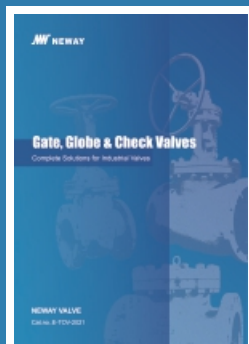
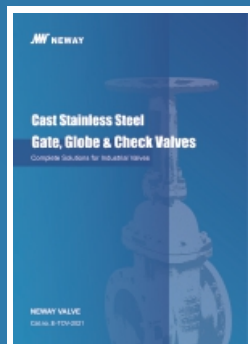




Cat.no.:E-PS



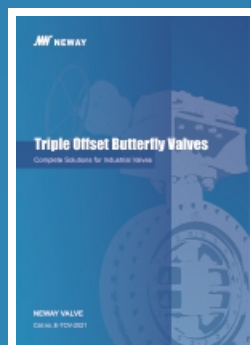
Cat.no.:E-GGC



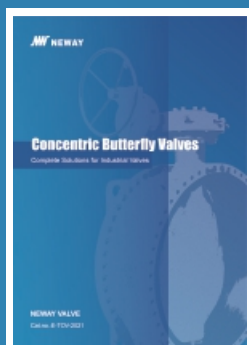
Cat.no.:E-CSS



Cat.no.:E-FSV



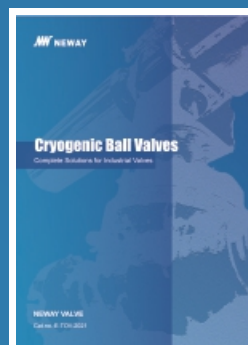
Cat.no.:TOBV



Cat.no.:E-CBV



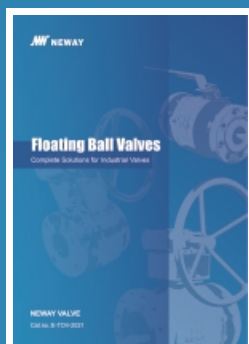
Cat.no.:E-CV



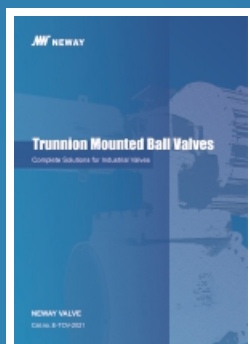
Cat.no.:E-CBV



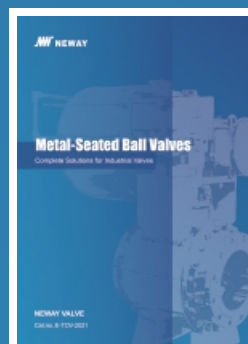
Cat.no.:E-FWBV



Cat.no.:E-FBV



Cat.no.:E-TMBV



Cat.no.:E-MSBV



NEWAY VALVE (SUZHOU) CO., LTD.

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

Post Code: 215129

Tel: 86-512-666-15637

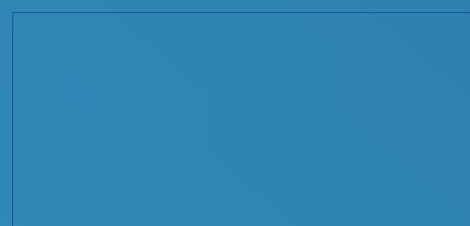
E-mail: overseas.sales@neway.com.cn

www.newayvalve.com



LinkedIn

Distributed by:



Cat.no.: E-SPV-2024



Sleeved Plug Valve

Complete Solutions for Industrial Valves



NEWAY VALVE

Cat.no.: E-SPV-2024

Table of Contents

Introduction

1 Quality Commitment

2~3 How To Order

Sleeved Plug Valve

4~7 Design Feature

8~9 Material Specification

10~11 Dimension & Weight

12~13 Engineering Data

14 Products Display

15 Neway Factory
Procut Warranty



Complete Solutions for Industrial Valves

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

Neway’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. Neway 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

Neway has developed a sophisticated multi-plant management system operating one valve assembly plant, one API6A valve plant, three foundries, and one R&D center. Our largest assembly plant was expanded in 2013, and it now covers 35,000 square meters.

Advanced software (ANSYS, FE-Safe, CF-Design, Siemens PLM and NX) is applied here at Neway 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 Neway’s global strategy, to provide better service to our customers, we have established our overseas subsidiaries in USA, Netherlands, Italy, Singapore, and Dubai along with over 80 agents and distributors worldwide.

Quality Assurance

Neway is dedicated to continuous improvement. We maintain a quality management system that encompasses our entire operation from order entry to final inspection. Through continuous efforts, Neway's products have successfully obtained industry certifications, including ASME UV & NB, NBBI, KGS, CE, CCS, and BV approvals.

Quality Commitment

Neway recognizes the importance of valve quality for the safety and protection of personnel heath and property. It is our quality commitment to focus our resources to provide our customers with first class products at a competitive price,that are designed, manufactured, inspected and tested in accordance with our customer's specifications and that comply with all international standards.

With respect to the facts that the 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 environment in which they operate. Our customers are requested to keep an open line of communication with our engineering department to identify and implement standards, that will provide valves with the possibility of deterioration in service, so as to ensure safety over the valves expected lifetime.



8

①

L

②

6

③

R

④

-

G

⑤

,

CF8M

⑥

/

45666

⑦

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

Following descriptions provide a basic guideline in valve specification:

① Valve Size

Full bore

| | | | | | | | | | | | | |
|----|-----|-----|-----|-------|-----|-------|-----|-----|-----|-----|-----|------|
| in | 1/2 | 3/4 | 1 | 1-1/2 | 2 | 2-1/2 | 3 | 4 | 6 | 8 | 10 | 12 |
| mm | 15 | 20 | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 |
| in | 14 | 16 | 18 | 20 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 40 |
| mm | 350 | 400 | 450 | 500 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 1000 |

Reduced bore

| | | | | | | | | | | | | | |
|----|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|-----------|-----------|
| in | 2*1-1/2 | 2-1/2*2 | 3*2 | 4*3 | 5*3 | 6*4 | 8*6 | 10*8 | 12*10 | 14*10 | 16*12 | 18*14 | 20*16 |
| mm | 50*40 | 65*50 | 80*50 | 100*80 | 125*80 | 150*100 | 200*150 | 250*200 | 300*250 | 350*250 | 400*300 | 450*350 | 500*400 |
| in | 22*18 | 24*20 | 26*20 | 28*24 | 30*24 | 32*26 | 34*28 | 36*30 | 38*32 | 40*34 | 42*36 | 46*40 | 48*42 |
| mm | 550*450 | 600*500 | 650*500 | 700*600 | 750*600 | 800*650 | 850*700 | 900*750 | 950*800 | 1000*850 | 1050*900 | 1150*1000 | 1200*1000 |

