

# ASCO™ General Service Solenoid Valves

Direct Acting | Brass or Stainless Steel Bodies | 1/8" to 1/4" NPT

3/2  
SERIES  
320

## Features

- All NPT connections are in the valve body to allow in-line piping
- No minimum Operating Pressure Differential required
- Broadest range of applications
- Mountable in any position

## Construction

Valve Parts in Contact with Fluids		
Body	Brass	303 Stainless Steel
Seals and Disc	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 Number			
	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	22.6	17.1	40	70	238610	238710	238614	238714

**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.

## 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.

## Nominal Ambient Temp. Ranges

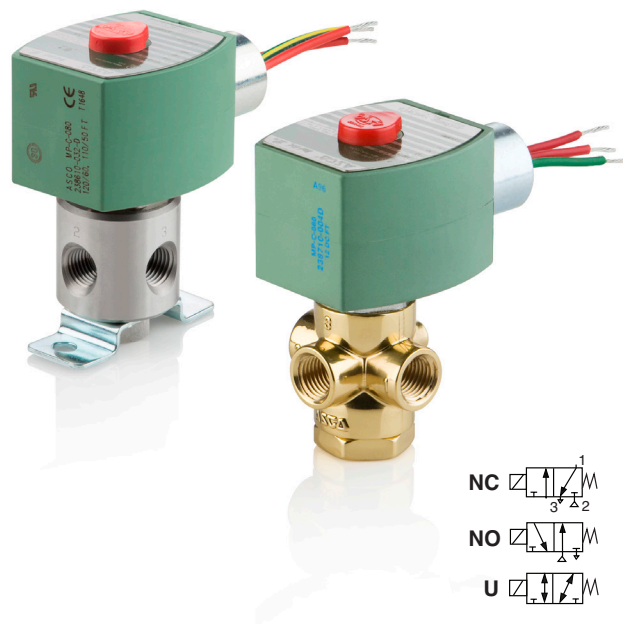
AC: 32°F to 125°F (0°C to 52°C)

DC: 32°F to 104°F (0°C to 40°C)

**Note:** Some stainless steel constructions are rated -40°F (-40°C).

See note ④ in specifications table.

Refer to Engineering Section for details.



## Approvals

- CSA certified, UL listed General Purpose Valves.
- Meets applicable CE directives.
- SIL 3 capable per IEC 61508 on normally closed constructions. Third party certification provided by EXIDA. Refer to Engineering Section for details.
- ATEX/IECEx certified with prefix "EV" as listed. Refer to Optional Features Electrical Section for details.

Specifications English (Metric units)

