

Applications: Applied to any media, but HF (Hydrofluoric Acid), with Max. Temperature 500 and Max. Pressure 5.0Mpa.

This valve has incomparable advantages under using in high corrosion, and high attrition.

Structure: 3-part flange type flowing ball valve, Flange, According to DIN/ANSI/API/JIS



Excellent wearproof property of ceramic enables this valve have high reliability and prolonged lifespan, 2-4times of that of Titanium Alloy and Monel Metal valve

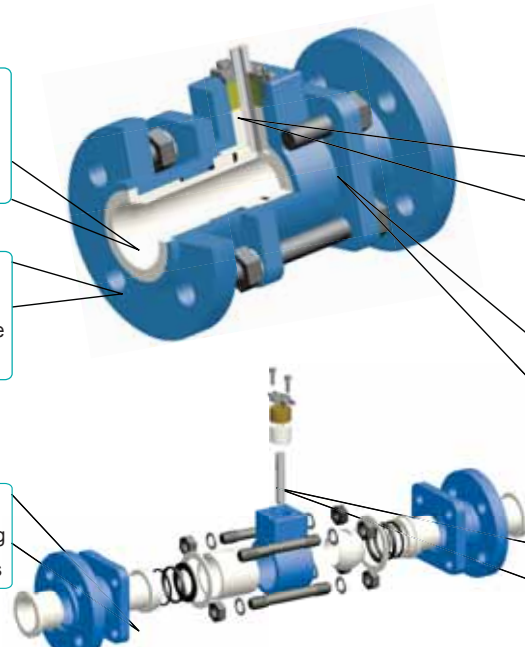
Interference fit between metal part and ceramic part makes the whole part stronger and more reliable, improves the mechanical properties of the ceramic, becoming real ceramic-steel

Elastic washers can guarantee excellent leakproofness at any time and avoid blocking in media with impurities and cracking of balls

A wide selection of stem material options available is 316/316L, Hastelloy-c Monel metal, structure ceramic

Completely symmetric design can ensure dual leak-proofness and two-direction usage for double lifespan.

Unique packing design can ensure closer sealing and prolonged service life



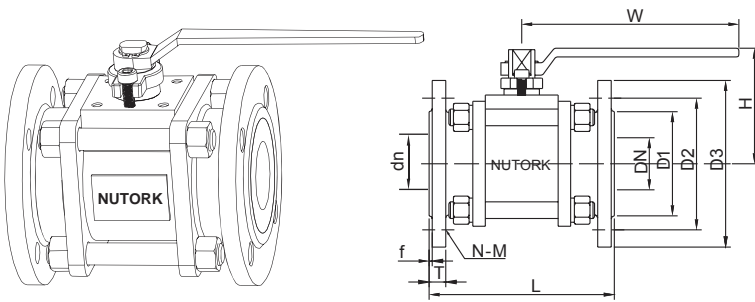
The valve has the exceedingly high wear-proof capability, corrosion resisting, enduring capability, good heat insulation, small thermal expansion. All parts that contact the media are made of structural ceramics with extremely high chemical stability and hardness (HRC90) only inferior to diamond.

The ball is processed by advanced polishing equipment that can ensure high circularity, accuracy, good surface quality. The self-lubricating capability of ZrO₂e ensures the good sealing performance. Thoroughly free from the defects that metal hard sealing has such as big torque, on-corrosion-resistant sealing surface.

The valve fits in granule medium of high hardness, or medium with erosive soft granule. It is also the only valve suitable for this type of medium. They are widely used in petrochemical industry, metallurgy, mining, power station, medicine and papermaking and so on.

