DUTCH VALVE COMPANY

# High Performance
# Butterfly Valves
## Series 7400

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**Aiming at Perfection**

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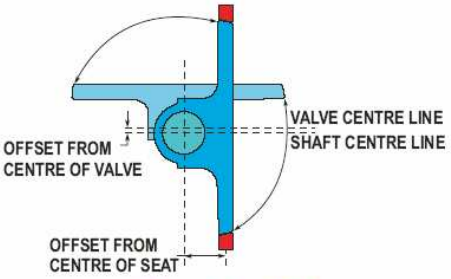
## Design Construction




### Double Offset

High Performance Butterfly Valves are available in Wafer and Lug type designs conforming to API 609 standard. The Disc construction is Double Offset providing excellent controllability, bubble tight shut off, greater seat life and smooth operation. Valves are specially designed for applications in Chemical, Petroleum, Hydro Carbons Processing, Pulp & Paper and HVAC industries.

Well supported shaft with heavy duty bearings ensure perfect alignment of seat and disc for smooth and trouble free operations. Valves have been rigorously tested to ensure industry performance requirements.

## Features

- Valve body is solid, heavy duty. Seat Retainer construction allows Gasket conforming to API 609.
- Optimal disc geometry and cavity free flow passage offers minimum flow resistance and high Cv values.
- Heavy duty pins connecting valve shaft to disc avoids lost motion under high torque conditions.
- Long life, easy field replaceable seat placed in body, away from flow steam, provides bubble tight shut off. Valves are equally suitable for control and tight shut off applications.
- Low friction bearings provide maximum radial support for higher shaft loads. The PTFE lined bearings having low co-efficient of friction minimizes operating torque and reduces actuator size. They are slip in-place type, easy for assembly and disassembly.
- Seat option includes PTFE, EPDM, Viton Soft Seats and Flexible Metal Seats to suit variety of fluids and applications.
- Recommended for critical applications including high temperature services, throttling steam control, liquor services, gas applications, vacuum applications, corrosive fluids, refinery services, chemical services, hydrocarbon services, etc.

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## Specifications

| | | |
|---|---|---|
| **Valve Sizes** | : | 2” (50mm) to 80” (2032mm) |
| **Ratings** | : | Class 150 , Class 300 ,Equivalent to DIN |
| **Body Style** | : | Wafer , Lug (Single Flange) |
| **Design Standard** | : | API 609 , ANSI B 16.34 , ANSI B 16.5 |
| **Testing Standard** | : | API 598 , FCI 70-2 |
| **Seat Leakage Option** | : | Class VI for PTFE, EPDM, Viton Soft Seats,<br>Class IV for Flexible Metal Seats |
| **Flow Direction** | : | Bi Directional |

## Conformity To Codes

| | | |
|---|---|---|
| **Design & Manufacturing** | : | API 609 Category B<br>BS 5155<br>API 607 (Fire Safe) |
| **Face to Face Dimensions** | : | API 609<br>BS 5155<br>BS EN 558-1<br>ISO 5752 |
| **Flange Dimensions** | : | ANSI B 16.5 (DN 50 to DN 600)<br>ANSI B 16.47 (DN 650 to DN 1500) |
| **Pressure Temperature Rating** | : | ANSI B 16.34 |
| **Valve Inspection** | : | API 598<br>FCI 70-2 |

## Testing and Inspection

| Test | Test Pressures | Test Stds | Test Medium | Acceptance Criteria |
|---|---|---|---|---|
| **Hydro Test** | 30 Bar (ANSI 150#) | API 598 | Water | No Leakage |
| | 80 Bar (ANSI 300#) | API 598 | Water | No Leakage |
| **Seat Leakage** | Max ΔP Shut Off | FCI 70-2 | Water | Class VI |
| **Test** | 20 Bar (ANSI 150#) | API 598 | Water | No Leakage |
| | 54 Bar (ANSI 300#) | API 598 | Water | No leakage |

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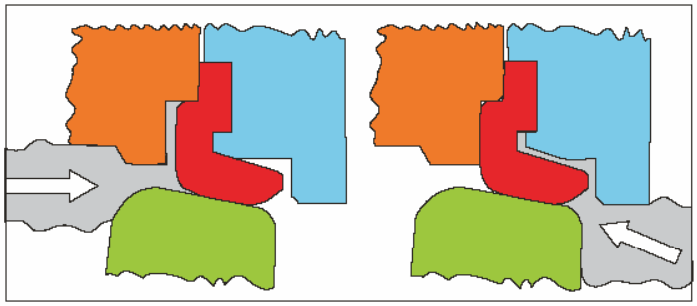
# Seat Design Options

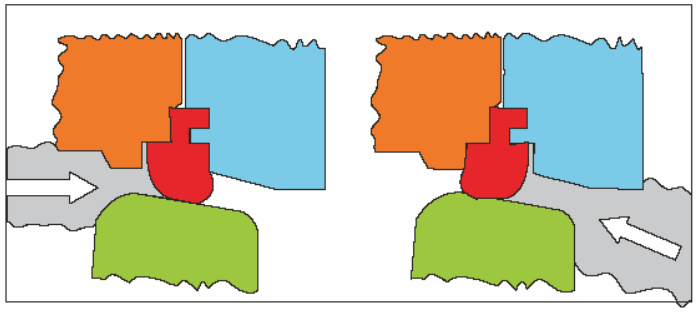
a wide variety of seat design options which are cost-effective and provide solutions to your service requirements. The Double Offset disc construction minimizes the interference between seat & disc edges allowing longer seat life even under frequent valve operations. Seats are available in both rigid & flexible construction to suit specific requirements. The seats are held rigidly by the seat retainer which is inserted within the body per API 609 design requirements. This construction allows use of Gasket conforming to API 601 (ANSI 16.5) Standard and eliminate the possibility of JOINT LEAKAGE from body to the atmosphere.

Virgin PTFE seat having a flexi lip provides bubble tight shut off in both the directions. Suits to wide range of applications. Maximum working Temperature 200°C.



Flexible Ptfe Seat

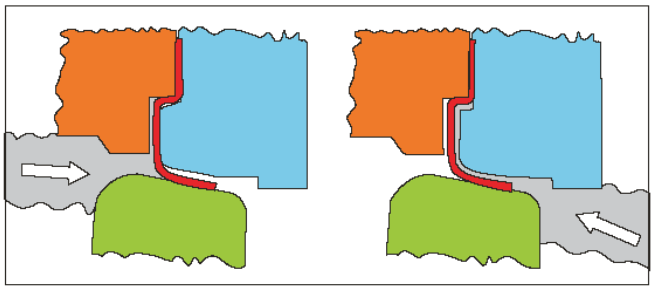
Rubber seats are available in EPDM, NBR and Viton materials. Rigid seats allow a clean flow passage & prevents fluid deposition within the seat. These seats are ideal for many applications in Sugar Industry Rigid seats allows unidirectional flow (i.e. shaft side inlet) providing tight shut off under positive & vacuum applications. With this configuration the shaft side is upstream side.



Flexible Rubber (EPDM / NBR / Viton) Seat

Most suitable for high consistency fluids having suspended hard particles, for erosive services, for high temperature services >200°to 550°C.

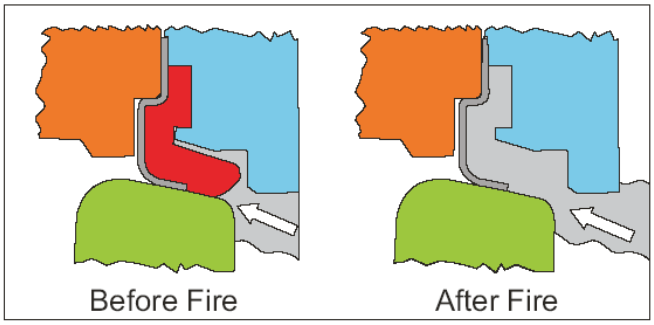
Die pressed stainless steel seats with inbuilt flexible property gives Class IV leakage with minimal torque requirements



Flexible Metal

Flow from Seat Retainer SideThe lip shaped PTFE Seat moves axially in the direction of flow with the assistance of line pressure. The tightness between seat and disc increases with increases in line pressure.

