

# SKINNER 7000 Series

## General Purpose Two-Way Direct Acting Valves

IN THIS SECTION :  
7121, 7122, 7123, 7129

### SPECIFICATIONS

#### Mechanical Characteristics

##### Standard Materials of Construction

- Body – Brass or Stainless Steel (430F)
- Seals – NBR, FKM, PCTFE as listed, EPDM as listed
- Sleeve Tube – Stainless Steel (303 or 304)
- Plunger – Stainless Steel (430FR)
- Stop – Stainless Steel (430FR)
- Springs – Stainless Steel (18-8)
- Shading Rings – 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.

##### Power Consumption

- 10, 22 watts
- Fluxtron Electronic Coils and Magnelatch (refer to page 137 for current draw charts)

#### Miscellaneous

##### Maximum Ambient Temperature

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

### 7121 DIRECT ACTING BRASS VALVES – NORMALLY CLOSED, PCTFE OR 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		10 watt					22 watt
				10 watt	22 watt						
FLG <sup>^</sup>	1/16	0.11	0	1000	435	165	7121FBF4GF00	GP	1		
	1/8	0.31	0	365	125	165	7121FBF4NF00	GP	1		
1/8	1/16	0.11	0	1000	435	700	7121KBN1GF00	GP	2		
	1/8	0.31	0	365	125	205	7121KBN1NF00	GP	2		
1/4	1/16	0.11	0	1000	435	700	7121KBN2GF00	GP	2		
	1/8	0.31	0	365	125	205	7121KBN2NF00	GP	2		
	1/8	0.31	0	145	125	125	7121KBN2NV00	SS	2		
	5/32	0.52	0	120	60	75	7121KBN2QV00	SS	2		
	13/64	0.76	0	80	30	40	7121KBN2SV00	SS	2		
3/8	1/4	0.83	0	55	20	20	7121KBN3UV00	SS	2		
1/2	7/16	2.5	0	17.5	35	5	10	7121KBN44V00	SS	3	

<sup>^</sup> 2, 3 and 5 station subbases with 1/4" BSP common inlet port and 1/8" BSP outlet port are available for use with D400 and D500 32mm DIN coils only. For details consult factory.

# 7000 Series General Purpose Two-Way Direct Acting Valves

## 7121 DIRECT ACTING STAINLESS STEEL VALVES – NORMALLY CLOSED, PCTFE OR NBR SEALS

\*5' Family valves listed below containing NBR seals are also available with FKM seals.

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Operating Pressure Differential (PSI)				Fluid Temp. (F)	MAX.* Pressure Vessel Number	UL/CSA** Approval	Const. Ref.	
			Min.	Maximum		10 watt					22 watt
				AC Ratings	DC Ratings						
1/8	3/64	0.06	0	1000		520	1000	165	71215SN1EF00	GP	4
	3/64	0.06	0	450		450		185	71215SN1EN00	SS	4
	1/16	0.1	0	700		350	700	165	71215SN1GF00	GP	4
	1/16	0.1	0	350		350		185	71215SN1GN00	SS	4
	3/32	0.18	0	260	650	130	300	165	71215SN1KF00	GP	4
	3/32	0.18	0	275		275		185	71215SN1KN00	SS	4
	1/8	0.28	0	200	520	100	200	165	71215SN1MF00	GP	4
	1/8	0.28	0	200		150	200	185	71215SN1MN00	SS	4
	5/32	0.4	0	110	150	60	130	185	71215SN1QN00	SS	4
	3/16	0.5	0	80	90	25	70	185	71215SN1SN00	SS	4
	1/4	0.75	0	40	70	10	30	185	71215SN1VN00	SS	4
1/4	3/64	0.06	0	1000		520	1000	165	71215SN2EF00	GP	4
	3/64	0.06	0	450		450		185	71215SN2EN00	SS	4
	1/16	0.1	0	700		350	700	165	71215SN2GF00	GP	4
	1/16	0.1	0	350		350		185	71215SN2GN00	SS	4
	3/32	0.18	0	260	650	130	300	165	71215SN2KF00	GP	4
	3/32	0.18	0	275		275		185	71215SN2KN00	SS	4
	1/8	0.28	0	200	520	100	200	165	71215SN2MF00	GP	4
	1/8	0.28	0	200		150	200	185	71215SN2MN00	SS	4
	5/32	0.4	0	110	150	60	130	185	71215SN2QN00	SS	4
	3/16	0.5	0	80	90	25	70	185	71215SN2SN00	SS	4
	1/4	0.75	0	40	70	10	30	185	71215SN2VN00	SS	4
3/8	3/8	2	0	6	25		5	185	71215SN33N00	SS	6
	3/8	2	0	5-11				185	71215SN33NHP+	SS	6

\* 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 136 for additional agency approval information.

+ 5-11PSI is the operating pressure range for bubblelight sealing. Valves may leak if the pressure differential falls below 5 PSI. Fluxtron coils not suitable for use with these valves.

**DRAWINGS**

Technical drawings for valve #4. Front view shows a diameter of 1.62. Side view shows a total length of 2.76 and a mounting hole diameter of 1.95. Detail view shows a mounting hole diameter of 1.48 and a distance of 2.84 from the valve body to the mounting hole. Schematic diagram shows a 2-IN/1-OUT port configuration. Dimensions for the coil include a diameter of 1.62 DIA and a distance of .34 from the valve body to the coil. The coil is labeled as #10-32 NF TH'D x .25 DP - 2 PLC'S.

**#4**

Port Identification: 2-IN/ 1-OUT

Technical drawings for valve #5. Front view shows a diameter of 1.62. Side view shows a total length of 2.76 and a mounting hole diameter of 1.95. Detail view shows a mounting hole diameter of 1.88 and a distance of 2.91 from the valve body to the mounting hole. Schematic diagram shows a 2-IN/1-OUT port configuration. Dimensions for the coil include a diameter of 1.62 DIA and a distance of .38 from the valve body to the coil. The coil is labeled as #10-32 NF TH'D x .25 DP - 2 PLC'S.

**#5**

Port Identification: 2-IN/ 1-OUT

# 7000 Series General Purpose Two-Way Direct Acting Valves

**#6**

Port Identification: 2-IN/ 1-OUT

**#1**

Port Identification: 1-IN/ 2-OUT

Valve	H	P	C	L
7121KBN1XXXX	2.63	3.07	1.61	1.57
7121KBN2XXXX	2.63	3.07	1.61	1.57
7121KBN3XXXX	2.57	3.08	1.55	1.97

\*X\* denotes multiple digit combinations for brevity.

**#2**

Port Identification: 1-IN/ 2-OUT

**#3**

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

# 7000 Series General Purpose Two-Way Direct Acting Valves

## 7122 DIRECT ACTING BRASS VALVES – NORMALLY OPEN, PCTFE 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		10 watt					22 watt
				AC Ratings	DC Ratings						
1/8	1/16	0.11	0	435	435	165	7122KBN1GF00	GP	96		
	3/32	0.21	0	175	175	165	7122KBN1LF00	GP	96		
1/4	1/16	0.11	0	435	435	165	7122KBN2GF00	GP	96		
	3/32	0.21	0	175	175	165	7122KBN2LF00	GP	96		

## 7122 DIRECT ACTING STAINLESS STEEL VALVES – NORMALLY OPEN, PCTFE SEALS

5' Family valves listed below containing NBR seals are also available with 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		10 watt					22 watt
				AC Ratings	DC Ratings						
1/8"	3/64	0.05	0	750	750	165	71225SN1EF00	GP	99		
	1/16	0.11	0	400	400	165	71225SN1GF00	GP	99		
	3/32	0.15	0	170	170	165	71225SN1KF00	GP	99		
1/4	3/64	0.05	0	750	750	165	71225SN2EF00	GP	99		
	1/16	0.11	0	400	400	165	71225SN2GF00	GP	99		
	3/32	0.15	0	170	170	165	71225SN2KF00	GP	99		

**DRAWINGS**

#99  
Port Identification: 2-IN/ 1-OUT

#96  
Port Identification: 1-IN/ 2-OUT

# 7000 Series General Purpose Two-Way Direct Acting Valves

## 7129 DIRECT ACTING STAINLESS STEEL VALVES – NORMALLY OPEN, NBR SEALS

\*5' Family valves listed below containing NBR seals are also available with 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.
			Maximum							
			Min.	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/8"	3/64	0.05	0	400		400	185	71295SN1ENJ1	GP	7
	1/16	0.11	0	325		325	185	71295SN1GNJ1	GP	7
	3/32	0.15	0	250		250	185	71295SN1KNJ1	GP	7
1/4"	3/64	0.05	0	400		400	185	71295SN2ENJ1	GP	7
	1/16	0.11	0	325		325	185	71295SN2GNJ1	GP	7
	3/32	0.15	0	250		250	185	71295SN2KNJ1	GP	7

\* 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 136 for additional agency approval information.