Part List :

| No. | Part Name | Material | No. | Part Name | Material |
|-----|------------|--------------------------------|-----|---------------|----------------------|
| 1 | Flange | WCB, CF8, CF8M | 12 | Ring | WCB, 304SS |
| 2 | Seat | Ceramic | 13 | Washer | PTFE, RTFE, Graphite |
| 3 | Socket | Ceramic | 14 | Ball | Ceramic |
| 4 | Stem | 304Ss, 316SS, Hastelloy, Monel | 15 | Inner Lined | Ceramic |
| 5 | Gland | WCB, 304SS | 16 | O Ring | Rubber |
| 6 | Space Ring | WCB, 304SS | 17 | Spring | Inconel 750 |
| 7 | Handle | WCB, 304SS | 18 | Gasket | PTFE, RTFE, Graphite |
| 8 | Snap Ring | 65Mn | 19 | Body | WCB, CF8, CF8M |
| 9 | Snap Ring | 65Mn | 20 | Spring Washer | 65Mn |
| 10 | Gland Bolt | WCB, 304SS | 21 | Nut | WCB, 304SS |
| 11 | Packing | PTFE, RTFE, Graphite | 22 | Stud Bolt | WCB, 304SS |



PN10 / JIS10K :

| DN | | Figure Size | | | | DIN PN10 Flange Dia. | | | | | | JIS 10K Flange Dia. | | | | | | Kg |
|--------|-----|-------------|-----|-----|-----|----------------------|-----|-----|--------|----|---|---------------------|-----|-----|--------|----|---|------|
| Inch | mm | dn | L | W | H | D1 | D2 | D3 | N-M | T | f | D1 | D2 | D3 | N-M | T | f | |
| 1/2" | 15 | 15 | 108 | 160 | 85 | 45 | 65 | 95 | 4-M12 | 14 | 2 | 52 | 70 | 95 | 4-M12 | 12 | 1 | 2.9 |
| 3/4" | 20 | 15 | 117 | 160 | 94 | 55 | 75 | 105 | 4-M12 | 14 | 2 | 58 | 75 | 100 | 4-M12 | 14 | 1 | 3.4 |
| 1" | 25 | 20 | 127 | 230 | 100 | 65 | 85 | 115 | 4-M12 | 14 | 2 | 70 | 90 | 125 | 4-M16 | 14 | 1 | 4.3 |
| 1 1/4" | 32 | 25 | 140 | 230 | 114 | 78 | 100 | 135 | 4-M16 | 16 | 2 | 80 | 100 | 135 | 4-M16 | 16 | 2 | 6.8 |
| 1 1/2" | 40 | 32 | 165 | 320 | 121 | 85 | 110 | 145 | 4-M16 | 16 | 2 | 85 | 105 | 140 | 4-M16 | 16 | 2 | 9.3 |
| 2" | 50 | 40 | 178 | 320 | 140 | 100 | 125 | 160 | 4-M16 | 16 | 3 | 100 | 120 | 155 | 4-M16 | 16 | 2 | 12.6 |
| 2 1/2" | 65 | 50 | 190 | 320 | 158 | 120 | 145 | 180 | 4-M16 | 18 | 3 | 120 | 140 | 173 | 4-M16 | 18 | 2 | 14.9 |
| 3" | 80 | 65 | 203 | 400 | 176 | 135 | 160 | 195 | 8-M16 | 20 | 3 | 130 | 150 | 185 | 8-M16 | 18 | 2 | 22.3 |
| 4" | 100 | 80 | 229 | | 202 | 155 | 180 | 215 | 8-M16 | 20 | 3 | 155 | 175 | 210 | 8-M16 | 18 | 2 | 30 |
| 5" | 125 | 100 | 254 | | 252 | 185 | 210 | 245 | 8-M16 | 22 | 3 | 185 | 210 | 250 | 8-M20 | 20 | 2 | 41 |
| 6" | 150 | 100 | 267 | | 276 | 210 | 240 | 280 | 8-M20 | 24 | 3 | 215 | 240 | 280 | 8-M20 | 22 | 2 | 54 |
| 8" | 200 | 150 | 292 | | 293 | 265 | 295 | 335 | 12-M20 | 26 | 3 | 265 | 290 | 330 | 12-M20 | 22 | 2 | 76 |

