



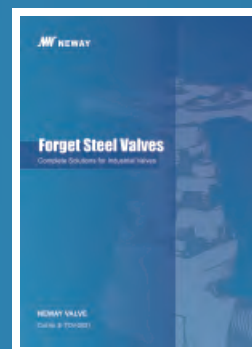
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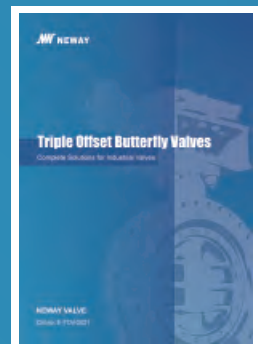
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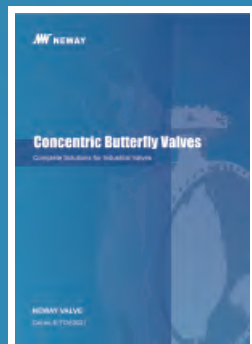
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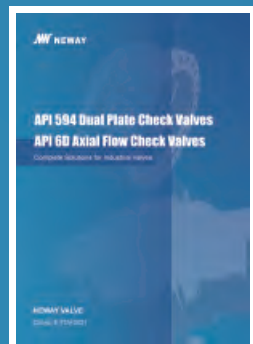
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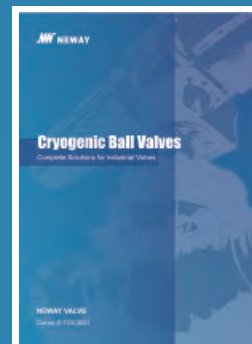
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Cat.no.:E-CBV



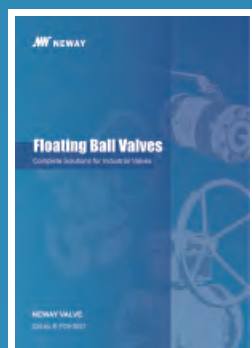
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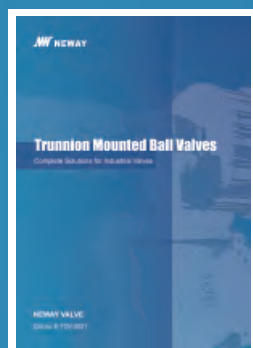
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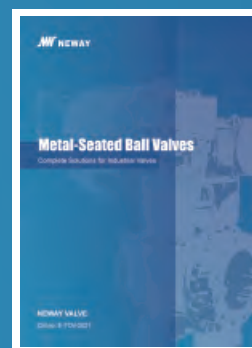
Cat.no.:E-FWBV



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Cat.no.:E-TMBV



Cat.no.:E-MSBV



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No.666 Taishan Road, Suzhou New District, P.R. China

Post Code: 215129

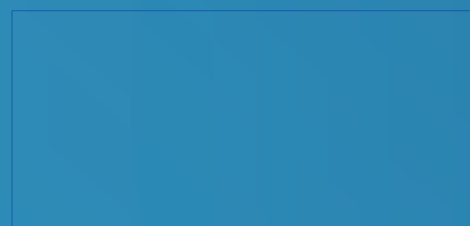
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Cat.no.:E-CBV-2025



# Cryogenic Ball Valves

Complete Solutions for Industrial Valves

NEWAY VALVE

Cat.no.:E-CBV-2025

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Complete Solutions for Industrial Valves

As a global leader of valve manufacturing, Newway (SSE:603699) is dedicated to the production, research, and development of industrial valves. Newway is committed to providing complete valve solutions to all industries through advanced engineering and innovation.

Newway's product line includes Ball, Butterfly, Gate, Globe, Check, Nuclear, Control, Subsea, Safety valves. Our high quality standards and innovative ability are recognized by many global end users and EPCs. Newway valves are utilized in a wide variety of industries and working conditions such as Refining, Chemical, Coal Chemical, Offshore(including subsea), Air Separation, LNG, Nuclear Power, Power Generation, and Pipeline Transmission applications.

Facilities & Service

Newway has developed a sophisticated multi-plant management system operating one valve assembly plant, one API6A valve plant, three foundries, and three R&D center. Our largest assembly plant was expanded in 2013, and it now covers 230,000 square meters.

Advanced software (ANSYS, FE-Safe, CF-Design, Siemens PLM and NX) is applied here at Newway for the Research & Development of products. We use SAP to control the traceability and status of all products during the manufacturing process. In order to ensure the safety, eco-friendliness, and reliability of our products, we use the most advanced fire-safe, cryogenic, high pressure, and fugitive emission test equipment.

As part of Newway's global strategy, to provide better service to our customers, we have established our overseas subsidiaries in USA, Netherlands, Italy, Singapore, Dubai, Vietnam and Nigeria along with over 80 agents and distributors worldwide.

Quality Assurance

Newway is dedicated to the pursuit of "Zero Defect ". We maintain a quality management system that encompasses our entire operation from order entry, to final inspection. Through Newway's continuous efforts, our products have sucessfully achieved industrial certificates including ISO 9001, API 6A, API 6D, CE/PED, ASME N & NPT, TA-LUFT, ABS and Fire-Safe approvals.

Quality Commitment



Newway recognizes the importance of valve quality for the safety and protection of personnel health and property. It is our quality commitment to focus our resources to provide our customers with first class products at a competitive price, designed, manufactured, inspected and tested in accordance with our customers specifications and complying with all international standards.

Current industrial standards do not always take into consideration the likelihood and consequences of possible deterioration in service, related to specific service fluids or the external environments in which they operate. Therefore we request that our customers communicate with our engineering department. Our valve optimization program continuously strives to provide valves that withstand deterioration in service, and ensure safety over the valves expected lifetime.

8

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BSG

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⑤

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S41

⑥

/

8LX66

⑦

Neway part numbers are designed to cover essential features. When ordering, please show the part numbers and a detailed description to avoid misunderstanding of your requirements.

Following descriptions provide a basic guideline in valve specification:

① Nominal Diameter

Cryogenic Floating Ball Valve Series

| Item | Class           | Size    |
|------|-----------------|---------|
| 1    | Class 150, 300  | 3/8"-8" |
| 2    | Class 600       | 3/8"-3" |
| 3    | Class 900, 1500 | 3/8"-2" |

Cryogenic TM Ball Valve Series

| Item | Class          | Size     |
|------|----------------|----------|
| 1    | Class 150, 300 | 1/2"-40" |
| 2    | Class 600, 900 | 1/2"-24" |
| 3    | Class 1500     | 1/2"-16" |

② Valve Types

Cryogenic Floating Ball Valve Series

| Code | Type                                       | Remark                             |
|------|--------------------------------------------|------------------------------------|
| BBG  | 2PC Forging Cryogenic Floating Ball Valve  | Class 600 & above or size below 2" |
| BG   | 2PC Casting Cryogenic Flaoating Ball Valve |                                    |
| BDG  | Top Entry Cryogenic Floating Ball Valve    |                                    |

Cryogenic TM Ball Valve Series

| Item | Type                                       | Remark |
|------|--------------------------------------------|--------|
| BSG  | Forging Side Entry Cryogenic TM Ball Valve |        |
| BEG  | Top Entry Cryogenic TM Ball Valve          |        |
|      |                                            |        |

③ ASME Class

| Code       | 1   | 3   | 6   | 9   | 15   |
|------------|-----|-----|-----|-----|------|
| Class (LB) | 150 | 300 | 600 | 900 | 1500 |

④ End Connection

| Symbol | End                     | Symbol | End             |
|--------|-------------------------|--------|-----------------|
| R      | Raised face flanged end | S      | Socket weld end |
| J      | RTJ flanged end         | N      | Screwed end     |
| B      | Butt-weld end           |        |                 |

⑤ Valve Code

| Symbol | Description   | Symbol | Description        |
|--------|---------------|--------|--------------------|
|        | Lever         | M      | Electric actuator  |
| G      | Gear operator | P      | Pneumatic actuator |

⑥ Body Material

| Code     | S00         | S00          | S02         | S03          | S40          |
|----------|-------------|--------------|-------------|--------------|--------------|
| Material | CF8         | CF8M         | CF3         | CF3M         | F304         |
| ASTM Ref | A351 Gr.CF8 | A351 Gr.CF8M | A351 Gr.CF3 | A351 Gr.CF3M | A182 Gr.F304 |

| Code     | S41          | S42           | S43           | L02         | L40         |
|----------|--------------|---------------|---------------|-------------|-------------|
| Material | F316         | F304L         | F316L         | LC3         | LF3         |
| ASTM Ref | A182 Gr.F316 | A182 Gr.F304L | A182 Gr.F316L | A352 Gr.LC3 | A350 Gr.LF3 |

