	9	B1
1/8	1/16	1/16	0.09	0.10	0	130	130	130	10	240	FKM	30CC02GV4	9	B1
1/8	5/64	5/64	0.15	0.14	0	90	90	90	10	240	FKM	30CC02JV4	9	B1
1/8	3/32	3/32	0.19	0.20	0	75	75	75	10	240	FKM	30CC02LV4	9	B1
1/8	7/64	3/32	0.25	0.20	0	50	50	50	10	240	FKM	30CC02MV4	9	B1
1/8	1/8	3/32	0.32	0.20	0	40	40	40	10	240	FKM	30CC02PV4	9	B1
1/8	5/32	3/32	0.38	0.20	0	25	25	25	10	240	FKM	30CC02QV4	9	B1

### DC TECHNICAL SPECIFICATIONS

1/8	1/32	1/32	0.02	0.02	0	250	250	250	8	240	FKM	30CC02AV4	9	B1
1/8	3/64	3/64	0.05	0.05	0	200	200	200	8	240	FKM	30CC02EV4	9	B1
1/8	1/16	1/16	0.09	0.10	0	130	130	130	8	240	FKM	30CC02GV4	9	B1
1/8	5/64	5/64	0.15	0.14	0	90	90	90	8	240	FKM	30CC02JV4	9	B1
1/8	3/32	3/32	0.19	0.20	0	75	75	75	8	240	FKM	30CC02LV4	9	B1
1/8	7/64	3/32	0.25	0.20	0	50	50	50	8	240	FKM	30CC02MV4	9	B1
1/8	1/8	3/32	0.32	0.20	0	40	40	40	8	240	FKM	30CC02PV4	9	B1
1/8	5/32	3/32	0.38	0.20	0	25	25	25	8	240	FKM	30CC02QV4	9	B1

### 3-Way Miniature Direct Acting - Normally Open - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>														
1/8	1/32	1/32	0.02	0.02	0	375	375	375	10	240	FKM	30CF02AV4	9	B1
1/8	3/64	3/64	0.05	0.05	0	230	230	230	10	240	FKM	30CF02EV4	9	B1
1/8	1/16	1/16	0.10	0.09	0	150	150	150	10	240	FKM	30CF02GV4	9	B1
1/8	5/64	5/64	0.14	0.15	0	105	105	105	10	240	FKM	30CF02JV4	9	B1
1/8	3/32	3/32	0.20	0.19	0	80	80	80	10	240	FKM	30CF02LV4	9	B1
<b>DC TECHNICAL SPECIFICATIONS</b>														
1/8	1/32	1/32	0.02	0.02	0	375	375	375	8	240	FKM	30CF02AV4	9	B1
1/8	3/64	3/64	0.05	0.05	0	230	230	230	8	240	FKM	30CF02EV4	9	B1
1/8	1/16	1/16	0.10	0.09	0	150	150	150	8	240	FKM	30CF02GV4	9	B1
1/8	5/64	5/64	0.14	0.15	0	105	105	105	8	240	FKM	30CF02JV4	9	B1
1/8	3/32	3/32	0.20	0.19	0	80	80	80	8	240	FKM	30CF02LV4	9	B1



3-Way

### 3-Way Miniature Direct Acting - Universal - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	NC	NO	NC	NO	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

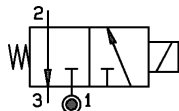
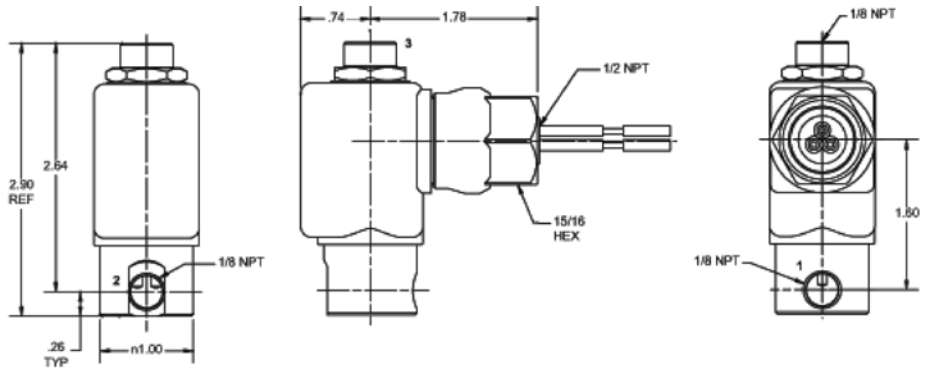
#### AC TECHNICAL SPECIFICATIONS

1/8	1/32	1/32	0.02	0.02	0	200	200	200	10	240	FKM	30CU02AV4	9	B1
1/8	3/64	3/64	0.05	0.05	0	150	150	150	10	240	FKM	30CU02EV4	9	B1
1/8	1/16	1/16	0.09	0.10	0	100	100	100	10	240	FKM	30CU02GV4	9	B1
1/8	5/64	5/64	0.15	0.14	0	70	70	70	10	240	FKM	30CU02JV4	9	B1
1/8	3/32	3/32	0.19	0.20	0	50	50	50	10	240	FKM	30CU02LV4	9	B1
1/8	7/64	3/32	0.25	0.20	0	40	40	40	10	240	FKM	30CU02MV4	9	B1
1/8	1/8	3/32	0.32	0.20	0	30	30	30	10	240	FKM	30CU02PV4	9	B1
1/8	5/32	3/32	0.38	0.20	0	20	20	20	10	240	FKM	30CU02QV4	9	B1

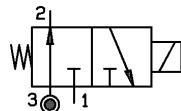
#### DC TECHNICAL SPECIFICATIONS

1/8	1/32	1/32	0.02	0.02	0	200	200	200	8	240	FKM	30CU02AV4	9	B1
1/8	3/64	3/64	0.05	0.05	0	150	150	150	8	240	FKM	30CU02EV4	9	B1
1/8	1/16	1/16	0.09	0.10	0	100	100	100	8	240	FKM	30CU02GV4	9	B1
1/8	5/64	5/64	0.15	0.14	0	70	70	70	8	240	FKM	30CU02JV4	9	B1
1/8	3/32	3/32	0.19	0.20	0	50	50	50	8	240	FKM	30CU02LV4	9	B1
1/8	7/64	3/32	0.25	0.20	0	40	40	40	8	240	FKM	30CU02MV4	9	B1
1/8	1/8	3/32	0.32	0.20	0	30	30	30	8	240	FKM	30CU02PV4	9	B1
1/8	5/32	3/32	0.38	0.20	0	20	20	20	8	240	FKM	30CU02QV4	9	B1

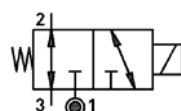
### Valve Reference B1



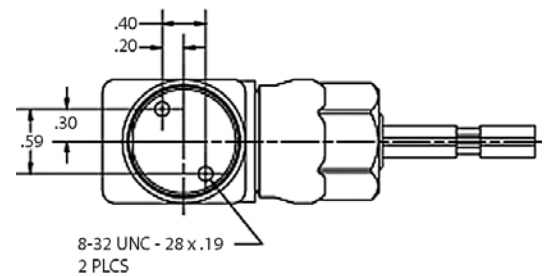
3-Way Normally Closed  
30CCxx  
Port Identification:  
Press - 1/CYL - 2/EXH - 3



3-Way Normally Open  
30CFxx  
Port Identification:  
Press - 3/ CYL - 2/EXH - 1



3-Way Universal  
30CUxx  
Port Identification:  
Pressure can be applied at either port.



### 3-Way Miniature Direct Acting Materials of Construction\*\*

Product*	Watt	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
30CC02	10 (AC)	3WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	135°F
30CC02	8 (DC)	3WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	125°F
30CF02	10 (AC)	3WNO	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	135°F
30CF02	8 (DC)	3WNO	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	125°F
30CU02	10 (AC)	3WU	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	135°F
30CU02	8 (DC)	3WU	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	125°F

\* Shows the first 6 digits of the pressure vessel part number.

\*\* Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

3-Way

Check out the 2-Way and 3-Way Manifold Mounted Miniature Cartridge valves in the Specialty Section of this catalog.



### Product Features:

- Space saving approach
- Cartridge valves are 100% tested
- Less manifold machining equals lower manifold cost
- No loose parts: sleeve, plunger, spring and orifice are pressed together as one unit
- No manifold orifices to machine or press in
- Available with all coils/enclosures from Chart 9 in the Coil Section of this catalog
- Easy to assemble & disassemble with a 5/32" hex wrench (Torque = 25-35 in-lbs)



# 3-Way

Direct Acting Valves  
1/8" - 1/4" NPT



3-Way

## General Description:

3-way Direct Acting valves are suitable for low to medium pressure applications that do not require a minimum operating pressure differential. Available in normally open, normally closed and universal operation.

### Installation

Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

### Standard Materials of Construction

Please refer to page B23.

### Compatible Fluids

Lubricated Air, Inert Gases, Water, Light Oil (300 SSU) and additional fluids compatible with materials of construction.

Use of non-lubricated gaseous media can affect valve life.

## Electrical Characteristics:

### Standard Voltages:

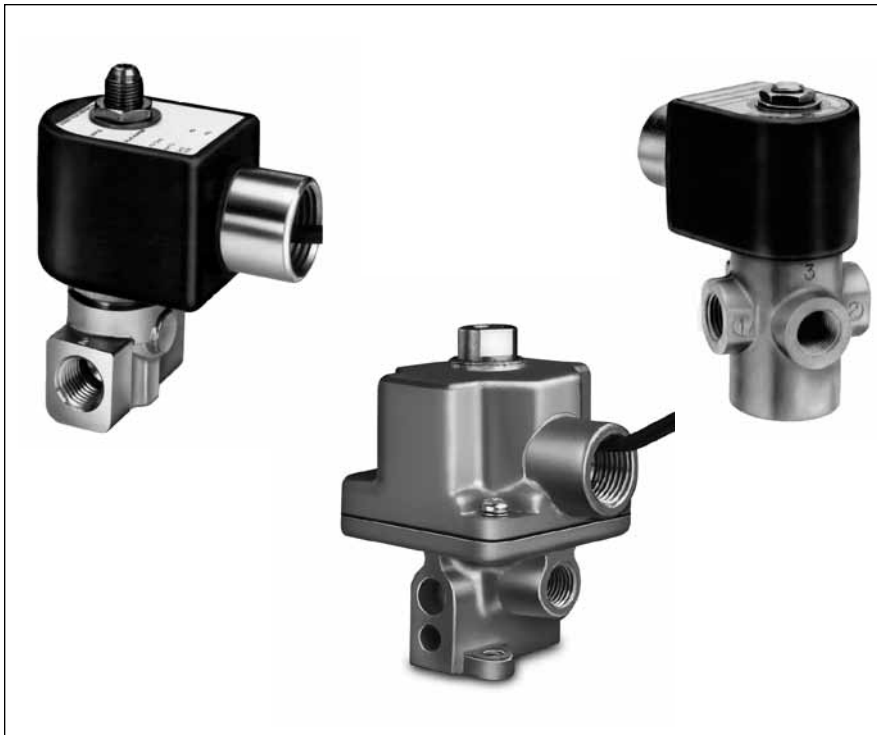
AC - 24/60

120/60-110/50

240/60-220/50

DC - 12, 24 & 120

For other Voltages - Consult Factory



### Coil Classification:

Class F Standard, Class H Available  
Class B Coils (Std. on A-Series Valves)

### Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified. For additional details, consult factory.

SIL-3 Capable (Models 7131Txx, 7132Txx, 7133Txx). See Certificate in Technical Section Page F19.

### Maximum Ambient Temperature

167°F

Please refer to Page B23 for details.

## Applications:

- Single acting spring return cylinder control
- Selection or diversion of process media
- HVAC damper control
- Instrumentation
- Pneumatic positioning
- Automatic dispensing equipment
- Gas sampling
- Small compressors
- Water treatment
- Air dryers



### 3-Way Direct Acting - Normally Closed - Brass

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.05	0.05	0	200	200	200	6	180	NBR	02F30C1103AAF	1	B8
1/8	1/16	1/16	0.08	0.08	0	125	125	125	6	180	NBR	02F30C1104AAF	1	B8
1/8	1/16	1/16	0.11	0.11	0	215	215	215	10	185	FKM	7131KBN1GV00	7	B12
1/8	3/32	3/32	0.12	0.12	0	100	100	100	6	180	NBR	02F30C1106AAF	1	B8
1/8	1/8	1/8	0.21	0.21	0	40	40	40	6	180	NBR	02F30C1108AAF	1	B8
1/8	3/32	3/32	0.24	0.24	0	100	100	100	10	185	FKM	7131KBN1LV00	7	B12
1/4	1/32	1/32	0.02	0.02	0	580	580	580	10	165	PCTFE	7131KBN2BF00	7	B12
1/4	1/16	1/16	0.08	0.08	0	125	125	125	6	180	NBR	04F30C2104AAF	1	B16
1/4	1/16	1/16	0.09	0.09	0	235	235	235	16	200	NBR	04F30C2104ADF	5	B17
1/4	1/16	1/16	0.11	0.11	0	215	215	215	10	185	FKM	7131KBN2GV00	7	B12
1/4	3/32	3/32	0.12	0.12	0	140	140	140	11	200	NBR	04F30C2106ACF	4	B17
1/4	5/64	5/64	0.17	0.24	0	150	150	150	10	185	FKM	7131KBN2JV00	7	B12
1/4	5/64	1/8	0.17	0.31	0	150	150	150	10	185	FKM	7131TBN2JV00	7	B13
1/4	3/32	3/32	0.21	0.21	0	250	250	250	16	180	NBR	A3LB2252	*	B18
1/4	3/32	9/64	0.24	0.38	0	110	110	110	10	185	FKM	7131TBN2LV00	7	B13
1/4	3/32	3/32	0.24	0.24	0	100	100	100	10	185	FKM	7131KBN2LV00	7	B12
1/4	1/8	1/8	0.25	0.25	0	70	70	70	11	200	NBR	04F30C2108ACF	4	B17
1/4	1/8	1/8	0.35	0.35	0	175	175	175	16	180	NBR	A3LB2177	*	B18
1/4	11/64	11/64	0.35	0.35	0	40	40	40	11	200	NBR	04F30C2111ACF	4	B17
1/4	5/32	5/32	0.45	0.45	0	125	125	125	16	180	NBR	A3LB2127	*	B18
1/4	3/16	1/4	0.49	0.63	0	30	30	30	10	185	FKM	7131TBN2RV00	7	B13

#### \*Ordering A Series Valves:

A Series Valves must be ordered as complete part numbers (These are Class B coils).

- 1) Select pressure vessel part number from above (i.e. A3LB2252)
- 2) Choose coil/enclosure part number from table below for required voltage

Voltage	24/60	120/60	240/60	12VDC	24VDC
Coil Code	AB2A44	AB6A46	AB8A48	DC1A22	DC2A23
Coil Part Number*	AB720S24	AB728S24	AB731S24	A7724F24	A7727F24

\*When ordering a replacement coil, use Coil Part Number (not Coil Code)

- 3) Complete P/N for 120/60 is A3LB2252AB6A46



3-Way

### 3-Way Direct Acting - Normally Closed - Brass

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### DC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.05	0.05	0	200	200	200	9.5	120	NBR	02F30C1103A1F	3	B8
1/8	1/16	1/16	0.08	0.08	0	125	125	125	9.5	120	NBR	02F30C1104A1F	3	B8
1/8	1/16	1/16	0.11	0.11	0	215	215	215	10	185	FKM	7131KBN1GV00	7	B12
1/8	3/32	3/32	0.12	0.12	0	100	100	100	9.5	120	NBR	02F30C1106A1F	3	B8
1/8	3/32	3/32	0.24	0.24	0	100	100	100	10	185	FKM	7131KBN1LV00	7	B12
1/8	1/8	1/8	0.21	0.21	0	40	40	40	9.5	120	NBR	02F30C1108A1F	3	B8

1/4	1/32	1/32	0.02	0.02	0	580	580	580	10	165	PCTFE	7131KBN2BF00	7	B12
1/4	1/16	1/16	0.08	0.08	0	125	125	125	9.5	120	NBR	04F30C2104A1F	3	B16
1/4	1/16	1/16	0.09	0.09	0	160	160	160	11.5	150	NBR	04F30C2104A3F	6	B17
1/4	1/16	1/16	0.11	0.11	0	215	215	215	10	185	FKM	7131KBN2GV00	7	B12
1/4	3/32	3/32	0.12	0.12	0	115	115	115	11.5	150	NBR	04F30C2106A3F	6	B17
1/4	5/64	5/64	0.17	0.24	0	150	150	150	10	185	FKM	7131KBN2JV00	7	B12
1/4	5/64	1/8	0.17	0.31	0	150	150	150	10	185	FKM	7131TBN2JV00	7	B13
1/4	3/32	3/32	0.21	0.21	0	250	250	250	14	180	NBR	A36LB2251	*	B18
1/4	3/32	9/64	0.24	0.38	0	110	110	110	10	185	FKM	7131TBN2LV00	7	B13
1/4	3/32	3/32	0.24	0.24	0	100	100	100	10	185	FKM	7131KBN2LV00	7	B12
1/4	1/8	1/8	0.25	0.25	0	60	60	60	11.5	150	NBR	04F30C2108A3F	6	B17
1/4	1/8	1/8	0.35	0.35	0	175	175	175	14	180	NBR	A36LB2176	*	B18
1/4	11/64	11/64	0.35	0.35	0	25	25	25	11.5	150	NBR	04F30C2111A3F	6	B17
1/4	5/32	5/32	0.45	0.45	0	125	125	125	14	180	NBR	A36LB2126	*	B18
1/4	3/16	1/4	0.49	0.63	0	30	30	30	10	185	FKM	7131TBN2RV00	7	B13

#### \*Ordering A Series Valves:

A Series Valves must be ordered as complete part numbers (These are Class B coils).

- 1) Select pressure vessel part number from above (i.e. A3LB2252)
- 2) Choose coil/enclosure part number from table below for required voltage

Voltage	24/60	120/60	240/60	12VDC	24VDC
Coil Code	AB2A44	AB6A46	AB8A48	DC1A22	DC2A23
Coil Part Number*	AB720S24	AB728S24	AB731S24	A7724F24	A7727F24

\*When ordering a replacement coil, use Coil Part Number (not Coil Code)

- 3) Complete P/N for 120/60 is A3LB2252AB6A46



### 3-Way Direct Acting - Normally Closed - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/8	3/64	1/16	0.060	0.095	0	250	250	250	10	185	NBR	71315SN1ENJ1	7	B5
1/8	3/64	1/16	0.060	0.095	0	250	250	250	10	185	NBR	71315SN1EN00	7	B5
1/8	3/64	3/64	0.060	0.060	0	200	200	200	6	180	NBR	02F30C3103AAF	1	B8
1/8	1/16	1/16	0.090	0.090	0	125	125	125	6	180	NBR	02F30C3104AAF	1	B8
1/8	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN1GNJ1	7	B5
1/8	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN1GN00	7	B5
1/8	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN1KNJ1	7	B5
1/8	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN1KN00	7	B5
1/8	1/8	3/32	0.230	0.170	0	90	90	90	10	185	NBR	71315SN1MNJ1	7	B5
1/8	1/8	3/32	0.230	0.170	0	90	90	90	10	185	NBR	71315SN1MN00	7	B5
1/8	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN1SNJ1	7	B5
1/8	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN1SN00	7	B5
*1/8	1/4	3/32	0.670	0.170	0	VAC	N/A	N/A	10	185	NBR	71315SN1VNJ1	7	B5

1/4	3/64	1/16	0.062	0.095	0	250	250	250	10	185	NBR	71315SN2ENJ1	7	B5
1/4	3/64	1/16	0.062	0.095	0	250	250	250	10	185	NBR	71315SN2EN00	7	B5
1/4	1/16	1/16	0.090	0.090	0	125	125	125	6	180	NBR	04F30C3104AAF	1	B14
1/4	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN2GNJ1	7	B5
1/4	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN2GN00	7	B5
1/4	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	7131TVN2GV00	7	B11
1/4	3/32	3/32	0.120	0.120	0	150	150	150	11	200	NBR	04F30C3106ACF	4	B15
1/4	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN2KNJ1	7	B5
1/4	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN2KN00	7	B5
1/4	5/64	5/64	0.180	0.180	0	150	150	150	10	185	FKM	7131TVN2JV00	7	B11
1/4	3/32	3/32	0.190	0.190	0	110	110	110	10	185	NBR	7131TVN2LV00	7	B11
1/4	1/8	3/32	0.230	0.170	0	90	90	90	10	185	NBR	71315SN2MNJ1	7	B5
1/4	1/8	1/8	0.230	0.170	0	90	90	90	10	185	NBR	71315SN2MN00	7	B5
1/4	1/8	1/8	0.250	0.250	0	85	85	85	11	200	NBR	04F30C3108ACF	4	B15
1/4	1/8	1/8	0.320	0.320	0	70	70	70	10	185	FKM	7131TVN2NV00	7	B11
1/4	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN2SNJ1	7	B5
1/4	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN2SN00	7	B5
*1/4	1/4	3/32	0.670	0.170	0	VAC	N/A	N/A	10	185	NBR	71315SN2VNJ1	7	B5

\*Note: Vacuum source should be connected to outlet/cylinder port.



