

### ADJUSTABLE DIRECT ACTING MODEL AA

#### APPLICATIONS:

Liquid metering vessels where up to 250 psig adjustable back pressure is desired.

Burner valve for throttling or snap action service.

Any system that requires a double acting motor valve but also requires an adjustable maximum back pressure.

#### FEATURES:

Tight shut-off

Single soft seat

Removable valve seat

Minimum maintenance

All internal parts can be removed with valve in line

Spring adjustment:

5 to 40 psig on 1"

5 to 250 psig on 2"

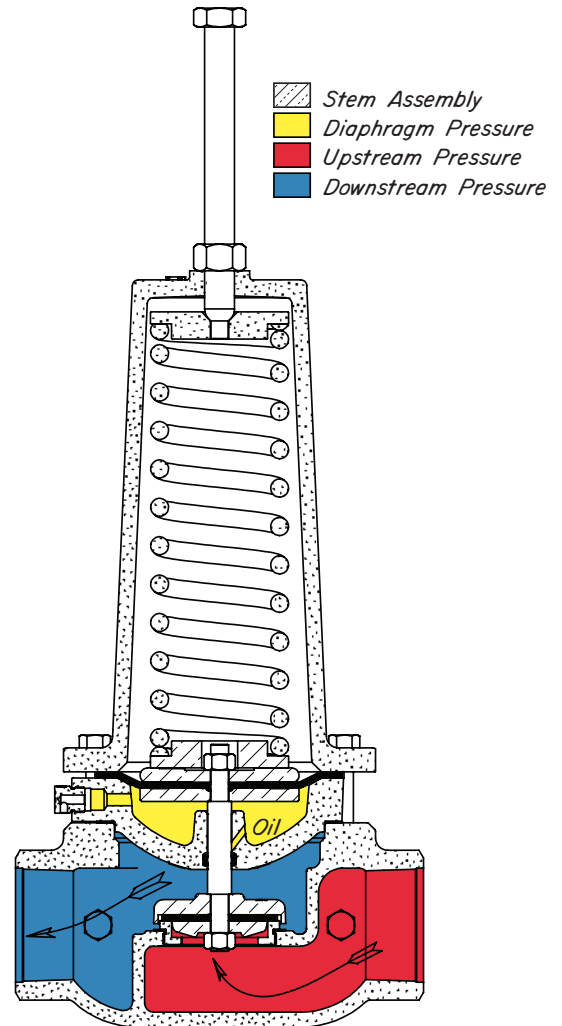
#### CERTIFICATIONS:

Canadian Registration Number (CRN):

0C15737.24567890NTY (Ductile)

0C15620.24567890NTY (Steel)

Kimray is an ISO 9001- certified manufacturer.



| Standard Configuration Code † | Order Code | Line Size | Connection Type | Inner Valve Size | Max. W.P. ††<br>psig | Cv   | Cf   |
|-------------------------------|------------|-----------|-----------------|------------------|----------------------|------|------|
| BAA1SADFS                     | ABC3       | 1"        | NPT             | 1"               | 300                  | 13.2 | 0.74 |
| BAA1SADRS                     | ABC2       |           |                 | 1/2"             |                      | 5.00 | 0.75 |
| BAA2SADFS                     | ATC3       | 2"        | NPT             | 2"               | 300                  | 47.0 | 0.84 |
| BAA2ARDFS                     | ATD3       |           | 150RF           |                  | 250                  |      |      |
| BAA2SADRS                     | ATC35      |           | NPT             | 1 1/4"           | 300                  | 21.0 | 0.75 |
| BAA2ARDRS                     | ATD35      |           | 150RF           |                  | 250                  |      |      |

#### NOTES:

For standard & optional seals, metals, Cf Cv values, material specifications & dimensions see technical data on pages 02:1 - 02:VI

† For Corrosive service remove last "S" & replace with "C"