Flow from Shaft Side With the line pressure acting on the disc, it tries to move towards the seat which is supported by Seat Retainer. Seat does not move giving simple leak tight seal.




Fire Safe Design

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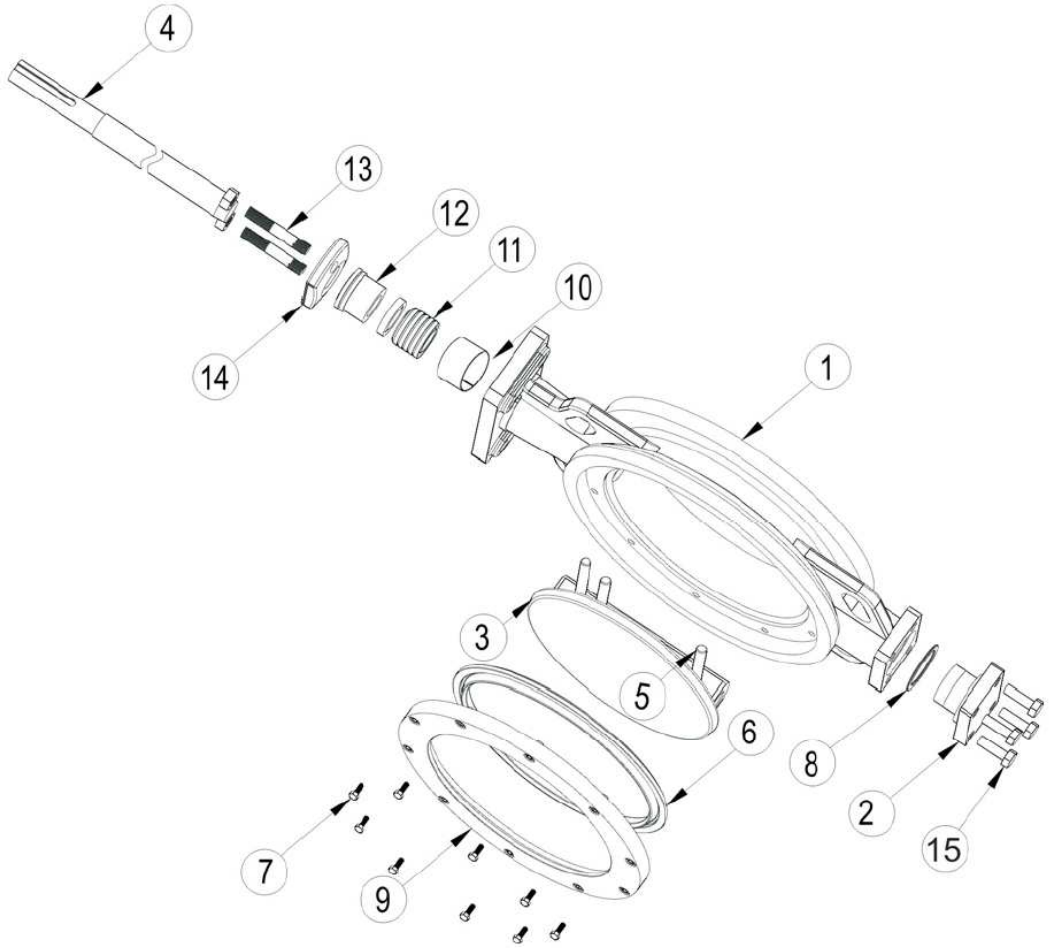
# Material Of Construction




| Sr. No. | Part Name |
|---|---|
| 1 | Valve Body |
| 2 | End Cover |
| 3 | Disc |
| 4 | Valve Shaft |
| 5 | Disc |
| 6 | Seat Ring |
| 7 | Seat Retainer Screw |

| Sr. No. | Part Name |
|---|---|
| 8 | Body Gasket |
| 9 | Seat Retainer |
| 10 | Guide Bush |
| 11 | Gland Packing |
| 12 | Gland Bush |
| 13 | Gland Studsr |
| 14 | Gland Flange |
| 15 | End cover bolts |

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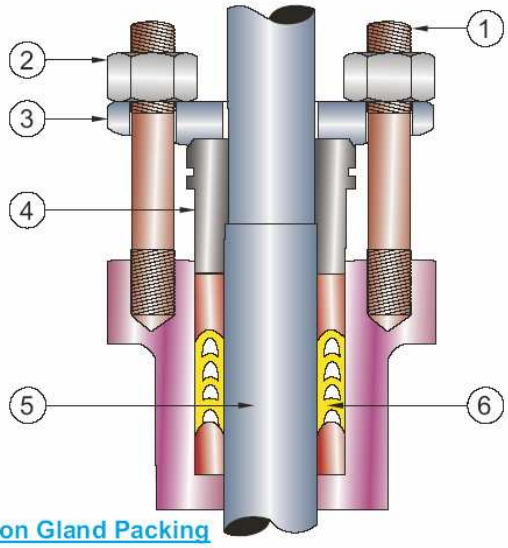
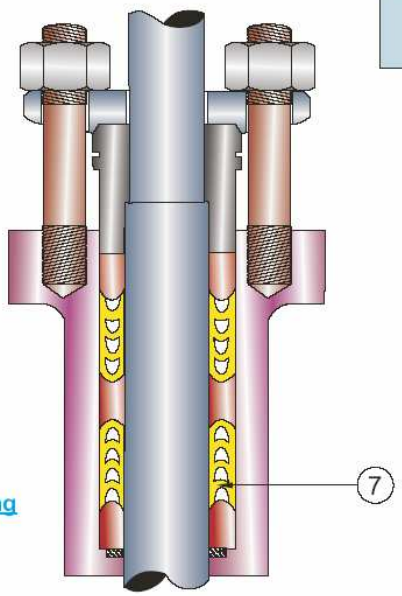
# Gland Packing Options

Single and Double set of V-Teflon rings (up to 200°C) and Graphite Moulded rings (>200°C up to 600°C) as standard. Inverted V- fered for vacuum application with upper set of V-Rings positioned Teflon packings are of reverse direction. Low fugitive Emission packings are provided on The LFE packing arrangement request. comprises of live loaded packings. The packing gland is loaded with spring washers to maintain a continuous compressive lead to gland packings as shown in figure below




Single V-teflon Gland Packing

| Sr. No. | Part Name |
|---|---|
| 1 | GLAND STUD |
| 2 | NUT |
| 3 | GLAND FLANGE |
| 4 | GLAND BUSH |
| 5 | VALVE SHAFT |
| 6 | V-RING TEFLON GLAND PACKING |
| 7 | V-RING TEFLON GLAND PACKING |




Inverted V-teflon Gland Packing
For Vacuum Application

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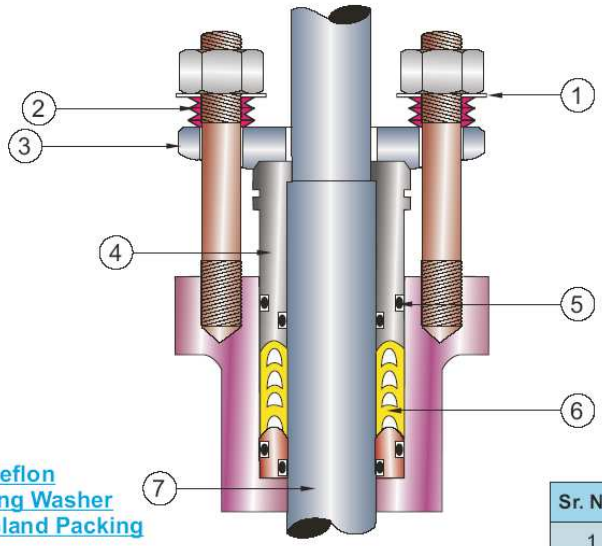
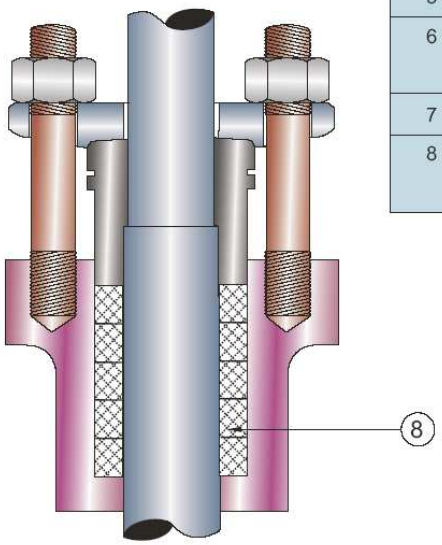
# Gland Packing Options




