

SKINNER 7000 Series General Purpose Three-Way Pilot Operated Valves

IN THIS SECTION :
7331, 7332, 7338, 7433

SPECIFICATIONS

Mechanical Characteristics

Standard Materials of Construction

- Body—Brass
- Seals—NBR
- Diaphragm Seal—NBR/PTFE
- Sleeve Tube—Stainless Steel (304)
- Plunger—Stainless Steel (430FR)
- Stop—Stainless Steel (430FR)
- Springs—Stainless Steel (18-8)
- Shading Ring—Copper
- Pilot Orifice—Stainless Steel (303)

Compatible Fluids

- Lubricated Air, Non-Lubricated Air, Inert Gases, Water, Hydraulic Fluids, Petroleum Products and additional fluids compatible with materials of construction. Use of non-lubricated gaseous media will substantially limit valve life.

Electrical Characteristics

Voltages

- DC—12, 24
- AC—24/60, 110/50-120/60, 208/60, 220/50-240/60, 440/50-480/60 (other AC/DC voltages available upon request)

Agency Approvals

- UL and CSA approvals are available on valves with applicable coil/enclosure combinations. For additional information see page 136.

Miscellaneous

Maximum Ambient Temperature

- 10 watt AC/DC—150°F
- 22 watt AC/DC—77°F
- Fluxtron/Magnelatch—122°F

7331 PILOT OPERATED BRASS VALVES—NORMALLY CLOSED, NBR SEALS

Pipe Size NPT	Orifice Body NC (inch)	Orifice Body NO (inch)	Cv Factor NC	Cv Factor NO	Operating Pressure Differential (PSI)					Max. Fluid Temp. (F)	Pressure Vessel Catalog Number	UL/CSA** Approval	Const. Ref.
					Min.*	Maximum							
						AC Ratings		DC Ratings					
						10 watt	22 watt	10 watt	22 watt				
3/8"	3/8	3/8	2.1	2.1	10	180		180		185	73312BN3RNJ0	GP	41
	3/8	3/8	2.1	2.1	10	180		180		185	73312BN3RNJ1	GP	42
1/2"	1/2	1/2	3.6	3.6	10	180		180		185	73312BN4UNJ0	GP	41
	1/2	1/2	3.6	3.6	10	180		180		185	73312BN4UNJ1	GP	42
3/4"	3/4	3/4	7.3	7.3	10	180		180		185	73312BN52NJ0	GP	43
	3/4	3/4	7.3	7.3	10	180		180		185	73312BN52NJ1	GP	44

DRAWINGS

Valve	Dimension										
	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	



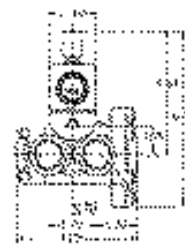
#42



Port Identification:
1-Pressure/ 2-Cylinder/ 3-Exhaust



#44



Port Identification:
1-Pressure/ 2-Cylinder/ 3-Exhaust

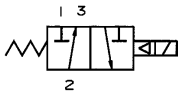
7000 Series General Purpose Three-Way Pilot Operated Valves

DRAWINGS

Valve	Dimension									
	H	P	C	L	W	T	R	J	K	
73312BN3RNJO	5.34	4.41	1.96	2.97	2.62	0.59	1.44	1.22	0.91	
73312BN4UNJO	5.62	4.56	2.08	3.38	3.09	0.69	1.66	1.41	1.06	



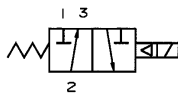
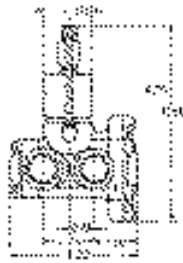
#41



Port Identification:
1-Pressure/ 2-Cylinder/ 3-Exhaust



#43



Port Identification:
1-Pressure/ 2-Cylinder/ 3-Exhaust

7000 Series General Purpose Three-Way Pilot Operated Valves

7332 PILOT OPERATED BRASS VALVES—NORMALLY OPEN, NBR SEALS

Pipe Size NPT	Orifice Body NC (inch)	Orifice Body NO (inch)	Cv Factor NC	Cv Factor NO	Operating Pressure Differential (PSI)				Max. Fluid Temp. (F)	Pressure Vessel Catalog Number	UL/CSA** Approval	Const. Ref.	
					Min.*	Maximum							
						AC Ratings		DC Ratings					
						10 watt	22 watt	10 watt					22 watt
3/8"	3/8	3/8	2.1	2.1	10	180	180	185	73322BN3RNJ0	GP	124		
	3/8	3/8	2.1	2.1	10	180	180	185	73322BN3RNJ1	GP	125		
1/2"	1/2	1/2	3.6	3.6	10	180	180	185	73322BN4UNJ0	GP	124		
	1/2	1/2	3.6	3.6	10	180	180	185	73322BN4UNJ1	GP	125		
3/4"	3/4	3/4	7.3	7.3	10	180	180	185	73322BN52NJ0	GP	128		
	3/4	3/4	7.3	7.3	10	180	180	185	73322BN52NJ1	GP	129		

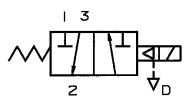
DRAWINGS

Valve	Dimension										
	H	P	C	L	W	S	T	R	J	K	
73322BN3RNJ1	4.89	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	