② Valve type

| Symbol | Valve type |
|--------|--------------------|
| L | Sleeved Plug Valve |

③ Class & Pressure

| Code | Class | Pressure (Mpa) |
|------|-------|----------------|
| 1 | 150 | 2 |
| 3 | 300 | 5 |
| 6 | 600 | 10 |

④ End Connection

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

⑤ Operator

| Symbol | Description | Symbol | Description |
|--------|--------------------|--------|-------------|
| L | Lever | BS | Bare shaft |
| G | Gear operator | | |
| M | Electric actuator | | |
| P | Pneumatic actuator | | |

⑥ Body Materials

| | | | | | | |
|----------|-------|--------|-------|---------|------|------|
| Spec.No. | Cz100 | M35-1 | M35-2 | M30H | M25S | M30C |
| Spec.No. | Cy40 | CW12MW | CW6M | N12MV | N7M | N3M |
| Spec.No. | CW2M | CW6MC | CX2MW | CU5MCuC | CX2M | |

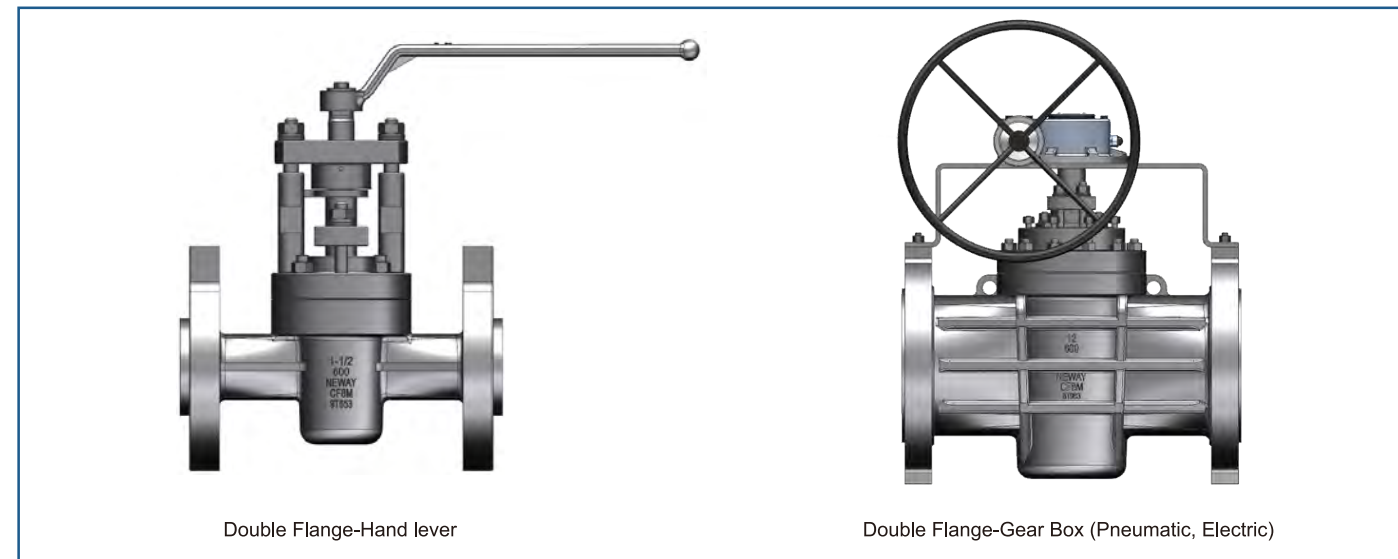
⑦ Trim Codes

| Sleeve Materials | | Stem Materials | | Plug Materials | |
|------------------|-------|----------------|------------|----------------|----------|
| 1 | PTFE | Z1 | CF8 | Z1 | CF8 |
| 2 | RPTFE | Z2 | CF8M | Z2 | CF8M |
| | | Z3 | CF3 | Z3 | CF3 |
| | | Z4 | CF3M | Z4 | CF3M |
| | | Z5 | 4A | Z5 | 4A |
| | | Z6 | CW6MC | Z6 | CW6MC |
| | | Z7 | CT15C | Z7 | CT15C |
| | | 14 | 17-4PH | 56 | H.B3 |
| | | 21 | F321 | 62 | H.C276 |
| | | 22 | F304 | 63 | ALLOY 20 |
| | | 24 | F316LN-MOD | 64 | H.B2 |
| | | 25 | F316Ti | 65 | B381 F5 |
| | | 26 | F316/F316L | 69 | 904L |
| | | 30 | F304/F304L | | |
| | | 2X | FXM-19 | | |
| | | 40 | F51-NC | | |
| | | 56 | H.B3 | | |
| | | 62 | H.C276 | | |
| | | 63 | ALLOY 20 | | |
| | | 64 | H.B2 | | |
| | | 65 | B381 F5 | | |
| | | 69 | 904L | | |

Note: Materials are according to customer requirements for reference.

Product Introduction

The sleeved plug valve is often used in high toxicity, strong corrosion and high-hazard media ,strictly prohibited leakage and valve material will not pollute the medium occasions. Usually used in nitric acid medium, it has important applications in acetic acid, acetic anhydride, smelting and other chemical enterprises. The fluid handling system of the sleeve plug valve is compact, economical and flexible, and has low production costs compared to ball valves and gate valves. There is a large sealing surface in plug valve to ensure a good seal when operating. Self-cleaning action: When the plug rotates, 360° lip can remove dirt and goo. The fluid will not accumulate, and will not cause pollution to the process which can prevent clogging.



Overall Structure

The sleeved plug valve adopts double gland flange structure, the valve body and bonnet do not contain welding flange, the valve wall thickness is in accordance with ASME B16.34, the safety margin and corrosion margin are increased to ensure the service life of the valve. The sleeved plug valve adopts integral sleeve, the sleeve is tightly fitted to the inner wall of the valve body, the material of sleeve NEWAY can provide a variety of options, such as PTFE and RPTFE, body-bonnet seal such as O-Ring, Lip Seal, gasket, stem seal such as O-Ring, Lip Seal and low leakage packing. It can be applied to a variety of chemical devices.

External Leakage Control

The static seal between the valve body and bonnet is graphite gasket, graphite gasket and O-Ring or lip ring combination seal; Wrap gasket +Lip seal seal, can also be selected according to customer conditions the best seal combination. The dynamic sealing structure at the valve stem is sealed by packing group with low torque and low escape. The low leakage meets requirements of ISO 15848-1, as shown in Figure 1.