DRAWINGS

Technical drawings showing dimensions for the valve:

- Top view: 1.62 (width), 1.62 DIA (width), .34 (height), 2 (width)
- Side view: 2.76 (total length), 1.95 (coil length), 3 (coil diameter), 3.82 (1/4) (height), 3.65 (1/8) (height), 1.82 (port length), 2 (port diameter)
- Detail view: #10-32 NF TH'D 7 x .25 DP - 2 PLC'S 7, .44 (width), .88 (width)
- Port Identification: 2-IN/ 3-OUT

#7

# 7000 Series **General Purpose Two-Way Direct Acting Valves**

## 7123 DIRECT ACTING STAINLESS STEEL VALVES – DUAL PURPOSE, NBR SEALS

\*5' Family valves listed below containing NBR seals are also available with 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		10 watt					22 watt
				10 watt	22 watt						
1/8	1/32	0.02	0	400	400	185	71235SN1AN00	SS	100		
	3/64	0.06	0	180	180	185	71235SN1EN00	SS	100		
	1/16	0.1	0	110	110	185	71235SN1GN00	SS	100		
	3/32	0.17	0	70	70	185	71235SN1KN00	SS	100		
	1/8	0.28	0	45	45	185	71235SN1MN00	SS	100		
1/4	1/32	0.02	0	400	400	185	71235SN2AN00	SS	100		
	3/64	0.06	0	180	180	185	71235SN2EN00	SS	100		
	1/16	0.1	0	110	110	185	71235SN2GN00	SS	100		
	3/32	0.17	0	70	70	185	71235SN2KN00	SS	100		
	1/8	0.28	0	45	45	185	71235SN2MN00	SS	100		

\* 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 136 for additional agency approval information.

DRAWINGS

#100

Port Identification: Pressure can be applied to either port.

# 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.

#### 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\*/Magnetlatch—122°F

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

### 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)

#### Power Consumption

- 10, 22 watts
- Fluxtron\* Electronic Coils and Magnetlatch

## 7221 DIRECT LIFT BRASS VALVES— NORMALLY CLOSED, NBR SEALS

*'8' 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.
			Maximum							
			Min.*	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	

## 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.
			Maximum							
			Min.*	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. 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 136 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

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

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		22 watt				
				10 watt	DC Ratings					
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 136 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		22 watt				
				10 watt	DC Ratings					
3/8"	5/8	3.0	0	125+	125	185	72228RN3TV00	SS	102	
1/2"	5/8	4.0	0	125+	125	185	72228RN4UV00	SS	102	
3/4"	3/4	5.0	0	125+	125	185	72228RN5VV00	SS	102	

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

## 7321 PILOT OPERATED BRASS VALVES – NORMALLY CLOSED, NBR SEALS

'K', '8' and 1/4" '2' Family valves also available with 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/4"	1/4	0.76	5	300	300	300	185	73212BN2MN00	SS	10
	7/16	2.0	3	150	60	150	185	7321KBN2RN00	SS	98
3/8"	1/2	2.4	5	300	300	300	185	73212BN3SN00	SS	11
	5/8	3.0	5	150	150	150	185	73218BN3TN00	SS	12
	7/16	2.5	3	150	60	150	185	7321KBN3SN00	SS	98
1/2"	1/2	2.8	5	300	300	300	185	73212BN4TN00	SS	11
	5/8	4.0	5	150	150	150	185	73218BN4UN00	SS	12
	7/16	2.5	3	150	60	150	185	7321KBN4SN00	SS	98
3/4"	3/4	7.3	5	300	300	300	185	73212BN52N00	SS	13
	3/4	5.0	5	150	150	150	185	73218BN5VN00	SS	12
	25/32	9.6	5	230	230	230	185	7321GBN53N00	SS	14
1"	1	11.0	5	300	300	300	185	73212BN63N00	SS	13
	1 1/16	13.5	5	125	125	125	185	73218BN64N00	SS	15
	1	12.5	5	230	230	230	185	7321GBN64N00	SS	14
1 1/4"	1 1/8	15.0	5	125	125	125	185	73218BN75N00	SS	15
	1 1/8	19.3	5	230	230	230	185	7321GBN76N00	SS	14
1 1/2"	1 1/4	22.5	5	125	125	125	185	73218BN87N00	SS	16
	1 9/16	29.0	5	230	200	230	185	7321GBN88N00	SS	14
2"	1 9/16	38.6	5	230	200	230	185	7321GBN99N00	SS	14

## 7321 PILOT OPERATED STAINLESS STEEL VALVES – NORMALLY CLOSED, NBR 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/4"	1/4	0.76	5	300	300	300	185	73212SN2MN00	SS	17

\* Pilot operated valves require the minimum pressure differential specified for proper valve operation.

\*\* 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 136 for additional agency approval information.  
1/4"-2" Family SS valve also available with FKM seals.

DRAWINGS

Valve	Dimension				
	H	P	C	L	R
7321KBN4SXXX	3.56	2.97	1.96	2.17	
7321KBN2RXXX	3.56	2.97	1.96	1.97	
7321KBN3SXXX	3.56	2.97	1.96	1.97	

*\*X\* denotes multiple digit combinations for brevity.*

*Flow arrow on body indicates flow direction – ports are not marked.*

•10-24 UNC TH'D  
X .22" DP-2 PLC'S

.59  
.30

IN  
OUT

Port Identification: 1-IN/ 2-OUT

**#98**

Valve	Dimension					
	H	P	C	L	R	R
73218BN3TXXX	4.38	3.84	2.81	2.64	1.39	
73218BN4UXXX	4.38	3.84	2.81	2.64	1.39	
73218BN5VXXX	4.59	3.94	2.91	2.72	1.43	


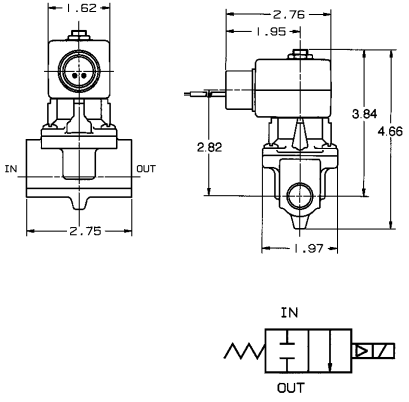
*\*X\* denotes multiple digit combinations for brevity.*

IN  
OUT

Port Identification: P-IN/ - -OUT


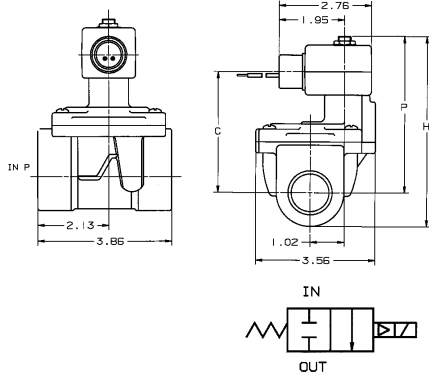
**#12**

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

**#11**

Port Identification: IN-IN/ OUT-OUT


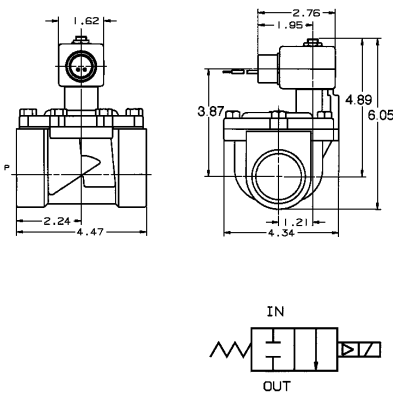



Valve	Dimension		
	H	P	C
73218BN64XXX	5.45	4.59	3.57
73218BN75XXX	5.74	2.97	1.96

\*X\* denotes multiple digit combinations for brevity.


