

GOLD RING Series 30 Small Three-Way Direct Acting Valves

SPECIFICATIONS

Mechanical Characteristics

Standard Materials of Construction

- Body-Brass or 303 Stainless Steel as listed
- Seals-NBR
- Plunger and Pole Piece-430FR Stainless Steel
- Plunger Tube-305 Stainless Steel
- Springs-302 Stainless Steel
- Shading Coil-Copper (Brass Bodies), Silver (Stainless Steel Bodies)
- Disc Holder-Celcon

Electrical Characteristics

Voltages

- DC-6, 12, 24, 120, 125 (other voltages available upon request)
- AC-24/60, 110/120-50/60, 220/240-50/60, 440/480-50/60

Coil

- Class F Standard, Class H Available

Agency Approvals

- Standard valves with general purpose or explosion proof solenoid enclosures are UL Listed and CSA Certified. For details, consult factory.

Miscellaneous

Temperature Ratings (media as listed)

- AC Voltages: 200°F max.
- DC Voltages: 150°F max.
- Ambient: 32-77°F (standard)
- For temperature variations, consult the factory.

Installation

- Series 30 valves may be mounted in any position. Product and mounting dimensions shown are nominal. For certified dimensions, consult factory.

Applications

- Used in a variety of applications including: Automated Systems, Dispensing Systems, Instrumentation, Pilot Operators, Laundry Equipment, Sampling Systems, Compressors, Water Treatment, and Air Dryers.

Operating Specifications

- Normally Closed-energize to pressurize operating device. De-energized, operating device is exhausted.
- Normally Open-energize to exhaust operating device. De-energized, operating device is pressurized.
- Universal-Can be installed for either normally closed, or normally open operation. Universal mode of operation is also suitable for flow selection (pressure at port 2 and 3) or diversion (pressure at port 1).

DIRECT ACTING BRASS VALVES—NORMALLY CLOSED (PRESSURE AT 2, ENERGIZE TO OPEN), NBR SEALS

AC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)				°F	°C					
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)				Light Oil 300SSU (PSI/Bar)				
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	180	82	6.0	73	02F30C1103AAF
1/8	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	180	82	6.0	73	02F30C1104AAF
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	180	82	6.0	73	02F30C1106AAF
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	180	82	6.0	73	02F30C1108AAF
1/4	1/16	1.59	.0	0.08	0	125	8.62	125	8.62	125	8.62	180	82	6.0	74	04F30C2104AAF
1/4	3/32	2.38	.12	0.10	0	110	7.59	110	7.59	110	7.59	180	82	10.2	74	04F30C2106ABF
1/4	3/32	2.38	.12	0.10	0	150	10.34	150	10.34	150	10.34	200	93	11.0	75	04F30C2106ACF
1/4	1/8	3.18	.25	0.22	0	40	2.76	40	2.76	40	2.76	180	82	6.0	74	04F30C2108AAF
1/4	11/64	4.37	.35	0.30	0	30	2.07	30	2.07	30	2.07	180	82	10.2	74	04F30C2111ABF

DIRECT ACTING BRASS VALVES—NORMALLY OPEN (PRESSURE AT 3, ENERGIZE TO CLOSE), NBR SEALS

AC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)				°F	°C					
						Air, Inert Gas (PSI/Bar)	Water (PSI/Bar)	Light Oil 300SSU (PSI/Bar)								
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	180	82	6.0	73	02F30O1103AAF
1/8	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	180	82	6.0	73	02F30O1104AAF
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	180	82	6.0	73	02F30O1106AAF
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	180	82	6.0	73	02F30O1108AAF
1/4	1/16	1.59	.09	0.08	0	235	16.21	250	17.24	250	17.24	200	93	16.0	75	04F30O2104ADF
1/4	3/32	2.38	.12	0.10	0	140	9.66	140	9.66	140	9.66	200	93	11.0	75	04F30O2106ACF
1/4	1/18	1.41	.25	0.22	0	40	2.76	40	2.76	40	2.76	180	82	6.0	74	04F30O2108AAF
1/4	1/8	3.18	.25	0.22	0	70	4.83	70	4.83	70	4.83	200	93	11.0	75	04F30O2108ACF
1/4	11/64	4.37	.35	0.30	0	40	2.76	40	2.76	40	2.76	200	93	11.0	75	04F30O2111ACF

