

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

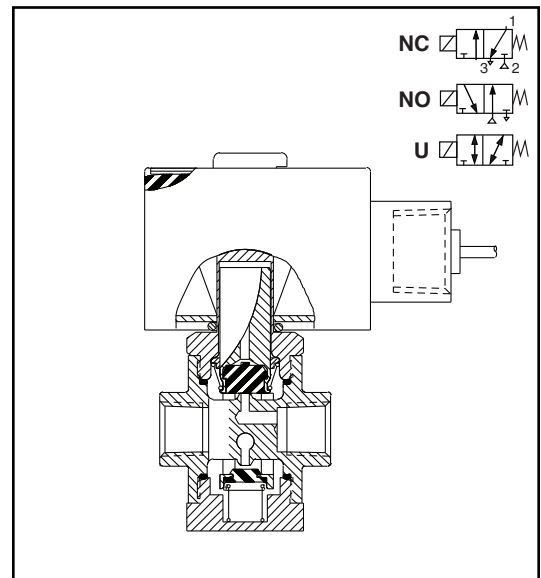
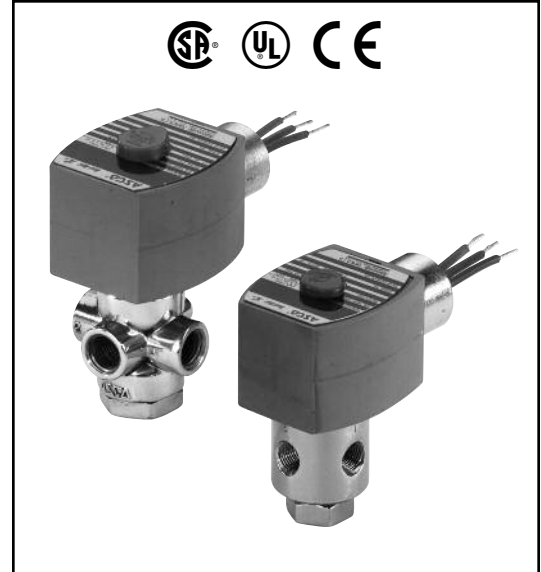
AC: 32°F to 125°F (0°C to 52°C)

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 const.

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 units)

