



| Model | Base Model Number                      |
|-------|--|
| 14    | 1400 Series - Standard General Service |
| 15    | 1500 Series - High Pressure Service    |

| Code | Body Material       |
|------|---------------------|
| 2    | Carbon Steel        |
| 3    | Bronze              |
| 7    | 316 Stainless Steel |
| 8    | Ductile Iron        |

| Code | Indicator Style                            |
|------|--|
| 0    | Plain (No Indicator - Bi-Directional Flow) |
| 1    | Propeller (Rotor)                          |
| 2    | Flapper (Bi-Directional Flow)              |
| 3    | Drip Tube                                  |
| 4    | Propeller Low Flow (1/4" - 1/2" only)      |

| Code | Connection Size |
|------|-----------------|
| 0025 | 1/4" NPTF       |
| 0038 | 3/8" NPTF       |
| 0050 | 1/2" NPTF       |
| 0075 | 3/4" NPTF       |
| 0100 | 1" NPTF         |
| 0125 | 1 1/4" NPTF     |
| 0150 | 1 1/2" NPTF     |
| 0200 | 2" NPTF         |

| Code | Seal Material |
|------|---------------|
| BN   | Buna-N        |
| EP   | EPT           |
| NP   | Neoprene      |
| TF   | Teflon        |
| VT   | Viton         |

Other materials including Hastelloy C, Alloy 20 & Monel are available, consult Muis Controls

Socket Weld and BSP Threaded Connections are available, consult Muis Controls

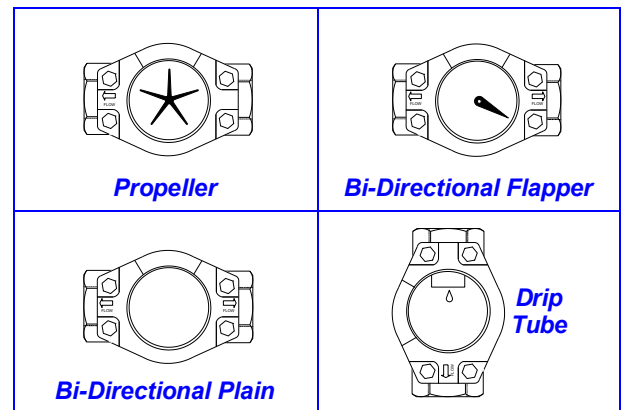
### Features

- Full ANSI service ratings
- Maintenance-free design
- Rated for full vacuum services
- Four indicator styles; propeller, bi-directional flapper, bi-directional plain, drip tube

14      7      1      -      0050      -      VT      ◀ Typical Model Number

### Construction and Material

|                             |   |  |
|-----------------------------|---|--|
| <b>Body:</b>                | Steel<br>316 Stainless Steel<br>Ductile Iron<br>Bronze<br>* 6" and larger ASTM A351 CF3M (316L St. St.)<br><i>Optional Materials: Hastelloy C, Alloy 20, Monel, Others upon request</i> | ASTM A216 WCB<br>ASTM A351 CF8M*<br>ASTM A536 65-45-12<br>ASTM B62 83600 |
| <b>Glass Windows:</b>       | 1400 Series<br>1500 Series  | Tempered Soda Lime Glass<br>Tempered Borosilicate Glass                  |
| <b>Indicators Elements:</b> | 1400 Series<br>1500 Series<br><i>Optional Materials: Teflon Flapper or Rotor</i>  | Delrin (Flapper or Rotor)<br>Ryton (Flapper or Rotor)                    |
| <b>Seals:</b>               | 1400 Series<br>1500 Series<br><i>See table for additional seal options</i>  | Viton (Standard)<br>Viton (Standard)                                     |
| <b>Connections:</b>         | 1400 Series<br>1500 Series<br><i>Options</i><br>Socket Weld<br>BSP  | ANSI B1.20 NPTF<br>ANSI B1.20 NPTF<br>ANSI B16.11<br>ANSI BS21           |
| <b>Options:</b>             | Protective Shield (1400SK): Polycarbonate   |  |