PN16 / ANSI150LB :

| DN | | Figure Size | | | | DIN PN16 Flange Dia. | | | | | | ANSI CLASS 150 Flange Dia. | | | | | | Kg |
|--------|-----|-------------|-----|-----|-----|----------------------|-----|-----|--------|----|---|----------------------------|-------|-----|-------|----|-----|------|
| Inch | mm | dn | L | W | H | D1 | D2 | D3 | N-M | T | f | D1 | D2 | D3 | N-M | T | f | |
| 1/2" | 15 | 15 | 108 | 160 | 85 | 45 | 65 | 95 | 4-M12 | 14 | 2 | 35 | 60.5 | 89 | 4-M12 | 11 | 1.6 | 2.9 |
| 3/4" | 20 | 15 | 117 | 160 | 94 | 55 | 75 | 105 | 4-M12 | 14 | 2 | 43 | 70 | 98 | 4-M12 | 11 | 1.6 | 3.4 |
| 1" | 25 | 20 | 127 | 230 | 100 | 65 | 85 | 115 | 4-M12 | 14 | 2 | 51 | 79.5 | 108 | 4-M12 | 11 | 1.6 | 4.3 |
| 1 1/4" | 32 | 25 | 140 | 230 | 114 | 78 | 100 | 135 | 4-M16 | 16 | 2 | 64 | 89 | 117 | 4-M12 | 13 | 1.6 | 6.8 |
| 1 1/2" | 40 | 32 | 165 | 320 | 121 | 85 | 110 | 145 | 4-M16 | 16 | 3 | 73 | 98.5 | 127 | 4-M12 | 14 | 1.6 | 9.3 |
| 2" | 50 | 40 | 178 | 320 | 140 | 100 | 125 | 160 | 4-M16 | 16 | 3 | 92 | 120.5 | 152 | 4-M16 | 16 | 1.6 | 12.6 |
| 2 1/2" | 65 | 50 | 190 | 320 | 158 | 120 | 145 | 180 | 4-M16 | 18 | 3 | 105 | 139.5 | 178 | 4-M16 | 18 | 1.6 | 14.9 |
| 3" | 80 | 65 | 203 | 400 | 176 | 135 | 160 | 195 | 8-M16 | 20 | 3 | 127 | 152.5 | 190 | 4-M16 | 19 | 1.6 | 22.3 |
| 4" | 100 | 80 | 229 | | 202 | 155 | 180 | 215 | 8-M16 | 20 | 3 | 157 | 190.5 | 229 | 8-M16 | 24 | 1.6 | 30 |
| 5" | 125 | 100 | 254 | | 252 | 185 | 210 | 245 | 8-M16 | 22 | 3 | 186 | 216 | 254 | 8-M20 | 24 | 1.6 | 41 |
| 6" | 150 | 100 | 267 | | 276 | 210 | 240 | 280 | 8-M20 | 24 | 3 | 216 | 241.5 | 279 | 8-M20 | 25 | 1.6 | 54 |
| 8" | 200 | 150 | 292 | | 293 | 265 | 295 | 335 | 12-M20 | 26 | 3 | 270 | 298.5 | 343 | 8-M20 | 29 | 1.6 | 76 |

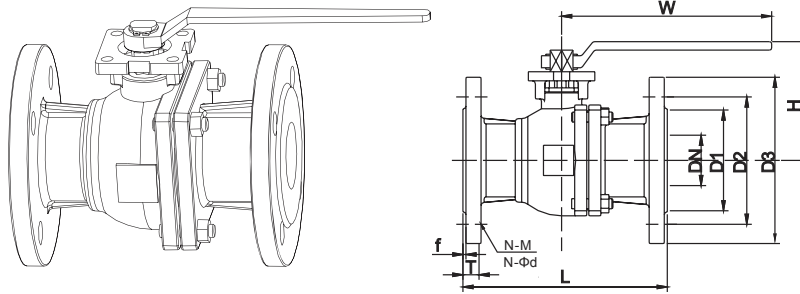
PN25 / JIS20K :