| Pipe Size (in) | Orifice Size (in) | 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 | Const. Ref. | Catalog Number | Const. Ref. | AC | DC |
| | | | Air-Inert Gas | Water ⑤ | Lt. Oil @ 300 SSU | Air-Inert Gas | Water ⑤ | Lt. Oil @ 300 SSU | | | | | | | | |
| UNIVERSAL OPERATION (Pressure at any port) | | | | | | | | | | | | | | | | |
| 1/8 | 3/64 | 0.06 | 175 | 175 | 175 | 125 | 125 | 125 | 140 | 120 | 8320G130 ① | 1 | 8320G140 ① | 1 | 9.1F | 10.6F |
| 1/8 | 1/16 | 0.09 | 100 | 100 | 100 | 65 | 65 | 65 | 180 | 120 | 8320G001 | 1 | 8320G041 ③ | 1 | 9.1F | 10.6F |
| 1/8 | 1/16 | 0.09 | 175 | 175 | 175 | 125 | 125 | 125 | 200 | 150 | 8320G212 | 4 | 8320G221 ④⑥ | 4 | 17.1/F | 22.6/F |
| 1/8 | 3/32 | 0.12 | 50 | 50 | 50 | 50 | 50 | 50 | 180 | 120 | 8320G083 | 1 | 8320G087 ③ | 1 | 6.1/F | 10.6/F |
| 1/8 | 3/32 | 0.12 | 100 | 100 | 100 | 60 | 60 | 60 | 200 | 150 | 8320G213 | 4 | 8320G222 ④ | 4 | 17.1/F | 11.6/F |
| 1/8 | 1/8 | 0.21 | 30 | 30 | 30 | 20 | 20 | 20 | 180 | 120 | 8320G003 | 1 | 8320G043 ③ | 1 | 9.1/F | 10.6/F |
| 1/8 | 1/8 | 0.21 | 50 | 50 | 50 | 25 | 25 | 25 | 200 | 150 | 8320G214 | 4 | 8320G223 ④ | 4 | 17.1/F | 11.6/F |
| 1/4 | 1/16 | 0.09 | 125 | 130 | 130 | 75 | 75 | 75 | 200 | 150 | 8320G172 | 2 | - | - | 10.1/F | 11.6/F |
| 1/4 | 1/16 | 0.09 | 175 | 175 | 175 | 125 | 125 | 125 | 200 | 150 | - | - | 8320G230 ④⑥ | 3 | 17.1/F | 22.6/F |
| 1/4 | 3/32 | 0.12 | 100 | 100 | 100 | 60 | 60 | 60 | 200 | 150 | 8320G174 | 2 | 8320G200 ③④⑥ | 3 | 17.1/F | 11.6/F |
| 1/4 | 1/8 | 0.25 | 50 | 50 | 50 | 25 | 25 | 25 | 200 | 150 | 8320G176 ⑥ | 2 | 8320G201 ③④⑥ | 3 | 17.1/F | 11.6/F |
| 1/4 | 11/64 | 0.35 | 20 | 20 | 20 | 12 | 12 | 12 | 200 | 150 | 8320G178 | 2 | - | - | 10.1/F | 11.6/F |
| NORMALLY CLOSED (Closed when de-energized) – PFD_{AVG} = 6.81 x 10⁻⁴ | | | | | | | | | | | | | | | | |
| 1/8 | 3/64 | 0.06 | 200 | 200 | 200 | 200 | 200 | 200 | 180 | 120 | 8320G132 | 1 | 8320G142 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1/16 | 0.09 | 150 | 125 | 125 | 125 | 125 | 125 | 180 | 120 | 8320G013 | 1 | 8320G045 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1/16 | 0.09 | 210 | 225 | 225 | 160 | 160 | 160 | 200 | 150 | 8320G215 | 4 | 8320G224 ④ | 4 | 17.1/F | 11.6/F |
| 1/8 | 3/32 | 0.12 | 100 | 100 | 100 | 100 | 100 | 100 | 180 | 120 | 8320G015 | 1 | 8320G047 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 3/32 | 0.12 | 150 | 150 | 150 | 115 | 115 | 115 | 200 | 150 | 8320G216 | 4 | 8320G225 ④ | 4 | 10.1/F | 11.6/F |
| 1/8 | 1/8 | 0.21 | 40 | 40 | 40 | 40 | 40 | 40 | 180 | 120 | 8320G017 | 1 | 8320G049 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1/8 | 0.21 | 85 | 85 | 85 | 60 | 60 | 60 | 200 | 150 | 8320G217 | 4 | 8320G226 ④ | 4 | 10.1/F | 11.6/F |
| 1/4 | 1/16 | 0.09 | 210 | 225 | 225 | 160 | 160 | 160 | 200 | 150 | 8320G182 ⑥ | 2 | 8320G231 ④ | 3 | 17.1/F | 11.6/F |
| 1/4 | 3/32 | 0.12 | 150 | 150 | 150 | 115 | 115 | 115 | 200 | 150 | 8320G184 | 2 | 8320G202 ③④⑥ | 3 | 10.1/F | 11.6/F |
| 1/4 | 1/8 | 0.25 | 85 | 85 | 85 | 60 | 60 | 60 | 200 | 150 | 8320G186 | 2 | 8320G203 ③④⑥ | 3 | 10.1/F | 11.6/F |
| 1/4 | 11/64 | 0.35 | 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 | 0.06 | 200 | 200 | 200 | 200 | 200 | 200 | 180 | 120 | 8320G136 | 1 | 8320G146 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1/16 | 0.09 | 150 | 125 | 125 | 125 | 125 | 125 | 180 | 120 | 8320G027 | 1 | 8320G051 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1/16 | 0.09 | 235 | 250 | 250 | 160 | 160 | 160 | 200 | 150 | 8320G218 | 4 | 8320G227 ④ | 4 | 17.1/F | 11.6/F |
| 1/8 | 3/32 | 0.12 | 100 | 100 | 100 | 100 | 100 | 100 | 180 | 120 | 8320G029 | 1 | 8320G053 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 3/32 | 0.12 | 150 | 140 | 140 | 100 | 100 | 100 | 200 | 150 | 8320G219 | 4 | 8320G228 ④ | 4 | 10.1/F | 11.6/F |
| 1/8 | 1/8 | 0.21 | 40 | 40 | 40 | 40 | 40 | 40 | 180 | 120 | 8320G031 | 1 | 8320G055 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1/8 | 0.21 | 70 | 70 | 70 | 55 | 55 | 55 | 200 | 150 | 8320G220 | 4 | 8320G229 ④ | 4 | 10.1/F | 11.6/F |
| 1/4 | 1/16 | 0.09 | 235 | 250 | 250 | 160 | 160 | 160 | 200 | 150 | 8320G192 ⑥ | 2 | 8320G232 ④ | 3 | 17.1/F | 11.6/F |
| 1/4 | 3/32 | 0.12 | 150 | 140 | 140 | 100 | 100 | 100 | 200 | 150 | 8320G194 | 2 | 8320G204 ③④⑥ | 3 | 10.1/F | 11.6/F |
| 1/4 | 1/8 | 0.25 | 70 | 70 | 70 | 55 | 55 | 55 | 200 | 150 | 8320G196 | 2 | 8320G205 ③④ | 3 | 10.1/F | 11.6/F |
| 1/4 | 11/64 | 0.35 | 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.
 ④ Constructions standard rated -40°F (-40°C) ambient temperature. EFX prefix and TPL # not required.
 ⑤ Water rating, CSA certified up to 232 psi.
 ⑥ ATEX/IECEx certified with prefix "EV".