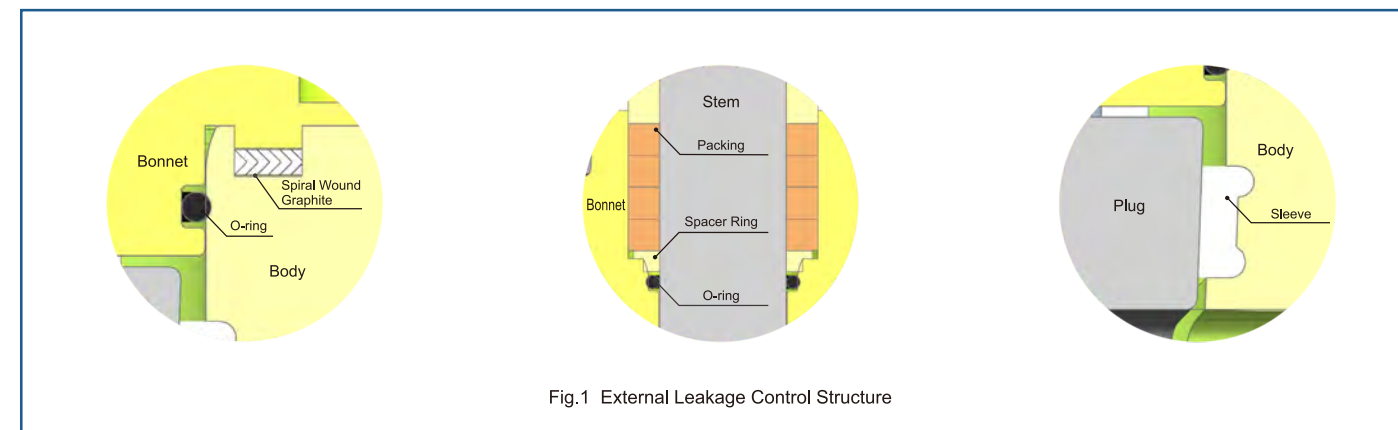


Fig.1 External Leakage Control Structure

Plug (Spool) Surface Special Processing and Hardening Treatment

First, advanced processing equipment and mature process tools are used to ensure that the coaxial degree of plug processing is controlled within 0.02mm. Then the plug is cold extruded by Hawker technology to ensure the surface roughness is controlled below Ra0.2μm. Use CCM check whether the product is qualified according to the drawing requirements, which is the basis for the product to ensure that the gas seal meets zero leakage. See Figure 2 for details

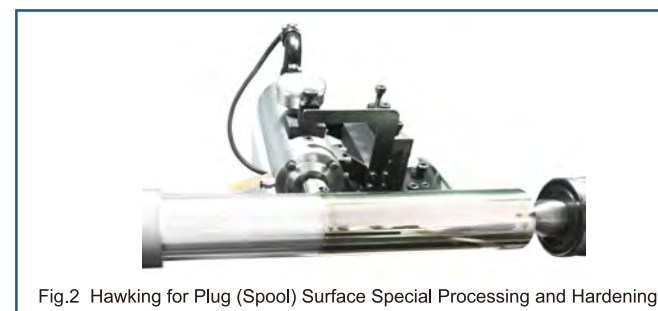


Fig.2 Hawking for Plug (Spool) Surface Special Processing and Hardening

Seat Sealing

The valve chamber of NEWAY plug valve adopts multi-groove and flange structure to fix the sealing bushing reliably and meet the special requirements of working conditions. Prevents the sleeve and plug from rotating at the same time when the valve is switching. Sealing bushing (seat) material selection of high-performance PTFE or filled PTFE; The sealing material has the advantages of high strength, small friction coefficient, low torque, reliable sealing performance, long life and so on, as shown in Figure 3.

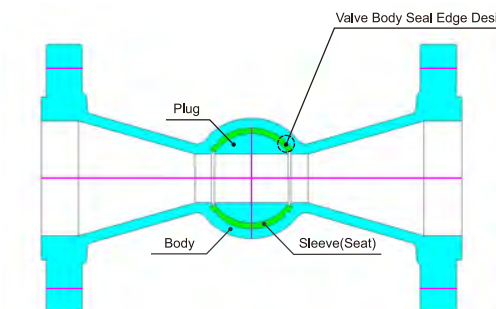


Fig.3 Valve Channel

Channel

The flow channel design adopts venturi or full path, the flow channel has no medium deposition, and the structure avoids the medium Crystallization and blockage, as shown in Figure 3.

360° Seal Raised Lip

The 360° seal raised lip effectively prevents or reduces flammable media through the valve to prevent further fire expansion. The 360° sealing bump can effectively reduce the sealing area and meet the requirements of low opening and closing torque on the basis of reliable sealing. At the same time, the groove can effectively absorb the volume expansion of the sleeve due to temperature changes, as shown in Figure 4.

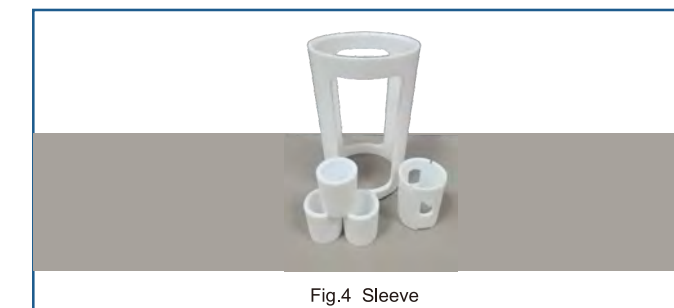


Fig.4 Sleeve

Sleeve

The sleeve adopts the "multiple heating pressing and shaping" process to make the sealing bushing close to the valve body. The sealing edge of the valve body is designed to bite the bushing, and the excess sleeve is squeezed into the groove of the valve body to prevent locking due to thermal expansion and cold contraction in use. The torque of the valve is light, smooth and stable, as shown in Figure 4.

API 6FA Fire safe design

For all gaskets and packing, strictly control the purity of graphite, reduce the burning loss rate to ensure the sealing performance at high temperatures, as shown in Figure 1.

Fire Safe and Antistatic Design

A spring-loaded pin assures the electrical continuity between the ball,stem and body,to avoid sparking during the turning of the stem to open and close the valve. See Figure 5 for details

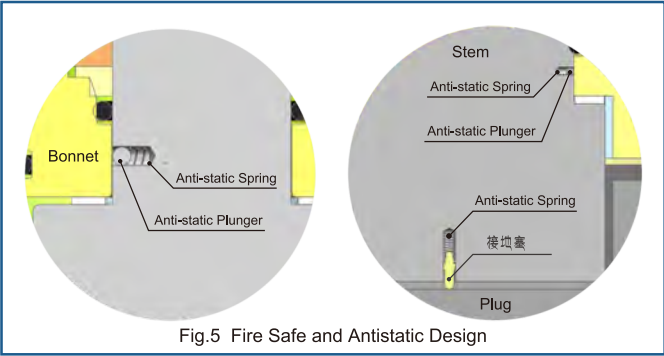


Fig.5 Fire Safe and Antistatic Design

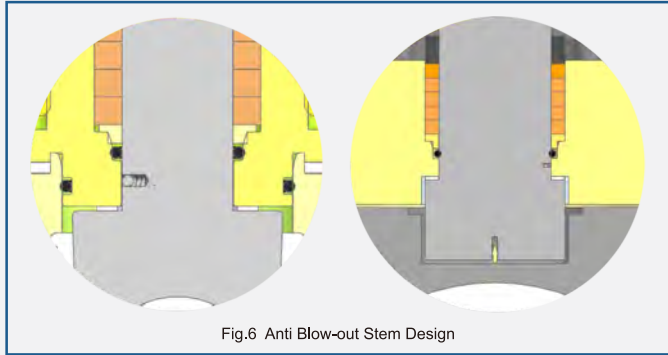


Fig.6 Anti Blow-out Stem Design

Anti Blow-out Stem

The lower end of the stem is designed with an integral shoulder to be blowout-proof, See Figure 6 for details.