| DN | | Figure Size | | | | DIN PN25 Flange Dia. | | | | | | JIS 20K Flange Dia. | | | | | | Kg |
|--------|-----|-------------|-----|-----|-----|----------------------|-----|-----|--------|----|---|---------------------|-----|-----|--------|----|---|------|
| Inch | mm | dn | L | W | H | D1 | D2 | D3 | N-M | T | f | D1 | D2 | D3 | N-M | T | f | |
| 1/2" | 15 | 15 | 108 | 160 | 85 | 45 | 65 | 95 | 4-M12 | 16 | 2 | 52 | 70 | 95 | 4-M12 | 14 | 1 | 2.9 |
| 3/4" | 20 | 15 | 117 | 160 | 94 | 55 | 75 | 105 | 4-M12 | 16 | 2 | 58 | 75 | 100 | 4-M12 | 16 | 1 | 3.4 |
| 1" | 25 | 20 | 127 | 230 | 100 | 65 | 85 | 115 | 4-M16 | 16 | 2 | 70 | 90 | 125 | 4-M16 | 16 | 1 | 4.3 |
| 1 1/4" | 32 | 25 | 140 | 230 | 114 | 78 | 100 | 135 | 4-M16 | 18 | 2 | 80 | 100 | 135 | 4-M16 | 18 | 2 | 6.8 |
| 1 1/2" | 40 | 32 | 165 | 320 | 121 | 85 | 110 | 145 | 4-M16 | 18 | 3 | 85 | 105 | 140 | 4-M16 | 18 | 2 | 9.3 |
| 2" | 50 | 40 | 178 | 320 | 140 | 100 | 125 | 160 | 4-M16 | 20 | 3 | 100 | 120 | 155 | 8-M16 | 18 | 2 | 12.6 |
| 2 1/2" | 65 | 50 | 190 | 320 | 158 | 120 | 145 | 180 | 8-M16 | 22 | 3 | 120 | 140 | 175 | 8-M16 | 20 | 2 | 14.9 |
| 3" | 80 | 65 | 203 | 400 | 176 | 135 | 160 | 195 | 8-M16 | 22 | 3 | 135 | 160 | 200 | 8-M20 | 22 | 2 | 22.3 |
| 4" | 100 | 80 | 229 | | 202 | 160 | 190 | 230 | 8-M20 | 24 | 3 | 160 | 185 | 225 | 8-M20 | 24 | 2 | 30 |
| 5" | 125 | 100 | 254 | | 252 | 188 | 220 | 270 | 8-M24 | 28 | 3 | 195 | 225 | 270 | 8-M24 | 26 | 2 | 41 |
| 6" | 150 | 100 | 267 | | 276 | 218 | 250 | 300 | 8-M24 | 30 | 3 | 230 | 260 | 305 | 12-M24 | 28 | 2 | 54 |
| 8" | 200 | 150 | 292 | | 293 | 278 | 310 | 360 | 12-M24 | 34 | 3 | 275 | 305 | 350 | 12-M24 | 30 | 2 | 76 |

PN40 / ANIS300LB :