Specifications (Metric units)

| Pipe Size (in) | Orifice Size (mm) | Kv Flow Factor (m ³ /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 | Const. Ref. | Catalog Number | Const. Ref. | AC | DC |
| | | | Air-Inert Gas | Water ^⑤ | Lt. Oil @ 300 SSU | Air-Inert Gas | Water ^⑤ | Lt. Oil @ 300 SSU | | | | | | | | |
| UNIVERSAL OPERATION (Pressure at any port) | | | | | | | | | | | | | | | | |
| 1/8 | 1.2 | 0.05 | 12 | 12 | 12 | 9 | 9 | 9 | 60 | 49 | 8320G130 ① | 1 | 8320G140 ① | 1 | 9.1F | 10.6F |
| 1/8 | 1.6 | 0.08 | 7 | 7 | 7 | 4 | 4 | 4 | 82 | 49 | 8320G001 | 1 | 8320G041 ③ | 1 | 9.1F | 10.6F |
| 1/8 | 1.6 | 0.08 | 12 | 12 | 12 | 9 | 9 | 9 | 93 | 66 | 8320G212 | 4 | 8320G221 ④⑥ | 4 | 17.1/F | 22.6/F |
| 1/8 | 2.4 | 0.10 | 3 | 3 | 3 | 3 | 3 | 3 | 82 | 49 | 8320G083 | 1 | 8320G087 ③ | 1 | 6.1/F | 10.6/F |
| 1/8 | 2.4 | 0.10 | 7 | 7 | 7 | 4 | 4 | 4 | 93 | 66 | 8320G213 | 4 | 8320G222 ④ | 4 | 17.1/F | 11.6/F |
| 1/8 | 3.2 | 0.18 | 2 | 2 | 2 | 1 | 1 | 1 | 82 | 49 | 8320G003 | 1 | 8320G043 ③ | 1 | 9.1/F | 10.6/F |
| 1/8 | 3.2 | 0.18 | 3 | 3 | 3 | 2 | 2 | 2 | 93 | 66 | 8320G214 | 4 | 8320G223 ④ | 4 | 17.1/F | 11.6/F |
| 1/4 | 1.6 | 0.08 | 9 | 9 | 9 | 5 | 5 | 5 | 93 | 66 | 8320G172 | 2 | - | - | 10.1/F | 11.6/F |
| 1/4 | 1.6 | 0.08 | 12 | 12 | 12 | 9 | 9 | 9 | 93 | 66 | - | - | 8320G230 ④⑥ | 3 | 17.1/F | 22.6/F |
| 1/4 | 2.4 | 0.10 | 7 | 7 | 7 | 4 | 4 | 4 | 93 | 66 | 8320G174 | 2 | 8320G200 ③④⑥ | 3 | 17.1/F | 11.6/F |
| 1/4 | 3.2 | 0.21 | 3 | 3 | 3 | 2 | 2 | 2 | 93 | 66 | 8320G176 ⑥ | 2 | 8320G201 ③④⑥ | 3 | 17.1/F | 11.6/F |
| 1/4 | 4.4 | 0.30 | 1 | 1 | 1 | 1 | 1 | 1 | 93 | 66 | 8320G178 | 2 | - | - | 10.1/F | 11.6/F |
| NORMALLY CLOSED (Closed when de-energized) – PFD_{AVG} = 6.81 x 10⁻⁴ | | | | | | | | | | | | | | | | |
| 1/8 | 1.2 | 0.05 | 14 | 14 | 14 | 14 | 14 | 14 | 82 | 49 | 8320G132 | 1 | 8320G142 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1.6 | 0.08 | 10 | 9 | 9 | 9 | 9 | 9 | 82 | 49 | 8320G013 | 1 | 8320G045 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1.6 | 0.08 | 14 | 15 | 15 | 11 | 11 | 11 | 93 | 66 | 8320G215 | 4 | 8320G224 ④ | 4 | 17.1/F | 11.6/F |
