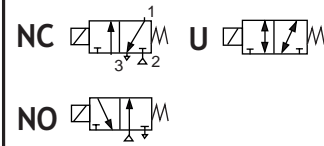




Direct Acting
General Service Solenoid Valves
 Brass or Stainless Steel Bodies
 1/8" to 1/4" NPT



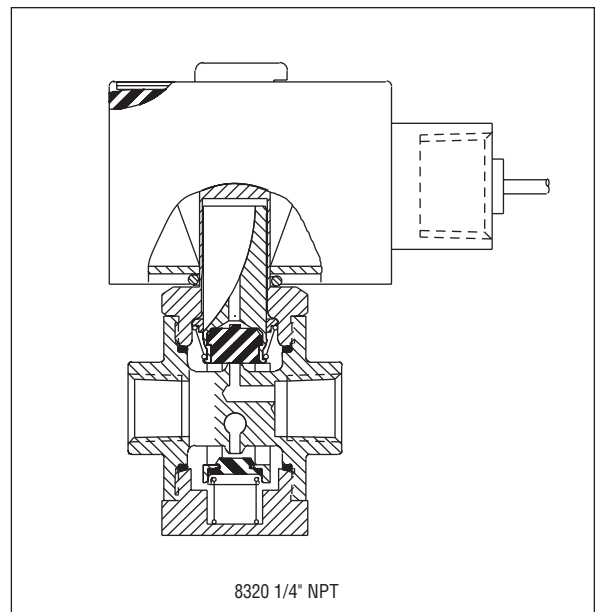
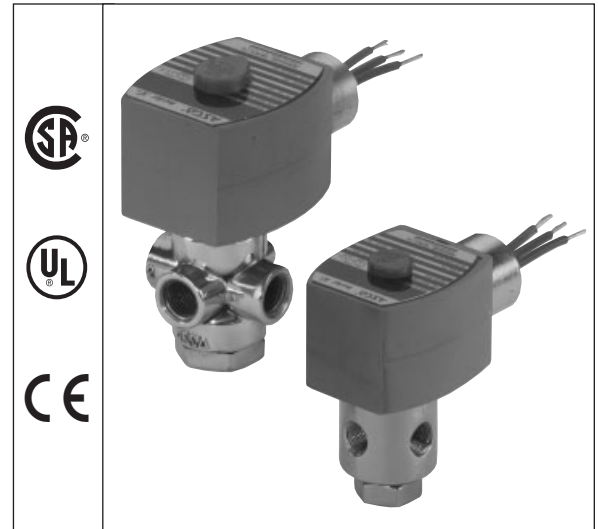
3/2
 SERIES
8320

Features

- All NPT connections are in the valve body to allow in-line piping.
- No Minimum Operating Pressure Differential required.
- Sturdy design for long years of reliable service.
- Broadest range of applications.
- Mountable in any position.

Construction

Valve Parts in Contact with Fluids		
Body	Brass	303 Stainless Steel
Seals and Discs	NBR or Cast UR, as Listed	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Core Springs	302 Stainless Steel	
Shading Coil	Copper	Silver
Disc-Holder	CA	
Core Guide	CA (10.1 and 17.1 Watt only)	



Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part No.			
	DC Watts	AC			General Purpose		Explosionproof	
		Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	-	9.1	25	40	238210	-	238214	-
F	11.6	10.1	25	50	238610	238710	238614	238714
F	-	17.1	40	70	238610	-	238614	-

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220, volts AC, 50 Hz). 6, 12, 24, 120, 240 volts DC. Must be specified when ordering. Other voltages are available when required.

Nominal Ambient Temperature Ranges:

AC: 32°F to 125°F (0°C to 52°C)

DC: 32°F to 104°F (0°C to 40°C)

Refer to Engineering Section for details.

Solenoid Enclosures

Standard: Watertight, Types 1, 2, 3, 3S, 4, and 4X.

Optional: Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add prefix "EF" to the catalog number.)
 See Optional Features Section for other available options.

Approvals:

CSA certified. UL listed General Purpose Valves.

Meets applicable CE directives.

Refer to Engineering Section for details.

