

# Masoneilan\* Pressure Regulators Steam, Gas or Liquid Service Models 525 and 526

Pressure Reducing, Back Pressure  
and Differential Pressure Control



imagination at work



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## Features

The Masoneilan Models 525 and 526 double seated regulators from GE are designed to handle a wide variety of process pressure control applications. Construction features have been carefully selected to provide optimum performance. Those include:

### Top and Bottom Guiding

A well accepted industry standard particularly suited for double seated plugs to provide adequate support against side loads.

### High Capacity with Low Recovery

Flow capacity is at top levels for contemporary double seated regulators and is attained with very little pressure recovery as indicated by a high critical flow factor.

### Reduced Capacity Trim

0.4 Factor Trim - the most practical double seated trim design giving a substantial reduction in capacity while maintaining desirable flow characteristics.

## High Performance Materials

Materials of construction have been selected for high performance and long life when handling the high pressure drop capabilities of the valve.

## High Temperature Applications

For temperatures over the rating of the diaphragm material, the regulator must be mounted with the actuator below the centerline of the regulator body. The diaphragm will be protected from the high temperature by a condensate barrier in the sensing line and actuator diaphragm case. If installed otherwise, an adequate condensate barrier must be incorporated. Consult factory for more information.

## Configurations

Models 525 and 526 Regulators are designed for use with the 10900 Series Actuators for reducing, back pressure and differential pressure applications. Refer to Specification Data CY10900 for actuator selection. The following pages provide the necessary technical information required to specify the Models 525 and 526 regulators.

# General Data

## Function

|                                |        |
|--------------------------------|--------|
| Pressure Reducing              | 525    |
| Differential Pressure Reducing | 525-50 |
| Back Pressure                  | 526    |
| Differential Back Pressure     | 526-50 |

## Bonnet

|       |                              |
|-------|------------------------------|
| Type: | Bolted, Standard             |
|       | Bolted, Extension - Optional |

## Service

Steam, Gas, Liquids

## Trim

|                 |  |
|-----------------|--|
| Plug Type:      | Disc                                     |
| Seat Ring:      | Threaded                                 |
| Guide:          | Heavy Top and Bottom Guided              |
| Capacity:       | Full Area, Reduced Capacity in All Sizes |
| Characteristic: | Quick Opening                            |

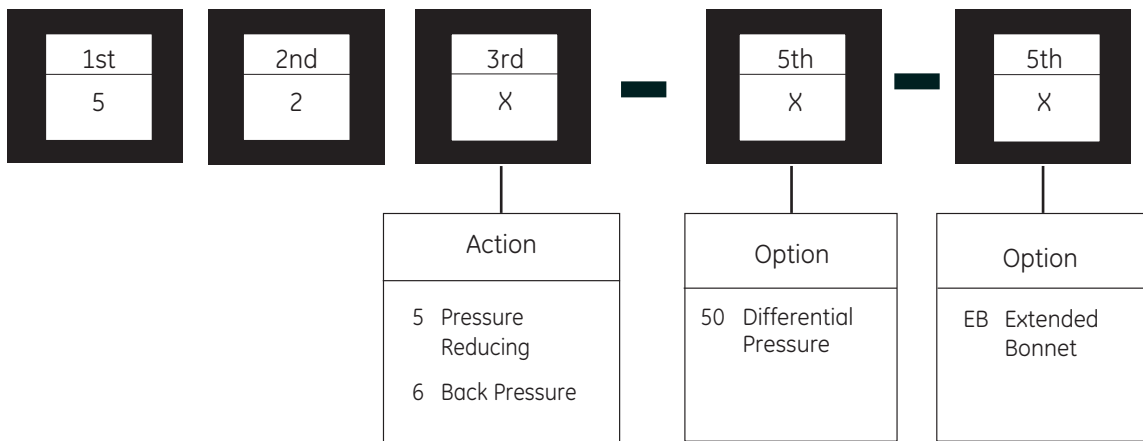
## Body

Type: High Capacity Globe with Double Seated Top and Bottom Guided Plug

## Actuator

Type: 10900 Spring Diaphragm

# Numbering System



# Body Ratings and End Connections

## 525 / 526 Double Seat Regulators:

- Flange Connections according to: ASME Class 150, 300 and 600  
ISO PN 20, 50 and 100  
DIN PN 16, 25 and 40 (Face to Face according to ANSI 300)
- Socket Weld ends for sizes ≤ 2"
- NPT Threaded for sizes ≤ 2"

n RF Flanged
Δ RT Joint
n Butt Weld
m Socket Weld
| Threaded

| Valve Size |     | ASME Class and Equivalent PN |         |         |
|------------|-----|------------------------------|---------|---------|
| inches     | mm  | 150                          | 300     | 600     |
| ¾          | 20  | n Δ   m                      | n Δ   m | n Δ   m |
| 1          | 25  | n Δ   m                      | n Δ   m | n Δ   m |
| 1 ½        | 40  | n Δ   m                      | n Δ   m | n Δ   m |
| 2          | 50  | n Δ   m                      | n Δ   m | n Δ   m |
| 3          | 80  | n Δ                          | n Δ     | n Δ     |
| 4          | 100 | n Δ                          | n Δ     | n Δ     |

# Standard Trim Materials

| Type     | Plug                     | Seat Ring                |
|----------|--------------------------|--------------------------|
| Standard | 316 St. St.              | 316 St. St.              |
| Hard     | 316 St. St. w/hardfacing | 316 St. St. w/hardfacing |

Other options available on request. Please consult factory.