3-Way



### 3-Way Direct Acting - Normally Closed - Stainless Steel (Continued)

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>DC TECHNICAL SPECIFICATIONS</b>														
1/8	3/64	3/64	0.060	0.060	0	200	200	200	9.5	120	NBR	02F30C3103A1F	3	B8
1/8	3/64	1/16	0.062	0.095	0	250	250	250	10	185	NBR	71315SN1ENJ1	7	B5
1/8	3/64	1/16	0.062	0.095	0	250	250	250	10	185	NBR	71315SN1EN00	7	B5
1/8	1/16	1/16	0.090	0.090	0	125	125	125	9.5	120	NBR	02F30C3104A1F	3	B8
1/8	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN1GNJ1	7	B5
1/8	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN1GN00	7	B5
1/8	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN1KNJ1	7	B5
1/8	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN1KN00	7	B5
1/8	1/8	3/32	0.230	0.170	0	90	90	90	10	185	NBR	71315SN1MNJ1	7	B5
1/8	1/8	3/32	0.230	0.170	0	90	90	90	10	185	NBR	71315SN1MN00	7	B5
1/8	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN1SNJ1	7	B5
1/8	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN1SN00	7	B5
*1/8	1/4	3/32	0.670	0.170	0	VAC	N/A	N/A	10	185	NBR	71315SN1VNJ1	7	B5
1/4	3/64	1/16	0.062	0.095	0	250	250	250	10	185	NBR	71315SN2ENJ1	7	B5
1/4	3/64	1/16	0.062	0.095	0	250	250	250	10	185	NBR	71315SN2EN00	7	B5
1/4	1/16	1/16	0.090	0.090	0	125	125	125	9.5	150	NBR	04F30C3104A1F	3	B14
1/4	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN2GNJ1	7	B5
1/4	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	71315SN2GN00	7	B5
1/4	1/16	1/16	0.110	0.095	0	200	200	200	10	185	NBR	7131TVN2GV00	7	B11
1/4	3/32	3/32	0.120	0.120	0	115	115	115	11.5	150	NBR	04F30C3106A3F	6	B15
1/4	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN2KNJ1	7	B5
1/4	3/32	3/32	0.170	0.170	0	125	125	125	10	185	NBR	71315SN2KN00	7	B5
1/4	3/32	3/32	0.190	0.190	0	110	110	110	10	185	NBR	7131TVN2LV00	7	B11
1/4	5/64	5/64	0.180	0.180	0	150	150	150	10	185	FKM	7131TVN2JV00	7	B11
1/4	1/8	3/32	0.230	0.170	0	90	90	90	10	185	NBR	71315SN2MNJ1	7	B5
1/4	1/8	1/8	0.230	0.170	0	90	90	90	10	185	NBR	71315SN2MN00	7	B5
1/4	1/8	1/8	0.250	0.250	0	60	60	60	11.5	150	NBR	04F30C3108A3F	6	B15
1/4	1/8	1/8	0.320	0.320	0	70	70	70	10	185	FKM	7131TVN2NV00	7	B11
1/4	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN2SNJ1	7	B5
1/4	3/16	3/32	0.380	0.170	0	25	25	25	10	185	NBR	71315SN2SN00	7	B5
*1/4	1/4	3/32	0.670	0.170	0	VAC	N/A	N/A	10	185	NBR	71315SN2VNJ1	7	B5

\*Note: Vacuum source should be connected to outlet/cylinder port.

### 3-Way Direct Acting - Normally Open - Brass

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.06	0.06	0	200	200	200	6	180	NBR	02F30O1103AAF	1	B8
1/8	1/16	1/16	0.09	0.09	0	125	125	125	6	180	NBR	02F30O1104AAF	1	B8
1/8	3/32	3/32	0.12	0.12	0	100	100	100	6	180	NBR	02F30O1106AAF	1	B8
1/4	1/16	1/16	0.09	0.09	0	235	250	250	16	200	NBR	04F30O2104ADF	5	B17
1/4	3/32	3/32	0.12	0.12	0	140	140	140	11	200	NBR	04F30O2106ACF	4	B17
1/4	1/8	1/8	0.25	0.25	0	70	70	70	11	200	NBR	04F30O2108ACF	4	B17
1/4	1/8	1/8	0.35	0.35	0	175	175	175	16	180	NBR	A5LB2177	*	B18
1/4	11/64	11/64	0.35	0.35	0	40	40	40	11	200	NBR	04F30O2111ACF	4	B17
1/4	5/32	5/32	0.45	0.45	0	125	125	125	16	180	NBR	A5LB2127	*	B18
1/4	5/32	1/8	0.31	0.41	0	150	150	150	22	185	FKM	7132TBN2NV00	8	B4

#### DC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.06	0.06	0	200	200	200	9.5	120	NBR	02F30O1103A1F	1	B8
1/8	1/16	1/16	0.09	0.09	0	200	200	200	9.5	120	NBR	02F30O1104A1F	1	B8
1/8	3/32	3/32	0.12	0.12	0	100	100	100	9.5	120	NBR	02F30O1106A1F	1	B8
1/4	1/16	1/16	0.09	0.09	0	160	160	160	11.5	150	NBR	04F30O2104A3F	6	B17
1/4	3/32	3/32	0.12	0.12	0	100	100	100	11.5	150	NBR	04F30O2106A3F	6	B17
1/4	1/8	1/8	0.25	0.25	0	55	55	55	11.5	150	NBR	04F30O2108A3F	6	B17
1/4	1/8	1/8	0.35	0.35	0	175	175	175	14	180	NBR	A56LB2176	*	B18
1/4	11/64	11/64	0.35	0.35	0	30	30	30	11.5	150	NBR	04F30O2111A3F	6	B17
1/4	5/32	5/32	0.45	0.45	0	125	125	125	14	180	NBR	A56LB2126	*	B18

#### \*Ordering A Series Valves:

A Series Valves must be ordered as complete part numbers (These are Class B coils).

- 1) Select pressure vessel part number from above (i.e. A3LB2252)
- 2) Choose coil/enclosure part number from table below for required voltage

Voltage	24/60	120/60	240/60	12VDC	24VDC
Coil Code	AB2A44	AB6A46	AB8A48	DC1A22	DC2A23
Coil Part Number*	AB720S24	AB728S24	AB731S24	A7724F24	A7727F24

\*When ordering a replacement coil, use Coil Part Number (not Coil Code)

- 3) Complete P/N for 120/60 is A3LB2252AB6A46



### 3-Way Direct Acting - Normally Open - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/8	3/64	1/16	0.052	0.10	0	250	250	250	10	185	NBR	71395SN1ENJ1	7	B6
1/8	1/16	1/8	0.100	0.28	0	150	150	150	10	185	NBR	71395SN1GNJ1	7	B6
1/8	3/32	1/8	0.280	0.28	0	125	125	125	10	185	NBR	71395SN1KNJ1	7	B6
1/4	3/64	1/16	0.052	0.10	0	250	250	250	10	185	NBR	71395SN2ENJ1	7	B6
1/4	1/16	1/8	0.100	0.28	0	150	150	150	10	185	NBR	71395SN2GNJ1	7	B6
1/4	3/32	3/32	0.120	0.12	0	150	140	140	11	200	NBR	04F30O3106ACF	4	B15
1/4	3/32	1/8	0.170	0.28	0	125	125	125	10	185	NBR	71395SN2KNJ1	7	B6
1/4	1/8	1/8	0.250	0.25	0	70	70	70	11	200	NBR	04F30O3108ACF	4	B15

#### DC TECHNICAL SPECIFICATIONS

1/8	3/64	1/16	0.052	0.10	0	250	250	250	10	185	NBR	71395SN1ENJ1	7	B6
1/8	1/16	1/8	0.100	0.28	0	150	150	150	10	185	NBR	71395SN1GNJ1	7	B6
1/8	3/32	1/8	0.280	0.28	0	125	125	125	10	185	NBR	71395SN1KNJ1	7	B6
1/4	3/64	1/16	0.052	0.10	0	250	250	250	10	185	NBR	71395SN2ENJ1	7	B6
1/4	1/16	1/8	0.100	0.28	0	150	150	150	10	185	NBR	71395SN2GNJ1	7	B6
1/4	3/32	3/32	0.120	0.12	0	100	100	100	11.5	150	NBR	04F30O3106A3F	6	B15
1/4	3/32	1/8	0.170	0.28	0	125	125	125	10	185	NBR	71395SN2KNJ1	7	B6
1/4	1/8	1/8	0.250	0.25	0	55	55	55	11.5	150	NBR	04F30O3108A3F	6	B15

3-Way

### 3-Way Direct Acting - Universal - Brass

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	N.C.	N.O.	N.C.	N.O.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.06	0.06	0	175	175	175	10.2	180	NBR	02F30U1103ABF	2	B8
1/8	1/16	1/16	0.09	0.09	0	100	100	100	10.2	180	NBR	02F30U1104ABF	2	B8
1/8	1/16	1/16	0.11	0.11	0	150	150	150	10	185	FKM	7133KBN1GVJ1	7	B9
1/8	3/32	3/32	0.12	0.12	0	50	50	50	6	180	NBR	02F30U1106AAF	1	B8
1/8	5/64	5/64	0.15	.015	0	100	100	100	10	185	FKM	7133KBN1JVJ1	7	B9
1/8	1/8	1/8	0.21	0.21	0	30	30	30	10.2	180	NBR	02F30U1108ABF	2	B8
1/4	1/32	1/32	0.02	0.02	0	435	435	435	10	185	FKM	7133KBN2BVJ1	7	B9
1/4	1/16	1/16	0.09	0.09	0	125	130	130	11	200	NBR	04F30U2104ACF	4	B17
1/4	1/16	1/16	0.10	0.10	0	150	150	150	10	185	FKM	7133KBN2GVJ1	7	B9
1/4	3/32	3/32	0.12	0.12	0	100	100	100	16	200	NBR	04F30U2106ADF	5	B17
1/4	5/64	5/64	0.15	0.15	0	100	100	100	10	185	FKM	7133KBN2JVJ1	7	B9
1/4	5/64	5/64	0.17	0.17	0	100	100	100	10	185	FKM	7133TBN2JV00	7	B10
1/4	1/8	1/8	0.25	0.25	0	50	50	50	16	200	NBR	04F30U2108ADF	5	B17
1/4	1/8	1/8	0.31	0.31	0	30	30	30	10	185	FKM	7133TBN2NV00	7	B10
1/4	11/64	11/64	0.35	0.35	0	20	20	20	11	200	NBR	04F30U2111ACF	4	B17
1/4	5/32	5/32	0.45	0.45	0	75	75	75	16	180	NBR	A4LB2077	*	B18

#### DC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.06	0.06	0	125	130	130	9.5	120	NBR	02F30U1103A1F	3	B8
1/8	1/16	1/16	0.09	0.09	0	65	65	65	9.5	120	NBR	02F30U1104A1F	3	B8
1/8	1/16	1/16	0.11	0.11	0	150	150	150	10	185	FKM	7133KBN1GVJ1	7	B9
1/8	3/32	3/32	0.12	0.12	0	50	50	50	9.5	120	NBR	02F30U1106A1F	3	B8
1/8	5/64	5/64	0.15	.015	0	100	100	100	10	185	FKM	7133KBN1JVJ1	7	B9
1/8	1/8	1/8	0.21	0.21	0	20	20	20	9.5	120	NBR	02F30U1108A1F	3	B8
1/4	1/32	1/32	0.02	0.02	0	435	435	435	10	185	FKM	7133KBN2BVJ1	7	B9
1/4	1/16	1/16	0.09	0.09	0	75	75	75	11.5	150	NBR	04F30U2104A3F	6	B17
1/4	1/16	1/16	0.10	0.10	0	150	150	150	10	185	FKM	7133KBN2GVJ1	7	B9
1/4	3/32	3/32	0.12	0.12	0	60	60	60	11.5	150	NBR	04F30U2106A3F	6	B17
1/4	5/64	5/64	0.15	0.15	0	100	100	100	10	185	FKM	7133KBN2JVJ1	7	B9
1/4	5/64	5/64	0.17	0.17	0	100	100	100	10	185	FKM	7133TBN2JV00	7	B10
1/4	1/8	1/8	0.25	0.25	0	25	25	25	11.5	150	NBR	04F30U2108A3F	6	B17
1/4	1/8	1/8	0.31	0.31	0	30	30	30	10	185	FKM	7133TBN2NV00	7	B10
1/4	11/64	11/64	0.35	0.35	0	12	12	12	11.5	150	NBR	04F30U2111A3F	6	B17
1/4	5/32	5/32	0.45	0.45	0	75	75	75	14	180	NBR	A46LB2076	*	B18

\*Refer to "Ordering A Series Valves" on bottom of page B10.



3-Way

### 3-Way Direct Acting - Universal - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	N.C.	N.O.	N.C.	N.O.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.052	0.052	0	180	180	180	10	185	NBR	71335SN1ENJ1	7	B3
1/8	1/16	1/16	0.090	0.090	0	100	100	100	10.2	180	NBR	02F30U3104ABF	2	B8
1/8	1/16	1/16	0.095	0.095	0	115	115	115	10	185	NBR	71335SN1GNJ1	7	B3
1/8	3/32	3/32	0.170	0.170	0	80	80	80	10	185	NBR	71335SN1KNJ1	7	B3
1/8	1/8	1/8	0.210	0.210	0	30	30	30	10.2	180	NBR	02F30U3108ABF	2	B8
1/4	1/32	1/32	0.024	0.024	0	400	400	400	10	185	NBR	71335SN2ANJ1	7	B3
1/4	3/64	3/64	0.052	0.052	0	180	180	180	10	185	NBR	71335SN2ENJ1	7	B3
1/4	1/16	1/16	0.090	0.090	0	100	100	100	10.2	180	NBR	04F30U3104ABF	2	B14
1/4	1/16	1/16	0.095	0.095	0	115	115	115	10	185	NBR	71335SN2GNJ1	7	B3
1/4	1/16	1/16	0.095	0.095	0	150	150	150	10	185	FKM	7133TVN2GV00	7	B2
1/4	3/32	3/32	0.120	0.120	0	100	100	100	16	200	NBR	04F30U3106ADF	5	B15
1/4	3/32	3/32	0.170	0.170	0	80	80	80	10	185	NBR	71335SN2KNJ1	7	B3
1/4	5/64	5/64	0.180	0.180	0	100	100	100	10	185	FKM	7133TVN2JV00	7	B2
1/4	1/8	1/8	0.250	0.250	0	50	50	50	16	200	NBR	04F30U3108ADF	5	B15
1/4	1/8	1/8	0.320	0.320	0	30	30	30	10	185	FKM	7133TVN2NV00	7	B2

#### DC TECHNICAL SPECIFICATIONS

1/8	3/64	3/64	0.052	0.052	0	180	180	180	10	185	NBR	71335SN1ENJ1	7	B3
1/8	1/16	1/16	0.090	0.090	0	65	65	65	9.5	120	NBR	02F30U3104A1F	3	B8
1/8	1/16	1/16	0.095	0.095	0	115	115	115	10	185	NBR	71335SN1GNJ1	7	B3
1/8	3/32	3/32	0.170	0.170	0	80	80	80	10	185	NBR	71335SN1KNJ1	7	B3
1/8	1/8	1/8	0.210	0.210	0	25	25	25	9.5	120	NBR	02F30U3108A1F	3	B8
1/4	1/32	1/32	0.024	0.024	0	400	400	400	10	185	NBR	71335SN2ANJ1	7	B3
1/4	3/64	3/64	0.052	0.052	0	180	180	180	10	185	NBR	71335SN2ENJ1	7	B3
1/4	1/16	1/16	0.090	0.090	0	65	65	65	9.5	120	NBR	04F30U3104A1F	3	B14
1/4	1/16	1/16	0.095	0.095	0	150	150	150	10	185	FKM	7133TVN2GV00	7	B2
1/4	1/16	1/16	0.095	0.095	0	115	115	115	10	185	NBR	71335SN2GNJ1	7	B3
1/4	3/32	3/32	0.120	0.120	0	60	60	60	11.5	150	NBR	04F30U3106A3F	6	B15
1/4	3/32	3/32	0.170	0.170	0	80	80	80	10	185	NBR	71335SN2KNJ1	7	B3
1/4	5/64	5/64	0.180	0.180	0	100	100	100	10	185	FKM	7133TVN2JV00	7	B2
1/4	1/8	1/8	0.250	0.250	0	25	25	25	11.5	150	NBR	04F30U3108A3F	6	B15
1/4	1/8	1/8	0.320	0.320	0	30	30	30	10	185	FKM	7133TVN2NV00	7	B2

### 3-Way Direct Acting - Diverting - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	N.C.	N.O.	N.C.	N.O.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

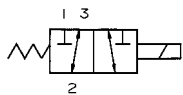
1/8	1/8	3/32	0.230	0.170	0	125	125	125	10	185	NBR	71385SN1MNJ1	7	B7
1/4	1/16	1/16	0.095	0.095	0	235	235	235	10	185	NBR	71385SN2GNJ1	7	B7
1/4	1/8	3/32	0.230	0.170	0	125	125	125	10	185	NBR	71385SN2MNJ1	7	B7

#### DC TECHNICAL SPECIFICATIONS

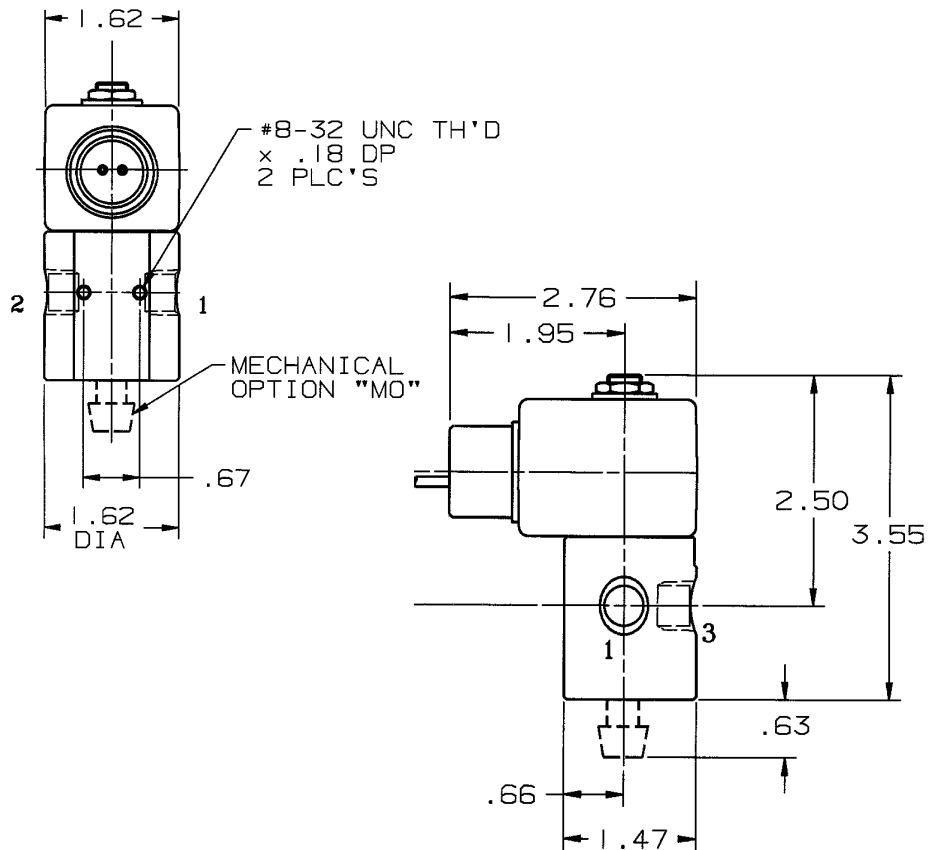
1/8	1/8	3/32	0.230	0.170	0	125	125	125	10	185	NBR	71385SN1MNJ1	7	B7
1/4	1/16	1/16	0.095	0.095	0	235	235	235	10	185	NBR	71385SN2GNJ1	7	B7
1/4	1/8	3/32	0.230	0.170	0	125	125	125	10	185	NBR	71385SN2MNJ1	7	B7