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)						Max. Fluid Temp. °F		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation ②	
			Max. AC			Max. DC			AC	DC	Catalog Number	Constr. Ref. No.	Catalog Number	Constr. Ref. No.	AC	DC
			Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Air-Inert Gas	Water	Lt. Oil @ 300 SSU								
UNIVERSAL OPERATION (Pressure at any port)																
1/8	3/64	.06	175	175	175	125	125	125	140	120	8320G130 ①	1	8320G140 ①	1	9.1/F	10.6/F
1/8	1/16	.09	100	100	100	65	65	65	180	120	8320G001	1	8320G041 ③	1	9.1/F	10.6/F
1/8	3/32	.12	50	50	50	50	50	50	180	120	8320G083	1	8320G087 ③	1	6.1/F	10.6/F
1/8	1/8	.21	30	30	30	20	20	20	180	120	8320G003	1	8320G043 ③	1	9.1/F	10.6/F
1/4	1/16	.09	125	130	130	75	75	75	200	150	8320G172	2	--	--	10.1/F	11.6/F
1/4	3/32	.12	100	100	100	60	60	60	200	150	8320G174	2	8320G200 ③	3	17.1/F	11.6/F
1/4	1/8	.25	50	50	50	25	25	25	200	150	8320G176	2	8320G201 ③	3	17.1/F	11.6/F
1/4	11/64	.35	20	20	20	12	12	12	200	150	8320G178	2	--	--	10.1/F	11.6/F
NORMALLY CLOSED (Closed when de-energized)																
1/8	3/64	.06	200	200	200	200	200	200	180	120	8320G132	1	8320G142 ③	1	6.1/F	10.6/F
1/8	1/16	.09	150	125	125	125	125	125	180	120	8320G013	1	8320G045 ③	1	6.1/F	10.6/F
1/8	3/32	.12	100	100	100	100	100	100	180	120	8320G015	1	8320G047 ③	1	6.1/F	10.6/F
1/8	1/8	.21	40	40	40	40	40	40	180	120	8320G017	1	8320G049 ③	1	6.1/F	10.6/F
1/4	1/16	.09	210	225	225	160	160	160	200	150	8320G182	2	--	--	17.1/F	11.6/F
1/4	3/32	.12	150	150	150	115	115	115	200	150	8320G184	2	8320G202 ③	3	10.1/F	11.6/F
1/4	1/8	.25	85	85	85	60	60	60	200	150	8320G186	2	8320G203 ③	3	10.1/F	11.6/F
1/4	11/64	.35	45	45	45	25	25	25	200	150	8320G188	2	--	--	10.1/F	11.6/F
NORMALLY OPEN (Open when de-energized)																
1/8	3/64	.06	200	200	200	200	200	200	180	120	8320G136	1	8320G146 ③	1	6.1/F	10.6/F
1/8	1/16	.09	150	125	125	125	125	125	180	120	8320G027	1	8320G051 ③	1	6.1/F	10.6/F
1/8	3/32	.12	100	100	100	100	100	100	180	120	8320G029	1	8320G053 ③	1	6.1/F	10.6/F
1/8	1/8	.21	40	40	40	40	40	40	180	120	8320G031	1	8320G055 ③	1	6.1/F	10.6/F
1/4	1/16	.09	250	250	250	160	160	160	200	150	8320G192	2	--	--	17.1/F	11.6/F
1/4	3/32	.12	150	140	140	100	100	100	200	150	8320G194	2	8320G204 ③	3	10.1/F	11.6/F
1/4	1/8	.25	70	70	70	55	55	55	200	150	8320G196	2	8320G205 ③	3	10.1/F	11.6/F
1/4	11/64	.35	40	40	40	30	30	30	200	150	8320G198	2	--	--	10.1/F	11.6/F