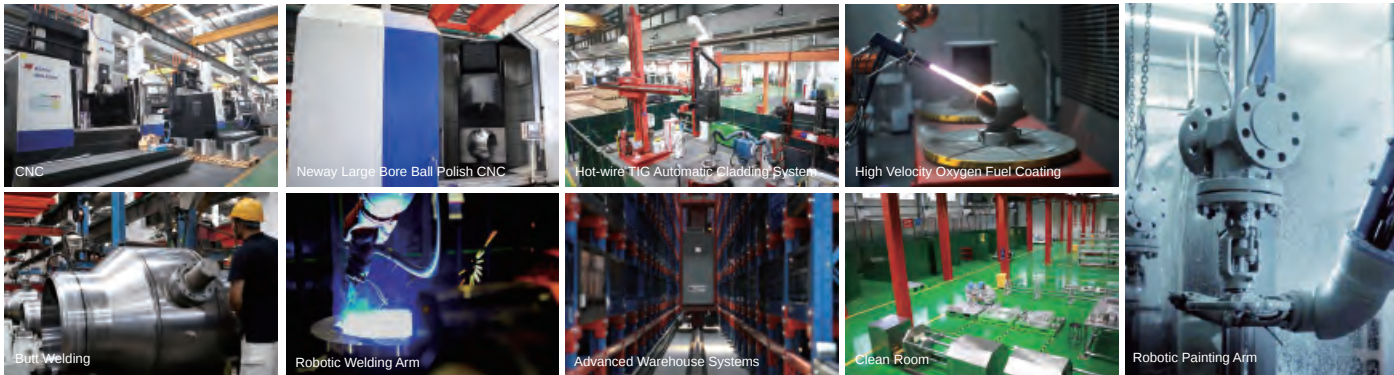
⑦ Trim Code

| Seat |          | O-Ring |            | Stem |          | Ball |          | Packing |                                  |
|------|----------|--------|------------|------|----------|------|----------|---------|----------------------------------|
| Code | Material | Code   | Material   | Code | Material | Code | Material | Code    | Material                         |
| 8    | PCTFE    | N      | No O-rings | 2    | F304     | 2    | F304     | X       | Low emission stuffing (GRAPHITE) |
| I    | RPTFE    |        |            | 6    | F316     | 6    | F316     |         |                                  |
| 3    | PEEK     |        |            | 7    | F304L    | 7    | F304L    |         |                                  |
| G    | VESPEL   |        |            | 8    | F316L    | 8    | F316L    |         |                                  |
| K    | PAI      |        |            | X    | XM-19    | X    | XM-19    |         |                                  |

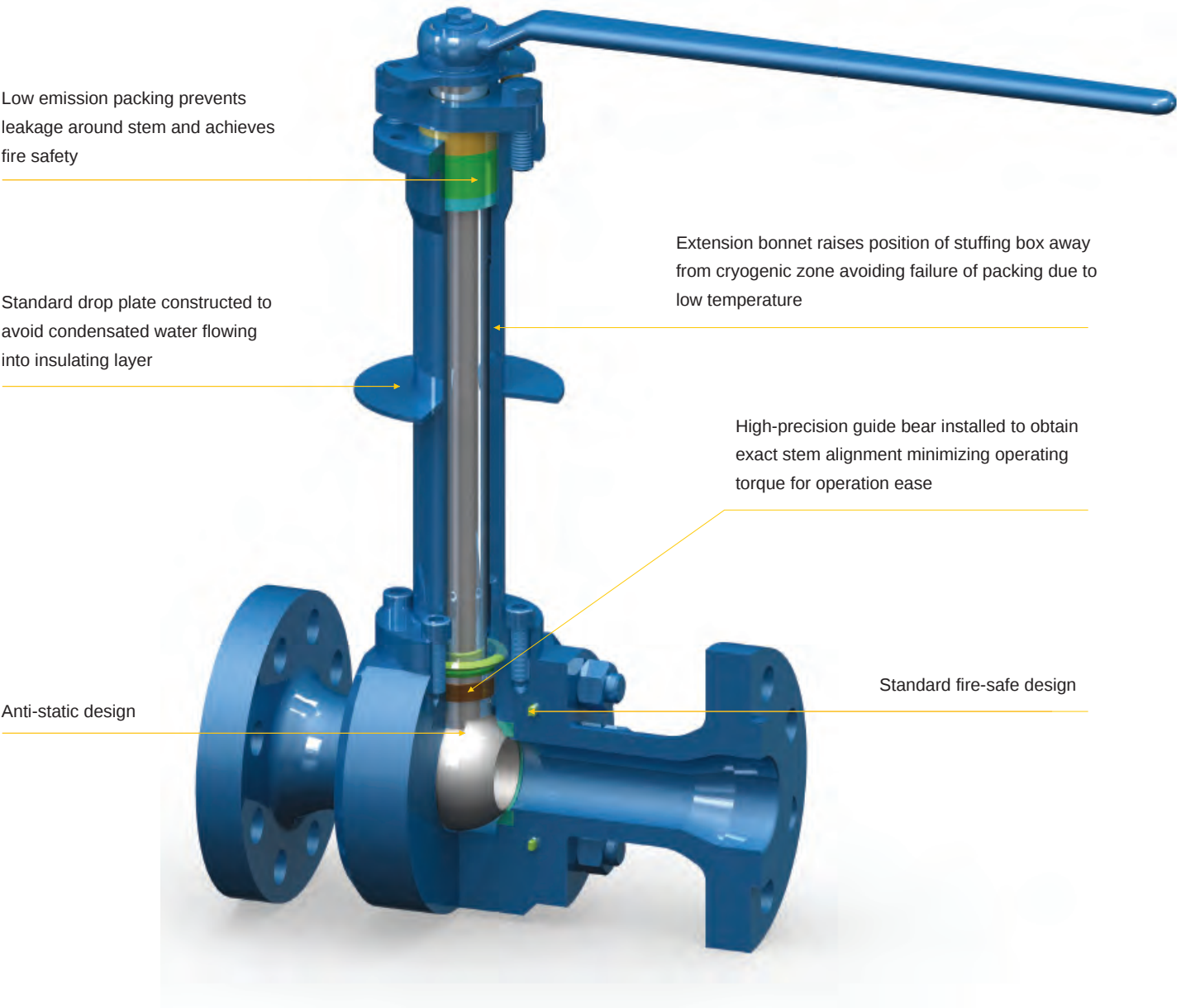
| Seat |          | Seal Ring |                       | Stem |          | Ball |          | Packing |          |
|------|----------|-----------|-----------------------|------|----------|------|----------|---------|----------|
| Code | Material | Code      | Material              | Code | Material | Code | Material | Code    | Material |
| 8    | PCTFE    | L         | Spring seal structure | 2    | F304     | 2    | F304     | X       | F304     |
| 3    | PEEK     |           |                       | 6    | F316     | 6    | F316     |         | F316     |
| I    | RPTFE    |           |                       | 7    | F304L    | 7    | F304L    |         | F304L    |
|      |          |           |                       | 8    | F316L    | 8    | F316L    |         | F316L    |
|      |          |           |                       | X    | XM-19    | X    | XM-19    |         |          |

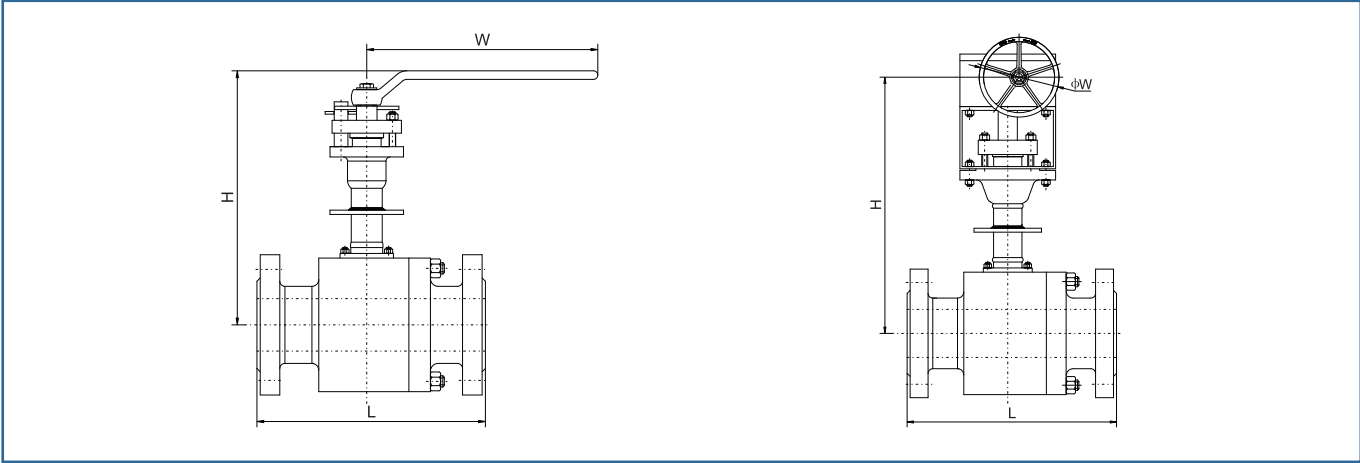
Note:other materials upon request

The latest computer technology has been extensively applied in NEWAY manufacturing, which includes a large number of numeric control machines (machining center, CNC horizontal and vertical lathe, and CNC drilling machine) and ERP management system. Additionally, the data through all factories has been connected and shared. These facilitate resource integration, boost productivity, evidently enhancing machining quality and tightening process control.



NEWAY developed comprehensive and advanced inspection and test facilities to control the quality from rough castings or forgings to final products, which enable us to perform ultrasonic testing, radiographic test, liquid penetrant test, magnetic-particle test, spectrum analysis, Material Positive Identification (MPI), impact test, tensile test, hardness test, fire safe test, cryogenic test, vacuum test, low fugitive emission test, high pressure gas test and hydrostatic test.