Dynamic Stem Seal

Advantages: Fluorine rubber O-ring has very good resistance to strong acid and alkali corrosion, can withstand more than a thousand kinds of chemicals, can be used for a long time at 260°C, anti-explosion, anti-tear effect is very good. The conventional and V-shaped RPTFE packing can prevent high pressure, pressure support self-sealing packing to prevent media leakage. Low leakage packing has API 622 certification .Valves with low leakage packing can do helium emission test, and met TSO 15848 standard B Class requirements. The upper and lower metal wire packing is sealed to prevent the packing from being dispersed by high pressure. See Figure 7 for details

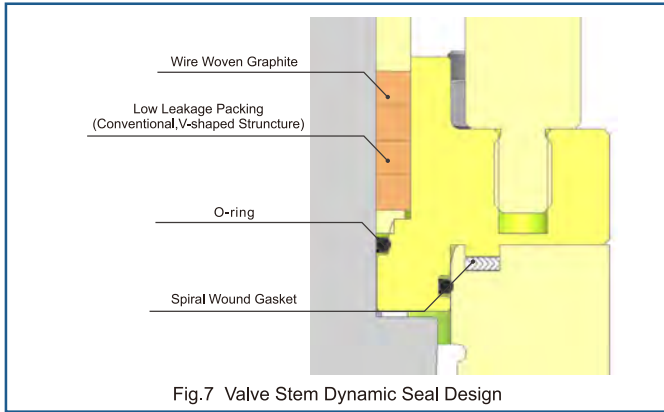


Fig.7 Valve Stem Dynamic Seal Design

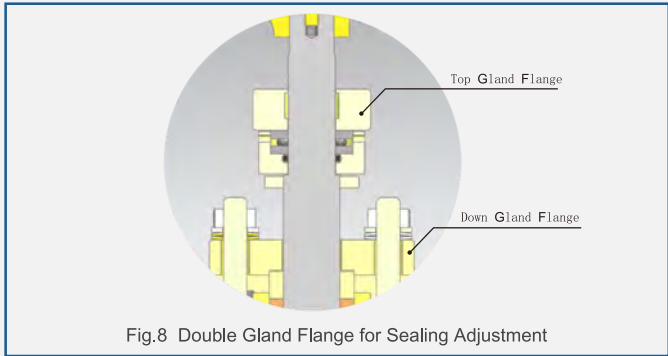


Fig.8 Double Gland Flange for Sealing Adjustment

Double Gland Flange for Sealing Adjustment

The lower gland flange butterfly spring loading packing and the upper gland flange butterfly spring loading plug, the double gland flange can separately adjust the packing and plug seal online to ensure the reliable sealing, also can adjust to reduce the operating torque to achieve the switch light and easy operation. See Figure 8 for details

Add Plane Bearing under Gland Flange

Add a plane bearing under the gland flange to reduce operating torque. Effectively improve the problem of excessive torque and difficult operation and others, as shown in Figure 9.