## Bonnet Packing

Packing Options 525 / 526 and 525 / 526EB

Body Ratings: ANSI Class 150 to 600

| Ref. No. | Temperature Range |                  | -20°F                             | 450°F | 650°F |
|----------|-------------------|------------------|-----------------------------------|-------|-------|
|          | Description       |                  | Materials                         |       |       |
| 17       | Packing           | Standard Bonnet  | Carbon Core/PTFE jacketed packing |       |       |
|          | Packing           | Extension Bonnet | Carbon Core/PTFE jacketed packing |       |       |
| Ref. No. | Temperature Range |                  | -29°C                             | 232°C | 343°C |

## Flow Coefficients - $C_v$

Model: 525 / 526

Ratings: ANSI Class 150, 300, 600

|    | Orifice Differential Area (mm <sup>2</sup> ) |      |           |   |      | 3.19        | 3.05 | 3.14 | 3.08 | 3.08 | 4.45              | 4.34 | 4.48              | 4.52               |  |  |
|----|--|------|-----------|---|------|-------------|------|------|------|------|-------------------|------|-------------------|--------------------|--|--|
|    | Travel                                       |      | Stem Size |   |      | Rated $C_v$ |      |      |      |      |                   |      |                   |                    |  |  |
|    | (mm)   |      | (inches)  |   |      | (mm)        |      |      |      |      |                   |      |                   |                    |  |  |
| ¾  | 20   | 0.26 | 9.05      | ⅜ | 0.36 | 3.6         | 6    |      |      |      |                   |      |                   |                    |  |  |
| 1  | 25   | 0.26 | 9.05      | ⅜ | 0.36 | 3.6         | 6    | 9    |      |      |                   |      |                   |                    |  |  |
| 1½ | 40   | 0.26 | 9.05      | ⅜ | 0.36 |             |      | 8.4  | 14   | 21   |                   |      |                   |                    |  |  |
| 2  | 50   | 0.26 | 9.05      | ⅜ | 9.53 |             |      |      | 14.4 | 21   | 36 <sup>(1)</sup> |      |                   |                    |  |  |
| 3  | 80   | 0.26 | 9.05      | ½ | 12.7 |             |      |      |      |      | 30 <sup>(1)</sup> | 54   | 75 <sup>(1)</sup> |                    |  |  |
| 4  | 100  | 0.26 | 9.05      | ½ | 12.7 |             |      |      |      |      |                   | 50   | 75                | 125 <sup>(1)</sup> |  |  |

(1) For regulator with a size 3½ actuator, ranges 150-450 psi or 150-300 psi or 400-750 psi, the  $C_v$  is limited to 60% of the nominal rating: 18 instead of 30, 21.6 instead of 36, 45 instead of 75, 75 instead of 125.

# Regulator Capacity

Model 525 Series Pressure Reducing Regulator Capacity<sup>(1)</sup>

Model 526 Series Back Pressure Regulator Capacity<sup>(1)</sup>

Saturated Steam (lb/hr)

| Inlet Pressure<br>psig | Outlet Pressure<br>psig | RatedC <sub>v</sub> |      |      |       |       |       |
|------------------------|-------------------------|---------------------|------|------|-------|-------|-------|
|                        |                         | 6                   | 9    | 21   | 36    | 75    | 125   |
| 30                     | ½-10                    | 500                 | 780  | 1710 | 2930  | 6100  | 10100 |
|                        | 20                      | 360                 | 540  | 1250 | 2100  | 4450  | 7400  |
| 50                     | ½-20                    | 710                 | 1090 | 2500 | 4270  | 8900  | 14600 |
|                        | 30                      | 605                 | 890  | 2100 | 3550  | 7350  | 12500 |
|                        | 40                      | 440                 | 670  | 1550 | 2600  | 5500  | 9100  |
| 60                     | ½-25                    | 820                 | 1220 | 2930 | 4900  | 10100 | 17100 |
|                        | 40                      | 655                 | 980  | 2250 | 3900  | 8050  | 13500 |
|                        | 50                      | 470                 | 720  | 1550 | 2800  | 5850  | 97500 |
| 75                     | ½-30                    | 980                 | 1460 | 3420 | 5850  | 12200 | 20800 |
|                        | 50                      | 785                 | 1200 | 2700 | 4650  | 9700  | 16000 |
|                        | 60                      | 635                 | 945  | 2200 | 3750  | 7800  | 13000 |
| 100                    | ½-50                    | 1220                | 1890 | 4450 | 7550  | 15800 | 26900 |
|                        | 60                      | 1100                | 1650 | 3850 | 6550  | 14000 | 23000 |
|                        | 80                      | 810                 | 1200 | 2800 | 4800  | 10200 | 16500 |
| 125                    | ½-60                    | 1520                | 2380 | 5500 | 9150  | 19500 | 31800 |
|                        | 80                      | 1300                | 2000 | 4500 | 7700  | 16000 | 27000 |
|                        | 100                     | 1000                | 1500 | 3550 | 6050  | 12500 | 21000 |
| 150                    | ½-70                    | 1830                | 2750 | 6350 | 11000 | 23200 | 37800 |
|                        | 100                     | 1500                | 2250 | 5150 | 8750  | 18500 | 30500 |
|                        | 125                     | 1150                | 1600 | 3750 | 6400  | 13500 | 23000 |
| 160                    | ½-80                    | 1950                | 2900 | 6800 | 11500 | 24500 | 40000 |
|                        | 100                     | 1650                | 2500 | 5700 | 10000 | 20500 | 34500 |
|                        | 120                     | 1380                | 2100 | 4800 | 8100  | 17200 | 28500 |
|                        | 140                     | 1070                | 1650 | 3900 | 6550  | 14000 | 23000 |
| 175                    | ½-90                    | 2100                | 3150 | 7300 | 12200 | 27000 | 44000 |
|                        | 100                     | 1900                | 2850 | 6600 | 11000 | 24000 | 40000 |
|                        | 125                     | 1600                | 2400 | 5600 | 9700  | 20000 | 33000 |
|                        | 160                     | 910                 | 1420 | 3240 | 5500  | 11600 | 19200 |
| 200                    | ½-100                   | 2450                | 3650 | 8550 | 14500 | 30500 | 50000 |
|                        | 125                     | 2000                | 3100 | 7250 | 12000 | 25500 | 42500 |
|                        | 160                     | 1550                | 2350 | 5450 | 9400  | 18500 | 32500 |
| 225                    | ½-120                   | 2700                | 4250 | 9400 | 16000 | 33500 | 56000 |
|                        | 160                     | 2050                | 3100 | 7200 | 12500 | 26000 | 43000 |
| 250                    | ½-130                   | 2900                | 4500 | 1000 | 17000 | 36500 | 61000 |
|                        | 160                     | 2450                | 3750 | 8500 | 14400 | 30500 | 51000 |

(1) Regulator Capacity Tables are included to provide convenience on common applications and are not intended to establish application limitations. If your particular service conditions are not listed in the Regulator Capacity Tables, calculate the required C<sub>v</sub> for selecting the optimum regulator size.