Single V-teflon
With Spring Washer
Loaded Gland Packing

| Sr. No. | Part Name |
|---|---|
| 1 | WASHER |
| 2 | SPRING WASHER |
| 3 | GLAND FLANGE |
| 4 | GLAND BUSH |
| 5 | 'O'RING |
| 6 | V-RING TEFLON GLAND PACKING |
| 7 | VALVE SHAFT |
| 8 | GRAFOIL GLAND PACKING |




Single Grafoil Packing

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# Valve Torques (N m)

## ANSI Class 150
## ΔP , Bar

| VALVE SIZE | | SOFT SEATED VALVE | | | | FIRE SAFE DESIGNED VALVE | | | | METAL SEATED VALVE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INCH | MM | ΔP = 5 | ΔP = 10 | ΔP = 15 | ΔP = 20 | Δ P = 5 | Δ P = 10 | ΔP = 15 | Δ P = 20 | Δ P = 5 | Δ P = 10 | ΔP = 15 | Δ P = 20 |
| 2" | 50 | 32 | 40 | 46 | 49 | 51 | 55 | 59 | 65 | 53 | 65 | 69 | 72 |
| 2.5" | 65 | 36 | 39 | 48 | 53 | 52 | 54 | 62 | 72 | 60 | 72 | 78 | 89 |
| 3" | 80 | 38 | 40 | 49 | 55 | 58 | 65 | 72 | 79 | 72 | 81 | 89 | 97 |
| 4" | 100 | 42 | 46 | 54 | 65 | 72 | 82 | 90 | 98 | 82 | 92 | 112 | 127 |
| 5" | 125 | 52 | 62 | 68 | 89 | 78 | 95 | 109 | 168 | 98 | 112 | 129 | 190 |
| 6" | 150 | 64 | 94 | 148 | 164 | 112 | 145 | 178 | 190 | 124 | 160 | 197 | 230 |
| 8" | 200 | 105 | 149 | 168 | 199 | 285 | 320 | 360 | 390 | 308 | 325 | 402 | 422 |
| 10" | 250 | 190 | 230 | 270 | 350 | 290 | 328 | 392 | 410 | 318 | 336 | 408 | 428 |
| 12" | 300 | 240 | 290 | 380 | 440 | 298 | 375 | 460 | 582 | 336 | 433 | 531 | 635 |
| 14" | 350 | 420 | 490 | 620 | 732 | 558 | 740 | 950 | 1040 | 598 | 784 | 971 | 1158 |
| 16" | 400 | 510 | 790 | 890 | 1400 | 942 | 1062 | 1340 | 1730 | 948 | 1089 | 1386 | 1780 |
| 18" | 450 | 780 | 975 | 1680 | 1920 | 980 | 1318 | 1862 | 2100 | 1046 | 1345 | 1944 | 2180 |
| 20" | 500 | 970 | 1480 | 1980 | 2300 | 1240 | 1724 | 2100 | 2640 | 1366 | 1793 | 2305 | 2818 |
| 22" | 550 | 1312 | 1970 | 2550 | 3400 | 1620 | 2240 | 2700 | 3890 | 1628 | 2320 | 2896 | 3990 |
| 24" | 600 | 1840 | 2400 | 2950 | 3940 | 2350 | 2850 | 3450 | 4300 | 2500 | 2930 | 3780 | 4400 |
| 26" | 650 | 2290 | 2978 | 3818 | 4334 | 2817 | 3663 | 4695 | 5634 | 3467 | 4506 | 5778 | 6934 |
| 28" | 700 | 2901 | 3741 | 4656 | 5084 | 3568 | 4601 | 5728 | 7043 | 4392 | 5663 | 7050 | 8668 |
| 30" | 750 | 3208 | 4200 | 5268 | 5778 | 3945 | 5165 | 6479 | 7700 | 4853 | 6356 | 7974 | 9477 |
| 32" | 800 | 3741 | 4886 | 6107 | 7164 | 4601 | 6009 | 7511 | 8919 | 5663 | 7397 | 9246 | 10980 |
| 34" | 850 | 4581 | 5955 | 7252 | 8320 | 5634 | 7324 | 8919 | 11268 | 6934 | 9014 | 10890 | 13867 |
| 36" | 900 | 5343 | 6870 | 8697 | 9592 | 6573 | 8451 | 10329 | 13146 | 8091 | 10402 | 12712 | 16180 |
| 38" | 950 | 6107 | 7634 | 9925 | 10862 | 7511 | 9391 | 12208 | 15023 | 9246 | 11556 | 15023 | 18491 |
| 40" | 1000 | 6870 | 9161 | 11451 | 12712 | 8451 | 11268 | 14085 | 16902 | 10402 | 13867 | 17335 | 20802 |
| 42" | 1050 | 7634 | 10688 | 12979 | 13867 | | | | | | | | |
| 44' | 1100 | 9161 | 12213 | 14124 | 15023 | | | | | | | | |
| 46" | 1150 | 10688 | 12979 | 15269 | 17334 | | | | | | | | |
| 48" | 1200 | 12213 | 14504 | 17176 | 19067 | | | | | | | | |
| 50" | 1250 | 13507 | 15973 | 18791 | 21234 | | | | | | | | |
| 52" | 1300 | 15034 | 17852 | 21024 | 23834 | | | | | | | | |
| 54" | 1350 | 16559 | 19730 | 23254 | 26290 | | | | | | | | |
| 56" | 1400 | 19379 | 22784 | 26895 | 30046 | | | | | | | | |
| 58" | 1450 | 22432 | 25016 | 29244 | 34967 | | | | | | | | |
| 60" | 1500 | 25955 | 30301 | 35351 | 43768 | | | | | | | | |
| 64" | 1600 | 32063 | 37113 | 42984 | 50558 | | | | | | | | |
| 66" | 1650 | 35467 | 41106 | 47682 | 55902 | | | | | | | | |
| 72" | 1800 | 41927 | 48622 | 55904 | 70347 | | | | | | | | |
| 76" | 1900 | 46714 | 54174 | 62288 | 78381 | | | | | | | | |
| 80" | 2000 | 51762 | 60026 | 69017 | 86848 | | | | | | | | |
| 84" | 2100 | 57067 | 66180 | 76091 | 95750 | | | | | | | | |
| 88" | 2200 | 62631 | 72633 | 83511 | 105087 | | | | | | | | |
| 92" | 2300 | 68454 | 79385 | 91275 | 114857 | | | | | | | | |
| 96" | 2400 | 74536 | 86439 | 99384 | 125061 | | | | | | | | |
| 100" | 2500 | 80879 | 93793 | 107838 | 135701 | | | | | | | | |
| 104" | 2600 | 87610 | 101446 | 116639 | 146883 | | | | | | | | |
| 108" | 2700 | 94478 | 109399 | 125782 | 158281 | | | | | | | | |
| 110" | 2750 | 98010 | 113489 | 130484 | 164198 | | | | | | | | |
| 112" | 2800 | 101606 | 117653 | 125273 | 170222 | | | | | | | | |
| 116" | 2900 | 108994 | 126206 | 145107 | 182598 | | | | | | | | |
| 120" | 3000 | 116640 | 135061 | 155288 | 195408 | | | | | | | | |