DIRECT ACTING BRASS VALVES – UNIVERSAL (PRESSURE AT ANY PORT), NBR SEALS

AC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential							Max. Temp.		AC Watt	Const. Ref.	Valve Part Number
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)						°F	°C			
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)		Light Oil 300SSU (PSI/Bar)						
1/8	3/64	1.19	.06	0.05	0	175	12.07	175	12.07	175	12.07	140	60	10.2	73	02F30U1103ABF
1/8	1/16	1.59	.09	0.08	0	100	6.90	100	6.90	100	6.90	180	82	10.2	73	02F30U1104ABF
1/8	3/32	2.38	.12	0.10	0	50	3.45	50	3.45	50	3.45	180	82	6.0	73	02F30U1106AAF
1/8	1/8	3.18	.21	0.18	0	30	2.07	30	2.07	30	2.07	180	82	10.2	73	02F30U1108ABF
1/4	1/16	1.59	.09	0.08	0	125	8.62	130	8.97	130	8.97	200	93	11.0	75	04F30U2104ACF
1/4	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	200	93	16.0	75	04F30U2106ADF
1/4	1/8	3.18	.25	0.22	0	50	3.45	50	3.45	50	3.45	200	93	16.0	75	04F30U2108ADF
1/4	11/64	4.37	.35	0.30	0	20	1.38	20	1.38	20	1.38	200	93	11.0	75	04F30U2111ACF

DIRECT ACTING BRASS VALVES – NORMALLY CLOSED (PRESSURE AT 2, ENERGIZE TO OPEN), NBR SEALS

DC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential							Max. Temp.		AC Watt	Const. Ref.	Valve Part Number
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)						°F	°C			
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)		Light Oil 300SSU (PSI/Bar)						
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	120	49	9.5	73	02F30C1103A1F
1/8	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	120	49	9.5	73	02F30C1104A1F
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	120	49	9.5	73	02F30C1106A1F
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	120	49	9.5	73	02F30C1108A1F
1/4	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	120	49	9.5	74	04F30C2104A1F
1/4	1/16	1.59	.09	0.08	0	160	11.03	160	11.03	160	11.03	150	66	11.5	75	04F30C2104A3F
1/4	3/32	2.38	12	10.34	0	115	7.93	115	7.93	115	7.93	150	66	11.5	75	04F30C2106A3F
1/4	1/8	3.18	.25	0.22	0	60	4.14	60	4.14	60	4.14	150	66	11.5	75	04F30C2108A3F
1/4	11/64	4.37	.35	0.30	0	25	1.72	25	1.72	25	1.72	150	66	11.5	75	04F30C2111A3F

DIRECT ACTING BRASS VALVES – NORMALLY OPEN (PRESSURE AT 3, ENERGIZE TO CLOSE), NBR SEALS

DC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)						°F				°C
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)		Light Oil 300SSU (PSI/Bar)						
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	120	49	9.5	73	02F30O1103A1F
1/8	1/16	1.59	.09	0.08	0	200	13.79	200	13.79	200	13.79	120	49	9.5	73	02F30O1104A1F
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	120	49	9.5	73	02F30O1106A1F
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	120	49	9.5	73	02F30O1108A1F
1/4	1/16	1.59	.09	0.08	0	160	11.03	160	11.03	160	11.03	150	66	11.5	75	04F30O2140A3F
1/4	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	150	66	11.5	75	04F30O2106A3F
1/4	1/8	3.18	.12	0.10	0	55	3.79	55	3.79	55	3.79	150	66	11.5	75	04F30O2108A3F
1/4	11/64	4.37	.35	0.30	0	30	2.07	30	2.07	30	2.07	150	66	11.5	75	04F30O2111A3F