3-Way

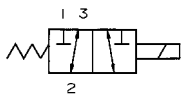
### Valve Reference B2



3-Way Universal  
Port Identification  
1-NC / 2-COMMON / 3-NO

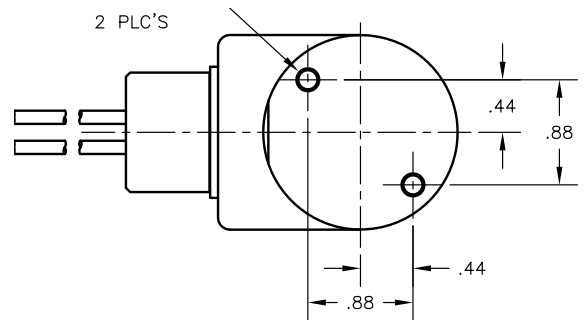
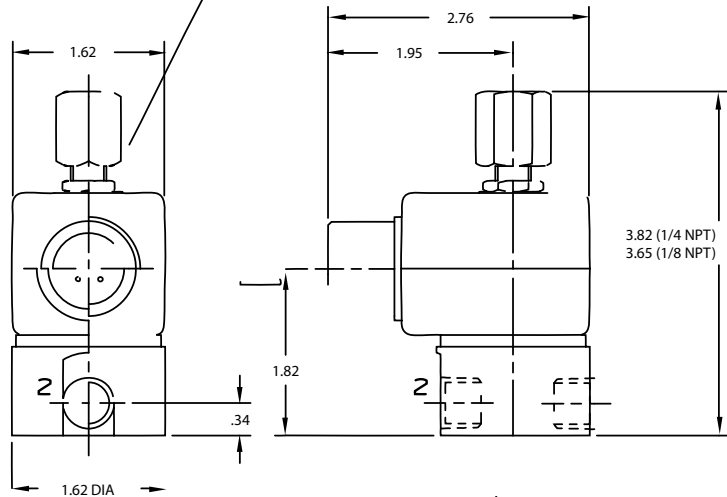


## Valve Reference B3



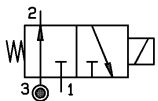
3-Way Universal  
Port Identification  
1-NC / 2-COMMON / 3-NO

MECHANICAL OPTION "J1" FOR TYPE 71335

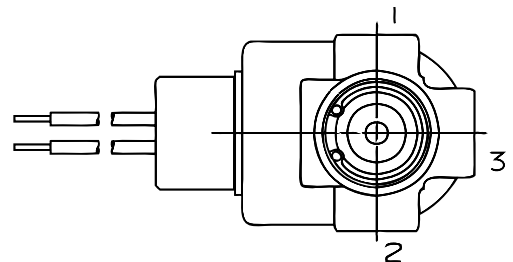
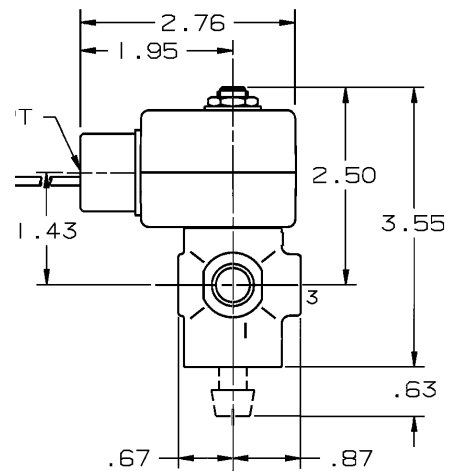
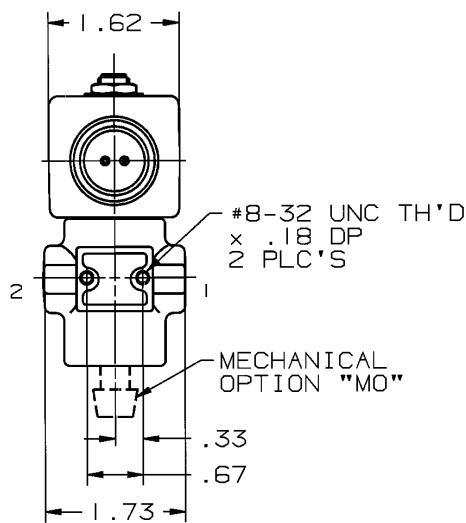


3-Way

## Valve Reference B4

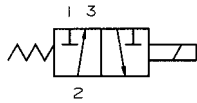


3-Way Normally Open  
Port Identification  
1-Exhaust/ 2-Cylinder/ 3-Pressure





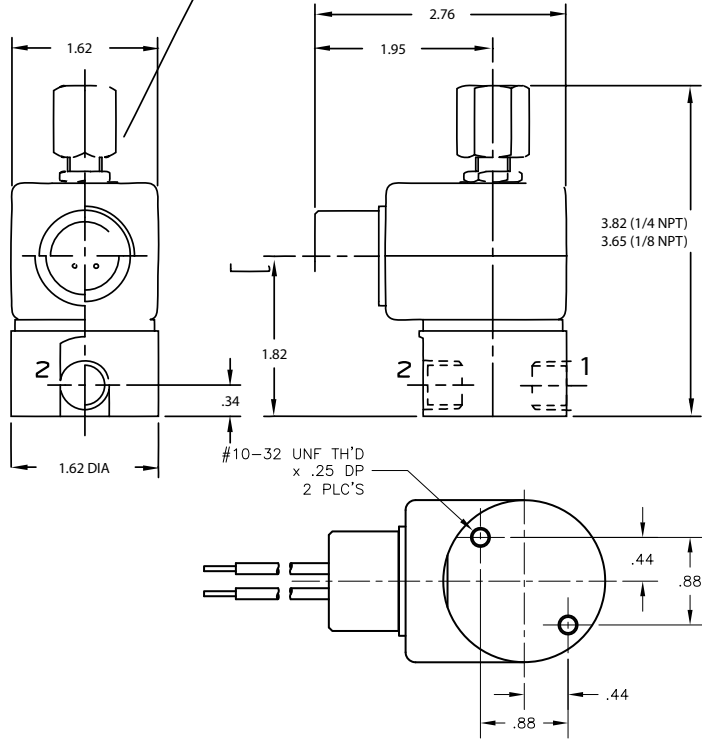
## Valve Reference B5



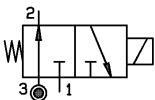
3-Way Normally Closed  
Port Identification

1-Pressure / 2-Cylinder / 3-Exhaust

MECHANICAL OPTION "J1" FORTYPE 71335



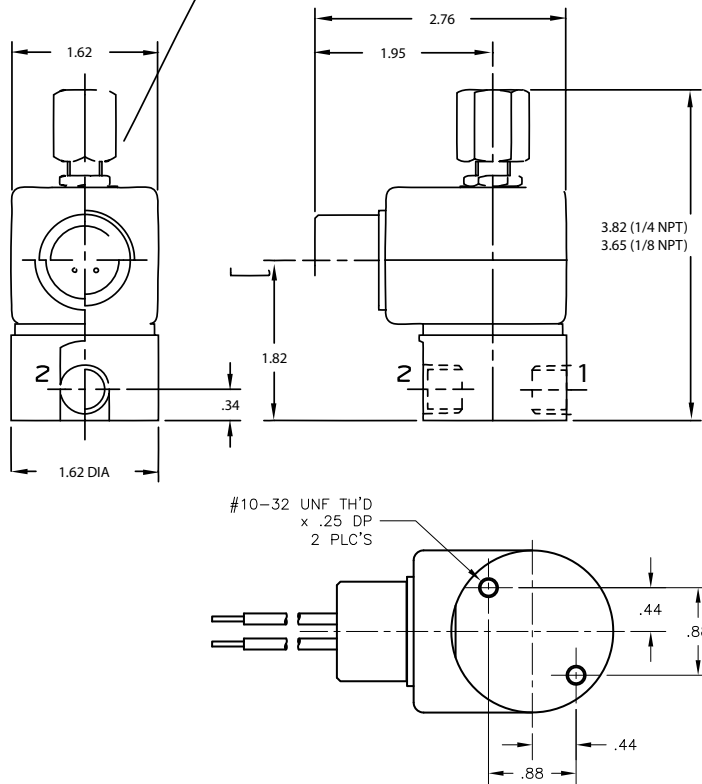
## Valve Reference B6



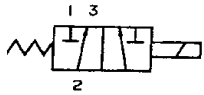
3-Way Normally Open  
Port Identification

1-Exhaust / 2-Cylinder / 3-Pressure

MECHANICAL OPTION "J1" FORTYPE 71395

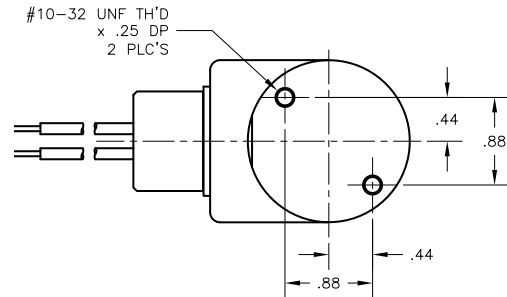
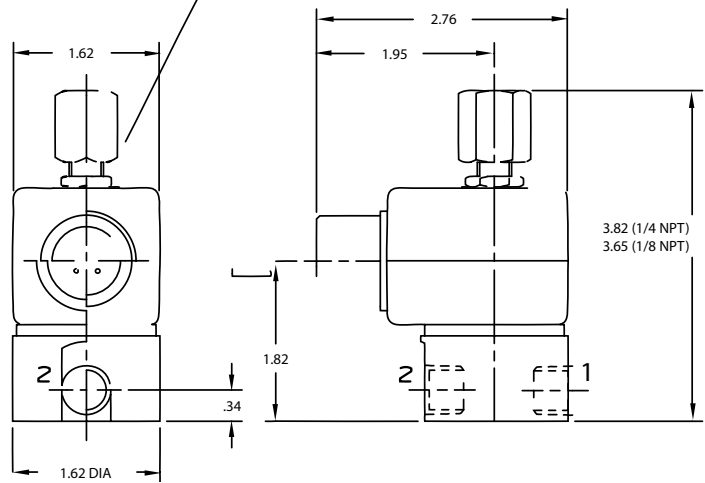


## Valve Reference B7



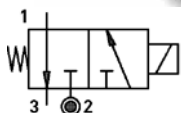
3-Way Normally Diverting  
 Port identification:  
 1-NC/ 2-IN/ 3-NO

MECHANICAL OPTION "J1" FOR TYPE 71385



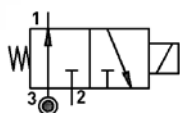
3-Way

## Valve Reference B8



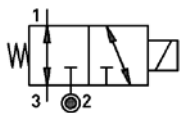
3-Way Normally Closed  
 02F30Cxx

Port Identification:  
 Press - 2 / CYL - 11 / EXH - 3



3-Way Normally Open  
 02F30Uxx

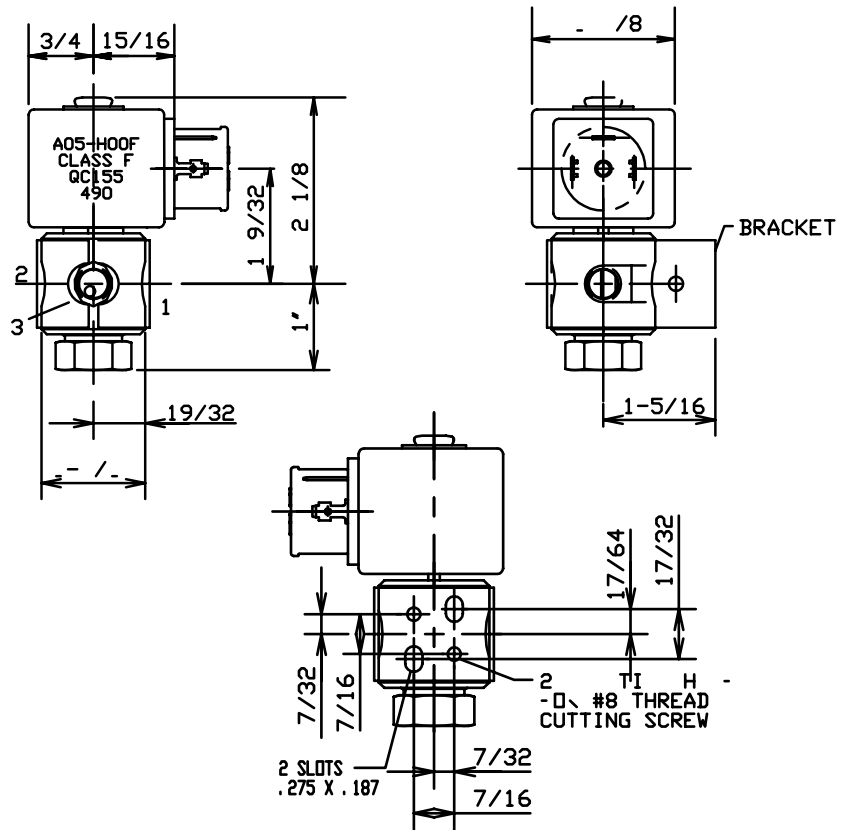
Port Identification:  
 Press - 3 / CYL - 1 / EXH - 2



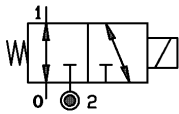
3-Way Universal  
 02F30Uxx

Port Identification:

Pressure can be applied at either port

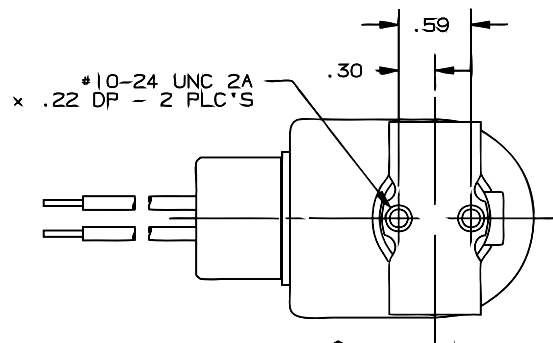
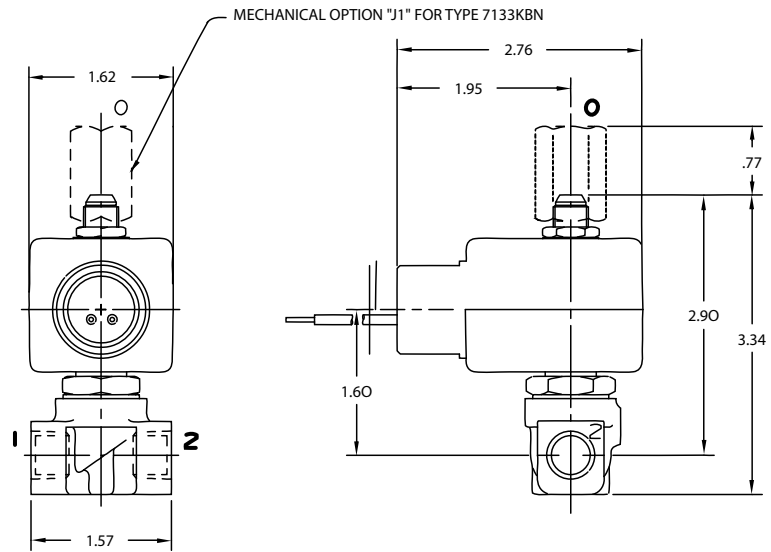


## Valve Reference B9

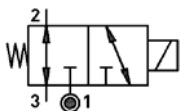


3-Way Universal  
Port Identification

Pressure can be applied at either port

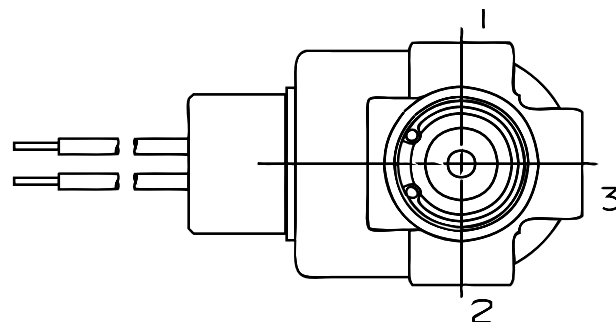
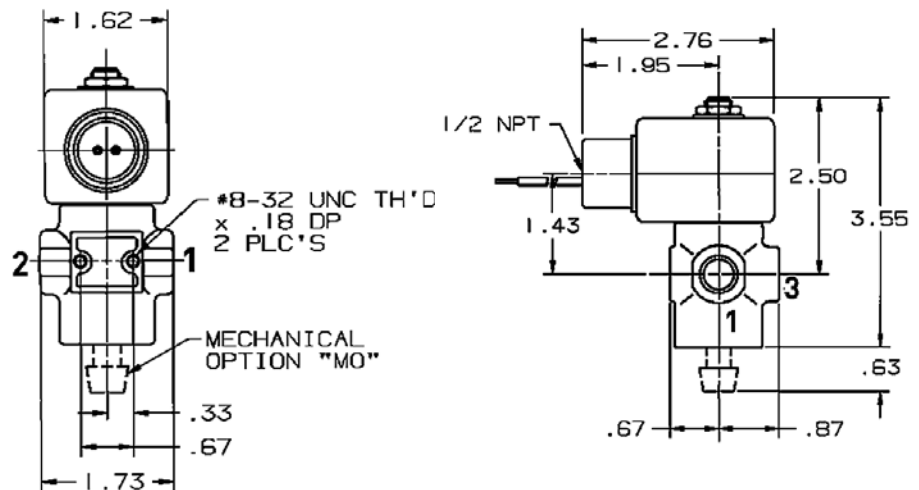