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# ANSI Class 300
# ΔP , Bar

| VALVE SIZE | | SOFT SEATED VALVE | | | | | | FIRE SAFE DESIGNED VALVE | | | | | | METAL SEATED VALVE | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INCH | MM | ΔP=0-10 | ΔP=20 | ΔP=25 | ΔP=35 | ΔP=40 | ΔP=51 | ΔP=0-10 | P=20 | ΔP=25 | ΔP=35 | ΔP=40 | ΔP=51 | ΔP=0-10 | P=20 | ΔP=25 | ΔP=35 | ΔP=40 | ΔP=51 |
| 2" | 50 | 45 | 53 | 61 | 68 | 73 | 82 | 52 | 58 | 64 | 72 | 79 | 89 | 78 | 83 | 85 | 89 | 91 | 93 |
| 2.5" | 65 | 48 | 55 | 64 | 75 | 81 | 90 | 65 | 71 | 78 | 86 | 90 | 99 | 81 | 88 | 92 | 96 | 99 | 107 |
| 3" | 80 | 57 | 60 | 71 | 82 | 92 | 98 | 76 | 81 | 88 | 95 | 101 | 109 | 95 | 101 | 104 | 107 | 109 | 120 |
| 4" | 100 | 62 | 68 | 79 | 88 | 99 | 104 | 96 | 107 | 117 | 127 | 140 | 148 | 129 | 145 | 154 | 165 | 180 | 192 |
| 5" | 125 | 78 | 93 | 115 | 124 | 134 | 148 | 123 | 138 | 156 | 166 | 179 | 194 | 167 | 182 | 196 | 208 | 223 | 240 |
| 6" | 150 | 96 | 166 | 178 | 185 | 198 | 220 | 142 | 192 | 212 | 225 | 240 | 262 | 188 | 218 | 246 | 264 | 282 | 304 |
| 8" | 200 | 172 | 202 | 235 | 260 | 295 | 335 | 240 | 302 | 340 | 370 | 406 | 438 | 308 | 402 | 445 | 480 | 517 | 541 |
| 10" | 250 | 218 | 325 | 380 | 398 | 422 | 468 | 362 | 496 | 574 | 614 | 650 | 702 | 505 | 666 | 768 | 829 | 878 | 936 |
| 12" | 300 | 322 | 466 | 525 | 585 | 638 | 712 | 506 | 728 | 953 | 1073 | 1189 | 1377 | 690 | 990 | 1380 | 1560 | 1740 | 2041 |
| 14" | 350 | 498 | 762 | 985 | 1205 | 1285 | 1405 | 883 | 1316 | 1573 | 1803 | 2023 | 2203 | 1267 | 1876 | 2161 | 2401 | 2761 | 3001 |
| 16" | 400 | 836 | 1485 | 1612 | 1790 | 1940 | 2110 | 1261 | 1919 | 2307 | 2636 | 2952 | 3157 | 1686 | 2352 | 3001 | 3481 | 3963 | 4203 |
| 18" | 450 | 990 | 1980 | 2165 | 2390 | 2550 | 2990 | 1579 | 2615 | 3124 | 3567 | 3977 | 4467 | 2167 | 3250 | 4083 | 4744 | 5403 | 5944 |
| 20" | 500 | 1520 | 2450 | 2775 | 2980 | 3236 | 3650 | 2193 | 3476 | 4245 | 4892 | 5496 | 6044 | 2865 | 4501 | 5715 | 6804 | 7756 | 8437 |
| 22" | 550 | 2040 | 3520 | 3890 | 4118 | 4288 | 4702 | 2828 | 4522 | 5347 | 6278 | 6907 | 7795 | 2615 | 5524 | 6804 | 8437 | 9526 | 10887 |
| 24" | 600 | 2515 | 4074 | 4488 | 4915 | 5315 | 5780 | 3440 | 5312 | 6326 | 7357 | 8169 | 9014 | 4365 | 6549 | 8164 | 9798 | 11023 | 12247 |
| 28" | 700 | 3820 | 5154 | 5689 | 6716 | 7315 | 8160 | 5253 | 7693 | 9052 | 11544 | 11843 | 13293 | 6686 | 10231 | 12414 | 16371 | 16371 | 18426 |
| 30" | 750 | 4315 | 5886 | 6645 | 7758 | 8357 | 9212 | 5909 | 8537 | 10485 | 12747 | 14073 | 15183 | 7503 | 11187 | 14325 | 17736 | 19789 | 21154 |
| 32" | 800 | 4946 | 7288 | 7459 | 9278 | 10160 | 12225 | 6839 | 10124 | 11574 | 14524 | 15994 | 18054 | 8731 | 12960 | 15688 | 19770 | 21828 | 23883 |
| 36" | 900 | 6986 | 9721 | 10818 | 13814 | 15365 | 17166 | 9633 | 14385 | 16323 | 19664 | 21325 | 23774 | 12279 | 19049 | 21828 | 25513 | 27285 | 30382 |
| 40" | 1000 | 9315 | 12896 | 14715 | 17678 | 19262 | 20612 | 12843 | 18726 | 21345 | 25491 | 27615 | 30826 | 16371 | 24556 | 27975 | 33304 | 35968 | 41040 |
| 42" | 1050 | 10776 | 14056 | 16330 | 19128 | 20901 | 22728 | 14938 | 19989 | 23485 | 28214 | 30433 | 34010 | 19099 | 25921 | 30639 | 37300 | 39964 | 45292 |
| 48" | 1200 | 14688 | 19248 | 21297 | 26005 | 28049 | 29148 | 20305 | 27608 | 30631 | 37648 | 40668 | 43881 | 25921 | 35968 | 39964 | 49290 | 53286 | 58614 |

# ANSI Class 600
# ΔP , Bar

| VALVE SIZE | | SOFT SEATED VALVE | | | | | | FIRE SAFE DESIGNED VALVE | | | | | | METAL SEATED VALVE | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INCH | MM | ΔP=0-10 | ΔP=35 | ΔP=55 | ΔP=70 | ΔP=80 | ΔP=102 | ΔP=0-10 | ΔP=35 | ΔP=55 | ΔP=70 | ΔP=80 | ΔP=102 | ΔP=0-10 | ΔP=35 | ΔP=55 | ΔP=70 | ΔP=80 | ΔP=102 |
| 3" | 80 | 58 | 85 | 103 | 121 | 133 | 141 | 85 | 113 | 155 | 181 | 193 | 204 | 102 | 112 | 168 | 192 | 203 | 218 |
| 4" | 100 | 64 | 98 | 148 | 169 | 189 | 212 | 125 | 208 | 265 | 323 | 359 | 390 | 151 | 268 | 342 | 428 | 469 | 508 |
| 5" | 125 | 82 | 128 | 186 | 222 | 249 | 278 | 160 | 272 | 392 | 477 | 563 | 613 | 189 | 356 | 518 | 663 | 798 | 848 |
| 6" | 150 | 102 | 191 | 242 | 306 | 348 | 379 | 205 | 383 | 512 | 613 | 743 | 933 | 258 | 516 | 712 | 840 | 1048 | 1388 |
| 8" | 200 | 176 | 265 | 382 | 488 | 556 | 695 | 312 | 536 | 890 | 1015 | 1087 | 1297 | 389 | 728 | 1288 | 1422 | 1508 | 1780 |
| 10" | 250 | 248 | 398 | 665 | 832 | 1128 | 1386 | 458 | 879 | 1289 | 1522 | 1781 | 2044 | 598 | 1280 | 1804 | 2092 | 2304 | 2582 |
| 12" | 300 | 369 | 722 | 1178 | 1392 | 1486 | 1676 | 855 | 1362 | 2008 | 2396 | 2660 | 3010 | 1242 | 1922 | 2708 | 3280 | 3704 | 4204 |
| 14" | 350 | 608 | 1232 | 1686 | 2247 | 2488 | 2692 | 1090 | 2148 | 2716 | 3549 | 4023 | 4283 | 1442 | 2934 | 3610 | 4711 | 5409 | 5716 |
| 16" | 400 | 892 | 1812 | 2242 | 2821 | 3476 | 3832 | 1532 | 2891 | 3737 | 4546 | 5347 | 6030 | 2042 | 3840 | 5102 | 6122 | 7099 | 8088 |
| 18" | 450 | 1078 | 2422 | 3118 | 3582 | 3980 | 4432 | 1746 | 3330 | 4680 | 5836 | 6555 | 7234 | 2285 | 4108 | 6102 | 7940 | 8980 | 9876 |
| 20" | 500 | 1680 | 3152 | 3728 | 4540 | 5108 | 5498 | 2734 | 4726 | 3686 | 8011 | 10048 | 10905 | 3688 | 6140 | 8884 | 11312 | 14828 | 16142 |
| 22" | 550 | 2132 | 4186 | 4760 | 5986 | 6435 | 6986 | 3545 | 6399 | 8735 | 11323 | 12629 | 13700 | 4778 | 8442 | 12540 | 16481 | 18623 | 20224 |
| 24" | 600 | 2215 | 5230 | 5886 | 6880 | 10093 | 10192 | 4798 | 7784 | 11385 | 13490 | 15990 | 16854 | 7082 | 11182 | 16585 | 19801 | 21587 | 23316 |