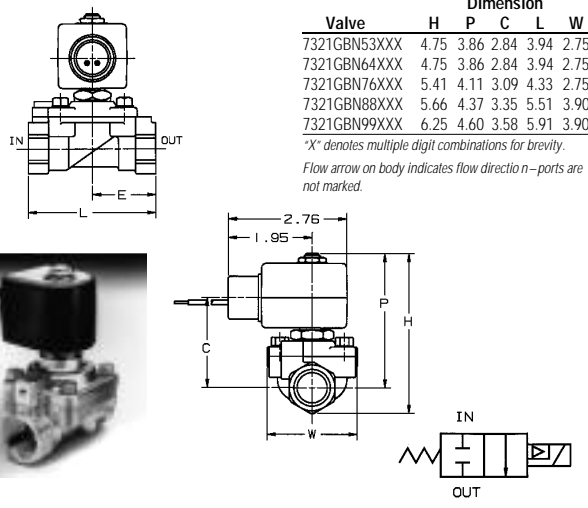
**#15**

Port Identification: P-IN/ - -OUT

**#16**

Port Identification: P-IN/ - -OUT


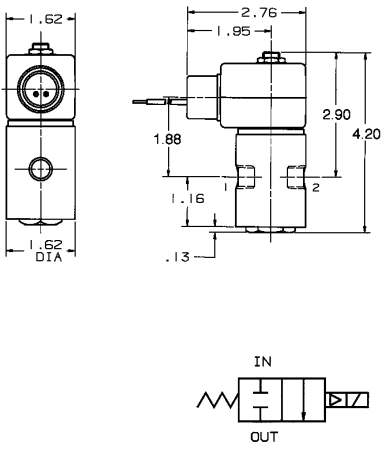



Valve	Dimension			
	H	P	C	W
7321GBN53XXX	4.75	3.86	2.84	3.94
7321GBN64XXX	4.75	3.86	2.84	3.94
7321GBN76XXX	5.41	4.11	3.09	4.33
7321GBN88XXX	5.66	4.37	3.35	5.51
7321GBN99XXX	6.25	4.60	3.58	5.91

\*X\* denotes multiple digit combinations for brevity.  
Flow arrow on body indicates flow direction - ports are not marked.


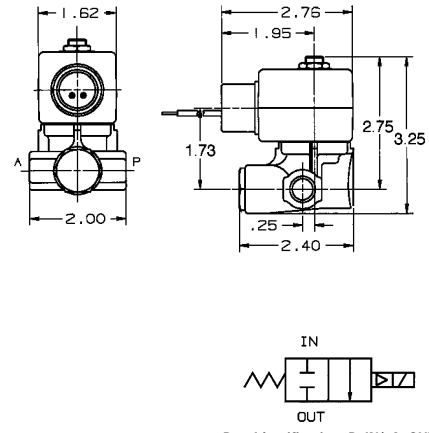
**#14**

Port Identification: P-IN/ - -OUT

**#17**

Port Identification: 2-IN/ 1-OUT


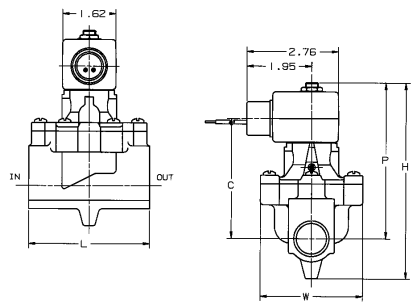
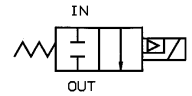



**#10**

Port Identification: P-IN/ A-OUT

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

Valve	Dimension					Port Identification	
	H	P	C	L	W	IN	OUT
73212BN52N00	5.81	4.62	3.59	3.62	3.09	IN	OUT
73212BN63N00	6.22	4.89	3.87	4.31	3.45	P	A

#13


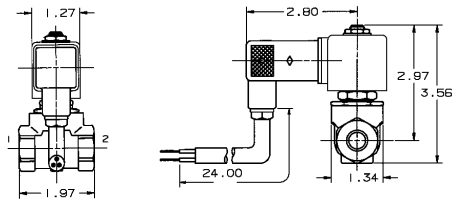
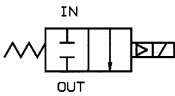
## 7321 PILOT OPERATED BRASS TIMER DRAIN VALVES—NORMALLY CLOSED, FKM SEALS

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						
				10 watt	22 watt					
1/4"	7/16	1.75	3	300	45	210	7321KBY61640	SS	18	
3/8"	7/16	2.5	3	300	45	210	7321KBY63200	SS	18	
1/2"	7/16	2.7	3	300	45	210	7321KBY6320A	SS	18	

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

See page 136 for additional agency approval information.  
 NOTE: See Electrical options section on page 135 for timers available for these valves. These valves are rated for intermittent duty cycle applications only.

**DRAWINGS**

#18

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

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

## 7322 PILOT OPERATED BRASS VALVES— NORMALLY OPEN, NBR SEALS

'8' and 1/4" '2' 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		DC Ratings				
				AC Ratings	DC Ratings					
10 watt	22 watt	10 watt	22 watt							
1/4"	1/4	0.76	5	200	200	185	73222BN2MN00	GP	104	
3/8"	1/2	2.4	5	200	200	185	73222BN3SN00	GP	105	
	5/8	3.0	5	150	150	185	73228BN3TN00	GP	106	
1/2"	1/2	2.8	5	200	200	185	73222BN4TN00	GP	105	
	5/8	4.0	5	150	150	185	73228BN4UN00	GP	106	
3/4"	3/4	7.3	5	200	200	185	73222BN52N00	GP	107	
	3/4	5.0	5	150	150	185	73228BN5VN00	GP	106	
	25/32	9.6	5	230	230	185	7322GBN53N00	GP	108	
1"	1	11.0	5	200	200	185	73222BN63N00	GP	107	
	1 1/16	13.5	5	125	125	185	73228BN64N00	GP	110	
	1	12.5	5	230	230	185	7322GBN64N00	GP	108	
1 1/4"	1 1/8	15.0	5	125	125	185	73228BN75N00	GP	110	
	1 1/8	19.3	5	230	230	185	7322GBN76N00	GP	108	
1 1/2"	1 1/4	22.5	5	125	125	185	73228BN87N00	GP	111	
	1 9/16	29.0	5	170	170	185	7322GBN88N00	GP	108	
2"	1 9/16	38.6	5	170	170	185	7322GBN99N00	GP	108	

## 7322 PILOT OPERATED STAINLESS STEEL VALVES— NORMALLY OPEN, NBR SEAL

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		DC Ratings				
				AC Ratings	DC Ratings					
10 watt	22 watt	10 watt	22 watt							
1/4"	1/4	0.76	5	200	200	185	73222SN2MN00	SS	112	

\* Pilot operated valves require the minimum pressure differential specified for proper valve operation.

