

Features

- Lightweight, low-cost valves for air service
- Ideal for low pressure applications
- Provides high flow, Cv up to 138 (Kv 118)
- Air and vacuum service

Construction

| Valve Parts in Contact with Fluids | |
|------------------------------------|--------------------------------------------|
| Body | Aluminum |
| Seals, Diaphragms, Disc | NBR |
| Disc-Holder | PA (10.1 and 11.6 watt Normally Open only) |
| Core Guide | POM |
| Core Tube | 305 Stainless Steel |
| Rider Rings | PTFE |
| Core and Plugnut | 430F Stainless Steel |
| Springs* | 302 Stainless Steel |
| Shading Coil | Copper |

* For 8040H006, 8040H007, 8040H008, spring material is 17-7 PH

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 | - | 6.1 | 16 | 40 | 238210 | - | 238214 | - |
| F | 11.6 | 10.1 | 25 | 70 | 238610 | 238710 | 238614 | 238714 |
| F | 15.8 | 15.4 | 27 | 160 | 99257 | 501695 | 99257 | 501696 |
| F | - | 28.2 | 50 | 385 | 206409 | - | 206409 | - |

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 available when required. (Note: 24 volt AC, 60 Hz not available with 28.2 watt coil)

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type 1.

Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; RedHat - Explosionproof and Raintight, Types 3, 7, and 9. (Except EF8215A40 and EF8215A90, which are suitable for Types 3 and 7 (C and D) only and have a T2B temperature rating code.)

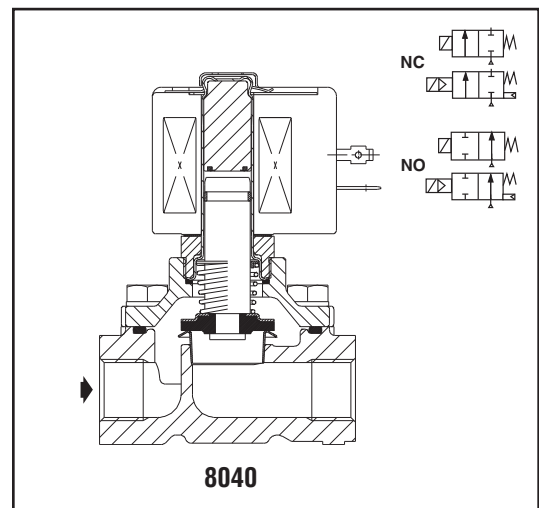
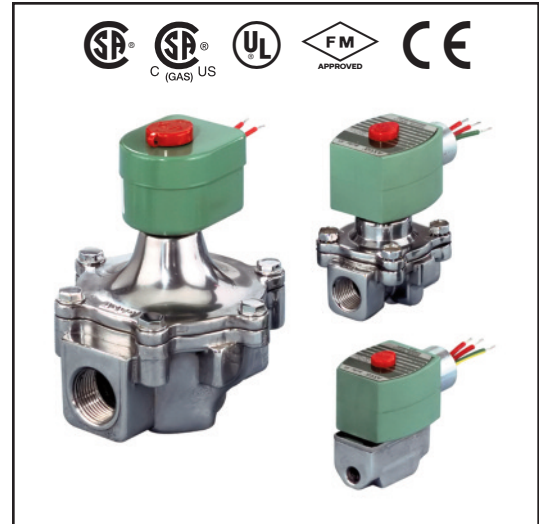
To order, add prefix "EF" to catalog number.

See *Optional Features Section* for other available options.

Nominal Ambient Temp. Ranges

| Series | AC | DC |
|--------|-----------------------------------|--------------------------------|
| | RedHat II/RedHat | RedHat II |
| 8040 | -40°F to 125°F (-40°C to 52°C) | - |
| 8215 | 32°F to 125°F (0°C to 52°C) | 32°F to 104°F (0°C to 40°C) |

Refer to Engineering Section for details.



Approvals:

CSA certified to:

8040 Series:

- 1) Standard C22.2 No. 139 "Electrically Operated Valves," File 10381.
- 2) Automatic Gas Valves Z21.21 (6.5) C/I, File 112872.