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# Cv Values (usgpm)

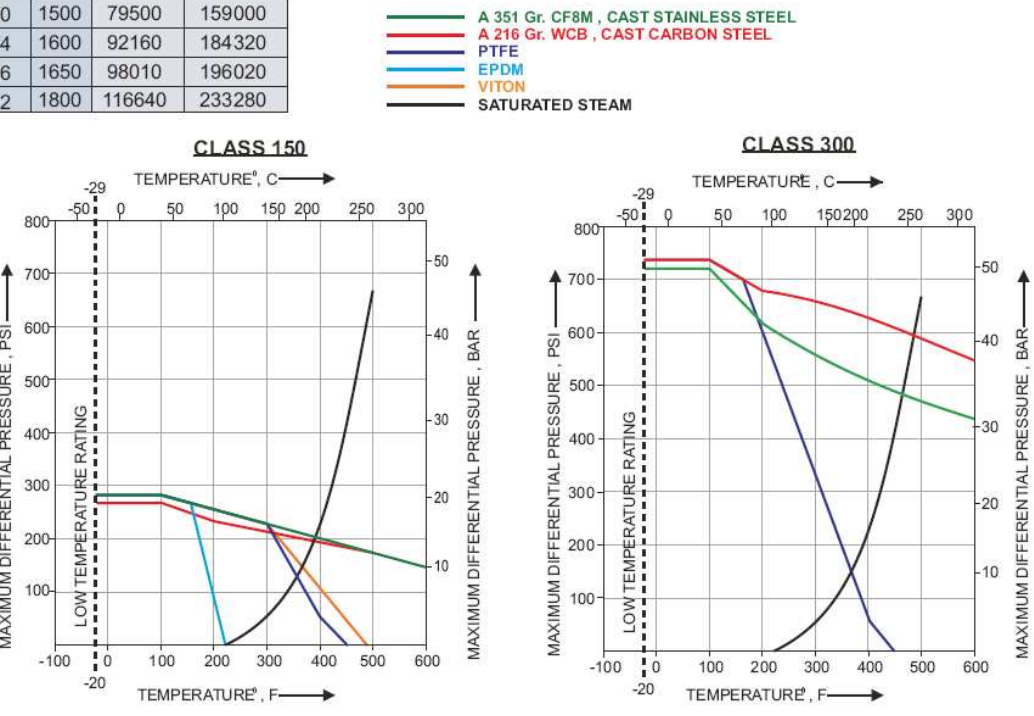
## ANSI 150#

| VALVE SIZE | | 150# | |
|---|---|---|---|
| INCH | MM | 60° | 90° |
| 2 | 50 | 25 | 50 |
| 2½ | 65 | 39 | 78 |
| 3 | 80 | 82.5 | 165 |
| 4 | 100 | 200 | 400 |
| 5 | 125 | 325 | 650 |
| 6 | 150 | 525 | 1050 |
| 8 | 200 | 1100 | 2200 |
| 10 | 250 | 1650 | 3300 |
| 12 | 300 | 2550 | 5100 |
| 14 | 350 | 2900 | 5800 |
| 16 | 400 | 4000 | 8000 |
| 18 | 450 | 5250 | 10500 |
| 20 | 500 | 7000 | 14000 |
| 24 | 600 | 10800 | 21600 |
| 28 | 700 | 14935 | 29870 |
| 30 | 750 | 17000 | 34000 |
| 32 | 800 | 20585 | 41170 |
| 36 | 900 | 27750 | 55500 |
| 40 | 1000 | 36800 | 73600 |
| 42 | 1050 | 41325 | 82650 |
| 44 | 1100 | 45600 | 91200 |
| 48 | 1200 | 54150 | 108300 |
| 52 | 1300 | 60840 | 121680 |
| 54 | 1350 | 66750 | 133500 |
| 56 | 1400 | 71000 | 142000 |
| 60 | 1500 | 79500 | 159000 |
| 64 | 1600 | 92160 | 184320 |
| 66 | 1650 | 98010 | 196020 |
| 72 | 1800 | 116640 | 233280 |

## ANSI 300#

| VALVE SIZE | | 300# | |
|---|---|---|---|
| INCH | MM | 60° | 90° |
| 2 | 50 | 25 | 50 |
| 2½ | 65 | 39 | 78 |
| 3 | 80 | 82.5 | 165 |
| 4 | 100 | 200 | 400 |
| 5 | 125 | 325 | 650 |
| 6 | 150 | 525 | 1050 |
| 8 | 200 | 900 | 1800 |
| 10 | 250 | 1575 | 3150 |
| 12 | 300 | 2375 | 4750 |
| 14 | 350 | 2600 | 5200 |
| 16 | 400 | 3450 | 6900 |
| 18 | 450 | 4650 | 9300 |
| 20 | 500 | 5650 | 11300 |
| 24 | 600 | 9250 | 18500 |
| 28 | 700 | 12785 | 25570 |
| 30 | 750 | 14550 | 29100 |
| 32 | 800 | 17620 | 35235 |
| 36 | 900 | 23750 | 47500 |

# Pressure-Temperature Ratings



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## Hand Lever

Series 'H' Hand lever arrangement provides latching system in open, closed and eight intermediate positions. A pointer indicates the position of disc and an additional lock facility is provided to prevent unauthorized valve operation. Lever actuators are provided on size 2" (50mm) to 6"
(150mm) only. For size 8" (200mm) and above, Gear Operators are recommended.

## Gear Operator

Series 'MOR' Gear operators offer simple and reliable manual positioning of the valves. These actuators consist of worm gear arrangement housed in a robust cast iron housing. Sturdy design provides long life and maintenance free services. The high gear ratios enable the minimum input efforts for high torque conditions.

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# Accessories Options

Following Accessories are offered as per Customers requirements :

- Pneumatic Valve Positioners,
- Electro Pneumatic Valve Positioners,
- Air Filter Regulators,
- Air Lock Relays,
- Air Volume Boosters,
- Limit Switches,
- Proximity Switches,
- Solenoid Valves,
- Position Feedback Transmitters,
- Quick Exhaust Valves,
- I/P Converters.