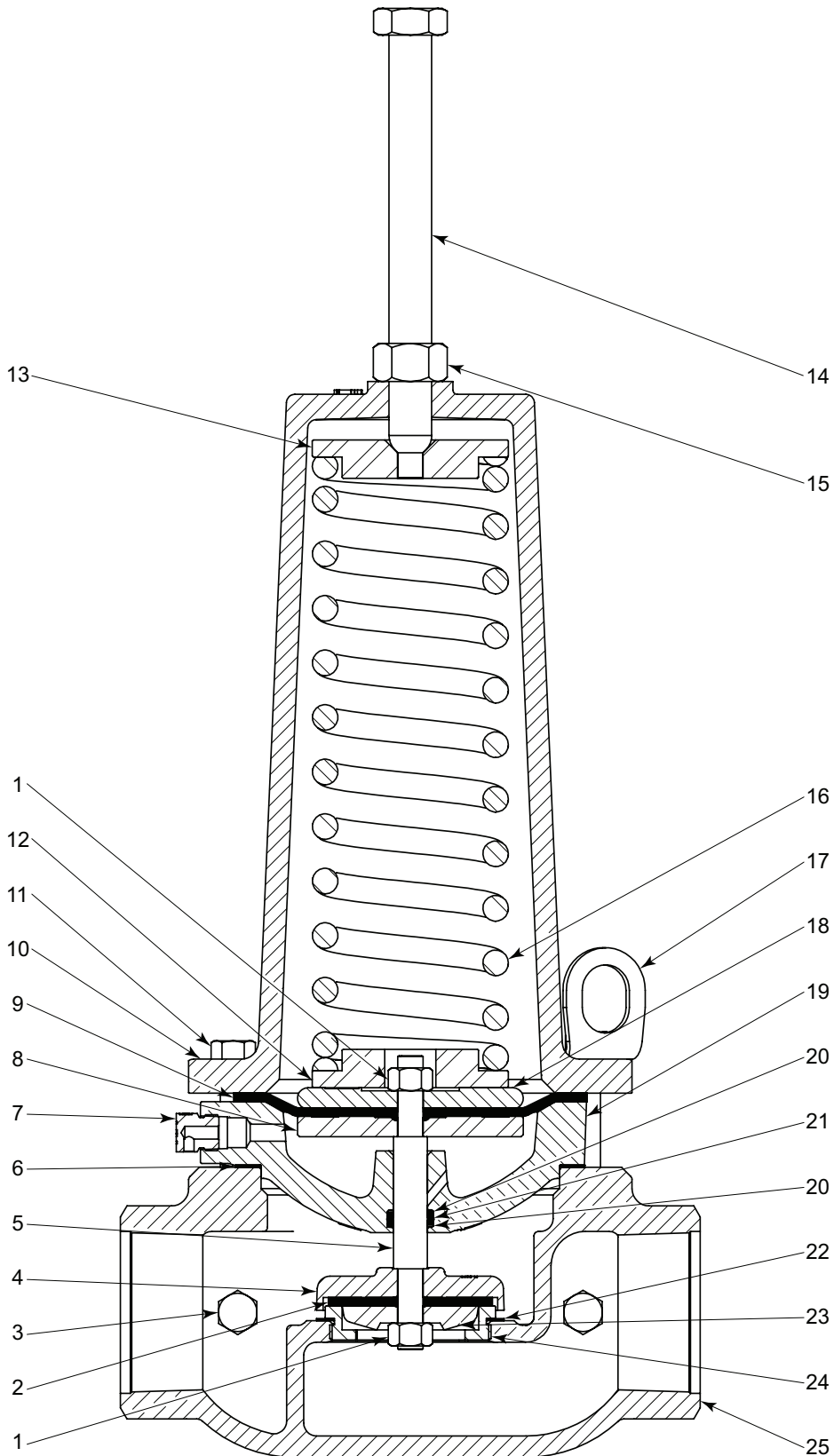
† For KimCoat option remove last "S" & replace with "K"

† For code builder see page 03:00.2

†† Max W.P. values based on -20°F to 100°F.