73322BN3RNJ1	4.89	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



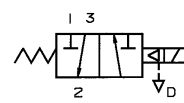
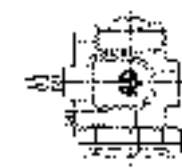
#125



Port Identification:
1-Exhaust/ 2-Cylinder/ 3-Pressure



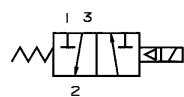
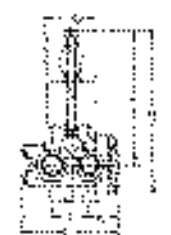
#129



Port Identification:
1-Exhaust/ 2-Cylinder/ 3-Pressure



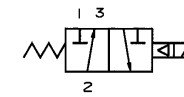
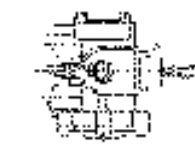
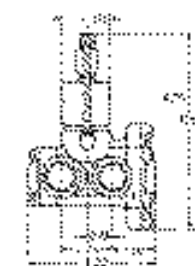
#124



Port Identification:
1-Exhaust/ 2-Cylinder/ 3-Pressure



#128



Port Identification:
1-Exhaust/ 2-Cylinder/ 3-Pressure

7000 Series General Purpose Three-Way Pilot Operated Valves

7338 PILOT OPERATED BRASS VALVES – DIVERTING, NBR SEALS

Pipe Size NPT	Orifice Body NC (inch)	Orifice Body NO (inch)	Cv Factor NC	Cv Factor NO	Operating Pressure Differential (PSI)				Max. Fluid Temp. (F)	Pressure Vessel Catalog Number	UL/CSA** Approval	Const. Ref.	
					Min.*	Maximum							
						AC Ratings		DC Ratings					
						10 watt	22 watt	10 watt					22 watt
3/8"	3/8	3/8	2.1	2.1	10	180	180	185	73382BN3RNJ1	GP	126		
1/2"	1/2	1/2	3.6	3.6	10	180	180	185	73382BN4UNJ1	GP	126		
3/4"	3/4	3/4	7.3	7.3	10	180	180	185	73382BN52NJ1	GP	130		

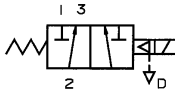
* Pilot operated valves require the minimum pressure differential specified for proper valve operation.
 **UL/CSA Approval Information: GP=General Purpose Blank=Not Approved

See page 136 for additional agency approval information.

DRAWINGS

Valve	Dimension									
	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

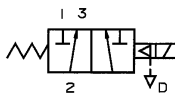


#126

Port Identification:
1-NC/ 2-IN/ 3-NO



#130

Port Identification:
1-NC/ 2-IN/ 3-NO

7000 Series General Purpose Three-Way Pilot Operated Valves

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 pressure of 10 PSI.
- 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.

7433 PILOT OPERATED BRASS VALVES (EXTERNAL PILOT PRESSURE) – MULTIPURPOSE, NBR SEALS

Pipe Size NPT	Orifice Body NC (inch)	Orifice Body NO (inch)	Cv Factor NC	Cv Factor NO	Operating Pressure Differential (PSI)					Max. Fluid Temp. (F)	Pressure Vessel Catalog Number	UL/CSA* Approval	Const. Ref.
					Min.	Maximum							
						AC Ratings		DC Ratings					
						10 watt	22 watt	10 watt	22 watt				
3/8"	3/8	3/8	2.1	2.1	0	170	22 watt	170		185	74332BN3RNJ1	GP	127
1/2"	1/2	1/2	3.6	3.6	0	170		170		185	74332BN4UNJ1	GP	127
3/4"	3/4	3/4	7.3	7.3	0	170		170		185	74332BN52NJ1	GP	131

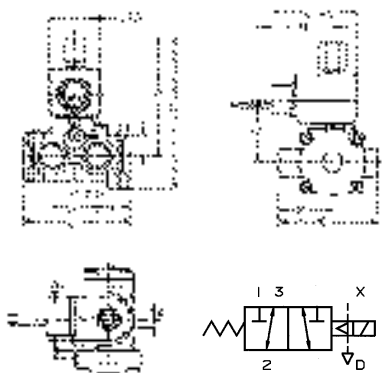
* UL/CSA Approval Information: GP=General Purpose Blank=Not Approved
See page 136 for additional agency approval information.

DRAWINGS

Valve	Dimension										
	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	



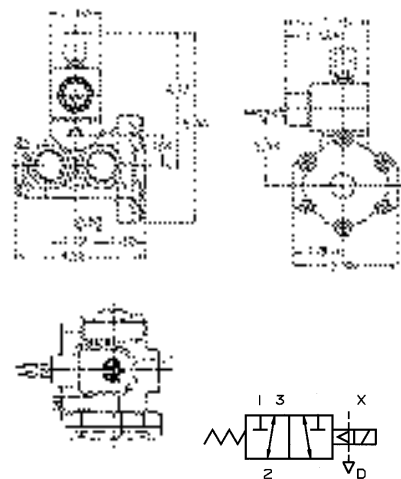
#127



Port Identification:
Pressure can be applied at either port.



#131



Port Identification:
Pressure can be applied at either port.