Limit Switch

Smart Positioner

Electro Pneumatic Positioner

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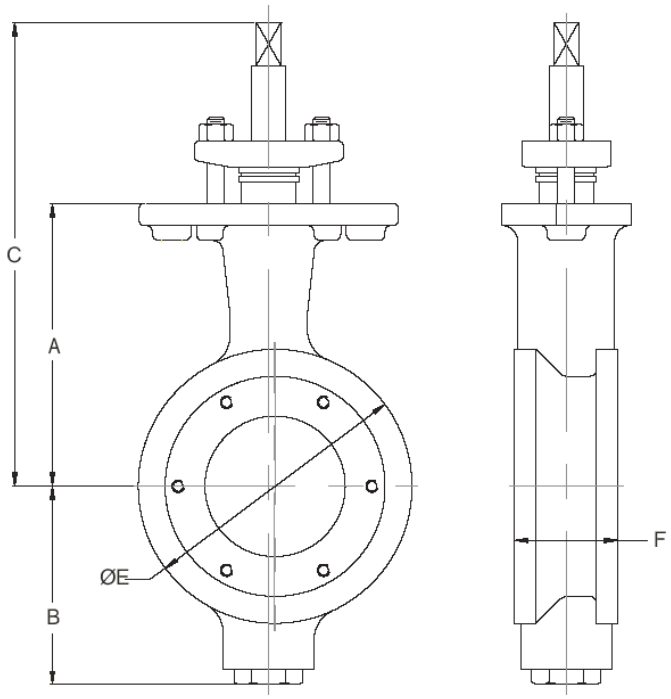
# Dimension Wafer Design




150#

| VALVE SIZE | | 150#-WAFER DESIGN | | | | |
|---|---|---|---|---|---|---|
| INCH | (DN) | A | B | C | ØE | F |
| 2" | (50.0) | 100.0 | 75.0 | 172.0 | 92.0 | 43.0 |
| 2.1/2" | (65.0) | 110.0 | 80.0 | 182.0 | 105.0 | 46.0 |
| 3" | (80.0) | 131.0 | 97.0 | 221.0 | 127.0 | 48.0 |
| 4" | (100.0) | 153.0 | 122.0 | 243.0 | 157.0 | 54.0 |
| 5" | (125.0) | 187.0 | 155.0 | 275.0 | 186.0 | 57.0 |
| 6" | (150.0) | 187.0 | 155.0 | 277.0 | 216.0 | 57.0 |

300#

| VALVE SIZE | | 300#-WAFER DESIGN | | | | |
|---|---|---|---|---|---|---|
| INCH | (DN) | A | B | C | ØE | F |
| 2" | (50.0) | 100.0 | 75.0 | 172.0 | 92.0 | 43.0 |
| 2.1/2" | (65.0) | 110.0 | 80.0 | 182.0 | 105.0 | 46.0 |
| 3" | (80.0) | 131.0 | 97.0 | 221.0 | 127.0 | 48.0 |
| 4" | (100.0) | 160.0 | 142.0 | 250.0 | 162.0 | 54.0 |
| 5" | (125.0) | 187.0 | 155.0 | 257.0 | 186.0 | 59.0 |
| 6" | (150.0) | 187.0 | 167.0 | 278.0 | 216.0 | 59.0 |

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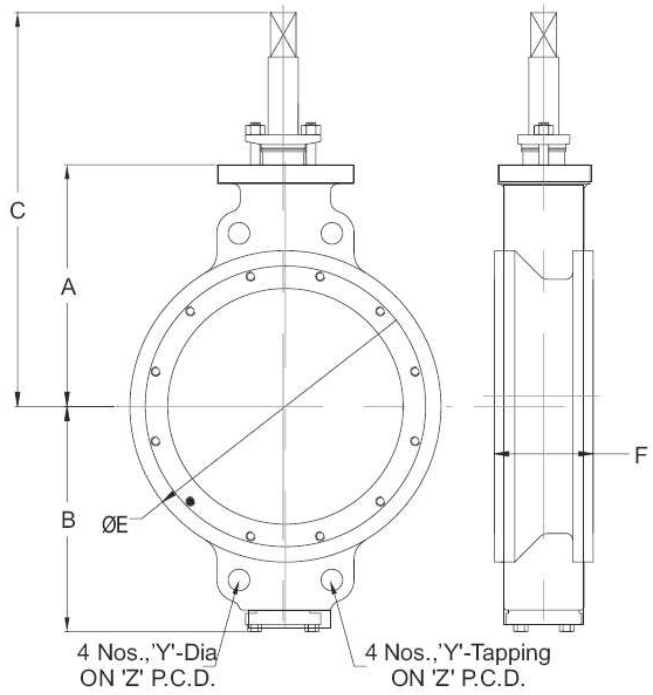
# Dimension Wafer Design




150#

| VALVE SIZE | 150#-WAFER DESIGN | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| INCH, (DN) | A | B | C | ØE | F | ØY Hole | Y Tapping | Z |
| 8" (200.0) | 217.0 | 210.0 | 318.0 | 270.0 | 64.0 | 22.2 | - | 298 |
| 10" (250.0) | 250.0 | 240.0 | 352.0 | 324.0 | 71.0 | 25.4 | - | 362 |
| 12" (300.0) | 310.0 | 285.0 | 425.0 | 381.0 | 81.0 | 25.4 | - | 432 |
| 14" (350.0) | 320.0 | 300.0 | 438.0 | 413.0 | 92.0 | 28.6 | - | 476 |
| 16" (400.0) | 340.0 | 350.0 | 458.0 | 470.0 | 102.0 | 28.6 | - | 540 |
| 18" (450.0) | 375.0 | 385.0 | 503.0 | 535.0 | 114.0 | 31.75 | - | 578 |
| 20" (500.0) | 406.0 | 400.0 | 551.0 | 584.0 | 127.0 | - | 1.1/8" | 635.0 |
| 24" (600.0) | 510.0 | 460.0 | 660.0 | 692.0 | 154.0 | - | 1.1/4" | 749.0 |
| 36" (900.0) | 666.0 | 640.0 | 893.0 | 1022.0 | 241.0 | - | 1.1/2" | 1086.0 |

300#

| VALVE SIZE | 300#-WAFER DESIGN | | | | | | |
|---|---|---|---|---|---|---|---|
| INCH (DN) | A | B | C | ØE | F | Y | Z |
| 8" (200.0) | 217.0 | 225.0 | 318.0 | 270.0 | 73.0 | 7/8" | 330.0 |
| 10" (250.0) | 270.0 | 250.0 | 378.0 | 324.0 | 83.0 | 1" | 387.0 |
| 12" (300.0) | 310.0 | 300.0 | 435.0 | 381.0 | 92.0 | 1.1/8" | 451.0 |
| 14" (350.0) | 335.0 | 335.0 | 490.0 | 413.0 | 117.0 | 1.1/8" | 514.0 |
| 16" (400.0) | 400.0 | 402.0 | 545.0 | 470.0 | 133.0 | 1.1/4" | 571.5 |
| 18" (450.0) | 425.0 | 427.0 | 578.0 | 533.0 | 149.0 | 1.1/4" | 629.0 |
| 20" (500.0) | 460.0 | 450.0 | 700.0 | 584.0 | 159.0 | 1.1/4" | 686.0 |
| 24" (600.0) | 550.0 | 564.0 | 728.0 | 692.0 | 181.0 | 1.1/2" | 813.0 |
| 36" (900.0) | 742.0 | 730.0 | 960.0 | 1022.0 | 241.0 | 1.5/8" | 1089.0 |