# LOW PRESSURE CONTROL VALVES

## ADJUSTABLE DIRECT ACTING MODEL AA PARTS LIST

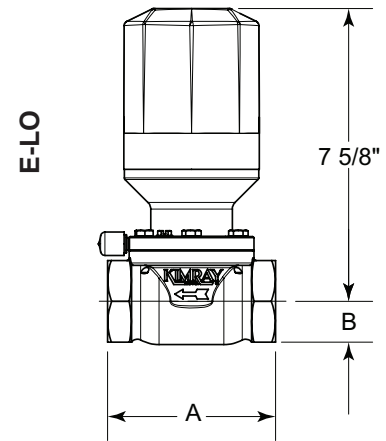
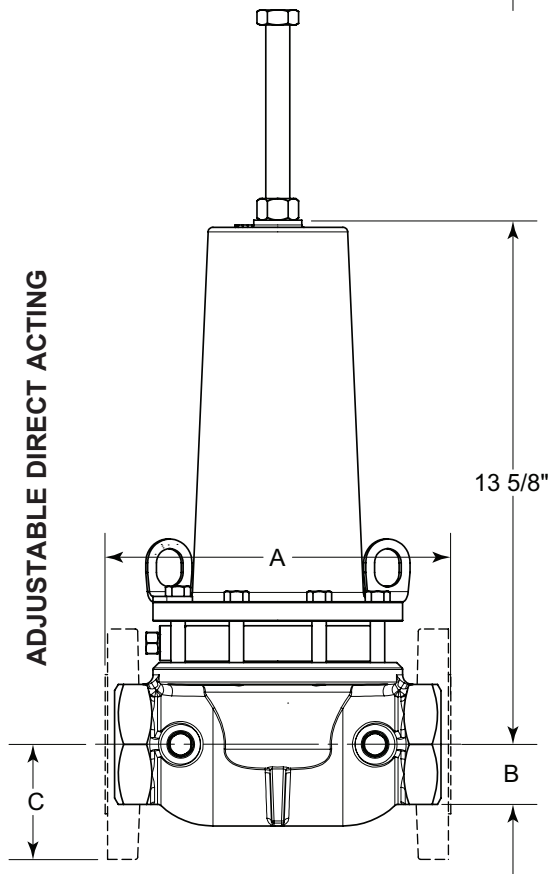
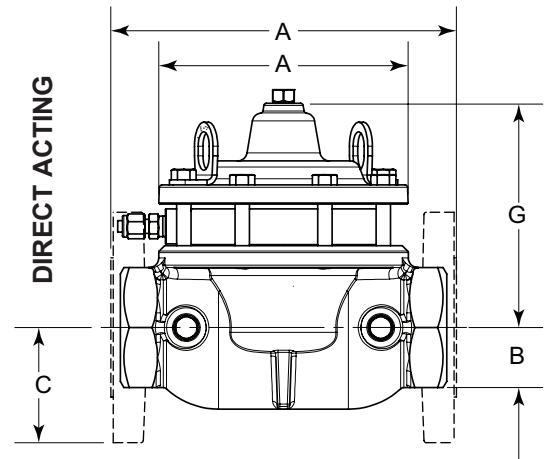
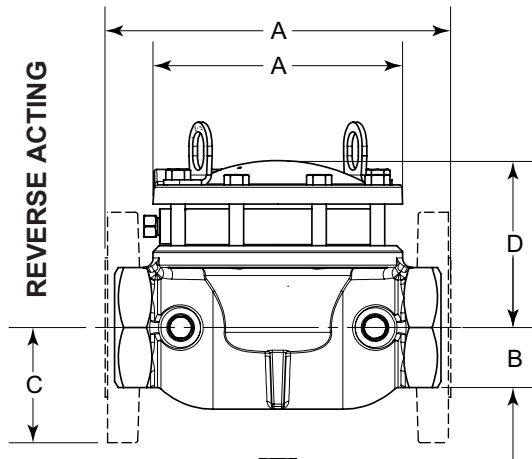


