

# DUO-CHEK<sup>®</sup>

**brands you trust.**

TECHNICAL DATASHEET  
**DUO-CHEK<sup>®</sup>**  
High Performance Non-Slam Check Valves



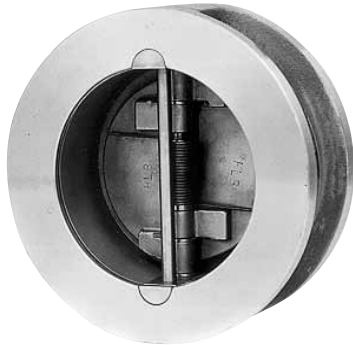
Energy Flow Solutions

[www.craneenergy.com](http://www.craneenergy.com)

# Retainerless Check Valves

## Style H<sup>†</sup>

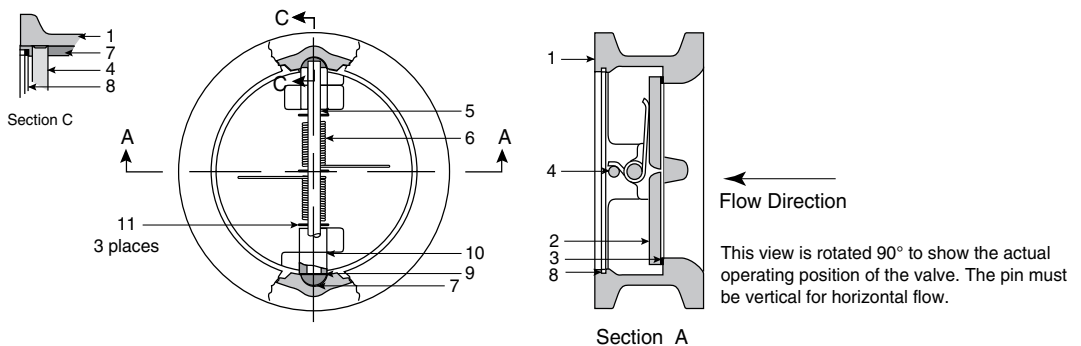
### High Performance Check Valve for Critical Applications



For critical applications, Duo-Chek<sup>®</sup> Retainerless Check valves Style H feature a one-piece body with no pin retainer penetration through the body.

These high performance valves utilize the same internal design of other Duo-Chek<sup>®</sup> valves with all the unique features and advantages built into them. The photo shown is a wafer valve however, designs apply to wafer, lug and double flange.

| Item No. | Part No.       |
|----------|----------------|
| 1        | Body           |
| 2        | Plate          |
| 3        | Seal           |
| 4        | Stop Pin       |
| 5        | Hinge Pin      |
| 6        | Spring*        |
| 7        | Pin Insert     |
| 8        | Snap Ring      |
| 9        | Body Bearing   |
| 10       | Plate Bearing  |
| 11       | Spring Bearing |



\* Independent spring in valve sizes 6" and larger.

Because Duo-Chek<sup>®</sup> Retainerless Check valves have no body penetrations, potential leak paths through the valve are eliminated. This makes the Retainerless Check ideally suited to meet the following critical service applications:

- Hydrocarbon processing
- Chemical processing
- Any industry concerned with fire hazards or environmental safety

Key features of the Duo-Chek<sup>®</sup> Retainerless Check valve Style H include:

- A wide selection of body and plate materials
- A choice of metal-to-metal or resilient sealing
- A full range of pressure classes and sizes
- A variety of end connections
- Designs available include wafer, lug and double flange
- Internals easily removed for field replacement under normal inspections and maintenance procedures

The advanced design of the Duo-Chek<sup>®</sup> provides many operational benefits to the user, which combined with its more compact size and lower weight, make the Duo-Chek<sup>®</sup> Retainerless Check valve Style H an excellent alternative to a standard swing check valve.

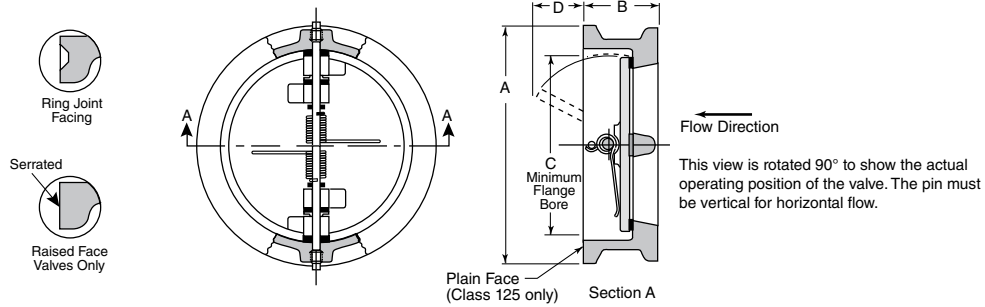
Remarkable advantages include:

- Independent spring action (on 6" and larger) and plate suspension on larger valves
- Free release flat seats
- Springs provide superior response to flow reversal or deceleration
- Minimal water hammer
- Savings in purchase price and installation costs compared to a conventional swing check valve
- Single body design with no body cartridge

<sup>†</sup> Installation dimensions for these valves are as shown on pages 13-14.

# Dimensions

## Wafer Styles G (Retainered) and H (Retainerless)



Wafer body valves are designed with flangeless bodies with short face-to-face dimensions per API 594. They are clamped between mating flanges which are connected by studs and nuts.

**ASME Class 125 (Cast Iron valves only)**

| Size   |      | A      |      | B      |      | C        |      | D       |     | Weight |       |
|--------|------|--------|------|--------|------|----------|------|---------|-----|--------|-------|
| in     | mm   | in     | mm   | in     | mm   | in       | mm   | in      | mm  | lbs.   | kg.   |
| 2"     | 50   | 4 1/8  | 105  | 2 1/8  | 54   | 2 1/16   | 52   | -       | -   | 4      | 1.8   |
| 2 1/2" | 65   | 4 7/8  | 124  | 2 1/8  | 54   | 2 15/32  | 63   | -       | -   | 6      | 2.7   |
| 3"     | 80   | 5 3/8  | 137  | 2 1/4  | 57   | 3 1/16   | 78   | 5/8     | 16  | 7      | 3.2   |
| 4"     | 100  | 6 7/8  | 175  | 2 1/2  | 64   | 4        | 102  | 1       | 25  | 12     | 5.4   |
| 5"     | 125  | 7 3/4  | 197  | 2 3/4  | 70   | 5        | 127  | 1 1/16  | 33  | 15     | 6.8   |
| 6"     | 150  | 8 3/4  | 222  | 3      | 76   | 6 1/16   | 154  | 1 15/16 | 35  | 20     | 9     |
| 8"     | 200  | 11     | 279  | 3 3/4  | 95   | 8        | 203  | 3 7/16  | 54  | 40     | 18    |
| 10"    | 250  | 13 3/8 | 340  | 4 1/4  | 108  | 10       | 254  | 3 3/8   | 70  | 65     | 29    |
| 12"    | 300  | 16 1/8 | 410  | 5 5/8  | 143  | 11 15/16 | 303  | 3 3/16  | 83  | 110    | 50    |
| 14"    | 350  | 17 3/4 | 451  | 7 1/4  | 184  | 12 1/2   | 318  | 3 7/16  | 83  | 183    | 83    |
| 16"    | 400  | 20 1/4 | 514  | 7 1/2  | 191  | 15       | 381  | 4 1/4   | 113 | 255    | 116   |
| 18"    | 450  | 21 5/8 | 549  | 8      | 203  | 16 7/8   | 429  | 5 3/8   | 137 | 315    | 143   |
| 20"    | 500  | 23 1/8 | 606  | 8 3/8  | 213  | 18 19/16 | 478  | 6 3/16  | 160 | 380    | 172   |
| 24"    | 600  | 28 1/4 | 718  | 8 3/4  | 222  | 22 3/8   | 575  | 8 1/4   | 210 | 575    | 261   |
| 30"    | 750  | 34 3/4 | 883  | 12     | 305  | 29 1/4   | 743  | 9 9/16  | 229 | 1070   | 486   |
| 36"    | 900  | 41 1/4 | 1048 | 14 1/2 | 368  | 35       | 889  | 12 3/16 | 303 | 1962   | 890   |
| 42"    | 1050 | 48     | 1219 | 17     | 432  | 41       | 1041 | 15      | 381 | 2800   | 1270  |
| 48"    | 1200 | 54 1/2 | 1384 | 20 5/8 | 524  | 47       | 1194 | 16 3/4  | 425 | 3920   | 1778  |
| 54"    | 1350 | 61     | 1549 | 21 1/4 | 540  | 51 1/2   | 1308 | 19 3/4  | 502 | 6172   | 2800  |
| 60"    | 1500 | 67 1/2 | 1715 | 26     | 660  | 56       | 1422 | -       | -   | 7800   | 3538  |
| 66"    | 1650 | 74 1/4 | 1886 | 31     | 787  | 65 1/4   | 1657 | -       | -   | 12000  | 5443  |
| 72"    | 1800 | 80 3/4 | 2051 | 36     | 914  | 68       | 1727 | -       | -   | 14000  | 6350  |
| 78"    | 1950 | 84     | 2133 | 39     | 991  | 74       | 1880 | -       | -   | 17160  | 7800  |
| 84"    | 2100 | 89 3/4 | 2280 | 42     | 1067 | 80       | 2032 | -       | -   | 20460  | 9300  |
| 88"    | 2200 | 94     | 2388 | 44     | 1118 | 84       | 2134 | -       | -   | 23100  | 10500 |

**ASME Class 150**

| Size   |      | A      |      | B      |      | C        |      | D        |     | Weight |       |
|--------|------|--------|------|--------|------|----------|------|----------|-----|--------|-------|
| in     | mm   | in     | mm   | in     | mm   | in       | mm   | in       | mm  | lbs.   | kg.   |
| 2"     | 50   | 4 1/8  | 105  | 2 3/8  | 60   | 1 15/16  | 49   | -        | -   | 6      | 3     |
| 2 1/2" | 65   | 4 7/8  | 124  | 2 5/8  | 67   | 2 11/32  | 60   | -        | -   | 10     | 5     |
| 3"     | 80   | 5 3/8  | 137  | 2 7/8  | 73   | 2 29/32  | 74   | 1/4      | 6   | 13     | 6     |
| 4"     | 100  | 6 7/8  | 175  | 2 7/8  | 73   | 3 53/64  | 97   | 5/8      | 16  | 17     | 8     |
| 5"     | 125  | 7 3/4  | 197  | 3 3/8  | 86   | 4 13/16  | 122  | 7/8      | 22  | 27     | 12    |
| 6"     | 150  | 8 3/4  | 222  | 3 7/8  | 98   | 5 49/64  | 146  | 1 3/8    | 35  | 35     | 16    |
| 8"     | 200  | 11     | 279  | 5      | 127  | 7 5/8    | 194  | 2 1/8    | 54  | 70     | 32    |
| 10"    | 250  | 13 3/8 | 340  | 5 3/4  | 146  | 9 9/16   | 243  | 2 3/4    | 70  | 106    | 48    |
| 12"    | 300  | 16 1/8 | 410  | 7 1/8  | 181  | 11 3/8   | 289  | 3 1/4    | 83  | 172    | 78    |
| 14"    | 350  | 17 3/4 | 451  | 7 1/4  | 184  | 12 1/2   | 318  | 3 1/4    | 83  | 200    | 91    |
| 16"    | 400  | 20 1/4 | 514  | 7 1/2  | 191  | 15       | 381  | 4 7/16   | 113 | 275    | 125   |
| 18"    | 450  | 21 5/8 | 549  | 8      | 203  | 16 7/8   | 429  | 5 3/8    | 137 | 315    | 143   |
| 20"    | 500  | 23 1/8 | 606  | 8 5/8  | 219  | 18 19/16 | 478  | 6 5/16   | 160 | 435    | 197   |
| 24"    | 600  | 28 1/4 | 718  | 8 3/4  | 222  | 22 5/8   | 575  | 8 1/4    | 210 | 620    | 281   |
| 26"    | 650  | 30 1/2 | 775  | 14     | 356  | 24 1/4   | 616  | 8        | 203 | 1555   | 705   |
| 30"    | 750  | 34 3/4 | 883  | 13     | 330  | 29 1/4   | 743  | 9        | 229 | 1230   | 558   |
| 36"    | 900  | 41 1/4 | 1048 | 15 1/4 | 387  | 35       | 889  | 11 15/16 | 303 | 2017   | 915   |
| 42"    | 1050 | 48     | 1219 | 17     | 432  | 41       | 1041 | 15       | 381 | 2800   | 1270  |
| 48"    | 1200 | 54 1/2 | 1384 | 20 5/8 | 524  | 47       | 1194 | 16 3/4   | 425 | 3920   | 1778  |
| 54"    | 1350 | 61     | 1549 | 21 1/4 | 540  | 51 1/2   | 1308 | 19 3/4   | 502 | 6172   | 2800  |
| 60"    | 1500 | 67 1/2 | 1715 | 26     | 660  | 56       | 1422 | -        | -   | 7800   | 3538  |
| 66"    | 1650 | 74 1/4 | 1886 | 31     | 787  | 65 1/4   | 1657 | -        | -   | 12000  | 5443  |
| 72"    | 1800 | 80 3/4 | 2051 | 36     | 914  | 68       | 1727 | -        | -   | 14000  | 6350  |
| 78"    | 1950 | 84     | 2133 | 39     | 991  | 74       | 1880 | -        | -   | 17160  | 7800  |
| 84"    | 2100 | 89 3/4 | 2280 | 42     | 1067 | 80       | 2032 | -        | -   | 20460  | 9300  |
| 88"    | 2200 | 94     | 2388 | 44     | 1118 | 84       | 2134 | -        | -   | 23100  | 10500 |

Duo-Chek® valves are available in accordance with DIN, BS, JIS, AS and ISO Dimensions. For other sizes and pressure classes contact factory. Class 125 face-to-face dimensions 2-1/2"-12" are thinner than the requirements of API 594.

