NUTORK®

Actuators & Valves

# Ball Valve

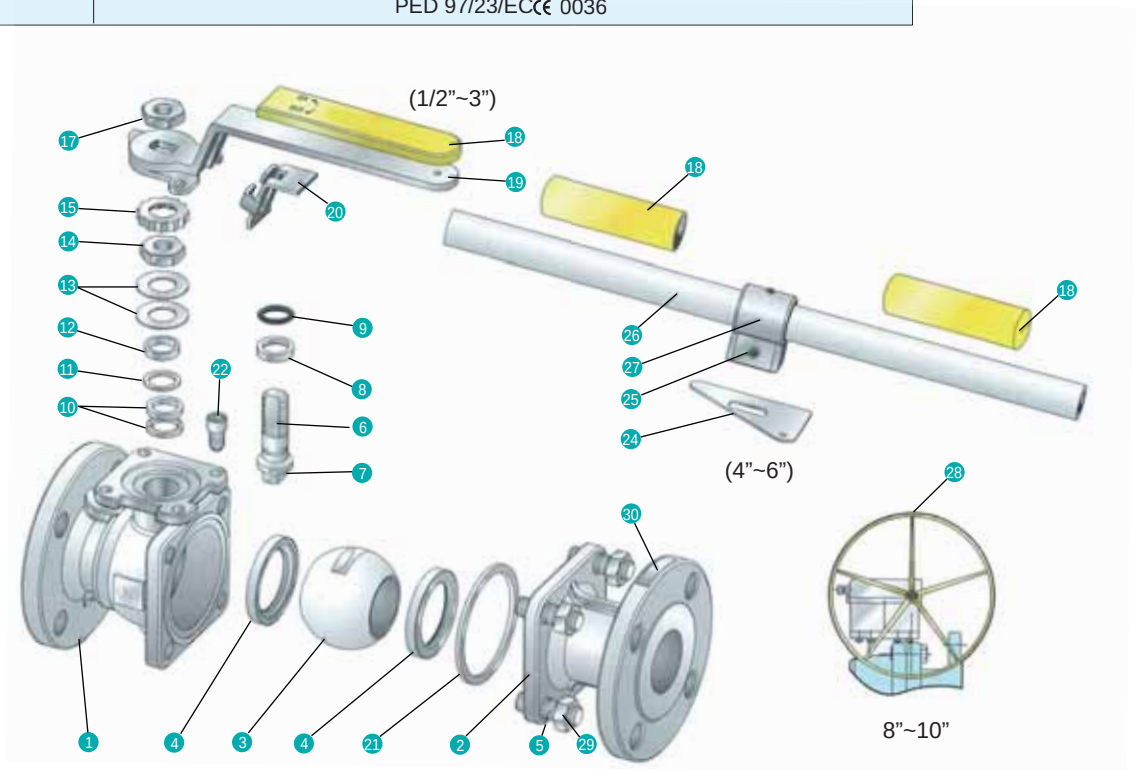
NUTORK CORPORATION

# Split Body, Flanged End, Ball Valve

| Standard | GB | ANSI | DIN / EN | JIS |
|---|---|---|---|---|
| Rating | GB / T12224<br>PN10-PN40<br>GB / T12237 | B16.34 CLASS 150<br>(BS5351 CLASS 150)<br>B16.34 CLASS 300<br>(BS5351 CLASS 300) | 3357 PN10-PN40<br>EN 12516 | B2001 10K<br>B2001 20K |
| Face to Face | GB / T12221 | B16.10<br>BS2080 | 3202 F4/F18<br>3202 F1/F17 | B2002 10K Form 6<br>B2002 20K Form 10 |
| Connection Facing | GB / T9113.1 | B16.5RF serrated<br>Finish (Ra3.2-Ra6.3)<br>BS1560 Part 2 RF | 2501/1 PN10-PN40<br>Facing DIN 2526 Form C | B2212 10K<br>B2214 20K |
| Inspection & Testing | GB / T13927 | API 598 and API 6D | 3230/3<br>EN 12266 | JIS B2003 |
| Fire Safe | API 607 4th edition 1993 | | | |
| Quality Assurance | ISO 9001<br>AD-W0 / TRD100<br>PED 97/23/EC CE 0036 | | | |

## AVAILABLE OPTIONS

- Other Alloys Steel Upon Request. Casting per NACE/MR-01-75 for Sour Gas Service.
- NACE/MR-01-75




## MATERIAL OF CONSTRUCTION

| NO. | PART NAME | MATERIALS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ANSI | | | DIN | | | JIS | | |
| 1 | Body | CF8M | CF8 | WCB | 1.4408 | 1.4308 | 1.0619 | SCS14A | SCS13A | SCPH2 |
| 2 | End Cap | CF8M | CF8 | WCB | 1.4408 | 1.4308 | 1.0619 | SCS14A | SCS13A | SCPH2 |
| 3 | Ball | CF8M | CF8 | | 1.4408 | 1.4308 | | SCS14A | SCS13A | |
| 4 | Ball Seat | PTFE | | | | | | | | |
| 5 | Bolting | A193-B8 | A193-B7 | | A193-B8 | A193-B7 | | A193-B8 | A193-B7 | |
| 6 | Stem | SUS316 | SUS304 | | SUS316 | SUS304 | | SUS316 | SUS304 | |
| 7 | Anti-Static | SUS316 | SUS304 | | SUS316 | SUS304 | | SUS316 | SUS304 | |
| 8 | Stem Seal-Ring | PTFE | | | | | | | | |
| 9 | O-ring | FKM(VITION) | | | | | | | | |
| 10 | V-Ring Stem Packing | GRAFOIL | | | | | | | | |
| 11 | Bushing | SUS304 | | | | | | | | |
| 12 | Gland | SUS304 | | | | | | | | |
| 13 | Belleville Washer | SUS301 | | | | | | | | |
| 14 | Stem Nut | A194-8 | | | | | | | | |
| 15 | Stop-lock-cap | SUS304 | | | | | | | | |
| 16 | Handle Gland | SUS304(Black) | | | | | | | | |
| 17 | Handle Nut | SUS304 | | | | | | | | |
| 18 | Handle Sleeve(1/2”~3”) | VINYL PLASTIC | | | | | | | | |
| 19 | Handle(1/2”~3”) | SUS304 | | | | | | | | |
| 20 | Lock Device (1/2”~3”) | SUS304 | | | | | | | | |
| 21 | Body Gasket | GRAFOIL | | | | | | | | |
| 22 | Stop Blot | A193-B8 | | | | | | | | |
| 23 | Nut | A194-8 | | | | | | | | |
| 24 | Triangle Stooper | SUS304 | | | | | | | | |
| 25 | Set Screwed(4”~6”) | A193-B8 | | | | | | | | |
| 26 | Handle(4”~6”) | A53+PLATED Zn | | | | | | | | |
| 27 | Handle Adapter(4”~6”) | SUS304 | | | | | | | | |
| 28 | Worm Gear(8”~10”) | A536 (60-50-12) / FCD 450 | | | | | | | | |
| 29 | Bolt Nut | A194-8 | A194-2H | | A194-8 | A194-2H | | A194-8 | A194-2H | |
| 30 | Name Plate | SUS304 | | | | | | | | |

316SS+Solder Stellite #6， 316SS+Hard Chrome Plated， ASME / PCI 70-2 Class V .

## API607- 5th

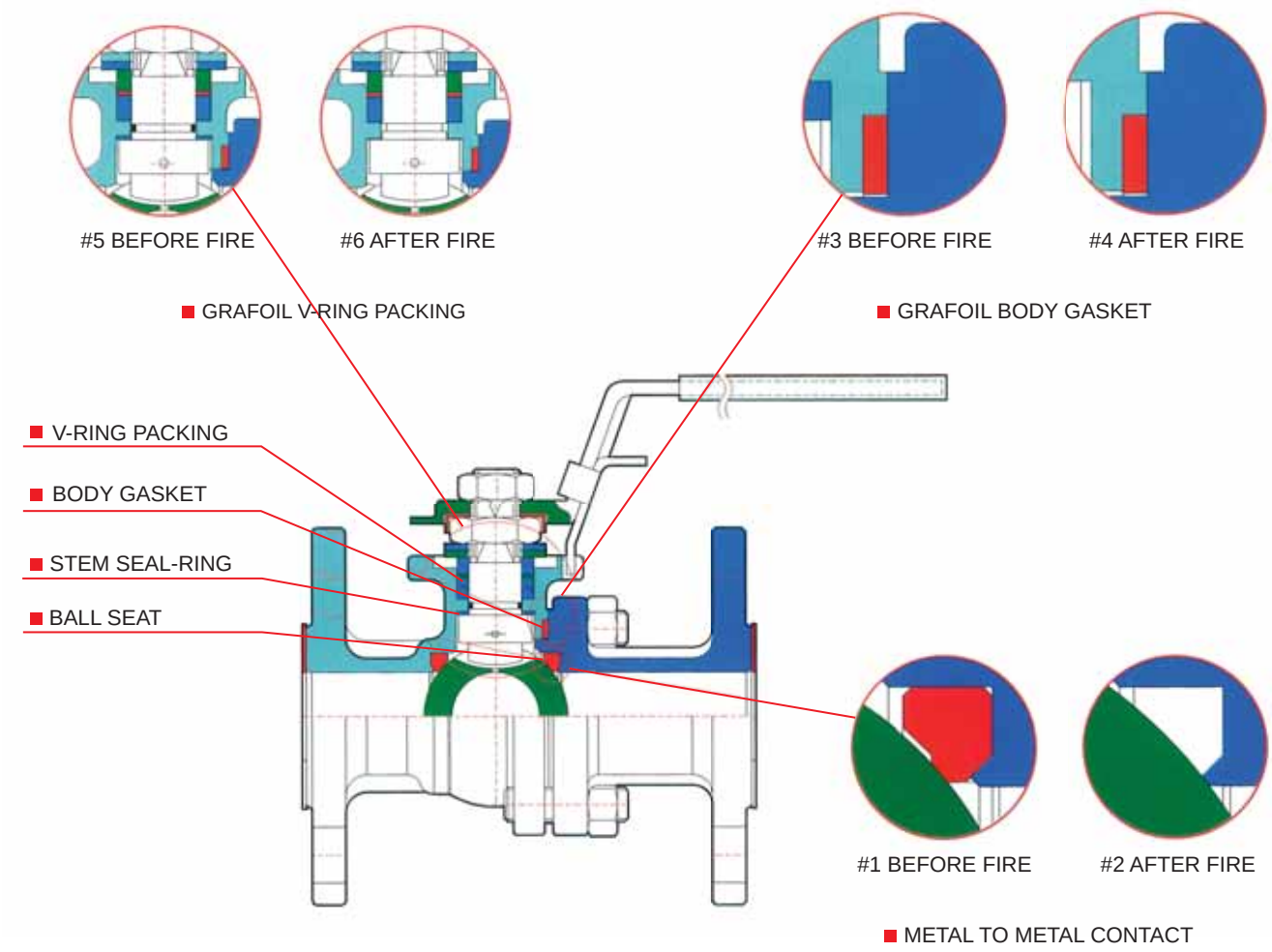
Nutork soft-seated ball valves conform to Fire Tests of API 607 Fourth Edition and BS 6755 Part 2 (1987). Our products can seal properly during the fire and after the accident, reduce indisde and outside leakage of pipeline fluids, and prevent environmental pollution (even the fire) resulted from flammable or other fluids in the pipeline.

## Design Features:

1. During the fire, soft seats (such as PTFE, RTFE... etc) will burn up and lose supporting and sealing functions. Then, the Ball free moves downstream due to pressure from upstream, contacts secondary metal seats of Body or End Cap, and finally achieves to prevent leakage (see flgures #1 & #2).

2. Grafoil Body Gaskets can endure high temperature and remain unaffected during the fire, and eventually prevent fluid leakage to the exterior. Moreover, the connection of Body and End Cap Flange maintains metal to metal contact by Stud Bolts screwed into Body (see figures #3 & #4).

3. Grafoil Stem Seals can endure high temperature and remain unaffected during the fire and prevent fluid leakage to the exterior (see figures #5 & #6).

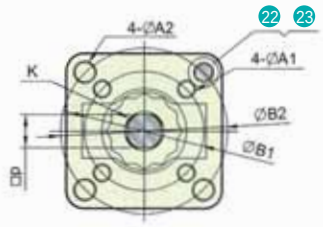


## DESIGN FEATURES

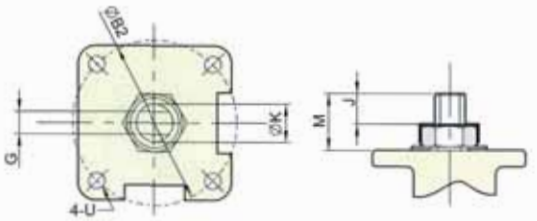
- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

## APPLICABLE STANDARDS

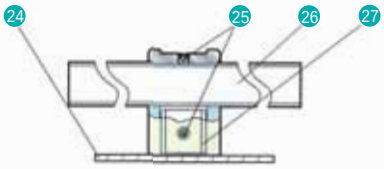
- Design: ASME B16.34, API 608
- Fire Safe : API 607 4th 1993, BS 6755 Part2
- Face to Face : ASME B16.10
- Wall Thickness : ASME B16.34
- End Flange : ASME B16.5
- Inspection & Testing: API 598,API 6D



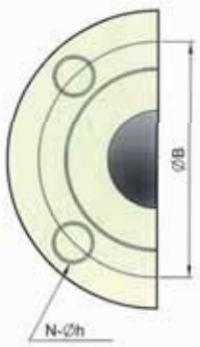

1/2”~ 10”
(Direct Mount Type)

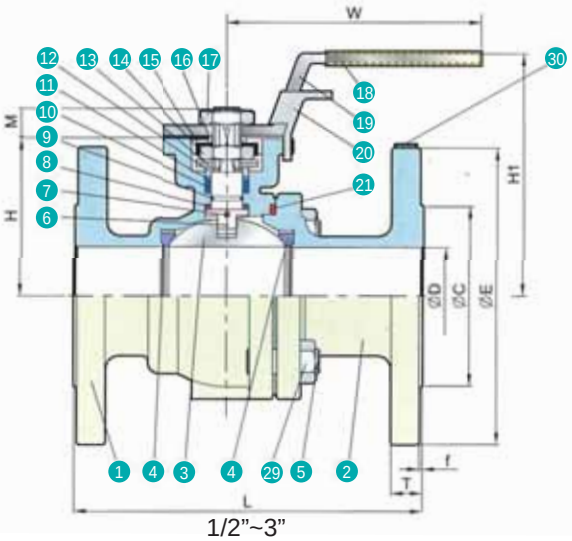



1/2”~ 4”

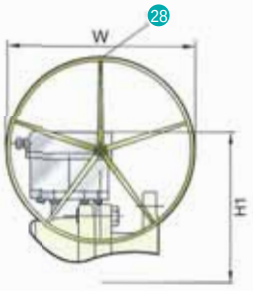



4”~ 6”




1/2”~3”