| 1/8 | 2.4 | 0.10 | 7 | 7 | 7 | 7 | 7 | 7 | 82 | 49 | 8320G015 | 1 | 8320G047 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 2.4 | 0.10 | 10 | 10 | 10 | 8 | 8 | 8 | 93 | 66 | 8320G216 | 4 | 8320G225 ④ | 4 | 10.1/F | 11.6/F |
| 1/8 | 3.2 | 0.18 | 3 | 3 | 3 | 3 | 3 | 3 | 82 | 49 | 8320G017 | 1 | 8320G049 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 3.2 | 0.18 | 6 | 6 | 6 | 4 | 4 | 4 | 93 | 66 | 8320G217 | 4 | 8320G226 ④ | 4 | 10.1/F | 11.6/F |
| 1/4 | 1.6 | 0.08 | 14 | 15 | 15 | 11 | 11 | 11 | 93 | 66 | 8320G182 ⑥ | 2 | 8320G231 ④ | 3 | 17.1/F | 11.6/F |
| 1/4 | 2.4 | 0.10 | 10 | 10 | 10 | 8 | 8 | 8 | 93 | 66 | 8320G184 | 2 | 8320G202 ③④⑥ | 3 | 10.1/F | 11.6/F |
| 1/4 | 3.2 | 0.21 | 6 | 6 | 6 | 4 | 4 | 4 | 93 | 66 | 8320G186 | 2 | 8320G203 ③④⑥ | 3 | 10.1/F | 11.6/F |
| 1/4 | 4.4 | 0.30 | 3 | 3 | 3 | 2 | 2 | 2 | 93 | 66 | 8320G188 | 2 | - | - | 10.1/F | 11.6/F |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | | | | |
| 1/8 | 1.2 | 0.05 | 14 | 14 | 14 | 14 | 14 | 14 | 82 | 49 | 8320G136 | 1 | 8320G146 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1.6 | 0.08 | 10 | 9 | 9 | 9 | 9 | 9 | 82 | 49 | 8320G027 | 1 | 8320G051 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 1.6 | 0.08 | 16 | 17 | 17 | 11 | 11 | 11 | 93 | 66 | 8320G218 | 4 | 8320G227 ④ | 4 | 17.1/F | 11.6/F |
| 1/8 | 2.4 | 0.10 | 7 | 7 | 7 | 7 | 7 | 7 | 82 | 49 | 8320G029 | 1 | 8320G053 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 2.4 | 0.10 | 10 | 10 | 10 | 7 | 7 | 7 | 93 | 66 | 8320G219 | 4 | 8320G228 ④ | 4 | 10.1/F | 11.6/F |
| 1/8 | 3.2 | 0.18 | 3 | 3 | 3 | 3 | 3 | 3 | 82 | 49 | 8320G031 | 1 | 8320G055 ③ | 1 | 6.1F | 10.6/F |
| 1/8 | 3.2 | 0.18 | 5 | 5 | 5 | 4 | 4 | 4 | 93 | 66 | 8320G220 | 4 | 8320G229 ④ | 4 | 10.1/F | 11.6/F |
| 1/4 | 1.6 | 0.08 | 16 | 17 | 17 | 11 | 11 | 11 | 93 | 66 | 8320G192 ⑥ | 2 | 8320G232 ④ | 3 | 17.1/F | 11.6/F |
| 1/4 | 2.4 | 0.10 | 10 | 10 | 10 | 7 | 7 | 7 | 93 | 66 | 8320G194 | 2 | 8320G204 ③④⑥ | 3 | 10.1/F | 11.6/F |
| 1/4 | 3.2 | 0.21 | 5 | 5 | 5 | 4 | 4 | 4 | 93 | 66 | 8320G196 | 2 | 8320G205 ③④ | 3 | 10.1/F | 11.6/F |
| 1/4 | 4.4 | 0.30 | 3 | 3 | 3 | 2 | 2 | 2 | 93 | 66 | 8320G198 | 2 | - | - | 10.1/F | 11.6/F |