♦These G Style valve dimensions do not meet API 594, please consult factory.

## Dimensions

### Wafer Styles G (Retainered) and H (Retainerless)

ASME Class 250 (Cast Iron valves only)

| Size   |      | A      |      | B      |     | C        |      | D       |     | Weight |      |
|--------|------|--------|------|--------|-----|----------|------|---------|-----|--------|------|
| in     | mm   | in     | mm   | in     | mm  | in       | mm   | in      | mm  | lbs.   | kg.  |
| 2"     | 50   | 4 3/8  | 111  | 2 1/8  | 54  | 1 15/16  | 49   | 3/32    | 2   | 5      | 2.3  |
| 2 1/2" | 65   | 5 1/8  | 130  | 2 3/8  | 60  | 2 11/32  | 60   | 3/8     | 10  | 11     | 5    |
| 3"     | 80   | 5 7/8  | 149  | 2 5/8  | 67  | 2 29/32  | 74   | 7/16    | 14  | 11     | 5    |
| 4"     | 100  | 7 1/8  | 181  | 2 7/8  | 67  | 3 53/64  | 97   | 9/16    | 14  | 14     | 6.4  |
| 5"     | 125  | 8 1/2  | 216  | 3 1/4  | 83  | 4 13/16  | 122  | 1       | 25  | 29     | 13.2 |
| 6"     | 150  | 9 3/8  | 251  | 3 3/4  | 95  | 5 49/64  | 146  | 1 1/2   | 38  | 35     | 16   |
| 8"     | 200  | 12 1/8 | 308  | 5      | 127 | 7 7/8    | 194  | 2 1/8   | 54  | 75     | 34   |
| 10"    | 250  | 14 1/4 | 362  | 5 1/2  | 140 | 9 9/16   | 243  | 3 1/16  | 80  | 113    | 51   |
| 12"    | 300  | 16 3/8 | 422  | 7 1/8  | 181 | 11 3/8   | 289  | 3 1/4   | 83  | 174    | 79   |
| 14"    | 350  | 19 1/8 | 486  | 8 3/4  | 222 | 12 1/2   | 318  | 3 3/16  | 81  | 299    | 136  |
| 16"    | 400  | 21 1/4 | 540  | 9 3/8  | 232 | 14 5/16  | 364  | 4 1/8   | 105 | 380    | 172  |
| 18"    | 450  | 23 1/2 | 597  | 10 3/8 | 264 | 16 1/8   | 429  | 4 13/16 | 122 | 510    | 231  |
| 20"    | 500  | 25 3/4 | 654  | 11 1/2 | 292 | 17 15/16 | 456  | 5 3/8   | 136 | 593    | 269  |
| 24"    | 600  | 30 1/2 | 775  | 12 1/2 | 318 | 21 1/16  | 548  | 7 1/16  | 179 | 1010   | 458  |
| 30"    | 750  | 37 1/2 | 953  | 14 1/2 | 368 | 28 3/4   | 730  | 8 13/16 | 224 | 1880   | 853  |
| 36"    | 900  | 44     | 1118 | 19     | 483 | 35       | 889  | 11 9/16 | 294 | 3573   | 1608 |
| 42"    | 1050 | 50 3/4 | 1289 | 22 3/8 | 568 | 41       | 1041 | 14 3/4  | 375 | 5780   | 2622 |
| 48"    | 1200 | 58 3/4 | 1492 | 24 3/4 | 629 | 47       | 1194 | 16 1/2  | 419 | 6572   | 2981 |

ASME Class 300

| Size   |      | A      |      | B       |     | C        |      | D       |     | Weight |      |
|--------|------|--------|------|---------|-----|----------|------|---------|-----|--------|------|
| in     | mm   | in     | mm   | in      | mm  | in       | mm   | in      | mm  | lbs.   | kg.  |
| 2"     | 50   | 4 3/8  | 111  | 2 3/8   | 60  | 1 15/16  | 49   | -       | -   | 7      | 3    |
| 2 1/2" | 65   | 5 1/8  | 130  | 2 5/8   | 67  | 2 11/32  | 60   | -       | -   | 11     | 5    |
| 3"     | 80   | 5 7/8  | 149  | 2 7/8   | 73  | 2 29/32  | 74   | 1/4     | 6   | 15     | 7    |
| 4"     | 100  | 7 1/8  | 181  | 2 7/8   | 73  | 3 53/64  | 97   | 5/8     | 16  | 18     | 8    |
| 5"     | 125  | 8 1/2  | 216  | 3 3/8   | 86  | 4 13/16  | 122  | 7/8     | 22  | 35     | 16   |
| 6"     | 150  | 9 3/8  | 251  | 3 3/8   | 98  | 5 49/64  | 146  | 1 3/8   | 35  | 45     | 20   |
| 8"     | 200  | 12 1/8 | 308  | 5       | 127 | 7 7/8    | 194  | 2 1/8   | 54  | 82     | 37   |
| 10"    | 250  | 14 1/4 | 362  | 5 3/4   | 146 | 9 9/16   | 243  | 2 3/4   | 70  | 125    | 57   |
| 12"    | 300  | 16 3/8 | 422  | 7 1/8   | 181 | 11 3/8   | 289  | 3 1/4   | 83  | 200    | 91   |
| 14"    | 350  | 19 1/8 | 486  | 8 3/4   | 222 | 12 1/2   | 318  | 3 3/16  | 81  | 325    | 147  |
| 16"    | 400  | 21 1/4 | 540  | 9 3/8   | 232 | 14 5/16  | 364  | 4 1/8   | 105 | 415    | 188  |
| 18"    | 450  | 23 1/2 | 597  | 10 3/8  | 264 | 16 1/8   | 429  | 4 13/16 | 122 | 555    | 252  |
| 20"    | 500  | 25 3/4 | 654  | 11 1/2  | 292 | 17 15/16 | 456  | 5 3/8   | 143 | 725    | 329  |
| 24"    | 600  | 30 1/2 | 775  | 12 1/2  | 318 | 21 1/16  | 548  | 7 1/16  | 179 | 1100   | 499  |
| 26"    | 650  | 32 7/8 | 835  | 14      | 356 | 24 3/8   | 619  | 8       | 203 | 1605   | 728  |
| 30"    | 750  | 37 1/2 | 953  | 15 1/16 | 368 | 28 3/4   | 730  | 9 1/16  | 230 | 2050   | 930  |
| 36"    | 900  | 44     | 1118 | 19 1/4  | 483 | 35       | 889  | 11 3/16 | 284 | 3573   | 1621 |
| 42"    | 1050 | 45 1/8 | 1289 | 22 3/8  | 568 | 41       | 1041 | 14 3/4  | 375 | 4723   | 2147 |
| 48"    | 1200 | 52 1/8 | 1492 | 24 3/4  | 629 | 47       | 1194 | 16 1/2  | 419 | 6090   | 2768 |

ASME Class 600

| Size   |      | A      |      | B      |     | C        |      | D        |     | Weight |      |
|--------|------|--------|------|--------|-----|----------|------|----------|-----|--------|------|
| in     | mm   | in     | mm   | in     | mm  | in       | mm   | in       | mm  | lbs.   | kg.  |
| 2"     | 50   | 4 3/8  | 111  | 2 3/8  | 60  | 1 15/16  | 49   | -        | -   | 7      | 3    |
| 2 1/2" | 65   | 5 1/8  | 130  | 2 5/8  | 67  | 2 11/32  | 60   | 3/8      | 3   | 11     | 5    |
| 3"     | 80   | 5 7/8  | 149  | 2 7/8  | 73  | 2 29/32  | 74   | 1/4      | 6   | 15     | 7    |
| 4"     | 100  | 7 7/8  | 194  | 3 1/8  | 79  | 3 53/64  | 97   | 7/8      | 22  | 26     | 12   |
| 5"     | 125  | 9 1/2  | 241  | 4 1/8  | 105 | 4 13/16  | 122  | 1        | 25  | 50     | 22.7 |
| 6"     | 150  | 10 1/2 | 267  | 5 3/8  | 136 | 5 49/64  | 146  | 1 1/16   | 36  | 80     | 36   |
| 8"     | 200  | 12 3/8 | 321  | 6 1/2  | 165 | 7 7/8    | 194  | 2        | 51  | 135    | 61   |
| 10"    | 250  | 15 3/4 | 400  | 8 3/8  | 213 | 9 9/16   | 243  | 2 3/32   | 58  | 238    | 108  |
| 12"    | 300  | 18     | 457  | 9      | 229 | 11 3/8   | 289  | 3 13/32  | 88  | 333    | 151  |
| 14"    | 350  | 19 3/8 | 492  | 10 3/4 | 273 | 12 1/2   | 318  | 2 3/4    | 70  | 455    | 206  |
| 16"    | 400  | 22 1/4 | 565  | 12     | 305 | 14 5/16  | 364  | 4 3/16   | 110 | 640    | 290  |
| 18"    | 450  | 24 1/8 | 613  | 14 1/4 | 362 | 16 1/8   | 410  | 3 1/16   | 94  | 890    | 404  |
| 20"    | 500  | 26 3/8 | 683  | 14 1/2 | 368 | 17 15/16 | 456  | 5 3/16   | 135 | 1120   | 508  |
| 24"    | 600  | 31 1/8 | 791  | 17 1/4 | 438 | 21 1/16  | 548  | 6 9/16   | 167 | 2040   | 925  |
| 26"    | 650  | 34 1/8 | 867  | 18     | 547 | 24       | 610  | 7 1/4    | 184 | 2530   | 1148 |
| 30"    | 750  | 38 1/4 | 972  | 18 1/8 | 398 | 28 3/4   | 730  | 9 9/16   | 243 | 3375   | 1531 |
| 36"    | 900  | 44 1/2 | 1130 | 25     | 635 | 33 3/4   | 857  | 11 15/16 | 303 | 6300   | 2858 |
| 42"    | 1050 | 48     | 1219 | 27 3/8 | 702 | 39 1/2   | 1003 | 14 1/4   | 362 | 8447   | 3832 |

ASME Class 900

| Size   |     | A      |     | B      |     | C        |     | D       |     | Weight |      |
|--------|-----|--------|-----|--------|-----|----------|-----|---------|-----|--------|------|
| in     | mm  | in     | mm  | in     | mm  | in       | mm  | in      | mm  | lbs.   | kg.  |
| 2"     | 50  | 5 3/8  | 143 | 2 3/4  | 70  | 1 11/16  | 43  | -       | -   | 14     | 6    |
| 2 1/2" | 65  | 6 1/2  | 165 | 3 1/4  | 83  | 2 1/8    | 54  | 1/16    | 2   | 16     | 7    |
| 3"     | 80  | 6 5/8  | 168 | 3 1/4  | 83  | 2 5/8    | 67  | 5/16    | 8   | 24     | 11   |
| 4"     | 100 | 8 1/8  | 206 | 4      | 102 | 3 7/16   | 87  | 9/16    | 14  | 40     | 18   |
| 5"     | 125 | 9 3/4  | 248 | -      | -   | 4 5/16   | 110 | -       | -   | -      | -    |
| 6"     | 150 | 11 3/8 | 289 | 6 1/4  | 159 | 5 3/16   | 132 | 1 1/16  | 27  | 115    | 52   |
| 8"     | 200 | 14 1/8 | 359 | 8 1/8  | 206 | 6 13/16  | 173 | 1 13/32 | 36  | 229    | 104  |
| 10"    | 250 | 17 1/8 | 435 | 9 1/2  | 241 | 8 1/2    | 216 | 1 13/16 | 46  | 388    | 176  |
| 12"    | 300 | 19 3/8 | 498 | 11 1/2 | 292 | 10 1/8   | 257 | 2 5/16  | 59  | 540    | 245  |
| 14"    | 350 | 20 1/2 | 521 | 14     | 356 | 11 1/2   | 292 | 2       | 51  | 926    | 420  |
| 16"    | 400 | 22 3/8 | 575 | 15 1/8 | 384 | 12 13/16 | 325 | 2 5/8   | 67  | 1152   | 523  |
| 18"    | 450 | 25 1/8 | 638 | 17 3/4 | 451 | 14 7/16  | 367 | 2 9/16  | 65  | 1318   | 598  |
| 20"    | 500 | 27 1/2 | 699 | 17 3/4 | 451 | 17 15/16 | 456 | 5 5/16  | 135 | 1426   | 647  |
| 24"    | 600 | 33     | 838 | 19 1/2 | 495 | 21 1/2   | 546 | 5 5/8   | 143 | 2729   | 1238 |

