

Features

- Range of products for vacuum service applications on vacuum breaking and roughing pumps
- Zero Minimum Operating Pressure Differential
- Elastomers de-gassed and cleaned ("VH" suffix)
- Mountable in any position, except as noted

Application

| Conditions | Pressure |
|-------------------|---|
| Low (and Rough) | 760 to 25 Torr (or 29" Hg) |
| Medium (and Fine) | 25 to 10 ⁻³ Torr |
| High | 10 ⁻³ to 10 ⁻⁶ Torr |
| Very High | 10 ⁻⁶ to 10 ⁻⁹ Torr |
| Ultra High | 10 ⁻⁹ Torr and Below |

Electrical

| Standard Coil and Class of Insulation | Watt Rating and Power Consumption | | | Spare Coil Part No. | |
|---------------------------------------|-----------------------------------|------------|-----------|---------------------|----------------|
| | AC | | | General Purpose | Explosionproof |
| | Watts | VA Holding | VA Inrush | AC | AC |
| F | 6.1 | 16 | 30 | 238210 | 238214 |
| F | 10.1 | 25 | 70 | 238610 | 238614 |
| F | 16.1 | 35 | 180 | 272610 | 272614 |
| F | 17.1 | 40 | 93 | 238610 | 238614 |

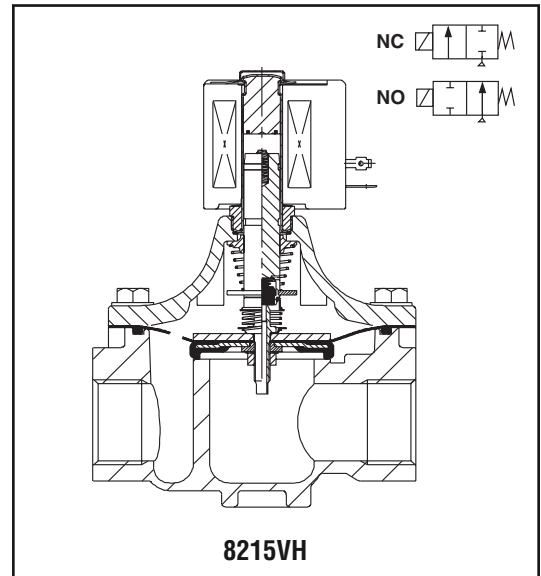
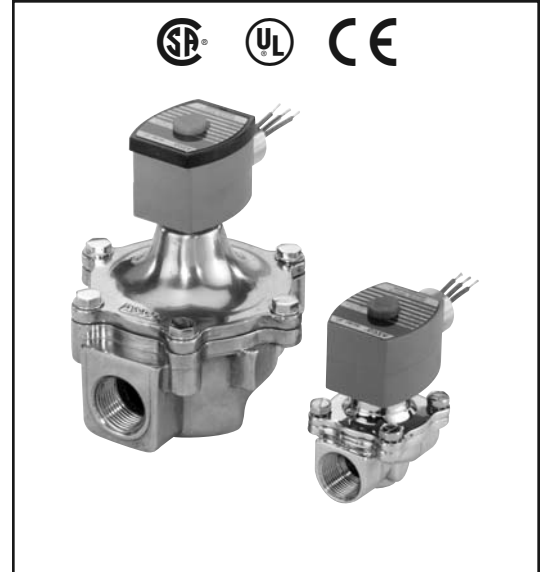
Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). Must be specified when ordering. Other voltages, including DC, available when required.

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 catalog number.)

See *Optional Features Section* for other available options.



Nominal Ambient Temp. Ranges

32°F to 125°F (0°C to 52°C)

Refer to *Engineering Section* for details.

Approvals

CSA certified. Meets applicable CE directives.

Refer to *Engineering Section* for details.