8”~10”
W/Worm Gear

### ANSI CLASS 150 DIMENSION TABLE / ANSI CLASS 150

Unit: mm

| SIZE | ØD | L | ØC | ØE | ØB | T | f | N | Øn | H* | H | H* | H1 | M* | M | W* | W | K* | K | P* | G | A1* | A2* | B1* | B2 | U | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/2” | 15.0 | 108.0 | 35.0 | 89.0 | 60.5 | 9.7 | 1.6 | 4.0 | 16.0 | 48.0 | 37.0 | 78.0 | 86.0 | 9.0 | 20.0 | 145.0 | 135.0 | 7/16-20UNF | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| 3/4” | 20.0 | 117.0 | 43.0 | 98.6 | 70.0 | 10.5 | 1.6 | 4.0 | 16.0 | 53.0 | 40.5 | 84.0 | 90.0 | 9.0 | 20.0 | 145.0 | 135.0 | 7/16-20UNF | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 7.0 | 36.0 | 50.0 | M5 | 10.0 |
| 1” | 25.0 | 127.0 | 51.0 | 108.0 | 79.2 | 11.2 | 1.6 | 4.0 | 16.0 | 58.5 | 45.5 | 90.5 | 96.0 | 11.0 | 24.0 | 175.0 | 170.0 | 9/16-18UNF | | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| 1-1/4” | 32.0 | 140.0 | 63.5 | 117.0 | 88.9 | 12.7 | 1.6 | 4.0 | 16.0 | 71.0 | 50.0 | 103.0 | 102.0 | 11.0 | 24.0 | 175.0 | 170.0 | 9/16-18UNF | | 11.0 | 9.0 | 6.0 | 9.0 | 42.0 | 70.0 | M6 | 11.0 |
| 1-1/2” | 38.0 | 165.0 | 73.2 | 127.0 | 98.6 | 14.2 | 1.6 | 4.0 | 16.0 | 76.0 | 61.0 | 111.0 | 114.0 | 14.0 | 27.0 | 194.0 | 200.0 | 3/4-16UNF | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| 2” | 50.0 | 178.0 | 92.0 | 152.5 | 120.7 | 15.9 | 1.6 | 4.0 | 16.0 | 81.0 | 71.0 | 116.0 | 127.0 | 14.0 | 27.0 | 194.0 | 200.0 | 3/4-16UNF | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| 2-1/2” | 64.0 | 190.0 | 104.7 | 177.8 | 139.7 | 17.5 | 1.6 | 4.0 | 16.0 | 101.5 | 89.0 | 150.0 | 177.0 | 17.0 | 42.5 | 265.0 | 250.0 | 7/8-14UNF | | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| 3” | 76.0 | 203.0 | 127.0 | 190.5 | 152.4 | 19.1 | 1.6 | 4.0 | 16.0 | 111.5 | 100.0 | 160.0 | 183.0 | 17.0 | 42.5 | 265.0 | 250.0 | 7/8-14UNF | | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| 4” | 100.0 | 229.0 | 157.2 | 228.6 | 190.5 | 23.9 | 1.6 | 4.0 | 16.0 | 140.0 | 121.0 | 182.0 | 214.0 | 22.0 | 47.5 | 400.0 | 400.0 | 1-1/8-12UNF | | 22.0 | 18.0 | - | 11.0 | - | 102.0 | M10 | 25.0 |
| 5” | 125.0 | 356.0 | 186.0 | 254.0 | 216.0 | 24.0 | 1.6 | 4.0 | 16.0 | 183.0 | - | 260.0 | - | 27.0 | - | 600.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 6” | 150.0 | 394.0 | 216.0 | 279.4 | 241.3 | 25.4 | 1.6 | 4.0 | 16.0 | 204.0 | - | 280.0 | - | 27.0 | - | 800.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 8” | 200.0 | 457.0 | 270.0 | 342.9 | 298.5 | 28.5 | 1.6 | 4.0 | 16.0 | 252.0 | - | 370.0 | - | 27.0 | - | 305.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 10” | 250.0 | 533.0 | 324.0 | 406.4 | 362.0 | 30.3 | 1.6 | 4.0 | 16.0 | 310.0 | - | 430.0 | - | 36.0 | - | 305.0 | - | 2-12UNF | - | 36.0 | - | 18.0 | - | 140.0 | - | - | - |

### ANSI CLASS 300 DIMENSION TABLE / ANSI CLASS 150

Unit: mm

| SIZE | ØD | L | ØC | ØE | ØB | T | f | N | Øn | H* | H | H1* | H1 | M* | M | W* | W | K* | K | P* | G | A1* | A2* | B1* | B2 | U | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/2” | 15.0 | 140.0 | 35.0 | 95.3 | 66.5 | 14.3 | 1.6 | 4.0 | 16.0 | - | 37.0 | - | 86.0 | - | 20.0 | - | 135.0 | - | 3/8-24UNF | - | 6.3 | - | - | - | 42.0 | M5 | 10.0 |
| 3/4” | 20.0 | 152.0 | 43.0 | 117.4 | 82.6 | 15.9 | 1.6 | 4.0 | 19.0 | - | 40.5 | - | 90.0 | - | 20.0 | - | 135.0 | - | 3/8-24UNF | - | 6.3 | - | - | - | 42.0 | M5 | 10.0 |
| 1” | 25.0 | 165.0 | 51.0 | 124.0 | 88.9 | 17.5 | 1.6 | 4.0 | 19.0 | - | 45.5 | - | 96.0 | - | 24.0 | - | 170.0 | - | 9/16-18UNF | - | 9.0 | - | - | - | 50.0 | M6 | 11.0 |
| 1-1/4” | 32.0 | 178.0 | 63.5 | 133.4 | 98.6 | 19.1 | 1.6 | 4.0 | 19.0 | - | 50.0 | - | 102.0 | - | 24.0 | - | 170.0 | - | 9/16-18UNF | - | 9.0 | - | - | - | 50.0 | M6 | 11.0 |
| 1-1/2” | 38.0 | 190.0 | 73.0 | 155.5 | 114.3 | 20.7 | 1.6 | 4.0 | 22.3 | - | 62.0 | - | 114.0 | - | 27.0 | - | 200.0 | - | 5/8-18UNF | - | 9.6 | - | - | - | 70.0 | M8 | 16.0 |
| 2” | 50.0 | 216.0 | 92.0 | 165.1 | 127.0 | 22.3 | 1.6 | 8.0 | 19.0 | - | 71.0 | - | 127.0 | - | 27.0 | - | 200.0 | - | 5/8-18UNF | - | 9.6 | - | - | - | 70.0 | M8 | 16.0 |
| 2-1/2” | 64.0 | 241.0 | 104.7 | 190.5 | 149.4 | 25.4 | 1.6 | 8.0 | 22.3 | - | 89.0 | - | 177.0 | - | 42.5 | - | 250.0 | - | 7/8-14UNF | - | 16.0 | - | - | - | 102.0 | M10 | 21.0 |
| 3” | 76.0 | 282.0 | 127.0 | 209.6 | 168.1 | 28.6 | 1.6 | 8.0 | 22.3 | - | 100.0 | - | 183.0 | - | 42.5 | - | 250.0 | - | 7/8-14UNF | - | 16.0 | - | - | - | 102.0 | M10 | 21.0 |
| 4” | 100.0 | 305.0 | 157.2 | 254.0 | 200.2 | 31.8 | 1.6 | 8.0 | 22.3 | - | 123.0 | - | 214.0 | - | 47.5 | - | 400.0 | - | 1-1/8-12UNF | - | 18.0 | - | 11.0 | - | 102.0 | M10 | 25.0 |
| 5” | 125.0 | 381.0 | 186.0 | 279.4 | 235.0 | 35.0 | 1.6 | 8.0 | 22.3 | 183.0 | - | 260.0 | - | 27.0 | - | 600.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 6” | 150.0 | 403.0 | 216.0 | 317.5 | 269.8 | 36.6 | 1.6 | 12.0 | 22.3 | 204.0 | - | 280.0 | - | 27.0 | - | 800.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 8” | 200.0 | 502.0 | 270.0 | 381.0 | 330.2 | 41.2 | 1.6 | 12.0 | 25.4 | 253.0 | - | 370.0 | - | 27.0 | - | 305.0 | - | 1-3/4-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 10” | 250.0 | 568.0 | 324.0 | 444.5 | 387.4 | 47.8 | 1.6 | 16.0 | 28.5 | 310.0 | - | 430.0 | - | 36.0 | - | 305.0 | - | 2-12UNF | - | 36.0 | - | 18.0 | - | 140.0 | - | - | - |

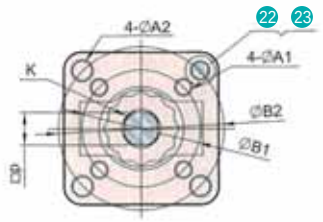
# DIN PN10/16/25/40, Full Port, Ball Valve

## DESIGN FEATURES

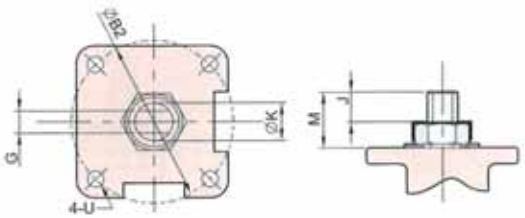
- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

## APPLICABLE STANDARDS

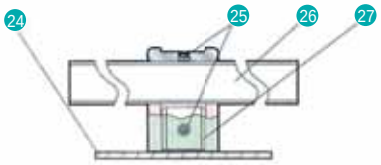
- Design Rating : EN 12516-1, ASME B16.34
- Fire Safe: API 607 4th 1993, BS 6755 Part2
- Face to Face : DIN 3202 F4/F17, F4/ F18, DIN 3357/2
- Wall Thickness : EN 12516-1
- End Flange: EN 1092-1: 1999; DIN 2545
- Inspection & Testing: EN 12266, API 6D



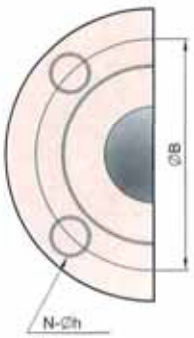

DN15 ~ DN250
(Direct Mount Type)

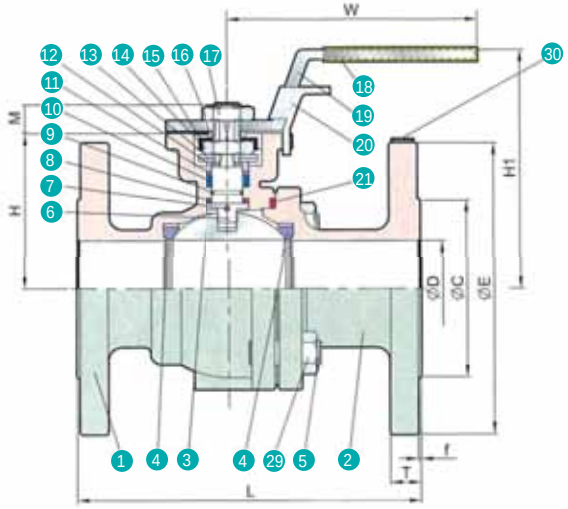



DN15 ~ DN100

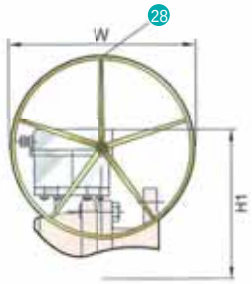



DN100 ~ DN150




DN15~DN80




DN200 ~ DN250
W/Worm Gear

### ■ DIN PN10/16/25/40 DIMENSION TABLE(F1/F17,F4/F18)

Unit: mm

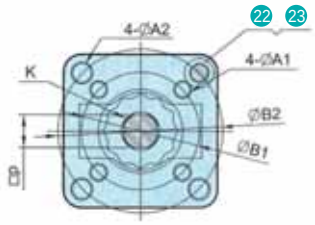
| SIZE | PN | ØD | L | #L | ØC | ØE | ØB | f | T | N | Øn | H* | H | H1* | H1 | M* | M | W* | W | K* | K | P* | G | A1* | A2* | B1* | B2 | U | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN15 | 10 | 15.0 | 115.0 | 130.0 | 45.0 | 95.0 | 65.0 | 2.0 | 16.0 | 4.0 | 14.0 | 48.0 | 37.0 | 78.0 | 86.0 | 9.0 | 20.0 | 145.0 | 135.0 | 7/16-20UNF | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| DN20 | 10 | 20.0 | 120.0 | 150.0 | 58.0 | 105.0 | 75.0 | 2.0 | 18.0 | 4.0 | 14.0 | 53.0 | 40.0 | 84.0 | 90.0 | 9.0 | 20.0 | 145.0 | 135.0 | 7/16-20UNF | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| DN25 | 16 | 25.0 | 125.0 | 160.0 | 68.0 | 115.0 | 85.0 | 2.0 | 18.0 | 4.0 | 14.0 | 58.5 | 46.0 | 90.5 | 96.0 | 11.0 | 24.0 | 175.0 | 170.0 | 9/16-18UNF | | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| DN32 | 25 | 32.0 | 130.0 | 180.0 | 78.0 | 140.0 | 100.0 | 2.0 | 18.0 | 4.0 | 18.0 | 71.0 | 50.0 | 103.0 | 102.0 | 11.0 | 24.0 | 175.0 | 170.0 | 9/16-18UNF | | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| DN40 | 40 | 38.0 | 140.0 | 200.0 | 88.0 | 150.0 | 110.0 | 3.0 | 18.0 | 4.0 | 18.0 | 76.0 | 61.0 | 111.0 | 114.0 | 14.0 | 27.0 | 194.0 | 200.0 | 3/4-16UNF | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| DN50 | | 50.0 | 150.0 | 230.0 | 102.0 | 165.0 | 125.0 | 3.0 | 20.0 | 4.0 | 18.0 | 85.0 | 71.0 | 120.0 | 127.0 | 14.0 | 27.0 | 194.0 | 200.0 | 3/4-16UNF | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| DN65 | 10/16 | 65.0 | 170.0 | 290.0 | 122.0 | 185.0 | 145.0 | 3.0 | 18.0 | 4.0 | 18.0 | 101.5 | 89.0 | 150.0 | 177.0 | 17.0 | 42.5 | 265.0 | 250.0 | 7/8-14UNF | | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| | 25/40 | | | | | | | | 22.0 | 8.0 | | | | | | | | | | | | | | | | | | | |
| DN80 | 10/16 | 76.0 | 180.0 | 310.0 | 138.0 | 200.0 | 160.0 | 3.0 | 20.0 | 8.0 | 18.0 | 111.5 | 100.0 | 160.0 | 183.0 | 17.0 | 42.5 | 265.0 | 250.0 | 7/8-14UNF | | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| | 25/40 | | | | | | | | 24.0 | | | | | | | | | | | | | | | | | | | | |
| DN100 | 10/16 | 100.0 | 190.0 | 350.0 | 158.0 | 220.0 | 180.0 | 3.0 | 20.0 | 8.0 | 18.0 | 140.0 | 121.0 | 182.0 | 214.0 | 22.0 | 47.5 | 400.0 | 400.0 | 1-1/8-12UNF | | 22.0 | 18.0 | - | 11.0 | - | 102.0 | M10 | 25.0 |
| | 25/40 | | | | 162.0 | 235.0 | 190.0 | | 24.0 | | 25.0 | | | | | | | | | | | | | | | | | | |
| DN125 | 10/16 | 125.0 | 325.0 | 400.0 | 188.0 | 250.0 | 210.0 | 3.0 | 22.0 | 18.0 | 8.0 | 183.0 | - | 260.0 | - | 27.0 | - | 600.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| | 25/40 | | | | | 270.0 | 220.0 | | 26.0 | 26.0 | | | | | | | | | | | | | | | | | | | |
| DN150 | 10/16 | 150.0 | 350.0 | 450.0 | 212.0 | 285.0 | 240.0 | 3.0 | 22.0 | 22.0 | 8.0 | 204.0 | - | 280.0 | - | 27.0 | - | 800.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| | 25/40 | | | | 218.0 | 300.0 | 250.0 | | 28.0 | 26.0 | | | | | | | | | | | | | | | | | | | |
| DN200 | 10 | 200.0 | 400.0 | 550.0 | 268.0 | 340.0 | 295.0 | 3.0 | 24.0 | 22.0 | 8.0 | 252.0 | - | 370.0 | - | 27.0 | - | 305.0 | - | 1-3/4-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 25 | | | | 278.0 | 360.0 | 310.0 | | 30.0 | 26.0 | 12.0 | | | | | | | | | | | | | | | | | | |
| | 40 | | | | 285.0 | 375.0 | 320.0 | | 34.0 | 30.0 | | | | | | | | | | | | | | | | | | | |
| DN250 | 10 | 250.0 | 450.0 | 650.0 | 320.0 | 395.0 | 350.0 | 3.0 | 26.0 | 22.0 | 12.0 | 310.0 | - | 430.0 | - | 36.0 | - | 305.0 | - | 2-12UNF | - | 36.0 | - | 14.0 | - | 140.0 | - | - | - |
| | 16 | | | | | 405.0 | 355.0 | | | 26.0 | | | | | | | | | | | | | | | | | | | |
| | 25 | | | | 335.0 | 425.0 | 370.0 | | 32.0 | 30.0 | | | | | | | | | | | | | | | | | | | |
| | 40 | | | | 345.0 | 450.0 | 385.0 | | 38.0 | 33.0 | | | | | | | | | | | | | | | | | | | |