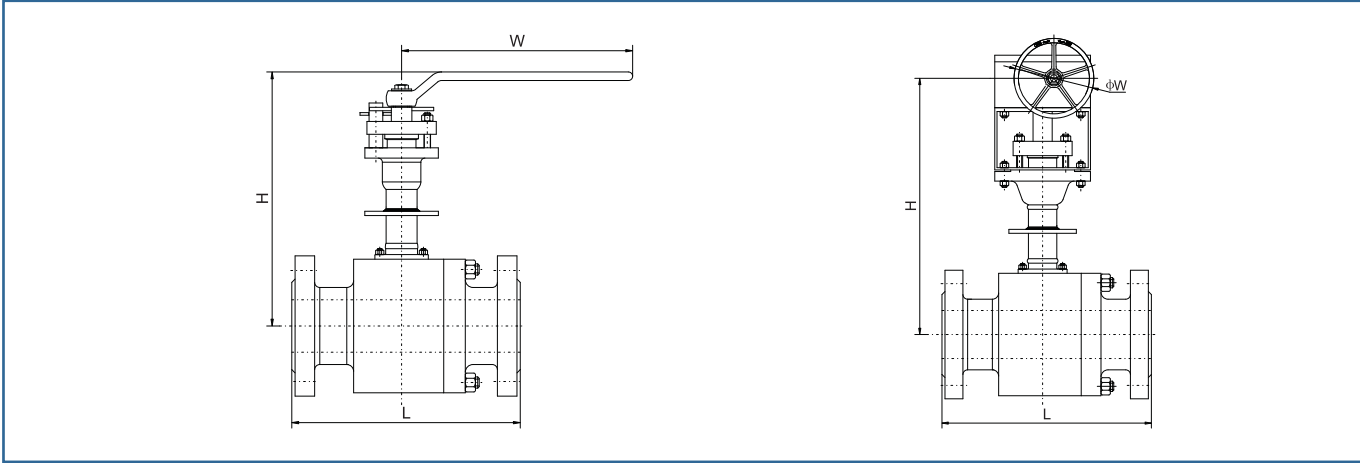


Class 150

| NPS    | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"     | 4"     | 6"     | 8"     |
|--------|----|------|------|-----|--------|-----|--------|--------|--------|--------|
| DN     | mm | 15   | 20   | 25  | 40     | 50  | 80     | 100    | 150    | 200    |
| L(RF)  | mm | 108  | 117  | 127 | 165    | 178 | 203    | 229    | 394    | 457    |
| H      | mm | 326  | 336  | 343 | 416    | 432 | 508    | 602    | 739    | 783    |
| W      | mm | 165  | 215  | 215 | 350    | 430 | 815(T) | 815(T) | 500(G) | 500(G) |
| WT(RF) | KG | 4    | 5    | 7   | 16     | 22  | 43     | 62     | 180    | 289    |

Class 300

| NPS    | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"     | 4"     | 6"     | 8"     |
|--------|----|------|------|-----|--------|-----|--------|--------|--------|--------|
| DN     | mm | 15   | 20   | 25  | 40     | 50  | 80     | 100    | 150    | 200    |
| L(RF)  | mm | 140  | 152  | 165 | 191    | 216 | 283    | 305    | 403    | 502    |
| H      | mm | 328  | 340  | 347 | 420    | 439 | 516    | 615    | 789    | 843    |
| W      | mm | 165  | 215  | 215 | 350    | 430 | 815(T) | 815(T) | 500(G) | 500(G) |
| WT(RF) | KG | 5    | 6    | 8   | 18     | 24  | 51     | 79     | 212    | 386    |

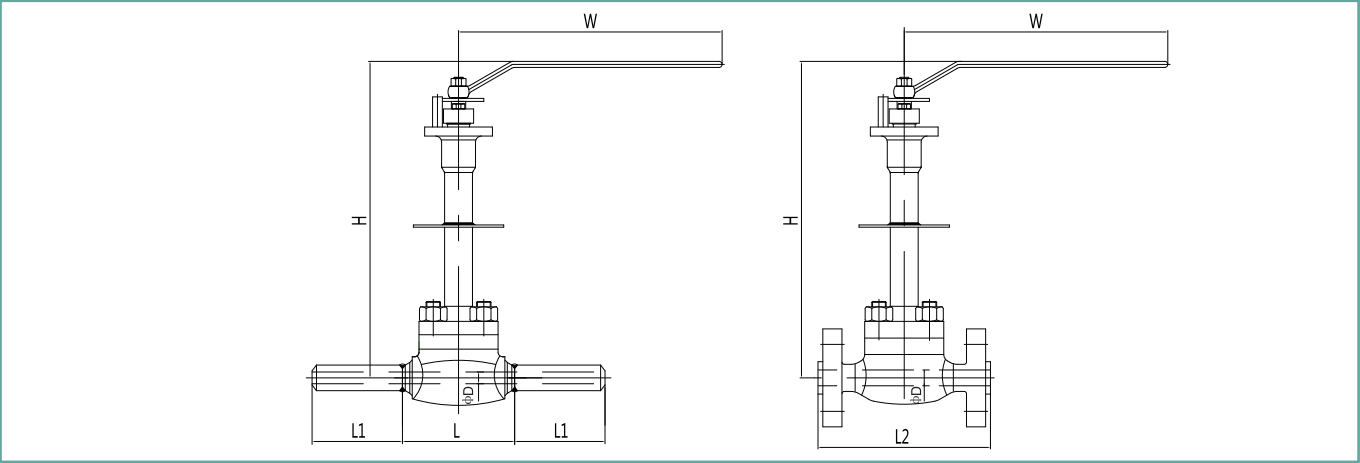
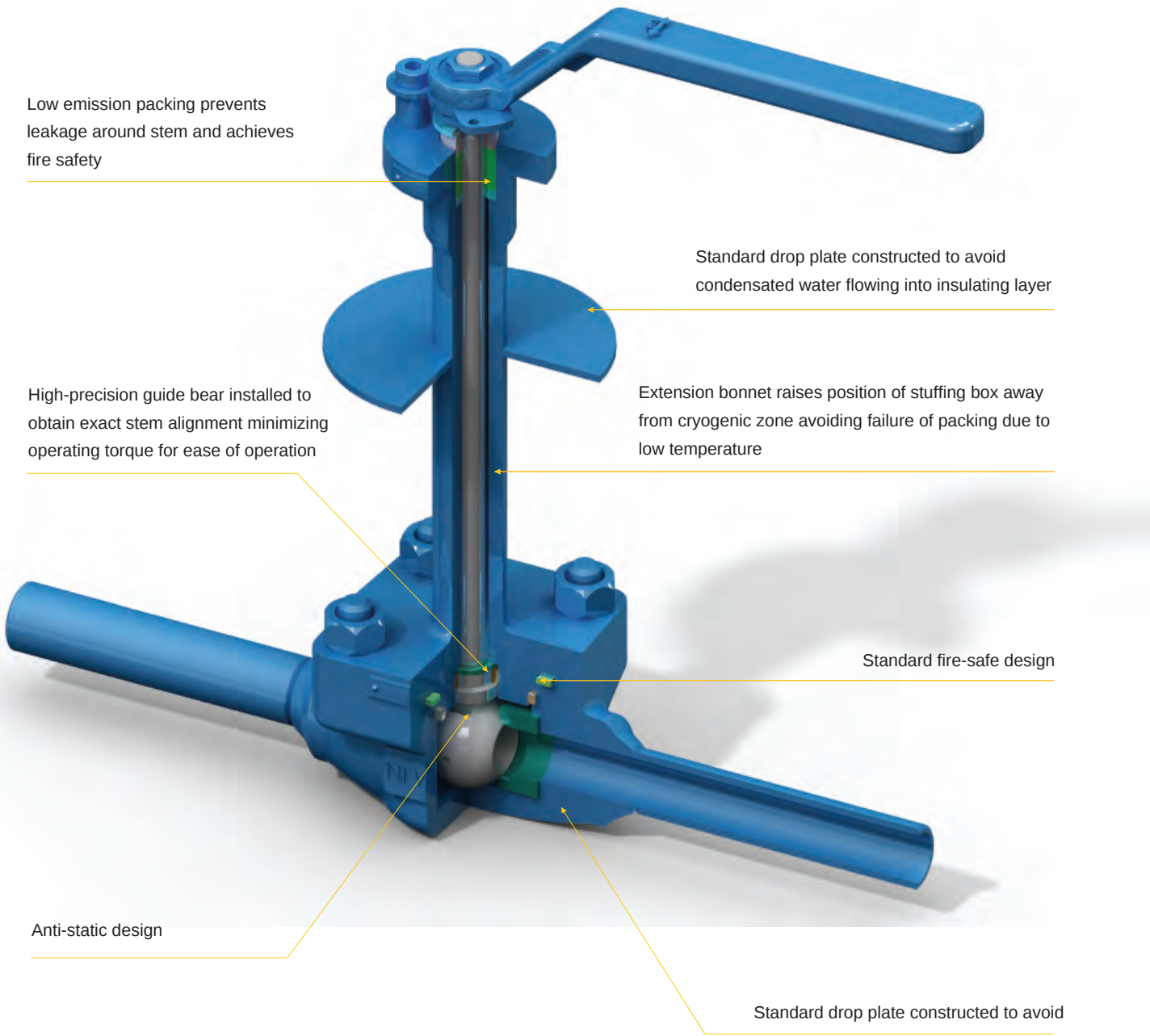


Class 600

| NPS    | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"     | 3"     |
|--------|----|------|------|-----|--------|--------|--------|
| DN     | mm | 15   | 20   | 25  | 40     | 50     | 80     |
| L(RF)  | mm | 165  | 191  | 216 | 241    | 292    | 356    |
| H      | mm | 337  | 347  | 361 | 423    | 510    | 652    |
| W      | mm | 215  | 215  | 350 | 600    | 300(G) | 400(G) |
| WT(RF) | KG | 8    | 9    | 15  | 27     | 52     | 82     |