All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

| ITEM  | QTY.         | DESCRIPTION           | PART NUMBER |         |           |          |        |
|---|--------------|-----------------------|-------------|---------|-----------|----------|--------|
|   |              |                       | STANDARD    |         | CORROSIVE |          |        |
|   |              |                       | 1 INCH      | 2 INCH  | 1 INCH    | 2 INCH   |        |
| 1   | 2            | Nut *                 | 172         | 173     | 172SS6    | 173SS6   |        |
| 2   | 1            | Standard Seat *       | 163HSN      | 164HSN  | 163HSN    | 164HSN   |        |
|   |              | Reduced Seat *        | 1347P       | 709P    | 1347HSN   | 709HSN   |        |
| 3   | 2            | Plug                  | 699         |         | 699SS6    |          |        |
| 4   | 1            | Standard Seat Disc    | 158         | 159     | 158SS6    | 2493SS6  |        |
|   |              | Reduced Seat Disc     | 1348SS6     | 707     | 1348SS6   | 707SS6   |        |
| 5   | 1            | Valve Stem            | 726         | 727     | 726SS6    | 727SS6   |        |
| 6   | 1            | Gasket *              | 195         | 196     | 195       | 196      |        |
| 7   | 1            | Vent Plug             | ----        | 147     | ----      | 147SS6   |        |
|   |              | Connector             | 1604        | ----    | 1604SS6   | ----     |        |
| 8   | 1            | Lower Diaphragm Plate | 736         | 737     | 736SS6    | 737      |        |
| 9   | 1            | Diaphragm *           | 741         | 1965    | 741       | 1965     |        |
| 10  | 1            | Bonnet                | 2103        | 2031    | 2103 ‡    | 2031 ‡   |        |
|   | 1            | Vent Plug (not shown) | 147         | ----    | 147SS6    | ----     |        |
| 11  | (QTY)        | Bolt                  | 4318 (6)    | 965 (8) | 4318 (6)  | 965 (8)  |        |
| 12  | 1            | Lower Spring Guide    | ----        | 2029    | ----      | 2029     |        |
| 13  | 1            | Upper Spring Guide    | 2104        | 1888    | 2104      | 1888     |        |
| 14  | 1            | Adjusting Screw       | 100         | 6911    | 100       | 6911     |        |
| 15  | 1            | Nut                   | 101         | 1897    | 101       | 1897     |        |
| 16  | 1            | Spring                | 6999        | 2013    | 6999      | 2013     |        |
| 17  | 2            | Lifting Ring          | ----        | 7559    | ----      | 7559     |        |
| 18  | 1            | Upper Diaphragm Plate | 731         | 732     | 731 ‡     | 732 ‡    |        |
| 19  | 1            | Lower Housing         | 142         | 1704    | 142 ‡     | 1704 ‡   |        |
| 20  | 2            | Back Up *             | 148T        | 149T    | 148T      | 149T     |        |
| 21  | 1            | O-Ring *              | 153         | 154     | 153       | 154      |        |
| 22  | 1            | Gasket *              | ----        | 276     | ----      | 276      |        |
| 23  | 1            | Standard Ratio Plug   | 176SS6      | 177SS6  | 176SS6    | 177SS6   |        |
|   |              | Reduced Ratio Plug    | 1346        | 708     | 1346SS6   | 708SS6   |        |
| 24  | 1            | Std. Removable Seat   | ----        | 272K    | ----      | 2496SS6K |        |
|   |              | Red. Removable Seat   | 1349        | 706D    | 1349SS6   | 706SS6   |        |
| 25  | 1            | Body                  |             |         |           |          |        |
|   |              | NPT Thru              | Std.        | 2033    | 1709      | 2343 ‡   | 1709 ‡ |
|   |              |                       | Red.        | 2343    | ----      | 2343     | ----   |
|   |              | 150RF Thru            |             | ----    | 1913      | ----     | 1913 ‡ |
| Grooved Thru  |              | ----                  | 2964        | ----    | 2964 ‡    |          |        |
| ‡ Coated Parts available with "K" service type                            |              |                       |             |         |           |          |        |
| Repair Kits   | Full Port    |                       | RNQ         | RNU     | RNQHSN    | RNUHSN   |        |
|   | Reduced Port |                       | RHE         | ROI     | RHEHSN    | ROIHSN   |        |
| * These parts are recommended spare parts and are stocked as repair kits. |              |                       |             |         |           |          |        |