## DESIGN FEATURES

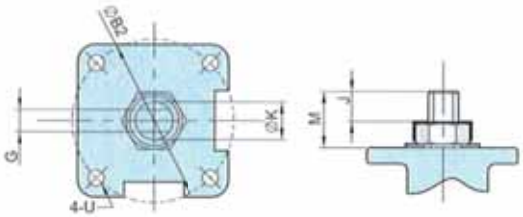
- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

## APPLICABLE STANDARDS

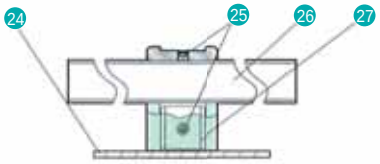
- Design : ASME B16.34, API 608
- Fire Safe : API 607 4th 1993, BS 6755 Part2
- Face to Face : JIS B2002 (ASME B16.10)
- End Flange: JIS B 2238
- Inspection & Testing: JIS B2003, API 6D
- Wall Thickness : ASME B16.34



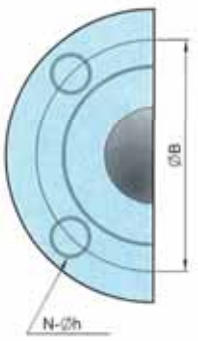

A15 ~ 250A
(Direct Mount Type)

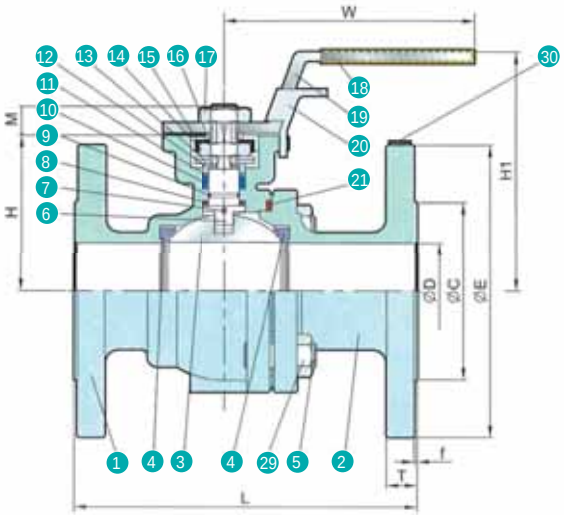



15A ~ 100A

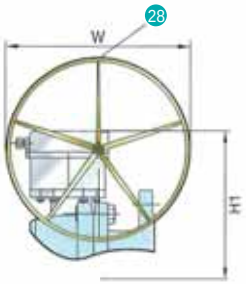



100A ~ 150A




15A ~ 80A




200A ~ 250A
W/Worm Gear

### JIS 10K DIMENSION TABLE

Unit: mm

| SIZE | ØD | L | ØC | ØE | ØB | T | f | N | Øn | H* | H | H* | H1 | M* | M | W* | W | K* | K | P* | G | A1* | A2* | B1* | B2 | U | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15A | 15.0 | 108.0 | 51.0 | 95.0 | 70.0 | 12.0 | 1.0 | 4.0 | 15.0 | 48.0 | 37.0 | 78.0 | 86.0 | 9.0 | 20.0 | 145.0 | 135.0 | 7/16-20UNF | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| 20A | 20.0 | 117.0 | 56.0 | 100.0 | 75.0 | 14.0 | 1.0 | 4.0 | 15.0 | 53.0 | 40.0 | 84.0 | 90.0 | 9.0 | 20.0 | 145.0 | 135.0 | 7/16-20UNF | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 7.0 | 36.0 | 50.0 | M5 | 10.0 |
| 25A | 25.0 | 127.0 | 67.0 | 125.0 | 90.0 | 14.0 | 1.0 | 4.0 | 19.0 | 63.5 | 46.0 | 95.0 | 96.0 | 11.0 | 24.0 | 175.0 | 170.0 | 9/16-18UNF | | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| 32A | 32.0 | 140.0 | 76.0 | 135.0 | 100.0 | 16.0 | 2.0 | 4.0 | 19.0 | 70.0 | 50.0 | 103.0 | 102.0 | 11.0 | 24.0 | 175.0 | 170.0 | 9/16-18UNF | | 11.0 | 9.0 | 6.0 | 9.0 | 42.0 | 70.0 | M6 | 11.0 |
| 40A | 38.0 | 165.0 | 81.0 | 140.0 | 105.0 | 16.0 | 2.0 | 4.0 | 19.0 | 71.0 | 61.0 | 106.0 | 114.0 | 14.0 | 27.0 | 194.0 | 200.0 | 3/4-16UNF | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| 50A | 50.0 | 178.0 | 96.0 | 155.0 | 120.0 | 16.0 | 2.0 | 4.0 | 19.0 | 80.0 | 71.0 | 116.0 | 127.0 | 14.0 | 27.0 | 194.0 | 200.0 | 3/4-16UNF | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| 65A | 64.0 | 190.0 | 116.0 | 175.0 | 140.0 | 18.0 | 2.0 | 4.0 | 19.0 | 101.5 | 89.0 | 150.0 | 177.0 | 17.0 | 42.5 | 265.0 | 250.0 | 7/8-14UNF | | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| 80A | 76.0 | 203.0 | 126.0 | 185.0 | 150.0 | 18.0 | 2.0 | 8.0 | 19.0 | 111.5 | 100.0 | 160.0 | 183.0 | 17.0 | 42.5 | 265.0 | 250.0 | 7/8-14UNF | | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| 100A | 100.0 | 229.0 | 151.0 | 210.0 | 175.0 | 18.0 | 2.0 | 8.0 | 19.0 | 140.0 | 121.0 | 182.0 | 214.0 | 22.0 | 47.5 | 400.0 | 400.0 | 1-1/8-12UNF | | 22.0 | 18.0 | - | 11.0 | - | 102.0 | M10 | 25.0 |
| 125A | 125.0 | 356.0 | 182.0 | 250.0 | 210.0 | 20.0 | 2.0 | 8.0 | 23.0 | 183.0 | - | 260.0 | - | 27.0 | - | 600.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 150A | 150.0 | 394.0 | 212.0 | 280.0 | 240.0 | 22.0 | 2.0 | 8.0 | 23.0 | 204.0 | - | 280.0 | - | 27.0 | - | 800.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 200A | 200.0 | 457.0 | 262.0 | 330.0 | 290.0 | 22.0 | 2.0 | 12.0 | 23.0 | 252.0 | - | 370.0 | - | 27.0 | - | 305.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 250A | 250.0 | 533.0 | 324.0 | 400.0 | 355.0 | 24.0 | 2.0 | 12.0 | 25.0 | 310.0 | - | 430.0 | - | 36.0 | - | 305.0 | - | 2-12UNF | - | 36.0 | - | 18.0 | - | 140.0 | - | - | - |

### JIS 20K DIMENSION TABLE

Unit: mm

| SIZE | ØD | L | ØC | ØE | ØB | T | f | N | Øn | H* | H | H1* | H1 | M* | M | W* | W | K* | K | P* | G | A1* | A2* | B1* | B2 | U | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15A | 15.0 | 140.0 | 51.0 | 95.0 | 70.0 | 14.0 | 1.6 | 4.0 | 15.0 | - | 37.0 | - | 86.0 | - | 20.0 | - | 135.0 | - | 3/8-24UNF | - | 6.3 | - | - | - | 42.0 | M5 | 10.0 |
| 20A | 20.0 | 152.0 | 56.0 | 100.0 | 75.0 | 16.0 | 1.6 | 4.0 | 15.0 | - | 40.5 | - | 90.0 | - | 20.0 | - | 135.0 | - | 3/8-24UNF | - | 6.3 | - | - | - | 42.0 | M5 | 10.0 |
| 25A | 25.0 | 165.0 | 67.0 | 125.0 | 90.0 | 16.0 | 1.6 | 4.0 | 19.0 | - | 45.5 | - | 96.0 | - | 24.0 | - | 170.0 | - | 9/16-18UNF | - | 9.0 | - | - | - | 50.0 | M6 | 11.0 |
| 32A | 32.0 | 178.0 | 76.0 | 135.0 | 100.0 | 18.0 | 2.0 | 4.0 | 19.0 | - | 50.0 | - | 102.0 | - | 24.0 | - | 170.0 | - | 9/16-18UNF | - | 9.0 | - | - | - | 50.0 | M6 | 11.0 |
| 40A | 38.0 | 190.0 | 81.0 | 140.0 | 105.0 | 18.0 | 2.0 | 4.0 | 19.0 | - | 62.0 | - | 114.0 | - | 27.0 | - | 200.0 | - | 5/8-18UNF | - | 9.6 | - | - | - | 70.0 | M8 | 16.0 |
| 50A | 50.0 | 216.0 | 96.0 | 155.0 | 120.0 | 18.0 | 2.0 | 8.0 | 19.0 | - | 71.0 | - | 127.0 | - | 27.0 | - | 200.0 | - | 5/8-18UNF | - | 9.6 | - | - | - | 70.0 | M8 | 16.0 |
| 65A | 64.0 | 241.0 | 116.0 | 175.0 | 140.0 | 20.0 | 2.0 | 8.0 | 19.0 | - | 89.0 | - | 177.0 | - | 42.5 | - | 250.0 | - | 7/8-14UNF | - | 16.0 | - | - | - | 102.0 | M10 | 21.0 |
| 80A | 76.0 | 282.0 | 132.0 | 200.0 | 160.0 | 22.0 | 2.0 | 8.0 | 23.0 | - | 100.0 | - | 183.0 | - | 42.5 | - | 250.0 | - | 7/8-14UNF | - | 16.0 | - | - | - | 102.0 | M10 | 21.0 |
| 100A | 100.0 | 305.0 | 160.0 | 225.0 | 185.0 | 24.0 | 2.0 | 8.0 | 23.0 | - | 123.0 | - | 214.0 | - | 47.5 | - | 400.0 | - | 1-1/8-12UNF | - | 18.0 | - | - | - | 102.0 | M10 | 25.0 |
| 125A | 125.0 | 381.0 | 195.0 | 270.0 | 225.0 | 26.0 | 2.0 | 8.0 | 25.0 | 183.0 | - | 260.0 | - | 27.0 | - | 600.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 150A | 150.0 | 403.0 | 230.0 | 305.0 | 260.0 | 28.0 | 2.0 | 12.0 | 25.0 | 204.0 | - | 280.0 | - | 27.0 | - | 800.0 | - | 1-3/8-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 200A | 200.0 | 502.0 | 275.0 | 350.0 | 305.0 | 30.0 | 2.0 | 12.0 | 25.0 | 252.0 | - | 370.0 | - | 27.0 | - | 305.0 | - | 1-3/4-12UNF | - | 27.0 | - | 14.0 | - | 125.0 | - | - | - |
| 250A | 250.0 | 568.0 | 345.0 | 430.0 | 380.0 | 34.0 | 2.0 | 12.0 | 27.0 | 310.0 | - | 430.0 | - | 36.0 | - | 305.0 | - | 2-12UNF | - | 36.0 | - | 18.0 | - | 140.0 | - | - | - |

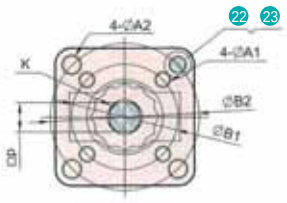
# GB - Q41F PN10/16/25/40, Full Port, Ball Valve

## DESIGN FEATURES

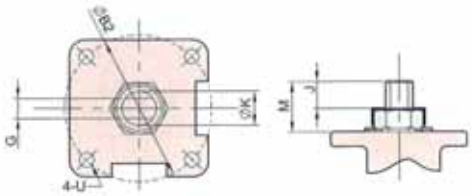
- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

## APPLICABLE STANDARDS

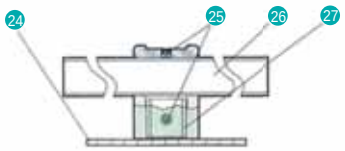
- Design Rating : GB / T12224 GB / T12237
- Fire Safe: API 607 4th 1993, BS 6755 Part2
- Face to Face : GB / T12221
- Wall Thickness: ASME B16.34
- End Flange:GB TT9113.1
- Inspection & Testing: GB / T13927 , API 598



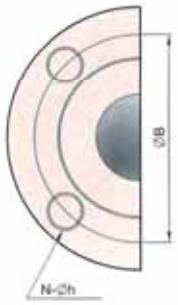

DN15 ~ DN250
(Direct Mount Type)

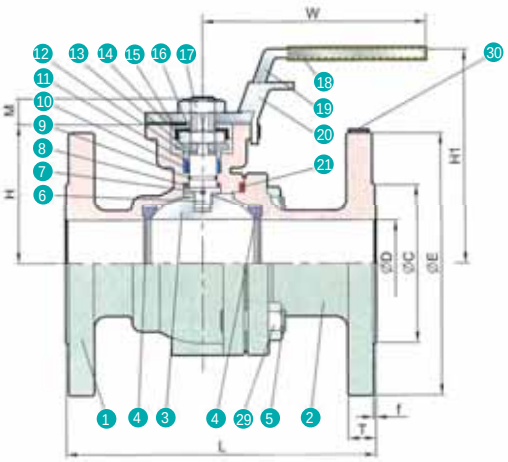



DN15 ~ DN100

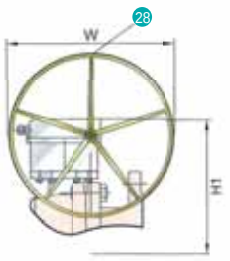



DN100 ~ DN150




DN15~DN80




DN200 ~ DN250
W/Worm Gear

### GB-Q41F PN16 DIMENSION TABLE(F1/F17,F4/F18)

Unit: mm

| SIZE | ØD | L | ØC | ØE | ØB | T | f | N | Øn | H | H1 | M | W | K | P | G | A1 | A2 | B1 | B2 | U | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN15 | 15.0 | 130.0 | 45.0 | 95.0 | 65.0 | 14.0 | 2.0 | 4.0 | 14.0 | 37.0 | 86.0 | 20.0 | 135.0 | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| DN20 | 20.0 | 140.0 | 58.0 | 105.0 | 75.0 | 16.0 | 2.0 | 4.0 | 14.0 | 40.0 | 90.0 | 20.0 | 135.0 | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| DN25 | 25.0 | 150.0 | 68.0 | 115.0 | 85.0 | 16.0 | 3.0 | 4.0 | 14.0 | 46.0 | 96.0 | 24.0 | 170.0 | 9/16-18UNF | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| DN32 | 32.0 | 165.0 | 78.0 | 140.0 | 100.0 | 16.0 | 3.0 | 4.0 | 18.0 | 50.0 | 102.0 | 24.0 | 170.0 | 9/16-18UNF | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| DN40 | 40.0 | 180.0 | 84.0 | 150.0 | 110.0 | 18.0 | 3.0 | 4.0 | 18.0 | 61.0 | 114.0 | 27.0 | 200.0 | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| DN50 | 50.0 | 200.0 | 99.0 | 165.0 | 125.0 | 20.0 | 3.0 | 4.0 | 18.0 | 71.0 | 127.0 | 27.0 | 200.0 | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| DN65 | 65.0 | 220.0 | 118.0 | 185.0 | 145.0 | 20.0 | 3.0 | 4.0 | 18.0 | 89.0 | 177.0 | 42.5 | 250.0 | 7/8-14UNF | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| DN80 | 80.0 | 250.0 | 132.0 | 200.0 | 160.0 | 20.0 | 3.0 | 8.0 | 18.0 | 100.0 | 183.0 | 42.5 | 250.0 | 7/8-14UNF | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| DN100 | 100.0 | 280.0 | 156.0 | 220.0 | 180.0 | 22.0 | 3.0 | 8.0 | 18.0 | 121.0 | 214.0 | 47.5 | 400.0 | 1-1/8-12UNF | 22.0 | 18.0 | --- | 11.0 | --- | 102.0 | M10 | 25.0 |
| DN125 | 125.0 | 320.0 | 184.0 | 250.0 | 210.0 | 22.0 | 3.0 | 8.0 | 18.0 | 183.0 | 260.0 | 27.0 | 600.0 | 1-3/8-12UNF | 27.0 | --- | 14.0 | --- | 125.0 | --- | --- | --- |
| DN150 | 150.0 | 360.0 | 211.0 | 285.0 | 240.0 | 24.0 | 3.0 | 8.0 | 22.0 | 204.0 | 280.0 | 27.0 | 800.0 | 1-3/8-12UNF | 27.0 | --- | 14.0 | --- | 125.0 | --- | --- | --- |
| DN200 | 200.0 | 457.0 | 266.0 | 340.0 | 295.0 | 24.0 | 3.0 | 12.0 | 22.0 | 252.0 | 370.0 | 27.0 | 305.0 | 1-3/4-12UNF | 27.0 | --- | 14.0 | --- | 125.0 | --- | --- | --- |
| DN250 | 250.0 | 533.0 | 319.0 | 405.0 | 355.0 | 26.0 | 3.0 | 12.0 | 26.0 | 310.0 | 430.0 | 36.0 | 305.0 | 2-12UNF | 36.0 | --- | 14.0 | --- | 140.0 | --- | --- | --- |