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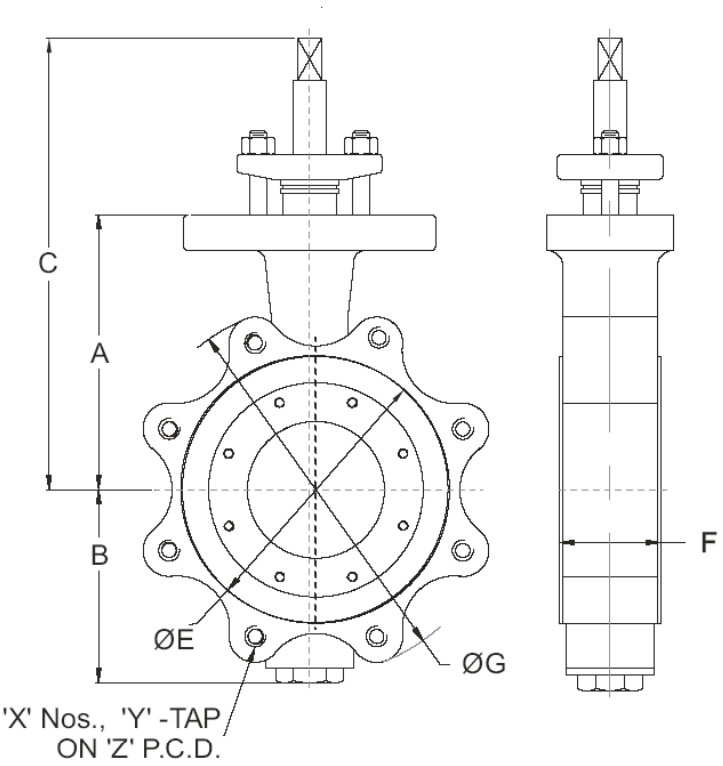
# Dimension Lug Design




150#

| VALVE SIZE | | 150#-LUGGED DESIGN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| INCH | (DN) | A | B | C | ØE | F | ØG | X | Y | Z |
| 2" | (50.0) | 100.0 | 75.0 | 172.0 | 92.0 | 43.0 | 152.5 | 4 | 5/8" | 121.0 |
| 2½" | (65.0) | 110.0 | 80.0 | 182.0 | 105.0 | 46.0 | 178.0 | 4 | 5/8" | 140.0 |
| 3" | (80.0) | 131.0 | 97.0 | 221.0 | 127.0 | 48.0 | 190.5 | 4 | 5/8" | 152.0 |
| 4" | (100.0) | 153.0 | 122.0 | 243.0 | 157.0 | 54.0 | 228.5 | 8 | 5/8" | 190.5 |
| 5" | (125.0) | 187.0 | 155.0 | 275.0 | 186.0 | 57.0 | 254.0 | 8 | 3/4" | 216.0 |
| 6" | (150.0) | 187.0 | 155.0 | 277.0 | 216.0 | 57.0 | 279.5 | 8 | 3/4" | 241.0 |

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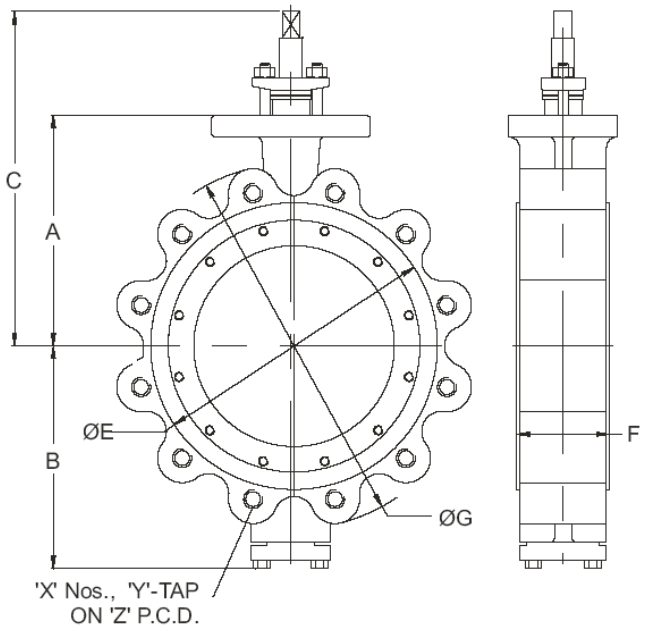
# Dimension Lug Design




150#

| VALVE SIZE | 150#-LUGGED DESIGN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INCH (DN) | A | B | C | ØE | F | ØG | X | Y Tap | Z |
| 8" (200.0) | 217.0 | 210.0 | 318.0 | 270.0 | 64.0 | 343.0 | 8 | 3/4" | 298.0 |
| 10" (250.0) | 250.0 | 240.0 | 352.0 | 324.0 | 71.0 | 406.5 | 12 | 7/8" | 362.0 |
| 12" (300.0) | 310.0 | 285.0 | 425.0 | 381.0 | 81.0 | 482.5 | 12 | 7/8" | 432.0 |
| 14" (350.0) | 320.0 | 300.0 | 438.0 | 413.0 | 92.0 | 533.5 | 12 | 1" | 476.0 |
| 16" (400.0) | 340.0 | 350.0 | 458.0 | 470.0 | 102.0 | 597.0 | 16 | 1" | 540.0 |
| 18" (450.0) | 375.0 | 385.0 | 503.0 | 535.0 | 114.0 | 635.0 | 16 | 1.1/8" | 578.0 |
| 20" (500.0) | 406.0 | 400.0 | 551.0 | 584.0 | 127.0 | 698.5 | 20 | 1.1/8" | 635.0 |
| 24" (600.0) | 510.0 | 460.0 | 660.0 | 692.0 | 154.0 | 813.0 | 20 | 1.1/4" | 749.0 |
| 36" (900.0) | 666.0 | 640.0 | 893.0 | 1022.0 | 241.0 | 1168.0 | 32 | 1.1/2" | 1086.0 |

300#

| VALVESIZE | 300#-LUGGED DESIGN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INCH (DN) | A | B | C | ØE | F | ØG | X | Y Tap | Z |
| 8" (200.0) | 238.0 | 239.0 | 343.0 | 270.0 | 73.0 | 381.0 | 12 | 7/8" | 330.0 |
| 10" (250.0) | 275.0 | 278.0 | 390.0 | 324.0 | 83.0 | 444.5 | 16 | 1" | 387.0 |
| 12" (300.0) | 320.0 | 330.0 | 435.0 | 381.0 | 92.0 | 520.7 | 16 | 1.1/8" | 451.0 |
| 14" (350.0) | 372.0 | 367.0 | 490.0 | 413.0 | 117.0 | 584.2 | 20 | 1.1/8" | 514.0 |
| 16" (400.0) | 425.0 | 408.0 | 545.0 | 470.0 | 133.0 | 647.7 | 20 | 1.1/4" | 571.5 |
| 18" (450.0) | 460.0 | 445.0 | 578.0 | 533.0 | 149.0 | 711.2 | 24 | 1.1/4" | 629.0 |
| 20" (500.0) | 525.0 | 510.0 | 700.0 | 584.0 | 159.0 | 774.7 | 24 | 1.1/4" | 686.0 |
| 24" (600.0) | 550.0 | 566.0 | 728.0 | 692.0 | 181.0 | 914.4 | 24 | 1.1/2" | 813.0 |
| 36" (900.0) | 715.0 | 720.0 | 960.0 | 1022.0 | 286.0 | 1168.0 | 32 | 1.5/8" | 1089.0 |