8215 Series Normally Closed:

- 1) Standard C22.2 No. 139 "Electrically Operated Valves," File 10381.
- 2) Automatic Gas Valves Z21.21 (6.5) C/I, File 112872. (Excludes 8215G001, -002, -003)

8215 Series Normally Open:

- 1) Standard C22.2 No. 139 "Electrically Operated Valves," File 10381.
 - 2) Automatic Gas Valves Z21.21 (6.5), File 112872.
- UL listed, as indicated. FM approved (Normally Closed only, except Catalog Numbers 8215A090, 8215A040 8215G001, 8215G002, and 8215G003). RedHat II meets applicable CE directives.

Specifications (English units)

| Pipe Size (in) | Orifice Size (in) | Cv Flow Factor | Gas Capacity Btu/hr ⑥ | Operating Pressure Differential (psi) | | | Max. Fluid Temp. °F | | Aluminum Body Catalog Number | Const. Ref. | | UL ⑤ Listing | Watt Rating/ Class of Coil Insulation ② | |
|---------------------------------------------------|-------------------|----------------|-----------------------|---------------------------------------|--------------|--------------|---------------------|-----|------------------------------|-------------|----|--------------|-----------------------------------------|--------|
| | | | | Min. | Max. AC | Max. DC | AC | DC | | AC | DC | | AC | DC |
| | | | | | Air-Fuel Gas | Air-Fuel Gas | | | | | | | | |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | | |
| 1/8 | 5/16 | 1.0 | 53,700 | 0 | 15 | - | 125 | - | 8040H006 ⑩ | 11 | | ○ | 6.1/F | - |
| 1/4 | 5/16 | 1.1 | 59,000 | 0 | 15 | - | 125 | - | 8040H007 ⑩ | 11 | | ○ | 6.1/F | - |
| 3/8 | 5/16 | 1.2 | 64,400 | 0 | 15 | - | 125 | - | 8040H008 ⑩ | 11 | | ○ | 6.1/F | - |
| 3/8 | 3/4 | 3.4 | 183,000 | 0 | 50 | 25 | 125 | 104 | 8215G010 ⑩ | 2 | | ○ | 10.1/F | 11.6/F |
| 3/8 | 3/4 | 3.5 | - | 5 | 125 | 125 | 125 | 104 | 8215G001 ① | 1 | | ○ | 6.1/F | 11.6/F |
| 1/2 | 3/4 | 5.4 | 291,000 | 0 | 2 | - | 125 | - | 8040G022 ⑩ | 13A | | ○ | 10.1/F | - |
| 1/2 | 3/4 | 4.4 | 238,500 | 0 | 50 | 25 | 125 | 104 | 8215G020 ⑩ | 2 | | ○ | 10.1/F | 11.6/F |
| 1/2 | 3/4 | 4.8 | - | 5 | 125 | 125 | 125 | 104 | 8215G002 ① | 1 | | ○ | 6.1/F | 11.6/F |
| 3/4 | 3/4 | 9.5 | 512,000 | 0 | 2 | - | 125 | - | 8040G023 ⑩ | 13B | | ○ | 10.1/F | - |
| 3/4 | 3/4 | 5.1 | 247,500 | 0 | 50 | 25 | 125 | 104 | 8215G030 ⑩ | 4 | | ○ | 10.1/F | 11.6/F |
