

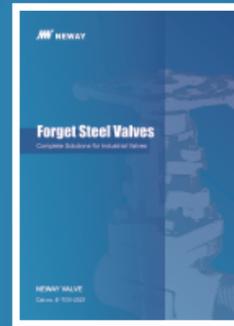
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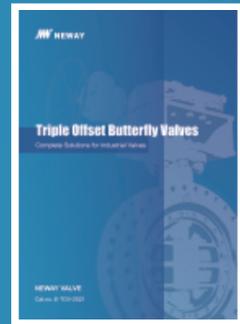
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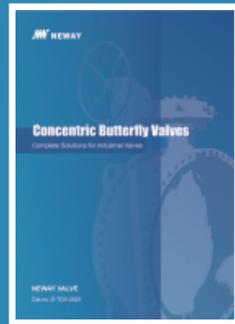
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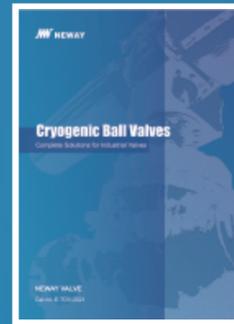
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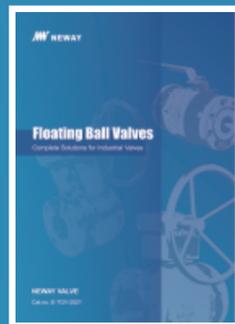
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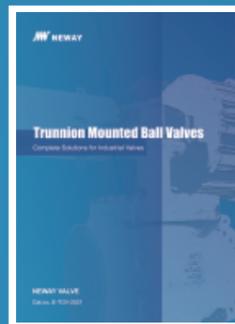
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Cat.no.:E-FWBV



Cat.no.:E-FBV



Cat.no.:E-TMBV



Cat.no.:E-MSBV

## Manifold DBB Ball Valves

Complete Solutions for Industrial Valves



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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.

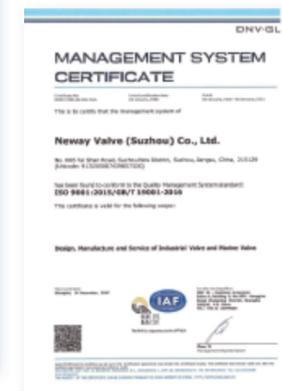
As part of Neway's global strategy, to provide better service to our customers, we have established our overseas subsidiaries in USA, Netherlands, Italy, Singapore, and Dubai along with over 80 agents and distributors worldwide.

Quality Assurance

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



NORSOK



ISO9001



CE/PED



Fire Safe Test Certificate



TA Luft



ABS



API 6D



AD2000

Neway 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.

## About Products

This catalogue is applicable to manifold DBB ball valves produced by Neway. Manifold DBB ball valves shall be used for isolation purpose only and shall not be used to regulate the fluid flow. During its life cycle, valve obturator shall always be kept in fully open or fully closed position depending on the application.

The main advantages of Neway's manifold DBB valve includes two aspects. Firstly, it will decrease the operator risk with true double isolation. Secondly, it needs less space when installation. Neway's manifold DBB valve is often used in offshore application and FPSO application. Typical applications of manifold DBB valves are used for Instrumentation purpose or process purpose.

## Product Range

Manifold Ball			
Type	Floating	Type	Trunnion
Size	1/2" ~ 3"	Size	2" ~ 12"
Rating	150LB ~ 2500LB	Rating	150LB ~ 2500LB
Body Material	CS, 316 SS, 22Cr/25Cr DS, etc.	Body Material	CS, 316 SS, 22Cr/25Cr DS, etc.
Seat Material	Soft Seats: PEEK, PTFE Metal Seats: Tungsten Carbide and Chrome Carbide	Seat Material	Soft Seats: Devlon, PEEK, PTFE Metal Seats: Tungsten Carbide and Chrome Carbide
		Optional Feature	Seat and Stem Injection Points; Ball Cavity Drain and Vent Ports; PTFE Lip Seals Needle type bleed valve with NPT screwed or flanged or socked welded connected to valve body

Note: The materials will be selected according to customer's datasheet requirements.