| DN | | Figure Size | | | | DIN PN40 Flange Dia. | | | | | | ANSI CLASS 300 Flange Dia. | | | | | | Kg |
|--------|-----|-------------|-----|-----|-----|----------------------|-----|-----|--------|----|---|----------------------------|-------|-----|--------|----|-----|------|
| Inch | mm | dn | L | W | H | D1 | D2 | D3 | N-M | T | f | D1 | D2 | D3 | N-M | T | f | |
| 1/2" | 15 | 15 | 108 | 160 | 90 | 45 | 65 | 95 | 4-M12 | 16 | 2 | 35 | 66.5 | 95 | 4-M12 | 15 | 1.6 | 3.5 |
| 3/4" | 20 | 15 | 117 | 160 | 100 | 55 | 75 | 105 | 4-M12 | 16 | 2 | 43 | 82.5 | 117 | 4-M16 | 16 | 1.6 | 4.1 |
| 1" | 25 | 20 | 127 | 230 | 105 | 65 | 85 | 115 | 4-M16 | 16 | 2 | 51 | 89 | 124 | 4-M16 | 18 | 1.6 | 5.2 |
| 1 1/4" | 32 | 25 | 140 | 230 | 120 | 78 | 100 | 135 | 4-M16 | 18 | 2 | 64 | 98.5 | 133 | 4-M16 | 19 | 1.6 | 8.2 |
| 1 1/2" | 40 | 32 | 165 | 320 | 128 | 85 | 110 | 145 | 4-M16 | 18 | 3 | 73 | 114.5 | 156 | 4-M20 | 21 | 1.6 | 11.3 |
| 2" | 50 | 40 | 178 | 320 | 146 | 100 | 125 | 160 | 4-M16 | 20 | 3 | 92 | 127 | 165 | 8-M16 | 22 | 1.6 | 15.1 |
| 2 1/2" | 65 | 50 | 190 | 320 | 165 | 120 | 145 | 180 | 8-M16 | 22 | 3 | 105 | 149.5 | 190 | 8-M20 | 25 | 1.6 | 17.9 |
| 3" | 80 | 65 | 203 | 400 | 185 | 135 | 160 | 195 | 8-M16 | 22 | 3 | 127 | 168 | 210 | 8-M20 | 29 | 1.6 | 26.8 |
| 4" | 100 | 80 | 229 | | 210 | 160 | 190 | 230 | 8-M20 | 24 | 3 | 157 | 200.5 | 254 | 8-M20 | 32 | 1.6 | 36 |
| 5" | 125 | 100 | 254 | | 265 | 188 | 220 | 270 | 8-M24 | 28 | 3 | 186 | 235 | 279 | 8-M20 | 35 | 1.6 | 49 |
| 6" | 150 | 100 | 267 | | 290 | 218 | 250 | 300 | 8-M24 | 30 | 3 | 216 | 270.5 | 318 | 12-M20 | 37 | 1.6 | 65 |
| 8" | 200 | 150 | 292 | | 308 | 282 | 320 | 375 | 12-M27 | 38 | 3 | 270 | 330 | 381 | 12-M24 | 41 | 1.6 | 93 |

Remarks: ceramic ball valve with nominal diameter larger than DN100 all matched with worm wheel manual operation



PN10 / JIS10K :

