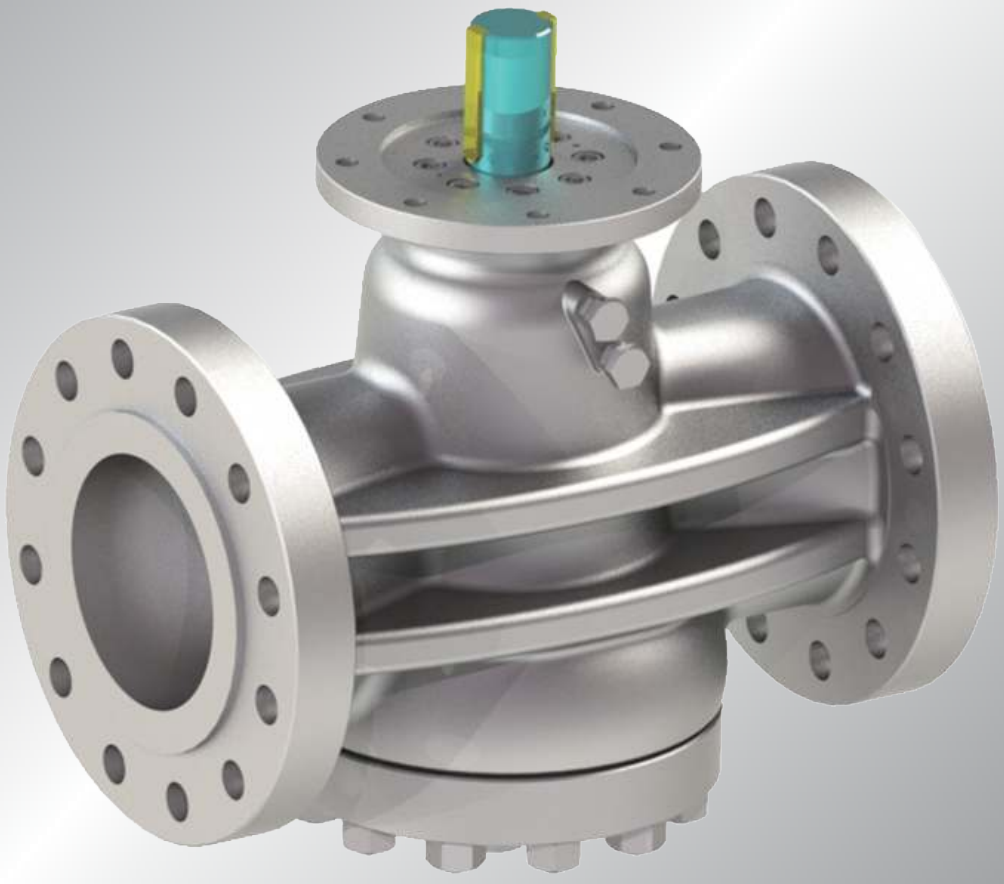


# Plug Valves

MT GROUP

# Company Introduction

MT group founded in 2003, is two-decade old international valve company, headquartered in Shanghai.The group's primary objective is to exceed in production quality, safety and value to the worldwide market, and to be a global leader in valve production, supply and customer service. With vast access to rich industrial resources which ensures superior quality of product and expedient delivery to customers.

Our leading products include ball valves, gate valves, globe valves, check valves, plug valves and butterfly valves, which are widely used in the oil, gas, chemical industry, power station, offshore, and water treatment, as well as various other industrial systems.

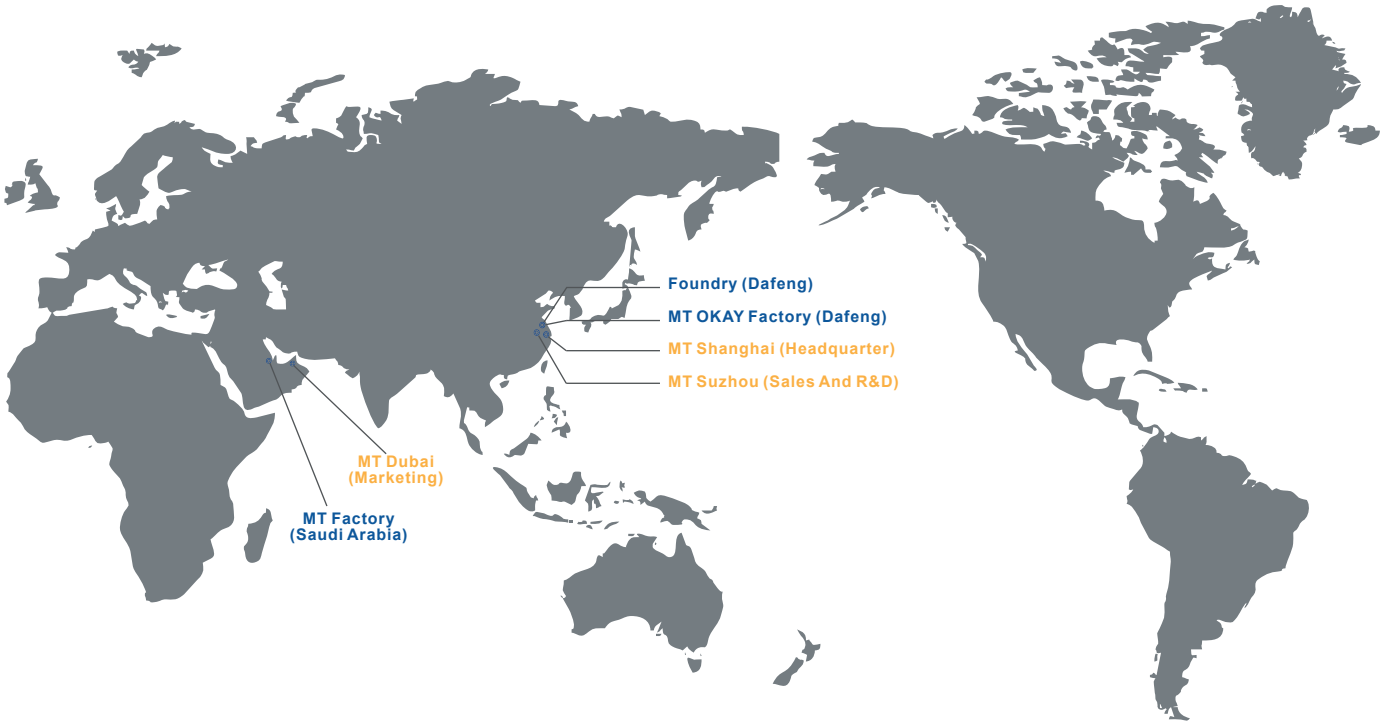
Product size ranges from 1/2 to 72 inches and pressure class ranges from Class150 to 2500. All Our products are in strict compliance with API, ASME, ANSI, DIN, ISO, GB and other reputed international standards. We have more than 50 experienced professionals to provide professional technical response and product application services. We are equipped with a professional valve R&D laboratory to ensure that product design and development meet the requirements of various harsh working conditions.

Backed by its multiple manufacturing units, own foundry, forge shop, innovative design engineering Team, dynamic & professional management, offices, associates and channel partners across all continents; MT Group is emerging as a leading Flow Control solution provider around the globe. MT Group is comitted to provide prompt response, high quality of products and services all time every time. The factories under MT group, respectively, get through the ISO 9001, ISO 14001, ISO 18001, CE, API 6D, API 600, API 607, API 6FA, TS, and a series of international and domestic certification. Products cover Europe, America, Africa, Middle East and Southeast Asia and other regions.