| <b>Table 1 - Flow Coefficient(Cv) at % stem travel for Pilot Operated Regulators</b> |             |                          |      |      |       |       |       |       |       |       |       |
|--|-------------|--------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|
| <b>1" Pressure Regulator</b>   |             |                          |      |      |       |       |       |       |       |       |       |
| Trim Size<br>in. (mm)  | Cf          | Valve Opening Percentage |      |      |       |       |       |       |       |       |       |
|  |             | 10                       | 20   | 30   | 40    | 50    | 60    | 70    | 80    | 90    | 100   |
| <b>1/2 in (12mm) Reduced</b>   | <b>0.75</b> | 0.4                      | 0.7  | 0.9  | 1.3   | 1.8   | 2.5   | 3.2   | 3.9   | 4.5   | 5     |
| <b>1 in (25mm) Full Port</b>   | <b>0.74</b> | 1.1                      | 1.8  | 2.4  | 3.4   | 4.8   | 6.6   | 8.5   | 10.2  | 11.9  | 13.2  |
| <b>2" Pressure Regulator</b>   |             |                          |      |      |       |       |       |       |       |       |       |
| Trim Size<br>in. (mm)  | Cf          | Valve Opening Percentage |      |      |       |       |       |       |       |       |       |
|  |             | 10                       | 20   | 30   | 40    | 50    | 60    | 70    | 80    | 90    | 100   |
| <b>1 1/4 in (31 mm) Reduced</b>  | <b>0.75</b> | 1.8                      | 2.8  | 3.9  | 5.4   | 7.7   | 10.5  | 13.6  | 16.2  | 19.0  | 21.0  |
| <b>2 in Removable Full Port *</b>  | <b>0.84</b> | 4.0                      | 6.2  | 8.6  | 12.1  | 17.2  | 23.5  | 30.4  | 36.3  | 42.5  | 47.0  |
| <b>2 in (50 mm) Full Port *</b>  | <b>0.75</b> | 4.4                      | 6.9  | 9.5  | 13.4  | 19.1  | 26.0  | 33.6  | 40.2  | 47.0  | 52.0  |
| <b>3" Pressure Regulator</b>   |             |                          |      |      |       |       |       |       |       |       |       |
| Trim Size<br>in. (mm)  | Cf          | Valve Opening Percentage |      |      |       |       |       |       |       |       |       |
|  |             | 10                       | 20   | 30   | 40    | 50    | 60    | 70    | 80    | 90    | 100   |
| <b>1 5/8 in (66 mm) Reduced</b>  | <b>0.82</b> | 2.9                      | 4.5  | 6.2  | 8.8   | 12.5  | 17.0  | 22.0  | 26.3  | 30.7  | 34.0  |
| <b>3 in (76 mm) Full Port</b>  | <b>0.75</b> | 9.9                      | 15.6 | 21.5 | 30.2  | 42.9  | 58.6  | 75.7  | 90.4  | 105.7 | 117.0 |
| <b>4" Pressure Regulator</b>   |             |                          |      |      |       |       |       |       |       |       |       |
| Trim Size<br>in. (mm)  | Cf          | Valve Opening Percentage |      |      |       |       |       |       |       |       |       |
|  |             | 10                       | 20   | 30   | 40    | 50    | 60    | 70    | 80    | 90    | 100   |
| <b>2 in (50 mm) Reduced</b>  | <b>0.80</b> | 4.7                      | 7.3  | 10.1 | 14.2  | 20.2  | 27.5  | 35.6  | 42.5  | 49.7  | 55.0  |
| <b>4 in (100 mm) Full Port</b>   | <b>0.75</b> | 17.8                     | 27.9 | 38.6 | 54.2  | 77.0  | 105.2 | 135.9 | 162.2 | 189.8 | 210.0 |
| <b>6" Pressure Regulator</b>   |             |                          |      |      |       |       |       |       |       |       |       |
| Trim Size<br>in. (mm)  | Cf          | Valve Opening Percentage |      |      |       |       |       |       |       |       |       |
|  |             | 10                       | 20   | 30   | 40    | 50    | 60    | 70    | 80    | 90    | 100   |
| <b>3 in (76 mm) Reduced</b>  | <b>0.80</b> | 10.2                     | 16.0 | 22.0 | 30.9  | 44.0  | 60.1  | 77.7  | 92.7  | 108.4 | 120.0 |
| <b>6 in (152 mm) Full Port</b>   | <b>0.75</b> | 40.6                     | 63.8 | 88.1 | 123.8 | 176.0 | 240.4 | 310.6 | 370.7 | 433.7 | 480.0 |

Kimray flow equations conform to ANSI/ISA - 75.01.01-2002  
 Kimray inherent flow characteristics conform to ANSI/ISA 75.11.01 -1985



| LINE SIZE | BODY TYPE | A        | B       | C      | D     | E     | F      | G     | H      |
|-----------|-----------|----------|---------|--------|-------|-------|--------|-------|--------|
| 1"        | FNPT      | 4 3/8"   | 1 1/8"  | ----   | 2 3/4 | 3 3/8 | 3 3/8  | 3 3/8 | 8      |
| 2"        | FNPT      | 8 1/2"   | 2 1/8"  | ----   | 4 3/8 | 5 7/8 | 6 7/8  | 6 7/8 | 18 1/2 |
|           | Flanged   | 9"       | ----    | 3"     | 4 3/8 | 5 7/8 | 6 7/8  | 6 7/8 | 18 1/2 |
|           | Grooved   | 8 3/4"   | 2 1/8"  | ----   | 4 3/8 | 5 7/8 | 6 7/8  | 6 7/8 | 18 1/2 |
| 3"        | FNPT      | 12 1/16" | 3 1/16" | ----   | 5 7/8 | 8     | 8      | 8     | 20     |
|           | Flanged   | 12 3/16" | ----    | 3 3/4" | 5 7/8 | 8     | 8      | 8     | 20     |
| 4"        | FNPT      | 15" 1/16 | 4"      | ----   | 7 1/2 | 9 3/4 | 9 1/2  | 9 1/2 | ----   |
|           | Flanged   | 15 1/16" | ----    | 4 1/2" | 7 1/2 | 9 3/4 | 9 1/2  | 9 1/2 | ----   |
| 6"        | Flanged   | 22"      | ----    | 5 1/2" | 11    | 16    | 15 1/4 | ----  | ----   |