| 3/4 | 3/4 | 5.1 | - | 5 | 125 | 125 | 125 | 104 | 8215G003 ① | 3 | | ○ | 6.1/F | 11.6/F |
| 1 | 1 5/8 | 21 | 1,119,000 | 0 | 25 | - | 125 | - | 8215B050 ③ | 6 | | ○ | 15.4/F | - |
| 1 | 1 5/8 | 21 | 1,119,000 | 0 | - | 25 | - | 104 | 8215G050 ③⑧⑨ | 16 | | ○ | - | 15.8/F |
| 1 1/4 | 1 5/8 | 32 | 1,730,000 | 0 | 25 | - | 125 | - | 8215B060 ③ | 6 | | ○ | 15.4/F | - |
| 1 1/4 | 1 5/8 | 32 | 1,730,000 | 0 | - | 25 | - | 104 | 8215G060 ③⑧⑨ | 16 | | ○ | - | 15.8/F |
| 1 1/2 | 1 5/8 | 35 | 1,900,000 | 0 | 25 | - | 125 | - | 8215B070 ③ | 6 | | ○ | 15.4/F | - |
| 1 1/2 | 1 5/8 | 35 | 1,900,000 | 0 | - | 25 | - | 104 | 8215G070 ③⑧⑨ | 16 | | ○ | - | 15.8/F |
| 2 | 2 3/32 | 60 | 3,251,000 | 0 | 25 | - | 125 | - | 8215B080 ③ | 7 | | ○ | 15.4/F | - |
| 2 | 2 3/32 | 60 | 3,251,000 | 0 | - | 15 | - | 104 | 8215G080 ③⑧⑨ | 17 | | ○ | - | 15.8/F |
| 2 1/2 | 3 | 117 | 5,821,000 | 0 | 5 | - | 125 | - | 8215A090 ⑦ | 8 | | ○ | 28.2/F | - |
| 3 | 3 | 138 | 7,430,000 | 0 | 5 | - | 125 | - | 8215A040 ⑦ | 8 | | ○ | 28.2/F | - |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | | |
| 3/8 | 3/4 | 3.5 | 191,000 | 0 | 125 | 125 | 125 | 104 | 8215G013 | 9 | | ● | 10.1/F | 11.6/F |
| 1/2 | 3/4 | 4.0 | 210,300 | 0 | 125 | 125 | 125 | 104 | 8215G023 | 9 | | ● | 10.1/F | 11.6/F |
| 3/4 | 3/4 | 4.7 | 252,000 | 0 | 125 | 125 | 125 | 104 | 8215G033 | 10 | | ● | 10.1/F | 11.6/F |
| 1 | 1 5/8 | 22 | 1,191,750 | 0 | 25 | 15 | 125 | 104 | 8215C053 | 12 | - | ● | 15.4/F | - |
| 1 | 1 5/8 | 22 | 1,191,750 | 0 | 25 | 15 | 125 | 104 | 8215G053 ⑧⑨ | - | 18 | ● | - | 15.8/F |
| 1 1/4 | 1 5/8 | 33 | 1,793,250 | 0 | 25 | 15 | 125 | 104 | 8215C063 | 12 | - | ● | 15.4/F | - |
| 1 1/4 | 1 5/8 | 33 | 1,793,250 | 0 | 25 | 15 | 125 | 104 | 8215G063 ⑧⑨ | - | 18 | ● | - | 15.8/F |
| 1 1/2 | 1 5/8 | 37 | 1,988,250 | 0 | 25 | 15 | 125 | 104 | 8215C073 | 13 | - | ● | 15.4/F | - |
| 1 1/2 | 1 5/8 | 37 | 1,988,250 | 0 | 25 | 15 | 125 | 104 | 8215G073 ⑧⑨ | - | 18 | ● | - | 15.8/F |
| 2 | 2 3/32 | 58 | 3,100,000 | 0 | 25 | 15 | 125 | 104 | 8215C083 | 14 | - | ● | 15.4/F | - |
| 2 | 2 3/32 | 58 | 3,100,000 | 0 | 25 | 15 | 125 | 104 | 8215G083 ⑧⑨ | - | 19 | ● | - | 15.8/F |
| 2 1/2 | 3 | 113 | 6,060,000 | 0 | 5 | - | 125 | - | 8215B093 ④⑦ | 15 | | ● | 28.2/F | - |