SPECIAL SERVICE VALVES

Specifications (English units)

| Pipe Size (ins.) | Orifice Size (ins.) | Cv Flow Factor | Operating Pressure Differential (psi) | | Body Material | Application Guide | | | | | Max. Fluid Temp. °F | Medium Vacuum to 10 ⁻³ Torr ③ | High Vacuum to 10 ⁻⁶ Torr ③ | Const. Ref. | Watt Rating/ Class of Coil Insulation ② |
|---|---------------------|----------------|---------------------------------------|------|---------------|-------------------|---------|----------|-------------------------|--------------------|---------------------|--|--|-------------|---|
| | | | Min. | Max. | | Electrical Check | Breaker | Roughing | Foreline or High Vacuum | Suction or Release | | | | | |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | | | |
| 1/4 | 9/32 | 0.96 | 0 | 15 | Brass | ● | ● | ● | ● | ● | 180 | 8262G090VM | 8262G090VH | 1 | 6.1/F |
| 3/8 | 3/8 | 1.8 | 0 | 15 | Brass | ● | ● | ● | ● | ● | 180 | 8030G013VM | 8030G013VH | 2 | 10.1/F |
| 1/2 | 7/16 | 2.8 | 0 | 15 | Brass | ● | ● | ● | ● | ● | 180 | 8030G017VM | 8030G017VH | 3 | 16.1/F |
| 3/4 | 3/4 | 5 | 0 | 4 | Brass | ● | - | - | - | - | 180 | 8030G043VM | 8030G043VH | 4 | 17.1/F |
| 3/4 | 3/4 | 5 | 0 | 15 | Brass | - | ● | - | - | ● | 180 | 8210G095VM | 8210G095VH | 5 | 10.1/F |
| 1 | 1 5/8 | 20.5 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G050VM ① | 8215G050VH ① | 8 | 16.1/F |
| 1 1/4 | 1 5/8 | 31.7 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G060VM ① | 8215G060VH ① | 8 | 16.1/F |
| 1 1/2 | 1 5/8 | 32.7 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G070VM ① | 8215G070VH ① | 9 | 16.1/F |
| 2 | 2 3/32 | 55 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G080VM ① | 8215G080VH ① | 10 | 16.1/F |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | | | |
| 3/8 | 5/8 | 3 | 0 | 15 | Brass | - | ● | - | - | ● | 180 | 8210G033VM | 8210G033VH | 6 | 10.1/F |
| 1/2 | 5/8 | 4 | 0 | 15 | Brass | - | ● | - | - | ● | 180 | 8210G034VM | 8210G034VH | 6 | 10.1/F |
| 3/4 | 3/4 | 5.5 | 0 | 15 | Brass | - | ● | - | - | ● | 180 | 8210G035VM | 8210G035VH | 7 | 10.1/F |
| 1 | 1 5/8 | 20.5 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G053VM ① | 8215G053VH ① | 11 | 16.1/F |
| 1 1/4 | 1 5/8 | 31.7 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G063VM ① | 8215G063VH ① | 11 | 16.1/F |
| 1 1/2 | 1 5/8 | 32.7 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G073VM ① | 8215G073VH ① | 12 | 16.1/F |
| 2 | 2 3/32 | 55 | 0 | 15 | Alum. | - | ● | - | - | ● | 125 | 8215G083VM ① | 8215G083VH ① | 13 | 16.1/F |

① Valves must be mounted with solenoid vertical and upright.
 ② On 50 hertz service, the rating for the 6.1/F solenoid is 8.1 watts.
 ③ For low vacuum applications to 29" Hg, use standard catalog valves with 0 psi minimum, 15+ psi maximum OPD (except 2" NPT).