| DN | | DIN PN10 Figure Size & Flange Dia. | | | | | | | | | | JIS 10K Figure Size & Flange Dia. | | | | | | | |
|--------|-----|------------------------------------|-----|-----|-----|-----|-----|--------|----|---|-----|-----------------------------------|-----|-----|-----|--------|----|---|--|
| Inch | mm | W | L | H | D1 | D2 | D3 | N-φd | T | f | L | H | D1 | D2 | D3 | N-φd | T | f | |
| 1/2" | 15 | 130 | 130 | 84 | 45 | 65 | 95 | 4-φ14 | 14 | 2 | 108 | 66 | 52 | 70 | 95 | 4-φ15 | 12 | 1 | |
| 3/4" | 20 | 130 | 130 | 84 | 55 | 75 | 105 | 4-φ14 | 14 | 2 | 117 | 69 | 58 | 75 | 100 | 4-φ15 | 14 | 1 | |
| 1" | 25 | 160 | 140 | 95 | 65 | 85 | 115 | 4-φ14 | 14 | 2 | 129 | 86 | 70 | 90 | 125 | 4-φ19 | 14 | 1 | |
| 1 1/4" | 32 | 160 | 165 | 95 | 78 | 100 | 135 | 4-φ18 | 16 | 2 | 140 | 97 | 80 | 100 | 135 | 4-φ19 | 16 | 2 | |
| 1 1/2" | 40 | 250 | 165 | 138 | 85 | 110 | 145 | 4-φ18 | 16 | 2 | 165 | 123 | 85 | 105 | 140 | 4-φ19 | 16 | 2 | |
| 2" | 50 | 250 | 203 | 147 | 100 | 125 | 160 | 4-φ18 | 16 | 3 | 180 | 130 | 100 | 120 | 155 | 4-φ19 | 16 | 2 | |
| 2 1/2" | 65 | 400 | 222 | 185 | 120 | 145 | 180 | 4-φ18 | 18 | 3 | 190 | 148 | 120 | 140 | 173 | 4-φ19 | 18 | 2 | |
| 3" | 80 | 400 | 241 | 194 | 135 | 160 | 195 | 4-φ18 | 20 | 3 | 200 | 174 | 130 | 150 | 185 | 8-φ19 | 18 | 2 | |
| 4" | 100 | 700 | 305 | 210 | 155 | 180 | 215 | 8-φ18 | 20 | 3 | 235 | 190 | 155 | 175 | 210 | 8-φ19 | 18 | 2 | |
| 5" | 125 | 700 | 381 | 265 | 185 | 210 | 245 | 8-φ18 | 22 | 3 | 300 | 230 | 185 | 210 | 250 | 8-φ23 | 20 | 2 | |
| 6" | 150 | 1100 | 403 | 290 | 210 | 240 | 280 | 8-φ23 | 24 | 3 | 340 | 252 | 215 | 240 | 280 | 8-φ23 | 22 | 2 | |
| 8" | 200 | 1100 | 419 | 308 | 265 | 295 | 335 | 12-φ23 | 26 | 3 | 350 | 278 | 265 | 290 | 330 | 12-φ23 | 22 | 2 | |

PN16 / ANSI150LB :

| DN | | DIN PN16 Figure Size & Flange Dia. | | | | | | | | | | ANSI CLASS 150 Figure Size & Flange Dia. | | | | | | | |
|--------|-----|------------------------------------|-----|-----|-----|-----|-----|--------|----|---|-----|--|-----|-------|-----|-------|----|-----|--|
| Inch | mm | W | L | H | D1 | D2 | D3 | N-φd | T | f | L | H | D1 | D2 | D3 | N-φd | T | f | |
| 1/2" | 15 | 130 | 130 | 84 | 45 | 65 | 95 | 4-φ14 | 14 | 2 | 108 | 66 | 35 | 60.5 | 89 | 4-φ15 | 11 | 1.6 | |
| 3/4" | 20 | 130 | 130 | 84 | 55 | 75 | 105 | 4-φ14 | 14 | 2 | 117 | 69 | 43 | 70 | 98 | 4-φ15 | 11 | 1.6 | |
| 1" | 25 | 160 | 140 | 95 | 65 | 85 | 115 | 4-φ14 | 14 | 2 | 127 | 91 | 51 | 79.5 | 108 | 4-φ15 | 11 | 1.6 | |
| 1 1/4" | 32 | 160 | 165 | 95 | 78 | 100 | 135 | 4-φ18 | 16 | 2 | 140 | 97 | 64 | 89 | 117 | 4-φ15 | 13 | 1.6 | |
| 1 1/2" | 40 | 250 | 165 | 138 | 85 | 110 | 145 | 4-φ18 | 16 | 2 | 165 | 123 | 73 | 98.5 | 127 | 4-φ15 | 14 | 1.6 | |
| 2" | 50 | 250 | 203 | 147 | 100 | 125 | 160 | 4-φ18 | 16 | 3 | 178 | 130 | 92 | 120.5 | 152 | 4-φ19 | 16 | 1.6 | |
| 2 1/2" | 65 | 400 | 222 | 185 | 120 | 145 | 180 | 4-φ18 | 18 | 3 | 190 | 143 | 105 | 139.5 | 178 | 4-φ19 | 18 | 1.6 | |
| 3" | 80 | 400 | 241 | 194 | 135 | 160 | 195 | 4-φ18 | 20 | 3 | 203 | 176 | 127 | 152.5 | 190 | 8-φ19 | 19 | 1.6 | |
| 4" | 100 | 700 | 305 | 210 | 155 | 180 | 215 | 8-φ18 | 20 | 3 | 229 | 192 | 157 | 190.5 | 229 | 8-φ19 | 24 | 1.6 | |
| 5" | 125 | 700 | 381 | 265 | 185 | 210 | 245 | 8-φ18 | 22 | 3 | 356 | 230 | 186 | 216 | 254 | 8-φ22 | 24 | 1.6 | |
| 6" | 150 | 1100 | 403 | 290 | 210 | 240 | 280 | 8-φ23 | 24 | 3 | 394 | 252 | 216 | 241.5 | 279 | 8-φ22 | 25 | 1.6 | |
| 8" | 200 | 1100 | 419 | 308 | 265 | 295 | 335 | 12-φ23 | 26 | 3 | 457 | 278 | 270 | 298.5 | 343 | 8-φ22 | 29 | 1.6 | |