Pipe Size (in)	Orifice Size in (mm)	Flow Factor Cv (Kv)	Operating Pressure Differential psi (bar)						Max. Fluid Temp. °F (°C)		Brass Body		Stainless Steel Body		Watt Rating/Class of Coil Insulation ②	
			Max. AC			Max. DC					Catalog Number	Const. Ref.	Catalog Number	Const. Ref.		
			Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Air-Inert Gas	Water	Lt. Oil @ 300 SSU	AC	DC					AC	DC
<b>UNIVERSAL OPERATION (Pressure at any port)</b>																
1/8	3/64 (1.2)	0.06 (0.05)	175 (12)	175 (12)	175 (12)	125 (9)	125 (9)	125 (9)	140 (60)	120 (49)	8320G130 ①	1	8320G140 ①	1	9.1F	10.6F
1/8	1/16 (1.6)	0.09 (0.08)	100 (7)	100 (7)	100 (7)	65 (4)	65 (4)	65 (4)	180 (82)	120 (49)	8320G001	1	8320G041 ③	1	9.1F	10.6F
1/8	1/16 (1.6)	0.09 (0.08)	175 (12)	175 (12)	175 (12)	125 (9)	125 (9)	125 (9)	200 (93)	150 (66)	8320G212	4	8320G221 ④⑤	4	17.1/F	22.6/F
1/8	3/32 (2.4)	0.12 (0.10)	50 (3)	50 (3)	50 (3)	50 (3)	50 (3)	50 (3)	180 (82)	120 (49)	8320G083	1	8320G087 ③	1	6.1/F	10.6/F
1/8	3/32 (2.4)	0.12 (0.10)	100 (7)	100 (7)	100 (7)	60 (4)	60 (4)	60 (4)	200 (93)	150 (66)	8320G213	4	8320G222 ④	4	17.1/F	11.6/F
1/8	1/8 (3.2)	0.21 (0.18)	30 (2)	30 (2)	30 (2)	20 (1)	20 (1)	20 (1)	180 (82)	120 (49)	8320G003	1	8320G043 ③	1	9.1/F	10.6/F
1/8	1/8 (3.2)	0.21 (0.18)	50 (3)	50 (3)	50 (3)	25 (2)	25 (2)	25 (2)	200 (93)	150 (66)	8320G214	4	8320G223 ④	4	17.1/F	11.6/F
1/4	1/16 (1.6)	0.09 (0.08)	125 (9)	130 (9)	130 (9)	75 (5)	75 (5)	75 (5)	200 (93)	150 (66)	8320G172	2	-	-	10.1/F	11.6/F
1/4	1/16 (1.6)	0.09 (0.08)	175 (12)	175 (12)	175 (12)	125 (9)	125 (9)	125 (9)	200 (93)	150 (66)	-	-	8320G230 ④⑤	3	17.1/F	22.6/F
1/4	3/32 (2.4)	0.12 (0.10)	100 (7)	100 (7)	100 (7)	60 (4)	60 (4)	60 (4)	200 (93)	150 (66)	8320G174	2	8320G200 ③④⑤	3	17.1/F	11.6/F
1/4	1/8 (3.2)	0.25 (0.21)	50 (3)	50 (3)	50 (3)	25 (2)	25 (2)	25 (2)	200 (93)	150 (66)	8320G176 ⑤	2	8320G201 ③④⑤	3	17.1/F	11.6/F
1/4	11/64 (4.4)	0.35 (0.30)	20 (1)	20 (1)	20 (1)	12 (1)	12 (1)	12 (1)	200 (93)	150 (66)	8320G178	2	-	-	10.1/F	11.6/F
<b>NORMALLY CLOSED (Closed when de-energized) – PFD<sub>AVG</sub> = 6.81 x 10<sup>-4</sup></b>																
1/8	3/64 (1.2)	0.06 (0.05)	200 (14)	200 (14)	200 (14)	200 (14)	200 (14)	200 (14)	180 (82)	120 (49)	8320G132	1	8320G142 ③	1	6.1F	10.6/F
1/8	1/16 (1.6)	0.09 (0.08)	150 (10)	125 (9)	125 (9)	125 (9)	125 (9)	125 (9)	180 (82)	120 (49)	8320G013	1	8320G045 ③	1	6.1F	10.6/F
1/8	1/16 (1.6)	0.09 (0.08)	210 (14)	225 (15)	225 (15)	160 (11)	160 (11)	160 (11)	200 (93)	150 (66)	8320G215	4	8320G224 ④	4	17.1/F	11.6/F
1/8	3/32 (2.4)	0.12 (0.10)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	180 (82)	120 (49)	8320G015	1	8320G047 ③	1	6.1F	10.6/F