Class 900 / 1500

| NPS     | in | 1/2" | 3/4"   | 1"     | 1-1/2" | 2"     |
|---------|----|------|--------|--------|--------|--------|
| DN      | mm | 15   | 20     | 25     | 40     | 50     |
| L(RF)   | mm | 216  | 229    | 254    | 305    | 368    |
| H       | mm | 354  | 369    | 400    | 482    | 579    |
| W       | mm | 215  | 150(G) | 203(G) | 300(G) | 400(G) |
| WT(RTJ) | KG | 15   | 22     | 33     | 63     | 96     |



Class 150 / 300 / 600

| NPS    | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"   |
|--------|----|------|------|-----|--------|-----|------|
| DN     | mm | 15   | 20   | 25  | 40     | 50  | 80   |
| L      | mm | 140  | 140  | 152 | 161    | 216 | 283  |
| L1     | mm | 100  | 100  | 100 | 100    | 100 | 100  |
| L2(RF) | mm | 165  | 191  | 216 | 241    | 292 | 356  |
| H      | mm | 330  | 330  | 350 | 430    | 440 | 550  |
| W      | mm | 215  | 215  | 350 | 350    | 430 | 430* |
| WT(RF) | KG | 8.5  | 8.5  | 12  | 28     | 43  | 96   |
| WT(BW) | KG | 8    | 8    | 11  | 25     | 40  | 87   |

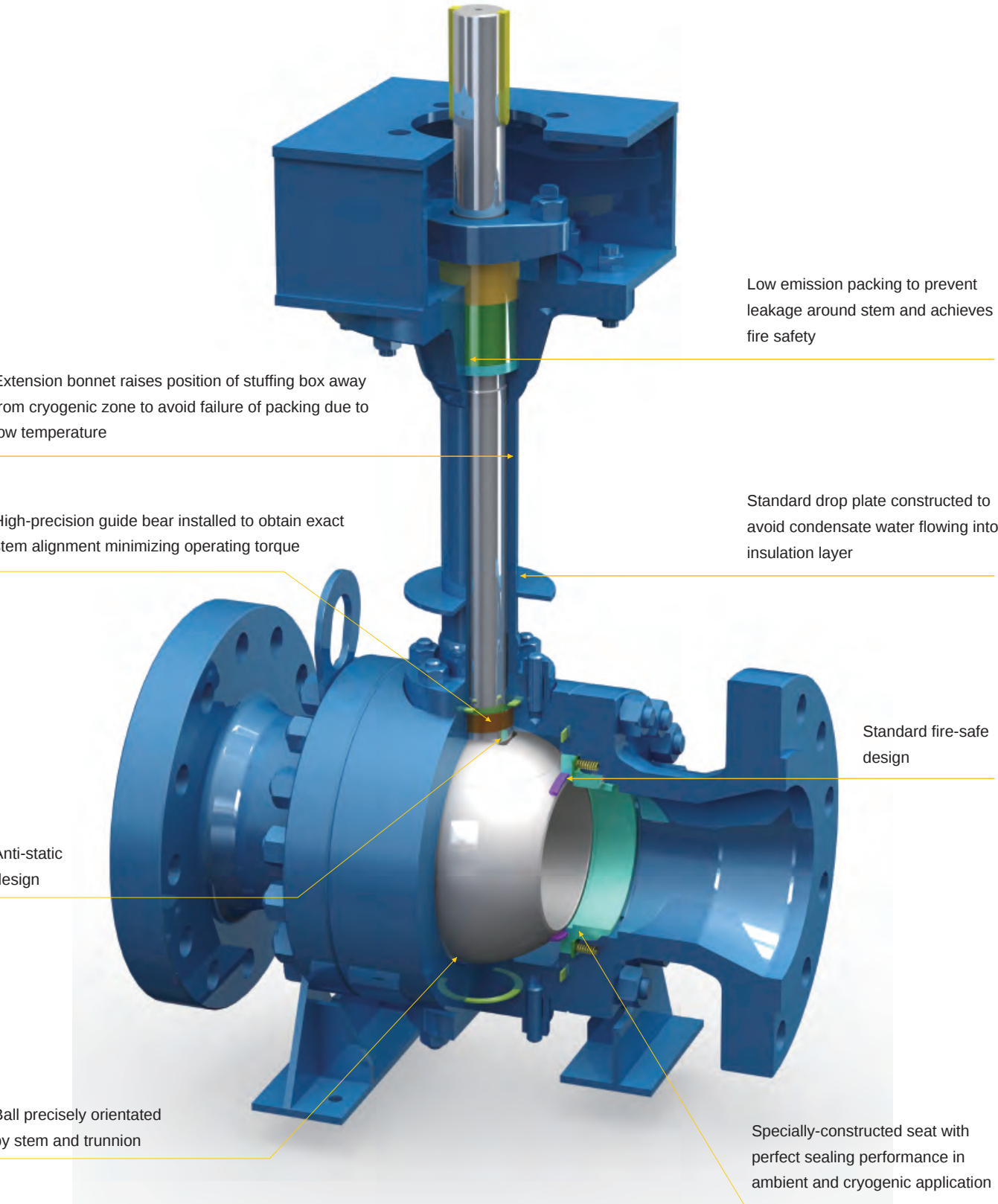
Class 900 / 1500

| NPS     | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  |
|---------|----|------|------|-----|--------|-----|
| DN      | mm | 15   | 20   | 25  | 40     | 50  |
| L       | mm | 216  | 229  | 254 | 305    | 368 |
| L1      | mm | 100  | 100  | 100 | 100    | 100 |
| L2(RTJ) | mm | 216  | 229  | 254 | 305    | 368 |
| H       | mm | 435  | 435  | 480 | 510    | 550 |
| W       | mm | 350  | 350  | 430 | 500    | 600 |
| WT(RTJ) | KG | 17   | 17   | 28  | 46     | 100 |
| WT(BW)  | KG | 15   | 15   | 24  | 41     | 90  |