## Valve Reference B10

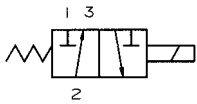


3-Way Universal  
Port Identification

Pressure can be applied at either port

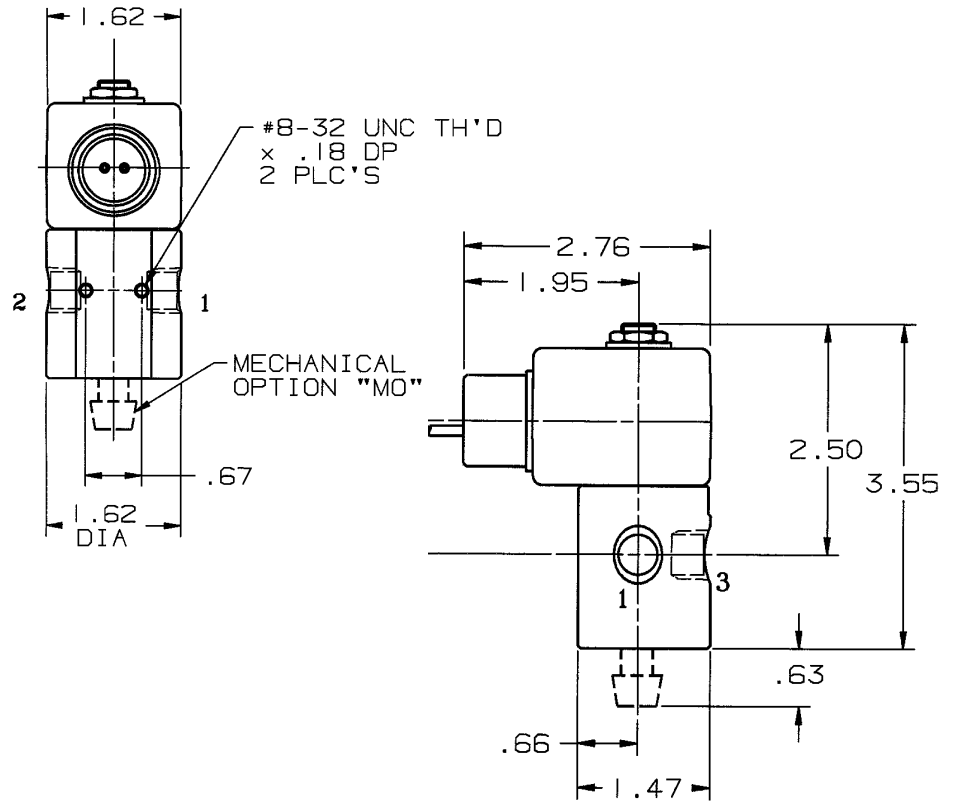


## Valve Reference B11



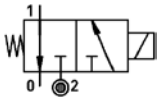
3-Way Normally Closed  
Port Identification

1-Pressure / 2-Cylinder/ 3-Exhaust



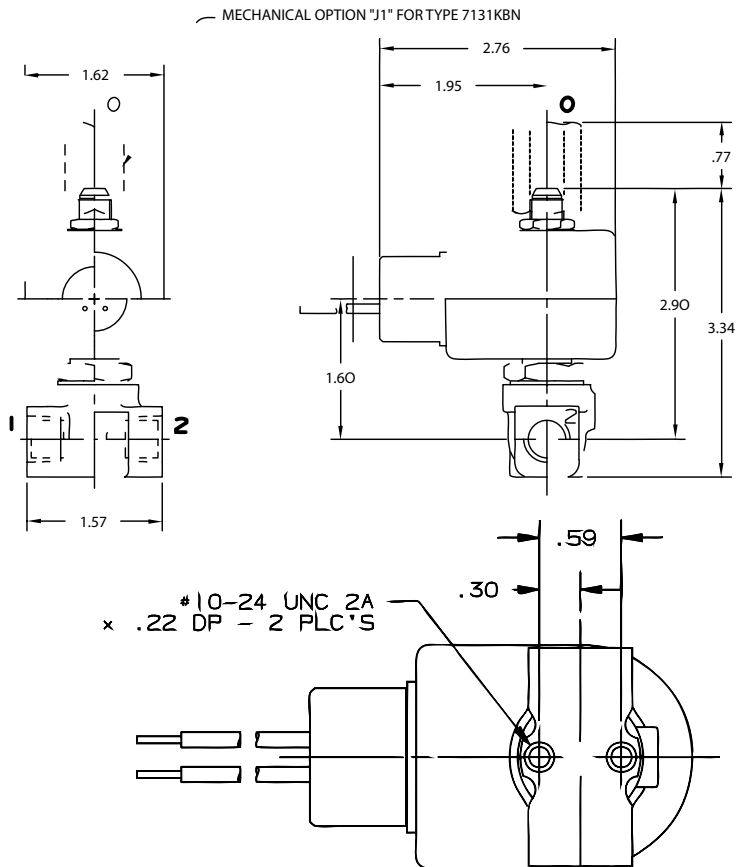
3-Way

## Valve Reference B12

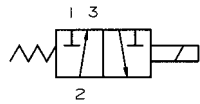


3-Way Normally Closed  
Port Identification

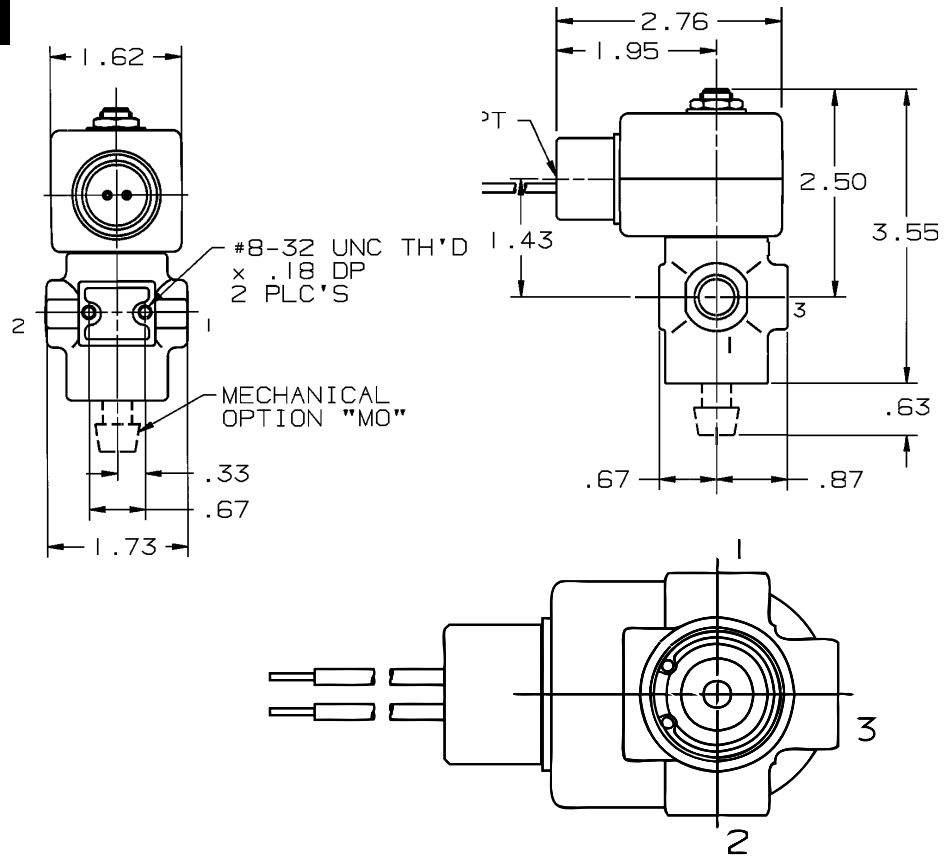
1-Cylinder/ 2-Pressure/ 0-Exhaust



## Valve Reference B13

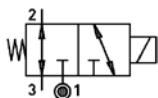


3-Way Normally Closed  
Port Identification  
1-Pressure/ 2-Cylinder/ 3-Exhaust

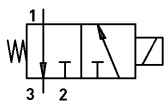


3-Way

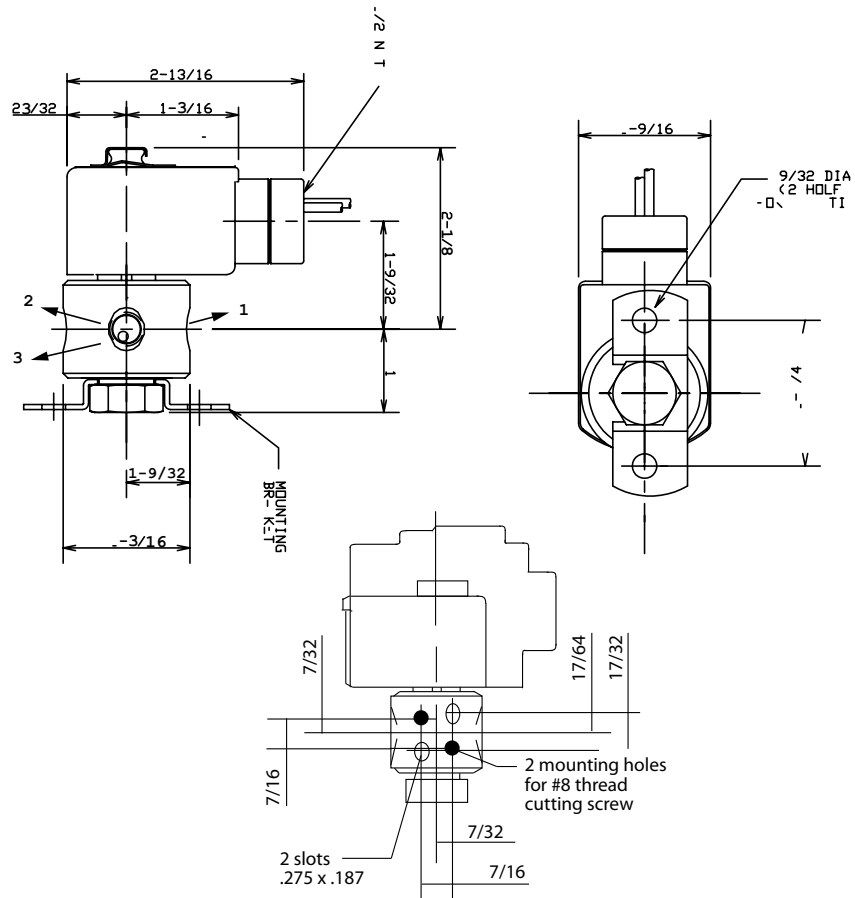
## Valve Reference B14



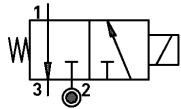
3-Way Universal  
Port Identification  
Pressure can be applied to either port.



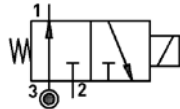
3-Way Normally Closed  
Port Identification  
Press - 2 | CYL-1 | EXH-3



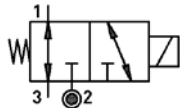
## Valve Reference B15



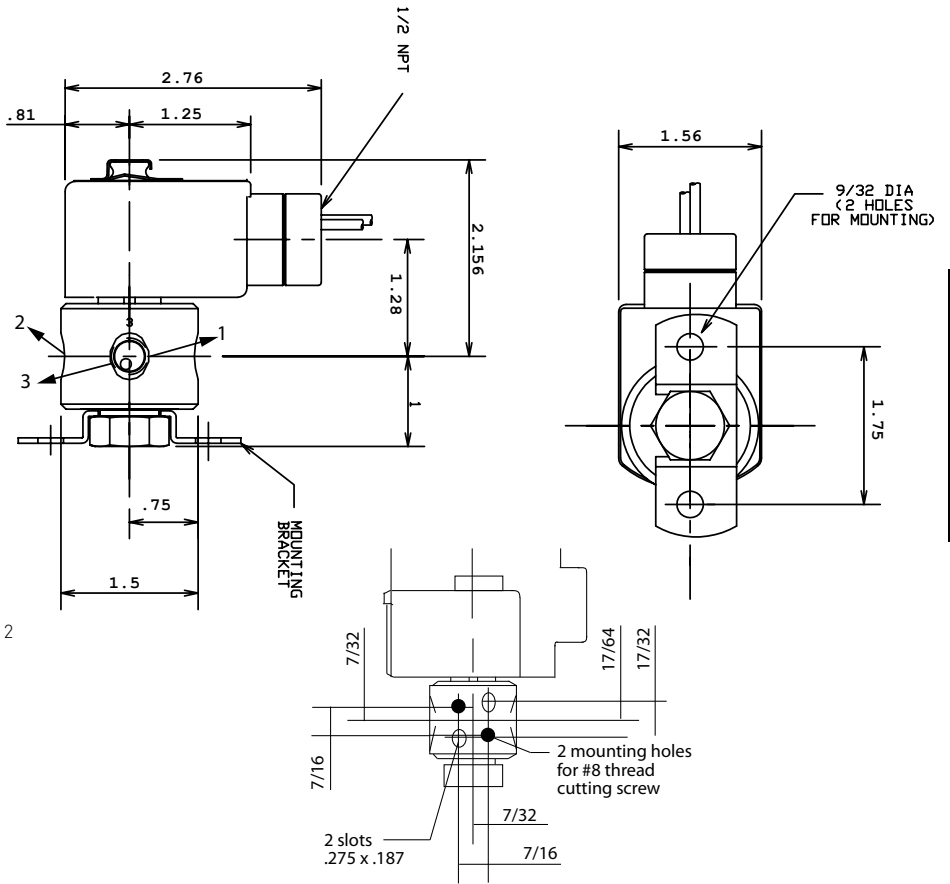
3-Way Normally Closed  
04F30Cxx  
Port Identification:  
Press - 2 /CYL-1/EXH-3



3-Way Normally Open  
04F300xx  
Port Identification:  
Press - 3/CYL -1/EXH - 2

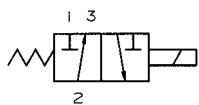


3-Way Universal  
04F30Uxx  
Port Identification:  
Pressure can be applied at either port

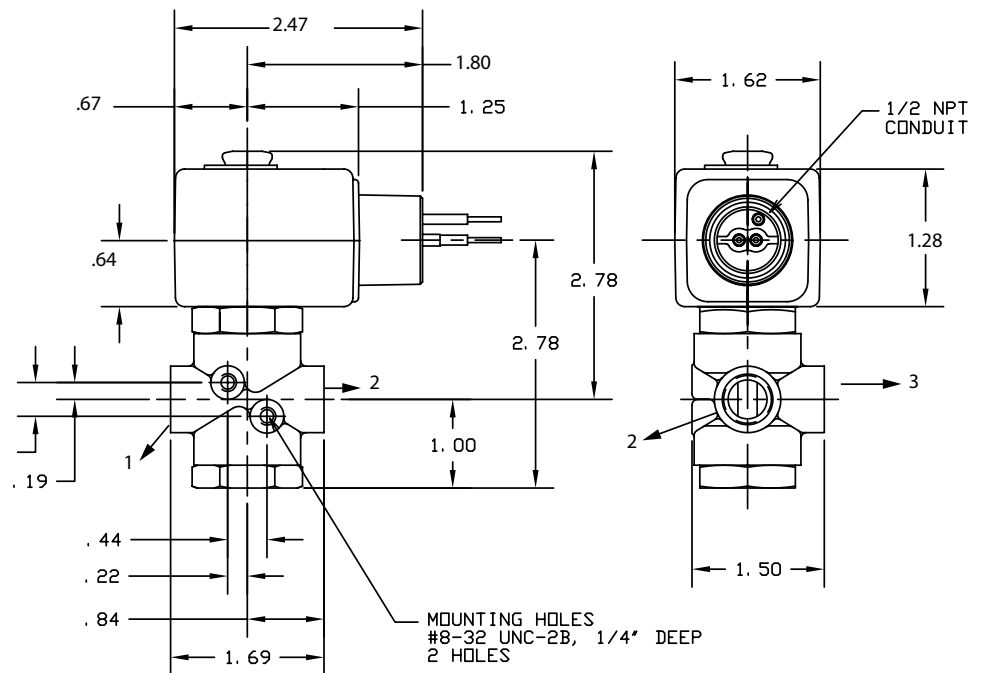


3-Way

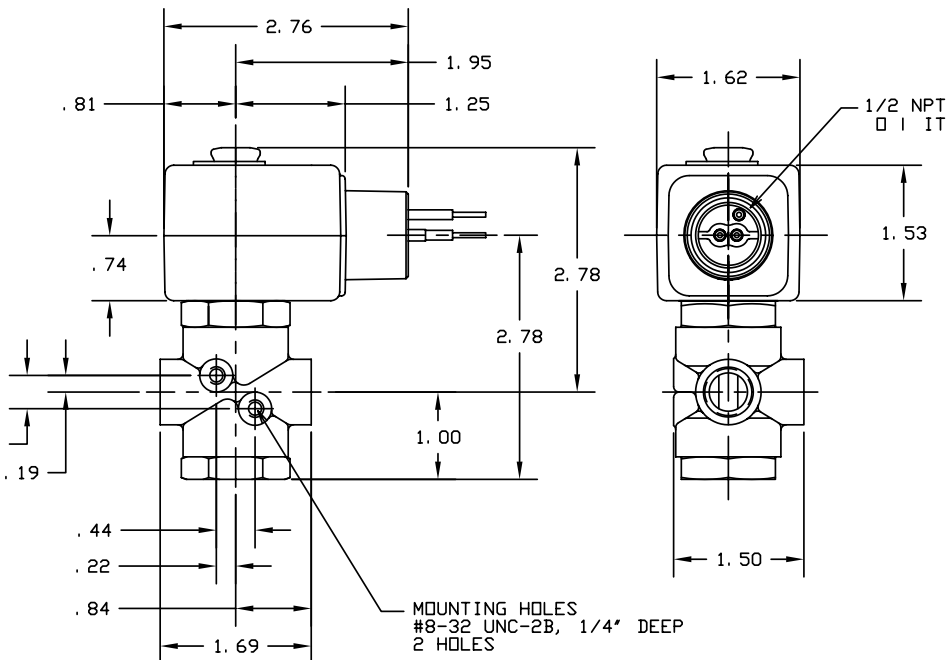
## Valve Reference B16



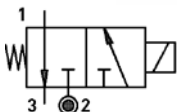
3-Way Normally Closed  
Port Identification  
1-Pressure/ 2-Cylinder/ 3-Exhaust



# Valve Reference B17



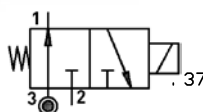
3-Way



3-Way Normally Closed  
04F30Cxx

Port Identification:

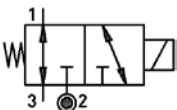
Press - 2 / CYL - 1 / EXH - 3



3-Way Normally Open  
04F300xx

Port Identification:

Press - 3 / CYL - 1 / EXH - 2

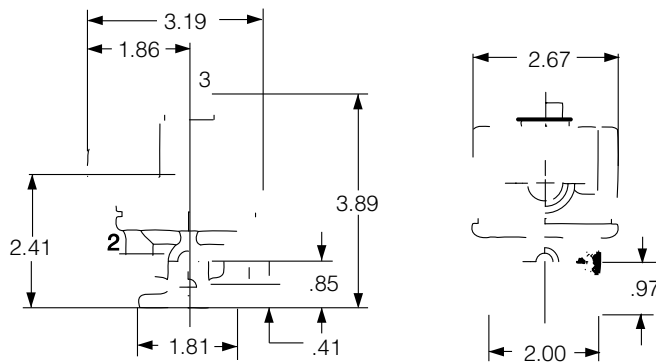


3-Way Universal  
04F30Uxx

Port Identification:

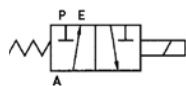
Pressure can be applied at either port

# Valve Reference B18

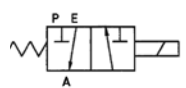


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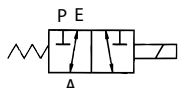
	A3 (NC)	A4 UNIV.	A5 (NO)
P	IN	NC	Exhaust
A	Cylinder	Common	Cylinder
E	Exhaust	NO	IN



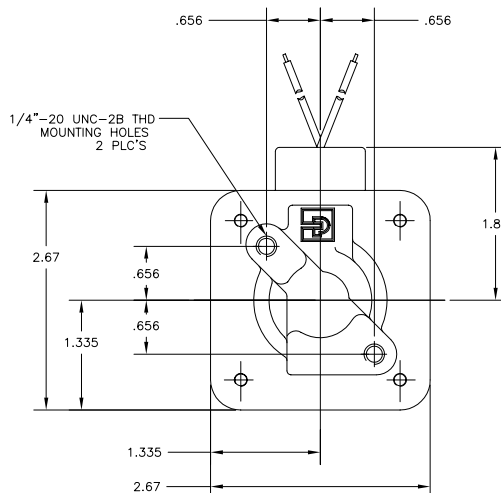
3-Way Normally Closed  
A3



3-Way Normally Open  
A5



3-Way Universal  
A4





### 3-Way Direct Acting Materials of Construction\*\*

Product*	Watt	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
02F30C1	9.5	3WNC	1/8	Brass	305SS	430FR	416/ 430FR	430FR	17-7PH	Copper	77°F
02F30C3	9.5	3WNC	1/8	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	77°F
02F30C3	6	3WNC	1/8	303SS	305SS	430FR	12L14 Plated	430FR	17-7PH	Silver	130°F
02F30O1	9.5	3WNO	1/8	Brass	305SS	430FR	416/ 430FR	430FR	17-7PH	Copper	77°F
02F30O1	6	3WNO	1/8	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
02F30O3	9.5	3WNO	1/8	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	77°F
02F30O3	6	3WNO	1/8	303SS	305SS	430FR	12L14 Plated	430FR	17-7PH	Silver	130°F
02F30U1	9.5	3WU	1/8	Brass	305SS	430FR	416/ 430FR	430FR	17-7PH	Copper	77°F
02F30U3	6	3WU	1/8	303SS	305SS	430FR	12L14 Plated	430FR	17-7PH	Silver	130°F
02F30U3	10.2	3WU	1/8	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	77°F
04F30C3	11.5	3WNC	1/4	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	77°F
04F30C3	10.2	3WNC	1/4	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	77°F
04F30C3	11	3WNC	1/4	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	130°F
04F30O2	11.5	3WNO	1/4	Brass	305SS	430FR	416/ 430FR	430FR	17-7PH	Copper	77°F
04F30O2	11	3WNO	1/4	Brass	305SS	430FR	416/ 430FR	430FR	17-7PH	Copper	130°F
04F30O2	16	3WNO	1/4	Brass	305SS	430FR	416/ 430FR	430FR	17-7PH	Copper	77°F
04F30O3	11.5	3WNO	1/4	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	77°F
04F30O3	11	3WNO	1/4	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	130°F
04F30U2	11.5	3WU	1/4	Brass	305SS	430FR	416/ 430FR	430FR	17-7PH	Copper	77°F
04F30U3	16	3WU	1/4	303SS	305SS	430FR	416/ 430FR	430FR	17-7PH	Silver	77°F
71315SN	10	3WNC	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F

\* Shows first 7 digits of pressure vessel.