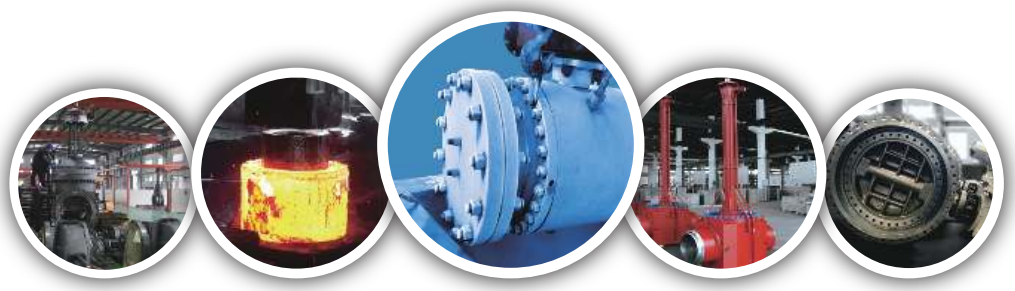
# Certification




- API 6D
- API 600
- API 607
- ISO 9001
- AD 2000
- CE/PED
- ISO 14001
- ISO 18001
- API 594
- TS




Fast technical support & delivery capability
High quality castings and forgings from in-house supply
Globalizing collaborative service



The products are widely used in petroleum, natural gas,
chemical industry, power station, marine industry,
water treatment and various industrial systems



# Introduction to the factory

## CNC Workshop





## Assembly Workshop





## Painting shop & Warehouse





## Foundry




- Investment casting & sand casting process.
- Product capacity is 1000T/month.
- Max weight of single casting can be 8000 kgs.



PRESSURE TEST



TORQUE TEST

NONDESTRUCTIVE TEST(NDT)



TAT TEST





CRYOGENIC TEST



COORDINATE MEASURING MACHINE

HEAT TREATMENT FURNACE



INDUSTRIAL VALVE MANUFACTURER

## Quality Control

MT Group's factories are equipped with precise measurement and testing equipment to perform UT, MT, PT, PMI, Impact Test, Tensile test, CMM, High Temperature Test, Cryogenic Test, Low Emission Test, High Pressure Gas Test, Paint Thickness Test, Surface Roughness Test, Hydraulic Test etc. Entirely supply chain management， from raw material purchasing until finished goods every process is under control.

# Pressure Balance Type

**Pressure Rating:**

Class 150-300-600-900-1500-2500

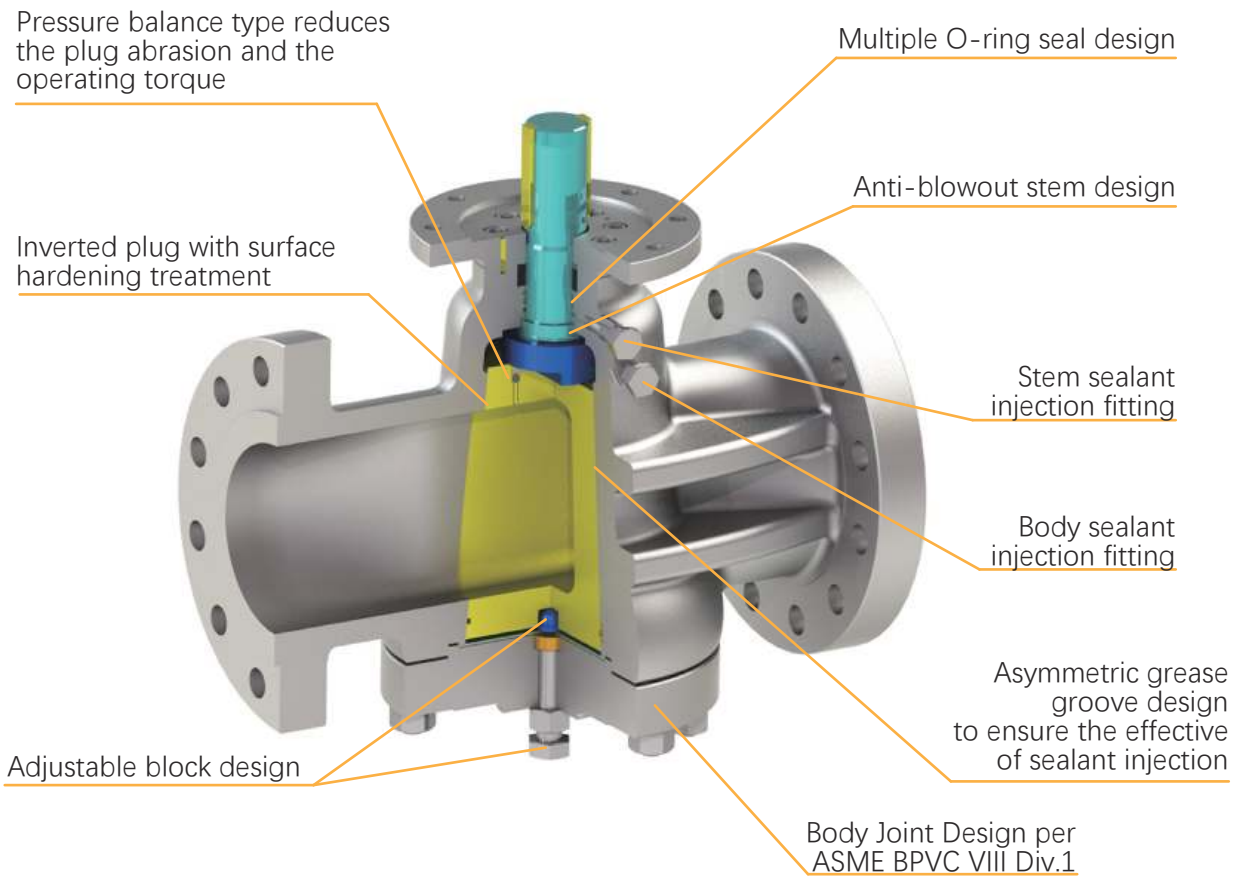
**Standard:**

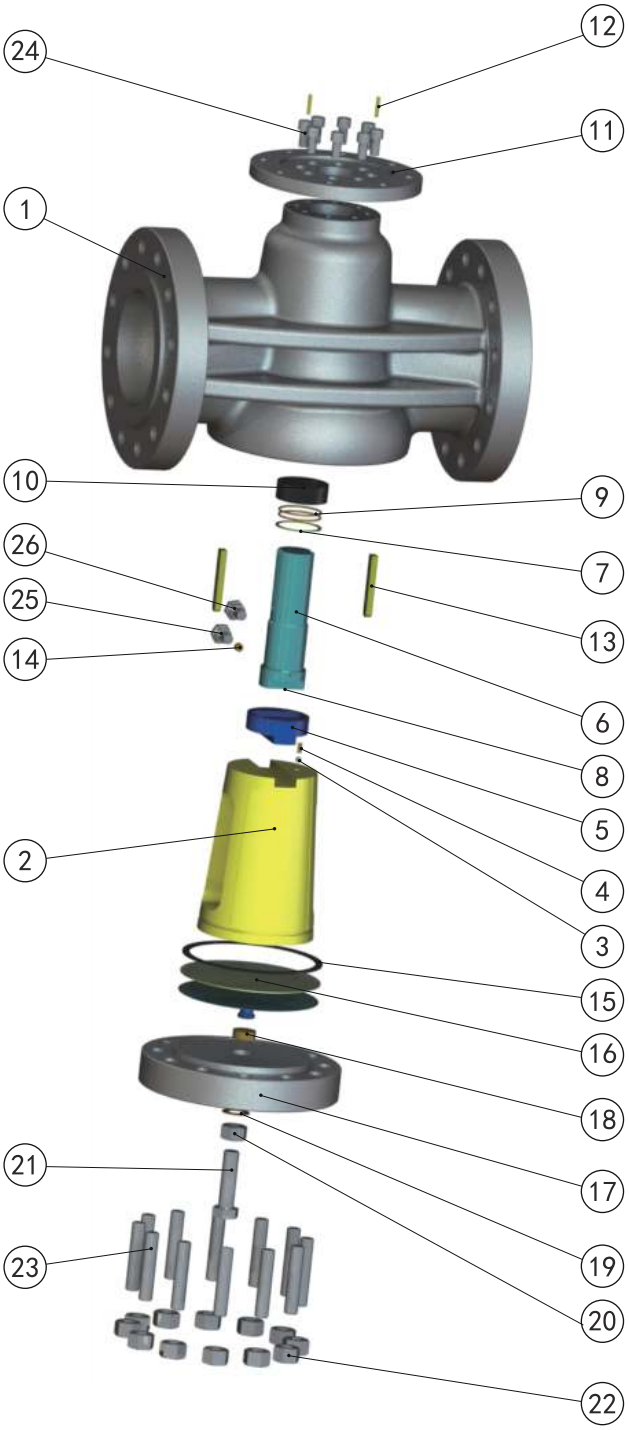
API 599, API 6D

**Max Size:**

NPS 36"