Specifications (Metric units)

| Pipe Size (ins.) | Orifice Size (mm) | Kv Flow Factor (m3/h) | Operating Pressure Differential (bar) | | Body Material | Application Guide | | | | | Max. Fluid Temp. °C | Medium Vacuum to 10 ⁻³ Torr ③ | High Vacuum to 10 ⁻⁶ Torr ③ | Const. Ref. | Watt Rating/ Class of Coil Insulation ② |
|---|-------------------|-----------------------|---------------------------------------|------|---------------|-------------------|---------|----------|-------------------------|--------------------|---------------------|--|--|-------------|---|
| | | | Min. | Max. | | Electrical Check | Breaker | Roughing | Foreline or High Vacuum | Suction or Release | | | | | |
| NORMALLY CLOSED (Closed when de-energized) | | | | | | | | | | | | | | | |
| 1/4 | 7 | 0.82 | 0 | 1 | Brass | ● | ● | ● | ● | ● | 82 | 8262G090VM | 8262G090VH | 1 | 6.1/F |
| 3/8 | 10 | 1.54 | 0 | 1 | Brass | ● | ● | ● | ● | ● | 82 | 8030G013VM | 8030G013VH | 2 | 10.1/F |
| 1/2 | 11 | 2.40 | 0 | 1 | Brass | ● | ● | ● | ● | ● | 82 | 8030G017VM | 8030G017VH | 3 | 16.1/F |
| 3/4 | 19 | 4.29 | 0 | 0.3 | Brass | ● | - | - | - | - | 82 | 8030G043VM | 8030G043VH | 4 | 17.1/F |
| 3/4 | 19 | 4.29 | 0 | 1 | Brass | - | ● | - | - | ● | 82 | 8210G095VM | 8210G095VH | 5 | 10.1/F |
| 1 | 41 | 17.57 | 0 | 1 | Alum. | - | ● | - | - | ● | 52 | 8215G050VM ① | 8215G050VH ① | 8 | 16.1/F |
| 1 1/4 | 41 | 27.17 | 0 | 1 | Alum. | - | ● | - | - | ● | 52 | 8215G060VM ① | 8215G060VH ① | 8 | 16.1/F |
| 1 1/2 | 41 | 28.03 | 0 | 1 | Alum. | - | ● | - | - | ● | 52 | 8215G070VM ① | 8215G070VH ① | 9 | 16.1/F |
| 2 | 53 | 47.14 | 0 | 1 | Alum. | - | ● | - | - | ● | 52 | 8215G080VM ① | 8215G080VH ① | 10 | 16.1/F |
| NORMALLY OPEN (Open when de-energized) | | | | | | | | | | | | | | | |
| 3/8 | 16 | 2.57 | 0 | 1 | Brass | - | ● | - | - | ● | 82 | 8210G033VM | 8210G033VH | 6 | 10.1/F |
| 1/2 | 16 | 3.43 | 0 | 1 | Brass | - | ● | - | - | ● | 82 | 8210G034VM | 8210G034VH | 6 | 10.1/F |
| 3/4 | 19 | 4.71 | 0 | 1 | Brass | - | ● | - | - | ● | 82 | 8210G035VM | 8210G035VH | 7 | 10.1/F |
| 1 | 41 | 17.57 | 0 | 1 | Alum. | - | ● | - | - | ● | 82 | 8215G053VM ① | 8215G053VH ① | 11 | 16.1/F |
| 1 1/4 | 41 | 27.17 | 0 | 1 | Alum. | - | ● | - | - | ● | 52 | 8215G063VM ① | 8215G063VH ① | 11 | 16.1/F |
| 1 1/2 | 41 | 28.03 | 0 | 1 | Alum. | - | ● | - | - | ● | 52 | 8215G073VM ① | 8215G073VH ① | 12 | 16.1/F |
| 2 | 53 | 47.14 | 0 | 1 | Alum. | - | ● | - | - | ● | 52 | 8215G083VM ① | 8215G083VH ① | 13 | 16.1/F |

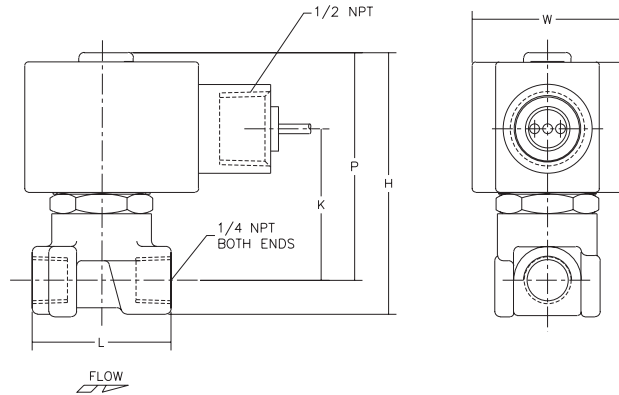
① Valves must be mounted with solenoid vertical and upright.
 ② On 50 hertz service, the rating for the 6.1/F solenoid is 8.1 watts.
 ③ For low vacuum applications to 29" Hg, use standard catalog valves with 0 bar minimum, 1+ bar maximum OPD (except 2" NPT).