# Regulator Capacity

Model 525 Series Pressure Reducing Regulator Capacity<sup>(1)</sup>

Model 526 Series Back Pressure Regulator Capacity<sup>(1)</sup>

Saturated Steam (kg/hr)

| Inlet Pressure barg | Outlet Pressure barg | Rated C <sub>v</sub> |      |      |      |       |       |
|---------------------|----------------------|----------------------|------|------|------|-------|-------|
|                     |                      | 6                    | 9    | 21   | 36   | 75    | 125   |
| 2.1                 | 0.03-0.7             | 227                  | 354  | 776  | 1329 | 2767  | 4581  |
|                     | 1.4                  | 163                  | 245  | 567  | 953  | 2018  | 3357  |
| 3.4                 | 0.03-1.4             | 322                  | 494  | 1134 | 1937 | 4037  | 6622  |
|                     | 2.1                  | 274                  | 404  | 953  | 1610 | 3334  | 5670  |
|                     | 2.8                  | 200                  | 304  | 703  | 1179 | 2495  | 4128  |
| 4.1                 | 0.03-1.7             | 372                  | 553  | 1329 | 2223 | 4581  | 7756  |
|                     | 2.8                  | 297                  | 445  | 1021 | 1769 | 3651  | 6123  |
|                     | 3.4                  | 213                  | 3237 | 703  | 1270 | 2654  | 4423  |
| 5.2                 | 0.03-2.1             | 445                  | 662  | 1551 | 2654 | 5534  | 9435  |
|                     | 3.4                  | 356                  | 544  | 1225 | 2109 | 4400  | 7257  |
|                     | 4.1                  | 288                  | 429  | 998  | 1701 | 3538  | 5897  |
| 6.9                 | 0.03-3.4             | 553                  | 857  | 2018 | 3425 | 7167  | 12202 |
|                     | 4.1                  | 499                  | 748  | 1746 | 2971 | 6350  | 10433 |
|                     | 5.5                  | 367                  | 544  | 1270 | 2177 | 4627  | 7484  |
| 8.6                 | 0.03-4.1             | 689                  | 1080 | 2495 | 4150 | 8845  | 14424 |
|                     | 5.5                  | 590                  | 907  | 2041 | 3493 | 7257  | 12247 |
|                     | 6.9                  | 454                  | 680  | 1610 | 2744 | 5670  | 9525  |
| 10.3                | 0.03-4.8             | 830                  | 1247 | 2880 | 4990 | 10523 | 17146 |
|                     | 6.9                  | 680                  | 1021 | 2336 | 3969 | 8391  | 13835 |
|                     | 8.6                  | 522                  | 726  | 1701 | 2903 | 6123  | 10433 |
| 11.0                | 0.03-5.5             | 885                  | 1315 | 3084 | 5216 | 11113 | 18144 |
|                     | 6.9                  | 748                  | 1134 | 2585 | 4536 | 9299  | 15649 |
|                     | 8.3                  | 626                  | 953  | 2177 | 3674 | 7802  | 12927 |
|                     | 9.7                  | 485                  | 748  | 1769 | 2971 | 6350  | 10433 |
| 12.1                | 0.03-6.2             | 953                  | 1429 | 3311 | 5534 | 12247 | 19958 |
|                     | 6.9                  | 862                  | 1293 | 2994 | 4990 | 10886 | 18144 |
|                     | 8.6                  | 726                  | 1089 | 2540 | 4400 | 9072  | 14969 |
|                     | 11                   | 413                  | 644  | 1470 | 2495 | 5262  | 8709  |
| 13.8                | 0.03-6.9             | 1111                 | 1656 | 3878 | 6577 | 13835 | 22680 |
|                     | 8.6                  | 907                  | 1406 | 3289 | 5443 | 11567 | 19278 |
|                     | 11                   | 703                  | 1066 | 2472 | 4264 | 8391  | 14742 |
| 15.5                | 0.03-8.3             | 1225                 | 1928 | 4264 | 7257 | 15195 | 25401 |
|                     | 11                   | 930                  | 1406 | 3266 | 5670 | 11793 | 19504 |
| 17.2                | 0.03-9.0             | 1315                 | 2041 | 4536 | 7711 | 16556 | 27669 |
|                     | 11                   | 1111                 | 1701 | 3856 | 6532 | 13835 | 23133 |

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# Regulator Capacity

Model 525 Series Pressure Reducing Regulator Capacity<sup>(1)</sup>

Model 526 Series Back Pressure Regulator Capacity<sup>(1)</sup>

Saturated Steam (scfm)

