

SKINNER 7000

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
- 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, 220/50-240/60, (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 122.

Power Consumption

- 10, 22 watts
- Fluxtron Electronic Coils and Magnelatch (refer to page 123 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		22 watt					
				10 watt	22 watt						
FLG [^]	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	165	7121KBN1GF00	GP	2	
	1/8	0.31	0	365	125	205	165	7121KBN1NF00	GP	2	
1/4	1/16	0.11	0	1000	435	700	165	7121KBN2GF00	GP	2	
	1/8	0.31	0	365	125	205	165	7121KBN2NF00	GP	2	
	1/8	0.31	0	145	125	125	185	7121KBN2NV00	SS	2	
	5/32	0.52	0	120	60	75	185	7121KBN2QV00	SS	2	
	13/64	0.76	0	80	30	40	185	7121KBN2SV00	SS	2	
3/8	1/4	0.83	0	55	20	20	185	7121KBN3UV00	SS	2	
1/2	7/16	2.5	0	17.5	35	5	10	185	7121KBN44V00	SS	3

[^] 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)				MAX.* Fluid Temp. (F)	Pressure Vessel Number	UL/CSA** Approval	Const. Ref.		
			Min.	Maximum		1000						
				AC Ratings							DC Ratings	
				10 watt	22 watt	10 watt	22 watt					
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
3/8	0.75	0	40	70	10		30	185	71215SN2VN00	SS	4	
5/16	1.1	0	20	55	3		10	185	71215SN21N00	SS	5	
3/8	3/8	2	0	6	25			5	185	71215SN33N00	SS	6
	3/8	2	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 122 for additional agency approval information.

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

DRAWINGS

#4

Port Identification: 2-IN/ 1-OUT

#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	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.

#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.
			Maximum							
			Min.	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
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.
			Maximum							
			Min.	AC Ratings		DC Ratings				
10 watt	22 watt	10 watt		22 watt						
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

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DRAWINGS

Technical drawings for valve #99. Front view shows a diameter of 1.62. Side view shows a total length of 2.76 and a mounting bracket length of 1.95. Detail view shows a mounting hole with dimensions .44 and .88. Schematic diagram shows a 2-IN/1-OUT configuration.

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

Technical drawings for valve #96. Front view shows a diameter of 1.62 (41, 1). Side view shows a total length of 2.76 (70, 1) and a mounting bracket length of 1.95 (48, 5). Detail view shows a mounting hole with dimensions .59 (15, 0) and .30 (7, 6). Schematic diagram shows a 1-IN/2-OUT configuration.

#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

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.
			Maximum							
			Min.	AC Ratings		DC Ratings				
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.

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DRAWINGS

#7

Port Identification: 2-IN/ 3-OUT

DRAWINGS

#100

Port Identification: Pressure can be applied to either port.