FLANGE DIMENSIONS ARE ANSI 125/150 STANDARD.

All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.

| Table 5 - Seal Options |                   |                   |
|------------------------|-------------------|-------------------|
| Part                   | Standard Material | Optional Material |
| Seat                   | HSN               | FKM, AFLAS®       |
| O-rings                | HSN               | FKM, AFLAS®       |
| Diaphragm              | HSN               | FKM, AFLAS®       |

| Table 6 - Seal Specifications                |                  |                          |                |                |
|--|------------------|--------------------------|----------------|----------------|
|  |                  | HIGHLY SATURATED NITRILE | FKM            | AFLAS®         |
| Kimray Suffix                                |                  | HSN                      | V              | AF             |
| Resistance                                   | Abrasion         | G-E                      | G              | G              |
|  | Acid             | G-E                      | G-E            | E              |
|  | Chemical         | F                        | E              | E              |
|  | Cold             | G                        | P              | P              |
|  | Flame            | P                        | E              | E              |
|  | Heat             | E                        | E              | E              |
|  | Oil              | E                        | E              | E              |
|  | Ozone            | G                        | G-E            | E              |
|  | Set              | G                        | G-E            | P              |
|  | Tear             | F                        | F              | P              |
|  | Water/Steam      | E                        | P              | G              |
|  | Weather          | G                        | E              | E              |
|  | CO2              | G                        | G              | G              |
|  | H2S              | F                        | P              | E              |
| Methanol                                     | E                | P                        | P              |                |
| Properties                                   | Dynamic          | G                        | G              | G              |
|  | Electrical       | F                        | F              | G-E            |
|  | Impermeability   | G                        | G              | G              |
|  | Tensile Strength | G-E                      | G              | F              |
| Temp. Range                                  |                  | -20° to +250°F           | -15° to +400°F | +15° to +450°F |
|  |                  | -29° to +121°C           | -26° to +204°C | -9° to +232°C  |
| RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT |                  |                          |                |                |

| <b>Table 7 - Material Options</b> |                   |                          |                                |                                  |
|-----------------------------------|-------------------|--------------------------|--------------------------------|----------------------------------|
| <b>Part Description</b>           | <b>Valve Size</b> | <b>Standard Material</b> | <b>Erosive Material</b>        | <b>Corrosive Material</b>        |
| Body                              | 1" thru 6"        |                          | Ductile (ASTM A395)            | Ductile (ASTM A395) with Kimcoat |
| Stem                              | 1" thru 6"        |                          | 303SS (ASTM A582)              | 316SS (ASTM A479)                |
| Ratio Plug                        | 1" & 2"           |                          | 316 Powdered Metal SS-316NI-25 |                                  |
|                                   | 3"                |                          | Powdered Metal F-008           | 316SS (ASTM A479)                |
|                                   | 4" & 6"           |                          | Ductile (ASTM A395)            | 316SS (ASTM A479)                |
| Reduced Ratio Plug                | 1"                |                          | 316 Powdered Metal SS-316NI-25 |                                  |
|                                   | 2"                |                          | Alloy Steel (ASTM A108)        | 316SS (ASTM A479)                |
|                                   | 3"                |                          | 316SS (ASTM A479)              |                                  |
|                                   | 4" & 6"           |                          | Ductile (ASTM A395)            | 316SS (ASTM A479)                |
| Seat Disc                         | 1"                |                          | Powdered Metal F-0008-30       | 316SS (ASTM A479)                |
|                                   | 2", 3" & 4"       |                          | Ductile (ASTM A395)            | 316SS6 (ASTM A351 CF8M)          |
|                                   | 6"                |                          | Ductile (ASTM A395)            | 316SS (ASTM A 240)               |
| Removable Seat                    | 1" thru 6"        |                          | Ductile (ASTM A395)            | 316SS6 (ASTM A351 CF8M)          |