## Design Feature:

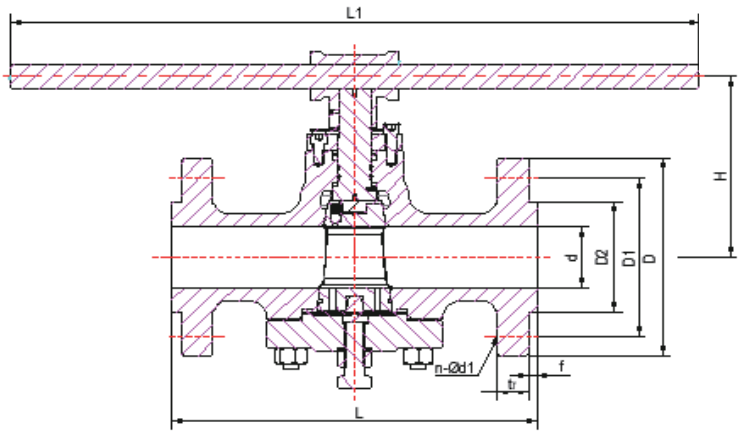


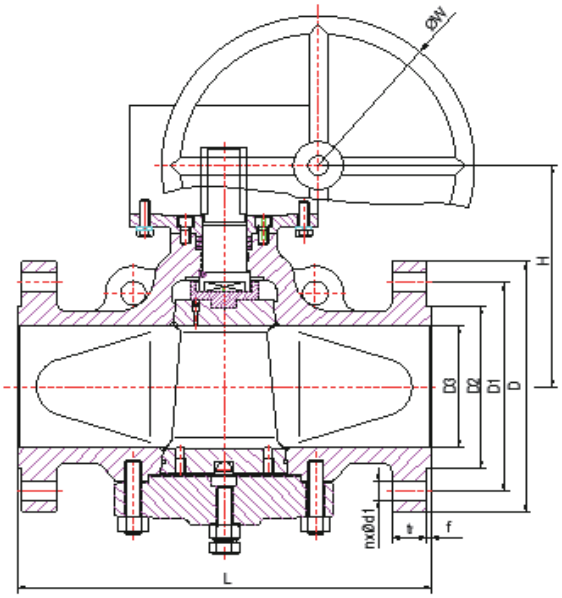



# Material Sheet

| ITEM | PART | MATERIAL |
|---|---|---|
| 26 | Sealant Injection fitting | SS304 |
| 25 | Sealant Injection fitting | SS304 |
| 24 | Bolt | ASTM A193 B7 |
| 23 | Stud | ASTM A193 B7 |
| 22 | Nut | ASTM A194 2H |
| 21 | Bolt | ASTM A193 B7 |
| 20 | Nut | ASTM A194 2H |
| 19 | Washer | PTFE |
| 18 | Adjustment Block | ASTM A276 420 |
| 17 | Bonnet | ASTM A216 WCB |
| 16 | Metal Sheet | SS304 |
| 15 | Gasket | 304SS + Graphite |
| 14 | Check Ball | ASTM A276 420 |
| 13 | Key | AISI 1045 |
| 12 | Pin | AISI 1045 |
| 11 | Top Flange | ASTM A216 WCB |
| 10 | Packing | Graphite |
| 9 | O-ring | VITON |
| 8 | Anti-static Spring | SS304 |
| 7 | Gasket | PTFE |
| 6 | Stem | ASTM A182 F6a CL2 |
| 5 | Coupling | ASTM A276 420 |
| 4 | Anti-static Spring | SS304 |
| 3 | Anti-static Ball | SS304 |
| 2 | Plug | WCB Nitriding |
| 1 | Body | ASTM A216 WCB |

Note：Other materials can be provided on request




# CLASS 150

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | | |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | Short Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern | Short Pattern |
| 25 | 1 | 25 | 140 | 140 | 140 | 110 | 79.4 | 50.8 | 2 | 9.6 | 4-Φ16 | 190 | 500 | | 16 | 16 | 16 |
| 40 | 1-1/2 | 38 | 165 | 165 | 165 | 125 | 98.4 | 73 | 2 | 12.7 | 4-Φ16 | 215 | 600 | | 23 | 23 | 23 |
| 50 | 2 | 49 | 178 | 178 | 178 | 150 | 120.7 | 92.1 | 2 | 14.3 | 4-Φ19 | 220 | 600 | | 26 | 26 | 26 |
| 65 | 2-1/2 | 62 | 190 | 190 | 190 | 180 | 139.7 | 104.8 | 2 | 15.9 | 4-Φ19 | 255 | 850 | | 31 | 31 | 31 |
| 80 | 3 | 74 | 203 | 203 | 203 | 190 | 152.4 | 127.0 | 2 | 17.5 | 4-Φ19 | 280 | 850 | | 35 | 35 | 35 |
| 100 | 4 | 100 | 229 | 305 | 229 | 230 | 190.5 | 157.2 | 2 | 22.3 | 8-Φ19 | 310 | | 300 | 52 | 68 | 52 |
| 125 | 5 | 127 | 381 | 381 | 254 | 255 | 215.9 | 185.7 | 2 | 22.3 | 8-Φ22 | 345 | | 300 | 95 | 95 | 78 |
| 150 | 6 | 150 | 394 | 394 | 267 | 280 | 241.3 | 215.9 | 2 | 23.9 | 8-Φ22 | 370 | | 350 | 135 | 135 | 102 |
| 200 | 8 | 201 | 457 | 457 | 292 | 345 | 298.5 | 269.9 | 2 | 27 | 8-Φ22 | 410 | | 350 | 210 | 210 | 163 |
| 250 | 10 | 252 | 533 | 533 | 330 | 405 | 362 | 323.8 | 2 | 28.6 | 12-Φ25 | 455 | | 600 | 360 | 360 | 176 |
| 300 | 12 | 303 | 610 | 610 | 356 | 485 | 431.8 | 381.0 | 2 | 30.2 | 12-Φ25 | 520 | | 800 | 485 | 485 | 254 |
| 350 | 14 | 334 | 686 | 686 | | 535 | 476.3 | 412.8 | 2 | 33.4 | 12-Φ29 | 595 | | 800 | 705 | 705 | |
| 400 | 16 | 385 | 762 | 762 | | 595 | 539.8 | 469.9 | 2 | 35 | 16-Φ29 | 610 | | 800 | 790 | 790 | |
| 450 | 18 | 436 | 864 | 864 | | 635 | 577.9 | 533.4 | 2 | 38.1 | 16-Φ32 | 630 | | 600 | 895 | 895 | |
| 500 | 20 | 487 | 914 | 914 | | 700 | 635 | 584.2 | 2 | 41.3 | 20-Φ32 | 655 | | 600 | 975 | 975 | |
| 600 | 24 | 589 | 1067 | 1067 | | 815 | 794.3 | 692.2 | 2 | 46.1 | 20-Φ35 | 705 | | 600 | 1895 | 1895 | |
| 750 | 30 | 743 | 1295 | | 1016 | 985 | 914.4 | 857 | 2 | 75 | 20-Φ35 | 765 | | 800 | 2706 | | 2540 |
| 900 | 36 | 895.3 | 1600 | | | 1170 | 1086 | 1022 | 2 | 90 | 30-Φ41 | 873 | | 800 | 3156 | | |