BSG series Cryogenic Ball Valve

Pivot structure

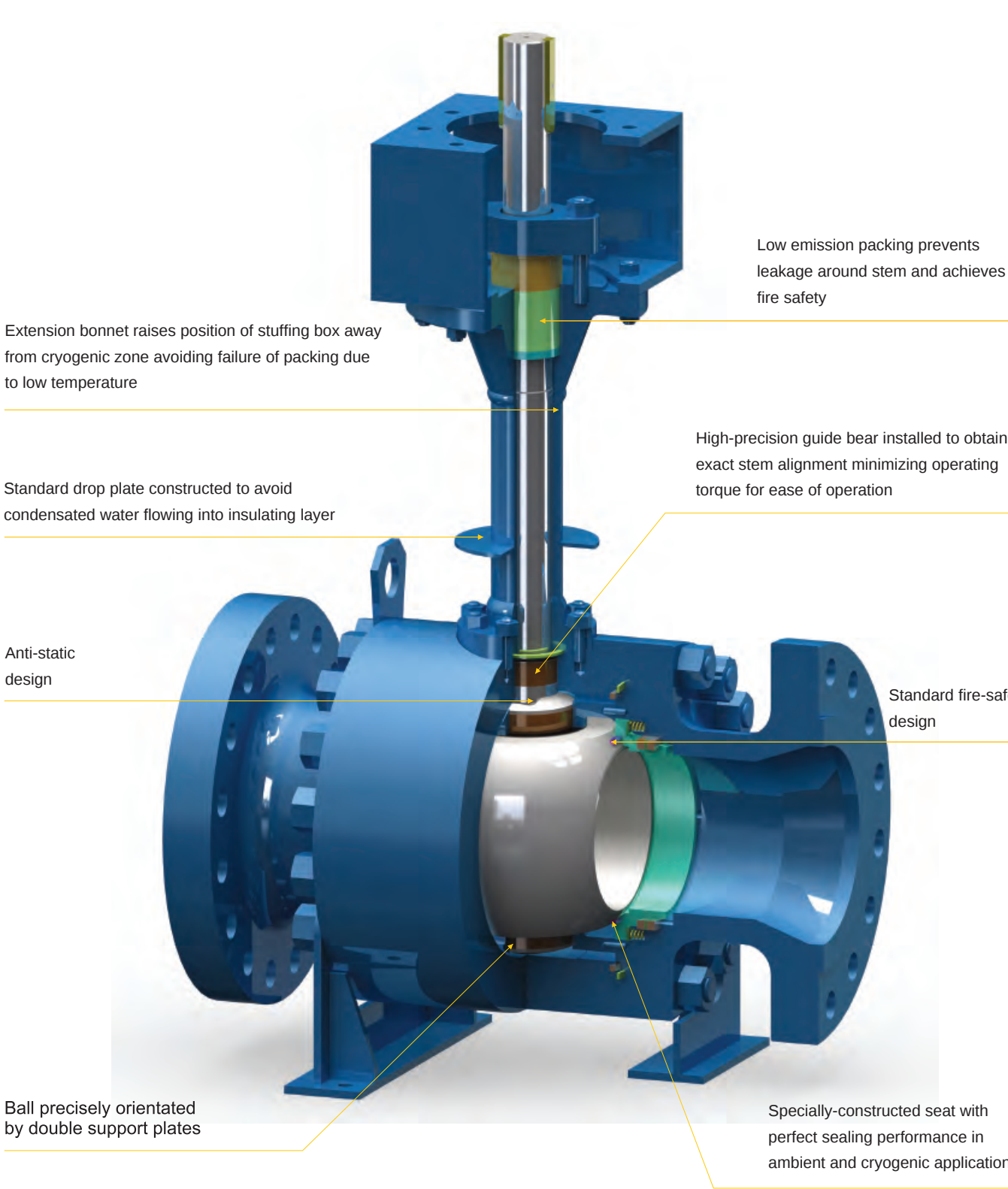
Design Features

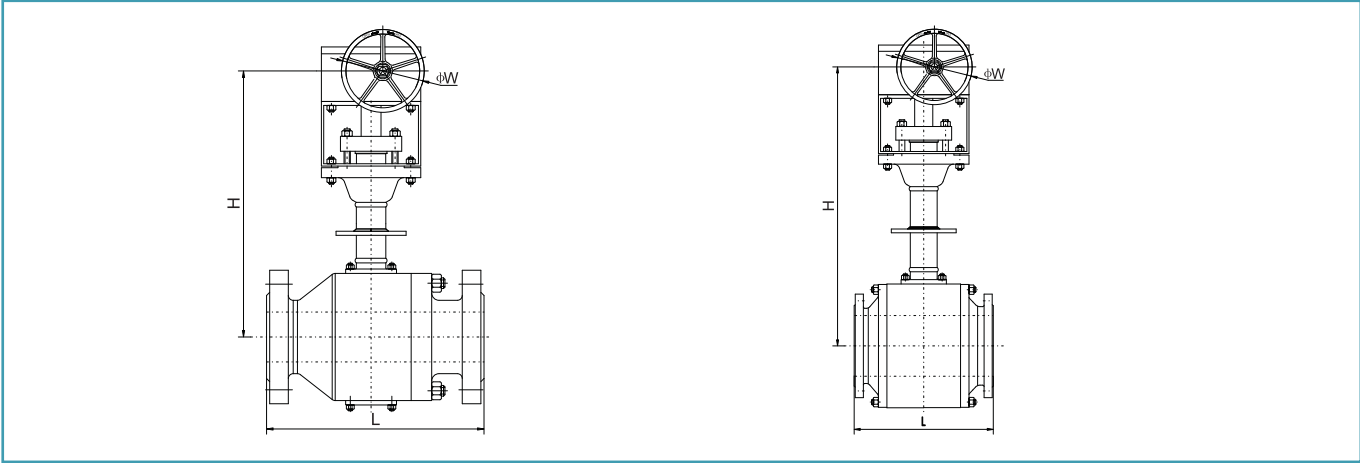


Design Feature

BSG series Cryogenic Ball Valve

Pivot structure



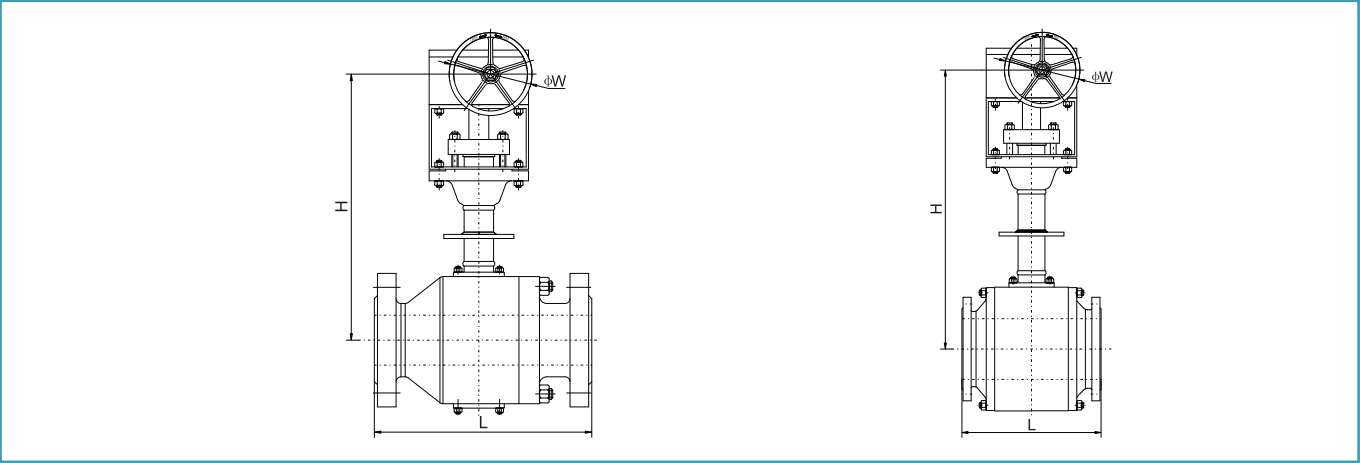


Class 150

| NPS    | in | 2"  | 3"  | 4"  | 6"  | 8"  | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|--------|----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| DN     | mm | 50  | 80  | 100 | 150 | 200 | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RF)  | mm | 178 | 203 | 229 | 394 | 457 | 533  | 610  | 686  | 762  | 864  | 914  | 991  | 1067 |
| L(BW)  | mm | 216 | 283 | 305 | 457 | 521 | 559  | 635  | 762  | 838  | 914  | 991  | 1067 | 1143 |
| H      | mm | 472 | 591 | 669 | 847 | 948 | 1034 | 1068 | 1154 | 1186 | 1810 | 2020 | 2170 | 2470 |
| W      | mm | 300 | 300 | 500 | 600 | 600 | 600  | 600  | 700  | 760  | 800  | 900  | 900  | 900  |
| WT(RF) | KG | 45  | 105 | 130 | 260 | 398 | 570  | 923  | 1380 | 1935 | 2295 | 3570 | 5040 | 6240 |
| WT(BW) | KG | 42  | 100 | 122 | 248 | 378 | 540  | 879  | 1320 | 1857 | 2200 | 3446 | 4880 | 6051 |

Class 300

| NPS    | in | 2"  | 3"  | 4"  | 6"  | 8"  | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|--------|----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| DN     | mm | 50  | 80  | 100 | 150 | 200 | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RF)  | mm | 216 | 283 | 305 | 403 | 502 | 568  | 648  | 762  | 838  | 914  | 991  | 1092 | 1143 |
| L(BW)  | mm | 216 | 283 | 305 | 403 | 502 | 568  | 648  | 762  | 838  | 914  | 991  | 1092 | 1143 |
| H      | mm | 472 | 591 | 669 | 847 | 948 | 1034 | 1068 | 1154 | 1186 | 1810 | 2020 | 2170 | 2470 |
| W      | mm | 300 | 300 | 500 | 600 | 600 | 600  | 600  | 700  | 760  | 800  | 900  | 900  | 900  |
| WT(RF) | KG | 50  | 111 | 144 | 286 | 613 | 719  | 1096 | 1385 | 1940 | 2300 | 3575 | 5045 | 6245 |
| WT(BW) | KG | 49  | 109 | 141 | 280 | 604 | 706  | 1077 | 1359 | 1906 | 2258 | 3525 | 4985 | 6174 |



Class 600

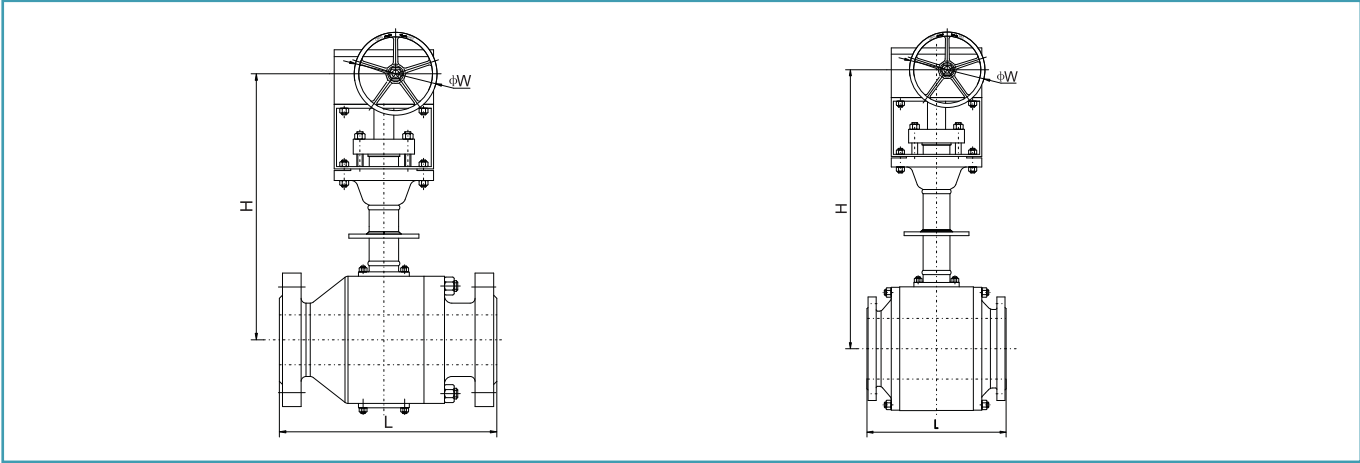
| NPS    | in | 2"  | 3"  | 4"  | 6"  | 8"  | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|--------|----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| DN     | mm | 50  | 80  | 100 | 150 | 200 | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RF)  | mm | 292 | 356 | 432 | 559 | 660 | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| L(BW)  | mm | 292 | 356 | 432 | 559 | 660 | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| H      | mm | 472 | 591 | 669 | 853 | 977 | 1046 | 1108 | 1184 | 1226 | 1840 | 2050 | 2200 | 2500 |
| W      | mm | 300 | 500 | 500 | 600 | 600 | 760  | 760  | 760  | 760  | 800  | 900  | 900  | 900  |
| WT(RF) | KG | 60  | 116 | 196 | 359 | 719 | 987  | 1370 | 1674 | 1950 | 2310 | 3585 | 5055 | 6255 |
| WT(BW) | KG | 55  | 106 | 175 | 319 | 669 | 900  | 1260 | 1343 | 1760 | 2080 | 3305 | 4745 | 5883 |