\*\* 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 136 for additional agency approval information.

1/4" - 2" Family valves listed are also available with FKM seals.

**DRAWINGS**

Valve	Dimension				
	H	P	C	L	W
7322GBN53XXX	4.75	3.86	2.84	3.94	2.75
7322GBN64XXX	4.75	3.86	2.84	3.94	2.75
7322GBN76XXX	5.41	4.11	3.09	4.33	2.75
7322GBN88XXX	5.66	4.37	3.35	5.51	3.90
7322GBN99XXX	6.25	4.60	3.58	5.91	3.90

\*X\* denotes multiple digit combinations for brevity.

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

#108

Valve	Dimension				
	H	P	C	L	R
73228BN3TXXX	4.62	4.07	3.01	2.64	1.39
73228BN4UXXX	4.62	4.07	3.01	2.64	1.39
73228BN5VXXX	4.83	4.17	3.11	2.72	1.43

\*X\* denotes multiple digit combinations for brevity.


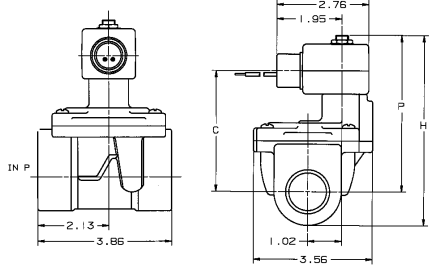
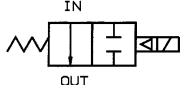
Port Identification: P-IN / - - OUT

#106


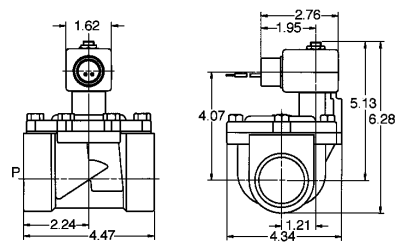
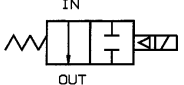
# 7000 Series General Purpose Two-Way Direct Lift and Pilot Operated Valves

Valve	Dimension		
	H	P	C
73228BN64XXX	5.69	4.83	3.77
73228BN75XXX	5.97	4.97	3.91


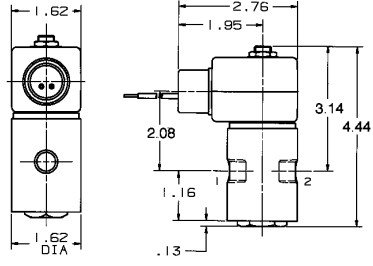
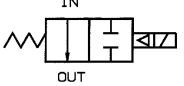
\*X\* denotes multiple digit combinations for brevity.


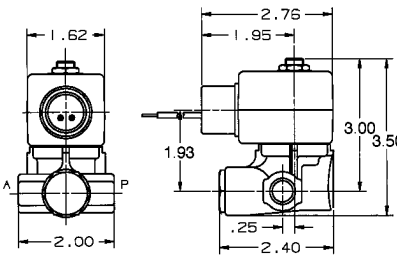
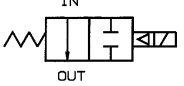
**#110**  
Port Identification: P-IN/ - -OUT

**#111**  
Port Identification: P-IN/ - -OUT


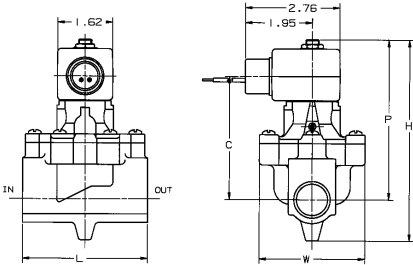
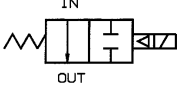




**#112**  
Port Identification: 2-IN/ 1-OUT


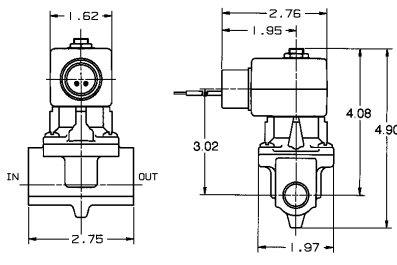
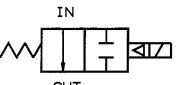




**#104**  
Port Identification: P-IN/ A-OUT

Valve	Dimension					Port Identification	
	H	P	C	L	W	IN	OUT
73222BN52N00	6.04	4.85	3.79	3.62	3.09	IN	OUT
73222BN63N00	6.46	5.13	4.07	4.31	3.45	P	A

**#107**

**#105**  
Port Identification: IN-IN/ OUT-OUT

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

## 7423 PILOT OPERATED BRASS VALVES – DUAL PURPOSE, NBR 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
3/8"	1/2	2.4	0	150	150	185	74232BN3SNJ1	GP	19	
1/2"	1/2	2.8	0	150	150	185	74232BN4TNJ1	GP	19	
3/4"	3/4	7.3	0	150	150	185	74232BN52NJ1	GP	20	
1"	1	11.0	0	150	150	185	74232BN63NJ1	GP	20	

\* 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.  
 Note: External Pilot Pressure valves require a minimum external pilot pressure equal to the main line pressure plus 10 PSI. Maximum external pilot pressure is 145 PSI for vacuum applications, and 160

PSI for pressure applications.  
 Pressure ratings may be reduced, however. Consult factory for details.  
 \*\*UL/CSA Approval information: SS= Safety Shutoff GP=General Purpose  
 BLANK = Not Approved  
 See page 136 for additional agency approval information.

DRAWINGS

**NORMALLY CLOSED**

**NORMALLY OPEN**

Port Identification: IN-IN/ OUT-OUT  
 Note: Valve may be normally closed or normally open, depending on piping of external pilot.

#20

Valve	Dimension						Port Identification	
	H	P	C	L	W	S	IN	OUT
74232BN52NJ1	6.78	5.59	3.59	3.62	3.09	2.28	IN	OUT
74232BN63NJ1	7.19	5.86	3.87	4.31	3.45	2.56	P	A

Valve can be normally closed or normally open, depending on piping of external pilot.

# SKINNER 7000 Series Hot Water and Steam Two-Way, Direct Acting, Direct Lift and Pilot Operated Valves

## SPECIFICATIONS

### Mechanical Characteristics

#### Standard Materials of Construction

- Body– Brass or Stainless Steel (316 or 430F)
- Seals– PTFE, EPDM as listed
- Sleeve Tube– Stainless Steel (303 or 304)
- Plunger– Stainless Steel (430FR)
- Piston– Brass
- Piston Seal– PTFE Composite
- Piston Guide– Teflon Composite
- Stop– Stainless Steel (430FR)
- Springs– Stainless Steel (18-8 or 17-7PH)
- Shading Ring– Copper

#### Compatible Fluids

- Steam to 353°F, Hot Water to 210°F

### 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)

#### 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 136.

### Miscellaneous

#### Maximum Ambient Temperature

- 10 watt AC/DC – 150°F (-E00 valves), 122°F (-ES0 valves), 77°F (-TS0 valves)
- 22 watt AC/DC – 77°F
- Fluxtron\*/Magnelatch – 122°F

Fluxtron coils not suitable for use on direct lift valves. Fluxtron and Magnelatch coils not suitable for use on valves rated for steam service (S0).

Valves with 'S0' in last two digits of pressure vessel number are rated for steam applications.