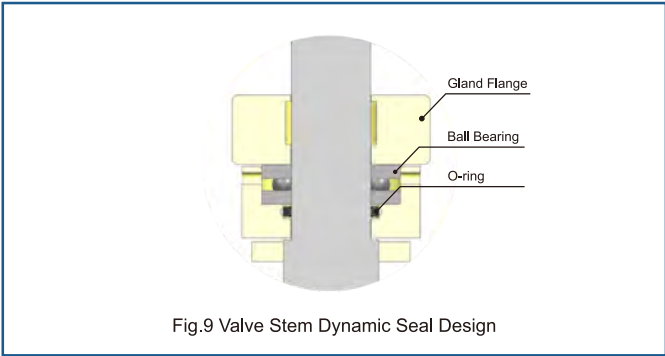


Fig.9 Valve Stem Dynamic Seal Design

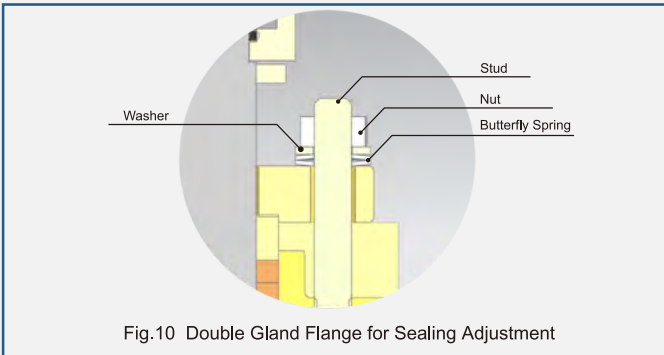


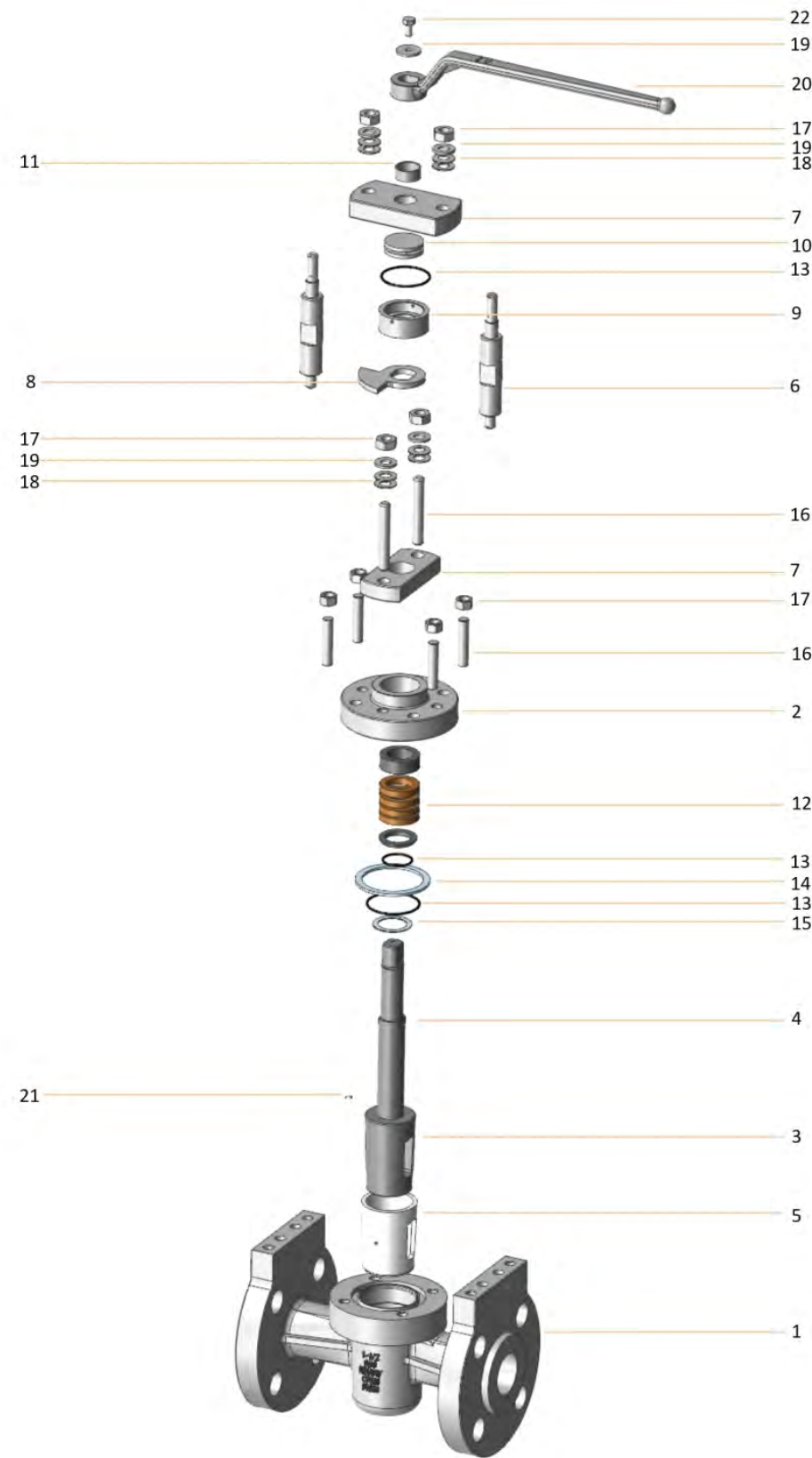
Fig.10 Double Gland Flange for Sealing Adjustment

Automatic Compensation Seal Function

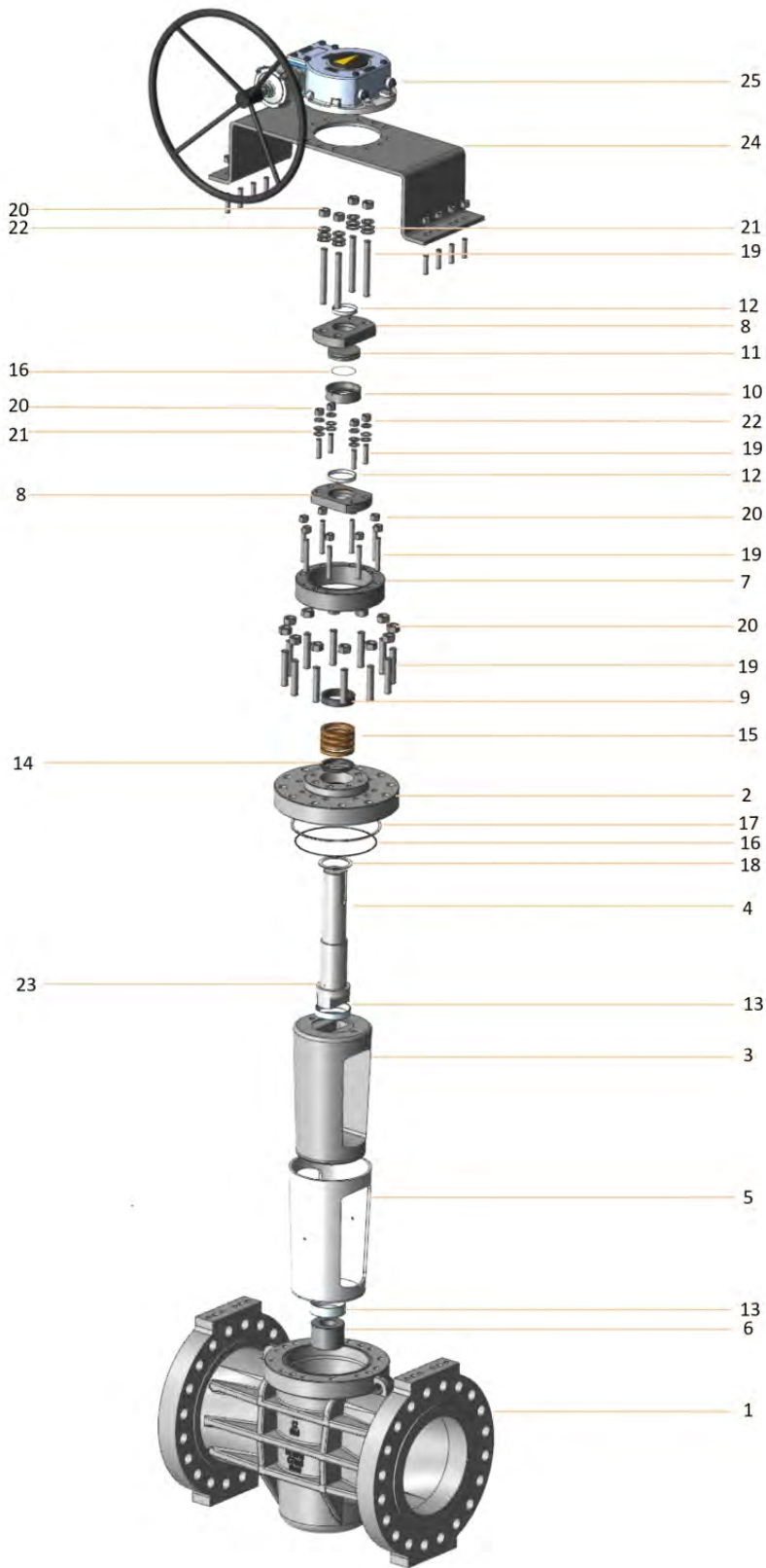
The connecting bolt of the packing and plug adjusting gland flange is loaded with a disc spring to prevent the influence of abnormal changes in pipeline pressure and temperature on the seal. The disc spring can automatically compensate the seal and always protect the seal of the valve packing and plug, as shown in Figure 10.