# CLASS 300

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | | |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | Short Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern | Short Pattern |
| 25 | 1 | 25 | 159 | 159 | 159 | 125 | 88.9 | 50.8 | 2 | 15.9 | 4-Φ19 | 156 | 500 | | 18 | 18 | 18 |
| 40 | 1-1/2 | 38 | 190 | 190 | 190 | 155 | 114.3 | 73 | 2 | 19.1 | 4-Φ22 | 170 | 620 | | 25 | 25 | 25 |
| 50 | 2 | 49 | 216 | 216 | 216 | 165 | 127 | 92.1 | 2 | 20.7 | 8-Φ19 | 225 | 620 | | 42 | 42 | 42 |
| 65 | 2-1/2 | 62 | 241 | 241 | 241 | 190 | 149.2 | 104.8 | 2 | 23.9 | 8-Φ22 | 255 | 700 | | 51 | 51 | 51 |
| 80 | 3 | 74 | 282 | 282 | 282 | 210 | 168.3 | 127.0 | 2 | 27 | 8-Φ22 | 280 | 850 | | 59 | 59 | 59 |
| 100 | 4 | 100 | 305 | 305 | 305 | 255 | 200 | 157.2 | 2 | 30.2 | 8-Φ22 | 310 | 950 | | 69 | 69 | 69 |
| 150 | 6 | 150 | 403 | 403 | 403 | 320 | 269.9 | 215.9 | 2 | 35 | 12-Φ22 | 580 | | 500 | 166 | 166 | 166 |
| 200 | 8 | 201 | 419 | 502 | 419 | 380 | 330.2 | 269.9 | 2 | 39.7 | 12-Φ25 | 625 | | 550 | 196 | 215 | 196 |
| 250 | 10 | 252 | 457 | 568 | 457 | 445 | 387.4 | 323.8 | 2 | 46.1 | 16-Φ29 | 746 | | 600 | 280 | 316 | 280 |
| 300 | 12 | 303 | 502 | 711 | 502 | 520 | 450.8 | 381.0 | 2 | 49.3 | 16-Φ32 | 771 | | 750 | 510 | 596 | 510 |
| 350 | 14 | 334 | 762 | 762 | 762 | 585 | 514.4 | 412.8 | 2 | 52.4 | 20-Φ32 | 795 | | 750 | 805 | 805 | 805 |
| 400 | 16 | 385 | 838 | 838 | 838 | 650 | 571.5 | 469.9 | 2 | 55.6 | 20-Φ35 | 813 | | 550 | 912 | 912 | 912 |
| 450 | 18 | 436 | 914 | 914 | 914 | 710 | 628.6 | 533.4 | 2 | 58.8 | 24-Φ35 | 846 | | 550 | 1112 | 1112 | 1112 |
| 500 | 20 | 487 | 991 | 991 | 991 | 775 | 685.8 | 584.2 | 2 | 62 | 24-Φ35 | 956 | | 800 | 1624 | 1624 | 1624 |
| 600 | 24 | 589 | 1143 | 1143 | 1143 | 915 | 812.8 | 692.2 | 2 | 68.3 | 24-Φ41 | 995 | | 800 | 2153 | 2153 | 2153 |
| 750 | 30 | 735 | 1397 | 1397 | 1397 | 1090 | 997 | 857 | 2 | 90.5 | 28-Φ48 | 1105 | | 800 | 2568 | 2568 | 2568 |
| 900 | 36 | 874 | 1727 | 1727 | 1727 | 1270 | 1168.4 | 1022 | 2 | 103.2 | 32-Φ54 | 1340 | | 800 | 2946 | 2946 | 2946 |

# CLASS 600

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern |
| 25 | 1 | 25 | 216 | 216 | 125 | 88.9 | 50.8 | 7 | 17.5 | 4-Φ19 | 165 | 500 | | 11 | 11 |
| 40 | 1-1/2 | 38 | 241 | 241 | 155 | 114.3 | 73.0 | 7 | 22.3 | 4-Φ22 | 178 | 600 | | 23 | 23 |
| 50 | 2 | 49 | 292 | 292 | 165 | 127 | 92.1 | 7 | 25.4 | 8-Φ19 | 198 | 600 | | 25.6 | 25.6 |
| 80 | 3 | 74 | 356 | 356 | 210 | 168.3 | 127.0 | 7 | 31.8 | 8-Φ22 | 220 | 800 | | 48 | 48 |
| 100 | 4 | 100 | 432 | 432 | 275 | 215.9 | 157.2 | 7 | 38.1 | 8-Φ25 | 235 | 950 | | 84 | 84 |
| 150 | 6 | 150 | 559 | 559 | 355 | 292.1 | 215.9 | 7 | 47.7 | 12-Φ29 | 570 | | 550 | 246 | 246 |
| 200 | 8 | 201 | 660 | 660 | 420 | 349.2 | 269.9 | 7 | 55.6 | 12-Φ32 | 716 | | 550 | 412 | 412 |
| 250 | 10 | 252 | 787 | 787 | 510 | 431.8 | 323.8 | 7 | 63.5 | 16-Φ35 | 756 | | 650 | 596 | 596 |
| 300 | 12 | 303 | 838 | 838 | 560 | 489 | 381.0 | 7 | 66.7 | 20-Φ35 | 785 | | 650 | 631 | 631 |
| 350 | 14 | 334 | 889 | 889 | 605 | 527 | 412.8 | 7 | 69.9 | 20-Φ38 | 830 | | 650 | 654 | 654 |
| 400 | 16 | 385 | 991 | 991 | 685 | 603.2 | 469.9 | 7 | 76.2 | 20-Φ41 | 860 | | 800 | 1189 | 1189 |
| 450 | 18 | 436 | 1092 | 1092 | 745 | 654 | 533.4 | 7 | 82.6 | 20-Φ45 | 885 | | 800 | 1662 | 1662 |
| 500 | 20 | 487 | 1194 | 1194 | 815 | 723.9 | 584.2 | 7 | 88.9 | 24-Φ45 | 915 | | 800 | 1878 | 1878 |
| 600 | 24 | 589 | 1397 | 1397 | 940 | 838.2 | 692.2 | 7 | 101.6 | 24-Φ51 | 964 | | 650 | 2186 | 2186 |
| 650 | 26 | 633 | 1448 | 1448 | 1015 | 914.4 | 749 | 7 | 108 | 28-Φ51 | 987 | | 650 | 2305 | 2305 |
| 750 | 30 | 735 | 1651 | 1651 | 1130 | 1022.4 | 857 | 7 | 114.3 | 28-Φ54 | 1068 | | 650 | 2569 | 2569 |
| 900 | 36 | 874 | 2083 | 2083 | 1315 | 1193.8 | 1022 | 7 | 123.9 | 28-Φ67 | 1104 | | 650 | 2951 | 2951 |