Class 900

| NPS     | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"  | 4"  | 6"  | 8"   | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"   | 24"  |
|---------|----|------|------|-----|--------|-----|-----|-----|-----|------|------|------|------|------|------|------|-------|------|
| DN      | mm | 15   | 20   | 25  | 40     | 50  | 80  | 100 | 150 | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550   | 600  |
| L(RTJ)  | mm | 216  | 229  | 254 | 305    | 368 | 381 | 457 | 610 | 737  | 838  | 965  | 1029 | 1130 | 1219 | 1321 | 1435* | 1549 |
| L(BW)   | mm | 216  | 229  | 254 | 305    | 368 | 381 | 457 | 610 | 737  | 838  | 965  | 1029 | 1130 | 1219 | 1321 | 1435* | 1549 |
| H       | mm | 460  | 460  | 460 | 500    | 500 | 630 | 687 | 890 | 1084 | 1144 | 1300 | 1550 | 1800 | 2060 | 2400 | 2650  | 2940 |
| W       | mm | 200  | 200  | 200 | 300    | 500 | 500 | 600 | 600 | 760  | 760  | 800  | 800  | 800  | 900  | 900  | 900   | 900  |
| WT(RTJ) | KG | 18   | 25   | 35  | 63     | 165 | 277 | 618 | 745 | 1045 | 1562 | 1760 | 2266 | 2965 | 3380 | 5470 | 6750  | 7940 |
| WT(BW)  | KG | 16   | 21   | 31  | 58     | 154 | 262 | 595 | 715 | 960  | 1425 | 1580 | 1960 | 2720 | 3070 | 5080 | 6180  | 7265 |

BSG series Cryogenic Ball Valve

Dimension & Weight

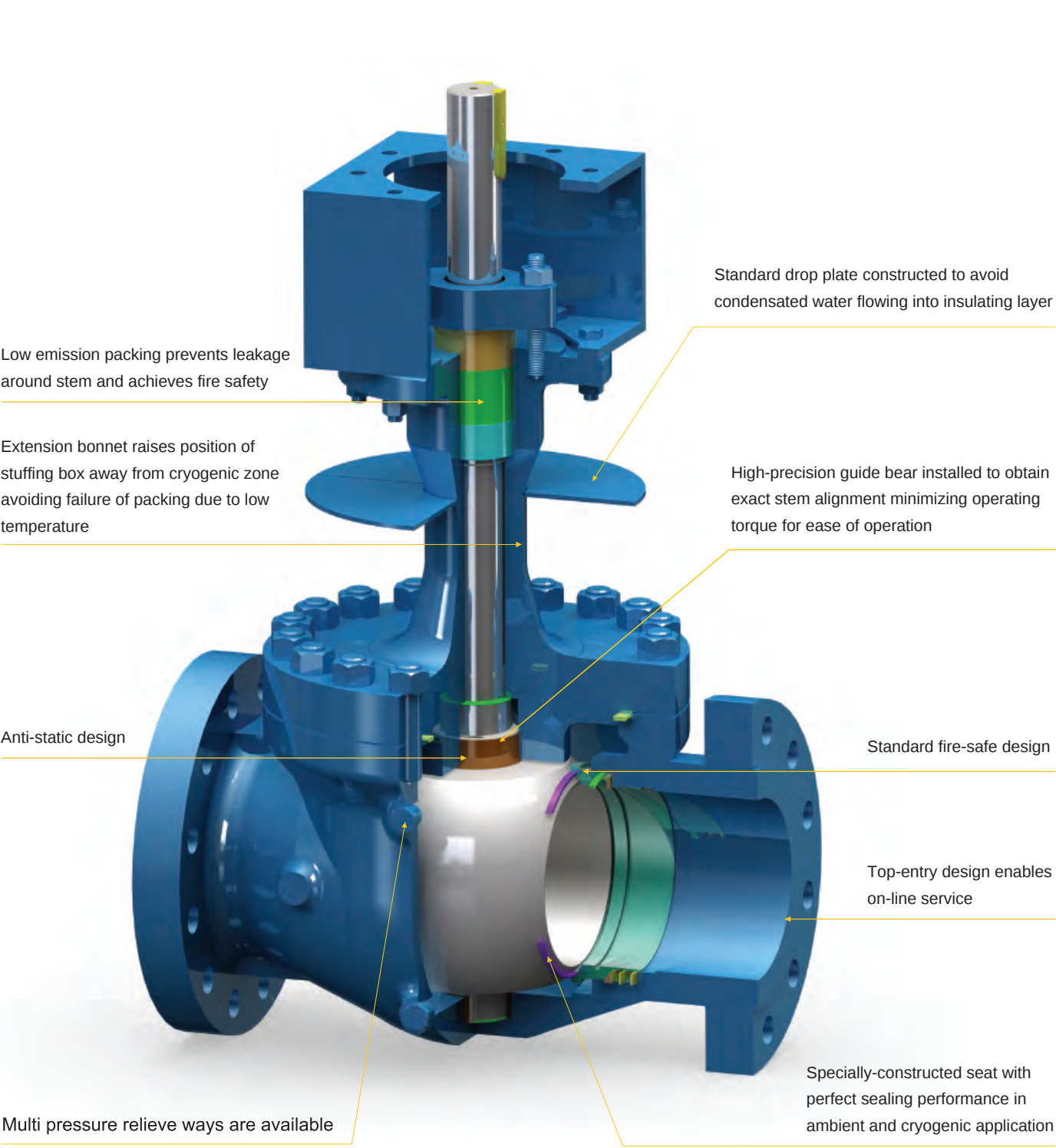


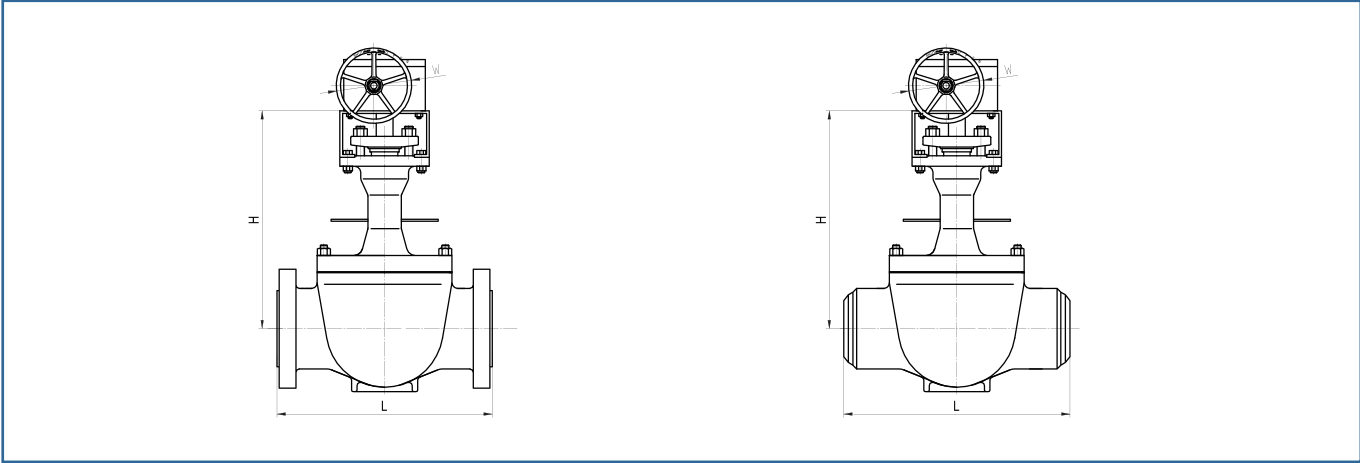
Class 1500

| NPS     | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"  | 4"  | 6"  | 8"   | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|---------|----|------|------|-----|--------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| DN      | mm | 15   | 20   | 25  | 40     | 50  | 80  | 100 | 150 | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RTJ)  | mm | 216  | 229  | 254 | 305    | 368 | 470 | 546 | 705 | 832  | 991  | 1130 | 1257 | 1384 | 1537 | 1664 | 1803 | 1943 |
| L(BW)   | mm | 216  | 229  | 254 | 305    | 371 | 473 | 549 | 711 | 841  | 1000 | 1146 | 1276 | 1407 | 1537 | 1664 | 1803 | 1943 |
| H       | mm | 500  | 500  | 500 | 520    | 650 | 700 | 730 | 860 | 1020 | 1500 | 1590 | 1680 | 1890 | 1925 | 2175 | 2425 | 2680 |
| W       | mm | 300  | 300  | 300 | 500    | 600 | 500 | 600 | 600 | 760  | 760  | 900  | 900  | 900  | 1000 | 1000 | 1000 | 1000 |
| WT(RTJ) | KG | 18   | 25   | 35  | 63     | 70  | 140 | 220 | 790 | 1120 | 1620 | 2950 | 3185 | 3850 | 5135 | 6180 | 7986 | 9675 |
| WT(BW)  | KG | 16   | 22   | 31  | 57     | 50  | 105 | 178 | 660 | 912  | 1264 | 2415 | 2470 | 2921 | 3880 | 4662 | 6010 | 7181 |