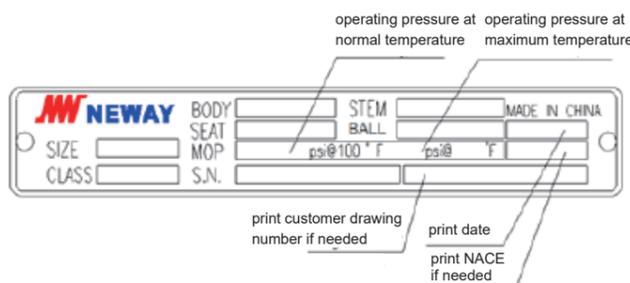
## Valve Information

Valve Description



①	Valve Size	②	Valve Type	③	ASME Class	④	End Connection
⑤	Operator	⑥	Body Materials	⑦	Trim Code		

## Nameplate Information



Name	Content	Name	Content
Size	Nominal diameter of valve	Class	Valve pressure rating
Body	Body material	Seat	Seat sealing surface material
Stem	Stem material	Ball	Ball sealing surface material
Mop	Maximum working pressure @ minimum temperature	S.N	Maximum working pressure @ minimum temperature
	Maximum working pressure @ minimum temperature		Maximum working pressure @ minimum temperature

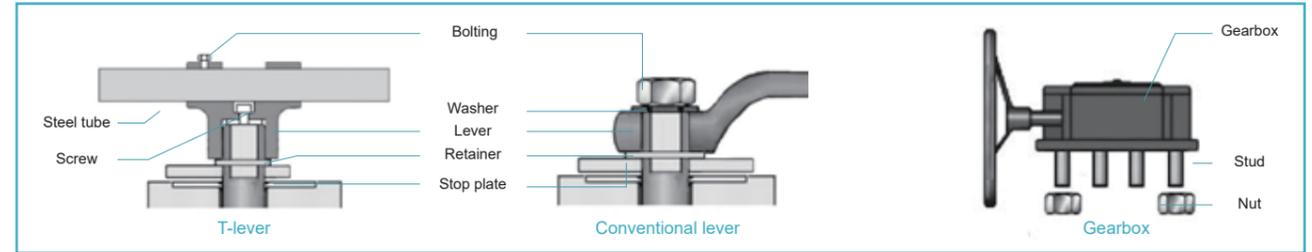
Remark: The code of valve description are Neway internal code. Neway will select the code according to customer's requirements.