| Inlet Pressure psig | Outlet Pressure psig | Rated C <sub>v</sub> |      |      |      |       |       |
|---------------------|----------------------|----------------------|------|------|------|-------|-------|
|                     |                      | 6                    | 9    | 21   | 36   | 75    | 125   |
| 30                  | ½-10                 | 165                  | 255  | 570  | 980  | 2020  | 3450  |
|                     | 20                   | 120                  | 175  | 425  | 705  | 1500  | 2950  |
| 50                  | ½-20                 | 245                  | 365  | 810  | 1410 | 2940  | 5000  |
|                     | 30                   | 200                  | 295  | 695  | 1180 | 2480  | 4200  |
|                     | 40                   | 150                  | 225  | 510  | 880  | 1800  | 3100  |
| 60                  | ½-25                 | 275                  | 405  | 950  | 1620 | 3350  | 5700  |
|                     | 40                   | 215                  | 320  | 715  | 1250 | 2600  | 4400  |
|                     | 50                   | 155                  | 240  | 545  | 940  | 2000  | 3250  |
| 75                  | ½-30                 | 325                  | 500  | 1160 | 2000 | 4150  | 6800  |
|                     | 50                   | 2260                 | 385  | 935  | 1580 | 3300  | 5400  |
|                     | 60                   | 210                  | 315  | 725  | 1300 | 2650  | 4300  |
| 100                 | ½-50                 | 425                  | 650  | 1490 | 2490 | 5250  | 8450  |
|                     | 60                   | 370                  | 560  | 1350 | 2250 | 4650  | 7800  |
|                     | 80                   | 270                  | 415  | 950  | 1600 | 3450  | 5700  |
| 125                 | ½-60                 | 520                  | 770  | 1810 | 3050 | 6500  | 10800 |
|                     | 80                   | 440                  | 660  | 1500 | 2550 | 5500  | 9150  |
|                     | 100                  | 350                  | 520  | 1250 | 2100 | 4350  | 7300  |
| 150                 | ½-70                 | 610                  | 935  | 2140 | 3680 | 7750  | 12800 |
|                     | 100                  | 500                  | 765  | 1750 | 2850 | 3650  | 10500 |
|                     | 125                  | 370                  | 540  | 1250 | 2150 | 4550  | 7550  |
| 160                 | ½-80                 | 650                  | 975  | 2350 | 3850 | 8150  | 13400 |
|                     | 100                  | 555                  | 850  | 1950 | 3350 | 7050  | 11500 |
|                     | 120                  | 460                  | 705  | 1600 | 2750 | 5850  | 9450  |
|                     | 140                  | 340                  | 510  | 1250 | 2050 | 4250  | 7200  |
| 175                 | ½-90                 | 710                  | 1080 | 2450 | 4250 | 8950  | 14600 |
|                     | 100                  | 645                  | 970  | 2250 | 3750 | 8000  | 13000 |
|                     | 125                  | 540                  | 825  | 1900 | 3200 | 6800  | 11500 |
|                     | 160                  | 310                  | 470  | 1100 | 1850 | 4000  | 6600  |
| 200                 | ½-100                | 825                  | 1220 | 2850 | 4900 | 10200 | 16600 |
|                     | 125                  | 705                  | 1050 | 2400 | 4050 | 8550  | 14500 |
|                     | 160                  | 525                  | 800  | 1850 | 3150 | 6650  | 11000 |
| 225                 | ½-120                | 895                  | 1340 | 3050 | 5300 | 11000 | 18600 |
|                     | 160                  | 715                  | 1100 | 2500 | 4300 | 9000  | 14500 |
| 250                 | ½-130                | 975                  | 1460 | 3350 | 5700 | 1200  | 19900 |
|                     | 160                  | 830                  | 1300 | 2950 | 5000 | 10500 | 17000 |

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# Regulator Capacity

Model 525 Series Pressure Reducing Regulator Capacity<sup>(1)</sup>

Model 526 Series Back Pressure Regulator Capacity<sup>(1)</sup>

Air (m<sup>3</sup>/hr)

| Inlet Pressure barg | Outlet Pressure barg | Rated C <sub>v</sub> |      |      |      |       |       |
|---------------------|----------------------|----------------------|------|------|------|-------|-------|
|                     |                      | 6                    | 9    | 21   | 36   | 75    | 125   |
| 2.1                 | 0.03-0.7             | 280                  | 433  | 968  | 1665 | 3432  | 5862  |
|                     | 1.4                  | 204                  | 297  | 722  | 1198 | 2549  | 5012  |
| 3.4                 | 0.03-1.4             | 416                  | 620  | 1376 | 2396 | 4995  | 8495  |
|                     | 2.1                  | 340                  | 501  | 1181 | 2005 | 4214  | 7136  |
|                     | 2.8                  | 255                  | 382  | 866  | 1495 | 3058  | 5267  |
| 4.1                 | 0.03-1.7             | 467                  | 688  | 164  | 2752 | 5692  | 9684  |
|                     | 2.8                  | 365                  | 544  | 1215 | 2124 | 4417  | 7476  |
|                     | 3.4                  | 263                  | 408  | 926  | 1597 | 33998 | 5522  |
| 5.2                 | 0.03-2.1             | 552                  | 850  | 1971 | 3398 | 7051  | 11553 |
|                     | 3.4                  | 442                  | 671  | 1589 | 2684 | 5607  | 9175  |
|                     | 4.1                  | 357                  | 535  | 1232 | 2209 | 4502  | 7306  |
| 6.9                 | 0.03-3.4             | 722                  | 1104 | 2532 | 4231 | 8920  | 14866 |
|                     | 4.1                  | 629                  | 951  | 2294 | 3823 | 7900  | 13252 |
|                     | 5.5                  | 459                  | 705  | 1614 | 2718 | 5862  | 9684  |
| 8.6                 | 0.03-4.1             | 883                  | 1308 | 3075 | 5182 | 11044 | 18349 |
|                     | 5.5                  | 748                  | 1121 | 2549 | 4332 | 9345  | 15546 |
|                     | 6.9                  | 595                  | 883  | 2124 | 3568 | 7391  | 12403 |
| 10.3                | 0.03-4.8             | 1036                 | 1589 | 3636 | 6252 | 13167 | 21747 |
|                     | 6.9                  | 850                  | 1300 | 2973 | 4842 | 10789 | 17840 |
|                     | 8.6                  | 629                  | 917  | 2124 | 3653 | 7731  | 12828 |
| 11.0                | 0.03-5.5             | 1104                 | 1657 | 3993 | 6541 | 13847 | 22767 |
|                     | 6.9                  | 943                  | 1444 | 3313 | 5692 | 11978 | 19539 |
|                     | 8.3                  | 782                  | 1198 | 2718 | 4672 | 9939  | 16565 |
|                     | 9.7                  | 578                  | 866  | 2124 | 3483 | 7221  | 12233 |
| 12.1                | 0.03-6.2             | 1206                 | 1835 | 4163 | 7221 | 15206 | 24806 |
|                     | 6.9                  | 1096                 | 1648 | 3823 | 6371 | 13592 | 22087 |
|                     | 8.6                  | 917                  | 1402 | 3228 | 5437 | 11553 | 19539 |
|                     | 11                   | 527                  | 799  | 1869 | 3143 | 6796  | 11213 |
| 13.8                | 0.03-6.9             | 1385                 | 2073 | 4842 | 8325 | 17330 | 28204 |
|                     | 8.6                  | 1198                 | 1784 | 4079 | 8661 | 14527 | 24636 |
|                     | 11                   | 892                  | 1359 | 3143 | 5352 | 11298 | 18689 |
| 15.5                | 0.03-8.3             | 1521                 | 2277 | 5182 | 9005 | 18689 | 32602 |
|                     | 11                   | 1215                 | 1869 | 4248 | 7306 | 15291 | 24636 |
| 17.2                | 0.03-9.0             | 1657                 | 2481 | 5692 | 9684 | 20728 | 33810 |
|                     | 11                   | 1410                 | 2209 | 5012 | 8495 | 17840 | 28883 |