\*\* Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

### 3-Way Direct Acting Materials of Construction (Continued)\*\*

Product*	Watt	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
7131KBN	10	3WNC	1/8 - 1/4	Brass	304SS	430FR	430F	430FR/4106	301SS	Copper	150°F
7131TBN	10	3WNC	1/4	Brass	304SS	430FR	430F	430FR/4106	301SS	Copper	150°F
7131TVN	10	3WNC	1/4	303	304SS	430FR	430F	430FR/4106	18-8SS	Copper	150°F
7133KBN	10	3WU	1/8 - 1/4	Brass	304SS	430FR	430F	430FR/4106	301SS	Copper	150°F
7133TBN	10	3WU	1/4	Brass	304SS	430FR	430F	430FR/4106	301SS	Copper	150°F
7133TVN	10	3WU	1/4	303	304SS	430FR	430F	430FR/4106	18-8SS	Copper	150°F
71335SN	10	3WU	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71385SN	10	3WD	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71395SN	10	3WNO	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
A3	16	3WNC	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	122°F
A36	14	3WNC	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	None	122°F
A4	16	3WU	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	122°F
A46	14	3WU	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	None	122°F
A5	16	3WNO	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	122°F
A56	14	3WNO	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	None	122°F

\* Shows first 7, 2 or 3 digits of pressure vessel.

\*\* Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

## Notes

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3-Way

# 3-Way

## Pilot & Remote Operated Valves 1/4" - 3/4" NPT



3-Way

### General Description:

3-Way Pilot Operated valves are used in general industrial applications and control valve pilot actuation where higher pressures and flows are required. Pilot operated valves require the minimum operating pressure differential specified to ensure proper operation.

#### Installation

Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

#### Standard Materials of Construction

Please refer to page B40.

#### Compatible Fluids

Lubricated Air, Inert Gases, Water, Light Oil (300 SSU) and additional fluids compatible with materials of construction, as listed in the product specifications charts.

Use of non-lubricated gaseous media can affect valve life.

### Electrical Characteristics:

#### Standard Voltages:

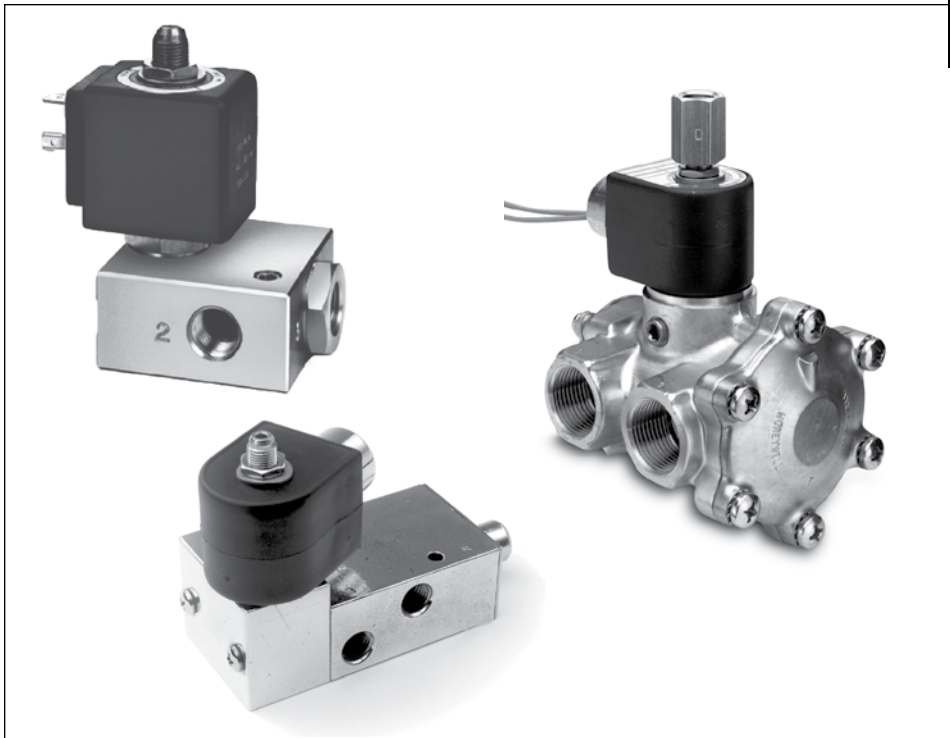
AC -24/60

120/60-110/50

240/60-220/50

DC -12,24 & 120

For other voltages - consult factory



#### Coil Classification:

Class F Standard - Class H Available

#### Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified.

SIL-3 Capable (Models 73317xx, 74317xx). See Certificate in Technical Section Page F20 For additional details, consult factory.

#### Maximum Ambient Temperature

167° F

#### Minimum Ambient Temperature

-40°F for Models 73317xx and 74317xx. Dew Point must be more than 7°F below ambient.

### Applications:

- Pilot valve actuation of larger control valves
- Oil and gas including off-shore installations
- Single acting spring return cylinder control
- Compressor unloaders
- Turbines

#### External Piloted 74332xxx

- Controlling Contaminated Fluids
- Controlling Pressures under 10 PSI
- Operating valves on vacuum

Please refer to page B40 for details



### 3-Way Internal Pilot Operated - Normally Closed - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

3/8	3/8	2.10	10	180	180	180	10	185	NBR	73312BN3RNJ0	7	B19
3/8	3/8	2.10	10	180	180	180	10	185	NBR	73312BN3RNJ1	7	B24
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73312BN4UNJ0	7	B19
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73312BN4UNJ1	7	B24
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73312BN52NJ0	7	B25
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73312BN52NJ1	7	B26

#### DC TECHNICAL SPECIFICATIONS

3/8	3/8	2.10	10	180	180	180	10	185	NBR	73312BN3RNJ0	7	B19
3/8	3/8	2.10	10	180	180	180	10	185	NBR	73312BN3RNJ1	7	B24
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73312BN4UNJ0	7	B19
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73312BN4UNJ1	7	B24
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73312BN52NJ0	7	B25
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73312BN52NJ1	7	B26

### 3-Way Internal Pilot Operated - Normally Open - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

3/8	3/8	2.10	10	180	180	180	10	185	NBR	73322BN3RNJ0	7	B27
3/8	3/8	2.10	10	180	180	180	10	185	NBR	73322BN3RNJ1	7	B28
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73322BN4UNJ0	7	B27
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73322BN4UNJ1	7	B28
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73322BN52NJ0	7	B29
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73322BN52NJ1	7	B20



3-Way

### 3-Way Internal Pilot Operated - Normally Open - Brass (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>DC TECHNICAL SPECIFICATIONS</b>												
3/8	3/8	2.10	10	180	180	180	10	185	NBR	73322BN3RNJ0	7	B27
3/8	3/8	2.10	10	180	180	180	10	185	NBR	73322BN3RNJ1	7	B28
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73322BN4UNJ0	7	B27
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73322BN4UNJ1	7	B28
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73322BN52NJ0	7	B29
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73322BN52NJ1	7	B20

### 3-Way Internal Pilot Operated - Diverting - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>												
3/8	3/8	2.10	10	180	180	180	10	185	NBR	73382BN3RNJ1	7	B30
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73382BN4UNJ1	7	B30
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73382BN52NJ1	7	B21
<b>DC TECHNICAL SPECIFICATIONS</b>												
3/8	3/8	2.10	10	180	180	180	10	185	NBR	73382BN3RNJ1	7	B30
1/2	1/2	3.60	10	180	180	180	10	185	NBR	73382BN4UNJ1	7	B30
3/4	3/4	7.30	10	180	180	180	10	185	NBR	73382BN52NJ1	7	B21



### 3-Way External Pilot Operated\* - Universal - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>												
3/8	3/8	2.10	0	170	170	170	10	185	NBR	74332BN3RNJ1	7	B31
1/2	1/2	3.60	0	170	170	170	10	185	NBR	74332BN4UNJ1	7	B31
3/4	3/4	7.30	0	170	170	170	10	185	NBR	74332BN52NJ1	7	B32
<b>DC TECHNICAL SPECIFICATIONS</b>												
3/8	3/8	2.10	0	170	170	170	10	185	NBR	74332BN3RNJ1	7	B31
1/2	1/2	3.60	0	170	170	170	10	185	NBR	74332BN4UNJ1	7	B31
3/4	3/4	7.30	0	170	170	170	10	185	NBR	74332BN52NJ1	7	B32

\*Minimum external pilot pressure must be main line pressure plus 10 psi; 180 psi maximum; 165 psi maximum for vacuum applications.

#### External Pilot Pressure Valves

When an application requires the separation of the fluid in the main line from the pilot operator, it is necessary to control the pilot externally.

Examples include:

- Controlling contaminated fluids up to 170 PSI
- Controlling pressures below the minimum
- Operating valves on vacuum

For such applications, the following 3-way multipurpose valves are provided with connections for external pressure to operate the pilot. The minimum external pilot pressure required is the main line pressure plus 10 PSI. The maximum external pilot pressure is 180 PSI for pressure applications, and 165 PSI for vacuum applications.

For vacuum service the vacuum line must be connected to the normally open port, and pilot pressure must be connected to the normally closed pilot port.



3-Way

### 3/2, 3-Way 2 Position Single Solenoid - In Line - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI		Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number without Manual Override	Pressure Vessel Number with Locking Manual Override	Pressure Vessel Number with Momentary Manual Override	Reference	
			Min.	Air, Inert Gas							Coil	Valve
<b>AC/DC TECHNICAL SPECIFICATIONS</b>												
1/4	11/64	0.55	30	150	10	167	NBR	73317BN2KN00	73317BN2KNM0	73317BN2KN7A	7	B22
1/4	11/64	0.55	30	150	1.5	150	NBR	73317BN2KN00	73317BN2KNM0	73317BN2KN7A	11	B22
1/4	1/4	1.20	30	150	10	167	NBR	73317BN2PN00	73317BN2PNM0	73317BN2PN7A	7	B22
1/4	1/4	1.20	30	150	1.5	150	NBR	73317BN2PN00	73317BN2PNM0	73317BN2PN7A	11	B22
1/4	1/4	1.20	30	150	0.6	150	NBR	73317BN2PN90	-	-	12	B22
1/2	5/8	4.00	30	150	10	167	NBR	73317BN4UN00	-	-	7	B33
1/2	5/8	4.00	30	150	1.5	150	NBR	73317BN4UN00	-	-	11	B33
1/2	5/8	4.00	30	150	0.6	150	NBR	73317BN4UN90	-	-	12	B33

### 3/2, 3-Way 2 Position Single Solenoid - Brass - External Pilot\*

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI		Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number without Manual Override	Pressure Vessel Number with Locking Manual Override	Pressure Vessel Number with Momentary Manual Override	Reference	
			Min.	Air, Inert Gas							Coil	Valve
<b>AC/DC TECHNICAL SPECIFICATIONS</b>												
1/4	11/64	0.55	0	150	10	167	NBR	74317BN2KN00	-	-	7	B34
1/4	11/64	0.55	0	150	1.5	150	NBR	74317BN2KN00	-	-	11	B34
1/4	1/4	1.20	0	150	10	167	NBR	74317BN2PN00	-	-	7	B34
1/4	1/4	1.20	0	150	1.5	150	NBR	74317BN2PN00	-	-	11	B34
1/2	5/8	4.00	30	150	10	167	MBR	74317BN4UN00	-	-	7	B35
1/2	5/8	4.00	30	150	1.5	167	MBR	74317BN4UN00	-	-	11	B35

\* External pilot pressure to operate valve must be 30 - 150 psi

\* These valves operate at 0 PSI, however a 2 PSI pressure differential is required to actuate the pressure operated quick exhaust poppet.



### 3/2, 3-Way 2 Position Single Solenoid - In Line - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI		Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number without Manual Override	Pressure Vessel Number with Locking Manual Override	Pressure Vessel Number with Momentary Manual Override	Reference	
			Min.	Air, Inert Gas							Coil	Valve

#### AC/DC TECHNICAL SPECIFICATIONS

1/4	11/64	0.55	30	150	10	167	NBR	73317VN2KN00	-	-	7	B22
1/4	11/64	0.55	30	150	1.5	150	NBR	73317VN2KN00	-	-	11	B22
1/4	11/64	0.55	30	150	0.6	150	NBR	73317VN2KN90	-	-	12	B22
1/4	1/4	1.20	30	150	10	167	NBR	73317VN2PN00	-	-	7	B22
1/4	1/4	1.20	30	150	1.5	150	NBR	73317VN2PN00	-	-	11	B22

### 3/2, 3-Way 2 Position Single Solenoid - Stainless Steel - External Pilot\*

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI		Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number without Manual Override	Pressure Vessel Number with Locking Manual Override	Pressure Vessel Number with Momentary Manual Override	Reference	
			Min.	Air, Inert Gas							Coil	Valve

#### AC/DC TECHNICAL SPECIFICATIONS

1/4	11/64	0.55	0	150	10	167	NBR	74317VN2KN00	-	-	7	B34
1/4	11/64	0.55	0	150	1.5	150	NBR	74317VN2KN00	-	-	11	B34

\*External pilot pressure to operate valve must be 30-150 psi

### 3-Way Remote Pressure Operated Valves - Universal - Brass, NBR Seals

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI		Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number without Manual Override	Pressure Vessel Number with Locking Manual Override	Pressure Vessel Number with Momentary Manual Override	Reference	
			Min.	Air, Inert Gas							Coil	Valve

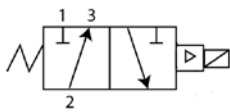
### Remote Operated Valve Port Connections

Valve Type	Main Line Supply	Remote Control Valve Hookup				3-Way Pilot Valve Hookup		
		Normally Closed Port	Normally Open Port	Common Port	Pilot Inlet Port 1/8" NPT	Normally Closed Port	Normally Open Port	Common Port
Normally Open	0-180 PSIG	Media Exhaust	Media Inlet	Cylinder	Connect to Common Port of 3-Way Pilot	Main Line Pressure +10 PSI Min.	Pilot Exhaust	1/8" NPT Pilot of Remote Control Valve
	Vacuum	Atmosphere	Vacuum	Cylinder		10 PSI Min.	Vacuum	
Normally Closed	0-180 PSIG	Media Inlet	Media Exhaust	Cylinder		Main Line Pressure +10 PSI Min.	Pilot Exhaust	
	Vacuum	Vacuum	Atmosphere	Cylinder		10 PSI Min.	Vacuum	
Directional Control	0-180 PSIG	Media Outlet	Media Outlet	Media Inlet		Main Line Pressure +10 PSI Min.	Pilot Exhaust	
	Vacuum	Inlet	Inlet	Vacuum		10 PSI Min.	Vacuum	



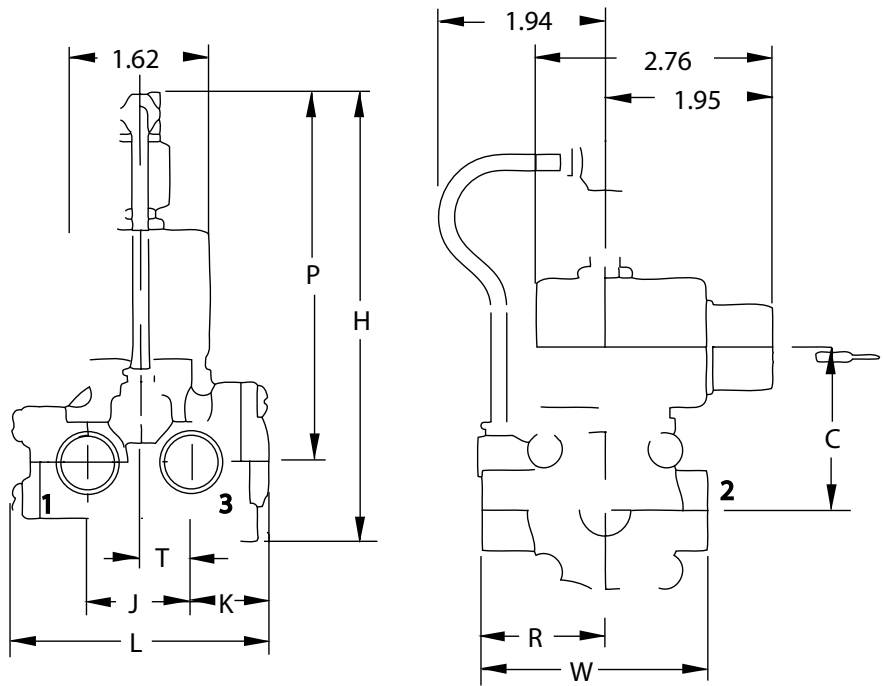
3-Way

## Valve Reference B19



3-Way Normally Closed  
Port Identification

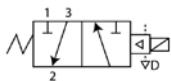
1-Pressure/ 2-Cylinder/ 3-Exhaust



Valve	Dimensions								
	H	P	C	L	W	T	R	J	K
73312BN3RNJ0	5.34	4.41	1.96	2.97	2.62	0.59	1.44	1.22	0.91
73312BN4UNJ0	5.62	4.56	2.08	3.38	3.09	0.69	1.66	1.41	1.06

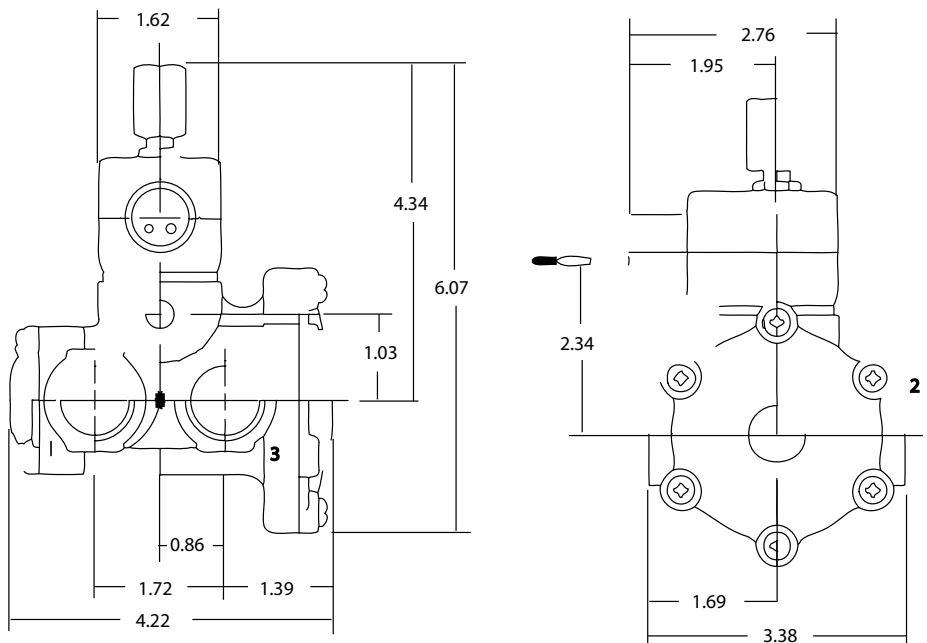
3-Way

## Valve Reference B20



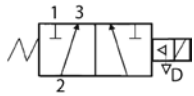
3-Way Normally Open  
Port Identification

