

## Features

- 2-way normally open operation
- Unique double disc design with overtravel provides redundant sealing for leak tight shutoff in the closed (energized) position (3/4" to 2")
- Die-cast aluminum bodies
- Zero differential piloted diaphragm
- Valves provided with 1/8" NPT downstream pipe tap with plug for routine testing

## Construction

| Valve Parts in Contact with Fluids |                         |
|------------------------------------|-------------------------|
| Body                               | Aluminum                |
| Seals and Disc                     | NBR                     |
| Core Tube                          | 305 Stainless Steel     |
| Core Guide                         | Acetal (20.1 watt only) |
| Rider Ring                         | PTFE (20.1 watt only)   |
| Core and Plugnut                   | 430F Stainless Steel    |
| Springs                            | 302 Stainless Steel     |
| Shading Coil                       | Copper                  |
| Pipe Plug                          | Zinc-Plated Steel       |

## Electrical

| Standard Coil Class of Insulation | Watt Rating and Power Consumption |            |           | Ambient Temp. °F | Spare Coil Family |                |
|-----------------------------------|-----------------------------------|------------|-----------|------------------|-------------------|----------------|
|                                   | Watts                             | VA Holding | VA Inrush |                  | General Purpose   | Explosionproof |
|                                   |                                   |            |           |                  | AC                | AC             |
| F                                 | 17.1                              | 40         | 93        | -40 to 125       | 238610            | 238614         |
| F                                 | 20.1                              | 43         | 240       | -40 to 125       | 272610            | -              |

**Standard Voltages:** 24, 120, 240 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz) (238610); 120, 240 volts AC, 60 Hz (272610).

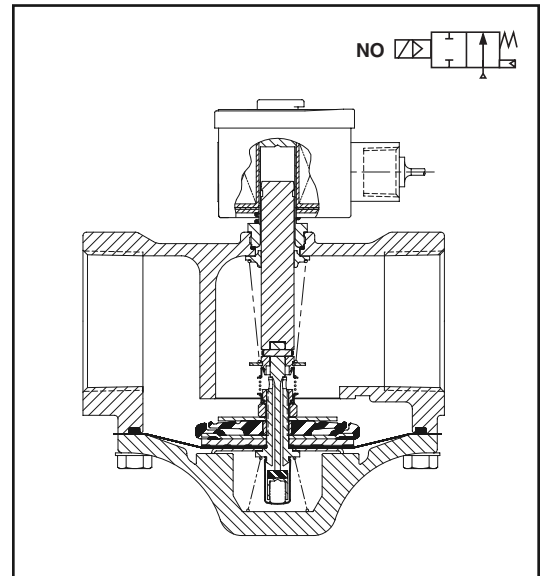
## Solenoid Enclosures

RedHat II molded epoxy Type 1, 2, 3, 3S, 4 and 4X combination. General Purpose and Watertight solenoid enclosures with 1/2" conduit hub as standard.

**Optional:** RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9. (To order, add Prefix "EF" to catalog numbers: 8214G -013, -023, and -033. All other constructions are not available with explosionproof enclosures.

## Valve Response Time

**Opening Time:** Less than 1 second; **Closing Time:** Less than 1 second



## Approvals

UL listed to standard 429 "Electrically Operated Valves," Guide Y10Z, File MP618 General Purpose Valves.

CSA Certified to:

- 1) Standard C22.2 No. 139 "Electrically Operated Valves," File 010381.
- 2) Automatic Gas Valves Z21.21 (6.5), File 112872.

