

## Features

- "LT" suffix valves are built to control cryogenic fluids, including liquid nitrogen (-320°F/-194°C), liquid argon (-303°F/-184°C), and liquid oxygen (-297°F/-181°C)
- All suffix "LT" valves are degreased, cleaned, tested free of moisture, and black light tested for hydrocarbons
- Liquid CO<sub>2</sub> valves are suitable for remote mounting or for direct mounting to the refrigerated component by using four-hole bracket, provided

## Construction

| Valve Parts in Contact with Fluids |                                     |
|------------------------------------|-------------------------------------|
| Body: Cryogenic Valves             | Brass                               |
| Body: LCO <sub>2</sub> Valves      | Nickel-Plated Brass                 |
| Seats                              | PTFE and/or Clad Copper/UR          |
| Disc                               | PTFE/UR (8264 only)                 |
| Core and Plugnut                   | 430F Stainless Steel or 49 FM Alloy |
| Core Spring                        | 302 Stainless Steel                 |
| Shading Coil                       | Copper                              |
| Seats                              | Stainless Steel (8264 Series)       |

## 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                                     | 11.6                              | 10.1  | 23         | 47        | 238610                 | 238710 | 238614         | 238714 |
| F                                     | 18.6                              | 13.8  | 27         | 43        | 238210                 | 238310 | 238214         | 238314 |
| F                                     | -                                 | 17.1  | 34         | 64        | 238610                 | -      | 238614         | -      |
| H                                     | 40.6                              | 17.1  | 34         | 64        | 238810                 | 238910 | 238814         | 238914 |

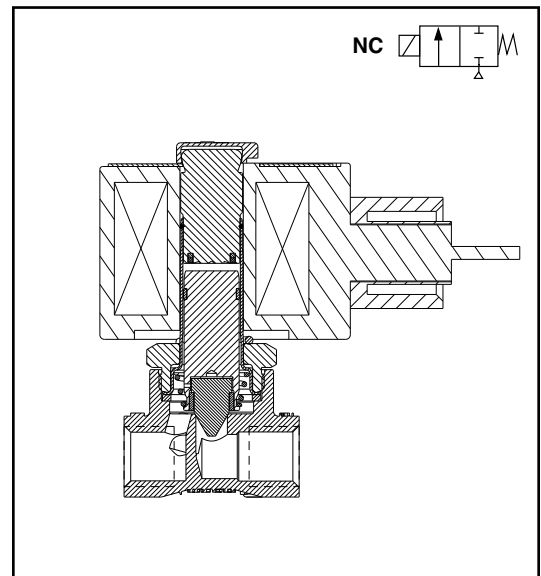
**Standard Voltages:** 24, 120, 240, 480 volts AC, 60 Hz. 6, 12, 24, 120, 240 volts DC.  
 Must be specified when ordering. Other voltages are available when required.

## 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 catalog number.)

See *Optional Features Section* for other available options.



## Nominal Fluid Temp. Ranges

AC Cryogenic Valves: -320°F to 150°F (-196°C to 66°C)  
 DC Cryogenic Valves: -320°F to 120°F (-196°C to 49°C)  
 All Liquid CO<sub>2</sub> Valves: -75°F to 120°F (-59°C to 49°C)  
 Refer to *Engineering Section* for details.

## Nominal Ambient Temp. Ranges

**AC Construction:** -40°F to 125°F (-40°C to 52°C)  
 8262/8263 Series: -40°F to 131°F (-40°C to 55°C)  
**DC Construction:** -40°F to 104°F (-40°C to 40°C)  
 8262/8263 Series: -40°F to 131°F (-40°C to 55°C)  
 Refer to *Engineering Section* for details.

## Approvals

CSA certified. UL listed as indicated.  
 Meets applicable CE directives.