## Standard

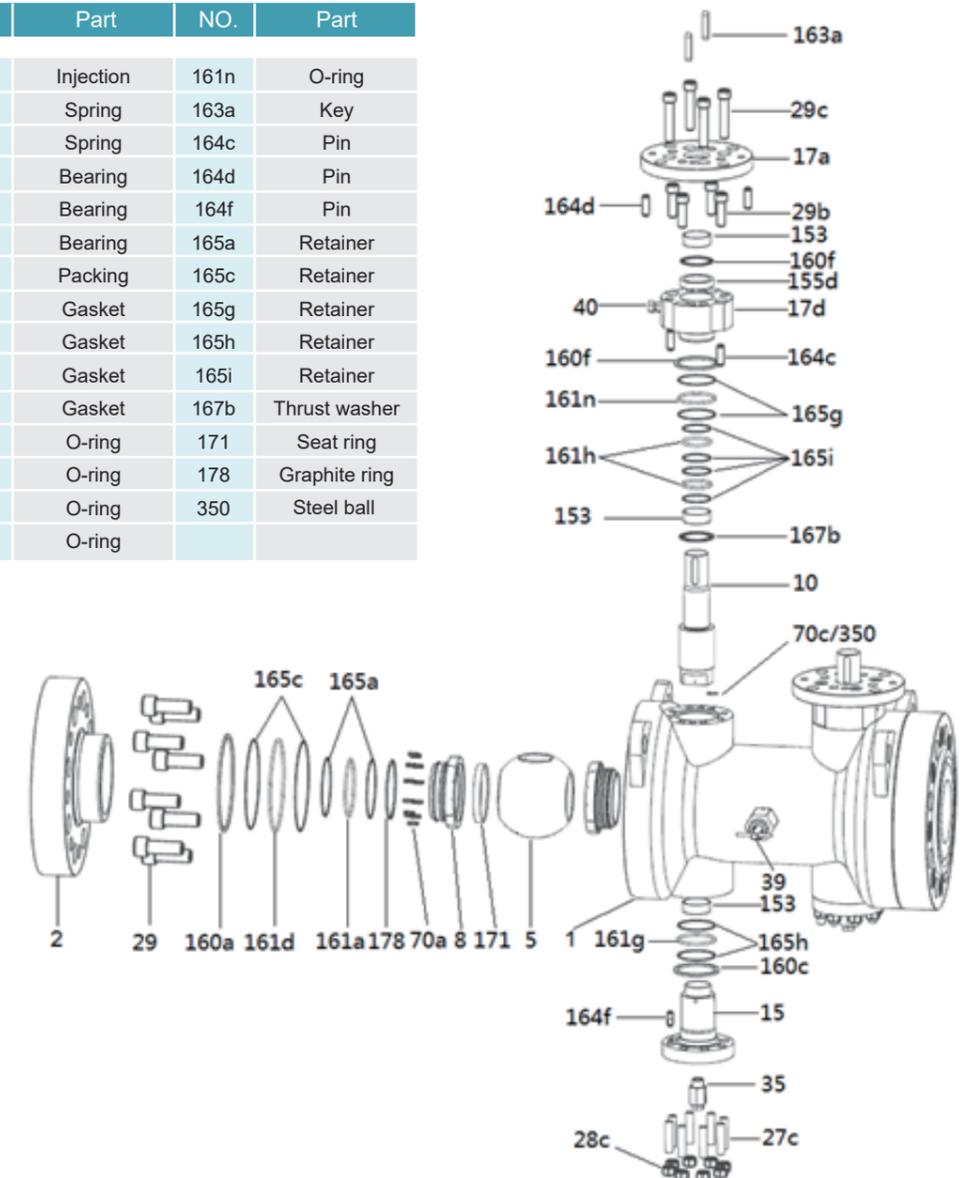
ASME B16.34, API 6D, ASME VIII, ASME B16.5, ASME B16.10, etc.