### GB-Q41F PN40 DIMENSION TABLE(F1/F17,F4/F18)

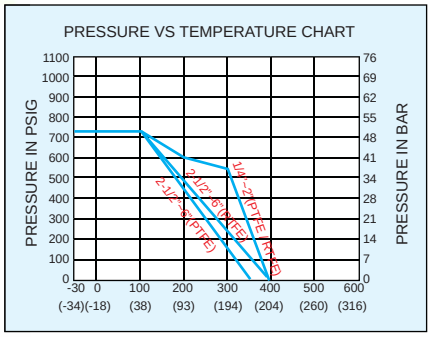
Unit: mm

| SIZE | ØD | L | ØC | ØE | ØB | T | f | N | Øn | H | H1 | M | W | K | P | G | A1 | A2 | B1 | B2 | U | J |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN15 | 15.0 | 140.0 | 45.0 | 95.0 | 65.0 | 14.0 | 2.0 | 4.0 | 14.0 | 37.0 | 86.0 | 20.0 | 135.0 | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| DN20 | 20.0 | 152.0 | 58.0 | 105.0 | 75.0 | 16.0 | 2.0 | 4.0 | 14.0 | 40.0 | 90.0 | 20.0 | 135.0 | 3/8-24UNF | 9.0 | 6.3 | 6.0 | 6.0 | 36.0 | 42.0 | M5 | 10.0 |
| DN25 | 25.0 | 165.0 | 68.0 | 115.0 | 85.0 | 16.0 | 3.0 | 4.0 | 14.0 | 46.0 | 96.0 | 24.0 | 170.0 | 9/16-18UNF | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| DN32 | 32.0 | 178.0 | 78.0 | 140.0 | 100.0 | 16.0 | 3.0 | 4.0 | 18.0 | 50.0 | 102.0 | 24.0 | 170.0 | 9/16-18UNF | 11.0 | 9.0 | 6.0 | 7.0 | 42.0 | 50.0 | M6 | 11.0 |
| DN40 | 40.0 | 190.0 | 84.0 | 150.0 | 110.0 | 18.0 | 3.0 | 4.0 | 18.0 | 61.0 | 114.0 | 27.0 | 200.0 | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| DN50 | 50.0 | 216.0 | 99.0 | 165.0 | 125.0 | 20.0 | 3.0 | 4.0 | 18.0 | 71.0 | 127.0 | 27.0 | 200.0 | 5/8-18UNF | 14.0 | 9.6 | 7.0 | 9.0 | 50.0 | 70.0 | M8 | 16.0 |
| DN65 | 65.0 | 241.0 | 118.0 | 185.0 | 145.0 | 22.0 | 3.0 | 4.0 | 18.0 | 89.0 | 177.0 | 42.5 | 250.0 | 7/8-14UNF | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| DN80 | 80.0 | 283.0 | 132.0 | 200.0 | 160.0 | 24.0 | 3.0 | 8.0 | 18.0 | 100.0 | 183.0 | 42.5 | 250.0 | 7/8-14UNF | 17.0 | 16.0 | 9.0 | 11.0 | 70.0 | 102.0 | M10 | 21.0 |
| DN100 | 100.0 | 305.0 | 156.0 | 235.0 | 190.0 | 24.0 | 3.0 | 8.0 | 22.0 | 121.0 | 214.0 | 47.5 | 400.0 | 1-1/8-12UNF | 22.0 | 18.0 | --- | 11.0 | --- | 102.0 | M10 | 25.0 |
| DN125 | 125.0 | 381.0 | 184.0 | 270.0 | 220.0 | 26.0 | 3.0 | 8.0 | 26.0 | 183.0 | 260.0 | 27.0 | 600.0 | 1-3/8-12UNF | 27.0 | --- | 14.0 | --- | 125.0 | --- | --- | --- |
| DN150 | 150.0 | 403.0 | 211.0 | 300.0 | 250.0 | 28.0 | 3.0 | 8.0 | 26.0 | 204.0 | 280.0 | 27.0 | 800.0 | 1-3/8-12UNF | 27.0 | --- | 14.0 | --- | 125.0 | --- | --- | --- |
| DN200 | 200.0 | 502.0 | 284.0 | 375.0 | 320.0 | 34.0 | 3.0 | 12.0 | 30.0 | 252.0 | 370.0 | 27.0 | 305.0 | 1-3/4-12UNF | 27.0 | --- | 14.0 | --- | 125.0 | --- | --- | --- |
| DN250 | 250.0 | 568.0 | 315.0 | 450.0 | 385.0 | 38.0 | 3.0 | 12.0 | 33.0 | 310.0 | 430.0 | 36.0 | 305.0 | 2-12UNF | 36.0 | --- | 14.0 | --- | 140.0 | --- | --- | --- |

# ANSI CLASS 150 / 300, Full Port, Ball Valve

## DESIGN FEATURES

- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot



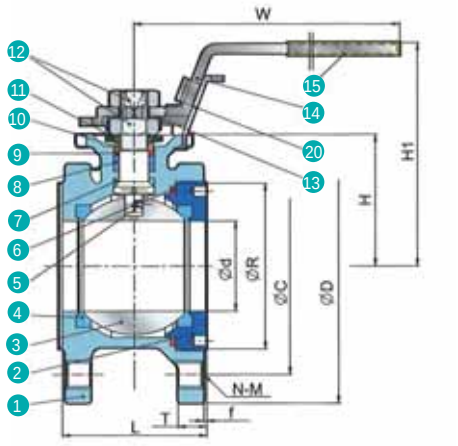

## APPLICABLE STANDARDS

- Design : ASME B16.34, API 608
- Fire Safe : API 607 4th 1993, BS 6755 Part2
- Wall Thickness: ASME B16.34
- End Flange : ASME B16.5
- Inspection & Testing: API 598,API 6D

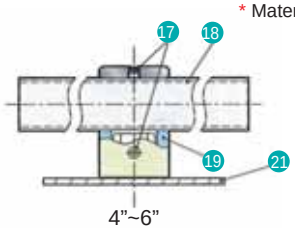
## MATERIAL OF CONSTRUCTION

| NO. | PART | MATERIAL | | |
|---|---|---|---|---|
| 1 | Body | CF8M | CF8 | WCB |
| 2 | End Cap | CF8M | CF8 | WCB |
| 3 | Ball | CF8M | WCB | |
| 4 | Ball Seat | PTFE | | |
| 5 | Stem | SUS 316 | SUS 304 | |
| 6 | Body Gasket | PTFE / SUS 316 SPIRAL WOUND * / GRAFOIL* | | |
| 7 | Stem Seal-Ring(+O-Ring *) | PTFE / PTFE (+FKM*) | | |
| 8 | V-Ring Packing | PTFE / GRAFOIL * | | |
| 9 | Bushing | 50%SS+50%PTFE / SUS 304 * | | |
| 10 | Gland | SUS 316 | | |
| 11 | Belleville Washer | SUS 301 | | |
| 12 | Stem Nut | SUS 304 | | |
| 13 | Stop-Lock-Cap | SUS 304 | | |
| 14 | Handle (1”~3”) | SUS 304 | | |
| 15 | Handle Sleeve (1”~3”) | VINYL PLASTIC | | |
| 16 | Stop Bolt | SUS 304 | | |
| 17 | Set Screwed (4”~6”) | SUS 304 | | |
| 18 | Handle (4”~6”) | A53-PLATED Zn | | |
| 19 | Handle Adapter (4”~6”) | A351-CF8 | | |
| 20 | Lock Device (1/2”~3”) | SUS 304 | | |
| 21 | Triangle Stopper (4”~6”) | SUS 304 | | |

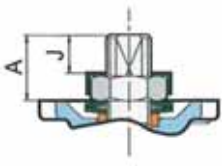
* Materials For FIRE-SAFE Models

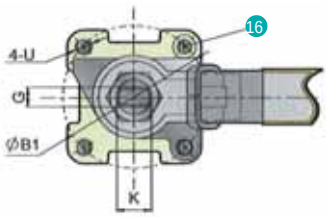



Series FIRE-SAFE



4”~6”



1/2”~3”

## ANSI CLASS 150 DIMENSION TABLE

Unit: mm

| SIZE | Ød | L | ØR | ØD | ØC | T | f | H | H1 | N | M | W | G | A | J | U | ØB1 | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/2” | 15.0 | 42.0 | 35.0 | 89.0 | 60.5 | 9.7 | 1.6 | 41.0 | 90.5 | 4 | 1/2” | 135 | 6.3 | 17.0 | 8.1 | M5 | 42 | 3/8-24UNF |
| 3/4” | 20.0 | 44.0 | 43.0 | 98.6 | 70.0 | 10.5 | 1.6 | 44.0 | 94.0 | 4 | 1/2” | 135 | 6.3 | 17.0 | 8.1 | M5 | 42 | 3/8-24UNF |
| 1” | 25.0 | 50.0 | 50.8 | 108.0 | 79.3 | 11.2 | 1.6 | 46.5 | 99.0 | 4 | 1/2” | 170 | 9.0 | 22.7 | 10.2 | M6 | 50 | 9/16-18UNF |
| 1-1/4” | 32.0 | 60.0 | 63.5 | 117.4 | 88.9 | 12.7 | 1.6 | 55.0 | 99.0 | 4 | 1/2” | 170 | 9.0 | 24.0 | 11.0 | M6 | 50 | 9/16-18UNF |
| 1-1/2” | 38.0 | 65.0 | 73.5 | 127.0 | 98.6 | 14.3 | 1.6 | 64.0 | 117.0 | 4 | 1/2” | 200 | 9.6 | 25.8 | 13.9 | M8 | 70 | 5/8-24UNF |
| 2” | 50.0 | 80.0 | 92.0 | 152.4 | 120.6 | 15.8 | 1.6 | 73.1 | 124.0 | 4 | 5/8” | 200 | 9.6 | 23.9 | 13.9 | M8 | 70 | 5/8-24UNF |
| 2-1/2” | 64.0 | 110.0 | 105.0 | 177.8 | 139.7 | 17.5 | 1.6 | 88.0 | 148.0 | 4 | 5/8” | 250 | 16.0 | 42.5 | 24.0 | M10 | 102 | 7/8-14UNF |
| 3” | 76.0 | 120.0 | 127.0 | 190.5 | 152.4 | 19.0 | 1.6 | 97.0 | 157.0 | 4 | 5/8” | 250 | 16.0 | 42.6 | 22.5 | M10 | 102 | 7/8-14UNF |
| 4” | 100.0 | 150.0 | 157.3 | 228.6 | 190.5 | 23.9 | 1.6 | 117.0 | 200.0 | 8 | 5/8” | 280 | 18.0 | 51.4 | 24.5 | M10 | 102 | 11/8-12UNF |
| 5” | 125.0 | 195.0 | 186.0 | 254.0 | 215.9 | 25.2 | 1.6 | 155.0 | 270.0 | 8 | 3/4” | 600 | 23.0 | 76.5 | 36.0 | M10 | 102 | 13/8-12UNF |
| 6” | 150.0 | 225.0 | 215.9 | 279.4 | 241.3 | 25.4 | 1.6 | 194.0 | 310.5 | 8 | 3/4” | 800 | 23.0 | 76.5 | 36.0 | M12 | 125 | 13/8-12UNF |

## ANSI CLASS 300 DIMENSION TABLE

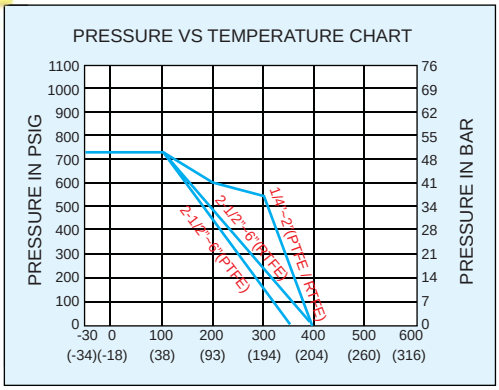
Unit: mm

| SIZE | Ød | L | ØR | ØD | ØC | T | f | H | H1 | N | M | W | G | A | J | U | ØB1 | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/2” | 15.0 | 42.0 | 35.0 | 95.3 | 66.5 | 14.3 | 1.6 | 41.0 | 90.5 | 4 | 1/2” | 135 | 6.3 | 17.0 | 8.1 | M5 | 42 | 3/8-24UNF |
| 3/4” | 20.0 | 44.0 | 43.0 | 117.4 | 82.6 | 15.9 | 1.6 | 44.0 | 94.0 | 4 | 1/2” | 135 | 6.3 | 17.0 | 8.1 | M5 | 42 | 3/8-24UNF |
| 1” | 25.0 | 50.0 | 50.8 | 124.0 | 88.9 | 17.5 | 1.6 | 46.5 | 99.0 | 4 | 5/8” | 170 | 9.0 | 22.7 | 10.2 | M6 | 50 | 9/16-18UNF |
| 1-1/4” | 32.0 | 60.0 | 63.5 | 133.0 | 98.6 | 19.0 | 1.6 | 55.0 | 99.0 | 4 | 5/8” | 170 | 9.0 | 24.0 | 11.0 | M6 | 50 | 9/16-18UNF |
| 1-1/2” | 38.0 | 65.0 | 73.5 | 155.0 | 114.3 | 20.6 | 1.6 | 64.0 | 117.0 | 4 | 3/4” | 200 | 9.6 | 25.8 | 13.9 | M8 | 70 | 5/8-28UNF |
| 2” | 50.0 | 80.0 | 92.0 | 165.0 | 127.0 | 22.3 | 1.6 | 73.1 | 124.0 | 8 | 5/8” | 200 | 9.6 | 27.0 | 13.9 | M8 | 70 | 5/8-28UNF |
| 2-1/2” | 64.0 | 110.0 | 105.0 | 190.0 | 149.4 | 25.4 | 1.6 | 88.0 | 148.0 | 8 | 3/4” | 250 | 16.0 | 42.5 | 24.0 | M10 | 102 | 7/8-14UNF |
| 3” | 76.0 | 120.0 | 127.0 | 210.0 | 168.1 | 28.5 | 1.6 | 97.0 | 157.0 | 8 | 3/4” | 250 | 16.0 | 42.5 | 22.5 | M10 | 102 | 7/8-14UNF |
| 4” | 100.0 | 150.0 | 140.3 | 254.0 | 200.2 | 31.8 | 1.6 | 117.0 | 200.0 | 8 | 3/4” | 400 | 18.0 | 47.5 | 24.5 | M10 | 102 | 11/8-12UNF |
| 5” | 125.0 | 195.0 | 157.0 | 280.0 | 235.0 | 35.0 | 1.6 | 155.0 | 270.0 | 8 | 3/4” | 600 | 23.0 | 76.5 | 36.0 | M10 | 102 | 13/8-12UNF |
| 6” | 150.0 | 225.0 | 186.0 | 318.0 | 269.8 | 36.6 | 1.6 | 194.0 | 310.5 | 12 | 3/4” | 800 | 23.0 | 76.5 | 36.0 | M12 | 125 | 13/8-12UNF |