1-Exhaust/ 2-Cylinder/ 3-Pressure

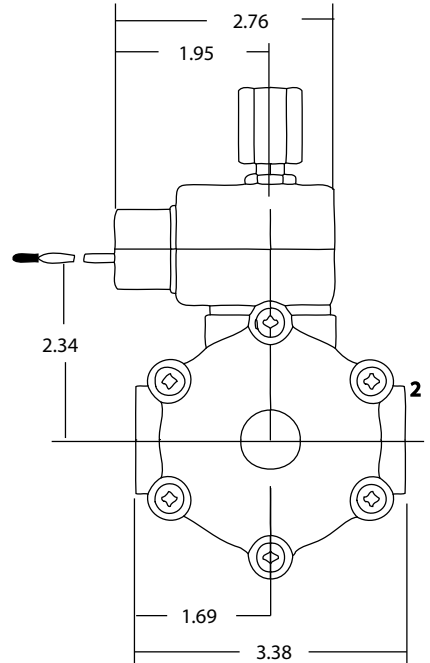
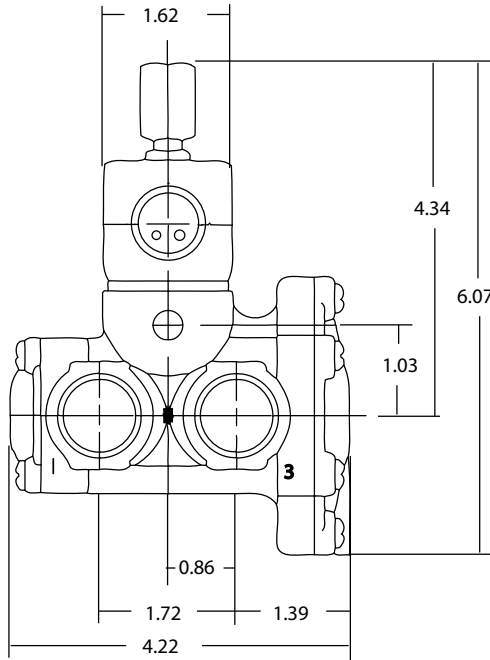


## Valve Reference B21

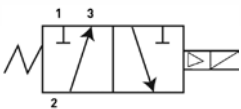
3-Way



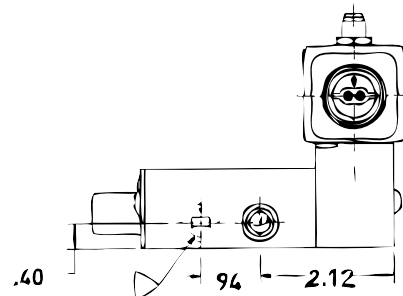
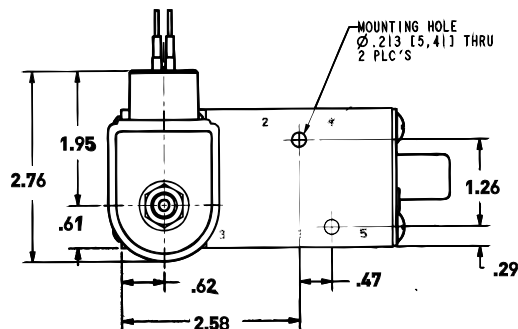
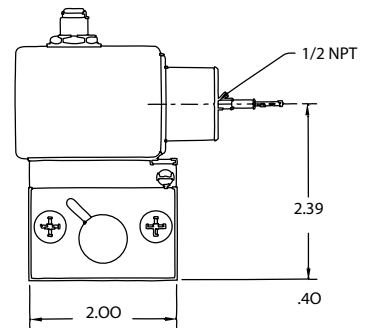
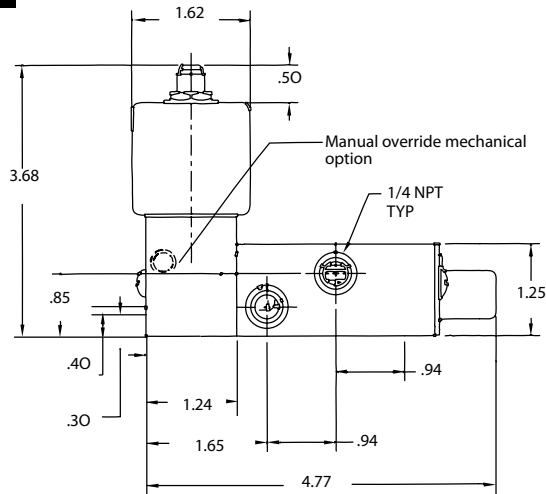
3-Way Diverting  
Port Identification  
1-NC/ 2-IN/ 3-NO



## Valve Reference B22



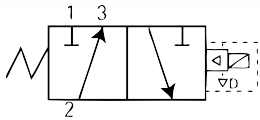
3-Way Normally Closed  
Port Identification  
2-Cylinder/ 1-Pressure/ 3-Exhaust



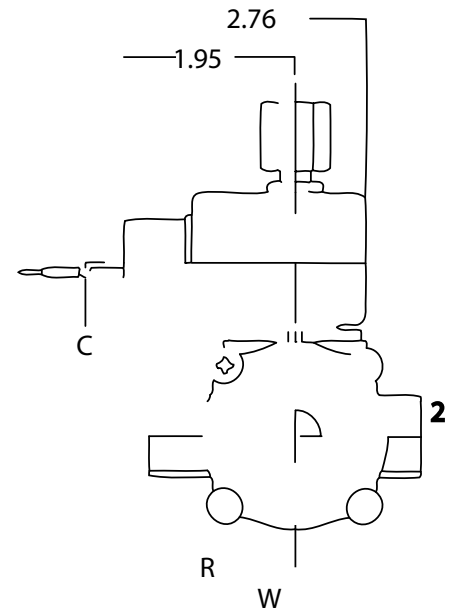
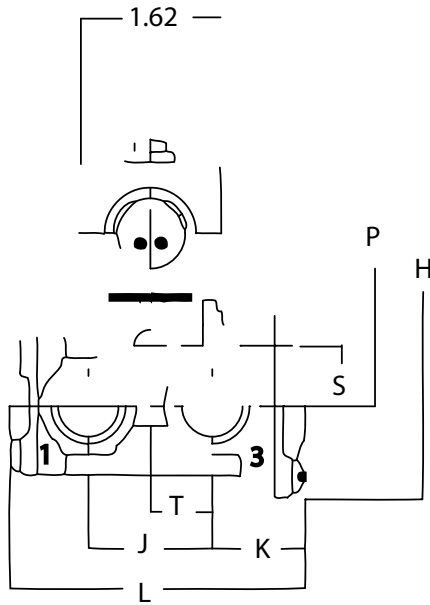
B32

Parker Hannifin Corporation  
Fluid Control Division  
1 800 825 8305 (1 800 Valve05)  
www.parker.com/fcd

## Valve Reference B24



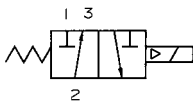
3-Way Normally Closed  
Port Identification  
1-Pressure/ 2-Cylinder/ 3-Exhaust



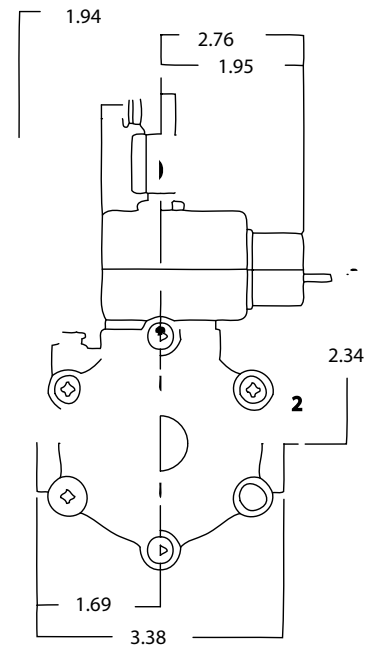
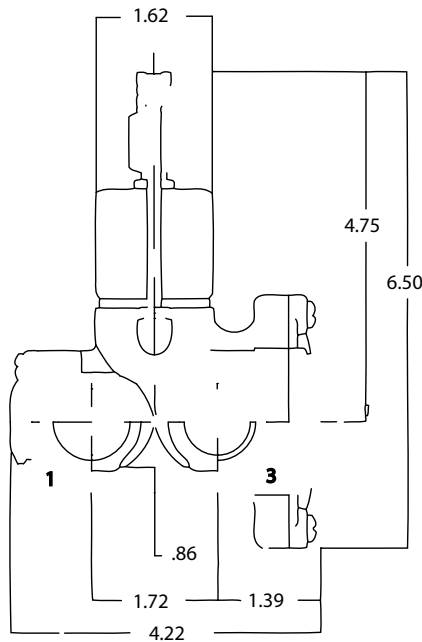
Valve	Dimensions									
	H	P	C	L	W	S	T	R	J	K
73312BN3RNJ1	4.89	3.98	1.96	2.97	2.62	0.65	0.59	1.44	1.22	0.91
73312BN4UNJ1	5.10	4.08	2.08	3.38	3.09	0.78	0.69	1.66	1.44	1.06

3-Way

## Valve Reference B25

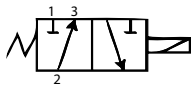


3-Way Normally Closed  
Port Identification  
1-Pressure/ 2-Cylinder/ 3-Exhaust

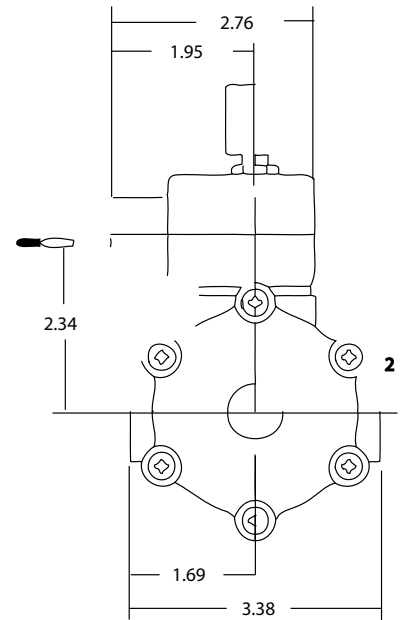
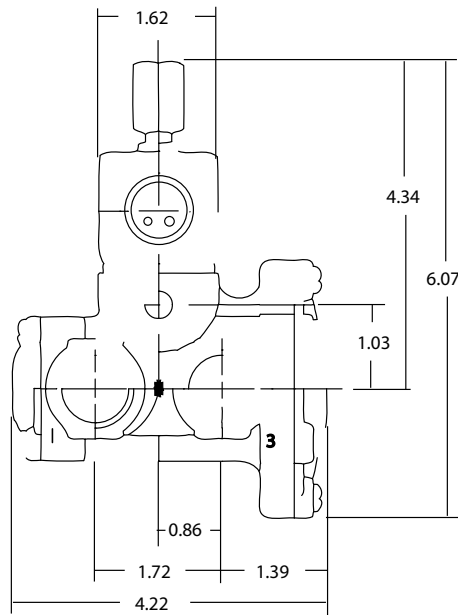


## Valve Reference B26

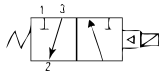
3-Way



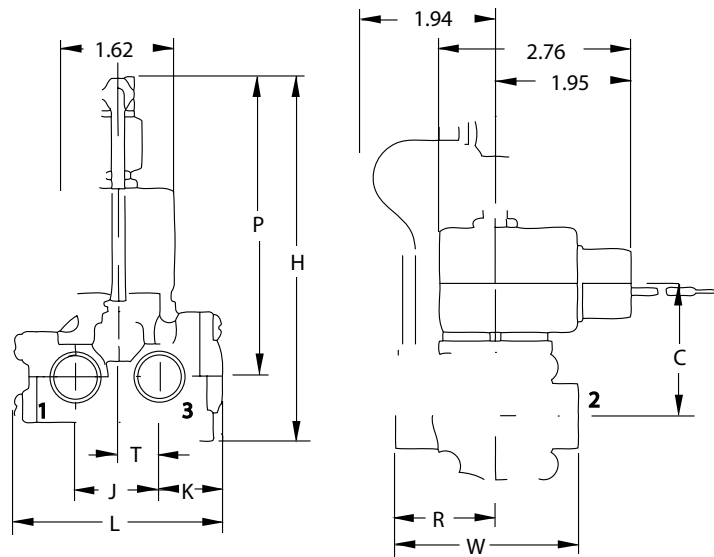
3-Way Normally Closed  
Port Identification  
1-Pressure/ 2-Cylinder/ 3-Exhaust



## Valve Reference B27



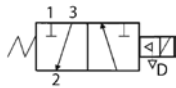
3-Way Normally Open  
Port Identification  
1-Exhaust/ 2-Cylinder/ 3-Pressure



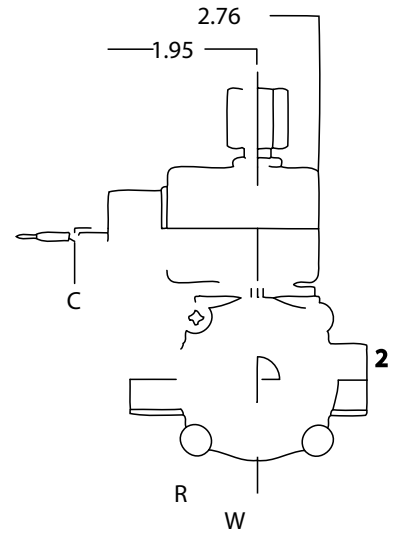
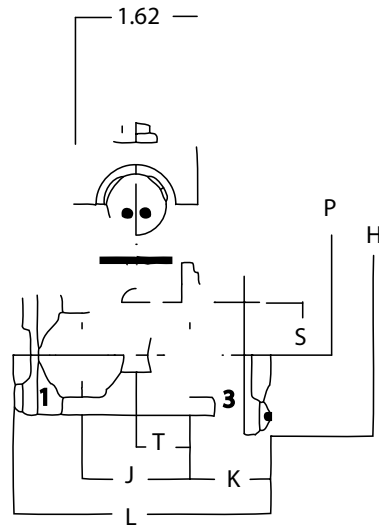
Valve	Dimensions								
	H	P	C	L	W	T	R	J	K
73322BN3RNJ0	5.34	4.41	1.96	2.97	2.62	0.59	1.44	1.22	0.91
73322BN4UNJ0	5.62	4.56	2.08	3.38	3.09	0.69	1.66	1.41	1.06



## Valve Reference B28



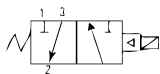
3-Way Normally Open  
Port Identification  
1-Exhaust/ 2-Cylinder/ 3-Pressure



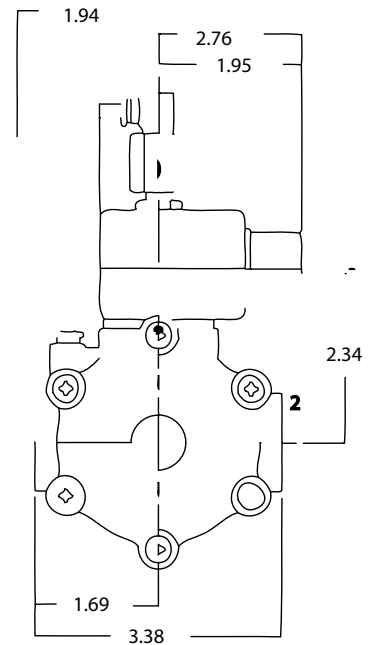
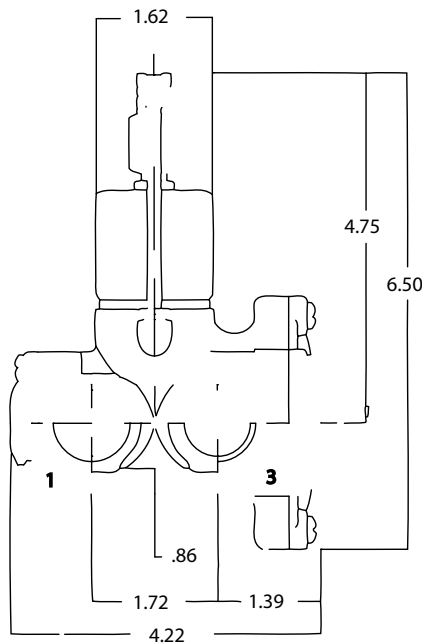
Valve	Dimensions									
	H	P	C	L	W	S	T	R	J	K
73322BN3RNJ1	4.98	3.98	1.96	2.97	2.62	0.65	0.59	1.44	1.22	0.91
73322BN4UNJ1	5.10	4.08	2.08	3.38	3.09	0.78	0.69	1.66	1.44	1.06

3-Way

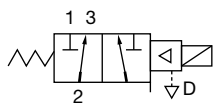
## Valve Reference B29



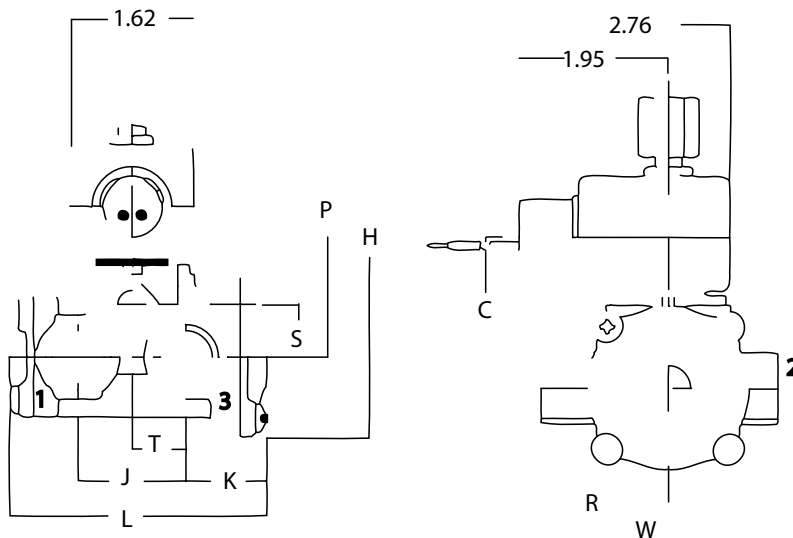
3-Way Normally Open  
Port Identification  
1-Exhaust/ 2-Cylinder/ 3-Pressure



## Valve Reference B30

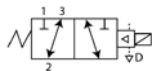


3-Way Diverting  
Port Identification  
1-NC/ 2-IN/ 3-NO

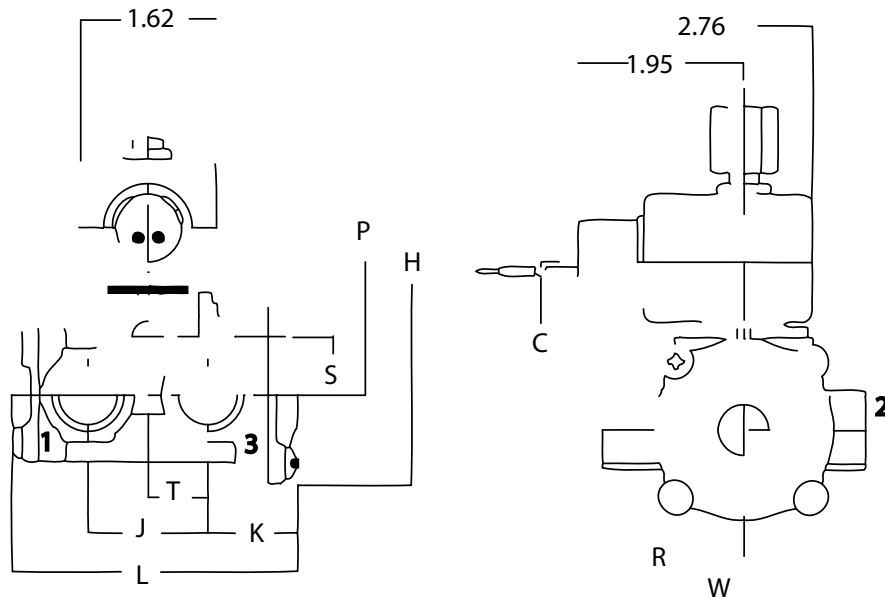


Valve	Dimensions									
	H	P	C	L	W	S	T	R	J	K
73382BN3RNJ1	4.89	3.98	1.96	2.97	2.62	0.65	0.59	1.44	1.22	0.91
73382BN4UNJ1	5.10	4.08	2.08	3.38	3.09	0.78	0.69	1.66	1.44	1.06

## Valve Reference B31



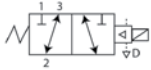
3-Way Universal  
Pressure can be applied at  
either port.