## Typical Valve Structure

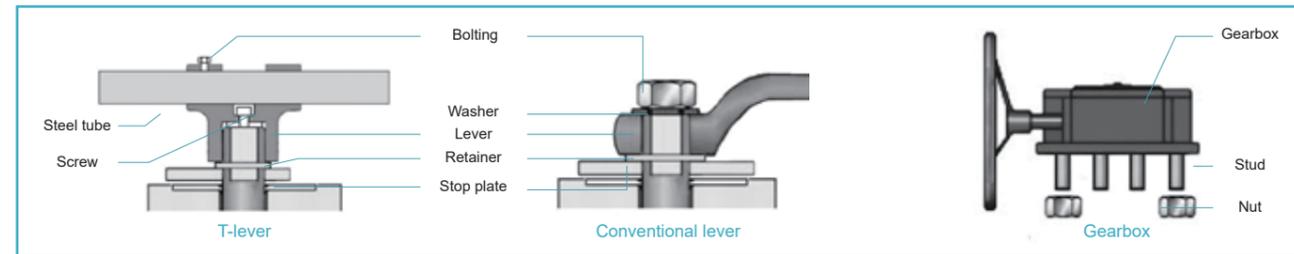
Stem&Splitted Lower Trunnion Structure



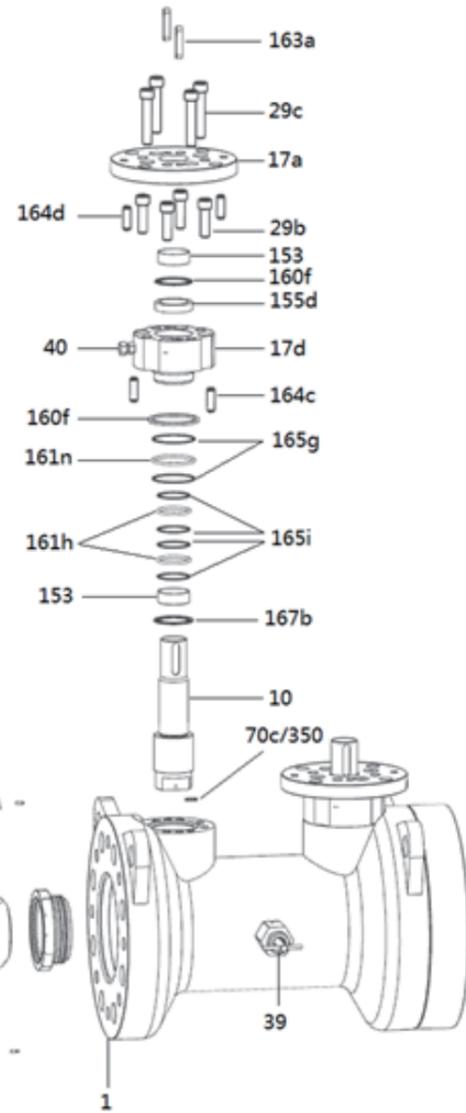
NO.	Part	NO.	Part	NO.	Part
1	Body	40	Injection	161n	O-ring
2	Bonnet	70a	Spring	163a	Key
5	Ball	70c	Spring	164c	Pin
8	Seat retainer	153	Bearing	164d	Pin
10	Stem	153	Bearing	164f	Pin
15	Trunnion	153	Bearing	165a	Retainer
17a	Top flange	155d	Packing	165c	Retainer
17d	Cover	160a	Gasket	165g	Retainer
27c	Stud	160c	Gasket	165h	Retainer
28c	Nut	160f	Gasket	165i	Retainer
29	Screw	160f	Gasket	167b	Thrust washer
29b	Screw	161a	O-ring	171	Seat ring
29c	Screw	161d	O-ring	178	Graphite ring
35	Vent valve	161h	O-ring	350	Steel ball
39	Relief valve	161g	O-ring		



## Plates Supported Trunnions (integral with Ball) Structure



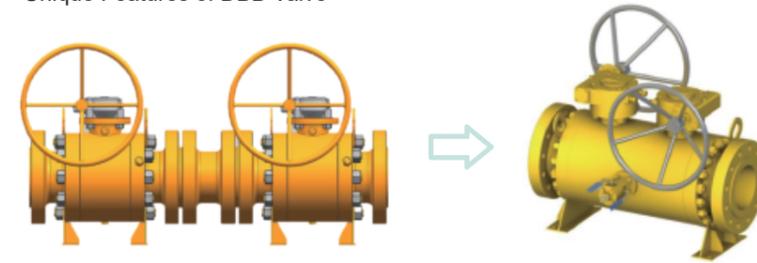
NO.	Part	NO.	Part	NO.	Part
1	Body	70c	Spring	163a	Key
2	Bonnet	153	Bearing	164a	Pin
5	Ball	153	Bearing	164c	Pin
8	Seat retainer	153	Bearing	164d	Pin
10	Stem	155d	Packing	165a	Retainer
17a	Top flange	159	Support plate	165c	Retainer
17d	Cover	160a	Gasket	165g	Retainer
29	Screw	160f	Gasket	165i	Retainer
29b	Screw	160f	Gasket	167a	Thrust washer
29c	Srew	161a	O-ring	167b	Thrust washer
39	Relief valve	161d	O-ring	171	Seat ring
40	Injection	161h	O-ring	178	Graphite ring
70a	Spring	161n	O-ring	350	Steel ball



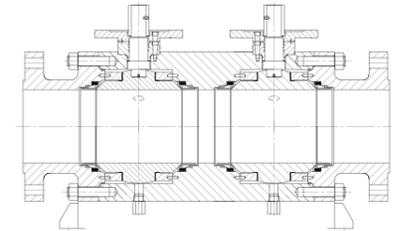
Above are typical manifold DBB structure for trunnion mounted ball, Neway can offer other manifold DBB valves such as DBB floating ball as per customer requirements.