### Seal and Indicator Operating Temperatures

| Material            | °F         | °C         |
|---------------------|------------|------------|
| <b>Seals</b>        |            |            |
| Neoprene (Optional) | -20 to 250 | -29 to 121 |
| Viton (Standard)    | 0 to 350   | -17 to 177 |
| Buna-N (Optional)   | -30 to 250 | -34 to 121 |
| EPT (Optional)      | -20 to 250 | -29 to 121 |
| Teflon (Optional)   | -40 to 450 | -40 to 232 |
| <b>Indicators</b>   |            |            |
| Delrin (Standard)   | -40 to 250 | -40 to 121 |
| Ryton (Standard)    | -40 to 450 | -40 to 232 |
| Teflon (Optional)   | -40 to 450 | -40 to 232 |

## Standard Ratings / Components

| Series      | Maximum ANSI Pressure | Maximum Temperature          | Glass                           | Seals | Indicator Material |
|-------------|-----------------------|------------------------------|---------------------------------|-------|--------------------|
| <b>1400</b> | 200 psi @ 150°F       | 250°F @ 135 psi              | Tempered Soda Lime <sup>2</sup> | Viton | Delrin             |
| <b>1500</b> | 400 psi @ 150°F       | 400°F @ 160 psi <sup>1</sup> | Tempered Borosilicate           | Viton | Ryton              |

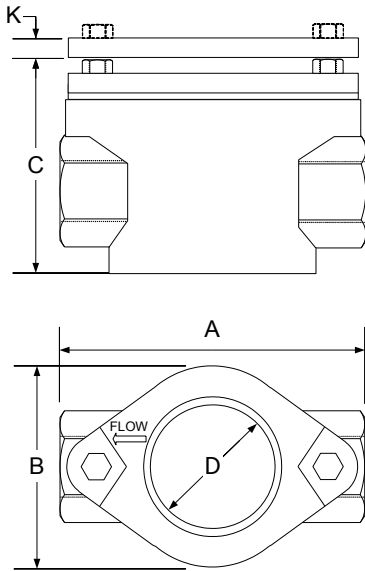
<sup>1</sup> Temperatures up to 450°F possible with Teflon Seals. For higher pressures and temperatures, consult Muis Controls  
<sup>2</sup> Annealed Borosilicate used on sizes 3" and above.

## Pressure / Temperature Ratings\*

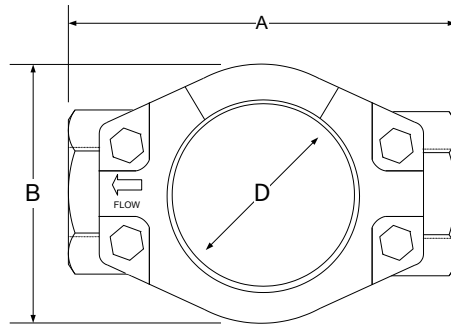
| Threaded 1400 Series (Std. Press. / Temp.) |           |             |            |            |              | Threaded 1500 Series (Std. Press. / Temp.) |                  |             |            |            |              |
|--|-----------|-------------|------------|------------|--------------|--|------------------|-------------|------------|------------|--------------|
| Temperature                                |           | PSIG (Barg) |            |            |              | Temperature                                |                  | PSIG (Barg) |            |            |              |
| (F)  | (C)       | Steel       | 316 SS     | Bronze     | Ductile Iron | (F)  | (C)              | Steel       | 316 SS     | Bronze     | Ductile Iron |
| -20 to 150                                 | -29 to 65 | 200 (13.8)  | 200 (13.8) | 200 (13.8) | 200 (13.8)   | -20 to 150                                 | -29 to 65        | 400 (27.6)  | 400 (27.6) | 400 (27.6) | 400 (27.6)   |
| 200  | 93        | 165 (11.4)  | 165 (11.4) | 165 (11.4) | 165 (11.4)   | 200  | 93               | 350 (24.1)  | 350 (24.1) | 350 (24.1) | 350 (24.1)   |
| 225  | 105       | 150 (10.3)  | 150 (10.3) | 150 (10.3) | 150 (10.3)   | 250  | 121              | 300 (20.7)  | 300 (20.7) | 300 (20.7) | 300 (20.7)   |
| 250  | 121       | 135 (9.3)   | 135 (9.3)  | 135 (9.3)  | 135 (9.3)    | 300  | 149              | 240 (16.6)  | 240 (16.6) | 240 (16.6) | 240 (16.6)   |
|  |           |             |            |            |              | 350  | 177              | 200 (13.8)  | 200 (13.8) | 200 (13.8) | 200 (13.8)   |
| <i>With Optional Seals (see page 1)</i>    |           |             |            |            |              | <i>With Optional Seals (see page 1)</i>    |                  |             |            |            |              |
| 300  | 149 (6.9) | 100 (6.9)   | 100 (6.9)  | 100 (6.9)  | 100 (6.9)    | 400  | 204              | 160 (11.0)  | 160 (11.0) | 160 (11.0) | 160 (11.0)   |
| 350  | 177 (4.8) | 70 (4.8)    | 70 (4.8)   | 70 (4.8)   | 70 (4.8)     | 450  | 232              | 120 (8.3)   | 120 (8.3)  | 120 (8.3)  | 120 (8.3)    |
| 400  | 204 (2.4) | 35 (2.4)    | 35 (2.4)   | 35 (2.4)   | 35 (2.4)     | 500 <sup>1</sup>                           | 260 <sup>1</sup> | 80 (5.5)    | 80 (5.5)   | 80 (5.5)   | 80 (5.5)     |