ASME Class 1500

| Size   |     | A      |     | B       |     | C        |     | D       |     | Weight |      |
|--------|-----|--------|-----|---------|-----|----------|-----|---------|-----|--------|------|
| in     | mm  | in     | mm  | in      | mm  | in       | mm  | in      | mm  | lbs.   | kg.  |
| 2"     | 50  | 5 3/8  | 143 | 2 3/4   | 70  | 1 11/16  | 43  | -       | -   | 14     | 6    |
| 2 1/2" | 65  | 6 1/2  | 165 | 3 1/4   | 83  | 2 1/8    | 54  | 1/16    | 2   | 16     | 7    |
| 3"     | 80  | 6 7/8  | 175 | 3 1/4   | 83  | 2 5/8    | 67  | 5/16    | 8   | 25     | 11   |
| 4"     | 100 | 8 1/4  | 210 | 4       | 102 | 3 7/16   | 87  | 9/16    | 14  | 43     | 20   |
| 5"     | 125 | 10     | 254 | -       | -   | 4 5/16   | 110 | -       | -   | -      | -    |
| 6"     | 150 | 11 1/8 | 283 | 6 1/4   | 159 | 5 3/16   | 132 | 1 1/16  | 27  | 110    | 50   |
| 8"     | 200 | 13 1/8 | 352 | 8 1/8   | 206 | 6 13/16  | 173 | 1 13/32 | 36  | 219    | 99   |
| 10"    | 250 | 17 1/8 | 435 | 9 3/4   | 248 | 8 1/2    | 216 | 1 11/16 | 43  | 397    | 180  |
| 12"    | 300 | 20 1/2 | 521 | 12      | 305 | 10 1/8   | 257 | 2 1/4   | 57  | 725    | 329  |
| 14"    | 350 | 22 3/4 | 578 | 14      | 356 | 11 1/2   | 292 | 2       | 51  | 948    | 430  |
| 16"    | 400 | 25 1/4 | 641 | 15 1/8  | 384 | 12 13/16 | 325 | 2 5/8   | 67  | 1380   | 627  |
| 18"    | 450 | 27 3/4 | 705 | 18 1/16 | 468 | 13 3/4   | 349 | 2 11/16 | 68  | 1900   | 863  |
| 20"    | 500 | 29 3/4 | 756 | 21      | 533 | 14 3/4   | 375 | 4       | 102 | 2750   | 1247 |
| 24"    | 600 | 35 1/2 | 902 | 22      | 559 | 15 1/8   | 384 | 4 1/8   | 105 | 4409   | 2000 |

ASME Class 2500

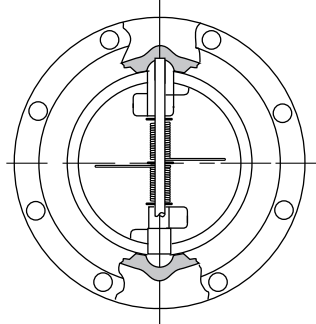
| Size   |     | A      |     | B     |     | C       |     | D       |    | Weight |     |
|--------|-----|--------|-----|-------|-----|---------|-----|---------|----|--------|-----|
| in     | mm  | in     | mm  | in    | mm  | in      | mm  | in      | mm | lbs.   | kg. |
| 2"     | 50  | 5 3/4  | 146 | 2 3/4 | 70  | 1 11/16 | 43  | -       | -  | 15     | 7   |
| 2 1/2" | 65  | 6 5/8  | 168 | 3 1/4 | 83  | 2 1/8   | 54  | 1/16    | 2  | 22     | 10  |
| 3"     | 80  | 7 3/4  | 197 | 3 3/8 | 86  | 2 5/8   | 67  | 1/4     | 6  | 31     | 14  |
| 4"     | 100 | 9 1/4  | 235 | 4 1/8 | 105 | 3 7/16  | 87  | 7/16    | 11 | 54     | 25  |
| 5"     | 125 | 11     | 279 | -     | -   | 4 5/16  | 110 | -       | -  | -      | -   |
| 6"     | 150 | 12 1/2 | 318 | 6 1/4 | 159 | 5 3/16  | 132 | 1 1/16  | 27 | 190    | 86  |
| 8"     | 200 | 15 1/4 | 387 | 8 1/8 | 206 | 6 13/16 | 173 | 1 11/16 | 43 | 285    | 129 |
| 10"    | 250 | 18 3/4 | 476 | 10    | 254 | 8 1/2   | 216 | 1 13/16 | 46 | 502    | 228 |
| 12"    | 300 | 21 3/8 | 549 | 12    | 305 | 10 1/8  | 257 | 2 1/16  | 56 | 963    | 437 |

◆These G Style valve dimensions do not meet API 594, please consult factory.

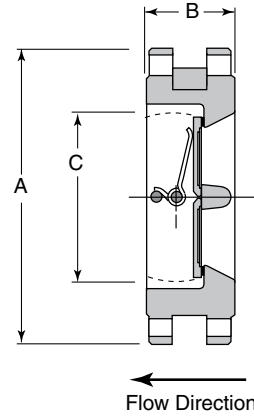
# Dimensions

## Style H Double Flange Retainerless

**Double Flanged Style Valves** bolt up similar to a bolted cap swing check or gate valve. Double flanged versions are offered as standard on larger size valves where the lay length of the body permits installation of two heavy nuts between the flanges. These valves are standard retainerless design.



Pin must be vertical for horizontal flow.



### ASME Class 150

| Size |      | A      |      | B      |      | C      |      | Weight |      |
|------|------|--------|------|--------|------|--------|------|--------|------|
| in   | mm   | in     | mm   | in     | mm   | in     | mm   | lbs.   | kg.  |
| 8"   | 200  | 13 1/2 | 343  | 5      | 127  | 7 5/8  | 194  | 93     | 42   |
| 10"  | 250  | 16     | 406  | 5 3/4  | 146  | 9 9/16 | 243  | 189    | 86   |
| 12"  | 300  | 19     | 483  | 7 1/8  | 181  | 11 3/8 | 289  | 308    | 140  |
| 14"  | 350  | 21     | 533  | 7 1/4  | 184  | 12 1/2 | 318  | 352    | 160  |
| 16"  | 400  | 23 1/2 | 597  | 7 1/2  | 191  | 15     | 381  | 496    | 225  |
| 18"  | 450  | 25     | 635  | 8      | 203  | 16 7/8 | 428  | 551    | 250  |
| 20"  | 500  | 27 1/2 | 699  | 8 5/8  | 219  | 18 7/8 | 480  | 661    | 300  |
| 24"  | 600  | 32     | 813  | 8 3/4  | 222  | 22 5/8 | 575  | 860    | 389  |
| 30"  | 750  | 38 3/4 | 984  | 12     | 305  | 29 1/4 | 743  | 1512   | 687  |
| 36"  | 900  | 46     | 1168 | 14 1/2 | 368  | 35     | 889  | 2525   | 1145 |
| 42"  | 1050 | 53     | 1346 | 17     | 432  | 41     | 1041 | 4163   | 1888 |
| 48"  | 1200 | 59 1/2 | 1511 | 20 5/8 | 524  | 47     | 1194 | 5880   | 2667 |
| 54"  | 1350 | 66 1/4 | 1683 | 21 1/4 | 539  | 51 1/2 | 1308 | -      | -    |
| 60"  | 1500 | 73     | 1854 | 26     | 660  | 56     | 1422 | -      | -    |
| 66"  | 1650 | 80     | 2032 | 31     | 787  | 62 1/2 | 1588 | -      | -    |
| 72"  | 1800 | 86 1/2 | 2197 | 36     | 914  | 68     | 1727 | -      | -    |
| 78"  | 1950 | 90     | 2286 | 39     | 991  | 74     | 1880 | -      | -    |
| 84"  | 2100 | 96     | 2438 | 42     | 1067 | 80     | 2032 | -      | -    |
| 88"  | 2200 | -      | -    | -      | -    | -      | -    | -      | -    |

### ASME Class 300

| Size |      | A      |      | B      |     | C      |      | Weight |      |
|------|------|--------|------|--------|-----|--------|------|--------|------|
| in   | mm   | in     | mm   | in     | mm  | in     | mm   | lbs.   | kg.  |
| 12"  | 300  | 20 1/2 | 521  | 7 1/8  | 181 | 11 3/8 | 289  | 465    | 211  |
| 14"  | 350  | 23     | 584  | 8 3/4  | 222 | 12 1/2 | 318  | 593    | 269  |
| 16"  | 400  | 25 1/2 | 648  | 9 1/8  | 232 | 14 3/8 | 365  | 771    | 350  |
| 18"  | 450  | 28     | 711  | 10 3/8 | 264 | 16 1/8 | 409  | 970    | 440  |
| 20"  | 500  | 30 1/2 | 775  | 11 1/2 | 292 | 17 7/8 | 454  | 1078   | 488  |
| 24"  | 600  | 36     | 914  | 12 1/2 | 318 | 22 1/8 | 562  | 1516   | 686  |
| 30"  | 750  | 43     | 1092 | 14 1/2 | 368 | 28 3/4 | 730  | 3100   | 1406 |
| 36"  | 900  | 50     | 1270 | 19     | 483 | 35     | 864  | 4650   | 2109 |
| 42"  | 1050 | 50 3/4 | 1289 | 22 3/8 | 568 | 41     | 1041 | 8670   | 3932 |
| 48"  | 1200 | 57 3/4 | 1467 | 24 3/4 | 629 | 47     | 1193 | 9950   | 4513 |
| 54"  | 1350 | 65 1/4 | 1657 | 27 1/4 | 692 | 51 1/2 | 1308 | -      | -    |
| 60"  | 1500 | 71 1/4 | 1809 | 32 1/2 | 826 | 56     | 1422 | -      | -    |

### ASME Class 600

| Size |      | A      |      | B        |     | C       |      | Weight |      |
|------|------|--------|------|----------|-----|---------|------|--------|------|
| in   | mm   | in     | mm   | in       | mm  | in      | mm   | lbs.   | kg.  |
| 12"  | 300  | 22     | 559  | 9        | 229 | 11 3/8  | 289  | 612    | 277  |
| 14"  | 350  | 23 3/4 | 603  | 10 3/4   | 273 | 12 1/2  | 318  | 826    | 375  |
| 16"  | 400  | 27     | 685  | 12       | 305 | 14 3/8  | 365  | 951    | 430  |
| 18"  | 450  | 29 1/4 | 743  | 14 1/4   | 362 | 16 1/8  | 409  | 1433   | 650  |
| 20"  | 500  | 32     | 813  | 14 1/2   | 368 | 18      | 457  | 1763   | 800  |
| 24"  | 600  | 37     | 940  | 17 1/4   | 438 | 21 9/16 | 548  | 2755   | 1250 |
| 30"  | 750  | 44 1/2 | 1130 | 19 5/8   | 505 | 28 3/4  | 730  | 5070   | 2300 |
| 36"  | 900  | 51 3/4 | 1314 | 25       | 635 | 33 3/4  | 857  | 7605   | 3450 |
| 42"  | 1050 | 55 1/4 | 1403 | 27 37/64 | 701 | 39 1/2  | 1003 | 9985   | 4529 |
| 48"  | 1200 | 62 3/4 | 1594 | 31       | 787 | 36      | 914  | 12600  | 5715 |

### ASME Class 900

| Size |      | A      |      | B      |     | C      |     | Weight |      |
|------|------|--------|------|--------|-----|--------|-----|--------|------|
| in   | mm   | in     | mm   | in     | mm  | in     | mm  | lbs.   | kg.  |
| 12"  | 300  | 24     | 610  | 11 1/2 | 292 | 10 1/8 | 257 | 770    | 349  |
| 14"  | 350  | 25 1/4 | 641  | 14     | 356 | 11 1/2 | 292 | 1240   | 561  |
| 16"  | 400  | 27 3/4 | 705  | 15 1/8 | 384 | 12 1/8 | 327 | 1653   | 750  |
| 18"  | 450  | 31     | 787  | 17 3/4 | 451 | 14 1/2 | 368 | 2314   | 1050 |
| 20"  | 500  | 33 3/4 | 857  | 17 3/4 | 451 | 18     | 457 | 2866   | 1300 |
| 24"  | 600  | 41     | 1041 | 19 1/2 | 495 | 21 1/2 | 546 | 4175   | 1893 |
| 30"  | 750  | 48 1/2 | 1232 | 25     | 635 | 26     | 660 | 6500   | 2948 |
| 36"  | 900  | 57 1/2 | 1461 | 28     | 711 | 31     | 787 | -      | -    |
| 42"  | 1050 | 61 1/2 | 1562 | 31 1/2 | 800 | 36     | 914 | -      | -    |

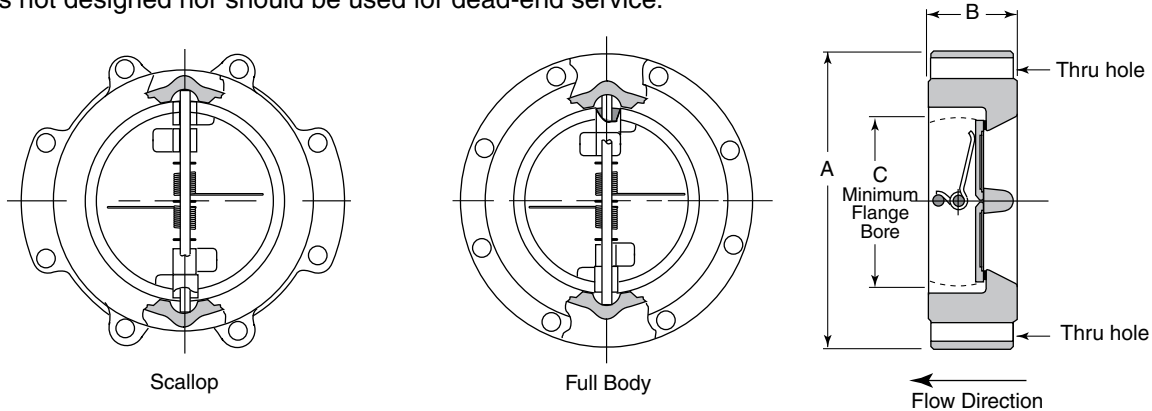
**Notes:**

- Sizes not available in double flange design are offered as lug body design, see page 16.
- Please consult factory for other sizes and pressure classes available.
- Consult factory for dimensions and weights not shown.