DIRECT ACTING BRASS VALVES – UNIVERSAL (PRESSURE AT ANY PORT), NBR SEALS

DC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)				°F	°C					
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)				Light Oil 300SSU (PSI/Bar)				
1/8	3/64	1.19	.06	0.05	0	125	8.62	125	8.62	125	8.62	120	49	9.5	73	02F30U1103A1F
1/8	1/16	1.59	.09	0.08	0	65	4.48	65	4.48	65	4.48	120	49	9.5	73	02F30U1104A1F
1/8	3/32	2.38	.12	0.10	0	50	3.45	50	3.45	50	3.45	120	49	9.5	73	02F30U1106A1F
1/8	1/8	3.18	.21	0.18	0	20	1.38	20	1.38	20	1.38	120	49	9.5	73	02F30U1108A1F
1/4	1/16	1.59	.09	0.08	0	75	5.17	75	5.17	75	5.17	150	66	11.5	75	04F30U2104A3F
1/4	3/32	2.38	.12	0.10	0	60	4.14	60	4.14	60	4.14	150	66	11.5	75	04F30U2106A3F
1/4	1/8	3.18	.25	0.22	0	25	1.72	25	1.72	25	1.72	150	66	11.5	75	04F30U2108A3F
1/4	11/64	4.37	.35	0.30	0	12	0.83	12	0.83	12	0.83	150	66	11.5	75	04F30U2111A3F

To choose a solenoid for your valve, refer to the AC or DC chart found on the flap attached to the back cover of this catalog.

Series 30 Small Three-Way Direct Acting Valves

DIRECT ACTING STAINLESS STEEL VALVES – NORMALLY CLOSED (PRESSURE AT 2, ENERGIZE TO OPEN), NBR SEALS

AC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)				°F	°C					
						Air, Inert Gas (PSI/Bar)	Water (PSI/Bar)	Light Oil 300SSU (PSI/Bar)								
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	180	82	6.0	73	02F30C3103AAF
1/8	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	180	82	6.0	73	02F30C3104AAF
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	180	82	6.0	73	02F30C3106AAF
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	180	82	6.0	73	02F30C3108AAF
1/4	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	180	82	6.0	76	04F30C3104AAF
1/4	3/32	2.38	.12	0.10	0	150	10.34	150	10.34	150	10.34	200	93	11.0	76	04F30C3106ACF
1/4	1/8	3.18	.31	0.27	0	85	5.86	85	5.86	85	5.86	200	93	11.0	76	04F30C3108ACF

DIRECT ACTING STAINLESS STEEL VALVES – NORMALLY OPEN (PRESSURE AT 3, ENERGIZE TO CLOSE), NBR SEALS

DC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential							Max. Temp.		AC Watt	Const. Ref.	Valve Part Number
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)						°F	°C			
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)		Light Oil 300SSU (PSI/Bar)						
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	180	82	6.0	73	02F3003103AAF
1/8	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	180	82	6.0	73	02F3003104AAF
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	180	82	6.0	73	02F3003106AAF
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	180	82	6.0	73	02F3003108AAF
1/4	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	180	82	6.0	76	04F3003104AAF
1/4	3/32	2.38	.12	0.10	0	150	10.34	140	9.66	140	9.66	200	93	11.0	76A	04F3003106ACF
1/4	1/8	3.18	.31	0.27	0	70	4.83	70	4.83	70	4.83	200	93	11.0	76A	04F3003108ACF