# CLASS 900

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern |
| 25 | 1 | 25 | 254 | 254 | 150 | 101.6 | 50.8 | 7 | 28.6 | 4-Φ25 | 165 | 600 | | 11 | 11 |
| 40 | 1-1/2 | 38 | 305 | 305 | 180 | 123.8 | 73.0 | 7 | 31.8 | 4-Φ29 | 178 | 750 | | 23 | 23 |
| 50 | 2 | 49 | 368 | 368 | 215 | 165.1 | 92.1 | 7 | 38.1 | 8-Φ25 | 198 | 800 | | 25.6 | 25.6 |
| 80 | 3 | 74 | 381 | 381 | 240 | 190.5 | 127.0 | 7 | 38.1 | 8-Φ25 | 236 | | 650 | 115 | 115 |
| 100 | 4 | 100 | 457 | 457 | 290 | 235 | 157.2 | 7 | 44.5 | 8-Φ32 | 254 | | 650 | 136 | 136 |
| 150 | 6 | 150 | 610 | 610 | 380 | 317.5 | 215.9 | 7 | 55.6 | 12-Φ32 | 605 | | 800 | 274 | 274 |
| 200 | 8 | 201 | 737 | 737 | 470 | 393.7 | 269.9 | 7 | 63.5 | 12-Φ38 | 664 | | 800 | 565 | 565 |
| 250 | 10 | 252 | 838 | 838 | 545 | 469.9 | 323.8 | 7 | 69.9 | 16-Φ38 | 736 | | 800 | 675 | 675 |
| 300 | 12 | 303 | 965 | 965 | 610 | 533.4 | 381.0 | 7 | 79.4 | 20-Φ38 | 783 | | 800 | 784 | 784 |
| 400 | 16 | 373 | 1130 | 1130 | 705 | 616 | 469.9 | 7 | 88.9 | 20-Φ45 | 856 | | 650 | 863 | 863 |
| 500 | 20 | 471 | 1321 | 1321 | 855 | 749.3 | 584.2 | 7 | 108 | 20-Φ54 | 916 | | 650 | 984 | 984 |

# CLASS 1500

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern |
| 25 | 1 | 25 | 254 | 254 | 150 | 101.6 | 50.8 | 7 | 28.6 | 4-Φ25 | 165 | 600 | | 16.3 | 16.3 |
| 40 | 1-1/2 | 38 | 305 | 305 | 180 | 123.8 | 73.0 | 7 | 31.8 | 4-Φ29 | 178 | 750 | | 18 | 18 |
| 50 | 2 | 49 | 368 | 368 | 215 | 165.1 | 92.1 | 7 | 38.1 | 8-Φ25 | 198 | 800 | | 71 | 71 |
| 80 | 3 | 74 | 470 | 470 | 265 | 203.2 | 127.0 | 7 | 47.7 | 8-Φ32 | 232 | | 650 | 126 | 126 |
| 100 | 4 | 100 | 546 | 546 | 310 | 241.3 | 157.2 | 7 | 54 | 8-Φ35 | 510 | | 650 | 175 | 175 |
| 150 | 6 | 144 | 705 | 705 | 395 | 317.5 | 215.9 | 7 | 82.6 | 12-Φ38 | 562 | | 800 | 263 | 263 |
| 200 | 8 | 192 | 832 | 832 | 485 | 393.7 | 269.9 | 7 | 92.1 | 12-Φ45 | 731 | | 800 | 532 | 532 |
| 250 | 10 | 239 | 991 | 991 | 585 | 482.6 | 323.8 | 7 | 108 | 12-Φ51 | 763 | | 800 | 689 | 689 |
| 300 | 12 | 287 | 1130 | 1130 | 678 | 571.5 | 381.0 | 7 | 123.9 | 16-Φ54 | 794 | | 800 | 754 | 754 |
| 400 | 16 | 360 | 1384 | 1384 | 825 | 704.8 | 469.9 | 7 | 146.1 | 16-Φ67 | 856 | | 650 | 948 | 948 |

# CLASS 2500

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) |
| (mm) | (inch) | | Regular Pattern | | | | | | | | | | Regular Pattern |
| 25 | 1 | 25 | 308 | 160 | 108 | 50.8 | 7 | 35 | 4-Φ25 | 165 | 600 | | 17.6 |
| 40 | 1-1/2 | 38 | 384 | 205 | 146 | 73.0 | 7 | 44.5 | 4-Φ32 | 187 | 750 | | 19.5 |
| 50 | 2 | 42 | 451 | 235 | 171.4 | 92.1 | 7 | 50.9 | 8-Φ29 | 220 | 800 | | 81 |
| 80 | 3 | 62 | 578 | 305 | 228.6 | 127.0 | 7 | 66.7 | 8-Φ35 | 562 | | 650 | 138 |
| 100 | 4 | 87 | 673 | 355 | 273 | 157.2 | 7 | 76.2 | 8-Φ41 | 516 | | 650 | 185 |
| 150 | 6 | 131 | 914 | 485 | 368.3 | 215.9 | 7 | 108 | 8-Φ54 | 569 | | 800 | 286 |
| 200 | 8 | 179 | 1022 | 550 | 438.2 | 269.9 | 7 | 127 | 12-Φ54 | 731 | | 800 | 549 |
| 250 | 10 | 223 | 1270 | 675 | 539.8 | 323.8 | 7 | 165.1 | 12-Φ67 | 763 | | 800 | 692 |
| 300 | 12 | 265 | 1422 | 760 | 619.1 | 381.0 | 7 | 184.2 | 12-Φ73 | 794 | | 800 | 787 |

# Valve torque pressure balanced plug

| ITEM | | CL150 | | | CL300 | | | CL600 | | CL900 | | CL1500 | | CL2500 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN (mm) | NPS (inch) | Venturi Pattern | Regular Pattern | Short Pattern | Venturi Pattern | Regular Pattern | Short Pattern | Venturi Pattern | Regular Pattern | Venturi Pattern | Regular Pattern | Venturi Pattern | Regular Pattern | Regular Pattern |
| 25 | 1 | | | | | | | | 82 | 105 | 105 | | 115 | 715 |
| 40 | 1-1/2 | | | | | | | 86 | 154 | 172 | 172 | | 182 | 1020 |
| 50 | 2 | 75 | 75 | 75 | | | | 105 | 196 | 235 | 235 | | 236 | 2350 |
| 65 | 2-1/2 | 86 | 86 | 86 | | | | 116 | 261 | 356 | 356 | | | |
| 80 | 3 | 165 | 165 | 165 | | | | 263 | 376 | 489 | 489 | | 564 | 6850 |
| 100 | 4 | 252 | 252 | 252 | | | | 356 | 678 | 748 | 748 | | 786 | |
| 125 | 5 | 365 | 365 | 365 | | | | | 846 | 986 | 986 | 1140 | 2480 | |
| 150 | 6 | 580 | 580 | 312 | 435 | 620 | 435 | 706 | 1120 | 1540 | 1540 | | 2865 | |
| 200 | 8 | 1758 | 1758 | 1365 | 652 | 1352 | 652 | 1125 | 2165 | 2820 | 2820 | | 3365 | |
| 250 | 10 | 1780 | 1780 | 1456 | 1458 | 2150 | 1458 | 2130 | 2685 | 4940 | 4940 | | | |
| 300 | 12 | 2650 | 2650 | 1980 | 2300 | 2540 | 2300 | 2460 | 4180 | | | | | |
| 350 | 14 | 1965 | 1965 | | 3320 | | 3320 | 4170 | 4170 | | | | | |
| 400 | 16 | 2615 | 2615 | | 3900 | | 3900 | 5560 | 5560 | | | | | |
| 450 | 18 | 2980 | 2980 | | 4720 | | 4720 | 6720 | 6720 | | | | | |
| 500 | 20 | 3156 | 3156 | | 5520 | | 5520 | 9560 | 9560 | | | | | |
| 600 | 24 | 3756 | 3756 | | 6980 | | 6980 | 13250 | 13250 | | | | | |
| 750 | 30 | 4563 | 4563 | | | | | 15690 | 15690 | | | | | |
| 900 | 36 | 5890 | 5890 | | | | | 19846 | 19846 | | | | | |