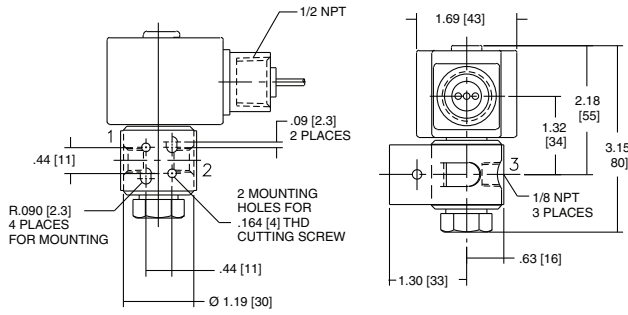
① Supplied with cast UR disc.
 ② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts.
 ③ Can be used for **dry** natural gas service with the EF prefix.
 ④ Constructions standard rated -40°F (-40°C) ambient temperature. EFX prefix and TPL # not required.
 ⑤ Water rating, CSA certified up to 16 bar.
 ⑥ ATEX/IECEx certified with prefix "EV".

3-WAY

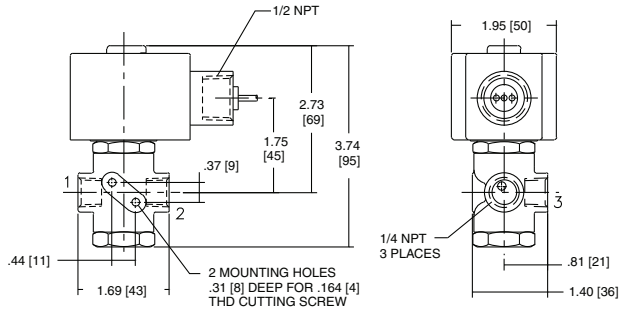


Dimensions: inches (mm)

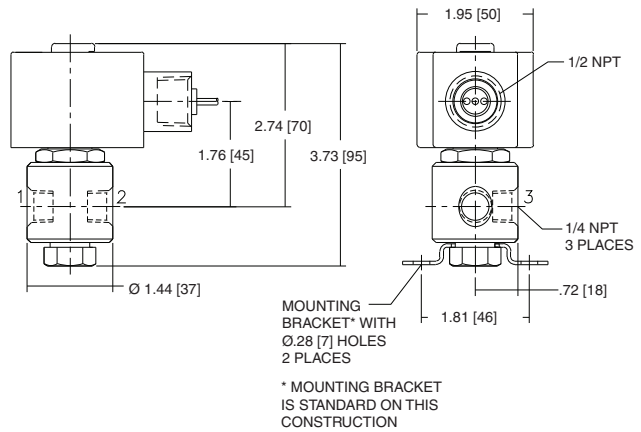
Const. Ref. 1



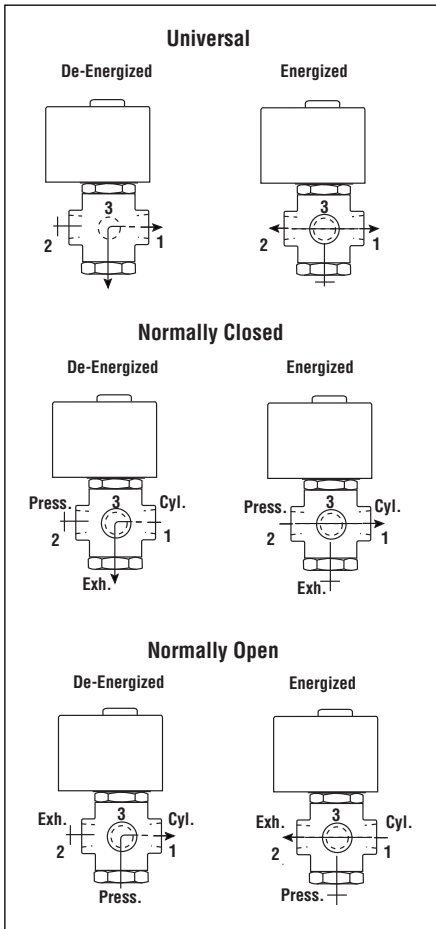
Const. Ref. 2



Const. Ref. 3



FLOW DIAGRAMS



Const. Ref. 4