DIRECT ACTING STAINLESS STEEL VALVES – UNIVERSAL (PRESSURE AT ANY PORT), NBR SEALS

AC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)						°F				°C
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)		Light Oil 300SSU (PSI/Bar)						
1/8	3/64	1.19	.06	0.05	0	175	12.07	175	12.07	175	12.07	140	60	10.2	73	02F30U3103ABF
1/8	1/16	1.59	.09	0.08	0	100	6.90	100	6.90	100	6.90	180	82	10.2	73	02F30U3104ABF
1/8	3/32	2.38	.12	0.10	0	50	3.45	50	3.45	50	3.45	180	82	6.0	73	02F30U3106AAF
1/8	1/8	3.18	.21	0.18	0	30	2.07	30	2.07	30	2.07	180	82	10.2	73	02F30U3108ABF
1/4	1/16	1.59	.09	0.08	0	100	6.90	100	6.90	100	6.90	180	82	10.2	76	04F30U3104ABF
1/4	3/32	2.38	.12	10.34	0	100	6.90	100	6.90	100	6.90	200	93	16.0	76A	04F30U3106ADF
1/4	1/8	3.18	.31	0.27	0	50	3.45	50	3.45	50	3.45	200	93	16.0	76A	04F30U3108ADF

DIRECT ACTING STAINLESS STEEL VALVES – NORMALLY CLOSED (PRESSURE AT 2, ENERGIZE TO OPEN), NBR SEALS

DC VALVE SPECIFICATIONS

NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)						°F				°C
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)		Light Oil 300SSU (PSI/Bar)						
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	120	49	9.5	73	02F30C3103A1F
1/8	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	120	49	9.5	73	02F30C3104A1F
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	120	49	9.5	73	02F30C3106A1F
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	120	49	9.5	73	02F30C3108A1F
1/4	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	1120	604	9.5	76	04F30C3104A1F
1/4	3/32	2.38	.12	0.10	0	115	7.93	115	7.93	115	7.93	150	66	11.5	76A	04F30C3106A3F
1/4	1/8	3.18	.31	0.27	0	60	4.14	60	4.14	60	4.14	150	66	11.5	76A	04F30C3108A3F

DIRECT ACTING STAINLESS STEEL VALVES— NORMALLY OPEN (PRESSURE AT 3, ENERGIZE TO CLOSE), NBR SEALS

DC VALVE SPECIFICATIONS

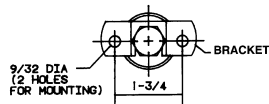
NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)				°F	°C					
						Air, Inert Gas (PSI/Bar)		Water (PSI/Bar)				Light Oil 300SSU (PSI/Bar)				
1/8	3/64	1.19	.06	0.05	0	200	13.79	200	13.79	200	13.79	120	49	9.5	73	02F3003103A1F
1/8	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	120	49	9.5	73	02F3003104A1F
1/8	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	120	49	9.5	73	02F3003106A1F
1/8	1/8	3.18	.21	0.18	0	40	2.76	40	2.76	40	2.76	120	49	9.5	73	02F3003108A1F
1/4	1/16	1.59	.09	0.08	0	125	8.62	125	8.62	125	8.62	120	49	9.5	76	04F3003104A1F
1/4	3/32	2.38	.12	0.10	0	100	6.90	100	6.90	100	6.90	150	66	11.5	76A	04F3003106A3F
1/4	1/8	3.18	.31	0.27	0	55	3.79	55	3.79	55	3.79	150	66	11.5	76A	04F3003108A3F