# DIN PN10 / 16 / 25 / 40, Full Port, Ball Valve

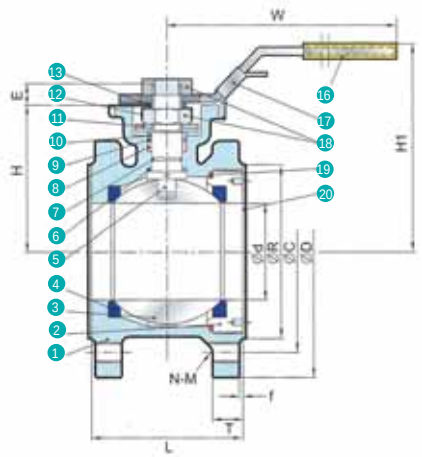
## DESIGN FEATURES

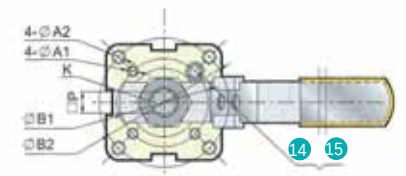
- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot



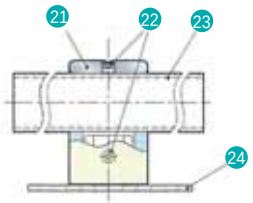

## APPLICABLE STANDARDS

- Design Rating : DIN 3375/1,2, EN 12516-1
- Fire Safe : API 607 4th 1993, BS 6755 Part 2.
- Wall Thickness : ASME B16.34, EN 12516-1
- End Flange : DIN 2542-DIN 2545,EN 1092
- Inspection & Testing : DIN3230/3, EN12266
- Connection :DIN2501/1 PN10-PN40
- Face : DIN2562 Form C




DN15-DN80



DN100-DN200

## MATERIAL OF CONSTRUCTION

| NO. | PART NAME | MATERIAL |
|---|---|---|
| 1 | Body | 1.4408 / 1.4308 / 1.0619 |
| 2 | End Cap | 1.4408 / 1.4308 / 1.0619 |
| 3 | Ball | 1.4408 / 1.4308 |
| 4 | Ball Seat | PTFE |
| 5 | Stem | SUS 316 / SUS 304 |
| 6 | Stem Seal-Ring | PTFE |
| 7 | O-Ring | FKM(VITON) |
| 8 | V-Ring Packing | PTFE / GRAFOIL * |
| 9 | Bushing | 50%SS+50%PTFE / SUS 304 * |
| 10 | Gland | SUS 316 |
| 11 | Belleville Washer | SUS 301 |
| 12 | Stop-lock-Cap | SUS 304 |
| 13 | Handle Gland | SUS 304 |
| 14 | Stop Bolt | A193-B8 |
| 15 | Nut | A194-8 |
| 16 | Handle Sleeve (1/2"~3") | VINYL PLASTIC |
| 17 | Handle (1/2"~3") | SUS 304 |
| 18 | Stem Nut | A194-8 |
| 19 | Body Gasket | PTFE / SUS316 SPIRAL WOUND * / GRAFOIL * |
| 20 | Flange Cover | PVC |
| 21 | Handle Adapter (4"~6") | CF8 |
| 22 | Set Screwed (4"~6") | SUS 304 |
| 23 | Handle (4"~6") | A53 + Zn Plated |
| 24 | Triangle Stopper (4"~6") | SUS 304 |

* Materials For FIRE-SAFE Models

## DIN PN10 / 16 / 25 / 40 DIMENSION TABLE

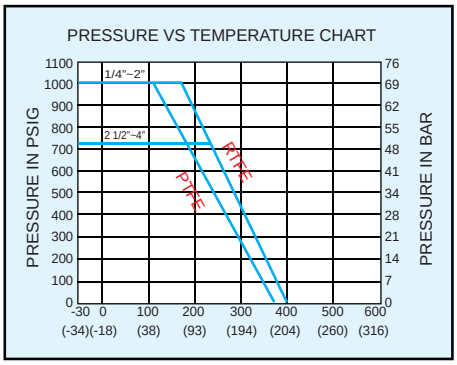
Unit: mm

| SIZE | | PN | Ød | ØR | ØC | ØD | f | T | L | H1 | H | E | P | N | M | W | K | ØA1 | ØA2 | ØB1 | ØB2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN15 | 1/2" | | 15 | 45 | 65 | 95 | 2 | 16 | 42 | 77 | 46 | 9.0 | 9 | 4 | M12 | 145 | 7/16-20UNF | 6 | 6 | 36 | 42 |
| DN20 | 3/4" | 10 | 20 | 58 | 75 | 105 | 2 | 18 | 44 | 85 | 51 | 9.0 | 9 | 4 | M12 | 145 | 7/16-20UNF | 6 | 7 | 36 | 50 |
| DN25 | 1" | 16 | 25 | 68 | 85 | 115 | 2 | 18 | 50 | 94 | 62 | 11.0 | 11 | 4 | M12 | 175 | 9/16-18UNF | 6 | 7 | 42 | 50 |
| DN32 | 1-1/4" | 25 | 32 | 78 | 100 | 140 | 2 | 18 | 60 | 104 | 72 | 11.0 | 11 | 4 | M16 | 175 | 9/16-18UNF | 6 | 9 | 42 | 70 |
| DN40 | 1-1/2" | 40 | 38 | 88 | 110 | 150 | 3 | 18 | 65 | 114 | 78 | 14.0 | 14 | 4 | M16 | 194 | 3/4-16UNF | 7 | 9 | 50 | 70 |
| DN50 | 2" | | 50 | 102 | 125 | 165 | 3 | 20 | 80 | 120 | 86 | 14.0 | 14 | 4 | M16 | 194 | 3/4-16UNF | 7 | 9 | 50 | 70 |
| DN65 | 2-1/2" | 10/16 | 64 | 122 | 145 | 185 | 3 | 18 | 110 | 158 | 108 | 17.0 | 17 | 4 | M16 | 265 | 7/8-14UNF | 9 | 11 | 70 | 102 |
| | | 25/40 | | | | | | 22 | | | | | | 8 | | | | | | | |
| DN80 | 3" | 10/16 | 76 | 138 | 160 | 200 | 3 | 20 | 120 | 165 | 116 | 17.0 | 17 | 8 | M16 | 265 | 7/8-14UNF | 9 | 11 | 70 | 102 |
| | | 25/40 | | | | | | 24 | | | | | | | | | | | | | |
| DN100 | 4" | 10/16 | 95 | 158 | 180 | 220 | 3 | 20 | 150 | 182 | 139 | 22.0 | 22 | 8 | M16 | NON | 1-1/8-12UNF | NON | 11 | NON | 102 |
| | | 25/40 | | 162 | 190 | 235 | | 24 | | | | | | | M20 | | | | | | |
| DN125 | 5" | 10/16 | 118 | 188 | 210 | 250 | 3 | 22 | 180 | 224 | 176 | 27.0 | 27 | 8 | M16 | NON | 1-3/8-12UNF | 14 | NON | 125 | NON |
| | | 25/40 | | | 220 | 270 | | 26 | | | | | | | M24 | | | | | | |
| DN150 | 6" | 10/16 | 142 | 212 | 240 | 285 | 3 | 22 | 225 | 268 | 192 | 27.0 | 27 | 8 | M20 | NON | 1-3/8-12UNF | 14 | NON | 125 | NON |
| | | 25/40 | | 218 | 250 | 300 | | 28 | | | | | | | M24 | | | | | | |
| DN200 | 8" | 10 | 190 | 268 | 295 | 340 | 3 | 24 | 310 | 300 | 240 | 27.0 | 27 | 8 | M20 | NON | 1-3/4-12UNF | 14 | NON | 125 | NON |
| | | 16 | | | | | | | | | | | | | | | | | | | |
| | | 25 | | 278 | 310 | 360 | | 30 | | | | | | 12 | M24 | | | | | | |
| | | 40 | | 285 | 320 | 375 | | 34 | | | | | | | M28 | | | | | | |

# 3-PC 1000WOG Mounting Pad,Full Port Ball Valve

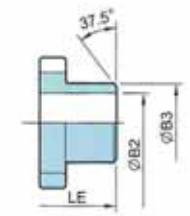
## DESIGN FEATURES

- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

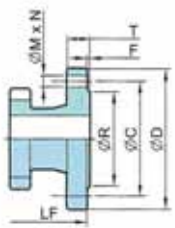



**STANDARDS:**

- Design : ASME B16.34, API 608
- Wall Thickness : ASME B16.34 CLASS 400
- Pipe Thread : ASME B1.20.1, BS21
  DIN 2999/259, BSP
  ISO 7/1, ISO 228/1
  JIS B 0203
- Butt Weld : ASME B16.25
  Ø B2 Available in Sch 10, 20 & 40
- Socket Weld : ASME B16.11
- Flange End : ASME B16.5
  DIN2542~2545
  JISB2238
- Inspection & Testing : API 598 EN 12266




FLANGE BUTT WELD END

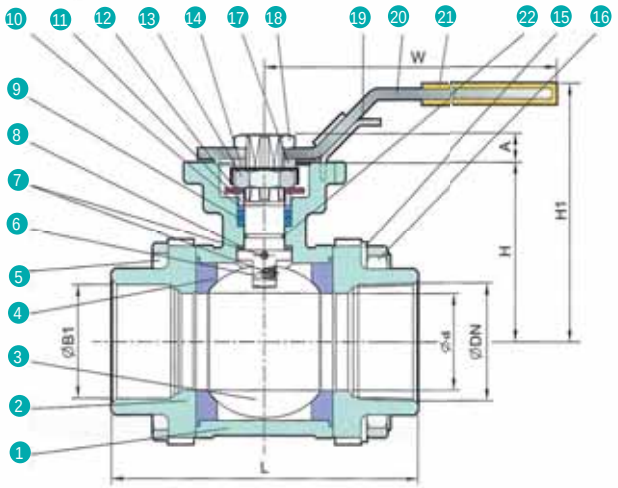



FLANGE END (PN25/40 F1)

## SPECIFICATIONS :

- Working Pressure : 1000 psing at 100°F (38°C)
- Temperature Range : -30°F to 350°F (-34°C to 177°C)

| NO. | PART | MATERIAL |
|---|---|---|
| 1 | Body | A351-CF8M(1.4408) |
| 2 | Cap (Thread)<br>Cap (Welding) | A351-CF8M(1.4408)<br>A351-CF3M(1.4408) |
| 3 | Ball | A351-CF3M(1.4408) |
| 4 | Ball Seat | PTFE |
| 5 | Bolt | A193-B8 |
| 6 | Stem | A276-316 |
| 7 | Anti-Static | SUS 316 |
| 8 | Stem Seal-Ring | PTFE |
| 9 | V-Ring Stem Packing | PTFE |
| 10 | Bushing | 50%SS+50%PTFE |
| 11 | Gland | SUS 316 |
| 12 | Belleville Washer | SUS 301 |
| 13 | Stem Nut | A194-8 |
| 14 | Stop-Lock-Cap | SUS 304 |
| 15 | Bolt Washer | SUS 304 |
| 16 | Bolt Nut | A194-8 |
| 17 | Handle Gland | SUS 304 |
| 18 | Handle Nut | SUS 304 |
| 19 | Lock Device | SUS 304 |
| 20 | Handle | SUS 304 |
| 21 | Handle Sleeve | Vinyl Plastic |
| 22 | O-Ring | FKM(VITON) |
| 23 | Stop Bolt | A193-B8 |
| 24 | Nut | A194-8 |
| 25 | Set Screwed | A193-B8 |
| 26 | Handle | SUS 304 |
| 27 | Handle Adapter | SUS 304 |
| 28 | Triangle Stopper | SUS 304 |


Unit: mm

| SIZE | Ød | L | LE | LF | H | H1 | ØE1 | ØE2 | G | ØU1 | ØU2 | A | W | ØD | ØC | ØR | T | F | N | ØM | ØB1 | ØB2 | ØB3 | ØDN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/4” | 10.6 | 75.0 | 72 | -- | 42.0 | 72.0 | 36.0 | 42.0 | 9.0 | 6.0 | 6.0 | 9.0 | 145.0 | -- | -- | -- | -- | -- | -- | -- | 14.2 | 10.6 | 18.0 | |
| 3/8” | 12.7 | 75.0 | 72 | -- | 42.0 | 72.0 | 36.0 | 42.0 | 9.0 | 6.0 | 6.0 | 9.0 | 145.0 | -- | -- | -- | -- | -- | -- | -- | 17.8 | 12.7 | 18.0 | |
| 1/2” | 15.0 | 75.0 | 75 | 130.0 | 42.0 | 72.0 | 36.0 | 42.0 | 9.0 | 6.0 | 6.0 | 9.0 | 145.0 | 95.0 | 65.0 | 45.0 | 16.0 | 2.0 | 4.0 | 14.0 | 21.8 | 15.8 | 22.0 | NPT |
| 3/4” | 20.0 | 80.0 | 90 | 150.0 | 49.0 | 80.0 | 36.0 | 50.0 | 9.0 | 6.0 | 6.0 | 9.0 | 145.0 | 105.0 | 75.0 | 58.0 | 18.0 | 2.0 | 4.0 | 14.0 | 27.3 | 20.9 | 28.0 | |
| 1” | 25.0 | 90.0 | 100 | 160.0 | 58.5 | 90.0 | 42.0 | 50.0 | 11.0 | 6.0 | 7.0 | 11.0 | 160.0 | 115.0 | 85.0 | 68.0 | 18.0 | 2.0 | 4.0 | 14.0 | 34.0 | 26.7 | 34.0 | BSP |
| 1-1/4” | 32.0 | 110.0 | 110 | 180.0 | 63.0 | 95.0 | 42.0 | 70.0 | 11.0 | 6.0 | 9.0 | 11.0 | 160.0 | 140.0 | 100.0 | 78.0 | 18.0 | 2.0 | 4.0 | 18.0 | 42.8 | 35.1 | 43.0 | |
| 1-1/2” | 38.0 | 120.0 | 125 | 200.0 | 71.0 | 106.0 | 50.0 | 70.0 | 14.0 | 7.0 | 9.0 | 14.0 | 190.0 | 150.0 | 110.0 | 88.0 | 18.0 | 3.0 | 4.0 | 18.0 | 48.9 | 40.9 | 50.0 | PT |
| 2” | 50.0 | 140.0 | 150 | 230.0 | 78.0 | 113.0 | 50.0 | 70.0 | 14.0 | 7. | 9.0 | 14.0 | 190.0 | 165.0 | 125.0 | 102.0 | 20.0 | 3.0 | 4.0 | 18.0 | 61.4 | 52.5 | 61.0 | |
| 2-1/2” | 63.5 | 185.0 | 190 | 290.0 | 100.0 | 150.0 | 70.0 | 102.0 | 17.0 | 9.0 | 11.0 | 17.0 | 260.0 | 185.0 | 145.0 | 122.0 | 22.0 | 3.0 | 8.0 | 18.0 | 74.0 | 62.7 | 76.0 | NIN |
| 3” | 76.0 | 205.0 | 220 | 310.0 | 109.0 | 159.0 | 70.0 | 102.0 | 17.0 | 9.0 | 11.0 | 17.0 | 260.0 | 200.0 | 160.0 | 138.0 | 24.0 | 3.0 | 8.0 | 18.0 | 90.0 | 78.0 | 92.0 | etc. |
| 4” | 100.0 | 240.0 | 270 | 350.0 | 140.0 | 198.0 | -- | 102.0 | 22.0 | -- | 11.0 | 22.0 | 350.0 | 235.0 | 190.0 | 162.0 | 24.0 | 3.0 | 8.0 | 22.0 | 115.4 | 102.4 | 115.0 | |