| Valve Size Inches:              | Full Inner Valve |       |        |        |        | Reduced Inner Valve |       |       |       |        |        |
|---------------------------------|------------------|-------|--------|--------|--------|---------------------|-------|-------|-------|--------|--------|
|                                 | 1                | 2     | 3      | 4      | 6      | 1                   | 2     | 3     | 4     | 6      |        |
| Pressure Drop Across Valve psig | 1                | 105   | 745    | 1,760  | 3,350  | 7,800               | 26    | 290   | 515   | 835    | 1,950  |
|                                 | 2                | 150   | 1,060  | 2,500  | 4,900  | 11,000              | 37    | 410   | 735   | 1,225  | 2,750  |
|                                 | 3                | 180   | 1,300  | 3,050  | 6,100  | 13,500              | 45    | 510   | 895   | 1,525  | 3,370  |
|                                 | 4                | 210   | 1,500  | 3,500  | 7,000  | 15,600              | 52    | 590   | 1,025 | 1,750  | 3,900  |
|                                 | 5                | 235   | 1,700  | 3,900  | 7,800  | 17,500              | 59    | 660   | 1,140 | 1,950  | 4,375  |
|                                 | 10               | 330   | 2,300  | 5,600  | 11,000 | 24,700              | 82    | 900   | 1,640 | 2,750  | 6,175  |
|                                 | 15               | 405   | 2,900  | 6,800  | 13,500 | 30,200              | 101   | 1,130 | 2,000 | 3,370  | 7,550  |
|                                 | 20               | 465   | 3,300  | 7,900  | 15,600 | 34,900              | 116   | 1,290 | 2,320 | 3,900  | 8,725  |
|                                 | 30               | 575   | 4,100  | 9,600  | 19,200 | 42,700              | 145   | 1,600 | 2,820 | 4,800  | 10,675 |
|                                 | 40               | 660   | 4,700  | 11,100 | 22,100 | 49,300              | 165   | 1,840 | 3,260 | 5,500  | 12,300 |
|                                 | 50               | 740   | 5,300  | 12,400 | 24,800 | 55,200              | 185   | 2,070 | 3,640 | 6,200  | 13,800 |
|                                 | 60               | 810   | 5,800  | 13,600 | 27,100 | 60,500              | 200   | 2,260 | 4,000 | 6,750  | 15,100 |
|                                 | 70               | 875   | 6,200  | 14,700 | 29,300 | 65,400              | 220   | 2,420 | 4,300 | 7,300  | 16,350 |
|                                 | 80               | 935   | 6,700  | 15,700 | 31,300 | 69,800              | 230   | 2,620 | 4,600 | 7,800  | 17,450 |
| 100                             | 1,045            | 7,500 | 17,600 | 33,500 | 78,200 | 260                 | 2,940 | 5,150 | 8,350 | 19,500 |        |
| 125                             | 1,170            | 8,400 | 19,700 | 38,200 | 87,500 | 290                 | 3,280 | 5,750 | 9,800 | 21,900 |        |