SPECIAL SERVICE VALVES

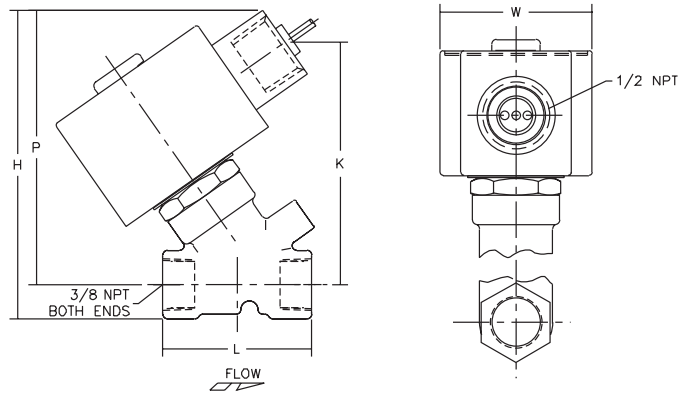
Dimensions inches (mm)

| Const. Ref. | | H | K | L | P | W |
|-------------|------|------|------|------|------|------|
| 1 | ins. | 2.98 | 1.71 | 1.56 | 2.57 | 1.69 |
| | mm | 76 | 43 | 40 | 65 | 43 |
| 2 | ins. | 4.00 | 3.14 | 1.91 | 3.55 | 1.95 |
| | mm | 102 | 80 | 49 | 90 | 50 |
| 3 | ins. | 4.13 | 2.84 | 2.28 | 3.56 | 2.22 |
| | mm | 105 | 72 | 58 | 90 | 56 |
| 4 | ins. | 4.10 | 2.44 | 2.81 | 3.41 | 2.28 |
| | mm | 104 | 62 | 71 | 87 | 58 |
| 5 | ins. | 4.13 | 2.47 | 2.81 | 3.44 | 2.28 |
| | mm | 105 | 63 | 71 | 87 | 58 |
| 6 | ins. | 4.35 | 2.65 | 2.75 | 3.79 | 2.28 |
| | mm | 110 | 67 | 70 | 96 | 58 |
| 7 | ins. | 4.64 | 2.81 | 2.81 | 3.94 | 2.28 |
| | mm | 118 | 71 | 71 | 100 | 58 |
| 8 | ins. | 6.79 | 4.26 | 5.00 | 5.48 | 5.38 |
| | mm | 174 | 108 | 127 | 139 | 137 |
| 9 | ins. | 6.79 | 4.32 | 5.00 | 5.54 | 5.38 |
| | mm | 174 | 110 | 127 | 141 | 137 |
| 10 | ins. | 7.42 | 4.66 | 6.09 | 5.89 | 6.31 |
| | mm | 188 | 118 | 155 | 150 | 160 |
| 11 | ins. | 6.79 | 2.35 | 5.00 | 3.13 | 5.38 |
| | mm | 172 | 60 | 127 | 79 | 137 |
| 12 | ins. | 6.79 | 2.29 | 5.00 | 3.06 | 5.38 |
| | mm | 172 | 58 | 127 | 78 | 137 |
| 13 | ins. | 6.94 | 2.54 | 6.09 | 3.31 | 6.31 |
| | mm | 176 | 65 | 155 | 84 | 160 |