### DIRECT ACTING BRASS VALVES – NORMALLY CLOSED, EPDM 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		10 watt					22 watt
				AC Ratings							
1/4	13/64	0.76	0	100	40	100	210	7121KBN2SE00	GP	2	
	13/64	0.76	0	40		40	285	7121KBN2SE50	GP	2	

### DIRECT LIFT BRASS VALVES – NORMALLY CLOSED, EPDM 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		10 watt					22 watt
				AC Ratings							
3/8"	5/8	3.0	0	100		40	210	72218BN3TE00	GP	8	
	5/8	3.0	0	50			297	72218BN3TES0	GP	8	
	19/32	4.4	0	150		100	210	7221GBN3VE00	GP	9	
	19/32	4.4	0	45		45	293	7221GBN3VES0	GP	9	
1/2"	5/8	4.0	0	100		40	210	72218BN4UE00	GP	8	
	5/8	4.0	0	50			297	72218BN4UES0	GP	8	
	19/32	4.4	0	150		100	210	7221GBN4VE00	GP	9	
	19/32	4.4	0	45		45	293	7221GBN4VES0	GP	9	
3/4"	3/4	5.0	0	100		40	210	72218BN5VE00	GP	8	
	3/4	5.0	0	50			297	72218BN5VES0	GP	8	
	19/32	5.5	0	150		100	210	7221GBN51E00	GP	9	
	19/32	5.5	0	45		45	293	7221GBN51ES0	GP	9	
1"	19/32	5.5	0	150		100	210	7221GBN61E00	GP	9	
	19/32	5.5	0	45		45	293	7221GBN61ES0	GP	9	
	1	11.7	0	150		100	210	7221GBN64E00	GP	9	
	1	11.7	0	45		45	293	7221GBN64ES0	GP	9	

# 7000 Series Hot Water and Steam Two-Way, Direct Acting, Direct Lift and Pilot Operated Valves

## DIRECT LIFT STAINLESS STEEL VALVES– NORMALLY CLOSED, EPDM 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		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
3/8"	5/8	3.0	0	100		40	210	72218RN3TE00	GP	8	
	5/8	3.0	0	50			297	72218RN3TES0	GP	8	
1/2"	5/8	4.0	0	100		40	210	72218RN4UE00	GP	8	
	5/8	4.0	0	50			297	72218RN4UES0	GP	8	
3/4"	3/4	5.0	0	100		40	210	72218RN5VE00	GP	8	
	3/4	5.0	0	50			297	72218RN5VES0	GP	8	

## DIRECT LIFT BRASS VALVES– NORMALLY OPEN, EPDM 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		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
3/8"	5/8	3.0	0		125		210	72228BN3TE00	GP	102	
	5/8	3.0	0	50			297	72228BN3TES0	GP	102	
1/2"	5/8	4.0	0		125		210	72228BN4UE00	GP	102	
	5/8	4.0	0	50			297	72228BN4UES0	GP	102	
3/4"	3/4	5.0	0		125		210	72228BN5VE00	GP	102	
	3/4	5.0	0	50			297	72228BN5VES0	GP	102	

## DIRECT LIFT STAINLESS STEEL VALVES– NORMALLY OPEN, EPDM 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		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
3/8"	5/8	3.0	0		125		210	72228RN3TE00	GP	102	
	5/8	3.0	0	50			297	72228RN3TES0	GP	102	
1/2"	5/8	4.0	0		125		210	72228RN4UE00	GP	102	
	5/8	4.0	0	50			297	72228RN4UES0	GP	102	
3/4"	3/4	5.0	0		125		210	72228RN5VE00	GP	102	
	3/4	5.0	0	50			297	72228RN5VES0	GP	102	

## PILOT OPERATED BRASS VALVES– NORMALLY CLOSED, EPDM OR PTFE 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		DC Ratings					
				10 watt	22 watt	10 watt					22 watt
1/4"	7/16	2.0	3	150		60	150	210	7321KBN2RE00	GP	98
	7/16	2.0	3	45			45	293	7321KBN2RES0	GP	98
3/8"	5/8	3.0	5	150		150		210	73218BN3TE00	GP	12
	5/8	3.0	5	50		50		297	73218BN3TES0	GP	12
	5/8	3.0	3	125				353	73218BN3TTS0	GP	21
	7/16	2.5	3	150		60	150	210	7321KBN3SE00	GP	98
	7/16	2.5	3	45			45	293	7321KBN3SES0	GP	98
1/2"	5/8	4.0	5	150		150		210	73218BN4UE00	GP	12
	5/8	4.0	5	50		50		297	73218BN4UES0	GP	12
	5/8	4.0	3	125				353	73218BN4UTS0	GP	21
	7/16	2.5	3	150		60	150	210	7321KBN4SE00	GP	98
	7/16	2.5	3	45			45	293	7321KBN4SES0	GP	98
3/4"	3/4	5.0	5	150		150		210	73218BN5VE00	GP	12
	3/4	5.0	5	50		50		297	73218BN5VES0	GP	12
	5/8	4.5	3	125				353	73218BN5VTS0	GP	21
1"	1 1/16	13.5	5	125		125		210	73218BN64E00	GP	15
	1 1/16	13.5	5	50		50		297	73218BN64ES0	GP	15
	1 1/16	13.5	5	125				353	73218BN64TS0	GP	22
1 1/4"	1 1/8	15.0	5	125		125		210	73218BN75E00	GP	15
	1 1/8	15.0	5	50		50		297	73218BN75ES0	GP	15
	1 1/8	16.0	5	125				353	73218BN75TS0	GP	22
1 1/2"	1 1/4	22.5	5	125		125		210	73218BN87E00	GP	16
	1 1/4	22.5	5	50		50		297	73218BN87ES0	GP	16
	1 1/4	22.5	5	125				353	73218BN87TS0	GP	23

# 7000 Series Hot Water and Steam Two-Way, Direct Acting, Direct Lift and Pilot Operated Valves

## PILOT OPERATED BRASS VALVES – NORMALLY OPEN, PTFE 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
3/8"	5/8	3.0	5	125			73228BN3TTSO	GP	21	
1/2"	5/8	4.0	5	125			73228BN4UTSO	GP	21	
3/4"	3/4	7.5	5	125			73228BN52TSO	GP	21	
1"	1 1/16	13.5	5	125			73228BN64TSO	GP	22	
1 1/4"	1 1/8	16.0	5	125			73228BN75TSO	GP	22	
1 1/2"	1 1/4	22.5	5	125			73228BN87TSO	GP	23	

\* 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 near zero differential pressure, consult Skinner. Pilot operated valves require the minimum pressure differential specified for proper valve operation.  
 \*\* Class H coils are required on steam valves with PTFE seals which are identified by the letters 'TSO'

in the last three digits of the pressure vessel number. Class F coils can be used on all other steam and hot water valves.  
 \*\*\*UL/CSA Approval Information: SS= Safety Shutoff GP=General Purpose Blank=Not Approved See page 136 for additional agency information.

DRAWINGS

Valve	Dimension				
	H	P	C	L	R
73218BN3TTSO	5.12	4.58	3.55	2.65	1.39
73218BN4UTSO	5.12	4.58	3.55	2.65	1.39
73218BN5VTSO	5.33	4.68	3.65	2.73	1.43
73228BN3TTSO	5.36	4.81	3.75	2.65	1.39
73228BN4UTSO	5.36	4.81	3.75	2.65	1.39
73228BN5VTSO	5.57	4.91	3.85	2.73	1.43

Valve	Dimension				
	H	P	C	L	W S
73218BN64TTSO	4.56	3.70	2.38	5.58	3.96 2.94
73218BN75TTSO	4.85	3.85	2.52	5.58	3.96 2.94
73228BN64TTSO	4.56	3.70	2.38	5.82	4.20 3.14
73228BN75TTSO	4.85	3.85	2.52	5.82	4.20 3.14

Valve	Dimension			
	H	P	C	L
7121KBN1XXXX	2.63	3.07	1.61	1.57
7121KBN2XXXX	2.63	3.07	1.61	1.57
7121KBN3XXXX	2.57	3.08	1.55	1.97

\*X denotes multiple digit combinations for brevity.

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.

# 7000 Series Hot Water and Steam Two-Way, Direct Acting, Direct Lift and Pilot Operated Valves

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.

