

Solenoid Valves for Automation

SKINNER 7000 Series General Purpose Two-Way Direct Lift and Pilot Operated Valves

IN THIS SECTION :
7221, 7222, 7321, 7322, 7423

SPECIFICATIONS

Mechanical Characteristics

Standard Materials of Construction

- Body—Brass or Stainless Steel (316 or 430F)
- Seals—NBR, FKM as listed
- Sleeve Tube—Stainless Steel (303 or 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, 220/50-240/60, (other AC/DC voltages available upon request)

Power Consumption

- 10, 22 watts
- Fluxtron* Electronic Coils and Magnelatch

Agency Approvals

- UL and CSA approvals are available on valves with applicable coil/enclosure combinations. For additional information see page 122.

Miscellaneous

Maximum Ambient Temperature

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

*** Fluxtron coils not for use on direct lift valves.**

7221 DIRECT LIFT BRASS VALVES— NORMALLY CLOSED, NBR SEALS

'B' and 'G' Family valves listed below are also available in FKM Seals.

Pipe* Size NPT	Orifice Size (inch)	Cv Factor	Operating Pressure Differential (PSI)				MAX.** Fluid Temp. (F)	Pressure Vessel Number	UL/CSA*** Approval	Const. Ref.	
			Min.*	Maximum							
				AC Ratings		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
3/8"	5/8	3.0	0	100		40	185	72218BN3TN00	SS	8	
	19/32	4.4	0	230		100	185	7221GBN3VN00	SS	9	
1/2"	5/8	4.0	0	100		40	185	72218BN4UN00	SS	8	
	19/32	4.4	0	230		100	185	7221GBN4VN00	SS	9	
3/4"	3/4	5.0	0	100		40	185	72218BN5VN00	SS	8	
	19/32	5.5	0	230		100	185	7221GBN51N00	SS	9	
1"	19/32	5.5	0	230		100	185	7221GBN61N00	SS	9	
	1	11.7	0	230		85	185	7221GBN64N00	SS	9	

For Direct Lift Valve With 1" NPT Process Connection Please Go To Page 44.

7221 DIRECT LIFT STAINLESS STEEL VALVES— NORMALLY CLOSED, FKM SEALS

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Operating Pressure Differential (PSI)				MAX.*** Fluid Temp. (F)	Pressure Vessel Number	UL/CSA** Approval	Const. Ref.	
			Min.*	Maximum							
				AC Ratings		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
3/8"	5/8	3.0	0	100		40	185	72218RN3TV00	SS	8	
1/2"	5/8	4.0	0	100		40	185	72218RN4UV00	SS	8	
3/4"	3/4	5.0	0	100		40	185	72218RN5VV00	SS	8	

* Direct lift valves will open at zero differential pressure, however full flow through the valve will not be safely achieved.

** Maximum fluid temperatures are provided for Class F coils. Valves with FKM seals (letter "V" in 10th position of pressure vessel number) can be used at fluid temperatures up to 240°F on DC and

250°F on AC provided a Class H coil is used.

*** UL/CSA Approval Information: SS=Safety Shutoff GP=General Purpose Blank=Not Approved See page 122 for additional agency approval information.

7000 Series General Purpose Two-Way Direct Lift and Pilot Operated Valves

DRAWINGS

Valve	Dimension			
	H	P	C	L
72218BN3TXXX	3.78	3.23	2.21	2.64
72218BN4UXXX	3.78	3.23	2.21	2.64
72218BN5VXXX	3.99	3.33	2.31	2.72
72218RN3TXXX	3.99	3.33	2.31	2.72
72218RN4UXXX	3.99	3.33	2.31	2.72
72218RN5VXXX	3.99	3.33	2.31	2.72

*"X" denotes multiple digit combinations for brevity.

#8

Port Identification: P-IN/ - -OUT

DRAWINGS

Valve	Dimension				
	H	P	C	L	W
7221GBN3VXXX	3.66	3.07	2.06	2.95	2.09
7221GBN4VXXX	3.66	3.07	2.06	2.95	2.09
7221GBN51XXX	3.75	3.07	2.06	3.15	2.09
7221GBN61XXX	4.03	3.15	2.12	3.35	2.09
7221GBN64XXX	4.25	3.35	2.34	3.94	2.75

*"X" denotes multiple digit combinations for brevity.

#9

Port Identification: Flow arrow on body indicates flow direction—ports are not marked.

7222 DIRECT LIFT BRASS VALVES— NORMALLY OPEN, FKM SEALS

222 DIRECT IN-FLANGE VALVES - NORMALLY OPEN, FIRM SEALS											
Pipe Size NPT	Orifice Size (inch)	Cv Factor	Operating Pressure Differential (PSI)				MAX.** Fluid Temp. (F)	Pressure Vessel Number	UL/CSA*** Approval	Const. Ref.	
			Min.*	Maximum							
				AC Ratings		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
3/8"	5/8	3.0	0	125+		125	185	72228BN3TV00	GP	102	
1/2"	5/8	4.0	0	125+		125	185	72228BN4UV00	GP	102	
3/4"	3/4	5.0	0	125+		125	185	72228BN5VV00	GP	102	

- * Direct lift valves will open at zero differential pressure, however full flow through the valve will not be safely achieved. If full flow is required at zero differential pressure, consult Skinner.
- ** Maximum fluid temperatures are provided for Class F coils. Valves with FKM seals (letter "V" in 10th position of pressure vessel number) can be used at fluid temperatures up to 240°F on DC and 250°F on AC provided a Class H coil is used.
- *** UL/CSA Approval Information: SS=Safety Shutoff GP=General Purpose Blank=Not Approved See page 122 for additional agency approval information.
- + Rating suitable for all 22 watt integrated coils except D300 DIN coil. Consult Skinner Valve for application review.

DRAWINGS

Valve	Dimension			
	H	P	C	L
72228BN3TXXX	4.04	3.49	2.43	2.64
72228BN4UXXX	4.04	3.49	2.43	2.64
72228BN5VXXX	4.24	3.58	2.52	2.72
72228RN3TXXX	4.04	3.49	2.43	2.64
72228RN4UXXX	4.04	3.49	2.43	2.64
72228RN5VXXX	4.24	3.58	2.52	2.72

*"X" denotes multiple digit combinations for brevity.

#102

Port Identification: P-IN/ - -OUT

7222 DIRECT LIFT STAINLESS STEEL VALVES— NORMALLY OPEN, FKM SEALS

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Operating Pressure Differential (PSI)				MAX.** Fluid Temp. (F)	Pressure Vessel Number	UL/CSA*** Approval	Const. Ref.	
			Min.*	Maximum							
				AC Ratings		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
3/8"	5/8	3.0	0	125+		125	185	72228RN3TV00	GP	102	
1/2"	5/8	4.0	0	125+		125	185	72228RN4UV00	GP	102	
3/4"	3/4	5.0	0	125+		125	185	72228RN5VV00	GP	102	