① Do not use for Fuel Gas.

② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.

③ FM Approved Process Control Valves. See Engineering Section (Approvals) for details.

④ Type I enclosure only.

⑤ ○ = Safety Shutoff Valve; ● = General Purpose Valve. Refer to Engineering Section (Approvals) for details.

⑥ 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

⑦ Not available with 24 volt, 60 Hz coil.

⑧ Coil options EF, HT, and HC only.

⑨ Not available with 6 VDC coil. ⑩ FM Approved Safety Shutoff Valves. Refer to Engineering Section (Approvals) for details

Specifications (Metric units)

| Pipe Size (in) | Orifice Size (mm) | Kv Flow Factor (m3/h) | Gas Capacity Btu/hr ⑥ | Operating Pressure Differential (bar) | | | Max. Fluid Temp. °C | | Aluminum Body Catalog Number | Const. Ref. | | UL ⑤ Listing | Watt Rating/ Class of Coil Insulation ② | |
|---------------------------------------------------|-------------------|-----------------------|-----------------------|---------------------------------------|--------------|--------------|---------------------|----|------------------------------|-------------|----|--------------|-----------------------------------------|----|
| | | | | Min. | Max. AC | Max. DC | AC | DC | | AC | DC | | AC | DC |
| | | | | | Air-Fuel Gas | Air-Fuel Gas | | | | | | | | |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | | |
| 1/8 | 7.9 | .86 | 53,700 | 0 | 1.0 | - | 52 | - | 8040H006 ⑩ | 11 | ○ | 6.1/F | - | |
| 1/4 | 7.9 | .94 | 59,000 | 0 | 1.0 | - | 52 | - | 8040H007 ⑩ | 11 | ○ | 6.1/F | - | |
| 3/8 | 7.9 | 1.0 | 64,400 | 0 | 1.0 | - | 52 | - | 8040H008 ⑩ | 11 | ○ | 6.1/F | - | |
| 3/8 | 19 | 2.9 | 183,000 | 0 | 3.4 | 1.7 | 52 | 40 | 8215G010 ⑩ | 2 | ○ | 10.1/F | 11.6/F | |
| 3/8 | 19 | 3.0 | - | 0.3 | 8.6 | 8.6 | 52 | 40 | 8215G001 ① | 1 | ○ | 6.1/F | 11.6/F | |
| 1/2 | 19 | 4.6 | 291,000 | 0 | 0.1 | - | 52 | - | 8040G022 ⑩ | 13A | ○ | 10.1/F | - | |
| 1/2 | 19 | 3.8 | 238,500 | 0 | 3.4 | 1.7 | 52 | 40 | 8215G020 ⑩ | 2 | ○ | 10.1/F | 11.6/F | |
| 1/2 | 19 | 4.1 | - | 0.3 | 8.6 | 8.6 | 52 | 40 | 8215G002 ① | 1 | ○ | 6.1/F | 11.6/F | |
| 3/4 | 19 | 8.1 | 449,000 | 0 | 0.1 | - | 52 | - | 8040G023 ⑩ | 13B | ○ | 10.1/F | - | |