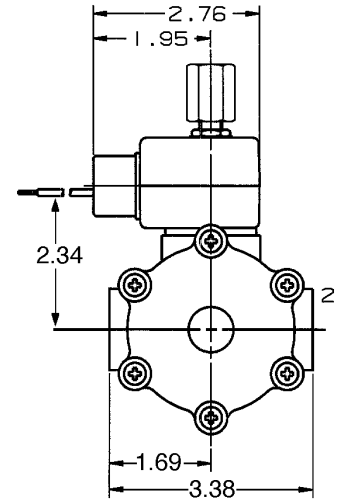
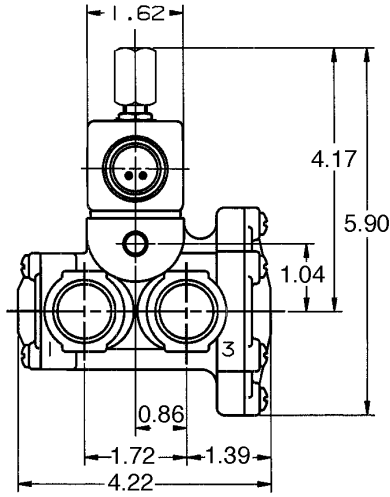
Valve	Dimensions									
	H	P	C	L	W	S	T	R	J	K
74332BN3RNJ1	4.72	3.79	1.96	2.97	2.62	0.65	0.59	1.44	1.22	0.91
74332BN4UNJ1	4.93	3.91	2.08	3.38	3.09	0.78	0.69	1.66	1.44	1.06



## Valve Reference B32

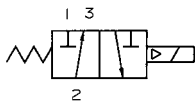
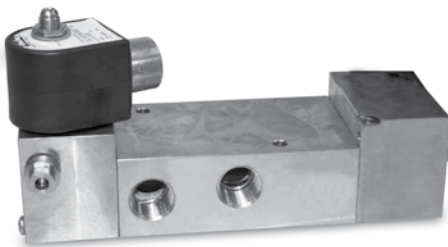


3-Way Universal  
Pressure can be applied at either port.

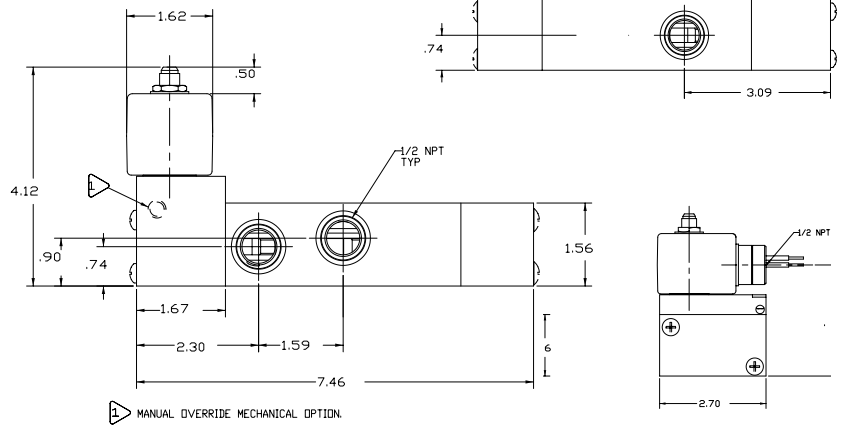
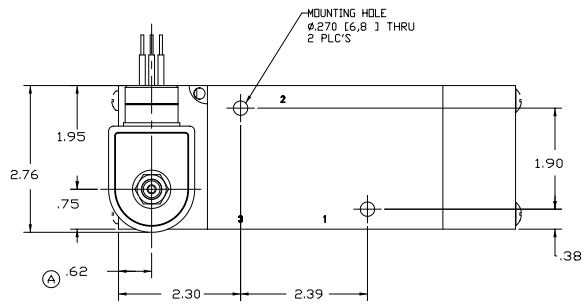


3-Way

## Valve Reference B33

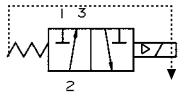


3-Way Normally Closed  
Port Identification  
2-Cylinder / 1-Pressure/ 3-Exhaust

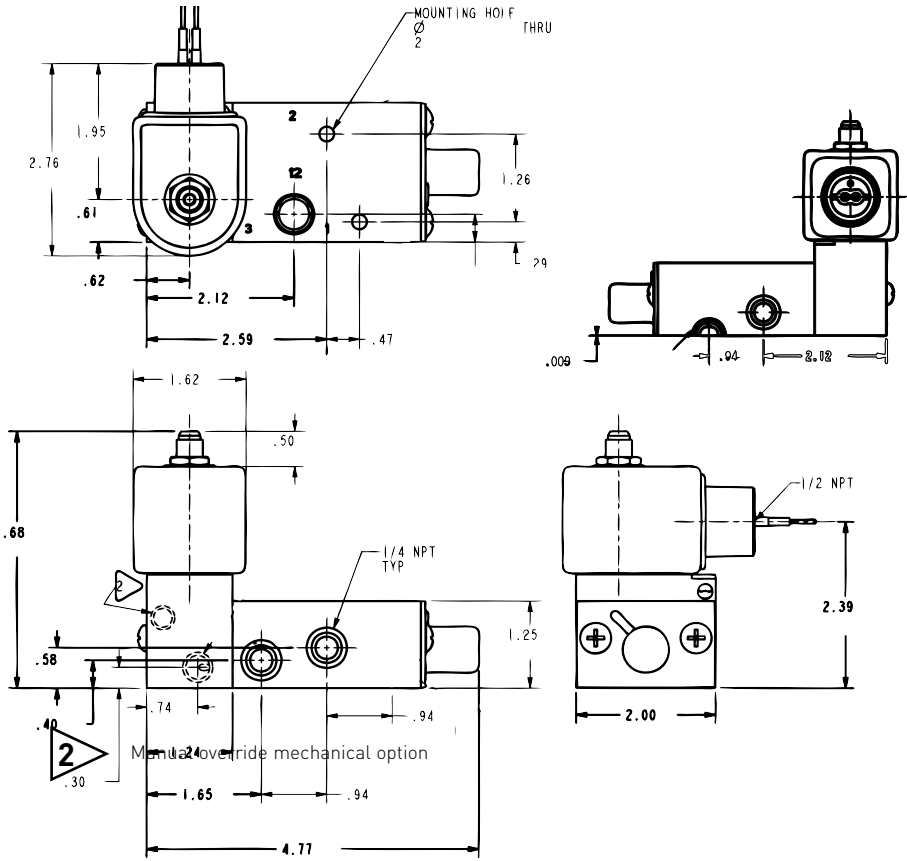


# Valve Reference B34

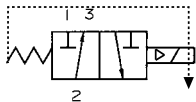
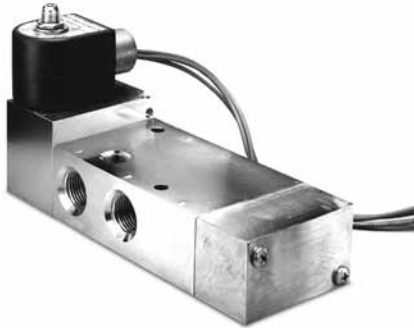
3-Way



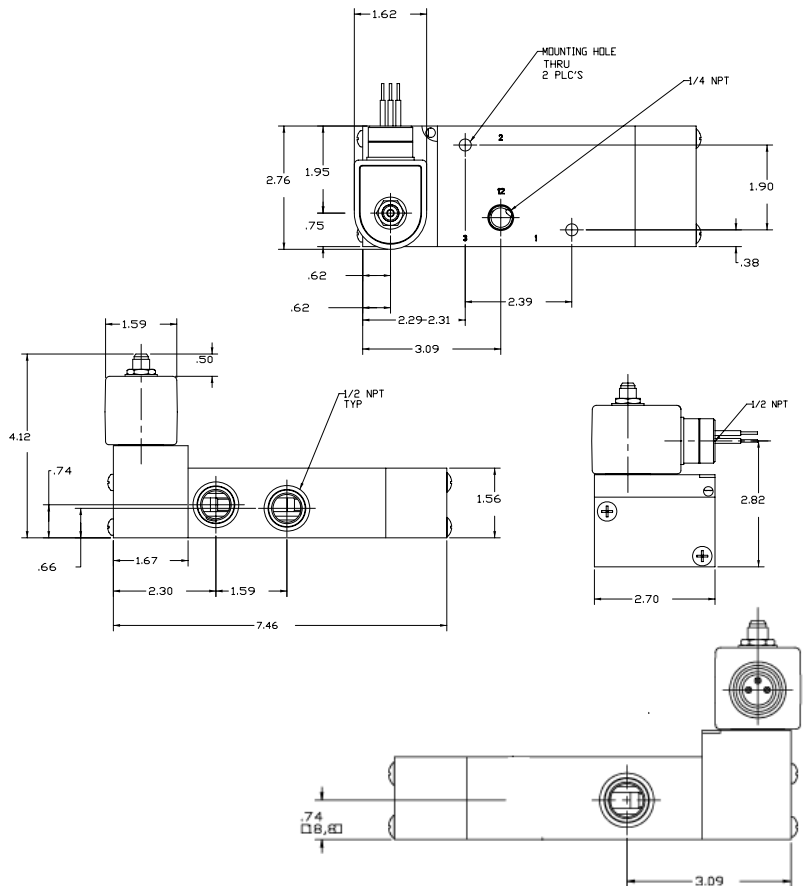
3-Way Normally Closed  
Port Identification  
1-Pressure/ 2-Cylinder/ 3-Exhaust



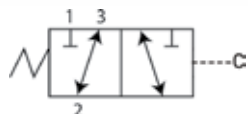
# Valve Reference B35



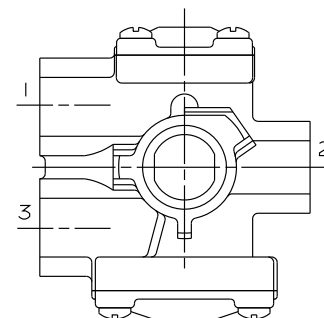
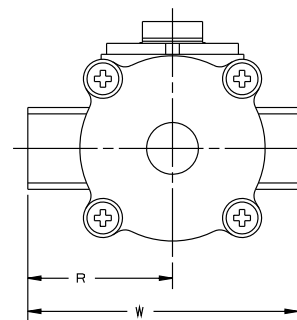
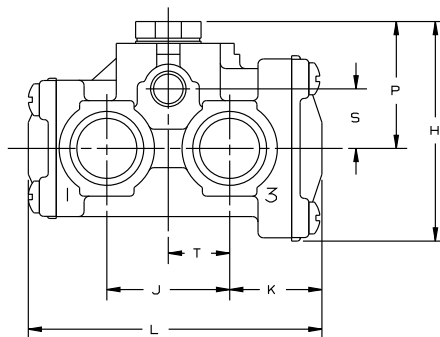
3-Way Normally Closed  
1-Pressure/ 2-Cylinder/ 3-Exhaust



# Valve Reference B36



Port Identification  
 Normally Closed: 1-press/2-cylinder/3-Exh.  
 Normally Open: 3 - press/2- cylinder/3 - Exh.  
 Directional Control: 2 - press/3 - N.O./1 - N.C.



3-Way

Valve	Dimension								
	H	P	L	W	S	T	R	J	K
**75332BN3RN00	2.42	1.49	2.97	2.62	.65	.59	1.44	1.22	.91
**75332BN4UN00	2.3	1.61	3.38	3.09	.78	.69	1.66	1.41	1.06
*75332BN52N00	3.60	1.87	4.22	3.38	1.03	.86	1.69	1.72	1.39

\* 6-Bolt cover pattern as shown in photo  
 \*\* 4-bolt cover pattern as shown in dimensional drawings



# 3-Way

Direct Acting High Pressure Valves  
1/8" - 1/4" NPT



3-Way

## General Description:

3-way Direct Acting High Pressure valves are used in general industrial application and control valve pilot actuation where higher pressures and flows are required. No minimum operating pressure differential required to ensure proper operation.

### Installation

Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

### Standard Materials of Construction

Please refer to page B44.

### Compatible Fluids

Lubricated Air, Inert Gases, Water, Light Oil (300 SSU) and additional fluids compatible with materials of construction, as listed in the product specifications charts.

Use of non-lubricated gaseous media can affect valve life.

## Electrical Characteristics:

### Standard Voltages:

AC -24/60

120/60-110/50

240/60-220/50

DC -12,24 & 120

For other voltages - consult factory



### Coil Classification:

Class F standard

Class H available

### Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified. For additional details, consult factory.

### Maximum Ambient Temperature

150° F

Please refer to Page B44 for details.

## Applications:

- Pilot valve actuation of larger control valves
- Oil and gas including off-shore installations
- Single acting spring return cylinder control
- Compressor unloaders
- Turbines
- Machining equipment
- High pressure compressors



### 3-Way Normally Closed High Pressure - Brass

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal*	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>														
1/4	1/32	1/32	0.020	0.020	0	1100	1100	1100	10	210	RUBY	7131KBN2BR00	7	B39
1/4	1/32	1/32	0.020	0.020	0	580	580	580	10	165	PCTFE	7131KBN2BF00	7	B39
<b>DC TECHNICAL SPECIFICATIONS</b>														
1/4	1/32	1/32	0.020	0.020	0	1100	1100	1100	10	210	RUBY	7131KBN2BR00	7	B39
1/4	1/32	1/32	0.020	0.020	0	580	580	580	10	165	PCTFE	7131KBN2BF00	7	B39

### 3-Way Universal High Pressure - Brass

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>														
1/4	1/32	1/32	0.020	0.020	0	435	435	435	10	185	FKM	7133KBN2BVJ1	7	B39
<b>DC TECHNICAL SPECIFICATIONS</b>														
1/4	1/32	1/32	0.020	0.020	0	435	435	435	10	185	FKM	7133KBN2BVJ1	7	B39

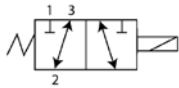
### 3-Way Universal High Pressure - Stainless Steel

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	In	Exh.	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>														
1/8	1/32	1/32	0.024	0.024	0	400	400	400	10	185	NBR	71335SN1ANJ1	7	B38
1/4	1/32	1/32	0.024	0.024	0	400	400	400	10	185	NBR	71335SN2ANJ1	7	B38
<b>DC TECHNICAL SPECIFICATIONS</b>														
1/8	1/32	1/32	0.024	0.024	0	400	400	400	10	185	NBR	71335SN1ANJ1	7	B38
1/4	1/32	1/32	0.024	0.024	0	400	400	400	10	185	NBR	71335SN2ANJ1	7	B38

\* PCTFE Seals: Allowable Seat leakage is 20 cc/min on air and inert gas at rated pressure: 7131KBNxxFxx  
 RUBY Seals: Allowable Seat leakage is 100 cc/min on air and inert gas at rated pressure: 7131KBNxxRxx

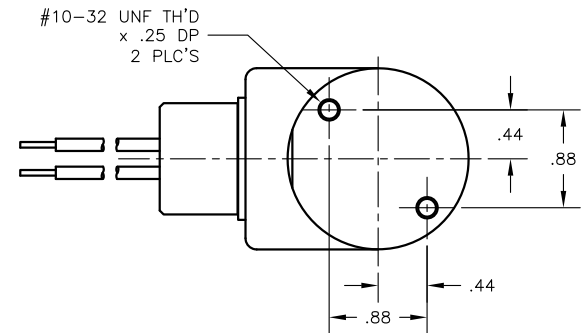
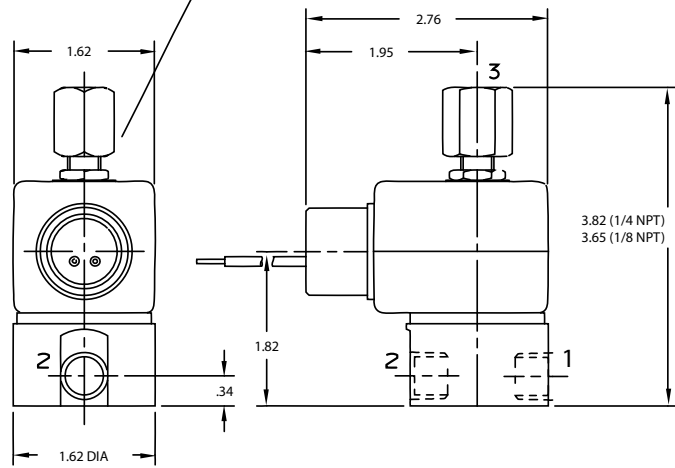


## Valve Reference B38



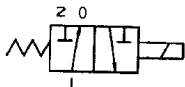
3-Way Universal  
Pressure can be applied at  
either port.

MECHANICAL OPTION "J1" FOR TYPE 71335

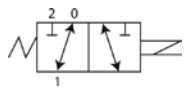


3-Way

## Valve Reference B39

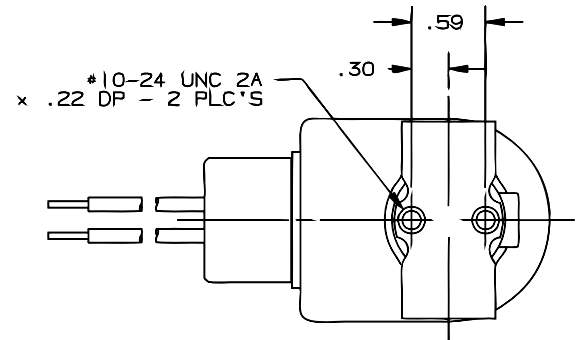
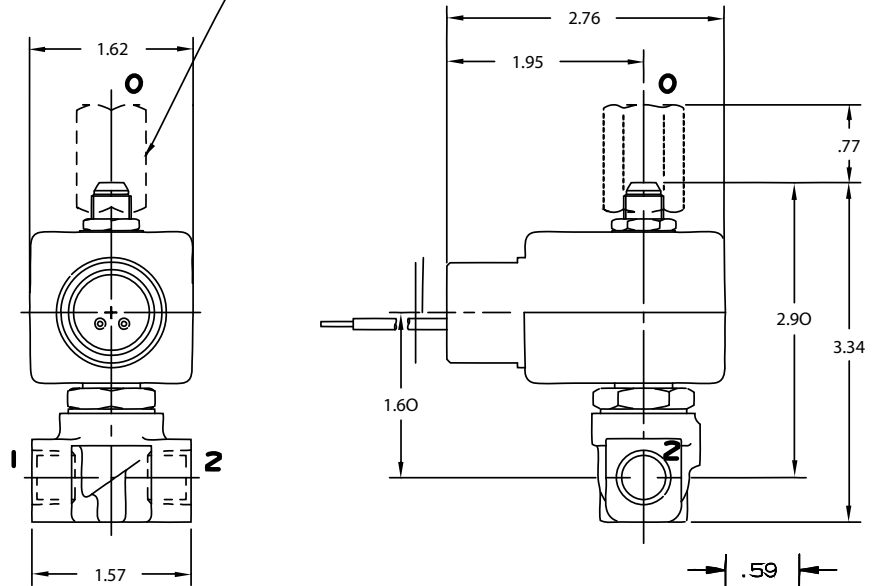


3-Way Normally Closed  
Port Identification  
1-Cylinder/ 2-Pressure/ 0-Exhaust



3-Way Universal  
Port Identification  
Pressure can be applied at  
either port

MECHANICAL OPTION "J1" FOR TYPE 7133KBN & 7131KBN



### 3-Way Direct Acting High Pressure Materials of Construction\*\*

Product*	Watt	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
7131KBN	10	3WNC	1/8 - 1/4	Brass	304SS	430FR	430F	430FR	301SS	Copper	150°F
7133KBN	10	3WU	1/8 - 1/4	Brass	304SS	430FR	430F	430FR	301SS	Copper	150°F
71335SN	10	3WU	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F

\* Shows first 7, 2 or 3 digits of pressure vessel.