PN25 / JIS20K :

| DN | | DIN PN25 Figure Size & Flange Dia. | | | | | | | | | | JIS 20K Figure Size & Flange Dia. | | | | | | | |
|--------|-----|------------------------------------|-----|-----|-----|-----|-----|--------|----|---|-----|-----------------------------------|-----|-----|-----|--------|----|---|--|
| Inch | mm | W | L | H | D1 | D2 | D3 | N-φd | T | f | L | H | D1 | D2 | D3 | N-φd | T | f | |
| 1/2" | 15 | 160 | 130 | 84 | 45 | 65 | 95 | 4-φ14 | 16 | 2 | 108 | 66 | 52 | 70 | 95 | 4-φ15 | 14 | 1 | |
| 3/4" | 20 | 160 | 130 | 84 | 55 | 75 | 105 | 4-φ14 | 16 | 2 | 117 | 69 | 58 | 75 | 100 | 4-φ15 | 16 | 1 | |
| 1" | 25 | 230 | 140 | 95 | 65 | 85 | 115 | 4-φ14 | 16 | 2 | 129 | 91 | 70 | 90 | 125 | 4-φ19 | 16 | 1 | |
| 1 1/4" | 32 | 230 | 165 | 95 | 78 | 100 | 135 | 4-φ18 | 18 | 2 | 140 | 97 | 80 | 100 | 135 | 4-φ19 | 18 | 2 | |
| 1 1/2" | 40 | 320 | 165 | 138 | 85 | 110 | 145 | 4-φ18 | 18 | 3 | 165 | 123 | 85 | 105 | 140 | 4-φ19 | 18 | 2 | |
| 2" | 50 | 320 | 203 | 147 | 100 | 125 | 160 | 4-φ18 | 20 | 3 | 180 | 130 | 100 | 120 | 155 | 4-φ19 | 18 | 2 | |
| 2 1/2" | 65 | 400 | 222 | 185 | 120 | 145 | 180 | 4-φ18 | 22 | 3 | 190 | 143 | 120 | 140 | 175 | 8-φ19 | 20 | 2 | |
| 3" | 80 | 400 | 241 | 194 | 135 | 160 | 195 | 8-φ18 | 22 | 3 | 200 | 176 | 135 | 160 | 200 | 8-φ23 | 22 | 2 | |
| 4" | 100 | 700 | 305 | 210 | 160 | 190 | 230 | 8-φ23 | 24 | 3 | 235 | 192 | 160 | 185 | 225 | 8-φ23 | 24 | 2 | |
| 5" | 125 | 700 | 381 | 265 | 188 | 220 | 270 | 8-φ25 | 28 | 3 | 300 | 230 | 195 | 225 | 270 | 8-φ25 | 26 | 2 | |
| 6" | 150 | 1100 | 403 | 290 | 218 | 250 | 300 | 8-φ25 | 30 | 3 | 340 | 252 | 230 | 260 | 305 | 12-φ25 | 28 | 2 | |
| 8" | 200 | 1100 | 419 | 308 | 278 | 310 | 360 | 12-φ25 | 34 | 3 | 350 | 278 | 275 | 305 | 350 | 12-φ25 | 30 | 2 | |