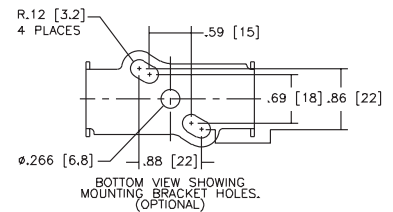
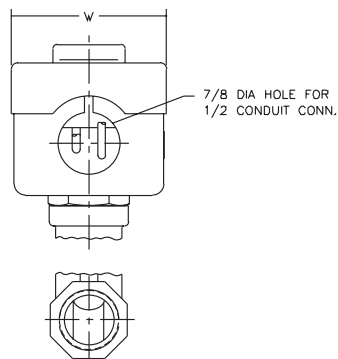
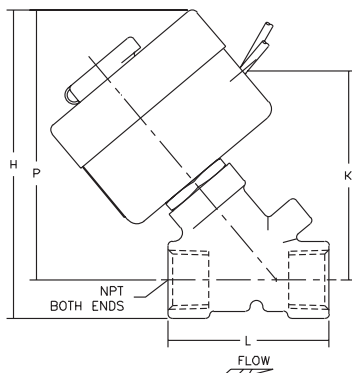
Const. Ref. 1



Const. Ref. 2

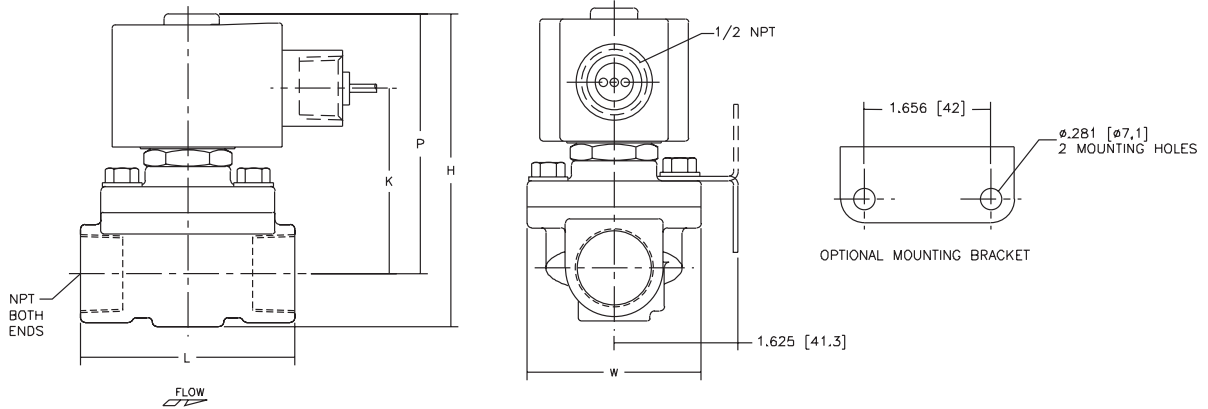


Const. Ref. 3

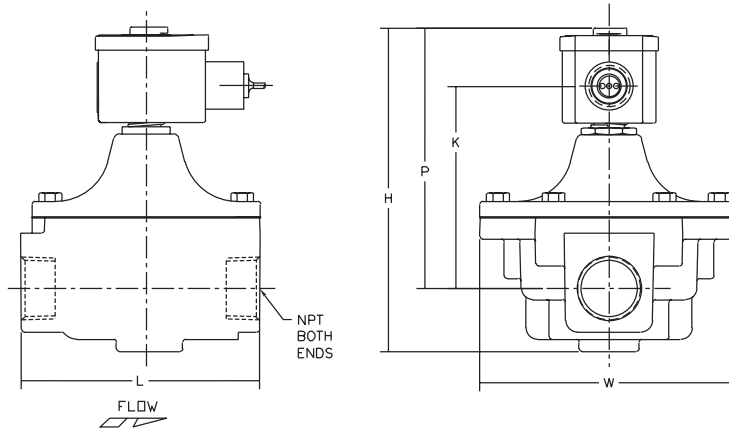


Dimensions inches (mm)

Const. Ref. 4, 5, 6, 7



Const. Ref. 8, 9, 10



Const. Ref. 11, 12, 13