\*\* Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

### Notes

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3-Way





# 3-Way

Direct Acting & Pilot Operated  
Quick Exhaust Valves  
1/4" - 3/8" NPT



3-Way

## General Description:

3-Way Direct Acting & Pilot Operated Quick Exhaust Valves are designed to provide a large orifice for quick exhaust. Increased exhaust capacity significantly reduces cycle time for single acting spring return actuators. Pilot operated valves require the minimum operating pressure differential specified to ensure proper operation. Direct acting valves do not require a pressure differential.

### Installation

Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

### Standard Materials of Construction

Please refer to page B50.

### Compatible Fluids

Lubricated air, inert gases, water, light oil (300 SSU) and additional fluids compatible with materials of construction, as listed in the product specifications.

Use of non-lubricated gaseous media can affect valve life.

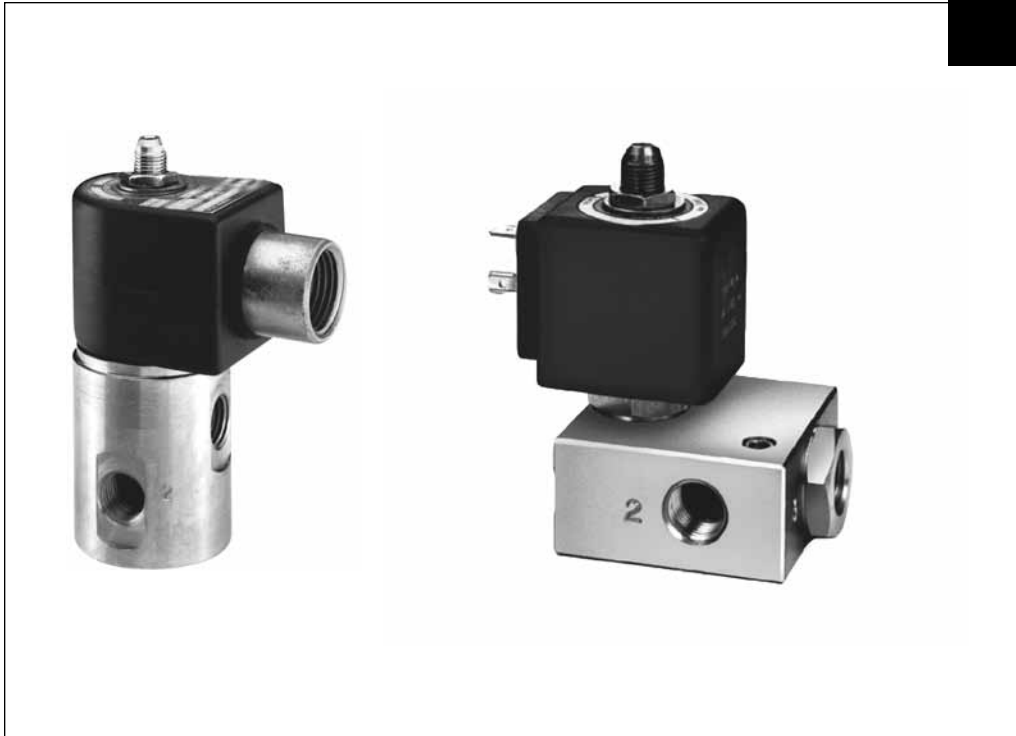
## Electrical Characteristics:

### Standard Voltages:

AC -24/60  
120/60-110/50  
240/60-220/50

DC -12, 24 & 120

For other voltages - consult factory.



### Coil Classification:

Class F Standard  
Class H Available

### Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified. For additional details, consult factory.

### Maximum Ambient Temperature

180° F

Please refer to Page B50 for details.

## Applications:

- Pilot valve actuation of larger control valves
- Oil and gas including off-shore installations
- Single acting spring return cylinder control
- Compressor unloaders
- Turbines



### 3-Way Normally Closed - Quick Exhaust - Brass

Port Size NPT	Orifice Size In.			Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	Body NC	Body NO	Sleeve Size	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/4	3/32	1/4	-	0.20	0.73	5	150	150	95	11	180	NBR	04F35C1116ACF	4	B41
1/4	3/32	1/4	3/32	0.20	1.10	0	100	100	100	10	185	NBR	7131EBN2LN00*	7	B40
1/4	3/32	1/4	3/32	0.20	1.10	0	100	100	100	10	185	NBR	7131EBN2LNJ1*	7	B40
1/4	9/32	11/32	-	0.80	1.20	10	200	200	200	6	180	NBR	04F38C1122AAF	1	B42
3/8	9/32	11/32	-	0.80	1.20	10	200	200	200	6	180	NBR	06F38C1122AAF	1	B42

#### DC TECHNICAL SPECIFICATIONS

1/4	3/32	1/4	-	0.20	0.73	5	115	115	60	11.5	104	NBR	04F35C1116A3F	6	B41
1/4	3/32	1/4	3/32	0.20	1.10	0	100	100	100	10	185	NBR	7131EBN2LN00*	7	B40
1/4	3/32	1/4	3/32	0.20	1.10	0	100	100	100	10	185	NBR	7131EBN2LNJ1*	7	B40
1/4	9/32	11/32	-	0.80	1.20	10	200	200	200	9.5	120	NBR	04F38C1122A1F	3	B42
3/8	9/32	11/32	-	0.80	1.20	10	200	200	200	9.5	120	NBR	06F38C1122A1F	3	B42

### 3-Way Normally Closed - Quick Exhaust - Stainless Steel

Port Size NPT	Orifice Size In.			Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	Body NC	Body NO	Sleeve Size	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

#### AC TECHNICAL SPECIFICATIONS

1/4	3/64	1/8	3/32	0.052	0.35	0	250	250	250	10	185	NBR	71313SN2EN00*	7	B43
1/4	3/64	1/8	3/32	0.052	0.35	0	250	250	250	10	185	NBR	71313SN2ENJ1*	7	B43
1/4	1/16	1/8	3/32	0.090	0.35	0	200	200	200	10	185	NBR	71313SN2GN00*	7	B43
1/4	1/16	1/8	3/32	0.090	0.35	0	200	200	200	10	185	NBR	71313SN2GNJ1*	7	B43
1/4	3/32	1/8	3/32	0.110	0.35	0	125	125	125	10	185	NBR	71313SN2KN00*	7	B43
1/4	3/32	1/8	3/32	0.110	0.35	0	125	125	125	10	185	NBR	71313SN2KNJ1*	7	B43
1/4	1/8	1/8	3/32	0.130	0.35	0	90	90	90	10	185	NBR	71313SN2MN00*	7	B43
1/4	1/8	1/8	3/32	0.130	0.35	0	90	90	90	10	185	NBR	71313SN2MNJ1*	7	B43

\*These valves operate at 0 PSI, however, a 2 PSI pressure differential is required to activate the pressure operated quick exhaust poppet.



3-Way

### 3-Way Normally Closed - Quick Exhaust - Stainless Steel (Continued)

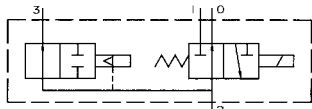
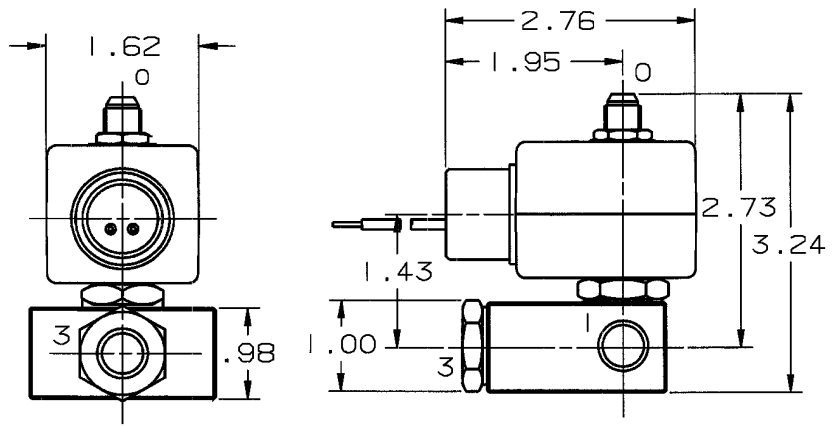
Port Size NPT	Orifice Size In.			Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	Body NC	Body NO	Sleeve Size	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>DC TECHNICAL SPECIFICATIONS</b>															
1/4	3/64	1/8	3/32	0.052	0.35	0	250	250	250	10	185	NBR	71313SN2EN00*	7	B43
1/4	3/64	1/8	3/32	0.052	0.35	0	250	250	250	10	185	NBR	71313SN2ENJ1*	7	B43
1/4	1/16	1/8	3/32	0.090	0.35	0	200	200	200	10	185	NBR	71313SN2GN00*	7	B43
1/4	1/16	1/8	3/32	0.090	0.35	0	200	200	200	10	185	NBR	71313SN2GNJ1*	7	B43
1/4	3/32	1/8	3/32	0.110	0.35	0	125	125	125	10	185	NBR	71313SN2KN00*	7	B43
1/4	3/32	1/8	3/32	0.110	0.35	0	125	125	125	10	185	NBR	71313SN2KNJ1*	7	B43
1/4	1/8	1/8	3/32	0.130	0.35	0	90	90	90	10	185	NBR	71313SN2MN00*	7	B43
1/4	1/8	1/8	3/32	0.130	0.35	0	90	90	90	10	185	NBR	71313SN2MNJ1*	7	B43

### 3-Way Normally Open - Quick Exhaust - Brass

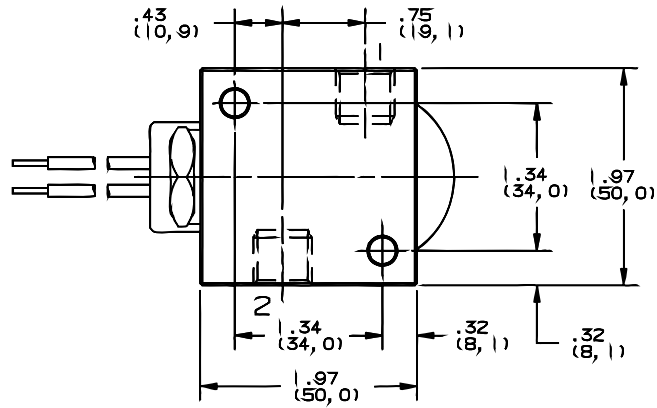
Port Size NPT	Orifice Size In.			Flow Factor Cv		Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
	Body NC	Body NO	Sleeve Size	In	Exh.	Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
<b>AC TECHNICAL SPECIFICATIONS</b>															
1/4	3/32	1/4	-	0.20	0.73	5	160	160	95	11	180	NBR	04F35O1116ACF	4	B41
1/4	9/32	11/32	-	0.80	1.20	10	200	200	200	11	180	NBR	04F38O1122ACF	4	B42
3/8	9/32	11/32	-	0.80	1.20	10	200	200	200	11	180	NBR	06F38O1122ACF	4	B42
<b>DC TECHNICAL SPECIFICATIONS</b>															
1/4	3/32	1/4	-	0.20	0.73	5	100	100	50	11.5	180	NBR	04F35O1116A3F	6	B41
1/4	9/32	11/32	-	0.80	1.20	10	200	200	200	11.5	180	NBR	04F38O1122A3F	6	B42
3/8	9/32	11/32	-	0.80	1.20	10	200	200	200	11.5	180	NBR	06F38O1122A3F	6	B42

\*These valves operate at 0 PSI, however, a 2 PSI pressure differential is required to activate the pressure operated quick exhaust poppet.

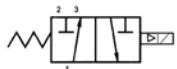
## Valve Reference B40



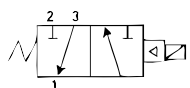
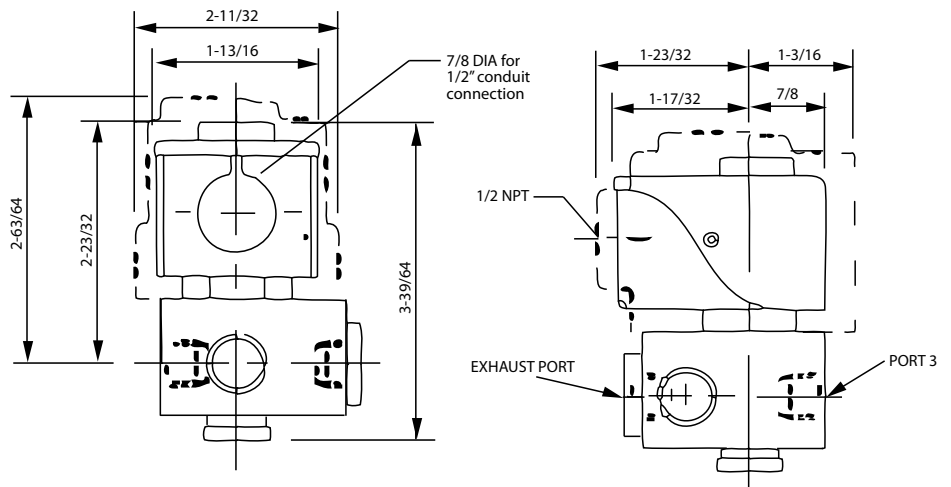
3-Way Normally Closed  
Port Identification  
1-Pressure/ 2-Cylinder/ 3-Exhaust



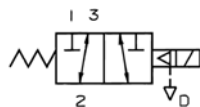
## Valve Reference B41



3-Way Normally Closed  
04F35Cxx  
Port identification:  
Pressure is at 2 | CYL. 1



3-Way Normally Open  
04F35Oxx  
Port identification:  
Pressure is at 3 | CYL. 1



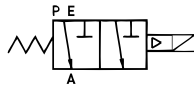
3-Way Universal  
04F35Uxx  
Port identification:  
Pressure can be applied at either port



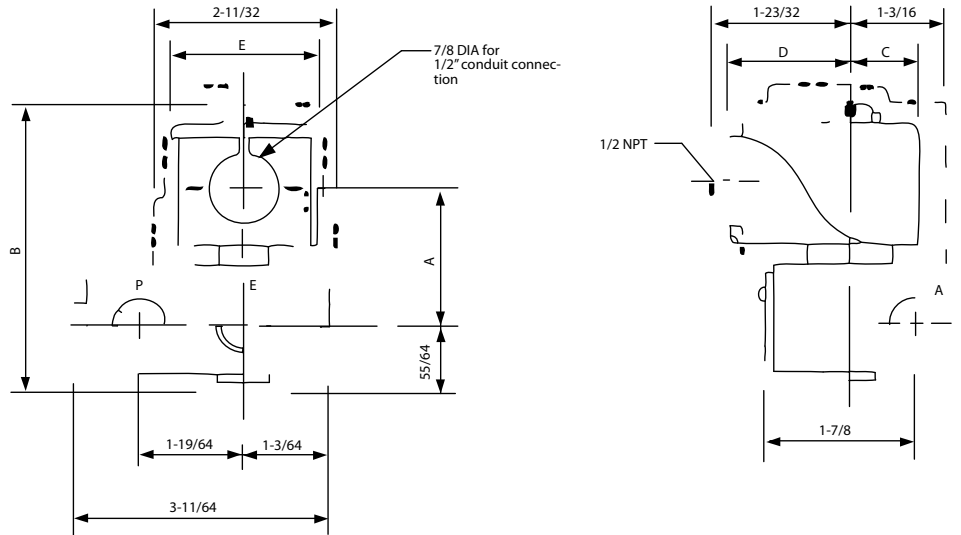
## Valve Reference B42



3-Way Normally Closed  
04F38Cxx and 06F38Cxx



3-Way Normally Open  
04F38Oxx and 06F38Oxx

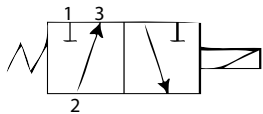


Port Identification:  
P - PRESSURE | A - CYL. | E - EXH

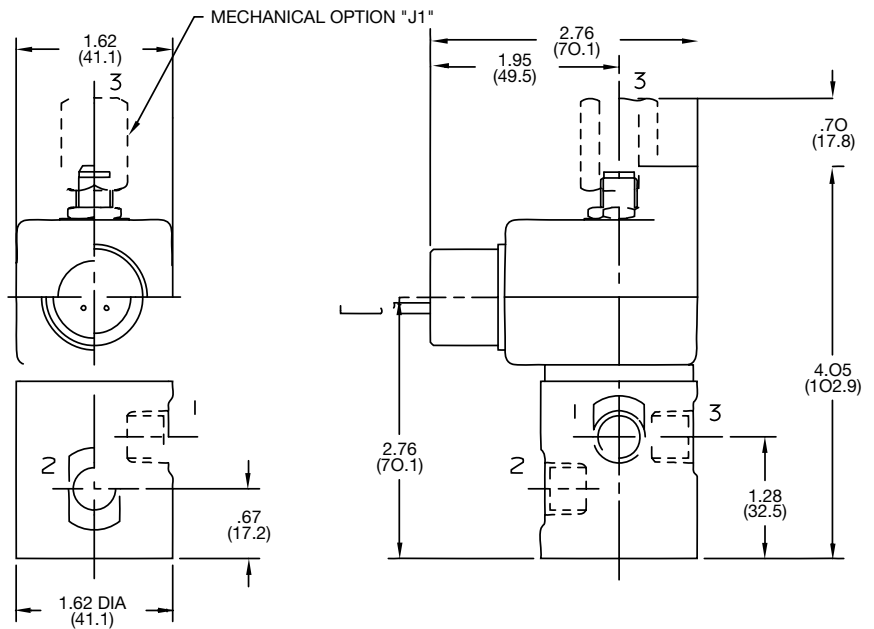
	Normally Closed	Normally Open
<b>A</b>	1 - 21/32	1 - 23/32
<b>B</b>	3 - 33/64	3 - 37/64
<b>C</b>	23/32	7/8
<b>D</b>	1 - 5/16	1 - 17/32
<b>E</b>	1 - 9/16	1 - 13/16

3-Way

## Valve Reference B43



3-way Normally closed  
Port identification:  
1-pressure/2-cylinder/3-exhaust



### 3-Way Quick Exhaust Materials of Construction\*\*

Product*	Watt	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
7131EBN	10	3WNC	1/4	Brass	304SS	430FR	430F	430FR	301SS	Copper	150°F
71313SN	10	3WNC	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
04F35C1	11.5	3WNC	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	180°F
04F35O1	6	3WNO	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	180°F
04F38C1	6	3WNC	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	180°F
04F38O1	6	3WNO	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	180°F
06F38C1	11.5	3WNC	3/8	Brass	305SS	430FR	430F	430FR	302SS	Copper	180°F
06F38O1	11.5	3WNO	3/8	Brass	305SS	430FR	430F	430FR	302SS	Copper	180°F
04F35C1	11.5	3WNC	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	104°F
04F35O1	11.5	3WNO	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	104°F
04F38C1	11.5	3WNC	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	120°F
04F38O1	11.5	3WNO	1/4	Brass	305SS	430FR	430F	430FR	302SS	Copper	120°F
06F38C1	11.5	3WNC	3/8	Brass	305SS	430FR	430F	430FR	302SS	Copper	120°F
06F38O1	11.5	3WNO	3/8	Brass	305SS	430FR	430F	430FR	302SS	Copper	120°F

\* Shows first 7 digits of pressure vessel.

\*\* Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

### Notes

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3-Way