**Specifications (English units)**

| Pipe Size (ins.)                             | Orifice Size (ins.) | Cv Flow Factor | Gas Capacity ①<br>Btu/hr. | Operating Pressure Differential (psi) |      | Max. Fluid Temp. °F | Catalog Number | Const. Ref. | Agency |    |     | Wattage | Approx. Shipping Weight (lbs) |
|--|---------------------|----------------|---------------------------|---------------------------------------|------|---------------------|----------------|-------------|--------|----|-----|---------|-------------------------------|
|  |                     |                |                           | Min.                                  | Max. |                     |                |             | UL     | FM | CSA |         |                               |
| <b>COMBUSTION (Fuel Gas) - NORMALLY OPEN</b> |                     |                |                           |                                       |      |                     |                |             |        |    |     |         |                               |
| 3/8  | 3/4                 | 3.4            | 172,500                   | 0                                     | 5    | 125                 | 8214G013 ②     | 1           | ●      | -  | ●   | 17.1    | 2.3                           |
| 1/2  | 3/4                 | 4.4            | 206,250                   | 0                                     | 5    | 125                 | 8214G023 ②     | 1           | ●      | -  | ●   | 17.1    | 2.3                           |
| 3/4  | 3/4                 | 5.1            | 247,500                   | 0                                     | 5    | 125                 | 8214G033 ②     | 2           | ●      | -  | ●   | 17.1    | 2.5                           |
| 3/4  | 1 5/8               | 11             | 659,000                   | 0                                     | 5    | 125                 | 8214G038 ③     | 3           | ●      | -  | ●   | 20.1    | 4.3                           |
| 1  | 1 5/8               | 21             | 1,179,000                 | 0                                     | 5    | 125                 | 8214G054 ③     | 3           | ●      | -  | ●   | 20.1    | 4.3                           |
| 1 1/4  | 1 5/8               | 32             | 1,538,750                 | 0                                     | 5    | 125                 | 8214G064 ③     | 4           | ●      | -  | ●   | 20.1    | 4.3                           |
| 1 1/2  | 1 5/8               | 35             | 1,615,250                 | 0                                     | 5    | 125                 | 8214G074 ③     | 4           | ●      | -  | ●   | 20.1    | 4.3                           |
| 2  | 2 3/32              | 60             | 2,924,500                 | 0                                     | 5    | 125                 | 8214G084 ③     | 5           | ●      | -  | ●   | 20.1    | 6.3                           |

● = General Purpose Valve. ① 1" W.C. Drop @ 2" W.C. Inlet Pressure, 1,000 Btu/cu.ft. or more, 0.64 Specific Gravity Gas.  
② Single disc design for valve sealing. ③ Double disc design for valve sealing

**Specifications (Metric units)**

| Pipe Size (ins.)                             | Orifice Size (mm) | Kv Flow (m³/hr) | Gas Capacity ①<br>Btu/hr. | Operating Pressure Differential (bar) |      | Max. Fluid Temp. °C | Catalog Number | Const. Ref. | Agency |    |     | Wattage | Approx. Shipping Weight (kgs) |
|--|-------------------|-----------------|---------------------------|---------------------------------------|------|---------------------|----------------|-------------|--------|----|-----|---------|-------------------------------|
|  |                   |                 |                           | Min.                                  | Max. |                     |                |             | UL     | FM | CSA |         |                               |
| <b>COMBUSTION (Fuel Gas) - NORMALLY OPEN</b> |                   |                 |                           |                                       |      |                     |                |             |        |    |     |         |                               |
| 3/8  | 19                | 2.9             | 172,500                   | 0                                     | 0.3  | 52                  | 8214G013 ②     | 1           | ●      | -  | ●   | 17.1    | 1.0                           |
| 1/2  | 19                | 3.7             | 206,250                   | 0                                     | 0.3  | 52                  | 8214G023 ②     | 1           | ●      | -  | ●   | 17.1    | 1.0                           |
| 3/4  | 19                | 4.3             | 247,500                   | 0                                     | 0.3  | 52                  | 8214G033 ②     | 2           | ●      | -  | ●   | 17.1    | 1.1                           |
| 3/4  | 41                | 9.4             | 659,000                   | 0                                     | 0.3  | 52                  | 8214G038 ③     | 3           | ●      | -  | ●   | 20.1    | 2.0                           |
| 1  | 41                | 17.9            | 1,179,000                 | 0                                     | 0.3  | 52                  | 8214G054 ③     | 3           | ●      | -  | ●   | 20.1    | 2.0                           |
| 1 1/4  | 41                | 27.2            | 1,538,750                 | 0                                     | 0.3  | 52                  | 8214G064 ③     | 4           | ●      | -  | ●   | 20.1    | 2.0                           |
| 1 1/2  | 41                | 29.8            | 1,615,250                 | 0                                     | 0.3  | 52                  | 8214G074 ③     | 4           | ●      | -  | ●   | 20.1    | 2.0                           |
| 2  | 53                | 51.0            | 2,924,500                 | 0                                     | 0.3  | 52                  | 8214G084 ③     | 5           | ●      | -  | ●   | 20.1    | 2.9                           |

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② Single disc design for valve sealing. ③ Double disc design for valve sealing