**Specifications (English units)**

| Pipe Size (in)  | Orifice Size (in) | Cv Flow Factor | Operating Pressure Differential (psi) |      |            |            | Catalog Number | Const. Ref. | UL Listed ③ | Watt Rating/ Class of Coil Insulation |        |
|---|-------------------|----------------|---------------------------------------|------|------------|------------|----------------|-------------|-------------|---------------------------------------|--------|
|   |                   |                | Min.                                  | Max. |            |            |                |             |             | AC                                    | DC     |
|   |                   |                |                                       | AC ② | DC @ 104°F | DC @ 131°F |                |             |             |                                       |        |
| <b>CRYOGENIC SERVICE - NORMALLY CLOSED (Closed when de-energized)</b>             |                   |                |                                       |      |            |            |                |             |             |                                       |        |
| 1/8   | 1/8               | 0.35           | 0                                     | 155  | 75         | 68         | 8263H240LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/8   | 1/8               | 0.35           | 0                                     | 250  | 130        | 120        | 8262H105LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 1/4   | 1/8               | 0.35           | 0                                     | 155  | 75         | 68         | 8262H232LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/4   | 1/8               | 0.35           | 0                                     | 250  | 130        | 120        | 8262H110LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 1/4   | 7/32              | 0.73           | 0                                     | 48   | 30         | 22         | 8262H208LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/4   | 7/32              | 0.73           | 0                                     | 100  | 42         | 40         | 8262H114LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 1/4   | 9/32              | 0.88           | 0                                     | 40   | 18         | 14         | 8262H210LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/4   | 9/32              | 0.88           | 0                                     | 58   | 27         | 18         | 8262H212LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 3/8   | 1/8               | 0.35           | 0                                     | 155  | 75         | 68         | 8263H232LT     | 2           | ●           | 10.1/F                                | 11.6/H |
| 3/8   | 1/8               | 0.35           | 0                                     | 250  | 130        | 120        | 8263H115LT     | 2           | ●           | 17.1/F                                | 22.6/H |
| 3/8   | 7/32              | 0.73           | 0                                     | 48   | 30         | 22         | 8263H124LT     | 2           | ●           | 10.1/F                                | 11.6/H |
| 3/8   | 7/32              | 0.73           | 0                                     | 90   | 42         | 40         | 8263H206LT     | 2           | ●           | 17.1/F                                | 22.6/H |
| 3/8   | 9/32              | 0.88           | 0                                     | 40   | 18         | 14         | 8263H125LT     | 2           | ●           | 10.1/F                                | 11.6/H |
| 3/8   | 9/32              | 0.88           | 0                                     | 58   | 27         | 18         | 8263H210LT     | 2           | ●           | 17.1/F                                | 22.6/H |
| 1/2   | 5/8               | 3.8            | 0                                     | 90   | 50         | -          | 8222G002LT     | 3           | -           | 17.1/H                                | 40.6/H |
| 3/4   | 3/4               | 5.8            | 0                                     | 90   | 50         | -          | 8222G003LT     | 3           | -           | 17.1/H                                | 40.6/H |
| 1   | 1                 | 13.5           | 5                                     | 200  | 100        | -          | 8210G078LT     | 4           | -           | 17.1/F                                | 40.6/H |
| 1 1/4   | 1 1/8             | 15             | 5                                     | 200  | 100        | -          | 8210G080LT     | 5           | -           | 17.1/F                                | 40.6/H |
| 1 1/2   | 1 1/4             | 22.5           | 5                                     | 200  | 100        | -          | 8210G082LT     | 6           | -           | 17.1/F                                | 40.6/H |
| <b>LIQUID CO<sub>2</sub> SERVICE - NORMALLY CLOSED (Closed when de-energized)</b> |                   |                |                                       |      |            |            |                |             |             |                                       |        |
| 1/8   | 3/64              | .06            | 0                                     | 1000 | 1000       | -          | 8264G009 ①     | 7           | -           | 13.8/F                                | 18.6/F |
| 1/8   | 3/32              | .20            | 0                                     | 300  | 300        | -          | 8264G010 ①     | 7           | -           | 13.8/F                                | 18.6/F |

① Must use tubing with an I.D. no larger than the outlet port orifice to locate the refrigeration point downstream and to prevent freezing of the CO<sub>2</sub> inside the valve.  
② For 8262 & 8263 Series, AC pressure ratings are at 131°F ambient; for all other series, AC pressure ratings are at 125°F. ③ ● General purpose valve.