Plug (Spool) Fixed Structure

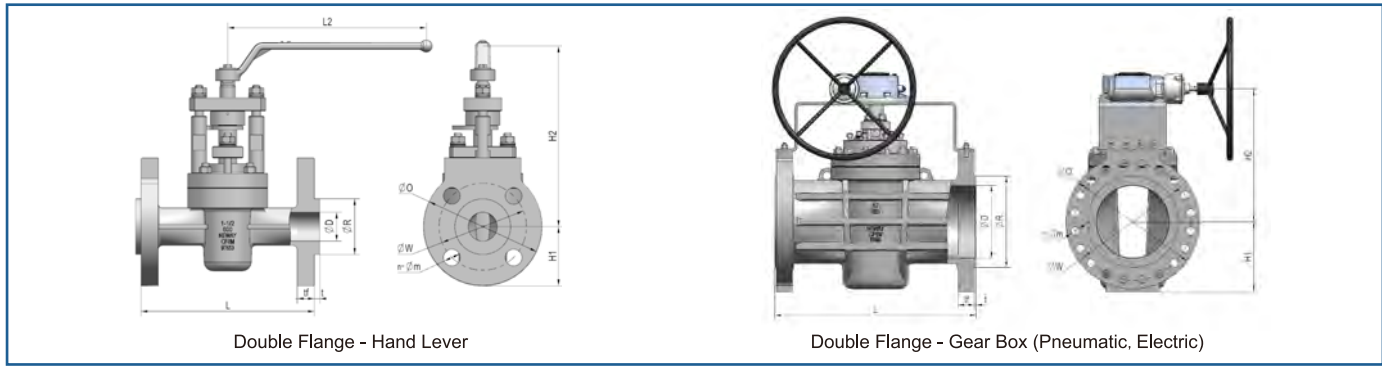
Fixed plug does not offset and squeeze the seat insert under high temperature and high pressure. The plug is always on the center shaft, effectively solving the problem of sealing leakage caused by sweeping out the seat insert of large diameter plug.



| No | Part Name |
|----|-----------------------|
| 1 | Body |
| 2 | Bonnet |
| 3 | Plug |
| 4 | Stem |
| 5 | Sleeve |
| 6 | Stand Column |
| 7 | Gland Flange |
| 8 | Location Plate |
| 9 | Bearing Bush |
| 10 | Ball Bearing |
| 11 | Ball Bearing |
| 12 | Packing |
| 13 | O-ring |
| 14 | Spiral Wound Graphite |
| 15 | Thrust Washer |
| 16 | Stud |
| 17 | Nut |
| 18 | Butterfly Spring |
| 19 | Washer |
| 20 | Hand Lever |
| 21 | Anti-static Device |
| 22 | Stud |

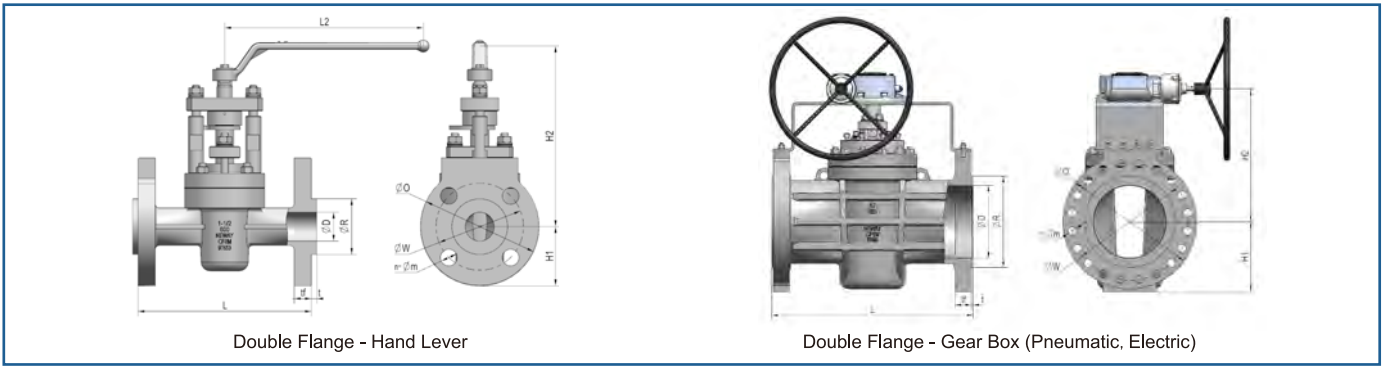


| No | Part Name |
|----|-----------------------|
| 1 | Body |
| 2 | Bonnet |
| 3 | Plug |
| 4 | Stem |
| 5 | Sleeve |
| 6 | Turnnion |
| 7 | Cover |
| 8 | Gland Flange |
| 9 | Gland |
| 10 | Bearing Bush |
| 11 | Ball Bearing |
| 12 | Ball Bearing |
| 13 | Ball Bearing |
| 14 | Spacer Ring |
| 15 | Packing |
| 16 | O-ring |
| 17 | Spiral Wound Graphite |
| 18 | Thrust Washer |
| 19 | Stud |
| 20 | Nut |
| 21 | Butterfly Spring |
| 22 | Washer |
| 23 | Anti-static Device |
| 24 | York |
| 25 | Gear Box |