## Dimensions

### Style H Lug Retainerless

**Lug Style valves** cover the bolting the entire length of the body. Lug valves are furnished in scallop and full body designs. Scallop is furnished whenever possible to keep weight to a minimum. These valves are standard retainerless design. Lug valves are furnished with thru-hole bolting in accordance with API 594. Threaded bolt holes are available but non standard as valve is not designed nor should be used for dead-end service.



Pin must be vertical  
for horizontal flow.

#### ASME Class 150

| Size   |     | A     |     | B     |    | C       |     | Weight |     |
|--------|-----|-------|-----|-------|----|---------|-----|--------|-----|
| in     | mm  | in    | mm  | in    | mm | in      | mm  | lbs.   | kg. |
| 2"     | 50  | 6     | 152 | 2 3/8 | 60 | 1 15/16 | 49  | 17     | 8   |
| 2 1/2" | 65  | 7     | 178 | 2 5/8 | 67 | 2 11/32 | 60  | 17     | 8   |
| 3"     | 80  | 7 1/2 | 191 | 2 7/8 | 73 | 2 29/32 | 74  | 44     | 20  |
| 4"     | 100 | 9     | 229 | 2 7/8 | 73 | 3 53/64 | 97  | 44     | 20  |
| 5"     | 125 | 10    | 254 | 3 3/8 | 86 | 4 13/16 | 122 | 48 1/2 | 22  |
| 6"     | 150 | 11    | 279 | 3 7/8 | 98 | 5 49/64 | 146 | 77     | 35  |

#### ASME Class 900

| Size |     | A      |     | B     |     | C       |     | Weight |     |
|------|-----|--------|-----|-------|-----|---------|-----|--------|-----|
| in   | mm  | in     | mm  | in    | mm  | in      | mm  | lbs.   | kg. |
| 2"   | 50  | 8 1/2  | 216 | 2 3/4 | 70  | 1 11/16 | 43  | 37     | 17  |
| 3"   | 80  | 9 1/2  | 241 | 3 1/4 | 83  | 2 5/8   | 67  | 57     | 26  |
| 4"   | 100 | 11 1/2 | 292 | 4     | 102 | 3 7/16  | 87  | 98     | 45  |
| 6"   | 150 | 15     | 381 | 6 1/4 | 159 | 5 3/16  | 132 | 252    | 114 |
| 8"   | 200 | 18 1/2 | 470 | 8 1/8 | 206 | 6 13/16 | 173 | 441    | 200 |
| 10"  | 250 | 21 1/2 | 546 | 9 1/2 | 241 | 8 1/2   | 216 | 787    | 357 |

#### ASME Class 300

| Size   |     | A      |     | B     |     | C       |     | Weight |     |
|--------|-----|--------|-----|-------|-----|---------|-----|--------|-----|
| in     | mm  | in     | mm  | in    | mm  | in      | mm  | lbs.   | kg. |
| 2"     | 50  | 6 1/2  | 165 | 2 3/8 | 60  | 1 15/16 | 49  | 18     | 8   |
| 2 1/2" | 65  | 7 1/2  | 191 | 2 5/8 | 67  | 2 11/32 | 60  | 22     | 10  |
| 3"     | 80  | 8 1/4  | 210 | 2 7/8 | 73  | 2 29/32 | 74  | 30     | 14  |
| 4"     | 100 | 10     | 254 | 2 7/8 | 73  | 3 53/64 | 97  | 44     | 20  |
| 5"     | 125 | 11     | 279 | 3 3/8 | 86  | 4 13/16 | 122 | 51     | 23  |
| 6"     | 150 | 12 1/2 | 318 | 3 7/8 | 98  | 5 49/64 | 146 | 84     | 38  |
| 8"     | 200 | 15     | 381 | 5     | 127 | 7 3/8   | 194 | 163    | 74  |
| 10"    | 250 | 17 1/2 | 445 | 5 3/4 | 146 | 9 9/16  | 243 | 270    | 123 |

#### ASME Class 1500

| Size |     | A      |      | B       |     | C        |     | Weight |      |
|------|-----|--------|------|---------|-----|----------|-----|--------|------|
| in   | mm  | in     | mm   | in      | mm  | in       | mm  | lbs.   | kg.  |
| 2"   | 50  | 8 1/2  | 216  | 2 3/4   | 70  | 1 11/16  | 43  | 37     | 17   |
| 3"   | 80  | 10 1/2 | 267  | 3 1/4   | 83  | 2 5/8    | 67  | 70     | 32   |
| 4"   | 100 | 12 1/4 | 311  | 4       | 102 | 3 7/16   | 87  | 112    | 51   |
| 6"   | 150 | 15 1/2 | 394  | 6 1/4   | 159 | 5 3/16   | 132 | 262    | 119  |
| 8"   | 200 | 19     | 483  | 8 1/8   | 206 | 6 13/16  | 173 | 488    | 221  |
| 10"  | 250 | 23     | 584  | 9 3/4   | 248 | 8 1/2    | 216 | 917    | 416  |
| 12"  | 300 | 26 1/2 | 673  | 12      | 305 | 10 1/8   | 257 | 1425   | 646  |
| 14"  | 350 | 29 1/2 | 749  | 14      | 356 | 11 1/2   | 292 | 2045   | 928  |
| 16"  | 400 | 32 1/2 | 826  | 15 1/8  | 384 | 12 13/16 | 325 | 2600   | 1179 |
| 18"  | 450 | 36     | 914  | 18 7/16 | 468 | 13 3/4   | 349 | 3883   | 1761 |
| 20"  | 500 | 38 3/4 | 984  | 21      | 533 | 14 3/4   | 348 | 5700   | 2580 |
| 24"  | 600 | 46     | 1168 | 22      | 559 | 15 1/8   | 384 | 7150   | 3236 |

#### ASME Class 600

| Size   |     | A      |     | B     |     | C       |     | Weight |     |
|--------|-----|--------|-----|-------|-----|---------|-----|--------|-----|
| in     | mm  | in     | mm  | in    | mm  | in      | mm  | lbs.   | kg. |
| 2"     | 50  | 6 1/2  | 165 | 2 3/8 | 60  | 1 15/16 | 49  | 18     | 8   |
| 2 1/2" | 65  | 7 1/2  | 191 | 2 5/8 | 67  | 2 11/32 | 60  | 22     | 10  |
| 3"     | 80  | 8 1/4  | 210 | 2 7/8 | 73  | 2 29/32 | 74  | 30     | 14  |
| 4"     | 100 | 10 3/4 | 273 | 3 1/8 | 79  | 3 53/64 | 97  | 60     | 27  |
| 6"     | 150 | 14     | 356 | 5 3/8 | 136 | 5 49/64 | 146 | 183    | 83  |
| 8"     | 200 | 16 1/2 | 419 | 6 1/2 | 165 | 7 3/8   | 194 | 295    | 134 |
| 10"    | 250 | 20     | 508 | 8 3/8 | 213 | 9 9/16  | 243 | 540    | 245 |

#### ASME Class 2500

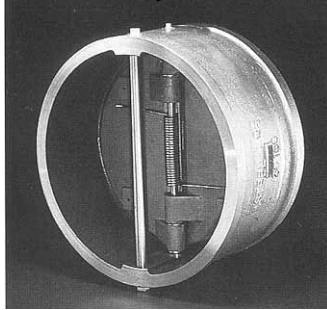
| Size |     | A      |     | B     |     | C       |     | Weight |      |
|------|-----|--------|-----|-------|-----|---------|-----|--------|------|
| in   | mm  | in     | mm  | in    | mm  | in      | mm  | lbs.   | kg.  |
| 2"   | 50  | 9 1/4  | 235 | 2 3/4 | 70  | 1 11/16 | 43  | 48     | 22   |
| 3"   | 80  | 12     | 305 | 3 3/8 | 86  | 2 5/8   | 67  | 93     | 42   |
| 4"   | 100 | 14     | 356 | 4 1/8 | 105 | 3 7/16  | 87  | 152    | 69   |
| 6"   | 150 | 19     | 483 | 6 1/4 | 159 | 5 3/16  | 132 | 386    | 175  |
| 8"   | 200 | 21 3/4 | 552 | 8 1/8 | 206 | 6 13/16 | 173 | 682    | 309  |
| 10"  | 250 | 26 1/2 | 673 | 10    | 254 | 8 1/2   | 216 | 1421   | 645  |
| 12"  | 300 | 30     | 762 | 12    | 305 | 10 1/8  | 257 | 2248   | 1020 |

• Consult factory for additional sizes and pressure classes.

# Dimensions

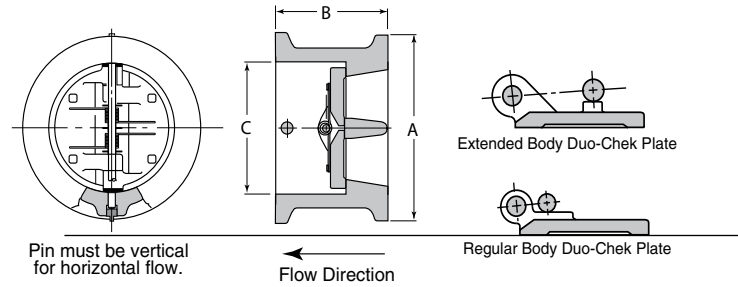
## Style X Extended Body Wafer Check

The "Extended Body" version of the Duo-Chek® was designed for extremely fast opening conditions. These types of applications are generally associated with compressed gas or steam that causes damage from the explosive opening effect on the closure mechanism. This damage can render them inoperative. This is especially true with slow response valves such as swing and tilting disc check valves.



The Style X body design has special geometry and plate configuration to allow each plate to strike the stop pin in its center of percussion. To absorb high impacts, the stop pin and hinge lugs are oversized.

Typical applications include centrifugal compressor discharge where compressors are subject to "surging", air separation plants, pipelines where compressors are mounted in parallel, and steam extraction. Style X Duo-Chek® valves are generally not required for liquid applications.



## Installation Dimensions Pressure Classes 150 – 2500

### ASME Class 150

| Size |      | A      |      | B      |     | C      |      | Weight |      |
|------|------|--------|------|--------|-----|--------|------|--------|------|
| in   | mm   | in     | mm   | in     | mm  | in     | mm   | lbs.   | kg.  |
| 10"  | 250  | 13 3/8 | 340  | 7 1/4  | 184 | 10 3/4 | 273  | 166    | 75   |
| 12"  | 300  | 16 1/8 | 410  | 9      | 229 | 12 3/4 | 324  | 244    | 111  |
| 14"  | 350  | 17 3/4 | 451  | 8 3/8  | 213 | 14     | 356  | 260    | 118  |
| 16"  | 400  | 20 1/4 | 514  | 9 1/2  | 241 | 16     | 406  | 345    | 157  |
| 18"  | 450  | 21 5/8 | 549  | 10 3/8 | 264 | 18     | 457  | 427    | 194  |
| 20"  | 500  | 23 1/8 | 606  | 11 3/4 | 298 | 20     | 508  | 548    | 249  |
| 24"  | 600  | 28 1/4 | 718  | 13 3/4 | 349 | 24     | 610  | 874    | 396  |
| 26"  | 650  | 30 1/2 | 775  | 18     | 457 | 26     | 660  | 1741   | 790  |
| 30"  | 750  | 34 3/4 | 883  | 18     | 457 | 30     | 762  | 1544   | 700  |
| 32"  | 800  | 37     | 940  | 20 5/8 | 530 | 32     | 813  | 1638   | 743  |
| 36"  | 900  | 41 1/4 | 1048 | 21 5/8 | 556 | 36     | 914  | 2750   | 1247 |
| 42"  | 1050 | 48     | 1219 | 25 3/4 | 654 | 42     | 1067 | 3862   | 1752 |
| 48"  | 1200 | 54 1/2 | 1384 | 30 5/8 | 784 | 48     | 1219 | 6000   | 2722 |
| 54"  | 1350 | 61     | 1550 | 32 3/4 | 832 | 54     | 1372 | 7462   | 3385 |

### ASME Class 300

| Size |      | A      |      | B      |     | C      |      | Weight |      |
|------|------|--------|------|--------|-----|--------|------|--------|------|
| in   | mm   | in     | mm   | in     | mm  | in     | mm   | lbs.   | kg.  |
| 10"  | 250  | 14 1/4 | 362  | 7 1/4  | 184 | 10 3/4 | 273  | 166    | 75   |
| 12"  | 300  | 16 5/8 | 422  | 9      | 229 | 12 3/4 | 324  | 244    | 111  |
| 14"  | 350  | 19 1/8 | 486  | 10 1/4 | 260 | 14     | 356  | 407    | 185  |
| 16"  | 400  | 21 1/4 | 540  | 11 1/8 | 283 | 16     | 406  | 533    | 242  |
| 18"  | 450  | 23 1/2 | 597  | 12 1/2 | 318 | 18     | 457  | 698    | 317  |
| 20"  | 500  | 25 3/4 | 654  | 13 3/4 | 349 | 20     | 508  | 900    | 408  |
| 24"  | 600  | 30 1/2 | 775  | 16     | 406 | 24     | 610  | 1446   | 656  |
| 28"  | 700  | 35 5/8 | 911  | 20 1/4 | 514 | 28     | 711  | 1992   | 904  |
| 30"  | 750  | 37 1/2 | 953  | 20 5/8 | 524 | 30     | 762  | 2457   | 1115 |
| 36"  | 900  | 44     | 1118 | 25     | 635 | 36     | 914  | 3947   | 1790 |
| 42"  | 1050 | 50 3/4 | 1289 | 31 5/8 | 810 | 42     | 1067 | 6523   | 2959 |
| 48"  | 1200 | 58 3/4 | 1492 | 35     | 889 | 48     | 1219 | 7483   | 3394 |