(1) Regulator Capacity Tables are included to provide convenience on common applications and are not intended to establish limitations. If your particular service conditions are not listed in the Regulator Capacity Tables, calculate the required C<sub>v</sub> for selecting the optimum regulator size.

# Regulator Capacity

Model 525 Series Pressure Reducing Regulator Capacity<sup>(1)</sup>

Model 526 Series Back Pressure Regulator Capacity<sup>(1)</sup>

Water (gpm)

| Inlet Pressure<br>Minus Outlet<br>Pressure psig | Rated C <sub>v</sub> |     |     |     |      |      |
|---|----------------------|-----|-----|-----|------|------|
|   | 6                    | 9   | 21  | 36  | 75   | 125  |
| 10  | 18                   | 28  | 65  | 110 | 230  | 380  |
| 15  | 23                   | 35  | 78  | 140 | 280  | 460  |
| 20  | 26                   | 40  | 90  | 160 | 330  | 550  |
| 25  | 30                   | 45  | 100 | 180 | 370  | 600  |
| 30  | 33                   | 50  | 115 | 200 | 400  | 660  |
| 35  | 35                   | 53  | 120 | 210 | 440  | 720  |
| 40  | 38                   | 56  | 130 | 230 | 470  | 760  |
| 45  | 40                   | 60  | 140 | 240 | 500  | 800  |
| 50  | 42                   | 54  | 145 | 250 | 510  | 830  |
| 60  | 46                   | 70  | 160 | 280 | 560  | 920  |
| 70  | 50                   | 75  | 170 | 300 | 610  | 1000 |
| 80  | 54                   | 80  | 185 | 320 | 650  | 1100 |
| 90  | 56                   | 85  | 200 | 340 | 700  | 1160 |
| 100   | 60                   | 90  | 210 | 360 | 750  | 1250 |
| 120   | 65                   | 98  | 225 | 390 | 800  | 1300 |
| 140   | 70                   | 105 | 240 | 420 | 880  | 1400 |
| 160   | 75                   | 115 | 260 | 460 | 920  | 1500 |
| 180   | 80                   | 120 | 270 | 490 | 980  | 1600 |
| 210   | 85                   | 130 | 290 | 520 | 1050 | 1750 |
| 230   | 90                   | 135 | 300 | 540 | 1100 | 1800 |

(1) Regulator Capacity Tables are included to provide convenience on common applications and are not intended to establish application limitations. If your particular service conditions are not listed in the Regulator Capacity Tables, calculate the required C<sub>v</sub> for selecting the optimum regulator size.

# Regulator Capacity

Model 525 Series Pressure Reducing Regulator Capacity<sup>(1)</sup>

Model 526 Series Back Pressure Regulator Capacity<sup>(1)</sup>

Water (lpm)

| Inlet Pressure<br>Minus Outlet<br>Pressure barg | Rated C <sub>v</sub> |     |      |      |      |      |
|---|----------------------|-----|------|------|------|------|
|   | 6                    | 9   | 21   | 36   | 75   | 125  |
| 0.7   | 68                   | 106 | 246  | 416  | 871  | 1438 |
| 1.0   | 87                   | 132 | 295  | 530  | 1060 | 1741 |
| 1.4   | 98                   | 151 | 341  | 606  | 1249 | 2082 |
| 1.7   | 114                  | 170 | 379  | 681  | 1401 | 2271 |
| 2.1   | 125                  | 189 | 435  | 757  | 1514 | 2498 |
| 2.4   | 132                  | 201 | 454  | 7995 | 1666 | 2725 |
| 2.8   | 144                  | 212 | 492  | 871  | 1779 | 2877 |
| 3.1   | 151                  | 227 | 530  | 908  | 1893 | 3028 |
| 3.4   | 159                  | 204 | 549  | 946  | 1931 | 3142 |
| 4.1   | 174                  | 265 | 606  | 1060 | 2120 | 3483 |
| 4.8   | 189                  | 284 | 644  | 1136 | 2309 | 3785 |
| 5.5   | 204                  | 303 | 700  | 1211 | 2461 | 4164 |
| 6.2   | 212                  | 322 | 757  | 1287 | 2650 | 4391 |
| 6.9   | 227                  | 341 | 795  | 1363 | 2839 | 4732 |
| 8.3   | 246                  | 371 | 852  | 1476 | 3028 | 4921 |
| 9.7   | 265                  | 397 | 908  | 1590 | 3331 | 5300 |
| 11.0  | 284                  | 435 | 984  | 1741 | 3483 | 5678 |
| 12.4  | 303                  | 454 | 1022 | 1855 | 3710 | 6057 |
| 14.5  | 322                  | 492 | 1098 | 1968 | 3975 | 6624 |
| 15.9  | 341                  | 511 | 1136 | 2044 | 4164 | 6814 |

(1) Regulator Capacity Tables are included to provide convenience on common applications and are not intended to establish application limitations. If your particular service conditions are not listed in the Regulator Capacity Tables, calculate the required C<sub>v</sub> for selecting the optimum regulator size.