**Specifications (Metric units)**

| Pipe Size (in)  | Orifice Size (mm) | Kv Flow Factor (m <sup>3</sup> /hr) | Operating Pressure Differential (bar) |      |           |           | Catalog Number | Const. Ref. | UL Listed ③ | Watt Rating/ Class of Coil Insulation |        |
|---|-------------------|-------------------------------------|---------------------------------------|------|-----------|-----------|----------------|-------------|-------------|---------------------------------------|--------|
|   |                   |                                     | Min.                                  | Max. |           |           |                |             |             | AC                                    | DC     |
|   |                   |                                     |                                       | AC ② | DC @ 40°C | DC @ 55°C |                |             |             |                                       |        |
| <b>CRYOGENIC SERVICE - NORMALLY CLOSED (Closed when de-energized)</b>             |                   |                                     |                                       |      |           |           |                |             |             |                                       |        |
| 1/8   | 3.2               | 0.30                                | 0                                     | 11   | 5         | 5         | 8263H240LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/8   | 3.2               | 0.30                                | 0                                     | 17   | 9         | 8         | 8262H105LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 1/4   | 3.2               | 0.30                                | 0                                     | 11   | 5         | 5         | 8262H232LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/4   | 3.2               | 0.30                                | 0                                     | 17   | 9         | 8         | 8262H110LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 1/4   | 5.6               | 0.63                                | 0                                     | 3    | 2         | 2         | 8262H208LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/4   | 5.6               | 0.63                                | 0                                     | 7    | 3         | 3         | 8262H114LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 1/4   | 7.0               | 0.76                                | 0                                     | 3    | 1         | 1         | 8262H210LT     | 1           | ●           | 10.1/F                                | 11.6/H |
| 1/4   | 7.0               | 0.76                                | 0                                     | 4    | 2         | 1         | 8262H212LT     | 1           | ●           | 17.1/F                                | 22.6/H |
| 3/8   | 3.2               | 0.30                                | 0                                     | 11   | 5         | 5         | 8263H232LT     | 2           | ●           | 10.1/F                                | 11.6/H |
| 3/8   | 3.2               | 0.30                                | 0                                     | 17   | 9         | 8         | 8263H115LT     | 2           | ●           | 17.1/F                                | 22.6/H |
| 3/8   | 5.6               | 0.63                                | 0                                     | 3    | 2         | 2         | 8263H124LT     | 2           | ●           | 10.1/F                                | 11.6/H |
| 3/8   | 5.6               | 0.63                                | 0                                     | 6    | 3         | 3         | 8263H206LT     | 2           | ●           | 17.1/F                                | 22.6/H |
| 3/8   | 7.0               | 0.76                                | 0                                     | 3    | 1         | 1         | 8263H125LT     | 2           | ●           | 10.1/F                                | 11.6/H |
| 3/8   | 7.0               | 0.76                                | 0                                     | 4    | 2         | 1         | 8263H210LT     | 2           | ●           | 17.1/F                                | 22.6/H |
| 1/2   | 16                | 3.2                                 | 0                                     | 6    | 3         | -         | 8222G002LT     | 3           | -           | 17.1/H                                | 40.6/H |
| 3/4   | 19                | 5                                   | 0                                     | 6    | 3         | -         | 8222G003LT     | 3           | -           | 17.1/H                                | 40.6/H |
| 1   | 25                | 11.6                                | 5                                     | 14   | 7         | -         | 8210G078LT     | 4           | -           | 17.1/F                                | 40.6/H |
| 1 1/4   | 29                | 13                                  | 5                                     | 14   | 7         | -         | 8210G080LT     | 5           | -           | 17.1/F                                | 40.6/H |
| 1 1/2   | 32                | 19                                  | 5                                     | 14   | 7         | -         | 8210G082LT     | 6           | -           | 17.1/F                                | 40.6/H |
| <b>LIQUID CO<sub>2</sub> SERVICE - NORMALLY CLOSED (Closed when de-energized)</b> |                   |                                     |                                       |      |           |           |                |             |             |                                       |        |
| 1/8   | 1                 | .05                                 | 0                                     | 69   | 69        | -         | 8264G009 ①     | 7           | -           | 13.8/F                                | 18.6/F |
| 1/8   | 2                 | .17                                 | 0                                     | 21   | 21        | -         | 8264G010 ①     | 7           | -           | 13.8/F                                | 18.6/F |

① Must use tubing with an I.D. no larger than the outlet port orifice to locate the refrigeration point downstream and to prevent freezing of the CO<sub>2</sub> inside the valve.  
② For 8262 & 8263 Series, AC pressure ratings are at 55°C ambient; for all other series, AC pressure ratings are at 52°C. ③ ● General purpose valve.