# 3-PC 2000WOG Mounting Pad,Full Port Ball Valve

## DESIGN FEATURES

- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

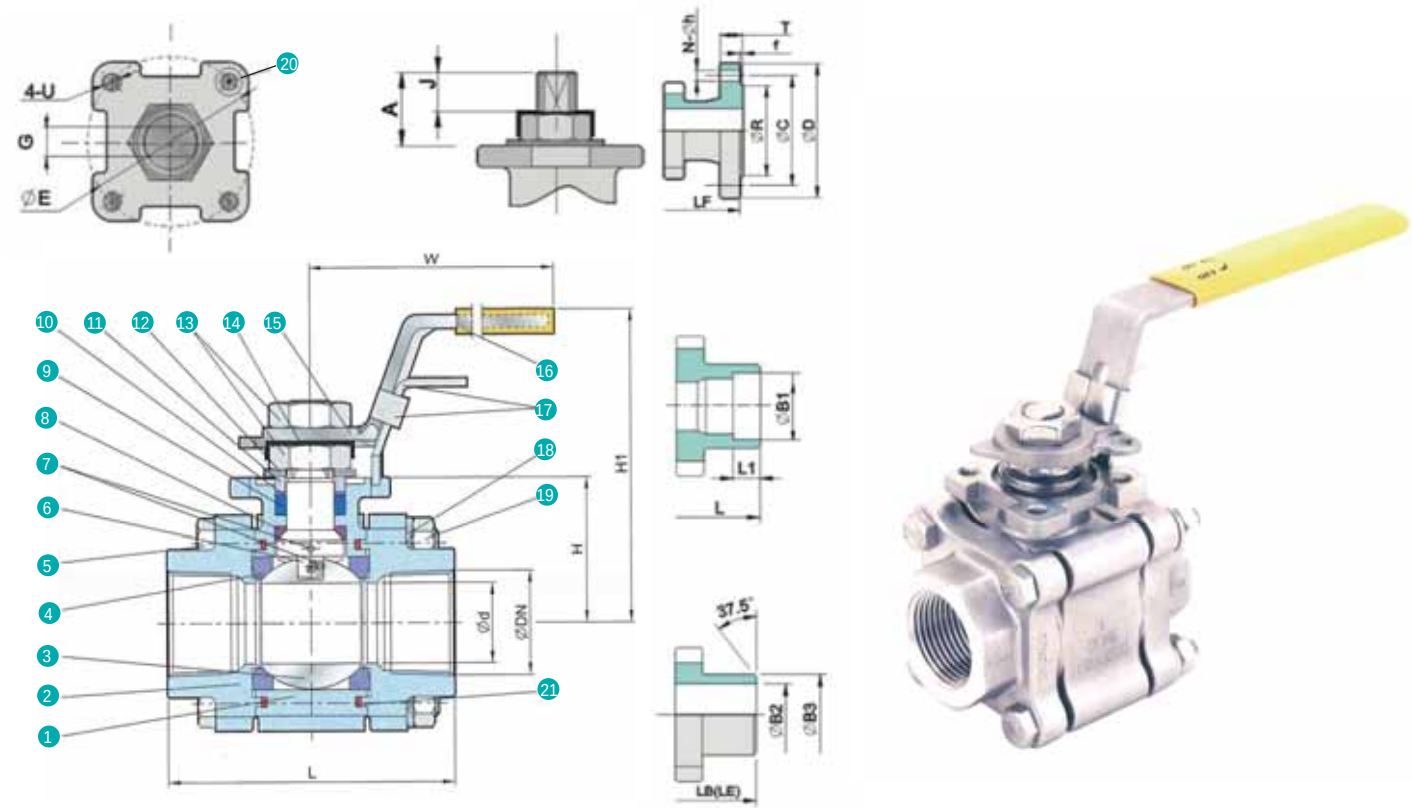
## STANDARDS :

- Design : ASME B16.34, API 608
- Wall Thickness : ASME B16.34 CLASS 800
- Pipe Thread : ASME B1.20.1, BS21
  DIN 2999/259, BSP
  ISO 7/1, ISO 228/1
  JIS B 0203
- Butt Weld : ASME B16.25
  Ø B2 Available in Sch 10, 20 & 40
- Socket Weld : ASME B16.11
- Flange End : ASME B16.5 CLASS 600
  DIN2542~2545 PN100
  JISB2238 40K
- Inspection & Testing : API 598 EN 12266

| NO. | PART | MATERIAL |
|---|---|---|
| 1 | Body | A351-CF8M(1.4408) |
| 2 | Thread Cap | A351-CF8M(1.4408) |
| 3 | Ball | A351-CF3M(1.4408) |
| 4 | Ball Seat | TFM1600 |
| 5 | Bolt | A193-B8 |
| 6 | Stem | A276-316 |
| 7 | Anti-Static | SUS 316 |
| 8 | Stem Seal-Ring | TFM1600 |
| 9 | V-Ring Stem Packing | PTFE |
| 10 | Bushing | 50%SS+50%PTFE |
| 11 | Gland | SUS 316 |
| 12 | Belleville Washer | SUS 301 |
| 13 | Stem Nut | A194-8 |
| 14 | Stop-Lock-Cap | SUS 304 |
| 15 | Handle (1/4”~3”) | SUS 304 |
| 16 | Handle Sleeve (1/4”~3”) | Vinyl Plastic |
| 17 | Lock Device (1/4”~3”) | SUS 304 |
| 18 | Bolt Washer | SUS 304 |
| 19 | Bolt Nut | A194-8 |
| 20 | Stop Bolt | A193-B8 |
| 21 | Body Gasket | PTFE |

## SPECIFICATIONS :

- Working Pressure : 1500 psing at 100°F (38°C)
- Temperature Range : -30°F to 350°F (-34°C to 177°C)




Unit: mm

| SIZE | Ød | L | LB | LE | LF | H | H1 | W | ØE | G | ØD | ØC | ØR | T | f | N | h | U | A | J | L1 | ØB1 | ØB2 | ØB3 | DN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/4” | 10.6 | 70 | 70 | 225 | -- | 30.0 | 76 | 135 | 42.0 | 6.3 | -- | -- | -- | -- | -- | -- | -- | M5 | 17.3 | 10.4 | 11 | 14.0 | 7.6 | 18.0 | |
| 3/8” | 12.7 | 70 | 70 | 225 | -- | 30.0 | 76 | 135 | 42.0 | 6.3 | -- | -- | -- | -- | -- | -- | -- | M5 | 17.3 | 10.4 | 11 | 18.0 | 10.7 | 18.0 | NPT |
| 1/2” | 15.0 | 75 | 75 | 225 | 130 | 36.0 | 83 | 135 | 42.0 | 6.3 | 95.3 | 66.6 | 35.0 | 20.7 | 6.35 | 4 | 15.8 | M5 | 20.3 | 11.8 | 11 | 22.0 | 13.9 | 22.2 | BSP |
| 3/4” | 20.0 | 80 | 90 | 225 | 150 | 39.5 | 88 | 135 | 42.0 | 6.3 | 117.4 | 82.6 | 43.0 | 22.2 | 6.35 | 4 | 19.1 | M5 | 20.3 | 11.8 | 13 | 27.5 | 18.8 | 28.0 | PT |
| 1” | 25.0 | 90 | 100 | 245 | 160 | 45.5 | 98 | 170 | 50.0 | 9.0 | 124.0 | 88.9 | 51.0 | 23.9 | 6.35 | 4 | 19.1 | M6 | 23.3 | 12.5 | 13 | 34.5 | 24.3 | 34.0 | |
| 1-1/4” | 31.8 | 110 | 110 | 255 | 180 | 50.0 | 103 | 175 | 50.0 | 9.0 | 133.4 | 98.6 | 63.5 | 27.0 | 6.35 | 4 | 19.1 | M6 | 23.3 | 12.5 | 13 | 43.0 | 32.5 | 43.0 | DIN |
| 1-1/2” | 38.1 | 120 | 125 | 260 | 200 | 60.0 | 110 | 200 | 70.0 | 9.6 | 155.5 | 114.3 | 73.2 | 28.8 | 6.35 | 4 | 22.4 | M8 | 23.8 | 15.1 | 13 | 48.6 | 38.1 | 50.0 | etc. |
| 2” | 50.0 | 140 | 150 | 275 | 230 | 68.0 | 119 | 200 | 70.0 | 9.6 | 165.1 | 127.0 | 92.0 | 31.8 | 6.35 | 8 | 19.1 | M8 | 23.8 | 15.1 | 16 | 61.2 | 49.2 | 61.0 | |

# 3-PC 2000WOG Mounting Pad,Full Port Tube End Ball Valve

## DESIGN FEATURES

- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

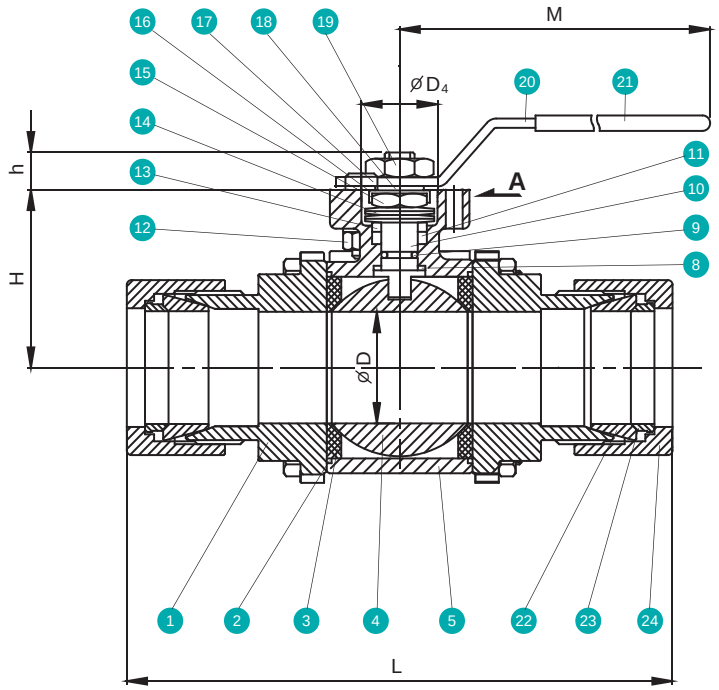
## STANDARDS :

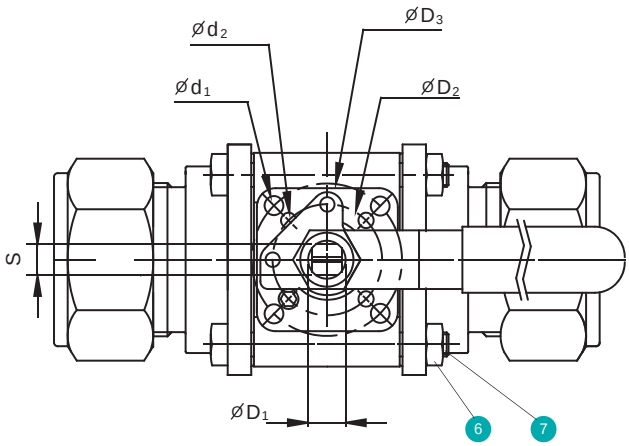
- Design : ASME B16.34, API 608
- Wall Thickness : ASME B16.34 CLASS 800
- Tube End : 1/4" ~ 2"
- Inspection & Testing : API 598 EN 12266

## SPECIFICATIONS :

- Working Pressure : 1500 psing at 100°F (38°C)
- Temperature Range : -30°F to 350°F (-34°C to 177°C)

| NO. | PART | MATERIAL |
|---|---|---|
| 1 | End Cap | A351 Gr. CF8M |
| 2 | Body Seal | TFM |
| 3 | Seat | TFM |
| 4 | Ball | 316L SS |
| 5 | Body | A351 Gr. CF3M |
| 6 | Body Nut | 304SS |
| 7 | Body Bolt | 304SS |
| 8 | Thrust Washer | PEEK |
| 9 | Stem O-Ring | Viton 90 |
| 10 | Stem | 316L SS |
| 11 | Stem Packing Set | TFM |
| 12 | Stop Pin Nut | 304SS |
| 13 | Packing Gland | 304SS |
| 14 | Belleville Washer | 301SS |
| 15 | Stem Nut | 304SS |
| 16 | Gland Nut | 304SS |
| 17 | Stop Pin Bolt | 304SS |
| 18 | Space Washer | 304SS |
| 19 | Handle Nut | 304SS |
| 20 | Handle | 304SS |
| 21 | Handle Cover | Vinyl |
| 22 | Front Ferrule | 316SS |
| 23 | Back Ferrule | 316SS |
| 24 | Locking Nut | 316SS |



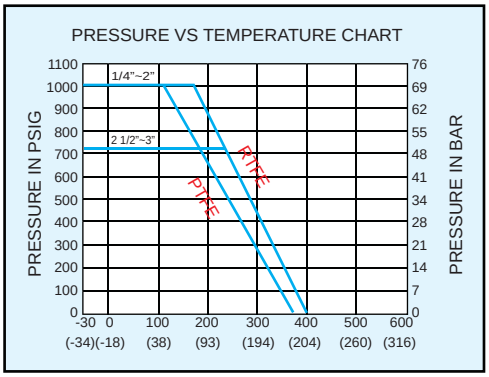

## DIMENSIONS

| Size | L | D | D1 | D2 | D3 | D4 | d1 | d2 | H | h | s |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/4 | 86 | 10 | 12 | 1.42 | 36 | 25 | 6 | 6 | 39 | 9 | 9 |
| 3/8 | 90 | 10 | 12 | 1.42 | 36 | 25 | 6 | 6 | 39 | 9 | 9 |
| 1/2 | 99 | 10 | 12 | 1.42 | 36 | 25 | 6 | 6 | 39 | 9 | 9 |
| 3/4 | 99 | 16 | 12 | 1.42 | 36 | 25 | 6 | 6 | 39 | 9 | 9 |
| 1 | 117 | 22 | 14 | 1.65 | 42 | 30 | 7 | 6 | 48 | 11 | 11 |

# 2-PC 1000WOG Mounting Pad,Full Port Ball Valve

## DESIGN FEATURES

- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

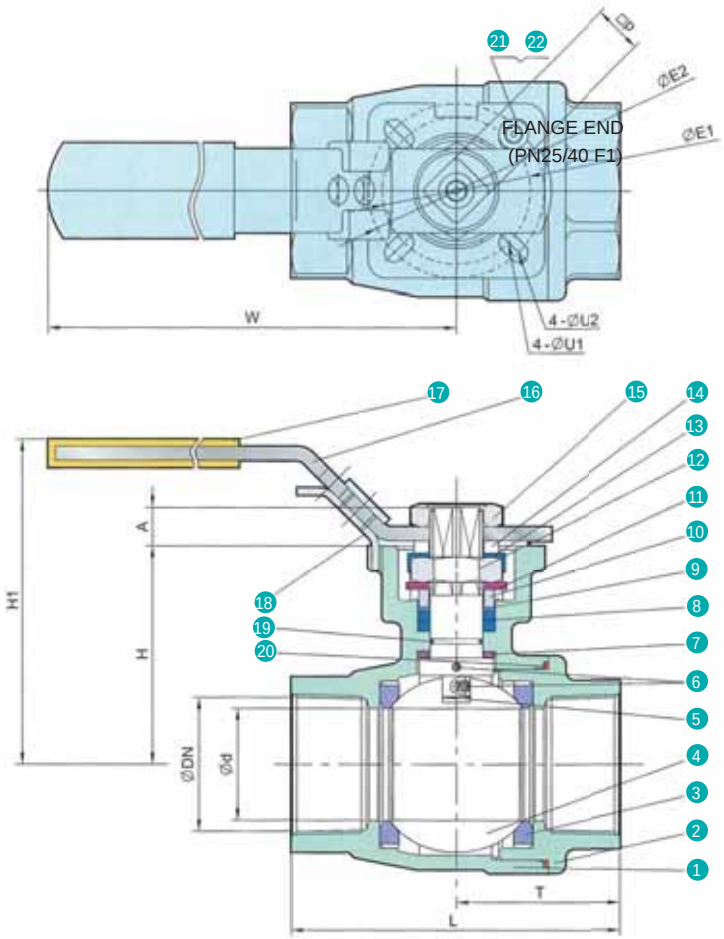



## STANDARDS :

- Design : ASME B16.34, API 608
- Wall Thickness : ASME B16.34 CLASS 400
- Pipe Thread : ASME B1.20.1, BS21
  DIN 2999/259, BSP
  ISO 7/1, ISO 228/1
  JIS B 0203
- Inspection & Testing : API 598 EN 12266

## SPECIFICATIONS :

- Working Pressure : 1000 psing at 100°F (38°C)
- Temperature Range : -30°F to 350°F (-34°C to 177°C)