# Non-lubricated Type

**Pressure Rating:**

Class 150-300-600

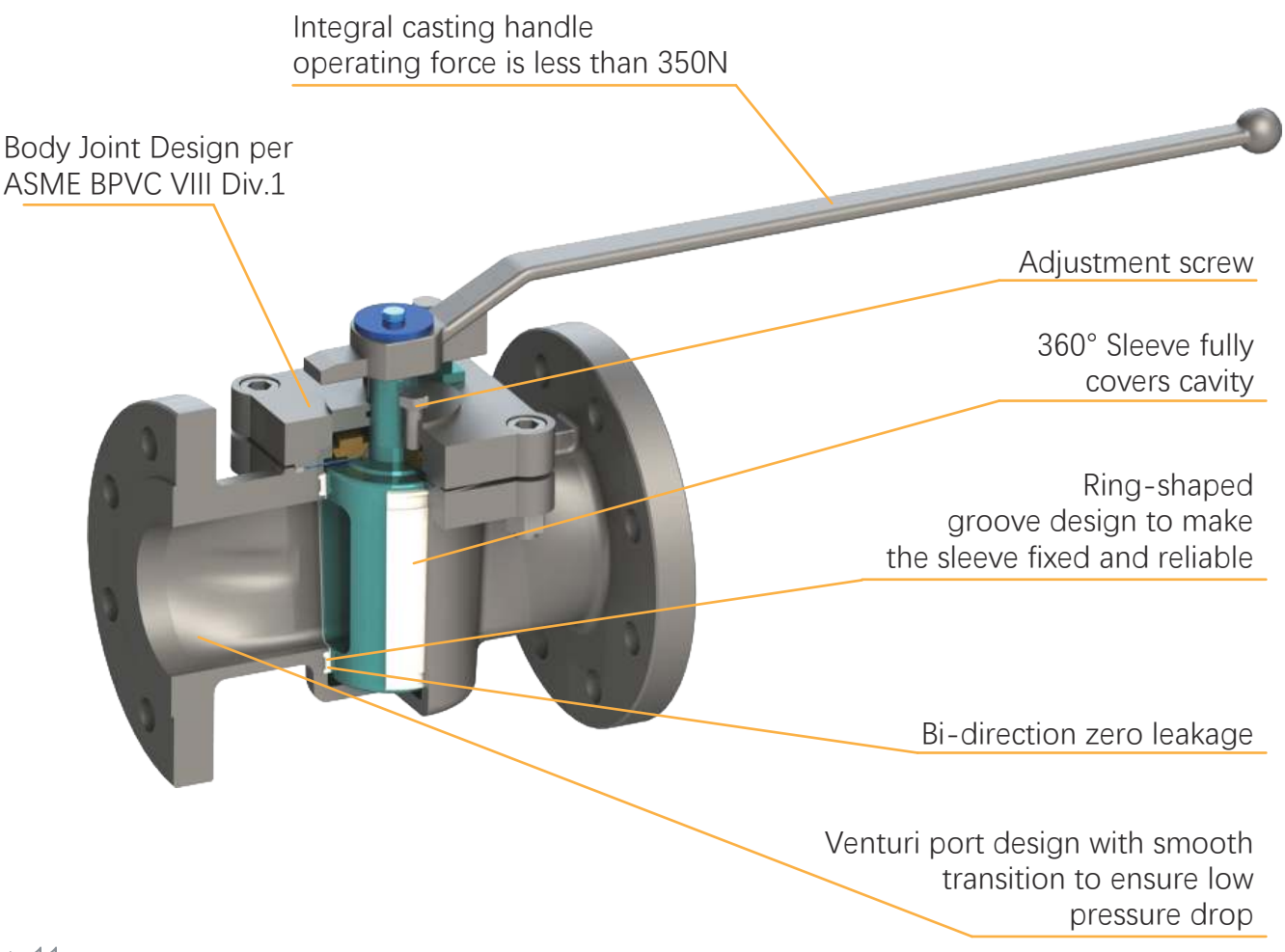
**Standard:**

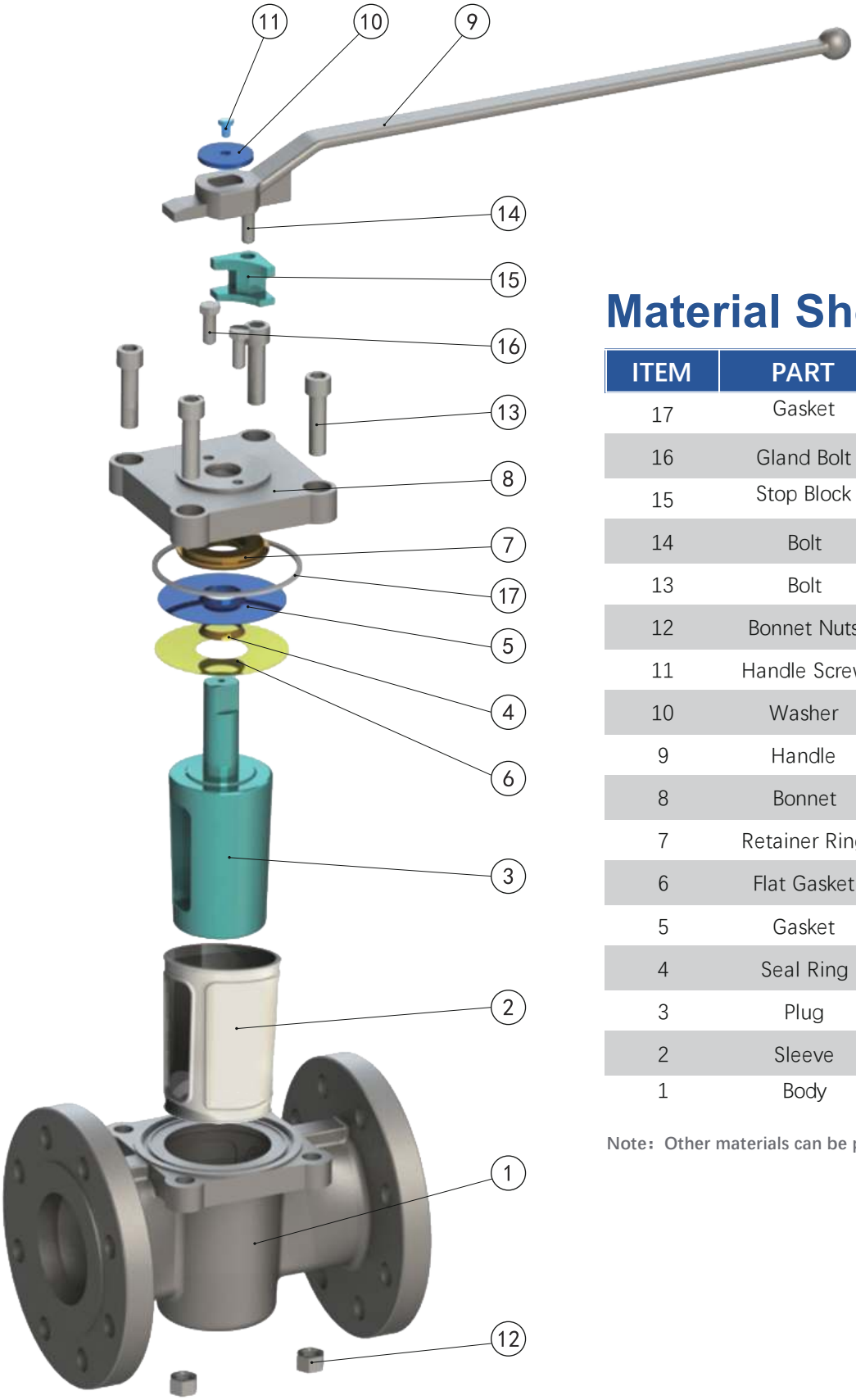
API 599

**Max Size:**

NPS 16"