DIRECT ACTING STAINLESS STEEL VALVES— UNIVERSAL (PRESSURE AT ANY PORT), NBR SEALS

DC VALVE SPECIFICATIONS

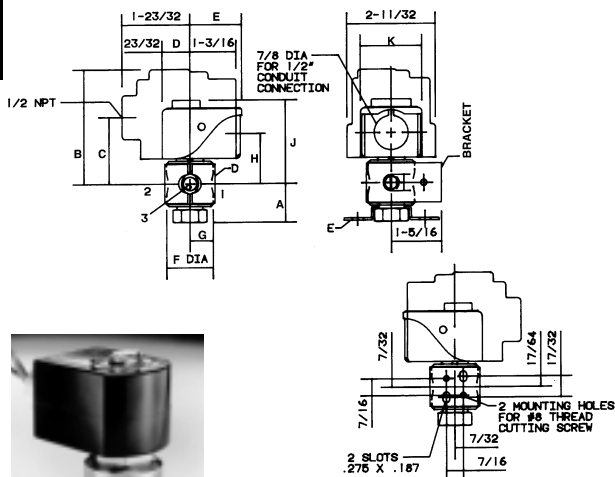
NPT Pipe Size	Orifice Diameter		Flow Factor		Operating Pressure Differential						Max. Temp.		AC Watt	Const. Ref.	Valve Part Number	
	inch	mm	Cv	Kv	Min. (PSI/Bar)	Max. (MOPD)			°F	°C						
						Air, Inert Gas (PSI/Bar)	Water (PSI/Bar)	Light Oil 300SSU (PSI/Bar)								
1/8	3/64	1.19	.06	0.05	0	125	8.62	125	8.62	125	8.62	120	49	9.5	73	02F30U3103A1F
1/8	1/16	1.59	.09	0.08	0	65	4.48	65	4.48	65	4.48	120	49	9.5	73	02F30U3104A1F
1/8	3/32	2.38	.12	0.10	0	50	3.45	50	3.45	50	3.45	120	49	9.5	73	02F30U3106A1F
1/8	1/8	3.18	.21	0.18	0	20	1.38	20	1.38	20	1.38	120	49	9.5	73	02F30U3108A1F
1/4	1/16	1.59	.09	0.08	0	65	4.48	65	4.48	65	4.48	120	49	9.5	76	04F30U3104A1F
1/4	3/32	2.38	.12	0.10	0	60	4.14	60	4.14	60	4.14	150	66	11.5	76A	04F30U3106A3F
1/4	1/8	3.18	.31	0.27	0	25	1.72	25	1.72	25	1.72	150	66	11.5	76A	04F30U3108A3F

DRAWINGS



Explosion-Proof/
Watertight
Shown in Outline

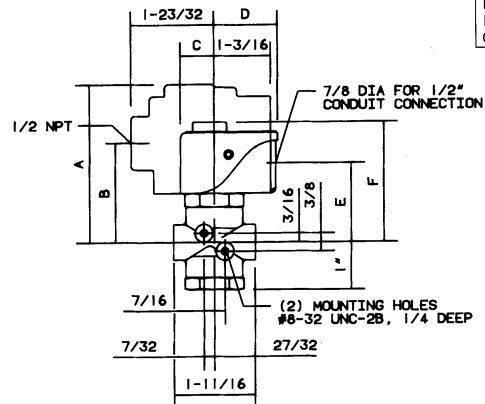
	Drawing 73	Drawing 76	Drawing 76A
A	1	1	23/32
B	2 7/8	2 7/8	3
C	1 11/16	1 11/16	125/32
D	23/32	23/32	7/8
E	1 5/16	1 5/16	1 17/32
F	1 3/16	1 1/2	1 1/2
G	1 9/32	23/32	3/4
H	1 9/32	1 9/32	1 11/16
J	2 1/8	2 1/8	2 23/32
K	1 9/16	1 9/16	1 13/16



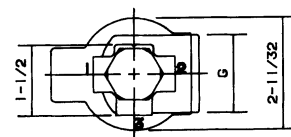
#73, 76, 76A

	Drawing 74	Drawing 75
A	3 9/32	3
B	2 1/16	125/32
C	23/32	7/8
D	1 5/16	1 17/32
E	1 21/32	1 11/16
F	2 1/2	2 23/32
G	1 9/16	1 13/16

Explosion-Proof/
Watertight
Shown in Outline



#74, 75



To choose a solenoid for your valve, refer to the AC or DC chart found on the flap attached to the back cover of this catalog.