**Capabilities Chart**

| Solenoid Options |              | Base Catalog Number | Resilient Materials | Standard Rebuild Kit |
|------------------|--------------|---------------------|---------------------|----------------------|
| High Temp.       | Junction Box | Aluminum            | NBR                 | AC                   |
| HB               | JB           | 8214G013            | ●                   | 316234               |
| HB               | JB           | 8214G023            | ●                   | 316234               |
| HB               | JB           | 8214G033            | ●                   | 316234               |
| HB               | JB           | 8214G038            | ●                   | 322467               |
| HB               | JB           | 8214G054            | ●                   | 322467               |
| HB               | JB           | 8214G064            | ●                   | 322467               |
| HB               | JB           | 8214G074            | ●                   | 322467               |
| HB               | JB           | 8214G084            | ●                   | 322468               |

● = Standard. Other options may be available. All option combinations may not be available.

**COMBUSTION**

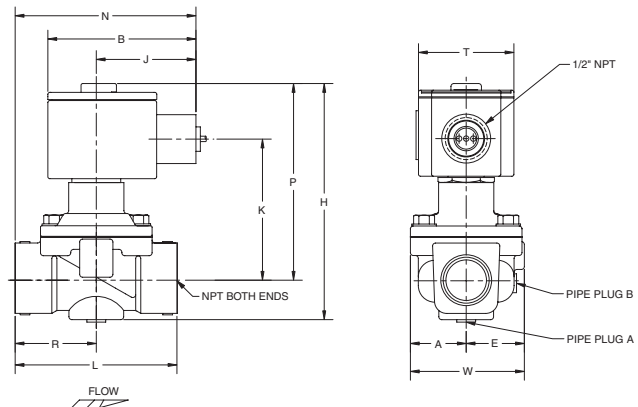
## Dimensions inches (mm)

| Const. Ref. |      | A    | B    | E    | H    | J    | K    | L    | N    | P    | R    | T    | W    | Pipe Plug |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|
| 1           | ins. | 1.14 | 3.03 | 1.36 | 4.48 | 2.04 | 2.72 | 2.75 | 3.42 | 3.86 | 1.38 | 1.95 | 2.50 | B         |
|             | mm   | 29   | 77   | 35   | 114  | 52   | 69   | 70   | 87   | 98   | 35   | 50   | 64   | B         |
| 2           | ins. | 1.14 | 3.03 | 1.25 | 5.92 | 2.04 | 2.90 | 3.31 | 3.70 | 4.04 | 1.66 | 1.95 | 2.39 | A         |
|             | mm   | 29   | 77   | 32   | 150  | 52   | 74   | 84   | 94   | 103  | 42   | 50   | 61   | A         |
| 3           | ins. | 2.69 | 3.11 | 2.69 | 6.74 | 2.05 | 2.33 | 5.00 | 4.67 | 3.54 | 2.62 | 2.06 | 5.39 | -         |
|             | mm   | 68   | 79   | 68   | 171  | 52   | 59   | 127  | 119  | 90   | 67   | 52   | 137  | -         |
| 4           | ins. | 2.69 | 3.11 | 2.69 | 6.74 | 2.05 | 2.27 | 5.00 | 4.67 | 3.48 | 2.62 | 2.06 | 5.39 | -         |
|             | mm   | 68   | 79   | 68   | 171  | 52   | 58   | 127  | 119  | 88   | 67   | 52   | 137  | -         |
| 5           | ins. | 3.16 | 3.11 | 3.16 | 7.34 | 2.05 | 2.52 | 6.09 | 4.67 | 3.73 | 3.28 | 2.06 | 6.32 | -         |
|             | mm   | 80   | 79   | 80   | 186  | 52   | 64   | 155  | 119  | 95   | 83   | 52   | 161  | -         |

### Vent Valve Requirements

| Manifold Line         | Vent Valve |
|-----------------------|------------|
| 3/8" through 1 1/2"   | 3/4        |
| 2"                    | 1          |
| 2 1/2" through 3"     | 1 1/4      |
| 3 1/2"                | 1 1/2      |
| 4" through 5"         | 2          |
| 5 1/2" through 6"     | 2 1/2      |
| 6 1/2" through 7 1/2" | 3          |

**Const. Ref. 1, 2**  
Can be mounted in any position.



**Const. Ref. 3, 4, 5**  
Must be mounted with solenoid vertical and upright.