| 3/4 | 19 | 4.4 | 247,500 | 0 | 3.4 | 1.7 | 52 | 40 | 8215G030 ⑩ | 4 | ○ | 10.1/F | 11.6/F | |
| 3/4 | 19 | 4.4 | - | 0.3 | 8.6 | 8.6 | 52 | 40 | 8215G003 ① | 3 | ○ | 6.1/F | 11.6/F | |
| 1 | 41 | 18 | 1,119,000 | 0 | 1.7 | - | 52 | - | 8215B050 ③ | 6 | ○ | 15.4/F | - | |
| 1 | 41 | 18 | 1,119,000 | 0 | - | 1.7 | - | 40 | 8215G050 ③⑧⑨ | 16 | ○ | - | 15.8/F | |
| 1 1/4 | 41 | 27 | 1,730,000 | 0 | 1.7 | - | 52 | - | 8215B060 ③ | 6 | ○ | 15.4/F | - | |
| 1 1/4 | 41 | 27 | 1,730,000 | 0 | - | 1.7 | - | 40 | 8215G060 ③⑧⑨ | 16 | ○ | - | 15.8/F | |
| 1 1/2 | 41 | 30 | 1,900,000 | 0 | 1.7 | - | 52 | - | 8215B070 ③ | 6 | ○ | 15.4/F | - | |
| 1 1/2 | 41 | 30 | 1,900,000 | 0 | - | 1.7 | - | 40 | 8215G070 ③⑧⑨ | 16 | ○ | - | 15.8/F | |
| 2 | 53 | 51 | 3,251,000 | 0 | 1.7 | - | 52 | - | 8215B080 ③ | 7 | ○ | 15.4/F | - | |
| 2 | 53 | 51 | 3,251,000 | 0 | - | 1.0 | - | 40 | 8215G080 ③⑧⑨ | 17 | ○ | - | 15.8/F | |
| 2 1/2 | 76 | 100 | 5,821,000 | 0 | 0.3 | - | 52 | - | 8215A090 ⑦ | 8 | ○ | 28.2/F | - | |
| 3 | 76 | 118 | 7,430,000 | 0 | 0.3 | - | 52 | - | 8215A040 ⑦ | 8 | ○ | 28.2/F | - | |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | | |
| 3/8 | 19 | 3.0 | 191,000 | 0 | 8.6 | 8.6 | 52 | 40 | 8215G013 | 9 | ● | 10.1/F | 11.6/F | |
| 1/2 | 19 | 3.4 | 210,300 | 0 | 8.6 | 8.6 | 52 | 40 | 8215G023 | 9 | ● | 10.1/F | 11.6/F | |
| 3/4 | 19 | 4.0 | 252,000 | 0 | 8.6 | 8.6 | 52 | 40 | 8215G033 | 10 | ● | 10.1/F | 11.6/F | |
| 1 | 41 | 19 | 1,191,750 | 0 | 1.7 | 1.0 | 52 | 40 | 8215C053 | 12 | - | ● | 15.4/F | |
| 1 | 41 | 19 | 1,191,750 | 0 | 1.7 | 1.0 | 52 | 40 | 8215G053 ⑧⑨ | - | 18 | ● | - | |
| 1 1/4 | 41 | 28 | 1,793,250 | 0 | 1.7 | 1.0 | 52 | 40 | 8215C063 | 12 | - | ● | 15.4/F | |
| 1 1/4 | 41 | 28 | 1,793,250 | 0 | 1.7 | 1.0 | 52 | 40 | 8215G063 ⑧⑨ | - | 18 | ● | - | |
| 1 1/2 | 41 | 32 | 1,988,250 | 0 | 1.7 | 1.0 | 52 | 40 | 8215C073 | 13 | - | ● | 15.4/F | |
| 1 1/2 | 41 | 32 | 1,988,250 | 0 | 1.7 | 1.0 | 52 | 40 | 8215G073 ⑧⑨ | - | 18 | ● | - | |
| 2 | 53 | 50 | 3,100,000 | 0 | 1.7 | 1.0 | 52 | 40 | 8215C083 | 14 | - | ● | 15.4/F | |
| 2 | 53 | 50 | 3,100,000 | 0 | 1.7 | 1.0 | 52 | 40 | 8215G083 ⑧⑨ | - | 19 | ● | - | |
| 2 1/2 | 76 | 97 | 6,060,000 | 0 | 0.3 | - | 52 | - | 8215B093 ④⑦ | 15 | ● | 28.2/F | - | |