# Materials of Construction

Valve Sizes: 0.75" to 4"  
Body Ratings: ANSI Class 150 to 600

## Carbon Steel Construction 525 / 526 and 525 / 526EB

| Ref. No. | Temperature Range            | Materials  |                    |                    |
|----------|------------------------------|--|--------------------|--------------------|
|          |                              | -20°F  | 450°F              | 650°F              |
| 1        | Valve Body                   | Carbon Steel ASTM A216 Grade WCC                       |                    |                    |
| 2        | Upper Seat Ring              | 316 St. St. ASTM 479 TY 316                            |                    |                    |
| 3        | Lower Seat Ring              | 316 St. St. ASTM 479 TY 316                            |                    |                    |
| 4        | Plug                         | 316 St. St. ASTM 479 TY 316                            |                    |                    |
| 5        | Plug Stem                    | 316 St. St. ASTM 479 TY 316                            |                    |                    |
| 6        | Plug Stop <sup>(1)</sup>     | 316 St. St. ASTM 479 TY 316                            |                    |                    |
| 7        | Plug Stop Pin <sup>(1)</sup> | 316 St. St. ASTM 479 TY 316                            |                    |                    |
| 8        | Plug Pin                     | 316 St. St. ASTM 479 TY 316                            |                    |                    |
| 9        | Blind Head                   | Carbon Steel ASTM A216 Grade WCC or ASTM A105          |                    |                    |
| 10       | Valve Bonnet <sup>(2)</sup>  | Carbon Steel ASTM A216 Grade WCC or ASTM A105          |                    |                    |
| 11       | Drive Nut                    | Carbon Steel SAE 1117 or ASTM A216 GR WCC              |                    |                    |
| 12       | Packing Follower             | Austenitic 300 Series Stainless Steel                  |                    |                    |
| 13       | Packing Flange               | Carbon Steel ASTM A105 Zinc Dichromate Plated          |                    |                    |
| 14       | Packing Flange Stud          | 304 St. St. ASTM A193 GR B8                            |                    |                    |
| 15       | Packing Flange Nut           | St. St. ASTM A194 GR 8                                 |                    |                    |
| 17       | Lantern Ring (Optional)      | Austenitic 300 Series Stainless Steel                  |                    |                    |
| 18       | Stem Locknuts                | Alloy Steel ASTM A194 GR 2H Zinc dichromate plated     |                    |                    |
| 19       | Body Stud                    | Alloy Steel ASTM A193 GR B7                            |                    |                    |
| 21       | Body Stud Nut                | Carbon Steel ASTM A194 GR 2H                           |                    |                    |
| 22       | Body Gasket                  | 316L St. St. w/Flexible Graphite Filler (Spiral Wound) |                    |                    |
| 23       | Guide Bushing                | 440C St. St. ASTM A276 TY 440C                         |                    |                    |
| Ref. No. | Temperature Range            | -29°C  | 232°C <sup>Δ</sup> | 343°C <sup>Δ</sup> |

1) The Plug stop (Ref. 6) and the Plug Stop Pin (Ref. 7) are installed in the bottom of the plug on model 526 back pressure valves with the 10900 series Actuator No. 3½ case (80-250 psi range) and No. 4 case (60-125 psi range) to prevent over-travel.

2) EB applies for temperature > of 450°F (232°C).

# Materials of Construction

Valve Sizes: 0.75" to 4"

Body Ratings: ANSI Class 150 to 600

## Stainless Construction 525 / 526 and 525 / 526EB

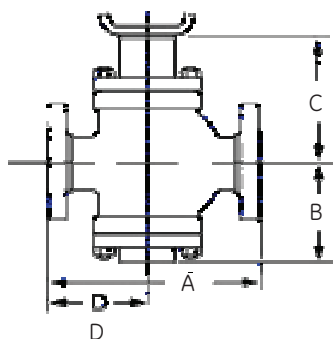
| Ref. No. | Temperature Range            | -20°F  | 450°F | 650°F |
|----------|------------------------------|--|-------|-------|
|          | Description                  | Materials  |       |       |
| 1        | Valve Body                   | 316 Stainless Steel ASTM A351 Grade CF8M                         |       |       |
| 2        | Upper Seat Ring              | 316 St. St. ASTM 479 TY 316                                      |       |       |
| 3        | Lower Seat Ring              | 316 St. St. ASTM 479 TY 316                                      |       |       |
| 4        | Plug                         | 316 St. St. ASTM 479 TY 316                                      |       |       |
| 5        | Plug Stem                    | 316 St. St. ASTM 479 TY 316                                      |       |       |
| 6        | Plug Stop <sup>(1)</sup>     | 316 St. St. ASTM 479 TY 316                                      |       |       |
| 7        | Plug Stop Pin <sup>(1)</sup> | 316 St. St. ASTM 479 TY 316                                      |       |       |
| 8        | Plug Pin                     | 316 St. St. ASTM 479 TY 316                                      |       |       |
| 9        | Blind Head                   | 316 Stainless Steel ASTM A351 Grade CF8M or ASTM A182 Grade F316 |       |       |
| 10       | Valve Bonnet <sup>(2)</sup>  | 316 Stainless Steel ASTM A351 Grade CF8M or ASTM A182 Grade F316 |       |       |
| 11       | Drive Nut                    | Carbon Steel SAE 1117 or ASTM A216 GR WCC                        |       |       |
| 12       | Packing Follower             | Austenitic 300 Series Stainless Steel                            |       |       |
| 13       | Packing Flange               | Carbon Steel ASTM A105 Zinc Dichromate Plated                    |       |       |
| 14       | Packing Flange Stud          | 304 St. St. ASTM A193 GR B8                                      |       |       |
| 15       | Packing Flange Nut           | St. St. ASTM A194 GR 8   |       |       |
| 17       | Lantern Ring (Optional)      | Austenitic 300 Series Stainless Steel                            |       |       |
| 18       | Stem Locknuts                | Alloy Steel ASTM A194 GR 2H Zinc dichromate plated               |       |       |
| 19       | Body Stud                    | Alloy Steel ASTM A193 GR B7 Zinc dichromate plated               |       |       |
|          |                              | ASTM A 193 GR B8 <sup>(3)</sup>                                  |       |       |
| 21       | Body Stud Nut                | Carbon Steel ASTM A194 GR 2H Zinc dichromate plated              |       |       |
|          |                              | ASTM A 194 GR 8 <sup>(3)</sup>                                   |       |       |
| 22       | Body Gasket                  | 316L St. St. w/Flexible Graphite Filler (Spiral Wound)           |       |       |
| 23       | Guide Bushing                | Stellite 6 UNS 30006   |       |       |
| Ref. No. | Temperature Range            | -29°C  | 232°C | 343°C |