## Design Feature:

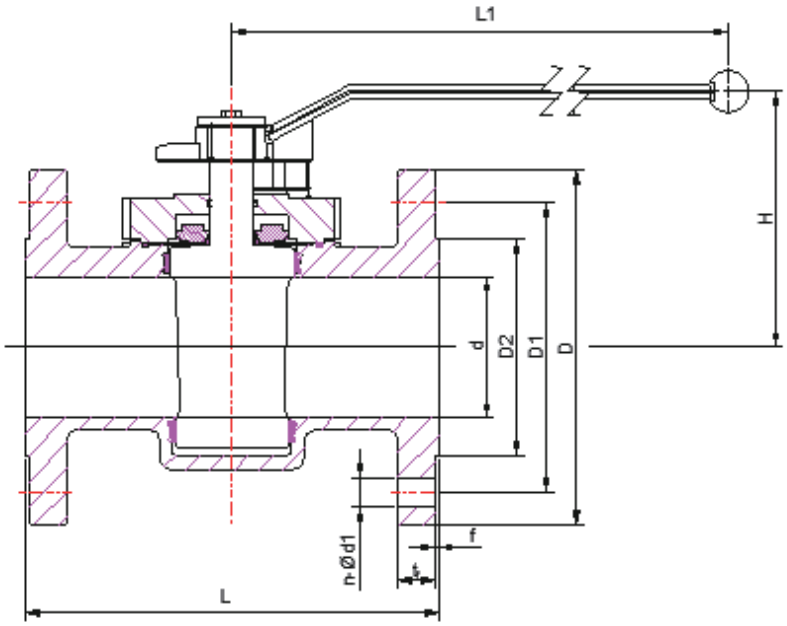


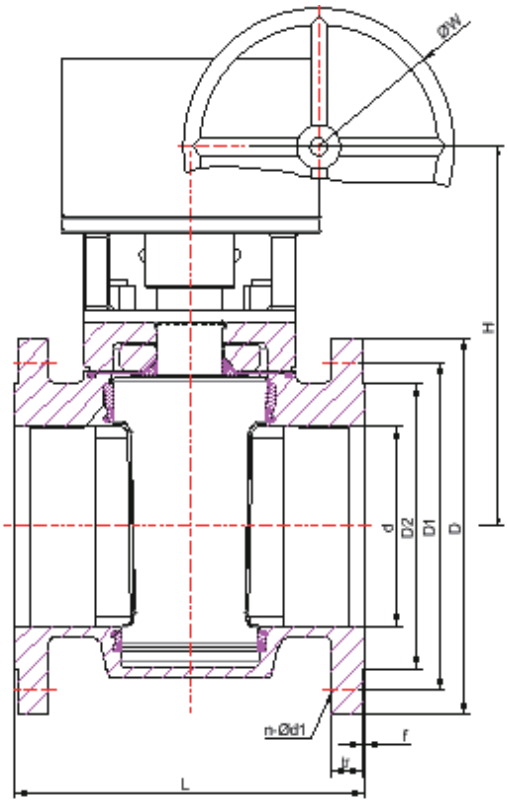



# Material Sheet

| ITEM | PART | MAIN MATERIAL |
|---|---|---|
| 17 | Gasket | 304SS+Graphite |
| 16 | Gland Bolt | ASTM A193B7 |
| 15 | Stop Block | ASTM 276 304 |
| 14 | Bolt | ASTM A193 B7 |
| 13 | Bolt | ASTM A193 B7 |
| 12 | Bonnet Nuts | ASTM A194 2H |
| 11 | Handle Screw | ASTM A193 B7 |
| 10 | Washer | ASTM A276 304 |
| 9 | Handle | ASTM WCB+ENP |
| 8 | Bonnet | ASTM A216 WCB |
| 7 | Retainer Ring | ASTM A276 304 |
| 6 | Flat Gasket | PTFE |
| 5 | Gasket | ASTM A276 304 |
| 4 | Seal Ring | PTFE |
| 3 | Plug | ASTM A216WCB+ENP |
| 2 | Sleeve | PTFE |
| 1 | Body | ASTM A216 WCB |

Note：Other materials can be provided on request




# CLASS 150

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | | | Torque N.m |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | Short Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern | Short Pattern | |
| 15 | 1/2 | 15 | 176 | 176 | 176 | 90 | 60.3 | 34.9 | 2 | 8 | 4-Φ16 | 105 | 250 | | 4.9 | 4.9 | 4.9 | 20 |
| 20 | 3/4 | 20 | 140 | 140 | 140 | 100 | 69.9 | 42.9 | 2 | 8.9 | 4-Φ16 | 105 | 250 | | 4.1 | 4.1 | 4.1 | 25 |
| 25 | 1 | 25 | 140 | 140 | 140 | 110 | 79.4 | 50.8 | 2 | 9.6 | 4-Φ16 | 107 | 250 | | 4.6 | 4.6 | 4.6 | 25 |
| 40 | 1-1/2 | 38 | 165 | 165 | 165 | 125 | 98.4 | 73 | 2 | 12.7 | 4-Φ16 | 126 | 350 | | 7.8 | 7.8 | 7.8 | 50 |
| 50 | 2 | 49 | 178 | 178 | 178 | 150 | 120.7 | 92.1 | 2 | 14.3 | 4-Φ19 | 160 | 350 | | 12.3 | 12.3 | 12.3 | 80 |
| 65 | 2-1/2 | 62 | 190 | 190 | 190 | 180 | 139.7 | 104.8 | 2 | 15.9 | 4-Φ19 | 169 | 450 | | 16.3 | 16.3 | 16.3 | 90 |
| 80 | 3 | 74 | 203 | 203 | 203 | 190 | 152.4 | 127.0 | 2 | 17.5 | 4-Φ19 | 176 | 650 | | 19.5 | 19.5 | 19.5 | 130 |
| 100 | 4 | 100 | 229 | 305 | 229 | 230 | 190.5 | 157.2 | 2 | 22.3 | 8-Φ19 | 189 | 650 | | 22.6 | 22.6 | 22.6 | 150 |
| 150 | 6 | 150 | 394 | 394 | 267 | 280 | 241.3 | 215.9 | 2 | 23.9 | 8-Φ22 | 284 | | 600 | 59 | 59 | 102 | 600 |
| 200 | 8 | 201 | 457 | 457 | 292 | 345 | 298.5 | 269.9 | 2 | 27 | 8-Φ22 | 326 | | 600 | 213 | 213 | 125 | 850 |
| 250 | 10 | 252 | 533 | 533 | 330 | 405 | 362 | 323.8 | 2 | 28.6 | 12-Φ25 | 374 | | 600 | 268 | 268 | 142 | 1000 |
| 300 | 12 | 303 | 610 | 610 | 356 | 485 | 431.8 | 381.0 | 2 | 30.2 | 12-Φ25 | 395 | | 600 | 312 | 312 | 162 | 2850 |
| 350 | 14 | 334 | 686 | 686 | | 535 | 476.3 | 412.8 | 2 | 33.4 | 12-Φ29 | 487 | | 600 | 368 | 368 | - | 6100 |
| 400 | 16 | 385 | 762 | 762 | | 595 | 539.8 | 469.9 | 2 | 35 | 16-Φ29 | 514 | | 750 | 439 | 439 | - | 7500 |
| 450 | 18 | 436 | 864 | 864 | | 635 | 577.9 | 533.4 | 2 | 38.1 | 16-Φ32 | 539 | | 750 | 856 | 856 | - | 8500 |
| 500 | 20 | 487 | 914 | 914 | | 700 | 635 | 584.2 | 2 | 41.3 | 20-Φ32 | 615 | | 800 | 893 | 893 | - | 9150 |
| 600 | 24 | 589 | 1067 | 1067 | | 815 | 794.3 | 692.2 | 2 | 46.1 | 20-Φ35 | 694 | | 800 | 975 | 975 | - | 10500 |