### ASME Class 600

| Size |      | A      |      | B      |      | C      |      | Weight |      |
|------|------|--------|------|--------|------|--------|------|--------|------|
| in   | mm   | in     | mm   | in     | mm   | in     | mm   | lbs.   | kg.  |
| 10"  | 250  | 15 3/4 | 400  | 9 7/8  | 251  | 10 3/4 | 273  | 285    | 130  |
| 12"  | 300  | 18     | 457  | 11 5/8 | 295  | 12 3/4 | 324  | 366    | 166  |
| 14"  | 350  | 19 5/8 | 492  | 12 3/4 | 324  | 14     | 356  | 485    | 220  |
| 16"  | 400  | 22 1/4 | 565  | 14 1/2 | 368  | 16     | 406  | 705    | 320  |
| 18"  | 450  | 24 1/8 | 613  | 16 3/4 | 425  | 18     | 457  | 1057   | 480  |
| 20"  | 500  | 26 7/8 | 683  | 17 1/2 | 445  | 20     | 508  | 1531   | 695  |
| 24"  | 600  | 31 1/8 | 791  | 21 1/4 | 540  | 24     | 610  | 2240   | 1016 |
| 28"  | 700  | 36     | 914  | 23     | 584  | 28     | 711  | 3277   | 1486 |
| 30"  | 750  | 38 1/4 | 972  | 26 3/4 | 680  | 30     | 762  | 3746   | 1699 |
| 36"  | 900  | 44 1/2 | 1130 | 31     | 787  | 36     | 914  | 7000   | 3175 |
| 48"  | 1200 | 54 3/4 | 1391 | 40 1/8 | 1019 | 48     | 1219 | 9972   | 4523 |

### ASME Class 900

| Size |     | A      |      | B        |     | C      |     | Weight |      |
|------|-----|--------|------|----------|-----|--------|-----|--------|------|
| in   | mm  | in     | mm   | in       | mm  | in     | mm  | lbs.   | kg.  |
| 10"  | 250 | 17 1/8 | 435  | 10 1/4   | 260 | 10 3/4 | 273 | 462    | 210  |
| 12"  | 300 | 19 5/8 | 498  | 12 19/64 | 325 | 12 3/4 | 324 | 605    | 274  |
| 14"  | 350 | 20 1/2 | 521  | 14 5/8   | 371 | 14     | 356 | 1030   | 467  |
| 16"  | 400 | 22 5/8 | 575  | 15 1/2   | 394 | 16     | 406 | 1553   | 705  |
| 20"  | 500 | 27 1/2 | 699  | 19 1/2   | 495 | 20     | 508 | 1583   | 718  |
| 24"  | 600 | 33     | 838  | 22 1/4   | 565 | 24     | 610 | 3029   | 1374 |
| 30"  | 750 | 39 3/4 | 1010 | 28 7/8   | 734 | 30     | 762 | 6310   | 2862 |

### ASME Class 1500

| Size |     | A      |     | B      |     | C      |     | Weight |      |
|------|-----|--------|-----|--------|-----|--------|-----|--------|------|
| in   | mm  | in     | mm  | in     | mm  | in     | mm  | lbs.   | kg.  |
| 10"  | 250 | 17 1/8 | 435 | 11 1/2 | 292 | 10 3/4 | 273 | 476    | 216  |
| 12"  | 300 | 20 1/2 | 521 | 13 7/8 | 353 | 12 3/4 | 324 | 805    | 365  |
| 14"  | 350 | 22 3/4 | 578 | 14 5/8 | 371 | 14     | 356 | 1080   | 490  |
| 16"  | 400 | 25 1/4 | 641 | 16 1/2 | 419 | 16     | 406 | 1530   | 694  |
| 18"  | 450 | 27 3/4 | 705 | 20 1/4 | 514 | 18     | 457 | 2109   | 957  |
| 20"  | 500 | 29 3/4 | 756 | 21 7/8 | 556 | 20     | 508 | 2376   | 1077 |
| 24"  | 600 | 35 1/2 | 902 | 24 7/8 | 632 | 24     | 610 | 4329   | 1964 |

### ASME Class 2500

| Size |     | A      |     | B      |     | C      |     | Weight |     |
|------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| in   | mm  | in     | mm  | in     | mm  | in     | mm  | lbs.   | kg. |
| 10"  | 250 | 18 3/4 | 476 | 11 1/2 | 292 | 10 3/4 | 273 | 577    | 262 |
| 12"  | 300 | 21 5/8 | 549 | 13 7/8 | 352 | 12 3/4 | 324 | 598    | 271 |

Consult factory for additional sizes and pressure classes.

## DIN Wafer Valve Outside Diameter of Body

**PN 6, 10, 16 (ASME Class 150)**

| Size   |      | PN | A (DIN)* |          |
|--------|------|----|----------|----------|
| in     | mm   |    | mm       | in       |
| 2"     | 50   | 6  | 98       | 3 27/32  |
|        |      | 10 | 109      | 4 9/32   |
|        |      | 16 | 109      | 4 9/32   |
| 2 1/2" | 65   | 6  | 118      | 4 5/8    |
|        |      | 10 | 129      | 5 1/16   |
|        |      | 16 | 129      | 5 1/16   |
| 3"     | 80   | 6  | 134      | 5 1/4    |
|        |      | 10 | 144      | 5 21/32  |
|        |      | 16 | 144      | 5 21/32  |
| 4"     | 100  | 6  | 154      | 6 1/16   |
|        |      | 10 | 164      | 6 7/16   |
|        |      | 16 | 164      | 6 7/16   |
| 5"     | 125  | 6  | 184      | 7 7/32   |
|        |      | 10 | 194      | 7 5/8    |
|        |      | 16 | 194      | 7 5/8    |
| 6"     | 150  | 6  | 209      | 8 7/32   |
|        |      | 10 | 220      | 8 21/32  |
|        |      | 16 | 220      | 8 21/32  |
| 8"     | 200  | 6  | 264      | 10 3/8   |
|        |      | 10 | 275      | 10 13/16 |
|        |      | 16 | 275      | 10 13/16 |
| 10"    | 250  | 6  | 319      | 12 17/32 |
|        |      | 10 | 330      | 13       |
|        |      | 16 | 331      | 13 1/32  |
| 12"    | 300  | 6  | 375      | 14 3/4   |
|        |      | 10 | 380      | 14 15/16 |
|        |      | 16 | 386      | 15 1/16  |
| 14"    | 350  | 6  | 425      | 16 23/32 |
|        |      | 10 | 440      | 17 3/16  |
|        |      | 16 | 446      | 17 17/32 |
| 16"    | 400  | 6  | 475      | 18 11/16 |
|        |      | 10 | 491      | 19 3/16  |
|        |      | 16 | 498      | 19 19/32 |
| 18"    | 450  | 10 | 541      | 21 9/32  |
|        |      | 16 | 558      | 21       |
|        |      | 16 | 558      | 21       |
| 20"    | 500  | 6  | 580      | 22 13/16 |
|        |      | 10 | 596      | 23 7/16  |
|        |      | 16 | 620      | 24 13/16 |
| 24"    | 600  | 6  | 681      | 26 25/32 |
|        |      | 10 | 698      | 27 15/32 |
|        |      | 16 | 737      | 29       |
| 28"    | 700  | 6  | 786      | 30 15/16 |
|        |      | 10 | 813      | 32       |
|        |      | 16 | 807      | 31 3/4   |
| 32"    | 800  | 6  | 893      | 35 5/32  |
|        |      | 10 | 920      | 36 7/32  |
|        |      | 16 | 914      | 35 15/16 |
| 36"    | 900  | 6  | 993      | 39 3/32  |
|        |      | 10 | 1020     | 40 3/32  |
|        |      | 16 | 1014     | 39 29/32 |
| 40"    | 1000 | 6  | 1093     | 43 1/32  |
|        |      | 10 | 1127     | 44 3/8   |
|        |      | 16 | 1131     | 44 1/2   |
| 48"    | 1200 | 6  | 1310     | 51 3/16  |
|        |      | 10 | 1344     | 52 15/16 |
|        |      | 16 | 1345     | 52 15/16 |

**PN 25, 40 (ASME Class 300)**

| Size   |     | PN | A (DIN)* |          |
|--------|-----|----|----------|----------|
| in     | mm  |    | mm       | in       |
| 2"     | 50  | 25 | 109      | 4 9/32   |
|        |     | 40 | 109      | 4 9/32   |
| 2 1/2" | 65  | 25 | 129      | 5 1/16   |
|        |     | 40 | 129      | 5 1/16   |
| 3"     | 80  | 25 | 144      | 5 21/32  |
|        |     | 40 | 144      | 5 21/32  |
| 4"     | 100 | 25 | 170      | 6 11/16  |
|        |     | 40 | 170      | 6 11/16  |
| 5"     | 125 | 25 | 196      | 7 11/16  |
|        |     | 40 | 196      | 7 11/16  |
| 6"     | 150 | 25 | 226      | 8 7/8    |
|        |     | 40 | 226      | 8 7/8    |
| 8"     | 200 | 25 | 286      | 11 1/4   |
|        |     | 40 | 293      | 11 17/32 |
| 10"    | 250 | 25 | 343      | 13 1/2   |
|        |     | 40 | 355      | 13 31/32 |
| 12"    | 300 | 25 | 403      | 15 27/32 |
|        |     | 40 | 420      | 16 17/32 |
| 14"    | 350 | 25 | 460      | 18 3/8   |
|        |     | 40 | 477      | 18 3/4   |
| 16"    | 400 | 25 | 517      | 20 11/32 |
|        |     | 40 | 549      | 21 19/32 |
| 18"    | 450 | 40 | 574      | 22 19/32 |
|        |     | 40 | 627      | 24 11/16 |
| 20"    | 500 | 25 | 631      | 24 13/16 |
|        |     | 40 | 631      | 24 13/16 |
| 24"    | 600 | 25 | 734      | 28 7/8   |
|        |     | 40 | 750      | 29 1/2   |

**PN 64, 100 (ASME Class 600)**

| Size   |     | PN  | A (DIN)* |          |
|--------|-----|-----|----------|----------|
| in     | mm  |     | mm       | in       |
| 2"     | 50  | 64  | 115      | 4 1/2    |
|        |     | 100 | 121      | 4 3/4    |
| 2 1/2" | 65  | 64  | 140      | 5 1/2    |
|        |     | 100 | 146      | 5 3/4    |
| 3"     | 80  | 64  | 150      | 5 29/32  |
|        |     | 100 | 156      | 6 1/8    |
| 4"     | 100 | 64  | 176      | 6 29/32  |
|        |     | 100 | 183      | 7 3/16   |
| 5"     | 125 | 64  | 213      | 8 3/8    |
|        |     | 100 | 220      | 8 27/32  |
| 6"     | 150 | 64  | 250      | 9 13/16  |
|        |     | 100 | 260      | 10 7/32  |
| 8"     | 200 | 64  | 312      | 12 9/32  |
|        |     | 100 | 327      | 12 27/32 |
| 10"    | 250 | 64  | 367      | 14 7/16  |
|        |     | 100 | 394      | 15 1/2   |
| 12"    | 300 | 64  | 427      | 16 25/32 |
|        |     | 100 | 461      | 18 1/8   |
| 14"    | 350 | 64  | 489      | 19 1/4   |
|        |     | 100 | 515      | 20 1/4   |
| 16"    | 400 | 64  | 546      | 21 15/32 |
|        |     | 100 | 575      | 22 5/8   |
| 20"    | 500 | 64  | 660      | 25 31/32 |
|        |     | 100 | 708      | 27 27/32 |
| 24"    | 600 | 64  | 768      | 30 7/32  |
|        |     | 100 | 819      | 32 7/32  |

**PN 160 (ASME Class 900)**

| Size   |     | PN  | A (DIN)* |          |
|--------|-----|-----|----------|----------|
| in     | mm  |     | mm       | in       |
| 2"     | 50  | 160 | 121      | 4 3/4    |
| 2 1/2" | 65  | 160 | 146      | 5 3/4    |
| 3"     | 80  | 160 | 156      | 6 1/8    |
| 4"     | 100 | 160 | 183      | 7 3/16   |
| 5"     | 125 | 160 | 220      | 8 27/32  |
| 6"     | 150 | 160 | 260      | 10 7/32  |
| 8"     | 200 | 160 | 327      | 12 27/32 |
| 10"    | 250 | 160 | 391      | 15 3/8   |
| 12"    | 300 | 160 | 461      | 18 1/8   |

**PN 250 (ASME Class 1500)**

| Size   |     | PN  | A (DIN)* |         |
|--------|-----|-----|----------|---------|
| in     | mm  |     | mm       | in      |
| 2"     | 50  | 250 | 126      | 4 15/16 |
| 2 1/2" | 65  | 250 | 156      | 6 1/8   |
| 3"     | 80  | 250 | 173      | 6 25/32 |
| 4"     | 100 | 250 | 205      | 8 1/16  |
| 5"     | 125 | 250 | 245      | 9 5/8   |
| 6"     | 150 | 250 | 287      | 11 9/32 |
| 8"     | 200 | 250 | 361      | 14 3/16 |
| 10"    | 250 | 250 | 445      | 17 1/2  |
| 12"    | 300 | 250 | 542      | 21 5/16 |

**PN 320 (ASME Class 2500)**

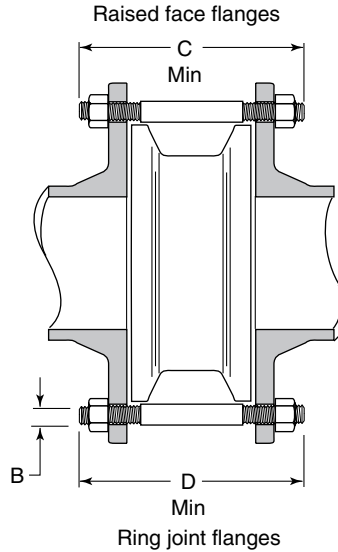
| Size   |     | PN  | A (DIN)* |          |
|--------|-----|-----|----------|----------|
| in     | mm  |     | mm       | in       |
| 2"     | 50  | 320 | 136      | 5 11/32  |
| 2 1/2" | 65  | 320 | 173      | 6 25/32  |
| 3"     | 80  | 320 | 193      | 7 19/32  |
| 4"     | 100 | 320 | 232      | 9 1/8    |
| 5"     | 125 | 320 | 277      | 10 29/32 |
| 6"     | 150 | 320 | 314      | 12 11/32 |
| 8"     | 200 | 320 | 401      | 15 25/32 |
| 10"    | 250 | 320 | 492      | 19 11/32 |

\*Dimension A applies to drawing on page 13. Other dimensions for ASME Classes shown apply to these valves with DIN outside diameters.