1) The Plug stop (Ref.6) and the Plug Stop Pin (Ref.7) are installed in the bottom of the plug on model 526 back pressure valves with the 10900 series Actuator No. 3½ case (80-250 psi range) and No.4 case (60-125 psi range) to prevent over-travel.

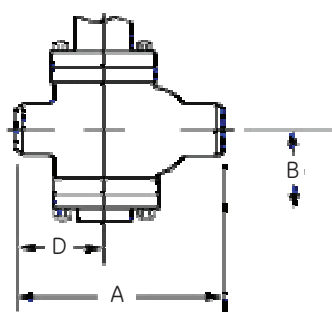
2) EB applies for temperature > of 450°F (232°C).

3) Bolting must be checked by Engineering Department.

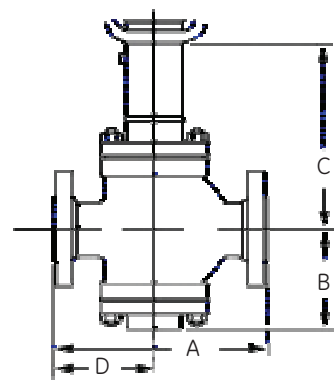
# Dimensions



Flanged Ends



Socket Weld or Threaded Ends



Extension Bonnet

English Units (inches)

| Valve Size |     | ANSI Class 150 and equivalent PN |      | ANSI Class 300 and equivalent PN |      |       |      | ANSI Class 600 and equivalent PN |      |       |      | ANSI Class 150-600 and equivalent PN |      |
|------------|-----|----------------------------------|------|----------------------------------|------|-------|------|----------------------------------|------|-------|------|--------------------------------------|------|
| inches     | mm  | RF                               |      | RF                               |      | RTJ   |      | RF                               |      | RTJ   |      | Threaded & Socket Weld               |      |
|            |     | A                                | D    | A                                | D    | A     | D    | A                                | D    | A     | D    | A                                    | D    |
| ¾          | 20  | 7.25                             | 3.66 | 7.62                             | 3.86 | 8.11  | 4.09 | 8.12                             | 4.09 | 8.12  | 4.09 | 6.00                                 | 2.88 |
| 1          | 25  | 7.25                             | 3.66 | 7.75                             | 3.90 | 8.25  | 4.13 | 8.25                             | 4.13 | 8.25  | 4.13 | 6.00                                 | 2.88 |
| 1½         | 40  | 8.75                             | 4.09 | 9.25                             | 4.33 | 9.76  | 4.57 | 9.88                             | 4.65 | 9.88  | 4.65 | 8.00                                 | 3.70 |
| 2          | 50  | 10.00                            | 4.61 | 10.50                            | 4.88 | 11.10 | 5.20 | 11.25                            | 5.25 | 11.38 | 5.31 | 9.25                                 | 4.13 |
| 3          | 80  | 11.75                            | 5.50 | 12.50                            | 5.88 | 13.11 | 6.18 | 13.25                            | 6.25 | 13.38 | 6.30 | -                                    | -    |
| 4          | 100 | 13.88                            | 6.57 | 14.50                            | 6.88 | 15.12 | 7.20 | 15.50                            | 7.36 | 15.63 | 7.44 | -                                    | -    |

Metric Units (mm)

| Valve Size |     | ANSI Class 150 and equivalent PN |     | ANSI Class 300 and equivalent PN |     |     |     | ANSI Class 600 and equivalent PN |     |     |     | ANSI Class 150-600 and equivalent PN |     |
|------------|-----|----------------------------------|-----|----------------------------------|-----|-----|-----|----------------------------------|-----|-----|-----|--------------------------------------|-----|
| inches     | mm  | RF                               |     | RF                               |     | RTJ |     | RF                               |     | RTJ |     | Threaded & Socket Weld               |     |
|            |     | A                                | D   | A                                | D   | A   | D   | A                                | D   | A   | D   | A                                    | D   |
| ¾          | 20  | 184                              | 93  | 194                              | 98  | 206 | 104 | 206                              | 104 | 206 | 104 | 153                                  | 73  |
| 1          | 25  | 184                              | 93  | 197                              | 99  | 210 | 105 | 210                              | 105 | 210 | 105 | 153                                  | 73  |
| 1½         | 40  | 222                              | 104 | 235                              | 110 | 248 | 116 | 251                              | 118 | 251 | 118 | 203                                  | 94  |
| 2          | 50  | 254                              | 117 | 267                              | 124 | 282 | 132 | 286                              | 133 | 289 | 135 | 235                                  | 105 |
| 3          | 80  | 298                              | 140 | 318                              | 149 | 333 | 157 | 337                              | 159 | 340 | 160 | -                                    | -   |
| 4          | 100 | 353                              | 167 | 368                              | 175 | 384 | 183 | 394                              | 187 | 397 | 189 | -                                    | -   |