## Design Features

### Unique Features of DBB Valve



- Reduce weight
- Save space
- Reduce leak point
- Installation efficiency



DBB is composed of two single balls, which design features are the same as single ball.

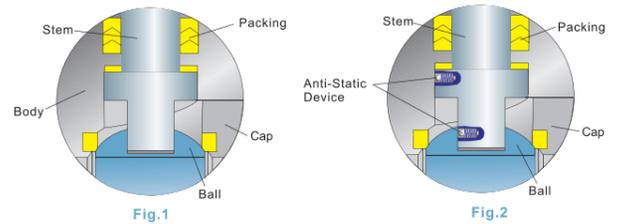
### - Floating Ball Valve:

#### Blow-out Proof Stem

The lower end of the stem is T-shaped structured, protected by boss of body, which assures stem retention at any pressure and acts as backseat. (Fig.1)

#### Anti-static Device

A spring-loaded plunger fitted on stem keeps constant contact between ball, stem and body to create an electric path to transfer charges, avoiding acceleration of static electricity as a result of friction during valve on-off. Such build-up is utterly hazardous to some services. (Fig.2)



#### Position Indicator

Double D stem head design provides mounting of the lever always in parallel to the flow passage. Misalignment of the lever is thus prevented. (Fig.3)

#### Locking Device

Facility for mounting a locking device for prevention of accidental valve operation is provide.

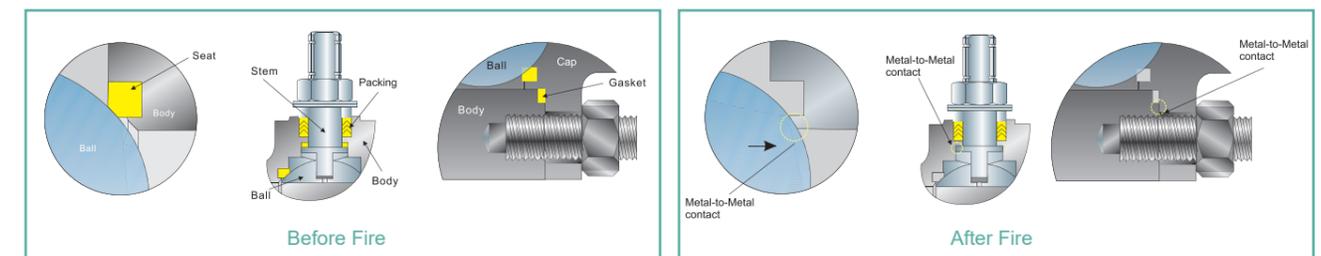
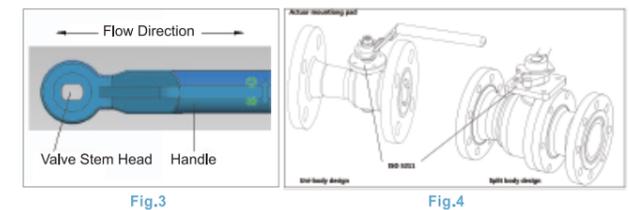
#### ISO 5211 Actuator Mounting Pad

Ball valves always furnished with integral actuator mounting pad designed according to ISO 5211. (Fig.4)

#### Facility for mounting a locking

When soft seats are decomposed or ruined by fire, the ball, driven by pressure, comes into contact with the metal lipseat of original soft seat, creating a metal-to-metal seal to shut off service fluids and minimize internal leakage.