# Stud Selection

## Wafer Styles G (Retainered) and H (Retainerless)



**ASME Class 125 (Cast Iron valves only)**

| Valve Size |      | No. of Studs | B             |           | C      |     |
|------------|------|--------------|---------------|-----------|--------|-----|
| in         | mm   |              | Bolt Diameter | Flat Face | in     | mm  |
| 2"         | 50   | 4            | 5/8           | 16        | 5 1/4  | 133 |
| 2 1/2"     | 65   | 4            | 5/8           | 16        | 5 3/8  | 136 |
| 3"         | 80   | 4            | 5/8           | 16        | 5 5/8  | 143 |
| 4"         | 100  | 8            | 5/8           | 16        | 6 1/4  | 159 |
| 5"         | 125  | 8            | 3/4           | 19        | 6 3/4  | 171 |
| 6"         | 150  | 8            | 3/4           | 19        | 7      | 178 |
| 8"         | 200  | 8            | 3/4           | 19        | 8      | 203 |
| 10"        | 250  | 12           | 7/8           | 22        | 9      | 229 |
| 12"        | 300  | 12           | 7/8           | 22        | 10 1/2 | 267 |
| 14"        | 350  | 12           | 1             | 25        | 12 3/4 | 324 |
| 16"        | 400  | 16           | 1             | 25        | 13 1/4 | 337 |
| 18"        | 450  | 16           | 1 1/8         | 29        | 14 1/4 | 362 |
| 20"        | 500  | 20           | 1 1/8         | 29        | 15     | 381 |
| 24"        | 600  | 20           | 1 1/4         | 32        | 16     | 406 |
| 26"        | 650  | 24           | 1 1/4         | 32        | 22 3/4 | 578 |
| 30"        | 750  | 28           | 1 1/4         | 32        | 20     | 508 |
| 36"        | 900  | 32           | 1 1/2         | 38        | 23 1/2 | 597 |
| 42"        | 1050 | 36           | 1 1/2         | 38        | 26 1/2 | 673 |
| 48"        | 1200 | 44           | 1 1/2         | 38        | 30 1/2 | 775 |
| 54"        | 1350 | 44           | 1 3/4         | 44        | 32 1/4 | 819 |
| 60"        | 1500 | 52           | 1 3/4         | 44        | -      | -   |
| 66"        | 1650 | 52           | 1 3/4         | 44        | -      | -   |
| 72"        | 1800 | 60           | 1 1/8         | 29        | -      | -   |
| 78"        | 1950 | 56           | 2             | 51        | -      | -   |
| 84"        | 2100 | 64           | 2 1/8         | 54        | -      | -   |
| 88"        | 2200 | 64           | 2 1/4         | 57        | -      | -   |

**ASME Class 150**

| Valve Size |      | No. of Studs | B             |             | C          |     | D      |     |
|------------|------|--------------|---------------|-------------|------------|-----|--------|-----|
| in         | mm   |              | Bolt Diameter | Raised Face | Ring Joint | in  | mm     |     |
| 2"         | 50   | 4            | 5/8           | 16          | 5 3/4      | 146 | 6 1/4  | 159 |
| 2 1/2"     | 65   | 4            | 5/8           | 16          | 6 1/4      | 159 | 7      | 178 |
| 3"         | 80   | 4            | 5/8           | 16          | 6 3/4      | 171 | 7 1/4  | 184 |
| 4"         | 100  | 8            | 5/8           | 16          | 6 3/4      | 171 | 7 1/4  | 184 |
| 5"         | 125  | 8            | 3/4           | 19          | 7 1/2      | 191 | 8      | 203 |
| 6"         | 150  | 8            | 3/4           | 19          | 8          | 203 | 8 1/2  | 216 |
| 8"         | 200  | 8            | 3/4           | 19          | 9 1/2      | 241 | 10     | 254 |
| 10"        | 250  | 12           | 7/8           | 22          | 10 1/2     | 267 | 11     | 279 |
| 12"        | 300  | 12           | 7/8           | 22          | 12         | 305 | 12 1/2 | 318 |
| 14"        | 350  | 12           | 1             | 25          | 12 3/4     | 324 | 13 1/4 | 337 |
| 16"        | 400  | 16           | 1             | 25          | 13 1/4     | 337 | 13 3/4 | 349 |
| 18"        | 450  | 16           | 1 1/8         | 29          | 14 1/4     | 362 | 14 3/4 | 375 |
| 20"        | 500  | 20           | 1 1/8         | 29          | 15         | 381 | 15 1/2 | 394 |
| 24"        | 600  | 20           | 1 1/4         | 32          | 15 3/4     | 400 | 16 1/4 | 413 |
| 26"        | 650  | 24           | 1 1/4         | 32          | 22 3/4     | 578 | 23 1/4 | 591 |
| 30"        | 750  | 28           | 1 1/4         | 32          | 21 1/4     | 540 | 22 3/4 | 578 |
| 36"        | 900  | 32           | 1 1/2         | 38          | 26 1/4     | 667 | 39     | 679 |
| 42"        | 1050 | 36           | 1 1/2         | 38          | 28 1/2     | 724 | -      | -   |
| 48"        | 1200 | 44           | 1 1/2         | 38          | 33         | 838 | -      | -   |
| 54"        | 1350 | 44           | 1 3/4         | 44          | 35         | 889 | -      | -   |
| 60"        | 1500 | 52           | 1 3/4         | 44          | -          | -   | -      | -   |
| 66"        | 1650 | 52           | 1 3/4         | 44          | -          | -   | -      | -   |
| 72"        | 1800 | 60           | 1 1/8         | 29          | -          | -   | -      | -   |
| 78"        | 1950 | 56           | 2             | 51          | -          | -   | -      | -   |
| 84"        | 2100 | 64           | 2 1/8         | 54          | -          | -   | -      | -   |
| 88"        | 2200 | 64           | 2 1/4         | 57          | -          | -   | -      | -   |

Stud dimensions apply to styles G & H for Lug style thru-hole bolting design.

## Stud Selection

### Wafer Styles G (Retainered) and H (Retainerless)

#### ASME Classes 250 (Cast Iron valves only) & 300

| Valve Size |      | No. of Studs | B             |    | C           |      | D           |     |
|------------|------|--------------|---------------|----|-------------|------|-------------|-----|
| in         | mm   |              | Bolt Diameter |    | Raised Face |      | Ring Joint* |     |
|            |      |              | in            | mm | in          | mm   | in          | mm  |
| 2"         | 50   | 8            | 5/8           | 16 | 6 3/4       | 171  | 6 3/4       | 171 |
| 2 1/2"     | 65   | 8            | 3/4           | 19 | 6 3/4       | 171  | 7 1/2       | 191 |
| 3"         | 80   | 8            | 3/4           | 19 | 7           | 178  | 8           | 203 |
| 4"         | 100  | 8            | 3/4           | 19 | 7 1/2       | 191  | 8 1/4       | 210 |
| 5"         | 125  | 8            | 3/4           | 19 | 8 1/4       | 210  | 9           | 229 |
| 6"         | 150  | 12           | 3/4           | 19 | 9           | 229  | 9 3/4       | 248 |
| 8"         | 200  | 12           | 7/8           | 22 | 10 1/2      | 267  | 11 1/4      | 286 |
| 10"        | 250  | 16           | 1             | 25 | 12 1/4      | 311  | 13          | 330 |
| 12"        | 300  | 16           | 1 1/8         | 29 | 14          | 356  | 14 3/4      | 375 |
| 14"        | 350  | 20           | 1 1/8         | 29 | 16          | 406  | 16 3/4      | 425 |
| 16"        | 400  | 20           | 1 1/4         | 32 | 17          | 432  | 17 3/4      | 451 |
| 18"        | 450  | 24           | 1 1/4         | 32 | 18 1/2      | 470  | 19 3/4      | 489 |
| 20"        | 500  | 24           | 1 1/4         | 32 | 19 3/4      | 502  | 20 1/2      | 521 |
| 24"        | 600  | 24           | 1 1/2         | 38 | 21 3/4      | 552  | 22 3/4      | 578 |
| 26"        | 650  | 28           | 1 5/8         | 41 | 24 1/4      | 616  | 25 1/4      | 641 |
| 30"        | 750  | 28           | 1 3/4         | 44 | 27 1/4      | 692  | 28 1/2      | 724 |
| 36"        | 900  | 32           | 2             | 51 | 32 1/4      | 819  | 15 1/2      | 851 |
| 42"        | 1050 | 36           | 2             | 51 | 36 1/2      | 927  | 37 3/4      | 959 |
| 48"        | 1200 | 40           | 2             | 51 | 40          | 1016 | -           | -   |

\*Available in Class 300 only.

#### ASME Class 600

| Valve Size |      | No. of Studs | B             |    | C           |      | D          |      |
|------------|------|--------------|---------------|----|-------------|------|------------|------|
| in         | mm   |              | Bolt Diameter |    | Raised Face |      | Ring Joint |      |
|            |      |              | in            | mm | in          | mm   | in         | mm   |
| 2"         | 50   | 8            | 5/8           | 16 | 6 3/4       | 171  | 7          | 178  |
| 2 1/2"     | 65   | 8            | 3/4           | 19 | 7 1/2       | 191  | 7 3/4      | 197  |
| 3"         | 80   | 8            | 3/4           | 19 | 8           | 203  | 8 1/4      | 210  |
| 4"         | 100  | 8            | 7/8           | 22 | 9 1/4       | 235  | 9 1/4      | 235  |
| 5"         | 125  | 8            | 1             | 25 | 10 3/4      | 273  | 11         | 279  |
| 6"         | 150  | 12           | 1             | 25 | 12 1/4      | 311  | 12 1/2     | 318  |
| 8"         | 200  | 12           | 1 1/8         | 29 | 14 1/4      | 362  | 14 1/2     | 368  |
| 10"        | 250  | 16           | 1 1/4         | 32 | 17          | 432  | 17 1/4     | 438  |
| 12"        | 300  | 20           | 1 1/4         | 32 | 18          | 457  | 18         | 457  |
| 14"        | 350  | 20           | 1 3/8         | 35 | 20 1/4      | 514  | 20 1/2     | 521  |
| 16"        | 400  | 20           | 1 1/2         | 38 | 22 1/4      | 565  | 22 1/2     | 572  |
| 18"        | 450  | 20           | 1 5/8         | 41 | 25 1/4      | 641  | 25 1/2     | 648  |
| 20"        | 500  | 24           | 1 5/8         | 41 | 26          | 660  | 26 1/4     | 667  |
| 24"        | 600  | 24           | 1 7/8         | 48 | 30 1/4      | 768  | 30 3/4     | 781  |
| 26"        | 650  | 28           | 1 7/8         | 48 | 31 1/2      | 800  | 32         | 813  |
| 30"        | 750  | 28           | 2             | 51 | 34 1/4      | 870  | 34 3/4     | 883  |
| 36"        | 900  | 28           | 2 1/2         | 64 | 41          | 1041 | 20 1/2     | 1060 |
| 42"        | 1050 | 28           | 2 3/4         | 70 | 47          | 1194 | 47 1/2     | 1207 |

Stud dimensions apply to styles G & H for Lug style thru-hole bolting design.