# B and C Dimensions

English Units (inches)

| Valve Size |     | ANSI Class 150 – 600 and equivalent PN |                 |               |
|------------|-----|--|-----------------|---------------|
| inches     | mm  | 8                                      | C (Std. Bonnet) | C (EB Bonnet) |
| ¾          | 20  | 4.49                                   | 5.67            | 9.72          |
| 1          | 25  | 4.49                                   | 5.67            | 9.72          |
| 1½         | 40  | 5.39                                   | 6.02            | 10.67         |
| 2          | 50  | 5.98                                   | 7.20            | 11.42         |
| 3          | 80  | 7.80                                   | 9.29            | 13.11         |
| 4          | 100 | 8.11                                   | 9.49            | 13.74         |

Metric Units (mm)

| Valve Size |     | ANSI Class 150 – 600 and equivalent PN |                 |               |
|------------|-----|--|-----------------|---------------|
| inches     | mm  | 8                                      | C (Std. Bonnet) | C (EB Bonnet) |
| ¾          | 20  | 114                                    | 144             | 247           |
| 1          | 25  | 114                                    | 144             | 247           |
| 1½         | 40  | 137                                    | 153             | 271           |
| 2          | 50  | 152                                    | 183             | 290           |
| 3          | 80  | 198                                    | 236             | 333           |
| 4          | 100 | 206                                    | 241             | 349           |



# 500 Series Weights

Body Sub-assemblies (lbs)

| Valve Size |     | ASME Class 150-600 and equivalent PN | ASME Class 150 and equivalent PN | ASME Class 300 and equivalent PN | ASME Class 600 and equivalent PN |
|------------|-----|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| inches     | mm  | Threaded & Socket Weld               |                                  | Flanged                          |                                  |
| ¾          | 20  | 40                                   | 79                               | 79                               | 90                               |
| 1          | 25  | 44                                   | 86                               | 86                               | 99                               |
| 1½         | 40  | 44                                   | 106                              | 110                              | 119                              |
| 2          | 50  | 51                                   | 150                              | 159                              | 174                              |
| 3          | 80  | 110                                  | 245                              | 256                              | 269                              |
| 4          | 100 | 192                                  | 304                              | 309                              | 335                              |

Body Sub-assemblies (lbs)

| Valve Size |     | ASME Class 150-600 and equivalent PN | ASME Class 150 and equivalent PN | ASME Class 300 and equivalent PN | ASME Class 600 and equivalent PN |
|------------|-----|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| inches     | mm  | Threaded & Socket Weld               |                                  | Flanged                          |                                  |
| ¾          | 20  | 18                                   | 36                               | 35                               | 41                               |
| 1          | 25  | 20                                   | 39                               | 39                               | 45                               |
| 1½         | 40  | 20                                   | 48                               | 50                               | 54                               |
| 2          | 50  | 23                                   | 68                               | 72                               | 79                               |
| 3          | 80  | 50                                   | 111                              | 116                              | 122                              |
| 4          | 100 | 87                                   | 138                              | 140                              | 152                              |

# Notes

# Notes

# DIRECT SALES OFFICE LOCATIONS

## BELGIUM

Phone: +32-2-344-0970  
Fax: +32-2-344-1123

## BRAZIL

Phone: +55-11-2146-3600  
Fax: +55-11-2146-3610

## CHINA

Phone: +86-10-8486-4515  
Fax: +86-10-8486-5305

## FRANCE

Courbevoie  
Phone: +33-1-4904-9000  
Fax: +33-1-4904-9010

## GERMANY

Ratingen  
Phone: +49-2102-108-0  
Fax: +49-2102-108-111

## INDIA

Mumbai  
Phone: +91-22-8354790  
Fax: +91-22-8354791

## New Delhi

Phone: +91-11-2-6164175  
Fax: +91-11-5-1659635

## ITALY

Phone: +39-081-7892-111  
Fax: +39-081-7892-208

## JAPAN Chiba

Phone: +81-43-297-9222  
Fax: +81-43-299-1115

## KOREA

Phone: +82-2-2274-0748  
Fax: +82-2-2274-0794

## MALAYSIA

Phone: +60-3-2161-0322  
Fax: +60-3-2163-6312

## MEXICO

Phone: +52-5-310-9863  
Fax: +52-5-310-5584

## THE NETHERLANDS

Phone: +0031-15-3808666  
Fax: +0031-18-1641438

## RUSSIA

Veliky Novgorod  
Phone: +7-8162-55-7898  
Fax: +7-8162-55-7921

## Moscow

Phone: +7 495-585-1276  
Fax: +7 495-585-1279

## SAUDI ARABIA

Phone: +966-3-341-0278  
Fax: +966-3-341-7624

## SINGAPORE

Phone: +65-6861-6100  
Fax: +65-6861-7172

## SOUTH AFRICA

Phone: +27-11-452-1550  
Fax: +27-11-452-6542

## SOUTH and CENTRAL

AMERICA and the CARIBBEAN  
Phone: +55-12-2134-1201  
Fax: +55-12-2134-1238

## SPAIN

Phone: +34-93-652-6430  
Fax: +34-93-652-6444

## UNITED ARAB EMIRATES

Phone: +971-4-8991-777  
Fax: +971-4-8991-778

## UNITED KINGDOM

Wooburn Green  
Phone: +44-1628-536300  
Fax: +44-1628-536319

## UNITED STATES

Massachusetts  
Phone: +1-508-586-4600  
Fax: +1-508-427-8971

## Corpus Christi, Texas

Phone: +1-361-881-8182  
Fax: +1-361-881-8246

## Deer Park, Texas

Phone: +1-281-884-1000  
Fax: +1-281-884-1010

## Houston, Texas

Phone: +1-281-671-1640  
Fax: +1-281-671-1735



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