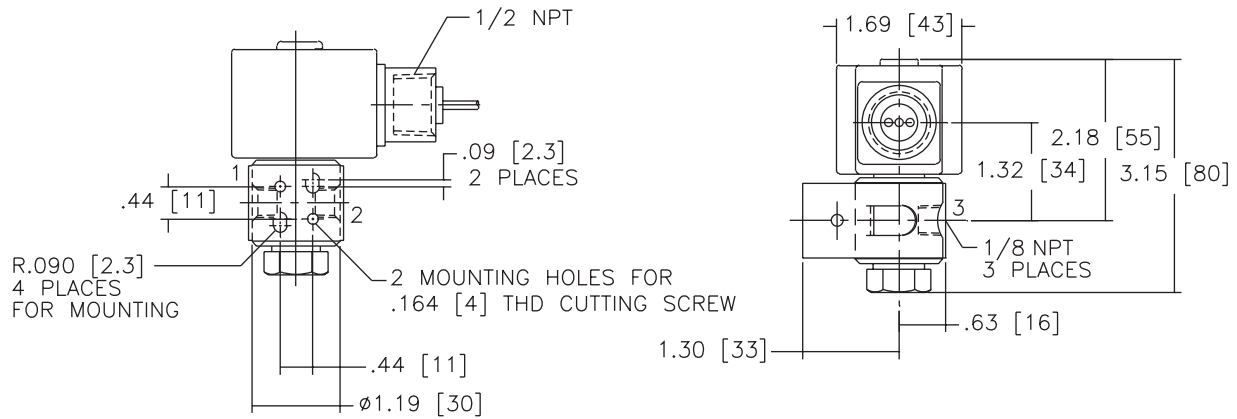
① Supplied with cast UR disc.
 ② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts.
 ③ Can be used for *dry* natural gas service with the EF prefix.

Specifications (Metric units)

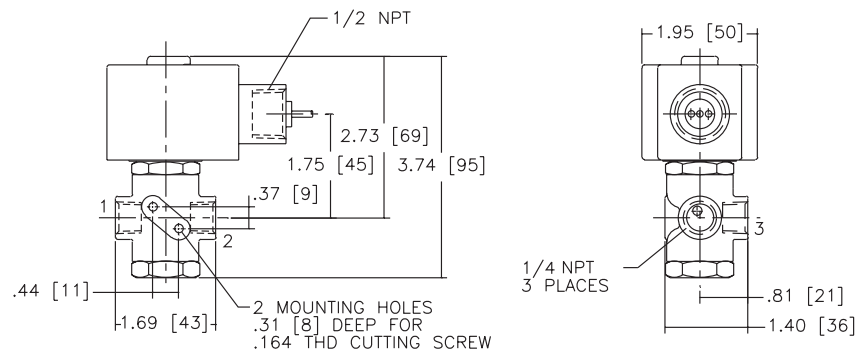
Pipe Size (ins.)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Operating Pressure Differential (bar)						Max. Fluid Temp. °C		Brass Body		Stainless Steel Body		Watt Rating/ Class of Coil Insulation ②	
			Max. AC			Max. DC			AC	DC	Catalog Number	Constr. Ref. No.	Catalog Number	Constr. Ref. No.	AC	DC
			Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Air-Inert Gas	Water	Lt. Oil @ 300 SSU								
UNIVERSAL OPERATION (Pressure at any port)																
1/8	1.2	.05	12	12	12	9	9	9	59	48.4	8320G130 ①	1	8320G140 ①	1	9.1/F	10.6/F
1/8	1.6	.08	7	7	7	4	4	4	81	48.4	8320G001	1	8320G041 ③	1	9.1/F	10.6/F
1/8	2.4	.10	3	3	3	3	3	3	81	48.4	8320G083	1	8320G087 ③	1	6.1/F	10.6/F
1/8	3.2	.18	2	2	2	1	1	1	81	48.4	8320G003	1	8320G043 ③	1	9.1/F	10.6/F
1/4	1.6	.08	9	9	9	5	5	5	92	64.9	8320G172	2	--	--	10.1/F	11.6/F
1/4	2.4	.10	7	7	7	4	4	4	92	64.9	8320G174	2	8320G200 ③	3	17.1/F	11.6/F
1/4	3.2	.21	3	3	3	2	2	2	92	64.9	8320G176	2	8320G201 ③	3	17.1/F	11.6/F
1/4	4.4	.30	1	1	1	1	1	1	92	64.9	8320G178	2	--	--	10.1/F	11.6/F
NORMALLY CLOSED (Closed when de-energized)																
1/8	1.2	.05	14	14	14	14	14	14	81	48.4	8320G132	1	8320G142 ③	1	6.1/F	10.6/F
1/8	1.6	.08	10	9	9	9	9	9	81	48.4	8320G013	1	8320G045 ③	1	6.1/F	10.6/F
1/8	2.4	.10	7	7	7	7	7	7	81	48.4	8320G015	1	8320G047 ③	1	6.1/F	10.6/F
1/8	3.2	.18	3	3	3	3	3	3	81	48.4	8320G017	1	8320G049 ③	1	6.1/F	10.6/F
1/4	1.6	.08	14	16	16	11	11	11	92	64.9	8320G182	2	--	--	17.1/F	11.6/F
1/4	2.4	.10	10	10	10	8	8	8	92	64.9	8320G184	2	8320G202 ③	3	10.1/F	11.6/F
1/4	3.2	.21	6	6	6	4	4	4	92	64.9	8320G186	2	8320G203 ③	3	10.1/F	11.6/F
1/4	4.4	.30	3	3	3	2	2	2	92	64.9	8320G188	2	--	--	10.1/F	11.6/F
NORMALLY OPEN (Open when de-energized)																
1/8	1.2	.05	14	14	14	14	14	14	81	48	8320G136	1	8320G146 ③	1	6.1/F	10.6/F
1/8	1.6	.08	10	9	9	9	9	9	81	48	8320G027	1	8320G051 ③	1	6.1/F	10.6/F
1/8	2.4	.01	7	7	7	7	7	7	81	48	8320G029	1	8320G053 ③	1	6.1/F	10.6/F
1/8	3.2	.18	3	3	3	3	3	3	81	48	8320G031	1	8320G055 ③	1	6.1/F	10.6/F
1/4	1.6	.08	17	17	17	11	11	11	92	65	8320G192	2	--	--	17.1/F	11.6/F
1/4	2.4	.10	10	10	10	7	7	7	92	65	8320G194	2	8320G204 ③	3	10.1/F	11.6/F
1/4	3.2	.21	5	5	5	4	4	4	92	65	8320G196	2	8320G205 ③	3	10.1/F	11.6/F
1/4	4.4	.30	3	3	3	2	2	2	92	65	8320G198	2	--	--	10.1/F	11.6/F
① Supplied with cast UR disc. ② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts. ③ Can be used for dry natural gas service with the EF prefix.																