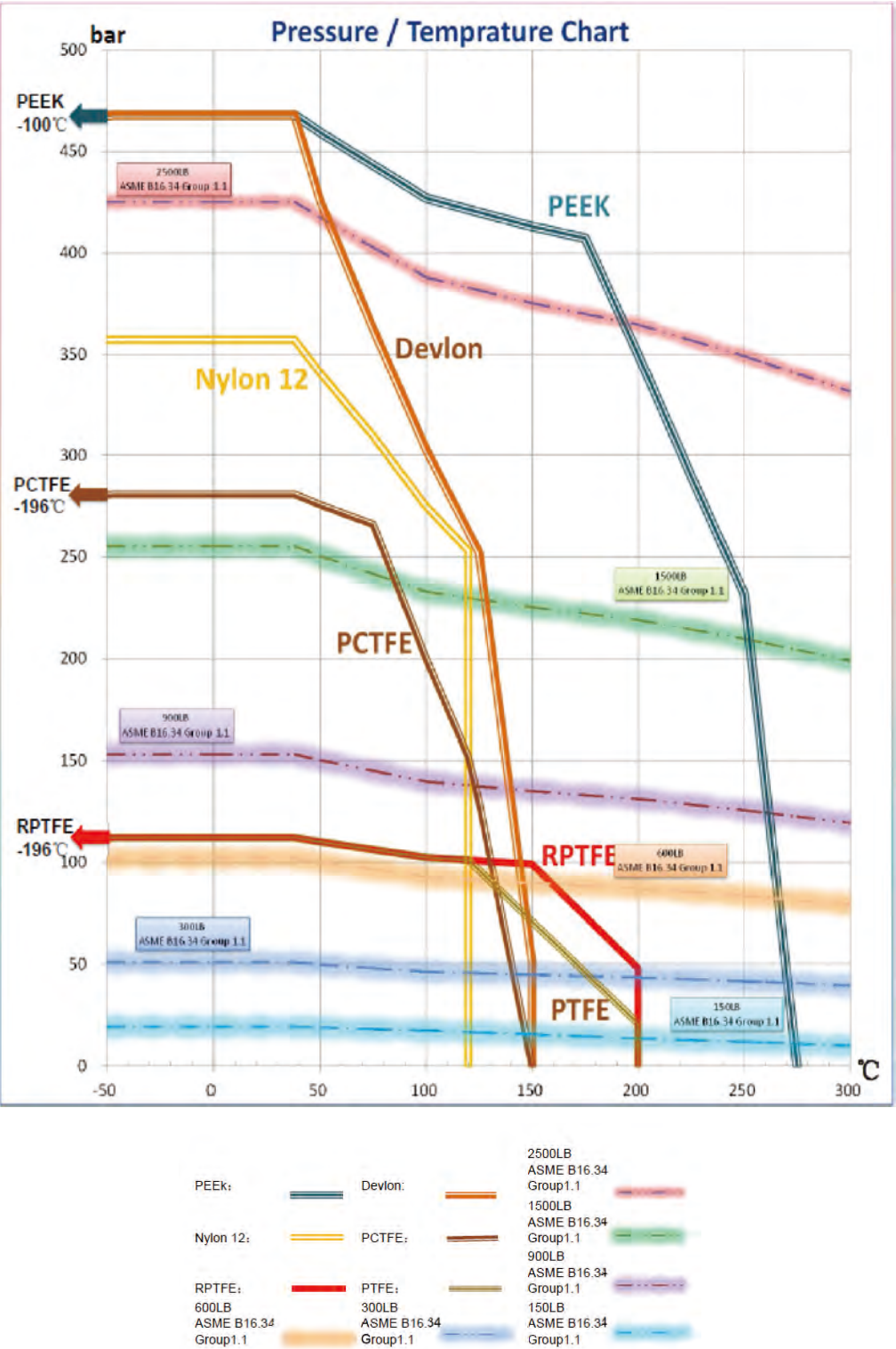
| Flanged End / Class 150 (PN20) | | | | | | | Weight | |
|--------------------------------|-----|------|-----|------|-----|-----|------------|----------|
| NPS | DN | L | øO | H1 | H2 | L2 | Hand Lever | Gear Box |
| 1/2 | 15 | 108 | 90 | 45 | 100 | 200 | 1.46 | N/A |
| 3/4 | 20 | 117 | 100 | 50 | 130 | 200 | 1.72 | N/A |
| 1 | 25 | 127 | 110 | 55 | 160 | 200 | 3.39 | N/A |
| 1-1/4 | 32 | 140 | 115 | 57.5 | 190 | 250 | 4.3 | N/A |
| 1-1/2 | 40 | 165 | 125 | 62.5 | 220 | 250 | 6.78 | N/A |
| 2 | 50 | 178 | 150 | 75 | 250 | 300 | 10.43 | N/A |
| 2-1/2 | 65 | 190 | 180 | 90 | 280 | 350 | 16.17 | N/A |
| 3 | 80 | 203 | 190 | 95 | 310 | 350 | 22 | N/A |
| 4 | 100 | 229 | 230 | 115 | 340 | N/A | N/A | 28 |
| 6 | 150 | 267 | 280 | 145 | 370 | N/A | N/A | 50 |
| 8 | 200 | 292 | 345 | 175 | 460 | N/A | N/A | 91 |
| 10 | 250 | 330 | 405 | 235 | 525 | N/A | N/A | 135 |
| 12 | 300 | 356 | 485 | 270 | 575 | N/A | N/A | 185 |
| 14 | 350 | 686 | 535 | 300 | 625 | N/A | N/A | 224 |
| 16 | 400 | 762 | 595 | 350 | 685 | N/A | N/A | 482 |
| 18 | 450 | 864 | 635 | 380 | 755 | N/A | N/A | 525 |
| 20 | 500 | 914 | 700 | 410 | 835 | N/A | N/A | 625 |
| 24 | 600 | 1067 | 815 | 500 | 925 | N/A | N/A | 1305 |

| Flanged End / Class 300 (PN50) | | | | | | | Weight | |
|--------------------------------|-----|-----|-----|------|-----|-----|------------|----------|
| NPS | DN | L | øO | H1 | H2 | L2 | Hand Lever | Gear Box |
| 1/2 | 15 | 140 | 95 | 47.5 | 100 | 200 | 3.13 | N/A |
| 3/4 | 20 | 152 | 115 | 57.5 | 130 | 250 | 4.69 | N/A |
| 1 | 25 | 165 | 125 | 62.5 | 160 | 250 | 5.74 | N/A |
| 1-1/4 | 32 | 178 | 135 | 67.5 | 190 | 300 | 7.2 | N/A |
| 1-1/2 | 40 | 190 | 155 | 77.5 | 220 | 300 | 10.95 | N/A |
| 2 | 50 | 216 | 165 | 82.5 | 250 | 350 | 14.61 | N/A |
| 2-1/2 | 65 | 241 | 190 | 95 | 280 | 400 | 19.8 | N/A |
| 3 | 80 | 282 | 210 | 105 | 310 | 450 | 32 | N/A |
| 4 | 100 | 305 | 255 | 127 | 340 | N/A | N/A | 41.7 |
| 6 | 150 | 403 | 320 | 159 | 400 | N/A | N/A | 86 |
| 8 | 200 | 419 | 380 | 195 | 465 | N/A | N/A | 140 |
| 10 | 250 | 457 | 445 | 225 | 530 | N/A | N/A | 206 |
| 12 | 300 | 502 | 520 | 275 | 575 | N/A | N/A | 282 |



| Flanged End / Class 600 (PN100) | | | | | | | Weight | |
|---------------------------------|-----|-----|-----|-------|-----|-----|------------|----------|
| NPS | DN | L | øO | H1 | H2 | L2 | Hand Lever | Gear Box |
| 1/2 | 15 | 165 | 95 | 47.5 | 125 | 250 | 6.3 | N/A |
| 3/4 | 20 | 190 | 115 | 57.5 | 150 | 250 | 8.7 | N/A |
| 1 | 25 | 216 | 125 | 62.5 | 175 | 250 | 10.5 | N/A |
| 1-1/4 | 32 | 229 | 135 | 67.5 | 200 | 350 | 14 | N/A |
| 1-1/2 | 40 | 241 | 155 | 77.5 | 220 | 350 | 16.6 | N/A |
| 2 | 50 | 292 | 165 | 82.5 | 255 | 550 | 22.1 | N/A |
| 2-1/2 | 65 | 330 | 190 | 95 | 300 | 600 | 29.2 | N/A |
| 3 | 80 | 356 | 210 | 105 | 325 | 650 | 50.8 | N/A |
| 4 | 100 | 432 | 275 | 137.5 | 350 | N/A | N/A | 78 |
| 6 | 150 | 559 | 355 | 180 | 400 | N/A | N/A | 112 |
| 8 | 200 | 660 | 420 | 215 | 480 | N/A | N/A | 189 |
| 10 | 250 | 787 | 510 | 255 | 535 | N/A | N/A | 305 |
| 12 | 300 | 838 | 560 | 280 | 585 | N/A | N/A | 396 |

Temperature Pressure Curve



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.