**DRAWINGS**

Valve	Dimension			
	H	P	C	L
7321KBN4SXXX	3.56	2.97	1.96	2.17
7321KBN2RXXX	3.56	2.97	1.96	1.97
7321KBN3SXXX	3.56	2.97	1.96	1.97

\*X\* denotes multiple digit combinations for brevity.  
Flow arrow on body indicates flow direction - ports are not marked.

**#98**

Port Identification: 1- IN/ 2- OUT

Valve	Dimension				
	H	P	C	L	R
73218BN3TXXX	4.38	3.84	2.81	2.64	1.39
73218BN4UXXX	4.38	3.84	2.81	2.64	1.39
73218BN5VXXX	4.59	3.94	2.91	2.72	1.43

\*X\* denotes multiple digit combinations for brevity.

**#12**

Port Identification: P- IN/ - - OUT

Valve	Dimension		
	H	P	C
73218BN64XXX	5.45	4.59	3.57
73218BN75XXX	5.74	4.73	3.71

\*X\* denotes multiple digit combinations for brevity.

**#15**

Port Identification: P- IN/ - - OUT

**#16**

Port Identification: P- IN/ - - OUT

Valve	Dimension		
	B	D	G
73218BN87TSO	6.03	4.08	3.05
73228BN87TSO	6.27	4.32	3.25

**#23**

Port Identification: P- IN/ - - OUT

NORMALLY CLOSED

NORMALLY OPEN

# 7000 Series Hot Water and Steam Two-Way, Direct Acting, Direct Lift and Pilot Operated Valves

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	4.04	3.58	2.52	2.72

\*X\* denotes multiple digit combinations for brevity.

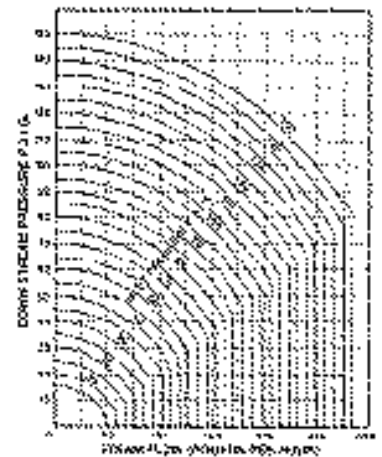
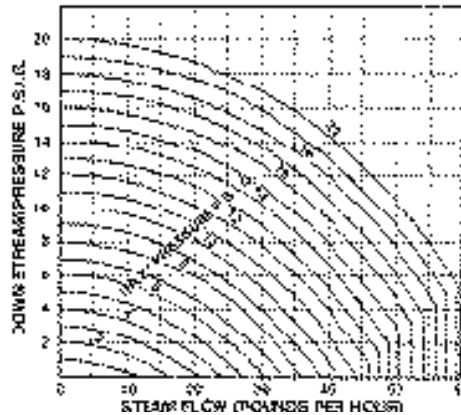
Port Identification: P-IN/ - -OUT

## Steam Valve Sizing

The following flow charts for saturated steam are based on a valve with a Cv factor = 1. To size valves for steam service ("SO" at end of catalog number), follow these steps:

- 1) Locate the known downstream pressure on the appropriate steam flow chart. From this point draw a horizontal line to intersect the known inlet pressure.
- 2) At this point draw a vertical line down to determine the corresponding steam flow (pounds per hour) for a valve with a Cv = 1.
- 3) Multiply this figure by the Cv factor listed in the catalog for a particular steam valve to determine the actual steam flow through the valve.

For hot water valves refer to page 129, Valve Sizing for Liquid Service.



# SKINNER 7000 Series High Pressure Two-Way Direct Acting and Pilot Operated Valves

## SPECIFICATIONS

### Mechanical Characteristics

#### Standard Materials of Construction

- Body– Brass or Stainless Steel (430F)
- Seals– FKM, PCTFE, PTFE, NBR, Nylon, Ruby as listed
- Sleeve Tube– Stainless Steel (303 or 304)
- Pilot Guide – Stainless Steel (303)
- Pilot Orifice– Stainless Steel (303)
- Piston– Stainless Steel (303)
- Plunger– Stainless Steel (430FR)
- Shading Ring– Copper
- Stop– Stainless Steel (430FR)
- Springs– Stainless Steel (18-8)

#### Compatible Fluids

- All common media including air, inert gases, hydraulic fluids, petroleum products, freons, water, steam and corrosive media. 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)

#### 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 136.

### Miscellaneous

#### Maximum Ambient Temperature

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

### DIRECT ACTING BRASS VALVES – NORMALLY CLOSED, PCTFE OR RUBY 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/8"	1/16	0.11	0	1000		435		7121KBN1GF00	GP	97
	3/32	0.24	0	500	725	175	320	7121KBN1LR00	GP	97
1/4"	1/16	0.11	0	1000		435		7121KBN2GF00	GP	97
	1/16	0.11	0	1100	1450	435	800	7121KBN2GR00	GP	97
	5/64	0.17	0	700	1030	260	460	7121KBN2JR00	GP	97
	3/32	0.24	0	500	725	175	320	7121KBN2LR00	GP	97
	1/8	0.31	0	365	525	125	220	7121KBN2NR00	GP	97

### DIRECT ACTING STAINLESS STEEL VALVES – NORMALLY CLOSED, PCTFE, NYLON OR PTFE SEALS (Flange Seal-NBR)

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Operating Pressure Differential (PSI)				MAX.** Fluid Temp. (F)	Pressure Vessel Number	UL/CSA*** Approval	Const. Ref.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/8"	3/64	0.062	0	1000		520	1000	71215SN1EF00	GP	101
	1/16	0.095	0	700		350	700	71215SN1GF00	GP	101
	1/32	0.021	0	3000		2500	3000	71216SN1BL00	-	101
	3/64	0.037	0	1500		1000	1500	71216SN1FU00	GP	101
	1/16	0.070	0	1250		500	1000	71216SN1GL00	GP	101
	5/64	0.090	0	500		200	400	71216SN1JT00	GP	101
1/4"	3/64	0.062	0	1000		520	1000	71215SN2EF00	GP	101
	1/16	0.095	0	700		350	700	71215SN2GF00	GP	101
	1/32	0.021	0	3000		2500	3000	71216SN2BL00	-	101
	3/64	0.037	0	1500		1000	1500	71216SN2FU00	GP	101
	1/16	0.070	0	1250		500	1000	71216SN2GL00	GP	101
	5/64	0.090	0	500		200	400	71216SN2JT00	GP	101

### DIRECT ACTING BRASS VALVES – NORMALLY OPEN, PCTFE OR RUBY 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/8"	1/16	0.11	0	435		435		7122KBN1GF00	GP	97
	1/8	0.28	0		435^			7122KBN1PR00	GP	97
1/4"	1/16	0.11	0	435		435		7122KBN2GF00	GP	97

# 7000 Series High Pressure Two-Way Direct Acting and Pilot Operated Valves

## DIRECT ACTING STAINLESS STEEL VALVES—NORMALLY OPEN, PCTFE 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/8"	3/64	0.054	0	750	750		165	71225SN1EF00	GP	101
	1/16	0.11	0	400	400		165	71225SN1GF00	GP	101
1/4"	3/64	0.054	0	750	750		165	71225SN2EF00	GP	101
	1/16	0.11	0	400	400		165	71225SN2GF00	GP	101

## PILOT OPERATED BRASS VALVES—NORMALLY CLOSED, NBR, PTFE SEALS

'H' Family valves listed are also available in FKM. 'H' Family valves contain ruby plunger seal.