Dimensions: inches (mm)

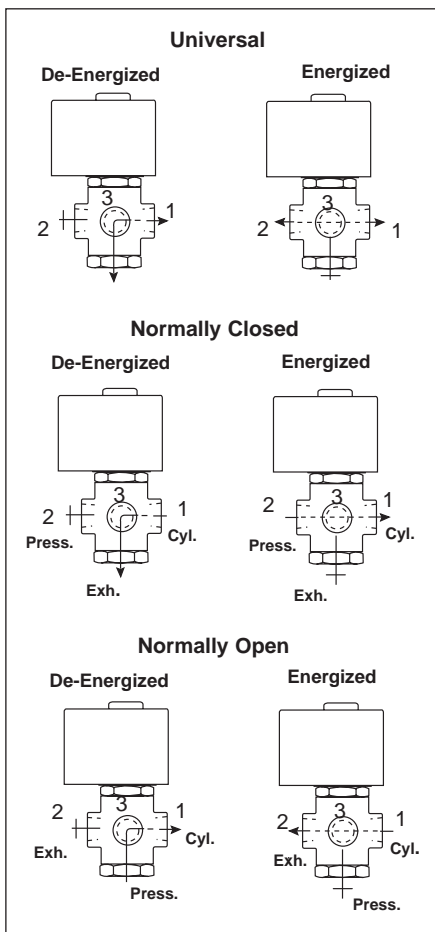
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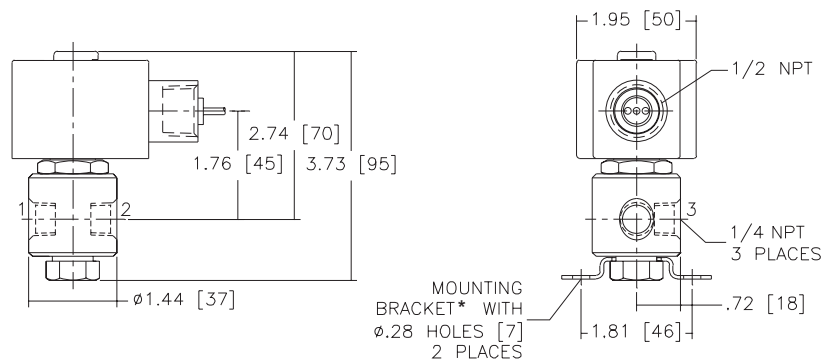
Constr. Ref. 2



FLOW DIAGRAMS



Constr. Ref. 3



* MOUNTING BRACKET IS STANDARD ON THIS CONSTRUCTION