\* For higher pressures and temperatures consult Muis Controls

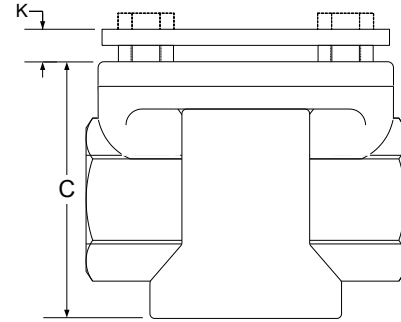
<sup>1</sup> - Consult Muis Controls



1/4" - 1"



1/4" - 2"



## Dimensions and Weights

|   | 1/4"      |    | 3/8"      |    | 1/2"      |    | 3/4"      |     | 1"        |     | 1 1/4"    |     | 1 1/2"    |     | 2"        |     |
|---|-----------|----|-----------|----|-----------|----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
|   | in.       | mm | in.       | mm | in.       | mm | in.       | mm  | in.       | mm  | in.       | mm  | in.       | mm  | in.       | mm  |
| <b>A Overall Length</b>                 | 3 1/4*    | 83 | 3 1/4*    | 83 | 3 1/4*    | 83 | 4 1/4**   | 108 | 4 1/4**   | 108 | 5 1/4***  | 133 | 5 1/4***  | 133 | 5 1/2***  | 140 |
| <b>B Overall Width</b>                  | 2         | 51 | 2         | 51 | 2         | 51 | 2 9/16    | 65  | 2 9/16    | 65  | 3 5/16    | 84  | 3 5/16    | 84  | 3 5/16    | 84  |
| <b>C Overall Height (1400 Series)</b>   | 2 5/8     | 60 | 2 5/8     | 60 | 2 5/8     | 60 | 3 3/4     | 83  | 3 3/4     | 83  | 4 3/16    | 110 | 4 3/16    | 110 | 4 3/16    | 110 |
| <b>Overall Height (1500 Series)</b>     | 2 9/16    | 65 | 2 9/16    | 65 | 2 9/16    | 65 | 3 7/16    | 87  | 3 7/16    | 87  | 4 1/2     | 114 | 4 1/2     | 114 | 4 1/2     | 114 |
| <b>D Diameter of Sight Opening</b>      | 1 1/8     | 29 | 1 1/8     | 29 | 1 1/8     | 29 | 1 1/2     | 38  | 1 1/2     | 38  | 2         | 51  | 2         | 51  | 2         | 51  |
| <b>K Added Height Due to Shield</b>     | 7/16      | 11 | 7/16      | 11 | 7/16      | 11 | 1/2       | 13  | 1/2       | 13  | 1/2       | 13  | 1/2       | 13  | 1/2       | 13  |
| <b>Total Weight (lbs / kgs) approx.</b> | 1.6 / .73 |    | 1.6 / .73 |    | 1.4 / .64 |    | 3.0 / 1.4 |     | 2.7 / 1.2 |     | 8.4 / 3.8 |     | 7.9 / 3.6 |     | 6.6 / 3.0 |     |

\* Stainless steel units are 3 5/8"    \*\* Bronze units are 4 1/8"    \*\*\*Stainless Steel units are 5 5/8"