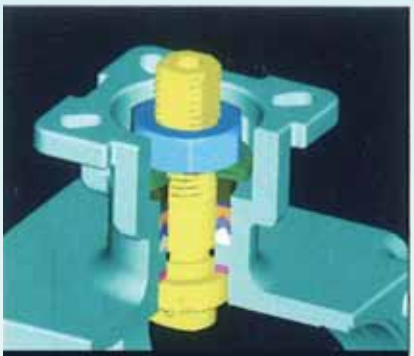

| NO. | PART | MATERIAL |
|---|---|---|
| 1 | Body | A351-CF8M(1.4408) |
| 2 | Cap | A351-CF8M(1.4408) |
| 3 | Ball Seat | PTFE |
| 4 | Ball | A351-CF8M(1.4408) |
| 5 | Stem | A276-316 |
| 6 | Anti-Static | SUS 316 |
| 7 | Stem Seal-Ring | PTFE |
| 8 | V-Ring Stem Packing | PTFE |
| 9 | Bushing | 50%SS+50%PTFE |
| 10 | Gland | SUS 316 |
| 11 | Belleville Washer | SUS 301 |
| 12 | Stem Nut | A194-8 |
| 13 | Stop-Lock-Cap | SUS 304 |
| 14 | Handle Gland | SUS 304 |
| 15 | Handle Nut | SUS 304 |
| 16 | Handle | SUS 304 |
| 17 | Handle Sleeve | Vinyl Plastic |
| 18 | Lock Device | SUS 304 |
| 19 | O-Ring | FKM (VITON) |
| 20 | Body Gasket | PTFE |
| 21 | Stop Bolt | A193-B8 |
| 22 | Nut | A194-8 |

Unit: mm

| SIZE | Ød | L | H | H1 | ØE1 | ØE2 | T | ØU1 | ØU2 | A | W | P | ØDN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/4" | 10.6 | 75.0 | 42.0 | 72.0 | 36.0 | 42.0 | 32.0 | 6.0 | 6.0 | 9.0 | 145.0 | 9.0 | |
| 3/8" | 12.7 | 75.0 | 42.0 | 72.0 | 36.0 | 42.0 | 32.0 | 6.0 | 6.0 | 9.0 | 145.0 | 9.0 | NPT |
| 1/2" | 15.0 | 75.0 | 42.0 | 72.0 | 36.0 | 42.0 | 32.0 | 6.0 | 6.0 | 9.0 | 145.0 | 9.0 | |
| 3/4" | 20.0 | 80.0 | 49.0 | 80.0 | 36.0 | 50.0 | 35.2 | 6.0 | 6.0 | 9.0 | 145.0 | 9.0 | BSP |
| 1" | 25.0 | 90.0 | 58.5 | 90.0 | 42.0 | 50.0 | 42.5 | 6.0 | 7.0 | 11.0 | 160.0 | 11.0 | PT |
| 1-1/4" | 32.0 | 110.0 | 63.0 | 95.0 | 42.0 | 70.0 | 47.0 | 6.0 | 9.0 | 11.0 | 160.0 | 11.0 | |
| 1-1/2" | 38.0 | 120.0 | 71.0 | 106.0 | 50.0 | 70.0 | 52.5 | 7.0 | 9.0 | 14.0 | 190.0 | 14.0 | DIN |
| 2" | 50.0 | 140.0 | 78.0 | 113.0 | 50.0 | 70.0 | 62.5 | 7. | 9.0 | 14.0 | 190.0 | 14.0 | |
| 2-1/2" | 63.5 | 185.0 | 100.0 | 150.0 | 70.0 | 102.0 | 77.5 | 9.0 | 11.0 | 17.0 | 260.0 | 17.0 | etc. |
| 3" | 76.0 | 205.0 | 109.0 | 159.0 | 70.0 | 102.0 | 86.5 | 9.0 | 11.0 | 17.0 | 260.0 | 17.0 | |

# NUTORK®
## MULTI-WAY BALL VALVES

# BALL VALVES

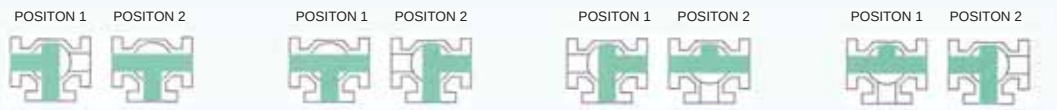


**DIRECT MOUNT HIGH PERFORMANCE**

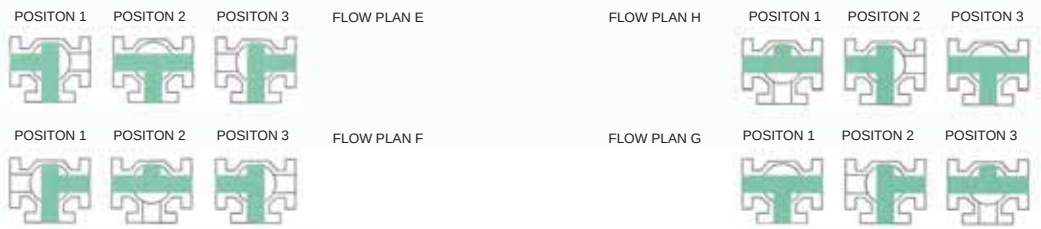
- Blow-out Proof and Anti-static Stem
- Pre-load 2 Belleville Washers to Self-adjust Packing
- Double Stem Sealing to Meet TUV TA-LUFT Requirements

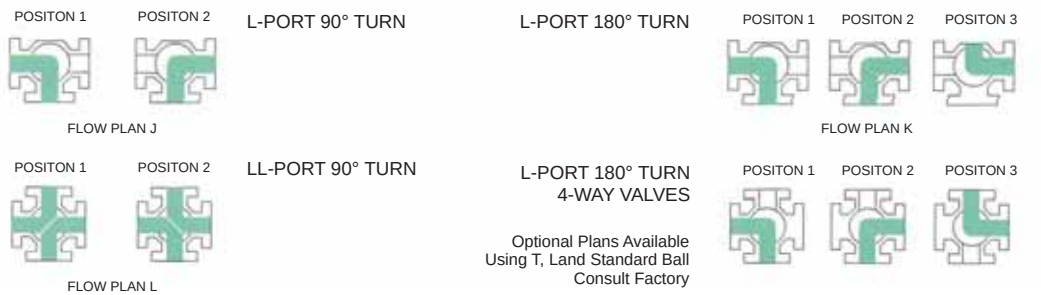
## FLOW PATTERNS FOR 3&4-WAY VALVES

### T-Port 90° TURN




### T-Port 180° TURN




Optional Plans Available
Using T, Land Standard Ball
Consult Factory

# 3- Way 1000WOG, Reduced Port, Ball Valve

## DESIGN FEATURES

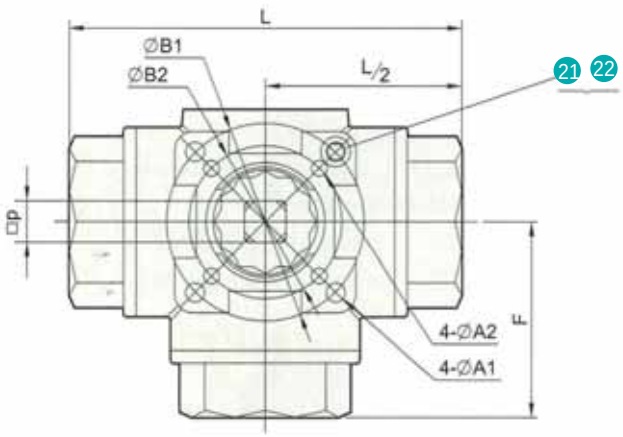
- Built-in ISO 5211 Direct Mounting Pad Easy Automation
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot
- Various Thread Standards are Available

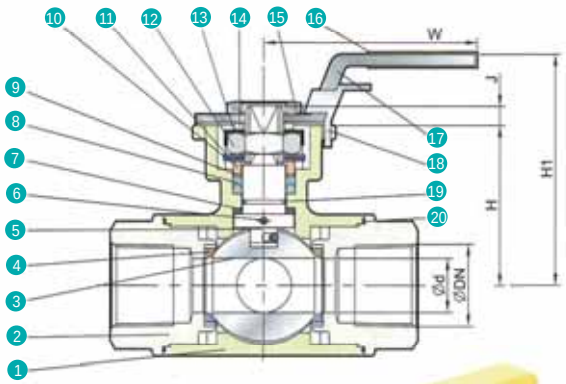
## STANDARDS

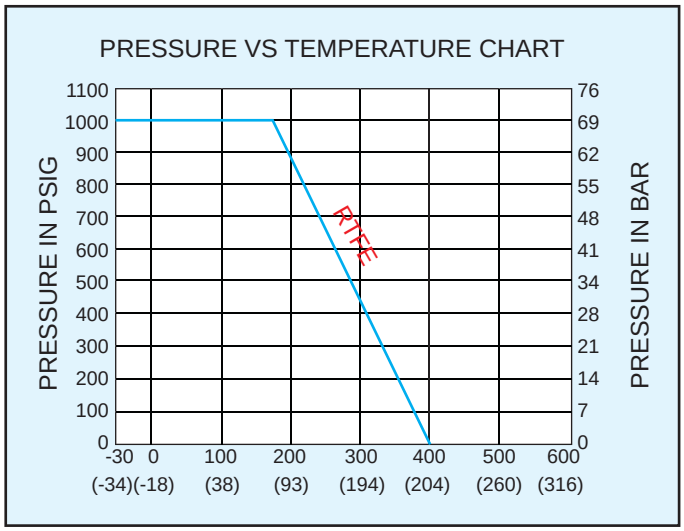
- Design: ASME B16.34, API 608
- Wall Thickness : ASME B16.34 CLASS 400
- Pipe Thread: ASME B1.20.1, BS21
  DIN 2999/259, BSP
  ISO 7/1, ISO 228/1
  JIS B 0203
- Inspection & Testing: API 598 EN 12266

## SPECIFICATIONS

- Working Pressure: 1000 psing at 100°F (38°C)
- Temperature Range: -30°F to 350°F (-34°C to 177°C)




| NO. | PART | MATERIAL |
|---|---|---|
| 1 | Body | A351-CF8M |
| 2 | End Cap | A351-CF8M |
| 3 | Ball | A351-CF8M |
| 4 | Ball Seat | RTFE / PTFE |
| 5 | Stem | A276-316 |
| 6 | Anti-Static | SUS 316 |
| 7 | Stem Seal-Ring | PTFE |
| 8 | V-Ring Packing | PTFE |
| 9 | Bushing | 50%SS+50%PTFE |
| 10 | Gland | SUS 316 |
| 11 | Belleville Washer | SUS 301 |
| 12 | Stem Nut | A194-8 |
| 13 | Stop-Lock-Cap | SUS 304 |
| 14 | Handle Gland | SUS 304 |
| 15 | Handle Nut | SUS 304 |
| 16 | Handle Sleeve | Vinyl plastic |
| 17 | Handle | SUS 304 |
| 18 | Lock Device | SUS 304 |
| 19 | O-Ring | FKM(VITON) |
| 20 | Body Gasket | PTFE |
| 21 | Stop Bolt | A193-B8 |
| 22 | Nut | A194-8 |

Unit: mm

| SIZE | Ød | L | H | H1 | W | J | F | ØB1 | ØB2 | ØA1 | ØA2 | P | ØDN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/4” | 11.0 | 79.0 | 42.0 | 70.0 | 147.0 | 9.0 | 39.5 | 42.0 | 36.0 | 6.0 | 6.0 | 9.0 | NPT |
| 3/8” | 11. | 79.0 | 42.0 | 70.0 | 147.0 | 9.0 | 39.5 | 42.0 | 36.0 | 6.0 | 6.0 | 9.0 | |
| 1/2” | 11.0 | 79.0 | 42.0 | 70.0 | 147.0 | 9.0 | 39.5 | 42.0 | 36.0 | 6.0 | 6.0 | 9.0 | BSP |
| 3/4” | 15.0 | 88.0 | 49.0 | 77.0 | 147.0 | 9.0 | 44.0 | 50.0 | 36.0 | 7.0 | 6.0 | 9.0 | |
| 1” | 20.0 | 108.0 | 59.0 | 87.0 | 176.5 | 11.0 | 54.0 | 50.0 | 42.0 | 7.0 | 6.0 | 11.0 | PT |
| 1-1/4” | 25.0 | 124.0 | 65.0 | 93.0 | 176.5 | 11.0 | 62.0 | 70.0 | 42.0 | 9.0 | 6.0 | 11.0 | NIN |
| 1-1/2” | 32.0 | 135.0 | 73.2 | 103.0 | 215.0 | 14.0 | 67.5 | 70.0 | 50.0 | 9.0 | 7.0 | 14.0 | etc. |
| 2” | 40.0 | 164.0 | 82.5 | 113.0 | 215.0 | 14.0 | 82.0 | 70.0 | 50.0 | 9.0 | 7.0 | 14.0 | |

## DESIGN FEATURES

- Built-in ISO 5211 Direct Mounting Pad Easy Automation.
- Fire Safe Design and Construction
- Anti-static Devices for Ball-stem-body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot

## APPLICABLE STANDARDS :

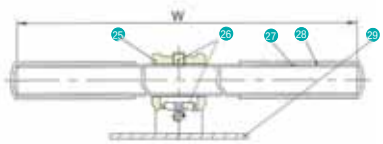
- Design Rating: DIN 3357/1,2, EN 12516-1
- End Flange: DIN 2542~DIN 2545,EN 1092
- Wall Thickness : ASME B16.34 , EN 12516-1
- Inspection & Testing:
  DIN 3203/3, EN 12266, API 598,API 6D
- Connection: DIN 2501/1 PN 10-40

## SPECIFICATIONS :

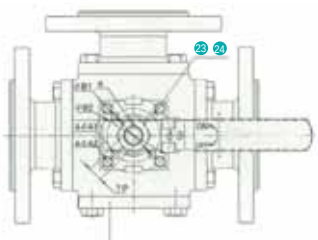
- Working Pressure: 40 Bar at 38°C
- Temperature Range: -30°F to 350°F(-34°C to 177°C)

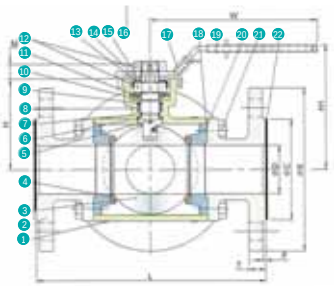
| NO. | PART | MATERIAL | | |
|---|---|---|---|---|
| 1 | Body | 1.4408 | 1.4308 | 1.0619 |
| 2 | Cap | 1.4408 | 1.4308 | 1.0619 |
| 3 | Ball | 1.4408 | 1.4308 | |
| 4 | Ball Seat | PTFE | | |
| 5 | Bolting | A193-B8 | A193-B7 | |
| 6 | Stem Seal-Ring | PTFE | | |
| 7 | O-Ring | FKM(VITON) | | |
| 8 | V-Ring Packing | PTFE | | |
| 9 | Bushing | 50%SS+50%PTFE | | |
| 10 | Gland | SUS 316 | | |
| 11 | Belleville Washer | SUS 301 | | |
| 12 | Stem Nut | A194-8 | | |
| 13 | Stop-Lock-Cap | SUS 304 | | |
| 14 | Handle Gland | SUS 304 | | |
| 15 | Handle (1/2-3") | SUS 304 | | |

| NO. | PART | MATERIAL | | |
|---|---|---|---|---|
| 16 | End Cap | 1.4408 | 1.4308 | 1.0619 |
| 17 | Lock Device(1/2-3") | SUS 304 | | |
| 18 | Body Gasket | PTFE | | |
| 19 | Handle Sleeve (1/2-3") | VINYL PLASTIC | | |
| 20 | Seat Retainer | 1.4408 | 1.4308 | 1.0619 |
| 21 | Bolt | A193-B8 | A193-B7 | |
| 22 | Flange Cover | PVC | | |
| 23 | Stop Bolt | A193-B8 | | |
| 24 | Nut | A194-8 | | |
| 25 | Handle Adapter (4") | 1.4408 | | |
| 26 | Set Screwed | A193-B8 | | |
| 27 | Handle (4") | A53+Zn Plate | | |
| 28 | Handle Sleeve | VINYL PLASTIC | | |
| 29 | Triangie stopper (4") | SUS 304 | | |