1/8	3/32 (2.4)	0.12 (0.10)	150 (10)	150 (10)	150 (10)	115 (8)	115 (8)	115 (8)	200 (93)	150 (66)	8320G216	4	8320G225 ④	4	10.1/F	11.6/F
1/8	1/8 (3.2)	0.21 (0.18)	40 (3)	40 (3)	40 (3)	40 (3)	40 (3)	40 (3)	180 (82)	120 (49)	8320G017	1	8320G049 ③	1	6.1F	10.6/F
1/8	1/8 (3.2)	0.21 (0.18)	85 (6)	85 (6)	85 (6)	60 (4)	60 (4)	60 (4)	200 (93)	150 (66)	8320G217	4	8320G226 ④	4	10.1/F	11.6/F
1/4	1/16 (1.6)	0.09 (0.08)	210 (14)	225 (15)	225 (15)	160 (11)	160 (11)	160 (11)	200 (93)	150 (66)	8320G182 ⑤	2	8320G231 ④	3	17.1/F	11.6/F
1/4	3/32 (2.4)	0.12 (0.10)	150 (10)	150 (10)	150 (10)	115 (8)	115 (8)	115 (8)	200 (93)	150 (66)	8320G184	2	8320G202 ③④⑤	3	10.1/F	11.6/F
1/4	1/8 (3.2)	0.25 (0.21)	85 (6)	85 (6)	85 (6)	60 (4)	60 (4)	60 (4)	200 (93)	150 (66)	8320G186	2	8320G203 ③④⑤	3	10.1/F	11.6/F
1/4	11/64 (4.4)	0.35 (0.30)	45 (3)	45 (3)	45 (3)	25 (2)	25 (2)	25 (2)	200 (93)	150 (66)	8320G188	2	-	-	10.1/F	11.6/F
<b>NORMALLY OPEN (Open when de-energized)</b>																
1/8	3/64 (1.2)	0.06 (0.05)	200 (14)	200 (14)	200 (14)	200 (14)	200 (14)	200 (14)	180 (82)	120 (49)	8320G136	1	8320G146 ③	1	6.1F	10.6/F
1/8	1/16 (1.6)	0.09 (0.08)	150 (10)	125 (9)	125 (9)	125 (9)	125 (9)	125 (9)	180 (82)	120 (49)	8320G027	1	8320G051 ③	1	6.1F	10.6/F
1/8	1/16 (1.6)	0.09 (0.08)	235 (16)	250 (17)	250 (17)	160 (11)	160 (11)	160 (11)	200 (93)	150 (66)	8320G218	4	8320G227 ④	4	17.1/F	11.6/F
1/8	3/32 (2.4)	0.12 (0.10)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	180 (82)	120 (49)	8320G029	1	8320G053 ③	1	6.1F	10.6/F
1/8	3/32 (2.4)	0.12 (0.10)	150 (10)	140 (10)	140 (10)	100 (7)	100 (7)	100 (7)	200 (93)	150 (66)	8320G219	4	8320G228 ④	4	10.1/F	11.6/F
1/8	1/8 (3.2)	0.21 (0.18)	40 (3)	40 (3)	40 (3)	40 (3)	40 (3)	40 (3)	180 (82)	120 (49)	8320G031	1	8320G055 ③	1	6.1F	10.6/F
1/8	1/8 (3.2)	0.21 (0.18)	70 (5)	70 (5)	70 (5)	55 (4)	55 (4)	55 (4)	200 (93)	150 (66)	8320G220	4	8320G229 ④	4	10.1/F	11.6/F
1/4	1/16 (1.6)	0.09 (0.08)	235 (16)	250 (17)	250 (17)	160 (11)	160 (11)	160 (11)	200 (93)	150 (66)	8320G192 ⑤	2	8320G232 ④	3	17.1/F	11.6/F
1/4	3/32 (2.4)	0.12 (0.10)	150 (10)	140 (10)	140 (10)	100 (7)	100 (7)	100 (7)	200 (93)	150 (66)	8320G194	2	8320G204 ③④⑤	3	10.1/F	11.6/F
1/4	1/8 (3.2)	0.25 (0.21)	70 (5)	70 (5)	70 (5)	55 (4)	55 (4)	55 (4)	200 (93)	150 (66)	8320G196	2	8320G205 ③④	3	10.1/F	11.6/F
1/4	11/64 (4.4)	0.35 (0.30)	40 (3)	40 (3)	40 (3)	30 (2)	30 (2)	30 (2)	200 (93)	150 (66)	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.  
 ④ Constructions standard rated -40°F (-40°C) ambient temperature. EFX prefix and TPL # not required.  
 ⑤ ATEX/IECEx certified with prefix "EV".