| Valve Size Inches:              | Full Inner Valve |        |        |        |         | Reduced Inner Valve |       |        |        |        |        |
|---------------------------------|------------------|--------|--------|--------|---------|---------------------|-------|--------|--------|--------|--------|
|                                 | 1                | 2      | 3      | 4      | 6       | 1                   | 2     | 3      | 4      | 6      |        |
| Pressure Drop Across Valve psig | 1                | 405    | 1,520  | 3,150  | 5,830   | 13,150              | 101   | 740    | 1,080  | 1,650  | 3,740  |
|                                 | 2                | 573    | 2,150  | 4,460  | 8,250   | 18,600              | 143   | 1,040  | 1,525  | 2,340  | 5,330  |
|                                 | 3                | 702    | 2,630  | 5,450  | 10,700  | 22,800              | 175   | 1,280  | 1,860  | 2,860  | 6,530  |
|                                 | 4                | 810    | 3,040  | 6,300  | 11,700  | 26,300              | 200   | 1,475  | 2,150  | 3,300  | 7,550  |
|                                 | 5                | 905    | 3,400  | 7,030  | 13,100  | 29,400              | 225   | 1,650  | 2,400  | 3,700  | 8,400  |
|                                 | 10               | 1,280  | 4,800  | 9,980  | 18,500  | 41,700              | 320   | 2,330  | 3,400  | 5,250  | 11,950 |
|                                 | 15               | 1,570  | 5,880  | 12,200 | 22,600  | 50,900              | 390   | 2,875  | 4,150  | 6,400  | 14,600 |
|                                 | 20               | 1,810  | 6,800  | 14,100 | 26,100  | 58,800              | 450   | 3,300  | 4,800  | 7,400  | 16,850 |
|                                 | 30               | 2,220  | 8,320  | 17,300 | 31,900  | 72,000              | 555   | 4,050  | 5,900  | 9,050  | 20,600 |
|                                 | 40               | 2,560  | 9,600  | 19,900 | 36,900  | 83,100              | 640   | 4,650  | 6,800  | 10,500 | 23,800 |
|                                 | 50               | 2,860  | 10,750 | 22,300 | 41,300  | 93,000              | 710   | 5,200  | 7,600  | 11,700 | 26,600 |
|                                 | 60               | 3,130  | 11,780 | 24,400 | 45,200  | 102,000             | 780   | 5,700  | 8,350  | 12,800 | 29,200 |
|                                 | 70               | 3,380  | 12,700 | 26,400 | 48,800  | 110,000             | 845   | 6,150  | 9,000  | 13,800 | 31,500 |
|                                 | 80               | 3,620  | 13,600 | 28,200 | 52,100  | 117,500             | 905   | 6,600  | 9,650  | 14,800 | 33,600 |
| 100                             | 4,050            | 15,200 | 31,500 | 58,300 | 131,500 | 1,010               | 7,375 | 10,800 | 16,500 | 37,400 |        |
| 125                             | 4,520            | 16,900 | 35,200 | 65,100 | 147,000 | 1,105               | 8,200 | 12,000 | 18,450 | 42,000 |        |

| Valve Size Inches:              | Full Inner Valve |       | Reduced Inner Valve |   |
|---------------------------------|------------------|-------|---------------------|---|
|                                 | 1                | 2     | 1                   | 2 |
| Pressure Drop Across Valve psig | 1                |       | 101                 |   |
|                                 | 2                |       | 143                 |   |
|                                 | 3                |       | 175                 |   |
|                                 | 4                |       | 200                 |   |
|                                 | 5                |       | 225                 |   |
|                                 | 10               |       | 320                 |   |
|                                 | 15               |       | 390                 |   |
|                                 | 20               |       | 450                 |   |
|                                 | 30               |       | 555                 |   |
|                                 | 40               |       | 640                 |   |
|                                 | 50               |       | 710                 |   |
|                                 | 60               |       | 780                 |   |
|                                 | 70               |       | 845                 |   |
|                                 | 80               |       | 905                 |   |
| 100                             |                  | 1,010 |                     |   |
| 125                             |                  | 1,105 |                     |   |

For gravity correction, multiply the above figures by  $\sqrt{\frac{1}{G}}$   
 Where "G" is the specific gravity of the flowing liquid.



# LOW PRESSURE CONTROL VALVES



## CODE BUILDER B SERIES

Series:

**B = Low Pressure Control Valve**

Model:

**RA = Reverse Acting**  
**DA = Direct Acting**  
**AA = Adjustable Direct Acting**

Line Size:

**1 = 1 NPS**  
**2 = 2 NPS**  
**3 = 3 NPS (RA & DA only)**  
**4 = 4 NPS (RA & DA only)**  
**6 = 6 NPS (RA & DA only)**

End Connection:

**SA = FNPT**  
**AR = 150RF Flange**  
**GV = Grooved (2 NPS only)**

Shell Material:

**D = Ductile Iron**

Inner Valve Size:

**F = Full Port**  
**R = Reduced Port**

Service Type:

**S = Standard**  
**C = Corrosive**  
**K = Corrosive with Coated Shell Components**

**B RA 2 SA D F S**

Options: Additional cost and lead times will apply  
If multiple options required input in sequential order  
Leave blank if no options required

**1 = NACE Certification (Corrosive Option Only)**  
**2 = Hydrostatic Test Certification**  
**3 = MTR (Shell Components)**  
**A = AFLAS Elastomers**  
**H = HSN Elastomers**  
**V = FKM Elastomers**  
**X = Export (Hydrostatic test, MTR & 3.1)**

Not all selections available on all products listed.  
See product pages 02:10.1 - 02:30.3 for available options