Dimension & Weight

Cast Steel Cryogenic Globe Valve



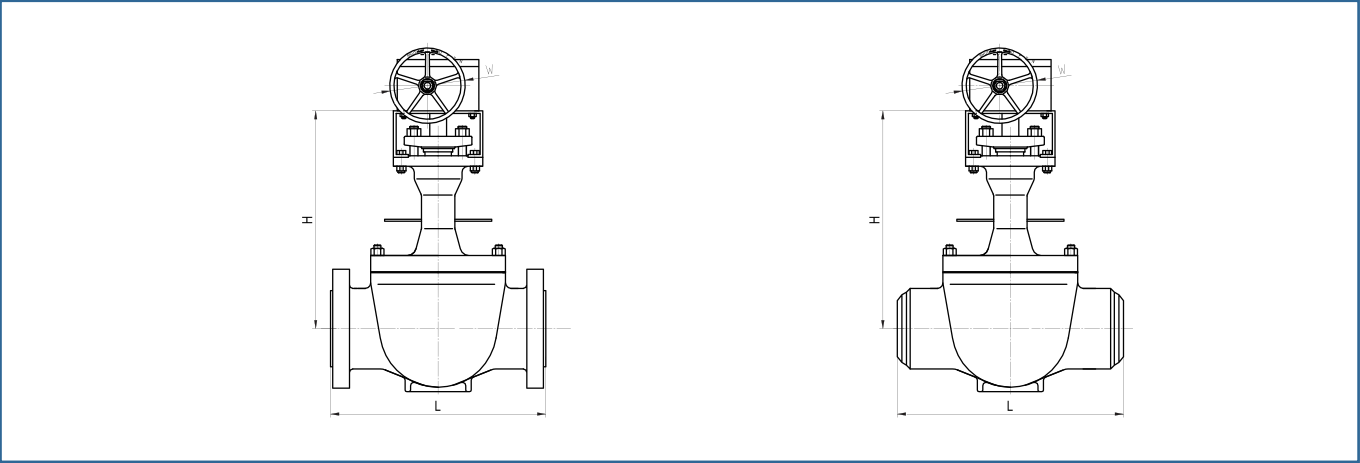


Class 150

| NPS    | in | 1/2" | 3/4" | 1"   | 1-1/2" | 2"  | 3"  | 4"  | 6"  | 8"   | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|--------|----|------|------|------|--------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| DN     | mm | 15   | 20   | 25   | 40     | 50  | 80  | 100 | 150 | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RF)  | mm | 165  | 191  | 216  | 241    | 292 | 356 | 432 | 559 | 660  | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| L(BW)  | mm | 165  | 191  | 216  | 241    | 292 | 356 | 432 | 559 | 660  | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| H      | mm | 420  | 420  | 420  | 450    | 454 | 580 | 650 | 797 | 1004 | 1050 | 1100 | 1190 | 1230 | 1870 | 2100 | 2240 | 2550 |
| W      | mm | 350* | 350* | 350* | 300    | 300 | 300 | 500 | 600 | 600  | 600  | 600  | 700  | 760  | 800  | 900  | 900  | 900  |
| WT(RF) | KG | 31   | 32   | 36   | 45     | 49  | 95  | 160 | 292 | 584  | 801  | 1030 | 1535 | 2150 | 2550 | 3970 | 5600 | 6940 |
| WT(BW) | KG | 30   | 30   | 34   | 42     | 46  | 89  | 152 | 280 | 566  | 776  | 990  | 1483 | 2085 | 2475 | 3880 | 5495 | 6820 |

Class 300

| NPS    | in | 1/2" | 3/4" | 1"   | 1-1/2" | 2"  | 3"  | 4"    | 6"  | 8"   | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|--------|----|------|------|------|--------|-----|-----|-------|-----|------|------|------|------|------|------|------|------|------|
| DN     | mm | 15   | 20   | 25   | 40     | 50  | 80  | 100   | 150 | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RF)  | mm | 165  | 191  | 216  | 241    | 292 | 356 | 432   | 559 | 660  | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| L(BW)  | mm | 165  | 191  | 216  | 241    | 292 | 356 | 432   | 559 | 660  | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| H      | mm | 420  | 420  | 420  | 450    | 454 | 580 | 650   | 797 | 1004 | 1050 | 1100 | 1190 | 1230 | 1870 | 2100 | 2240 | 2550 |
| W      | mm | 350* | 350* | 350* | 300    | 300 | 300 | 500   | 600 | 600  | 600  | 600  | 700  | 760  | 800  | 900  | 900  | 900  |
| WT(RF) | KG | 31   | 32   | 37   | 48     | 52  | 98  | 168.5 | 308 | 616  | 845  | 1220 | 1540 | 2160 | 2560 | 3980 | 5610 | 6940 |
| WT(BW) | KG | 30   | 30   | 34   | 42     | 48  | 90  | 156.5 | 288 | 585  | 801  | 1155 | 1451 | 2047 | 2420 | 3812 | 5408 | 6704 |



Class 600

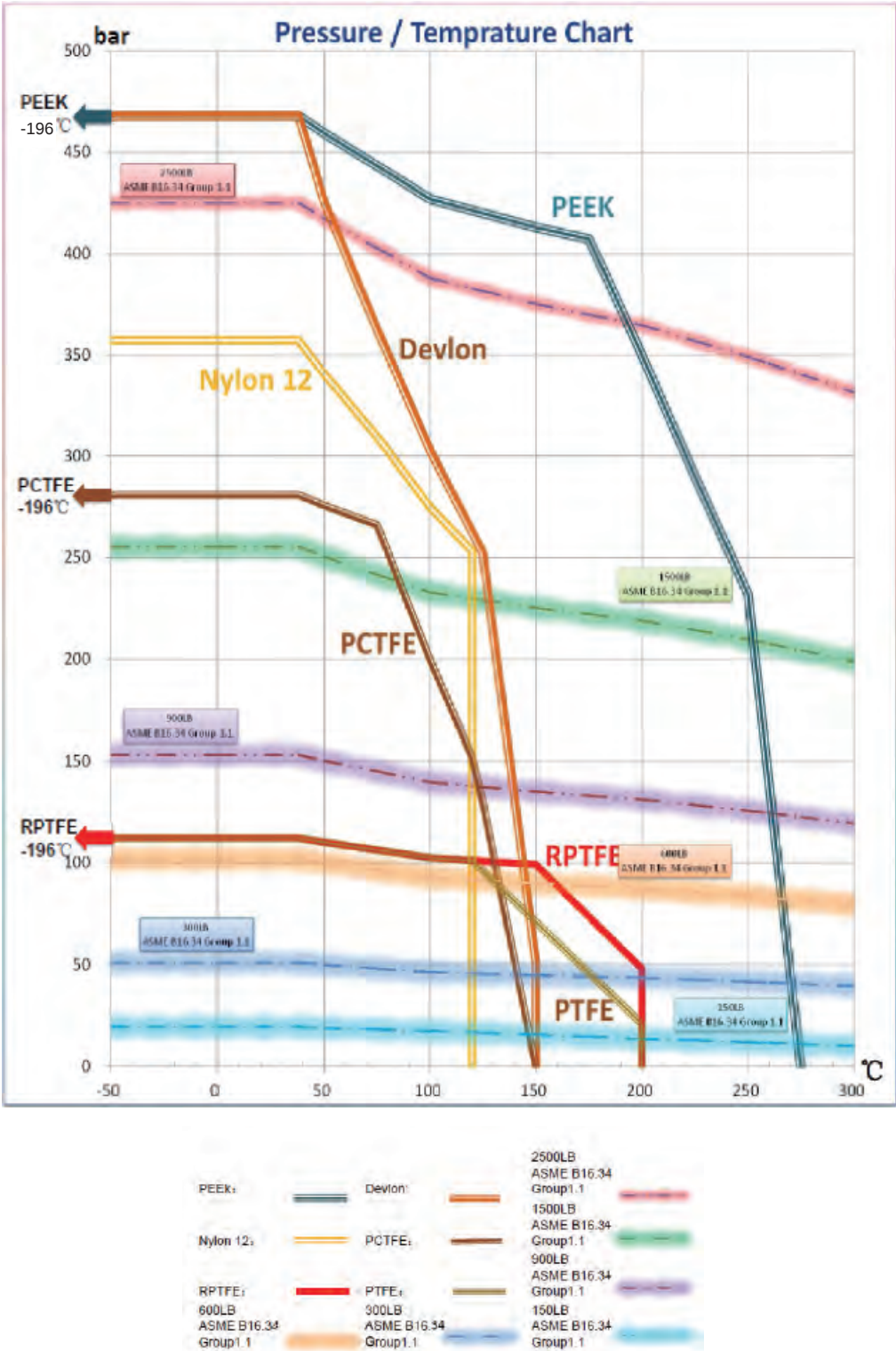
| NPS    | in | 1/2" | 3/4" | 1"   | 1-1/2" | 2"  | 3"  | 4"  | 6"  | 8"   | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|--------|----|------|------|------|--------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| DN     | mm | 15   | 20   | 25   | 40     | 50  | 80  | 100 | 150 | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RF)  | mm | 165  | 191  | 216  | 241    | 292 | 356 | 432 | 559 | 660  | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| L(BW)  | mm | 165  | 191  | 216  | 241    | 292 | 356 | 432 | 559 | 660  | 787  | 838  | 889  | 991  | 1092 | 1194 | 1295 | 1397 |
| H      | mm | 420  | 420  | 420  | 450    | 454 | 580 | 650 | 801 | 1034 | 1100 | 1150 | 1220 | 1265 | 1900 | 2120 | 2270 | 2580 |
| W      | mm | 350* | 350* | 350* | 300    | 300 | 500 | 500 | 600 | 600  | 760  | 760  | 760  | 760  | 800  | 900  | 900  | 900  |
| WT(RF) | KG | 31   | 34   | 38   | 45     | 54  | 105 | 177 | 324 | 648  | 889  | 1525 | 1860 | 2170 | 2570 | 3985 | 5620 | 5950 |
| WT(BW) | KG | 30   | 30   | 34   | 40     | 49  | 95  | 160 | 286 | 597  | 801  | 1420 | 1735 | 1990 | 2350 | 3715 | 5300 | 5578 |