Flow Coefficient (Cv)

| NPS | 150LB | 300LB | 600LB |
|-------|---------|--------|--------|
| 1/2 | 1.19 | 1.19 | 1.19 |
| 3/4 | 2.54 | 2.54 | 2.54 |
| 1 | 4.40 | 4.40 | 4.40 |
| 1-1/4 | 7.20 | 7.20 | 7.20 |
| 1-1/2 | 10.15 | 10.15 | 10.15 |
| 2 | 16.88 | 16.88 | 16.88 |
| 2-1/2 | 27.03 | 27.03 | 27.03 |
| 3 | 38.50 | 38.50 | 38.50 |
| 4 | 70.31 | 70.31 | 70.31 |
| 6 | 158.19 | 158.19 | 158.19 |
| 8 | 284.04 | 284.04 | 284.04 |
| 10 | 446.47 | 446.47 | 446.47 |
| 12 | 645.47 | 645.47 | 645.47 |
| 14 | 784.30 | N/A | N/A |
| 16 | 1042.11 | N/A | N/A |
| 18 | 1336.48 | N/A | N/A |
| 20 | 1667.43 | N/A | N/A |
| 22 | 2034.96 | N/A | N/A |
| 24 | 2439.05 | N/A | N/A |

01 Bi-directional Flow and Flexible Seal Force

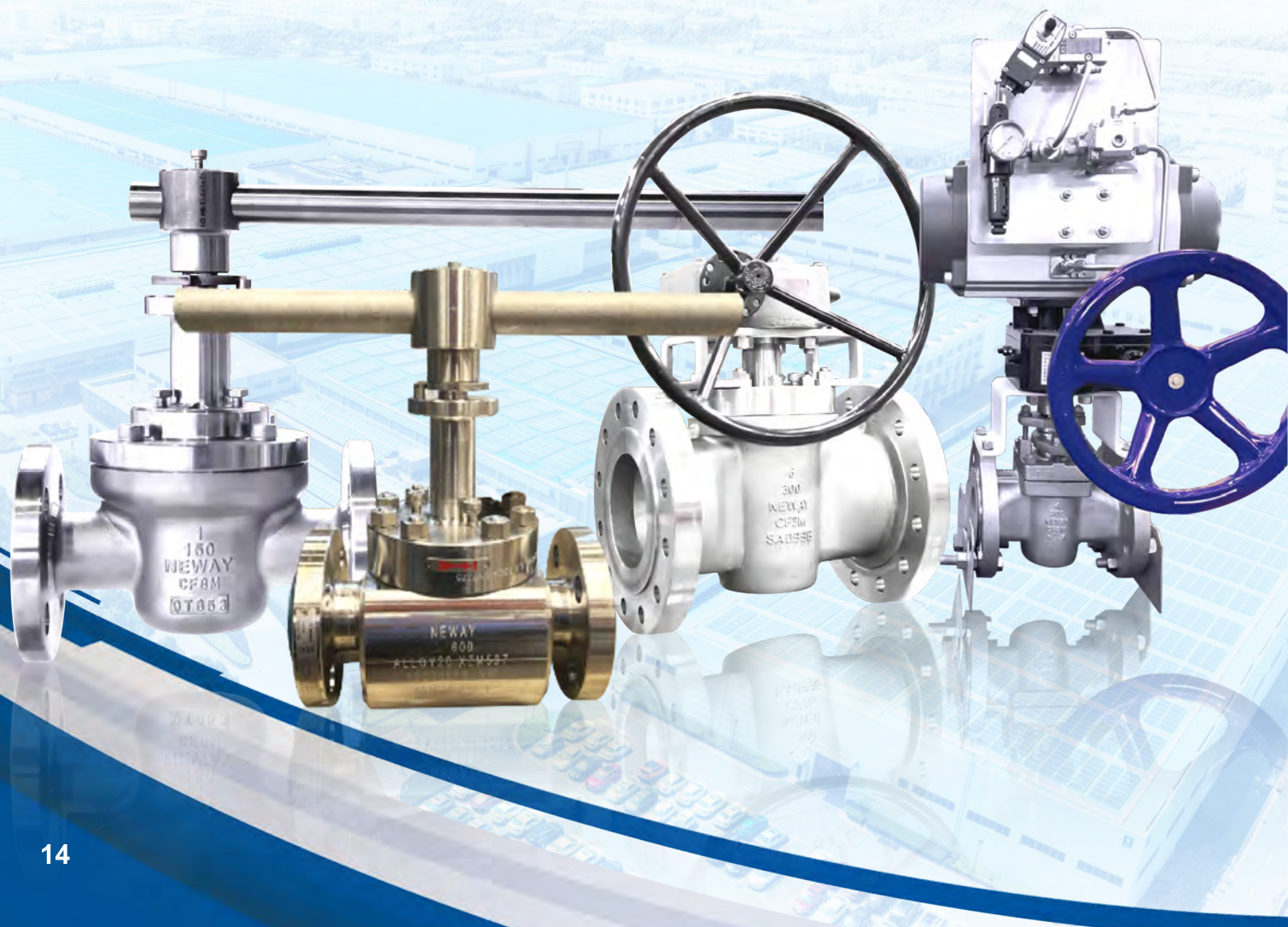
02 Self-cleaning Action to Remove Scaling and Adhering Media

03 No Cavities No Contamination

04 Multilayer Stem Seal

05 Secure sealing without deformation or rotation

06 Top Entry Type



NEWAY Head Office
Total area: 2,295sqm
Office area: 6,885sqm

Founded in 2014



NEWAY Manufacturing Base
Main products: Ball Valve, Butterfly Valve, Gate Valve, Globe Valve, Check Valve, Control Valve
Building area: 230,000 sqm
Work shop: 140,061 sqm

Founded in 2006
Expanded in 2013



NEWAY Foundry (Suzhou)
Main products: Sand Casting
Building area: 112,500 sqm
Work shop: 98,000 sqm

Founded in 2008
Expanded in 2015



NEWAY Foundry (Dafeng)
Main products: Lost wax investment casting
Building area: 40,000 sqm
Work shop: 20,000 sqm

Founded in 2008



Neway Precision Forging(Liyang),LTD
Main products: Hammer forging, annular forging
Office area: 3,000 sqm
Work shop: 30,000 sqm

Founded in 2017



Neway Butterfly Valve Plant
Main products: Butterfly Valve
Building area: 30,000 sqm
Work shop: 19,000 sqm (first floor)
7,000 sqm (second floor)

Founded in 2020

Product Warranty

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.