SPECIAL SERVICE VALVES

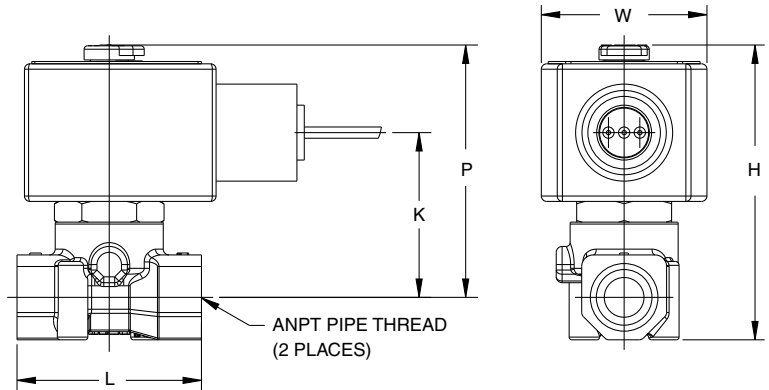
### Dimensions inches (mm)

| Const. Ref. |    | H    | K    | L     | P    | W    |
|-------------|----|------|------|-------|------|------|
| 1           | in | 3.16 | 1.81 | 1.56  | 2.81 | 1.95 |
|             | mm | 77   | 46   | 40    | 71   | 50   |
| 2           | in | 3.23 | 1.81 | 1.88  | 2.81 | 1.95 |
|             | mm | 82   | 46   | 48    | 71   | 50   |
| 3           | in | 4.67 | 3.15 | 2.75  | 4.11 | 1.95 |
|             | mm | 119  | 80   | 70    | 104  | 50   |
| 4           | in | 5.82 | 3.22 | 3.75  | 4.19 | 4.44 |
|             | mm | 148  | 82   | 95    | 106  | 113  |
| 5           | in | 5.82 | 3.22 | 3.66  | 4.19 | 4.86 |
|             | mm | 148  | 82   | 93    | 106  | 123  |
| 6           | in | 6.29 | 3.37 | 4.38  | 4.34 | 5.81 |
|             | mm | 160  | 86   | 111   | 110  | 148  |
| 7           | in | 2.82 | 1.27 | Ø1.12 | 2.13 | 1.69 |
|             | mm | 72   | 32   | Ø28   | 54   | 43   |

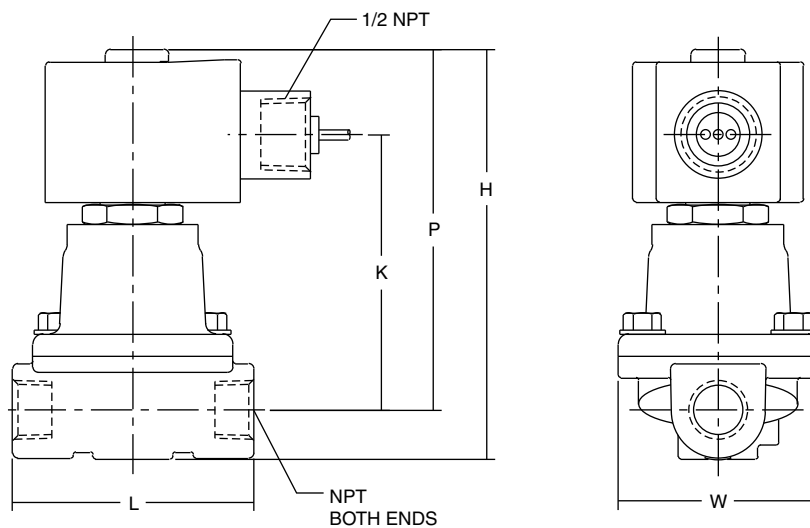
**IMPORTANT:** Valves may be mounted in any position.

|                          |                             |
|--------------------------|-----------------------------|
| 8222G002LT<br>8222G003LT | Mount vertical and upright. |
|--------------------------|-----------------------------|

Const. Ref. 1, 2



Const. Ref. 3



SPECIAL  
SERVICE VALVES

Dimensions inches (mm)