Class 900

| NPS     | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"  | 4"  | 6"  | 8"  | 10" | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"  |
|---------|----|------|------|-----|--------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| DN      | mm | 15   | 20   | 25  | 40     | 50  | 80  | 100 | 150 | 200 | 250 | 300  | 350  | 400  | 450  | 500  | 550  | 600  |
| L(RTJ)  | mm | 216  | 229  | 254 | 305    | 368 | 381 | 457 | 610 | 737 | 838 | 965  | 1029 | 1130 | 1219 | 1321 | 1435 | 1549 |
| L(BW)   | mm | 216  | 229  | 254 | 305    | 368 | 381 | 457 | 610 | 737 | 838 | 965  | 1029 | 1130 | 1219 | 1321 | 1435 | 1549 |
| H       | mm | 440  | 440  | 440 | 480    | 520 | 580 | 650 | 730 | 810 | 910 | 1000 | 1130 | 1260 | 1980 | 2220 | 2370 | 2680 |
| W       | mm | 200  | 200  | 200 | 300    | 500 | 500 | 600 | 600 | 760 | 760 | 800  | 800  | 800  | 900  | 900  | 900  | 900  |
| WT(RTJ) | KG | 40   | 45   | 46  | 55     | 68  | 135 | 220 | 450 | 690 | 950 | 1720 | 2113 | 2458 | 3614 | 4259 | 5835 | 7608 |
| WT(BW)  | KG | 38   | 42   | 42  | 50     | 63  | 125 | 203 | 412 | 639 | 870 | 1615 | 1990 | 2283 | 3395 | 3980 | 5315 | 7238 |

Class 1500

| NPS     | in | 1/2" | 3/4" | 1"  | 1-1/2" | 2"  | 3"  | 4"  | 6"  | 8"   | 10"  | 12"  | 14"  | 16"  | 18"  | 20"  | 22"  | 24"   |
|---------|----|------|------|-----|--------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|-------|
| DN      | mm | 15   | 20   | 25  | 40     | 50  | 80  | 100 | 150 | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600   |
| L(RTJ)  | mm | 216  | 229  | 254 | 305    | 368 | 470 | 546 | 705 | 832  | 991  | 1130 | 1257 | 1384 | 1537 | 1664 | 1800 | 1950  |
| L(BW)   | mm | 216  | 229  | 254 | 305    | 371 | 473 | 549 | 711 | 841  | 1000 | 1146 | 1276 | 1407 | 1559 | 1686 | 1829 | 1972  |
| H       | mm | 500  | 500  | 500 | 550    | 600 | 650 | 700 | 850 | 1000 | 1290 | 1350 | 1500 | 1690 | 2180 | 2430 | 2610 | 2810  |
| W       | mm | 300  | 300  | 300 | 500    | 600 | 500 | 600 | 600 | 760  | 760  | 900  | 900  | 900  | 1000 | 1000 | 1000 | 1000  |
| WT(RTJ) | KG | 43   | 48   | 50  | 55     | 68  | 150 | 250 | 580 | 850  | 1395 | 2070 | 2850 | 3670 | 5686 | 6637 | 8565 | 11530 |
| WT(BW)  | KG | 40   | 45   | 45  | 50     | 48  | 114 | 195 | 150 | 638  | 1040 | 1535 | 2138 | 3745 | 4450 | 5120 | 6590 | 9040  |



Note: Other materials are available upon request.  
If the operating condition is beyond the range above, please contact NEWAY's technical team.  
NEWAY reserves the right to update without notice.

Seat

| Properties           |                              | PCTFE                       | PTFE                        | PEEK                        |
|----------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Temperature Range °F |                              | -328~302                    | -328~302                    | -320.8~500                  |
| Temperature Range °C |                              | -200~150                    | -200~150                    | -196~260                    |
| Pressure Rating--LB  |                              | 150~1500                    | 150~1500                    | 150~2500                    |
| Mechanical Property  | Hardness (D)                 | 75~85                       | 75~85                       | ≥82                         |
|                      | Tensile Strength(MPa)        | 31.4~37.2                   | 31.4~37.2                   | ≥95                         |
|                      | Tensile Elongation(Break, %) | 50~200                      | 50~200                      | ≥55                         |
| Physical Property    | Specific Gravity (g/cm3)     | 2.11~2.16                   | 2.11~2.16                   | 1.3~1.4                     |
|                      | Water Absorption 24hrs(%)    | 0.00                        | 0.00                        | 0.2                         |
|                      | Water Absorption Saturation  | <0.01                       | <0.01                       | 0.5                         |
| Service Application  |                              | Cryogenic & Low Temperature | Cryogenic & Low Temperature | High Pressure & Temperature |

Seal Ring

| Type                 | Spring Seal Structure |
|----------------------|-----------------------|
| Temperature Range °F | -425~600              |
| Temperature Range °C | -254~316              |
| Pressure Rating--LB  | 150~1500              |
| Size--inch           | 1/2"~78"              |

Flow Coefficient (Cv Value)

| Size (inch) | Class 150 | Class 300 | Class 600 | Class 900 | Class 1500 |
|-------------|-----------|-----------|-----------|-----------|------------|
| 1/2         | 17        | 15        | 14        | 12        | 12         |
| 3/4         | 43        | 38        | 34        | 31        | 31         |
| 1           | 86        | 76        | 66        | 61        | 61         |
| 1-1/2       | 227       | 211       | 187       | 167       | 167        |
| 2           | 423       | 384       | 330       | 294       | 294        |
| 3           | 1139      | 965       | 860       | 832       | 749        |
| 4           | 2416      | 2093      | 1759      | 1710      | 1564       |
| 6           | 5241      | 5183      | 4400      | 4212      | 3918       |
| 8           | 10471     | 9991      | 8713      | 8245      | 6921       |
| 10          | 17709     | 17154     | 14573     | 14123     | 11376      |
| 12          | 26241     | 25460     | 22389     | 20864     | 16835      |
| 14          | 32857     | 31176     | 28863     | 24483     | 20967      |
| 16          | 44474     | 42409     | 38998     | 33741     | 27901      |
| 18          | 57002     | 55420     | 50703     | 44491     | 35761      |
| 20          | 73076     | 70180     | 63936     | 55915     | 45445      |
| 22          | 88907     | 85757     | 78750     | -         | -          |
| 24          | 113639    | 109796    | 99314     | -         | -          |

Notes:  
1.All the sizes are of full port.  
2.Pressure Ratings are according to B 16.34.  
3.MDMT as per ASME B31.3.  
4.Part of design standard refer to SPE 77/200,BS 6364, ASME B16.34 and relevant API/ ASME/ ISO standard.  
5.Method of Calculating Flow  
The Flow Coefficient Cv of a value is the flow rate of water (gallons/minute) through a fully opened valve, with a pressure drop of 1 psi across the valve. To find the flow of liquid through the valve from the Cv, use the following formulas:  
  
Liquid Flow:  
 $Q_L = C_v (P/G)^{1/2}$   
 $Q_L$  = Flow rate of liquid (gal. /min.)  
 $P$ = differential pressure across the valve  
 $G$  = specific gravity of liquid (for water, G=1)  
  
Gas Flow:  
 $Q_g = 61C_v (P_2P/g)^{1/2}$   
(For non-critical flow,  $P/P_2 < 1.0$ )  
 $Q_g$  = Flow rate of gas (CFH at STP)  
 $P_2$  = outlet pressure (psia)  
 $g$  = specific gravity of gas (for air, g=1.0)

Neway has supplied cryogenic gate valves, cryogenic globe valves, cryogenic check valves, cryogenic ball valves, cryogenic butterfly valve, cryogenic control valves, SIS on off valves, molecular sieve switching valves for LNG industry since 2013. The valves meet BS6364, SHELL77/200、GB/T24925 standard. Until now, Neway has supplied some high end valves to customers including 56" cryogenic butterfly valve, 52" cryogenic gate valve, 24" Class 1500 cryogenic top entry on off valve, and hydrogen valve applied in -253°C,etc.



- 1 24" Class 1500 Top Entry Cryogenic Ball Valve
- 2 16" Class 150 Cryogenic ball valve for emergency release system(LNG)
- 3 12" Class 1500 Cryogenic Ball Valve
- 4 Top Entry Cryogenic Ball Valve
- 5 Pneumatic Emergency Shut Off Valve



Seller will replace without charge or refund the purchase price of products provided by Seller which prove to be defective in material or workmanship, provided in each case that the product is properly installed and is used in the service for which Seller recommends it and that written claim, specifying the alleged defect, is presented to the Seller within 18 months from the date of shipment or 12 months after installation, whichever occurs first. Seller shall in no event bear any labor, equipment, engineering or other costs incurred in connection with repair or replacement. The warranty stated in this paragraph is in lieu of all other warranties, either expressed or implied. With respect to warranties, this paragraph states Buyer's exclusive remedy and seller's exclusive liability.