DUTCH VALVE COMPANY

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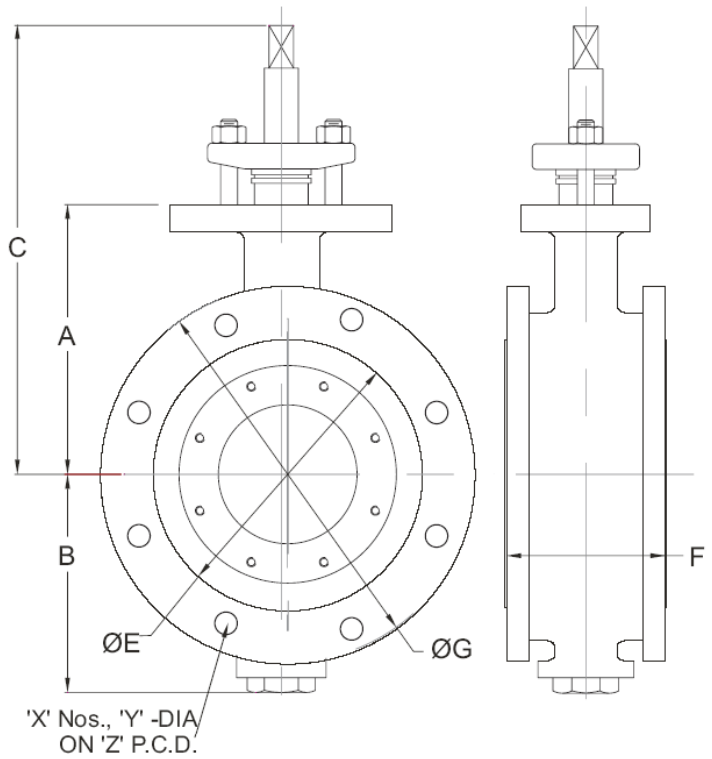
# Dimension Flanged Design




150#

| VALVE SIZE | 150#-FLANGED DESIGN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INCH (DN) | A | B | C | ØE | F | ØG | X | ØY | Z |
| 2" (50.0) | 100.0 | 75.0 | 172.0 | 92.0 | 108.0 | 152.5 | 4 | 19.0 | 121.0 |
| 2.1/2" (65.0) | 110.0 | 75.0 | 182.0 | 105.0 | 112.0 | 178.0 | 4 | 19.0 | 140.0 |
| 3" (80.0) | 131.0 | 97.0 | 221.0 | 127.0 | 114.0 | 190.5 | 4 | 19.0 | 152.0 |
| 4" (100.0) | 153.0 | 122.0 | 243.0 | 157.0 | 127.0 | 228.5 | 8 | 19.0 | 190.5 |
| 5" (125.0) | 187.0 | 155.0 | 275.0 | 186.0 | 140.0 | 254.0 | 8 | 22.0 | 216.0 |
| 6" (150.0) | 187.0 | 155.0 | 277.0 | 216.0 | 140.0 | 279.5 | 8 | 22.0 | 241.0 |

300#

| VALVE SIZE | 300#-FLANGED DESIGN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INCH. (DN) | A | B | C | ØE | F | ØG | X | ØY | Z |
| 2" (50.0) | 100.0 | 70.0 | 172.0 | 92.0 | 150.0 | 165.1 | 8 | 19.0 | 127.0 |
| 2.1/2" (65.0) | 110.0 | 75.0 | 182.0 | 105.0 | 170.0 | 190.5 | 8 | 22.0 | 149.0 |
| 3" (80.0) | 131.0 | 92.0 | 221.0 | 127.0 | 180.0 | 209.5 | 8 | 22.0 | 168.0 |
| 4" (100.0) | 172.0 | 148.0 | 250.0 | 157.0 | 190.0 | 254.0 | 8 | 22.0 | 200.0 |
| 5" (125.0) | 192.0 | 188.0 | 257.0 | 186.0 | 200.0 | 279.4 | 8 | 22.0 | 235.0 |
| 6" (150.0) | 201.0 | 190.0 | 278.0 | 216.0 | 210.0 | 317.5 | 12 | 22.0 | 270.0 |

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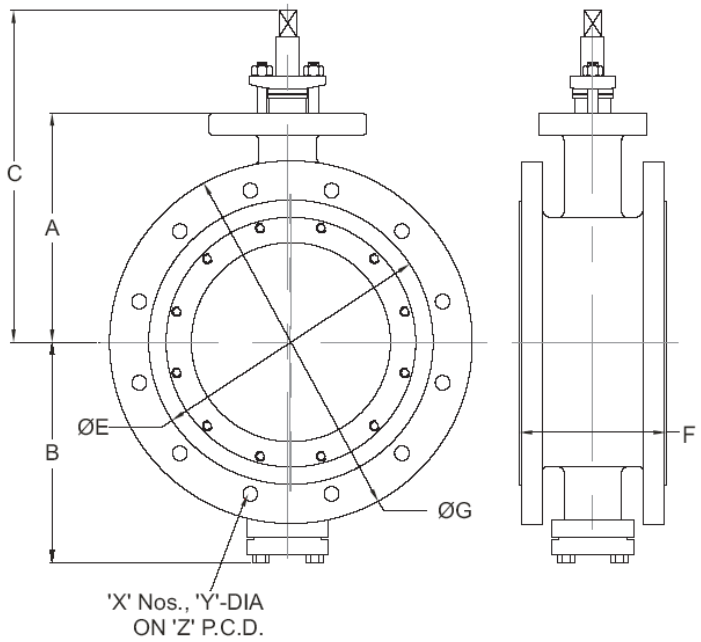
# Dimension Flanged Design




150#

| VALVESIZE | 150#-FLANGED DESIGN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INCH (DN) | A | B | C | ØE | F | ØG | X | ØY | Z |
| 8" (200.0) | 217.0 | 210.0 | 318.0 | 270.0 | 152.0 | 343.0 | 8 | 22.0 | 298.0 |
| 10" (250.0) | 250.0 | 240.0 | 352.0 | 324.0 | 165.0 | 406.5 | 12 | 25.0 | 362.0 |
| 12" (300.0) | 310.0 | 285.0 | 425.0 | 381.0 | 178.0 | 482.5 | 12 | 25.0 | 432.0 |
| 14" (350.0) | 320.0 | 300.0 | 438.0 | 413.0 | 190.0 | 533.5 | 12 | 28.5 | 476.0 |
| 16" (400.0) | 340.0 | 350.0 | 458.0 | 470.0 | 216.0 | 597.0 | 16 | 28.5 | 540.0 |
| 18" (450.0) | 375.0 | 385.0 | 501.0 | 535.0 | 222.0 | 635.0 | 16 | 32.0 | 578.0 |
| 20" (500.0) | 406.0 | 400.0 | 551.0 | 584.0 | 229.0 | 698.5 | 20 | 32.0 | 635.0 |
| 24" (600.0) | 510.0 | 460.0 | 660.0 | 692.0 | 267.0 | 813.0 | 20 | 35.0 | 749.0 |
| 36" (900.0) | 666.0 | 840.0 | 893.0 | 1022.0 | 330.0 | 1168.0 | 32 | 44.4 | 1086.0 |

300#

| VALVE SIZE | 300#-FLANGED DESIGN | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INCH. (DN) | A | B | C | ØE | F | ØG | X | ØY | Z |
| 8" (200.0) | 240.0 | 220.0 | 338.0 | 270.0 | 230.0 | 381.0 | 12 | 25.4 | 330.0 |
| 10" (250.0) | 263.0 | 250.0 | 395.0 | 324.0 | 250.0 | 444.5 | 16 | 28.5 | 387.0 |
| 12" (300.0) | 303.0 | 290.0 | 445.0 | 381.0 | 270.0 | 520.7 | 16 | 32.0 | 451.0 |
| 14" (350.0) | 340.0 | 320.0 | 505.0 | 413.0 | 290.0 | 584.2 | 20 | 32.0 | 514.0 |
| 16" (400.0) | 400.0 | 402.0 | 540.0 | 470.0 | 310.0 | 647.7 | 20 | 35.0 | 571.0 |
| 18" (450.0) | 425.0 | 427.0 | 620.0 | 533.0 | 330.0 | 711.2 | 24 | 35.0 | 629.0 |
| 20" (500.0) | 460.0 | 450.0 | 691.0 | 584.0 | 350.0 | 774.7 | 24 | 35.0 | 686.0 |
| 24" (600.0) | 523.0 | 550.0 | 788.0 | 692.0 | 390.0 | 914.4 | 24 | 41.0 | 813.0 |
| 36" (900.0) | 765.0 | 780.0 | 950.0 | 1022.0 | 510.0 | 1168.0 | 32 | 44.5 | 1089.0 |

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