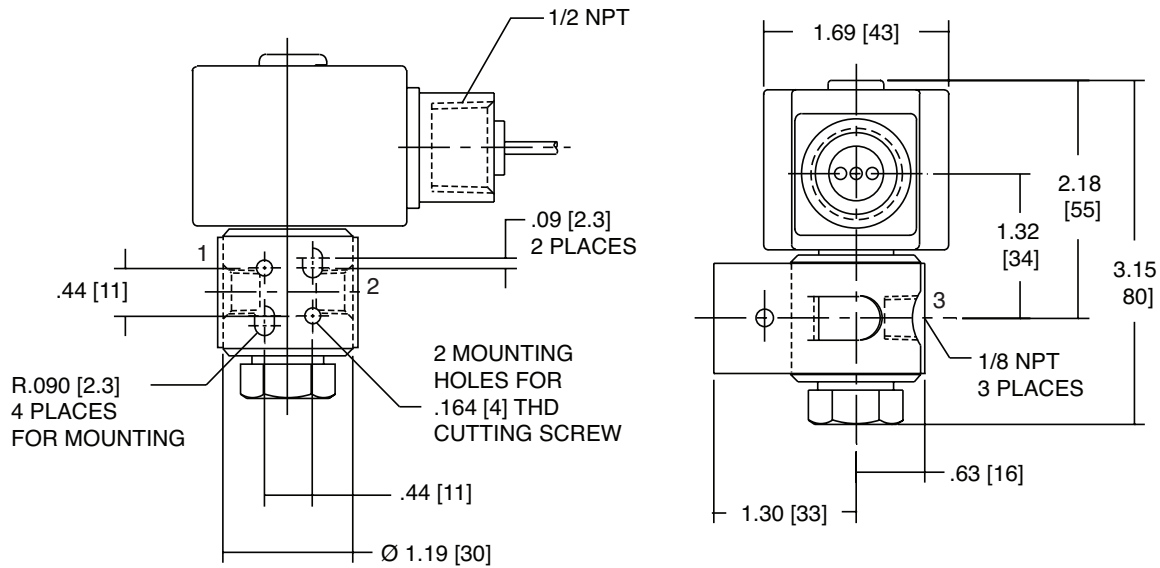
# ASCO™ General Service Solenoid Valves

Direct Acting | Brass or Stainless Steel Bodies | 1/8" to 1/4" NPT

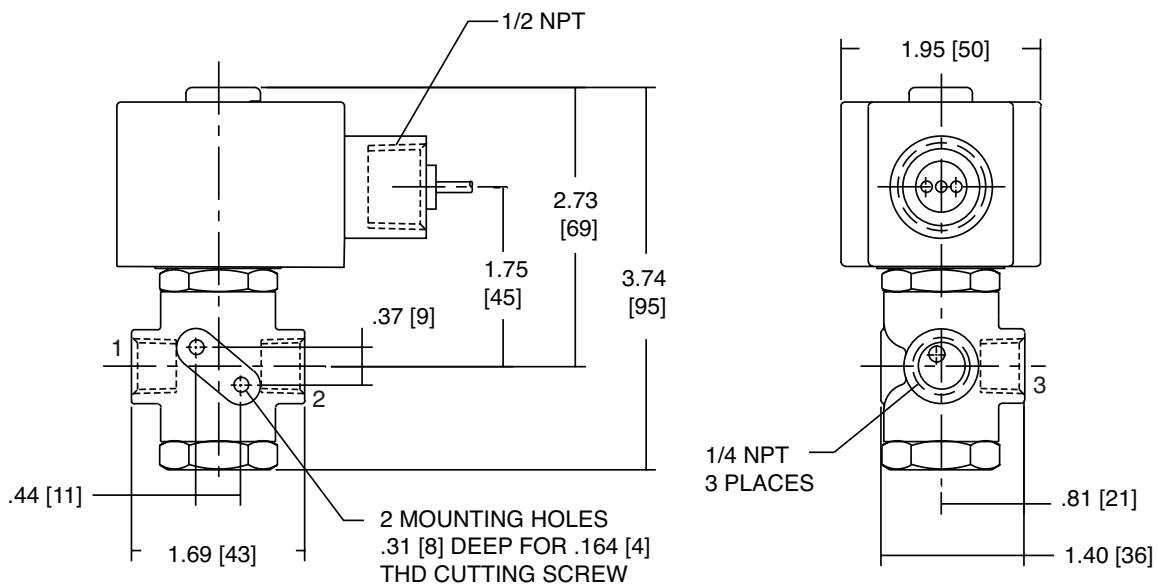
3/2  
SERIES  
320