PN40 / ANIS300LB :

| DN | | DIN PN40 Figure Size & Flange Dia. | | | | | | | | | | ANSI CLASS 300 Figure Size & Flange Dia. | | | | | | | |
|--------|-----|------------------------------------|-----|-----|-----|-----|-----|--------|----|---|-----|--|-----|-------|-----|--------|----|-----|--|
| Inch | mm | W | L | H | D1 | D2 | D3 | N-φd | T | f | L | H | D1 | D2 | D3 | N-φd | T | f | |
| 1/2" | 15 | 160 | 140 | 67 | 45 | 65 | 95 | 4-φ14 | 16 | 2 | 108 | 66 | 35 | 66.5 | 95 | 4-φ15 | 15 | 1.6 | |
| 3/4" | 20 | 160 | 152 | 70 | 55 | 75 | 105 | 4-φ14 | 16 | 2 | 117 | 69 | 43 | 82.5 | 117 | 4-φ19 | 16 | 1.6 | |
| 1" | 25 | 230 | 165 | 89 | 65 | 85 | 115 | 4-φ14 | 16 | 2 | 127 | 91 | 51 | 89 | 124 | 4-φ19 | 18 | 1.6 | |
| 1 1/4" | 32 | 230 | 180 | 95 | 78 | 100 | 135 | 4-φ18 | 18 | 2 | 140 | 97 | 64 | 98.5 | 133 | 4-φ19 | 19 | 1.6 | |
| 1 1/2" | 40 | 320 | 200 | 122 | 85 | 110 | 145 | 4-φ18 | 18 | 2 | 165 | 123 | 73 | 114.5 | 156 | 4-φ22 | 21 | 1.6 | |
| 2" | 50 | 320 | 230 | 130 | 100 | 125 | 160 | 4-φ18 | 20 | 3 | 178 | 130 | 92 | 127 | 165 | 8-φ19 | 22 | 1.6 | |
| 2 1/2" | 65 | 400 | 290 | 157 | 120 | 145 | 180 | 4-φ18 | 22 | 3 | 190 | 143 | 105 | 149.5 | 190 | 8-φ22 | 25 | 1.6 | |
| 3" | 80 | 400 | 310 | 186 | 135 | 160 | 195 | 4-φ18 | 22 | 3 | 203 | 176 | 127 | 168 | 210 | 8-φ22 | 29 | 1.6 | |
| 4" | 100 | 700 | 350 | 203 | 160 | 190 | 230 | 8-φ23 | 24 | 3 | 229 | 192 | 157 | 200.5 | 254 | 8-φ22 | 32 | 1.6 | |
| 5" | 125 | 700 | 356 | 252 | 188 | 220 | 270 | 8-φ25 | 28 | 3 | 350 | 230 | 186 | 235 | 279 | 8-φ22 | 35 | 1.6 | |
| 6" | 150 | 1100 | 394 | 276 | 218 | 250 | 300 | 8-φ25 | 30 | 3 | 414 | 252 | 216 | 270.5 | 318 | 12-φ22 | 37 | 1.6 | |
| 8" | 200 | 1100 | 457 | 293 | 282 | 320 | 375 | 12-φ30 | 38 | 3 | 439 | 278 | 270 | 330 | 381 | 12-φ25 | 41 | 1.6 | |