#### ASME Class 900

| Valve Size |     | No. of Studs | B             |    | C           |     | D          |     |
|------------|-----|--------------|---------------|----|-------------|-----|------------|-----|
| in         | mm  |              | Bolt Diameter |    | Raised Face |     | Ring Joint |     |
|            |     |              | in            | mm | in          | mm  | in         | mm  |
| 2"         | 50  | 8            | 7/8           | 22 | 8 3/4       | 222 | 8 3/4      | 222 |
| 2 1/2"     | 65  | 8            | 1             | 25 | 9 3/4       | 248 | 9 3/4      | 248 |
| 3"         | 80  | 8            | 7/8           | 22 | 9 1/4       | 235 | 9 1/4      | 235 |
| 4"         | 100 | 8            | 1 1/8         | 29 | 11          | 279 | 11         | 279 |
| 6"         | 150 | 12           | 1 1/8         | 29 | 14          | 356 | 14 1/4     | 362 |
| 8"         | 200 | 12           | 1 3/8         | 35 | 17          | 432 | 17 1/4     | 438 |
| 10"        | 250 | 16           | 1 3/8         | 35 | 19          | 483 | 19         | 483 |
| 12"        | 300 | 20           | 1 3/8         | 35 | 21 3/4      | 552 | 21 3/4     | 552 |
| 14"        | 350 | 20           | 1 1/2         | 38 | 25          | 635 | 25 1/2     | 648 |
| 16"        | 400 | 20           | 1 5/8         | 41 | 26 3/4      | 679 | 27         | 686 |
| 18"        | 450 | 20           | 1 7/8         | 48 | 30 3/4      | 781 | 31 1/2     | 800 |
| 20"        | 500 | 20           | 2             | 51 | 31 1/2      | 800 | 32 1/4     | 819 |
| 24"        | 600 | 20           | 2 1/2         | 64 | 36 3/4      | 933 | 37 1/4     | 946 |

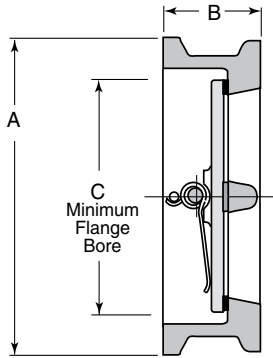
#### ASME Class 1500

| Valve Size |     | No. of Studs | B             |    | C           |      | D          |      |
|------------|-----|--------------|---------------|----|-------------|------|------------|------|
| in         | mm  |              | Bolt Diameter |    | Raised Face |      | Ring Joint |      |
|            |     |              | in            | mm | in          | mm   | in         | mm   |
| 2"         | 50  | 8            | 7/8           | 22 | 8 3/4       | 222  | 8 3/4      | 222  |
| 2 1/2"     | 65  | 8            | 1             | 25 | 9 3/4       | 248  | 9 3/4      | 248  |
| 3"         | 80  | 8            | 1 1/8         | 29 | 10 1/2      | 267  | 10 1/2     | 267  |
| 4"         | 100 | 8            | 1 1/4         | 32 | 12          | 305  | 12         | 305  |
| 6"         | 150 | 12           | 1 3/8         | 35 | 16 3/4      | 425  | 16 3/4     | 425  |
| 8"         | 200 | 12           | 1 5/8         | 41 | 19 3/4      | 502  | 20 1/4     | 514  |
| 10"        | 250 | 12           | 1 7/8         | 48 | 23 1/4      | 591  | 23 1/2     | 597  |
| 12"        | 300 | 16           | 2             | 51 | 27          | 686  | 27 3/4     | 705  |
| 14"        | 350 | 16           | 2 1/4         | 57 | 30 1/4      | 768  | 31 1/4     | 794  |
| 16"        | 400 | 16           | 2 1/2         | 64 | 33          | 838  | 34         | 864  |
| 18"        | 450 | 16           | 2 3/4         | 70 | 38 3/4      | 965  | 39         | 900  |
| 20"        | 500 | 16           | 3             | 76 | 43 3/4      | 1111 | 44 3/4     | 1137 |
| 24"        | 600 | 16           | 3 1/2         | 89 | 48          | 1219 | 49 1/4     | 1251 |

#### ASME Class 2500

| Valve Size |     | No. of Studs | B             |    | C           |     | D          |     |
|------------|-----|--------------|---------------|----|-------------|-----|------------|-----|
| in         | mm  |              | Bolt Diameter |    | Raised Face |     | Ring Joint |     |
|            |     |              | in            | mm | in          | mm  | in         | mm  |
| 2"         | 50  | 8            | 1             | 25 | 10          | 254 | 10         | 254 |
| 2 1/2"     | 65  | 8            | 1 1/8         | 29 | 11 1/4      | 286 | 11 1/4     | 286 |
| 3"         | 80  | 8            | 1 1/4         | 32 | 12 1/4      | 311 | 12 1/2     | 318 |
| 4"         | 100 | 8            | 1 1/2         | 38 | 14 1/4      | 362 | 14 3/4     | 375 |
| 6"         | 150 | 8            | 2             | 51 | 20          | 508 | 20 1/2     | 521 |
| 8"         | 200 | 12           | 2             | 51 | 23 3/4      | 603 | 24         | 610 |
| 10"        | 250 | 12           | 2 1/2         | 64 | 29 1/4      | 743 | 30 1/4     | 768 |
| 12"        | 300 | 12           | 2 3/4         | 70 | 33 1/4      | 845 | 34 1/4     | 870 |

# Installation & Stud Selection API 6A



## API Installation Dimensions - Class 2000

| Size<br>in | A      |     | B      |     | C       |     | Weight |     |
|------------|--------|-----|--------|-----|---------|-----|--------|-----|
|            | in     | mm  | in     | mm  | in      | mm  | lbs.   | kg. |
| 2 1/16"    | 4 3/8  | 143 | 2 3/4  | 70  | 1 11/16 | 43  | 14     | 6   |
| 2 9/16"    | 5 1/8  | 130 | 3 1/4  | 83  | 2 1/8   | 54  | 16     | 7   |
| 3 1/8"     | 5 7/8  | 149 | 3 1/4  | 83  | 2 5/8   | 67  | 24     | 11  |
| 4 1/16"    | 7 5/8  | 194 | 4      | 102 | 3 7/16  | 87  | 40     | 18  |
| 7 1/16"    | 10 1/2 | 267 | 6 1/4  | 159 | 5 3/16  | 132 | 115    | 52  |
| 9"         | 12 5/8 | 321 | 8 1/8  | 206 | 6 13/16 | 173 | 229    | 104 |
| 11"        | 15 3/4 | 400 | 9 1/2  | 241 | 8 1/2   | 216 | 388    | 176 |
| 13 5/8"    | 18     | 457 | 11 1/2 | 292 | 10 1/8  | 257 | 540    | 245 |

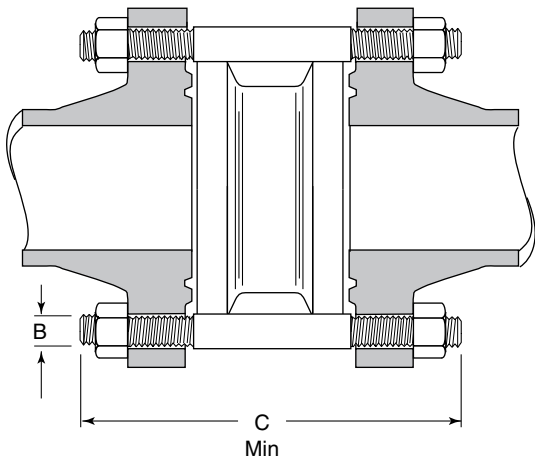
**NOTES:** Dimensions for 10000 and 15000 ratings available on request.  
Allowable leakage rates for API 6A (also API 6D) metal seated valves in accordance with API 598.

## API Installation Dimensions - Class 3000

| Size<br>in | A      |     | B     |     | C       |     | Weight |     |
|------------|--------|-----|-------|-----|---------|-----|--------|-----|
|            | in     | mm  | in    | mm  | in      | mm  | lbs.   | kg. |
| 2 1/16"    | 5 5/8  | 143 | 2 3/4 | 70  | 1 11/16 | 43  | 14     | 6   |
| 2 9/16"    | 6 1/2  | 165 | 3 1/4 | 83  | 2 1/8   | 54  | 16     | 7   |
| 3 1/8"     | 6 5/8  | 168 | 3 1/4 | 83  | 2 5/8   | 67  | 25     | 11  |
| 4 1/16"    | 8 1/8  | 206 | 4     | 102 | 3 7/16  | 87  | 43     | 20  |
| 7 1/16"    | 11 3/8 | 289 | 6 1/4 | 159 | 5 3/16  | 132 | 110    | 50  |
| 9"         | 14 1/8 | 359 | 8 1/8 | 206 | 6 13/16 | 173 | 219    | 99  |
| 11"        | 17 1/8 | 435 | 9 3/4 | 248 | 8 1/2   | 216 | 397    | 180 |
| 13 5/8"    | 19 5/8 | 498 | 12    | 305 | 10 1/8  | 257 | 725    | 329 |

## API Installation Dimensions - Class 5000

| Size<br>in | A      |     | B     |     | C       |     | Weight |     |
|------------|--------|-----|-------|-----|---------|-----|--------|-----|
|            | in     | mm  | in    | mm  | in      | mm  | lbs.   | kg. |
| 2 1/16"    | 5 5/8  | 143 | 2 3/4 | 70  | 1 11/16 | 43  | 15     | 7   |
| 2 9/16"    | 6 1/2  | 165 | 3 1/4 | 83  | 2 1/8   | 54  | 22     | 10  |
| 3 1/8"     | 6 7/8  | 175 | 3 3/8 | 86  | 2 5/8   | 67  | 31     | 14  |
| 4 1/16"    | 8 1/4  | 210 | 4 1/8 | 105 | 3 7/16  | 87  | 49     | 22  |
| 7 1/16"    | 11 1/8 | 283 | 6 1/4 | 159 | 5 3/16  | 132 | 190    | 86  |
| 9"         | 13 7/8 | 352 | 8 1/8 | 206 | 6 13/16 | 173 | 285    | 129 |
| 11"        | 17 1/8 | 435 | 10    | 254 | 8 1/2   | 216 | 502    | 228 |



## API Stud Selection - Class 3000

| Size<br>in | No. of<br>Studs | B     |    | C      |     |
|------------|-----------------|-------|----|--------|-----|
|            |                 | in    | mm | in     | mm  |
| 2 1/16"    | 8               | 7/8   | 22 | 9 1/4  | 235 |
| 2 9/16"    | 8               | 1     | 25 | 11 1/4 | 286 |
| 3 1/8"     | 8               | 7/8   | 22 | 11 1/2 | 292 |
| 4 1/16"    | 8               | 1 1/8 | 29 | 12     | 305 |
| 7 1/16"    | 12              | 1 1/8 | 29 | 15 1/4 | 387 |
| 9"         | 12              | 1 3/8 | 35 | 18 3/4 | 476 |
| 11"        | 16              | 1 3/8 | 35 | 20     | 508 |
| 13 5/8"    | 20              | 1 3/8 | 35 | 21 1/2 | 591 |

## API Stud Selection - Class 2000

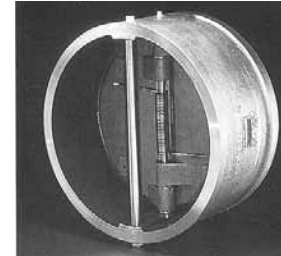
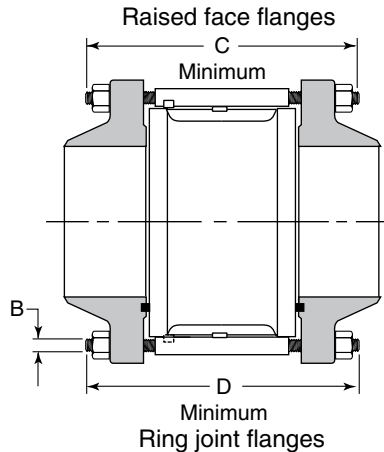
| Size<br>in | No. of<br>Studs | B     |    | C      |     |
|------------|-----------------|-------|----|--------|-----|
|            |                 | in    | mm | in     | mm  |
| 2 1/16"    | 8               | 5/8   | 16 | 8      | 203 |
| 2 9/16"    | 8               | 3/4   | 19 | 9      | 229 |
| 3 1/8"     | 8               | 3/4   | 19 | 9 1/2  | 241 |
| 4 1/16"    | 8               | 7/8   | 22 | 11 1/2 | 292 |
| 7 1/16"    | 12              | 1     | 25 | 14     | 356 |
| 9"         | 12              | 1 1/8 | 29 | 17     | 432 |
| 11"        | 16              | 1 1/4 | 32 | 19     | 483 |
| 13 5/8"    | 20              | 1 1/4 | 32 | 23 3/4 | 546 |

## API Stud Selection - Class 5000

| Size<br>in | No. of<br>Studs | B     |    | C      |     |
|------------|-----------------|-------|----|--------|-----|
|            |                 | in    | mm | in     | mm  |
| 2 1/16"    | 8               | 7/8   | 22 | 9 1/4  | 235 |
| 2 9/16"    | 8               | 1     | 25 | 11 1/4 | 286 |
| 3 1/8"     | 8               | 1 1/8 | 29 | 12     | 305 |
| 4 1/16"    | 8               | 1 1/4 | 32 | 13     | 330 |
| 7 1/16"    | 12              | 1 3/8 | 35 | 18 3/4 | 476 |
| 9"         | 12              | 1 5/8 | 41 | 21     | 533 |
| 11"        | 12              | 1 7/8 | 48 | 24 1/2 | 622 |