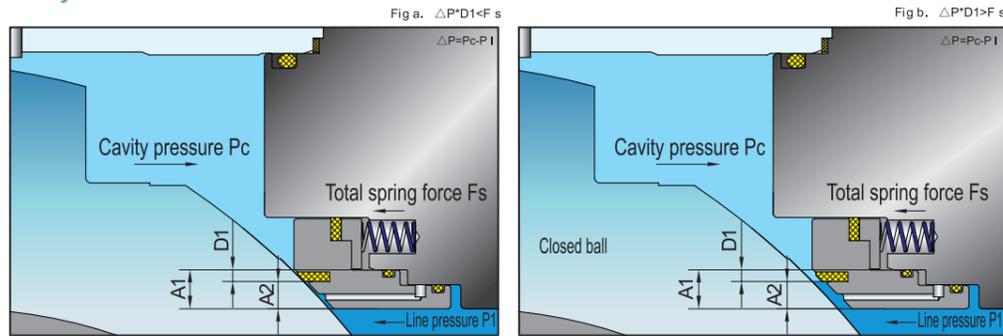
Additionally, the fire safe metal seat prevents damage the medium imposed on soft seat and minimizes creep of nonmetal materials. All the NEWAY floating valves are designed to be fire safe per API 607 and are tested and certified by the third party.



DBB is composed of two single balls, which design features are the same as single ball.

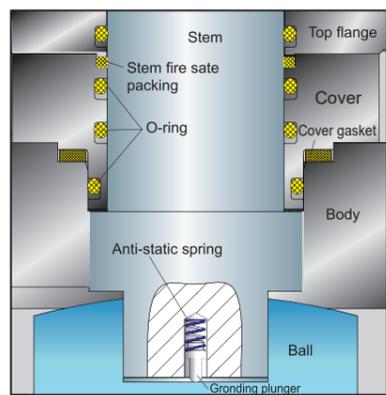
- Trunnion Ball Valve:

## Cavity Pressure Relief



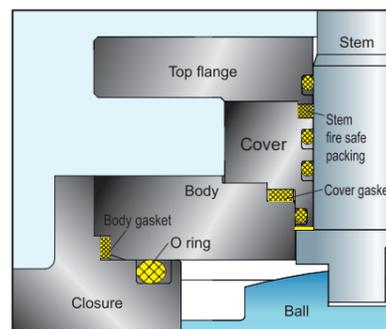
When force created by cavity pressure ( $P_c$ ) is lower than the force created by line pressure ( $P_l$ ), i.e.  $\Delta P \cdot D_1 < F_s$ , then contact between ball and seat ring is assured to provide a tight seal.

When cavity pressure is higher than seat spring force plus line pressure, i.e.  $\Delta P \cdot D_1 > F_s$ , the self-relieving action allows the valve seat to move slightly away from the ball surface. Therefore, any overpressure inside the body cavity is discharged into the pipeline (either upstream or downstream side).



## Anti-static Device

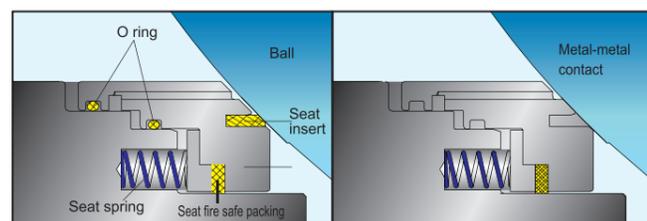
The Antistatic Device is a standard feature of the NEWAY ball valve. A spring-loaded pin assures the electrical continuity between the ball, stem and body, to avoid sparking during the turning of the stem to open and close the valve.



## Super Fire safe design

### External leakage prevention

Leakage from the valve stem area is prevented by two O-ring seals and a cover gasket. Leakage through the valve body connection is also blocked by an O-ring seal and a body gasket. After a fire deteriorated the O-rings, cover and body gasket, the firesafe stem packing prevents external leakage.