① Do not use for Fuel Gas.

② On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.

③ FM Approved Process Control Valves. See Engineering Section (Approvals) for details.

④ Type 1 enclosure only.

⑤ ○ = Safety Shutoff Valve; ● = General Purpose Valve. Refer to Engineering Section (Approvals) for details.

⑥ 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.

⑦ Not available with 24 volt, 60 Hz coil.

⑧ Coil options EF, HT, and HC only.

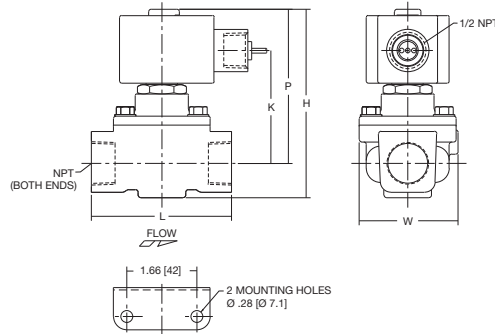
⑨ Not available with 6 VDC coil. ⑩ FM Approved Safety Shutoff Valves. Refer to Engineering Section (Approvals) for details

Dimensions: inches (mm)

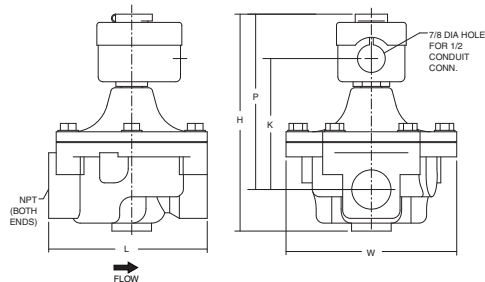
| Const. Ref. | | H | K | L | P | W |
|-------------|-----|-------|------|------|------|------|
| 1 | in | 3.42 | 2.00 | 2.75 | 2.87 | 2.46 |
| | mm | 87 | 51 | 70 | 73 | 63 |
| 2 | ins | 4.02 | 2.49 | 2.75 | 3.46 | 2.46 |
| | mm | 102 | 63 | 70 | 88 | 63 |
| 3 | in | 3.87 | 2.19 | 3.31 | 3.05 | 2.33 |
| | mm | 98 | 56 | 84 | 77 | 59 |
| 4 | in | 4.46 | 2.68 | 3.31 | 3.64 | 2.33 |
| | mm | 113 | 68 | 84 | 92 | 59 |
| 6 ① | in | 6.84 | 4.25 | 5.00 | 5.59 | 5.38 |
| | mm | 174 | 108 | 127 | 142 | 137 |
| 7 ① | in | 7.47 | 4.53 | 6.09 | 5.94 | 6.31 |
| | mm | 190 | 115 | 155 | 151 | 160 |
| 8 ① | in | 10.25 | 5.75 | 7.79 | 7.91 | 7.94 |
| | mm | 260 | 146 | 198 | 201 | 202 |
| 9 | in | 4.42 | 2.72 | 2.75 | 3.86 | 2.36 |
| | mm | 112 | 69 | 70 | 98 | 60 |
| 10 | in | 4.86 | 2.72 | 3.31 | 4.04 | 2.36 |
| | mm | 123 | 69 | 84 | 103 | 60 |
| 11 | in | 2.74 | 1.44 | 2.00 | 2.30 | 1.69 |
| | mm | 69 | 36 | 51 | 58 | 43 |
| 12 | in | 6.84 | 2.22 | 5.00 | 3.63 | 5.38 |
| | mm | 174 | 56 | 127 | 92 | 137 |
| 13 | in | 6.84 | 2.16 | 5.00 | 3.56 | 5.38 |
| | mm | 174 | 55 | 127 | 90 | 137 |
| 13A | in | 4.05 | 2.46 | 2.75 | 3.44 | 2.42 |
| | mm | 103 | 63 | 70 | 87 | 62 |
| 13B | in | 4.49 | 2.65 | 3.31 | 3.63 | 2.39 |
| | mm | 114 | 67 | 84 | 92 | 61 |
| 14 ② | in | 7.44 | 2.41 | 6.09 | 3.81 | 6.31 |
| | mm | 189 | 61 | 155 | 97 | 160 |
| 15 ② | in | 10.25 | 3.07 | 7.80 | 5.22 | 7.94 |
| | mm | 260 | 78 | 198 | 133 | 202 |
| 16 | in | 6.7 | 4.4 | 5.00 | 5.5 | 5.38 |
| | mm | 171 | 111 | 127 | 139 | 137 |
| 17 | in | 7.3 | 4.7 | 6.1 | 5.8 | 6.31 |
| | mm | 186 | 120 | 155 | 148 | 160 |
| 18 ② | in | 6.7 | 2.4 | 4.8 | 3.5 | 5.4 |
| | mm | 171 | 60 | 121 | 89 | 137 |
| 19 ② | in | 7.3 | 2.6 | 6.1 | 3.7 | 6.3 |
| | mm | 187 | 66 | 155 | 95 | 161 |

IMPORTANT: Valves may be mounted in any position except all DC constructions and those marked ①, which must be mounted with the solenoid vertical and upright. Constructions marked ② must be mounted with the solenoid vertical and upright or horizontal only.

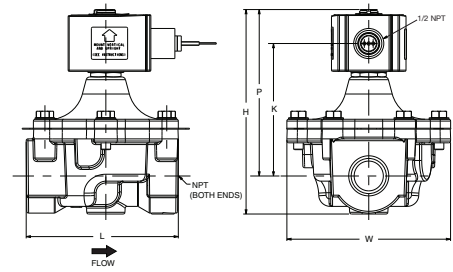
Const. Ref. 1-4, 9, 10, 13A, 13B



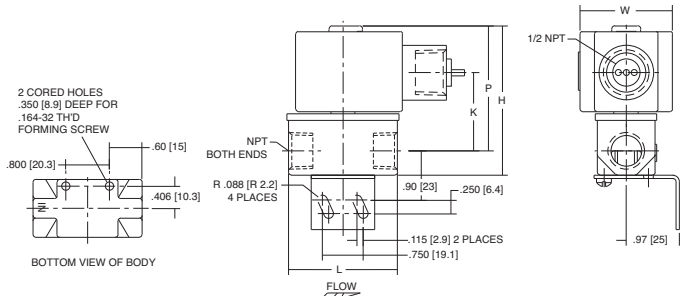
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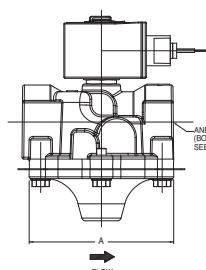
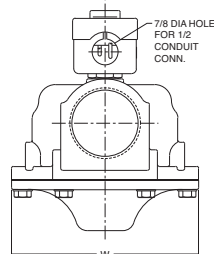
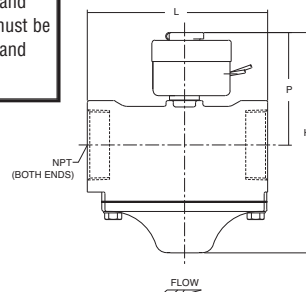
Const. Ref. 16, 17



Const. Ref. 11



Const. Ref. 12-15



Const. Ref. 18-19