DN15~DN80





■ ASME CLASS 150 DIMENSION TABLE

Unit: mm

| SIZE | | Rating | ØD | L | ØC | ØE | ØB | F | T | H | H1 | N | Øh | W | P | M | K | ØA1 | ØA2 | ØB1 | ØB2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN15 | 1/2" | ASME CLASS 150 | 15.0 | 150.0 | 35.0 | 89.0 | 65.0 | 1.6 | 9.7 | 53.0 | 83.0 | 4.0 | 16.0 | 144.5 | 9.0 | 9.0 | 7/16-24UNF | 6.0 | 6.0 | 36.0 | 42.0 |
| DN20 | 3/4" | | 20.0 | 160.0 | 43.0 | 98.6 | 70.0 | 1.6 | 10.5 | 58.5 | 88.5 | 4.0 | 16.0 | 144.5 | 9.0 | 9.0 | 7/16-24UNF | 6.0 | 7.0 | 36.0 | 50.0 |
| DN25 | 1" | | 25.0 | 180.0 | 51.0 | 108.0 | 79.2 | 1.6 | 11.2 | 70.0 | 104.0 | 4.0 | 16.0 | 175.0 | 11.0 | 11.0 | 9/16-18UNF | 6.0 | 7.0 | 42.0 | 50.0 |
| DN32 | 1-1/4" | | 32.0 | 190.0 | 63.5 | 117.0 | 88.9 | 1.6 | 12.7 | 77.5 | 111.5 | 4.0 | 16.0 | 175.0 | 11.0 | 11.0 | 9/16-18UNF | 6.0 | 9.0 | 42.0 | 70.0 |
| DN40 | 1-1/2" | | 38.0 | 212.0 | 73.2 | 127.0 | 98.6 | 1.6 | 14.2 | 86.5 | 120.5 | 4.0 | 16.0 | 200.0 | 14.0 | 14.0 | 3/4-18UNF | 7.0 | 9.0 | 50.0 | 70.0 |
| DN50 | 2" | | 49.0 | 235.0 | 92.0 | 152.2 | 120.7 | 1.6 | 15.9 | 92.0 | 126.0 | 4.0 | 19.0 | 200.0 | 14.0 | 14.0 | 3/4-18UNF | 7.0 | 9.0 | 50.0 | 70.0 |
| DN65 | 2-1/2" | | 63.0 | 300.0 | 104.7 | 177.8 | 139.7 | 1.6 | 17.5 | 107.0 | 155.0 | 4.0 | 19.0 | 350.0 | 17.0 | 17.0 | 7/8-14UNF | 9.0 | 11.0 | 70.0 | 102.0 |
| DN80 | 3" | | 75.0 | 330.0 | 127.0 | 190.5 | 125.4 | 1.6 | 19.1 | 119.0 | 167.0 | 4.0 | 19.0 | 350.0 | 17.0 | 17.0 | 7/8-14UNF | 9.0 | 11.0 | 70.0 | 102.0 |
| DN100 | 4" | | 99.0 | 380.0 | 157.2 | 228.6 | 190.5 | 1.6 | 23.9 | 150.0 | 214.0 | 8.0 | 19.0 | 400.0 | 22.0 | 22.0 | 1-1/8-12UNF | -- | 11.0 | -- | 102.0 |

■ ASME CLASS 300 DIMENSION TABLE

Unit: mm

| SIZE | | Rating | ØD | L | ØC | ØE | ØB | F | T | H | H1 | N | Øh | W | P | M | K | ØA1 | ØA2 | ØB1 | ØB2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN15 | 1/2" | ASME CLASS 300 | 15.0 | 150.0 | 35.0 | 89.3 | 66.5 | 1.6 | 14.3 | 53.0 | 83.0 | 4.0 | 16.0 | 144.5 | 9.0 | 9.0 | 7/16-24UNF | 6.0 | 6.0 | 36.0 | 42.0 |
| DN20 | 3/4" | | 20.0 | 160.0 | 43.0 | 117.4 | 82.6 | 1.6 | 15.9 | 58.5 | 88.5 | 4.0 | 16.0 | 144.5 | 9.0 | 9.0 | 7/16-24UNF | 6.0 | 7.0 | 36.0 | 50.0 |
| DN25 | 1" | | 25.0 | 180.0 | 51.0 | 124.0 | 88.9 | 1.6 | 17.5 | 70.0 | 104.0 | 4.0 | 16.0 | 175.0 | 11.0 | 11.0 | 9/16-18UNF | 6.0 | 7.0 | 42.0 | 50.0 |
| DN32 | 1-1/4" | | 32.0 | 195.0 | 63.5 | 133.4 | 98.6 | 1.6 | 19.1 | 77.5 | 111.5 | 4.0 | 16.0 | 175.0 | 11.0 | 11.0 | 9/16-18UNF | 6.0 | 9.0 | 42.0 | 70.0 |
| DN40 | 1-1/2" | | 38.0 | 215.0 | 73.2 | 155.5 | 114.3 | 1.6 | 20.7 | 86.5 | 120.5 | 4.0 | 16.0 | 200.0 | 14.0 | 14.0 | 3/4-18UNF | 7.0 | 9.0 | 50.0 | 70.0 |
| DN50 | 2" | | 49.0 | 235.0 | 92.0 | 165.1 | 127.0 | 1.6 | 22.3 | 92.0 | 126.0 | 8.0 | 19.0 | 200.0 | 14.0 | 14.0 | 3/4-18UNF | 7.0 | 9.0 | 50.0 | 70.0 |
| DN65 | 2-1/2" | | 63.0 | 300.0 | 104.7 | 190.5 | 149.4 | 1.6 | 25.4 | 107.0 | 155.0 | 8.0 | 22.3 | 350.0 | 17.0 | 17.0 | 7/8-14UNF | 9.0 | 11.0 | 70.0 | 102.0 |
| DN80 | 3" | | 75.0 | 330.0 | 127.0 | 209.6 | 168.1 | 1.6 | 28.6 | 119.0 | 167.0 | 8.0 | 22.3 | 350.0 | 17.0 | 17.0 | 7/8-14UNF | 9.0 | 11.0 | 70.0 | 102.0 |
| DN100 | 4" | | 99.0 | 380.0 | 157.2 | 254.0 | 200.2 | 1.6 | 31.8 | 150.0 | 214.0 | 8.0 | 22.3 | 400.0 | 22.0 | 22.0 | 1-1/8-12UNF | -- | 11.0 | -- | 102.0 |

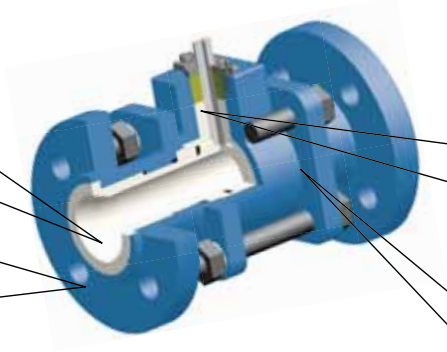
■ DIN PN10/40 DIMENSION TABLE

Unit: mm

| SIZE | | PN | ØD | L | ØC | ØE | ØB | F | T | H | H1 | N | Øh | W | P | M | K | ØA1 | ØA2 | ØB1 | ØB2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN15 | 1/2" | 10 | 15.0 | 150.0 | 45.0 | 95.0 | 65.0 | 2.0 | 16.0 | 53.0 | 83.0 | 4.0 | 14.0 | 144.5 | 9.0 | 9.0 | 7/16-20UNF | 6.0 | 6.0 | 36.0 | 42.0 |
| DN20 | 3/4" | | 20.0 | 160.0 | 58.0 | 105.0 | 75.0 | 2.0 | 18.0 | 58.5 | 88.5 | 4.0 | 14.0 | 144.5 | 9.0 | 9.0 | 7/16-20UNF | 6.0 | 7.0 | 36.0 | 50.0 |
| DN25 | 1" | 16 | 25.0 | 180.0 | 68.0 | 115.0 | 85.0 | 2.0 | 18.0 | 70.0 | 104.0 | 4.0 | 14.0 | 175.0 | 11.0 | 11.0 | 9/16-18UNF | 6.0 | 7.0 | 42.0 | 50.0 |
| DN32 | 1-1/4" | 25 | 32.0 | 190.0 | 78.0 | 140.0 | 100.0 | 2.0 | 18.0 | 77.5 | 111.5 | 4.0 | 18.0 | 175.0 | 11.0 | 11.0 | 9/16-18UNF | 6.0 | 9.0 | 42.0 | 70.0 |
| DN40 | 1-1/2" | | 38.0 | 212.0 | 88.0 | 150.0 | 110.0 | 3.0 | 18.0 | 86.5 | 120.5 | 4.0 | 18.0 | 200.0 | 14.0 | 14.0 | 9/4-18UNF | 7.0 | 9.0 | 50.0 | 70.0 |
| DN50 | 2" | 40 | 49.0 | 230.0 | 102.0 | 165.0 | 125.0 | 3.0 | 20.0 | 92.0 | 126.0 | 4.0 | 18.0 | 200.0 | 14.0 | 14.0 | 9/4-18UNF | 7.0 | 9.0 | 50.0 | 70.0 |
| DN65 | 2-1/2" | 10/16<br>25/40 | 63.0 | 290.0 | 122.0 | 185.0 | 145.0 | 3.0 | 18.0<br>22.0 | 107.0 | 155.0 | 4.0<br>8.0 | 18.0 | 265.0 | 17.0 | 17.0 | 7/8-14UNF | 9.0 | 11.0 | 70.0 | 102.0 |
| DN80 | 3" | 10/16<br>25/40 | 75.0 | 310.0<br>320.0 | 138.0 | 200.0 | 160.0 | 3.0 | 20.0<br>24.0 | 119.0 | 167.0 | 8.0 | 18.0 | 265.0 | 17.0 | 17.0 | 7/8-14UNF | 9.0 | 11.0 | 70.0 | 102.0 |
| DN100 | 4" | 10/16<br>25/40 | 99.0 | 350.0<br>370.0 | 158.0<br>162.0 | 220.0<br>235.0 | 180.0<br>190.0 | 3.0 | 20.0<br>24.0 | 150.0 | 214.0 | 8.0 | 18.0 | 400.0 | 22.0 | 22.0 | 1-1/8-12UNF | non | 11.0 | non | 102.0 |

# Flanged End Full Port Ball Valve (Ceramic Lined)

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

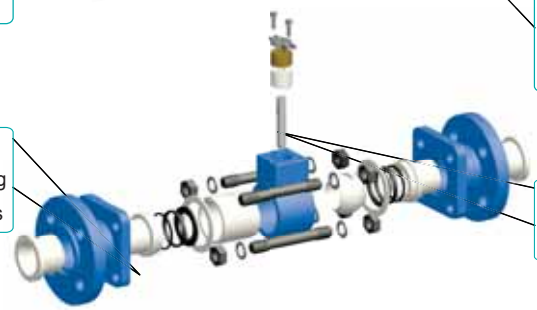


Excellent wearproof property ofceramic enables this valve have high reliability and prolonged lifespan , 2-4times of that of TitaniumAlloy and Monel Metal valve

Interference fit between metal part and ceramic part makes the whole part stringer and more reliable,im-proves the mechanical propves of the ceramic,bec-oming real ceramic-steel

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.



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

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 |

## Order Information

| 1P | O | PTFE | 0100 | PN10 | FL | CS | 13 | PTFE | NTE |
|---|---|---|---|---|---|---|---|---|---|
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| Body Type | Ball Type | Liner Material | Size | Pressure Rating | End Coonectio | Body | Ball | Seat | Operation |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

1. Body Type

| Code | Description |
|---|---|
| 1P | 1-Piece Body |
| 2P | 2-Piece Body |
| 3P | 3-Piece Body |

2. Ball Type

| Code | Description |
|---|---|
| V | V Port |
| R | Reduce Port |
| O | Full Port |

3. Liner Material

| Code | Description |
|---|---|
| 00 | NONE |
| PTFE | PTFE |
| PFA | PFA |
| CR | Ceramic |

4. Valve Size

| Code | Description |
|---|---|
| 0100 | Four numbers represent the valve size.<br>eg: 0100 represent DN100(4 " ) |

5. Pressure Rating

| Code | GB | Code | ANSI | Code | DIN | Code | JIS |
|---|---|---|---|---|---|---|---|
| PN10 | PN10 | 150LB | ANSI150LB | DPN10 | DIN PN10 | 10K | JIS10K |
| PN16 | PN16 | 300LB | ANSI300LB | DPN16 | DIN PN16 | 20K | JIS20K |
| PN25 | PN25 | 600LB | ANSI600LB | DPN25 | DIN PN25 | | |
| PN40 | PN40 | 900LB | ANSI900LB | DPN40 | DIN PN40 | | |

6. End Coonectionv

| Code | Description |
|---|---|
| PT | PT |
| NPT | NPT |
| BW | Butt Weld |
| SW | Scoket Weld |
| CL | Clamp Type |
| TU | Tube End |
| FL | Flanged End |

7. Body Material

| Code | Description |
|---|---|
| CS | Carbon Steel |
| 13 | 304SS |
| 14 | 316SS |
| MN | Monel |
| HC | Hastelloy C |
| XX | XX |

8. Ball Material

| Code | Description |
|---|---|
| 13 | 304SS |
| 14 | 316SS |
| MN | Monel |
| HC | Hastelloy C |
| XX | XX |

9. Seat Material

| Code | Description |
|---|---|
| PTFE | PTFE |
| PFA | PFA |
| CR | Ceramic |
| S6 | Stellite #6 |
| XX | XX |

10. Operation

| Code | Description |
|---|---|
| M | Manual |
| NK | Rack & Pinon Pneumatic Actuator/NK(052~270) |
| NSF | Scotch Yoke Type Pneumatic Actuator/NSF(16~60) |
| NTE | Electric Actuator/NTE Series(02~200) |
| NTQ | Electric Actuator/NTQ Series(100~3000) |

**NUTORK Corp.**
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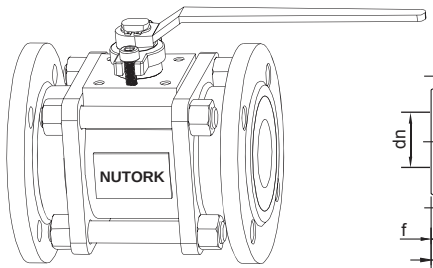
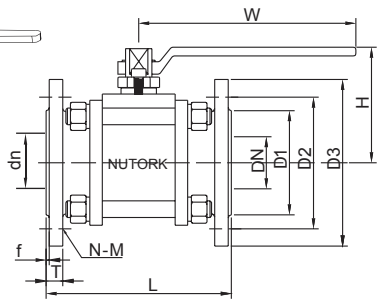
E-mail:nutork@nutork.com
Website: www.nutork.com

Agent:

# Flanged End Full Port Ball Valve (Ceramic Lined)




**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 :**

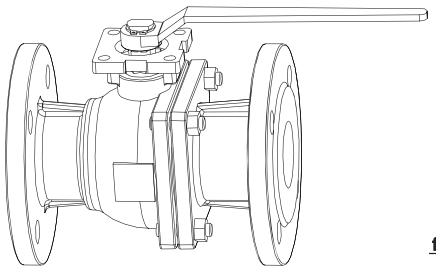
| DN | | Figure Size | | | | DIN PN25 Flange Dia. | | | | | | JIS 20K Flange Dia. | | | | | | Kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inch | mm | dn | L | W | H | D1 | D2 | D3 | N-M | T | f | D1 | D2 | D3 | N-M | T | f | |
| 1/2" | 15 | 15 | 108 | 160 | 85 | 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 |

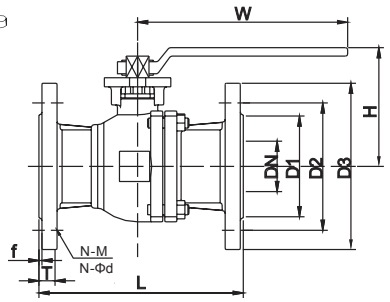
**PN40 / ANIS300LB :**

| 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:ceramicballvalvewithnominaldiameterlargerthanDN100allmatchedwithwormwheelmanualoperation

# Flanged End Full Port Ball Valve (Ceramic Lined)






**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 |