## Stud Selection - Pressure Classes 150 - 2500

### Style X Extended Body Wafer Check



#### ASME Stud Selection Class 600

| Valve Size |      | No. of Studs | B             |    | C           |      | D          |      |
|------------|------|--------------|---------------|----|-------------|------|------------|------|
|            |      |              | Bolt Diameter |    | Raised Face |      | Ring Joint |      |
| in         | mm   |              | in            | mm | in          | mm   | in         | mm   |
| 10"        | 250  | 16           | 1 1/4         | 32 | 18 1/4      | 464  | 18 3/4     | 476  |
| 12"        | 300  | 20           | 1 1/4         | 32 | 20 1/2      | 521  | 20 3/4     | 527  |
| 14"        | 350  | 20           | 1 3/8         | 35 | 22          | 559  | 22         | 559  |
| 16"        | 400  | 20           | 1 1/8         | 29 | 24 1/2      | 622  | 24 1/2     | 622  |
| 18"        | 450  | 20           | 1 5/8         | 41 | 30          | 762  | 30 1/4     | 768  |
| 20"        | 500  | 24           | 1 5/8         | 41 | 29          | 737  | 29 1/2     | 743  |
| 24"        | 600  | 24           | 1 7/8         | 48 | 34 1/4      | 870  | 34 3/4     | 883  |
| 28"        | 700  | 28           | 2             | 51 | 36 1/2      | 927  | 37         | 940  |
| 30"        | 750  | 28           | 2             | 51 | 42          | 1067 | 42 1/2     | 1080 |
| 36"        | 900  | 28           | 2 1/2         | 64 | 47          | 1194 | -          | -    |
| 48"        | 1050 | 32           | 2 3/4         | 70 | 62          | 1574 | -          | -    |

#### ASME Stud Selection Class 150

| Valve Size |      | No. of Studs | B             |    | C           |      | D          |     |
|------------|------|--------------|---------------|----|-------------|------|------------|-----|
|            |      |              | Bolt Diameter |    | Raised Face |      | Ring Joint |     |
| in         | mm   |              | in            | mm | in          | mm   | in         | mm  |
| 10"        | 250  | 12           | 7/8           | 22 | 12          | 305  | 12 1/2     | 318 |
| 12"        | 300  | 12           | 7/8           | 22 | 14          | 356  | 14 1/2     | 368 |
| 14"        | 350  | 12           | 1             | 25 | 14          | 356  | 14 1/2     | 368 |
| 16"        | 400  | 16           | 3/4           | 19 | 14 3/4      | 375  | 15 1/4     | 387 |
| 18"        | 450  | 16           | 1 1/8         | 29 | 16 3/4      | 425  | 17 1/4     | 438 |
| 20"        | 500  | 20           | 1 1/8         | 29 | 18 1/4      | 464  | 18 3/4     | 476 |
| 24"        | 600  | 20           | 1 1/4         | 29 | 20 3/4      | 527  | 21 1/4     | 540 |
| 26"        | 650  | 24           | 1 1/4         | 32 | 26 3/4      | 679  | 27 1/4     | 692 |
| 30"        | 750  | 28           | 1 1/4         | 32 | 27 1/4      | 692  | 27 3/4     | 705 |
| 32"        | 800  | 28           | 1 1/2         | 38 | 32          | 1690 | 32 3/4     | 832 |
| 36"        | 900  | 32           | 1 1/2         | 32 | 32 1/4      | 819  | 32 3/4     | 832 |
| 42"        | 1050 | 36           | 1 1/2         | 38 | 37 1/4      | 946  | -          | -   |
| 48"        | 1200 | 44           | 1 1/2         | 38 | 43 1/4      | 1099 | -          | -   |
| 54"        | 1350 | 44           | 1 3/4         | 44 | 43 1/2      | 1105 | -          | -   |

#### ASME Stud Selection Class 900

| Valve Size |     | No. of Studs | B             |    | C           |      | D          |      |
|------------|-----|--------------|---------------|----|-------------|------|------------|------|
|            |     |              | Bolt Diameter |    | Raised Face |      | Ring Joint |      |
| in         | mm  |              | in            | mm | in          | mm   | in         | mm   |
| 10"        | 250 | 16           | 1 3/8         | 35 | 19 1/2      | 495  | 19 3/4     | 502  |
| 12"        | 300 | 20           | 1 3/8         | 35 | 23          | 584  | 23 1/4     | 591  |
| 14"        | 350 | 20           | 1 1/2         | 38 | 25 3/4      | 654  | 26 1/4     | 667  |
| 16"        | 400 | 20           | 1 1/4         | 32 | 26 3/4      | 679  | 27         | 686  |
| 20"        | 500 | 20           | 2             | 51 | 33 1/4      | 844  | 34         | 864  |
| 24"        | 600 | 20           | 2 1/2         | 64 | 39 3/4      | 1010 | 40 3/4     | 1035 |
| 30"        | 750 | 20           | 3             | 76 | 48          | 1219 | 48 1/2     | 1232 |

#### ASME Stud Selection Class 300

| Valve Size |      | No. of Studs | B             |    | C           |      | D          |     |
|------------|------|--------------|---------------|----|-------------|------|------------|-----|
|            |      |              | Bolt Diameter |    | Raised Face |      | Ring Joint |     |
| in         | mm   |              | in            | mm | in          | mm   | in         | mm  |
| 10"        | 250  | 16           | 1             | 25 | 13 3/4      | 349  | 14 1/2     | 368 |
| 12"        | 300  | 16           | 1 1/8         | 29 | 16          | 406  | 16 3/4     | 425 |
| 14"        | 350  | 20           | 1 1/8         | 29 | 17 1/2      | 445  | 18 1/4     | 464 |
| 16"        | 400  | 20           | 7/8           | 22 | 18 1/2      | 470  | 19         | 483 |
| 18"        | 450  | 24           | 1 1/4         | 32 | 20 3/4      | 527  | 21 1/2     | 546 |
| 20"        | 500  | 24           | 1 1/4         | 32 | 22          | 641  | 22 3/4     | 578 |
| 24"        | 600  | 24           | 1 1/2         | 29 | 15 1/4      | 648  | 26 1/4     | 667 |
| 28"        | 700  | 28           | 1 5/8         | 41 | 31          | 787  | 31 1/2     | 800 |
| 30"        | 750  | 28           | 1 3/4         | 44 | 32 1/4      | 819  | 33 1/2     | 851 |
| 36"        | 900  | 32           | 2             | 51 | 38 1/2      | 978  | -          | -   |
| 42"        | 1050 | 32           | 2             | 51 | 47 1/2      | 1206 | -          | -   |
| 48"        | 1200 | 40           | 2             | 51 | 50 1/4      | 1276 | -          | -   |

#### ASME Stud Selection Class 1500

| Valve Size |     | No. of Studs | B             |    | C           |      | D          |      |
|------------|-----|--------------|---------------|----|-------------|------|------------|------|
|            |     |              | Bolt Diameter |    | Raised Face |      | Ring Joint |      |
| in         | mm  |              | in            | mm | in          | mm   | in         | mm   |
| 10"        | 250 | 12           | 1 7/8         | 48 | 25          | 635  | 25 1/4     | 641  |
| 12"        | 300 | 16           | 2             | 51 | 29          | 737  | 29 1/2     | 749  |
| 14"        | 350 | 16           | 2 1/4         | 57 | 31 1/4      | 794  | 32 1/4     | 819  |
| 16"        | 400 | 16           | 1 1/2         | 38 | 34          | 864  | 35         | 889  |
| 18"        | 450 | 16           | 2 3/4         | 70 | 39 3/4      | 1010 | 41         | 1041 |
| 20"        | 500 | 16           | 3             | 76 | 43          | 1092 | 44         | 1118 |
| 24"        | 600 | 16           | 3 1/2         | 89 | 49          | 1245 | 49 1/4     | 1251 |

#### ASME Stud Selection Class 2500

| Valve Size |     | No. of Studs | B             |    | C           |     | D          |     |
|------------|-----|--------------|---------------|----|-------------|-----|------------|-----|
|            |     |              | Bolt Diameter |    | Raised Face |     | Ring Joint |     |
| in         | mm  |              | in            | mm | in          | mm  | in         | mm  |
| 10"        | 250 | 12           | 2 1/2         | 64 | 31          | 787 | 31 3/4     | 806 |
| 12"        | 300 | 12           | 2 3/4         | 70 | 35 1/2      | 902 | 36 1/2     | 927 |

# Technical Data

## Valve Coefficient Cv and Average Spring Force (Class 125 - 300)

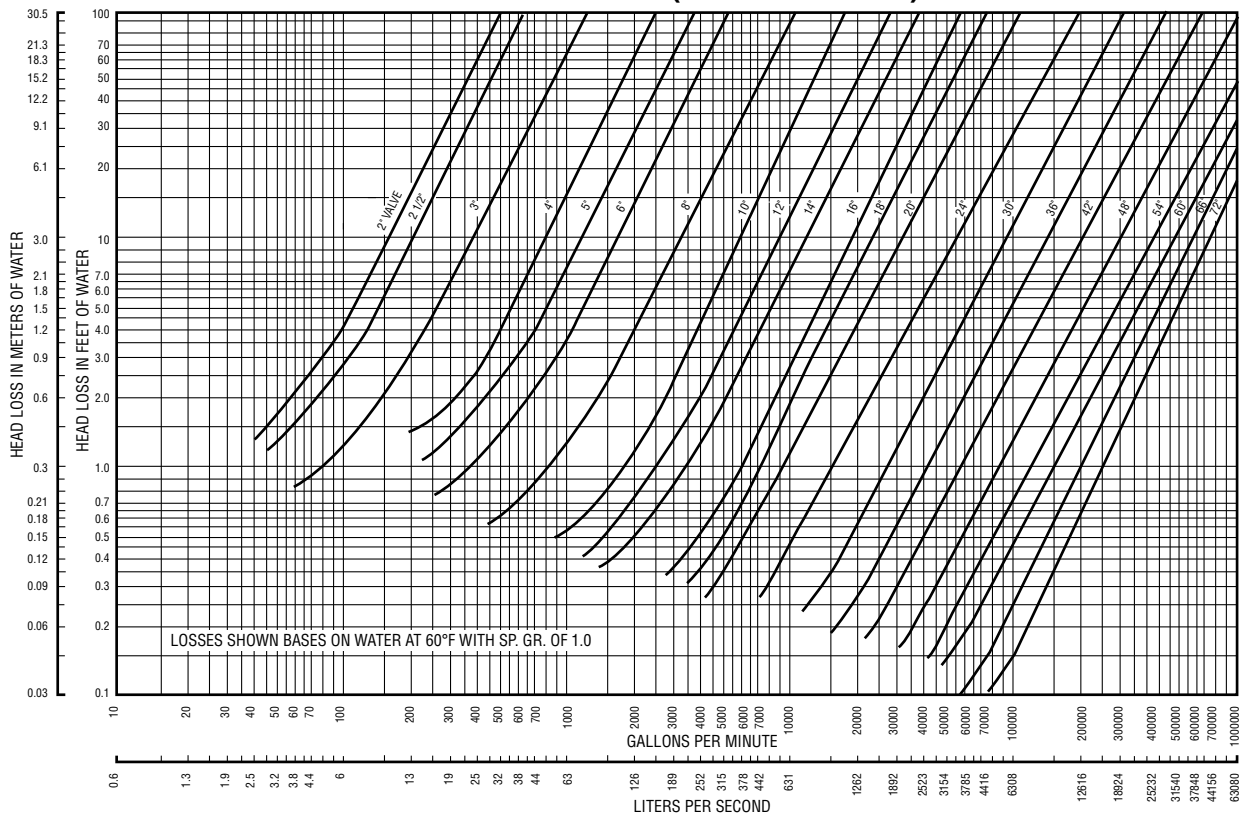
| Valve Size |      | Cv      | Spring Force (psi) |
|------------|------|---------|--------------------|
| in         | mm   |         |                    |
| 2"         | 50   | 75      | 0.23               |
| 2 1/2"     | 65   | 95      | 0.26               |
| 3"         | 80   | 191     | 0.21               |
| 4"         | 100  | 377     | 0.22               |
| 5"         | 127  | 483     | 0.18               |
| 6"         | 150  | 821     | 0.14               |
| 8"         | 200  | 1,590   | 0.19               |
| 10"        | 250  | 2,920   | 0.18               |
| 12"        | 300  | 4,470   | 0.17               |
| 14"        | 350  | 5,870   | 0.15               |
| 16"        | 400  | 8,690   | 0.16               |
| 18"        | 450  | 10,940  | 0.15               |
| 20"        | 500  | 14,290  | 0.13               |
| 24"        | 600  | 23,000  | 0.10               |
| 30"        | 750  | 37,200  | 0.08               |
| 36"        | 900  | 59,000  | 0.08               |
| 42"        | 1050 | 92,000  | 0.05               |
| 48"        | 1200 | 126,000 | 0.06               |
| 54"        | 1350 | 186,000 | -                  |
| 60"        | 1500 | 217,000 | -                  |
| 66"        | 1650 | 280,000 | -                  |
| 72"        | 1800 | 350,000 | -                  |

- Coefficients for sizes above 72" please consult factory.
- Spring Force is an estimate of the pressure required to overcome the spring when valve is closed. This is not exact as valve cannot be used as a relief valve.
- Valves 6" and larger have independent springs.

## Pressure Loss Information

- The curves show pressure loss available with the Duo-Chek® in horizontal flow.
- Duo-Chek® valves should be installed in horizontal flow with pins vertical for best performance. For other installations, contact the factory.
- Each piping system has a unique geometry which should be evaluated whenever the liquid media velocity exceeds 8 feet/second (2.4m/sec) through a swage or expansion (15° or greater included angle) directly upstream of the valve. Where practicable, **for maximum service life, and based on actual service**, a minimum of one (1) to five (5) pipe diameters distance should be maintained between the valve and the pump discharge and pipe fittings (swages or expansion).
- Systems with drastic flow decelerations may require higher torque springs for faster valve response and to reduce water hammer for non-slam applications. Please consult the factory.
- We can evaluate Duo-Chek® valves relative to your system behavior.

## Pressure Loss Chart (Class 125 - 300)



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