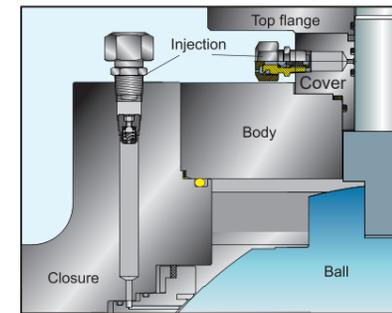


### Internal leakage prevention

After the soft sealing materials are decomposed or deteriorated by fire, the edge of the metal seat preloaded by the seat spring comes into contact with the ball to shut off the process media and minimize internal leakage through the valve bore. Also the fire safe graphite packing is compressed by the seat spring to prevent process media leakage between the valve body and the seat.

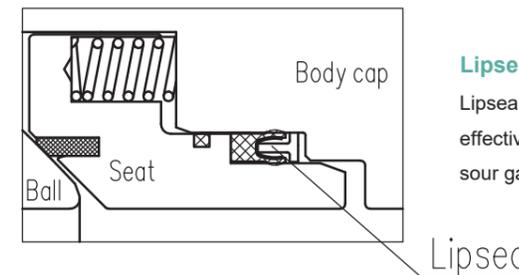
## Double block and bleed

In the closed position, each seat shuts off the process media independently on each side, or simultaneously on both sides of the ball, the cavity can be vented / bled via vent or drain plugs on the valve body.



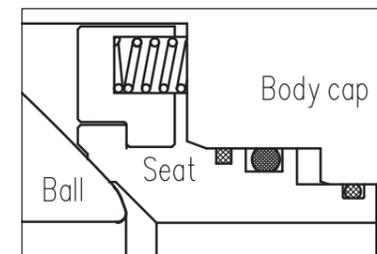
## Emergency sealant injection system

For 6 inch and larger NEWAY Trunnion mounted ball valves, sealant injection fittings will be installed on both the stem and seats. When the sealing materials (soft seat or the stem o-ring) are damaged, the seat and stem leakage can be prevented by the sealant injected into these fittings. The fitting shall include a check valve secondary means of sealing. For 4 inch and below, it could be added upon requirement.



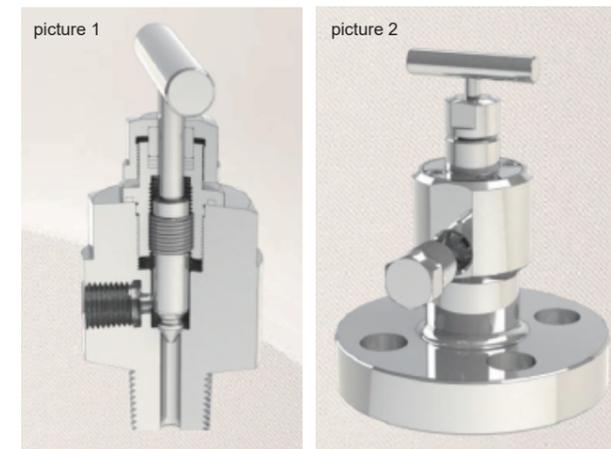
## Lipseal design (optional)

Lipseal is the spring-energized seal including Elgiloy or Inconel spring and PTFE jacket. It's effective in a wide range of application, such as high resistance to corrosive chemical media, high sour gas, low temperature or cryogenic service.



## Metal-to-metal seat design (optional)

When valve is applied in the high abrasive or high temperature service, metal-to-metal seat shall be chosen.



## Multiple Bleed Valve options

Various bleed valve options and connections are available in line with customer requirements, such as needle type bleed valve with screwed or flange connection to valve body ect.

# Application

## DBB Compact Manifold Ball Valve applications



Neway supplies DBB compact manifold ball valves which are equipped with two balls in one body. The series can be designed in three-piece, long or customized pattern to satisfy the different installation requirements. DBB compact manifold ball valve design reduces the weight and space compared with installing two conventional valves when it achieves safer application. These valves are usually applied in marine and offshore industry.



Offshore



FPSO



# 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.