## Dimensions: inches (mm)

Const. Ref. 1

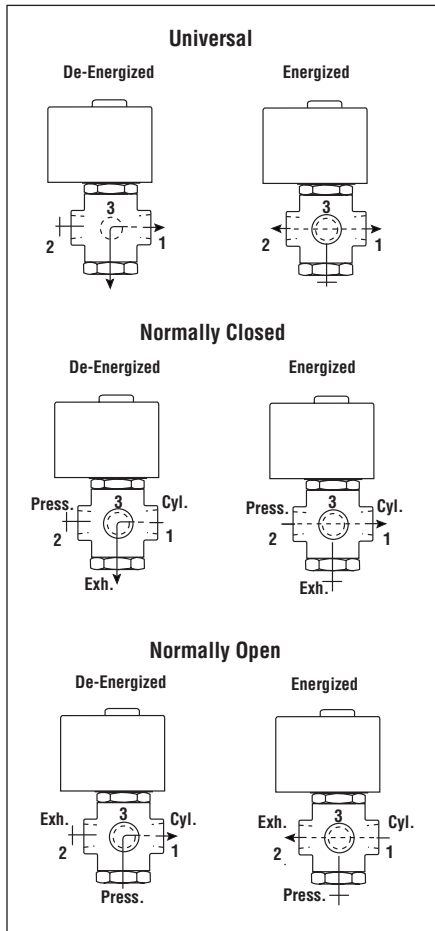


Const. Ref. 2

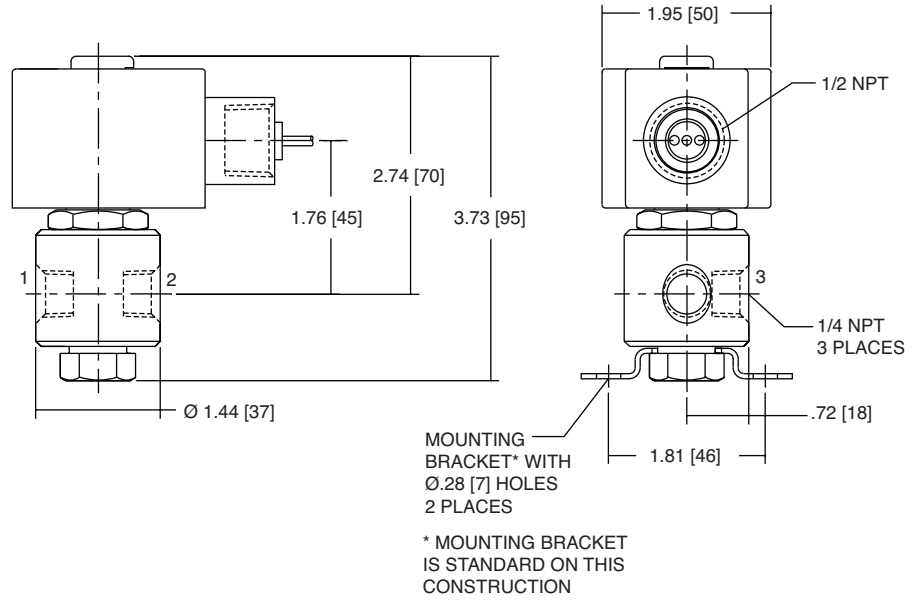


Dimensions: inches (mm)

FLOW DIAGRAMS



Const. Ref. 3



Const. Ref. 4