# CLASS 300

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | | | Torque N.m |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | Short Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern | Short Pattern | |
| 15 | 1/2 | 15 | 176 | 176 | 176 | 95 | 66.7 | 34.9 | 2 | 14.3 | 4-Φ16 | 105 | 250 | | 5.5 | 5.5 | 5.5 | 20 |
| 20 | 3/4 | 20 | 140 | 140 | 140 | 115 | 82.6 | 42.9 | 2 | 15.9 | 4-Φ19 | 105 | 250 | | 4.6 | 4.6 | 4.6 | 25 |
| 25 | 1 | 25 | 159 | 159 | 159 | 125 | 88.9 | 50.8 | 2 | 15.9 | 4-Φ19 | 107 | 250 | | 4.9 | 4.9 | 4.9 | 25 |
| 40 | 1-1/2 | 38 | 190 | 190 | 190 | 155 | 114.3 | 73 | 2 | 19.1 | 4-Φ22 | 126 | 350 | | 8.6 | 8.6 | 8.6 | 50 |
| 50 | 2 | 49 | 216 | 216 | 216 | 165 | 127 | 92.1 | 2 | 20.7 | 8-Φ19 | 160 | 350 | | 14.9 | 14.9 | 14.9 | 80 |
| 65 | 2-1/2 | 62 | 241 | 241 | 241 | 190 | 149.2 | 104.8 | 2 | 23.9 | 8-Φ22 | 169 | 450 | | 19.8 | 19.8 | 19.8 | 90 |
| 80 | 3 | 74 | 282 | 282 | 282 | 210 | 168.3 | 127.0 | 2 | 27 | 8-Φ22 | 176 | 650 | | 22.7 | 22.7 | 22.7 | 130 |
| 100 | 4 | 100 | 305 | 305 | 305 | 255 | 200 | 157.2 | 2 | 30.2 | 8-Φ22 | 189 | 650 | | 32.6 | 32.6 | 32.6 | 150 |
| 150 | 6 | 150 | 403 | 403 | 403 | 320 | 269.9 | 215.9 | 2 | 35 | 12-Φ22 | 284 | | 600 | 85 | 85 | 85 | 600 |
| 200 | 8 | 201 | 419 | 502 | 419 | 380 | 330.2 | 269.9 | 2 | 39.7 | 12-Φ25 | 326 | | 600 | 236 | 273 | 125 | 850 |
| 250 | 10 | 252 | 457 | 568 | 457 | 445 | 387.4 | 323.8 | 2 | 46.1 | 16-Φ29 | 374 | | 600 | 294 | 326 | 142 | 1000 |
| 300 | 12 | 303 | 502 | 711 | 502 | 520 | 450.8 | 381.0 | 2 | 49.3 | 16-Φ32 | 395 | | 600 | 345 | 398 | 162 | 2850 |
| 350 | 14 | 334 | 762 | 762 | 762 | 585 | 514.4 | 412.8 | 2 | 52.4 | 20-Φ32 | 487 | | 600 | 416 | 416 | 416 | 6100 |
| 400 | 16 | 385 | 838 | 838 | 838 | 650 | 571.5 | 469.9 | 2 | 55.6 | 20-Φ35 | 514 | | 750 | 495 | 495 | 495 | 7500 |
| 450 | 18 | 436 | 914 | 914 | 914 | 710 | 628.6 | 533.4 | 2 | 58.8 | 24-Φ35 | 539 | | 750 | 910 | 910 | 910 | 8500 |
| 500 | 20 | 487 | 991 | 991 | 991 | 775 | 685.8 | 584.2 | 2 | 62 | 24-Φ35 | 615 | | 800 | 987 | 987 | 987 | 9150 |
| 600 | 24 | 589 | 1143 | 1143 | 1143 | 915 | 812.8 | 692.2 | 2 | 68.3 | 24-Φ41 | 694 | | 800 | 1206 | 1206 | 1206 | 10500 |

# CLASS 600

| ITEM | | STANDARD DIMENSION | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | NPS | d | FACE TO FACE DIMENSION | | D | D1 | D2 | f | b | n-Φd | H | L1 | ΦW | WEIGHT(Kg) | | | Torque N.m |
| (mm) | (inch) | | Venturi Pattern | Regular Pattern | | | | | | | | | | Venturi Pattern | Regular Pattern | | |
| 15 | 1/2 | 15 | 176 | 176 | 95 | 66.7 | 34.9 | 7 | 14.3 | 4-Φ16 | 105 | 250 | | 6.9 | 6.9 | | 20 |
| 20 | 3/4 | 20 | 140 | 140 | 115 | 82.6 | 42.9 | 7 | 15.9 | 4-Φ19 | 105 | 250 | | 5.6 | 5.6 | | 25 |
| 25 | 1 | 25 | 216 | 216 | 125 | 88.9 | 50.8 | 7 | 17.5 | 4-Φ19 | 107 | 250 | | 7.8 | 7.8 | | 25 |
| 40 | 1-1/2 | 38 | 241 | 241 | 155 | 114.3 | 73.0 | 7 | 22.3 | 4-Φ22 | 126 | 350 | | 9.6 | 9.6 | | 50 |
| 50 | 2 | 49 | 292 | 292 | 165 | 127 | 92.1 | 7 | 25.4 | 8-Φ19 | 160 | 350 | | 14.6 | 14.6 | | 80 |
| 65 | 2-1/2 | 62 | 330 | 330 | 190 | 149.2 | 104.8 | 7 | 28.6 | 8-Φ22 | 169 | 450 | | 19.4 | 19.4 | | 90 |
| 80 | 3 | 74 | 356 | 356 | 210 | 168.3 | 127.0 | 7 | 31.8 | 8-Φ22 | 176 | 650 | | 22.9 | 22.9 | | 130 |
| 100 | 4 | 100 | 432 | 432 | 275 | 215.9 | 157.2 | 7 | 38.1 | 8-Φ25 | 189 | 650 | | 29.6 | 29.6 | | 150 |
| 150 | 6 | 150 | 559 | 559 | 355 | 292.1 | 215.9 | 7 | 47.7 | 12-Φ29 | 284 | | 600 | 76 | 76 | | 600 |
| 200 | 8 | 201 | 660 | 660 | 420 | 349.2 | 269.9 | 7 | 55.6 | 12-Φ32 | 326 | | 600 | 259 | 259 | | 850 |
| 250 | 10 | 252 | 787 | 787 | 510 | 431.8 | 323.8 | 7 | 63.5 | 16-Φ35 | 374 | | 600 | 324 | 324 | | 1000 |
| 300 | 12 | 303 | 838 | 838 | 560 | 489 | 381.0 | 7 | 66.7 | 20-Φ35 | 395 | | 600 | 397 | 397 | | 2850 |
| 350 | 14 | 334 | 889 | 889 | 605 | 527 | 412.8 | 7 | 69.9 | 20-Φ38 | 487 | | 600 | 426 | 426 | | 6100 |
| 400 | 16 | 385 | 991 | 991 | 685 | 603.2 | 469.9 | 7 | 76.2 | 20-Φ41 | 514 | | 750 | 756 | 756 | | 7500 |
| 450 | 18 | 436 | 1092 | 1092 | 745 | 654 | 533.4 | 7 | 82.6 | 20-Φ45 | 539 | | 750 | 1056 | 1056 | | 8500 |
| 500 | 20 | 487 | 1194 | 1194 | 815 | 723.9 | 584.2 | 7 | 88.9 | 24-Φ45 | 615 | | 800 | 1269 | 1269 | | 9150 |
| 600 | 24 | 589 | 1397 | 1397 | 940 | 838.2 | 692.2 | 7 | 101.6 | 24-Φ51 | 694 | | 800 | 1437 | 1437 | | 10500 |

REV. 2020-A

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