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Operating Pressure Differential (PSI)				MAX.** Fluid Temp. (F)	Pressure Vessel Number	UL/CSA*** Approval	Const. Ref.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/4"	1/4	0.76	5	1500	800	1500	210	73216BN2MT00	GP	10
	5/16	2.5	5	600	435	600	185	7321HBN2SN00	GP	24
3/8"	7/16	3.5	5	600	435	600	185	7321HBN3TN00	GP	24
	9/16	4.1	5	600	435	600	185	7321HBN4UN00	GP	24

## PILOT OPERATED STAINLESS STEEL VALVES—NORMALLY CLOSED, PTFE 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/4"	1/4	0.76	5	1500	800	1500	210	73216SN2MT00	GP	17

## PILOT OPERATED BRASS VALVES—NORMALLY OPEN, NBR SEALS

Valves are also available in FKM. 'H' Family valves contain Ruby plunger 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.
			Maximum							
			Min.*	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
1/4"	5/16	2.5	5	600	600		185	7322HBN2SV00	GP	24
3/8"	7/16	3.5	5	600	600		185	7322HBN3TN00	GP	24
1/2"	9/16	4.1	5	600	600		185	7322HBN4UN00	GP	24

\* Pilot operated valves require the minimum pressure differential specified for proper valve operation.  
 \*\* 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 250°F on DC and 250°F on AC provided a Class H coil is used. Pressure ratings may be reduced, however. Consult factory for details.

\*\*\*UL/CSA Approval information: SS = Safety Shutoff GP = General Purpose Blank = Not Approved See page 136 for additional agency approval information.  
 ^ Rating suitable for all 22 watt integrated coils except DIN 300 coil. Consult Skinner Valve for application review. See page 134 for additional seal material combinations.

DRAWINGS

Valve	Dimension	
	H	C
71215SN1XXXX	2.84	1.48
71215SN2XXXX	2.84	1.48
71216SN1XXXX	2.84	1.48
71216SN2XXXX	2.84	1.48
71225SN1XXXX	3.08	1.68
71225SN2XXXX	3.08	1.68

*X* denotes multiple digit combinations for brevity.

NORMALLY CLOSED

NORMALLY OPEN


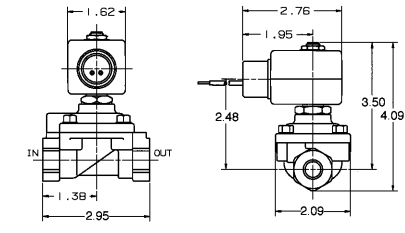
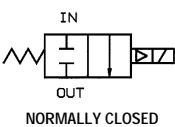
Port Identification: 1-OUT/ 2-IN

NORMALLY CLOSED

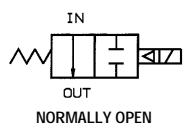
NORMALLY OPEN

Port Identification: 1-IN/ 2-OUT

# 7000 Series High Pressure Two-Way Direct Acting and Pilot Operated Valves


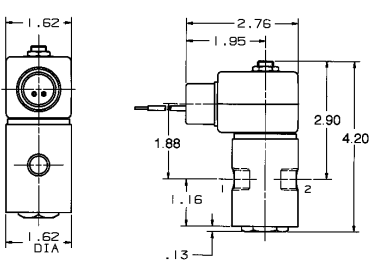
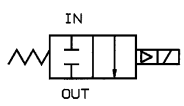
NORMALLY CLOSED



NORMALLY OPEN


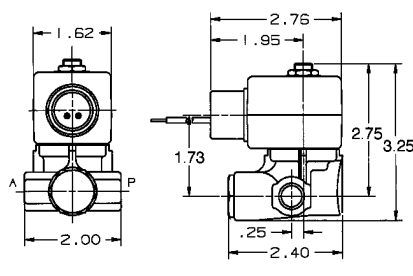
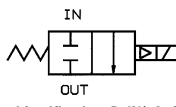
Port Identification: Flow arrow on body indicates flow direction - ports are not marked.

#24

Port Identification: 2-IN/ 1-OUT

#17

Port Identification: P-IN/ A-OUT

#10

# SKINNER 7000 Series Anti-Water Hammer Two-Way Direct Lift and Pilot Operated Valves

## SPECIFICATIONS

### Mechanical Characteristics

#### Standard Materials of Construction

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

#### Compatible Fluids

- Water up to 185°F

### 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)

#### 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 136.

### Miscellaneous

#### Maximum Ambient Temperature

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

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

### DIRECT LIFT BRASS VALVES—NORMALLY CLOSED, NBR 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		10 watt					22 watt
				AC Ratings	DC Ratings						
3/4"	19/32	5.5	0	230	100	185	7221GBN51NCO	SS	103		
1"	19/32	5.5	0	230	100	185	7221GBN61NCO	SS	103		
	1	11.7	0	230	85	185	7221GBN64NCO	SS	103		

### PILOT OPERATED BRASS VALVES—NORMALLY CLOSED, NBR 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		10 watt					22 watt
				AC Ratings	DC Ratings						
3/8"	7/16	2.5	3	150	60	150	185	7321KBN3SNW0	SS	98	
1/2"	7/16	2.5	3	150	60	150	185	7321KBN4SNW0	SS	98	
	3/4"	3/4	9.6	5	230	230	185	7321GBN53NMC	GP	109	
1"	1	12.5	5	230	230	185	7321GBN64NMC	GP	109		
1 1/4"	1 1/8	19.3	5	230	230	185	7321GBN76NMC	GP	109		
1 1/2"	1 9/16	29.0	5	230	200	230	185	7321GBN88NMC	GP	109	
2"	1 9/16	38.6	5	230	200	230	185	7321GBN99NMC	GP	109	

### PILOT OPERATED BRASS VALVES—NORMALLY OPEN, NBR 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		10 watt					22 watt
				AC Ratings	DC Ratings						
3/4"	3/4	9.6	5	230	230	185	7322GBN53NCO	GP	109		
1"	1	12.5	5	230	230	185	7322GBN64NCO	GP	109		
1 1/4"	1 1/8	19.3	5	230	230	185	7322GBN76NCO	GP	109		
1 1/2"	1 9/16	29.0	5	170	170	185	7322GBN88NCO	GP	109		
2"	1 9/16	38.6	5	170	170	185	7322GBN99NCO	GP	109		

# 7000 Series Anti-Water Hammer Two-Way Direct Lift and Pilot Operated Valves

Response Time	Valve Type	Opening Time Range (seconds)	Closing Time Range (seconds)
		7221GBN51NCO	0.03
	7221GBN61NCO	0.04-0.05	0.2-1.7
	7221GBN64NCO	0.07-0.17	0.5-4.0
	7321KBN3SNW0	0.015	0.85
	7321KBN4SNW0	0.015	0.85
	7321GBN53NMC	0.25-0.1	0.6-4.5
	7321GBN64NMC	0.25-0.1	0.6-4.5
	7321GBN76NMC	0.5-0.2	0.8-5.8
	7321GBN88NMC	0.4-0.2	1.5-9.0
	7321GBN99NMC	0.45-0.25	1.5-9.5
	7322GBN53NCO	0.25-0.1	0.6-4.5
	7322GBN64NCO	0.25-0.1	0.6-4.5
	7322GBN76NCO	0.5-0.2	0.8-5.8
	7322GBN88NCO	0.4-0.2	1.5-9.0
	7322GBN99NCO	0.45-0.25	1.5-9.5

**DRAWINGS**

Valve	Dimension				
	H	P	C	L	W
7321GBN53XXX	4.75	3.86	2.84	3.94	2.75
7322GBN53XXX	4.75	3.86	2.84	3.94	2.75
7321GBN64XXX	4.75	3.86	2.84	3.94	2.75
7322GBN64XXX	4.75	3.86	2.84	3.94	2.75
7321GBN76XXX	5.41	4.11	3.09	4.33	2.75
7322GBN76XXX	5.41	4.11	3.09	4.33	2.75
7321GBN88XXX	5.66	4.37	3.35	5.51	3.90
7322GBN88XXX	5.66	4.37	3.35	5.51	3.90
7321GBN99XXX	6.25	4.60	3.58	5.91	3.90
7322GBN99XXX	6.25	4.60	3.58	5.91	3.90

\*X\* denotes multiple digit combinations for brevity.

**NORMALLY CLOSED**

**NORMALLY OPEN**

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

**#109**

**DRAWINGS**

Valve	Dimension				
	H	P	C	L	W
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.

**NORMALLY CLOSED**

**NORMALLY OPEN**

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

**#103**

**DRAWINGS**

Valve	Dimension			
	H	P	L	
7321KBN4SXXX	3.56	2.97	1.96	2.17
7321KBN2RXXX	3.56	2.97	1.96	1.97
7321KBN3SXXX	3.56	2.97	1.96	1.97

\*X\* denotes multiple digit combinations for brevity.

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

**#98**

\* 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 near zero differential pressure, consult Skinner. Pilot operated valves require the minimum pressure differential specified for proper valve operation.

\*\*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 250°F on DC and 250°F on AC provided a Class H coil is used. Pressure ratings may be reduced, however. Consult factory for details.

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

NOTE: Mechanical Options indicated in pressure vessel catalog number (eleventh and twelfth digits) are as follows: C0=four-step adjustable closing, MC=manual override with four-step adjustable closing, W0=non-adjustable control.

# SKINNER 7000 Series Manual Reset Two-Way Direct Acting and Pilot Operated Valves

## SPECIFICATIONS

### Mechanical Characteristics

#### Standard Materials of Construction

- Body—Brass or Stainless Steel (430)
- Seals—NBR or FKM seals as listed
- Sleeve Tube—Stainless Steel (303 or 304)
- Plunger—Stainless Steel (430FR)
- Shading Ring—Copper
- Stop—Stainless Steel (430FR)
- Springs—Stainless Steel (18-8)
- Pilot Orifice—Stainless Steel (303)

#### Compatible Fluids

- Depending on the valve used, most common media including air, inert gases or petroleum products.

#### Power Consumption

- 10, 22 watts

#### Agency Approvals

- cUL approval.

### Electrical Characteristics

#### Voltages

- DC—12, 24
- AC—110/50-120/60, 220/50-240/60

### Miscellaneous

#### Maximum Ambient Temperature

- 131°F

## DIRECT ACTING STAINLESS STEEL MANUAL RESET VALVES—NORMALLY CLOSED, FKM SEALS\*

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Min.*	Operating Pressure Differential (PSI)				MAX. Fluid Temp. (F)	No-Voltage Release Pressure Vessel	Electrically Tripped Pressure Vessel	Const. Ref.
				Maximum							
				AC Ratings		DC Ratings					
10 watt	22 watt	10 watt	22 watt								
1/4"	3/32	0.18	0	150			150	185	70215SN2KVVR	70215SN2KVET	25

\* All wetted parts are stainless steel, FKM and plastic.

## PILOT OPERATED BRASS MANUAL RESET VALVES—NORMALLY CLOSED, NBR SEALS

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Min.*	Operating Pressure Differential (PSI)				MAX. Fluid Temp. (F)	No-Voltage Release Pressure Vessel	Electrically Tripped Pressure Vessel	Const. Ref.
				Maximum							
				AC Ratings		DC Ratings					
10 watt	22 watt	10 watt	22 watt								
1/2"	5/8	4.0	5	150			150	185	70218BN4UNVR	70218BN4UNET	25
3/4"	3/4	7.3	5	300			300	185	70212BN52NVR	70212BN52NET	25
1"	1 1/16	13.5	5	125			125	185	70218BN64NVR	70218BN64NET	25
1 1/4"	1 1/8	15.0	5	125			125	185	70218BN75NVR	70218BN75NET	25
1 1/2"	1 1/4	22.5	5	125			125	185	70218BN87NVR	70218BN87NET	25

## PILOT OPERATED BRASS MANUAL RESET VALVES—NORMALLY OPEN, NBR SEALS

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Min.*	Operating Pressure Differential (PSI)				MAX. Fluid Temp. (F)	No-Voltage Release Pressure Vessel	Electrically Tripped Pressure Vessel	Const. Ref.
				Maximum							
				AC Ratings		DC Ratings					
10 watt	22 watt	10 watt	22 watt								
3/4"	3/4	7.3	5	300			300	185	70222BN52NVR	70222BN52NET	25
1"	1 1/16	13.5	5	125			125	185	70228BN64NVR	70228BN64NET	25
1 1/4"	1 1/8	15.0	5	125			125	185	70228BN75NVR	70228BN75NET	25
1 1/2"	1 1/4	22.5	5	125			125	185	70228BN87NVR	70228BN87NET	25

\* Pilot operated valves require the minimum pressure differential specified for proper valve operation.

DRAWINGS

Dimension	No-Voltage Release	Electrically Tripped
A	4.64	4.40
B	4.31	4.07
C	1.79	1.59
D	3.26	3.06

#25

# SKINNER 7000 Series Remote Pressure Operated Two-Way Remote Operated Valves

## SPECIFICATIONS

### Mechanical Characteristics

#### Standard Materials of Construction

- Body—Brass
- Seals—NBR
- Springs—Stainless Steel (18-8)
- 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.

#### Maximum Operating Pressure Differential

- 190 PSI

#### Cv Factor

- 2.4 to 11.0

#### Pipe Sizes

- 3/8" TO 1" NPT

### REMOTE PRESSURE OPERATED VALVES—DUAL PURPOSE

Pipe Size NPT	Orifice Size (inch)	Cv Factor	Pressure Vessel Catalog Number	Const. Ref.
3/8"	1/2	2.4	75232BN3SN00	26
1/2"	1/2	2.8	75232BN4TN00	26
3/4"	3/4	7.3	75232BN52N00	26
1"	1	11.0	75232BN63N00	26

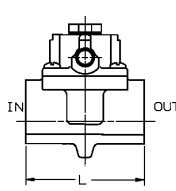
### TWO-WAY REMOTE OPERATED VALVE PORT CONNECTIONS

Valve Type	Main Line Supply	Remote Control Valve Hookup			3-Way Pilot Valve Hookup		
		IN Port	Out Port	Pilot Inlet Port* 1/8" NPT	Normally Closed Port	Normally Open Port	Common Port
Normally Open	0-190 PSIG	IN	Out	Common Port of 3-Way Pilot Valve	Main Line Pressure + 10 PSI Minimum	Pilot Exhaust	Pilot IN Port (1/8" NPT) of Remote Control Valve
Normally Open	Vacuum	Non-Vacuum Pump	Vacuum Pump		Main Line Pressure + 10 PSI Minimum	Vacuum	
Normally Closed	0-190 PSIG	IN	Out		Pilot Exhaust	Main Line Pressure + 10 PSI Minimum	
Normally Closed	Vacuum	Non-Vacuum Pump	Non-Vacuum Pump		Vacuum	Main Line Pressure + 10 PSI Minimum	

\* To assure long, trouble free life, the Pilot IN to main pressure differential should not exceed 200 PSIG.


NOTE: In de-energized state, valve in normally open position.

DRAWINGS

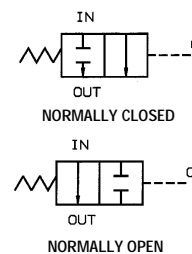


Valve	Dimension					Port Identification	
	H	P	C	L	W	IN	OUT
75232BN3SN00	3.17	2.35	1.51	2.75	1.97	IN	OUT
75232BN4TN00	3.17	2.35	1.51	2.75	1.97	IN	OUT
75232BN52N00	4.31	3.12	2.28	3.62	3.09	IN	OUT
75232BN63N00	4.73	3.40	2.56	4.31	3.45	P	A

Valve can be normally closed or normally open, depending on piping of external pilot.



#26



NORMALLY CLOSED

NORMALLY OPEN